Cowlitz County
Department of Public Works

CONTRACT DOCUMENTS
FOR

ITALIAN CREEK ROAD CULVERT REPLACEMENT PROJECT
(M.P. 1.85 to 1.95, Road Number 40900)

SE ¼ SEC. 31, T7N, R1E

Cowlitz County Project No. 1323
C.R.P. No. 790

MARCH 2025

COWLITZ COUNTY
Department of Public Works
1600-13th Avenue South
Kelso, Washington 98626
Phone (360) 577-3030

BOARD OF COUNTY COMMISSIONERS
STEVE RADER District No. 1
STEVEN L. FERRELL District No. 2
RICHARD R. DAHL District No. 3

Cowlitz County
Department of Public Works

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MARCH 2025

3/17/25

ROGER EVAN MAURER
STATE OF WASHINGTON
34939
REGISTERED
PROFESSIONAL ENGINEER

Responsible for all portions of the Contract Documents

COWLITZ COUNTY
Department of Public Works
1600-13th Avenue South
Kelso, Washington 98626
Phone (360) 577-3030

Approved by:

Susan Eugenis, P.E. Date
County Engineer

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***Included as indicated but numbered independently.

CALL FOR BIDS

The Board of County Commissioners of Cowlitz County, Washington will receive sealed bids until **April 14, 2025, prior to 1:30 p.m.**, for the following work: **ITALIAN CREEK ROAD CULVERT REPLACEMENT PROJECT.**

Work performed under this contract consists of the following:

Clearing and grubbing, construction of temporary roadway, roadway excavation, temporary creek diversion, removal of existing culvert, construction of cast-in-place concrete foundations, installation of precast reinforced concrete three-sided structure, roadway reconstruction, streambed reconstruction, seeding and mulching, and associated work.

At that time all bids will be publicly opened and read in the Public Works Administration Building Training Room. Bids must be addressed to:

Cowlitz County Department of Public Works
Attn: County Engineer
1600 13th Avenue South
Kelso WA 98626

Project bid documents (Plans, specifications, addenda, bid documents, bidders list and plan holders list) for this project are available online for inspection during the bidding period through the Builders Exchange of Washington (BXWA) website at www.bxwa.com. Click on Posted Projects, then Public Works, then Cowlitz County and then Projects Bidding. These documents are available for viewing, downloading and printing on your own equipment free of charge. This service is provided to Prime Bidders, Subcontractors, and Vendors bidding on this project. Bidders will need to "Register as a Bidder" through the BXWA in order to receive automatic e-mail notification of future addenda and to be placed on the Bidders List. Bidders should contact Builder's Exchange of Washington at (425) 258-1303 for questions regarding access or registration.

It is the sole responsibility of the Bidder to obtain Addenda, if any. Addenda information will be available on the BXWA web site at www.bxwa.com. Cowlitz County accepts no responsibility or liability and will provide no accommodation to bidders who fail to check for addenda and thereby submit inadequate or incomplete responses.

Cowlitz County will not provide paper copies of the Project bid documents for this project for bidding purposes. A copy of the plans and specifications may be reviewed at the office of the Clerk of the Board of County Commissioners.

All bid proposals shall be accompanied by a bid proposal deposit in cash, certified check, cashier's check, or surety bond in an amount equal to five percent (5%) of the amount of such bid proposal. Should the successful bidder fail to enter into such contract and furnish

satisfactory performance bond within the time stated in the specifications, the bid proposal deposit shall be forfeited to Cowlitz County.

All documents received in response to this invitation to bid will become a matter of public record and subject to the Washington public disclosure act under chapter 42.56 RCW.

Cowlitz County, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

The Board reserves the right to reject any and all bids and to waive any immaterial irregularities or informalities in any bid or in the bidding.

DATED this 18th day of March, 2025.

BOARD OF COUNTY COMMISSIONERS
OF COWLITZ COUNTY, WASHINGTON

Richard R. Dahl, Chairman

Absent - excused
Steve Rader, Commissioner

Steven L. Ferrell, Commissioner

BOARD OF COUNTY COMMISSIONERS
COWLITZ COUNTY
WASHINGTON
Cowlitz County

ATTEST:

Kelly Grayson, Clerk of the Board

BIDDER'S CHECKLIST

(Informational only – not required to be submitted with the BID)

ITALIAN CREEK ROAD CULVERT REPLACEMENT PROJECT

Name of Project

ITEMS TO BE INCLUDED WITH BID

The following checked items are required to be completed and submitted with the BID, except as noted otherwise:

Required if Checked:

☒ 1. PROPOSAL FORM – To be completed and signed by bidder. Provide all information pertaining to BIDDER'S organization on the first page. Fill in all unit prices and amounts for each bid item. Fill in all subtotals, sales tax and the total bid amount in the spaces provided. List the addenda in the spaces provided to indicate acknowledgement. Sign, date, and provide requested information in the spaces provided on the last page.

☐ 2. APPRENTICE UTILIZATION PLAN – In accordance with Special Provisions Section 1-07.9, this form shall be submitted within 30 calendar days of execution, however no later than the preconstruction meeting.

☒ 3. NON-COLLUSION DECLARATION – required on all projects.

☒ 4. PROPOSAL FOR INCORPORATING RECYCLED MATERIALS INTO THE PROJECT – required on all road construction projects.

☐ 5. CERTIFICATION FOR FEDERAL AID CONTRACTS – required on FHWA-funded projects.

☐ 6. DISADVANTAGED BUSINESS ENTERPRISE UTILIZATION CERTIFICATION – required on FHWA-funded projects with a goal of greater than 0%.

☐ 7. DISADVANTAGED BUSINESS ENTERPRISE (DBE) WRITTEN CONFIRMATION DOCUMENT – required on FHWA-funded projects with a goal of greater than 0%. This form is required to be submitted within 48 hours after the time for delivery of the bid proposal.

☐ 8. DISADVANTAGED BUSINESS ENTERPRISE (DBE) BID ITEM BREAKDOWN – required on FHWA-funded projects with a goal of greater than 0%. This form is required to be submitted within 48 hours after the time for delivery of the bid proposal.

☐ 9. DISADVANTAGED BUSINESS ENTERPRISE (DBE) TRUCKING CREDIT FORM – required on FHWA-funded projects with a goal of greater than 0%. This form is required to be submitted within 48 hours after the time for delivery of the bid proposal.

☐ 10. LOCAL AGENCY SUBCONTRACTOR LISTS – To be filled in and signed by BIDDER.

☐ 11. CONTRACTOR'S PROJECT INFORMATION STANDARD QUESTIONNAIRE - The BIDDER shall complete this form.

☒ 12. BID DEPOSIT FORM - This form is to be executed by the BIDDER and the Surety Company unless bid is accompanied by cash, cashier's check, or a certified check. The amount of the deposit or bid bond shall be not less than 5% of the total amount of the bid and may be shown in dollars or on a percentage basis. Bid Bond forms other than the enclosed form may be accepted providing it has been approved by the OWNER prior to bid submittal.

☒ 13. E-VERIFY DECLARATION – The BIDDER shall complete and sign this form.

☒ 14. CERTIFICATION OF COMPLIANCE WITH WAGE PAYMENT STATUTES – The BIDDER shall complete and sign this form. This form is required to be submitted within 24 hours after the time for delivery of the bid proposal.

☐ 15. BIDDER QUESTIONNAIRE – To be filled in and signed by BIDDER.

PROPOSAL FORM

TO: Board of County Commissioners
County Administration Building
207 Fourth Avenue North, 3rd Floor
Kelso, WA 98626

FOR: **ITALIAN CREEK ROAD CULVERT REPLACEMENT PROJECT**
Name of Project

FROM:

_____ Bidder's Business Name	_____ Mailing Address
_____ Email Address	_____ City, State and Zip
_____ Name of Bidder's Representative for Bid	_____ Telephone
_____ Washington Registration No.	_____ Tax I.D. No.
_____ Employment Security Department No.	_____ State Excise Tax Registration No.
_____ Industrial Insurance Coverage Account No.	_____ UBI No.

INSTRUCTIONS TO BIDDERS

1. Contract Documents. See Section 1-04.2 of the Special Provisions for a list of the "contract documents" that make up the contract. Be sure that you have a copy of the **2025** Standard Specifications for Road, Bridge, and Municipal Construction, by the Washington State Department of Transportation and the American Public Works Association, Washington State Chapter. Such specifications are sometimes referred to as the "Standard Specifications."

2. Submission of Bid. Fill out this Proposal Form completely, in accordance with Section 1-02.6 of the Standard Specifications. Enclose your Proposal Form and bid deposit in an opaque sealed envelope addressed to:

Cowlitz County Department of Public Works
Attn: County Engineer
1600 13th Avenue South
Kelso, WA 98626

Mark the outside of the envelope with the name of the bidder, the name of the project, and the date and time of the bid opening. It is your responsibility to make sure that your bid is physically received by the Clerk of the Board by the time set for the bid opening. Bids not so received will not be considered. Bids may not be submitted by facsimile machine.

The County's determination of when a bid was received shall be final and non-appealable.

3. Bidder Responsibility Standards. It is the intent of the Owner to award a contract to the lowest, responsible and responsive bidder for all described Work. Before award, the bidder must meet all criteria and satisfy all requirements of the following bidder-responsibility standards to be considered a responsible and a responsive bidder. The bidder may be required by the Owner to submit documentation demonstrating compliance with these standards to be qualified to be awarded a contract. The bidder must:

a. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of bid submittal;

b. Have a current Washington Unified Business Identifier (UBI) number;

c. If applicable:

   i. Have Industrial Insurance (workers' compensation) coverage for the bidder's employees working in Washington, as required in Title 51 RCW;

   ii. Have a Washington Employment Security Department number, as required in Title 50 RCW;

   iii. Have a Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;

d. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3).

4. Execution of Contract. The successful bidder must use the performance bond form and other forms provided by Cowlitz County to be considered both a responsible and responsive bidder.

5. Sales Tax Code. In computing and reporting sales taxes payable to the Washington State Department of Revenue on this project, the following code number shall be used: **0800**.

PROPOSAL

The undersigned bidder proposes to perform the project named above in strict compliance with the contract documents, for the following amounts:

Item No.	Approximate Quantity	ITEM	UNIT PRICE $	AMOUNT $
1	Force Account	Miscellaneous Construction	10,000.00	10,000.00
2	1 Hours	Replacement Staking Services	-100.00	-100.00
3	Lump Sum	Mobilization		
4	Lump Sum	Project Temporary Traffic Control		
5	Lump Sum	Clearing and Grubbing		
6	Lump Sum	Removal of Structures and Obstructions		
7	175 C.Y.	Roadway Excavation, Embankment and Disposal Including Haul		
8	50 C.Y.	Unsuitable Foundation Excavation Including Haul		
9	342 C.Y.	Structure Excavation Class A Including Haul		
10	Lump Sum	Shoring or Extra Excavation Class A		
11	Lump Sum	Trimming and Cleanup		
12	1,070 S.Y.	Construction Geotextile for Separation		
13	470 Ton	Structural Fill Including Haul		
14	250 Ton	Channel Fill Material Including Haul		
15	670 Ton	Crushed Surfacing Base Course		

Item No.	Approximate Quantity	ITEM	UNIT PRICE $	AMOUNT $
16	150 Ton	HMA Class 3/8 Inch PG 58H-22		
17	Calculation	Asphalt Cost Price Adjustment	0.00	0.00
18	18 C.Y.	Concrete Class 5000		
19	2,817 LBS	St. Reinf. Bar		
20	Lump Sum	Contractor Designed Buried Structure No. 1		
21	49 L.F.	Corrugated Polyethylene Storm Sewer Pipe, 12-inch Diameter		
22	0.10 Acre	Seeding And Mulching		
23	7 Each	Flexible Guide Posts		
24	75 L.F.	Beam Guardrail Type 31		
25	2 Each	Beam Guardrail Anchor Type 11		
26	2 Each	Beam Guardrail Non-Flared TL-2 Terminal		
27	1 Each	Mailbox Support, Type 2		
28	Lump Sum	Temporary Stream Diversion		
29	Lump Sum	Temporary Road		

TOTAL COST TO COWLITZ COUNTY .....$_____

Addenda. The bidder acknowledges receipt of the following addenda: _____, _____, _____, _____, and _____. (Insert numbers of any addenda received.)

Non-Collusion. Each bidder must submit a declaration of non-collusion completely executed with their bid. Reasonable grounds for believing that any bidder(s) have engaged, either directly or indirectly, into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with this bid will cause rejection of all proposals which said bidder(s) has shown interest, and none of the participants to such direct or indirect actions will be considered.

The person(s) signing this bid on behalf of the bidder declare(s) under penalty of perjury under the laws of the United States and the State of Washington that this bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with this bid.

_____	_____
Date	Signature of Person Authorized to Bind Bidder
_____	_____
Bidder's Business Name	Title of Person Signing Bid

Signed in _____, Washington

Failure to return this Declaration as part of the bid proposal package will make the bid nonresponsive and ineligible for award.

NON-COLLUSION DECLARATION

I, by signing the proposal, hereby declare, under penalty of perjury under the laws of the United States that the following statements are true and correct:

1. That the undersigned person(s), firm, association or corporation has (have) not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the project for which this proposal is submitted.

2. **That by signing the signature page of this proposal, I am deemed to have signed and to have agreed to the provisions of this declaration.**

NOTICE TO ALL BIDDERS

To report rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (USDOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of USDOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the USDOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

DOT Form 272-036I EF
07/2011

Proposal for Incorporating Recycled Materials into the Project

In compliance with a new law that went into effect January 1, 2016 (SHB1695), the Bidder shall propose below, the total percent of construction aggregate and concrete materials to be incorporated into the Project that are recycled materials. Calculated percentages must be within the amounts allowed in Section 9-03.21(1)E, Table on Maximum Allowable Percent (By Weight) of Recycled Material, of the Standard Specifications.

Proposed total percentage:_____percent.

Note: Use of recycled materials is highly encouraged within the limits shown above, but does not constitute a Bidder Preference, and will not affect the determination of award, unless two or more lowest responsive Bid totals are exactly equal, in which case proposed recycling percentages will be used as a tie-breaker, per the APWA GSP in Section 1-03.1 of the Special Provisions. Regardless, the Bidder's stated proposed percentages will become a goal the Contractor should do its best to accomplish. Bidders will be required to report on recycled materials actually incorporated into the Project, in accordance with the APWA GSP in Section 1-06.6 of the Special Provisions.

Bidder: _____

Signature of Authorized Official: _____

Date: _____

BID DEPOSIT FORM

ITALIAN CREEK ROAD CULVERT REPLACEMENT PROJECT
Name of Project

_____
Name of Bidder

The bidder named above hereby submits its bid deposit in the form of a certified check, cashier's check, cash or bid bond in the amount of $_____, which amount is not less than five (5) percent of the total bid.

PROPOSAL BOND

KNOW ALL MEN BY THESE PRESENTS, That we, _____, as Principal and _____, a corporation duly organized under the laws of the state of _____, and authorized to do business in the State of Washington, as Surety, are held and firmly bound unto Cowlitz County as Obligee, in the full and penal sum of five (5) percent of the total amount of the bid proposal of said Principal for the work hereinafter described, for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

The condition of this bond is such, that whereas the Principal herein is herewith submitting his or its sealed proposal for the following public works project, to wit:

Said bid and proposal, by reference thereto, being made a part hereof.

NOW, THEREFORE, If the said proposal bid by said Principal be accepted, and the contract be awarded to said Principal, and if the said Principal shall duly make and enter into and execute said contract and shall furnish bond as required by the contract documents within a period of ten (10) days from and after said award, exclusive of the day of such award, then this obligation shall be null and void, otherwise it shall be and remain in full force and effect.

SIGNED AND SEALED this _____ day of _____, 2025.

_____	_____
Name of Bidder	Name of Surety
_____	_____
Authorized Signature	Authorized Signature*
_____	_____
Title	Title
_____	
Date	*Attach Power of Attorney

E-VERIFY DECLARATION

ITALIAN CREEK ROAD CULVERT REPLACEMENT PROJECT
Cowlitz County Project No. 1323

Firm Name: _____

The undersigned declares, under **penalty of perjury** under the laws of Washington that:

1. That the above-named firm is currently enrolled in and using the E-Verify system implemented on October 25, 2011 as outlined in Resolution No. 11-118 and will continue to use the E-Verify system for so long as work is being performed on the above named project.

2. I certify that I am duly authorized to sign this declaration on behalf of the above-named bidder/proposer.

3. I acknowledge that Cowlitz County reserves the right to require a copy of the Memorandum of Understanding between the contractor listed above and the Department of Homeland Security certifying enrollment in the E-Verify program at any time. Failure to provide the required Memorandum of Understanding within 10 days of request could lead to suspension of this contract.

Dated at _____ , State of _____ on this _____ day of _____, 2025.

Signature _____

Printed Name _____

THIS PAGE MUST BE RETURNED WITH THE BID DOCUMENTS

COMPLIANCE WITH WAGE PAYMENT LAWS DECLARATION

ITALIAN CREEK ROAD CULVERT REPLACEMENT PROJECT
Cowlitz County Project No. 1323

Firm Name: _____

1. The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date of March 25, 2025, the bidder is not a "willful" violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction.

2. I certify that I am duly authorized to sign this declaration on behalf of the above-named bidder/proposer.

3. I acknowledge that Cowlitz County is required to receive this declaration as a condition to awarding the public works contract pursuant to RCW 39.04.350.

The undersigned declares, under penalty of perjury under the laws of Washington that the foregoing is true and correct.

Signed and dated at_____, in State of____, on this_____day of _____2025.

Signature _____

Printed Name _____

THIS PAGE MUST BE RETURNED BEFORE THE PUBLIC WORKS CONTRACT CAN BE AWARDED

AGREEMENT

THIS AGREEMENT is entered into between **COWLITZ COUNTY** and _____ _____ ("Contractor") for the following project: **ITALIAN CREEK ROAD CULVERT REPLACEMENT PROJECT** ("the Project").

The Parties Agree as Follows:

1. Acceptance of Bid Proposal. Cowlitz County accepts Contractor's bid proposal for the Project. Such acceptance is limited to the following items of the bid proposal: **1-29**.

2. Contractor to Accomplish Project. Contractor shall do all work and furnish all labor, materials, equipment, tools, services, and incidentals necessary to accomplish the Project in strict compliance with the contract documents.

3. Contract Amount. Cowlitz County shall pay Contractor in accordance with the contract documents, based on the unit prices and lump sums stated in the Proposal Form. The total contract amount for the Project shall not exceed **$**_____, including sales taxes.

4. Contract Documents. (a) This Agreement shall be governed by and incorporates by reference the **2025** Standard Specifications for Road, Bridge, and Municipal Construction, by the Washington State Department of Transportation and the American Public Works Association, Washington State Chapter (the "Standard Specifications"). All provisions of the Standard Specifications apply unless specifically modified herein. (b) The contract documents constitute the parties' entire and integrated agreement concerning the Project, and supersede all prior and contemporaneous negotiations, representations, or agreements, both written and oral.

5. Contractor Registration. By submitting a bid, each bidder warrants that it is currently a registered contractor in accordance with RCW 18.27. Continuous registration throughout the performance of the project is a requirement of the contract. The bidder shall promptly furnish proof of registration whenever requested.

6. Performance of Work. (a) The Contractor warrants that all work performed shall be free from defects in material and workmanship, shall conform to the contract documents, and shall be fit for Cowlitz County's intended purposes. If the Engineer determines that the work or any portion thereof fails to conform to the foregoing warranty, the Engineer shall give the Contractor written notice thereof and the Contractor shall then take corrective action as directed by the Engineer. The purpose of the corrective action will be to remedy all nonconforming work and any damage caused by the nonconforming work. The Contractor shall begin the repair or replacement within 10 days after receiving the notice and shall complete the work within such reasonable time as determined by the

Engineer. If the Contractor fails to carry out the corrective action as required by this section, Cowlitz County may perform the corrective action with its own resources or by contract, and the Contractor shall pay all the costs thereof.

(b) If other provisions of the contract documents contain different performance requirements, the more stringent requirements shall apply.

(c) No inspection, acceptance, use, or occupancy of the work, or payment for the work, shall relieve the Contractor from its responsibilities.

(d) The Contractor warrants good title to all materials, supplies, and equipment incorporated into the work.

7. Uniformity of Equipment and Materials. Like items of equipment and materials to be incorporated into the work shall be products of one manufacturer.

8. Substitution of "Equal" Products. Unless otherwise provided, any reference in the contract documents to any product by a brand name, model, or catalog number shall be understood as establishing a standard of quality, and products equal in quality may be substituted if approved in advance by the Engineer. If the Contractor wishes to propose a substitution, it shall submit a written proposal in a form approved by the County, warranting and guarantying the substitute product will be, including but not limited to, at least equal to or better than the specified product in terms of quality, function, performance, compatibility and reliability, to the Engineer, whose decision shall be final. The proposal shall identify the proposed substitute product, and the Contractor shall upon request and at its expense furnish the Engineer with such detailed specifications, test results, and other data as are helpful to the Engineer. The Engineer will not consider any proposed substitution if there is inadequate time available to fully evaluate the proposal. If the Engineer approves a substitution proposed by the Contractor, it is understood that such approval is in reliance upon the Contractor's written warranty and guaranty the substitute product to be, including but not limited to, at least equal to or better than the specified product in terms of quality, function, performance, compatibility and reliability. There will be no additional compensation or extensions to the time for completion. If the installation, application or performance of the substitute product is not equal to the specified product, the Engineer may direct the Contractor to remove the substitute product and replace it with the specified product, and to remedy any damage and delay caused by the use of the substitute product, all at the Contractor's expense. The County has a right to a deductive Change Order if the substituted product proves less costly than the contractually required product.

9. Utilities. The Contractor shall comply with the provisions of RCW 19.122, Standard Specification 1-07.17, and this paragraph. The telephone number of the Cowlitz County Utilities Coordinating Council is (800) 424-5555. The Special Provisions and/or contract plans identify all underground facilities known by Cowlitz County to be located within the area of excavation required as part of the work. Locations and dimensions shown in the Special Provisions or on the plans are in accordance with available information without uncovering, measuring, or other verification. If a utility

is known or suspected of having underground facilities within the area of the excavation, and that utility is not a subscriber to the Cowlitz County Utilities Coordinating Council, the Contractor shall give individual notice to that utility.

10. Prevailing Wages and E-Verify. The Contractor shall pay all fees required by the Department of Labor and Industries in connection with the administration of the prevailing wage requirements. No increase in prevailing wage rates or fringe benefits shall be grounds for any additional compensation to the Contractor.

Cowlitz County requires that all businesses which contract with the County for contracts awarded by formal competitive procedures be enrolled in the Federal E-Verify Program. The requirement extends to every subcontractor meeting the same criteria. The Prime Contractor must provide certification of enrollment with bid submittal. The Prime Contractor is responsible for verification of every applicable subcontractor. Cowlitz County reserves the right to require a copy of a Memorandum of Understanding between the Prime or any Subcontractor and Department of Homeland Security upon request at any time during the project verifying the contractor's enrollment. Failure to provide this document could result in suspension of the project.

A copy of Resolution No. 11-118 is available at the Offices of the Board of County Commissioners. Federal E-Verify Program is a web-based application that can be accessed at www.dhs.gov/everify.

11. Air Pollution Regulations. The Southwest Washington Air Pollution Control Authority has adopted regulations to control the emission of contaminants into the air by sources within the Authority's jurisdiction, which includes Cowlitz County. The Contractor shall comply with all regulations and orders of such Authority.

12. Shoring. If in the performance of this contract, the Contractor or any subcontractor excavates any trench to a depth in excess of four feet, the Contractor shall provide adequate safety systems for the trench excavation that comply with the requirements of the Washington Industrial Safety and Health Act, RCW 39.04.180, and with all regulations thereunder. The costs associated with such trench safety systems are set forth as a separate bid item on each bidder's proposal. The costs of such trench safety systems shall not be considered as incidental to any other contract item, and any attempt to include the trench safety systems as an incidental cost is prohibited.

13. Worker's Benefits. The following is added at the end of Standard Specification 1-07.10: Notwithstanding the provisions of the preceding paragraphs, Contractor shall remain at all times liable for payment of any and all premiums due under Title 50 or Title 51 RCW, or any other employee benefit act, with respect to all work performed by Contractor or any subcontractor pursuant to this contract. Contractor shall indemnify, defend and hold Cowlitz County harmless from and against any claim or demand for payment of such premiums. The Contractor's responsibilities under this section shall survive the termination or completion of the contract and/or any release of retainage with respect to

the contract. These waivers by the Contractor are a material inducement to County to enter into this contract, are reflected in Contractor's compensation, and have been mutually negotiated by the parties.

BOARD OF COUNTY COMMISSIONERS
OF COWLITZ COUNTY, WASHINGTON

_____	_____
Richard R. Dahl, Chairman	Name of Contractor
_____	_____
Steve Rader, Commissioner	Signatory Authorized by Firm Bylaws to Bind Contractor
_____	_____
Steven L. Ferrell, Commissioner	Title
ATTEST:	
_____	_____
Kelly Grayson, Clerk of the Board	Date
_____	_____
Date	Washington Contractor's Registration Number

APPROVED AS TO FORM:

_____
Civil Deputy Prosecuting Attorney

[Executed copies shall be delivered each to County, Contractor, Surety and Insurance Company]

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that the undersigned Contractor and Surety, a corporation, organized and existing under and by virtue of the laws of the State of Washington, are jointly and severally obligated to Cowlitz County, State of Washington, in the penal sum of $_____, for the payment of which sum we jointly and severally bind ourselves and our heirs, executors, administrators, and assigns, and successors and assigns, firmly in accordance with the following provisions:

The Contractor has entered into or is about to enter into a contract with Cowlitz County for the following project: **ITALIAN CREEK ROAD CULVERT REPLACEMENT PROJECT.**

Now, if the Contractor fully and timely performs all terms, conditions and requirements of the contract in all respects, including all warranty provisions; and pays all laborers, mechanics, subcontractors, and materialmen, and all persons who supply such person or persons, or subcontractors, with provisions and supplies for the above project; and defends and indemnifies Cowlitz County against any direct or indirect loss, damage, liability, judgments, and costs, to the extent required by the contract; then this obligation shall be void; otherwise it shall remain in full force and effect.

Provided, however, that the conditions of this obligation shall not apply to any money loaned or advanced to the Contractor or to any subcontractor or other person in the performance of any such work.

The Surety, for value received agrees that no change, extension of time, alteration or addition to the terms of the Contract, the specifications accompanying the Contract or to the work to be performed under the Contract shall in any way affect its obligation on this bond, and waives notice of any change, extension of time, alteration or addition to the terms of the Contract or the work performed. The Surety agrees that modifications and changes to the terms and conditions of the Contract that increase the total amount to be paid the Contractor shall automatically increase the obligation of the Surety on this bond and notice to Surety is not required for such increased obligation.

Any judgment against Cowlitz County that relates to or is covered by the contract, or this bond shall be conclusive against the Contractor and the Surety, not only as to the amount of damages but also as to their liability if reasonable notice of the pendency of the suit has been given.

_____	_____
Name of Contractor	Name of Surety
_____	_____
Authorized Signature	Authorized Signature*
_____	_____
Title	Title
_____	_____
Date	Date

*Attach Power of Attorney

INTRODUCTION TO THE SPECIAL PROVISIONS

(January 4, 2024 APWA GSP, Option A)

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction*, 2025 edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter "Standard Specifications"). The Standard Specifications, as modified or supplemented by these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.

These Special Provisions are made up of both General Special Provisions (GSPs) from various sources, which may have project-specific fill-ins; and project-specific Special Provisions. Each Provision either supplements, modifies, or replaces the comparable Standard Specification, or is a new Provision. The deletion, amendment, alteration, or addition to any subsection or portion of the Standard Specifications is meant to pertain only to that particular portion of the section, and in no way should it be interpreted that the balance of the section does not apply.

The GSPs are labeled under the headers of each GSP, with the effective date of the GSP and its source. For example:

(March 8, 2013 APWA GSP)
(April 1, 2013 WSDOT GSP)

Project specific special provisions are labeled without a date as such:
(*****)

Also incorporated into the Contract Documents by reference are:

- *Manual on Uniform Traffic Control Devices for Streets and Highways*, currently adopted edition, with Washington State modifications, if any
- *Standard Plans for Road, Bridge and Municipal Construction*, WSDOT Manual M21-01, current edition

Contractor shall obtain copies of these publications, at Contractor's own expense.

- DIVISION 1 -
GENERAL REQUIREMENTS

DESCRIPTION OF WORK
(March 13, 1995)

This contract provides for the improvement of *** Clearing and grubbing, construction of temporary roadway, roadway excavation, temporary creek diversion, removal of existing culvert, construction of cast-in-place concrete foundations, installation of precast reinforced concrete three-sided structure, roadway reconstruction, streambed reconstruction, seeding and mulching *** and other work, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications.

(******)
Appendices. The following appendices are hereby provided for the Contractor's information:

Appendix A – Topographic Survey
Appendix B – Geotechnical Report
Appendix C – HPA from Washington State Department of Fish and Wildlife
Appendix D – Nationwide Permit 14 from US Army Corps of Engineers
Appendix E – Critical Area Permit from Cowlitz County Department of Building and Planning
Appendix F – Applicable Standard Plans
Appendix G – Washington State Emergency Management Division - State and Federal Laws to be Observed

1-01.3 Definitions
(January 19, 2022 APWA GSP)

Delete the heading **Completion Dates** and the three paragraphs that follow it, and replace them with the following:

Dates

Bid Opening Date
The date on which the Contracting Agency publicly opens and reads the Bids.

Award Date
The date of the formal decision of the Contracting Agency to accept the lowest responsible and responsive Bidder for the Work.

Contract Execution Date
The date the Contracting Agency officially binds the Agency to the Contract.

Notice to Proceed Date
The date stated in the Notice to Proceed on which the Contract time begins.

Substantial Completion Date
The day the Engineer determines the Contracting Agency has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, any remaining traffic disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the Physical Completion of the total Contract.

Physical Completion Date
The day all of the Work is physically completed on the project. All documentation required by the Contract and required by law does not necessarily need to be furnished by the Contractor by this date.

Completion Date
The day all the Work specified in the Contract is completed and all the obligations of the Contractor under the contract are fulfilled by the Contractor. All documentation required by the Contract and required by law must be furnished by the Contractor before establishment of this date.

Final Acceptance Date
The date on which the Contracting Agency accepts the Work as complete.

Supplement this Section with the following:

All references in the Standard Specifications or WSDOT General Special Provisions, to the terms "Department of Transportation", "Washington State Transportation Commission", "Commission", "Secretary of Transportation", "Secretary", "Headquarters", and "State Treasurer" shall be revised to read "Contracting Agency".

All references to the terms "State" or "state" shall be revised to read "Contracting Agency" unless the reference is to an administrative agency of the State of Washington, a State statute or regulation, or the context reasonably indicates otherwise.

All references to "State Materials Laboratory" shall be revised to read "Contracting Agency designated location".

All references to "final contract voucher certification" shall be interpreted to mean the Contracting Agency form(s) by which final payment is authorized, and final completion and acceptance granted.

Additive
A supplemental unit of work or group of bid items, identified separately in the Bid Proposal, which may, at the discretion of the Contracting Agency, be awarded in addition to the base bid.

Alternate
One of two or more units of work or groups of bid items, identified separately in the Bid Proposal, from which the Contracting Agency may make a choice between different methods or material of construction for performing the same work.

Business Day
A business day is any day from Monday through Friday except holidays as listed in Section 1-08.5.

Contract Bond
The definition in the Standard Specifications for "Contract Bond" applies to whatever bond form(s) are required by the Contract Documents, which may be a combination of a Payment Bond and a Performance Bond.

Contract Documents
See definition for "Contract".

Contract Time
The period of time established by the terms and conditions of the Contract within which the Work must be physically completed.

Notice of Award
The written notice from the Contracting Agency to the successful Bidder signifying the Contracting Agency's acceptance of the Bid Proposal.

Notice to Proceed
The written notice from the Contracting Agency or Engineer to the Contractor authorizing and directing the Contractor to proceed with the Work and establishing the date on which the Contract time begins.

Traffic
Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and equestrian traffic.

(******)
"Contracting Agency" means Cowlitz County.

"Engineer" or "Project Engineer" means the Cowlitz County Engineer.

"Secretary" or "Secretary of Transportation" means the Board of County Commissioners of Cowlitz County.

"State" or "State of Washington" means Cowlitz County, except when referring to state departments other than the department of transportation, and except when referring to state publications, laws, etc.

1-02 BID PROCEDURES AND CONDITIONS

1-02.1 Prequalification of Bidders

Delete this Section and replace it with the following:

1-02.1 Qualifications of Bidder

(January 24, 2011 APWA GSP)

Before award of a public works contract, a bidder must meet at least the minimum qualifications of RCW 39.04.350(1) to be considered a responsible bidder and qualified to be awarded a public works project.

1-02.2 Plans and Specifications

(June 27, 2011 APWA GSP)

Delete this section and replace it with the following:

Information as to where Bid Documents can be obtained or reviewed can be found in the Call for Bids (Advertisement for Bids) for the work.

After award of the contract, plans and specifications will be issued to the Contractor at no cost as detailed below:

To Prime Contractor	No. of Sets	Basis of Distribution
Reduced plans (11" x 17")	2	Furnished automatically upon award.
Contract Provisions	2	Furnished automatically upon award.
Large plans (e.g., 22" x 34")	3	Furnished only upon request.

Additional plans and Contract Provisions may be obtained by the Contractor from the source stated in the Call for Bids, at the Contractor's own expense.

1-02.4(1) General

(December 30, 2022 APWA GSP Option B)

The first sentence of the ninth paragraph, beginning with "Prospective Bidder desiring...", is revised to read:

Prospective Bidders desiring an explanation or interpretation of the Bid Documents, shall request the explanation or interpretation in writing by close of business ***5*** business days preceding the bid opening to allow a written reply to reach all prospective Bidders before the submission of their Bids.

1-02.5 Proposal Forms

(November 25, 2024 APWA GSP)

Delete this section and replace it with the following:

The Proposal Form will identify the project and its location and describe the work. It will also list estimated quantities, units of measurement, the items of work, and the materials to be furnished at the unit bid prices. The bidder shall complete spaces on the proposal form that call for, but are not limited to, unit prices; extensions; summations; the total bid amount; signatures; date; and, where applicable, retail sales taxes and acknowledgment of addenda; the bidder's name, address, telephone number, and signature; the bidder's DBE commitment, if applicable; a State of Washington Contractor's Registration Number; and a Business License Number, if applicable. Bids shall be in legible figures (not words) written in ink or typed and expressed in U.S. dollars. The required certifications are included as part of the Proposal Form.

The Contracting Agency reserves the right to arrange the proposal forms with alternates and additives,

if such be to the advantage of the Contracting Agency. The bidder shall bid on all alternates and additives set forth in the Proposal Form unless otherwise specified.

1-02.6 Preparation of Proposal
Section 1-02.6 is supplemented with the following:

(November 20, 2023)
The fourth and fifth paragraphs of Section 1-02.6 are deleted.

1-02.6(1) Recycled Materials Proposal
(January 4, 2016 APWA GSP)

The Bidder shall submit with the Bid, its proposal for incorporating recycled materials into the project, using the form provided in the Contract Provisions.

1-02.9 Delivery of Proposal
(July 8, 2024 APWA GSP, Option A)

Delete this section and replace it with the following:

DBE DOCUMENT SUBMITTAL REQUIREMENTS

General
Each Proposal shall be submitted in a sealed envelope, with the Project Name and Project Number as stated in the Call for Bids clearly marked on the outside of the envelope, or as otherwise required in the Bid Documents, to ensure proper handling and delivery.

To be considered responsive on a FHWA-funded project, the Bidder may be required to submit the following items, as required by Section 1-02.6:

- DBE Utilization Certification (WSDOT 272-056)
- DBE Written Confirmation Document (WSDOT 422-031) from each DBE firm listed on the Bidder's completed DBE Utilization Certification
- Good Faith Effort (GFE) Documentation (if applicable)
- DBE Bid Item Breakdown (WSDOT 272-054)

Proposals that are received as required will be publicly opened and read as specified in Section 1-02.12. The Contracting Agency will not open or consider any Bid Proposal that is received after the time specified in the Call for Bids for receipt of Bid Proposals or received in a location other than that specified in the Call for Bids. The Contracting Agency will not open or consider any "Supplemental Information" (Written Confirmations Documents, or GFE Documentation) that is received after the time specified, or received in a location other than that specified in the Call for Bids.

If an emergency or unanticipated event interrupts normal work processes of the Contracting Agency so that Proposals cannot be received at the office designated for receipt of bids as specified in Section 1-02.12 the time specified for receipt of the Proposal will be deemed to be extended to the same time of

day specified in the solicitation on the first work day on which the normal work processes of the Contracting Agency resume.

Supplemental bid information submitted after the Proposal submittal but within 48 hours of the time specified for receipt of Proposals, shall be submitted in a sealed envelope labeled the same as for the Proposal, with "Supplemental Information" added.

DBE Utilization Certification (WSDOT Form 272-056)
The DBE Utilization Certification shall be received at the same location and no later than the time required for delivery of the Proposal. The Contracting Agency will not open or consider any Proposal when the DBE Utilization Certification is received after the time specified for receipt of Proposals or received in a location other than that specified for receipt of Proposals. The DBE Utilization Certification may be submitted in the same envelope as the Bid deposit.

DBE Written Confirmation Document (WSDOT Form 422-031) and/or GFE Documentation, (if applicable)
The DBE Written Confirmation Documents and/or GFE Documentation are not required to be submitted with the Proposal. The DBE Written Confirmation Document(s) and/or GFE Documentation (if applicable) shall be received either with the Bid Proposal or as a Supplement to the Bid. Written Confirmation and/or GFE Documentation shall be received no later than 48 hours (not including Saturdays, Sundays and Holidays) after the time for delivery of the Proposal. To be considered responsive, Bidders shall submit a Written Confirmation Document from each DBE firm listed on the Bidder's completed DBE Utilization Certification and/or the GFE Documentation as required by Section 1-02.6.

DBE Bid Item Breakdown Form (WSDOT Form 272-54)
The DBE Bid Item Breakdown shall be received either with the Bid Proposal or as a Supplement to the Bid. The documents shall be received no later than 48 hours (not including Saturdays, Sundays and Holidays) after the time for delivery of the Proposal. To be considered responsive, Bidders shall submit a completed DBE Bid Item Breakdown, however, the Contractor may correct minor errors to the DBE Bid Item Breakdown for a period up to five calendar days after bid opening (not including Saturdays, Sundays and Holidays). DBE Bid Item Breakdowns that are still incorrect after the correction period will be determined to be non-responsive.

The DBE Bid Item Breakdown will not be included as part of the executed Contract.

1-02.10 Withdrawing, Revising, or Supplementing Proposal
(July 23, 2015 APWA GSP)

Delete this section, and replace it with the following:

After submitting a physical Bid Proposal to the Contracting Agency, the Bidder may withdraw, revise, or supplement it if:

1. The Bidder submits a written request signed by an authorized person and physically delivers it to the place designated for receipt of Bid Proposals, and

2. The Contracting Agency receives the request before the time set for receipt of Bid Proposals, and
3. The revised or supplemented Bid Proposal (if any) is received by the Contracting Agency before the time set for receipt of Bid Proposals.

If the Bidder's request to withdraw, revise, or supplement its Bid Proposal is received before the time set for receipt of Bid Proposals, the Contracting Agency will return the unopened Proposal package to the Bidder. The Bidder must then submit the revised or supplemented package in its entirety. If the Bidder does not submit a revised or supplemented package, then its bid shall be considered withdrawn.

Late revised or supplemented Bid Proposals or late withdrawal requests will be date recorded by the Contracting Agency and returned unopened. Mailed, emailed, or faxed requests to withdraw, revise, or supplement a Bid Proposal are not acceptable.

(*******)

1-02.12 Public Opening of Proposal

Section 1-02.12 is supplemented with the following:

Date Of Opening Bids

Sealed bids are to be received at the following location prior to the time specified in the CALL FOR BIDS:

Cowlitz County Department of Public Works
Attn: County Engineer
1600 13th Avenue South
Kelso, WA 98626

1-02.13 Irregular Proposals

(September 3, 2024 APWA GSP)

Delete this section and replace it with the following:

1. A Proposal will be considered irregular and will be rejected if:

    a. The Bidder is not prequalified when so required;
    b. The Bidder adds provisions reserving the right to reject or accept the Award, or enter into the Contract;
    c. A price per unit cannot be determined from the Bid Proposal;
    d. The Proposal form is not properly executed;
    e. The Bidder fails to submit or properly complete a subcontractor list (WSDOT Form 271-015), if applicable, as required in Section 1-02.6;
    f. The Bidder fails to submit or properly complete a Disadvantaged Business Enterprise Certification (WSDOT Form 272-056), if applicable, as required in Section 1-02.6;
    g. The Bidder fails to submit Written Confirmations (WSDOT Form 422-031) from each DBE firm listed on the Bidder's completed DBE Utilization Certification that they are in agreement with the bidder's DBE participation commitment, if applicable, as required in Section 1-02.6, or if

the written confirmation that is submitted fails to meet the requirements of the Special Provisions;

h. The Bidder fails to submit DBE Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award in accordance with Section 1-07.11;
i. The Bidder fails to submit a DBE Bid Item Breakdown (WSDOT Form 272-054), if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
j. The Bidder fails to submit the Bidder Questionnaire (DOT Form 272-022), if applicable as required by Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions; or
k. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation.

2. A Proposal may be considered irregular and may be rejected if:

a. The Proposal does not include a unit price for every Bid item;
b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the Contracting Agency;
c. The authorized Proposal Form furnished by the Contracting Agency is not used or is altered;
d. The completed Proposal form contains unauthorized additions, deletions, alternate Bids, or conditions;
e. Receipt of Addenda is not acknowledged;
f. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or
g. If Proposal form entries are not made in ink.

1-02.14 Disqualification of Bidders
(May 17, 2018 APWA GSP, Option A)

Delete this section and replace it with the following:

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended.

The Contracting Agency will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1). To assess bidder responsibility, the Contracting Agency reserves the right to request documentation as needed from the Bidder and third parties concerning the Bidder's compliance with the mandatory bidder responsibility criteria.

If the Contracting Agency determines the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1) and is therefore not a responsible Bidder, the Contracting Agency shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees with this determination, it may appeal the determination within two (2) business days of the Contracting Agency's determination by presenting its appeal and any additional information to the Contracting Agency. The Contracting Agency will consider the appeal and any additional information before issuing

its final determination. If the final determination affirms that the Bidder is not responsible, the Contracting Agency will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the Contracting Agency's final determination.

1-02.15 Pre-Award Information

(December 30, 2022 APWA GSP)

Revise this section to read:

Before awarding any contract, the Contracting Agency may require one or more of these items or actions of the apparent lowest responsible bidder:

1. A complete statement of the origin, composition, and manufacture of any or all materials to be used,
2. Samples of these materials for quality and fitness tests,
3. A progress schedule (in a form the Contracting Agency requires) showing the order of and time required for the various phases of the work,
4. A breakdown of costs assigned to any bid item,
5. Attendance at a conference with the Engineer or representatives of the Engineer,
6. Obtain, and furnish a copy of, a business license to do business in the city or county where the work is located.
7. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

1-03 AWARD AND EXECUTION OF CONTRACT

1-03.1 Consideration of Bids

(December 30, 2022 APWA GSP)

Revise the first paragraph to read:

After opening and reading proposals, the Contracting Agency will check them for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit will control. If a minimum bid amount has been established for any item and the bidder's unit or lump sum price is less than the minimum specified amount, the Contracting Agency will unilaterally revise the unit or lump sum price, to the minimum specified amount and recalculate the extension. The total of extensions, corrected where necessary, including sales taxes where applicable and such additives and/or alternates as selected by the Contracting Agency, will be used by the Contracting Agency for award purposes and to fix the Awarded Contract Price amount and the amount of the contract bond.

1-03.1(1) Identical Bid Totals
(December 30, 2022 APWA GSP)

Revise this section to read:

After opening Bids, if two or more lowest responsive Bid totals are exactly equal, then the tie-breaker will be the Bidder with an equal lowest bid, that proposed to use the highest percentage of recycled materials in the Project, per the form submitted with the Bid Proposal. If those percentages are also exactly equal, then the tie-breaker will be determined by drawing as follows: Two or more slips of paper will be marked as follows: one marked "Winner" and the other(s) marked "unsuccessful". The slips will be folded to make the marking unseen. The slips will be placed inside a box. One authorized representative of each Bidder shall draw a slip from the box. Bidders shall draw in alphabetic order by the name of the firm as registered with the Washington State Department of Licensing. The slips shall be unfolded and the firm with the slip marked "Winner" will be determined to be the successful Bidder and eligible for Award of the Contract. Only those Bidders who submitted a Bid total that is exactly equal to the lowest responsive Bid, and with a proposed recycled materials percentage that is exactly equal to the highest proposed recycled materials amount, are eligible to draw.

1-03.3 Execution of Contract
(January 4, 2024 APWA GSP Option B)

Revise this section to read:

Within 3 calendar days of Award date (not including Saturdays, Sundays and Holidays), the successful Bidder shall provide the information necessary to execute the Contract to the Contracting Agency. The Bidder shall send the contact information, including the full name, email address, and phone number, for the authorized signer and bonding agent to the Contracting Agency.

Copies of the Contract Provisions, including the unsigned Form of Contract, will be available for signature by the successful bidder on the first business day following award. The number of copies to be executed by the Contractor will be determined by the Contracting Agency.

Within 10 calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract, an insurance certification as required by Section 1-07.18, a satisfactory bond as required by law and Section 1-03.4, the Transfer of Coverage form for the Construction Stormwater General Permit with sections I, III, and VIII completed when provided. Before execution of the contract by the Contracting Agency, the successful bidder shall provide any pre-award information the Contracting Agency may require under Section 1-02.15.

Until the Contracting Agency executes a contract, no proposal shall bind the Contracting Agency nor shall any work begin within the project limits or within Contracting Agency-furnished sites. The Contractor shall bear all risks for any work begun outside such areas and for any materials ordered before the contract is executed by the Contracting Agency.

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within the calendar days after the award date stated above, the Contracting Agency may

grant up to a maximum of 10 additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.

1-03.4 Contract Bond

(July 23, 2015 APWA GSP)

Delete the first paragraph and replace it with the following:

The successful bidder shall provide executed payment and performance bond(s) for the full contract amount. The bond may be a combined payment and performance bond; or be separate payment and performance bonds. In the case of separate payment and performance bonds, each shall be for the full contract amount. The bond(s) shall:

1. Be on Contracting Agency-furnished form(s);
2. Be signed by an approved surety (or sureties) that:
   a. Is registered with the Washington State Insurance Commissioner, and
   b. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner,
3. Guarantee that the Contractor will perform and comply with all obligations, duties, and conditions under the Contract, including but not limited to the duty and obligation to indemnify, defend, and protect the Contracting Agency against all losses and claims related directly or indirectly from any failure:
   a. Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with all contract obligations, conditions, and duties, or
   b. Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;
4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under titles 50, 51, and 82 RCW; and
5. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond; and
6. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond(s) must be signed by the president or vice president, unless accompanied by written proof of the authority of the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).

1-03.7 Judicial Review

(December 30, 2022 APWA GSP)

Revise this section to read:

All decisions made by the Contracting Agency regarding the Award and execution of the Contract or Bid rejection shall be conclusive subject to the scope of judicial review permitted under Washington Law.

Such review, if any, shall be timely filed in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction.

1-04 SCOPE OF THE WORK

1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications, and Addenda

(December 30, 2022 APWA GSP)

Revise the second paragraph to read:

Any inconsistency in the parts of the contract shall be resolved by following this order of precedence (e.g., 1 presiding over 2, 2 over 3, 3 over 4, and so forth):

1. Addenda,
2. Proposal Form,
3. Special Provisions,
4. Contract Plans,
5. Standard Specifications,
6. Contracting Agency's Standard Plans or Details (if any), and
7. WSDOT Standard Plans for Road, Bridge, and Municipal Construction.

(*******)

Interpretation of Contract Documents. The Contractor shall provide any work or materials clearly implied in the contract even if the contract documents do not mention it specifically. If the contract documents use words that are not defined therein but have a commonly accepted technical or trade meaning, the words shall be understood in accordance with that meaning.

1-04.4 Changes

(January 19, 2022 APWA GSP)

The first two sentences of the last paragraph of Section 1-04.4 are deleted.

1-05 CONTROL OF WORK

1-05.1 Authority of The Engineer

Section 1-05.1 is supplemented with the following:

(*******)

Additional Directions from Engineer. If the Engineer determines that the provisions in the contract documents are not sufficiently clear to permit the Contractor to proceed with the work, the Engineer shall, either on his own or upon written request from the Contractor, furnish such additional written directions as he deems appropriate. When the Contractor makes such a request, it must do so in writing and must allow ample time to permit the Engineer to review the request and prepare any additional directions before the Contractor begins any work affected by the request. Any additional directions issued by the Engineer shall not be inconsistent with the contract documents and shall have the same force and effect as if contained in the contract documents.

1-05.3 Plans and Working Drawings

Section 1-05.3 is supplemented with the following:

Shop Drawings. The Contractor shall submit five copies of all shop drawings and samples to the Engineer for review and approval in accordance with the schedule of shop drawing submissions approved at the Pre-Construction Conference. Contractor shall check and verify all field measurements prior to submitting shop drawings to Engineer for review and approval, shop drawings shall have been checked by and stamped with the approval of the Contractor and identified as the Engineer may require. The data shown on the Shop Drawings will be complete with respect to dimensions, design criteria, material or construction and like information to enable the Engineer to review the information as required.

At the time of each submission, the Contractor shall, in writing, call the Engineer's attention to any deviations that the Shop Drawings or Samples may have from the requirements of the Contract Documents.

The Engineer will review and approve with reasonable promptness shop drawings and samples, but the Engineer's review and approval shall be only for conformance with the design concept of the Project and for compliance with the information given in the Contact Documents and shall not extend to means, methods, sequences, techniques or procedures of construction or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. The Contractor shall make any corrections required by the Engineer and shall return the required number of corrected copies of shop drawing and resubmit new samples for review and approval. The Contractor shall direct specific attention, in writing, to revisions other than the corrections called for by the Engineer on previous submittals. The Contractor's stamp of approval on any shop drawings or samples shall constitute a representation to Owner and Engineer that Contractor has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data or assumes full responsibility for doing so, and that the Contractor has reviewed or coordinated each shop drawing or sample with the requirements of the work and the Contract Documents.

Where a shop drawing or sample is required by the Specifications, no related work shall be commenced until the submittal has been reviewed and approved by the Engineer.

The Engineer's review and approval of shop drawings or samples shall not relieve the Contractor from responsibility for any deviations from the Contract Documents unless the Contractor has, in writing, called the Engineer's attention to such deviation at the time of submission and the Engineer has given written concurrence and approval to the specific deviation, nor shall any concurrence or approval by the Engineer relieve the Contractor from responsibility for errors or omissions in the shop drawings.

The following is a list of products and materials for which the Contractor shall submit shop drawings or samples. The list may not be inclusive and is subject to revision by the Engineer and Owner.

1.) Steel Reinforcing Bar
2.) Precast Reinf. Conc. Three-Sided Structure, 14-foot Span

1-05.4 Conformity With And Deviations From Plans And Stakes

Section 1-05.4 is supplemented with the following:

(*******)

The Contracting Agency will provide construction surveying following a written request by the Contractor. The Contractor shall prepare the project site as necessary to accommodate the survey operations. This includes clearing and grubbing, and any excavation or placement of fill materials necessary for the stakes to be placed at the correct elevations. If the Contracting Agency's survey personnel arrive at the project site and the site has not been adequately prepared for the specific surveying task, the survey request will be denied and returned to the Contractor. The Contracting Agency will not provide the requested surveying services until a new request has been submitted by the Contractor.

The Contractor shall provide sufficient, safe and adequate space for the surveyors to set points and elevations and shall use caution whenever it is necessary to have equipment working at the same time and the same vicinity as the Contracting Agency's survey personnel. If the Engineer determines that sufficient, safe and adequate space is not provided, then survey personnel may be withdrawn until corrective action is taken by the Contractor to the satisfaction of the Engineer.

The Contractor shall assume full responsibility for the interpretation and measurements from the stakes, hubs or marks. If the Contractor notices any discrepancies in line or grade, the Contractor shall bring them to the immediate attention of the Engineer, prior to constructing the affected work

Replacement Staking Services

If at any time the Contracting Agency is required to replace survey staking previously done by the Contracting Agency, the Contractor shall bear the expense. The Contractor shall be charged by the hour at the rate set in the bid proposal form for each hour that the replacement staking requires.

Measurement

Replacement staking services shall be measured by the whole hour rounded up for any partial hour. The time for determining the hour charges will be from the time the Contracting Agency's personnel leave their current work until they return to that work at the same point as the departure.

Payment

"Replacement Staking Services", per hour, will be deducted off the regular and final progress payments at the rate per hour shown in the bid proposal form.

Add the following two new sub-sections (revise to singular if only adding one of the following subsections):

1-05.4 Conformity With and Deviations from Plans and Stakes

Supplement this section with the following:

Roadway and Utility Surveys

(November 25, 2024 APWA GSP, Option A)

The Engineer shall furnish to the Contractor one time only all principal lines, grades, and measurements the Engineer deems necessary for completion of the work. These shall generally consist of one initial set of:

1. Slope stakes for establishing grading;
2. Curb grade stakes;
3. Centerline finish grade stakes for pavement sections wider than 25 feet; and
4. Offset points to establish line and grade for underground utilities such as water, sewers, and storm drains.

On alley construction projects with minor grade changes, the Engineer shall provide only offset hubs on one side of the alley to establish the alignment and grade.

1-05.7 Removal of Defective and Unauthorized Work

(October 1, 2005 APWA GSP)

Supplement this section with the following:

If the Contractor fails to remedy defective or unauthorized work within the time specified in a written notice from the Engineer or fails to perform any part of the work required by the Contract Documents, the Engineer may correct and remedy such work as may be identified in the written notice, with Contracting Agency forces or by such other means as the Contracting Agency may deem necessary.

If the Contractor fails to comply with a written order to remedy what the Engineer determines to be an emergency situation, the Engineer may have the defective and unauthorized work corrected immediately, have the rejected work removed and replaced, or have work the Contractor refuses to perform completed by using Contracting Agency or other forces. An emergency situation is any situation when, in the opinion of the Engineer, a delay in its remedy could be potentially unsafe, or might cause serious risk of loss or damage to the public.

Direct or indirect costs incurred by the Contracting Agency attributable to correcting and remedying defective or unauthorized work, or work the Contractor failed or refused to perform, shall be paid by the Contractor. Payment will be deducted by the Engineer from monies due, or to become due, the Contractor. Such direct and indirect costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of the Contractor's unauthorized work.

No adjustment in contract time or compensation will be allowed because of the delay in the performance of the work attributable to the exercise of the Contracting Agency's rights provided by this Section.

The rights exercised under the provisions of this section shall not diminish the Contracting Agency's right to pursue any other avenue for additional remedy or damages with respect to the Contractor's failure to perform the work as required.

1-05.11 Final Inspection
Delete this section and replace it with the following:

1-05.11 Final Inspections and Operational Testing
(October 1, 2005 APWA GSP)

1-05.11(1) Substantial Completion Date

When the Contractor considers the work to be substantially complete, the Contractor shall so notify the Engineer and request the Engineer establish the Substantial Completion Date. The Contractor's request shall list the specific items of work that remain to be completed in order to reach physical completion. The Engineer will schedule an inspection of the work with the Contractor to determine the status of completion. The Engineer may also establish the Substantial Completion Date unilaterally.

If, after this inspection, the Engineer concurs with the Contractor that the work is substantially complete and ready for its intended use, the Engineer, by written notice to the Contractor, will set the Substantial Completion Date. If, after this inspection the Engineer does not consider the work substantially complete and ready for its intended use, the Engineer will, by written notice, so notify the Contractor giving the reasons, therefore.

Upon receipt of written notice concurring in or denying substantial completion, whichever is applicable, the Contractor shall pursue vigorously, diligently and without unauthorized interruption, the work necessary to reach Substantial and Physical Completion. The Contractor shall provide the Engineer with a revised schedule indicating when the Contractor expects to reach substantial and physical completion of the work.

The above process shall be repeated until the Engineer establishes the Substantial Completion Date and the Contractor considers the work physically complete and ready for final inspection.

1-05.11(2) Final Inspection and Physical Completion Date

When the Contractor considers the work physically complete and ready for final inspection, the Contractor by written notice, shall request the Engineer to schedule a final inspection. The Engineer will set a date for final inspection. The Engineer and the Contractor will then make a final inspection and the Engineer will notify the Contractor in writing of all particulars in which the final inspection reveals the work incomplete or unacceptable. The Contractor shall immediately take such corrective measures as are necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously, diligently, and without interruption until physical completion of the listed deficiencies. This process will continue until the Engineer is satisfied the listed deficiencies have been corrected.

If action to correct the listed deficiencies is not initiated within 7 days after receipt of the written notice listing the deficiencies, the Engineer may, upon written notice to the Contractor, take whatever steps are necessary to correct those deficiencies pursuant to Section 1-05.7.

The Contractor will not be allowed an extension of contract time because of a delay in the performance of the work attributable to the exercise of the Engineer's right hereunder.

Upon correction of all deficiencies, the Engineer will notify the Contractor and the Contracting Agency, in writing, of the date upon which the work was considered physically complete. That date shall constitute the Physical Completion Date of the contract but shall not imply acceptance of the work or that all the obligations of the Contractor under the contract have been fulfilled.

1-05.11(3) Operational Testing

It is the intent of the Contracting Agency to have at the Physical Completion Date a complete and operable system. Therefore, when the work involves the installation of machinery or other mechanical equipment; street lighting, electrical distribution or signal systems; irrigation systems; buildings; or other similar work it may be desirable for the Engineer to have the Contractor operate and test the work for a period of time after final inspection but prior to the physical completion date. Whenever items of work are listed in the Contract Provisions for operational testing, they shall be fully tested under operating conditions for the time period specified to ensure their acceptability prior to the Physical Completion Date. During and following the test period, the Contractor shall correct any items of workmanship, materials, or equipment which prove faulty, or that are not in first class operating condition. Equipment, electrical controls, meters, or other devices and equipment to be tested during this period shall be tested under the observation of the Engineer, so that the Engineer may determine their suitability for the purpose for which they were installed. The Physical Completion Date cannot be established until testing and corrections have been completed to the satisfaction of the Engineer.

The costs for power, gas, labor, material, supplies, and everything else needed to successfully complete operational testing, shall be included in the unit contract prices related to the system being tested, unless specifically set forth otherwise in the proposal.

Operational and test periods, when required by the Engineer, shall not affect a manufacturer's guaranties or warranties furnished under the terms of the contract.

1-05.13 Superintendents, Labor and Equipment of Contractor
(August 14, 2013 APWA GSP)

Delete the sixth and seventh paragraphs of this section.

Add the following new section:

1-05.16 Water and Power
(October 1, 2005 APWA GSP)

The Contractor shall make necessary arrangements and shall bear the costs for power and water necessary for the performance of the work, unless the contract includes power and water as a pay item.

1-06 CONTROL OF MATERIAL

1-06.6 Recycled Materials

(January 4, 2016 APWA GSP)

Delete this section, including its subsections, and replace it with the following:

The Contractor shall make their best effort to utilize recycled materials in the construction of the project. Approval of such material use shall be as detailed elsewhere in the Standard Specifications.

Prior to Physical Completion the Contractor shall report the quantity of recycled materials that were utilized in the construction of the project for each of the items listed in Section 9-03.21. The report shall include hot mix asphalt, recycled concrete aggregate, recycled glass, steel furnace slag and other recycled materials (e.g. utilization of on-site material and aggregates from concrete returned to the supplier). The Contractor's report shall be provided on DOT form 350-075 Recycled Materials Reporting.

1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

1-07.1 Laws To Be Observed

Section 1-07.1 is supplemented with the following:

(October 1, 2005 APWA GSP)

Supplement this section with the following:

In cases of conflict between different safety regulations, the more stringent regulation shall apply.

The Washington State Department of Labor and Industries shall be the sole and paramount administrative agency responsible for the administration of the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA).

The Contractor shall maintain at the project site office, or other well-known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor's care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care.

The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of the Contractor's plant, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the project site, including safety for all persons and property in the performance of the work. This requirement shall apply continuously, and not be limited to normal working hours. The required or implied duty of the Engineer to conduct construction review of the Contractor's performance does not, and shall not, be intended to include review and adequacy of the Contractor's safety measures in, on, or near the project site.

1-07.2 State Sales Tax
Delete this section, including its sub-sections, in its entirety and replace it with the following:

1-07.2 State Sales Tax
(June 27, 2011 APWA GSP)

The Washington State Department of Revenue has issued special rules on the State sales tax. Sections 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The Contractor should contact the Washington State Department of Revenue for answers to questions in this area. The Contracting Agency will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Section 1-07.2(2) describes this exception.

The Contracting Agency will pay the retained percentage (or release the Contract Bond if a FHWA-funded Project) only if the Contractor has obtained from the Washington State Department of Revenue a certificate showing that all contract-related taxes have been paid (RCW 60.28.051). The Contracting Agency may deduct from its payments to the Contractor any amount the Contractor may owe the Washington State Department of Revenue, whether the amount owed relates to this contract or not. Any amount so deducted will be paid into the proper State fund.

1-07.2(1) State Sales Tax — Rule 171

WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work.

1-07.2(2) State Sales Tax — Rule 170

WAC 458-20-170, and its related rules, apply to the constructing and repairing of new or existing buildings, or other structures, upon real property. This includes, but is not limited to, the construction of streets, roads, highways, etc., owned by the state of Washington; water mains and their appurtenances; sanitary sewers and sewage disposal systems unless such sewers and disposal systems are within, and a part of, a street or road drainage system; telephone, telegraph, electrical power distribution lines, or other conduits or lines in or above streets or roads, unless such power lines become a part of a street or road lighting system; and installing or attaching of any article of tangible personal property in or to real property, whether or not such personal property becomes a part of the realty by virtue of installation.

For work performed in such cases, the Contractor shall collect from the Contracting Agency, retail sales tax on the full contract price. The Contracting Agency will automatically add this sales tax to each payment to the Contractor. For this reason, the Contractor shall not include the retail sales tax in the unit bid item prices, or in any other contract amount subject to Rule 170, with the following exception.

Exception: The Contracting Agency will not add in sales tax for a payment the Contractor or a subcontractor makes on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project. Such sales taxes shall be included in the unit bid item prices or in any other contract amount.

1-07.2(3) Services

The Contractor shall not collect retail sales tax from the Contracting Agency on any contract wholly for professional or other services (as defined in Washington State Department of Revenue Rules 138 and 244).

1-07.3(2) Merchantable Timber Requirements
(April 7, 2008)

Section 1-07.3(2) is supplemented with the following:

This project contains merchantable timber.

Export Restrictions - DOT Form 410-100, Purchaser Certification for Export Restricted Timber, will be included when the contract is sent to the Contractor for execution. The form shall be completed and signed by the Contractor. The Contractor shall send the original signed form and one copy of the signed form directly to the Washington State Department of Revenue at the address on the form. The Contractor shall send one signed copy along with the other documents required by Section 1-03.3 to the Contracting Agency with the executed contract.

State Tax Requirements - It shall be the Contractor's responsibility to pay to the State Department of Revenue all taxes on harvested timber.

1-07.6 Permits and Licenses
Section 1-07.6 is supplemented with the following:

(*******)
The Contracting Agency has obtained the below-listed permit(s) for this project. A copy of the permit(s) is attached as an appendix for informational purposes. All contacts with the permitting agency concerning the below-listed permit(s) shall be through the Engineer. The Contractor shall obtain additional permits as necessary. All costs to obtain and comply with additional permits shall be included in the applicable bid items for the work involved. Copies of these permits are required to be onsite at all times.

*** HPA from Washington Department of Fish and Wildlife
Nationwide Permit 14 from the U.S. Army Corps of Engineers
Critical Area Permit from the Cowlitz County Department of Building and Planning ***

1-07.7 Load Limits
Section 1-07.7 is supplemented with the following:

(March 13, 1995)
If the sources of materials provided by the Contractor necessitates hauling over roads other than State Highways, the Contractor shall, at the Contractor's expense, make all arrangements for the use of the haul routes.

1-07.8 High-Visibility Apparel
The third and fourth paragraphs of Section 1-07.8 are revised to read:

(November 4, 2024)
High-visibility garments shall always be the outermost garments worn in a manner to ensure 360 degrees of uninterrupted background and retroreflective material encircling the torso.

High-visibility garments shall be labeled as, and in a condition compliant with the ANSI/ISEA 107-2015 publication entitled "American National Standard for High-Visibility Safety Apparel and Accessories," or equivalent revisions.

1-07.13 Contractor's Responsibility for Work

(*******)
1-07.13(4) Repair of Damage
Section 1-07.13(4) is revised to read:

The Contractor shall promptly repair all damage to either temporary or permanent work as directed by the Engineer. For damage qualifying for relief under Sections 1-07.13(1), 1-07.13(2) or 1-07.13(3), payment will be made in accordance with Section 1-04.4. Payment will be limited to repair of damaged work only. No payment will be made for delay or disruption of work.

(*******)
1-07.14 Responsibility for Damage
Section 1-07.14 is supplemented with the following:

Indemnification. References in Standard Specification 1-07.14 to the Contractor's "agents" shall be understood to include the Contractor's subcontractors. The Contractor's responsibilities under Standard Specification 1-07.14 shall survive the termination or completion of the contract.

Utilities and Similar Facilities
Section 1-07.17 is supplemented with the following:

(April 2, 2007)
Locations and dimensions shown in the Plans for existing facilities are in accordance with available information obtained without uncovering, measuring, or other verification.

The following addresses and telephone numbers of utility companies known or suspected of having facilities within the project limits are supplied for the Contractor's convenience:

**Power:	Cowlitz Public Utility District 961 12th Avenue Longview, Washington 98632 (360) 577-7546
Telephone:	Kalama Telephone PO Box 1068 Kalama, Washington 98625 (360) 673-2764

1-07.18 Public Liability and Property Damage Insurance
Delete this section in its entirety, and replace it with the following:

1-07.18 Insurance
(January 4, 2024 APWA GSP)

1-07.18(1) General Requirements

A. The Contractor shall procure and maintain the insurance described in all subsections of section 1-07.18 of these Special Provisions, from insurers with a current A. M. Best rating of not less than A-: VII and licensed to do business in the State of Washington. The Contracting Agency reserves the right to approve or reject the insurance provided, based on the insurer's financial condition.

B. The Contractor shall keep this insurance in force without interruption from the commencement of the Contractor's Work through the term of the Contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated below.

C. If any insurance policy is written on a claims-made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract. The policy shall state that coverage is claims made and state the retroactive date. Claims-made form coverage shall be maintained by the Contractor for a minimum of 36 months following the Completion Date or earlier termination of this Contract, and the Contractor shall annually provide the Contracting Agency with proof of renewal. If renewal of the claims made form of coverage becomes unavailable, or economically prohibitive, the Contractor shall purchase an extended reporting period ("tail") or execute another form of guarantee acceptable to the Contracting Agency to assure financial responsibility for liability for services performed.

D. The Contractor's Automobile Liability, Commercial General Liability and Excess or Umbrella Liability insurance policies shall be primary and non-contributory insurance as respects the Contracting Agency's insurance, self-insurance, or self-insured pool coverage. Any insurance, self-insurance, or self-insured pool coverage maintained by the Contracting Agency shall be excess of the Contractor's insurance and shall not contribute with it.

E. The Contractor shall provide the Contracting Agency and all additional insureds with written notice of any policy cancellation, within two business days of their receipt of such notice.

F. The Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the Contracting Agency

G. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the Contracting Agency may, after giving five business days' notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the Contracting Agency on demand, or at the sole discretion of the Contracting Agency, offset against funds due the Contractor from the Contracting Agency.

H. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the Contract and no additional payment will be made.

I. Under no circumstances shall a wrap-up policy be obtained, for either initiating or maintaining coverage, to satisfy insurance requirements for any policy required under this Section. A "wrap up policy" is defined as an insurance agreement or arrangement under which all the parties working on a specified or designated project are insured under one policy for liability arising out of that specified or designated project.

1-07.18(2) Additional Insured

All insurance policies, with the exception of Workers Compensation, and of Professional Liability and Builder's Risk (if required by this Contract) shall name the following listed entities as additional insured(s) using the forms or endorsements required herein:

- the Contracting Agency and its officers, elected officials, employees, agents, and volunteers

The above-listed entities shall be additional insured(s) for the full available limits of liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract, and irrespective of whether the Certificate of Insurance provided by the Contractor pursuant to 1-07.18(4) describes limits lower than those maintained by the Contractor.

For Commercial General Liability insurance coverage, the required additional insured endorsements shall be at least as broad as ISO forms CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

1-07.18(3) Subcontractors

The Contractor shall cause each subcontractor of every tier to provide insurance coverage that complies with all applicable requirements of the Contractor-provided insurance as set forth herein, except the Contractor shall have sole responsibility for determining the limits of coverage required to be obtained by subcontractors.

The Contractor shall ensure that all subcontractors of every tier add all entities listed in 1-07.18(2) as additional insureds, and provide proof of such on the policies as required by that section as detailed in

1-07.18(2) using an endorsement as least as broad as ISO CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency evidence of insurance and copies of the additional insured endorsements of each subcontractor of every tier as required in 1-07.18(4) Verification of Coverage.

1-07.18(4) Verification of Coverage

The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the work. Failure of Contracting Agency to demand such verification of coverage with these insurance requirements or failure of Contracting Agency to identify a deficiency from the insurance documentation provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

Verification of coverage shall include:

1. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.
2. Copies of all endorsements naming Contracting Agency and all other entities listed in 1-07.18(2) as additional insured(s), showing the policy number. The Contractor may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement.
3. Any other amendatory endorsements to show the coverage required herein.
4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements – actual endorsements must be submitted.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency a full and certified copy of the insurance policy(s). If Builders Risk insurance is required on this Project, a full and certified copy of that policy is required when the Contractor delivers the signed Contract for the work.

1-07.18(5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Contractor's maintenance of insurance, its scope of coverage, and limits as required herein shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the Contracting Agency's recourse to any remedy available at law or in equity.

All deductibles and self-insured retentions must be disclosed and are subject to approval by the Contracting Agency. The cost of any claim payments falling within the deductible or self-insured retention shall be the responsibility of the Contractor. In the event an additional insured incurs a liability subject to any policy's deductibles or self-insured retention, said deductibles or self-insured retention shall be the responsibility of the Contractor.

1-07.18(5)A Commercial General Liability

Commercial General Liability insurance shall be written on coverage forms at least as broad as ISO occurrence form CG 00 01, including but not limited to liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal and advertising injury,

and liability assumed under an insured contract. There shall be no exclusion for liability arising from explosion, collapse or underground property damage.

The Commercial General Liability insurance shall be endorsed to provide a per project general aggregate limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.

Contractor shall maintain Commercial General Liability Insurance arising out of the Contractor's completed operations for at least three years following Substantial Completion of the Work.

Such policy must provide the following minimum limits:

$2,000,000	Each Occurrence
$3,000,000	General Aggregate
$3,000,000	Products & Completed Operations Aggregate
$2,000,000	Personal & Advertising Injury each offence
$2,000,000	Stop Gap / Employers' Liability each accident

1-07.18(5)B Automobile Liability

Automobile Liability shall cover owned, non-owned, hired, and leased vehicles; and shall be written on a coverage form at least as broad as ISO form CA 00 01. If the work involves the transport of pollutants, the automobile liability policy shall include MCS 90 and CA 99 48 endorsements.

Such policy must provide the following minimum limit:

$1,000,000	Combined single limit each accident

1-07.18(5)C Workers' Compensation

The Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

1-07.18(5)D Excess or Umbrella Liability

(January 4, 2016 APWA GSP)

The Contractor shall provide Excess or Umbrella Liability insurance with limits of not less than $$1$$ million each occurrence and annual aggregate. This excess or umbrella liability coverage shall be excess over and as least as broad in coverage as the Contractor's Commercial General and Auto Liability insurance.

All entities listed under 1-07.18(2) of these Special Provisions shall be named as additional insureds on the Contractor's Excess or Umbrella Liability insurance policy.

This requirement may be satisfied instead through the Contractor's primary Commercial General and Automobile Liability coverages, or any combination thereof that achieves the overall required limits of insurance.

1-07.18(5)K Professional Liability
(December 30, 2022 APWA GSP)

The Contractor and/or its subcontractor(s) and/or its design consultant providing construction management, value engineering, or any other design-related non-construction professional services shall provide evidence of Professional Liability insurance covering professional errors and omissions.

Such policy shall provide the following minimum limits:

$1,000,000 per claim and annual aggregate

If the scope of such design-related professional services includes work related to pollution conditions, the Professional Liability insurance shall include coverage for Environmental Professional Liability.

If insurance is on a claims-made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract.

1-07.23 Public Convenience And Safety
1-07.23(1) Construction Under Traffic
The second paragraph of Section 1-07.23(1) is supplemented with the following:

(*******)
The Contractor shall limit the total delay to the public, to a maximum of *** 20 *** minutes, during travel through the project. If the delay becomes greater than *** 20 *** minutes, the Contractor shall immediately begin to take action to cease the operations that are causing the delays. If the *** 20 *** minute delay limit has been exceeded, as determined by the Engineer, the Contractor shall provide to the Engineer, a written proposal to revise his work operations to meet the *** 20 *** minute limit. This proposal shall be approved by the Engineer prior to resuming any work requiring traffic control.

1-07.24 Rights of Way
(July 23, 2015 APWA GSP)

Delete this section and replace it with the following:

Street Right of Way lines, limits of easements, and limits of construction permits are indicated in the Plans. The Contractor's construction activities shall be confined within these limits unless arrangements for use of private property are made.

Generally, the Contracting Agency will have obtained, prior to bid opening, all rights of way and easements, both permanent and temporary, necessary for carrying out the work. Exceptions to this are noted in the Bid Documents or will be brought to the Contractor's attention by a duly issued Addendum.

Whenever any of the work is accomplished on or through property other than public Right of Way, the Contractor shall meet and fulfill all covenants and stipulations of any easement agreement obtained by the Contracting Agency from the owner of the private property. Copies of the easement agreements may be included in the Contract Provisions or made available to the Contractor as soon as practical after they have been obtained by the Engineer.

Whenever easements or rights of entry have not been acquired prior to advertising, these areas are so noted in the Plans. The Contractor shall not proceed with any portion of the work in areas where right of way, easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that the right of way or easement is available or that the right of entry has been received. If the Contractor is delayed due to acts of omission on the part of the Contracting Agency in obtaining easements, rights of entry or right of way, the Contractor will be entitled to an extension of time. The Contractor agrees that such delay shall not be a breach of contract.

Each property owner shall be given 48 hours notice prior to entry by the Contractor. This includes entry onto easements and private property where private improvements must be adjusted.

The Contractor shall be responsible for providing, without expense or liability to the Contracting Agency, any additional land and access thereto that the Contractor may desire for temporary construction facilities, storage of materials, or other Contractor needs. However, before using any private property, whether adjoining the work or not, the Contractor shall file with the Engineer a written permission of the private property owner, and, upon vacating the premises, a written release from the property owner of each property disturbed or otherwise interfered with by reasons of construction pursued under this contract. The statement shall be signed by the private property owner, or proper authority acting for the owner of the private property affected, stating that permission has been granted to use the property and all necessary permits have been obtained or, in the case of a release, that the restoration of the property has been satisfactorily accomplished. The statement shall include the parcel number, address, and date of signature. Written releases must be filed with the Engineer before the Completion Date will be established.

1-08 PROSECUTION AND PROGRESS

Add the following new section:

1-08.0 Preliminary Matters

(May 25, 2006 APWA GSP)

Add the following new section:

1-08.0(1) Preconstruction Conference

(July 8, 2024 APWA GSP)

Prior to the Contractor beginning the work, a preconstruction conference will be held between the Contractor, the Engineer and such other interested parties as may be invited. The purpose of the preconstruction conference will be:

1. To review the initial progress schedule;
2. To establish a working understanding among the various parties associated or affected by the work;
3. To establish and review procedures for progress payment, notifications, approvals, submittals, etc.;

4. To review DBE Requirements, Training Plans, and Apprenticeship Plans, when applicable.
5. To establish normal working hours for the work;
6. To review safety standards and traffic control; and
7. To discuss such other related items as may be pertinent to the work.

The Contractor shall prepare and submit at the preconstruction conference the following:

1. A breakdown of all lump sum items;
2. A preliminary schedule of working drawing submittals; and
3. A list of material sources for approval if applicable.

Add the following new section:

1-08.0(2) Hours of Work
(December 8, 2014 APWA GSP)

Except in the case of emergency or unless otherwise approved by the Engineer, the normal working hours for the Contract shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. Monday through Friday, exclusive of a lunch break. If the Contractor desires different than the normal working hours stated above, the request must be submitted in writing prior to the preconstruction conference, subject to the provisions below. The working hours for the Contract shall be established at or prior to the preconstruction conference.

All working hours and days are also subject to local permit and ordinance conditions (such as noise ordinances).

If the Contractor wishes to deviate from the established working hours, the Contractor shall submit a written request to the Engineer for consideration. This request shall state what hours are being requested, and why. Requests shall be submitted for review no later than 10 am prior to the day(s) the Contractor is requesting to change the hours.

If the Contracting Agency approves such a deviation, such approval may be subject to certain other conditions, which will be detailed in writing. For example:

1. On non-Federal aid projects, requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency representatives who worked during such times. (The Engineer may require designated representatives to be present during the work. Representatives who may be deemed necessary by the Engineer include but are not limited to: survey crews; personnel from the Contracting Agency's material testing lab; inspectors; and other Contracting Agency employees or third party consultants when, in the opinion of the Engineer, such work necessitates their presence.)
2. Considering the work performed on Saturdays, Sundays, and holidays as working days with regard to the contract time.
3. Considering multiple work shifts as multiple working days with respect to contract time even though the multiple shifts occur in a single 24-hour period.

4. If a 4-10 work schedule is requested and approved the non-working day for the week will be charged as a working day.
5. If Davis Bacon wage rates apply to this Contract, all requirements must be met and recorded properly on certified payroll.

1-08.0(3) Reimbursement for Overtime Work of Contracting Agency Employees
(*******)

Where the Contractor elects to work on a Saturday, Sunday, or holiday, or longer than an 8-hour work shift on a regular working day, as defined in the Standard Specifications, such work shall be considered as overtime work. On all such overtime work an inspector will be present, and a survey crew may be required at the discretion of the Engineer. In such case, the Contracting Agency may deduct from amounts due or to become due to the Contractor for the costs in excess of the straight-time costs for employees of the Contracting Agency required to work overtime hours.

The Contractor by these specifications does hereby authorize the Engineer to deduct such costs from the amount due or to become due to the Contractor.

1-08.1 Subcontracting
Section 1-08.1 is supplemented with the following:

(******)
The Contractor shall ensure that each subcontractor (in any tier) agrees in writing to: (a) perform its work in strict compliance with these contract documents; and (b) defend, indemnify, and hold harmless Cowlitz County (and its officials, employees, and agents) from claims and liabilities arising from the subcontractor's acts and omissions, to the same extent provided in Standard Specification 1-07.14 for the Contractor. Upon request, the Contractor will promptly provide the Engineer with a copy of any subcontract.

The Contractor shall include the language of this section in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. Upon request of the Owner, the Contractor shall promptly provide documentation to the Owner demonstrating that the subcontractor meets the subcontractor responsibility criteria below. The requirements of this section apply to all subcontractors regardless of tier.

At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:

1. Have a current certificate of registration in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;

2. Have a current Washington Unified Business Identifier (UBI) number;

3. If applicable, have:

a. Have Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RCW;

b. A Washington Employment Security Department number, as required in Title 50 RCW;

c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;

d. An electrical contractor license, if required by Chapter 19.28 RCW;

e. An elevator contractor license, if required by Chapter 70.87 RCW.

4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065 (3).

1-08.3 Progress Schedule.
Add the following to Section 1-08.3:

(*******)
A critical path schedule shall be submitted by the Contractor for review and approval by the Engineer prior to the preconstruction meeting. Work shall not begin until the critical path schedule is approved. Any deviation from the approved critical path must be submitted to the Engineer with a modified critical path schedule two (2) working days prior to the proposed deviation. Approval must be received from the Engineer prior to proceeding with the deviation. Costs for the critical path schedule shall be included in the bid items of this contract and will not be paid for individually.

1-08.5 Time for Completion
Section 1-08.5 is supplemented with the following:

(March 13, 1995)
This project shall be physically completed within *** 80 *** working days.

1-08.9 Liquidated Damages
(March 3, 2021 APWA GSP, Option B)

Revise the second and third paragraphs to read:

Accordingly, the Contractor agrees:

1. To pay (according to the following formula) liquidated damages for each working day beyond the number of working days established for Physical Completion, and

2. To authorize the Engineer to deduct these liquidated damages from any money due or coming due to the Contractor.

Liquidated Damages Formula

LD=0.15C/T

Where:

LD = liquidated damages per working day (rounded to the nearest dollar)
C = original Contract amount
T = original time for Physical Completion

When the Contract Work has progressed to Substantial Completion as defined in the Contract, the Engineer may determine the Contract Work is Substantially Complete. The Engineer will notify the Contractor in writing of the Substantial Completion Date. For overruns in Contract time occurring after the date so established, the formula for liquidated damages shown above will not apply. For overruns in Contract time occurring after the Substantial Completion Date, liquidated damages shall be assessed on the basis of direct engineering and related costs assignable to the project until the actual Physical Completion Date of all the Contract Work. The Contractor shall complete the remaining Work as promptly as possible. Upon request by the Project Engineer, the Contractor shall furnish a written schedule for completing the physical Work on the Contract.

1-09 MEASUREMENT AND PAYMENT

1-09.6 Force Account

(December 30, 2022 APWA GSP)

Supplement this section with the following:

The Contracting Agency has estimated and included in the Proposal, dollar amounts for all items to be paid per force account, only to provide a common proposal for Bidders. All such dollar amounts are to become a part of Contractor's total bid. However, the Contracting Agency does not warrant expressly or by implication, that the actual amount of work will correspond with those estimates. Payment will be made on the basis of the amount of work actually authorized by the Engineer.

1-09.7 Mobilization

(December 30, 2022 APWA GSP)

Delete this Section and replace it with the following:

Mobilization consists of preconstruction expenses and the costs of preparatory Work and operations performed by the Contractor typically occurring before 10 percent of the total original amount of an individual Bid Schedule is earned from other Contract items on that Bid Schedule. Items which are not to be included in the item of Mobilization include but are not limited to:

1. Portions of the Work covered by the specific Contract item or incidental Work which is to be included in a Contract item or items.

2. Profit, interest on borrowed money, overhead, or management costs.
3. Costs incurred for mobilizing equipment for force account Work.

Based on the lump sum Contract price for "Mobilization", partial payments will be made as follows:

1. When 5 percent of the total original Bid Schedule amount is earned from other Contract items on that original Bid Schedule, excluding amounts paid for materials on hand, 50 percent of the Bid Item for mobilization on that original Bid Schedule, 5 percent of the total of that original Bid Schedule, or 5 percent of the total original Contract amount, whichever is the least, will be paid.
2. When 10 percent of the total original Bid Schedule amount is earned from other Contract items on that original Bid Schedule, excluding amounts paid for materials on hand, 100 percent of the Bid Item for mobilization on that original Bid Schedule, 10 percent of the total of that original Bid Schedule, or 10 percent of the total original Contract amount, whichever is the least, will be paid.
3. When the Substantial Completion Date has been established for the project, payment of any remaining amount Bid for mobilization will be paid.

Nothing herein shall be construed to limit or preclude partial payments otherwise provided by the Contract.

1-09.9 Payments
(July 8, 2024, APWA GSP, Option B)

Delete the fourth paragraph and replace it with the following:

Progress payments for completed work and material on hand will be based upon progress estimates prepared by the Engineer. A progress estimate cutoff date will be established at the preconstruction conference.

The initial progress estimate will be made not later than 30 days after the Contractor commences the work, and successive progress estimates will be made every month thereafter until the Completion Date. Progress estimates made during progress of the work are tentative, and made only for the purpose of determining progress payment. The progress estimates are subject to change at any time prior to the calculation of the Final Payment.

The value of the progress estimate will be the sum of the following:

1. Unit Price Items in the Bid Form — the approximate quantity of acceptable units of work completed multiplied by the unit price.
2. Lump Sum Items in the Bid Form — based on the approved Contractor's lump sum breakdown for that item, or absent such a breakdown, based on the Engineer's determination.
3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.
4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

Progress payments will be made in accordance with the progress estimate less:

1. Retainage per Section 1-09.9(1), on non FHWA-funded projects;
2. The amount of Progress Payments previously made; and
3. Funds withheld by the Contracting Agency for disbursement in accordance with the Contract Documents.

Progress payments for work performed shall not be evidence of acceptable performance or an admission by the Contracting Agency that any work has been satisfactorily completed. The determination of payments under the contract will be final in accordance with Section 1-05.1.

(July 8, 2024 APWA GSP, Option A)

Supplement this section with the following:

Lump sum item breakdowns are not required when the bid price for the lump sum item is less than $20,000.

Section 1-09.9 is supplemented with the following:

(*******)

Partial Payments. Partial payments shall be made once each month, based on estimates prepared by the Engineer. The Contractor shall prepare a document detailing work and labor performed and material furnished during each calendar month, and shall deliver the document to the Engineer by the fifth day of the following month. The documentation shall be in a format prescribed by the Engineer. If the Contractor's documentation is timely submitted, the County Auditor will issue a warrant payable to the Contractor on the last working day of the month, based on the estimate prepared by the Engineer.

1-09.11(3) Time Limitation and Jurisdiction

(December 30, 2022 APWA GSP)

Revise this section to read:

For the convenience of the parties to the Contract it is mutually agreed by the parties that all claims or causes of action which the Contractor has against the Contracting Agency arising from the Contract shall be brought within 180 calendar days from the date of final acceptance (Section 1-05.12) of the Contract by the Contracting Agency; and it is further agreed that all such claims or causes of action shall be brought only in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction. The parties understand and agree that the Contractor's failure to bring suit within the time period provided, shall be a complete bar to all such claims or causes of action. It is further mutually agreed by the parties that when claims or causes of action which the Contractor asserts against the Contracting Agency arising from the Contract are filed with the Contracting Agency or initiated in court, the Contractor shall permit the Contracting Agency to have timely access to all records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

1-09.13(3)A Arbitration General
(January 19, 2022 APWA GSP)

Revise the third paragraph to read:

The Contracting Agency and the Contractor mutually agree to be bound by the decision of the arbitrator, and judgment upon the award rendered by the arbitrator may be entered in the Superior Court of the county in which the Contracting Agency's headquarters is located, provided that where claims subject to arbitration are asserted against a county, RCW 36.01.050 shall control venue and jurisdiction of the Superior Court. The decision of the arbitrator and the specific basis for the decision shall be in writing. The arbitrator shall use the Contract as a basis for decisions.

1-09.13(4) Venue for Litigation
(December 30, 2022 APWA GSP)

Revise this section to read:

Litigation shall be brought in the Superior Court of the county in which the Contracting Agency's headquarters is located, provided that where claims are asserted against a county, RCW 36.01.050 shall control venue and jurisdiction of the Superior Court. It is mutually agreed by the parties that when litigation occurs, the Contractor shall permit the Contracting Agency to have timely access to all records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

1-10 TEMPORARY TRAFFIC CONTROL
1-10.2 Traffic Control Management
1-10.2(1) General

Section 1-10.2(1) is supplemented with the following:

(October 3, 2022)
The Traffic Control Supervisor shall be certified by one of the following:

The Northwest Laborers-Employers Training Trust
27055 Ohio Ave.
Kingston, WA 98346
(360) 297-3035
https://www.nwlett.edu

Evergreen Safety Council
12545 135th Ave. NE
Kirkland, WA 98034-8709
1-800-521-0778
https://www.esc.org

The American Traffic Safety Services Association
15 Riverside Parkway, Suite 100
Fredericksburg, Virginia 22406-1022
Training Dept. Toll Free (877) 642-4637
Phone: (540) 368-1701
https://atssa.com/training

Integrity Safety
13912 NE 20th Ave.
Vancouver, WA 98686
(360) 574-6071
https://www.integritysafety.com

US Safety Alliance
(904) 705-5660
https://www.ussafetyalliance.com

K&D Services Inc.
2719 Rockefeller Ave.
Everett, WA 98201
(800) 343-4049
https://www.kndservices.net

1-10.3 Traffic Control Labor, Procedures, and Devices
1-10.3(3)A Construction Signs
(******)

The first paragraph of Section 1-10.3(3)A is revised to read as follows:

All signs required by the approved traffic control plan(s) as well as any other appropriate signs prescribed by the Engineer shall be furnished by the Contractor. The Contractor shall provide the posts or supports and erect and maintain the signs in a clean, neat, and presentable condition until the necessity for them has ceased. When the need for these signs has ceased, the Contractor, upon approval of the Engineer, shall remove all signs, posts, and supports from the project and they shall remain the property of the Contractor. There shall be no intermixing of signs with non-fluorescent orange reflective sign sheeting and signs with fluorescent orange reflective sign sheeting on the same signpost.

The third paragraph of Section 1-10.3(3)A is supplemented with the following:

The Contractor shall furnish, install, and remove all construction signs and all cones, barricades, flashers, and other traffic control devises of a temporary and portable nature. The Contractor shall maintain all signs and other traffic control devices.

"MOTORCYCLES USE EXTREME CAUTION" signs per W21-1701 of the WSDOT Sign Fabrication Manual shall be supplied by the Contractor if there will be grooved pavement, abrupt lane edges, steel plates or gravel-or-earth surfaced roadways within the project limits. The Contractor shall include the signs

in the Traffic Control Plan and install the signs in advance of the work zone and maintain the signs for as long as the above conditions are present. These signs are in addition to any other signs stating the condition of the roadway. MOTORCYCLES USE EXTREME CAUTION" signs shall be considered Class B signs.

The seventh paragraph of Section 1-10.3(3)A is revised to read as follows:

Signs, posts, or supports that are lost, stolen, damaged, destroyed, or which the Engineer deems to be unacceptable while their use is required on the project, shall be replaced by the Contractor without additional compensation.

1-10.4 Measurement

1-10.4(1) Lump Sum Bid for Project (No Unit Items)

Section 1-10.4(2) is supplemented with the following:

(*******)
The bid proposal contains the item "Project Temporary Traffic Control," lump sum. The provisions of Section 1-10.4(1) and Section 1-10.5(1) shall apply.

BID ITEMS

BID ITEM 1: MISCELLANEOUS CONSTRUCTION

This bid item shall be accomplished in accordance with the Plans and Standard Specification Section 1-09.6, except as modified below.

1-09.6 Force Account

Insert the following paragraph before the first paragraph of Section 1-09.6, which begins "The terms of the contract or of a change order may call...":

The Miscellaneous Construction bid item has been included for any additional work directed by the Engineer that is not required by the original contract. The amount indicated in the proposal for this bid item is to provide a common bid amount. The actual amount paid under this bid item may vary from no payment to the full amount of the bid item.

Add the following to Section 1-09.6:

In lieu of the preceding prescribed method of determining payment for force account work, payment may be made at unit prices or lump sum prices agreed to by the Engineer and the Contractor, prior to beginning the Miscellaneous Construction work.

BID ITEM 2: REPLACEMENT STAKING SERVICES

This bid item shall be accomplished in accordance with the Plans, Standard Specification Section 1-05.4 and the Special Provisions for Section 1-05.4.

BID ITEM 3: MOBILIZATION

This bid item shall be accomplished in accordance with the Plans and Standard Specification Section 1-09.7.

BID ITEM 4: PROJECT TEMPORARY TRAFFIC CONTROL

This bid item shall be accomplished in accordance with the Plans and Standard Specification Sections 1-07 and 1-10 and the Special Provisions for Section 1-10.

BID ITEM 5: CLEARING AND GRUBBING

This bid item shall be accomplished in accordance with the Plans and Standard Specification Section 2-01 except as modified below:

2-01.1 Description

Delete paragraph one of Section 2-01.1, which begins "The Contractor shall clear..." and replace with the following:

(*******)

The Contractor shall clear, grub, and clean the entire limits of clearing within the project area, unless otherwise noted or specified. The Contractor shall also clear, grub and clean areas designated to receive fill materials, as specified herein. Existing trees outside the limits of clearing and specific improvements marked on the plans as remaining shall be protected from damage.

Delete paragraph two of Section 2-01.1 which begins "Clearing" means removing and..." and replace with the following:

(*******)

"Clearing" means removing and disposing of all unwanted material from the surface, as determined by the Engineer, such as trees, brush, vines, down timber, lumber, concrete, miscellaneous trash, and other.

2-01.2 Disposal of Usable Material and Debris

Add the following to Section 2-01.2:

(*******)

No waste site has been provided by the County for this project.

2-01.5 Payment

Add the following to the third paragraph of Section 2-01.5 which begins "the unit Contract price per acre...":

(*******)
It has been calculated that there are approximately **0.2** acres of Clearing and Grubbing required for this project. This value has been provided for the purposes of bidding only. No adjustment to this lump sum bid item will be made.

BID ITEM 6: REMOVAL OF STRUCTURES AND OBSTRUCTIONS

This bid item shall be accomplished in accordance with the Plans and Standard Specification Section 2-02, except as modified below:

2-02.1 Description

Add the following to Section 2-02.1:

(*******)
Removal of Structures and Obstructions shall consist of the following work:

1. Removal of existing fencing as shown on the Plans.
2. Removal of existing mailbox support.
3. Removal of existing pavement.

2-02.3(3) Removal of Pavement, Sidewalks, Curbs and Gutters

(*******)
Delete Section 2-02.3(3) and replace with the following:

In removing pavement, sidewalks, curbs, and gutters, the Contractor shall:

1. Haul broken-up pieces to some off-project site.
2. Excavated pavements shall be disposed of in accordance with applicable local and state regulations.
3. Make a vertical full depth saw cut between any existing pavement that is to remain and the portion to be removed.
4. Replace at no expense to the Contracting Agency any existing pavement designated to remain that is damaged during the removal of other pavement.

2-02.5 Payment

Add the following to Section 2-02.5:

(*******)
The lump sum contract price shall be full pay for excavating, loading, hauling, placing, or otherwise disposing of all items of this bid item designated for removal, salvage, or abandonment.

The contract price shall also include all backfilling as is necessary to bring the voids left by the removal of the items specified above to match the elevation of the sub-grade or surrounding grade.

It has been calculated that there are approximately **385** square yards of existing asphalt concrete pavement located within the project limits that are designated for removal in the Removal of Structure and Obstruction bid item. This value has been provided for the purposes of bidding only. No cost adjustment to the lump sum bid item for Removal of Structure and Obstruction will be made.

BID ITEM 7: ROADWAY EXCAVATION, EMBANKMENT AND DISPOSAL INCLUDING HAUL
BID ITEM 8: UNSUITABLE FOUNDATION EXCAVATION INCLUDING HAUL

These bid items shall be accomplished in accordance with the Plans and Standard Specification Section 2-03, except as modified below. The bid quantities listed for these items are approximate and are for the purposes of bidding only. Overruns and underruns in these bid items shall not be cause for adjustment in the unit prices. Section 1-04.6 "Increased or Decreased Quantities" does not apply to these bid items.

2-03 ROADWAY EXCAVATION AND EMBANKMENT

2-03.1 Description

Delete paragraph one of Section 2-03.1 which begins "The work described in..." and replace with the following:

(*******)

The work described in this section, regardless of the nature or type of materials encountered, includes excavation and grading the roadway, excavation below grade, excavating ditches, placement and compaction of excavated materials as directed by the Engineer, and disposal of all excess material. These activities may be performed in making cuts, embankments, slopes, roadway ditches, parking areas, driveways, and in completing other related work.

It is the County's intent to maximize use of the material excavated in the Roadway Excavation, Embankment and Disposal Including Haul bid item in the construction of embankments in lieu of using the Structural Fill Including Haul, or other embankment material specifications noted in this contract.

2-03.3 Construction Requirements

Add the following to Section 2-03.3:

2-03.3(19) Removal of Pavement, Sidewalks, and Curbs

Removal of pavement, sidewalks, curbs, or other similar materials that lie within the limits of excavation shall be included in the Removal of Structures and Obstructions bid item of this document.

2-03.3(3) Excavation Below Grade

Add the following after the second paragraph of Section 2-03.3(3) which begins "If the Contractor uses...":

(*******)

Existing culverts, storm drains, and drainage structures located within the horizontal limits of the excavation shall be removed, backfilled, compacted, or abandoned as specified, unless otherwise noted on the plans.

Where shown on the Plans or where designated by the Engineer, existing culverts shall be plugged on

both the inlet and outlet ends with Class 3000 concrete. Care shall be used in placing the concrete in the culvert to see that the opening of the pipe is completely filled and thoroughly plugged. A minimum linear plug length of two pipe diameters is required.

2-03.3(7)A General

Delete the text of Section 2-03.3(7)A which begins "The Contractor shall haul..." and replace with the following:

(*******)

The Contractor shall haul all suitable excavation, as determined by the Engineer, to the nearest area designated to receive embankment material. The excavated materials for this project not considered by the Engineer to be acceptable for embankment, or determined to be in excess of the embankment materials required for this work, shall become the property of the Contractor to be disposed of in accordance with Section 2-03.3(7)C. No waste site has been provided by the County.

The disposal of waste or excess materials from this project on private property requires a permit(s) from Cowlitz County Building and Planning Department. This includes the temporary stockpiling and processing/crushing of material (soil, rock, etc.). No adjustment in the time of completion will be made for the time required to obtain permits and/or the failure to obtain or qualify for a permit. It is recommended that the contractor contact the Building and Planning Department early in the bidding process to review potential sites to avoid problems and delays.

2-03.4 Measurement

Add the following to Section 2-03.4:

(*******)

Roadway excavation, embankment and disposal including haul - by the cubic yard. The quantities indicated on the proposal include an estimated **0** cubic yards of over excavation. The actual over excavation quantity will be determined by neat line measurement. All other materials will be measured in-place as determined by neat-line modeling.

Unsuitable Foundation Excavation Including Haul – by the cubic yard. The unsuitable foundation excavation quantity will be determined by neat line measurement.

2-03.5 Payment

Add the following to Section 2-03.5:

(*******)

"Roadway Excavation, Embankment and Disposal Including Haul", per cubic yard.

The unit contract price per cubic yard for Roadway Excavation, Embankment and Disposal Including Haul shall be full pay for excavating, loading, hauling, placing, compacting, or otherwise disposing of the materials as directed by the Engineer. All work required in removal, backfilling, plugging or abandonment of existing culverts or structures shall be included in the unit bid price of this bid item, unless specifically identified for removal under the Removal of Structures and Obstructions bid item of this document.

When the Engineer orders excavation below subgrade before subgrade preparation is complete, unit prices for Roadway Excavation, Embankment and Disposal Including Haul shall apply.

It is anticipated that up to **50** cubic yards of the material excavated in this bid item may be determined suitable by the Engineer to be used in the construction of embankments in lieu of using the Structural Fill Including Haul or other embankment material specifications noted in this contract. This value has been provided for the purposes of bidding only. No adjustment to the unit price of this bid item will be made.

"Unsuitable Foundation Excavation Including Haul", per cubic yard.

The unit contract price per cubic yard for Unsuitable Excavation Including Haul shall be full pay for excavating, loading, and disposing of the materials as directed by the Engineer.

BID ITEM 9: STRUCTURE EXCAVATION CLASS A INCL. HAUL
BID ITEM 10: SHORING OR EXTRA EXCAVATION CLASS A

These bid items shall be accomplished in accordance with the Plans and Standard Specification Section 2-09 except as modified below:

2-09 STRUCTURE EXCAVATION

2-09.1 Description

Add the following to Section 2-09.1:

Structure Excavation Class A includes channel excavation for the streambed reconstruction through the culvert, and extending beyond the culvert inlet and outlet to the limits of streambed reconstruction. This includes removal of the existing culvert within the limits of structure excavation.

2-09.3 Construction Requirements

2-09.3(1) General Requirements

Section 2-09.3(1) is supplemented with the following:

(*******)

Explosives shall not be used for structure excavation.

2-09.3(1)D Disposal of Excavated Material

Section 2-09.3(1)D is supplemented with the following:

(*******)

No waste site has been provided by the County. The disposal of waste or excess materials from this project on private property requires a permit(s) from Cowlitz County Building and Planning Department. This includes the temporary stockpiling and processing/crushing of material (soil, rock, etc.). No adjustment in the time of completion will be made for the time required to obtain permits and/or the failure to obtain or qualify for a permit. It is recommended that the contractor contact the Building and Planning Department early in the bidding process to review potential sites to avoid problems and delays.

2-09.3(1)E Backfilling
Section 2-09.3(1)E is supplemented with the following:

(*******)
The Contractor shall place select backfill material within the structure excavation when so specified in the Plans.

2-09.5 Payment
Delete the first sentence of the third paragraph of Section 2-09.5 which begins "If the Engineer orders the Contractor to excavate...", and replace with the following:

(*******)
If the Engineer orders the Contractor to excavate below the lower limits of structure excavation, the quantity of excavation below the lower limits shall be paid under the bid item Unsuitable Foundation Excavation Including Haul.

Add the following to 2-09.5:

(*******)
The Contract unit price for Structure Excavation Class A shall include excavation of all material. Backfilling the excavation shall be paid under the bid item Structural Fill Including Haul.

BID ITEM 11: TRIMMING AND CLEANUP
This bid item shall be accomplished in accordance with the Plans and Standard Specification Section 2-11.

BID ITEM 12: CONSTRUCTION GEOTEXTILE FOR SEPARATION
This bid item shall be accomplished in accordance with the Plans and Standard Specification Section 2-12, except as modified below. The bid quantity listed for this item is approximate and is for the purposes of bidding only. Overruns and underruns in this bid item shall not be cause for adjustment in the unit price. Section 1-04.6 "Increased or Decreased Quantities" does not apply to this bid item.

2-12 CONSTRUCTION GEOTEXTILE
2-12.2 Materials
Add the following to Section 2-12.2:

(*******)
Construction Geotextile for Separation shall be nonwoven.

2-12.3 Construction Requirements
Add the following to Section 2-12.3:

(*******)
Geotextile shall be placed with the long axis parallel to the centerline of the road. Overlaps of the fabric shall be pinned with sod pins on intervals determined for the site by the Engineer. Pleats for changing

directions of the fabric roll shall be pinned. Additional sod pins shall be used to prevent displacement of the fabric by the wind or other conditions. Fabric placed over benches cut in a slope shall be pinned at the bottom of the vertical cuts at 10-foot intervals, or as otherwise directed by the Engineer.

2-12.4 Measurement

Delete paragraph one of Section 2-12.4 which begins "Construction geotextile, with the...", and replace with the following:

(*******)
Construction geotextile will be measured by the square yard of material installed.

BID ITEM 13: STRUCTURAL FILL INCLUDING HAUL

This bid item shall be accomplished in accordance with the Plans, Standard Specifications and the following Special Provisions Section 2-13. The bid quantity listed for this item is approximate and is for the purposes of bidding only. Overruns and underruns in this bid item shall not be cause for adjustment in the unit price. Section 1-04.6 "Increased or Decreased Quantities" does not apply to this bid item.

2-13 STRUCTURAL FILL

2-13.1 Description

The work described as Structural Fill Including Haul shall consist of providing from off-project sources, a manufactured rock meeting the requirements below and placing, shaping, and compacting those materials into the roadway embankment, as is indicated on the drawings.

It is the County's intent to maximize use of the material excavated in the Roadway Excavation, Embankment and Disposal Including Haul, and Structure Excavation Class A Including Haul bid items in the construction of embankments in lieu of using the material noted in this bid item.

2-13.2 Materials

Aggregate for Structural Fill shall meet the requirements of Section 9-03.10, Aggregate for Gravel Base with the following modifications:

In lieu of the grading requirements specified in Section 9-03.10, grading shall conform to one of the following gradations:

Sieve Size	Percent Passing by Weight
3-inch square	100
1-inch square	45-75
¼-inch square	15-35
U.S. No. 200	5 max.

In addition to the requirements specified in Section 9-03.10, Structural Fill shall meet the following requirements:

70% of the aggregate retained on each of the 1-inch square and ¼-inch square sieves shall have at least one fractured face.

Structural Fill shall consist of unweathered, hard, angular, durable, free-draining material that is visibly well graded from course to fine.

2-13.3 Construction Requirements

Embankments shall be constructed in lifts not exceeding 8 inches. Verification of compaction for Structural Fill shall be accomplished by routing a loaded 10-yard minimum capacity dump truck over the compacted material in the presence of the Engineer. Compaction shall be determined to be adequate if there is no visual deflection of the material under the load. In locations where there is insufficient room for a dump truck, compaction shall be accomplished with a small roller, hoe pack, or by other methods as approved by the Engineer.

Structural Fill to be placed on construction geotextile shall not be dumped directly onto construction geotextile. Structural Fill shall be placed on previously placed materials then spread over the construction geotextile.

If traffic is to be routed over structural fill, a 0.17-foot thick (minimum) course of crushed surfacing base course shall be placed and compacted to provide a smooth roadway surface, prior to opening the road to traffic. The fill shall be graded as necessary to provide smooth horizontal and vertical roadway alignments prior to placing the crushed surfacing base course. Crushed surfacing base course placed below subgrade shall remain in place and shall be incorporated into the roadway embankment.

2-13.4 Measurement

"Structural fill including haul", by the ton.

Only material imported from offsite sources and meeting the requirements of this Special Provision will be measured. Excavated material from the Roadway, Excavation, Embankment and Disposal Including Haul and Structure Excavation Class A Including Haul bid items that are stockpiled and/or placed in the embankment will not be measured for this bid item. Crushed surfacing base course that is placed below subgrade (to provide a smooth roadway surface) will be included in the measurement for Structural Fill Including Haul.

2-13.5 Payment

"Structural Fill Including Haul", per ton.

The unit contract price per ton shall be full pay for furnishing, processing, hauling, placing, and compacting the structural fill. Crushed surfacing base course that is placed below subgrade (to provide a smooth roadway surface) will be paid at the unit price per ton for Structural Fill Including Haul.

BID ITEM 14: CHANNEL FILL MATERIAL INCLUDING HAUL

This bid item shall be accomplished in accordance with the Plans and the following Special Provisions Section 2-14. The bid quantity listed for this item is approximate and is for the purposes of bidding only. Overruns and underruns in this bid item shall not be cause for adjustment in the unit price. Section 1-04.6 "Increased or Decreased Quantities" does not apply to this bid item.

2-14 CHANNEL FILL MATERIAL INCLUDING HAUL

2-14.1 Description

This work consists of placing channel fill within the new culvert and the reconstructed creek channel segments at both ends of the culvert.

2-14.2 Materials

Aggregate for Channel fill material shall meet the requirements of Sections 9-03.11(1) Streambed Sediment, 9-03.11(4) Streambed Cobbles, and 9-03.11(5) Streambed Boulders mixed to the following proportions:

Material	Percent by Weight
Streambed Sediment	35% - 45%
10" Streambed Cobbles	45% - 55%
Type 1 Streambed Boulders	4% - 6%
Type 2 Streambed Boulders	4% - 6%

2-14.3 Construction Requirements

This work must be accomplished during the time allowed by the permits (see appendices). Prior to performing this work, the temporary diversion required under the bid item Temporary Creek Diversion must be in place. Dewatering is included in the bid item Temporary Creek Diversion. The Contractor shall comply with all requirements of the permits included in the appendices.

Channel fill material shall be placed within the culvert as shown on the Plans. All channel fill material shall be carefully placed to avoid segregation of the larger rocks. Channel fill material shall not be dumped from a height greater than five feet. Placed channel fill material shall be compacted with tracked equipment making a minimum of three passes. Alternatively, a hoe-pack may be used for compaction. Within the culvert, channel fill shall be compacted with small equipment.

2-14.4 Measurement

Measurement for channel fill material shall be by the ton of channel fill material actually placed.

2-14.5 Payment

"Channel Fill Material Including Haul" per ton.

The unit contract price per ton shall be full pay for furnishing, processing, hauling, placing and compacting the channel fill material.

BID ITEM 15: CRUSHED SURFACING BASE COURSE

This bid item shall be accomplished in accordance with the Plans and Standard Specification Section 4-04, except as modified below.

(*******)

4-04.3(4) Placing and Spreading

Delete item 2 of Section 4-04.3(4), which begins "Road Mix Method. Each..." and replace with the

2. **Road Mix Method**. The road mix method of mixing crushed surfacing base course and top course will not be allowed.

3. **Placement on Construction Geotextile.** Crushed surfacing base and top course to be placed on construction geotextile shall not be dumped directly onto geotextile. Crushed surfacing base and top course shall be dumped on previously placed materials then spread over the geotextile and compacted as required by the Plans.

(*******)
Delete the second paragraph under item **2 Road Mix Method** of Section 4-04.3(4), which begins "The following nominal depth..." and replace with the following:

The following nominal depth of compacted material shall not be exceeded in any one course without the approval of the Engineer:

Crushed Surfacing	0.50-foot

4-04.3(5) Shaping and Compaction
Add the following to Section 4-04.3(5):

(*******)
The top surface of the compacted materials shall not deviate from the design grade in excess of the following:

Crushed Surfacing Base Course: + or – 0.02 foot.

BID ITEM 16: HMA CLASS 3/8 INCH PG 58H-22
BID ITEM 17: ASPHALT COST PRICE ADJUSTMENT
These bid items shall be accomplished in accordance with the Plans, the following APWA GSP for Section 5-04, as modified by Cowlitz County, and the subsequently following WSDOT GSP for Asphalt Cost Price Adjustment. Cowlitz County modifications to the APWA GSP are shown as underlined text for additions and as strikethrough text for deletions.

5-04 Hot Mix Asphalt
(January 31, 2023 APWA GSP)

Delete Section 5-04, Hot Mix Asphalt, and replace it with the following:

5-04.1 Description
This Work shall consist of providing and placing one or more layers of plant-mixed hot mix asphalt (HMA) on a prepared foundation or base in accordance with these Specifications and the lines, grades, thicknesses, and typical cross-sections shown in the Plans. The manufacture of HMA may include warm mix asphalt (WMA) processes in accordance with these Specifications. WMA processes include organic additives, chemical additives, and foaming.

mix asphalt (WMA) processes in accordance with these Specifications. WMA processes include organic additives, chemical additives, and foaming.

HMA shall be composed of asphalt binder and mineral materials as may be required, mixed in the proportions specified to provide a homogeneous, stable, and workable mixture.

5-04.2 Materials

Materials shall meet the requirements of the following sections:

Asphalt Binder	9-02.1(4)
Cationic Emulsified Asphalt	9-02.1(6)
Anti-Stripping Additive	9-02.4
HMA Additive	9-02.5
Aggregates	9-03.8
Recycled Asphalt Pavement (RAP)	9-03.8(3)B, 9-03.21
Reclaimed Asphalt Shingles (RAS)	9-03.8(3)B, 9-03.21
Mineral Filler	9-03.8(5)
Recycled Material	9-03.21

The Contract documents may establish that the various mineral materials required for the manufacture of HMA will be furnished in whole or in part by the Contracting Agency. If the documents do not establish the furnishing of any of these mineral materials by the Contracting Agency, the Contractor shall be required to furnish such materials in the amounts required for the designated mix. Mineral materials include coarse and fine aggregates, and mineral filler.

The Contractor may choose to utilize recycled asphalt pavement (RAP) in the production of HMA. The RAP may be from pavements removed under the Contract, if any, or pavement material from an existing stockpile.

The Contractor may use up to 20 percent RAP by total weight of HMA with no additional sampling or testing of the RAP.

If the Contractor wishes to utilize High RAP/Any RAS, the design must be listed on the WSDOT Qualified Products List (QPL).

The grade of asphalt binder shall be as required by the Contract. Blending of asphalt binder from different sources is not permitted.

The Contractor may only use warm mix asphalt (WMA) processes in the production of HMA with 20 percent or less RAP by total weight of HMA. The Contractor shall submit to the Engineer for approval the process that is proposed and how it will be used in the manufacture of HMA.

Production of aggregates shall comply with the requirements of Section 3-01.

Preparation of stockpile site, the stockpiling of aggregates, and the removal of aggregates from stockpiles shall comply with the requirements of Section 3-02.

5-04.2(1) How to Get an HMA Mix Design on the QPL

If the Contractor wishes to submit a mix design for inclusion in the Qualified Products List (QPL), please follow the WSDOT process outlined in Standard Specification 5-04.2(1).

5-04.2(1)A Vacant

5-04.2(2) Mix Design - Obtaining Project Approval

No paving shall begin prior to the approval of the mix design by the Engineer.

Nonstatistical evaluation will be used for all HMA not designated as Commercial HMA in the Contract documents.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, temporary pavement, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Project Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Project Engineer. The Proposal quantity of HMA that is accepted by commercial evaluation will be excluded from the quantities used in the determination of nonstatistical evaluation.

Nonstatistical Mix Design. Fifteen days prior to the first day of paving the Contractor shall provide one of the following mix design verification certifications for Contracting Agency review;

- The WSDOT Mix Design Evaluation Report from the current WSDOT QPL, or one of the mix design verification certifications listed below.
- The proposed HMA mix design on WSDOT Form 350-042 with the seal and certification (stamp & signature) of a valid licensed Washington State Professional Engineer.
- The Mix Design Report for the proposed HMA mix design developed by a qualified City or County laboratory that is within one year of the approval date.

The mix design shall be performed by a lab accredited by a national authority such as Laboratory Accreditation Bureau, L-A-B for Construction Materials Testing, The Construction Materials Engineering Council (CMEC's) ISO 17025 or AASHTO Accreditation Program (AAP) and shall supply evidence of participation in the AASHTO: resource proficiency sample program.

Mix designs for HMA accepted by Nonstatistical evaluation shall:

- Be designed for ***0.3 to less than 3.0*** million equivalent single axle loads (ESALs).
- Have the aggregate structure and asphalt binder content determined in accordance with WSDOT Standard Operating Procedure 732 and meet the requirements of Sections 9-03.8(2), except that Hamburg testing for ruts and stripping are at the discretion of the Engineer, and 9-03.8(6).
- Have anti-strip requirements, if any, for the proposed mix design determined in accordance with AASHTO T 283 or T 324 or based on historic anti-strip and aggregate source compatibility from

previous WSDOT lab testing.

At the discretion of the Engineer, agencies may accept verified mix designs older than 12 months from the original verification date with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design.

Commercial Evaluation Mix Design. Approval of a mix design for "Commercial Evaluation" will be based on a review of the Contractor's submittal of WSDOT Form 350-042 (for commercial mixes, AASHTO T 324 evaluation is not required) or a Mix Design from the current WSDOT QPL or from one of the processes allowed by this section. Testing of the HMA by the Contracting Agency for mix design approval is not required.

For the Bid Item Commercial HMA, the Contractor shall select a class of HMA and design level of ESALs appropriate for the required use.

5-04.2(2)B Using Warm Mix Asphalt Processes

The Contractor may elect to use additives that reduce the optimum mixing temperature or serve as a compaction aid for producing HMA. Additives include organic additives, chemical additives and foaming processes. The use of Additives is subject to the following:

- Do not use additives that reduce the mixing temperature more than allowed in Section 5-04.3(6) in the production of mixtures.
- Before using additives, obtain the Engineer's approval using WSDOT Form 350-076 to describe the proposed additive and process.

5-04.3 Construction Requirements

5-04.3(1) Weather Limitations

Do not place HMA for wearing course on any Traveled Way beginning October 1st through March 31st of the following year without written concurrence from the Engineer.

Do not place HMA on any wet surface, or when the average surface temperatures are less than those specified below, or when weather conditions otherwise prevent the proper handling or finishing of the HMA.

Minimum Surface Temperature for Paving

Compacted Thickness (Feet)	Wearing Course	Other Courses
Less than 0.10	55°F	45°F
0.10 to .20	45°F	35°F
More than 0.20	35°F	35°F

5-04.3(2) Paving Under Traffic

When the Roadway being paved is open to traffic, the requirements of this Section shall apply.

The Contractor shall keep intersections open to traffic at all times except when paving the intersection or paving across the intersection. During such time, and provided that there has been an advance warning to the public, the intersection may be closed for the minimum time required to place and compact the mixture. In hot weather, the Engineer may require the application of water to the pavement to accelerate the finish rolling of the pavement and to shorten the time required before reopening to traffic.

Before closing an intersection, advance warning signs shall be placed, and signs shall also be placed marking the detour or alternate route.

During paving operations, temporary pavement markings shall be maintained throughout the project. Temporary pavement markings shall be installed on the Roadway prior to opening to traffic. Temporary pavement markings shall be in accordance with Section 8-23.

All costs in connection with performing the Work in accordance with these requirements, except the cost of temporary pavement markings, shall be included in the unit Contract prices for the various Bid items involved in the Contract.

5-04.3(3) Equipment

5-04.3(3)A Mixing Plant

Plants used for the preparation of HMA shall conform to the following requirements:

1. **Equipment for Preparation of Asphalt Binder** – Tanks for the storage of asphalt binder shall be equipped to heat and hold the material at the required temperatures. The heating shall be accomplished by steam coils, electricity, or other approved means so that no flame shall be in contact with the storage tank. The circulating system for the asphalt binder shall be designed to ensure proper and continuous circulation during the operating period. A valve for the purpose of sampling the asphalt binder shall be placed in either the storage tank or in the supply line to the mixer.

2. **Thermometric Equipment** – An armored thermometer, capable of detecting temperature ranges expected in the HMA mix, shall be fixed in the asphalt binder feed line at a location near the charging valve at the mixer unit. The thermometer location shall be convenient and safe for access by Inspectors. The plant shall also be equipped with an approved dial-scale thermometer, a mercury actuated thermometer, an electric pyrometer, or another approved thermometric instrument placed at the discharge chute of the drier to automatically register or indicate the temperature of the heated aggregates. This device shall be in full view of the plant operator.

3. **Heating of Asphalt Binder** – The temperature of the asphalt binder shall not exceed the maximum recommended by the asphalt binder manufacturer nor shall it be below the minimum temperature required to maintain the asphalt binder in a homogeneous state. The asphalt binder shall be heated in a manner that will avoid local variations in heating. The heating method shall provide a continuous supply of asphalt binder to the mixer at a uniform average temperature with no individual variations exceeding 25°F. Also, when a WMA additive is included in the asphalt binder, the temperature of the asphalt binder shall not exceed the

maximum recommended by the manufacturer of the WMA additive.

4. **Sampling and Testing of Mineral Materials** – The HMA plant shall be equipped with a mechanical sampler for the sampling of the mineral materials. The mechanical sampler shall meet the requirements of Section 1-05.6 for the crushing and screening operation. The Contractor shall provide for the setup and operation of the field-testing facilities of the Contracting Agency as provided for in Section 3-01.2(2).

5. **Sampling HMA** – The HMA plant shall provide for sampling HMA by one of the following methods:

   a. A mechanical sampling device attached to the HMA plant.

   b. Platforms or devices to enable sampling from the hauling vehicle without entering the hauling vehicle.

5-04.3(3)B Hauling Equipment

Trucks used for hauling HMA shall have tight, clean, smooth metal beds and shall have a cover of canvas or other suitable material of sufficient size to protect the mixture from adverse weather. Whenever the weather conditions during the work shift include, or are forecast to include precipitation or an air temperature less than 45°F or when time from loading to unloading exceeds 30 minutes, the cover shall be securely attached to protect the HMA.

The Contractor shall provide an environmentally benign means to prevent the HMA mixture from adhering to the hauling equipment. Excess release agent shall be drained prior to filling hauling equipment with HMA. Petroleum derivatives or other coating material that contaminate or alter the characteristics of the HMA shall not be used. For live bed trucks, the conveyer shall be in operation during the process of applying the release agent.

5-04.3(3)C Pavers

HMA pavers shall be self-contained, power-propelled units, provided with an internally heated vibratory screed and shall be capable of spreading and finishing courses of HMA plant mix material in lane widths required by the paving section shown in the Plans.

The HMA paver shall be in good condition and shall have the most current equipment available from the manufacturer for the prevention of segregation of the HMA mixture installed, in good condition, and in working order. The equipment certification shall list the make, model, and year of the paver and any equipment that has been retrofitted.

The screed shall be operated in accordance with the manufacturer's recommendations and shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, segregating, or gouging the mixture. A copy of the manufacturer's recommendations shall be provided upon request by the Contracting Agency. Extensions will be allowed provided they produce the same results, including ride, density, and surface texture as obtained by the primary screed. Extensions without augers and an internally heated vibratory screed shall not be used in the Traveled Way.

When specified in the Contract, reference lines for vertical control will be required. Lines shall be placed on both outer edges of the Traveled Way of each Roadway. Horizontal control utilizing the reference line will be permitted. The grade and slope for intermediate lanes shall be controlled automatically from reference lines or by means of a mat referencing device and a slope control device. When the finish of the grade prepared for paving is superior to the established tolerances and when, in the opinion of the Engineer, further improvement to the line, grade, cross-section, and smoothness can best be achieved without the use of the reference line, a mat referencing device may be substituted for the reference line. Substitution of the device will be subject to the continued approval of the Engineer. A joint matcher may be used subject to the approval of the Engineer. The reference line may be removed after the completion of the first course of HMA when approved by the Engineer. Whenever the Engineer determines that any of these methods are failing to provide the necessary vertical control, the reference lines will be reinstalled by the Contractor.

The Contractor shall furnish and install all pins, brackets, tensioning devices, wire, and accessories necessary for satisfactory operation of the automatic control equipment.

If the paving machine in use is not providing the required finish, the Engineer may suspend Work as allowed by Section 1-08.6. Any cleaning or solvent type liquids spilled on the pavement shall be thoroughly removed before paving proceeds.

5-04.3(3)D Material Transfer Device or Material Transfer Vehicle

A Material Transfer Device/Vehicle (MTD/V) shall only be used with the Engineer's approval, unless otherwise required by the Contract.

Where an MTD/V is required by the Contract, the Engineer may approve paving without an MTD/V, at the request of the Contractor. The Engineer will determine if an equitable adjustment in cost or time is due.

When used, the MTD/V shall mix the HMA after delivery by the hauling equipment and prior to laydown by the paving machine. Mixing of the HMA shall be sufficient to obtain a uniform temperature throughout the mixture. If a windrow elevator is used, the length of the windrow may be limited in urban areas or through intersections, at the discretion of the Engineer.

To be approved for use, an MTV:

1. Shall be self-propelled vehicle, separate from the hauling vehicle or paver.

2. Shall not be connected to the hauling vehicle or paver.

3. May accept HMA directly from the haul vehicle or pick up HMA from a windrow.

4. Shall mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.

5. Shall mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

To be approved for use, an MTD:

1. Shall be positively connected to the paver.

2. May accept HMA directly from the haul vehicle or pick up HMA from a windrow.

3. Shall mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.

4. Shall mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

5-04.3(3)E Rollers

Rollers shall be of the steel wheel, vibratory, oscillatory, or pneumatic tire type, in good condition and capable of reversing without backlash. Operation of the roller shall be in accordance with the manufacturer's recommendations. When ordered by the Engineer for any roller planned for use on the project, the Contractor shall provide a copy of the manufacturer's recommendation for the use of that roller for compaction of HMA. The number and weight of rollers shall be sufficient to compact the mixture in compliance with the requirements of Section 5-04.3(10). The use of equipment that results in crushing of the aggregate will not be permitted. Rollers producing pickup, washboard, uneven compaction of the surface, displacement of the mixture or other undesirable results shall not be used.

5-04.3(4) Preparation of Existing Paved Surfaces

When the surface of the existing pavement or old base is irregular, the Contractor shall bring it to a uniform grade and cross-section as shown on the Plans or approved by the Engineer.

Preleveling of uneven or broken surfaces over which HMA is to be placed may be accomplished by using an asphalt paver, a motor patrol grader, or by hand raking, as approved by the Engineer.

Compaction of preleveling HMA shall be to the satisfaction of the Engineer and may require the use of small steel wheel rollers, plate compactors, or pneumatic rollers to avoid bridging across preleveled areas by the compaction equipment. Equipment used for the compaction of preleveling HMA shall be approved by the Engineer.

Before construction of HMA on an existing paved surface, the entire surface of the pavement shall be clean. All fatty asphalt patches, grease drippings, and other objectionable matter shall be entirely removed from the existing pavement. All pavements or bituminous surfaces shall be thoroughly cleaned of dust, soil, pavement grindings, and other foreign matter. All holes and small depressions shall be filled with an appropriate class of HMA. The surface of the patched area shall be leveled and compacted thoroughly. Prior to the application of tack coat, or paving, the condition of the surface shall be approved by the Engineer.

A tack coat of asphalt shall be applied to all paved surfaces on which any course of HMA is to be placed or abutted~~; except that tack coat may be omitted from clean, newly paved surfaces at the discretion of the Engineer~~. Tack coat shall be uniformly applied to cover the existing pavement with a thin film of residual asphalt free of streaks and bare spots at a rate between 0.02 and 0.10 gallons per square yard of retained asphalt. The rate of application shall be approved by the Engineer. A heavy application of

tack coat shall be applied to all joints. For Roadways open to traffic, the application of tack coat shall be limited to surfaces that will be paved during the same working shift. The spreading equipment shall be equipped with a thermometer to indicate the temperature of the tack coat material.

Equipment shall not operate on tacked surfaces until the tack has broken and cured. If the Contractor's operation damages the tack coat it shall be repaired prior to placement of the HMA.

The tack coat shall be CSS-1, or CSS-1h emulsified asphalt. The CSS-1 and CSS-1h emulsified asphalt may be diluted once with water at a rate not to exceed one-part water to one-part emulsified asphalt. The tack coat shall have sufficient temperature such that it may be applied uniformly at the specified rate of application and shall not exceed the maximum temperature recommended by the emulsified asphalt manufacturer.

5-04.3(4)A Crack Sealing
When the Proposal includes a pay item for crack sealing, seal cracks in accordance with Section 5-03.

5-04.3(4)B Vacant

5-04.3(4)C Pavement Repair
The Contractor shall excavate pavement repair areas and shall backfill these with HMA in accordance with the details shown in the Plans and as marked in the field. The Contractor shall conduct the excavation operations in a manner that will protect the pavement that is to remain. Pavement not designated to be removed that is damaged as a result of the Contractor's operations shall be repaired by the Contractor to the satisfaction of the Engineer at no cost to the Contracting Agency. The Contractor shall excavate only within one lane at a time unless approved otherwise by the Engineer. The Contractor shall not excavate more area than can be completely finished during the same shift, unless approved by the Engineer.

Unless otherwise shown in the Plans or determined by the Engineer, excavate to a depth of 1.0 feet. The Engineer will make the final determination of the excavation depth required. The minimum width of any pavement repair area shall be 40 inches unless shown otherwise in the Plans. Before any excavation, the existing pavement shall be sawcut or shall be removed by a pavement grinder. Excavated materials will become the property of the Contractor and shall be disposed of in a Contractor-provided site off the Right of Way or used in accordance with Sections 2-02.3(3) or 9-03.21.

Asphalt for tack coat shall be required as specified in Section 5-04.3(4). A heavy application of tack coat shall be applied to all surfaces of existing pavement in the pavement repair area.

Placement of the HMA backfill shall be accomplished in lifts not to exceed 0.35-foot compacted depth. Lifts that exceed 0.35-foot of compacted depth may be accomplished with the approval of the Engineer. Each lift shall be thoroughly compacted by a mechanical tamper or a roller.

5-04.3(5) Producing/Stockpiling Aggregates and RAP
Aggregates and RAP shall be stockpiled according to the requirements of Section 3-02. Sufficient storage space shall be provided for each size of aggregate and RAP. Materials shall be removed from stockpile(s) in a manner to ensure minimal segregation when being moved to the HMA plant for processing into the

final mixture. Different aggregate sizes shall be kept separated until they have been delivered to the HMA plant.

5-04.3(5)A Vacant

5-04.3(6) Mixing

After the required amount of mineral materials, asphalt binder, recycling agent and anti-stripping additives have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials is ensured.

When discharged, the temperature of the HMA shall not exceed the optimum mixing temperature by more than 25°F as shown on the reference mix design report or as approved by the Engineer. Also, when a WMA additive is included in the manufacture of HMA, the discharge temperature of the HMA shall not exceed the maximum recommended by the manufacturer of the WMA additive. A maximum water content of 2 percent in the mix, at discharge, will be allowed providing the water causes no problems with handling, stripping, or flushing. If the water in the HMA causes any of these problems, the moisture content shall be reduced as directed by the Engineer.

Storing or holding of the HMA in approved storage facilities will be permitted with approval of the Engineer, but in no event shall the HMA be held for more than 24 hours. HMA held for more than 24 hours after mixing shall be rejected. Rejected HMA shall be disposed of by the Contractor at no expense to the Contracting Agency. The storage facility shall have an accessible device located at the top of the cone or about the third point. The device shall indicate the amount of material in storage. No HMA shall be accepted from the storage facility when the HMA in storage is below the top of the cone of the storage facility, except as the storage facility is being emptied at the end of the working shift.

Recycled asphalt pavement (RAP) utilized in the production of HMA shall be sized prior to entering the mixer so that a uniform and thoroughly mixed HMA is produced. If there is evidence of the recycled asphalt pavement not breaking down during the heating and mixing of the HMA, the Contractor shall immediately suspend the use of the RAP until changes have been approved by the Engineer. After the required amount of mineral materials, RAP, new asphalt binder and asphalt rejuvenator have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials, and RAP is ensured.

5-04.3(7) Spreading and Finishing

The mixture shall be laid upon an approved surface, spread, and struck off to the grade and elevation established. HMA pavers complying with Section 5-04.3(3) shall be used to distribute the mixture. Unless otherwise directed by the Engineer, the nominal compacted depth of any layer of any course shall not exceed the following:

HMA Class 1"	0.35 feet
HMA Class ¾" and HMA Class ½"	
wearing course	0.30 feet
other courses	0.35 feet
HMA Class ⅜"	~~0.15~~0.17 feet

On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the paving may be done with other equipment or by hand.

When more than one JMF is being utilized to produce HMA, the material produced for each JMF shall be placed by separate spreading and compacting equipment. The intermingling of HMA produced from more than one JMF is prohibited. Each strip of HMA placed during a work shift shall conform to a single JMF established for the class of HMA specified unless there is a need to make an adjustment in the JMF.

The internal temperature of the HMA mixture as measured immediately behind the paver screed should not be less than the minimum Compaction Temperature listed in the Mix Design Submittal Form or that listed in the WSDOT Mix Design Verification Report, whichever is greater.

All underground utilities testing shall be completed, and the installation of the underground utilities shall be accepted by the utility owner prior to placing HMA. All fill and crushed surfacing materials under the HMA pavement shall be placed, compacted and tested according to the Contract Documents prior to placing HMA. The HMA mixture shall be laid upon the prepared surface, spread, and struck off to the grade and elevation established.

The finish surface of the compacted HMA shall not deviate from the design grade in excess of the following:

Specified Depth	Max. Allowable Deviation At any point	Ave. Depth Deviation for entire project
Single lift 0.08 – 0.17′	-0.045′	-0.015′
Multi lift 0.00 – 0.25′	-0.03′	-0.01′
0.26 – 0.50′	-0.045′	-0.015′
0.51 – 0.75′	-0.06′	-0.02′
over 0.75′	-0.075′	-0.025′

5-04.3(8) Aggregate Acceptance Prior to Incorporation in HMA

For HMA accepted by nonstatistical evaluation, the aggregate properties of sand equivalent, uncompacted void content, and fracture will be evaluated in accordance with Section 3-04. Sampling and testing of aggregates for HMA accepted by commercial evaluation will be at the option of the Engineer.

5-04.3(9) HMA Mixture Acceptance

Acceptance of HMA shall be as provided under nonstatistical, or commercial evaluation.

Nonstatistical evaluation will be used for the acceptance of HMA unless Commercial Evaluation is specified.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, temporary pavement, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Engineer.

The mix design will be the initial JMF for the class of HMA. The Contractor may request a change in the JMF. Any adjustments to the JMF will require the approval of the Engineer and may be made in accordance with this section.

HMA Tolerances and Adjustments

1. **Job Mix Formula Tolerances** – The constituents of the mixture at the time of acceptance shall be within tolerance. The tolerance limits will be established as follows:

   For Asphalt Binder and Air Voids (Va), the acceptance limits are determined by adding the tolerances below to the approved JMF values. These values will also be the Upper Specification Limit (USL) and Lower Specification Limit (LSL) required in Section 1-06.2(2)D2

Property	Non-Statistical Evaluation	Commercial Evaluation
Asphalt Binder	+/- 0.5%	+/- 0.7%
Air Voids, Va	2.5% min. and 5.5% max	N/A

   For Aggregates in the mixture:

   a. First, determine preliminary upper and lower acceptance limits by applying the following tolerances to the approved JMF.

Aggregate Percent Passing	Non-Statistical Evaluation	Commercial Evaluation
1", ¾", ½", and 3/8" sieves	+/- 6%	+/- 8%
No. 4 sieve	+/-6%	+/- 8%
No. 8 Sieve	+/- 6%	+/-8%
No. 200 sieve	+/- 2.0%	+/- 3.0%

   b. Second, adjust the preliminary upper and lower acceptance limits determined from step (a) the minimum amount necessary so that none of the aggregate properties are outside the control points in Section 9-03.8(6). The resulting values will be the upper and lower acceptance limits for aggregates, as well as the USL and LSL required in Section 1-06.2(2)D2.

2. **Job Mix Formula Adjustments** – An adjustment to the aggregate gradation or asphalt binder content of the JMF requires approval of the Engineer. Adjustments to the JMF will only be considered if the change produces material of equal or better quality and may require the development of a new mix design if the adjustment exceeds the amounts listed below.

   a. **Aggregates** –2 percent for the aggregate passing the 1½", 1", ¾", ½", ⅜", and the No. 4 sieves, 1 percent for aggregate passing the No. 8 sieve, and 0.5 percent for the aggregate passing the No. 200 sieve. The adjusted JMF shall be within the range of the control points in Section 9-03.8(6).

b. **Asphalt Binder Content** – The Engineer may order or approve changes to asphalt binder content. The maximum adjustment from the approved mix design for the asphalt binder content shall be 0.3 percent.

5-04.3(9)A Vacant

5-04.3(9)B Vacant

5-04.3(9)C Mixture Acceptance – Nonstatistical Evaluation

HMA mixture which is accepted by Nonstatistical Evaluation will be evaluated by the Contracting Agency by dividing the HMA tonnage into lots.

5-04.3(9)C1 Mixture Nonstatistical Evaluation – Lots and Sublots

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A sublot shall be equal to one day's production or 800 tons, whichever is less except that the final sublot will be a minimum of 400 tons and may be increased to 1200 tons.

All of the test results obtained from the acceptance samples from a given lot shall be evaluated collectively. If the Contractor requests a change to the JMF that is approved, the material produced after the change will be evaluated on the basis of the new JMF for the remaining sublots in the current lot and for acceptance of subsequent lots. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

Sampling and testing for evaluation shall be performed on the frequency of one sample per sublot.

Sampling and testing for total project quantities less than 400 tons is at the discretion of the engineer. For a total project quantity less than 800 tons but more than 400 tons, a minimum of one acceptance test shall be performed:

i. If test results are found to be within specification requirements, additional testing will be at the Engineer's discretion.
ii. If test results are found not to be within specification requirements, additional testing as needed to determine a CPF shall be performed.

5-04.3(9)C2 Mixture Nonstatistical Evaluation Sampling

Samples for acceptance testing shall be obtained by the Contractor when ordered by the Engineer. The Contractor shall sample the HMA mixture in the presence of the Engineer and in accordance with AASHTO T 168. A minimum of three samples should be taken for each class of HMA placed on a project. If used in a structural application, at least one of the three samples shall be tested.

Sampling and testing HMA in a structural application where quantities are less than 400 tons is at the discretion of the Engineer.

For HMA used in a structural application and with a total project quantity less than 800 tons but more than 400 tons, a minimum of one acceptance test shall be performed. In all cases, a minimum of 3 samples will be obtained at the point of acceptance, a minimum of one of the three samples will be tested for conformance to the JMF:

- If the test results are found to be within specification requirements, additional testing will be at the Engineer's discretion.

- If test results are found not to be within specification requirements, additional testing of the remaining samples to determine a CPF shall be performed.

5-04.3(9)C3 Mixture Nonstatistical Evaluation – Acceptance Testing

Testing of HMA for compliance of V_a will at the option of the Contracting Agency. If tested, compliance of V_a will use WSDOT SOP 731.

Testing for compliance of asphalt binder content will be by WSDOT FOP for AASHTO T 308.

Testing for compliance of gradation will be by FOP for WAQTC T 27/T 11.

5-04.3(9)C4 Mixture Nonstatistical Evaluation – Pay Factors

For each lot of material falling outside the tolerance limits in 5-04.3(9), the Contracting Agency will determine a CPF using the following price adjustment factors:

Table of Price Adjustment Factors	
Constituent	**Factor "f"**
All aggregate passing: 1½", 1", ¾", ½", ⅜" and No. 4 sieves	2
All aggregate passing No. 8 sieve	15
All aggregate passing No. 200 sieve	20
Asphalt binder	40
Air Voids (Va) (where applicable)	20

Each lot of HMA produced under Nonstatistical Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the nonstatistical tolerance limits in the Job Mix Formula shown in Table of Price Adjustment Factors, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The nonstatistical tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the Roadway shall be tested to provide a minimum of three sets of results for evaluation.

5-04.3(9)C5 Vacant

5-04.3(9)C6 Mixture Nonstatistical Evaluation – Price Adjustments

For each lot of HMA mix produced under Nonstatistical Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The total job mix compliance price adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the CPF.

5-04.3(9)C7 Mixture Nonstatistical Evaluation - Retests

The Contractor may request a sublot be retested. To request a retest, the Contractor shall submit a written request within 7 calendar days after the specific test results have been received. A split of the original acceptance sample will be retested. The split of the sample will not be tested with the same tester that ran the original acceptance test. The sample will be tested for a complete gradation analysis, asphalt binder content, and, at the option of the agency, V_a. The results of the retest will be used for the acceptance of the HMA in place of the original sublot sample test results. The cost of testing will be deducted from any monies due or that may come due the Contractor under the Contract at the rate of $500 per sample.

5-04.3 (9)D Mixture Acceptance – Commercial Evaluation

If sampled and tested, HMA produced under Commercial Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the commercial tolerance limits in the Job Mix Formula shown in 5-04.3(9), the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The commercial tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the street shall be tested to provide a minimum of three sets of results for evaluation.

For each lot of HMA mix produced and tested under Commercial Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The Job Mix Compliance Price Adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the CPF.

5-04.3(10) HMA Compaction Acceptance

HMA mixture accepted by nonstatistical evaluation that is used in traffic lanes, including lanes for intersections, ramps, truck climbing, weaving, and speed change, and having a specified compacted course thickness greater than 0.10-foot, shall be compacted to a specified level of relative density. The specified level of relative density shall be a CPF of not less than 0.75 when evaluated in accordance with Section 1-06.2, using a LSL of 92.0 (minimum of 92 percent of the maximum density). The maximum density shall be determined by WSDOT FOP for AASHTO T 729. The specified level of density attained

will be determined by the evaluation of the density of the pavement. The density of the pavement shall be determined in accordance with WSDOT FOP for WAQTC TM 8, except that gauge correlation will be at the discretion of the Engineer, when using the nuclear density gauge and WSDOT SOP 736 when using cores to determine density.

Tests for the determination of the pavement density will be taken in accordance with the required procedures for measurement by a nuclear density gauge or Roadway cores after completion of the finish rolling.

If the Contracting Agency uses a nuclear density gauge to determine density the test procedures FOP for WAQTC TM 8 and WSDOT SOP T 729 will be used on the day the mix is placed and prior to opening to traffic.

Roadway cores for density may be obtained by either the Contracting Agency or the Contractor in accordance with WSDOT SOP 734. The core diameter shall be 4-inches minimum, unless otherwise approved by the Engineer. Roadway cores will be tested by the Contracting Agency in accordance with WSDOT FOP for AASHTO T 166.

If the Contract includes the Bid item "Roadway Core", the cores shall be obtained by the Contractor in the presence of the Engineer on the same day the mix is placed and at locations designated by the Engineer. If the Contract does not include the Bid item "Roadway Core", the Contracting Agency will obtain the cores.

For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used for preleveling wheel rutting shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

Test Results

For a sublot that has been tested with a nuclear density gauge that did not meet the minimum of 92 percent of the reference maximum density in a compaction lot with a CPF below 1.00 and thus subject to a price reduction or rejection, the Contractor may request that a core be used for determination of the relative density of the sublot. The relative density of the core will replace the relative density determined by the nuclear density gauge for the sublot and will be used for calculation of the CPF and acceptance of HMA compaction lot.

When cores are taken by the Contracting Agency at the request of the Contractor, they shall be requested by noon of the next workday after the test results for the sublot have been provided or made available to the Contractor. Core locations shall be outside of wheel paths and as determined by the

Engineer. Traffic control shall be provided by the Contractor as requested by the Engineer. Failure by the Contractor to provide the requested traffic control will result in forfeiture of the request for cores. When the CPF for the lot based on the results of the HMA cores is less than 1.00, the cost for the coring will be deducted from any monies due or that may become due the Contractor under the Contract at the rate of $200 per core and the Contractor shall pay for the cost of the traffic control.

5-04.3(10)A HMA Compaction – General Compaction Requirements

Compaction shall take place when the mixture is in the proper condition so that no undue displacement, cracking, or shoving occurs. Areas inaccessible to large compaction equipment shall be compacted by other mechanical means. Any HMA that becomes loose, broken, contaminated, shows an excess or deficiency of asphalt, or is in any way defective, shall be removed and replaced with new hot mix that shall be immediately compacted to conform to the surrounding area.

Separate breakdown and finish rollers are required. The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor's option, provided the specified densities are attained. Unless the Engineer has approved otherwise, rollers shall only be operated in the static mode when the internal temperature of the mix is less than 175°F. Regardless of mix temperature, a roller shall not be operated in a mode that results in checking or cracking of the mat. Rollers shall only be operated in static mode on bridge decks. Approaches shall be compacted with vibratory plates or a small roller if determined necessary by the Engineer.

5-04.3(10)B HMA Compaction - Cyclic Density

Low cyclic density areas are defined as spots or streaks in the pavement that are less than 90 percent of the theoretical maximum density. At the Engineer's discretion, the Engineer may evaluate the HMA pavement for low cyclic density, and when doing so will follow WSDOT SOP 733. A $500 Cyclic Density Price Adjustment will be assessed for any 500-foot section with two or more density readings below 90 percent of the theoretical maximum density.

5-04.3(10)C Vacant

5-04.3(10)D HMA Nonstatistical Compaction

5-04.3(10)D1 HMA Nonstatistical Compaction - Lots and Sublots

HMA compaction which is accepted by nonstatistical evaluation will be based on acceptance testing performed by the Contracting Agency dividing the project into compaction lots.

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A sublot shall be equal to one day's production or 400 tons, whichever is less except that the final sublot will be a minimum of 200 tons and may be increased to 800 tons. Testing for compaction will be at the rate of 5 tests per sublot per WSDOT T 738.

The sublot locations within each density lot will be determined by the Engineer. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used to prelevel wheel ruts shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

5-04.3(10)D2 HMA Compaction Nonstatistical Evaluation – Acceptance Testing

The location of the HMA compaction acceptance tests will be randomly selected by the Engineer from within each sublot, with one test per sublot.

5-04.3(10)D3 HMA Nonstatistical Compaction – Price Adjustments

For each compaction lot with one or two sublots, having all sublots attain a relative density that is 92 percent of the reference maximum density the HMA shall be accepted at the unit Contract price with no further evaluation. When a sublot does not attain a relative density that is 92 percent of the reference maximum density, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The maximum CPF shall be 1.00, however, lots with a calculated CPF in excess of 1.00 will be used to offset lots with CPF values below 1.00 but greater than 0.90. Lots with CPF lower than 0.90 will be evaluated for compliance per 5-04.3(11). Additional testing by either a nuclear moisture-density gauge or cores will be completed as required to provide a minimum of three tests for evaluation.

For compaction below the required 92%, a Non-Conforming Compaction Factor (NCCF) will be determined. The NCCF equals the algebraic difference of CPF minus 1.00 multiplied by 40 percent. The Compaction Price Adjustment will be calculated as the product of CPF, the quantity of HMA in the compaction control lot in tons, and the unit Contract price per ton of mix.

5-04.3(11) Reject Work

5-04.3(11)A Reject Work General

Work that is defective or does not conform to Contract requirements shall be rejected. The Contractor may propose, in writing, alternatives to removal and replacement of rejected material. Acceptability of such alternative proposals will be determined at the sole discretion of the Engineer. HMA that has been rejected is subject to the requirements in Section 1-06.2(2) and this specification, and the Contractor shall submit a corrective action proposal to the Engineer for approval.

5-04.3(11)B Rejection by Contractor

The Contractor may, prior to sampling, elect to remove any defective material and replace it with new material. Any such new material will be sampled, tested, and evaluated for acceptance.

5-04.3(11)C Rejection Without Testing (Mixture or Compaction)

The Engineer may, without sampling, reject any batch, load, or section of Roadway that appears defective. Material rejected before placement shall not be incorporated into the pavement. Any rejected section of Roadway shall be removed.

No payment will be made for the rejected materials or the removal of the materials unless the Contractor requests that the rejected material be tested. If the Contractor elects to have the rejected material tested, a minimum of three representative samples will be obtained and tested. Acceptance of rejected material will be based on conformance with the nonstatistical acceptance Specification. If the CPF for the rejected material is less than 0.75, no payment will be made for the rejected material; in addition, the cost of sampling and testing shall be borne by the Contractor. If the CPF is greater than or equal to 0.75, the cost of sampling and testing will be borne by the Contracting Agency. If the material is rejected before placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at a CPF of 0.75. If rejection occurs after placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at the calculated CPF with an addition of 25 percent of the unit Contract price added for the cost of removal and disposal.

5-04.3(11)D Rejection - A Partial Sublot

In addition to the random acceptance sampling and testing, the Engineer may also isolate from a normal sublot any material that is suspected of being defective in relative density, gradation or asphalt binder content. Such isolated material will not include an original sample location. A minimum of three random samples of the suspect material will be obtained and tested. The material will then be statistically evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)E Rejection - An Entire Sublot

An entire sublot that is suspected of being defective may be rejected. When a sublot is rejected a minimum of two additional random samples from this sublot will be obtained. These additional samples and the original sublot will be evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)F Rejection - A Lot in Progress

The Contractor shall shut down operations and shall not resume HMA placement until such time as the Engineer is satisfied that material conforming to the Specifications can be produced:

1. When the CPF of a lot in progress drops below 1.00 and the Contractor is taking no corrective action, or
2. When the Pay Factor (PF) for any constituent of a lot in progress drops below 0.95 and the Contractor is taking no corrective action, or
3. When either the PF for any constituent or the CPF of a lot in progress is less than 0.75.

5-04.3(11)G Rejection - An Entire Lot (Mixture or Compaction)

An entire lot with a CPF of less than 0.75 will be rejected.

5-04.3(12) Joints

5-04.3(12)A HMA Joints

5-04.3(12)A1 Transverse Joints

The Contractor shall conduct operations such that the placing of the top or wearing course is a continuous operation or as close to continuous as possible. Unscheduled transverse joints will be allowed, and the roller may pass over the unprotected end of the freshly laid mixture only when the placement of the course must be discontinued for such a length of time that the mixture will cool below compaction temperature. When the Work is resumed, the previously compacted mixture shall be cut back to produce a slightly beveled edge for the full thickness of the course.

A temporary wedge of HMA constructed on a 20H:1V shall be constructed where a transverse joint as a result of paving or planing is open to traffic. The HMA in the temporary wedge shall be separated from the permanent HMA by strips of heavy wrapping paper or other methods approved by the Engineer. The wrapping paper shall be removed and the joint trimmed to a slightly beveled edge for the full thickness of the course prior to resumption of paving.

The material that is cut away shall be wasted and new mix shall be laid against the cut. Rollers or tamping irons shall be used to seal the joint.

5-04.3(12)A2 Longitudinal Joints

The longitudinal joint in any one course shall be offset from the course immediately below by not more than 6 inches nor less than 2 inches. All longitudinal joints constructed in the wearing course shall be located at a lane line or an edge line of the Traveled Way. A notched wedge joint shall be constructed along all longitudinal joints in the wearing surface of new HMA unless otherwise approved by the Engineer. The notched wedge joint shall have a vertical edge of not less than the maximum aggregate size or more than ½ of the compacted lift thickness and then taper down on a slope not steeper than 4H:1V. The sloped portion of the HMA notched wedge joint shall be uniformly compacted.

5-04.3(12)B Bridge Paving Joint Seals

Bridge Paving Joint Seals shall be in accordance with Section 5-03.

5-04.3(13) Surface Smoothness

The completed surface of all courses shall be of uniform texture, smooth, uniform as to crown and grade, and free from defects of all kinds. The completed surface of the wearing course shall not vary more than ⅛ inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline. The transverse slope of the completed surface of the wearing course shall vary not more than ¼ inch in 10 feet from the rate of transverse slope shown in the Plans.

When deviations in excess of the above tolerances are found that result from a high place in the HMA, the pavement surface shall be corrected by one of the following methods:

1. Removal of material from high places by grinding with an approved grinding machine, or

2. Removal and replacement of the wearing course of HMA, or

3. By other method approved by the Engineer.

Correction of defects shall be carried out until there are no deviations anywhere greater than the allowable tolerances.

Deviations in excess of the above tolerances that result from a low place in the HMA and deviations resulting from a high place where corrective action, in the opinion of the Engineer, will not produce satisfactory results will be accepted with a price adjustment. The Engineer shall deduct from monies due or that may become due to the Contractor the sum of $500.00 for each and every section of single traffic lane 100 feet in length in which any excessive deviations described above are found.

When utility appurtenances such as manhole covers and valve boxes are located in the traveled way, the utility appurtenances shall be adjusted to the finished grade prior to paving. This requirement may be waived when requested by the Contractor, at the discretion of the Engineer or when the adjustment details provided in the project plan or specifications call for utility appurtenance adjustments after the completion of paving.

Utility appurtenance adjustment discussions will be included in the Pre-Paving and Pre-Planing Briefing (5-04.3(14)B3). Submit a written request to waive this requirement to the Engineer prior to the start of paving.

5-04.3(14) Planing Bituminous Pavement

The planing plan must be approved by the Engineer and a pre-planing meeting must be held prior to the start of any planing. See Section 5-04.3(14)B2 for information on planing submittals.

Where planing an existing pavement is specified in the Contract, the Contractor must remove existing surfacing material and to reshape the surface to remove irregularities. The finished product must be a prepared surface acceptable for receiving an HMA overlay.

Use the cold milling method for planing unless otherwise specified in the Contract. Do not use the planer on the final wearing course of new HMA.

Conduct planing operations in a manner that does not tear, break, burn, or otherwise damage the surface which is to remain. The finished planed surface must be slightly grooved or roughened and must be free from gouges, deep grooves, ridges, or other imperfections. The Contractor must repair any damage to the surface by the Contractor's planing equipment, using an Engineer approved method.

Repair or replace any metal castings and other surface improvements damaged by planing, as determined by the Engineer.

A tapered wedge cut must be planed longitudinally along curb lines sufficient to provide a minimum of 4 inches of curb reveal after placement and compaction of the final wearing course. The dimensions of the wedge must be as shown on the Drawings or as specified by the Engineer.

A tapered wedge cut must also be made at transitions to adjoining pavement surfaces (meet lines) where butt joints are shown on the Drawings. Cut butt joints in a straight line with vertical faces 2 inches or more in height, producing a smooth transition to the existing adjoining pavement.

After planing is complete, planed surfaces must be swept, cleaned, and if required by the Contract, patched and preleveled.

The Engineer may direct additional depth planing. Before performing this additional depth planing, the Contractor must conduct a hidden metal in pavement detection survey as specified in Section 5-04.3(14)A.

5-04.3(14)A Pre-Planing Metal Detection Check

Before starting planing of pavements, and before any additional depth planing required by the Engineer, the Contractor must conduct a physical survey of existing pavement to be planed with equipment that can identify hidden metal objects.

Should such metal be identified, promptly notify the Engineer.

See Section 1-07.16(1) regarding the protection of survey monumentation that may be hidden in pavement.

The Contractor is solely responsible for any damage to equipment resulting from the Contractor's failure to conduct a pre-planing metal detection survey, or from the Contractor's failure to notify the Engineer of any hidden metal that is detected.

5-04.3(14)B Paving and Planing Under Traffic

5-04.3(14)B1 General

In addition, the requirements of Section 1-07.23 and the traffic controls required in Section 1-10, and unless the Contract specifies otherwise or the Engineer approves, the Contractor must comply with the following:

1. Intersections:

    a. Keep intersections open to traffic at all times, except when paving or planing operations through an intersection requires closure. Such closure must be kept to the minimum time required to place and compact the HMA mixture, or plane as appropriate. For paving, schedule such closure to individual lanes or portions thereof that allows the traffic volumes and schedule of traffic volumes required in the approved traffic control plan. Schedule work so that adjacent intersections are not impacted at the same time and comply with the traffic control restrictions required by the Traffic Engineer. Each individual intersection closure or partial closure must be addressed in the traffic control plan, which must be submitted to and accepted by the Engineer, see Section 1-10.2(2).

    b. When planing or paving and related construction must occur in an intersection, consider scheduling and sequencing such work into quarters of the intersection, or half or more of an intersection with side street detours. Be prepared to sequence the work to individual lanes or portions thereof.

    c. Should closure of the intersection in its entirety be necessary, and no trolley service is impacted, keep such closure to the minimum time required to place and compact the HMA mixture, plane, remove asphalt, tack coat, and as needed.

    d. Any work in an intersection requires advance warning in both signage and a number of Working Days advance notice as determined by the Engineer, to alert traffic and emergency services of the intersection closure or partial closure.

    e. Allow new compacted HMA asphalt to cool to ambient temperature before any traffic is allowed on it. Traffic is not allowed on newly placed asphalt until approval has been obtained

from the Engineer.

2. Temporary centerline marking, post-paving temporary marking, temporary stop bars, and maintaining temporary pavement marking must comply with Section 8-23.

3. Permanent pavement marking must comply with Section 8-22.

5-04.3(14)B2 Submittals - Planing Plan and HMA Paving Plan

The Contractor must submit a separate planing plan and a separate paving plan to the Engineer at least 5 Working Days in advance of each operation's activity start date. These plans must show how the moving operation and traffic control are coordinated, as they will be discussed at the pre-planing briefing and pre-paving briefing. When requested by the Engineer, the Contractor must provide each operation's traffic control plan on 24 x 36 inch or larger size Shop Drawings with a scale showing both the area of operation and sufficient detail of traffic beyond the area of operation where detour traffic may be required. The scale on the Shop Drawings is 1 inch = 20 feet, which may be changed if the Engineer agrees sufficient detail is shown.

The planing operation and the paving operation include, but are not limited to, metal detection, removal of asphalt and temporary asphalt of any kind, tack coat and drying, staging of supply trucks, paving trains, rolling, scheduling, and as may be discussed at the briefing.

When intersections will be partially or totally blocked, provide adequately sized and noticeable signage alerting traffic of closures to come, a minimum 2 Working Days in advance. The traffic control plan must show where police officers will be stationed when signalization is or may be, countermanded, and show areas where flaggers are proposed.

At a minimum, the planing and the paving plan must include:

1. A copy of the accepted traffic control plan, see Section 1-10.2(2), detailing each day's traffic control as it relates to the specific requirements of that day's planing and paving. Briefly describe the sequencing of traffic control consistent with the proposed planing and paving sequence, and scheduling of placement of temporary pavement markings and channelizing devices after each day's planing, and paving.

2. A copy of each intersection's traffic control plan.

3. Haul routes from supplier facilities, and locations of temporary parking and staging areas, including return routes. Describe the complete round trip as it relates to the sequencing of paving operations.

4. Names and locations of HMA supplier facilities to be used.

5. List of all equipment to be used for paving.

6. List of personnel and associated job classification assigned to each piece of paving equipment.

7. Description (geometric or narrative) of the scheduled sequence of planing and of paving and intended area of planing and of paving for each day's work, must include the directions of proposed planing and of proposed paving, sequence of adjacent lane paving, sequence of skipped lane paving, intersection planing and paving scheduling and sequencing, and proposed notifications and coordinations to be timely made. The plan must show HMA joints relative to the final pavement marking lane lines.

8. Names, job titles, and contact information for field, office, and plant supervisory personnel.

9. A copy of the approved Mix Designs.

10. Tonnage of HMA to be placed each day.

11. Approximate times and days for starting and ending daily operations.

5-04.3(14)B3 Pre-Paving and Pre-Planing Briefing

At least 2 Working Days before the first paving operation and the first planing operation, or as scheduled by the Engineer for future paving and planing operations to ensure the Contractor has adequately prepared for notifying and coordinating as required in the Contract, the Contractor must be prepared to discuss that day's operations as they relate to other entities and to public safety and convenience, including driveway and business access, garbage truck operations, transit operations and working around energized overhead wires, school and nursing home and hospital and other accesses, other Contractors who may be operating in the area, pedestrian and bicycle traffic, and emergency services. The Contractor, and Subcontractors that may be part of that day's operations, must meet with the Engineer and discuss the proposed operation as it relates to the submitted planing plan and paving plan, approved traffic control plan, and public convenience and safety. Such discussion includes, but is not limited to:

1. General for both the Paving and Planing:

   a. The actual times of starting and ending daily operations.

   b. In intersections, how to break up the intersection, and address traffic control and signalization for that operation, including use of peace officers.

   c. The sequencing and scheduling of paving operations and of planing operations, as applicable, as it relates to traffic control, public convenience and safety, and other Contractors who may operate in the Project limits.

   d. Notifications required of Contractor activities and coordinating with other entities and the public as necessary. This includes notification of the public of areas where parking will be prohibited during planing or paving operations, including any necessary "TEMPORARY NO PARKING" signs.

   e. Description of the sequencing of installation and types of temporary pavement markings as it relates to planning and paving.

f. Description of the sequencing of installation of, and the removal of, temporary pavement patch material around exposed castings and as may be needed.

g. Description of procedures and equipment to identify hidden metal in the pavement, such as survey monumentation, monitoring wells, streetcar rail, and castings, before planing as per Section 5-04.3(14)B2.

h. Description of how flaggers will be coordinated with the planing, paving, and related operations.

i. Description of sequencing of traffic controls for the process of rigid pavement base repairs.

j. Other items the Engineer deems necessary to address.

2. Paving – additional topics:

a. When to start applying tack and coordinating with paving.

b. Types of equipment and numbers of each type of equipment to be used. If more pieces of equipment than personnel are proposed, describe the sequencing of the personnel operating the types of equipment. Discuss the continuance of operator personnel for each type of equipment as it relates to meeting Specification requirements.

c. Number of JMFs to be placed, and if more than one JMF is used, how the Contractor will ensure different JMFs are distinguished, how pavers and how MTVs are distinguished, and how pavers and MTVs are cleaned so that one JMF does not adversely influence the other JMF.

d. Description of contingency plans for that day's operations such as equipment breakdown, rain out, and supplier shutdown of operations.

e. Number of sublots to be placed, sequencing of density testing, and other sampling and testing.

5-04.3(15) Sealing Pavement Surfaces

Apply a fog seal where shown in the plans. Construct the fog seal in accordance with Section 5-02.3. Unless otherwise approved by the Engineer, apply the fog seal prior to opening to traffic.

5-04.3(16) HMA Road Approaches

Construct HMA approaches at the locations shown in the Plans or where staked by the Engineer, in accordance with Section 5-04.

5-04.3(17) Protection of Monuments

To protect monuments within the limits of paving opeerations, the Contractor shall cover the monument with material that will protect the monument from damage. The Contractor shall pave over

the protected monument, leaving a 3-inch diameter hole in the paving mat centered over the monument. After paving operations are complete, the Contractor shall coat the sides of the hole and underlying pavement with tack coat. No tack coat shall cover the monument itself.

5-04.4 Measurement

HMA Cl. ___ PG ___, HMA for ___ Cl. ___ PG ___, and Commercial HMA will be measured by the ton in accordance with Section 1-09.2, with no deduction being made for the weight of asphalt binder, mineral filler, or any other component of the mixture. If the Contractor elects to remove and replace mix as allowed by Section 5-04.3(11), the material removed will not be measured.

Roadway cores will be measured per each for the number of cores taken.

Pavement repair excavation will be measured by the square yard of surface marked prior to excavation.

Planing bituminous pavement will be measured by the square yard.

No specific unit of measurement will apply to the calculated item of asphalt cost price adjustment.

5-04.5 Payment

Payment will be made for each of the following Bid items that are included in the Proposal:

"HMA Cl. ___ PG ___", per ton.

"HMA for Approach Cl. ___ PG ___", per ton.

"HMA for Preleveling Cl. ___ PG ___", per ton.

"HMA for Pavement Repair Cl. ___ PG ___", per ton.

"Commercial HMA", per ton.

The unit Contract price per ton for "HMA Cl. ___ PG ___", "HMA for Approach Cl. ___ PG ___", "HMA for Preleveling Cl. ___ PG ___", "HMA for Pavement Repair Cl. ___ PG ___", and "Commercial HMA" shall be full compensation for all costs, including anti-stripping additive, incurred to carry out the requirements of Section 5-04 except for those costs included in other items which are included in this Subsection and which are included in the Proposal. The cost of asphalt for tack coat, preparation of existing surfaces, protection of monuments, temporary striping and removal of existing buttons and all other costs in connection with performing the work in accordance with these requirements shall be included in the unit cost for the HMA bid item of this contract.

"Pavement Repair Excavation Incl. Haul", per square yard.

The unit Contract price per square yard for "Pavement Repair Excavation Incl. Haul" shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(4) with the exception, however, that all costs involved in the placement of HMA shall be included in the unit Contract price per ton for "HMA for Pavement Repair Cl. ___ PG ___", per ton.

"Asphalt for Prime Coat", per ton.

The unit Contract price per ton for "Asphalt for Prime Coat" shall be full payment for all costs incurred to obtain, provide and install the material in accordance with Section 5-04.3(4).

"Prime Coat Agg.", per cubic yard, or per ton.

The unit Contract price per cubic yard or per ton for "Prime Coat Agg." shall be full pay for furnishing, loading, and hauling aggregate to the place of deposit and spreading the aggregate in the quantities required by the Engineer.

"Planing Bituminous Pavement", per square yard.

The unit Contract price per square yard for "Planing Bituminous Pavement" shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(14).

"Job Mix Compliance Price Adjustment", by calculation.

"Job Mix Compliance Price Adjustment" will be calculated and paid for as described in Section 5-04.3(9)C6.

"Compaction Price Adjustment", by calculation.

"Compaction Price Adjustment" will be calculated and paid for as described in Section 5-04.3(10)D3.

"Roadway Core", per each.

The Contractor's costs for all Work associated with the coring (e.g., traffic control) shall be incidental and included in the unit Bid price per each.

"Cyclic Density Price Adjustment", by calculation.

"Cyclic Density Price Adjustment" will be calculated and paid for as described in Section 5-04.3(10)B.

(January 13, 2021)
Asphalt Cost Price Adjustment
The Contracting Agency will make an Asphalt Cost Price Adjustment, either a credit or a payment, for qualifying changes in the reference cost of asphalt binder. The adjustment will be applied to partial payments made according to Section 1-09.9 for the following bid items when they are included in the proposal:

"HMA Cl. ___ PG ___"
"HMA for Approach Cl. ___ PG ___"
"HMA for Preleveling Cl. ___ PG ___"
"HMA for Pavement Repair Cl. ___ PG ___"
"Commercial HMA"

The adjustment is not a guarantee of full compensation for changes in the cost of asphalt binder. The Contracting Agency does not guarantee that asphalt binder will be available at the reference cost.

The Contracting Agency will establish asphalt binder reference costs twice each month and post the information on the Agency website at: https://wsdot.wa.gov/business-wsdot/contracts/about-public-works-contracts/payments-reporting/asphalt-binder-reference-cost. The reference cost will be determined using posted prices furnished by Poten & Partners, Inc. If the selected price source ceases to be available for any reason, then the Contracting Agency will select a substitute price source to establish the reference cost.

Price adjustments will be calculated one time per month. No price adjustment will be made if the Current Reference Cost is within +/-5% of the Base Cost. Reference costs for projects located in Eastern versus Western Washington shall be selected from the column in the WSDOT website table labeled "Eastern", or "Western", accordingly. The adjustment will be calculated as follows:

If the reference cost is greater than or equal to 105% of the base cost, then Asphalt Cost Price Adjustment = (Current Reference Cost – (1.05 x Base Cost)) x (Q x 0.056).

If the reference cost is less than or equal to 95% of the base cost, then Asphalt Cost Price Adjustment = (Current Reference Cost – (0.95 x Base Cost)) x (Q x 0.056).

Where: Current Reference Cost is selected from the website table based on the "Date Effective" that immediately precedes the current month's progress estimate end date. For work completed after all authorized working days are used, the adjustment will be based on the posted reference cost during which contract time was exhausted.

Base Cost is selected from the website table based on the "Date Effective" that immediately precedes the contract bid opening date, and shall be a constant for all monthly adjustments.

Q = total tons of all classes of HMA paid in the current month's progress payment.

"Asphalt Cost Price Adjustment", by calculation.
"Asphalt Cost Price Adjustment" will be calculated and paid for as described in this section. For the purpose of providing a common proposal for all bidders, the Contracting Agency has entered an amount in the proposal to become a part of the total bid by the Contractor.

BID ITEM 18: CONC. CLASS 5000
BID ITEM 19: ST. REINF. BAR
These bid items shall be accomplished in accordance with the Plans and Standard Specification Section 6-02, except as modified below.

6-02.5 Payment
Delete the item "'Deficient Strength Conc. Price Adjustment', by calculation".

Add the following to Section 6-02.5:

In the event that concrete tests do not achieve the required strength, payment for the above bid items shall be reduced according to Section 6-02.3(5)L.

BID ITEM 20: CONTRACTOR DESIGNED BURIED STRUCTURE NO. 1

This bid item shall be accomplished in accordance with the Plans and Standard Specification Section 6-20, except as modified below.

6-20 BURIED STRUCTURES

6-20.1 Description

Section 6-20.1 is supplemented with the following:

(*****)

The Contractor Designed Buried Structure shall be a precast concrete three sided structure (Structure Class 1) meeting the dimensional requirements shown on the Plans. The foundations for this structure are included in the bid items Conc. Class 5000 and St. Reinf. Bar, and are not part of this lump sum bid item. The keyway in the top of the foundations may be modified as necessary to accommodate the connection with the precast structure, subject to approval by the Engineer.

6-20.3 Construction Requirements

6-20.3(7) Fabrication

6-20.3(7)A Precast Concrete Structures

Section 6-20.3(7)A is supplemented with the following:

(*****)

The exterior top and sides of the PRCTSS shall be coated with a waterproofing compound meeting the requirements of ASTM C836, and complying with all current federal, state, and local maximum allowable VOC requirements, including National EPA VOC Emission Standard for Architectural Coatings, CARB, LADCO, OTC Phase I and II, and SCAQMD. Dry film thickness shall be 60 mils minimum. The precast element shall not be moved from the precasting yard until the waterproofing compound has dried and cured according to manufacturer's recommendations.

Add the following to Section 6-02.3(9) which is referenced by Section 6-20.3(7)A:

(*****)

The Contracting Agency will coordinate with Washington State Department of Transportation for fabrication inspection. All segments of the PRCTSS shall be stamped "Approved for Shipment" by the fabrication inspector prior to shipment.

6-20.3(8) Placement and Assembly

6-20.3(8)A Precast Concrete Structures

Section 6-20.3(8)A is supplemented with the following:

(*****)

Precast segments shall be placed in a manner that does not damage the segments. The Contractor shall not push segments together using an excavator bucket directly against the concrete. Chains or cables may be used around the side walls, provided that spacers of timber or similar material are placed between the chains or cables and the ends of the concrete walls.

BID ITEM 21: CORRUGATED POLYETHYLENE STORM SEWER PIPE, 12-INCH DIAM

This bid item shall be accomplished in accordance with the Plans and Standard Specification Section 7-04 and 7-08, except as modified below.

7-04.3 Construction Requirements

(*******)

Add the following to Section 7-08, which is referenced by Section 7-04.3:

7-08.2 Materials

(*******)

Delete the text of Section 7-08.2 and replace with the following:

Materials shall meet the requirements of the following sections:

Gravel Backfill for Pipe Zone Bedding .....9-03.9(3), Base Course
Gravel Backfill for Pipe Zone Backfill.....9-03.9(3), Base Course
Gravel Backfill Above Pipe.....9-03.9(3), Base Course

7-08.3(2) Laying Pipe

Add the following to Section 7-08.3(2):

(*******)

7-08.3(2)J Beveled Ends

All exposed ends of storm sewer pipes or culverts shall be beveled on a 3:1 slope beginning 6 inches above the pipe flow line, or beveled to match the embankment or ditch foreslope, not to exceed 4:1.

7-04.3(1)A General

(*******)

Add the following to Section 7-04.3(1)A:

Testing will not be required if a section of storm sewer pipe is less than 75 feet long, has less than 5 feet of cover, and has no inlet or junction structures.

7-04.4 Measurement

(*******)
Delete the second sentence of paragraph one of Section 7-04.4, which begins, "The number of linear..." and replace with the following:

The number of linear feet will be measured from the inside face of drainage structure to the inside face of drainage structure or from the inside face of drainage structure to the end of pipe, as is appropriate.

7-04.5 Payment

(*******)
Delete paragraph two of Section 7-04.5, which begins, "The unit contract price..." and add the following:

The unit contract price per linear foot for storm sewer pipe of the type and size specified shall be full pay for furnishing and installing the pipe. Installation shall include excavation, removal of culverts or structures to be abandoned or replaced, fittings, jointing materials, beveling, backfilling to existing grade or subgrade, compaction, and all other items essential for completion of the installation to the required lines and grades.

BID ITEM 22: SEEDING AND MULCHING

This bid item shall be accomplished in accordance with the Plans and Standard Specification Section 8-02, except as modified below:

8-02.3 Construction Requirements

8-02.3(9)B Seeding, Fertilizing and Mulching

Section 8-02.3(9)B is supplemented with the following:

Seed Mix: Grass seed, of the following composition, proportion, and quality shall be applied at the rate of ****80**** pounds of pure live seed per acre on all areas requiring permanent roadside seeding within the project limits.

Kind and Variety of Seed in Mixture	Pounds Pure Live Seed (PLS) Per Acre
Deschampsia elongata **Slender Hairgrass**	0.32
Elymus glaucus **Blue Wildrye**	34.43
Festuca idahonesis **Idaho Fescue**	5.61

Festuca ovina **Sheep Fescue**	0.93
Hordeum brachyantherum **Meadow Barley**	29.71
Koeler cristata **Prairie Junegrass**	0.27
Lolium multiflorum **Annual Ryegrass**	8.73
Total Pounds PLS Per Acre	80.00

Seeds shall be certified "Weed Free", indicating there are not noxious or nuisance weeds in the seed.

Mulching

Wood Cellulose Fiber mulch shall be hydraulically applied at a rate of 2,000 pounds per acre to produce 100% soil coverage.

BID ITEM 23: FLEXIBLE GUIDE POST

This bid item shall be accomplished in accordance with the Plans and Standard Specification Section 8-10, except as modified below.

8-10 GUIDE POSTS

8-10.1 Description

Delete Section 8-10.1 and replace it with the following:

(*******)

This work shall consist of furnishing and placing Flexible Guide Post – guardrail mount in accordance with these Specifications and the Standard Plans, at the locations as indicated in the plans or where designated by the Engineer.

8-10.3 Construction Requirements

Section 8-10.3 is supplemented with the following:

(*******)

Flexible Guide Posts shall be installed at every third section of guardrail including terminals and transitions, at a spacing not to exceed 37.5', or as directed by the Engineer.

BID ITEM 24: BEAM GUARDRAIL TYPE 31

BID ITEM 25: BEAM GUARDRAIL ANCHOR TYPE 11

BID ITEM 26: BEAM GUARDRAIL NON-FLARED TL-2 TERMINAL

These bid items shall be accomplished in accordance with the Plans and Standard Specification Section

8-11, except as modified below.

8-11 GUARDRAIL

8-11.2 Materials

Add the following to Section 8-11.2:

(*******)

Beam Guardrail Flared and Non-Flared Terminals shall be listed on the WSDOT Qualified Product List. Terminals shall have a TL-2 rating when so specified on the Plans. Otherwise, TL-2 terminals will not be allowed.

8-11.4 Measurement

Delete paragraph one of Section 8-11.4, which begins, "Measurement of beam guardrail..." and replace with the following:

(*******)

Measurement of beam guardrail and beam guardrail with long posts will be by the linear foot measured along the line of completed guardrail from end to end including Design F end sections for connection to concrete barrier, but excluding transition and terminal sections as are covered by other bid items of this contract.

8-11.5 Payment

(*******)

Delete the fifth sentence of the first paragraph of Section 8-11.5, which begins, "The unit contract price per linear foot..." and replace with the following:

The unit contract price per linear foot for "Beam Guardrail Type____", "Beam Guardrail Type 1-____ Ft. Long Post", or "Beam Guardrail Type 31-____ Ft. Long Post" shall include all CRT posts and installation of the guardrail to the posts as specified and indicated on the plans.

(*******)

BID ITEM 27: MAILBOX SUPPORT, TYPE 2

These bid items shall be accomplished in accordance with the Plans, WSDOT Standard Plans H-70.10-00 and H-70.20-00, and Standard Specification Section 8-18, except as modified below.

8-18.3 Construction Requirements

(*******)

Delete the third paragraph of Section 8-18.3, which begins "The existing mailboxes shall...", and replace with the following:

The Engineer will determine which mailboxes require new supports. Mailboxes not requiring new supports will be reinstalled with their existing supports at locations determined by the Engineer.

Mailboxes requiring new supports shall be installed according to the Standard Plans. The Engineer will determine the type of support to be installed for each mailbox. Each mailbox shall be installed within 24 hours of completion of the shoulder work at the mailbox location.

8-18.4 Measurement

(*******)
Add the following to Section 8-18.4:

Mailboxes installed with their existing supports will not be measured for payment under this bid item.

8-18.5 Payment

(*******)
Add the following to Section 8-18.5:

The costs associated with the removal and reinstallation of existing mailboxes that do not require new supports shall be included in the Removal of Structures and Obstructions bid item.

BID ITEM 28: TEMPORARY STREAM DIVERSION

This bid item shall be accomplished in accordance with the Plans and Standard Specification Section 8-31, except as modified below.

8-31 TEMPORARY STREAM DIVERSION
8-31.3 Construction Requirements
8-31.3(1) General
8-31.3(1)A General TSD Requirements
Section 8-31.3(1)A is supplemented with the following:

(*******)
Stream water shall be diverted around construction areas for the duration of all in-stream work. The stream diversion shall be designed to convey 6 cubic feet per second without any stream flow overtopping the upstream diversion dam. The stream diversion system must not extend beyond the limits of disturbance shown on the Plans. A gravity system schematic diagram is included in the Plans. The Contractor may use this schematic diagram as part of their design.

The Contractor is responsible for dewatering the work area. Additional dewatering sumps and discharge pumps shall always be available within the site to manage seeping groundwater and lower water levels necessary for sufficient construction conditions. Dispose of dewatering water in accordance with Section 8-01.3(1)C.

The Contractor shall have materials on site, and processes defined, to secure the area from impacts of heavy rainfall with appropriate BMPs (such as plastic sheeting, straw mulch or placement of streambed aggregate on disturbed soils ahead of the storm) to prevent high flows from contacting disturbed fine soils within the active work zone.

Before diversion systems are completely removed, a fraction of the full flow shall be released to the watercourse such that the water can be pumped upland immediately upstream of the diversion outlet. The fractional flow release shall continue until turbidity is minimized to the approval of the Engineer and in compliance with permit conditions.

8-31.3(1)B TSD Plan Implementation Meeting
Delete Section 8-31.3(1)B.

8-31.3(2) Temporary Stream Diversion Plan
8-31.3(2)B Plan Requirements
Delete item 2.a.ii of Section 8-31.3(2)B that begins "Fish Block Net Installation..." and replace with the following:

(*******)
ii. Fish Block Net Installation and Fish Exclusion (performed by Contractor).

Delete item 2.a.ix of Section 8-31.3(2)B that begins "Fish Block Net Removal..." and replace with the following:

(*******)
ix. Fish Block Net Removal (performed by Contractor).

Delete item 5.c of Section 8-31.3(2)B that begins "Provide the type and size of..." and replace with the following:

(*******)
c. Provide the type and size of materials that will be used in the event of the work area becoming inundated, including fish exclusion if the block nets are compromised.

8-31.3(3) Fish Block Net Installation and Fish and Aquatic Species Exclusion
Delete Section 8-31.3(3) and replace with the following:

(*******)
The Contractor shall install fish block nets upstream and downstream of the in-water work area and safely capture and relocate all fish and other aquatic organisms that become trapped between the block nets. No Work within the limits of the Ordinary High-Water Line will be allowed prior to installation of fish block nets and completion of fish exclusion activities. Fish capture and removal shall be performed according to WSDOT Fish Exclusion Protocols and Standards. An exception to these guidelines is that the directing biologist does not have to be under contract with WSDOT but shall be a fisheries biologist with at least two years of experience that includes conducting fish exclusion operations. If the bypass is overwhelmed during a storm event, causing water to flow into the project site and the fish exclusion nets are damaged or bypassed, fish exclusion shall be re-performed prior to restarting construction activities.

8-31.3(3)A Fish Exclusion Assistance
Delete Section 8-31.3(3)A.

8-31.3(3)B Contracting Agency Provided Materials

Delete Section 8-31.3(3)B.

8-31.3(4) Dewatering Work Areas

Delete Section 8-31.3(4) and replace with the following:

(*******)

Dewatering the isolated in-water work area (between the upstream and downstream diversion dams) shall occur at a rate slow enough to allow the Contractor to safely capture and relocate all fish species and other aquatic organisms to avoid stranding.

All pumps used for dewatering shall have an intake covered with a fish screen, operated, and maintained in accordance with RCW 77.57.010 and RCW 77.57.070. Appropriate fish screens are as follows:

1. Perforated plate: 0.094 inch (maximum opening diameter);
2. Profile bar: 0.069 inch (maximum width opening); or
3. Woven wire: 0.094 inch (maximum opening measured on the diagonal).

The minimum open area for all types of fish screens is 27 percent. The screened intake facility must have enough surface area to ensure that the velocity through the screen complies with the velocity provided within the Hydraulic Project Approval (HPA). If no velocity is provided within the HPA, the maximum approach velocity shall not exceed 0.33 feet per second. The fish screen must remain in place whenever water is withdrawn until the Contractor's Biologists confirm all fish have been removed. At that point, the Contractor may remove the fish screen to finish dewatering the work area.

8-31.3(5) Inspection and Maintenance

Delete Section 8-31.3(5) and replace with the following:

(*******)

At a minimum, the Contractor shall perform the following activities once per day (including weekends and holidays):

1. Check for and correct leaks;
2. Check inlet for proper function;
3. Ensure the upstream and downstream fish block nets remain sealed to the channel substrate;
4. Inspect the upstream and downstream fish block nets and remove debris;
5. Inspect the upstream fish block net and all screens and similar facilities for impinged fish; and
6. If impinged fish are discovered, the Contractor shall carefully remove the impinged fish and place it in the creek downstream of the isolated work area in a minimum of 6 inches of water.

The Contractor shall maintain a written record of all inspection and maintenance activities; record to be available at the request of the Engineer.

8-31.3(6) Channel Rewatering and Removal of TSD Components (Except Nets)
Delete Section 8-31.3(6) and replace with the following:

(*******)
The Contractor shall introduce water to the new stream channel section and trap sediments until the stream section meets the requirements of these Provisions. Rewatering shall occur at a rate to avoid loss of surface water downstream while the new channel section is rewatered.

Once the water in the new stream channel meets the applicable turbidity standards the Contractor may begin removal of the temporary stream diversion and the stream channel opened to flows.

The Contractor shall immediately take all corrective actions necessary to prevent the water from exceeding the turbidity standards should the stream turbidity increase. All Work within the channel, except for removal of the temporary erosion control items, shall be completed before the temporary stream diversion is removed. The Contractor must finish all construction activities within the limits of the Ordinary High-Water Line, including but not limited to culvert installation and creek bed channel restoration, before removing the fish block nets.

8-31.3(7) Removal of Fish Block Nets
Delete Section 8-31.3(7) and replace with the following:

The Contractor shall carefully remove the block nets. All materials used for the diversion shall be removed from the project limits.

8-31.3(7)A Contractor Provided Labor
Delete Section 8-31.3(7)A.

8-31.3(7)B Contracting Agency-Provided Materials
Delete Section 8-31.3(7)B.

8-31.5 Payment
Delete Section 8-31.3(5) and replace with the following:

Payment will be made for the following Bid item when it is included in the Proposal:

"Temporary Stream Diversion", lump sum.

The lump sum Contract price for "Temporary Stream Diversion" shall be full payment to perform the Work as specified. Progress payments for the lump sum item "Temporary Stream Diversion" will be made as follows:

1. Ten percent of the bid amount will be paid following completion of the TSD Plan including resolution of all Contracting Agency review comments.

2. The next eighty percent of the bid amount will be paid following completion of the initial stream diversion installation.

2. The remaining ten percent of the bid amount will be paid following removal of all stream diversion components and restoration of the areas disturbed by the stream diversion system.

BID ITEM 29: TEMPORARY ROAD

This bid item shall be accomplished in accordance with the Plans and Standard Specification Section 8-32, except as modified below.

8-32 VACANT

Delete Section 8-32 and replace with the following:

8-32 TEMPORARY ROAD

8-32.1 Description

This work consists of constructing temporary one lane roads to maintain traffic on Italian Creek Road. The temporary roads shall be constructed as shown on the Plans. The Contractor may propose alternative temporary roads subject to the Engineer's approval.

8-32.1(1) Submittals

The Contractor shall submit Type 2E Working Drawings for any and all alternative temporary roads to the Engineer. The 2E Working Drawings shall be stamped and signed by a Professional Engineer licensed in the State of Washington.

8-32.2 Materials

Suitable on-site materials may be used for temporary roadway embankment. Alternatively, structural fill meeting the requirements of the bid item Structural Fill Including Haul may be used for temporary roadway embankment. Surfacing of the temporary road shall be crushed surfacing base course, with a minimum one foot thickness. Signage for the temporary road shall be included in the bid item Project Temporary Traffic Control.

8-32.3 Construction Requirements

The temporary road shall meet the following requirements:

1. The temporary road shall have a minimum clear width of 12 feet and shall have horizontal and vertical alignments designed for 15 mph design speed. Width shall be increased to accommodate WB-40 trucks on curved roadways.
2. Access shall be maintained for all driveways in the project area. This includes access for emergency vehicles.
3. The temporary road shall have traffic barrier extending a minimum of 30 feet beyond the excavation with approved terminals or impact attenuators.

8-32.3(1) Maintenance of Temporary Road

The Contractor shall maintain the temporary road in a safe condition throughout the time it is in use. Any damage to the temporary road shall be repaired immediately. The Contractor shall be available for call out for repairs at any time of day or night. The Contractor shall respond to such calls and be on site

within six hours to make the necessary repairs.

8-32.3(2) Removal of Temporary Road

The temporary road shall be removed when it is no longer needed to maintain traffic on Italian Creek Road. The Contractor shall restore the ground to pre-construction grades, except for areas designated for other improvements.

8-32.4 Measurement

No unit of measurement shall apply to the lump sum price for Temporary Road.

8-32.5 Payment

Payment will be made in accordance with Section 1-04.1, for the following bid item when it is included in the proposal:

"Temporary Road", lump sum.

The lump sum bid price for Temporary Road shall be full pay for constructing, maintaining and removing all temporary roads, and associated temporary traffic barriers for each stage of construction. It shall also include any necessary excavation, embankment, gravel surfacing, backfill and roadway section reconstruction required to construct the road, and to restore the roadway and other improvements following removal of all temporary roads.

(November 4, 2024)
Standard Plans

The Washington State Department of Transportation *Standard Plans* M21-01, published September 2024, is made a part of this Contract with the following revisions:

A-10.30

RISER RING detail (Including SECTION view and RISER RING DIMENSIONS table): The RISER RING detail is deleted from the plan.

INSTALLATION detail, SECTION A: The "1/4"" callout is revised to read "+/- 1/4" (SEE CONTRACT ~ Note: The + 1/4" installation is shown in the Section A view)"

A-40.20

Sheet 1, NOTES 1, 2, 3, and 4 are replaced with the following:

1. Use the ½ inch joint details for bridges with expansion length less than 100 feet and for bridges with L type abutments. Use the 1 inch joint details for other applications.

2. Use detail 5, 6, 7 on steel trusses and timber bridges with concrete bridge deck panels.

3. For details 1, 2, 3, and 4, the item "HMA Joint Seal at Bridge End" shall be used for payment. For details 5 and 6, the item "HMA Joint Seal at Bridge Deck Panel Joint" shall be used for payment. For detail 7, the item "Clean and Seal Bridge Deck Panel Joint" shall be used for payment.

Sheet 2, Detail 8 reference to "6-09.3(6)" is revised to read "6-21.3(7)".

A-50.40
Sheet 1, Plan View: The callout "BEAM GUARDRAIL TYPE 31 TRANSITION SECTION TYPE 21 OR TYPE 24 (SEE STANDARD PLAN C-25.20 OR C-25.30)" is revised to read "BEAM GUARDRAIL TYPE 31 TRANSITION SECTION TYPE 21, 24, OR 25 (SEE STANDARD PLAN C-25.20, C-25.30, OR C-25.32)"

A-60.40
Note 2 reference to "6-09.3(6)" is revised to read "6-21.3(7)".

B-90.40
Valve Detail – DELETED

C-23.70
Sheet 2, ANCHOR BRACKET ASSEMBLY DETAIL, dimension, "R. 5/16" is revised to read; R. 15/16"
ANCHOR PLATE DETAIL, weld callout (fillet), 1/4" is revised to read; 3/16"

C-60.20
Sheet 1, Plan view, callout – "1/2" (IN) DIAMETER X 6 1/2" (IN) LONG ANCHOR BOLT ~ PER STD. SPEC. SECT. 9-06.5(4) (TYPICAL) (SEE NOTE 7)" is revised to read: "5/8" DIAMETER x 6 1/2" (IN) LONG ANCHOR BOLT ~ PER STD. SPEC. SECT. 9-06.5(4) (TYPICAL) (SEE NOTE 7)"

C-81.15
Sheet 1, General Notes, Add Note 7, to read;"7. The concrete class for the moment slab shall be class 4000 typically and class 4000A when the top of the slab is used as the roadway, or sidewalk, surface. The concrete class for the barrier is defined in Standard Specification Section 6-10.3."

C-85.11
On Section B, the callout "3" EXPANDED POLYSTYRENE AROUND COLUMN (TYP.)" is revised to read "3" EXPANDED POLYSTYRENE OR POLYETHYLENE FOAM AROUND COLUMN (TYP.)"

D-3.09
Sheet 1, Geosynthetic Wall with 2 FT Traffic Surcharge detail, callout – "BARRIER ON WALL ~ SEE Standard Plan D-3.15 or D-3.16" is revised to read: "BARRIER ON WALL ~ SEE Standard Plan C-81.10 and/or C-81.15"

D-3.10
Sheet 1, Typical Section, callout – "FOR WALLS WITH SINGLE SLOPE TRAFFIC BARRIER. USE THE DETAILS ABOVE THE MATCH LINE ON STANDARD PLAN D-3.15" is revised to read; "FOR WALLS WITH SINGLE SLOPE TRAFFIC BARRIER, SEE CONTRACT PLANS"
Sheet 1, Typical Section, callout – "FOR WALLS WITH F-SHAPE TRAFFIC BARRIER. USE THE DETAILS ABOVE THE MATCH LINE ON STANDARD PLAN D-3.16" is revised to read; "FOR WALLS WITH F-SHAPE TRAFFIC BARRIER, SEE CONTRACT PLANS"

D-3.11
Sheet 1, Typical Section, callout – ""B" BRIDGE APPROACH SLAB (SEE BRIDGE PLANS) OR PERMANENT

GEOSYNTHETIC WALL BARRIER ~ SEE STANDARD PLANS D-3.15 OR D-3.16" is revised to read; "B" BRIDGE APPROACH SLAB OR MOMENT SLAB (SEE CONTRACT PLANS)
Sheet 1, Typical Section, callout – "TYPICAL BARRIER ON BRIDGE APPROACH SLAB (SEE BRIDGE PLANS) OR PERMANENT GEOSYNTHETIC WALL BARRIER ~ SEE STANDARD PLANS D-3.15 OR D-3.16" is revised to read; "TYPICAL BARRIER ON BRIDGE APPROACH SLAB OR MOMENT SLAB (SEE CONTRACT PLANS)

D-10.10
Note 7, "If Traffic Barriers are required, See Standard Plans D-15.10, D-15.20 and D-15.30" is revised to read "Traffic Barriers shall not be structurally connected to the Reinforced Concrete Retaining Wall Type 1 and 1SW".

D-10.15
Note 7, "If Traffic Barriers are required, See Standard Plans D-15.10, D-15.20 and D-15.30" is revised to read "Traffic Barriers shall not be structurally connected to the Reinforced Concrete Retaining Wall Type 2 and 2SW".

D-10.30
Wall Type 5 may be used in all cases.

D-10.35
Wall Type 6 may be used in all cases.

D-10.40
Note 5, "If Traffic Barriers are required, See Standard Plans D-15.10, D-15.20 and D-15.30" is revised to read "Traffic Barriers shall not be structurally connected to the Reinforced Concrete Retaining Wall Type 7".

D-10.45
Note 5, "If Traffic Barriers are required, See Standard Plans D-15.10, D-15.20 and D-15.30" is revised to read "Traffic Barriers shall not be structurally connected to the Reinforced Concrete Retaining Wall Type 8".

F-10.18
General Note 1; "Construct curb joints at concrete pavement transverse joint locations. If all adjacent pavement is HMA, see Standard Plam F-30.10 for Curb Expansion and Contraction Joint Spacing." Is revised to read – "See Standard Plan F-30.10 and Standard Specification Section 8-04.3 for Curb Expansion and Contraction Joint details and spacing."

F-30.10
All five instances of the "2.0% MAX." are replaced with "2.1% MAX."

F-40.12
The one instance of "2.0% MAX." is replaced with "2.1% MAX."
Note 7 is replaced with the following:
7. The running slope of curb ramps shall not exceed 8.3% maximum except as noted herein. If the 8.3% running slope creates a ramp that exceeds 15ft, see contract plans for details. Use a single constant slope

from bottom of ramp to top of ramp to match into the landing. Do not include the abutting landing in the Curb Ramp length measurement. When a ramp is constructed on a radius, the Curb Ramp length is measured on the inside radius along the back of the walkway.
Section B is amended as follows:
Delete: "15' – 0" MAX. (TYP.)"
Section C is amended as follows:
Delete: "15' – 0" MAX. (TYP.)"

F-40.14
The one instance of "2.0% MAX." is replaced with "2.1% MAX."
Note 7 is replaced with the following:
7. The running slope of curb ramps shall not exceed 8.3% maximum except as noted herein. If the 8.3% running slope creates a ramp that exceeds 15ft, see contract plans for details. Use a single constant slope from bottom of ramp to top of ramp to match into the landing. Do not include the abutting landing in the Curb Ramp length measurement. When a ramp is constructed on a radius, the Curb Ramp length is measured on the inside radius along the back of the walkway.
Section A is amended as follows:
Delete: "15' – 0" MAX. (TYP.)"
Section C is amended as follows:
Delete: "15' – 0" MAX. (TYP.)"

F-40.15
The one instance of "2.0% MAX." is replaced with "2.1% MAX."
Note 7 is replaced with the following:
7. The running slope of curb ramps shall not exceed 8.3% maximum except as noted herein. If the 8.3% running slope creates a ramp that exceeds 15ft, see contract plans for details. Use a single constant slope from bottom of ramp to top of ramp to match into the landing. Do not include the abutting landing in the Curb Ramp length measurement.
Section A is amended as follows:
Delete: "15' – 0" MAX. (TYP.)"

F-40.16
The one instance of "2.0% MAX." is replaced with "2.1% MAX."
Note 8 is replaced with the following:
7. The running slope of curb ramps shall not exceed 8.3% maximum except as noted herein. If the 8.3% running slope creates a ramp that exceeds 15ft, see contract plans for details. Use a single constant slope from bottom of ramp to top of ramp to match into the landing. Do not include the abutting landing in the Curb Ramp length measurement.
Section A is amended as follows:
Delete: "15' – 0" MAX. (TYP.)"
Section B is amended as follows:
Delete: "15' – 0" MAX. (TYP.)"

F-80.10
The one instance of "2.0% MAX." is replaced with "2.1% MAX."
Note 6 is replaced with the following:
The running slope of the Pedestrian Ramp shall not exceed 8.3% maximum except as noted herein. If the 8.3% running slope creates a ramp that exceeds 15ft, see contract plans for details. Use a single constant slope from bottom of ramp to top of ramp to match into the sidewalk.
Section A is amended as follows:
Delete: "15" Max."

J-10.10
Sheet 4 of 6, "Foundation Size Reference Table", PAD WIDTH column, Type 33xD=6' – 3" is revised to read: 7' – 3". Type 342LX / NEMA P44=5' – 10" is revised to read: 6' – 10"
Sheet 5 of 6, Plan View, "FOR EXAMPLE PAD SHOWN HERE:, "first bullet" item, "-SPACE BETWEEN TYPE B MOD. CABINET AND 33x CABINET IS 6" (IN)" IS REVISED TO READ: "SPACE BETWEEN TYPE B MOD. CABINET (BACK OF ALL CHANNEL STEEL) AND 33x CABINET IS 6" (IN) (CHANNEL STEEL ADDS ABOUT 5" (IN)"

J-10.16
Key Note 1, Standard Plan J-10.30 revised to Standard Plan J-10.14

J-10.17
Key Note 1, Standard Plan J-10.30 revised to Standard Plan J-10.14

J-10.18
Key Note 1, Standard Plan J-10.30 revised to Standard Plan J-10.14

J-20.10
DELETED

J-20.11
DELETED

J-20.26
Add Note 1, "1. One accessible pedestrian pushbutton station per pedestrian pushbutton post."
Add General Note 2, to read: "Signs shown are for locations with pedestrian signal displays (Accessible Pedestrian Signals/APS). Accessible information device (AID) pushbuttons signs not shown."
Revise View Titles (Both Sheets) to read: "ACCESSIBLE PEDESTRIAN PUSHBUTTON ASSEMBLY"

J-20.16
View A, callout, was – LOCK NIPPLE, is revised to read; CHASE NIPPLE

J-21.10
Sheet 1, Anchor Bolt Template, callout; "9" (IN) BOLT CIRCLE" is revised to read: "9" (IN) DIA.BOLT CIRCLE"
Base Plate Detail, callout; "3/4" (IN) STEEL PLATE WITH HOLE = POLE BASE + 1/6" (IN)" IS REVISED TO READ; "3/4" (IN) STEEL PLATE WITH HOLE = POLE BASE + 1/16" (IN)"

Flat Foundation Detail – Elevation, callout; "ANCHOR BOLTS ~ ¾" (IN) x 30" (IN) FULL THREAD ~ THREE REQ'D. PER ASSEMBLY" is revised to read; "ANCHOR BOLTS ~ ¾" (IN) x 30" (IN) FULL THREAD ~ FOUR REQ'D. PER ASSEMBLY"
Flat Foundation Detail – Elevation, dimension; 4' – 0" is revised to read; "4' – 0" ROUND OR 3' – 0" SQUARE"

J-21.15
Partial View, callout, was – LOCK NIPPLE ~ 1 ½" DIAM., is revised to read; CHASE NIPPLE ~ 1 ½" (IN) DIAM.

J-28.30
General Note 13 – "See Standard Plans C-8b and C-85.14 for steel light standards on traffic barrier" is revised to read; "See Standard Plan C-85.15 for steel light standards on traffic barrier."

J-40.10
Sheet 2 of 2, Detail F, callout, "12 – 13 x 1 ½" S.S. PENTA HEAD BOLT AND 12" S. S. FLAT WASHER" is revised to read; "12 – 13 x 1 ½" S.S. PENTA HEAD BOLT AND 1/2" (IN) S. S. FLAT WASHER"

J-40.36
Note 1, second sentence; "Finish shall be # 2B for backbox and # 4 for the cover." Is revised to read; "Finish shall be # 2B for barrier box and HRAP (Hot Rolled Annealed and Pickled) for the cover.

J-40.37
Note 1, second sentence; "Finish shall be # 2B for backbox and # 4 for the cover." Is revised to read; "Finish shall be # 2B for barrier box and HRAP (Hot Rolled Annealed and Pickled) for the cover.

J-75.20
Key Notes, note 16, second bullet point, was: "1/2" (IN) x 0.45" (IN) Stainless Steel Bands", add the following to the end of the note: "Alternate: Stainless steel cable with stainless steel ends, nuts, bolts, and washers may be used in place of stainless steel bands and associated hardware."

J-75.55
Notes, Note A1, Revise reference, was – G-90.29, should be – G-90.20.

L-5.10
Add new general Note 9 on sheet 1 – "9. The top of wall in Section A on Sheet 1 shall be located as follows: 1) flush with the finished grade when placed within the deflection distance of the long span guardrail system (Std. Plan C-20.40), 2) Two inches maximum above finished grade when placed behind a box culvert guardrail steel post system (Std. Plan C-20.41 or C-20.43), 3) Six inches minimum for all other applications. The bottom rail shall be located at mid height between the top rail and the top of structure."

M-20.30
Wide Dotted Lane Line Detail, reference below title, (SEE NOTE 6) is revised to read: (SEE NOTE 5)

M-40.10
Guide Post Type ~ Reflective Sheeting Applications Table, remove reference - "(SEE NOTE 5)"

The following are the Standard Plan numbers applicable at the time this project was advertised. The date shown with each plan number is the publication approval date shown in the lower right-hand corner of that plan. Standard Plans showing different dates shall not be used in this contract.

A-10.10-00 ..... 8/7/07
A-10.20-00 ..... 10/5/07
A-10.30-00 ..... 10/5/07
A-20.10-00 ..... 8/31/07
A-30.10-00 ..... 11/8/07
A-30.30-01 ..... 6/16/11
A-30.35-00 ..... 10/12/07
A-40.00-01 ..... 7/6/22
A-40.10-04 ..... 7/31/19
A-40.15-00 ..... 8/11/09
A-40.20-04 ..... 1/18/17
A-40.50-03 ..... 9/12/23
A-50.10-02 ..... 7/18/24
A-50.40-01 ..... 8/17/21
A-60.10-03 ..... 12/23/14
A-60.20-03 ..... 12/23/14
A-60.30-01 ..... 6/28/18
A-60.40-00 ..... 8/31/07

B-5.20-03 ..... 9/9/20
B-5.40-02 ..... 1/26/17
B-5.60-02 ..... 1/26/17
B-10.20-03 ..... 8/23/23
B-10.40-02 ..... 8/17/21
B-10.70-03 ..... 8/23/23
B-15.20-01 ..... 2/7/12
B-15.40-01 ..... 2/7/12
B-15.60-02 ..... 1/26/17
B-20.20-02 ..... 3/16/12
B-20.40-04 ..... 2/27/18
B-20.60-03 ..... 3/15/12
B-25.20-02 ..... 2/27/18
B-25.60-03 ..... 8/23/23
B-30.05-00 ..... 9/9/20
B-30.10-03 ..... 2/27/18
B-30.15-00 ..... 2/27/18
B-30.20-04 ..... 2/27/18
B-30.30-03 ..... 2/27/18
B-30.50-03 ..... 2/27/18
B-30.60-00 ..... 9/9/20
B-30.40-03 ..... 2/27/18
B-30.70-04 ..... 2/27/18
B-30.80-01 ..... 2/27/18
B-30.90-02 ..... 1/26/17
B-35.20-00 ..... 6/8/06
B-35.40-01 ..... 8/23/23
B-40.20-00 ..... 6/1/06
B-40.40-02 ..... 1/26/17
B-45.20-01 ..... 7/11/17
B-45.40-01 ..... 7/21/17
B-50.20-00 ..... 6/1/06
B-55.20-03 ..... 8/17/21
B-60.20-02 ..... 9/9/20
B-60.40-01 ..... 2/27/18
B-65.20-01 ..... 4/26/12
B-65.40-00 ..... 6/1/06
B-70.20-01 ..... 3/15/22
B-75.20-03 ..... 8/17/21
B-75.50-02 ..... 3/15/22
B-70.60-01 ..... 1/26/17
B-75.60-00 ..... 6/8/06
B-80.20-00 ..... 6/8/06
B-80.40-00 ..... 6/1/06
B-85.10-01 ..... 6/10/08
B-85.20-00 ..... 6/1/06
B-85.30-00 ..... 6/1/06
B-85.40-00 ..... 6/8/06
B-85.50-01 ..... 6/10/08
B-90.10-00 ..... 6/8/06
B-90.20-00 ..... 6/8/06
B-90.30-00 ..... 6/8/06
B-90.40-01 ..... 1/26/17
B-90.50-00 ..... 6/8/06
B-95.20-02 ..... 8/17/21
B-95.40-01 ..... 6/28/18

C-1 ..... 9/8/22
C-1b 10/12/23
C-1d 10/31/03
C-6a 9/8/22
C-7 ..... 9/8/22
C-7a 9/8/22
C-20.10-09 ..... 10/12/23
C-20.14-05 ..... 9/8/22
C-20.15-03 ..... 10/12/23
C-20.18-04 ..... 9/8/22
C-20.40-10 ..... 10/12/23
C-20.41-05 ..... 7/18/24
C-20.43-01 ..... 7/18/24
C-20.44-00 ..... 8/13/24
C-23.70-01 ..... 10/16/23
C.24.10-05 ..... 7/21/24
C-24.15-00 ..... 3/15/22
C-25.20-07 ..... 8/20/21
C-25.22-06 ..... 8/20/21
C-25.26-05 ..... 8/20/21
C-25.30-01 ..... 8/20/21
C-25.32-00 ..... 7/29/24
C-25.80-05 ..... 8/12/19
C-60.10-04 ..... 7/21/24
C-60.15-01 ..... 7/21/24
C-60.20-01 ..... 9/8/22
C-60.30-02 ..... 7/21/24
C-60.40-01 ..... 7/21/24
C-70.10-04 ..... 10/16/23
C-70.15-01 ..... 7/21/24
C-75.10-02 ..... 9/16/20
C-75.20-03 ..... 8/20/21
C-75.30-03 ..... 8/20/21
C-80.10-03 ..... 10/16/23
C-80.20-01 ..... 6/11/14
C-80.30-02 ..... 8/20/21
C-80.40-01 ..... 6/11/14
C-85.10-00 ..... 4/8/12
C-85.11-01 ..... 9/16/20
C-85.15-03 ..... 10/17/23
C-85-18-03 ..... 9/8/22
C-81.10-00 ..... 9/12/23

C-20.45-03 ..... 9/8/22
C-20.55-00 ..... 7/30/24
C-22.16-08 ..... 10/17/23
C-22.40-11 ..... 7/21/24
C-22.45-07 ..... 7/21/24
C-60.45-01 ..... 7/21/24
C-60.50-01 ..... 7/21/24
C-60.60-01 ..... 7/21/24
C-60.70-01 ..... 9/8/22
C-60.80-02 ..... 7/21/24
C-81.15-00 ..... 9/12/23

D-2.36-03 ..... 6/11/14
D-2.46-02 ..... 8/13/21
D-2.84-00 ..... 11/10/05
D-2.92-01 ..... 4/26/22
D-3.09-00 ..... 5/17/12
D-3.10-01 ..... 5/29/13
D-3.11-03 ..... 6/11/14
D-4 ..... 12/11/98
D-6 ..... 6/19/98
D-10.10-01 ..... 12/2/08
D-10.15-01 ..... 12/2/08
D-10.20-01 ..... 8/7/19
D-10.25-01 ..... 8/7/19
D-10.30-00 ..... 7/8/08
D-10.35-00 ..... 7/8/08
D-10.40-01 ..... 12/2/08
D-10.45-01 ..... 12/2/08
D-20.10-00 ..... 10/9/23

E-1 ..... 2/21/07
E-2 ..... 5/29/98
E-4 ..... 8/27/03
E-4a 8/27/03
E-20.10-00 ..... 9/12/23
E-20.20-00 ..... 10/4/23

F-10.12-04 ..... 9/24/20
F-10.16-00 ..... 12/20/06
F-10.18-04 ..... 6/28/24
F-10.40-04 ..... 9/24/20
F-10.42-00 ..... 1/23/07
F-10.62-02 ..... 4/22/14
F-10.64-03 ..... 4/22/14
F-30.10-04 ..... 9/25/20
F-40.12-03 ..... 6/29/16
F-40.14-03 ..... 6/29/16
F-40.15-04 ..... 9/25/20
F-40.16-03 ..... 6/29/16
F-45.10-05 ..... 6/4/24
F-80.10-04 ..... 7/15/16

G-10.10-00 ..... 9/20/07
G-20.10-03 ..... 8/20/21
G-22.10-04 ..... 6/28/18
G-24.10-00 ..... 11/8/07
G-24.20-01 ..... 2/7/12
G-24.30-02 ..... 6/28/18
G-24.40-07 ..... 6/28/18
G-24.50-05 ..... 8/7/19
G-24.60-05 ..... 6/28/18
G-25.10-05 ..... 9/16/20
G-26.10-00 ..... 7/31/19
G-30.10-04 ..... 6/23/15
G-50.10-03 ..... 6/28/18
G-90.10-03 ..... 7/11/17
G-90.20-05 ..... 7/11/17
G-90.30-04 ..... 7/11/17
G-95.10-02 ..... 6/28/18
G-95.20-03 ..... 6/28/18
G-95.30-03 ..... 6/28/18

H-10.10-01 ..... 6/2/24
H-10.11-00 ..... 6/2/24
H-10.15-01 ..... 6/2/24
H-10.16-00 ..... 6/2/24
H-30.10-00 ..... 10/12/07
H-32.10-00 ..... 9/20/07
H-60.10-01 ..... 7/3/08
H-60.20-01 ..... 7/3/08
H-70.10-02 ..... 8/17/21
H-70.20-02 ..... 8/17/21

I-10.10-01 ..... 8/11/09
I-30.10-02 ..... 3/22/13
I-30.15-02 ..... 3/22/13
I-30.16-01 ..... 7/11/19
I-30.17-01 ..... 6/12/19
I-30.20-00 ..... 9/20/07
I-30.30-02 ..... 6/12/19
I-30.40-02 ..... 6/12/19
I-30.60-02 ..... 6/12/19
I-40.10-00 ..... 9/20/07
I-40.20-00 ..... 9/20/07
I-50.20-02 ..... 7/6/22
I-60.10-01 ..... 6/10/13
I-60.20-01 ..... 6/10/13
I-80.10-02 ..... 7/15/16

J-05.50-00 ..... 8/30/22
J-10 ..... 7/18/97
J-10.10-04 ..... 9/16/20
J-10.12-00 ..... 9/16/20
J-10.14-00 ..... 9/16/20
J-26.10-03 ..... 7/21/16
J-26.15-01 ..... 5/17/12
J-26.20-01 ..... 6/28/18
J-27.10-01 ..... 7/21/16
J-27.15-00 ..... 3/15/12
J-50.05-00 ..... 7/21/17
J-50.10-01 ..... 7/31/19
J-50.11-02 ..... 7/31/19
J-50.12-02 ..... 8/7/19
J-50.13-01 ..... 8/30/22

J-10.15-01 ..... 6/11/14
J-10.16-02 ..... 8/18/21
J-10.17-02 ..... 8/18/21
J-10.18-02 ..... 8/18/21
J-10.20-04 ..... 8/18/21
J-10.21-02 ..... 8/18/21
J-10.22-03 ..... 10/4/23
J-10.25-01 ..... 6/21/24
J-10.26-00 ..... 8/30/22
J-12.15-00 ..... 6/28/18
J-12.16-00 ..... 6/28/18
J-15.10-01 ..... 6/11/14
J-15.15-02 ..... 7/10/15
J-20.01-01 ..... 6/21/24
J-20.05-00 ..... 6/21/24
J-20.10-05 ..... 10/4/23
J-20.11-03 ..... 7/31/19
J-20.15-04 ..... 6/21/24
J-20.16-02 ..... 6/30/14
J-20.20-02 ..... 5/20/13
J-20.26-01 ..... 7/12/12
J-21.10-05 ..... 6/21/24
J-21.15-01 ..... 6/10/13
J-21.16-02 ..... 6/21/24
J-21.17-01 ..... 6/10/13
J-21.20-01 ..... 6/10/13
J-22.15-03 ..... 6/21/24
J-22.16-03 ..... 7/10/15
J-22.17-00 ..... 6/21/24

J-28.01-00 ..... 8/30/22
J-28.10-02 ..... 8/7/19
J-28.22-00 ..... 8/07/07
J-28.24-02 ..... 9/16/20
J-28.26-01 ..... 12/02/08
J-28.30-04 ..... 6/18/24
J-28.40-02 ..... 6/11/14
J-28.42-01 ..... 6/11/14
J-28.43-01 ..... 6/28/18
J-28.45-03 ..... 7/21/16
J-28.50-03 ..... 7/21/16
J-28.60-03 ..... 8/27/21
J-28.70-04 ..... 8/30/22
J-29.10-02 ..... 8/26/22
J-29.15-01 ..... 7/21/16
J-29.16-02 ..... 7/21/16
J-30.10-01 ..... 8/26/22
J-40.01-00 ..... 8/30/22
J-40.05-00 ..... 7/21/16
J-40.10-04 ..... 4/28/16
J-40.20-03 ..... 4/28/16
J-40.30-04 ..... 4/28/16
J-40.35-01 ..... 5/29/13
J-40.36-02 ..... 7/21/17
J-40.37-02 ..... 7/21/17
J-40.38-01 ..... 5/20/13
J-40.39-00 ..... 5/20/13
J-40.40-02 ..... 7/31/19
J-45.36-00 ..... 7/21/17

J-50.15-01 ..... 7/21/17
J-50.16-01 ..... 3/22/13
J-50.18-00 ..... 8/7/19
J-50.19-00 ..... 8/7/19
J-50.20-00 ..... 6/3/11
J-50.25-00 ..... 6/3/11
J-50.30-00 ..... 6/3/11
J-60.05-01 ..... 7/21/16
J-60.11-00 ..... 5/20/13
J-60.12-00 ..... 5/20/13
J-60.13-00 ..... 6/16/10
J-60.14-01 ..... 7/31/19
J-75.10-02 ..... 7/10/15
J-75.20-01 ..... 7/10/15
J-75.30-02 ..... 7/10/15
J-75.50-00 ..... 8/30/22
J-75.55-00 ..... 8/30/22
J-80.05-00 ..... 8/30/22
J-80.10-01 ..... 8/18/21
J-80.12-00 ..... 8/18/21
J-80.15-00 ..... 6/28/18
J-81.10-02 ..... 8/18/21
J-81.12-00 ..... 9/3/21
J-84.05-00 ..... 8/30/22
J-86.10-00 ..... 6/28/18
J-90.10-03 ..... 6/28/18
J-90.20-03 ..... 6/28/18
J-90.21-02 ..... 6/28/18
J-90.50-00 ..... 6/28/18

K-70.20-01 ..... 6/1/16
K-80.10-02 ..... 9/25/20

K-80.32-00 ..... 8/17/21
K-80.34-00 ..... 8/17/21

K-80.35-01 ..... 9/16/20
K-80.37-01 ..... 9/16/20

L-5.10-02 ..... 6/5/24
L-5.15-00 ..... 9/19/22
L-10.10-02 ..... 6/21/12

L-20.10-03 ..... 7/14/15
L-30.10-02 ..... 6/11/14
L-40.15-01 ..... 6/16/11

L-40.20-02 ..... 6/21/12
L-70.10-01 ..... 5/21/08
L-70.20-01 ..... 5/21/08

M-1.20-04 ..... 9/25/20
M-1.40-03 ..... 9/25/20
M-1.60-03 ..... 9/25/20
M-1.80-03 ..... 6/3/11
M-2.20-03 ..... 7/10/15
M-2.21-00 ..... 7/10/15
M-3.10-04 ..... 9/25/20
M-3.20-04 ..... 8/2/22
M-3.30-04 ..... 9/25/20

M-9.60-00 ..... 2/10/09
M-11.10-04 ..... 8/2/22
M-12.10-04 ..... 6/28/24
M-15.10-02 ..... 7/17/23
M-17.10-02 ..... 7/3/08
M-20.10-04 ..... 8/2/22
M-20.20-02 ..... 4/20/15
M-20.30-05 ..... 6/28/24
M-20.40-03 ..... 6/24/14

M-24.66-00 ..... 7/11/17
M-40.10-04 ..... 10/17/23
M-40.20-00 ..... 10/12/07
M-40.30-01 ..... 7/11/17
M-40.40-00 ..... 9/20/07
M-40.50-00 ..... 9/20/07
M-40.60-00 ..... 9/20/07
M-60.10-01 ..... 6/3/11
M-60.20-03 ..... 8/17/21

M-3.40-04 ..... 9/25/20
M-3.50-03 ..... 9/25/20
M-5.10-03 ..... 9/25/20
M-7.50-01 ..... 1/30/07
M-9.50-02 ..... 6/24/14
M-20.50-02 ..... 6/3/11
M-24.20-02 ..... 4/20/15
M-24.40-02 ..... 4/20/15
M-24.60-04 ..... 6/24/14
M-24.65-00 ..... 7/11/17
M-65.10-03 ..... 8/17/21
M-80.10-01 ..... 6/3/11
M-80.20-00 ..... 6/10/08
M-80.30-00 ..... 6/10/08

PREVAILING MINIMUM HOURLY WAGE RATES

State of Washington
Department of Labor & Industries
Prevailing Wage Section - Telephone 360-902-5335
PO Box 44540, Olympia, WA 98504-4540

Washington State Prevailing Wage

The PREVAILING WAGES listed here include both the hourly wage rate and the hourly rate of fringe benefits. On public works projects, worker's wage and benefit rates must add to not less than this total. A brief description of overtime calculation requirements are provided on the Benefit Code Key.

Journey Level Prevailing Wage Rates for the Effective Date: 3/13/2025

Cowlitz County

Trade^	Job Classification	Wage	Holiday	Overtime	Note	Ris
Asbestos Abatement Workers	Journey Level	$59.48	**6Z**	**1M**		
Boilermakers	Journey Level	$78.89	**5N**	**1C**		
Brick Mason	Brick Finisher	$48.08	**5A**	**1B**		
Brick Mason	Caulker-Pointer-Cleaner	$74.09	**5A**	**1B**		
Brick Mason	Journey Level	$74.09	**5A**	**1B**		
Building Service Employees	Janitor	$16.66		**1**		
Building Service Employees	Shampooer	$16.66		**1**		

Building Service Employees	Waxer	$16.66		1	
Building Service Employees	Window Cleaner	$16.66		1	
Cabinet Makers (In Shop)	Journey Level	$16.66		1	
Carpenters	Acoustical Worker	$67.80	15J	11U	9L
Carpenters	Bridge & Highway Carpenter	$69.08	15J	11U	9L
Carpenters	Floor Layer And Floor Finishers	$67.97	15J	11U	9L
Carpenters	General Carpenter	$67.80	15J	11U	9L
Carpenters	Scaffold/Shoring Erecting & Dismantling	$67.70	7E	4X	8N
Carpenters	Stationary Power Saw	$67.97	15J	11U	9L
Cement Masons	Application of all Composition Mastic	$77.30	15J	4U	
Cement Masons	Application of all Epoxy Material	$76.78	15J	4U	
Cement Masons	Application of all Plastic Material	$77.30	15J	4U	
Cement Masons	Application of Sealing Compound	$76.78	15J	4U	

Cement Masons	Application of Underlayment	$77.30	**15J**	**4U**
Cement Masons	Building General	$76.78	**15J**	**4U**
Cement Masons	Composition or Kalman Floors	$77.30	**15J**	**4U**
Cement Masons	Concrete Paving	$76.78	**15J**	**4U**
Cement Masons	Curb & Gutter Machine	$77.30	**15J**	**4U**
Cement Masons	Curb & Gutter, Sidewalks	$76.78	**15J**	**4U**
Cement Masons	Curing Concrete	$76.78	**15J**	**4U**
Cement Masons	Finish Colored Concrete	$77.30	**15J**	**4U**
Cement Masons	Floor Grinding	$77.30	**15J**	**4U**
Cement Masons	Floor Grinding/Polisher	$76.78	**15J**	**4U**
Cement Masons	Green Concrete Saw, self-powered	$77.30	**15J**	**4U**
Cement Masons	Grouting of all Plates	$76.78	**15J**	**4U**
Cement Masons	Grouting of all Tilt-up Panels	$76.78	**15J**	**4U**
Cement Masons	Gunite Nozzleman	$77.30	**15J**	**4U**

Cement Masons	Hand Powered Grinder	$77.30	15J	4U	
Cement Masons	Journey Level	$76.78	15J	4U	
Cement Masons	Patching Concrete	$76.78	15J	4U	
Cement Masons	Pneumatic Power Tools	$77.30	15J	4U	
Cement Masons	Power Chipping & Brushing	$77.30	15J	4U	
Cement Masons	Sand Blasting Architectural Finish	$77.30	15J	4U	
Cement Masons	Screed & Rodding Machine	$77.30	15J	4U	
Cement Masons	Spackling or Skim Coat Concrete	$76.78	15J	4U	
Cement Masons	Troweling Machine Operator	$77.30	15J	4U	
Cement Masons	Troweling Machine Operator on Colored Slabs	$77.30	15J	4U	
Cement Masons	Tunnel Workers	$77.30	15J	4U	
Divers & Tenders	Assistant Tender	$75.35	15J	11T	9I
Divers & Tenders	Bell/Vehicle or Submersible	$124.92	15J	11T	9I

	Operator Not Under Pressure				
Divers & Tenders	Dive Master	$94.29	**15J**	**11T**	**9I**
Divers & Tenders	Dive Supervisor	$94.29	**15J**	**11T**	**9I**
Divers & Tenders	Diver Diving	$124.92	**15J**	**11T**	**9I**
Divers & Tenders	Diver Tender	$80.92	**15J**	**11T**	**9I**
Divers & Tenders	Divers Including Stand-By Diver	$89.29	**15J**	**11T**	**9I**
Divers & Tenders	Manifold Operator	$85.92	**15J**	**11T**	**9I**
Divers & Tenders	Manifold Operator Mixed Gas	$90.92	**15J**	**11T**	**9I**
Divers & Tenders	ROV Operator	$80.92	**15J**	**11T**	**9I**
Divers & Tenders	ROV Tender/Technician	$75.35	**15J**	**11T**	**9I**
Dredge Workers	Assistant Engineer	$72.54	**5D**	**1N**	**8D**
Dredge Workers	Assistant Mate (deckhand)	$67.18	**5D**	**1N**	**8D**
Dredge Workers	Boatman (licensed)	$72.54	**5D**	**1N**	**8D**
Dredge Workers	Fill Equipment Operator	$69.88	**5D**	**1N**	**8D**
Dredge Workers	Fireman	$71.05	**5D**	**1N**	**8D**

Dredge Workers	Leverman (hydraulic & Clamshell)	$75.70	**5D**	**1N**	**8D**
Dredge Workers	Mate	$72.54	**5D**	**1N**	**8D**
Dredge Workers	Oiler	$67.18	**5D**	**1N**	**8D**
Dredge Workers	Tenderman (boatman Attending Dredge Plant)	$71.05	**5D**	**1N**	**8D**
Dredge Workers	Welder	$72.54	**5D**	**1N**	**8D**
Drywall Applicator	Journey Level	$67.80	**5A**	**1B**	
Drywall Tapers	Journey Level	$66.95	**7E**	**1E**	
Electrical Fixture Maintenance Workers	Journey Level	$25.23		**1**	
Electricians - Inside	Journey Level	$95.68	**5A**	**1B**	
Electricians - Inside	Journeyman, Welder	$102.22	**5A**	**1B**	
Electricians - Motor Shop	Craftsman	$16.66		**1**	
Electricians - Motor Shop	Journey Level	$16.66		**1**	
Electricians - Powerline Construction	Cable Splicer	$102.42	**5A**	**4D**	
Electricians - Powerline Construction	Certified Line Welder	$93.99	**5A**	**4D**	

Electricians - Powerline Construction	Groundperson	$59.30	5A	4D	
Electricians - Powerline Construction	Heavy Line Equipment Operator	$93.99	5A	4D	
Electricians - Powerline Construction	Journey Level Lineperson	$93.99	5A	4D	
Electricians - Powerline Construction	Line Equipment Operator	$80.96	5A	4D	
Electricians - Powerline Construction	Meter Installer	$59.30	5A	4D	8W
Electricians - Powerline Construction	Pole Sprayer	$93.99	5A	4D	
Electricians - Powerline Construction	Powderperson	$69.84	5A	4D	
Electronic Technicians	Journey Level	$79.16	5A	1B	
Elevator Constructors	Mechanic	$115.62	5N	4A	
Elevator Constructors	Mechanic In Charge	$125.08	5N	4A	
Fabricated Precast Concrete Products	Journey Level	$16.66		1	
Fabricated Precast Concrete Products	Journey Level - In-Factory Work Only	$16.66		1	
Fence Erectors	Fence Erector	$54.63	6Z	1M	8S
Fence Erectors	Fence Laborer	$54.63	6Z	1M	8S

Flaggers	Journey Level	$54.63	**6Z**	**1M**	**8S**
Glaziers	Journey Level	$76.47	**7I**	**11K**	
Heat & Frost Insulators And Asbestos Workers	Mechanic	$85.39	**5N**	**1F**	
Heating Equipment Mechanics	Journey Level	$99.92	**7F**	**1E**	
Hod Carriers & Mason Tenders	Journey Level	$62.10	**5D**	**1B**	
Industrial Power Vacuum Cleaner	Journey Level	$16.66		**1**	
Inland Boatmen	Boat Operator	$71.28	**5B**	**1K**	
Inland Boatmen	Cook	$69.70	**5B**	**1K**	
Inland Boatmen	Deckhand	$70.00	**5B**	**1K**	
Inland Boatmen	Deckhand Engineer	$69.55	**5B**	**1K**	
Inland Boatmen	Launch Operator	$71.23	**5B**	**1K**	
Inland Boatmen	Mate	$89.12	**5B**	**1K**	
Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Cleaner Operator, Foamer Operator	$16.66		**1**	
Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Grout Truck Operator	$16.66		**1**	

Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Head Operator	$16.66		1	
Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Technician	$16.66		1	
Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Tv Truck Operator	$16.66		1	
Insulation Applicators	Journey Level	$67.97	15J	11U	9L
Ironworkers	Journey Level	$81.13	15K	11N	
Laborers	Anchor Machines	$59.48	6Z	1M	
Laborers	Application (Including Pot Power Tender For Same), Applying Protective Material By Hand Or Nozzle On Utility Lines Or Storage Tanks On Project	$58.86	6Z	1M	
Laborers	Asbestos Removal	$59.48	6Z	1M	
Laborers	Asphalt Plant Laborers	$58.04	6Z	1M	
Laborers	Asphalt Raker	$60.00	6Z	1M	

Laborers	Asphalt Spreaders	$58.04	6Z	1M
Laborers	Ballast Regulators	$59.48	6Z	1M
Laborers	Batch Weighman	$58.04	6Z	1M
Laborers	Bit Grinder	$59.48	6Z	1M
Laborers	Brick Pavers (Dry)	$58.04	6Z	1M
Laborers	Broomers	$58.04	6Z	1M
Laborers	Brush (Power Saw)	$58.86	6Z	1M
Laborers	Brush Burners And Cutters	$58.04	6Z	1M
Laborers	Burners	$58.86	6Z	1M
Laborers	Car And Truck Loaders	$58.04	6Z	1M
Laborers	Carpenter Tender	$58.04	6Z	1M
Laborers	Change-house Man Or Dry Shack Man	$58.04	6Z	1M
Laborers	Chipping Guns	$58.86	6Z	1M
Laborers	Choker Setters	$58.04	6Z	1M
Laborers	Choker Splicer	$58.86	6Z	1M
Laborers	Chuck Tender	$58.86	6Z	1M

Laborers	Clary Power Spreader And Similar Types	$58.86	6Z	1M	
Laborers	Clean Up Laborers	$58.04	6Z	1M	
Laborers	Clean-up Nozzleman-Green-Cutter (Concrete Rock, Etc.)	$58.86	6Z	1M	
Laborers	Concrete Crew, Bull Gang	$58.86	6Z	1M	
Laborers	Concrete Laborers	$58.86	6Z	1M	
Laborers	Concrete Nozzlemen	$60.00	6Z	1M	
Laborers	Concrete Power Buggyman	$58.86	6Z	1M	
Laborers	Concrete Saw Operator	$59.48	6Z	1M	
Laborers	Concrete Saw Operator (Walls)	$60.00	6Z	1M	
Laborers	Confined Space / Hole Watch	$54.63	6Z	1M	8S
Laborers	Crusher Feeder	$58.86	6Z	1M	
Laborers	Curing, Concrete	$58.04	6Z	1M	

Laborers	Demolition And Wrecking Charred Materials	$58.86	6Z	1M	
Laborers	Demolition, Wrecking And Moving Laborers	$58.04	6Z	1M	
Laborers	Drill Doctor	$59.48	6Z	1M	
Laborers	Drill Operators, Air Tracks, Cat Drills, Wagon Drills, Rubber-mounted Drills And Other Similar Types, Including At Crusher Plants	$60.00	6Z	1M	
Laborers	Dry Pack Machine	$58.86	6Z	1M	
Laborers	Dry Stack Walls	$58.04	6Z	1M	
Laborers	Dumpers, Road Oiling Crew	$58.04	6Z	1M	
Laborers	Dumpmen (for Grading Crew)	$58.04	6Z	1M	
Laborers	Elevator Feeders	$58.04	6Z	1M	
Laborers	Erosion Control Specialist	$58.04	6Z	1M	
Laborers	Final Clean-up	$54.63	6Z	1M	8S

Laborers	Fine Graders	$58.04	6Z	1M	
Laborers	Fire Watch	$54.63	6Z	1M	8S
Laborers	Form Strippers (Not Swinging Stages)	$58.04	6Z	1M	
Laborers	General Laborer	$58.04	6Z	1M	
Laborers	Grade Checker	$60.00	6Z	1M	
Laborers	Guard Rail, Median Rail, Reference Post Guide Post, Right-of-way Marker	$58.04	6Z	1M	
Laborers	Gunite Nozzleman	$60.00	6Z	1M	
Laborers	Gunite Nozzleman Tender	$58.86	6Z	1M	
Laborers	Gunite or Sand Blasting Pot Tender	$58.86	6Z	1M	
Laborers	Hand Placed Sand Blasting (Wet)	$58.86	6Z	1M	
Laborers	Handlers Or Mixers Of All Materials Of An Irritating Nature (Including Cement & Lime)	$58.86	6Z	1M	
Laborers	Hazardous Waste Worker	$59.48	6Z	1M	

Laborers	High Scalers, Strippers & Drillers (covers work in swinging stages, chairs or belts under extreme conditions unusual to normal drilling, blasting, barring down or slopping and stripping	$60.00	**6Z**	**1M**
Laborers	Laser Beam	$60.00	**6Z**	**1M**
Laborers	Laser Beam (Pipe Laying) - Applicable When Employee Assigned To Move, Set Up, Align	$60.00	**6Z**	**1M**
Laborers	Laser Beam (Tunnel) - Applicable When Employee Assigned To Move, Set Up, Align	$60.00	**6Z**	**1M**
Laborers	Lead Abatement	$59.48	**6Z**	**1M**
Laborers	Leverman Or Aggregate Spreaders (Flaherty And Similar Types)	$58.04	**6Z**	**1M**

Laborers	Loading Spotters	$58.04	6Z	1M	
Laborers	Loop Installation	$60.00	6Z	1M	
Laborers	Manhole Building	$59.48	6Z	1M	
Laborers	Material Yard Man	$58.04	6Z	1M	
Laborers	Miner - Tunnel	$60.00	6Z	1M	
Laborers	Mold Remediation Or Removal	$59.48	6Z	1M	
Laborers	Nippers And Timbermen	$59.48	6Z	1M	
Laborers	Nuclear Plant Workers - Lead Shield, Power Saw Operators (Bucking & Falling)	$59.48	6Z	1M	
Laborers	Pilot Car	$54.63	6Z	1M	8S
Laborers	Pipe Doping & Wrapping	$58.86	6Z	1M	
Laborers	Pipe Layer All Types	$60.00	6Z	1M	
Laborers	Pittsburgh Chipper Operator Or Similar Types	$58.04	6Z	1M	
Laborers	Post Hold Digger, Air, Gas Or Electric	$58.86	6Z	1M	

Laborers	Powderman - Tunnel	$60.00	6Z	1M
Laborers	Powderman Tender	$58.04	6Z	1M
Laborers	Power Jacks	$59.48	6Z	1M
Laborers	Pressure Washer	$58.86	6Z	1M
Laborers	Railroad Track Laborers	$58.04	6Z	1M
Laborers	Ribbon Setter, Head	$58.86	6Z	1M
Laborers	Ribbon Setters (Including Steel Forms)	$58.04	6Z	1M
Laborers	Rigger/Signalperson	$58.04	6Z	1M
Laborers	Rip Rap Man (Hand Packed)	$58.04	6Z	1M
Laborers	Rip Rap Man (Head)	$58.86	6Z	1M
Laborers	Road Pump Tender	$58.04	6Z	1M
Laborers	Sand Blasting (Dry)	$59.48	6Z	1M
Laborers	Scaffold Tender	$58.04	6Z	1M
Laborers	Sewer Labor	$58.04	6Z	1M
Laborers	Sewer Timbermen	$59.48	6Z	1M

Laborers	Signalman	$58.04	**6Z**	**1M**
Laborers	Skipman	$58.04	**6Z**	**1M**
Laborers	Slopers	$58.04	**6Z**	**1M**
Laborers	Spraymen	$58.04	**6Z**	**1M**
Laborers	Stake Chaser	$58.04	**6Z**	**1M**
Laborers	Stake-setter	$58.86	**6Z**	**1M**
Laborers	Stockpiler	$58.04	**6Z**	**1M**
Laborers	Tampers	$58.86	**6Z**	**1M**
Laborers	Tie Back Shoring	$58.86	**6Z**	**1M**
Laborers	Timber Faller And Bucker (Hand Labor)	$58.04	**6Z**	**1M**
Laborers	Tool Operators - Jackhammer	$58.86	**6Z**	**1M**
Laborers	Tool Operators - Paving Breakers	$58.86	**6Z**	**1M**
Laborers	Toolroom Man (At Job Site)	$58.04	**6Z**	**1M**
Laborers	Track Liners	$59.48	**6Z**	**1M**
Laborers	Traffic Control Laborer	$58.04	**6Z**	**1M**

Laborers	Traffic Control Supervisor	$58.86	**6Z**	**1M**
Laborers	Traffic Control Supervisor	$58.86	**6Z**	**1M**
Laborers	Tugger Operator	$59.48	**6Z**	**1M**
Laborers	Tunnel Bullgang (Above Ground)	$60.00	**6Z**	**1M**
Laborers	Tunnel Chuck Tenders	$60.00	**6Z**	**1M**
Laborers	Tunnel Motorman - Dinky Locomotive	$60.00	**6Z**	**1M**
Laborers	Tunnel Muckers, Brakemen	$60.00	**6Z**	**1M**
Laborers	Tunnel Shield Operator	$60.00	**6Z**	**1M**
Laborers	Vibrating Screed	$60.00	**6Z**	**1M**
Laborers	Vibrators (All Types)	$60.00	**6Z**	**1M**
Laborers	Water Blaster	$59.48	**6Z**	**1M**
Laborers	Weight-Man-Crusher (Aggregate When Used)	$58.04	**6Z**	**1M**
Laborers	Welder	$59.48	**6Z**	**1M**

Laborers - Underground Sewer & Water	General Laborer and Topman	$60.00	6Z	1M	
Landscape Construction	Landscape Operator	$68.46	7B	4G	8U
Landscape Construction	Landscaping or Planting Laborer	$46.95	6Z	1M	8T
Landscape Maintenance	Groundskeeper	$16.66		1	
Lathers	Journey Level	$67.80	5A	1B	
Marble Setters	Journey Level	$75.09	5A	1B	
Metal Fabrication (In Shop)	Fitter	$25.33	7S	1B	
Metal Fabrication (In Shop)	Machine Operator	$25.33	7S	1B	
Metal Fabrication (In Shop)	Welder	$25.33	7S	1B	
Millwright	Journey Level	$80.28	5A	1B	
Modular Buildings	Journey Level	$16.66		1	
Painters	Bridge Painter	$60.44	7E	11L	
Painters	Commercial Painter	$51.86	7E	11L	
Painters	Industrial Painter	$53.93	7E	11L	9F
Pile Driver	Journey Level	$69.08	15J	11U	9L
Plasterers	Journey Level	$64.24	5H	1E	

Playground & Park Equipment Installers	Journey Level	$16.66		1	
Plumbers & Pipefitters	Journey Level	$90.87	5A	1G	
Power Equipment Operators	Air Filtration Equipment(group 6)	$65.24	7B	4G	8U
Power Equipment Operators	Asphalt Plant (any Type) (assistant Engineer Required) (group 2)	$74.18	7B	4G	8U
Power Equipment Operators	Asphalt, Burner & Reconditioner (any Type), (asst To Engineer If Required)(group 5)	$68.46	7B	4G	8U
Power Equipment Operators	Asphalt, Extrusion Machine Operator(group 5)	$68.46	7B	4G	8U
Power Equipment Operators	Asphalt, Paver (screed Man Required)(group 4)	$69.70	7B	4G	8U
Power Equipment Operators	Asphalt, Pugmill (any Type)(group 6)	$65.24	7B	4G	8U
Power Equipment Operators	Asphalt, Raker(group 6)	$65.24	7B	4G	8U
Power Equipment Operators	Asphalt, Roller (any Asphalt Mix)(group 5)	$68.46	7B	4G	8U

Power Equipment Operators	Asphalt, Roto-mill, Pavement Profiler Under 8 Ft Lateral Cut(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Asphalt, Roto-mill, Pavement Profiler, 8 Ft Lateral Cut & Over(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Asphalt, Roto-mill, Pavement Profiler, Groundman(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Asphalt, Screed(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Asphalt, Truck Mounted Spreader, With Screed(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Auger Oiler(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Auto Grader Or "trimmer" (grade Checker Required) (group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Back Filling Machine (assistant To Engineer Required) (group 4)	$69.70	**7B**	**4G**	**8U**

Power Equipment Operators	Backhoe, Robotic, Track And Wheel Type Up To And Including 20,000 Lbs. With Any Attachments(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Band Wagons (in Conjuction With Whell Excavator) (group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Bell Man (any Type Of Comunication) (group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Blade Any Type(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Blade, Robotic(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Boatman(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Boatman, Licensed(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Bobcat, Skid Steer (< 1yd)(group 6)	$65.24	**7B**	**4G**	**8U**

Power Equipment Operators	Boom Type Lifting Device, 5 Ton Capacity Or Less(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Boring Machine (asst To Engineer Required)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Broom Self-propelled, Construction Job Site(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Bulldozer Operator, 20,000 Lbs Or Less, Or 100 Horse Or Less(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Bulldozer Operator, Over 20,000 Lbs And More Than 100 Horse Up To 70,000 Lbs(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Bulldozer Over 70,000 Lbs Up To And Including 120,000 Lbs(group 3)	$73.03	**7B**	**4G**	**8U**
Power Equipment Operators	Bulldozer Over 120,000 Lbs And Above(group 2)	$74.18	**7B**	**4G**	**8U**

Power Equipment Operators	Bulldozer Robotic Equipment(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Cable-plow (any Type)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Cableway 25 Ton & Over(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Cableway Up To 25 Ton(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Canal Trimmer (grade Oiler Required)(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Cat Drill (john Henry)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Cement Pump(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Challenger(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Chip Spreading Machine(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Chippers (asst To Engineer If Required)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Churn Drill & Earth Boring Machine(group 5)	$68.46	**7B**	**4G**	**8U**

Power Equipment Operators	Combination Heavy Duty Mechanic-welder, When Required To Do Both(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Compactor Self Propelled Without Blade(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Compactor With Blade Self Propelled(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Compactor, Multi-engine(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Compactor, Robotic(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Compressor (any Power) 1,250 Cu Ft And Over Total Capacity(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Compressor Operator (any Power) Under 1,250 Cu Ft Total Capacity(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete Batch Plant And/or Wet Mix (3 Units Or More) (group1)	$76.09	**7B**	**4G**	**8U**

Power Equipment Operators	Concrete Batch Plant And/or Wet Mix Operator (1 & 2 Drums)(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete Batch Plant Quality Control(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete Breaker (assistant To Engineer Required) (group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete Canal Line, Assistant To Engineer Required(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete Curing Machine (riding Type)(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete Diamond Head Profiler(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete Paving Road Mixer(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete Planer(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete Saw(group 6)	$65.24	**7B**	**4G**	**8U**

Power Equipment Operators	Concrete, Automatic Slip Form Paver (asst To Engineer Required) (group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete, Combination Mixer & Compressor Operator, Gunite Work(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete, Curb Machine Mechanical Berm, Curb And/or Curb And Gutter(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete, Finishing Machine(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete, Grout Plant(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete, Grouting Machine(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete, Joint Machine(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete, Mixer Mobile(group 4)	$69.70	**7B**	**4G**	**8U**

Power Equipment Operators	Concrete, Mixer Single Drum Any Capacity(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete, Paving Machine 8' And Less (asst To Engineer Required) (group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete, Placing Boom(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete, Pump Truck(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete, Pump(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete, Pumpcrete Operator (any Type) (group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete, Reinforced Tank Banding Machine (asst To Engineer Required)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Concrete, Slip Form Pumps, Power Driven Hydraulic Lifting Device For	$68.46	**7B**	**4G**	**8U**

	Concrete Forms(group 5)				
Power Equipment Operators	Concrete, Spreader(group 5)	$68.46	7B	4G	8U
Power Equipment Operators	Concrete, Telebelt(group 5)	$68.46	7B	4G	8U
Power Equipment Operators	Concrete, Treated Base Roller Operator, Oiling(group 5)	$68.46	7B	4G	8U
Power Equipment Operators	Conveyor Operator Or Assistant(group 6)	$65.24	7B	4G	8U
Power Equipment Operators	Conveyored Material Hauler(group 5)	$68.46	7B	4G	8U
Power Equipment Operators	Crane, Bridge Locomotive, Gantry And Overhead(group 4)	$69.70	7B	4G	8U
Power Equipment Operators	Crane, Carry Deck(group 4)	$69.70	7B	4G	8U
Power Equipment Operators	Crane, Chicago Boom & Similar Types(group 4)	$69.70	7B	4G	8U
Power Equipment Operators	Crane, Floating (derrick Barge) 30	$74.18	7B	4G	8U

	Ton But Less Than 150 Ton (asst To Engineer Required) (group 2)				
Power Equipment Operators	Crane, Floating 150 Ton But Less Than 250 Ton (asst To Engineer Required) (group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Floating 250 Ton And Over (asst To Engineer And Deckhand Required) (group 1)	$78.25	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Floating Clamshell 3 Cu. Yds. & Over (fireman Or Diesel Electric Engineer Required(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Floating Clamshell, Dragline Etc. Operator Under 3 Cu. Yds. Or Less Than 30 Ton (diesel-electric Engineer Required)(group 4)	$69.70	**7B**	**4G**	**8U**

Power Equipment Operators	Crane, Hydraulic 200 Ton Through 399 Ton (group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Hydraulic 50 Ton Through 89 Ton With Luffing Or Tower Attachment(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Hydraulic 50 Ton Through 89 Tons(group 3)	$73.03	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Hydraulic 90 Ton Through 199 Ton With Luffing Or Tower Attachment (group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Hydraulic 90 Ton Through 199 Ton(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Hydraulic Crane 200 Ton Through 300 Ton With Luffing Or Tower Attachment(group 1)	$78.25	**7B**	**4G**	**8U**

Power Equipment Operators	Crane, Hydraulic Crane 400 Ton And Over(group 1)	$80.41	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Hydraulic Crane Over 300 Ton Through 399 Ton With Luffer Or Tower Attachment(group 1)	$80.41	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Hydraulic Under 50 Ton(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Lattice Boom 200 Ton Through 299 Ton, With Over 200' Boom(group 1)	$78.25	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Lattice Boom 300 Ton Through 399 Ton(group 1)	$78.25	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Lattice Boom 300 Ton Through 399 Ton, With Over 200' Boom(group 1)	$80.41	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Lattice Boom 50 Ton Through 89 Ton With 150' Boom Or Less(group 3)	$73.03	**7B**	**4G**	**8U**

Power Equipment Operators	Crane, Lattice Boom 50 Ton Through 89 Ton With Over 150' Boom	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Lattice Boom 90 Ton Through 199 Ton With 150' - 200' Boom(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Lattice Boom Under 50 Ton(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Lattice Boom, 200 Ton Through 299 Ton With 200' Boom Or Less (group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Lattice Boom, 90 Ton Through 199 Ton With Over 200' Boom (group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Shovel, Dragline Or Clamshell 3 Cu. Yds. But Less Than 5 Cu. Yds. (asst To Engineer Required) (group 3)	$73.03	**7B**	**4G**	**8U**

Power Equipment Operators	Crane, Tower Crane With 175' Tower Or Less And With Less Than 200' Jib(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Tower Crane With Over 175' Tower Or Over 200' Jib (group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Tugger(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Whirley 90 Ton And Over (group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators	Crane, Whirley Under 90 Ton(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Crusher Feederman(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Crusher Oiler(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Crusher Plant(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Deckhand(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Derrick Operator Under 100 Ton (two	$69.70	**7B**	**4G**	**8U**

	Operators Required When Swing Control Is Remote From Hoist)(group 4)				
Power Equipment Operators	Diesel-electric Engineer (plant Or Floating)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Directional Drill Over 20,000 Lbs Pullback(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Drill Assistant(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Drill Cat Operator(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Drill Directional Type Less Than 20,ooo Lbs Pullback(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Drill Doctor And/or (bit Grinder)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Drill Mud Mixer(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Drill Oscillator(group 4)	$69.70	**7B**	**4G**	**8U**

Power Equipment Operators	Drill, Directinal Locator(group 6)	$65.24	7B	4G	8U
Power Equipment Operators	Driller, Percussion, Diamond, Core, Cable, Rotary & Similar Type(group 4)	$69.70	7B	4G	8U
Power Equipment Operators	Elevating Grader Operator, Tractor Towed Requiring Operator Or Grader(group 5)	$68.46	7B	4G	8U
Power Equipment Operators	Elevating Loader Operator (any Type) (group 5)	$68.46	7B	4G	8U
Power Equipment Operators	Elevator To Move Personnel Or Materials(group 5)	$68.46	7B	4G	8U
Power Equipment Operators	Excavator Over 80,000 Lbs Through 130,000 Lbs(group 3)	$73.03	7B	4G	8U
Power Equipment Operators	Excavator Operator, Over 20,000 Lbs Through 80,000 Lbs(group 4)	$69.70	7B	4G	8U
Power Equipment Operators	Excavator Operator, Over 130,000	$74.18	7B	4G	8U

	Lbs(group 2)				
Power Equipment Operators	Fireman(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Floating, Crane 350 Ton And Over (asst To Engineer And Deckhand Required) (group 1)	$80.41	**7B**	**4G**	**8U**
Power Equipment Operators	Fork Lift(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Fork Lift, Over 10 Ton Or Robotic(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Generator Operator(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Grade Checker(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Grade Setter / Layout From Plans(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Grade-all(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Guardrail Machines, I.e. Punch, Auger, Etc.(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Guardrail Punch Oiler(group 6)	$65.24	**7B**	**4G**	**8U**

Power Equipment Operators	Hammer Operator (pile Driver)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Heavy Duty Repairman Assistant(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Heavy Equipment Robotics Operator Or Mechanic(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Helicopter Hoist(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Helicopter Radioman (ground) (group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Helicopter When Used In Erecting Workcrane(group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators	Hoist Operator, Single Drum(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Hoist, 2 Drums Or More(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Hoist, Stiff Leg, Guy Derrick Or Similar Type, 50 Ton And Over(group 4)	$69.70	**7B**	**4G**	**8U**

Power Equipment Operators	Hydraulic Backhoe Track Type Up To And Including 20,000 Lbs(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Hydraulic Backhoe Wheel Type (any Make)(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Hydraulic Pipe Press(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Hydro Axe (loader Mounted Or Similar Type)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Hydrographic Seeder Machine Straw, Pulp Or Seed(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Hydrostatic Pump Operator(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Internal Full Slab Vibrator Operator(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Jack Operator, Elevating Barges, Barge Operator, Self-unloading (asst To Engineer Required)(group 4)	$69.70	**7B**	**4G**	**8U**

Power Equipment Operators	Laser Screed(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Lattice Boom Crane 400 Ton And Over(group 1)	$80.41	**7B**	**4G**	**8U**
Power Equipment Operators	Lime Spreader, Construction Job Site(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Loaders Operator, Front End & Overhead, 25,000 Lbs And Less Than 60,000 Lbs(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Loaders, 120,000 Lbs And Above(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Loaders, 60,000 Lbs And Less Than 120,000 Lbs(group 3)	$73.03	**7B**	**4G**	**8U**
Power Equipment Operators	Loaders, Rubber-tire Type, Less Than 25,000 Lbs(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Log Skidders(group 4)	$69.70	**7B**	**4G**	**8U**

Power Equipment Operators	Master Environmental Maintenance Mechanic(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Material Handler(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Mechanic, Heavy Duty(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Mixer Box (c.t.b., Dry Batch, Etc.)(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Oiler(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Parts Man (tool Room)(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Pavement Grinder And Or Grooving Machine (riding Type)(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Pile Driver Operator (not Crane Type) (asst To Engineer Required)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Pipe Bending, Cleaning, Doping And Wrapping Machines(group 4)	$69.70	**7B**	**4G**	**8U**

Power Equipment Operators	Pipe, Cast In Place Pipe Laying Machine(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Plant Oiler(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Pump (any Power) (group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Pump Operator, More Than 5 Pumps (any Size)(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Rail, Ballast Compactor, Regulator Or Tamper Machines(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Rail, Ballast Tamper Multi-purpose(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Rail, Brakeman, Switchman, Motorman(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Rail, Car Mover(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Rail, Clip Applicator(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Rail, High Rail Self Loader Truck(group	$68.46	**7B**	**4G**	**8U**

	5)				
Power Equipment Operators	Rail, Lo-railer(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Rail, Locomotive, 40 Ton And Over (asst To Engineer Required)(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Rail, Shuttle Car Operator(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Rail, Speedswing(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Rail, Switchman(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Rail, Tamping Machine, Mechanical, Self-propelled(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Rail, Track Liner(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Remote Controlled Earth Moving Equipment(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Rigger(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Roller Grading (not Asphalt)(group 6)	$65.24	**7B**	**4G**	**8U**

Power Equipment Operators	Rubber-tired Dozers And Pushers(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Scraper All Types(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Service Oiler (greaser)(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Shovel, Dragline, Clamshell, 5 Yards And Over(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Side-boom(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Skip Loader, Drag Box(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Stump Grinder (loader Mounted Or Similar Type)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Surface Heater And Planer(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Sweeper Self-propelled, Construction Job Site(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Tar Pot Fireman (power Agitated) Or Not(group 6)	$65.24	**7B**	**4G**	**8U**

Power Equipment Operators	Tractor Rubber-tired, 50 Hp Flywheel & Under(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Tractor, Rubber-tired Over 50 Hp Flywheel(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Trenching Machine 3 Ft Depth And Deeper (asst To The Operator If Required)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Trenching Machine Operator, Maximum Digging Capacity 3 Ft Depth(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Truck Crane Oiler-driver(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Truck, All Terrain Or Track Type(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Truck, Barrel Type(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Truck, Boom(group 5)	$68.46	**7B**	**4G**	**8U**

Power Equipment Operators	Truck, Off-road Trucks, Articulated And Non-articulated Trucks(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Truck, Offraod Trucks, Articulated And Non-articulated Trucks(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Truck, Vacuum(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Truck, Water(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Tub Grinder(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Tunnel Boring Machine Mechanic(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Tunnel Boring Machine(group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators	Tunnel Segment Plant(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Tunnel Separation Plant(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Tunnel Shaef Loader(group 4)	$69.70	**7B**	**4G**	**8U**

Power Equipment Operators	Tunnel, Locomotive, Dinkey(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Tunnel, Micro Boring Tunnel Machine(group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators	Tunnel, Mucking Machine(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Tunnel, Power Jumbo Setting Slip Forms, Etc.(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators	Tunnel, Shield Operator(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Ultra High Pressure Water Jet Cutting Tool System Operator(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Underwater Equipment, Remote Or Otherwise(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Vacuum Blasting Machine Operator(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Water Pulls, Water Wagon(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Welder's Assistant(group 6)	$65.24	**7B**	**4G**	**8U**

Power Equipment Operators	Welder; Heavy Duty, Certified Or Not(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators	Welding Machine(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators	Wheel Excavation Any Size (grade Oiler Required) (group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators	Wire Mat Or Brooming Machine(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Air Filtration Equipment(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Asphalt Plant (any Type) (assistant Engineer Required) (group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Asphalt, Burner & Reconditioner (any Type), (asst To Engineer If Required)(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Asphalt, Extrusion Machine Operator(group 5)	$68.46	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Asphalt, Paver (screed Man Required)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Asphalt, Pugmill (any Type)(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Asphalt, Raker(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Asphalt, Roller (any Asphalt Mix)(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Asphalt, Roto-mill, Pavement Profiler Under 8 Ft Lateral Cut(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Asphalt, Roto-mill, Pavement Profiler, 8 Ft Lateral Cut & Over(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Asphalt, Roto-mill, Pavement Profiler, Groundman(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Asphalt, Screed(group 4)	$69.70	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Asphalt, Truck Mounted Spreader, With Screed(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Auger Oiler(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Auto Grader Or "trimmer" (grade Checker Required) (group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Back Filling Machine (assistant To Engineer Required) (group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Backhoe, Robotic, Track And Wheel Type Up To And Including 20,000 Lbs. With Any Attachments(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Band Wagons (in Conjuction With Whell Excavator) (group 2)	$74.18	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Bell Man (any Type Of Comunication) (group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Blade Any Type(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Blade, Robotic(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Boatman(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Boatman, Licensed(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Bobcat, Skid Steer (< 1yd)(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Boom Type Lifting Device, 5 Ton Capacity Or Less(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Boring Machine (asst To Engineer Required)(group 4)	$69.70	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Broom Self-propelled, Construction Job Site(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Bulldozer Operator, 20,000 Lbs Or Less, Or 100 Horse Or Less(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Bulldozer Operator, Over 20,000 Lbs And More Than 100 Horse Up To 70,000 Lbs(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Bulldozer Over 70,000 Lbs Up To And Including 120,000 Lbs(group 3)	$73.03	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Bulldozer Over 120,000 Lbs And Above(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Bulldozer Robotic Equipment(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Cable-plow (any Type)(group 4)	$69.70	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Cableway 25 Ton & Over(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Cableway Up To 25 Ton(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Canal Trimmer (grade Oiler Required)(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Cat Drill (john Henry)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Cement Pump(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Challenger(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Chip Spreading Machine(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Chippers (asst To Engineer If Required)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Churn Drill & Earth Boring Machine(group 5)	$68.46	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Combination Heavy Duty Mechanic-welder, When Required To Do Both(group 4)	$69.70	7B	4G	8U
Power Equipment Operators- Underground Sewer & Water	Compactor Self Propelled Without Blade(group 5)	$68.46	7B	4G	8U
Power Equipment Operators- Underground Sewer & Water	Compactor With Blade Self Propelled(group 4)	$69.70	7B	4G	8U
Power Equipment Operators- Underground Sewer & Water	Compactor, Multi-engine(group 4)	$69.70	7B	4G	8U
Power Equipment Operators- Underground Sewer & Water	Compactor, Robotic(group 4)	$69.70	7B	4G	8U
Power Equipment Operators- Underground Sewer & Water	Compressor (any Power) 1,250 Cu Ft And Over Total Capacity(group 5)	$68.46	7B	4G	8U
Power Equipment Operators- Underground Sewer & Water	Compressor Operator (any Power) Under 1,250 Cu Ft Total Capacity(group 6)	$65.24	7B	4G	8U
Power Equipment Operators- Underground	Concrete Batch Plant And/or Wet	$76.09	7B	4G	8U

Sewer & Water	Mix (3 Units Or More) (group1)				
Power Equipment Operators- Underground Sewer & Water	Concrete Batch Plant And/or Wet Mix Operator (1 & 2 Drums)(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete Batch Plant Quality Control(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete Breaker (assistant To Engineer Required) (group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete Canal Line, Assistant To Engineer Required(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete Curing Machine (riding Type)(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete Diamond Head Profiler(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete Paving Road Mixer(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground	Concrete Planer(group 5)	$68.46	**7B**	**4G**	**8U**

Sewer & Water					
Power Equipment Operators- Underground Sewer & Water	Concrete Saw(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Automatic Slip Form Paver (asst To Engineer Required) (group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Combination Mixer & Compressor Operator, Gunite Work(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Curb Machine Mechanical Berm, Curb And/or Curb And Gutter(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Finishing Machine(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Grout Plant(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Grouting Machine(group 5)	$68.46	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Concrete, Joint Machine(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Mixer Mobile(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Mixer Single Drum Any Capacity(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Paving Machine 8' And Less (asst To Engineer Required) (group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Placing Boom(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Pump Truck(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Pump(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Pumpcrete Operator (any Type) (group 5)	$68.46	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Concrete, Reinforced Tank Banding Machine (asst To Engineer Required)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Slip Form Pumps, Power Driven Hydraulic Lifting Device For Concrete Forms(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Spreader(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Telebelt(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Concrete, Treated Base Roller Operator, Oiling(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Conveyor Operator Or Assistant(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Conveyored Material Hauler(group 5)	$68.46	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Crane, Bridge Locomotive, Gantry And Overhead(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Carry Deck(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Chicago Boom & Similar Types(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Floating (derrick Barge) 30 Ton But Less Than 150 Ton (asst To Engineer Required) (group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Floating 150 Ton But Less Than 250 Ton (asst To Engineer Required) (group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Floating 250 Ton And Over (asst To Engineer And Deckhand Required) (group 1)	$78.25	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Crane, Floating Clamshell 3 Cu. Yds. & Over (fireman Or Diesel Electric Engineer Required(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Floating Clamshell, Dragline Etc. Operator Under 3 Cu. Yds. Or Less Than 30 Ton (diesel-electric Engineer Required)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Hydraulic 200 Ton Through 399 Ton (group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Hydraulic 50 Ton Through 89 Ton With Luffing Or Tower Attachment(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Hydraulic 50 Ton Through 89 Tons(group 3)	$73.03	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Hydraulic 90 Ton Through 199 Ton With Luffing Or	$76.09	**7B**	**4G**	**8U**

	Tower Attachment (group 1)				
Power Equipment Operators- Underground Sewer & Water	Crane, Hydraulic 90 Ton Through 199 Ton(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Hydraulic Crane 200 Ton Through 300 Ton With Luffing Or Tower Attachment(group 1)	$78.25	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Hydraulic Crane 400 Ton And Over(group 1)	$80.41	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Hydraulic Crane Over 300 Ton Through 399 Ton With Luffer Or Tower Attachment(group 1)	$80.41	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Hydraulic Under 50 Ton(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Lattice Boom 200 Ton Through 299 Ton, With Over 200' Boom(group 1)	$78.25	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Crane, Lattice Boom 300 Ton Through 399 Ton(group 1)	$78.25	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Lattice Boom 300 Ton Through 399 Ton, With Over 200' Boom(group 1)	$80.41	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Lattice Boom 50 Ton Through 89 Ton With 150' Boom Or Less(group 3)	$73.03	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Lattice Boom 50 Ton Through 89 Ton With Over 150' Boom	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Lattice Boom 90 Ton Through 199 Ton With 150' - 200' Boom(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Lattice Boom Under 50 Ton(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Lattice Boom, 200 Ton Through 299 Ton With 200' Boom Or Less (group 1)	$76.09	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Crane, Lattice Boom, 90 Ton Through 199 Ton With Over 200' Boom (group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Shovel, Dragline Or Clamshell 3 Cu. Yds. But Less Than 5 Cu. Yds. (asst To Engineer Required) (group 3)	$73.03	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Tower Crane With 175' Tower Or Less And With Less Than 200' Jib(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Tower Crane With Over 175' Tower Or Over 200' Jib (group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Tugger(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crane, Whirley 90 Ton And Over (group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators- Underground	Crane, Whirley Under 90 Ton(group	$74.18	**7B**	**4G**	**8U**

Sewer & Water	2)				
Power Equipment Operators- Underground Sewer & Water	Crusher Feederman(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crusher Oiler(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Crusher Plant(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Deckhand(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Derrick Operator Under 100 Ton (two Operators Required When Swing Control Is Remote From Hoist)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Diesel-electric Engineer (plant Or Floating)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Directional Drill Over 20,000 Lbs Pullback(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground	Drill Assistant(group 6)	$65.24	**7B**	**4G**	**8U**

Sewer & Water					
Power Equipment Operators- Underground Sewer & Water	Drill Cat Operator(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Drill Directional Type Less Than 20,ooo Lbs Pullback(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Drill Doctor And/or (bit Grinder)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Drill Mud Mixer(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Drill Oscillator(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Drill, Directinal Locator(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Driller, Percussion, Diamond, Core, Cable, Rotary & Similar Type(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Elevating Grader Operator, Tractor Towed Requiring	$68.46	**7B**	**4G**	**8U**

	Operator Or Grader(group 5)				
Power Equipment Operators- Underground Sewer & Water	Elevating Loader Operator (any Type) (group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Elevator To Move Personnel Or Materials(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Excavator Over 80,000 Lbs Through 130,000 Lbs(group 3)	$73.03	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Excavator Operator, Over 20,000 Lbs Through 80,000 Lbs(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Excavator Operator, Over 130,000 Lbs(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Fireman(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Floating, Crane 350 Ton And Over (asst To Engineer And Deckhand Required) (group 1)	$80.41	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Fork Lift(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Fork Lift, Over 10 Ton Or Robotic(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Generator Operator(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Grade Checker(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Grade Setter / Layout From Plans(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Grade-all(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Guardrail Machines, I.e. Punch, Auger, Etc.(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Guardrail Punch Oiler(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Hammer Operator (pile Driver)(group 4)	$69.70	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Heavy Duty Repairman Assistant(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Heavy Equipment Robotics Operator Or Mechanic(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Helicopter Hoist(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Helicopter Radioman (ground) (group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Helicopter When Used In Erecting Workcrane(group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Hoist Operator, Single Drum(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Hoist, 2 Drums Or More(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Hoist, Stiff Leg, Guy Derrick Or Similar Type, 50 Ton And Over(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground	Hydraulic Backhoe Track Type Up To	$68.46	**7B**	**4G**	**8U**

Sewer & Water	And Including 20,000 Lbs(group 5)				
Power Equipment Operators- Underground Sewer & Water	Hydraulic Backhoe Wheel Type (any Make)(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Hydraulic Pipe Press(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Hydro Axe (loader Mounted Or Similar Type)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Hydrographic Seeder Machine Straw, Pulp Or Seed(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Hydrostatic Pump Operator(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Internal Full Slab Vibrator Operator(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Jack Operator, Elevating Barges, Barge Operator, Self-unloading (asst To Engineer Required)(group 4)	$69.70	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Laser Screed(group 5)	$68.46	7B	4G	8U
Power Equipment Operators- Underground Sewer & Water	Lattice Boom Crane 400 Ton And Over(group 1)	$80.41	7B	4G	8U
Power Equipment Operators- Underground Sewer & Water	Lime Spreader, Construction Job Site(group 5)	$68.46	7B	4G	8U
Power Equipment Operators- Underground Sewer & Water	Loaders Operator, Front End & Overhead, 25,000 Lbs And Less Than 60,000 Lbs(group 4)	$69.70	7B	4G	8U
Power Equipment Operators- Underground Sewer & Water	Loaders, 120,000 Lbs And Above(group 2)	$74.18	7B	4G	8U
Power Equipment Operators- Underground Sewer & Water	Loaders, 60,000 Lbs And Less Than 120,000 Lbs(group 3)	$73.03	7B	4G	8U
Power Equipment Operators- Underground Sewer & Water	Loaders, Rubber-tire Type, Less Than 25,000 Lbs(group 5)	$68.46	7B	4G	8U
Power Equipment Operators- Underground	Log Skidders(group 4)	$69.70	7B	4G	8U

Sewer & Water					
Power Equipment Operators- Underground Sewer & Water	Master Environmental Maintenance Mechanic(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Material Handler(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Mechanic, Heavy Duty(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Mixer Box (c.t.b., Dry Batch, Etc.)(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Oiler(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Parts Man (tool Room)(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Pavement Grinder And Or Grooving Machine (riding Type)(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Pile Driver Operator (not Crane Type) (asst To Engineer Required)(group 4)	$69.70	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Pipe Bending, Cleaning, Doping And Wrapping Machines(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Pipe, Cast In Place Pipe Laying Machine(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Plant Oiler(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Pump (any Power) (group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Pump Operator, More Than 5 Pumps (any Size)(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Rail, Ballast Compactor, Regulator Or Tamper Machines(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Rail, Ballast Tamper Multi-purpose(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Rail, Brakeman, Switchman, Motorman(group 6)	$65.24	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Rail, Car Mover(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Rail, Clip Applicator(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Rail, High Rail Self Loader Truck(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Rail, Lo-railer(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Rail, Locomotive, 40 Ton And Over (asst To Engineer Required)(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Rail, Shuttle Car Operator(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Rail, Speedswing(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Rail, Switchman(group 6)	$65.24	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Rail, Tamping Machine, Mechanical, Self-propelled(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Rail, Track Liner(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Remote Controlled Earth Moving Equipment(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Rigger(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Roller Grading (not Asphalt)(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Rubber-tired Dozers And Pushers(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Scraper All Types(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Service Oiler (greaser)(group 5)	$68.46	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Shovel, Dragline, Clamshell, 5 Yards And Over(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Side-boom(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Skip Loader, Drag Box(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Stump Grinder (loader Mounted Or Similar Type)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Surface Heater And Planer(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Sweeper Self-propelled, Construction Job Site(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Tar Pot Fireman (power Agitated) Or Not(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Tractor Rubber-tired, 50 Hp Flywheel & Under(group 5)	$68.46	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Tractor, Rubber-tired Over 50 Hp Flywheel(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Trenching Machine 3 Ft Depth And Deeper (asst To The Operator If Required)(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Trenching Machine Operator, Maximum Digging Capacity 3 Ft Depth(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Truck Crane Oiler-driver(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Truck, All Terrain Or Track Type(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Truck, Barrel Type(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Truck, Boom(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Truck, Off-road Trucks, Articulated And Non-articulated Trucks(group 5)	$68.46	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Truck, Offraod Trucks, Articulated And Non-articulated Trucks(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Truck, Vacuum(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Truck, Water(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Tub Grinder(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Tunnel Boring Machine Mechanic(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Tunnel Boring Machine(group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Tunnel Segment Plant(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Tunnel Separation Plant(group 4)	$69.70	**7B**	**4G**	**8U**

Power Equipment Operators- Underground Sewer & Water	Tunnel Shaef Loader(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Tunnel, Locomotive, Dinkey(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Tunnel, Micro Boring Tunnel Machine(group 1)	$76.09	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Tunnel, Mucking Machine(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Tunnel, Power Jumbo Setting Slip Forms, Etc.(group 5)	$68.46	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Tunnel, Shield Operator(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Ultra High Pressure Water Jet Cutting Tool System Operator(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Underwater Equipment, Remote Or Otherwise(group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground	Vacuum Blasting Machine	$69.70	**7B**	**4G**	**8U**

Sewer & Water	Operator(group 4)				
Power Equipment Operators- Underground Sewer & Water	Water Pulls, Water Wagon(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Welder's Assistant(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Welder; Heavy Duty, Certified Or Not(group 4)	$69.70	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Welding Machine(group 6)	$65.24	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Wheel Excavation Any Size (grade Oiler Required) (group 2)	$74.18	**7B**	**4G**	**8U**
Power Equipment Operators- Underground Sewer & Water	Wire Mat Or Brooming Machine(group 6)	$65.24	**7B**	**4G**	**8U**
Power Line Clearance Tree Trimmers	Journey Level In Charge	$64.20	**5A**	**4A**	
Power Line Clearance Tree Trimmers	Spray Person	$60.74	**5A**	**4A**	
Power Line Clearance Tree Trimmers	Tree Equipment Operator	$64.20	**5A**	**4A**	

Power Line Clearance Tree Trimmers	Tree Trimmer	$57.29	5A	4A		
Power Line Clearance Tree Trimmers	Tree Trimmer Groundperson	$43.05	5A	4A		
Refrigeration & Air Conditioning Mechanics	Journey Level	$95.46	5A	1G		
Residential Brick Mason	Journey Level	$23.02		1		
Residential Carpenters	Journey Level	$26.70		1		
Residential Cement Masons	Journey Level	$16.66		1		
Residential Drywall Applicators	Journey Level	$36.07		1		
Residential Drywall Tapers	Journey Level	$16.66		1		
Residential Electricians	Journey Level	$30.53		1		
Residential Glaziers	Journey Level	$42.76		1		
Residential Insulation Applicators	Journey Level	$28.53		1		
Residential Laborers	Journey Level	$46.95	6Z	1M	8T	
Residential Marble Setters	Journey Level	$23.02		1		
Residential Painters	Journey Level	$51.86	7E	11L		
Residential Plumbers & Pipefitters	Journey Level	$51.05		1		

Residential Refrigeration & Air Conditioning Mechanics	Journey Level	$99.92	**7F**	**1E**
Residential Sheet Metal Workers	Journey Level	$99.92	**7F**	**1E**
Residential Soft Floor Layers	Journey Level	$61.44	**7E**	**11Q**
Residential Sprinkler Fitters (Fire Protection)	Journey Level	$41.11		**1**
Residential Stone Masons	Journey Level	$23.02		**1**
Residential Terrazzo Workers	Journey Level	$16.66		**1**
Residential Terrazzo/Tile Finishers	Journey Level	$36.64		**1**
Residential Tile Setters	Journey Level	$16.66		**1**
Roofers	Journey Level	$67.45	**5A**	**3H**
Roofers	Using Irritable Bituminous Materials	$70.45	**5A**	**3H**
Sheet Metal Workers	Journey Level (Field or Shop)	$99.92	**7F**	**1E**
Shipbuilding & Ship Repair	New Construction Heat & Frost Insulator	$85.39	**5N**	**1F**

Shipbuilding & Ship Repair	Ship Repair Heat & Frost Insulator	$85.39	**5N**	**1F**	
Sign Makers & Installers (Electrical)	Journey Level	$16.88		**1**	
Sign Makers & Installers (Non-Electrical)	Journey Level	$16.66		**1**	
Soft Floor Layers	Journey Level	$63.29	**15J**	**4C**	
Solar Controls For Windows	Journey Level	$16.66		**1**	
Sprinkler Fitters (Fire Protection)	Journey Level	$75.89	**7J**	**1R**	
Stage Rigging Mechanics (Non Structural)	Journey Level	$16.66		**1**	
Stone Masons	Journey Level	$74.09	**5A**	**1B**	
Street And Parking Lot Sweeper Workers	Journey Level	$16.66		**1**	
Surveyors	Chain Person	$65.24	**7B**	**1B**	**9H**
Surveyors	Instrument Person	$68.46	**7B**	**1B**	**9H**
Surveyors	Party Chief	$74.18	**7B**	**1B**	**9H**
Telecommunication Technicians	Journey Level	$79.16	**5A**	**1B**	
Telephone Line Construction - Outside	Cable Splicer	$41.35	**5A**	**2B**	

Telephone Line Construction - Outside	Hole Digger/Ground Person	$27.31	**5A**	**2B**
Telephone Line Construction - Outside	Telephone Equipment Operator (Light)	$34.53	**5A**	**2B**
Telephone Line Construction - Outside	Telephone Lineperson	$39.07	**5A**	**2B**
Terrazzo Workers	Journey Level	$64.27	**5A**	**1B**
Tile Setters	Journey Level	$64.27	**5A**	**1B**
Tile, Marble & Terrazzo Finishers	Finishers	$47.95	**5A**	**1B**
Traffic Control Stripers	Journey Level	$88.42	**15N**	**1K**
Truck Drivers	Asphalt Mix Over 10 Yards	$49.39	**5A**	**1B**
Truck Drivers	Asphalt Mix To 10 Yards	$49.24	**5A**	**1B**
Truck Drivers	Dump Truck	$49.24	**5A**	**1B**
Truck Drivers	Dump Truck And Trailer	$49.39	**5A**	**1B**
Truck Drivers	Other Trucks	$49.39	**5A**	**1B**
Truck Drivers - Ready Mix	Transit Mix 5 cubic yards and under	$49.24	**5A**	**1B**

Truck Drivers - Ready Mix	Transit Mix over 11 cubic yards up to 15 cubic yards	$49.85	**5A**	**1B**
Truck Drivers - Ready Mix	Transit Mix over 5 cubic yards up to 7 cubic yards	$49.39	**5A**	**1B**
Truck Drivers - Ready Mix	Transit Mix Over 7 cubic yards up to 11 cubic yards	$49.54	**5A**	**1B**
Well Drillers & Irrigation Pump Installers	Irrigation Pump Installer	$16.66		**1**
Well Drillers & Irrigation Pump Installers	Oiler	$16.66		**1**
Well Drillers & Irrigation Pump Installers	Well Driller	$17.97		**1**

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Overtime Codes

Overtime calculations are based on the hourly rate actually paid to the worker. On public works projects, the hourly rate must be not less than the prevailing rate of wage minus the hourly rate of the cost of fringe benefits actually provided for the worker.

1. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

B. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

C. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

D. The first two (2) hours before or after a five-eight (8) hour workweek day or a four-ten (10) hour workweek day and the first eight (8) hours worked the next day after either workweek shall be paid at one and one-half times the hourly rate of wage. All additional hours worked and all worked on Sundays and holidays shall be paid at double the hourly rate of wage.

E. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

F. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours worked, except Labor Day, shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.

G. The first ten (10) hours worked on Saturdays and the first ten (10) hours worked on a fifth calendar weekday in a four-ten hour schedule, shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

H. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions or equipment breakdown) shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

I. All hours worked on Sundays and holidays shall also be paid at double the hourly rate of wage.

J. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over ten (10) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage.

K. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

M. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

1. N. All hours worked on Saturdays (except makeup days) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

O. The first ten (10) hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays, holidays and after twelve (12) hours, Monday through Friday and after ten (10) hours on Saturday shall be paid at double the hourly rate of wage.

P. All hours worked on Saturdays (except makeup days if circumstances warrant) and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

Q. The first two (2) hours after eight (8) regular hours Monday through Friday and up to ten (10) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays (except Christmas day) shall be paid at double the hourly rate of wage. All hours worked on Christmas day shall be paid at two and one-half times the hourly rate of wage.

R. All hours worked on Sundays and holidays shall be paid at two times the hourly rate of wage.

U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays (except Labor Day) shall be paid at two times the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.

V. All hours worked on Sundays and holidays (except Thanksgiving Day and Christmas day) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Thanksgiving Day and Christmas day shall be paid at double the hourly rate of wage.

W. All hours worked on Saturdays and Sundays (except make-up days due to conditions beyond the control of the employer)) shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

X. The first four (4) hours after eight (8) regular hours Monday through Friday and the first twelve (12) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over twelve (12) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage. When holiday falls on Saturday or Sunday, the day before Saturday, Friday, and the day after Sunday, Monday, shall be considered the holiday and all work performed shall be paid at double the hourly rate of wage.

Y. All hours worked outside the hours of 5:00 am and 5:00 pm (or such other hours as may be agreed upon by any employer and the employee) and all hours worked in excess of eight (8) hours per day (10 hours per day for a 4 x 10 workweek) and on Saturdays and holidays (except labor day) shall be paid at one and one-half times the hourly rate of wage. (except for employees who are absent from work without prior approval on a scheduled workday during the workweek shall be paid at the straight-time rate until they have worked 8 hours in a day (10 in a 4 x 10 workweek) or 40 hours during that workweek.) All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and Labor Day shall be paid at double the hourly rate of wage.

Z. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid the straight time rate of pay in addition to holiday pay.

Overtime Codes Continued

2. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

   B. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage.

   F. The first eight (8) hours worked on holidays shall be paid at the straight hourly rate of wage in addition to the holiday pay. All hours worked in excess of eight (8) hours on holidays shall be paid at double the hourly rate of wage.

   M. This code appears to be missing. All hours worked on Saturdays, Sundays and holidays shall be paid at double the hourly rate of wage.

   R. All hours worked on Sundays and holidays and all hours worked over sixty (60) in one week shall be paid at double the hourly rate of wage.

   U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked over 12 hours in a day or on Sundays and holidays shall be paid at double the hourly rate of wage.

3. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

   F. All hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sunday shall be paid at two times the hourly rate of wage. All hours worked on paid holidays shall be paid at two and one-half times the hourly rate of wage including holiday pay.

   H. All work performed on Sundays between March 16th and October 14th and all Holidays shall be compensated for at two (2) times the regular rate of pay. Work performed on Sundays between October 15th and March 15th shall be compensated at one and one half (1-1/2) times the regular rate of pay.

   J. All hours worked between the hours of 10:00 pm and 5:00 am, Monday through Friday, and all hours worked on Saturdays shall be paid at a one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

   K. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal 5 am to 6pm shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage. All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays, and all hours worked in excess of twelve (12) hours in a single shift shall be paid at double the hourly rate of wage.

   After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more. When an employee returns to work without at least eight (8) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the eight (8) hours rest period.

Overtime Codes Continued

4. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

A. All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at double the hourly rate of wage. All hours worked on Saturdays, Sundays and holidays shall be paid at double the hourly rate of wage

C. On Monday through Friday, the first four (4) hours of overtime after eight (8) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay, unless a four (4) day ten (10) hour workweek has been established. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, the first two (2) hours of overtime after ten (10) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay. On Saturday, the first twelve (12) hours of work shall be paid at one and one half (1-1/2) times the straight time rate of pay, except that if the job is down on Monday through Friday due to weather conditions or other conditions outside the control of the employer, the first ten (10) hours on Saturday may be worked at the straight time rate of pay. All hours worked over twelve (12) hours in a day and all hours worked on Sunday and Holidays shall be paid at two (2) times the straight time rate of pay.

D. All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at double the hourly rate of wage. All hours worked on Saturday, Sundays and holidays shall be paid at double the hourly rate of pay. Rates include all members of the assigned crew.

EXCEPTION:
On all multipole structures and steel transmission lines, switching stations, regulating, capacitor stations, generating plants, industrial plants, associated installations and substations, except those substations whose primary function is to feed a distribution system, will be paid overtime under the following rates:

The first two (2) hours after eight (8) regular hours Monday through Friday of overtime on a regular workday, shall be paid at one and one-half times the hourly rate of wage. All hours in excess of ten (10) hours will be at two (2) times the hourly rate of wage. The first eight (8) hours worked on Saturday will be paid at one and one-half (1-1/2) times the hourly rate of wage. All hours worked in excess of eight (8) hours on Saturday, and all hours worked on Sundays and holidays will be at the double the hourly rate of wage.

All overtime eligible hours performed on the above described work that is energized, shall be paid at the double the hourly rate of wage.

E. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

On a four-day, ten-hour weekly schedule, either Monday thru Thursday or Tuesday thru Friday schedule, all hours worked after ten shall be paid at double the hourly rate of wage. The Monday or Friday not utilized in the normal four-day, ten hour work week, and Saturday shall be paid at one and one half (1½) times the regular shift rate for the first eight (8) hours. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

G. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

I. The First eight (8) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of eight (8) per day on Saturdays shall be paid at double the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

4. J. The first eight (8) hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of eight (8) hours on a Saturday shall be paid at double the hourly rate of wage. All hours worked over twelve (12) in a day, and all hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.

K. All hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage, so long as Saturday is the sixth consecutive day worked. All hours worked over twelve (12) in a day Monday through Saturday, and all hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.

L. The first twelve (12) hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on a Saturday in excess of twelve (12) hours shall be paid at double the hourly rate of pay. All hours worked over twelve (12) in a day Monday through Friday, and all hours worked on Sundays shall be paid at double the hourly rate of wage. All hours worked on a holiday shall be paid at one and one-half times the hourly rate of wage, except that all hours worked on Labor Day shall be paid at double the hourly rate of pay.

S. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, work performed in excess of (10) hours shall be paid at one and one half (1-1/2) times the hourly rate of pay. On Monday through Friday, work performed outside the normal work hours of 6:00 a.m. and 6:00 p.m. shall be paid at one and one-half (1-1/2) times the straight time rate, (except for special shifts or multiple shift operations).

All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All work performed on Sundays and holidays shall be paid at double the hourly rate of wage. When an employee returns to work without at least eight (8) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

Multiple Shift Operations: When the first shift of a multiple shift (a two or three shift) operation is started at the basic straight time rate or at a specific overtime rate, all shifts of that day's operation shall be completed at that rate. Special Shifts: The Special Shift Premium is the basic hourly rate of pay plus $2.00 an hour. When due to conditions beyond the control of the employer or when an owner (not acting as the contractor), a government agency or the contract specifications require more than four (4) hours of a special shift can only be performed outside the normal 6am to 6pm shift then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they shall be paid the special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday).

U. The first four (4) hours after eight (8) regular hours Monday through Friday and the first twelve (12) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. (Except on makeup days if work is lost due to inclement weather, then the first eight (8) hours on Saturday may be paid the regular rate.) All hours worked over twelve (12) hours Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

4. X. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage. Work performed outside the normal shift of 6 am to 6pm shall be paid at one and one-half the straight time rate, (except for special shifts or three shift operations). All work performed on Sundays and holidays shall be paid at double the hourly rate of wage. Shifts may be established when considered necessary by the Employer.

   The Employer may establish shifts consisting of eight (8) or ten (10) hours of work (subject to WAC 296-127-022), that shall constitute a normal forty (40) hour work week. The Employer can change from a 5-eight to a 4-ten hour schedule or back to the other. All hours of work on these shifts shall be paid for at the straight time hourly rate. Work performed in excess of eight hours (or ten hours per day (subject to WAC 296-127-022) shall be paid at one and one-half the straight time rate.

   When due to conditions beyond the control of the Employer, or when contract specifications require that work can only be performed outside the regular day shift, then by mutual agreement a special shift may be worked at the straight time rate, eight (8) hours work for eight (8) hours pay. The starting time shall be arranged to fit such conditions of work.

   When an employee returns to work without at a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

Overtime Codes Continued

11. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

   B After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

   C The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours worked, except Labor Day, and all hours on Sunday shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage. All non-overtime and non-holiday hours worked between 4:00 pm and 5:00 am, Monday through Friday, shall be paid at a premium rate of 15% over the hourly rate of wage.

   D. All hours worked on Saturdays and holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays shall be paid at double the hourly rate of wage.

   After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

   E. The first two (2) hours after eight (8) regular hours Monday through Friday, the first ten (10) hours on Saturday, and the first ten (10) hours worked on Holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked over ten (10) hours Monday through Saturday, and Sundays shall be paid at double the hourly rate of wage.

   After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

Overtime Codes Continued

11. F. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

On a four-day, ten-hour weekly schedule, either Monday thru Thursday or Tuesday thru Friday schedule, all hours worked after ten shall be paid at double the hourly rate of wage. The Monday or Friday not utilized in the normal four-day, ten hour work week, and Saturday shall be paid at one-half times the hourly rate of wage for the first eight (8) hours. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

G. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal 5 am to 6pm shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage.

All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays, and all hours worked in excess of twelve (12) hours in a single shift shall be paid at double the hourly rate of wage.

After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of nine (9) hours or more. When an employee returns to work without at least nine (9) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the nine (9) hours rest period.

H. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal 5 am to 6pm shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage.

All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays, and all hours worked in excess of twelve (12) hours in a single shift shall be paid at double the hourly rate of wage.

After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of ten (10) hours or more. When an employee returns to work without at least ten (10) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the ten (10) hours rest period.

J. All hours worked on holidays shall be paid at double the hourly rate of wage.

K. On Monday through Friday hours worked outside 4:00 am and 5:00 pm, and the first two (2) hours after eight (8) hours worked shall be paid at one and one-half times the hourly rate. All hours worked over 10 hours per day Monday through Friday, and all hours worked on Saturdays, Sundays, and Holidays worked shall be paid at double the hourly rate of wage.

L. An employee working outside 5:00 am and 5:00 pm shall receive an additional two dollar ($2.00) per hour for all hours worked that shift. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage.

Overtime Codes Continued

11. M. On Monday through Friday, the first four (4) hours of overtime after eight (8) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay, unless a four (4) day ten (10) hour workweek has been established. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, the first two (2) hours of overtime after ten (10) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay.

Work performed outside the normal work hours of 5:00 a.m. and 6:00 p.m. shall be paid at one and one-half (1-1/2) times the straight time rate, (except for special shifts or multiple shift operations). When the first shift of a multiple shift (a two or three shift) operation is started at the basic straight time rate or at a specific overtime rate, all shifts of that day's operation shall be completed at that rate. When due to conditions beyond the control of the Employer or when contract specifications require that work can only be performed outside the regular day shift of 5:00 am to 6:00 pm, then a special shift may be worked at the straight time rate, plus the shift pay premium when applicable. The starting time of work will be arranged to fit such conditions of work. Such shift shall consist of eight (8) hours work for eight (8) hours pay or ten (10) hours work for ten (10) hours pay for four ten shifts.

On Saturday, the first twelve (12) hours of work shall be paid at one and one half (1-1/2) times the straight time rate of pay. All work performed after 6:00 pm Saturday to 5:00 am Monday, all work performed over twelve (12) hours, and all work performed on holidays shall be paid at double the straight time rate of pay.

Shift Pay Premium: In an addition to any overtime already required, all hours worked between the hours of 6:00 pm and 5:00 am shall receive an additional two dollars ($2.00) per hour.

N. All work performed over twelve hours in a shift and all work performed on Sundays and Holidays shall be paid at double the straight time rate.

Any time worked over eight (8) hours on Saturday shall be paid double the straight time rate, except employees assigned to work six 10-hour shifts per week shall be paid double the straight time rate for any time worked on Saturday over 10 hours.

O. All work performed on Saturdays, Sundays, and Holidays shall be paid at one and one half (1-1/2) times the straight time rate of pay.

Overtime Codes Continued

11. P. Work performed in excess of ten (10) hours of straight time per day when four ten (10) hour shifts are established and all work on Saturdays, except for make-up days shall be paid at time and one-half (1 ½) the straight time rate.

Work performed outside the normal work hours of 5:00 a.m. and 6:00 p.m. shall be paid at one and one-half (1-1/2) times the straight time rate, (except for special shifts or multiple shift operations). When the first shift of multiple shift (a two or three shift) operation is started at the basic straight time rate or at a specific overtime rate, all shifts of that day's operation shall be completed at that rate. When due to conditions beyond the control of the Employer or when contract specifications require that work can only be performed outside the regular day shift of 5:00 a.m. to 6:00 p.m., then a special shift may be worked at the straight time rate, plus the shift pay premium when applicable. The starting time of work will be arranged to fit such conditions of work. Such shifts shall consist of eight (8) hours work for eight (8) hours pay or ten (10) hours work for ten (10) hours pay for four ten-hour shifts.

In the event the job is down due to weather conditions, then Saturday may, be worked as a voluntary make-up day at the straight time rate. However, Saturday shall not be utilized as a make-up day when a holiday falls on Friday. All work performed on Sundays and holidays and work in excess of twelve (12) hours per day shall be paid at double (2x) the straight time rate of pay.

After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

When an employee returns to work without a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

Q. All hours worked between the hours of 6:00 pm and 6:00 am, Monday through Saturday, shall be paid at a premium rate of 35% over the hourly rate of wage. Work performed on Sundays shall be paid at double time. All hours worked on holidays shall be paid at double the hourly rate of wage.

R On Monday through Saturday hours worked outside 6:00 am and 7:00 pm, and all hours after eight (8) hours worked shall be paid at one and one-half times the hourly rate. All hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.

When a holiday falls on a Saturday, the Friday before shall be the observed holiday. When a holiday falls on a Sunday, the following Monday shall be the observed holiday.

S. The first ten (10) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. In the event the job is down due to weather conditions, or other conditions beyond the control of the Employer, then Saturday may be worked at the straight time rate, for the first eight (8) hours, or the first ten (10) hours when a four day ten hour workweek has been established.

All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

When an employee returns to work without a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

11. T. On Monday through Friday, the first four (4) hours of overtime after eight (8) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay, unless a four (4) day ten (10) hour workweek has been established. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, the first two (2) hours of overtime after ten (10) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay.

On Saturday, the first twelve (12) hours of work shall be paid at one and one half (1-1/2) times the straight time rate of pay, except that if the job is down on Monday through Friday due to weather conditions or other conditions outside the control of the employer, the first ten (10) hours on Saturday may be worked at the straight time rate of pay.

All hours worked over twelve (12) hours in a day and all hours worked on Sunday and Holidays shall be paid at two (2) times the straight time rate of pay.

U. On Monday through Friday, the first four (4) hours of overtime after eight (8) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay, unless a four (4) day ten (10) hour workweek has been established. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, the first two (2) hours of overtime after ten (10) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay.

On Saturday, the first twelve (12) hours of work shall be paid at one and one half (1-1/2) times the straight time rate of pay, except that if the job is down on Monday through Friday due to weather conditions or other conditions outside the control of the employer, the first ten (10) hours on Saturday may be worked at the straight time rate of pay.

All hours worked over twelve (12) hours in a day and all hours worked on Sunday and Holidays shall be paid at two (2) times the straight time rate of pay.

If, due to conditions beyond the control of the Employer or when contract specifications require that work can only be performed outside the regular day shift, then a Special Shift may be worked, Monday through Friday, at the straight-time rate. The starting time of work for the Special Shift will be arranged to fit such conditions of work. Such Special Shift shall consist of eight (8) hours of work for eight (8) hours of pay or ten (10) hours of work for ten(10) hours of pay on a four-ten workday schedule.

Holiday Codes

5. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, and Christmas Day (7).

B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, the day before Christmas, and Christmas Day (8).

C. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).

D. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8).

H. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Day after Thanksgiving Day, And Christmas (6).

Holiday Codes Continued

5. I. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).

K. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9).

L. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (8).

N. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, The Friday After Thanksgiving Day, And Christmas Day (9).

P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday And Saturday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9). If A Holiday Falls On Sunday, The Following Monday Shall Be Considered As A Holiday.

Q. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).

R. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day After Thanksgiving Day, One-Half Day Before Christmas Day, And Christmas Day. (7 1/2).

S. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, And Christmas Day (7).

Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).

Holiday Codes Continued

6. G. Paid Holidays: New Year's Day, Martin Luther King Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and Christmas Eve Day (11).

H. Paid Holidays: New Year's Day, New Year's Eve Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, Christmas Day, The Day After Christmas, And A Floating Holiday (10).

T. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Last Working Day Before Christmas Day, And Christmas Day (9).

Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). If a holiday falls on Saturday, the preceding Friday shall be considered as the holiday. If a holiday falls on Sunday, the following Monday shall be considered as the holiday.

Holiday Codes Continued

7. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any Holiday Which Falls On A Sunday Shall Be Observed As A Holiday On The Following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

C. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

D. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Unpaid Holidays: President's Day. Any paid holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any paid holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

E. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

F. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the last working day before Christmas day and Christmas day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

Holiday Codes Continued

7. G. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

J. Holidays: New Year's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

Holiday Codes Continued

7. K. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

L. Holidays: New Year's Day, Memorial Day, Labor Day, Independence Day, Thanksgiving Day, the Last Work Day before Christmas Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

N. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. When Christmas falls on a Saturday, the preceding Friday shall be observed as a holiday.

P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

Q. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

S. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Day, the Day after Christmas, and A Floating Holiday (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

V. Holidays: New Year's Day, President's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, the day before or after Christmas, and the day before or after New Year's Day. If any of the above listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

W. Holidays: New Year's Day, Day After New Year's, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Eve Day, Christmas Day, the day after Christmas, the day before New Year's Day, and a Floating Holiday.

X. Holidays: New Year's Day, Day before or after New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and the day before or after Christmas day. If a holiday falls on a Saturday or on a Friday that is the normal day off, then the holiday will be taken on the last normal workday. If the holiday falls on a Monday that is the normal day off or on a Sunday, then the holiday will be taken on the next normal workday.

Y. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day. (8) If the holiday falls on a Sunday, then the day observed by the federal government shall be considered a holiday and compensated accordingly.

Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, Christmas Eve, and Christmas Day (9). Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday. Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

Holiday Codes Continued

15. G. New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, the last scheduled workday before Christmas, and Christmas Day (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

J. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

K. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

L. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

M. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Eve Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

N. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

O. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, the day before Christmas day, and Christmas Day (10). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

Note Codes

8. D. Workers working with supplied air on hazmat projects receive an additional $1.00 per hour.

L. Workers on hazmat projects receive additional hourly premiums as follows -Level A: $0.75, Level B: $0.50, And Level C: $0.25.

M. Workers on hazmat projects receive additional hourly premiums as follows: Levels A & B: $1.00, Levels C & D: $0.50.

N. Workers on hazmat projects receive additional hourly premiums as follows -Level A: $1.00, Level B: $0.75, Level C: $0.50, And Level D: $0.25.

S. Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.

T. Effective August 31, 2012 – A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.

U. Workers on hazmat projects receive additional hourly premiums as follows – Class A Suit: $2.00, Class B Suit: $1.50, And Class C Suit: $1.00. Workers performing underground work receive an additional $0.40 per hour for any and all work performed underground, including operating, servicing and repairing of equipment. The premium for underground work shall be paid for the entire shift worked. Workers who work suspended by a rope or cable receive an additional $0.50 per hour. The premium for work suspended shall be paid for the entire shift worked. Workers who do "pioneer" work (break open a cut, build road, etc.) more than one hundred fifty (150) feet above grade elevation receive an additional $0.50 per hour.

8. V. In addition to the hourly wage and fringe benefits, the following depth and enclosure premiums shall be paid. The premiums are to be calculated for the maximum depth and distance into an enclosure that a diver reaches in a day. The premiums are to be paid one time for the day and are not used in calculating overtime pay.

Depth premiums apply to depths of fifty feet or more. Over 50' to 100' - $2.00 per foot for each foot over 50 feet. Over 101' to 150' - $3.00 per foot for each foot over 101 feet. Over 151' to 220' - $4.00 per foot for each foot over 220 feet. Over 221' - $5.00 per foot for each foot over 221 feet.

Enclosure premiums apply when divers enter enclosures (such as pipes or tunnels) where there is no vertical ascent and is measured by the distance travelled from the entrance. 25' to 300' - $1.00 per foot from entrance. 300' to 600' - $1.50 per foot beginning at 300'. Over 600' - $2.00 per foot beginning at 600'.

W. Meter Installers work on single phase 120/240V self-contained residential meters. The Lineman/Groundmen rates would apply to meters not fitting this description.

Note Codes Continued

X. Workers on hazmat projects receive additional hourly premiums as follows - Class A Suit: $2.00, Class B Suit: $1.50, Class C Suit: $1.00, and Class D Suit: $0.50. Special Shift Premium: Basic hourly rate plus $2.00 per hour.

When due to conditions beyond the control of the Employer or when an owner (not acting as the contractor), a government agency or the contract specifications requires that work can only be performed outside the normal 5 am to 6pm shift, then the special shift premium will be applied to the basic hourly rate. When an employee works on a special shift, they shall be paid a special shift premium for each hour worked unless they are in OT or Double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

Y. Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay.

Swinging Stage/Boatswains Chair: Employees working on a swinging state or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents ($0.75) per hour above the classification rate.

Z. Workers working with supplied air on hazmat projects receive an additional $1.00 per hour.

Special Shift Premium: Basic hourly rate plus $2.00 per hour. When due to conditions beyond the control of the Employer or when an owner (not acting as a contractor), a government agency or the contract specifications require that more than (4) hours of a special shift can only be performed outside the normal 6 am to 6pm shift, then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they will be paid a special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

Note Codes Continued

9. A. Workers working with supplied air on hazmat projects receive an additional $1.00 per hour.

Special Shift Premium: Basic hourly rate plus $2.00 per hour. When due to conditions beyond the control of the Employer or when an owner (not acting as the contractor), a government agency or the contract specifications require that more than four (4) hours of a special shift can only be performed outside the normal 6 am to 6pm shift, then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they shall be paid a special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

Certified Crane Operator Premium: Crane operators requiring certifications shall be paid $0.50 per hour above their classification rate.

Boom Pay Premium: All cranes including tower shall be paid as follows based on boom length:

(A) – 130' to 199' – $0.50 per hour over their classification rate.
(B) – 200' to 299' – $0.80 per hour over their classification rate.
(C) – 300' and over – $1.00 per hour over their classification rate.

Note Codes Continued

9. B. The highest pressure registered on the gauge for an accumulated time of more than fifteen (15) minutes during the shift shall be used in determining the scale paid.

Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay. Swinging Stage/Boatswains Chair: Employees working on a swinging stage or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents ($0.75) per hour above the classification rate.

C. Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay. Swinging Stage/Boatswains Chair: Employees working on a swinging stage or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents ($0.75) per hour above the classification rate.

Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. These classifications are only effective on or after August 31, 2012.

D. Industrial Painter wages are required for painting within industrial facilities such as treatment plants, pipelines, towers, dams, bridges, power generation facilities and manufacturing facilities such as chemical plants, etc., or anywhere abrasive blasting is necessary to prepare surfaces, or hazardous materials encapsulation is required.

E. Heavy Construction includes construction, repair, alteration or additions to the production, fabrication or manufacturing portions of industrial or manufacturing plants, hydroelectric or nuclear power plants and atomic reactor construction. Workers on hazmat projects receive additional hourly premiums as follows -Level A: $1.00, Level B: $0.75, Level C: $0.50, And Level D: $0.25.

F. Industrial Painter wages are required for painting within industrial facilities such as treatment plants, pipelines, towers, dams, power generation facilities and manufacturing facilities such as chemical plants, etc., or anywhere abrasive blasting is necessary to prepare surfaces, or hazardous materials encapsulation is required.

H. One (1) person crew shall consist of a Party Chief. (Total Station or similar one (1) person survey system). Two (2) person survey party shall consist of a least a Party Chief and a Chain Person. Three (3) person survey party shall consist of at least a Party Chief, an Instrument Person, and a Chain Person.

9. I. In addition to the hourly wage and fringe benefits, the following depth and enclosure premiums shall be paid. The premiums are to be calculated for the maximum depth and distance into an enclosure that a diver reaches in a day. The premiums are to be paid one time for the day and are not used in calculating overtime pay.

Depth premiums apply to depths of fifty feet or more. Over 50' to 100' - $2.00 per foot for each foot over 50 feet. Over 101' to 150' - $3.00 per foot for each foot over 101 feet. Over 151' to 220' - $4.00 per foot for each foot over 220 feet. Over 221' - $5.00 per foot for each foot over 221 feet.

Enclosure premiums apply when divers enter enclosures (such as pipes or tunnels) where there is no vertical ascent and is measured by the distance travelled from the entrance. 25' to 300' - $1.00 per foot from entrance. 300' to 600' - $1.50 per foot beginning at 300'. Over 600' - $2.00 per foot beginning at 600'.

Employees may be required to perform any combination of work within the Diving team/crew, (with the exception of dive Supervisor) provided they are paid at the highest rate at which he/she has worked for the shift.

L. Workers on hazmat projects receive additional hourly premiums as follows -Level A: $0.75, Level B: $0.50, And Level C: $0.25.

Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay.

Swinging Stage/Boatswains Chair: Employees working on a swinging stage or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents ($0.75) per hour above the classification rate.

Washington State Department of Labor and Industries
Policy Statement
(Regarding the Production of "Standard" or "Non-standard" Items)

Below is the department's (State L&I's) list of criteria to be used in determining whether a prefabricated item is "standard" or "non-standard". For items not appearing on WSDOT's predetermined list, these criteria shall be used by the Contractor (and the Contractor's subcontractors, agents to subcontractors, suppliers, manufacturers, and fabricators) to determine coverage under RCW 39.12. The production, in the State of Washington, of non-standard items is covered by RCW 39.12, and the production of standard items is not. The production of any item outside the State of Washington is not covered by RCW 39.12.

1. Is the item fabricated for a public works project? If not, it is not subject to RCW 39.12. If it is, go to question 2.

2. Is the item fabricated on the public works jobsite? If it is, the work is covered under RCW 39.12. If not, go to question 3.

3. Is the item fabricated in an assembly/fabrication plant set up for, and dedicated primarily to, the public works project? If it is, the work is covered by RCW 39.12. If not, go to question 4.

4. Does the item require any assembly, cutting, modification or other fabrication by the supplier? If not, the work is not covered by RCW 39.12. If yes, go to question 5.

5. Is the prefabricated item intended for the public works project typically an inventory item which could reasonably be sold on the general market? If not, the work is covered by RCW 39.12. If yes, go to question 6.

6. Does the specific prefabricated item, generally defined as standard, have any unusual characteristics such as shape, type of material, strength requirements, finish, etc? If yes, the work is covered under RCW 39.12.

Any firm with questions regarding the policy, WSDOT's Predetermined List, or for determinations of covered and non-covered workers shall be directed to State L&I at (360) 902-5330.

WSDOT's
Predetermined List for
Suppliers - Manufactures - Fabricator

Below is a list of potentially prefabricated items, originally furnished by WSDOT to Washington State Department of Labor and Industries, that may be considered non-standard and therefore covered by the prevailing wage law, RCW 39.12. Items marked with an X in the "YES" column should be considered to be non-standard and therefore covered by RCW 39.12. Items marked with an X in the "NO" column should be considered to be standard and therefore not covered. Of course, exceptions to this general list may occur, and in that case shall be evaluated according to the criteria described in State and L&I's policy statement.

	ITEM DESCRIPTION	YES	NO
1.	Metal rectangular frames, solid metal covers, herringbone grates, and bi-directional vaned grates for Catch Basin Types 1, 1L, 1P, and 2 and Concrete Inlets. See Std. Plans		X
2.	Metal circular frames (rings) and covers, circular grates, and prefabricated ladders for Manhole Types 1, 2, and 3, Drywell Types 1, 2, and 3 and Catch Basin Type 2. See Std. Plans		X
3.	Prefabricated steel grate supports and welded grates, metal frames and dual vaned grates, and Type 1, 2, and 3 structural tubing grates for Drop Inlets. See Std. Plans.		X
4.	Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes smaller than 60 inch diameter.		X
5.	Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes larger than 60 inch diameter.		X
6.	Corrugated Steel Pipe - Steel lock seam corrugated pipe for culverts and storm sewers, sizes 30 inch to 120 inches in diameter. May also be treated, 1 thru 5.		X
7.	Corrugated Aluminum Pipe - Aluminum lock seam corrugated pipe for culverts and storm sewers, sizes 30 inch to 120 inches in diameter. May also be treated, #5.		X

	ITEM DESCRIPTION	YES	NO
8.	Anchor Bolts & Nuts - Anchor Bolts and Nuts, for mounting sign structures, luminaries and other items, shall be made from commercial bolt stock. See Contract Plans and Std. Plans for size and material type.		X
9.	Aluminum Pedestrian Handrail - Pedestrian handrail conforming to the type and material specifications set forth in the contract plans. Welding of aluminum shall be in accordance with Section 9-28.14(3).	X	
10.	Major Structural Steel Fabrication - Fabrication of major steel items such as trusses, beams, girders, etc., for bridges.	X	
11.	Minor Structural Steel Fabrication - Fabrication of minor steel Items such as special hangers, brackets, access doors for structures, access ladders for irrigation boxes, bridge expansion joint systems, etc., involving welding, cutting, punching and/or boring of holes. See Contact Plans for item description and shop drawings.	X	
12.	Aluminum Bridge Railing Type BP - Metal bridge railing conforming to the type and material specifications set forth in the Contract Plans. Welding of aluminum shall be in accordance with Section 9-28.14(3).		X
13.	Concrete Piling--Precast-Prestressed concrete piling for use as 55 and 70 ton concrete piling. Concrete to conform to Section 9-19.1 of Std. Spec..	X	
14.	Precast Manhole Types 1, 2, and 3 with cones, adjustment sections and flat top slabs. See Std. Plans.		X
15.	Precast Drywell Types 1, 2, and with cones and adjustment Sections. See Std. Plans.		X
16.	Precast Catch Basin - Catch Basin type 1, 1L, 1P, and 2 With adjustment sections. See Std. Plans.		X

	ITEM DESCRIPTION	YES	NO
17.	Precast Concrete Inlet - with adjustment sections, See Std. Plans		X
18.	Precast Drop Inlet Type 1 and 2 with metal grate supports. See Std. Plans.		X
19.	Precast Grate Inlet Type 2 with extension and top units. See Std. Plans		X
20.	Metal frames, vaned grates, and hoods for Combination Inlets. See Std. Plans		X
21.	Precast Concrete Utility Vaults - Precast Concrete utility vaults of various sizes. Used for in ground storage of utility facilities and controls. See Contract Plans for size and construction requirements. Shop drawings are to be provided for approval prior to casting		X
22.	Vault Risers - For use with Valve Vaults and Utilities X Vaults.		X
23.	Valve Vault - For use with underground utilities. See Contract Plans for details.		X
24.	Precast Concrete Barrier - Precast Concrete Barrier for use as new barrier or may also be used as Temporary Concrete Barrier. Only new state approved barrier may be used as permanent barrier.		X
25.	Reinforced Earth Wall Panels – Reinforced Earth Wall Panels in size and shape as shown in the Plans. Fabrication plant has annual approval for methods and materials to be used. See Shop Drawing. Fabrication at other locations may be approved, after facilities inspection, contact HQ. Lab.	X	
26.	Precast Concrete Walls - Precast Concrete Walls - tilt-up wall panel in size and shape as shown in Plans. Fabrication plant has annual approval for methods and materials to be used	X	

	ITEM DESCRIPTION	YES	NO
27.	Precast Railroad Crossings - Concrete Crossing Structure Slabs.	X	
28.	12, 18 and 26 inch Standard Precast Prestressed Girder – Standard Precast Prestressed Girder for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
29.	Prestressed Concrete Girder Series 4-14 - Prestressed Concrete Girders for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
30.	Prestressed Tri-Beam Girder - Prestressed Tri-Beam Girders for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
31.	Prestressed Precast Hollow-Core Slab – Precast Prestressed Hollow-core slab for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A.	X	
32.	Prestressed-Bulb Tee Girder - Bulb Tee Prestressed Girder for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
33.	Monument Case and Cover See Std. Plan.		X

	ITEM DESCRIPTION	YES	NO
34.	Cantilever Sign Structure - Cantilever Sign Structure fabricated from steel tubing meeting AASHTO-M-183. See Std. Plans, and Contract Plans for details. The steel structure shall be galvanized after fabrication in accordance with AASHTO-M-111.	X	
35.	Mono-tube Sign Structures - Mono-tube Sign Bridge fabricated to details shown in the Plans. Shop drawings for approval are required prior to fabrication.	X	
36.	Steel Sign Bridges - Steel Sign Bridges fabricated from steel tubing meeting AASHTO-M-138 for Aluminum Alloys. See Std. Plans, and Contract Plans for details. The steel structure shall be galvanized after fabrication in accordance with AASHTO-M-111.	X	
37.	Steel Sign Post - Fabricated Steel Sign Posts as detailed in Std Plans. Shop drawings for approval are to be provided prior to fabrication		X
38.	Light Standard-Prestressed - Spun, prestressed, hollow concrete poles.	X	
39.	Light Standards - Lighting Standards for use on highway illumination systems, poles to be fabricated to conform with methods and materials as specified on Std. Plans. See Specia Provisions for pre-approved drawings.	X	
40.	Traffic Signal Standards - Traffic Signal Standards for use on highway and/or street signal systems. Standards to be fabricated to conform with methods and material as specified on Std. Plans. See Special Provisions for pre-approved drawings	X	
41.	Precast Concrete Sloped Mountable Curb (Single and DualFaced) See Std. Plans.		X

	ITEM DESCRIPTION	YES	NO
42.	Traffic Signs - Prior to approval of a Fabricator of Traffic Signs, the sources of the following materials must be submitted and approved for reflective sheeting, legend material, and aluminum sheeting. **NOTE:** *** Fabrication inspection required. Only signs tagged "Fabrication Approved" by WSDOT Sign Fabrication Inspector to be installed	X	X
		Custom Message	Std Signing Message
43.	Cutting & bending reinforcing steel		X
44.	Guardrail components	X	X
		Custom End Sec	Standard Sec
45.	Aggregates/Concrete mixes	Covered by WAC 296-127-018	
46.	Asphalt	Covered by WAC 296-127-018	
47.	Fiber fabrics		X
48.	Electrical wiring/components		X
49.	treated or untreated timber pile		X
50.	Girder pads (elastomeric bearing)	X	
51.	Standard Dimension lumber		X
52.	Irrigation components		X

	ITEM DESCRIPTION	YES	NO
53.	Fencing materials		X
54.	Guide Posts		X
55.	Traffic Buttons		X
56.	Epoxy		X
57.	Cribbing		X
58.	Water distribution materials		X
59.	Steel "H" piles		X
60.	Steel pipe for concrete pile casings		X
61.	Steel pile tips, standard		X
62.	Steel pile tips, custom	X	

Prefabricated items specifically produced for public works projects that are prefabricated in a county other than the county wherein the public works project is to be completed, the wage for the offsite prefabrication shall be the applicable prevailing wage for the county in which the actual prefabrication takes place.

It is the manufacturer of the prefabricated product to verify that the correct county wage rates are applied to work they perform.

See RCW 39.12.010
(The definition of "locality" in RCW 39.12.010(2) contains the phrase "wherein the physical work is being performed." The department interprets this phrase to mean the actual work site.

WSDOT's List of State Occupations not applicable to Heavy and Highway Construction Projects

This project is subject to the state hourly minimum rates for wages and fringe benefits in the contract provisions, as provided by the state Department of Labor and Industries.
The following list of occupations, is comprised of those occupations that are not normally used in the construction of heavy and highway projects.
When considering job classifications for use and / or payment when bidding on, or building heavy and highway construction projects for, or administered by WSDOT, these Occupations will be excepted from the included "Washington State Prevailing Wage Rates For Public Work Contracts" documents.

- Building Service Employees
- Electrical Fixture Maintenance Workers
- Electricians - Motor Shop
- Heating Equipment Mechanics
- Industrial Engine and Machine Mechanics
- Industrial Power Vacuum Cleaners
- Inspection, Cleaning, Sealing of Water Systems by Remote Control
- Laborers - Underground Sewer & Water
- Machinists (Hydroelectric Site Work)
- Modular Buildings
- Playground & Park Equipment Installers
- Power Equipment Operators - Underground Sewer & Water
- Residential *** ALL ASSOCIATED RATES ***
- Sign Makers and Installers (Non-Electrical)
- Sign Makers and Installers (Electrical)
- Stage Rigging Mechanics (Non Structural)

The following occupations may be used only as outlined in the preceding text concerning "WSDOT's list for Suppliers - Manufacturers - Fabricators"

- Fabricated Precast Concrete Products
- Metal Fabrication (In Shop)

Definitions for the Scope of Work for prevailing wages may be found at the Washington State Department of Labor and Industries web site and in WAC Chapter 296-127.

Washington State Department of Labor and Industries
Policy Statements
(Regarding Production and Delivery of Gravel, Concrete, Asphalt, etc.)

WAC 296-127-018 Agency filings affecting this section

Coverage and exemptions of workers involved in the production and delivery of gravel, concrete, asphalt, or similar materials.

(1) The materials covered under this section include but are not limited to: Sand, gravel, crushed rock, concrete, asphalt, or other similar materials.

(2) All workers, regardless of by whom employed, are subject to the provisions of chapter 39.12 RCW when they perform any or all of the following functions:

(a) They deliver or discharge any of the above-listed materials to a public works project site:

(i) At one or more point(s) directly upon the location where the material will be incorporated into the project; or

(ii) At multiple points at the project; or

(iii) Adjacent to the location and coordinated with the incorporation of those materials.

(b) They wait at or near a public works project site to perform any tasks subject to this section of the rule.

(c) They remove any materials from a public works construction site pursuant to contract requirements or specifications (e.g., excavated materials, materials from demolished structures, clean-up materials, etc.).

(d) They work in a materials production facility (e.g., batch plant, borrow pit, rock quarry, etc.,) which is established for a public works project for the specific, but not necessarily exclusive, purpose of supplying materials for the project.

(e) They deliver concrete to a public works site regardless of the method of incorporation.

(f) They assist or participate in the incorporation of any materials into the public works project.

(3) All travel time that relates to the work covered under subsection (2) of this section requires the payment of prevailing wages. Travel time includes time spent waiting to load, loading, transporting, waiting to unload, and delivering materials. Travel time would include all time spent in travel in support of a public works project whether the vehicle is empty or full. For example, travel time spent returning to a supply source to obtain another load of material for use on a public works site or returning to the public works site to obtain another load of excavated material is time spent in travel that is subject to prevailing wage. Travel to a supply source, including travel from a public works site, to obtain materials for use on a private project would not be travel subject to the prevailing wage.

(4) Workers are not subject to the provisions of chapter 39.12 RCW when they deliver materials to a stockpile.

(a) A "stockpile" is defined as materials delivered to a pile located away from the site of incorporation such that the stockpiled materials must be physically moved from the stockpile and transported to another location on the project site in order to be incorporated into the project.

(b) A stockpile does not include any of the functions described in subsection (2)(a) through (f) of this section; nor does a stockpile include materials delivered or distributed to multiple locations upon the project site; nor does a stockpile include materials dumped at the place of incorporation, or adjacent to the location and coordinated with the incorporation.

(5) The applicable prevailing wage rate shall be determined by the locality in which the work is performed. Workers subject to subsection (2)(d) of this section, who produce such materials at an off-site facility shall be paid the applicable prevailing wage rates for the county in which the off-site facility is located. Workers subject to subsection (2) of this section, who deliver such materials to a public works project site shall be paid the applicable prevailing wage rates for the county in which the public works project is located.

[Statutory Authority: Chapter 39.12 RCW, RCW 43.22.051 and 43.22.270. 08-24-101, § 296-127-018, filed 12/2/08, effective 1/2/09. Statutory Authority: Chapters 39.04 and 39.12 RCW and RCW 43.22.270. 92-01-104 and 92-08-101, § 296-127-018, filed 12/18/91 and 4/1/92, effective 8/31/92.]

PLANS

Appendices

(*******)

The following appendices are attached and made a part of this contract:

Appendix A – Topographic Survey
Appendix B – Geotechnical Report
Appendix C – HPA from Washington State Department of Fish and Wildlife
Appendix D – Nationwide Permit 14 from US Army Corps of Engineers
Appendix E – Critical Area Permit from Cowlitz County Department of Building and Planning
Appendix F – Applicable Standard Plans
Appendix G – Washington State Emergency Management Division - State and Federal Laws to be Observed

APPENDIX A

TOPOGRAPHIC SURVEY

REFERENCE SURVEYS LEGEND:

##/LCR/##	- LAND CORNER RECORD BOOK AND PAGE, COWLITZ COUNTY AUDITOR'S SURVEY RECORDS
##/SPLATS/##	- SHORT PLAT BOOK AND PAGE, COWLITZ COUNTY AUDITOR'S SURVEY RECORDS
##/PLATS/##	- SUBDIVISION PLAT BOOK AND PAGE, COWLITZ COUNTY AUDITOR'S SURVEY RECORDS
##/ROS/##	- RECORD OF SURVEY BOOK AND PAGE, COWLITZ COUNTY AUDITOR'S SURVEY RECORDS
CCPWFB-####-##	- COWLITZ COUNTY PUBLIC WORKS FIELD BOOK YEAR, NUMBER, AND PAGE ON FILE IN THE OFFICE OF THE COWLITZ COUNTY ROAD ENGINEER
FML-###-##	- FRED MILTON LANE FIELD BOOK NUMBER AND PAGE NUMBER, AN ELECTRONIC COPY OF WHICH IS ON FILE IN THE OFFICE OF THE COWLITZ COUNTY ROAD ENGINEER THE ORIGINAL, HARD COPY, FIELD BOOKS ARE CURRENTLY IN THE POSSESSION OF JERRY C. OLSON, PLS 9025, OF OLSON ENGINEERING IN VANCOUVER, WA
COD-###-##	- CLAUD OLSON DAVOLT FIELD BOOK NUMBER AND PAGE NUMBER, WHICH ARE ON FILE IN THE OFFICE OF THE COWLITZ COUNTY ROAD ENGINEER
AES-###-##	- AE (CURLEY) SCHULTZ FIELD BOOK NUMBER AND PAGE NUMBER, THESE BOOKS ARE ON FILE IN THE OFFICE OF THE COWLITZ COUNTY ROAD ENGINEER
###.##	- MEASURED DIMENSION
(### ##')(#)	- RECORD DIMENSION PER REFERENCE NUMBER (BELOW)
### ##'(#)	- MEASURED AND RECORD DIMENSION PER REF. NO. (BELOW)
(1)	- LEFT INTENTIONALLY BLANK

TAKEN ON NORTHERLY SIDE OF ROAD, LOOKING SOUTHERLY TOWARDS CREEK, 36" CULVERT, AND ROAD

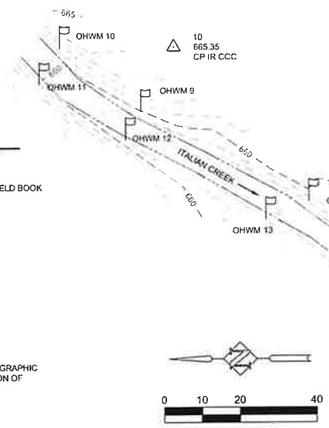
MONUMENT LEGEND:

- FOUND SECTION CORNER, AS NOTED
- FOUND QUARTER SECTION CORNER, AS NOTED
- FOUND MONUMENT AS NOTED. PROTECT / PRESERVE WHERE POSSIBLE. - IF TO BE DESTROYED, A PERMIT TO REMOVE A MONUMENT MUST BE FILED WITH THE DEPARTMENT OF NATURAL RESOURCES, THEN REPLACE MONUMENT AFTER CONSTRUCTION
- # ELEV. DESC. - TEMPORARY CONTROL POINT
- ### - SEE MONUMENT DESCRIPTION AND INFORMATION IN TABLE

NOTES:
1. ALL PIPE DIAMETERS ARE INSIDE DIMENSIONS, UNLESS NOTED OTHERWISE.
2. THE TERM "IRON ROD" REFERS TO REINFORCING BAR. SMOOTH RODS (IF ANY) ARE NOTED AS SUCH.
3. ALL FOUND MONUMENTS WERE VISITED AND TIED DURING THIS SURVEY (11/3-17/2022)

ABBREVIATIONS:

AFN	= AUDITOR'S FILE NUMBER
ALC	= ALUMINUM CAP
CCPWFB	= COWLITZ COUNTY PUBLIC WORKS FIELD BOOK
CMP	= CORRUGATED METAL PIPE
CONC	= CONCRETE PIPE
IE	= INVERT ELEVATION
PC	= POINT OF CURVATURE
PT	= POINT OF TANGENCY
PI	= POINT OF INTERSECTION
REBAR	= REINFORCING BAR
W/YPC	= WITH YELLOW PLASTIC CAP



PURPOSE OF SURVEY

THE PURPOSE OF THIS SURVEY WAS TO PROVIDE TOPOGRAPHIC SURVEY AND RIGHT OF WAY RESOLUTION FOR A PORTION OF ITALIAN CREEK ROAD, FOR PURPOSES OF DESIGN.

COUNTY PROJECT NUMBER: 1323

VERTICAL DATUM

ELEVATION DATUM:	NAVD88
BENCHMARK:	CP#5
LOCATION:	AS SHOWN HEREON
ELEVATION:	646.03'

0 10 20 40

SCALE: 1" = 20'

BASIS OF BEARINGS / HORIZONTAL COORDINATES / CONTROL SCHEME

WASHINGTON STATE PLANE, SOUTH ZONE (SPC 4602 WA S), SEE DETAILS BELOW:

HORIZONTAL COORDINATES AND BASIS OF BEARINGS ARE WASHINGTON STATE PLANE (SOUTH ZONE) - REFERENCE FRAME: NAD83 (2011) (EPOCH:2010.0000), US SURVEY FEET. ALL DISTANCES/COORDINATES ARE GRID, AND WERE DETERMINED FROM NGS OPUS SOLUTIONS, WHICH WERE DERIVED FROM 2 HOUR MINIMUM GPS OBSERVATIONS ON CONTROL POINTS 1 AND 7 (SHOWN HEREON), UTILIZING THE FOLLOWING EXISTING BASE STATIONS:

PID	DESIGNATION	LATITUDE(*)	LONGITUDE(*)
DH4120	P690 MSH_SRIDGEWA2005 CORS ARP	N46°10'47.944"	W122°11'23.470"
DH4129	P698 MSH_SESLPEWA2004 CORS ARP	N46°10'24.461"	W122°09'38.141"
DH5819	P693 MSH_NWDOMEWA2004 CORS ARP	N46°12'37.142"	W122°12'08.394"
DK4151	P446 KELSO_AIR_WA2007 CORS ARP	N46°06'56.359"	W122°52'33.975"
DH5822	P702 MSH_ELKRCKWA2004 CORS ARP	N46°18'00.565"	W122°20'44.271"

CONTROL POINTS 1 AND 7 WERE THEN TIED TOGETHER USING STANDARD TRAVERSE TECHNIQUES, THE RESULTS OF WHICH WERE ADJUSTED TOGETHER IN A WEIGHTED LEAST SQUARES ADJUSTMENT, UTILIZING STARNET SOFTWARE. AN AVERAGE PROJECT COMBINED SCALE FACTOR (0.9999285909) WAS CALCULATED FOR THE PURPOSES OF COMPARING GRID DISTANCES (NOT SHOWN HEREON) WITH GROUND DISTANCES (SHOWN IN THE SURVEY RECORD). THE DIFFERENCE BETWEEN GRID/GROUND DISTANCES IS APPROXIMATELY 0.07' PER 1000.00', BEING 1000.00' GRID TO 1000.07' GROUND.

THE CONVERGENCE ANGLE IS -1.61625000° AT CONTROL POINT NUMBER 1.

RELATIVE VERTICAL POSITIONAL ACCURACY

THE CONTOURS SHOWN HEREON ARE FROM DIRECT FIELD OBSERVATIONS. THE RELATIVE VERTICAL POSITIONAL ACCURACY OF THE CONTOURS AND SPOT ELEVATIONS SHOWN HEREON MEETS THOSE STANDARDS DEFINED BY THE NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS (NSPS) PER THAT CERTAIN DOCUMENT ENTITLED "NSPS MODEL STANDARDS FOR TOPOGRAPHIC SURVEYS" (LABELED AS SECTION E), APPROVED 3/12/2002. THOSE STANDARDS ARE AS FOLLOWS FOR A 1' CONTOUR MAP:

CONTOUR LINES AT 1' INTERVALS: ±0.65' VERTICAL POSITIONAL ACCURACY
SPOT ELEVATIONS FOR WELL DEFINED PLANIMETRIC FEATURES: ±0.10' VERTICAL POSITIONAL ACCURACY

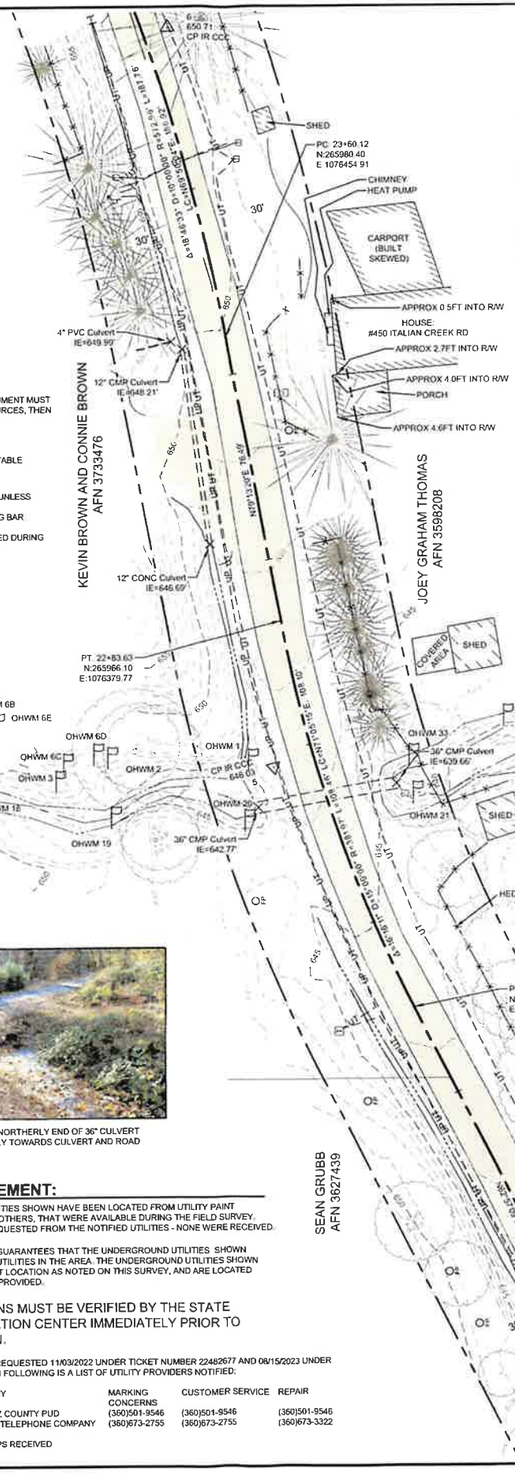
METHOD OF SURVEY

FIELD SURVEYS WERE ACCOMPLISHED UTILIZING STANDARD CLOSED TRAVERSE AND RADIAL SURVEY METHODS, AS WELL AS STANDARD GLOBAL POSITIONING SYSTEM (GPS) NETWORK RTK GPS METHODS (60 SECOND OBSERVATIONS, MINIMUM). MEASUREMENTS WERE PERFORMED USING A TOPCON 3-SECOND TOTAL STATION AND TRIMBLE R12i, SURVEY GRADE GPS UNITS. THE ANGULAR CLOSURE OF TRAVERSE MEETS STANDARDS AS SET FORTH IN WAC332-130-090, LINEAR CLOSURE AFTER AZIMUTH ADJUSTMENT IS GREATER THAN 1:10000. A LEAST SQUARES ADJUSTMENT OF THE DATA WAS PERFORMED.

NARRATIVE

THIS SECTION OF ITALIAN CREEK ROAD WAS ORIGINALLY ESTABLISHED ON AUGUST 4TH, 1910, IN COWLITZ COUNTY COMMISSIONER'S JOURNAL VOLUME 7, PAGE 309 AS "VOIGHT ROAD". THE SURVEY WAS CONDUCTED BY GB ROBERTS, COUNTY ENGINEER ON JULY 28-29, 1910. SEE MAP TITLED "VOIGHT ROAD PETITION OF WM VOIGHT" AND THE FIELD NOTES THEREOF (CCPWFB 1910-03-14). THE ENGINEERS REPORT, SIGNED AND SUBMITTED TO THE BOARD BY GB ROBERTS, COUNTY ENGINEER ON AUGUST 4TH, 1910 RECOMMENDS A 60' WIDE RIGHT OF WAY. WAIVERS IN THE COUNTY'S ROAD FILE INDICATE A MINIMUM WIDTH OF 60' FOR THIS SECTION. THESE WAIVERS WERE UNSIGNED. I LOOKED IN THE AUDITOR'S OFFICE TO SEE IF THE WAIVERS HAD BEEN RECORDED, BUT WAS UNABLE TO FIND ANYTHING - THOUGH RESEARCHING THE AUDITORS FILES HAS GOTTEN HARDER AFTER THEY MOVED THEIR DEED DOCUMENTS AND GRANTOR/GRANTEE INDEX UP TO STATE ARCHIVES IN 2020. AN INQUIRY TO STATE ARCHIVES ALSO PRODUCED NOTHING.

AS THIS IS A 1910 COUNTY ROAD, AND I COULD FIND NO INDICATION OF A LATER RETRACEMENT SURVEY BY THE COUNTY, I HELD THE AS-TRAVELED LOCATION OF THE ROAD, AS THE BEST AVAILABLE EVIDENCE OF THE ORIGINAL LOCATION OF THE ORIGINAL CENTERLINE. IN LOOKING AT THE COUNTY'S 1950'S ERA AERIAL PHOTOS, THE ROAD APPEARS TO HAVE BEEN IN SUBSTANTIALLY THE SAME LOCATION THAT IT IS TODAY. I COULD FIND NO EVIDENCE (FROM AERIALS BACK TO THE 1950'S) THAT THE AS-TRAVELED ROADWAY LOOKED LIKE THAT SHOWN IN 24/ROS/48 (2002), ESPECIALLY THE WESTERLY HALF. THEREFORE, I ASSUMED THAT THE CENTERLINE SHOWN IN SAID 24/ROS/48 WAS INTENDED AS A ROUGH ESTIMATE OF THE APPROXIMATE CENTERLINE OF ITALIAN CREEK ROAD (NOT ACTUALLY SURVEYED OR MONUMENTED, EXCEPT AT THE ENDS, WHICH MONUMENTS I HELD), AND HELD MY SURVEY OF THE AS-TRAVELED CENTERLINE, AS SHOWN HEREON, WHICH WAS DETERMINED BY FIELD LOCATING BOTH EDGES OF PAVEMENT FOR APPROXIMATELY 2200'. I THEN HELD THE ESTABLISHED WIDTH OF 60.00' (30.00' ON EACH SIDE OF CENTERLINE). THIS MATCHED RELATIVELY WELL WITH 24/ROS/48 ON THE EASTERLY END (NEAREST THE PROPERTY BEING SURVEYED THEREON), BUT VERY POORLY ALONG THE CURVES WEST OF THE SECTION LINE.

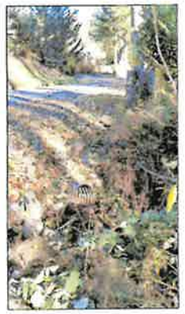


SITE PHOTOS:

PHOTOS WERE TAKEN ON 11/02/2022, AND REFLECT SITE CONDITIONS AT THE TIME OF SURVEY

TAKEN AT EASTERLY END OF TOPOGRAPHIC LIMITS, LOOKING WESTERLY TOWARDS THE CULVERT AT THE CURVE

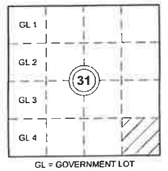
TAKEN AT WESTERLY END OF TOPOGRAPHIC LIMITS, LOOKING EASTERLY TOWARDS THE CULVERT AT THE CURVE



TAKEN ON 11/17/22 NEAR SOUTHERLY END OF 36" CULVERT LOOKING NORTHEASTERLY TOWARDS CULVERT, ROAD, AND PAVED DRIVEWAY ACROSS ROAD

INDEX LOCATION

SE1/4 SE1/4, S31 T7N R1E W.M.



GL = GOVERNMENT LOT

MONUMENT TABLE

POINT	NORTHING	EASTING	DESCRIPTION	ORIGIN	STATION	OFFSET
1 *	265442.414	1075438.753	5/8" REBAR W/RPC MARKED "COWLITZ CNTY CONTROL POINT"	THIS SURVEY	11+76.39	23.07L
2 *	265654.337	1075729.328	5/8" REBAR W/RPC MARKED "COWLITZ CNTY CONTROL POINT"	THIS SURVEY	15+36.06	11.38R
3 *	265726.788	1075999.361	5/8" REBAR W/RPC MARKED "COWLITZ CNTY CONTROL POINT"	THIS SURVEY	18+22.65	10.60L
4	265861.269	1076164.823	5/8" REBAR W/RPC MARKED "COWLITZ CNTY CONTROL POINT"	THIS SURVEY	20+42.57	10.73R
5	265968.153	1076340.994	5/8" REBAR W/RPC MARKED "COWLITZ CNTY CONTROL POINT"	THIS SURVEY	22+46.93	11.08L
6	265995.363	1076536.927	5/8" REBAR W/RPC MARKED "COWLITZ CNTY CONTROL POINT"	THIS SURVEY	24+42.81	6.67R
7 *	266136.575	1076756.443	5/8" REBAR W/RPC MARKED "COWLITZ CNTY CONTROL POINT"	THIS SURVEY	27+02.79	17.62L
8 *	266200.149	1076927.637	5/8" REBAR W/RPC MARKED "COWLITZ CNTY CONTROL POINT"	THIS SURVEY	28+83.45	11.42R
9	266088.858	1076344.059	5/8" REBAR W/RPC MARKED "COWLITZ CNTY CONTROL POINT"	THIS SURVEY	22+74.50	127.22L
10	266185.810	1076463.687	5/8" REBAR W/RPC MARKED "COWLITZ CNTY CONTROL POINT"	THIS SURVEY	24+32.02	197.19L
100 *	265514.672	1075546.552	5/8" REBAR W/YPC MARKED "GERMUNSON LS 10997"	14/ROS/114	13+00.02	0.00R
101 *	265512.659	1075569.383	1/2" REBAR W/YPC MARKED "K. BLUHM LS 29269"	31/ROS/115	13+29.61	30.36R
102 *	265999.542	1076608.239	1/2" REBAR W/YPC MARKED "K. BLUHM LS 29269"	31/ROS/115	25+08.31	29.92R
103 *	266237.202	1076906.586	5/8" REBAR W/YPC MARKED "LS 10997"	1984 FIBRE SURVEY	28+82.21	31.17L
104 *	266215.103	1077233.059	1/2" REBAR, BENT - TIED VERTICAL POINT	24/ROS/48	31+98.38	0.00R
105 *	265639.463	1075671.066	5/8" REBAR W/YPC - CAP UNREADABLE	14/ROS/114	14+76.47	0.86L

* THIS MONUMENT NOT SHOWN GRAPHICALLY HEREON

TAKEN ON NORTHERLY SIDE OF ROAD, APPROXIMATELY AT 36" CULVERT CROSSING, LOOKING EASTERLY TOWARDS CONTROL POINT NUMBER 5 (FLAGGED LATH IN PHOTO) AND ROAD

TAKEN ON 11/17/22 NEAR NORTHERLY END OF 36" CULVERT LOOKING SOUTHWESTERLY TOWARDS CULVERT AND ROAD

TAKEN NEAR CONTROL POINT #6 AT EAST END OF PROJECT LIMITS, LOOKING SOUTHWESTERLY AT THE SHED, CARPORT, AND HOUSE. NOTE THAT THE CARPORT WAS BUILT SKEWED TO THE HOUSE. PHOTO TAKEN 8/17/23

TAKEN NEAR THE NORTHEAST CORNER OF HOUSE #450 ITALIAN CREEK RD, LOOKING WESTERLY AT THE HOUSE, COVERED PORCH, AND BACK SIDE OF LANDSCAPING. PHOTO TAKEN 8/17/23

SYMBOL LEGEND

SYMBOL	DESCRIPTION
	SIGN
	TELEPHONE PEDESTAL
	FENCE GATE POST
	FENCE POST
	MAILBOX
	CONIFER TREE*
	CONIFER TREE CLUMP*
	DECIDUOUS TREE*
	DECIDUOUS TREE CLUMP*

LINETYPE LEGEND

LINETYPE	DESCRIPTION
	UTILITY LINE PAINT ENDS HERE, CONNECTION NOT LOCATED OR UNKNOWN
	DRAINAGE CULVERT
	DRAINAGE / ROAD DITCH
-x-x-x-	FENCE, TYPE AS NOTED
— UT —	TELEPHONE LINE
— UTV —	TELEVISION LINE
— UP —	ELECTRIC LINE UNDERGRND
	BUILDING LINE
	MAJOR CONTOUR - SPACED AT 5' INTERVALS
	MINOR CONTOUR - SPACED AT 1' INTERVALS

HATCH LEGEND

HATCH	DESCRIPTION
	EXISTING ASPHALT SURFACE
	EXISTING DIRT DRIVEWAY SURFACE
	EXISTING GRAVEL SURFACE
	EXISTING LANDSCAPING SURFACE

* NOTE THAT APPROXIMATE TREE DIAMETERS WERE COLLECTED, BUT NOT SHOWN HEREON DUE TO CLARITY ISSUES. PLEASE REQUEST THIS INFORMATION IF NECESSARY.

UTILITY STATEMENT:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM UTILITY PAINT MARKINGS PROVIDED BY OTHERS, THAT WERE AVAILABLE DURING THE FIELD SURVEY, AS-BUILT MAPS WERE REQUESTED FROM THE NOTIFIED UTILITIES - NONE WERE RECEIVED.

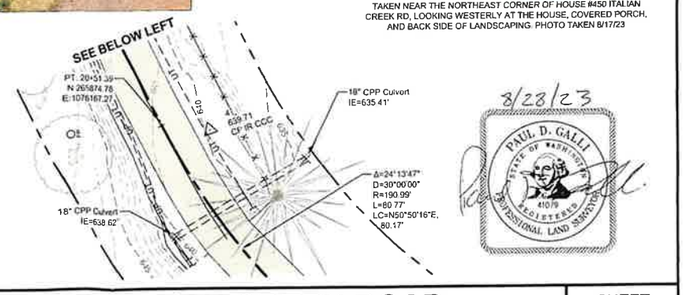
THIS SURVEY MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE OF ALL SUCH UTILITIES IN THE AREA. THE UNDERGROUND UTILITIES SHOWN MAY NOT BE IN THE EXACT LOCATION AS NOTED ON THIS SURVEY, AND ARE LOCATED FROM THE INFORMATION PROVIDED.

UTILITY LOCATIONS MUST BE VERIFIED BY THE STATE UTILITY NOTIFICATION CENTER IMMEDIATELY PRIOR TO ANY EXCAVATION.

UTILITY LOCATES WERE REQUESTED 11/03/2022 UNDER TICKET NUMBER 22482677 AND 08/15/2023 UNDER TICKET NUMBER 23326068 FOLLOWING IS A LIST OF UTILITY PROVIDERS NOTIFIED:

DISTRICT	COMPANY	MARKING CONCERNS	CUSTOMER SERVICE	REPAIR
COWPUD03	COWLITZ COUNTY PUD	(360)501-9546	(360)501-9546	(360)501-9546
KALTEL01	KALAMA TELEPHONE COMPANY	(360)673-2755	(360)673-2755	(360)673-3322

* - DENOTES ASBUILT MAPS RECEIVED



RM	N/A
PROJECT MANAGER	DATE
PDG, CWB	8/28/2023
DRAWN BY	DATE
CWB, BH	8/28/2023
CHECKED BY	DATE

HORIZ. SCALE: 1" = 20'
VERT. SCALE: 1' CONTOURS

PROJECT ID: 1323
ROAD NO. : 40900

COMPUTER FILE:
1323-Italian Crk Rd-Topo ADD.dwg
FIELD BOOK(S): 2022-02, PAGES 70-77&86-87

COWLITZ COUNTY WASHINGTON

DEPARTMENT OF PUBLIC WORKS

1600 13TH AVENUE SOUTH
KELSO, WASHINGTON 98626

LOCATED IN THE SOUTHEAST ONE-QUARTER OF SECTION 31, TOWNSHIP 7 NORTH, RANGE 1 EAST, WILLAMETTE MERIDIAN COWLITZ COUNTY, WASHINGTON

FIELD WORK DATE: 11/3-8, 17/2022, 1/31/2023, 4/24/2023, & 8/17/2023

ITALIAN CREEK ROAD
MILEPOST 1.90
TOPOGRAPHIC SURVEY CULVERT REPLACEMENT

SHEET 1 OF 1

APPENDIX B

GEOTECHNICAL REPORT

Italian Creek Road Culvert Replacement

Geotechnical Engineering Report

December 2023

DELVE underground

Final
Rev. No. 1

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Document QA/QC Check Form

Project Number and Name:		6463.4 – Italian Creek Road Culvert Replacement				
Document Title:		Final Geotechnical Engineering Report				
Rev. No.	**Document Date**	**Description / Design Phase:**	**Geotechnical explorations and engineering to support culvert replacement**			
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		Date	11/13/2023	11/16/2023	11/16/2023	11/16/2023
1	12/14/2023	**Final Submittal**	**Prepared by**	**Checked by**	**Technical Editor Review by**	**Approved by**
		Name	Jeff Quinn	Farid Sariosseiri	Jeff Quinn	Jeff Quinn
		Date	12/13/2023	12/14/2023	12/14/2023	12/14/2023

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Distribution

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1.0 Introduction & Project Information

Cowlitz County Department of Public Works (Cowlitz County) has retained Delve Underground (Delve) to provide geotechnical services for the culvert replacement project on Italian Creek Road between mile post (MP) 1.85 and 1.95. The project location is shown on Figure 1, Vicinity Map. Our understanding of the proposed culvert replacement is based on the 30% drawings provided by Cowlitz County.

The project includes replacing the existing, damaged 36-inch diameter corrugated metal pipe (CMP) culvert with a 14-foot wide, 7-foot-high, 45-foot-long bottomless concrete box culvert. The grade along Italian Creek Road will be raised about 2 to 2.5 feet to provide the minimum 1.5-foot depth of cover over the new culvert. In addition, minor embankment widening is planned to accommodate the length of the new culvert. The culvert will be supported on 3-foot-wide continuous footings typically founded at about 8 feet below existing grades along Italian Creek Road.

The culvert will be constructed in two phases. During Phase 1 (i.e., construction of the southern half of the culvert), a temporary access road on the north side of Italian Creek Road will convey local traffic. Once the southern half of the culvert has been constructed, a temporary access road will be constructed on top of the southern half of the culvert to convey traffic during Phase 2 (i.e., construction of the northern half of the culvert). Italian Creek will be temporarily diverted through a pipe during construction of the culvert. We anticipate vertical shoring will be required to support all excavations based on the limits of excavation boundaries extending only a few feet beyond the culvert (i.e., insufficient room to lay back the excavations).

The primary purpose of this geotechnical engineering report is to provide geologic and geotechnical data on the project site as well as recommendations for design and construction of the proposed culvert.

2.0 Geotechnical Investigation

The geotechnical investigation for the project was completed on October 20, 2023, and consisted of two exploratory borings. The approximate boring locations are shown on the attached Site Plan, Figure 2.

2.1 Exploratory Borings

Borings B-1 and B-2 were advanced to approximately 30 feet below ground surface (bgs) using mud rotary drilling methods with a truck-mounted CME 75 drill rig by Western States Soil Conservation, Inc. of Hubbard, Oregon. B-1 was advanced on the south side of Italian Creek Road within asphalt pavement, and B-2 within the gravel shoulder on the north side of the road. Upon completion, the borings were backfilled with granular bentonite. The asphalt pavement surface at boring B-1 was restored using cold-patch asphalt mix.

Disturbed soil samples were collected in conjunction with Standard Penetration Tests (SPTs) by advancing a standard 2-inch outside diameter split-barrel sampler 18 inches by dropping a 140-pound hammer 30 inches. The number of hammer blows for each six-inch increment of penetration was recorded. The SPT resistance (e.g., N-value) shown on the boring logs is the sum of hammer blows required for the final 12 inches of penetration, indicating the relative density of granular soils and the relative consistency of cohesive soils. Conditions requiring more than 50 blows per 6 inches of penetration were noted as refusal.

Additional samples were taken using a "Modified California" 3-inch-diameter split-barrel sampler, driven using the same technique as the SPT described above. These larger diameter samples were taken to provide a larger sample volume, to better characterize the weathered bedrock materials. Equivalent SPT N-values were calculated using a correction factor of 0.56, based on field studies (Rogers, 2006), are presented on the boring logs in Appendix A.

2.2 Laboratory Testing

Soil samples obtained from the exploration borings were re-examined and classified independently of field boring log descriptions to provide a quality control check of the field classifications. Representative soil samples were selected for laboratory testing. The laboratory testing program included the following tests: Water Content of Soil (ASTM D2216); Amount of Material Finer than U.S. No. 200 Sieve, or "Percent Fines" (ASTM D1140); and Atterberg Limits of Soils (ASTM D4318).

Laboratory testing was performed by FEI Testing and Inspection, Inc. of Corvallis, Oregon. Laboratory test results were used to characterize soil properties and refine soil classifications. The logs of our explorations in Appendix A include the results for the above laboratory index tests.

3.0 Site conditions

3.1 Surface Description

The site is located within the Italian Creek drainage, a tributary of the Kalama River near Kalama, Washington. Italian Creek flows approximately south through the existing CMP culvert crossing under Italian Creek Road. The existing culvert has approximately two to four feet of built-up roadway cover; the south side of the road having more cover as it slopes downhill, and the north/uphill side having less cover where the partially collapsed culvert is visible.

Italian Creek Road is a single-lane residential and logging road terminating about 1.5 miles east of the project site and provides access to several residences. The paved surface of Italian Creek Road at the project site sits at approximately elevation (El.) 645 feet, and the roadway slopes gently downhill to the west through moderately to densely wooded forestland. Italian Creek Road is built up a few feet higher than adjacent grades around the culvert, with a drainage ditch on the north/uphill side of the road. The north side of the road opens to a forested area that backs up to the partially cleared backyard of the nearest residence at 451 Italian Creek Road and an unused logging road that proceeds uphill to the northwest. To the south, a fence-line stands approximately ten feet from the paved roadway and opens to continued forestland.

3.2 Site Geology

The site is located within the South Cascades geologic province and mapped as underlain by the basaltic-andesite lava flow member of the Goble Volcanics (Phillips, 1987). The Gobles Volcanics are upper Eocene to lower Oligocene (approximately 23.03 Ma years to 56.0 Ma years) in age and consist of porphyritic pyroxene basaltic-andesite, flow breccia with thin interbeds of red-brown siltstone, sandstone, conglomerate and tuff; as well as less amounts of olivine basalt, pyroxene andesite, and platy to irregularly jointed dacite. Flows are typically thin (1- to 4-meters) with wavy upper and lower contacts. Siltstone and sandstone layers often separate flows. The Goble Volcanics were informally subdivided into an upper lava-flow dominated unit, and a lower volcaniclastic and pyroclastic unit By Wilkinson et al. (1946).

Review of Washington DNR LiDAR data indicates the deposition of unmapped alluvium within the Italian Creek drainage and adjacent to the roadway.

3.3 Subsurface Conditions

The drilling was directed by a Delve Underground engineer who classified the soils in accordance with the Visual-Manual Procedure (ASTM D2488). Sample depths, stratigraphy, groundwater occurrence and soil engineering characteristics were also recorded. The stratigraphic contacts indicated on the boring logs represent the approximate boundaries between soil types and actual transitions may be more gradual. Summary boring logs are included in Appendix A.

Boring B-1 was advanced within the asphalt pavement of the EB lane, approximately 20 feet east of the culvert centerline. Boring B-2 was advanced within the gravel shoulder of the WB lane, approximately 20 feet west of the culvert centerline. The approximate boring locations are shown in Figure 2. Subsurface conditions were generally consistent between the two borings and are summarized as follows:

- *Fill materials*: In boring B-1, fill materials extend from the ground surface to about 5 feet below ground surface (bgs) and consist of a 9-inch-thick pavement section (i.e., 3 inches of asphalt over 6 inches of crushed rock base) overlying medium stiff, moist, gray silt (ML) with trace gravel. One SPT in the fill materials in boring B-1 resulted in an N-value of 8 blows per foot (bpf) indicating medium stiff conditions. In boring B-2, fill materials extend from the ground surface to about 3 feet below ground surface (bgs), consisting of 6 inches of shoulder gravel overlying predominately gravel and cobbles with varying amounts silt and sand. One SPT was conducted in the fill materials in boring B-2 at 2.5 feet bgs; however, only the first 6 inches of this sample was fill before transitioning to underlying native alluvium soils. Therefore, an SPT N-value for the fill materials cannot be concluded from this sample. However, boring B-2 drilling was generally difficult and slow within the fill materials which infer relatively dense conditions.

- *Alluvium*: Below the fill materials, we encountered alluvium consisting of medium dense, moist to wet, gray to brown, silty gravel with sand. In boring B-1, two SPTs were conducted in the alluvium, resulting in N-values ranging from 22 to 29 bpf, while the three N-values in boring B-2 ranged from 10 to 26 bpf. These N-values correspond to medium dense conditions; however, N-values in boring B-1 were generally greater within the alluvium unit. The alluvium extends to approximately 10 feet bgs in both borings.

- *Weathered Bedrock*: Below the alluvium in B-1 and B-2, at approximately 10 feet bgs, we encountered a severely weathered rock mass consisting of a platy texture (i.e., thin leaf-like layering) around completely weathered core stones. Core stones are typically dark gray to dark brown, angular and ¼- to 1-inch diameter. The weathered bedrock can be broken down to a soil-like structure under moderate to strong manual pressure. Therefore, the weathered bedrock is described with the following USCS soil descriptions on the boring logs: well graded gravel (GW); silty gravel (GM); silty sand (SM); and silty sand with gravel (SM). A total of 11 SPTs were performed in the weathered bedrock, resulting in SPT N-values ranging from 16 bpf to refusal (50 blows for 6 inches or less of penetration). Seven SPT N-values resulted in refusal conditions. The four SPT N-values that did not result in refusal ranged from 16 bpf to 73 bpf. The lower N-values were recorded near the top of the weathered bedrock in boring B-1. In

general, the weathered bedrock is anticipated to be dense to very dense and extends to the maximum depths explored of 30 feet bgs.

3.4 Groundwater Conditions

Borings B-1 and B-2 were advanced using mud-rotary drilling methods, which makes the observation of groundwater conditions more difficult than other drilling methods not using drilling fluids (i.e., such as hollow-stem auger methods). However, we expect groundwater levels at the project site will correspond with water surface levels in Italian Creek, or approximately 3 to 5 feet below the pavement surface of Italian Creek Road.

Groundwater levels may vary with precipitation, the time of year, and/or other factors. Generally, groundwater highs occur near the end of the wet season in late spring or early summer and groundwater lows occur near the end of the dry season in the early fall.

4.0 Design Recommendations

Geotechnical design recommendations for the proposed culvert replacement project are provided in this section. Due to the limited width of the culvert, seismic loading was not considered.

4.1 Lateral Earth Pressures

Lateral earth pressures on the culvert includes backfill pressure, surcharge pressure, and pressure due to traffic. Because of the rigid nature of the proposed concrete box culvert (i.e., walls restrained from rotation), we recommend using at-rest earth pressure conditions for the structural design of the culvert. The lateral earth pressure distributions are provided in Figure 3.

4.2 Foundation Design

We understand the proposed bottomless concrete box culvert will be supported on continuous, cast-in-place concrete footings. Based on the subsurface conditions encountered in borings B-1 and B-2, the foundations are anticipated to bear on native alluvium soils consisting of medium dense silty gravel with sand, which was encountered at depths ranging from 3 to 5 feet bgs.

4.2.1 Bearing Pressure & Settlement

For design of the continuous footings, we recommend using an allowable bearing capacity of 2,500 pounds per square foot (psf). The 30% drawings show the continuous footings will have a width of 3 feet. Considering the subsurface conditions and anticipated loading due to the weight of the structure and additional fill, total settlement is anticipated to be less than 1 inch, and differential settlement less than ½ inch.

4.2.2 Lateral/Sliding Resistance

Lateral/sliding resistance can be provided through frictional resistance between the subgrade and the bottom of the foundations. For base frictional resistance, we recommend using a base friction coefficient of 0.6 for cast-in-place concrete on prepared subgrade.

5.0 Construction Recommendations

The construction of the proposed culvert will require excavation depths on the order of 10 feet. All specifications referenced herein refer to Washington State Department of Transportation (WSDOT) Standard Specifications for Road, Bridge, and Municipal Construction M41-10 (WSDOT 2024). We recommend constructing the culvert during the dry season (June to October) to decrease dewatering effort and facilitate fill placement.

5.1 Temporary Shoring

The 30% drawings show vertical shoring will be required on the north side of the Phase 1 excavation to support the temporary access road on the north side of Italian Creek Road. In addition, because the excavation limits shown on the 30% drawings extend only a few feet outside of the culvert, we anticipate that vertical shoring elements will also be required to support all other sides of the excavations.

Typical vertical shoring systems to support these types of excavations on the order of 10 feet deep include soldier piles with lagging and continuous sheet piles. However, the presence of gravels between 3 and 10 feet bgs, as well as the underlying weathered bedrock, will make sheet pile installation difficult. Therefore, we believe that drilled soldier piles with lagging is the most feasible type of vertical shoring system given the subsurface conditions at the project site. Another shoring method that could potentially be feasible for this project is a slide rail shoring system. However, the success of a slide rail shoring system depends on how deep the corner posts can be embedded, which could be difficult in the weathered bedrock.

The selection and design of the shoring system and the safety of temporary excavations are solely the responsibility of the Contractor. The Contractor must submit an excavation and shoring plan to the Engineer prior to construction. The plan should show the design of the shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground for any trench or excavation over 4 feet in depth. The Contractor should be aware of, and familiar with, applicable local, state, and federal safety regulations, including the current Occupational Safety and Health Administration (OSHA) Excavation and Trench Safety Standards. The shoring plan must be prepared and stamped by a registered Civil or Structural Engineer in the State of Washington. The Contractor's shoring design and submittals should be in conformance with Section 2-09.3(3)B of the M41-10 Manual (WSDOT, 2024).

For design of the vertical shoring systems, the Contractor is responsible for the selection of soil properties. The soil parameters presented in Table 5-1 represent typical values that could be expected for the subsurface conditions encountered at the project site. Note that the values for active and passive earth pressures are not factored.

Table 5-1. Soil Parameters for Vertical Shoring Systems

Geologic Unit	Unit Weight (pcf)	Friction Angle, ϕ (°)	Active Earth Pressure Coefficient, k_a	Passive Earth Pressure Coefficient, k_p
Fill	120	32	0.30	3.2
Alluvium	125	36	0.26	3.8
Weathered Bedrock	135	38	0.24	4.2

5.2 Temporary Excavations

If vertical shoring systems are not chosen as the temporary excavation support method, the excavations should be laid back with maximum cut slope inclinations in accordance with OSHA regulations. Based on the site subsurface conditions, we recommend an OSHA Type C soil type for temporary excavation layout. For excavations up to 20 feet deep, the maximum allowable temporary slope for Type C soils is 1.5H:1V if fully dewatered.

Temporary slope recommendations do not consider site constraints such as groundwater, surcharge, or nearby structures. Temporary slopes should be evaluated on a case-by-case basis and incorporate groundwater conditions, soil classification, and site constraints. Slopes should be inspected and maintained as required by OSHA.

Temporary slopes kept open during construction should be protected from erosion by installing a surface water diversion ditch or berm at the top of the slope and covering the cut face with well-anchored plastic sheets. The Contractor should monitor temporary cut slope stability and adjust the slope inclination accordingly. Temporary excavation stability is the responsibility of the Contractor and must comply with current federal, state, and local requirements.

5.3 Groundwater Control

From a planning-level consideration, we anticipate the primary means of groundwater control will consist of the proposed temporary diversion of Italian Creek, which the plans show will be conveyed through a pipe. This approach should significantly reduce the flow of groundwater into the excavations and therefore reduce the dewatering effort/cost and construction risks.

Once a temporary diversion is constructed, we anticipate any excess groundwater flow into the excavations can be controlled with sump pumping as the excavation proceeds below the groundwater. Delve Underground should be provided the opportunity to review the earthwork and dewatering specifications, as well as the Contractor's excavation and dewatering plans before the start of construction.

We recommend that the Contractor be responsible for the means and methods to control the groundwater, including design of water control and/or dewatering systems and provide a stable subgrade sufficient to construct the culvert to the specified invert elevation.

5.4 Subgrade Preparation

Based on the 30 percent design drawings, the base of the continuous footings supporting the new bottomless concrete box culvert will be set at approximate elevations ranging from 636.9 to 639.3 feet, or about 7 to 8 feet below the existing pavement surface of Italian Creek Road. Based on our findings in borings B-1 and B-2, we anticipate subgrade conditions will consist of medium dense, silty gravel with sand alluvium.

Soil should be excavated to a firm subgrade condition. The continuous footings should be supported on a minimum 6-inch-thick layer of Gravel Backfill for Foundations, Class A, as described in Section 5.5.1. The exposed subgrade conditions should be evaluated by a representative of the geotechnical engineer before placement of structural fill.

5.5 Fill and Compaction Criteria

Except where noted otherwise, the fill materials in the following sections refer to sections out of the 2024 Washington State Department of Transportation Standard Specifications for Road, Bridge, and Municipal Construction, Publication Number M 41-10 (WSDOT, 2024).

5.5.1 Gravel Backfill for Foundations, Class A

We recommend that the continuous footings of the new bottomless concrete box culvert be supported on a minimum 6-inch-thick layer of Gravel Backfill for Foundations, Class A, as described in Section 9-03.12(1). This material shall conform to the requirements in Section 9-03.9(1) for Ballast or Section 9-03.9(3) for Crushed Surfacing.

The Gravel Backfill for Foundations, Class A materials should be placed in maximum, 12-inch loose lifts and compacted to 95 percent of maximum dry density per ASTM D1557 (i.e., Modified Proctor). Proper moisture conditioning and the use of vibratory equipment will facilitate compaction of this material. Each lift of this material should be tested by a qualified testing agency. This fill condition should extend a minimum of 9 inches beyond the edge of the continuous footings.

5.5.2 Culvert Backfill

The culvert should be backfilled with Structural Fill per Section 2-13 of the Cowlitz County Special Provisions. The Structural Fill should be placed in maximum, 8-inch loose lifts. Proper moisture conditioning and the use of vibratory equipment will facilitate compaction of this material. This fill condition should extend horizontally outward beyond the exterior perimeter of the culvert a distance equal to the height of the fill or 3 feet, whichever is greater.

Due to its high percentage of oversized aggregates (I.e., greater than ¾-inch), the Structural Fill should be considered non-moisture-density testable by conventional methods (i.e., using a nuclear density gauge). Therefore, compaction of the Structural Fill should be evaluated by proof roll test observation (deflection tests). Compaction shall be determined to be adequate if there is no visual deflection of the material under the load. In locations where there is insufficient room for a dump truck, compaction shall be accomplished with a small roller, hoe pack, or by other methods as approved by the Engineer.

5.5.3 Embankment Fill

If excavated materials are to be re-used as embankment fill, the following restrictions apply. Embankment fill material should contain no organic matter, debris, or particles larger than 3 inches, and have less than 7 percent material passing the U.S. Standard No. 200 Sieve. The percentage of fines can be increased to 12 percent of the material passing the U.S. Standard No. 200 Sieve if placed during dry weather, and provided the fill material is moisture-conditioned, as necessary, for proper compaction. Embankment fill material should be compacted to not less than 92 percent of the material's maximum dry density, as determined in general accordance with ASTM D1557 (Modified Proctor). Proper moisture conditioning and the use of vibratory equipment will facilitate compaction of these materials.

If the reuse of the excavated materials as embankment fill is not feasible, then Structural Fill per Section 2-13 of the Cowlitz County Special Provisions. Structural Fill placement and compaction requirements are described above in Section 5.5.2.

5.6 Wet Weather Construction

For planning purposes, the wet season should be considered to extend from late September to late June. Dry weather working conditions should prevail between early July and the middle of September.

Delays in site earthwork activities should be anticipated during periods of heavy rainfall. If earthwork is performed during extended periods of wet weather or in wet conditions, we recommend the following:

- Cover the base of excavations within soil with subgrade protection granular pad material.
- Excavations should be protected from surface water runoff by placing sandbags or by other means to promote runoff away from work areas and to prevent ponded water in excavations.
- Plastic covers, sloping, ditching, sumps, dewatering, and other measures should be employed in work areas as necessary to permit timely completion of work.

Straw bales and/or geotextile silt fences should be used to control surface soil movement and erosion.

- Excavations should be completed in small sections and backfilled at the end of each day to reduce exposure to wet conditions.
- Excavation or the removal of unsuitable soil should be followed promptly by placement and compaction of structural fill.
- The size and type of construction equipment used may have to be limited to minimize soil disturbance.

6.0 Closure

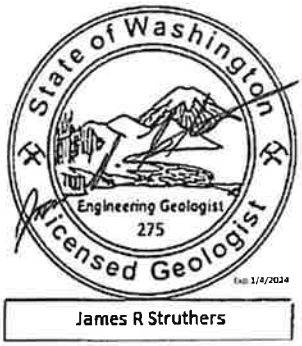
This report was prepared for the exclusive use of the Cowlitz County Department of Public Works for the Italian Creek Road Culvert Replacement Project. Our conclusions and recommendations are based on our interpretation of the information from the geotechnical explorations and laboratory testing as well as our professional experience and judgement.

In the performance of geotechnical work, specific information is obtained at specific locations at specific times, and geologic conditions can change over time. It should be acknowledged that variations in soil conditions may exist between exploration and exposed locations and this report does not necessarily reflect variations between different explorations. The nature and extent of variation may not become evident until construction. Delve Underground is not responsible for the interpretation of the data contained in this report by anyone; as such interpretations are dependent on each person's subjectivity. If, during construction, conditions different from those disclosed by this report are observed or encountered, Delve Underground should be notified at once so we can observe and review these conditions and reconsider our recommendations where necessary.

The site investigation and this report were completed within the limitations of the Delve Underground approved scope of work, schedule, and budget. The services rendered have been performed in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same area. Delve Underground is not responsible for the use of this report in connection with anything other than the project at the location described above.

DELVE UNDERGROUND

Jeff Quinn, PE
Associate - Geotechnical



James R. Struthers, LG, CEG
Principal Engineering Geologist

7.0 References

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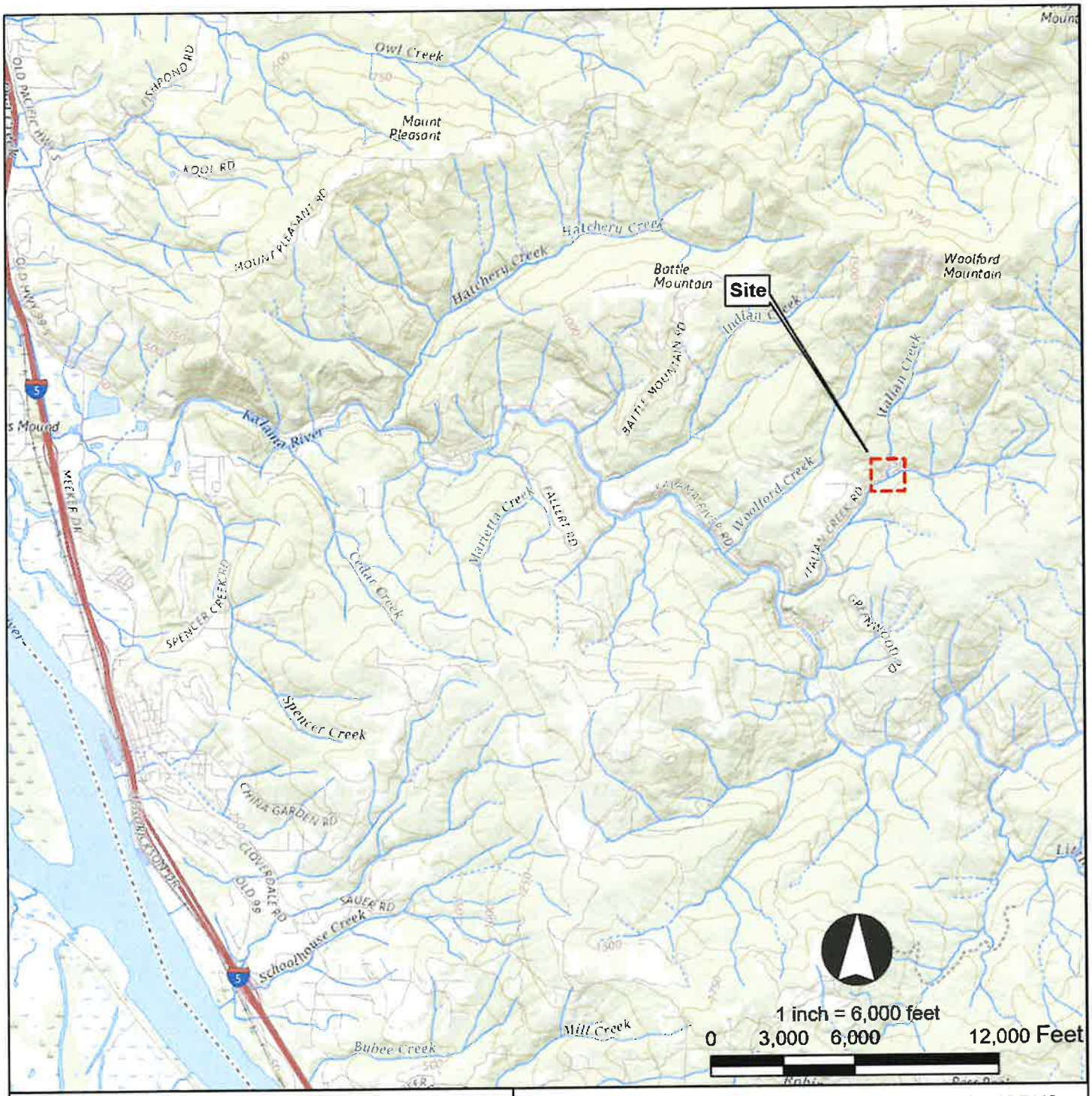
Figures



COWLITZ COUNTY DEPARTMENT OF PUBLIC WORKS

ITALIAN CREEK CULVERT REPLACEMENT

VICINITY MAP

COWLITZ COUNTY, WASHINGTON

DATE: DEC 2023 • PROJECT: 6463.4

DELVE underground

FIGURE 1

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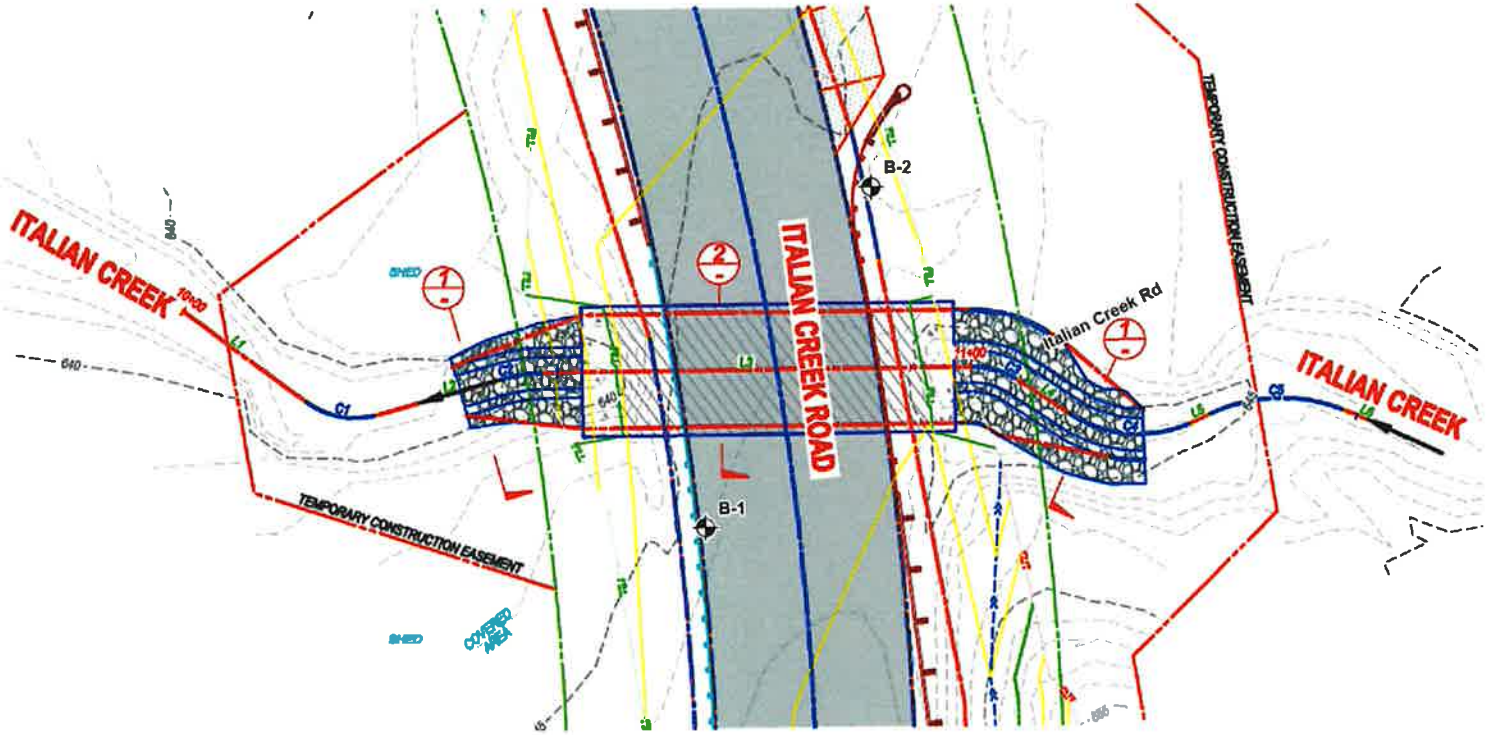

EXPLANATION

B-1 - Boring name and approximate location

1 inch = 15 feet

0 7.5 15 30 Feet

Coordinate System: NAD 1983 2011 StatePlane Washington South FIPS 4602 Ft US; Map Units: Foot

COWLITZ COUNTY DEPARTMENT OF PUBLIC WORKS

ITALIAN CREEK CULVERT REPLACEMENT

SITE PLAN

COWLITZ COUNTY, WASHINGTON

DATE: DEC 2023 • PROJECT: 6463.4

DELVE underground

FIGURE 2

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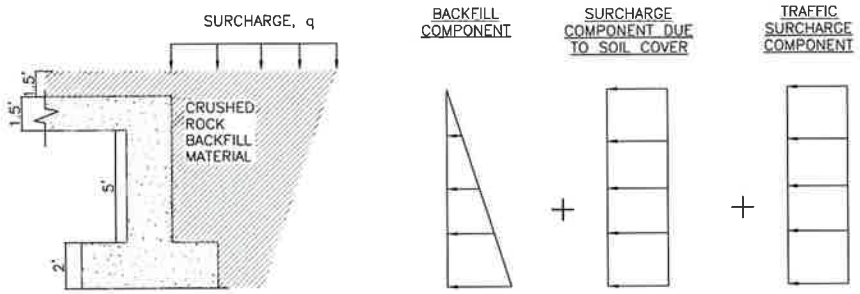
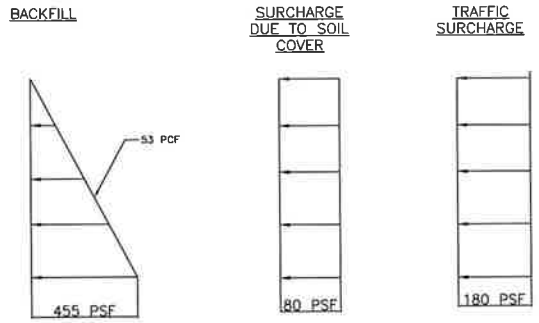
LATERAL EARTH PRESSURES ON BOTTOMLESS CONCRETE BOX CULVERT



NOTES:

1. LATERAL EARTH PRESSURES WERE DEVELOPED ASSUMING WALL BACKFILL CONSISTS OF GRAVEL BACKFILL FOR WALLS CONFORMING TO WSDOT SECTION 9-03.12(2).
2. LATERAL EARTH PRESSURES WERE DEVELOPED ASSUMING UNIT WEIGHT OF 130 PCF AND FRICTION ANGLE OF 36 DEGREES FOR BACKFILL MATERIAL AND AT-REST EARTH PRESSURE CONDITIONS.
3. HYDROSTATIC PRESSURE WAS NOT CONSIDERED SINCE THE BOTTOMLESS CONCRETE CULVERT WILL BE BACKFILLED WITH FREE-DRAINING MATERIAL.
4. SURCHARGE DUE TO SOIL COVER ASSUMES 1.5 FOOT DEPTH OF COVER FOR NEW BOTTOMLESS CONCRETE BOX CULVERT
5. TRAFFIC SURCHARGE COMPONENT CALCULATED PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS TABLE 3.11.6.4-1.

NON-YIELDING EMBEDDED WALLS & STRUCTURES (AT-REST CONDITION)



DELVE underground

COWLITZ COUNTY DEPARTMENT OF PUBLIC WORKS

ITALIAN CREEK ROAD CULVERT REPLACEMENT

GEOTECHNICAL ENGINEERING REPORT
LATERAL EARTH PRESSURES
BOTTOMLESS CONCRETE BOX CULVERT

FIG.3
DEC. 2023

Path: C:\Users\NoloseHoLamb-wg\Box\1891\1483.4 Italian Creek Road Culvert Replacement\1st> 3 - Analyses and Reports\CAD\1960_Drawings\VC 11x17 Plot.dgn Nov 09, 2023, CAD User: Noloselamb-wg

Appendix A Boring Logs

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MOISTURE CONTENT

DESCRIPTION	CONDITION
Dry	Absence of moisture, dusty, dry to the touch.
Moist	Damp, but no visible water.
Wet	Visible free water, typically below water table.

ABBREVIATIONS

SYMBOL	DEFINITION
⊢	Atterberg Limits
○	Moisture Content
□	Blows per foot (N)
●	WDP Blows per 6 in.

FINE-GRAINED SOIL CONSISTENCY

RELATIVE CONSISTENCY	N, SPT *Blows/foot*	FIELD TEST
Very Soft	0 to 1	Easily penetrated by thumb. Extrudes between thumb and fingers when squeezed.
Soft	2 to 4	Easily penetrated one inch by thumb. Molded by light finger pressure.
Medium stiff	5 to 8	Can be penetrated over ¼ inch with moderate pressure. Molded by strong finger pressure.
Stiff	9 to 15	Indented about ¼ inch by thumb, but penetrated only with great effort.
Very Stiff	16 to 30	Readily indented by thumbnail.
Hard	> 30	Indented with difficulty by thumbnail.

COARSE-GRAINED SOIL DENSITY

Relative Density	N, SPT *Blows/foot*
Very Loose	0 to 4
Loose	5 to 10
Medium Dense	11 to 30
Dense	31 to 50
Very Dense	> 50

PERCENTAGE RANGE TERMS[1,2]

DESCRIPTION	RANGE
Trace	< 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

1. Gravel, Sand and fines are estimated by mass. Other constituents such as organics, cobbles, and boulders are estimated by volume.
2. Percentages per ASTM D2488.

SOIL CONSTITUENCY DEFINITIONS

CONSTITUENT	COARSE-GRAINED	FINE-GRAINED
Major	Less than 50% fines: **SAND** or **GRAVEL**	More than 50% fines: **SILT, ELASTIC SILT, LEAN CLAY, FAT CLAY, ORGANIC SOIL**
Secondary	12%[1] or more fine-grained: **Silty** or **Clayey**	30% or more coarse-grained: **Sandy** or **Gravelly**
Minor	5 to 12%[1] fine-grained: **with Silt** or **with Clay**	15 to 30% coarse-grained: **with Sand** or **with Gravel**
	15% or more of a second coarse-grained constituent: **with Sand** or **with Gravel**	30% or more total coarse-grained and the lesser coarse constituent is 15% or more: **with Sand** or **with Gravel**

1. ASTM D2488 specifies more than 15% fines

PARTICLE SIZE DEFINITIONS

DESCRIPTON		SIEVE SIZE *PER ASTM D2488*
FINES		< #200 (0.075 mm)
SAND	*Fine*	#200 to #40 (0.075 to 0.4 mm)
	Medium	#40 to #10 (0.4 to 2 mm)
	Coarse	#10 to #4 (0.4 to 4.75 mm)
GRAVEL	*Fine*	#4 to ¾ in. (4.75 to 19 mm)
	Medium	¾ to 3 in. (19 to 76 mm)
COBBLES		3 to 12 in. (76 to 305 mm)
BOULDERS		> 12 in. (305 mm)

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)[1]

MAJOR DIVISIONS				SYMBOL		TYPICAL DESCRIPTION	ALTERNATE DESCRIPTIONS
COARSE-GRAINED SOILS (50% OR MORE RETAINED BY NO. 200 SIEVE)	GRAVELS (MORE THAN 50% RETAINED ON NO. 4 SIEVE)	CLEAN GRAVELS (≤ 5% FINES)		GW		WELL-GRADED GRAVEL	WELL-GRADED GRAVEL WITH SAND
				GP		POORLY GRADED GRAVEL	POORLY GRADED GRAVEL WITH SAND
		GRAVELS[2,4] (5 – 12 % FINES)		GW-GM		WELL-GRADED GRAVEL WITH SILT	WELL-GRADED GRAVEL WITH SILT AND SAND
				GW-GC		WELL-GRADED GRAVEL WITH CLAY	WELL-GRADED GRAVEL WITH CLAY AND SAND
				GP-GM		POORLY GRADED GRAVEL WITH SILT	POORLY GRADED GRAVEL WITH SILT AND SAND
				GP-GC		POORLY GRADED GRAVEL WITH CLAY	POORLY GRADED GRAVEL WITH CLAY AND SAND
		GRAVELS WITH FINES[2] (≥ 12% FINES)		GM		SILTY GRAVEL	SILTY GRAVEL WITH SAND
				GC		CLAYEY GRAVEL	CLAYEY GRAVEL WITH SAND
	SANDS (LESS THAN 50% RETAINED ON NO. 4 SIEVE)	CLEAN SANDS (≤ 5% FINES)		SW		WELL-GRADED SAND	WELL-GRADED SAND WITH GRAVEL
				SP		POORLY GRADED SAND	POORLY GRADED SAND WITH GRAVEL
		SANDS[2,4] (5 – 12 % FINES)		SW-SM		WELL-GRADED SAND WITH SILT	WELL-GRADED SAND WITH SILT AND GRAVEL
				SW-SC		WELL-GRADED SAND WITH CLAY	WELL-GRADED SAND WITH CLAY AND GRAVEL
				SP-SM		POORLY GRADED SAND WITH SILT	POORLY GRADED SAND WITH SILT AND GRAVEL
				SP-SC		POORLY GRADED SAND WITH CLAY	POORLY GRADED SAND WITH CLAY AND GRAVEL
		SANDS WITH FINES[3] (> 12% FINES)		SM		SILTY SAND	SILTY SAND WITH GRAVEL
				SC		CLAYEY SAND	CLAYEY SAND WITH GRAVEL
FINE-GRAINED SOILS (50% OR MORE PASSES NO. 200 SIEVE)	SILTS AND CLAYS (LL < 50)	INORGANIC		ML		SILT	SILT WITH SAND OR GRAVEL; SANDY OR GRAVELLY SILT
				CL		LEAN CLAY	LEAN CLAY WITH SAND OR GRAVEL; SANDY OR GRAVELLY LEAN CLAY
		ORGANIC		OL		ORGANIC SOIL	ORGANIC SOIL WITH SAND OR GRAVEL; SANDY OR GRAVELLY ORGANIC SOIL
	SILTS AND CLAYS (LL ≥ 50)	INORGANIC		MH		ELASTIC SILT	ELASTIC SILT WITH SAND OR GRAVEL; SANDY OR GRAVELLY ELASTIC SILT
				CH		FAT CLAY	FAT CLAY WITH SAND OR GRAVEL; SANDY OR GRAVELLY FAT CLAY
		ORGANIC		OH		ORGANIC SOIL	ORGANIC SOIL WITH SAND OR GRAVEL; SANDY OR GRAVELLY ORGANIC SOIL
	SILT/CLAY[2]	INORGANIC		CL-ML		SILTY CLAY	SILTY CLAY WITH SAND OR GRAVEL; SANDY OR GRAVELLY SILTY CLAY
HIGHLY ORGANIC SOILS		ORGANIC		PT		PEAT	

NOTES:

1. The USCS described here is based on ASTM standards D2487 & D2488.
2. Dual symbol materials (e.g., SP-SM) are used for soils between 5% and 12% fines or when liquid limit and plasticity index values plot in the CL-ML area of the plasticity chart, (LL: 12 -25, PI: 4-7).
3. ASTM D2488 specifies the use of dual symbol coarse-grained soils between 5% and 15% fines.

BACKFILL, WELL, AND SAMPLE SYMBOLS

Bentonite Chips	Grout	2" OD Split Barrel Sampler
Concrete	Observation Well - Solid	Shelby Tube Sample
Sand	Observation Well – Screen	Grab Sample
Asphalt	Vibrating Wire Piezometer	Rock Core Run
Gravel	Measured Groundwater Level	

DELVE underground

KEY TO LOGS

Project: Italian Creek Rd. Culvert Replacement
Project Location: Cowlitz County
Project Number: 6463.4

Log of Boring

B-1

Date(s) Drilled	10/20/2023	Client	Cowlitz County Department of Public Works	Final Depth	31.5 ft bgs
Coordinates	265956.11 N, 1076336.72 E	Geotechnical Consultant	Delve Underground	Method/ Rig Type	Mud Rotary CME 75
Surface Elevation	646.0 ft.	Drilling Contractor	Western States Soil Conservation, Inc.	Hole Diameter	4.25 in
Location	South side of road on asphalt	Logged by/ Checked by	N. Lambing / J. Quinn	Hammer Type	140 lb / 30 in / Automatic

ELEV. (FT)	WATER LEVEL	DEPTH (FT)	SAMPLE TYPE	RECOVERY (%)	BLOW COUNTS	SAMPLE NUMBER	N (blows/ft) 10 20 30 40 / MC (%) / LL/PL 20 40 60 80	USCS GRAPHIC	USCS	MATERIAL DESCRIPTION	REMARKS AND TESTS	BACKFILL/INSTALL.
										3" asphalt		
										Gravel fill, 3/4" minus		
				53	1-2-6 (N=8)	S-01	■ ○ H		MH	Loose, moist, gray, GRAVELY ELASTIC SILT WITH SAND (MH);, fine to coarse gravel up to 1" in size, subangular gravel, low plasticity, trace to rare charcoal. **Fill**	S-1 fines content = 30.1% S-1 Attterberg Limits: PL = 43 LL = 50 PI = 7	
641		5		47	7-10-12 (N=22)	S-02	○ ■		GM	Medium dense, wet, brown SILTY GRAVEL with SAND (GM); fine to coarse sand, fine to coarse gravel, angular to subangular gravel. **ALLUVIUM**	Initial drill chatter between 5 and 7.5 feet bgs S-2 fines content = 13.7%	
				27	5-11-18 (N=29)	S-03	○ ■				S-3 fines content = 11.1%	
636		10		54	28-50/4" (Refusal)	S-04			GW	Very dense, wet, red-brown and gray-olive brown, WELL GRADED GRAVEL (GW); fine to coarse gravel as rock fragments **WEATHERED BEDROCK** *Pervasive platey rock texture around completely weathered core stones. Core stones are dark gray to dark brown and angular ranging from 1/4" to 1" diameter. Highly weathered rock described as soil per USCS (see above).*		

DELVE underground

NOTES:N: Penetration resistance; MC: Moisture Content; LL/PL: Atterberg liquid/plastic limits
Location and Elevation Source:
Vertical Datum: Topographic Survey on Figure 2
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet

Boring B-1

Project: Italian Creek Rd. Culvert Replacement
Project Location: Cowlitz County
Project Number: 6463.4

Log of Boring

B-1

Date(s) Drilled	10/20/2023	Client	Cowlitz County Department of Public Works	Final Depth	31.5 ft bgs
Coordinates	265956.11 N, 1076336.72 E	Geotechnical Consultant	Delve Underground	Method/ Rig Type	Mud Rotary CME 75
Surface Elevation	646.0 ft.	Drilling Contractor	Western States Soil Conservation, Inc.	Hole Diameter	4.25 in
Location	South side of road on asphalt	Logged by/ Checked by	N. Lambing / J. Quinn	Hammer Type	140 lb / 30 in / Automatic

ELEV. (FT)	WATER LEVEL	DEPTH (FT)	SAMPLE TYPE	RECOVERY (%)	BLOW COUNTS	SAMPLE NUMBER	N (blows/ft) 10 20 30 40 / MC (%) / LL/PL 20 40 60 80	USCS GRAPHIC	USCS	MATERIAL DESCRIPTION	REMARKS AND TESTS	BACKFILL/INSTALL.
				83	12-19-50 /4" (Refusal)	S-05			GM	Very dense, wet, mottled, very dark brown to very dark gray, SILTY GRAVEL (GM); subangular to angular gravel, low plasticity. *Highly weathered rock described as soil per USCS (see above).*		
626		20		73	19-35-37 (N=72)	S-06			SM	Very dense, moist, gray to gray-green, SILTY SAND (SM); fine to coarse sand, trace angular 1/4" to 3/4" inch gravel. *Highly weathered rock described as soil per USCS (see above).*		
621		25		109	26-50/5" (Refusal)	S-07				*(25 ft bgs) Becomes red-brown in color.*		

DELVE underground

NOTES:N: Penetration resistance; MC: Moisture Content; LL/PL: Atterberg liquid/plastic limits
Location and Elevation Source:
Vertical Datum: Topographic Survey on Figure 2
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet

Boring B-1

Project: Italian Creek Rd. Culvert Replacement
Project Location: Cowlitz County
Project Number: 6463.4

Log of Boring

B-1

Date(s) Drilled	10/20/2023	Client	Cowlitz County Department of Public Works	Final Depth	31.5 ft bgs
Coordinates	265956.11 N, 1076336.72 E	Geotechnical Consultant	Delve Underground	Method/ Rig Type	Mud Rotary CME 75
Surface Elevation	646.0 ft.	Drilling Contractor	Western States Soil Conservation, Inc.	Hole Diameter	4.25 in
Location	South side of road on asphalt	Logged by/ Checked by	N. Lambing / J. Quinn	Hammer Type	140 lb / 30 in / Automatic

ELEV. (FT)	WATER LEVEL	DEPTH (FT)	SAMPLE TYPE	RECOVERY (%)	BLOW COUNTS	SAMPLE NUMBER	N (blows/ft) 10 20 30 40 / MC (%) / LL/PL 20 40 60 80	USCS GRAPHIC	USCS	MATERIAL DESCRIPTION	REMARKS AND TESTS	BACKFILL/INSTALL.
				108	33-50/4" (Refusal)	S-08	■		SM	Very dense, moist, gray to gray-green, SILTY SAND (SM); fine to coarse sand, trace angular 1/4" to 3/4" inch gravel. *Highly weathered rock described as soil per USCS (see above).*	Borehole completed at 31.5 feet below ground surface (bgs).	
611		35										
606		40										

DELVE underground

NOTES:N: Penetration resistance; MC: Moisture Content; LL/PL: Atterberg liquid/plastic limits
Location and Elevation Source:
Vertical Datum: Topographic Survey on Figure 2
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet

Boring B-1

Project: Italian Creek Rd. Culvert Replacement
Project Location: Cowlitz County
Project Number: 6463.4

Log of Boring

B-2

Date(s) Drilled	10/20/2023	Client	Cowlitz County Department of Public Works	Final Depth	31.5 ft bgs
Coordinates	265967.11 N, 1076321.78 E	Geotechnical Consultant	Delve Underground	Method/ Rig Type	Mud Rotary CME 75
Surface Elevation	645.0 ft.	Drilling Contractor	Western States Soil Conservation, Inc.	Hole Diameter	4.25 in
Location	North side of road apprx. 5 feet off asphalt roadway.	Logged by/ Checked by	N. Lambing / J. Quinn	Hammer Type	140 lb / 30 in / Automatic

ELEV. (FT)	WATER LEVEL	DEPTH (FT)	SAMPLE TYPE	RECOVERY (%)	BLOW COUNTS	SAMPLE NUMBER	N (blows/ft) 10 20 30 40 / MC (%) / LL/PL 20 40 60 80	USCS GRAPHIC	USCS	MATERIAL DESCRIPTION	REMARKS AND TESTS	BACKFILL/INSTALL.
										3/4-inch minus gravel surfacing within shoulder, underlain by predominantly gravel embankment with varying amounts of cobbles, silt and sand. **FILL**	Driller notes approximately 3 feet of gravel and cobbles based on drill rig chatter and difficult drilling action.	
				0	6-6-4 (N=10)	S-01	■			Medium dense, moist, gray to gray brown SILTY GRAVEL with SAND (GM); fine to coarse, angular to subangular gravel, fine to coarse sand, low plasticity. **ALLUVIUM**		
640		5		53	8-15-11 (N=26)	S-02	○ ■		GM		S-2 fines content = 12.5%	
				60	10-9-4 (N=13)	S-03	■				S-3 fines content = 40.5%	
635		10		53	11-9-7 (N=16)	S-04	■		SM	Medium dense, moist, gray-green, SILTY SAND with GRAVEL (SM); fine to coarse gravel, angular to subangular gravel, fine to coarse sand. **WEATHERED BEDROCK** *Pervasive platey rock texture around completely weathered core stones. Core stones dark gray to dark brown, angular and 1/4" to 1" diameter. Highly weathered rock described as soil per USCS (see above).*		
				60	26-27-20 (N=47)	S-05	■		SM	Dense, moist, gray to brown SILTY SAND (SM); fine gravel, subangular to angular gravel, fine to coarse sand, low plasticity. *Highly weathered rock described as soil per USCS (see above).*		

DELVE underground

NOTES:N: Penetration resistance; MC: Moisture Content; LL/PL: Atterberg liquid/plastic limits
Location and Elevation Source:
Vertical Datum: Topographic Survey on Figure 2
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet

Boring B-2

Project: Italian Creek Rd. Culvert Replacement
Project Location: Cowlitz County
Project Number: 6463.4

Log of Boring

B-2

Date(s) Drilled	10/20/2023	Client	Cowlitz County Department of Public Works	Final Depth	31.5 ft bgs
Coordinates	265967.11 N, 1076321.78 E	Geotechnical Consultant	Delve Underground	Method/ Rig Type	Mud Rotary CME 75
Surface Elevation	645.0 ft.	Drilling Contractor	Western States Soil Conservation, Inc.	Hole Diameter	4.25 in
Location	North side of road apprx. 5 feet off asphalt roadway.	Logged by/ Checked by	N. Lambing / J. Quinn	Hammer Type	140 lb / 30 in / Automatic

ELEV. (FT)	WATER LEVEL	DEPTH (FT)	SAMPLE TYPE	RECOVERY (%)	BLOW COUNTS	SAMPLE NUMBER	N (blows/ft) 10 20 30 40 / MC (%) / LL/PL 20 40 60 80	USCS GRAPHIC	USCS	MATERIAL DESCRIPTION	REMARKS AND TESTS	BACKFILL/INSTALL.
				93	18-36-37 (N=73)	S-06				Very dense, moist to dry, red brown with light brown mottling, SILTY SAND (SM); fine to coarse gravel, fine to coarse sand, low plasticity. *Highly weathered rock described as soil per USCS (see above).*		
625		20		67	18-31-29 N=60	S-07			SM		Switched to 3" Modified California Sampler at 20 feet bgs.	
620		25		67	9-11-18 N=29	S-08			SC	Medium dense, moist, green-gray with purple mottling, CLAYEY SAND (SC); fine to coarse gravel, subangular to angular gravel, fine to coarse sand. *Highly weathered rock described as soil per USCS (see above).*		

DELVE underground

NOTES:N: Penetration resistance; MC: Moisture Content; LL/PL: Atterberg liquid/plastic limits
Location and Elevation Source:
Vertical Datum: Topographic Survey on Figure 2
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet

Boring B-2

Project: Italian Creek Rd. Culvert Replacement
Project Location: Cowlitz County
Project Number: 6463.4

Log of Boring

B-2

Date(s) Drilled	10/20/2023	Client	Cowlitz County Department of Public Works	Final Depth	31.5 ft bgs
Coordinates	265967.11 N, 1076321.78 E	Geotechnical Consultant	Delve Underground	Method/ Rig Type	Mud Rotary CME 75
Surface Elevation	645.0 ft.	Drilling Contractor	Western States Soil Conservation, Inc.	Hole Diameter	4.25 in
Location	North side of road apprx. 5 feet off asphalt roadway.	Logged by/ Checked by	N. Lambing / J. Quinn	Hammer Type	140 lb / 30 in / Automatic

ELEV. (FT)	WATER LEVEL	DEPTH (FT)	SAMPLE TYPE	RECOVERY (%)	BLOW COUNTS	SAMPLE NUMBER	N (blows/ft) 10 20 30 40 / MC (%) / LL/PL 20 40 60 80	USCS GRAPHIC	USCS	MATERIAL DESCRIPTION	REMARKS AND TESTS	BACKFILL/INSTALL.
				67	9-29-50/5" (Refusal)	S-09			SW-SM	Very dense, gray brown, WELL GRADED SAND with SILT (SW-SM); fine to coarse sand, low plasticity, core stones of more resilient rock appear as gray gravel inclusions. *Highly weathered rock described as soil per USCS (see above).*	Borehole completed at 31.5 feet below ground surface (bgs).	
610		35										
605		40										

DELVE underground

NOTES:N: Penetration resistance; MC: Moisture Content; LL/PL: Atterberg liquid/plastic limits
Location and Elevation Source:
Vertical Datum: Topographic Survey on Figure 2
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet

Boring B-2

APPENDIX C

HPA FROM WASHINGTON STATE DEPARTMENT OF FISH AND WILDLIFE

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

HYDRAULIC PROJECT APPROVAL

Issued Date: September 05, 2024
Project End Date: September 04, 2029

Permit Number: 2024-5-90+01
FPA/Public Notice Number: N/A
Application ID: 35098

PERMITTEE	AUTHORIZED AGENT OR CONTRACTOR
Cowlitz County Department of Public Works	Cowlitz County Public Works
ATTENTION: Susan Eugenis	ATTENTION: Roger Maurer
1600 13th Ave S	1600 S 13th Ave
Kelso, WA 98626	Kelso, WA 98626-2851

Project Name: Italian Creek Road Culvert Replacement

Project Description: The project will replace a 36-inch diameter steel pipe culvert with a 14-foot span bottomless precast concrete box culvert on cast-in-place concrete foundations. A natural streambed channel will be constructed through the culvert.

PROVISIONS

TIMING - PLANS - INVASIVE SPECIES CONTROL

1. TIMING LIMITATION: Work below the ordinary high water line can occur between July 16 and September 30.

2. RE-VEGETATION: You must complete re-vegetation during the first dormant season (late fall through late winter) after project completion per the approved plan. Monitor the success of the re-vegetation to ensure no less than 80% survival for at least three years.

3. APPROVED PLANS: You must accomplish the work per plans and specifications submitted with the application and approved by the Washington Department of Fish and Wildlife, including:

- "Italian Creek Road Culvert Replacement" (APP ID 25098) received July 24, 2024, and
- "Italian Creek MP 1.90 Level II HA and Mit Plan 20240216 - reduced.pdf" received June 18, 2024, and
- "1232 Italian Creek Profile with OHWM.pdf" received July 29, 2024,

except as modified by this Hydraulic Project Approval. You must have a copy of these plans and this HPA available on site during all phases of the project construction.

4. INVASIVE SPECIES CONTROL: Follow Method 1 for low risk locations (i.e. clean/drain/dry). Thoroughly remove visible dirt and debris from all equipment and gear (including drive mechanisms, wheels, tires, tracks, buckets, and undercarriage) before arriving and leaving the job site to prevent the transport and introduction of invasive species. For contaminated or high risk sites please refer to the Method 2 Decontamination protocol. Properly dispose of any water and chemicals used to clean gear and equipment. You can find this and additional information in the Washington Department of Fish and Wildlife's "Invasive Species Management Protocols", available online at https://wdfw.wa.gov/species-habitats/invasive/prevention.

NOTIFICATION REQUIREMENTS

5. PRE- AND POST-CONSTRUCTION NOTIFICATION: You, your agent, or contractor must contact the Washington Department of Fish and Wildlife by e-mail at HPAapplications@dfw.wa.gov; mail to Post Office Box 43234, Olympia, Washington 98504-3234; or fax to (360) 902-2946 at least three business days before starting work, and again within seven days after completing the work. The notification must include the permittee's name, project location, starting date for work or date the work was completed, and the permit number. The Washington Department of Fish and Wildlife may conduct inspections during and after construction; however, the Washington Department of Fish and Wildlife will

notify you or your agent before conducting the inspection.

6. FISH KILL/ WATER QUALITY PROBLEM NOTIFICATION: If a fish kill occurs or fish are observed in distress at the job site, immediately stop all activities causing harm. Immediately notify the Washington Department of Fish and Wildlife of the problem. If the likely cause of the fish kill or fish distress is related to water quality, also notify the Washington Military Department Emergency Management Division at 1-800-258-5990. Activities related to the fish kill or fish distress must not resume until the Washington Department of Fish and Wildlife gives approval. The Washington Department of Fish and Wildlife may require additional measures to mitigate impacts.

STAGING, JOB SITE ACCESS, AND EQUIPMENT

7. Establish staging areas (used for equipment storage, vehicle storage, fueling, servicing, and hazardous material storage) in a location and manner that will prevent contaminants such as petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials from entering waters of the state.

8. This Hydraulic Project Approval authorizes only the removal of the large woody vegetation shown in the approved plan. Clearly mark all large woody vegetation authorized for removal before starting work.

9. If wet or muddy conditions exist, in or near a riparian zone or wetland area, use equipment that reduces ground pressure.

10. Check equipment daily for leaks and complete any required repairs in an upland location before using the equipment in or near the water.

11. Use environmentally acceptable lubricants composed of biodegradable base oils such as vegetable oils, synthetic esters, and polyalkylene glycols in equipment operated in or near the water.

CONSTRUCTION-RELATED SEDIMENT, EROSION AND POLLUTION CONTAINMENT

12. Stop all hydraulic project activities except those needed to control erosion and siltation, if flow conditions arise that will result in erosion or siltation of waters of the state.

13. Prevent project contaminants, such as petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials, from entering or leaching into waters of the state.

14. Deposit waste material from the project, such as construction debris, silt, excess dirt, or overburden, in an upland area above the limits of anticipated floodwater.

15. Deposit all trash from the project at an appropriate upland disposal location.

CONSTRUCTION MATERIALS

16. To prevent leaching, construct forms to contain any wet concrete. Place impervious material over wet concrete that will come in contact with waters of the state. Forms and impervious materials must remain in place until the concrete is cured.

17. Do not stockpile construction material waterward of the ordinary high water line.

18. Use only clean, suitable material as fill material (no trash, debris, car bodies, tires, asphalt, concrete, etc.).

CULVERT

19. Establish the culvert invert elevation with reference point(s) or benchmark(s) created before to starting work on this project. Clearly mark and preserve the reference point(s) for post-project compliance. Before backfilling, confirm the invert elevation, as stated on the plans, relative to the reference points with at least a construction-grade leveling device (such as an optical auto-level or laser level).

20. Size streambed material to mimic the stream's natural gradation as found in nearby reference channel reaches. Material must be clean, rounded and well-graded (includes all size classes). Angular rock is not permitted within the channel or culvert.

Issued Date: September 05, 2024
Project End Date: September 04, 2029

Permit Number: 2024-5-90+01
FPA/Public Notice Number: N/A
Application ID: 35098

21. The width of the channel-bed inside the culvert must be equal to or greater than 10 feet.

22. The streambed must include a sinuous low-flow channel expected under common conditions in the reach and a high-flow bench on both sides of the culvert.

23. Protect structural fill associated with the culvert installation from erosion to the 100-year peak flow.

24. Embed the top of footings of bottomless culverts sufficiently below potential scour depth to prevent exposure of the footing surface and undermining.

25. The owner(s) must maintain the culvert to ensure it provides continued, unimpeded fish passage. If the culvert becomes a hindrance to fish passage, the owner must obtain an Hydraulic Project Approval and provide prompt repair.

DEMOBILIZATION AND CLEANUP

26. Completely remove any temporary fill before the end of the in-water timing window if the fill material could erode and deliver sediment-laden water into waters of the state.

27. To minimize sediment delivery to the stream or stream channel, do not return in-stream flows to the work area until all in-channel work is completed and the bed and banks are stabilized.

28. Do not relocate removed or replaced structures within waters of the state. Remove and dispose of these structures in an upland area above the limits of anticipated floodwater.

29. Return water flow slowly to the in-water work area to prevent the downstream release of sediment laden water. If necessary, install silt fencing above the bypass outlet to capture sediment during re-watering of the channel.

30. Remove temporary erosion and sediment control methods after job site is stabilized or within three months of project completion, whichever is sooner.

LOCATION #1:	Site Name: Italian Creek Road Italian Creek Road, Kalama, WA 98625					
WORK START:	September 5, 2024			WORK END:	September 4, 2029	
WRIA		Waterbody:			Tributary to:	
27 - Lewis		Unknown Stream Number			Unknown	
1/4 SEC:	Section:	Township:	Range:	Latitude:	Longitude:	County:
SE 1/4	31	06 N	01 E	46.040854	-122.721388	Cowlitz

Location #1 Driving Directions

From I-5 exit 32, head east on Kalama River Road 9 miles to Weyerhaeuser Road. Turn slightly left and head northeast 0.1 miles to Greenwood Road. Turn left and head northwest 2.3 miles to Italian Creek Road. Turn right and head northeast 0.7 miles to the project site.

APPLY TO ALL HYDRAULIC PROJECT APPROVALS

Washington Department of FISH and WILDLIFE

HYDRAULIC PROJECT APPROVAL

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

Issued Date: September 05, 2024
Project End Date: September 04, 2029

Permit Number: 2024-5-90+01
FPA/Public Notice Number: N/A
Application ID: 35098

This Hydraulic Project Approval pertains only to those requirements of the Washington State Hydraulic Code, specifically Chapter 77.55 RCW. Additional authorization from other public agencies may be necessary for this project. The person(s) to whom this Hydraulic Project Approval is issued is responsible for applying for and obtaining any additional authorization from other public agencies (local, state and/or federal) that may be necessary for this project.

This Hydraulic Project Approval shall be available on the job site at all times and all its provisions followed by the person (s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work.

This Hydraulic Project Approval does not authorize trespass.

The person(s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work may be held liable for any loss or damage to fish life or fish habitat that results from failure to comply with the provisions of this Hydraulic Project Approval.

Failure to comply with the provisions of this Hydraulic Project Approval could result in civil action against you, including, but not limited to, a stop work order or notice to comply, and/or a gross misdemeanor criminal charge, possibly punishable by fine and/or imprisonment.

All Hydraulic Project Approvals issued under RCW 77.55.021 are subject to additional restrictions, conditions, or revocation if the Department of Fish and Wildlife determines that changed conditions require such action. The person(s) to whom this Hydraulic Project Approval is issued has the right to appeal those decisions. Procedures for filing appeals are listed below.

MINOR MODIFICATIONS TO THIS HPA: You may request approval of minor modifications to the required work timing or to the plans and specifications approved in this HPA unless this is a General HPA. If this is a General HPA you must use the Major Modification process described below. Any approved minor modification will require issuance of a letter documenting the approval. A minor modification to the required work timing means any change to the work start or end dates of the current work season to enable project or work phase completion. Minor modifications will be approved only if spawning or incubating fish are not present within the vicinity of the project. You may request subsequent minor modifications to the required work timing. A minor modification of the plans and specifications means any changes in the materials, characteristics or construction of your project that does not alter the project's impact to fish life or habitat and does not require a change in the provisions of the HPA to mitigate the impacts of the modification. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a minor modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you did not use APPS you must submit a written request that clearly indicates you are seeking a minor modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the APP ID number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234, or by email to HPAapplications@dfw.wa.gov. You should allow up to 45 days for the department to process your request.

HYDRAULIC PROJECT APPROVAL

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MAJOR MODIFICATIONS TO THIS HPA: You may request approval of major modifications to any aspect of your HPA. Any approved change other than a minor modification to your HPA will require issuance of a new HPA. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a major modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you did not use APPS you must submit a written request that clearly indicates you are requesting a major modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the APP ID number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send your written request by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234. You may email your request for a major modification to HPAapplications@dfw.wa.gov. You should allow up to 45 days for the department to process your request.

APPEALS INFORMATION

If you wish to appeal the issuance, denial, conditioning, or modification of a Hydraulic Project Approval (HPA), Washington Department of Fish and Wildlife (WDFW) recommends that you first contact the department employee who issued or denied the HPA to discuss your concerns. Such a discussion may resolve your concerns without the need for further appeal action. If you proceed with an appeal, you may request an informal or formal appeal. WDFW encourages you to take advantage of the informal appeal process before initiating a formal appeal. The informal appeal process includes a review by department management of the HPA or denial and often resolves issues faster and with less legal complexity than the formal appeal process. If the informal appeal process does not resolve your concerns, you may advance your appeal to the formal process. You may contact the HPA Appeals Coordinator at (360) 902-2534 for more information.

A. INFORMAL APPEALS: WAC 220-660-460 is the rule describing how to request an informal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete informal appeal procedures. The following information summarizes that rule.

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request an informal appeal of that action. You must send your request to WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. WDFW must receive your request within 30 days from the date you receive notice of the decision. If you agree, and you applied for the HPA, resolution of the appeal may be facilitated through an informal conference with the WDFW employee responsible for the decision and a supervisor. If a resolution is not reached through the informal conference, or you are not the person who applied for the HPA, the HPA Appeals Coordinator or designee may conduct an informal hearing or review and recommend a decision to the Director or designee. If you are not satisfied with the results of the informal appeal, you may file a request for a formal appeal.

B. FORMAL APPEALS: WAC 220-660-470 is the rule describing how to request a formal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete formal appeal procedures. The following information summarizes that rule.

Washington Department of FISH and WILDLIFE

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A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request a formal appeal of that action. You must send your request for a formal appeal to the clerk of the Pollution Control Hearings Boards and serve a copy on WDFW within 30 days from the date you receive notice of the decision. You may serve WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. The time period for requesting a formal appeal is suspended during consideration of a timely informal appeal. If there has been an informal appeal, you may request a formal appeal within 30 days from the date you receive the Director's or designee's written decision in response to the informal appeal.

C. FAILURE TO APPEAL WITHIN THE REQUIRED TIME PERIODS: If there is no timely request for an appeal, the WDFW action shall be final and unappealable.

Habitat Biologist	George.Fornes@dfw.wa.gov		for Director
George Fornes	360-623-0651		WDFW

APPENDIX D

NATIONWIDE PERMIT 14 FROM US ARMY CORPS OF ENGINEERS

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SEATTLE DISTRICT
4735 EAST MARGINAL WAY SOUTH, BLDG 1202
SEATTLE, WA 98134-2388

Regulatory Branch

October 29, 2024

Susan Eugenis
Cowlitz County Department of Public Works
1600 13th Avenue South
Kelso, Washington 98626

Reference: NWS-2024-525
Cowlitz County
Department of Public
Works
(Italian Creek
RoadCulvert
Replacement MP 1.90)

Dear Susan Eugenis:

We have reviewed your application to replace a failing 36-inch wide, 36-foot long corrugated metal pipe culvert with a 14-foot wide by 45-foot long precast concrete bottomless box culvert at milepost 1.9 of Italian Creek Road, Cowlitz County, Washington. Based on the information you provided to us, Nationwide Permit (NWP) 14, Linear Transportation Projects (Federal Register January 13, 2021, Vol. 86, No. 8), authorizes your proposal as depicted on the enclosed drawings submitted to the Corps on June 18, 2024.

In order for this authorization to be valid, you must ensure the work is performed in accordance with the enclosed NWP 14, Terms and Conditions.

We have reviewed your project pursuant to the requirements of the Endangered Species Act, the Magnuson-Stevens Fishery Conservation and Management Act and the National Historic Preservation Act. We have determined this project complies with the requirements of these laws provided you comply with all of the permit general and special conditions.

The Federal Emergency Management Administration (FEMA) is the lead federal agency for the proposed action. This agency has provided documentation to the Corps showing it made a no effect determination pursuant to Section 7 of the ESA. For the purpose of this Department of the Army authorization, we have determined this project will comply with the requirements of these laws provided you comply with all of the

permit general conditions. The Corps has reviewed the documentation provided by the agency and determined it is sufficient to confirm Section 7 ESA compliance for this permit authorization, and additional consultation is not necessary.

Please note that National General Condition 21, *Discovery of Previously Unknown Remains and Artifacts*, found in the *Nationwide Permit Terms and Conditions* enclosure, details procedures that must be followed should an inadvertent discovery occur. You must ensure that you comply with this condition during the construction of your project.

The authorized work complies with the Washington State Department of Ecology's (Ecology) Water Quality Certification (WQC) requirements for this NWP. No further coordination with Ecology for WQC is required.

You have not requested a jurisdictional determination for this proposed project. If you believe the U.S. Army Corps of Engineers does not have jurisdiction over all or portions of your project you may request a preliminary or approved jurisdictional determination (JD). If one is requested, please be aware that we may require the submittal of additional information to complete the JD and work authorized in this letter may not occur until the JD has been completed.

Our verification of this NWP authorization is valid until March 14, 2026, unless the NWP is modified, reissued, or revoked prior to that date. If the authorized work for the NWP authorization has not been completed by that date and you have commenced or are under contract to commence this activity before March 14, 2026, you will have until March 14, 2027, to complete the activity under the enclosed terms and conditions of this NWP. Failure to comply with all terms and conditions of this NWP verification invalidates this authorization and could result in a violation of Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act. You must also obtain all local, State, and other Federal permits that apply to this project.

Upon completing the authorized work, you must fill out and return the enclosed *Certificate of Compliance with Department of the Army Permit*. All compliance reports should be submitted to the U.S. Army Corps of Engineers, Seattle District, Regulatory Branch electronically at nws.compliance@usace.army.mil. Thank you for your cooperation during the permitting process. We are interested in your experience with our Regulatory Program and encourage you to complete a customer service survey. Referenced documents and information about our program are available on our website at www.nws.usace.army.mil, select "Regulatory Permit Information". A copy of this letter with enclosures will be furnished to Roger Maurer at maurerr@cowlitzwa.gov. If you have any questions, please contact me at owen.weller@usace.army.mil or (360) 305-5891.

Sincerely,

M. Owen Weller, Project Manager
Regulatory Branch

Enclosures

cc:
Ecology (ecyrefedpermits@ecy.wa.gov)

US Army Corps of Engineers
Seattle District

NATIONWIDE PERMIT 14
Terms and Conditions

2021 NWPs - Final 41; Effective Date: February 25, 2022
amended with RGCs 10-14 June 28, 2024

A. Description of Authorized Activities
B. U.S. Army Corps of Engineers (Corps) National General Conditions for All Final 41 NWPs
C. Seattle District Regional General Conditions
D. Seattle District Regional Specific Conditions for this Nationwide Permit (NWP)
E. 401 Water Quality Certification (401 WQC) for this NWP
F. Coastal Zone Management Consistency Response for this NWP

In addition to any special condition 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 (NWP) authorization to be valid in Washington State.

A. DESCRIPTION OF AUTHORIZED ACTIVITIES

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, driveways, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge of dredged or fill material 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 of dredged or fill material 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 of dredged or fill material, 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 of dredged or fill material in a special aquatic site, including wetlands. (See general condition 32.) (Authorities: Sections 10 and 404)

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 of dredged or fill material 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)(4) 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. CORPS NATIONAL GENERAL CONDITIONS FOR ALL 2021 NWPs - FINAL 41

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 or her 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 NWPs 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 Structures and Fills. Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. 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. Permittees 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 activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

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 designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). 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 species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, 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 species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) 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. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) 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 species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference 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 or conference 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 and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects 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) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places 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 (see 33 CFR 330.4(g)(1)). 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 commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or 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.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has 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. 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. Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they 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, 52, 57 and 58 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 by permittees in the

designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines 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) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-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. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-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. 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. If restoring riparian areas involves planting vegetation, only native species should be planted. 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)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(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 or federal, 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. (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority 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)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. 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 CWA 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 authorized, subject to the following restrictions:
(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot 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.
(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 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 review by, or 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 and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review 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. 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) (i) 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.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, 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 (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) 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 and intermittent 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 or 3/100-acre of stream bed 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 species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) 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 NWP activity that requires permission from, or review by, 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, or review by, the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification*: The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. 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 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 (iii) 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 e-mail, 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 e-mail 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 pre-construction 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 that 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 pre-construction notifications to expedite agency coordination.

C. SEATTLE DISTRICT REGIONAL GENERAL CONDITIONS: The following conditions apply to the 2021 NWPs - Final 41 NWPs for the Seattle District in Washington State, as applicable.

RGC 1, Project Drawings
Drawings must be submitted with a pre-construction notification (PCN). Drawings must provide a clear understanding of the proposed project, and how waters of the United States will be affected. Drawings must be originals and not reduced copies of large-scale plans. Engineering drawings are not required. Existing and proposed site conditions (manmade and landscape features) must be drawn to scale.

RGC 2, Aquatic Resources Requiring Special Protection
A PCN is required for activities resulting in a loss of waters of the United States in wetlands in dunal systems along the Washington coast, mature forested wetlands, bogs and peatlands, aspen-dominated wetlands, alkali wetlands, vernal pools, camas prairie wetlands, estuarine wetlands, and wetlands in coastal lagoons.

RGC 3, New Bank Stabilization in Tidal Waters of Puget Sound
Activities involving new bank stabilization in tidal waters in Water Resource Inventory Areas (WRIAs) 8, 9, 10, 11, and 12 (within the areas identified on Figures 1a through 1e) cannot be authorized by NWP.

RGC 4, Commencement Bay

No permanent losses of wetlands or mudflats within the Commencement Bay Study Area may be authorized by any NWP (see Figure 2).

RGC 5, Bank Stabilization
All projects including new or maintenance bank stabilization activities in waters of the United States where salmonid species are present or could be present, requires PCN to the U.S. Army Corps of Engineers (Corps) (see NWP general condition 32).

For new bank stabilization projects only, the following must be submitted to the Corps:

a. The cause of the erosion and the distance of any existing structures from the area(s) being stabilized.

b. The type and length of existing bank stabilization within 300 feet of the proposed project.

c. A description of current conditions and expected post-project conditions in the waterbody.

d. A statement describing how the project incorporates elements avoiding and minimizing adverse environmental effects to the aquatic environment and nearshore riparian area, including vegetation impacts in the waterbody.

In addition to a. through d., the results from any relevant geotechnical investigations can be submitted with the PCN if it describes current or expected conditions in the waterbody.

RGC 6, Crossings of Waters of the United States
Any project including installing, replacing, or modifying crossings of waters of the United States, such as culverts or bridges, requires submittal of a PCN to the U.S. Army Corps of Engineers (see NWP general condition 32).

If a culvert is proposed to cross waters of the U.S. where salmonid species are present or could be present, the project must apply the stream simulation design method from the Washington Department of Fish and Wildlife located in the Water Crossing Design Guidelines (2013), or a design method which provides passage at all life stages at all flows where the salmonid species would naturally seek passage. If the stream simulation design method is not applied for a culvert where salmonid species are present or could be present, the applicant must provide a rationale in the PCN sufficient to establish one of the following:

a. The existence of extraordinary site conditions.

b. How the proposed design will provide equivalent or better fish passage and fisheries habitat benefits than the stream simulation design method.

Culverts installed under emergency authorization that do not meet the above design criteria will be required to meet the above design criteria to receive an after-the-fact nationwide permit verification.

RGC 7, Stream Loss
A PCN is required for all activities that result in the loss of any linear feet of streams.

RGC 8, Construction Boundaries
Permittees must clearly mark all construction area boundaries within waters of the United States before beginning work on projects that involve grading or placement of fill. Boundary markers and/or construction fencing must be maintained and clearly visible for the duration of construction. Permittees should avoid and minimize removal of native vegetation (including submerged aquatic vegetation) to the maximum extent possible.

RGC 9, ESA Reporting to NMFS

For any nationwide permit that may affect threatened or endangered species:

Incidents where any individuals of fish species, marine mammals and/or sea turtles listed by National Oceanic and Atmospheric Administration Fisheries, National Marine Fisheries Service (NMFS) under the Endangered Species Act appear to be injured or killed as a result of discharges of dredged or fill material into waters of the U.S. or structures or work in navigable waters of the U.S. authorized by this Nationwide Permit verification shall be reported to NMFS, Office of Protected Resources at (301) 713-1401 and the Regulatory Office of the Seattle District of the U.S. Army Corps of Engineers at (206) 764-3495. The finder should leave the animal alone, make note of any circumstances likely causing the death or injury, note the location and number of individuals involved and, if possible, take photographs. Adult animals should not be disturbed unless circumstances arise where they are obviously injured or killed by discharge exposure or some unnatural cause. The finder may be asked to carry out instructions provided by the NMFS to collect specimens or take other measures to ensure that evidence intrinsic to the specimen is preserved.

RGC 10, Limitations on New Bank Stabilization Within the Salish Sea
The length of new bank stabilization within waters of the U.S., including new bank stabilization associated with maintenance activities that would expand previously authorized armoring length, cannot exceed 50 linear feet within the Salish Sea under any NWP.

RGC 11, Effects to Forage Fish Spawning Beaches, Drift Cells, and Feeder Bluffs)
No NWP activity can:

a. cause more than minimal adverse effects to forage fish spawning beaches or drift cells; or

b. prevent the functioning of feeder bluffs, including more than minimal adverse effects to sediment recruitment, transport, or deposition.

This regional general condition applies to all NWP activities within the Salish Sea. Information regarding the location of forage fish spawning beaches is available on the Washington Department of Fish and Wildlife's (WDFW) Forage Fish Spawning Map at https://wdfw.maps.arcgis.com/home/webmap/viewer.html?webmap=19b8f74e2d41470cbd80b1af8dedd6b3. Information regarding the location and movement of drift cells, shoreline stability, and coastal landforms, to include feeder bluffs, is available at the Washington State Department of Ecology's Coastal Atlas Map website: https://apps.ecology.wa.gov/coastalatlasmap. These maps are resources that can be used to help identify the location of forage fish spawning beaches, drift cells, and feeder bluffs; they are not a substitute for site-specific data. Information about forage fish, their spawning habitats, and spawning behavior are available through the WDFW. Additional information about the importance of these species as prey species for Endangered Species Act listed salmonids can be found on the National Marine Fisheries Service website.

RGC 12, Bank Stabilization Design Considerations
Bank stabilization activities, including maintenance activities, shall utilize living shorelines, vegetative stabilization, bioengineering, including but not limited to large woody material with intact root wads, and other soft bank stabilization approaches to the maximum practicable extent before considering hard bank stabilization methods such as bulkheads and rock revetments.

RGC 13, PCNs for Activities in Areas Where There May Be Treaty-Reserved Tribal Rights
To ensure compliance with General Condition 17, Tribal Rights, a pre-construction notification (PCN) is required for all NWPs associated with structures or fills in areas where Tribes have retained via treaty the right to fish in their usual and accustomed grounds and stations.

RGC 14, Maintenance of Existing Bank Stabilization Structures and Fills
(Applicable to NWP 3, Maintenance Activities) Maintenance of existing bank stabilization structures that expand the existing structure's footprint or dimensions either waterward, vertically, or linearly along the shoreline within the geographic jurisdiction of the U.S. Army Corps of Engineers are not eligible for NWP 3.

D. SEATTLE DISTRICT REGIONAL SPECIFIC CONDITIONS FOR THIS NWP:

NWP 14 Specific Regional Conditions:
1. A pre-construction notification must be submitted to the district engineer (see NWP general condition 32) for linear transportation project crossings in tidal waters.

E. 401 WATER QUALITY CERTIFICATION: Depending on the geographic region of the work authorized by this verification, the appropriate 401 certifying authority has made the following determinations:

Washington Department of Ecology (Ecology) (Projects in all areas except as described for the other certifying agencies listed below): General and Specific WQC Conditions

A. State General Conditions for all Nationwide Permits

In addition to all of the U.S. Army Corps of Engineers' (Corps) national and Seattle District'sregional permit conditions, the following state general Water Quality Certification (WQC) conditions **apply to all NWPs whether granted or granted with conditions** in Washington where Ecology is the certifying authority.

Due to the lack of site specific information on the discharge types, quantities, and specific locations, as well as the condition of receiving waters and the quantity of waters (including wetlands) that may be lost, Ecology may need to review the project if one of the following stategeneral conditions is triggered.

This case-by-case review may be required, and additional information regarding the project and associated discharges may be needed, to verify that the proposed project would comply with state water quality requirements and if an individual WQC is required or if the project meets this programmatic WQC.

1. **In-water construction activities**. Ecology WQC review is required for projects or activities authorized under NWPs where the project proponent has indicated on the Joint Aquatic Resource Permit Application (JARPA) question 9e that the project or activity will not meet State water quality standards, or has provided information indicating that the project or activity will cause, or may be likely to cause or contributeto an exceedance of a State water quality standard (Chapter 173-201A WAC) or sediment management standard (Chapter 173-204 WAC).

Note: In-water activities include any activity within a jurisdictional wetland and/orwaters.

2. **Projects or Activities Discharging to Impaired Waters**. Ecology WQC review is required for projects or activities that will occur in a 303(d) listed segment of a waterbody or upstream of a listed segment and may result in further exceedances of the specific listedparameter to determine if the project meets this programmatic WQC or will require individual WQC.

To determine if your project or activity is in a 303(d) listed segment of a waterbody, visitEcology's Water Quality Assessment webpage for maps and search tools.

3. **Aquatic resources requiring special protection**. Certain aquatic resources are unique and difficult-to-replace components of the aquatic environment in Washington. Activities that would affect these resources must be avoided to the greatest extent practicable. Compensating for adverse impacts to high value aquatic resources is typically difficult, prohibitively expensive, and may not be possible in some landscapesettings.

Ecology WQC review is required for projects or activities in areas identified below to determine if the project meets this programmatic WQC or will require individual WQC.

a. Activities in or affecting the following aquatic resources:

i. Wetlands with special characteristics (as defined in the Washington State Wetland Rating Systems for western and eastern Washington, Ecology Publications #14-06-029 and #14-06-030):
   - Estuarine wetlands.
   - Wetlands of High Conservation Value.
   - Bogs.
   - Old-growth forested wetlands and mature forested wetlands.
   - Wetlands in coastal lagoons.
   - Wetlands in dunal systems along the Washington coast.
   - Vernal pools.
   - Alkali wetlands.

ii. Fens, aspen-dominated wetlands, camas prairie wetlands.

iii. Category I wetlands.

iv. Category II wetlands with a habitat score ≥ 8 points.

b. Activities in or resulting in a loss of eelgrass (Zostera marina) beds.

This state general condition does not apply to the following NWPs:
NWP 20 – Response Operations for Oil and Hazardous Substances
NWP 32 – Completed Enforcement Actions
NWP 48 – Commercial Shellfish Mariculture Activities

4. **Loss of More than 300 Linear Feet of Streambed.** For any project that results in the lossof more than 300 linear feet of streambed Ecology WQC review is required to determineif the project meets this programmatic WQC or will require individual WQC.

5. **Temporary Fills.** For any project or activity with temporary fill in wetlands or other waters for more than six months Ecology WQC review is required to determine if theproject meets this programmatic WQC or will require individual WQC.

6. **Mitigation.** Project proponents are required to show that they have followed the mitigation sequence and have first avoided and minimized impacts to aquatic resourceswherever practicable. For projects requiring Ecology WQC review or an individual WQC with unavoidable impacts to aquatics resources, a mitigation plan must be provided.

   a. Wetland mitigation plans submitted for Ecology review and approval shall be based on the most current guidance provided in Wetland Mitigation in Washington State, Parts 1 and 2 (available on Ecology's website) and shall, at aminimum, include the following:

      i. A description of the measures taken to avoid and minimize impacts to wetlands and other waters of the U.S.

      ii. The nature of the proposed impacts (i.e., acreage of wetlands and functions lost or degraded).

      iii. The rationale for the mitigation site that was selected.

      iv. The goals and objectives of the compensatory mitigation project.

v. How the mitigation project will be accomplished, including construction sequencing, best management practices to protect water quality, proposed performance standards for measuring success and the proposed buffer widths.

vi. How it will be maintained and monitored to assess progress toward goals and objectives. Monitoring will generally be required for a minimum of five years. For forested and scrub-shrub wetlands, 10 years of monitoring will often be necessary.

vii. How the compensatory mitigation site will be legally protected for the long term.

Refer to Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Ecology Publication #06-06-011b) and Selecting Wetland Mitigation Sites Using a Watershed Approach (Ecology Publications #09-06-032 (Western Washington) and #10-06-007 (Eastern Washington)) for guidance on selecting suitable mitigation sites and developing mitigation plans.

Ecology encourages the use of alternative mitigation approaches, includingcredit/debit methodology, advance mitigation, and other programmatic approaches such as mitigation banks and in-lieu fee programs. If you are interested in proposing use of an alternative mitigation approach, consult with the appropriate Ecology regional staff person. Information on alternative mitigation approaches is available on Ecology's website.

b. Mitigation for other aquatic resource impacts will be determined on a case-by-case basis.

7. **Stormwater Pollution Prevention**. All projects involving land disturbance or impervious surfaces must implement stormwater pollution prevention or control measures to avoiddischarge of pollutants in stormwater runoff to waters.

a. For land disturbances during construction, the applicant must obtain and implement permits (e.g., Construction Stormwater General Permit) where required and follow Ecology's current stormwater manual.

b. Following construction, prevention or treatment of on-going stormwater runofffrom impervious surfaces shall be provided.

Ecology's Stormwater Management and Design Manuals and stormwater permitinformation are available on Ecology's website.

8. **Application**. For projects or activities that will require Ecology WQC review, or anindividual WQC, project proponents must provide Ecology with a JARPA or the equivalent information, along with the documentation provided to the Corps, as described in national general condition 32, Pre-Construction Notification (PCN), including, where applicable:

a. A description of the project, including site plans, project purpose, direct and indirect adverse environmental effects the project discharge(s) would cause, best management practices (BMPs), and proposed means to monitor the discharge(s).

b. List of all federal, state or local agency authorizations required to be used for anypart of the proposed project or any related activity.

c. Drawings indicating the OHWM, delineation of special aquatic sites, and other waters of

the state. Wetland delineations must be prepared in accordance with thecurrent method required by the Corps and shall include Ecology's Wetland Rating form. Wetland Rating forms are subject to review and verification by Ecology staff.

Guidance for determining the OHWM is available on Ecology's website.

d. A statement describing how the mitigation requirement will be satisfied. A conceptual or detailed mitigation or restoration plan may be submitted. See stategeneral condition 5.

e. Other applicable requirements of Corps NWP general condition 32, Corps regional conditions, or notification conditions of the applicable NWP.

Ecology **grants with conditions Water Quality Certification** (WQC) for this NWP provided that Ecology individual WQC review is not required per the state general conditions (see above) and the following conditions:

1. Ecology WQC review is required if the project or activity is in a known contaminatedor cleanup site to determine if an individual WQC is required or the project meets the programmatic WQC for this NWP.

2. Ecology individual WQC is required for projects or activities authorized under thisNWP if:
   a. The project or activity impacts more than 1/3 acre of waters; or

   b. This NWP is authorized in conjunction with any other NWP.

Environmental Protection Agency (EPA) (on Tribal Lands where Tribes Do Not Have Treatment in a Similar Manner as a State and Lands with Exclusive Federal Jurisdiction in Washington):

On behalf of the 28 tribes that do not have treatment in a similar manner as a state and for exclusive federal jurisdiction lands located within the state of Washington, EPA Region 10 has determined that CWA Section 401 WQC for the following proposed NWPs is granted with conditions. EPA Region 10 has determined that any discharge authorized under the following proposed NWPs will comply with water quality requirements, as defined at 40 C.F.R. § 121.1(n), subject to the following conditions pursuant to CWA Section 401(d).

General Conditions:

EPA General Condition 1 – Aquatic Resources of Special Concern

Activities resulting in a point source discharge in the following types of aquatic resources of special concern shall request an individual project-specific CWA Section 401 WQC: mature forested wetlands; bogs, fens and other peatlands; vernal pools; aspen-dominated wetlands; alkali wetlands; camas prairie wetlands; wetlands in dunal systems along the Oregon or Washington Coast; riffle-pool complexes of streams; marine or estuarine mud-flats; salt marshes; marine waters with native eelgrass or kelp beds; or marine nearshore forage fish habitat. To identify whether a project would occur in any of these aquatic resources of special concern, project proponents shall use existing and available information to identify the location and type of resources, including using the U.S. Fish and Wildlife Service's online digital National Wetland Inventory maps, identifying project location on topographical maps, and/or providing on-site determinations as required by the Corps. When a project requires a Pre-Construction Notification (PCN) to the Corps, project proponents shall work with the Corps to identify whether the project is in any of these specific aquatic resources of special concern.

EPA General Condition 2 – Soil Erosion and Sediment Controls

Turbidity shall not exceed background turbidity by more than 50 Nephelometric Turbidity Units (NTU) above background instantaneously or more than 25 NTU above background for more than ten consecutive days.[8] Projects or activities that are expected to exceed these levels require an individual project-specific CWA Section 401 WQC.

The turbidity standard shall be met at the following distances from the discharge:

Wetted Stream Width at Discharge Point	**Approximate Downstream Point to Sample to Determine Compliance**
Up to 30 feet	50 feet
>30 to 100 feet	100 feet
>100 feet to 200 feet	200 feet
>200 feet	300 feet
Lake, Pond, Reservoir	Lesser of 100 feet or maximum surface distance

For Marine Water	**Point of Compliance for Temporary Area of Mixing**
Estuaries or Marine Waters	Radius of 150 feet from the activity causing the turbidity exceedance

Measures to prevent and/or reduce turbidity shall be implemented and monitored prior to, during, and after construction. Turbidity monitoring shall be done at the point of compliance within 24 hours of a precipitation event of 0.25 inches or greater. During monitoring and maintenance, if turbidity limits are exceeded or if measures are identified as ineffective, then additional measures shall be taken to come into compliance and EPA shall be notified within 48 hours of the exceedance or measure failure.

EPA General Condition 3 - Compliance with Stormwater Pollution Prevention and the National Pollutant Discharge Elimination System Permit Provisions

For land disturbances during construction that 1) disturb one or more acres of land, or 2) will disturb less than one acre of land but are part of a common plan of development or sale that will ultimately disturb one or more acres of land, the permittee shall obtain and implement Construction Stormwater General Permit requirements,[9] including:

1. The permittee shall develop a Stormwater Pollution Prevention Plan (SWPPP)[10] and submit it to EPA Region 10 and appropriate Corps District; and
2. Following construction, prevention or treatment of ongoing stormwater runoff from impervious surfaces that includes soil infiltration shall be implemented.

EPA General Condition 4 – Projects or Activities Discharging to Impaired Waters

Projects or activities are not authorized under the NWPs if the project will involve point source discharges into an active channel (e.g., flowing or open waters) of a water of the U.S. listed as impaired under CWA Section 303(d) and/or if the waterbody has an approved Total Maximum Daily Load (TMDL) and the discharge may result in further exceedance of a specific parameter (e.g., total suspended solids, dissolved oxygen, temperature) for which the waterbody is listed or has an approved TMDL. The current lists of impaired waters of the U.S. under CWA Section 303(d) and waters of the U.S. for which a TMDL has been approved are available on EPA Region 10's web site at: https://www.epa.gov/tmdl/impaired-waters-and-tmdls-region-10.

EPA General Condition 5 – Notice to EPA

All project proponents shall provide notice to EPA Region 10 prior to commencing construction activities authorized by a NWP. This will provide EPA Region 10 with the opportunity to inspect the activity for the purposes of determining whether any discharge from the proposed project will violate this CWA Section 401 WQC. Where the Corps requires a PCN for an applicable NWP, the project proponent shall also provide the PCN to EPA Region 10. EPA Region 10 will provide written notification to the project proponent if the proposed project will violate the water quality certification of the NWP.

EPA General Condition 6 – Unsuitable Materials

The project proponent shall not use wood products treated with leachable chemical components (e.g., copper, arsenic, zinc, creosote, chromium, chloride, fluoride, pentachlorophenol), which result in a discharge to waters of the U.S., unless the wood products meet the following criteria:

1. Wood preservatives and their application shall be in compliance with EPA label requirements and criteria of approved EPA Registration Documents under the Federal Insecticide, Fungicide, and Rodenticide Act;
2. Use of chemically treated wood products shall follow the Western Wood Preservatives Institute (WWPI) guidelines and BMPs to minimize the preservative migrating from treated wood into the aquatic environment;
3. For new or replacement wood structures, the wood shall be sealed with non-toxic products such as water-based silica or soy-based water repellants or sealers to prevent or limit leaching. Acceptable alternatives to chemically treated wood include untreated wood, steel (painted, unpainted or coated with epoxy petroleum compound or plastic), concrete and plastic lumber; and
4. All removal of chemically treated wood products (including pilings) shall follow the most recent "EPA Region 10 Best Management Practices for Piling Removal and Placement in Washington State."

EPA NWP Specific Conditions:

NWP 14 is conditionally certified, subject to the general conditions listed above, except that an individual project-specific WQC is required for projects authorized under one or more NWP by the Corps that result(s) in:

1. Greater than 1/10 acre of impacts to waters of the U.S.; or
2. Greater than 300 linear feet of impacts to waters of the U.S.

Specific Tribes with Certifying Authority (Projects in Specific Tribal Areas):
WQC was issued by the Swinomish Indian Tribal Community. WQC was waived by the Confederated Tribes of the Chehalis Reservation and Colville Indian Reservation, Kalispel Tribe of Indians, Port Gamble S'Klallam Tribe, Quinault Indian Nation, and the Spokane Tribe of Indians. WQC was denied by the Lummi Nation, Makah Tribe, Puyallup Tribe of Indians, and the Tulalip Tribes; therefore, individual WQC is required from these tribes.

F. COASTAL ZONE MANAGEMENT ACT (CZMA) CONSISTENCY RESPONSE FOR THIS NWP:

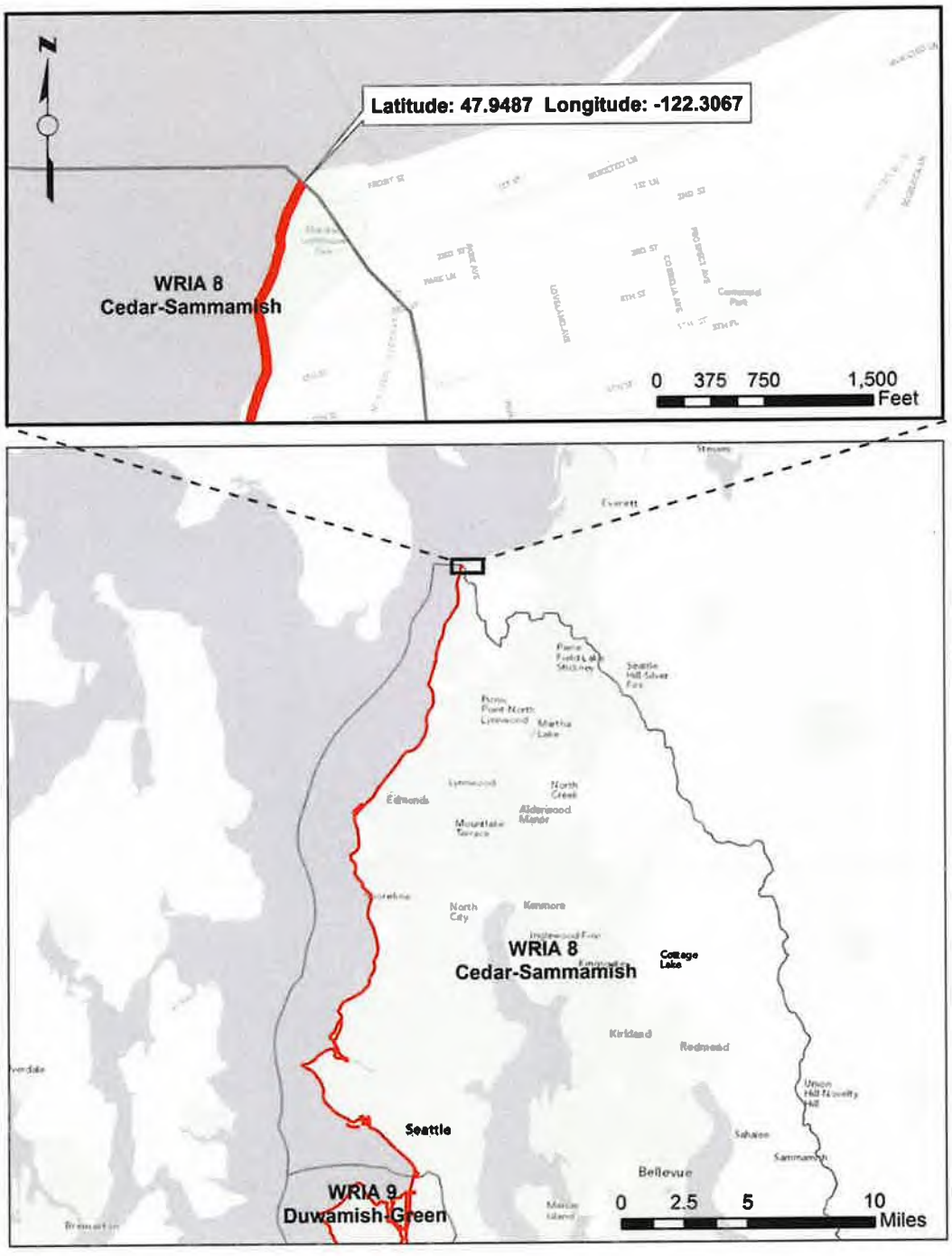
Ecology's determination is that they concur with conditions that this NWP is consistent with CZMA.

CZM Federal Consistency Response – Concur with Conditions.

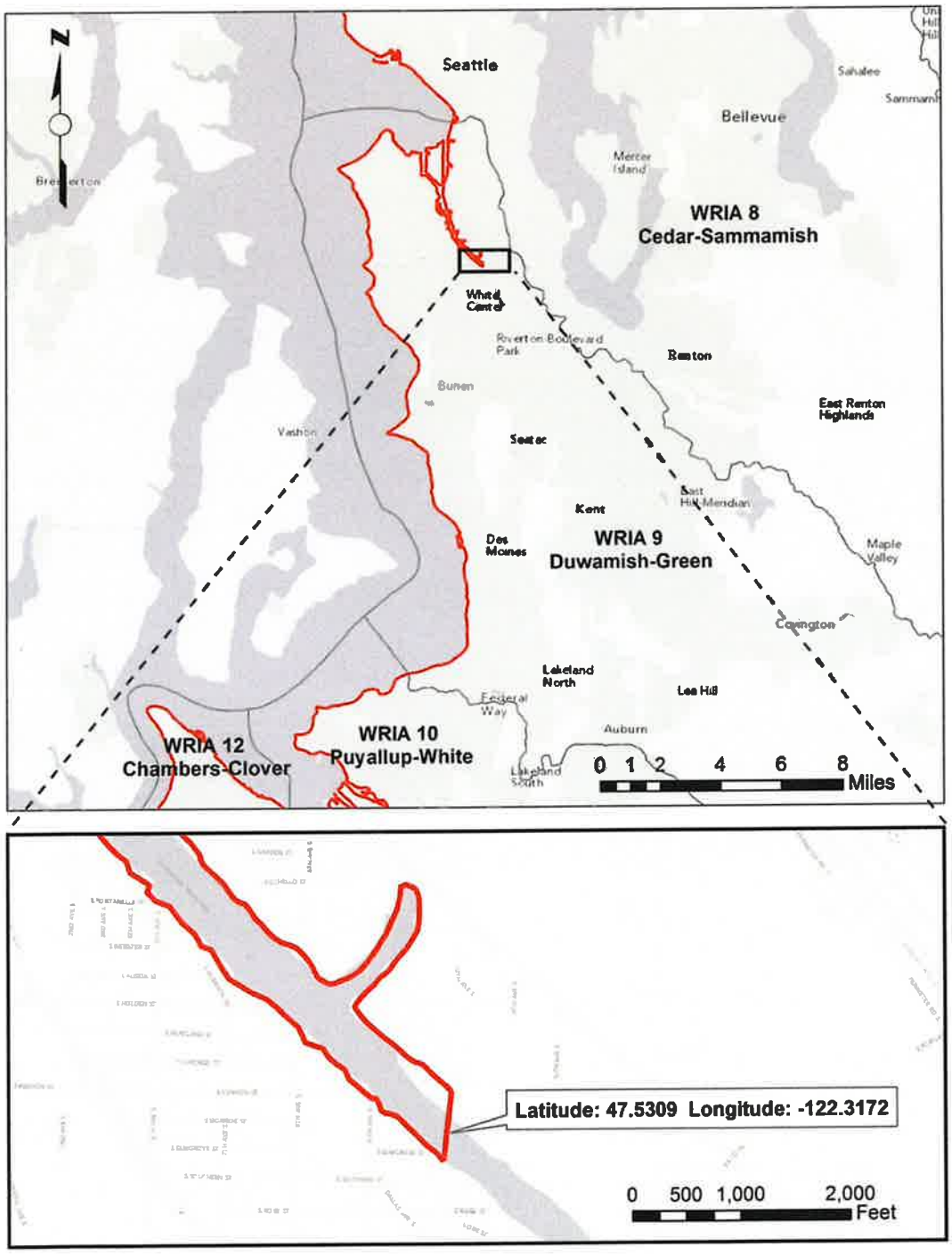
1. A CZM Federal Consistency Decision is required for projects or activities under this NWP if a State 401 Water Quality Certification is required.
2. A CZM Federal Consistency Decision is required for projects or activities under this NWP if they are pre-empting local or state permit requirements necessary to demonstrate compliance with

the CZMP's enforceable policies.

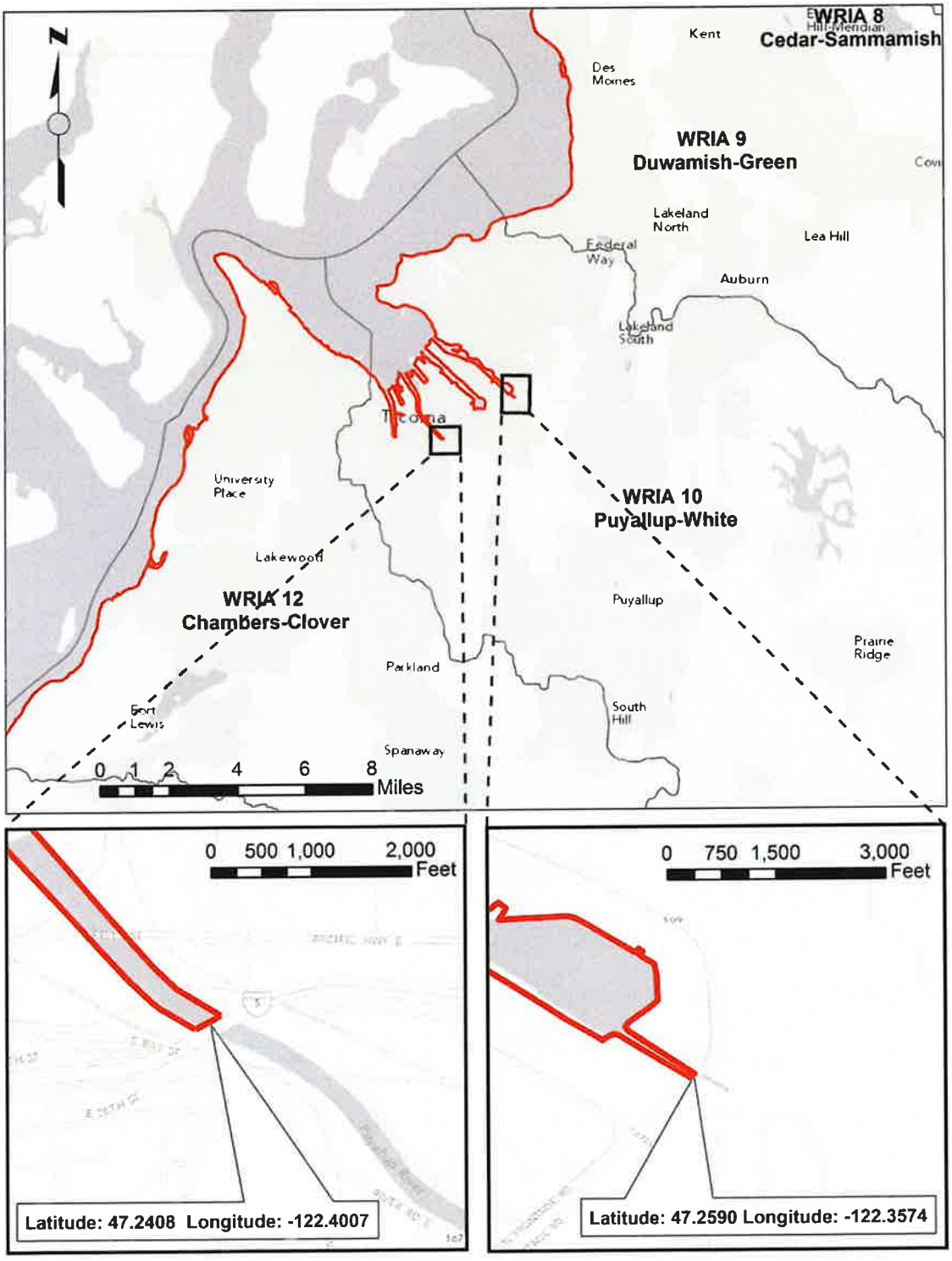
Seattle District Regional General Conditions - Figures
Figure 1: RGC 3 - WRIAs 8, 9, 10, 11, and 12
a. WRIA 8



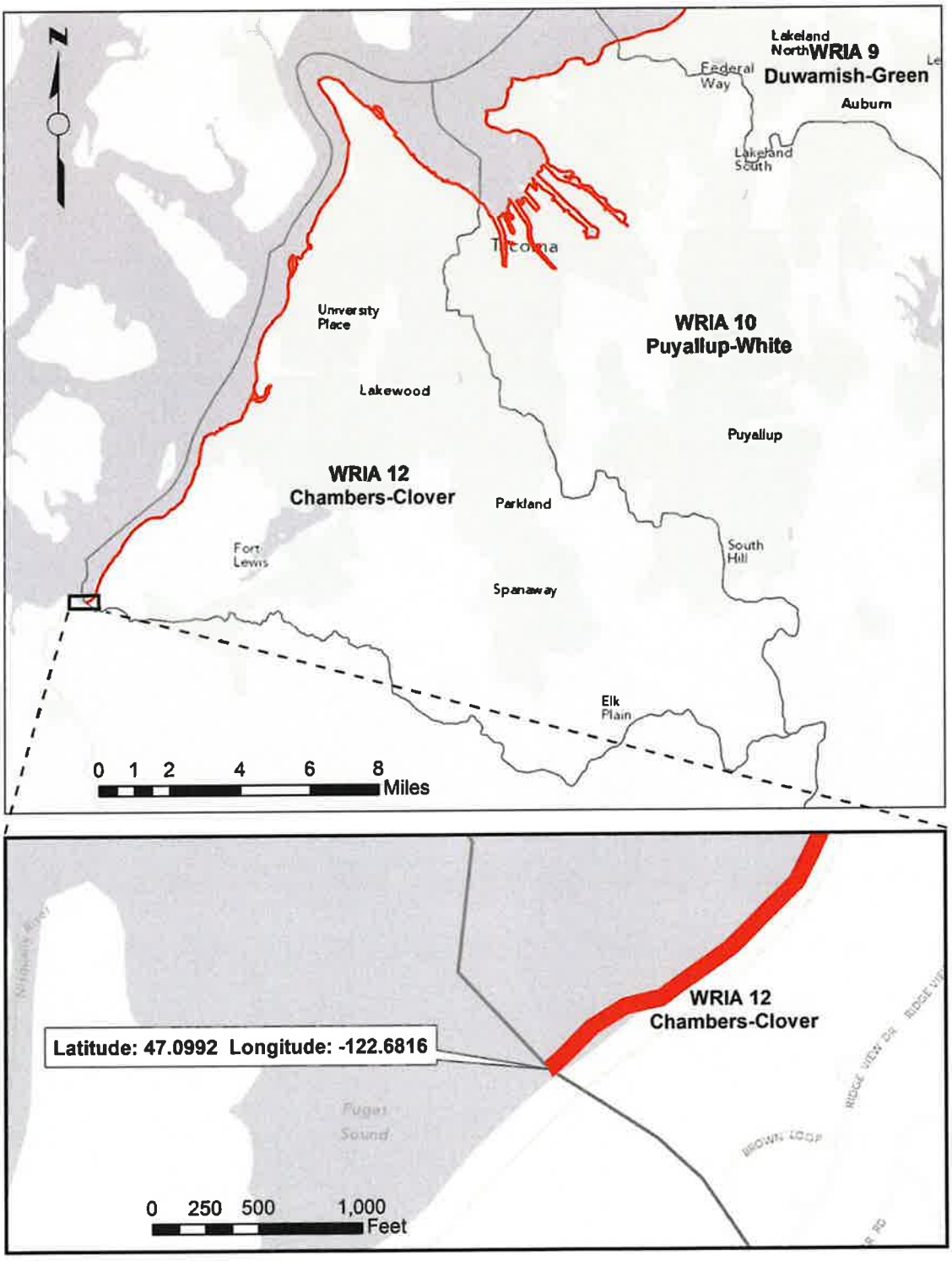
b. WRIA 9


N
Seattle
Bellevue
Mercer Island
WRIA 8
Cedar-Sammamish
White Center
Renton
Burien
East Renton Highlands
Tukwila
Kent
Des Moines
WRIA 9
Duwamish-Green
Maple Valley
Covington
Lakeland North
Lea Hill
Federal Way
Auburn
WRIA 12
Chambers-Clover
WRIA 10
Puyallup-White
0 1 2 4 6 8 Miles
Latitude: 47.5309 Longitude: -122.3172
0 500 1,000 2,000 Feet

c. WRIA 10


N
WRIA 8
Cedar-Sammamish
Kent
Des Moines
WRIA 9
Duwamish-Green
Lakeland North
Lea Hill
Federal Way
Auburn
Lakeland South
Tacoma
University Place
WRIA 10
Puyallup-White
Lakewood
WRIA 12
Chambers-Clover
Puyallup
Prairie Ridge
Parkland
Fort Lewis
South Hill
Spanaway
0 1 2 4 6 8 Miles
0 500 1,000 2,000 Feet
Latitude: 47.2408 Longitude: -122.4007
0 750 1,500 3,000 Feet
Latitude: 47.2590 Longitude: -122.3574

d. WRIA 12


N
Lakeland North
WRIA 9
Duwamish-Green
Federal Way
Auburn
Lakeland South
Tacoma
University Place
WRIA 10
Puyallup-White
Lakewood
Puyallup
WRIA 12
Chambers-Clover
Parkland
South Hill
Fort Lewis
Spanaway
Elk Plain
0 1 2 4 6 8
Miles
WRIA 12
Chambers-Clover
Latitude: 47.0992 Longitude: -122.6816
Puget Sound
0 250 500 1,000
Feet

e. WRIA 11

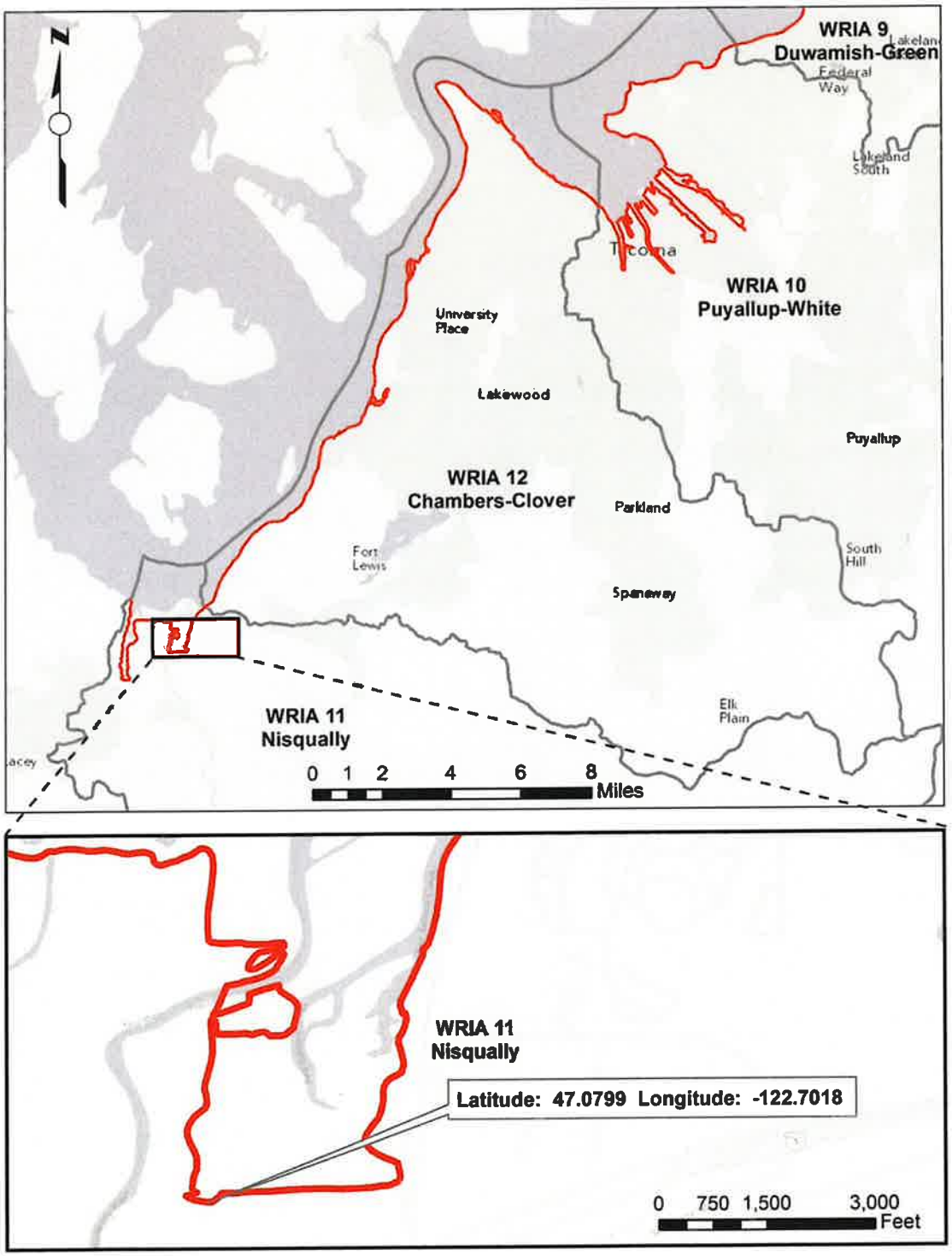
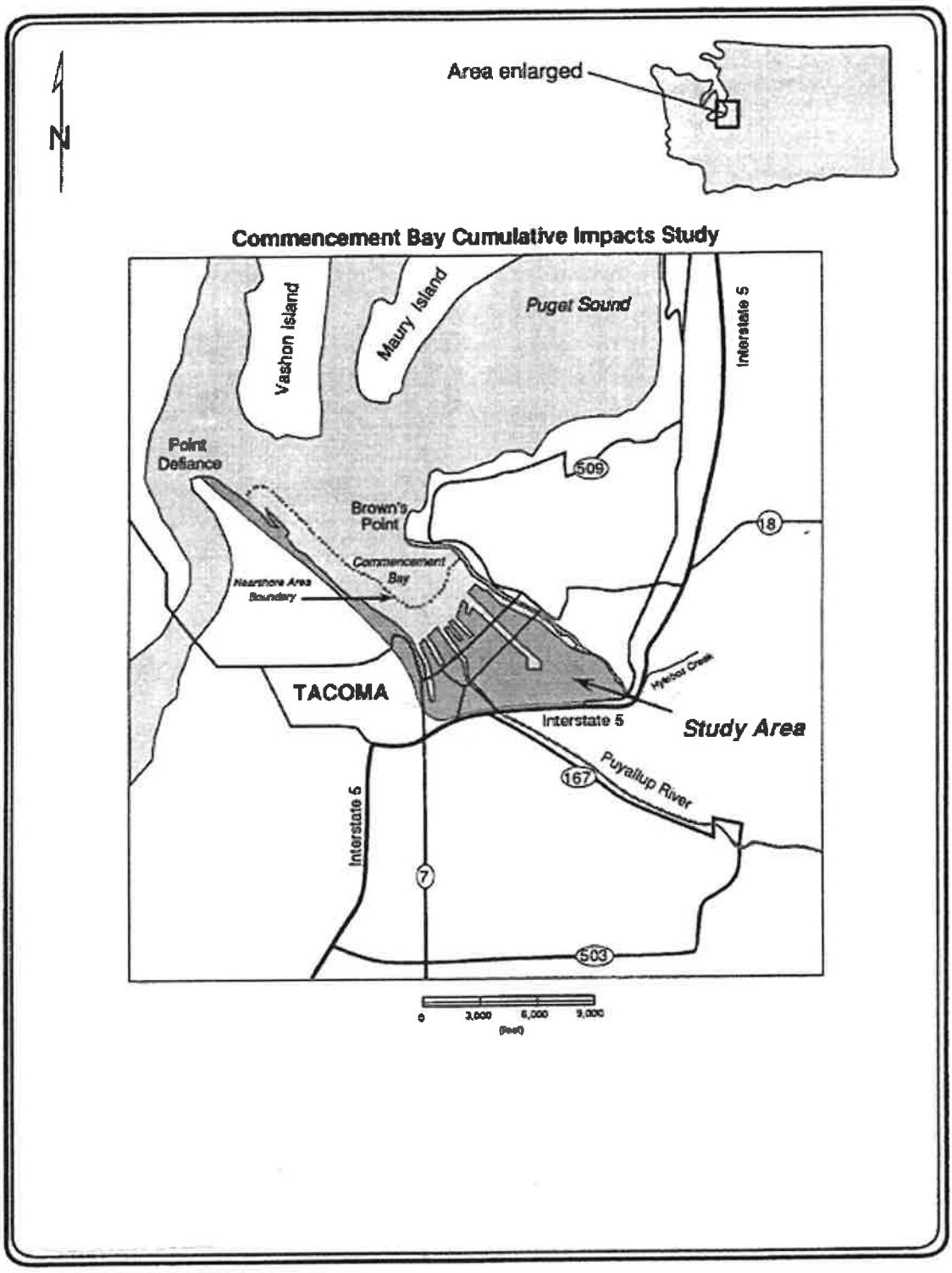

N
WRIA 9
Duwamish-Green
Federal Way
Lakeland South
Tacoma
WRIA 10
Puyallup-White
University Place
Lakewood
Puyallup
WRIA 12
Chambers-Clover
Parkland
Fort Lewis
South Hill
Spanaway
Elk Plain
WRIA 11
Nisqually
0 1 2 4 6 8
Miles
WRIA 11
Nisqually
Latitude: 47.0799 Longitude: -122.7018
0 750 1,500 3,000
Feet

Figure 2. RGC 4 - Commencement Bay Study Area



NOTE:
Quadrangle topographic map from USGS.

VICINITY MAP
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road
Kalama, WA

PROPOSED: In-Water Work
IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 1 **OF** 13
DATE: 1/5/24

PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

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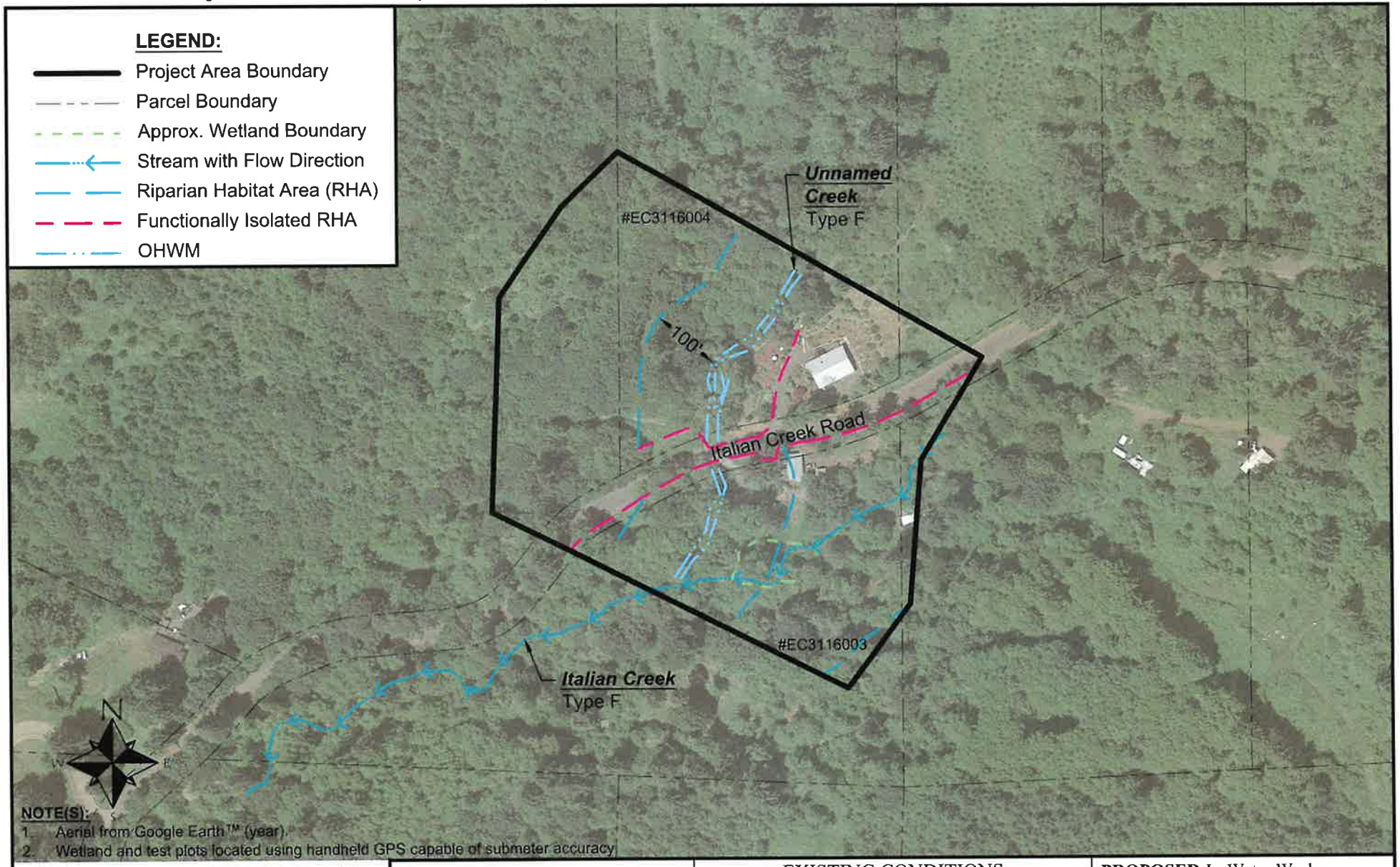

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SCALE IN FEET

Ecological Land Services

1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

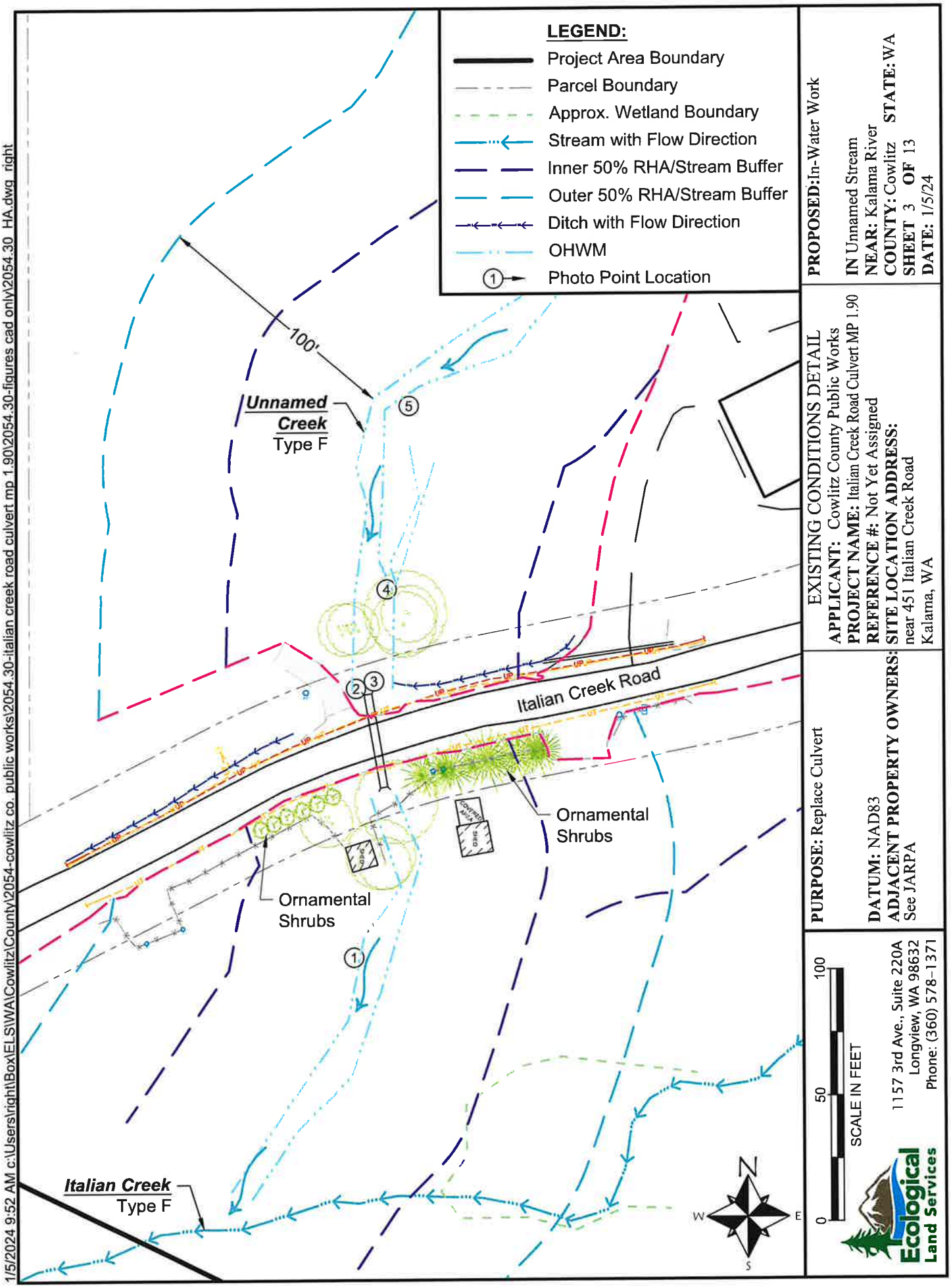
EXISTING CONDITIONS

APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 2 **OF** 13
DATE: 1/5/24

NWS-2024-525


LEGEND:
Project Area Boundary
Parcel Boundary
Approx. Wetland Boundary
Stream with Flow Direction
Inner 50% RHA/Stream Buffer
Outer 50% RHA/Stream Buffer
Ditch with Flow Direction
OHWM
Photo Point Location
100'
Unnamed Creek
Type F
Italian Creek Road
Ornamental Shrubs
Ornamental Shrubs
Italian Creek
Type F
1
2
3
4
5
N
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E
S
0
50
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SCALE IN FEET
PROPOSED: In-Water Work
IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz STATE: WA
SHEET 3 OF 13
DATE: 1/5/24
EXISTING CONDITIONS DETAIL
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS:
near 451 Italian Creek Road
Kalama, WA
PURPOSE: Replace Culvert
DATUM: NAD83
ADJACENT PROPERTY OWNERS:
See JARPA
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371
Ecological Land Services
1/5/2024 9:52 AM c:\Users\right\Box\ELS\WA\Cowlitz\County\2054-cowlitz co. public works\2054.30-italian creek road culvert mp 1.90\2054.30-figures cad only\2054.30 HA.dwg right

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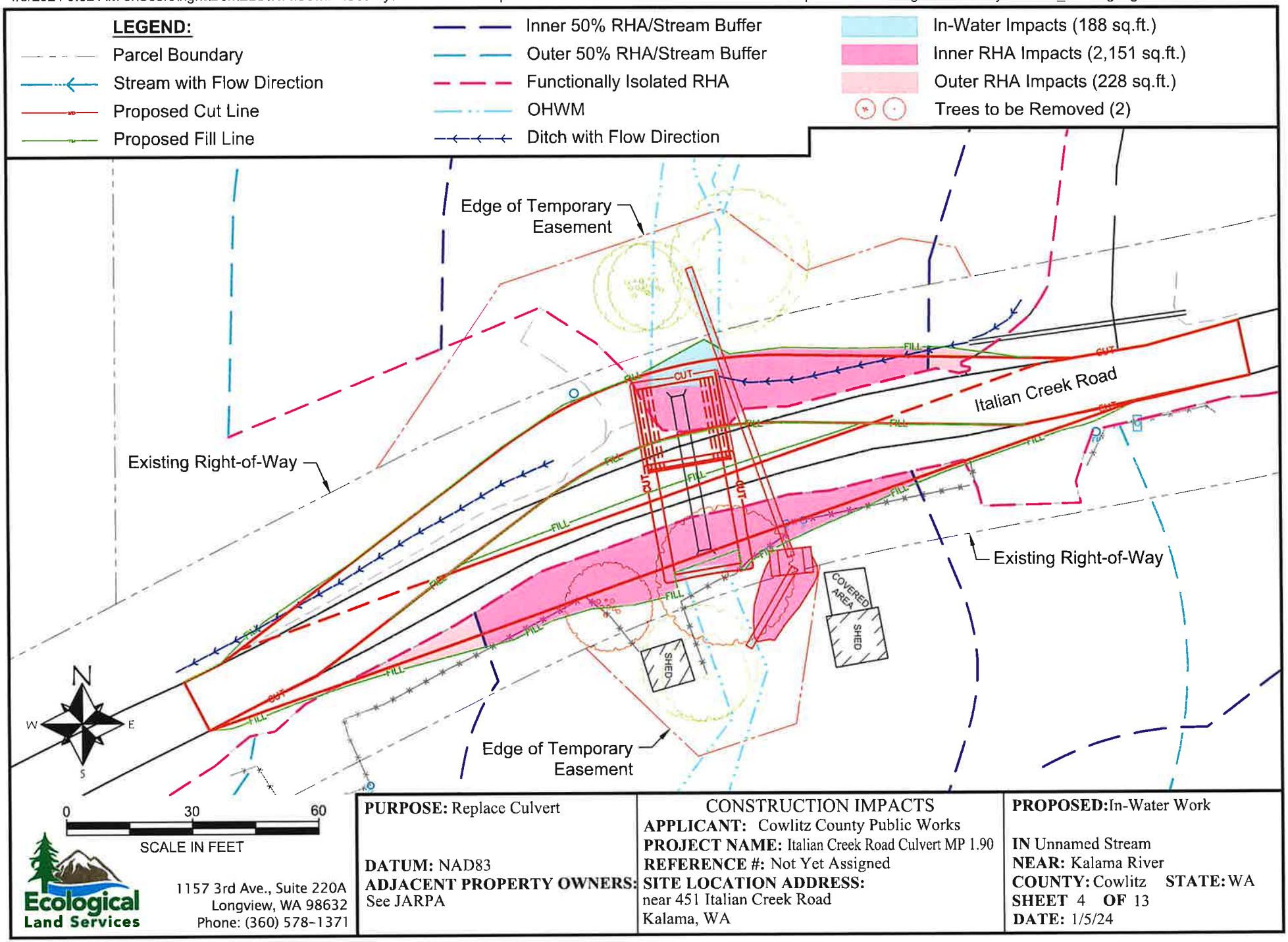

Ecological Land Services

1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

CONSTRUCTION IMPACTS

APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 4 **OF** 13
DATE: 1/5/24

NWS-2024-525

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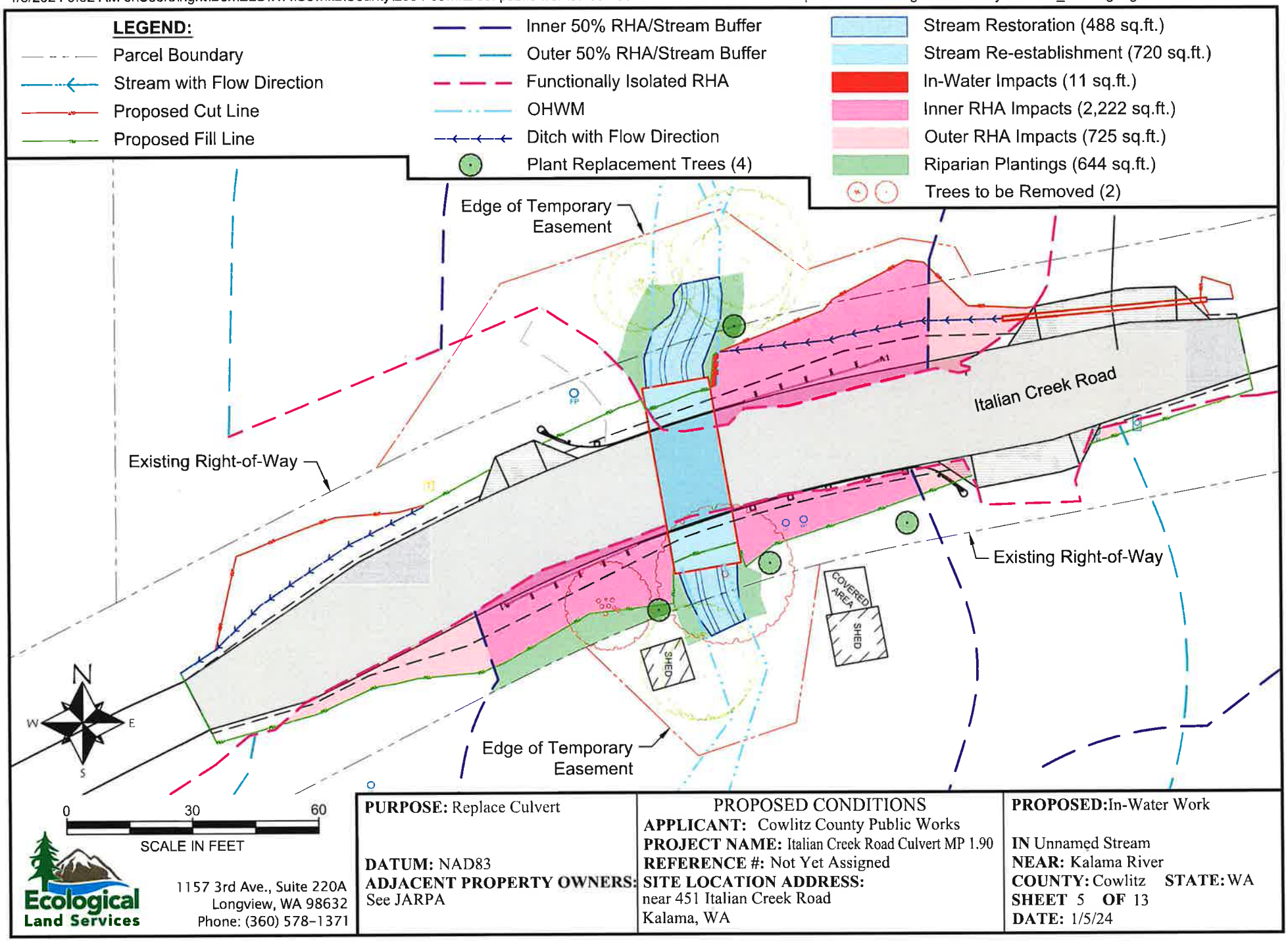


Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

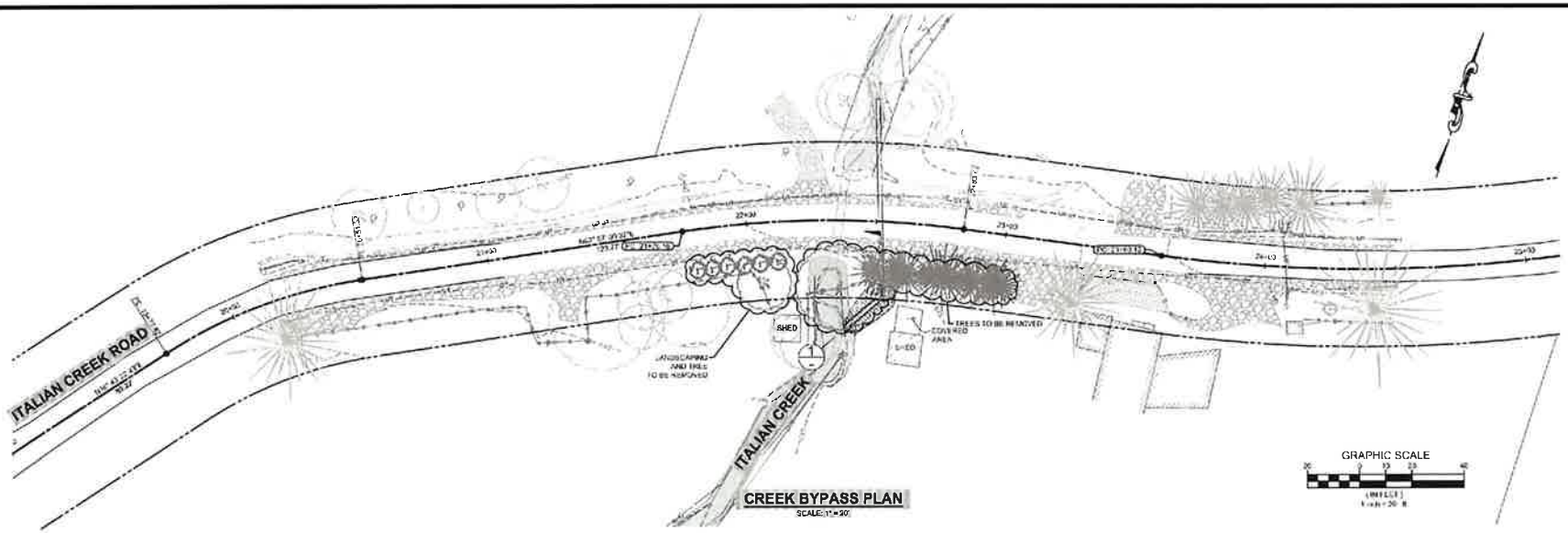
DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED CONDITIONS
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

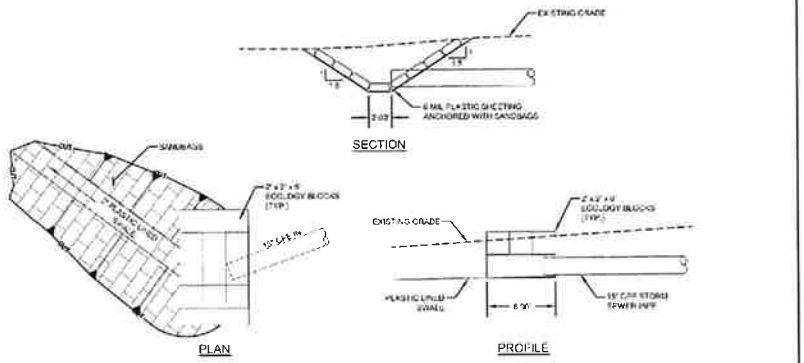
PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 5 **OF** 13
DATE: 1/5/24

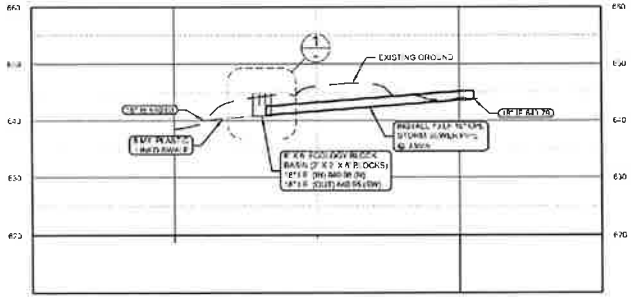
NWS-2024-525



CREEK BYPASS PLAN



BASIN DETAIL 1



CREEK BYPASS PROFILE

R.E.M. PROJECT MANAGER 5/25/2023 DATE	HORIZ SCALE: AS NOTED VERT SCALE: AS NOTED	COWLITZ COUNTY WASHINGTON	DEPARTMENT OF PUBLIC WORKS 1600 13TH AVENUE SOUTH KELSO, WASHINGTON 98626	NOTE: SCALES SHOWN ARE FOR FULL SIZE (24"X36") PLAN SHEETS ONLY. SCALES FOR HALF SIZE PLAN SHEETS ARE APPROXIMATELY ONE HALF SCALE.	SEC. 31, T 6N, R 1E	ITALIAN CREEK ROAD CULVERT REPLACEMENT CREEK BYPASS PLAN, PROFILE AND DETAILS	SHEET 2 OF 6
D.J.D. DRAWN BY 5/25/2023 DATE							
S.E.E. CHECKED BY 5/25/2023 DATE							

PRELIMINARY-30%

SCALE AS SHOWN

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

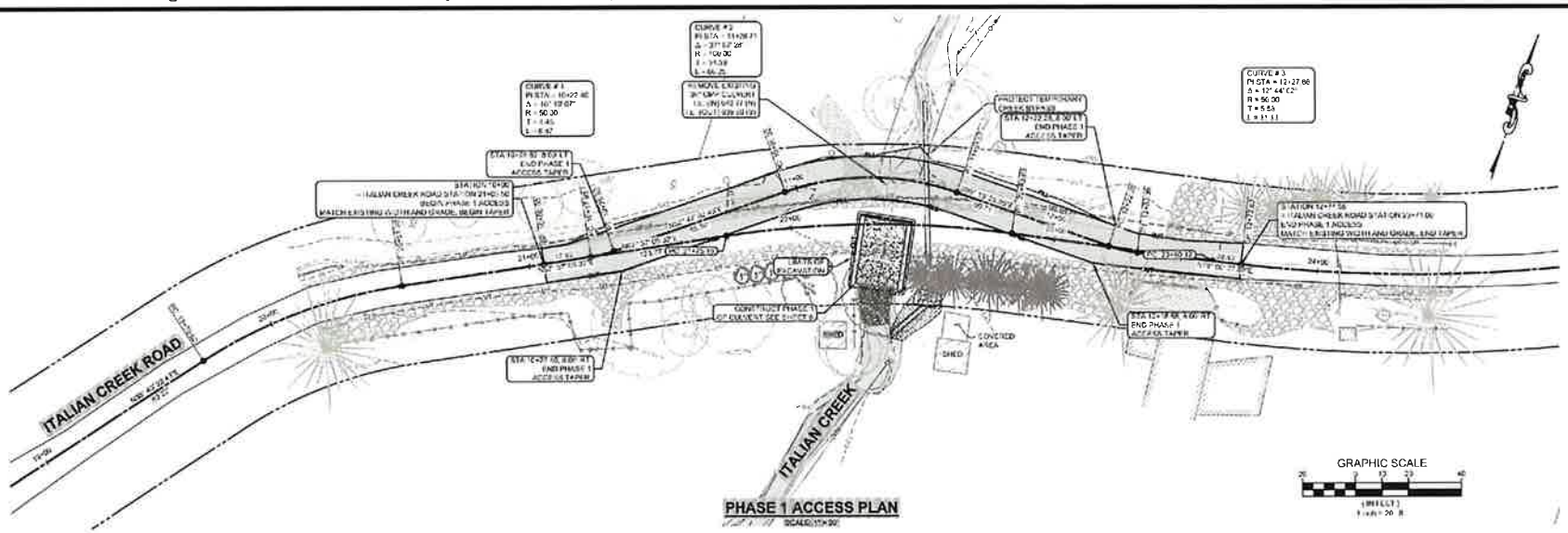
DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

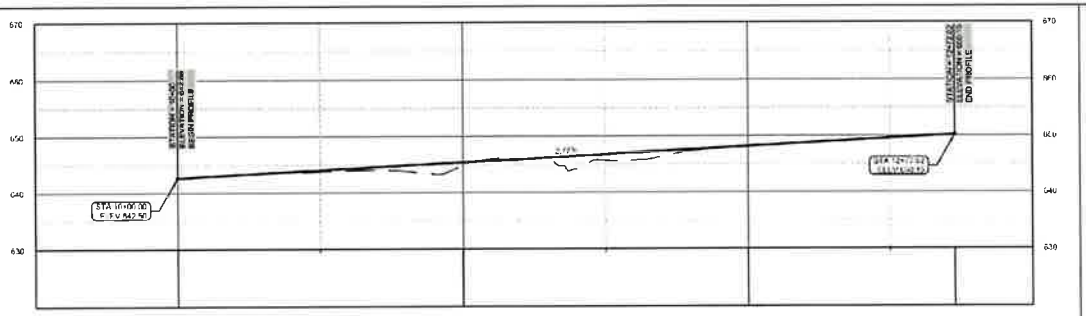
PROPOSED CONDITIONS CREEK BYPASS PLAN, PROFILE & DETAILS
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 6 **OF** 13
DATE: 1/5/24

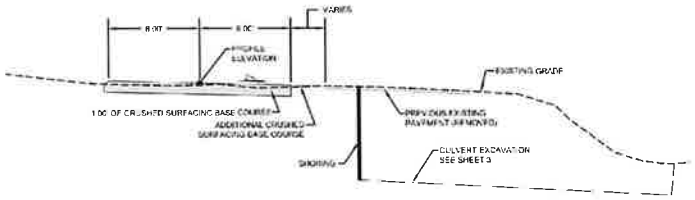


PHASE 1 ACCESS PLAN



PHASE 1 ACCESS PROFILE

PHASE 1 ACCESS SUPERELEVATION



PHASE 1 TYPICAL ACCESS SECTION

R.F.M. PROJECT MANAGER 9/26/2023 DATE	HORIZ SCALE: AS NOTED VERT SCALE: AS NOTED PROJECT ID: 4323 ROAD NO: 41000 COMPUTER FILE: 1323 Phase 1 Temp Const.dwg	COWLITZ COUNTY WASHINGTON	DEPARTMENT OF PUBLIC WORKS 1600 13TH AVENUE SOUTH KELSO, WASHINGTON 98626	NOTE: SCALES SHOWN ARE FOR FULL SIZE (24"x36") PLAN SHEETS ONLY. SCALES FOR HALF SIZE PLAN SHEETS ARE APPROXIMATELY ONE HALF SCALE.		SEC. 31, T 6N, R 1E	ITALIAN CREEK ROAD CULVERT REPLACEMENT PHASE 1 ACCESS PLAN, PROFILE AND TYPICAL ACCESS SECTION	SHEET 3 OF 6
D.J.G. 9/26/2023 DRAWN BY DATE								
S.E.E. 9/26/2023 CHECKED BY DATE								

PRELIMINARY-30%

SCALE AS SHOWN

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

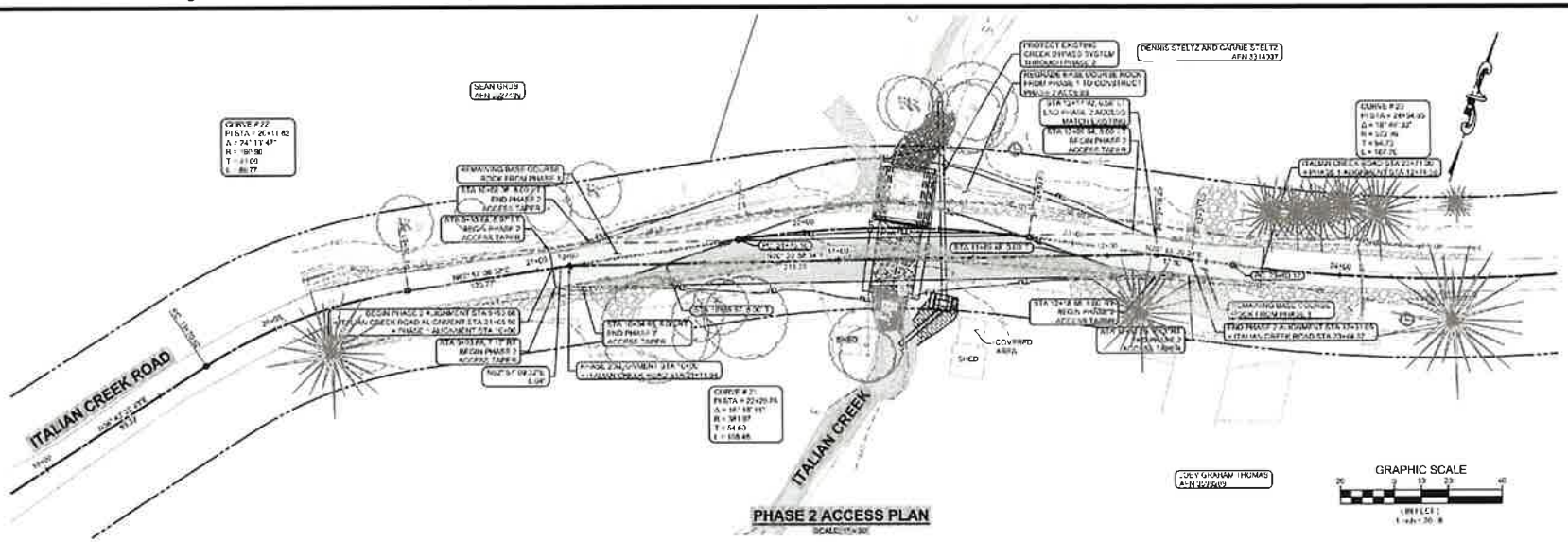
PROPOSED CONDITIONS PHASE 1 ACCESS PLAN, PROFILE & SECTION

APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 7 **OF** 13
DATE: 1/5/24

1/5/2024 9:52 AM c:\Users\right\Box\ELS\WA\Cowlitz\County\2054-cowlitz co. public works\2054.30-italian creek road culvert mp 1.90\2054.30-figures cad only\2054.30_HA.dwg right



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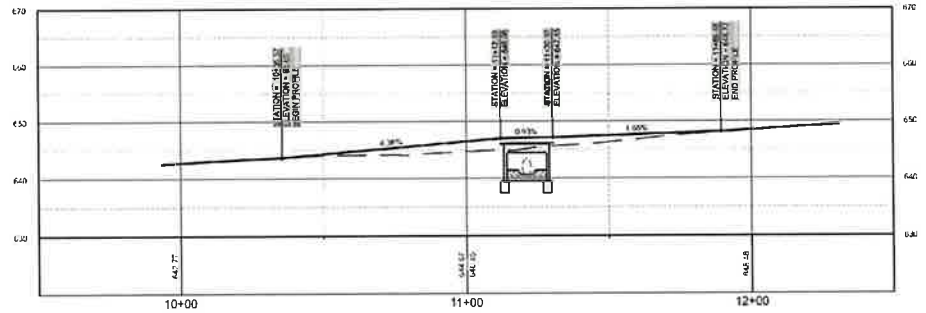
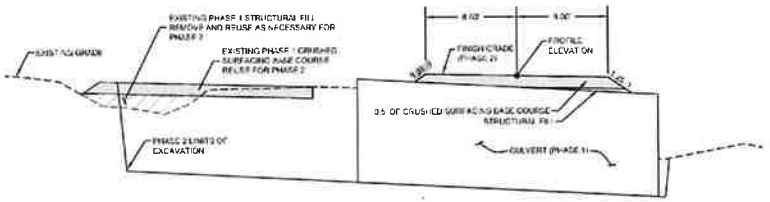


PHASE 2 ACCESS PROFILE

PHASE 2 ACCESS TYPICAL SECTION



PHASE 2 ACCESS TYPICAL SECTION OVER CULVERT

R F M PROJECT MANAGER 5/25/2023 DATE	HORIZ SCALE: AS NOTED VERT SCALE: AS NOTED PROJECT ID: 1933 ROAD NO: 4900 COMPUTER FILE: 1933 Phase 2 Temp Const.dwg	COWLITZ COUNTY WASHINGTON	DEPARTMENT OF PUBLIC WORKS 1600 13TH AVENUE SOUTH KELSO, WASHINGTON 98626	NOTE: SCALES SHOWN ARE FOR FULL SIZE (24"x36") PLAN SHEETS ONLY. SCALES FOR HALF SIZE PLAN SHEETS ARE APPROXIMATELY ONE-HALF SCALE.	SEC. 31, T 6N, R 1E	ITALIAN CREEK ROAD CULVERT REPLACEMENT PHASE 2 ACCESS PLAN, PROFILE AND TYPICAL SECTIONS	SHEET 4 OF 6
B J D DRAWN BY 5/25/2023 DATE							
S E E CHECKED BY 5/25/2023 DATE							

PRELIMINARY-30%

SCALE AS SHOWN

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

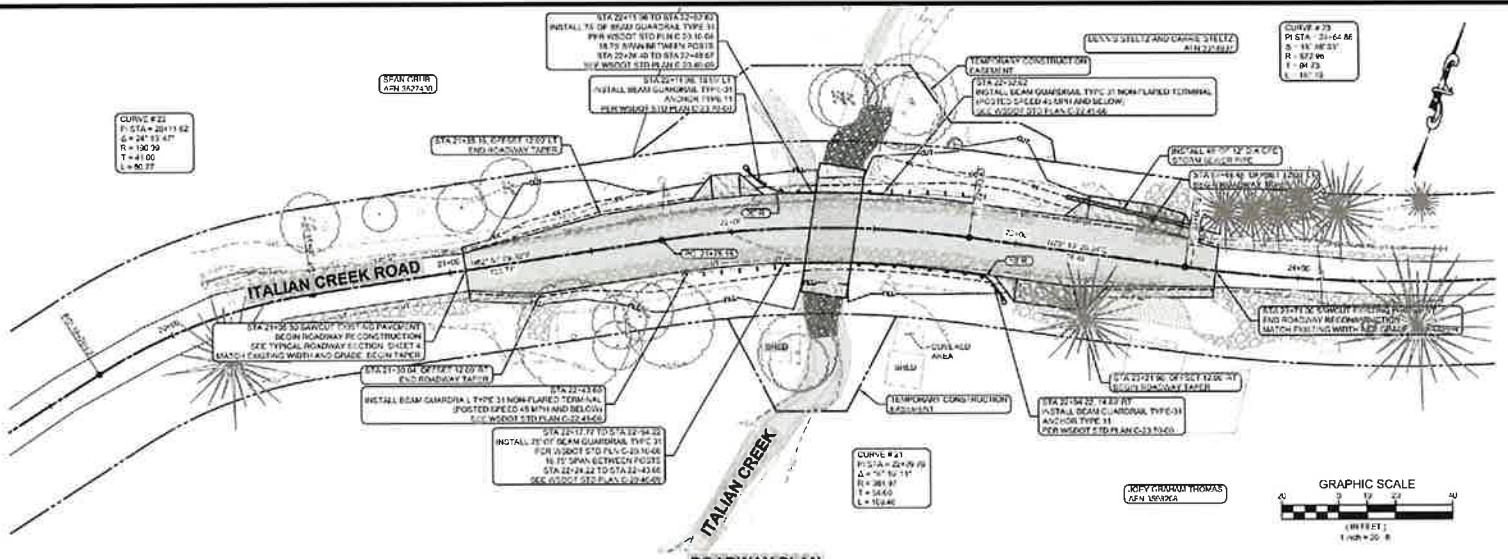
PROPOSED CONDITIONS PHASE 2 ACCESS PLAN, PROFILE & SECTION

APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

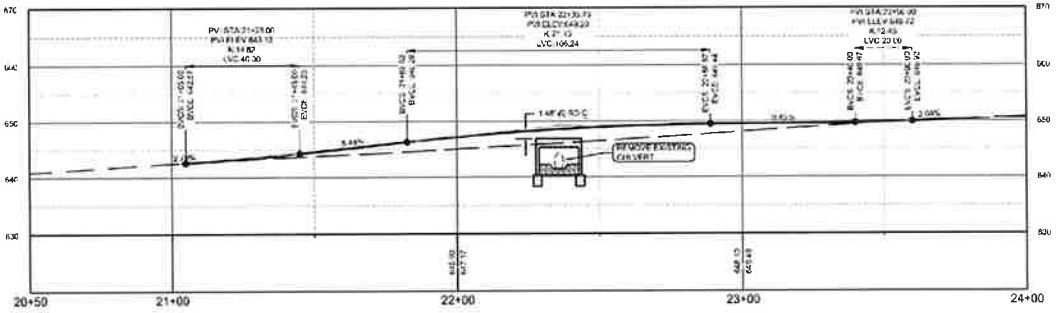
PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 8 **OF** 13
DATE: 1/5/24

NWS-2024-525

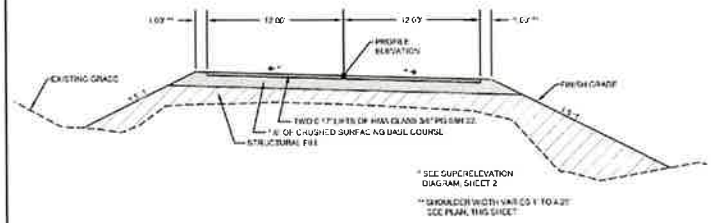


ROADWAY PLAN



ROADWAY PROFILE

SUPER ELEVATION



TYPICAL ROADWAY SECTION

R.F.M. PROJECT MANAGER 5/25/2023 DATE	HORIZ SCALE: AS NOTED VERT SCALE: AS NOTED	COWLITZ COUNTY WASHINGTON	DEPARTMENT OF PUBLIC WORKS 1600 13TH AVENUE SOUTH KELSO, WASHINGTON 98626	NOTE: SCALES SHOWN ARE FOR FULL SIZE (24"x36") PLAN SHEETS ONLY. SCALES FOR HALF SIZE PLAN SHEETS ARE APPROXIMATELY ONE HALF SCALE.	SEC. 31, T 6N, R 1E	ITALIAN CREEK ROAD CULVERT REPLACEMENT FINAL ROADWAY PLAN, PROFILE AND TYPICAL ROADWAY SECTION	SHEET 5 OF 6
D.J.B. DRAWN BY 5/25/2023 DATE	PROJECT ID: 1333 ROAD NO: 41490						
S.E.E. CHECKED BY 5/25/2023 DATE	COMPUTER FILE: 1333 Design.dwg						

PRELIMINARY-30%

SCALE AS SHOWN

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED CONDITIONS FINAL ROADWAY PLAN, PROFILE & SECTION
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 9 **OF** 13
DATE: 1/5/24

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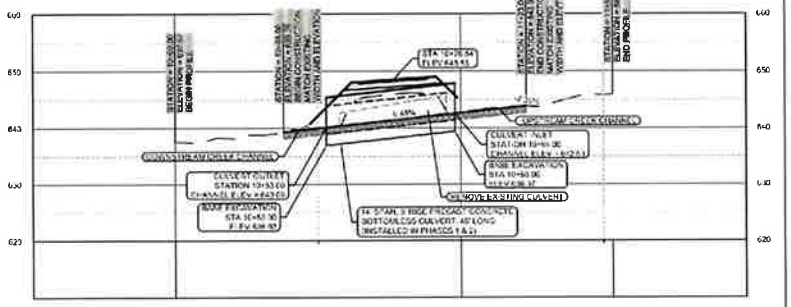
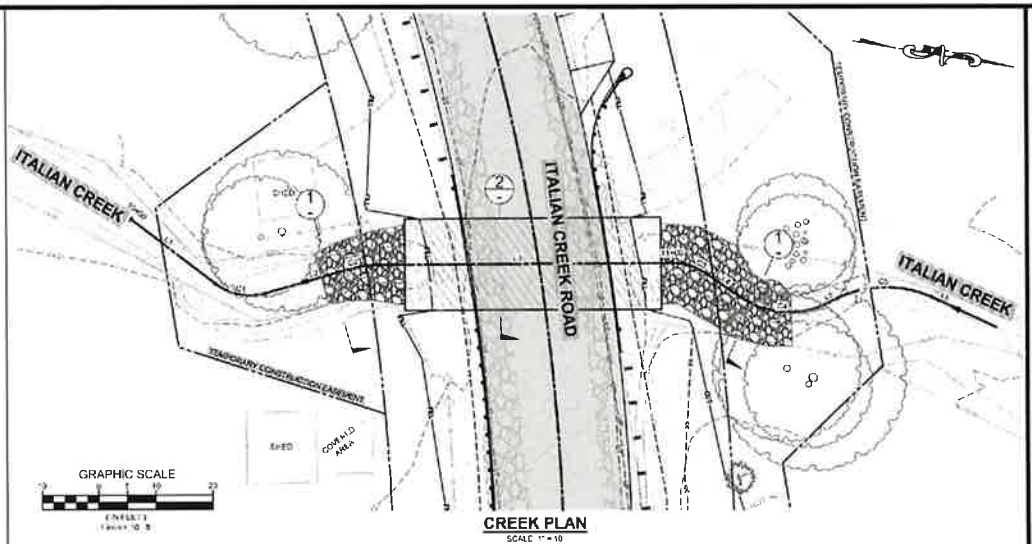


CREEK PROFILE



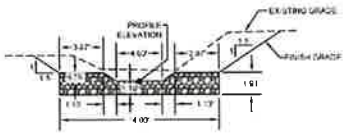
CREEK PLAN

CURVE TABLE: ITALIAN CREEK CENTERLINE ALIGNMENT

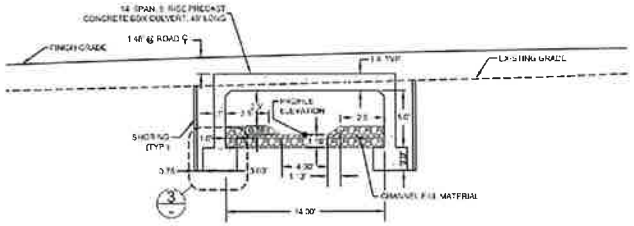
CURVE #	RADIUS	LENGTH	CHORD DIRECTION	START POINT	END POINT	R	Δ
C1	10.00	9.53	S31°26'49.68"E	(1076340.06,2639907.01)	(1076329.77,2639921.40)	10+23.51	054°36'05"
C2	20.00	6.43	S17°38'48.78"W	(1076329.77,2639921.40)	(1076330.15,2639926.61)	10+44.82	015°20'54"
C3	10.00	8.67	S71°12'37.26"E	(1076329.48,2639977.46)	(1076336.08,2639982.38)	11+00.28	050°03'57"
C4	10.00	15.68	N81°51'18.72"W	(1076323.41,2639960.07)	(1076332.14,2639965.00)	11+22.20	089°49'08"
C5	20.00	12.57	N18°16'36.18"W	(1076330.89,2639968.99)	(1076327.02,2639982.11)	11+48.56	036°00'00"

LINE TABLE: ITALIAN CREEK CENTERLINE

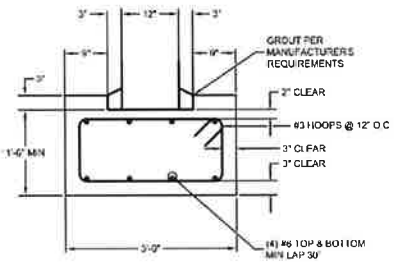
LINE #	BEARING	DISTANCE
L1	N29°04'34"E	78.09'
L2	N25°18'10"W	15.09'
L3	N67°59'47"W	34.38'
L4	N45°00'10"E	7.34'
L5	N34°59'50"W	3.00'
L6	N34°59'50"E	4.47'



1 TYPICAL CREEK SECTION



2 TYPICAL CULVERT SECTION



3 FOOTING

R.E.M. PROJECT MANAGER 6/25/2023 DATE
D.J.D. DRAWN BY 6/25/2023 DATE
S.C.C. CHECKED BY 6/25/2023 DATE

HORIZ SCALE: AS NOTED
VERT SCALE: AS NOTED
PROJECT ID: 1333
ROAD NO: 44000
COMPUTER FILE: 1333 Design.dwg

COWLITZ COUNTY WASHINGTON

DEPARTMENT OF PUBLIC WORKS
1600 13TH AVENUE SOUTH
KELSO, WASHINGTON 98626

NOTE: SCALES SHOWN ARE FOR FULL SIZE (24"x36") PLAN SHEETS ONLY. SCALES FOR HALF SIZE PLAN SHEETS ARE APPROXIMATELY ONE HALF SCALE

SEC. 31, T 6N, R 1E

ITALIAN CREEK ROAD
CULVERT REPLACEMENT
CREEK PLAN, PROFILE AND TYPICAL CREEK SECTIONS

SHEET 6 OF 6

PRELIMINARY 30%

SCALE AS SHOWN

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED CONDITIONS CREEK PLAN, PROFILE & SECTIONS
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS:
near 451 Italian Creek Road
Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 10 **OF** 13
DATE: 1/5/24

NWS-2024-525

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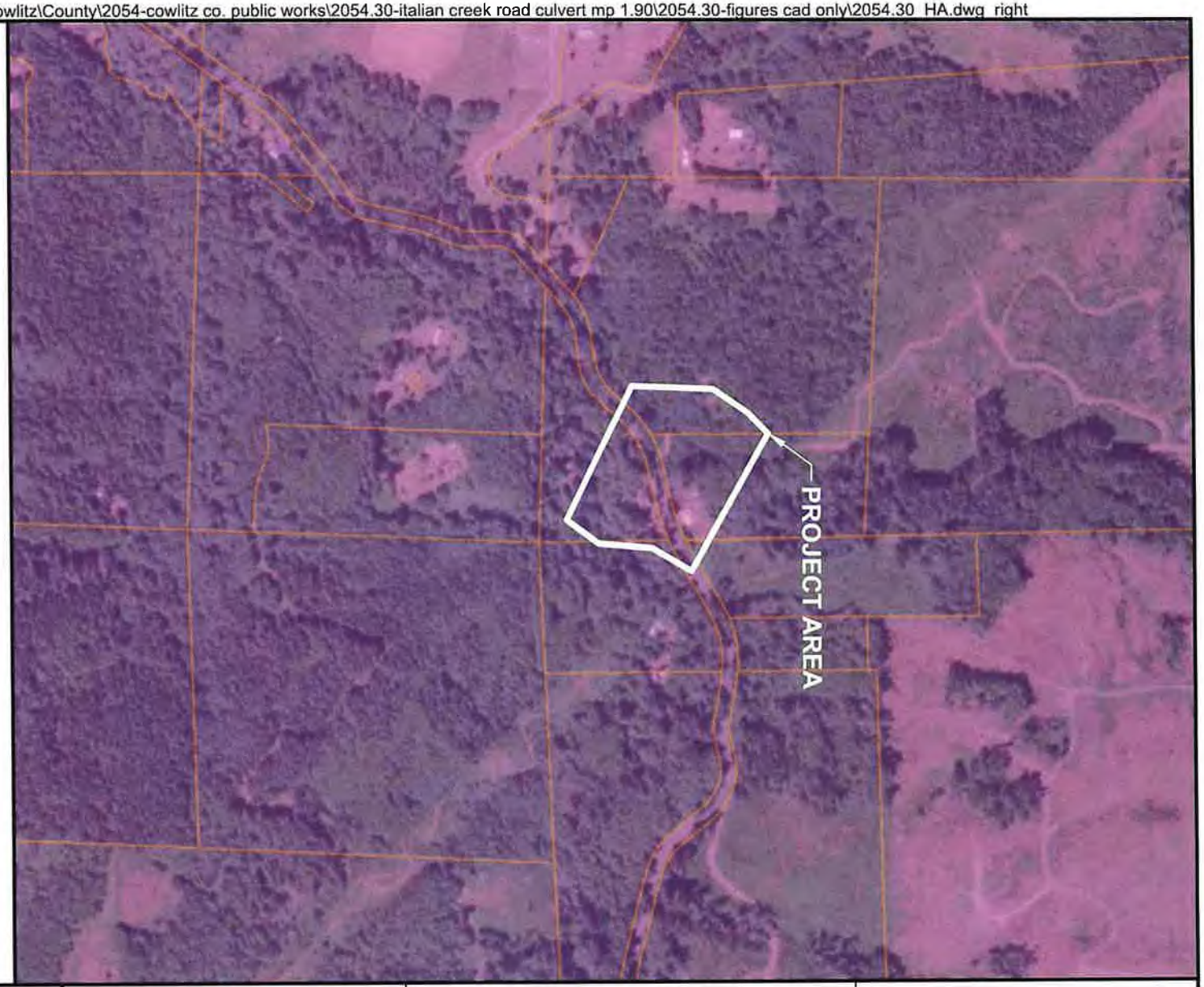


LEGEND:

Rocky Mountain elk, *Cervus elaphus nelsoni*, Occurrence

Northern Spotted Owl, *Strix occidentalis*, Occurrence

NOTE: Map provided on-line by Washington State Department of Fish & Wildlife at web address: *http://apps.wdfw.wa.gov/phsontheweb/*

0 600 1200

SCALE IN FEET

Ecological Land Services

1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

WDFW PRIORITY HABITAT AND SPECIES

APPLICANT: Cowlitz County Public Works

PROJECT NAME: Italian Creek Road Culvert MP 1.90

REFERENCE #: Not Yet Assigned

SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream

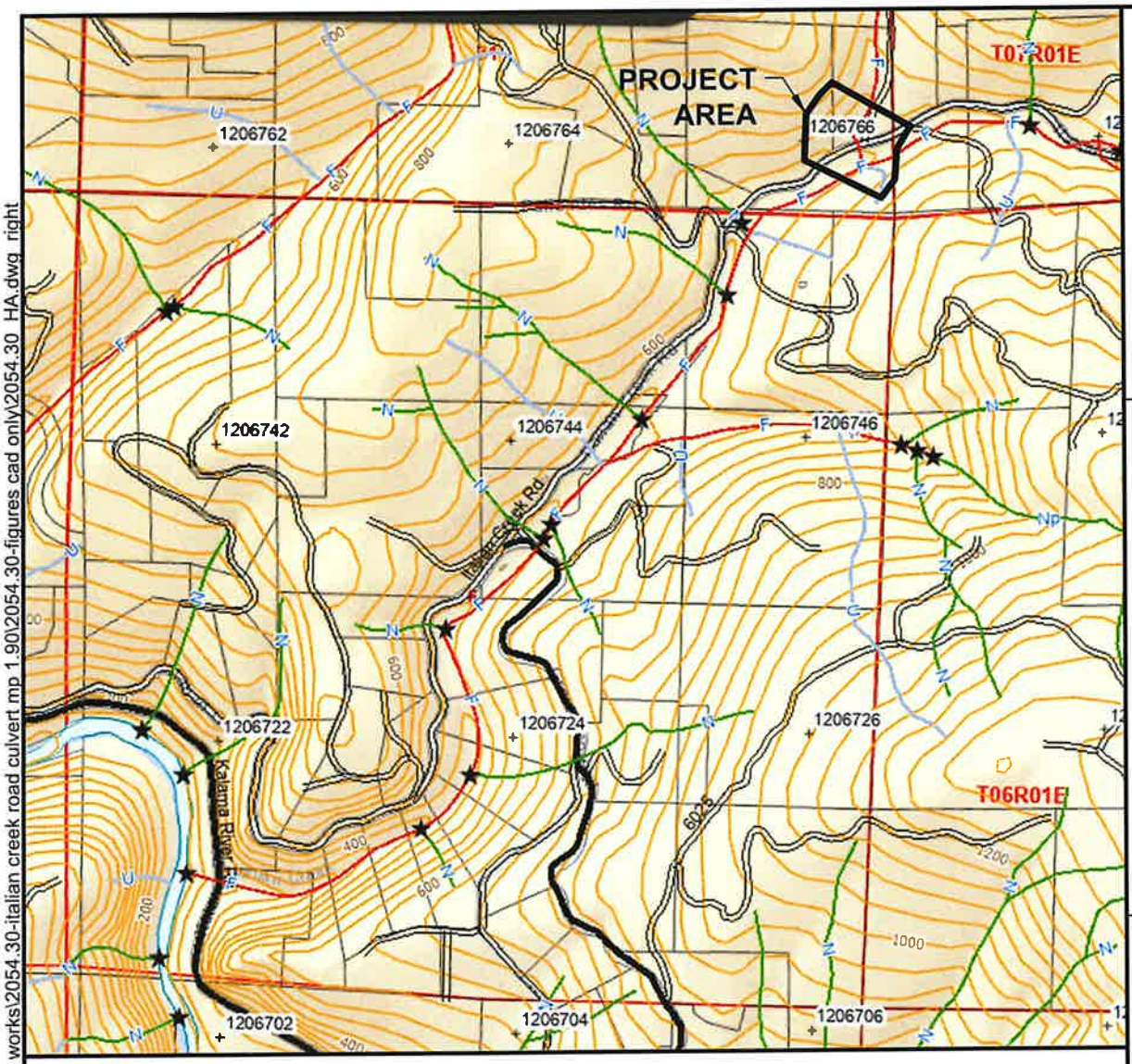
NEAR: Kalama River

COUNTY: Cowlitz **STATE:** WA

SHEET 11 **OF** 13

DATE: 1/5/24

NWS-2024-525



PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 12 **OF** 13
DATE: 1/5/24

WDNR STREAM TYPE MAP
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road
Kalama, WA

PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

LEGEND:

- Site Boundary

40-foot Contours
- 40 ft. Contours

Fire Shutdown Zones
- Fire Shutdown Zones

Water Bodies (FP)
- Other Impoundments
- Open Freshwater
- Subject to Inundation
- Glacier / Snowfield
- Wet Area
- Open Saltwater
- Artificial Feature

SOSEA Boundaries
- SOSEA Boundaries

Water Courses (FP)
- Type S
- Type F
- Type N, Np, Ns
- U, unknown
- X, non-typed per WAC 222-16

WRIA Boundaries
- WRIA Boundaries

WAUs
- WAUs

Trails & Railroads (FP)
- Trail
- Railroad
- Railroad Grade

DNR Roads
- Paved Road
- Unpaved Road/Surface Unknown

Unpaved Road/Surface Unknown
- Water Type Breaks (FP)

Public Land Survey Sections
- Public Land Survey Sections

Public Land Survey Townships
- Public Land Survey Townships

NOTE: Map provided on-line by Washington State Department of Natural Resources at web address: *http://fortress.wa.gov/dnr/app1/Fpars/viewer.htm*

N W E S

0 1200 2400 SCALE IN FEET

1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

Ecological Land Services

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NWS-2024-525

LEGEND:

- Site Boundary

WRIAs & WAUs

- WRIA Boundaries
- Watershed Administrative Units

Fish Distribution

- All SWIFD Listed Species

NOTE:
Map provided on-line by WA State Dept of Fish & Wildlife at web address: https://geo.nwifc.org/swifd/

N W E S

0 2500 5000
SCALE IN FEET

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83

ADJACENT PROPERTY OWNERS:
See JARPA

STATEWIDE WA INTEGRATED FISH DISTRIBUTION (SWIFD)

APPLICANT: Cowlitz County Public Works

PROJECT NAME: Italian Creek Road Culvert MP 1.90

REFERENCE #: Not Yet Assigned

SITE LOCATION ADDRESS:
near 451 Italian Creek Road
Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 13 **OF** 13
DATE: 1/5/24

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NWS-2024-525

US Army Corps of Engineers ®
Seattle District

CERTIFICATE OF COMPLIANCE WITH DEPARTMENT OF THE ARMY PERMIT

Permit Number: NWS-_____

Name of Permittee: _____

Date of Issuance: _____

Upon completion of the activity authorized by this permit, please check the applicable boxes below, date and sign this certification, and return it to the following email or mailing address:

NWS.Compliance@usace.army.mil OR

Department of the Army
U.S. Army Corps of Engineers Seattle District, Regulatory Branch
4735 E. Marginal Way S, Bldg 1202
Seattle, Washington 98134-2388

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with the terms and conditions of your authorization, your permit may be subject to suspension, modification, or revocation.

☐ The work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of this permit.

Date work complete: _____

☐ Photographs and as-built drawings of the authorized work (OPTIONAL, unless required as a Special Condition of the permit).

☐ If applicable, the mitigation required (e.g., construction and plantings) in the above-referenced permit has been completed in accordance with the terms and conditions of this permit (not including future monitoring).

Date work complete: _____ ☐N/A

☐ Photographs and as-built drawings of the mitigation (OPTIONAL, unless required as a Special Condition of the permit).

☐ Provide phone number/email for scheduling site visits (must have legal authority to grant property access).

Printed Name: _____

Phone Number: _____ Email: _____

Printed Name: _____

Signature: _____

Date: _____

APPENDIX E

CRITICAL AREA PERMIT FROM COWLITZ COUNTY DEPARTMENT OF BUILDING AND PLANNING

DEPARTMENT OF BUILDING AND PLANNING

207 Fourth Avenue North
Kelso, WA 98626
TEL (360) 577-3052
FAX (360) 414-5550
www.co.cowlitz.wa.us/buildplan

Board of County Commissioners
Arne Mortensen District 1
Dennis P. Weber District 2
Richard R. Dahl District 3

CRITICAL AREAS PERMIT
Permit Number 24-06-3127

Applicant/ Owner: *Roger Maurer (Cowlitz County Public Works)*
1600 13th Ave S
Kelso WA 98626

Associated Permits: Planning Clearance (24-06-3127)

Project Address: Within County Right-of-Way. Adjoining properties: 451 Italian Creek Rd, 450 Italian Creek Rd, and Parcel #EC3116001

Parcel Number(s): EC3116004, EC3116003, EC3116001

Legal Description: Within Section 31, Township 6 North, Range 1 East, Willamette Meridian

Impacted Critical Area(s): Riparian Habitat Area

Mitigation Required: Compliance with the conditions outlined herein and recommendations outlined within the Habitat Assessment prepared by Ecological Land Services, dated February 16, 2024.

Associated Water Body: Unnamed Type F Stream; tributary to Italian Creek, a Type F Stream

Development Type: Culvert Replacement and Road Reconstruction

Staff Reviewer: Jenny Conde, Associate Environmental Planner

Issuance Date: July 24th, 2024

Project Description:
The applicant, Roger Maurer, on behalf of Cowlitz County Public Works, proposes replacement of an undersized, failing culvert with an appropriately sized culvert, widening of Italian Creek Road, and reconstruction of the streambed adjacent to the new proposed culvert. Project will take place at MP 1.90 on Italian Creek Road. The existing undersized culvert was damaged during

previous flood events and will be replaced with a 14-ft span, 5-ft rise, and 45-ft long precast concrete bottomless box culvert. Project work will occur within an unnamed fish-bearing stream, tributary to Italian Creek, a Type F Stream. A small depressional wetland is located along the unnamed Type F Stream to the south of the project area. A Level II Habitat Assessment and Mitigation Plan, prepared by Ecological Land Services has been submitted in support of this application. Two (2) native trees will be removed within the inner RHA of the Type F Stream to allow for stream bypass installation and culvert replacement. Additionally, thirteen (13) native trees are proposed to be removed during construction. Lost vegetation will be replanted with native species. No work will occur within the 100-year floodplain. Project will be constructed during the in-water work window specified by the Washington Department of Fish & Wildlife for no longer than 60 days. Cowlitz County issued a SEPA Mitigated Determination of Non-Significance on July 8th, 2024, with a 14-day comment period ending July 22nd, 2024. Comments were received from the Washington Department of Fish & Wildlife (WDFW). Washington Department of Fish & Wildlife (WDFW) visited the site with the applicant and determined that a Hydraulic Project Approval (HPA) permit will be required. George Fornes, WDFW, confirmed that the in-water work window is July 15 – September 30 because salmonids cannot access the site due to downstream natural barriers. Compliance with HPA permit requirements will be added as a condition of approval. Project impacts are minimized to the extent practicable, per the Habitat Assessment. Compliance with SEPA has been achieved.

Discussion:

The applicant submitted a Level II Habitat Assessment and Mitigation Plan, prepared by Ecological Land Services, dated February 16, 2024, in support of this application. The assessment titled "Level II Habitat Assessment and Mitigation Plan" ("the assessment") meets the requirements of CCC 19.15.130(C) and the conclusions and recommendations of the assessment are relied upon for the review and approval of this project. The assessment states that the project impacts to in-water and riparian habitat have been divided between temporary construction impacts and permanent impacts. Approximately, 11 sq ft of streambed above the road will be permanently impacted, and 488 sq ft of streambed will be restored above and below the culvert. "Permanent inner and outer RHA impacts will be "2,222 sq ft and 725 sq ft, respectively". Additionally, the culvert will be bottomless and 720 sq ft of streambed will be re-established. The assessment continues to discuss mitigation and achievement of no net loss, stating that "projects impacts will be compensated using a 2 : 1 ratio (riparian habitat functions to in-water impacts)". Project avoidance and minimization include not altering natural topography outside the right-of way, and not changing the stream's course". The culvert and armoring will be placed above the OHWM in the smallest footprint to protect the road and the culvert. Additionally, "exposed soil at the project site will be seeded with native grasses and covered with weed-free mulch". Proposed mitigation actions include streambed re-establishment and restoration, improving inner RHA habitat by planting native trees and shrubs, and establishing a 3-year monitoring plan. Approximately 1,208 sq ft of streambed will be restored above and below the culvert by planting native Sitka willow; waterward of the OHWM. Additionally, the inner RHA will be enhanced by removing invasive blackberries and planting four (4) red alder trees. Lastly, native understory plants (36) will be planted in 2 adjacent areas within the permanent road easement to provide water-quality functions from road runoff, as well as wildlife habitat and organic input into the stream.

These mitigation actions will offset the unavoidable impacts to riparian habitats, and the project will result in no net loss of riparian habitat function as required in CCC 19.15. The habitat assessment concludes that "the project will result in no permanent impacts to stream habitat...and will restore and re-establish 1,208 sq ft of riparian habitat".

Based on the conclusions and recommendations of the assessment, the critical areas permit for the proposed project is hereby approved, subject to the following:

Conditions of Approval:

1) Construction shall proceed in compliance with the plans and specifications submitted to this department on June 17, 2024. Any proposed changes or modifications to these plans and specifications, including those required by other agencies, shall require additional regulatory review and approval by the Department of Building and Planning prior to implementation.

2) All work shall follow the conclusions and recommendations contained within the "Level II Habitat Assessment and Mitigation Plan" prepared by Ecological Land Services, dated February 16th, 2024.

3) The permittee shall provide a copy of the critical areas permit, habitat assessment and drawings to all contractors performing any of the authorized work.

4) Mitigation, as outlined in Appendix B of the assessment (B-5 – B-11), shall be completed and proof submitted to the Department of Building and Planning prior to final building permit inspection.

5) Monitoring reports shall be submitted to the Department of Building and Planning by December 31st of each monitoring year (years 1, 2, 3 and 5) after date of plant installation as outlined in Appendix B (B-8 – B-11) of the "Level II Habitat Assessment and Mitigation Plan" (dated February 16, 2024).

6) Applicant shall submit an As-Built Report to the Department of Building and Planning within 3 months of plant installation.

7) A Hydraulic Project Approval (HPA) permit shall be obtained from the Washington Department of Fish and Wildlife.

8) Representatives from this department shall be allowed to inspect the authorized activity at any time deemed necessary to ensure that the project is being, or has been, accomplished in accordance with the terms and conditions of this permit.

9) Impact avoidance and minimization measures identified on page 6 of the referenced Habitat Assessment and Mitigation Plan shall be implemented before, during and after project completion.

10) Clearing activities that disturb the soil shall be allowed from May 1st to October 1st; provided, that the county may extend or shorten the dry season on a case-by-case basis.

11) The permittee must contact the Building and Planning Department to discuss any substantive plan changes or project modifications prior to implementation.

12) The applicant must contact the Department of Ecology to determine if development activities require a Construction Stormwater General Permit (CSWGP).

Sincerely,

Jenny Conde
Associate Environmental Planner

Encl.: Approved Site Plan
"Level II Habitat Assessment and Mitigation Plan" Ecological Land Services, February 16, 2024.

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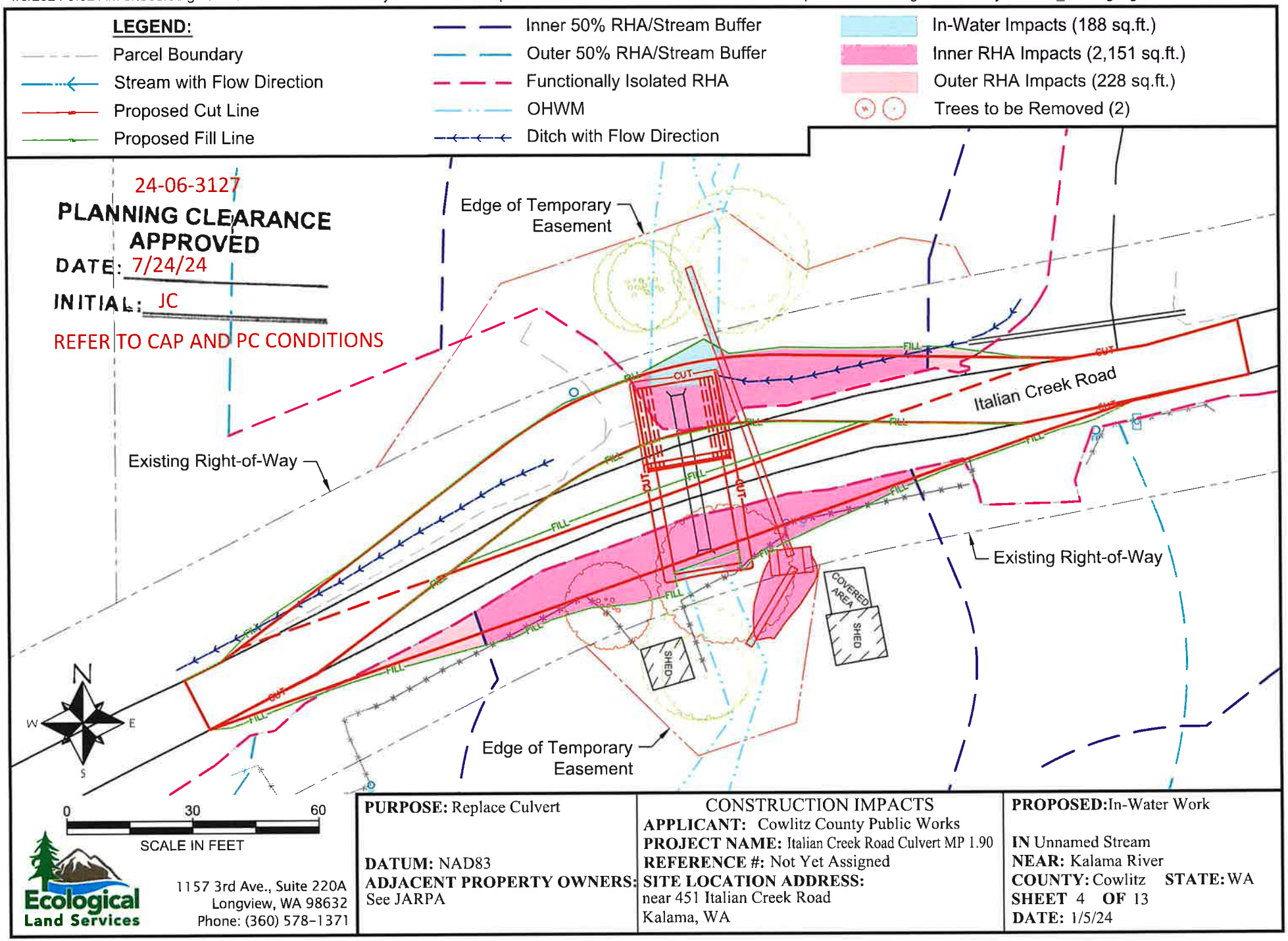

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

CONSTRUCTION IMPACTS
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 4 **OF** 13
DATE: 1/5/24

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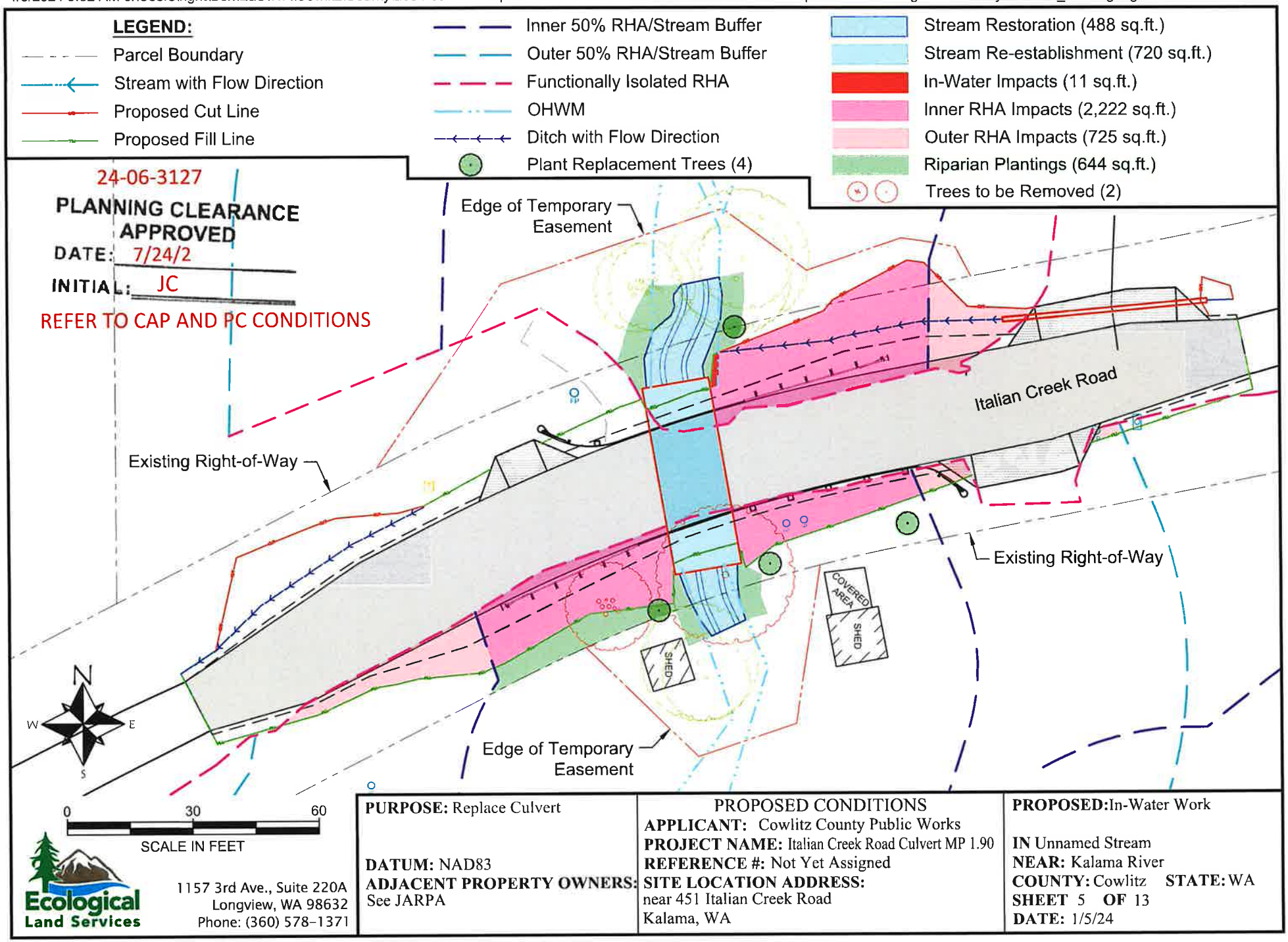

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED CONDITIONS
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 5 **OF** 13
DATE: 1/5/24

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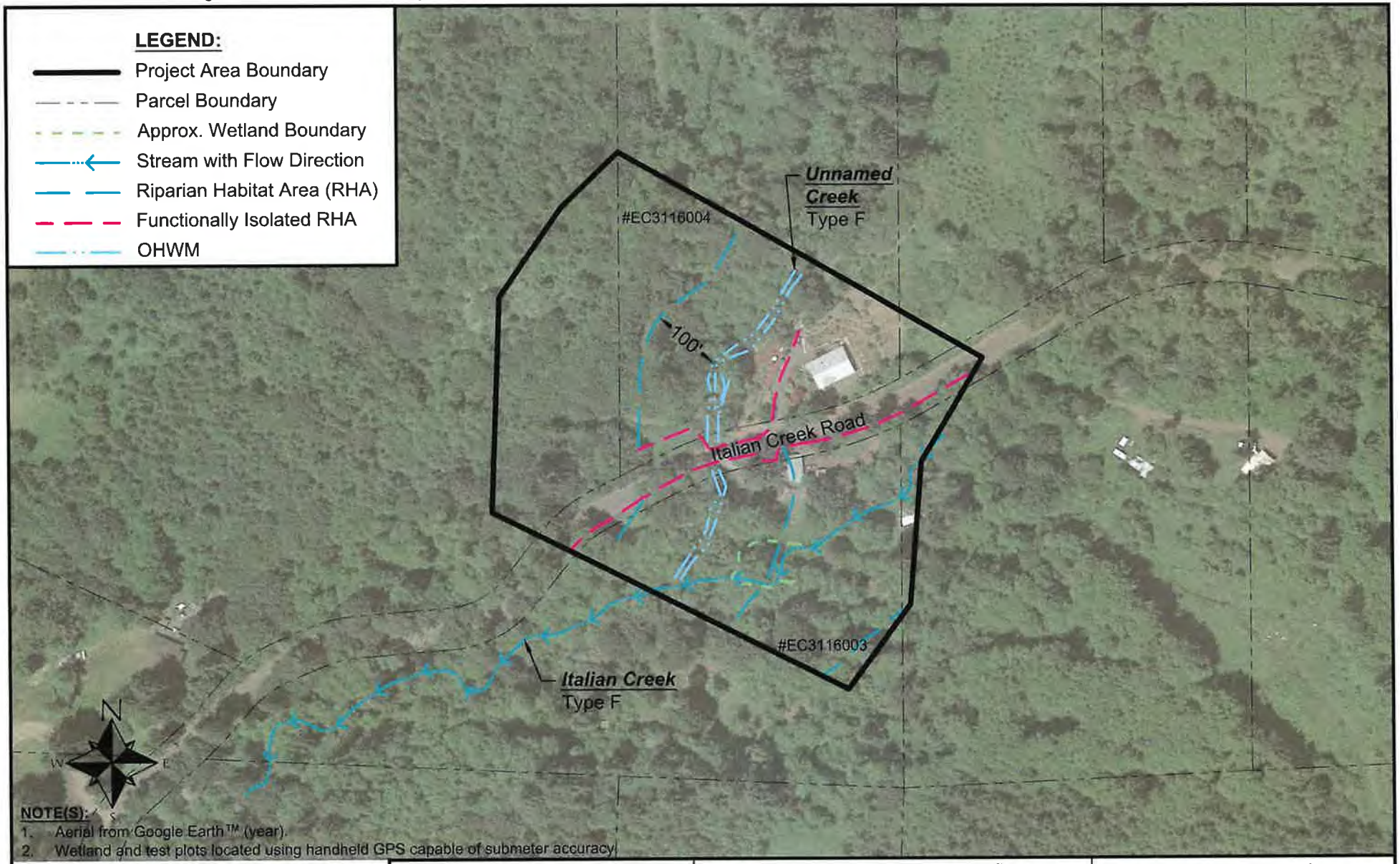

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SCALE IN FEET

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

EXISTING CONDITIONS

APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 2 **OF** 13
DATE: 1/5/24

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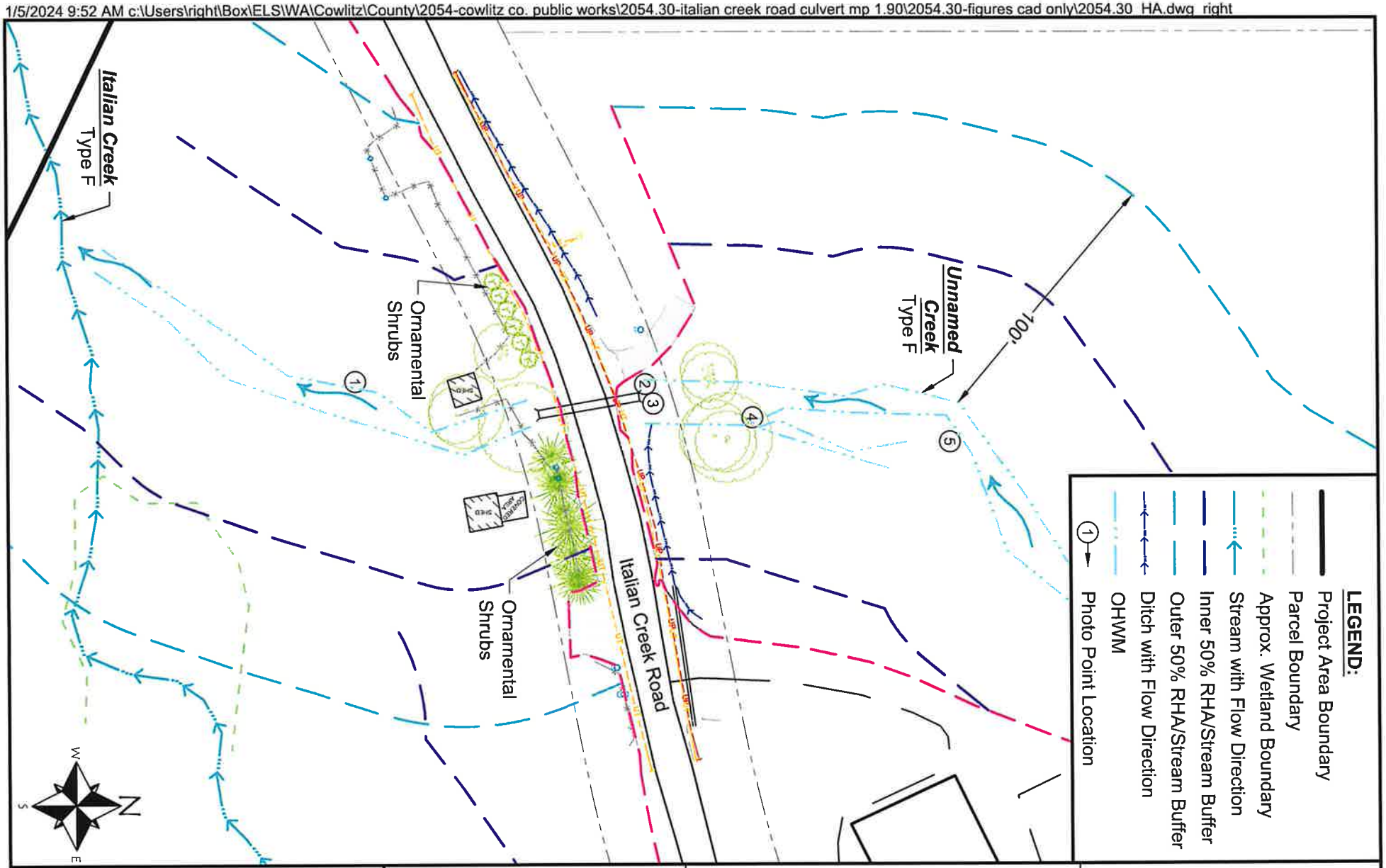

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SCALE IN FEET

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

EXISTING CONDITIONS DETAIL
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road
Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 3 **OF** 13
DATE: 1/5/24

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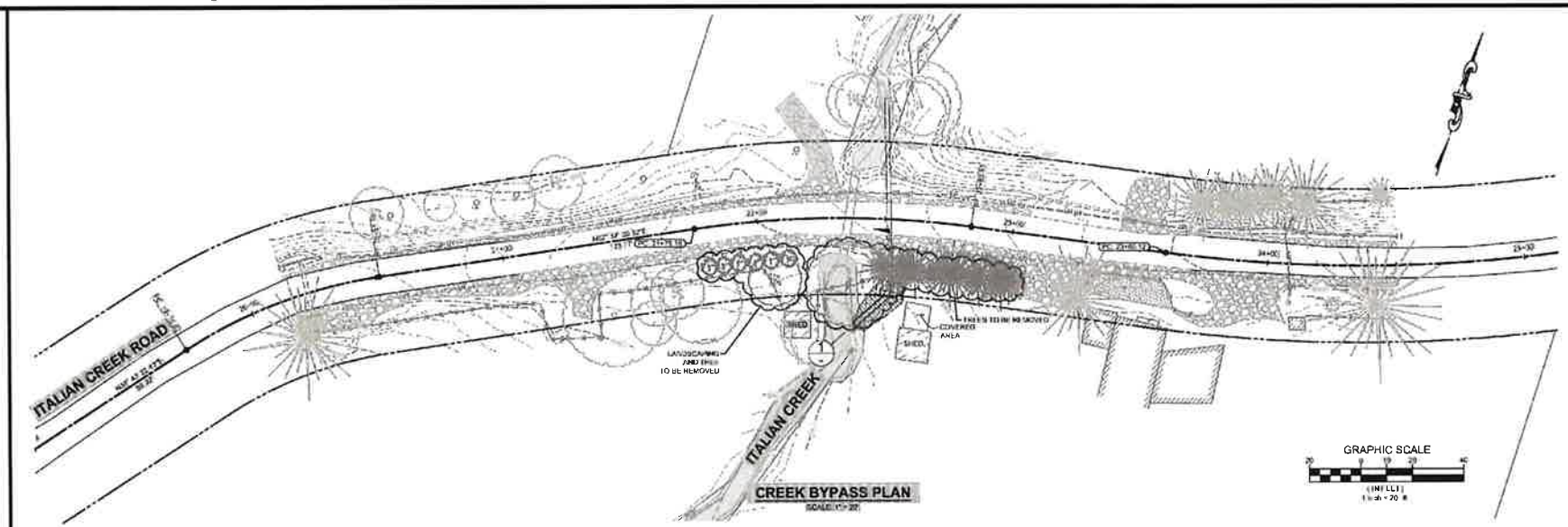
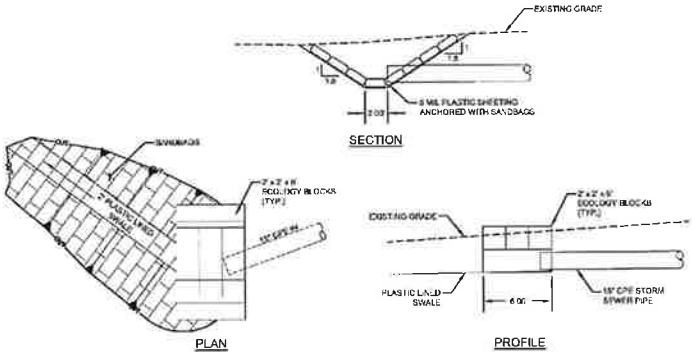
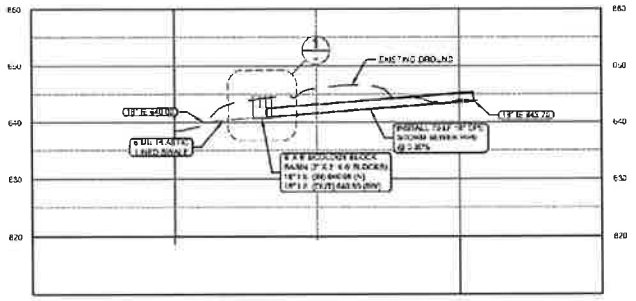


CREEK BYPASS PLAN



BASIN DETAIL 1



CREEK BYPASS PROFILE

RJEM PROJECT MANAGER 1/5/2024 DATE	HORIZ SCALE: AS NOTED VERT. SCALE: AS NOTED PROJECT ID: 1323 ROAD NO: 40900 COMPUTER FILE: 1323 Phase 1 Temp Const.dwg	COWLITZ COUNTY WASHINGTON	DEPARTMENT OF PUBLIC WORKS 1600 13TH AVENUE SOUTH KELSO, WASHINGTON 98626	NOTE: SCALES SHOWN ARE FOR FULL SIZE (24"X36") PLAN SHEETS ONLY. SCALES FOR 11"X17" PLAN SHEETS ARE APPROXIMATELY ONE HALF SCALE.	PRELIMINARY-30%	SEC. 31, T 6N, R 1E	ITALIAN CREEK ROAD CULVERT REPLACEMENT CREEK BYPASS PLAN, PROFILE AND DETAILS	SHEET 2 OF 6
DJB DRAWN BY 1/5/2024 DATE								
SEE CHECKED BY 1/5/2024 DATE								

SCALE AS SHOWN

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED CONDITIONS CREEK BYPASS PLAN, PROFILE & DETAILS
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS:
near 451 Italian Creek Road
Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 6 **OF** 13
DATE: 1/5/24

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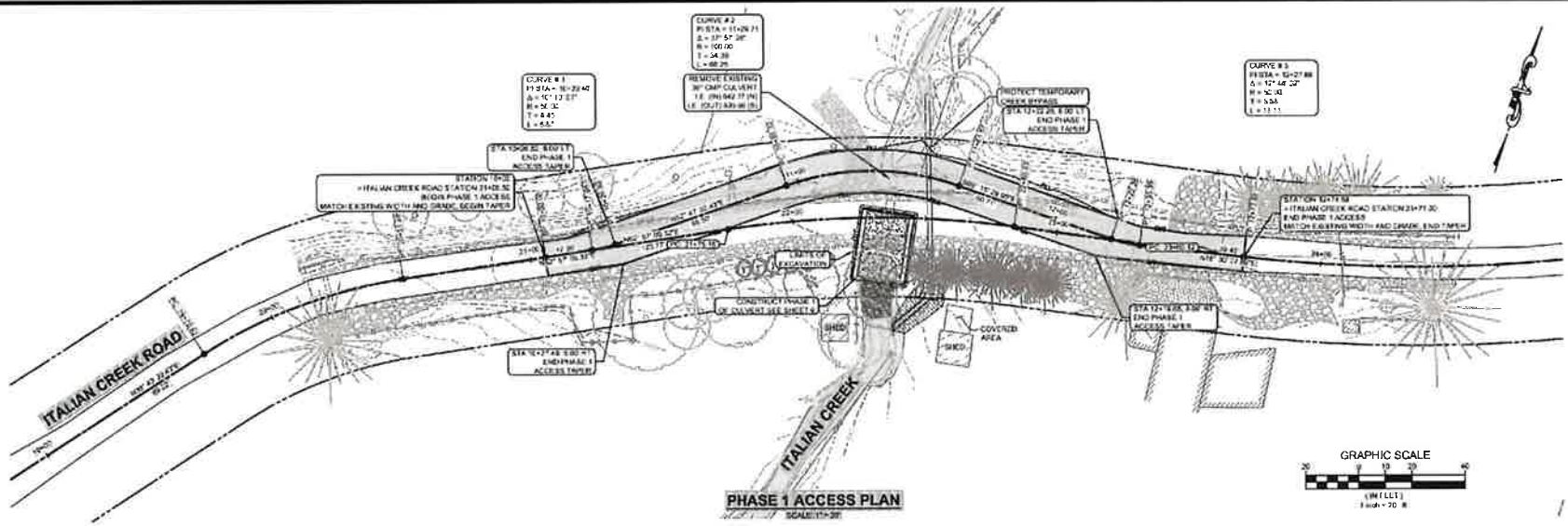
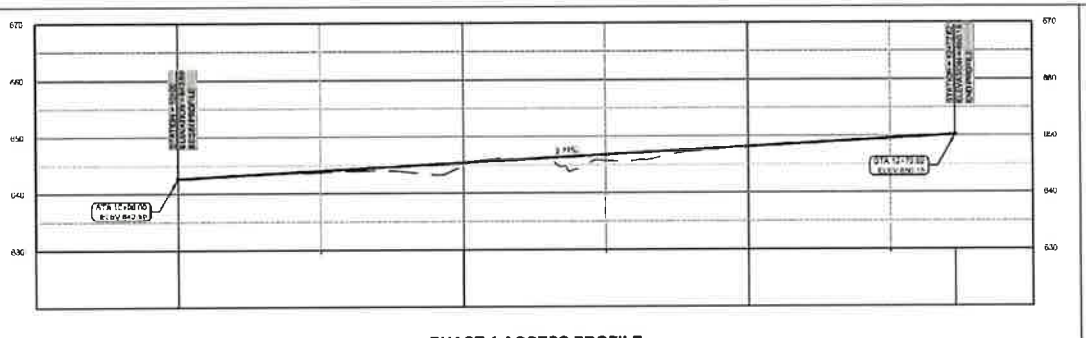
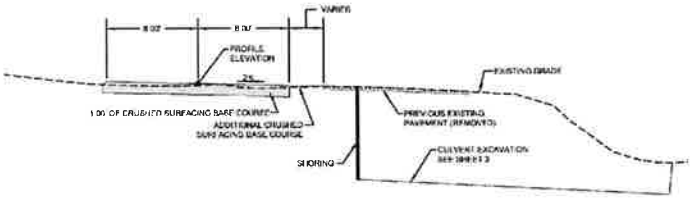


PHASE 1 ACCESS PLAN



PHASE 1 ACCESS PROFILE

PHASE 1 ACCESS SUPERELEVATION



PHASE 1 TYPICAL ACCESS SECTION

RLEM PROJECT MANAGER 6/25/2023 DATE	HORIZ SCALE: AS NOTED VERT. SCALE: AS NOTED PROJECT ID: 1323 ROAD NO: 40900 COMPUTER FILE: 1323 Phase 1 Temp Const.dwg	COWLITZ COUNTY WASHINGTON	DEPARTMENT OF PUBLIC WORKS 1600 13TH AVENUE SOUTH KELSO, WASHINGTON 98626	NOTE: SCALES SHOWN ARE FOR FULL SIZE (24"x36") PLAN SHEETS ONLY. SCALES FOR HALF SIZE PLANS SHEETS ARE APPROXIMATELY ONE HALF SCALE	SEC. 31, T 6N, R 1E	ITALIAN CREEK ROAD CULVERT REPLACEMENT PHASE 1 ACCESS PLAN, PROFILE AND TYPICAL ACCESS SECTION	SHEET 3 OF 6
DJD DRAWN BY 6/25/2023 DATE							
SEE CHECKED BY 6/25/2023 DATE							

PRELIMINARY-30%

SCALE AS SHOWN

Ecological Land Services

1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED CONDITIONS PHASE 1 ACCESS PLAN, PROFILE & SECTION

APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 7 **OF** 13
DATE: 1/5/24

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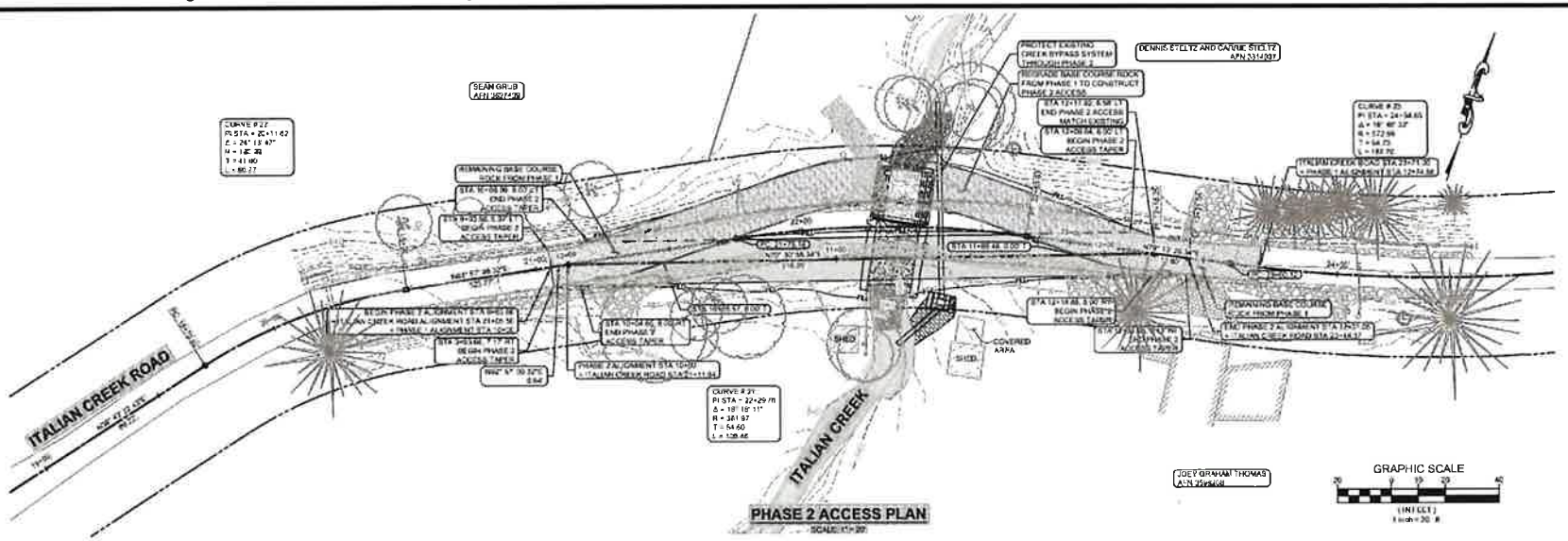
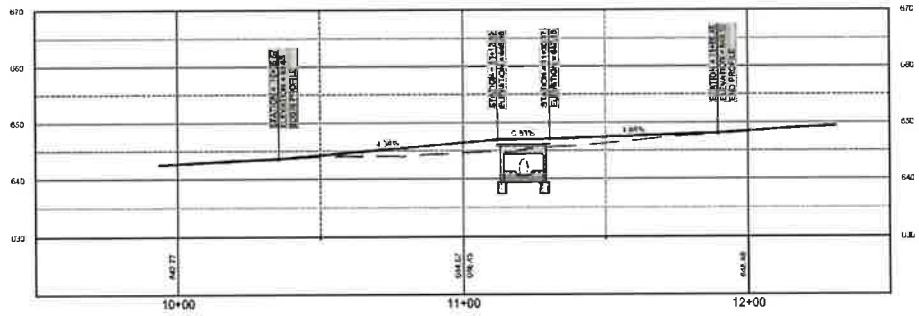
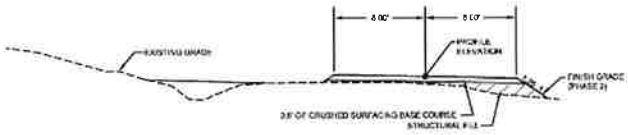


PHASE 2 ACCESS PLAN



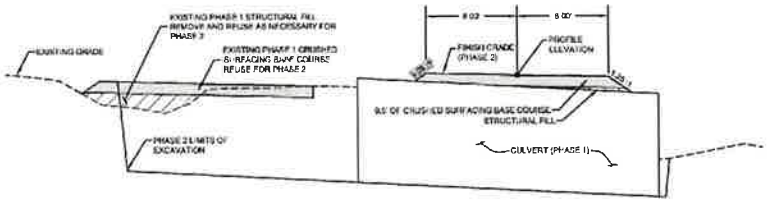
PHASE 2 ACCESS PROFILE

SCALE: 1" = 20 HORIZ
1" = 10 VERT



PHASE 2 ACCESS TYPICAL SECTION

SCALE: 1" = 5 HORIZ
1" = 5 VERT



PHASE 2 ACCESS TYPICAL SECTION OVER CULVERT

SCALE: 1" = 5 HORIZ
1" = 5 VERT

RLEM PROJECT MANAGER 9/25/2023 DATE	HORIZ SCALE: AS NOTED VERT. SCALE: AS NOTED PROJECT ID: 1323 ROAD NO.: 40900 COMPUTER FILE: 1323 Phase 2 Temp Const.dwg	COWLITZ COUNTY WASHINGTON	DEPARTMENT OF PUBLIC WORKS 1600 13TH AVENUE SOUTH KELSO, WASHINGTON 98626	NOTE: SCALES SHOWN ARE FOR FULL SIZE (24"x36") PLAN SHEETS ONLY. SCALES FOR HALF SIZE PLAN SHEETS ARE APPROXIMATELY ONE HALF SCALE		SEC. 31, T 6N, R 1E	ITALIAN CREEK ROAD CULVERT REPLACEMENT PHASE 2 ACCESS PLAN, PROFILE AND TYPICAL SECTIONS	SHEET 4 OF 6
DJB DRAWN BY 9/25/2023 DATE								
SEC CHECKED BY 9/25/2023 DATE								

PRELIMINARY-30%

SCALE AS SHOWN

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83

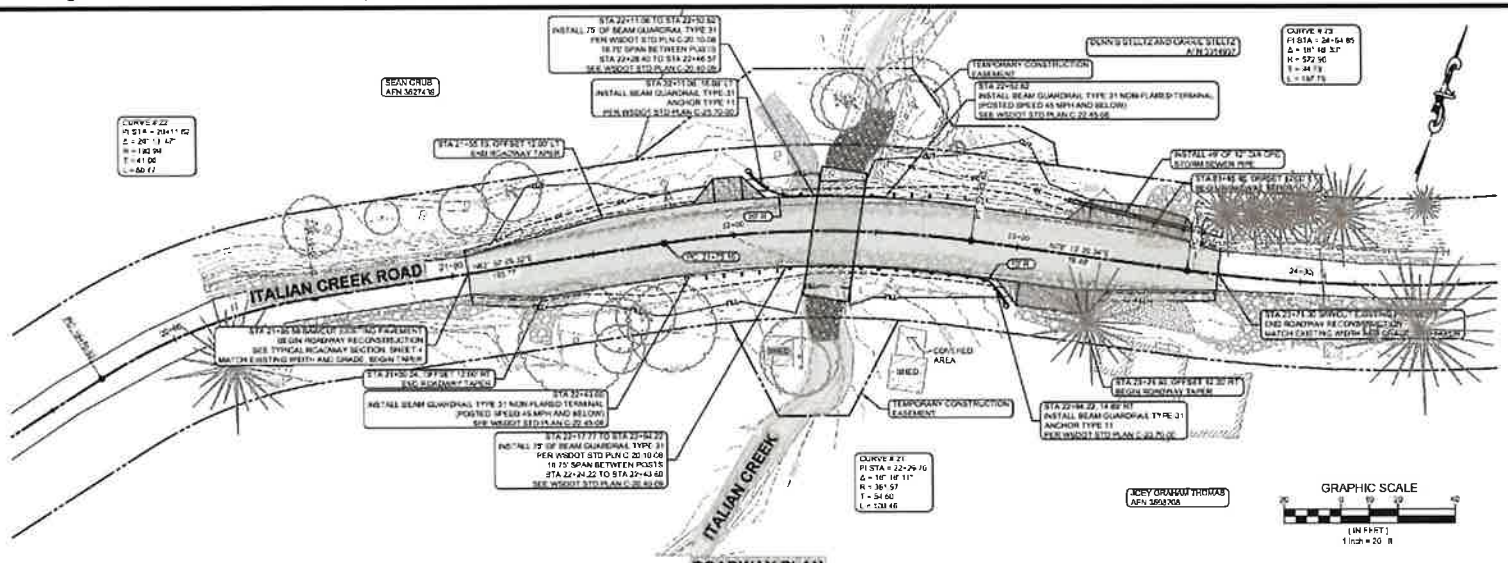
ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED CONDITIONS PHASE 2 ACCESS PLAN, PROFILE & SECTION

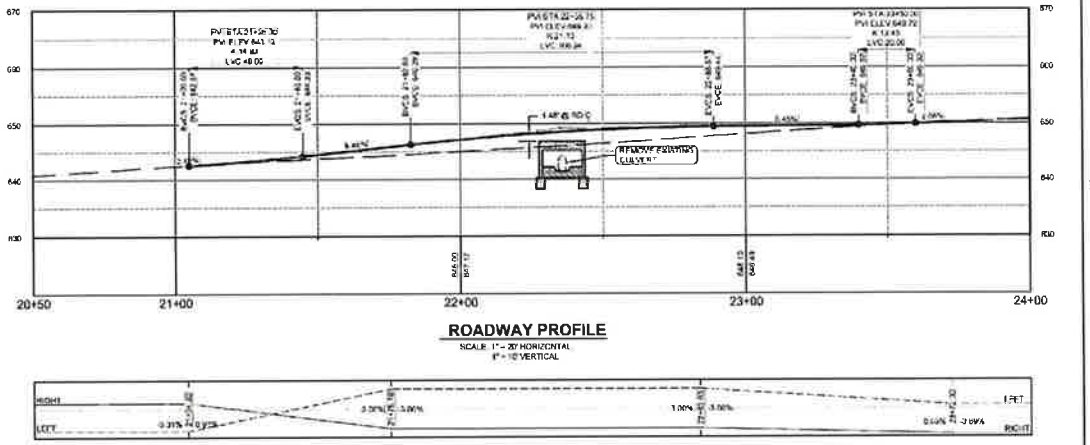
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 8 **OF** 13
DATE: 1/5/24



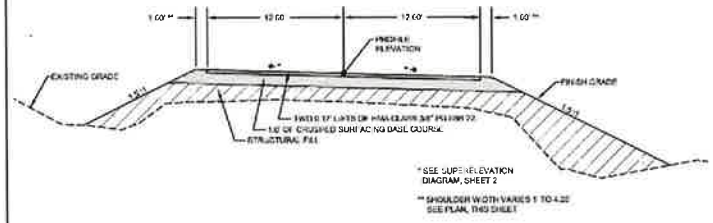
ROADWAY PLAN



ROADWAY PROFILE

SCALE 1" = 20' HORIZONTAL
1" = 10' VERTICAL

SUPER ELEVATION



TYPICAL ROADWAY SECTION

SCALE 1" = 5'

R.F.M. PROJECT MANAGER 6/26/2023 DATE	HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED PROJECT ID: 1323 ROAD NO.: 40900 COMPUTER FILE: 1323 Design.dwg	COWLITZ COUNTY WASHINGTON	DEPARTMENT OF PUBLIC WORKS 1600 13TH AVENUE SOUTH KELSO, WASHINGTON 98626	NOTE: SCALES SHOWN ARE FOR FULL SIZE (24"x36") PLAN SHEETS ONLY. SCALES FOR HALF SIZE PLAN SHEETS ARE APPROXIMATELY ONE HALF SCALE.		SEC. 31, T 6N, R 1E	ITALIAN CREEK ROAD CULVERT REPLACEMENT FINAL ROADWAY PLAN, PROFILE AND TYPICAL ROADWAY SECTION	SHEET 5 OF 6
O.J.G. DRAWN BY 6/25/2023 DATE								
S.E.C. CHECKED BY 6/25/2023 DATE								

PRELIMINARY-30%

SCALE AS SHOWN

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED CONDITIONS FINAL ROADWAY PLAN, PROFILE & SECTION
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 9 **OF** 13
DATE: 1/5/24

24-06-2127

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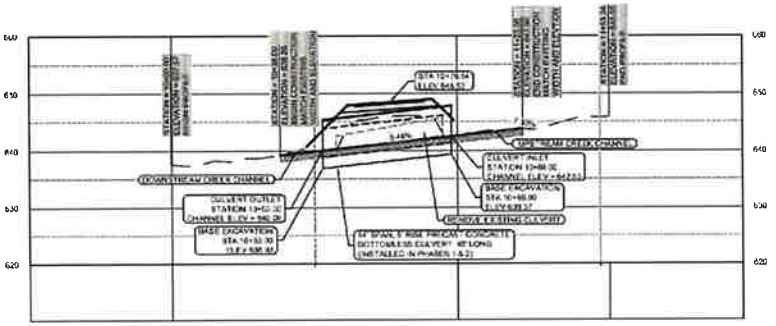
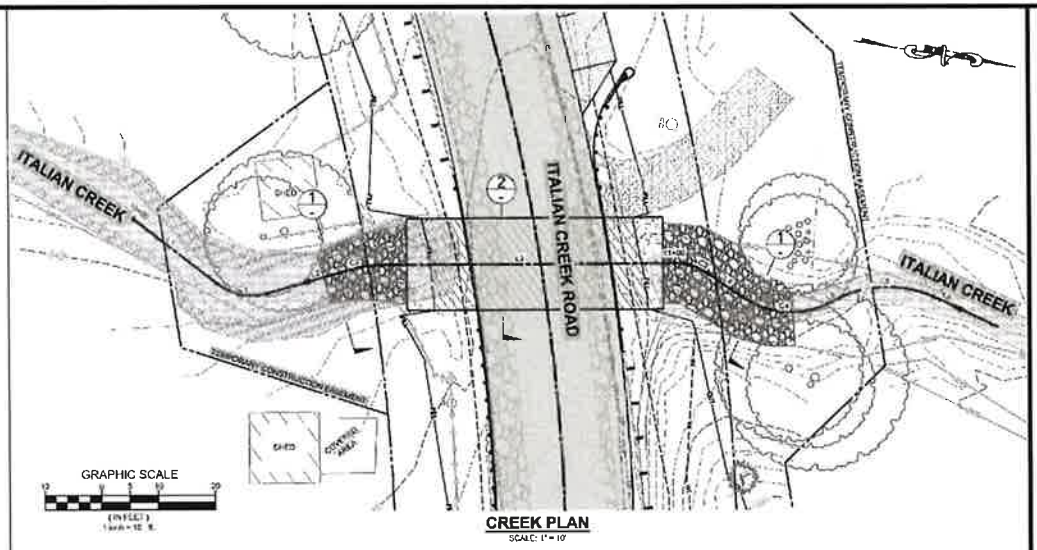


CREEK PROFILE
SCALE: 1" = 20' HORIZ
1" = 10' VERT



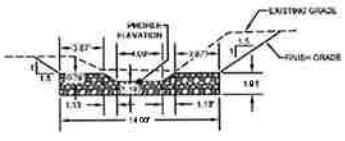
CREEK PLAN
SCALE: 1" = 10'

CURVE TABLE: ITALIAN CREEK CENTERLINE ALIGNMENT

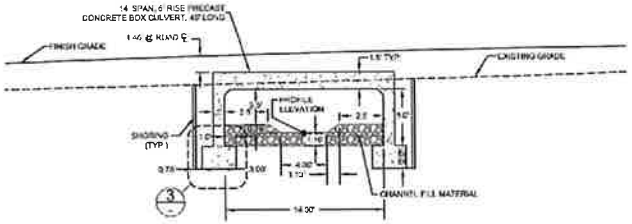
CURVE #	RADIUS	LENGTH	CHORD DIRECTION	START POINT	END POINT	PI	Δ
C1	18.00	9.30	N 11° 25' 49.45"E	(1076340.26,265864.95)	(1076349.26,265880.07)	10+23.81	053°18'10"
C2	20.00	5.43	N37° 36' 48.28"W	(1076329.77,265921.45)	(1076330.15,265926.91)	10+46.82	015°32'54"
C3	18.00	8.07	N 2° 42' 27.26"E	(1076229.46,266077.46)	(1076,230.26,266,082.36)	11+03.23	034°24'07"
C4	18.00	15.53	N6° 51' 48.19"W	(1076323.41,265290.07)	(1076332.14,266305.00)	11+22.28	059°34'58"
C5	20.00	17.10	N16° 11' 36.38"W	(1076330.89,266306.80)	(1076327.22,266323.11)	11+40.56	049°00'26"

LINE TABLE: ITALIAN CREEK CENTERLINE

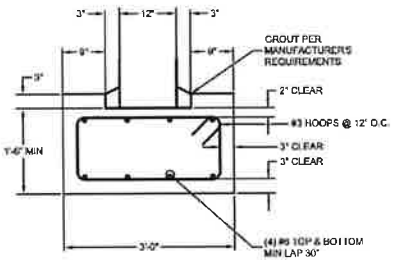
LINE #	BEARING	DISTANCE
L1	N29°04'04"E	18.50'
L2	N25°12'15"W	15.29'
L3	N6°40'21"W	51.59'
L4	N35°08'15"E	7.39'
L5	N34°40'57"W	2.29'
L6	N14°09'42"E	4.71'



1 TYPICAL CREEK SECTION
SCALE: 1" = 5' HORIZ
1" = 5' VERT



2 TYPICAL CULVERT SECTION
SCALE: 1" = 5' HOR.2
1" = 5' VERT



4 FOOTING
SCALE: 1" = 5' HORIZ
1" = 5' VERT

R.P.M. PROJECT MANAGER	6/29/2023 DATE	HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED PROJECT ID: 1323 ROAD NO.: 40900 COMPUTER FILE: 1323 Design.dwg	COWLITZ COUNTY WASHINGTON	DEPARTMENT OF PUBLIC WORKS 1600 13TH AVENUE SOUTH KELSO, WASHINGTON 98626	NOTE: SCALES SHOWN ARE FOR FULL SIZE (24"x36") PLAN SHEETS ONLY. SCALES FOR HALF SIZE PLAN SHEETS ARE APPROXIMATELY ONE-HALF SCALE.	PRELIMINARY-30%	SEC. 31, T 6N, R 1E	**ITALIAN CREEK ROAD CULVERT REPLACEMENT** **CREEK PLAN, PROFILE AND TYPICAL CREEK SECTIONS**	SHEET 6 OF 6
D.J.D. DRAWN BY	6/29/2023 DATE								
S.E.C. CHECKED BY	6/29/2023 DATE								

SCALE AS SHOWN

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED CONDITIONS CREEK PLAN, PROFILE & SECTIONS
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS:
near 451 Italian Creek Road
Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 10 **OF** 13
DATE: 1/5/24

WASHINGTON

Latitude: 46.0409°
Longitude: -122.7215°

LOCATION MAP

PROJECT VICINITY MAP

NOTE:
Quadrangle topographic map from USGS.

VICINITY MAP
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS:
near 451 Italian Creek Road
Kalama, WA

PROPOSED: In-Water Work
IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 1 **OF** 13
DATE: 1/5/24

PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS:
See JARPA

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Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

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24-06-2127

LEGEND:

Rocky Mountain elk, *Cervus elaphus nelsoni*, Occurrence

Northern Spotted Owl, *Strix occidentalis*, Occurrence

NOTE: Map provided on-line by Washington State Department of Fish & Wildlife at web address: *http://apps.wdfw.wa.gov/phsontheweb/*

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SCALE IN FEET

Ecological Land Services

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Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

WDFW PRIORITY HABITAT AND SPECIES

APPLICANT: Cowlitz County Public Works

PROJECT NAME: Italian Creek Road Culvert MP 1.90

REFERENCE #: Not Yet Assigned

SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

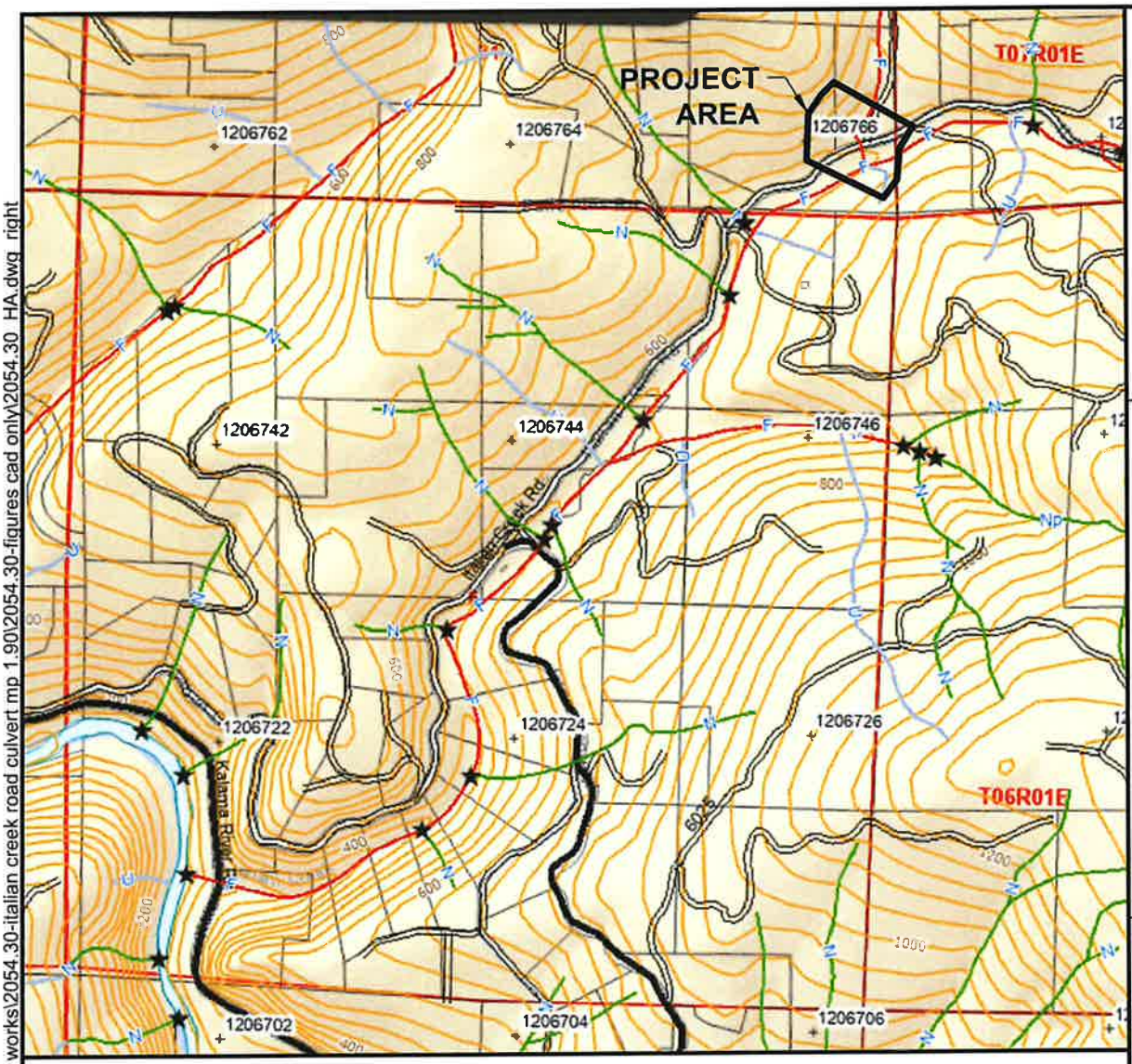
IN Unnamed Stream

NEAR: Kalama River

COUNTY: Cowlitz **STATE:** WA

SHEET 11 **OF** 13

DATE: 1/5/24



PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 12 **OF** 13
DATE: 1/5/24

WDNR STREAM TYPE MAP
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road
Kalama, WA

PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

LEGEND:

- Site Boundary
- 40-foot Contours
  - 40 ft. Contours
- Fire Shutdown Zones
  - Fire Shutdown Zones
- Water Bodies (FP)
  - Other Impoundments
  - Open Freshwater
  - Subject to Inundation
  - Glacier / Snowfield
  - Wet Area
  - Open Saltwater
  - Artificial Feature
- SOSEA Boundaries
  - SOSEA Boundaries
- Water Courses (FP)
  - Type S
  - Type F
  - Type N, Np, Ns
  - U, unknown
  - X, non-typed per WAC 222-16
- WRIA Boundaries
  - WRIA Boundaries
- WAUs
  - WAUs
- Trails & Railroads (FP)
  - Trail
  - Railroad
  - Railroad Grade
- DNR Roads
  - Paved Road
  - Unpaved Road/Surface Unknown
- Unpaved Road/Surface Unknown
  - ★ Water Type Breaks (FP)
- Public Land Survey Sections
  - Public Land Survey Sections
- Public Land Survey Townships
  - Public Land Survey Townships

NOTE: Map provided on-line by Washington State Department of Natural Resources at web address: *http://fortress.wa.gov/dnr/app1/Fpars/viewer.htm*

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1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

Ecological Land Services

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PROJECT AREA
Indian Creek
Woolford Creek
Italian Creek Rd
Kalama River Rd
Italian Creek
Greenwood Rd
LEGEND:
Site Boundary
WRIAs & WAUs
WRIA Boundaries
Watershed Administrative Units
Fish Distribution
All SWIFD Listed Species
NOTE:
Map provided on-line by WA State Dept of Fish & Wildlife at web address: https://geo.nwifc.org/swifd/
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SCALE IN FEET
Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371
PURPOSE: Replace Culvert
DATUM: NAD83
ADJACENT PROPERTY OWNERS:
See JARPA
STATEWIDE WA INTEGRATED FISH DISTRIBUTION (SWIFD)
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS:
near 451 Italian Creek Road
Kalama, WA
PROPOSED: In-Water Work
IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz STATE: WA
SHEET 13 OF 13
DATE: 1/5/24
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Ecological Land Services

Level II Habitat Assessment and Mitigation Plan

February 16, 2024

Italian Creek Road Culvert MP 1.90

Cowlitz County, Washington

Prepared for

Cowlitz County Dept of Public Works
c/o Susan Eugenis
1600 13th Ave S.
Kelso, WA 98626
(360) 577-3030

Prepared by
Ecological Land Services
1157 3rd Avenue, Suite 220A • Longview, WA 98632
(360) 578-1371 • Project Number 2054.30

SIGNATURE PAGE

The information in this report was compiled and prepared under the supervision and direction of the undersigned.

Lacey Hoffmann
Senior Biologist

Lynn Simpson
Senior Environmental Scientist

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WSDOT Fish Exclusion – Protocol and Standards

APPENDIX B

Mitigation Plan

INTRODUCTION

Cowlitz County Department of Public Works contracted Ecological Land Services, Inc. (ELS) to prepare a Level II Habitat Assessment in accordance with the *Cowlitz County Code (CCC) Chapter 19.15.130, Fish and Wildlife Conservation Areas* (CCC 2022), for proposed actions associated with removing an existing undersized culvert and installing a new culvert in an unnamed tributary to Italian Creek (Type F; fish-bearing) that passes under Italian Creek Road at milepost (MP) 1.90 (Sheet 1). The project is in the Cowlitz County right-of-way of Italian Creek Road in Section 31, Township 6 North, and Range 1 East of the Willamette Meridian. The project center point is at latitude 46.040854, longitude -122.721388. Project figures are attached.

Parameters to define the study area are in *CCC 19.15.120(B)(2)(a)*, which for this project is 300 linear feet from each end of the proposed work area (see Sheets 2, 3, and 4). ELS biologists completed field work for this assessment on January 25, 2023, and were able to visually assess adjacent private lands. The ordinary high water mark (OHWM) of Italian Creek was flagged and ELS did visually assess one wetland in the study area. Approximate wetland boundaries were mapped, but no flags were left onsite, as the project footprint will not negatively impact the wetland or wetland buffers. All proposed work occurs within the riparian or in-water habitat of the unnamed tributary to Italian Creek and appropriate mitigation is proposed.

The Washington Department of Fish and Wildlife (WDFW) area habitat biologist, George Fornes, met onsite with ELS and Cowlitz County Public Works engineers on February 16, 2023, to determine the average bankfull width. His comments are incorporated into this report.

SITE DESCRIPTION

The study area includes an undeveloped, forested slope and a single-family residence north of Italian Creek Road. South of Italian Creek Road is a single-family residence and active pasture for small livestock.

STREAMS IN THE STUDY AREA

The unnamed stream with the culvert to be replaced is a Type F (fish-bearing) stream, that is a tributary to Italian Creek (Type F; fish-bearing) (WDNR 2024a; Sheets 1, 2, 3, 12). This stream is misidentified on the USGS map on Sheet 1. The mainstem of Italian Creek is adjacent to Italian Creek Road.

The culvert is located about 185 feet upstream from the unnamed stream's confluence with Italian Creek. WDFW's *Statewide Washington Integrated Fish Distribution* map shows that no salmon, steelhead, or bull trout are present in the project vicinity (WDFW 2024a, b), and there is no accessible fish habitat to the project site due to an approximately 25-foot-tall waterfall downstream of the project area. Additionally, a natural barrier that serves as a complete passage barrier is located downstream at the confluence of Italian Creek and Kalama River as mapped by WDFW Washington State Fish Passage Maps (WDFW 2024b, Site ID 700139).

The unnamed Type F stream and Italian Creek are considered "Waters of the State" by Cowlitz County (Table *CCC 19.15.130-A*) but are not shorelines of the state. According to *CCC Table 19.15.130-B,* riparian habitat area (RHA) width is 100 feet wide for Type F waters with a channel width less than or equal to 20 feet. The area between the OHWM and half the RHA (0 to 50 feet) is the inner RHA for streams that are not within shoreline jurisdiction. The outer half of the RHA (50-100 feet) is the outer RHA (Sheet 2). The entire project area south of the road falls within the RHA for unnamed Type F stream as well as for Italian Creek to the south. Because all proposed work will be within the inner/outer RHA of the unnamed Type F stream, only impacts to this stream are discussed.

The unnamed Type F stream's bankfull width is 10 feet on average and is approximately the same width as the biological OHWM. Upstream of the culvert, streambed material consists of cobbles, gravel, and a small amount of sediment and sand concentrated at the culvert inlet. The steepest stream gradient is near the culvert and is about 5 percent. The stream gradient is much lower and a gentler slope further upstream. The unnamed Type F stream has flow year round. Streambanks upstream of the culvert are partially incised, while farther upstream there are steeply cut banks and a defined channel with large and small woody material throughout, creating small pools and riffle or glide habitat. Downstream of the culvert, the streambanks are nearly vertical, and in-water habitat is limited to only riffle or glide habitat. Substrate consists of small cobbles and gravel. No large woody material is present in the stream downstream of the culvert to its confluence with Italian Creek.

During the site visit, a large (approximately 25-foot tall) natural waterfall was observed on Italian Creek downstream of the site. This waterfall is located approximately 800 feet upstream of the culvert that passes Italian Creek beneath Greenwood Road. The waterfall is not mapped by any available mapping website. The waterfall creates a natural fish-passage barrier to anadromous fish species. There is another natural barrier further downstream at the confluence of Italian Creek and the Kalama River that serves as a complete barrier for anadromous fish (WDFW Site ID 700139). Available habitat in the project area is limited to local fish species only.

Riparian Habitat

Riparian vegetation downstream of culvert is mostly narrow through the livestock grazing area, but there is a partially closed canopy over the stream. It is dominated by Himalayan blackberry, but portions consist of three strata; *Trees*: red alder, *Shrubs*: vine maple and Himalayan blackberry, *Herbaceous*: swordfern, creeping buttercup, and reed canarygrass.

Riparian vegetation upstream of culvert is wide on the north side of the stream, covers the stream, and consists of three strata; *Trees*: bigleaf maple, western red cedar, Douglas fir; *Shrubs*: Indian plum, beaked hazelnut, Himalayan blackberry; and *Herbaceous*: deer fern, swordfern, wood sorrel, Pacific bleeding heart, water parsley, reed canarygrass, and stinging nettle. The single-family residence in the RHA north of Italian Creek Road has many ornamental trees and woody shrubs.

Wetland

A small depressional wetland is located along the unnamed Type F stream to the south of the project area. This wetland appears to be grazed and consisted of mainly emergent plant species including creeping buttercup and water parsley. This wetland was saturated to the surface during the site visit. It likely outlets to the unnamed Type F stream, however, water will only be impounded during high flow events from this stream.

Field Methodology

OHWM Determination

To define waters regulated by the Corps as "Waters of the United States" and by Ecology as "Waters of the State", the ordinary high water marks (OHWMs) in the project area were determined using standard methodology following *RCW 90.58.030 and Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (Ecology 2016). The indicators used to determine the OHWM included exposed soils, undercut banks, sediment and wrack deposits, transitions in vegetation, and breaks in topography. ELS flagged the OHWM in the project area using consecutively numbered fluorescent tape flagging, and flag locations were surveyed by a professional survey crew.

Wetland Determination

ELS follows the Routine Determination Method developed by the U.S. Army Corps of Engineers (Corps) for wetland delineation (Environmental Laboratory 1987, Corps 2010), which examines vegetation, soils, and hydrology to determine if wetland is present. EPA defines wetlands as "...areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." When present, wetlands are regulated by the Corps as "Waters of the United States", by Ecology as "Waters of the State", and locally by Cowlitz County.

ELS located one small depressional wetland near the unnamed Type F stream. Wetland boundaries were not flagged, as these flags would likely be impacted by grazing livestock. Approximate wetland boundaries were recorded using a hand-held GPS unit capable of submeter accuracy.

Project Description

Cowlitz County Public Works is proposing to replace a failing and undersized culvert in a fish-bearing stream. The existing culvert is a 36-inch diameter and 36-foot long, corrugated metal pipe (CMP) that has been damaged during previous flood events. According to a neighbor, a culvert upstream on Italian Creek failed sometime in the recent past, resulting in the surrounding road fill to be washed downstream to this culvert. This material blocked and flooded the surrounding culvert inlet and resulted in stream flows crossing Italian Creek Road, damaging the

existing culvert and changing the streambed in the adjacent area. The upstream culvert failure has not been confirmed on-the-ground. The proposed project will replace this existing culvert with a 14-foot span, 5-foot rise, and 45-foot long precast concrete bottomless box culvert, widen the roadway near the creek, and reconstruct the streambed adjacent to the new, appropriately sized culvert.

Project construction is proposed in two phases. Phase 1 will include the temporary stream bypass, traffic bypass road installation, replacing the southern portion of the culvert within the existing road prism, and graveling Italian Creek Road to prepare for Phase 2 traffic. Phase 2 includes directing traffic to the newly graveled Italian Creek Road section, removing the temporary traffic bypass road, reshaping the stream channel at the new culvert inlet, removing the temporary stream bypass, and resurfacing Italian Creek Road.

A total of 2 trees will be removed within the inner riparian habitat area (RHA) of the Type F stream. Tree removal is necessary to facilitate stream bypass installation and for culvert replacement. Surrounding topography will generally be the same post-project, and the stream channel will not be changed, except at the new culvert inlet and outlet. Equipment access will be limited to uplands and no driving mechanisms will enter the water.

Stream Isolation Bypass and Bypass Removal

The temporary work area bypass is part of Phase 1 of construction and consists of a temporary road slightly to the north of the footprint of the new culvert (Sheets 4 and 7). Before the bypass is installed, the creek within the defined work area will be isolated with block nets, and any fish present will be removed with dip nets or seine nets and moved to a suitable location outside the work area. Before the road is constructed, a 73-foot long, by 18-inch wide, corrugated polyethylene pipe (CPE) will be installed to the east of the existing culvert that will serve to route stream flow around the work area. The bypass pipe inlet will be in the stream centerline and will require 40 cubic yards of streambank excavation above the OHWM and within the inner RHA. A cofferdam consisting of sandbags wrapped in plastic sheeting will be placed around the bypass pipe inlet to direct the entire streamflow into the pipe and keep water from entering the work area. The bypass pipe outlet will be placed in stacked ecology blocks for stability, and streamflow will be directed to a sandbag-lined pad with a 2-foot plastic lined swale to direct streamflow back into the existing channel. The downstream extent of the work area may also need a sandbag cofferdam to prevent backflow into the work area. If groundwater seeps into the work area after the diversion is complete, it will be pumped to vegetated areas within the RHA for infiltration.

After work is complete, a gap in the upstream cofferdam will be opened and slowly increased in size to minimize turbidity until the cofferdam and bypass pipe are removed and the streambank is reshaped to pre-project conditions. After flow is established through the new culvert and there is minimal-to-no turbidity in the new stream channel, fish-block nets will be removed. The stream diversion will be in place during the in-water work window established by WDFW following the Hydraulic Project Approval (HPA) for no longer than 60 days. George Fornes of WDFW confirmed

the in-water work window is July 15 through September 30 because salmonids cannot access the site due to downstream natural barriers (G. Fornes personal communication, June 15, 2023).

Construction Methods

The project will be constructed during the in-water work window specified by WDFW, which is July 15 through September 30, unless otherwise specified by the HPA. Construction equipment will include an excavator and loader. Other equipment used will include haul trucks and hand tools. The existing fence at the culvert outlet will be removed for construction and replaced post-construction.

Phase 1

To avoid blocking local traffic, a temporary bypass road will be installed to the north of Italian Creek Road as part of Phase 1. The temporary stream bypass will be installed and functional prior to completing the bypass road. The bypass road will require 30 cubic yards (188 square feet) of temporary fill below the OHWM. Other impacts during construction will be to remove 13 native trees, mostly in the inner buffer. Fill in the inner RHA will extend over 2,151 square feet in the inner RHA and 228 square feet in the outer RHA. Most of the fill in the RHA will remain as permanent fill.

After the bypass road is installed and functional, the culvert to be replaced will be removed within the existing road footprint. The new 14-foot span, 5-foot rise, and 45-foot-long precast concrete bottomless box culvert will be installed with a 5.46 percent streambed gradient throughout to match the upstream and downstream existing streambed conditions.

Phase 2

Phase 2 of construction includes directing traffic to the newly graveled section of Italian Creek Road that has been shifted south. Once traffic is actively passing through the work area, the temporary access road to the north will be removed, including most of the fill below the OHWM, and the streambanks will be reshaped.

Before returning flow to the new stream channel, it is recommended that the new stream channel substrate be washed within the isolation area and all turbid water be pumped into the uplands for infiltration. This will reduce turbidity and suspended sediment in the water column prior to returning all stream flow to the new culvert upon completion. All excavated material that is not used to reshape the streambed will be disposed offsite at an acceptable upland location.

After streambed construction is complete, flow will be directed to the newly constructed stream channel and culvert, and the temporary stream bypass pipe will be removed. All downstream diversion materials including the ecology blocks, sandbags, and plastic lining will be removed. Italian Creek Road will be paved with a new road surface of hot-mix asphalt to match surrounding road elevation. Any excavation for diversion outlet armoring will be filled with excavated

material from the project site to pre-project conditions. All bare soils will be mulched with certified weed-free hay or straw, and an erosion control native grass seed mix will be applied.

Impact Avoidance and Minimization Measures

The project has been designed to avoid and minimize impacts to habitats and species that may potentially occur in the vicinity of the project area. Several design features are proposed to avoid and minimize adverse impacts to the aquatic and riparian environment as listed below:

1. Meet the requirements of all environmental permits from local, state, and federal agencies.
2. Work will be conducted within the in-water work window of July 15 through September 30 that will be confirmed by WDFW.
3. Capture fish according to WSDOT protocol (see Appendix A).
4. No equipment driving mechanisms will enter the stream.
5. Refuel and maintain construction equipment at least 150 feet away from any waterbody.
6. Check for fuel leaks at the beginning of each construction day.
7. Surrounding cuts, BMP such as silt fence, wattle, or straw bales will be installed, if appropriate.
8. Prior to returning flow to the new channel, all exposed streambed material below the new OHWM will be rinsed, and all turbid water will be pumped into the riparian area for infiltration.
9. Stabilize disturbed areas with hydroseeding or rock and remove temporary BMPs after soils have stabilized.
10. Regularly inspect and maintain the road, banks, and culvert.

Project Impact Summary

Project impacts to in-water and riparian habitat have been divided between temporary construction impacts and permanent impacts. The project will also result in re-establishing the streambed to more natural conditions than the bottom of the existing culvert.

Approximately 11 square feet of streambed above the road will be permanently impacted, and 488 square feet of streambed will be restored above and below the culvert. Permanent inner and outer RHA impacts will be 2,222 square feet and 725 square feet, respectively. Two native trees will be removed from the inner RHA. Because the culvert will be bottomless, 720 square feet of streambed will be re-established. Table 1 shows details of all impacts and habitat gains from the project.

Table 1. Construction Impacts, Permanent Impacts, and Habitat Gain Summary

Temporary Construction Impacts			
Habitat Area	Fill Material	Square Feet	Cubic Yards
Waterward of OHWM (culvert inlet/outlet)	Channel Fill Material*	188	15
Inner RHA	3" minus crushed rock	2,151	160
Outer RHA	3" minus crushed rock	228	17
Permanent Construction Impacts			
Habitat Area	Material	Square Feet	Cubic Yards
Waterward of OHWM	Channel Fill Material*	11	1
Inner RHA	3" minus crushed rock	2,222	164
Outer RHA	3" minus crushed rock	725	54
Habitat Gain			
Waterward of OHWM (streambed re-establishment and restoration)	Streambed	720+488 (total: 1,208)	---
Inner RHA	Shrubs Trees	704 4 trees	---

*Channel Fill Material = 10-inch-minus, well-graded mixture of rounded cobbles, gravel, and sand with Type Two streambed boulders in the percentages listed below:

9-03.11(1) Streambed Sediment (2.5" minus)	35% to 45%
9-03.11(4) 10" Streambed Cobbles	45% to 55%
9-03.11(5) Type Two Streambed Boulders (18" to 28")	8% to 12%

Mitigation

Mitigation credits cannot be purchased because the site is outside of the Coweeman Mitigation Bank service area, and there is no in-lieu fee program. There is sufficient space for mitigation to be performed onsite in the permanent road easement. The mitigation plan is attached in Appendix B.

Mitigation strategy includes enhancing re-establishing about 70 linear feet of natural streambed habitat to allow a smooth transition from the bottomless culvert to the upstream and downstream areas. The strategy also includes enhancing the inner RHA by controlling invasive blackberries, planting four red alder, and adding to providing streambank stabilization and instream cover by planting native willows along the restored streambed. The remaining planting areas will be enhanced by adding native understory plants within the inner RHA to provide water-quality functions from road runoff, as well as wildlife habitat and organic input into the stream.

Permanent instream impacts include 11 square feet of fill material waterward of the OHWM. In habitat modeling programs, such as the Habitat Equivalency Analysis used by the National Marine Fisheries Service, the ratio to measure riparian habitat functions in relation to in-water impacts

is 2:1. Therefore, 11 square feet of fill will be subtracted from the 1,208 square feet of stream restoration and re-establishment areas to leave 1,197 square feet of instream habitat to be used for calculating RHA mitigation needs. At a ratio of 0.5:1 stream habitat to RHA habitat, this will compensate for 2,394 square feet of RHA impacts.(1,197 x 2 = 2,394) This project will create 2,947 square feet of inner and outer RHA impacts, leaving 580 square feet of RHA impacts to meet mitigation needs (2,974 – 2,394 = 580).

This plan proposes to plant the restored streambanks with native Sitka willow (*Salix sitchensis*) and two adjacent areas within the permanent road easement with native understory plants for a total of 644 square feet of inner RHA enhancement (64 square feet more than the required area).

Listed Species and Priority Habitats in the Project Vicinity

This fish and wildlife habitat assessment will address the species and habitats present within the project area according to *CCC 19.15.130*, which lists eight classifications of fish and wildlife habitat. The project vicinity has Classification 1 (areas with which federal or state designated endangered, threatened, or sensitive species have a primary association.) Classification 2 (state priority habitats and areas associated with state priority species), and Classification 5 (Waters of the State, which includes Type S, Type F, Type Np, and Type Ns streams). All of the other classifications listed in the table are not present and will not be discussed further in this assessment (Classifications 3, 4, 6, 7, and 8).

Suitable Habitat for Fish and Wildlife

The following table includes state priority habitats and federally listed or state-listed species as well as state sensitive species that have a primary association with habitat within 300 feet of disturbance areas. The culvert is within a Type F stream. The table was compiled using the most recent state and federal species lists (WDFW 2024a, 2024b; WDNR 2024b; NMFS 2023; and USFWS 2024b). The following table lists the species that have suitable habitat in the project vicinity.

Table 2. Endangered, Threatened, Candidate, and Sensitive Species and Priority Habitat that have Primary Association with Habitat on or Adjacent to the Study Area

Species or State Priority Habitat	State Status	Federal Status	Designated Critical Habitat in Project Vicinity?
Fish			
Bull Trout (*Salvelinus confluentus*)	Candidate	Threatened	No
Birds			
Northern Spotted Owl (*Strix occidentalis caurina*)	Endangered	Threatened	No
Northern Goshawk (*Accipiter gentilis*)	Candidate	Species of Concern	
Marbled murrelet (*Brachyramphus marmoratus*)	Endangered	Threatened	No
Amphibians			
Western Toad (*Anaxyrus boreas*)	Candidate	None	Not applicable
Plants			
Western Wahoo (*Euonymus occidentalis var. occidentalis*)	Sensitive	None	Not applicable
Loose-Flowered Bluegrass (*Poa laxiflora*)	Sensitive	None	Not applicable
Soft-Leaved Willow (*Salix sessilifolia*)	Sensitive	None	Not applicable
Priority Habitats			
Instream	Priority Habitat	Not applicable	Not applicable
Riparian	Priority Habitat	Not applicable	Not applicable

The WDFW *Statewide Washington Integrated Fish Distribution* website shows that there are no fish species present in this stream or in Italian Creek to the south (see Sheet 13; WDFW 2024b). Bull trout is included in the list as it was indicated by USFWS; however, due to the natural barrier downstream, it is assumed bull trout cannot access the project area.

ELS recorded observations of surrounding topography, wildlife use, and habitat functions in the study area according to *CCC 19.15.130(C)*. Birds, western toad, and plants listed in the table could occur in the project vicinity because there is suitable habitat at or near the project site. ELS did not observe these species during the site visit, and none are mapped in or adjacent to the study area by sources listed above. However, animals and fish may not have been present during the site visit and a botanical survey has not been performed, so some of the smaller plants and plants that were not flowering may have gone unnoticed. If suitable habitat exists, these species may use habitat in the study area; therefore, it must be assumed that they could currently be present, as well as during and after project construction. The terrestrial species that are not plants are unlikely to remain in the project area during construction. In addition, the ground disturbance footprint is small, no state-listed plants were identified by ELS biologists, and management recommendations will be met, as described below.

MANAGEMENT RECOMMENDATIONS

Effects to species are generally avoided or minimized if the project meets management recommendations that are discussed below.

Northern Spotted Owl

The 2011 USFWS *Revised Recovery Plan for the Northern Spotted Owl (Strix occidentalis caurina)* states that the three main threats to the northern spotted owl are barred owls, past habitat loss, and current habitat loss. It states that "silvicultural treatments are generally not needed to maintain existing old-growth forests on sites with moist climates" (USFWS 2011). However, the document has a recovery action that states if moist forests are "managed for spotted owl habitat, land managers should implement silvicultural techniques in plantations, overstocked stands, and modified younger stands to accelerate the development of structural complexity and biological diversity that will benefit spotted owl recovery" (USFWS 2011).

This project will not affect tree stands away from the road, so it meets USFWS management recommendations.

Northern Goshawk

WDFW has provided the following management recommendations for northern goshawks (Larsen et al 2004):

- Minimize human disturbance in active nest areas between March 1 and September 30.
- Retain an average canopy closure of 70 to 80 percent and maintain forest in late stages of forest development.
- In nest-area clusters, limit all overstory or regeneration harvest and increase harvest rotation length.
- Retain large-diameter snags and downed logs in foraging areas for prey.
- Thin young tree stands.

Active nest areas are in mature forests, which do not occur within 300 feet of this project. There are no young tree stands suitable for goshawks that will be affected by the project. Therefore, this project meets management recommendations.

Marbled Murrelet

Federal

The USFWS *Recovery Plan for the Threatened Marbled Murrelet* (1997) does not advise specific management guidelines, such as buffers or timing restrictions for marbled murrelets. Instead, the Recovery Plan identifies that the decline in murrelets appears largely due to 1) loss of old-growth forest, nesting habitat, and direct loss and changes in forest-age distribution, and 2) poor reproductive success in the remaining habitat because of increased vulnerability of nests to predators in highly fragmented landscapes.

State

According to the WDFW *Management Recommendations for Washington's Priority Habitats and Species* (Rodrick and Milner 1991), a 0.5-mile radius buffer is an appropriate distance between construction activities and marbled murrelet occupancy sites.

No nesting or occupancy sites have been identified near the project site, so WDFW and USFWS management recommendations will be met.

Western Toad
There are no state or federal management recommendations for the western toad.

Western Wahoo, Loose-Flowered Bluegrass, Soft-Leaved Willow
These species are not federally listed, and there is not currently a list of state management recommendations for them. Western wahoo and loose-flowered bluegrass could occur in upland riparian areas in the project vicinity, and soft-leaved willow could occur in the riparian areas near the stream. However, ELS biologists did not identify these species within the disturbance footprints, so it is unlikely they are present.

Instream Habitat
WDFW does not have specific documents that have a short list of management recommendations for instream habitat. Aquatic Habitat Guidelines are a series of documents with guidelines to facilitate the consistent application of good science and practice for resources and habitat management, project design, construction, and operation in, near, or affecting aquatic systems. This project has been designed according to these documents that are available on the WDFW website.

Riparian Habitat
The WDFW management recommendation for riparian habitat (Knutson and Naef 1997) is to "protect riparian habitat areas". Standard recommended RHA widths for areas with typed and non-typed streams are somewhat different than widths required in the CCC. However, this project has little impact on the surrounding riparian habitat because there is only minor excavation into riparian habitat and only small quantities of fill near the existing roadway and culvert. Two red alder trees will be removed and will be mitigated for through onsite enhancement within the right of way. Therefore, the project generally meets riparian management recommendations.

Level II Habitat Assessment

This project requires a Level II habitat assessment because there are impacts within the inner RHA, which includes Level I items as well as species management recommendations and development standards that are included below.

DEVELOPMENT STANDARDS

CCC 19.15.130 D. Development Standards – General Requirements

The following are development standards applicable to this project (in *italics*) as listed in the *CCC 19.15.130 D, E* and *F*, followed by a discussion of how they are met (in regular font).

1. *Alterations within All Classifications. A habitat conservation area may be altered, provided that the proposed alteration of the habitat or the mitigation proposed does not degrade the quantitative and qualitative functions and values of the habitat.*

   Best management practices stated in the avoidance and minimization section will be in place prior to and for the duration of construction to prevent and minimize habitat disturbances. Onsite mitigation is proposed because this site is not within the service area of Coweeman Mitigation Bank.

2. *Nonindigenous Species. Plants, wildlife, or fish species not indigenous to the region shall not be introduced into a habitat conservation area unless authorized by a state or federal permit or approval.*

   Nonindigenous species will not be introduced; nonindigenous plants will not be installed.

3. *Approvals and the Best Available Science. Any approval of alterations or impacts to a habitat conservation area shall be supported by the best available science.*

   Best available science and the most recent available data were used in preparing this document and the mitigation plan.

4. *Clearing and Grading. When clearing and grading is permitted as part of an approved critical areas assessment the following shall apply: a) Grading is allowed only during the dry season, which is typically regarded as beginning on May 1st and ending on October 1st of each year; provided, that the county may extend or shorten the dry season on a case-by-case basis, determined on actual weather conditions; and b) Best management practices for erosion and sediment control must be in place prior to, during, and after construction.*

   Culvert replacement will be conducted within the in-water work window specified by WDFW (July 15 through September 30). BMPs as previously described will be implemented.

CCC 19.15.130 E. DEVELOPMENT STANDARDS - SPECIFIC HABITATS

1. ***Endangered, Threatened, and Sensitive Species.***
   Where federal or state management recommendations exist to protect a state or federally protected species, development or activities may be allowed within or adjacent to a habitat conservation area or buffer with which the state or federally endangered, threatened, or sensitive species has a primary association only when the management recommendations are utilized as demonstrated in a critical area assessment prepared by a qualified professional and approved by the Director.

This project will meet management recommendations for federal and state-listed species and habitats as described above.

3. ***Riparian Habitat Areas (RHA).*** *RHAs shall be established for habitats that include aquatic and terrestrial ecosystems that mutually benefit each other and that are located adjacent to waters of the state. Unless otherwise allowed in this title, all structures and activities shall be located outside of the RHAs.*

   Culvert replacement requires working in the inner RHA. This project has been designed to minimize the disturbance footprint to the smallest extent possible, while still allowing local residents to use Italian Creek Road.

   d. Riparian Habitat Area Widths. Required RHA widths.

   For Type F water with channel width less than or equal to 20 feet, there is an established 100-foot RHA width.

   iii. Option 3 – Inner Zone of RHA. The inner zone of the RHA is the inner one-half or 50 percent of the standard RHA widths shown in Table 19.15.130-B. Where proposed use or development activities would occur partially or entirely within the inner zone, the following standards must be met:

   (A) A level two critical areas habitat assessment is required, and

   (B) The applicant demonstrates compliance with all applicable provisions of subsection (E)(5) of this section.

   The inner RHA zone is 50% of the RHA, which is 50 feet from the OHWM. Work will occur in the inner RHA, so this project requires a Level II Habitat Assessment.

4. ***Alterations to Waters of the State and Associated RHAs****. Activities may be permitted within a pond, lake, water of the state, marine habitat, or associated riparian habitat area when the activity complies with the provisions in this subsection and in accordance with an approved critical area assessment and, if applicable, in accordance with the Shoreline Management Act, Chapter 90.58 RCW, the county's Shoreline Master Program, and all other applicable state or federal permits.*

   a. General.

   i. All work shall comply with the Washington Department of Fish and Wildlife in-water work window for the applicable species;

   Work will be done within the WDFW-specified in-water work window (July 15 through September 30).

ii. The proposal will not degrade the functions or values of the fish habitat or other critical areas.

Best management practices stated in the avoidance and minimization section will be in place prior to and for the duration of construction to prevent and minimize habitat disturbances. Mitigation proposed will fully compensate for any lost functions or values.

d. In-Stream Structures. On Type F, Type Np, and Type Ns waters, the following provisions shall apply:

i. No structures that prevent the migration of salmonids will be allowed in the portion of water bodies currently used by anadromous fish.

ii. In-stream structures, such as, but not limited to, high flow bypasses, sediment ponds, instream ponds, and retention and detention facilities, are prohibited from RHAs unless they are necessary for the successful development or maintenance of a habitat improvement project.

e. Fills. Fills shall minimize impacts to anadromous fish or their habitat.

Culverts for road crossings are instream structures that are necessary to allow continued stream flow. There is a downstream natural barrier to anadromous fish, so replacing this culvert will not affect anadromous fish. Although there is a downstream barrier, the culvert has been designed to allow passage of resident fish species and to be able to pass appropriate flows.

g. Roads, Trails, Bridges, and Rights-of-Way. Construction of trails, roadways, and bridges may be permitted subject to the following additional standards:

i. There is no other feasible alternative route with less impact on the environment;

ii. The crossing minimizes interruption of downstream movement of wood and gravel;

iii. Trails shall be located in the outer 50 percent of the RHA, except for limited viewing platforms and crossings;

iv. Crossings, where necessary, shall only occur as near to perpendicular with the watercourse as possible;

v. Mitigation for impacts is provided pursuant to a mitigation plan of an approved critical area assessment;

vi. Trails and associated viewing platforms shall not be made of continuous impervious materials.

This project meets the requirements above, as the proposed project is for a culvert replacement and not new construction.

6. Other Classifications.

a. Classifications 2 and 3. Whenever activities are proposed adjacent to or within Classification 2 or 3 areas, an approved critical area assessment prepared by a qualified professional may be required and must comply with Washington Department of Fish and Wildlife management recommendations for affected species or habitats.

This project will meet management recommendations as described in this document.

CCC 19.15.130 F. Development Standards – Additional Mitigation Requirements for Fish and Wildlife Habitat Conservation Areas.

1. Mitigation for alterations to fish and wildlife habitat conservation areas shall be consistent with the Washington State Department of Fish and Wildlife and other state or federal agencies' management recommendations and guidance documents for best practices mitigation. See CCC 19.15.170, Mitigation requirements.
2. Mitigation shall be required to the level or extent necessary to achieve no net loss of critical area functions and values.
3. Proposed mitigation for impacts within fish and wildlife habitat conservation areas may be conditioned by the county on a case-by-case basis using recommendations provided by Washington Department of Fish and Wildlife. [Ord. 16-174 § 2 (Exh. A), 12-20-16.].

Mitigation is proposed for this project, and it is described in detail in the attached mitigation plan (Appendix B).

CONCLUSIONS

Project avoidance and minimization include not altering natural topography outside the right-of-way, and the stream's course will not be changed. The culvert and armoring will be placed above the OHWM in the smallest footprint that will protect the road and culvert, and areas of exposed soil at the project site will be seeded with native grasses and covered with weed-free mulch. This culvert will be bottomless, no riprap or culvert armoring will be placed waterward of the OHWMs, and the stream slope will match the slopes upstream and downstream of the culvert.

The project will result in no permanent impacts to stream habitat. It will restore and re-establish 1,208 square feet of riparian habitat. These improvements will be used to compensate for RHA impacts.

RHA construction impacts are somewhat less than permanent impacts and will mostly occupy the same footprint as the permanent RHA impacts. These impacts will be compensated by using a 1 to 0.5 ratio (1 unit of RHA impacts to 0.5 units of instream habitat improvements). The attached mitigation plan proposes to plant the restored streambanks with native Sitka willow (Salix sitchensis) and two adjacent areas within the permanent road easement with native understory plants for a total of 644 square feet of inner RHA enhancement (96 square feet above the required area).

LIMITATIONS

ELS bases this report's determinations on standard scientific methodology and best professional judgment. In our opinion, local, state, and federal regulatory agencies should agree with our determinations; however, the information contained in this report should be considered preliminary and used at your own risk until it has been approved in writing by the appropriate regulatory agencies. ELS is not responsible for the impacts of any changes in environmental standards, practices, or regulations after the date of this report.

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Personal Communications

George Fornes, WDFW. Emails dated February 16, 2023.
George Fornes, WDFW, personal communication, June 15, 2023.

Lacey Hoffmann

From: Fornes, George L (DFW) <George.Fornes@dfw.wa.gov>
Sent: Thursday, February 16, 2023 3:47 PM
To: Lacey Hoffmann; Maurer, Roger
Cc: Lunday,Anna
Subject: RE: Italian Creek Road MP 1.90 - Culvert Replacement

Hi Lacey,

Yes, the average BFW measured today was 10 ft. We took 9 measurements today upstream of the county road. We were able to go further upstream today than we were on a previous visit, and get above the immediate influence of the culvert. If we combine today's measurements with the two from the last site visit (downstream of the county road), the average is 10 ft.

Individual measurements were:
Upstream 2/16/2023: 10, 11, 13.5, 10.5, 9, 9.5, 8, 9.5, 13
Downstream 10/10/2022: 7, 8

Stream simulation methodology would yield a crossing 14 feet wide.

Best,

George Fornes
Habitat Biologist

Washington Department of Fish and Wildlife
5525 S 11th Street, Ridgefield, WA 98642
Cell: (360) 623-0651

From: Lacey Hoffmann <Lacey@eco-land.com>
Sent: Thursday, February 16, 2023 3:37 PM
To: Maurer, Roger <MaurerR@cowlitzwa.gov>; Fornes, George L (DFW) <George.Fornes@dfw.wa.gov>
Cc: Lunday,Anna <lundaya@cowlitzwa.gov>
Subject: RE: Italian Creek Road MP 1.90 - Culvert Replacement

External Email

Hi George,

Thanks for meeting with us out there today to take a look at the bfw. Just confirming that the average bfw was measured at 10 feet and the County can move forward with design based on that measurement.

FIGURES AND PHOTOPLATES

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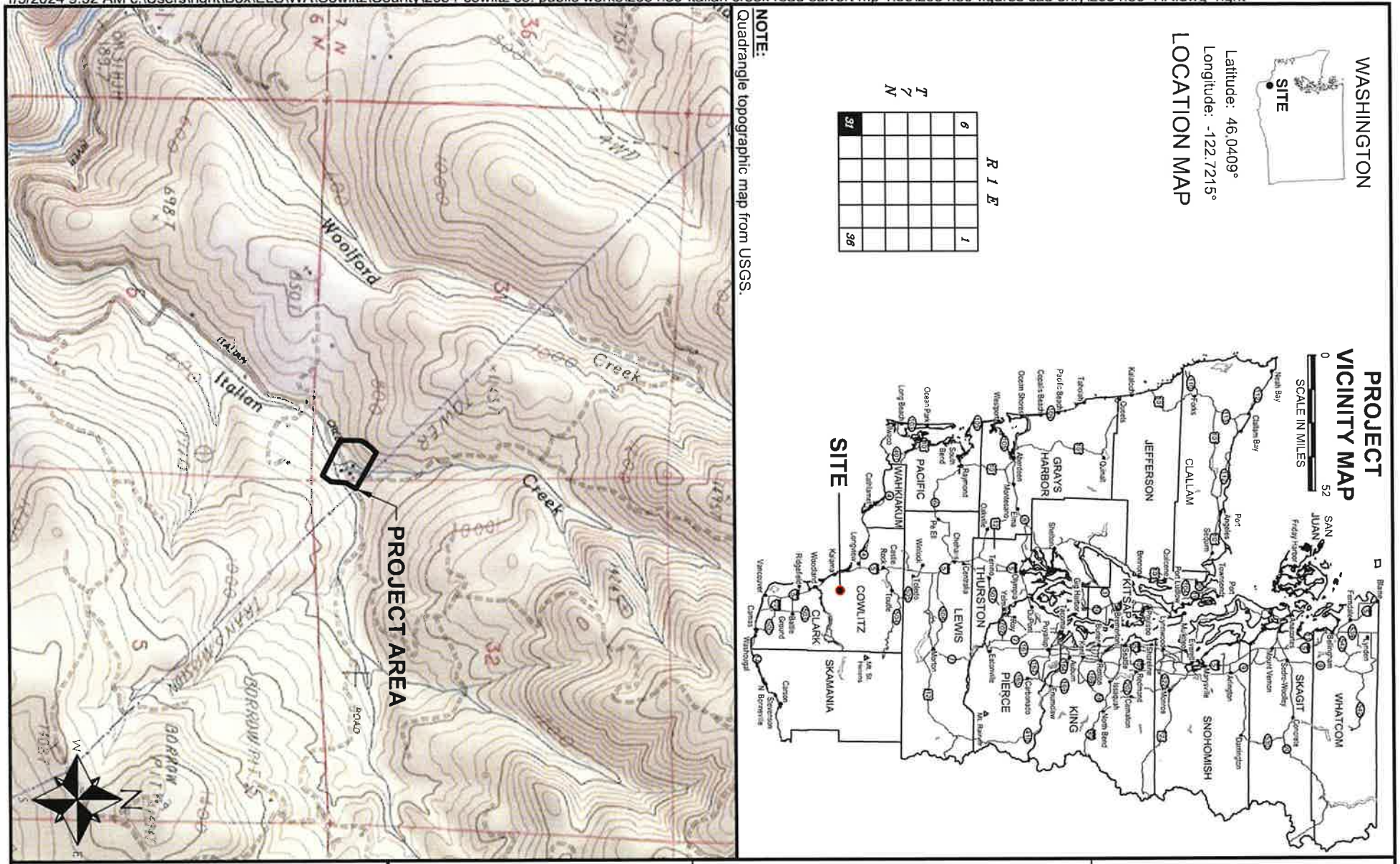


Ecological Land Services

1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

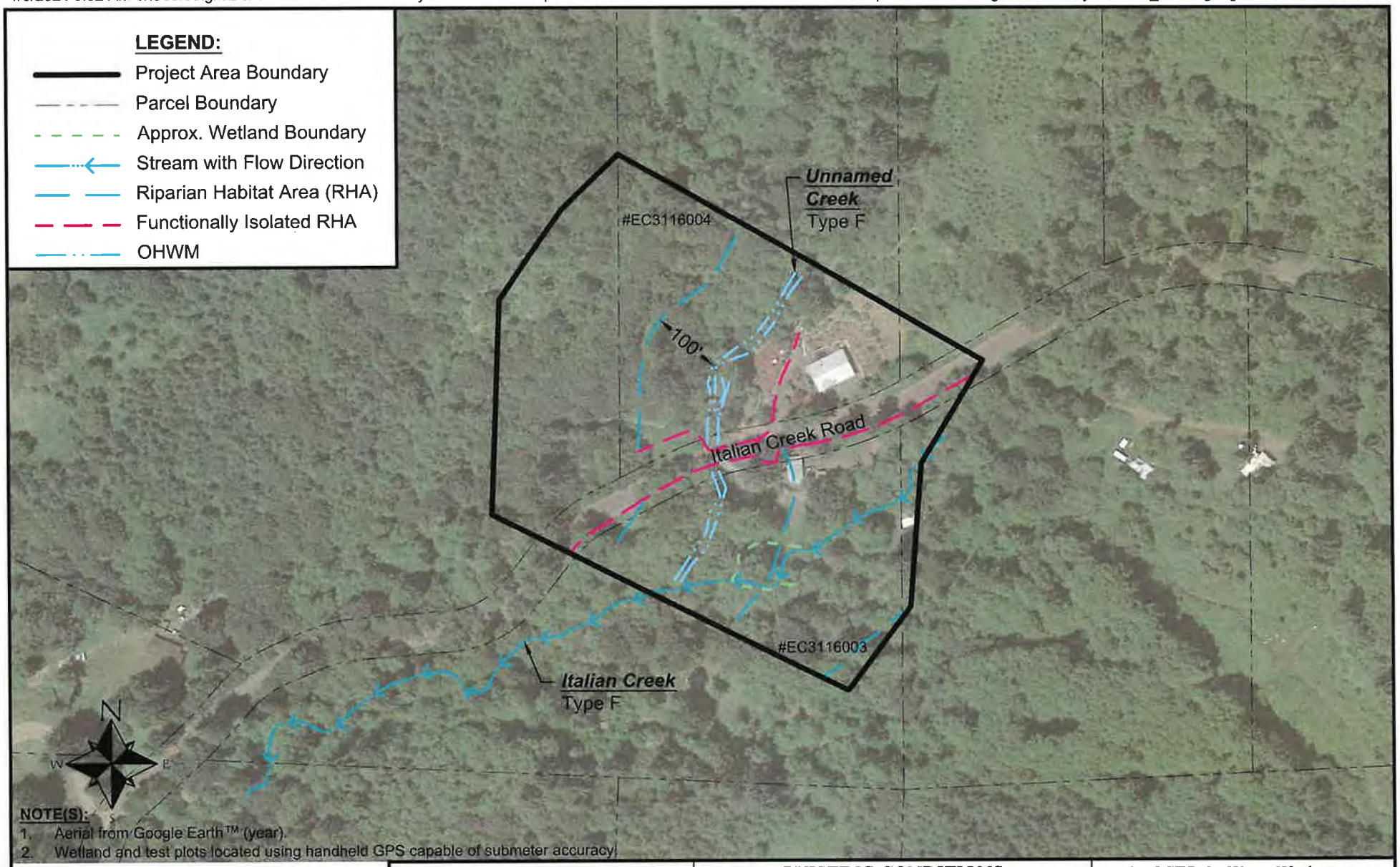
PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

VICINITY MAP
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road
Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 1 **OF** 13
DATE: 1/5/24



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SCALE IN FEET

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

EXISTING CONDITIONS
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS:
near 451 Italian Creek Road
Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 2 **OF** 13
DATE: 1/5/24

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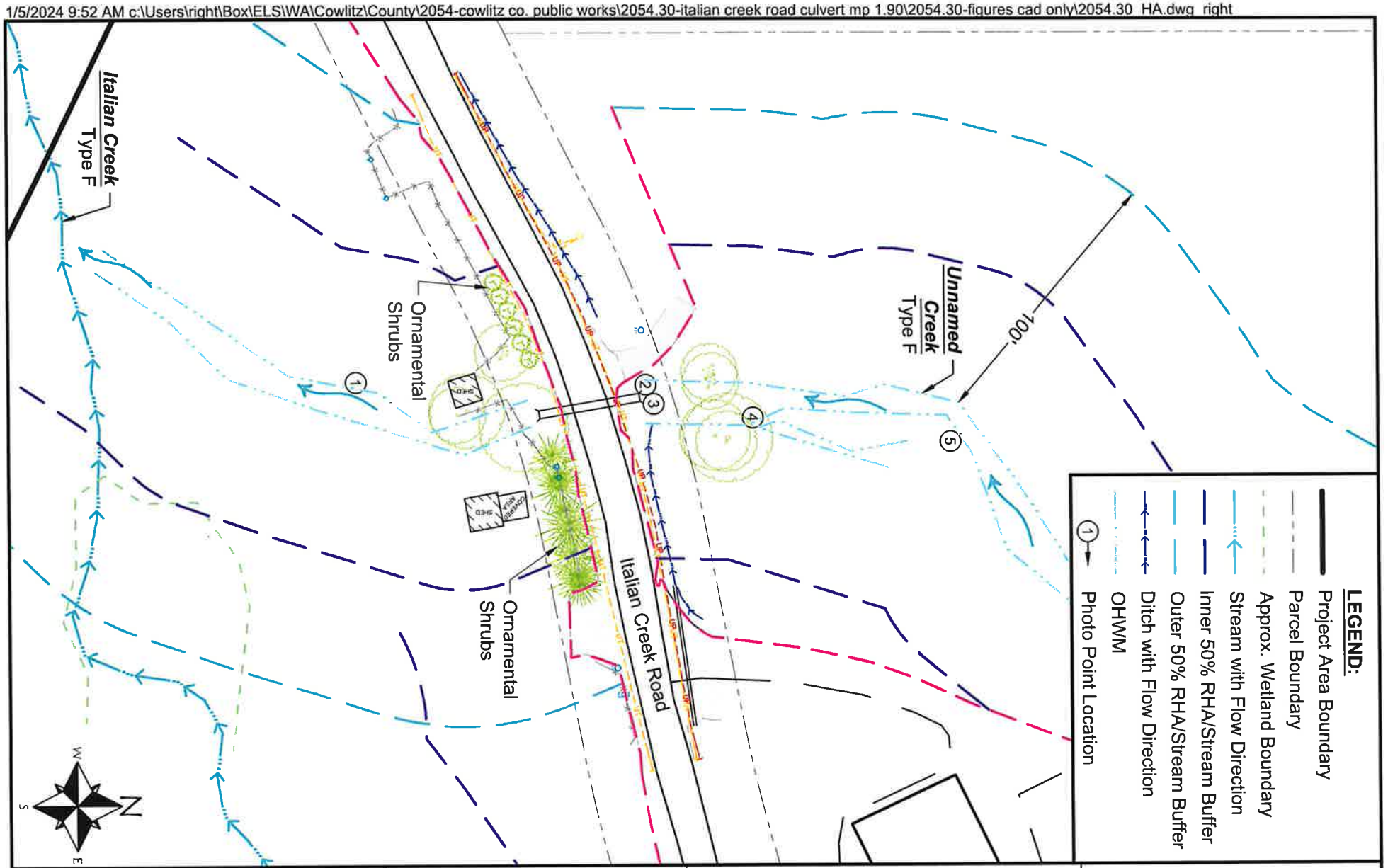

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SCALE IN FEET

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

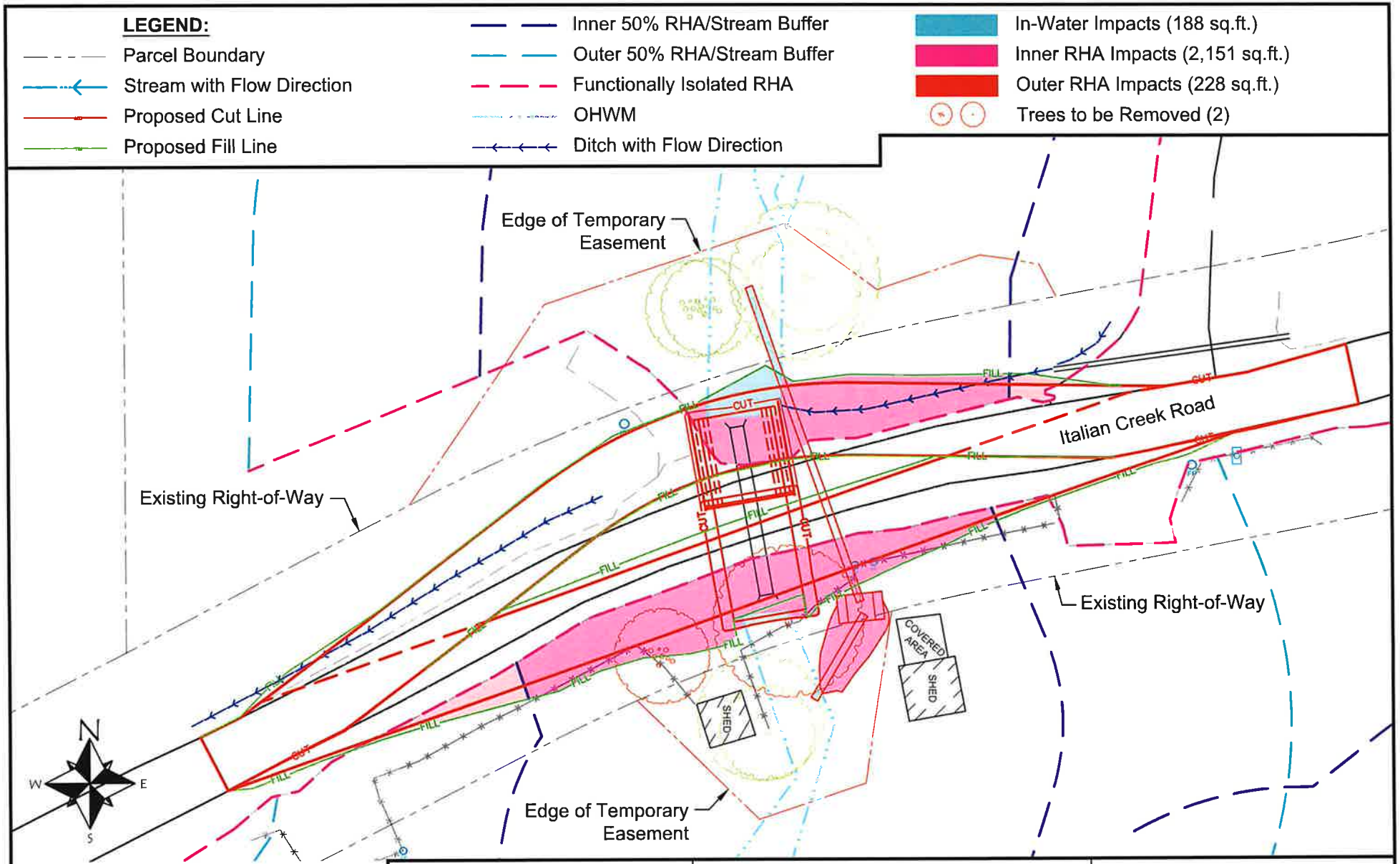
PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

EXISTING CONDITIONS DETAIL
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road
Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 3 **OF** 13
DATE: 1/5/24



Ecological Land Services

1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

CONSTRUCTION IMPACTS
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS:
near 451 Italian Creek Road
Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 4 **OF** 13
DATE: 1/5/24

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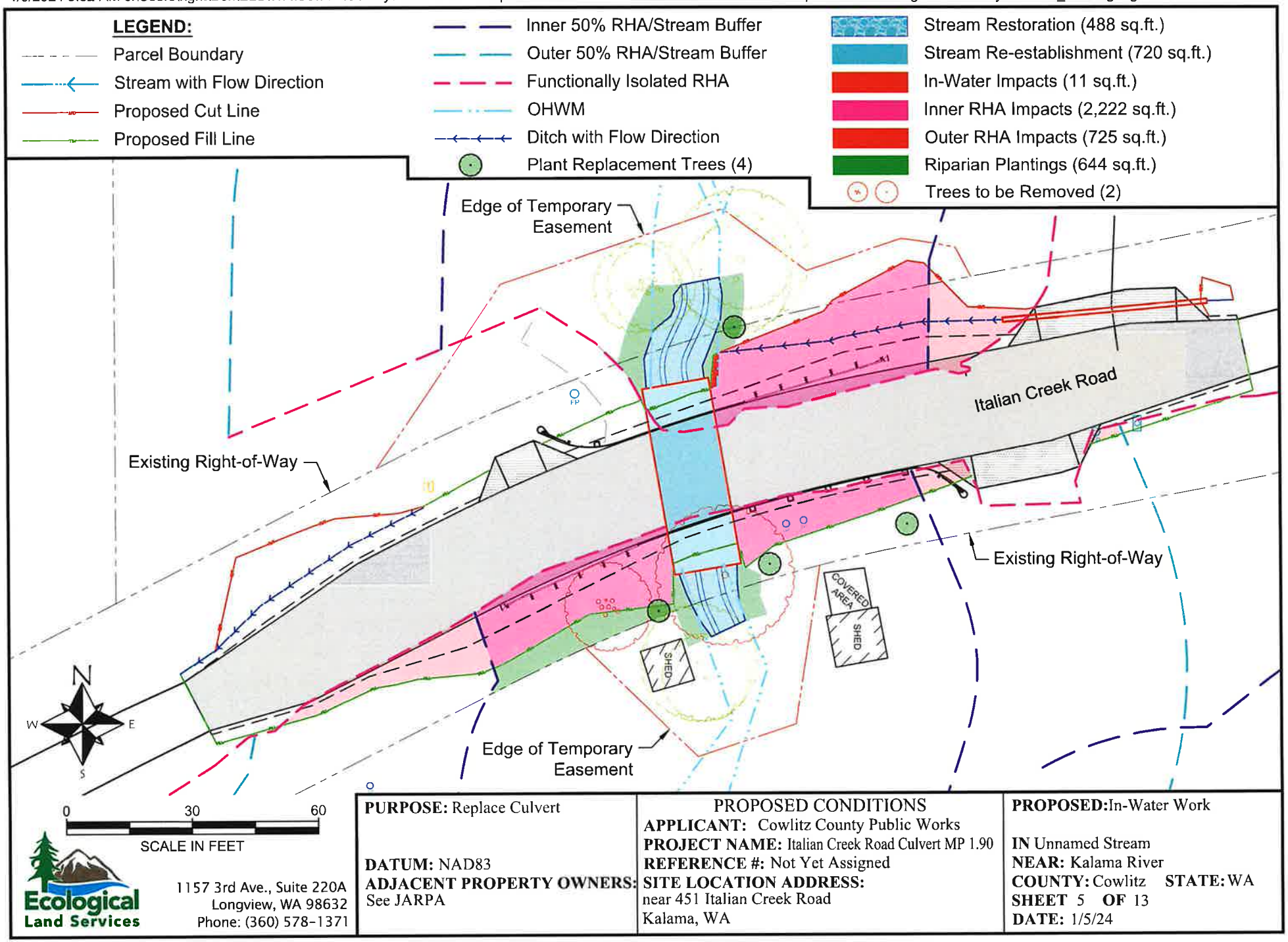

Ecological Land Services

1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED CONDITIONS

APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 5 **OF** 13
DATE: 1/5/24

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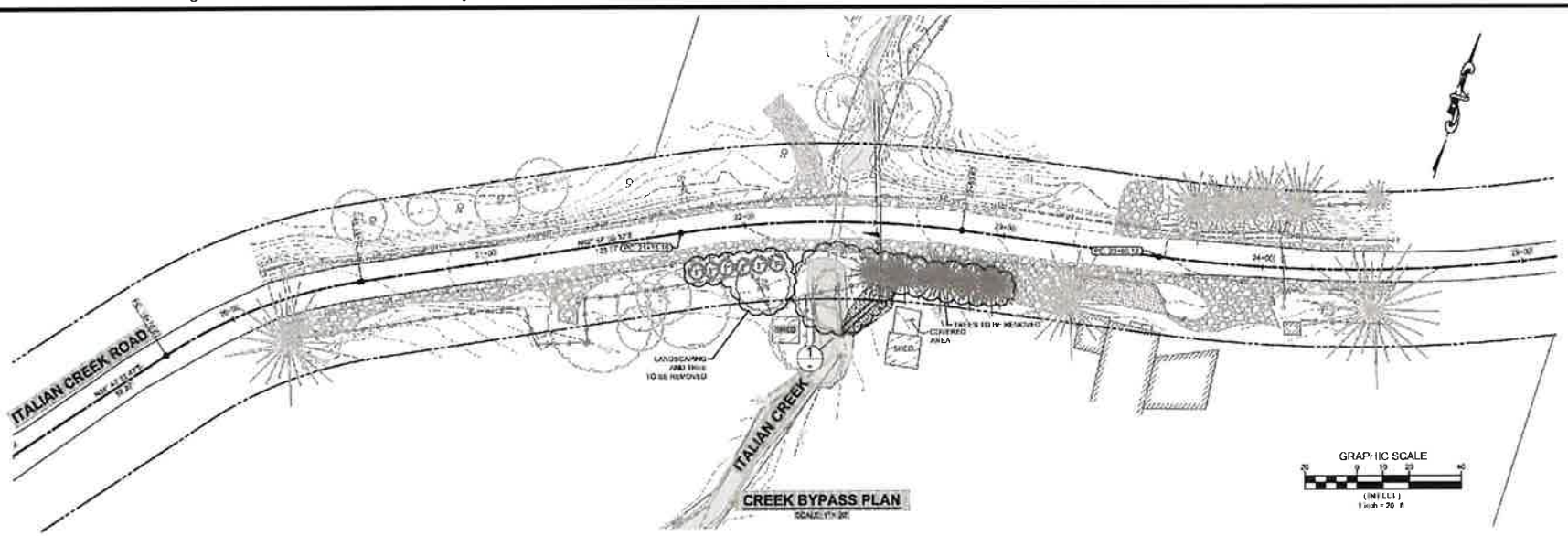
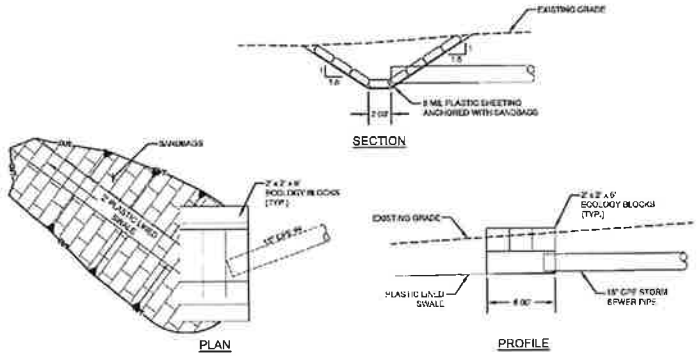
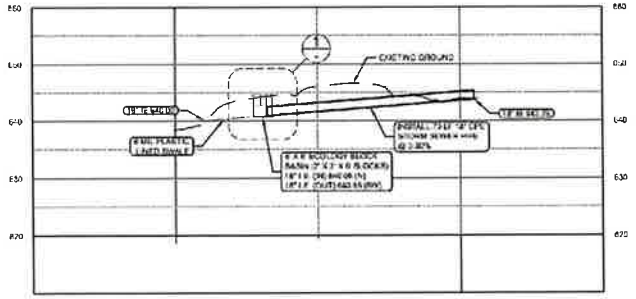


CREEK BYPASS PLAN



BASIN DETAIL



CREEK BYPASS PROFILE

R.E.M. PROJECT MANAGER 9/25/2023 DATE D.J.H. DRAWN BY 9/25/2023 DATE S.C.C. CHECKED BY 9/25/2023 DATE	HORZ. SCALE: AS NOTED VERT. SCALE: AS NOTED PROJECT ID: 1323 ROAD NO: 40300 COMPUTER FILE: 1323 Phase 1 Temp Const.dwg	COWLITZ COUNTY WASHINGTON	DEPARTMENT OF PUBLIC WORKS 1600 13TH AVENUE SOUTH KELSO, WASHINGTON 98626	NOTE: SCALES SHOWN ARE FOR FULL SIZE (24"x36") PLAN SHEETS ONLY. SCALES FOR HALF SIZE PLAN SHEETS ARE APPROXIMATELY ONE HALF SCALE	PRELIMINARY-30%	SEC. 31, T 6N, R 1E	ITALIAN CREEK ROAD CULVERT REPLACEMENT CREEK BYPASS PLAN, PROFILE AND DETAILS	SHEET 2 OF 6

SCALE AS SHOWN

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

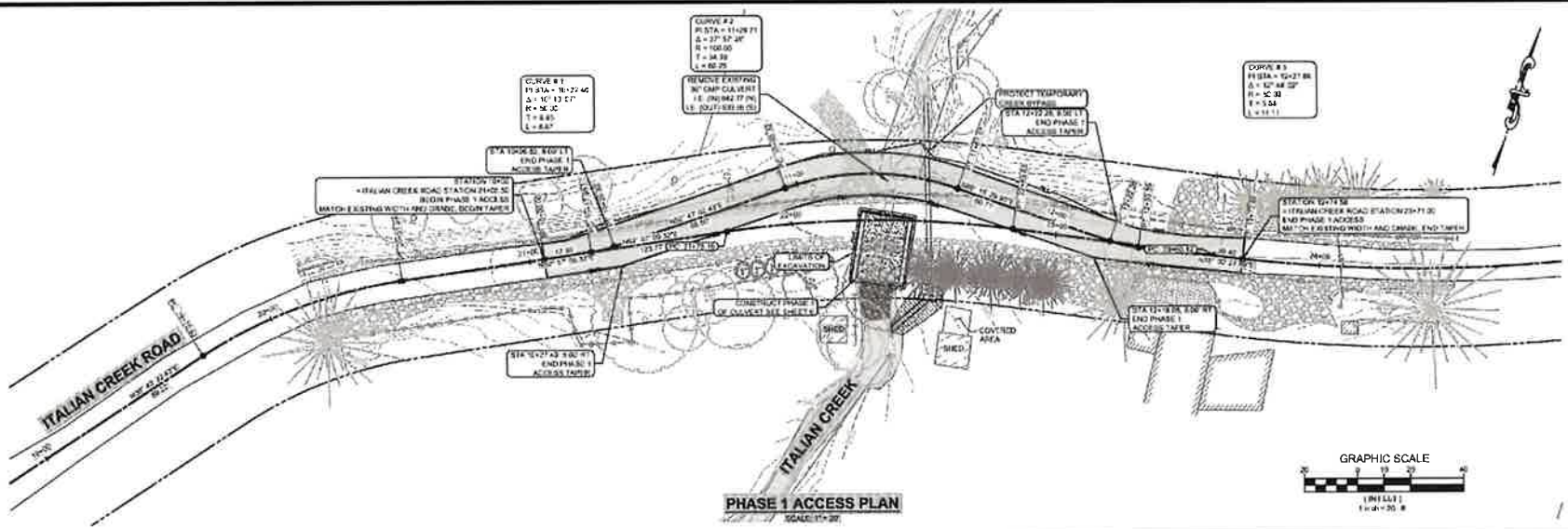
PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

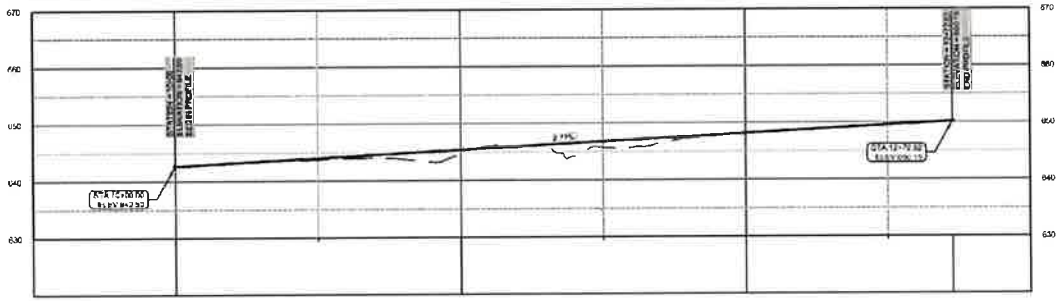
PROPOSED CONDITIONS CREEK BYPASS PLAN, PROFILE & DETAILS
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS:
near 451 Italian Creek Road
Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 6 **OF** 13
DATE: 1/5/24

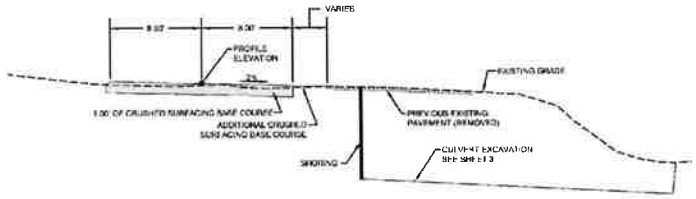


PHASE 1 ACCESS PLAN



PHASE 1 ACCESS PROFILE

PHASE 1 ACCESS SUPERELEVATION



PHASE 1 TYPICAL ACCESS SECTION

RJM PROJECT MANAGER 9/25/2023 DATE	HORZ. SCALE: AS NOTED VERT. SCALE: AS NOTED PROJECT ID: 1323 ROAD NO. 40900 COMPUTER FILE: 1323 Phase 1 Temp Const.dwg	COWLITZ COUNTY WASHINGTON	DEPARTMENT OF PUBLIC WORKS 1600 13TH AVENUE SOUTH KELSO, WASHINGTON 98626	NOTE: SCALES SHOWN ARE FOR FULL SIZE (24"x36") PLAN SHEETS ONLY. SCALES FOR HALF SIZE PLAN SHEETS ARE APPROXIMATELY ONE HALF SCALE.	PRELIMINARY-30%	SEC. 31, T 6N, R 1E	ITALIAN CREEK ROAD CULVERT REPLACEMENT PHASE 1 ACCESS PLAN, PROFILE AND TYPICAL ACCESS SECTION	SHEET 3 OF 6
DJB DRAWN BY 9/25/2023 DATE								
SEF CHECKED BY 9/25/2023 DATE								

SCALE AS SHOWN

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED CONDITIONS PHASE 1 ACCESS PLAN, PROFILE & SECTION
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 7 **OF** 13
DATE: 1/5/24

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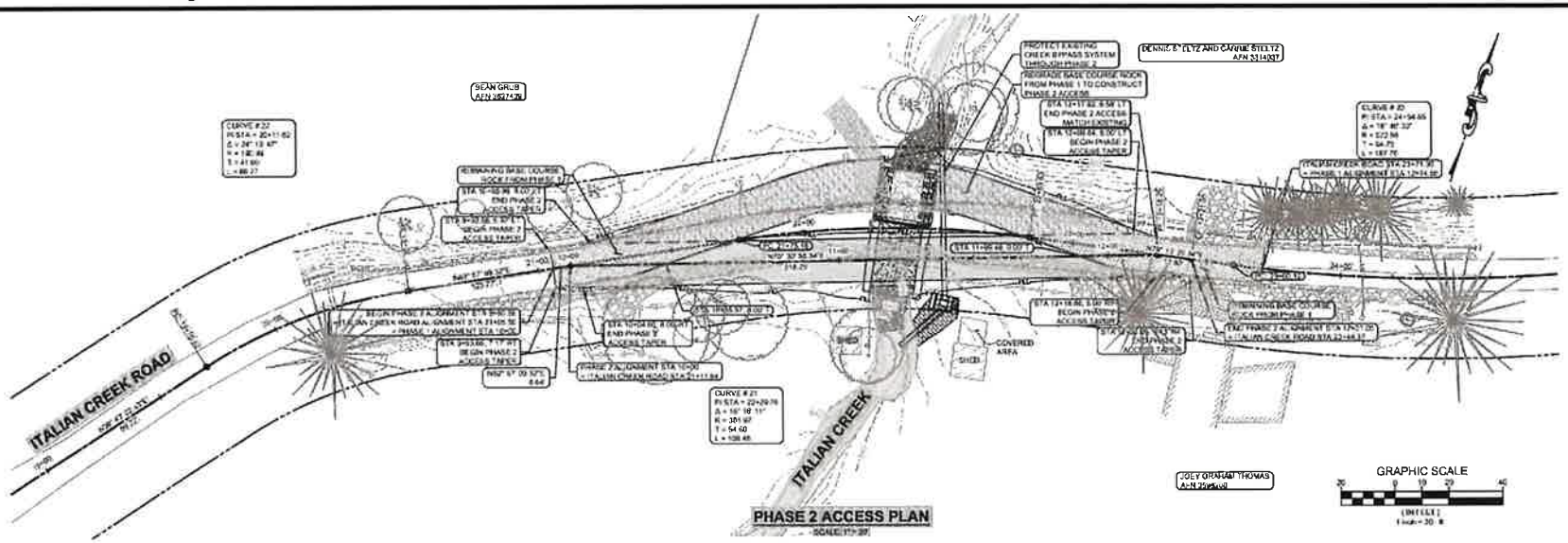
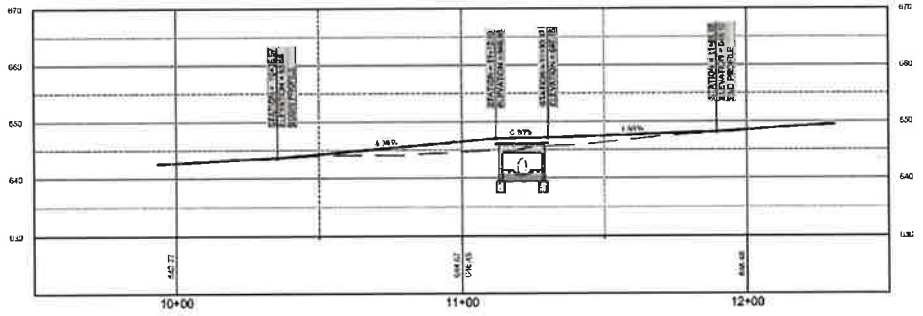
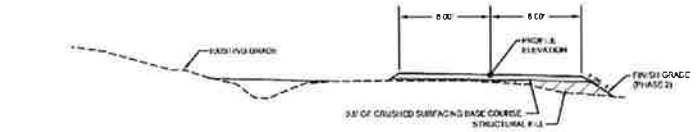


PHASE 2 ACCESS PLAN



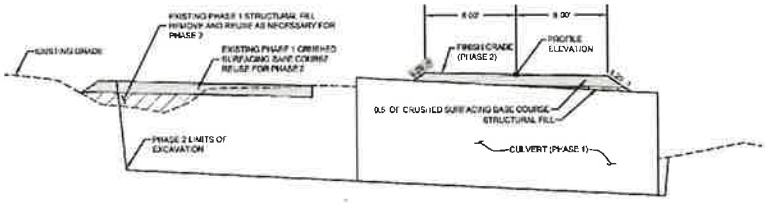
PHASE 2 ACCESS PROFILE

SCALE: 1" = 20' HORIZ
1" = 10' VERT



PHASE 2 ACCESS TYPICAL SECTION

SCALE 1" = 5' HORIZ
1" = 5' VERT



PHASE 2 ACCESS TYPICAL SECTION OVER CULVERT

SCALE 1" = 5' HORIZ
1" = 5' VERT

R.E.M. PROJECT MANAGER 9/26/2023 DATE D.J.B. DRAWN BY 9/26/2023 DATE S.C.E. CHECKED BY 9/26/2023 DATE	HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED PROJECT ID: 1323 ROAD NO: 40900 COMPUTER FILE: 1323 Phase 2 Temp Const.dwg	COWLITZ COUNTY WASHINGTON	DEPARTMENT OF PUBLIC WORKS 1600 13TH AVENUE SOUTH KELSO, WASHINGTON 98626	NOTE: SCALES SHOWN ARE FOR FULL SIZE (24"x36") PLAN SHEETS ONLY. SCALES FOR HALF SIZE PLAN SHEETS ARE APPROXIMATELY ONE HALF SCALE.	PRELIMINARY-30%	SEC. 31, T 6N, R 1E	ITALIAN CREEK ROAD CULVERT REPLACEMENT PHASE 2 ACCESS PLAN, PROFILE AND TYPICAL SECTIONS	SHEET 4 OF 6

SCALE AS SHOWN

Ecological Land Services

1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED CONDITIONS PHASE 2 ACCESS PLAN, PROFILE & SECTION

APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 8 **OF** 13
DATE: 1/5/24

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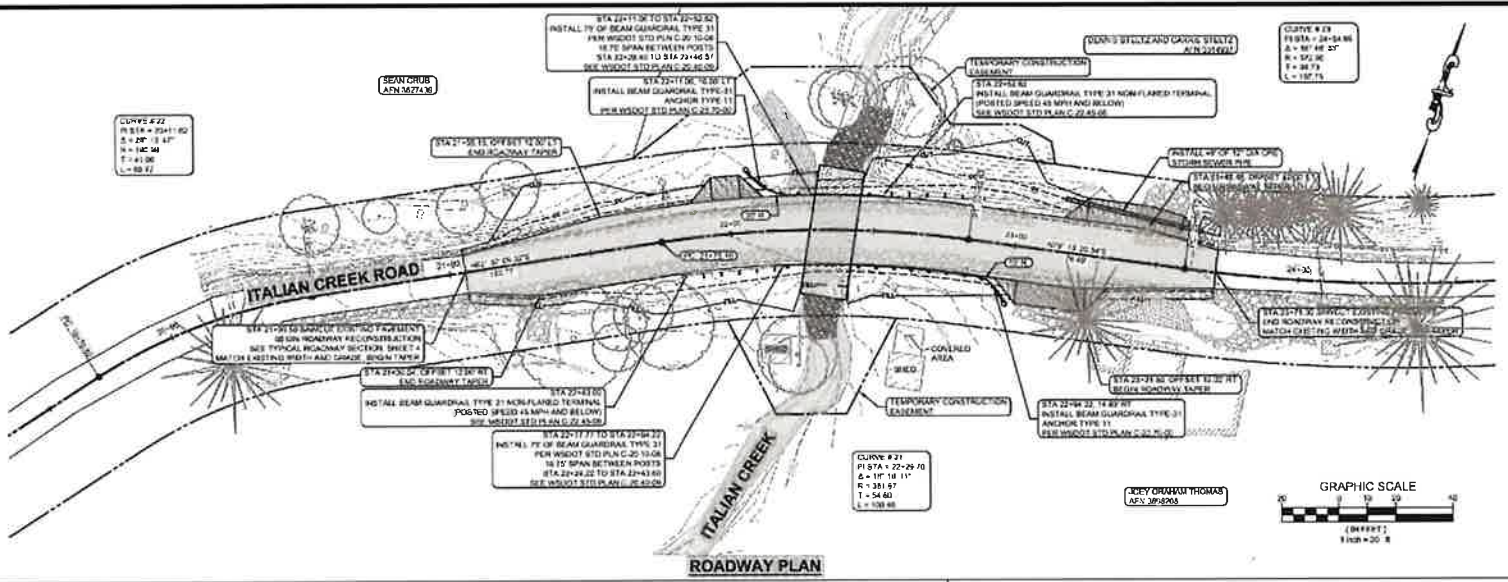
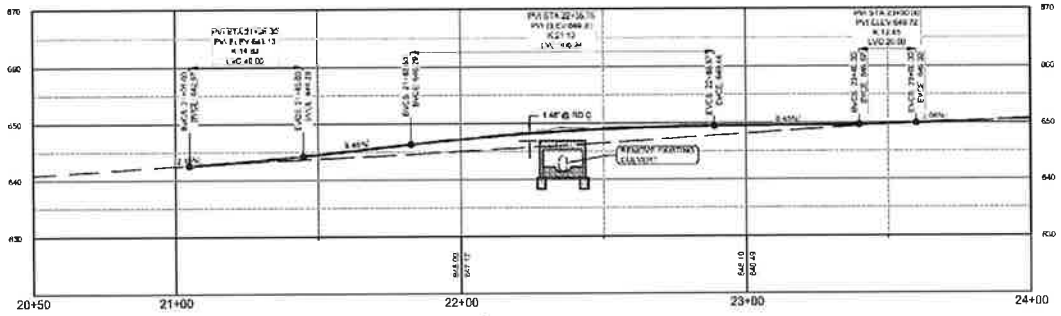


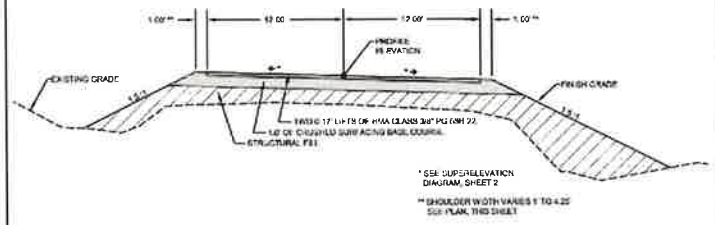
ROADWAY PLAN



ROADWAY PROFILE

SCALE: 1" = 20' HORIZONTAL
1" = 10' VERTICAL

SUPER ELEVATION



TYPICAL ROADWAY SECTION

SCALE: 1" = 8'

RJFM PROJECT MANAGER 9/25/2023 DATE	HORIZ SCALE: AS NOTED VERT. SCALE: AS NOTED	COWLITZ COUNTY WASHINGTON	DEPARTMENT OF PUBLIC WORKS	NOTE: SCALES SHOWN ARE FOR FULL SIZE (24"x36") PLAN SHEETS ONLY. SCALES FOR HALF SIZE PLAN SHEETS ARE APPROXIMATELY ONE-HALF SCALE.		SEC. 31, T 6N, R 1E	ITALIAN CREEK ROAD CULVERT REPLACEMENT FINAL ROADWAY PLAN, PROFILE AND TYPICAL ROADWAY SECTION	SHEET 5 OF 6
DJ IL DRAWN BY 9/25/2023 DATE	PROJECT ID: 1323 ROAD NO: 40900		1600 13TH AVENUE SOUTH KELSO, WASHINGTON 98626					
SEC CHECKED BY 9/25/2023 DATE	COMPUTER FILE: 1323 Design.dwg							

PRELIMINARY-30%

SCALE AS SHOWN

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED CONDITIONS FINAL ROADWAY PLAN, PROFILE & SECTION
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS:
near 451 Italian Creek Road
Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 9 **OF** 13
DATE: 1/5/24

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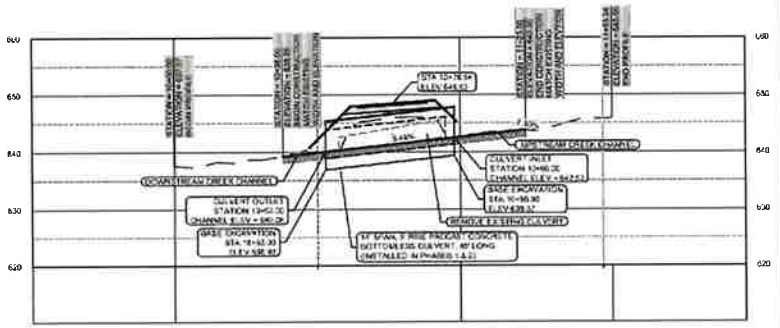
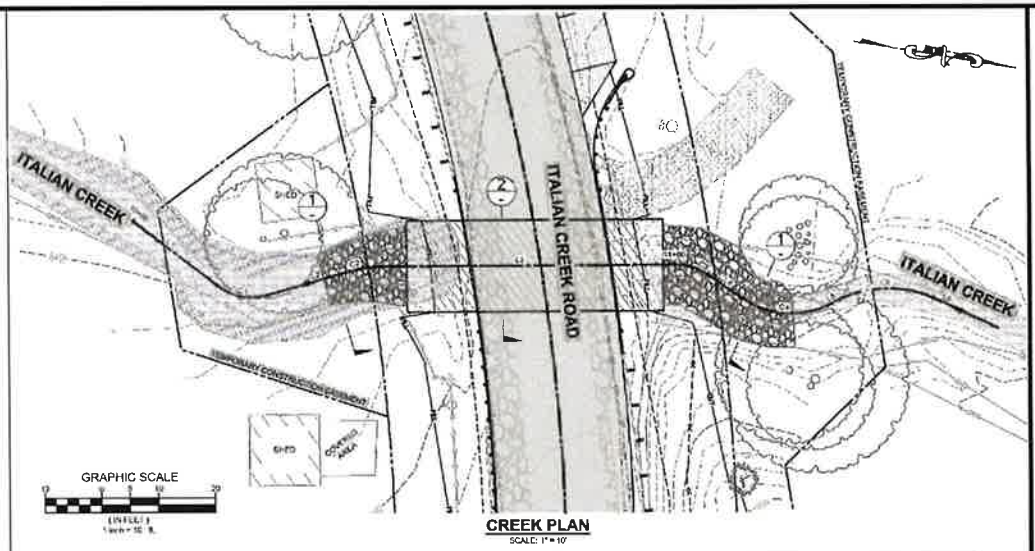


CREEK PROFILE



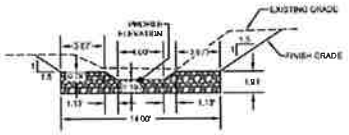
CREEK PLAN

CURVE TABLE: ITALIAN CREEK CENTERLINE ALIGNMENT

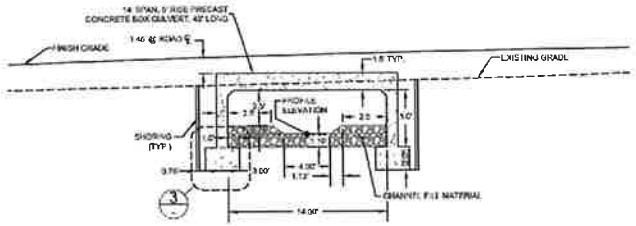
CURVE #	RADIUS	LENGTH	CHORD DIRECTION	START POINT	END POINT	PI	Δ
C1	10.00	8.30	N 1° 25' 49.45"E	(1076340.00,265407.01)	(1076340.26,265407.01)	10123.51	053°18'10"
C2	30.00	5.43	N11° 26' 48.28"W	(1076339.77,265381.45)	(1076300.15,265396.61)	10446.82	010°22'54"
C3	10.00	8.07	N7° 42' 21.20"E	(1076329.48,265377.46)	(1076320.26,265393.38)	10453.23	046°14'57"
C4	10.00	15.58	N4° 51' 48.75"W	(1076303.41,265390.07)	(1076302.14,265405.00)	10422.20	089°34'58"
C5	20.00	17.10	N10° 1' 36.38"W	(1076330.89,265306.50)	(1076327.82,265323.11)	10440.56	049°00'36"

LINE TABLE: ITALIAN CREEK CENTERLINE

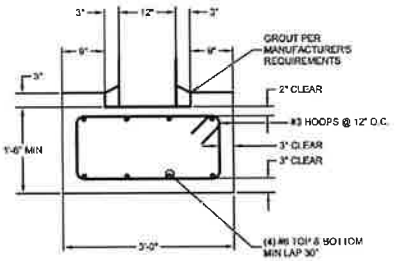
LINE #	BEARING	DISTANCE
L1	N28°56'54"E	18.59'
L2	N25°51'16"W	15.24'
L3	N87°40'21"W	51.59'
L4	N47°05'15"E	7.28'
L5	N39°46'33"W	2.29'
L6	N14°29'42"E	4.71'



1 TYPICAL CREEK SECTION



2 TYPICAL CULVERT SECTION



3 FOOTING

RJM PROJECT MANAGER 6/25/2023 DATE	HORIZ SCALE: AS NOTED VERT. SCALE: AS NOTED PROJECT ID: 1323 ROAD NO: 40900 COMPUTER FILE: 1323 Design.dwg	COWLITZ COUNTY WASHINGTON	DEPARTMENT OF PUBLIC WORKS 1600 13TH AVENUE SOUTH KELSO, WASHINGTON 98626	NOTE: SCALES SHOWN ARE FOR FULL SIZE (24"x36") PLAN SHEETS ONLY. SCALES FOR HALF SIZE PLAN SHEETS ARE APPROXIMATELY ONE-HALF SCALE.	SEC. 31, T 6N, R 1E	ITALIAN CREEK ROAD CULVERT REPLACEMENT CREEK PLAN, PROFILE AND TYPICAL CREEK SECTIONS	SHEET 6 OF 6
DJD DRAWN BY 6/25/2023 DATE							
SEC CHECKED BY 6/25/2023 DATE							

PRELIMINARY-30%

SCALE AS SHOWN

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED CONDITIONS CREEK PLAN, PROFILE & SECTIONS

APPLICANT: Cowlitz County Public Works

PROJECT NAME: Italian Creek Road Culvert MP 1.90

REFERENCE #: Not Yet Assigned

SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream

NEAR: Kalama River

COUNTY: Cowlitz **STATE:** WA

SHEET 10 **OF** 13

DATE: 1/5/24

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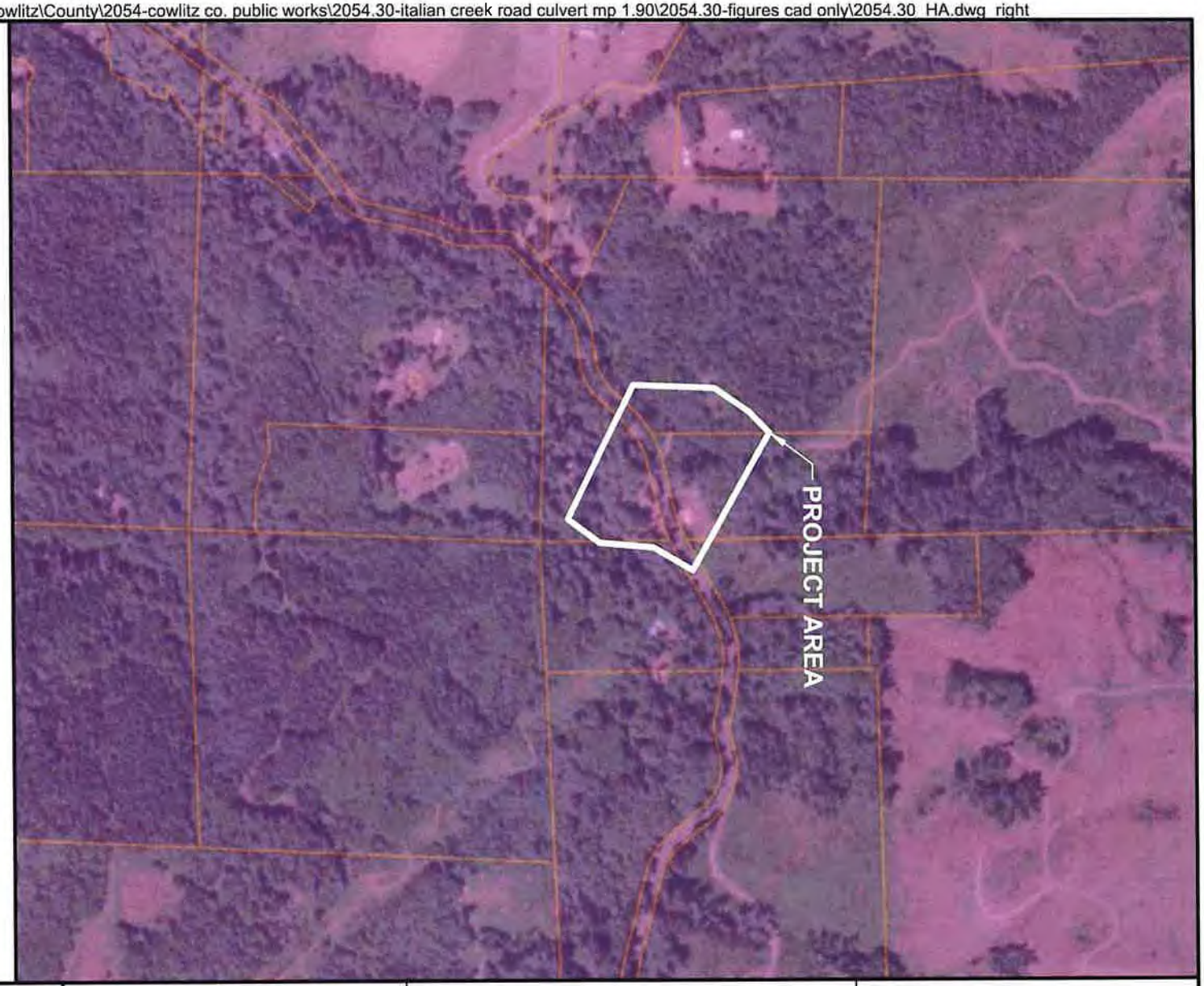


LEGEND:

Rocky Mountain elk, *Cervus elaphus nelsoni*, Occurrence

Northern Spotted Owl, *Strix occidentalis*, Occurrence

NOTE: Map provided on-line by Washington State Department of Fish & Wildlife at web address: *http://apps.wdfw.wa.gov/phsontheweb/*

N W E S

0 600 1200

SCALE IN FEET

Ecological Land Services

1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA

WDFW PRIORITY HABITAT AND SPECIES

APPLICANT: Cowlitz County Public Works

PROJECT NAME: Italian Creek Road Culvert MP 1.90

REFERENCE #: Not Yet Assigned

SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PROPOSED: In-Water Work

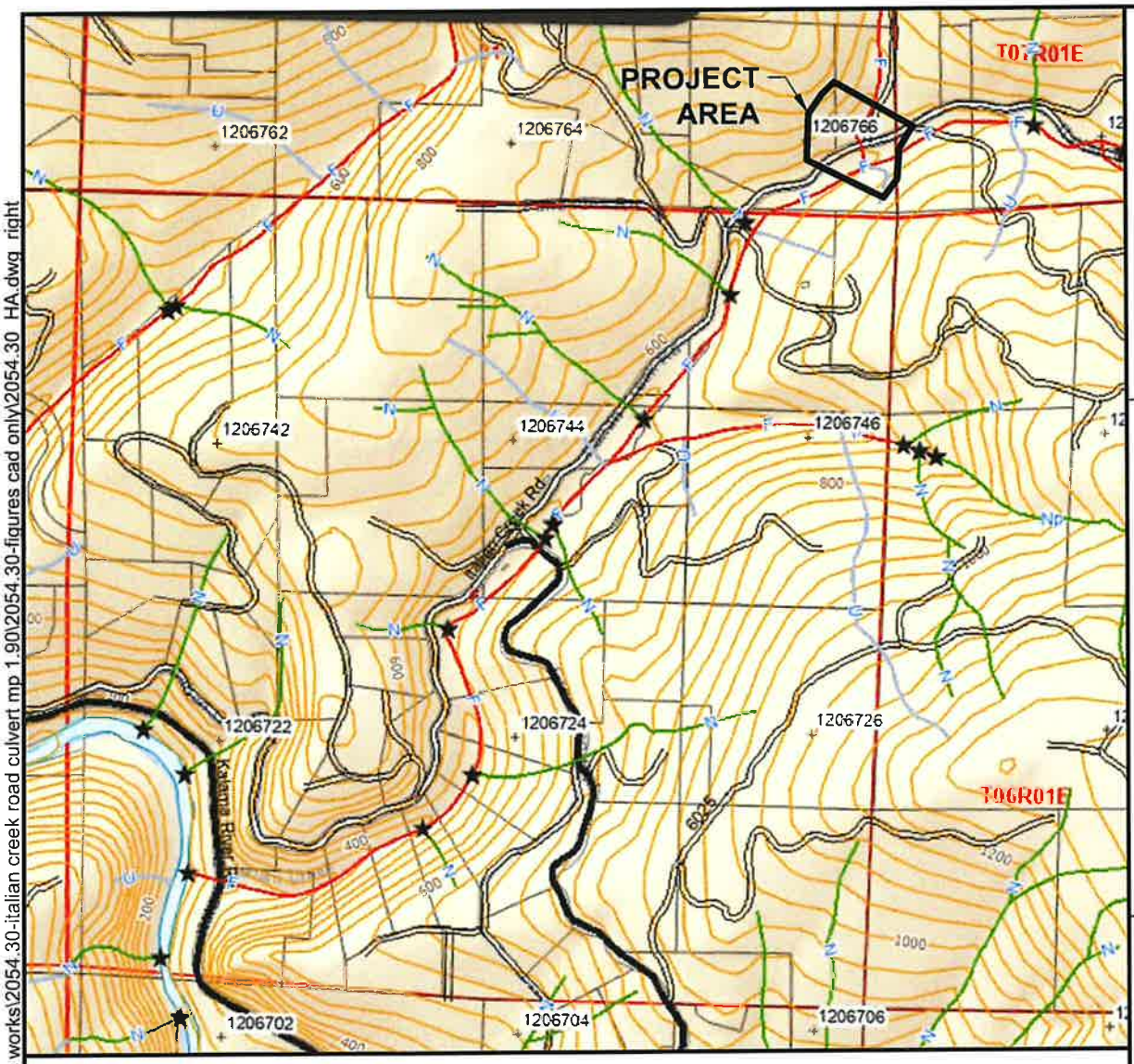
IN Unnamed Stream

NEAR: Kalama River

COUNTY: Cowlitz **STATE:** WA

SHEET 11 **OF** 13

DATE: 1/5/24



LEGEND:

- Site Boundary
- 40-foot Contours
  - 40 ft. Contours
- Fire Shutdown Zones
  - Fire Shutdown Zones
- Water Bodies (FP)
  - Other Impoundments
  - Open Freshwater
  - Subject to Inundation
  - Glacier / Snowfield
  - Wet Area
  - Open Saltwater
  - Artificial Feature
- SOSEA Boundaries
  - SOSEA Boundaries
- Water Courses (FP)
  - Type S
  - Type F
  - Type N, Np, Ns
  - U, unknown
  - X, non-typed per WAC 222-16
- WRIA Boundaries
  - WRIA Boundaries
- WAUs
  - WAUs
- Trails & Railroads (FP)
  - Trail
  - Railroad
  - Railroad Grade
- DNR Roads
  - Paved Road
  - Unpaved Road/Surface Unknown
- Unpaved Road/Surface Unknown
  - Water Type Breaks (FP)
- Public Land Survey Sections
  - Public Land Survey Sections
- Public Land Survey Townships
  - Public Land Survey Townships

NOTE: Map provided on-line by Washington State Department of Natural Resources at web address: *http://fortress.wa.gov/dnr/app1/Fpars/viewer.htm*

N W E S

WDNR STREAM TYPE MAP

APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS: near 451 Italian Creek Road Kalama, WA

PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 12 **OF** 13
DATE: 1/5/24

SCALE IN FEET
0 1200 2400

1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

Ecological Land Services

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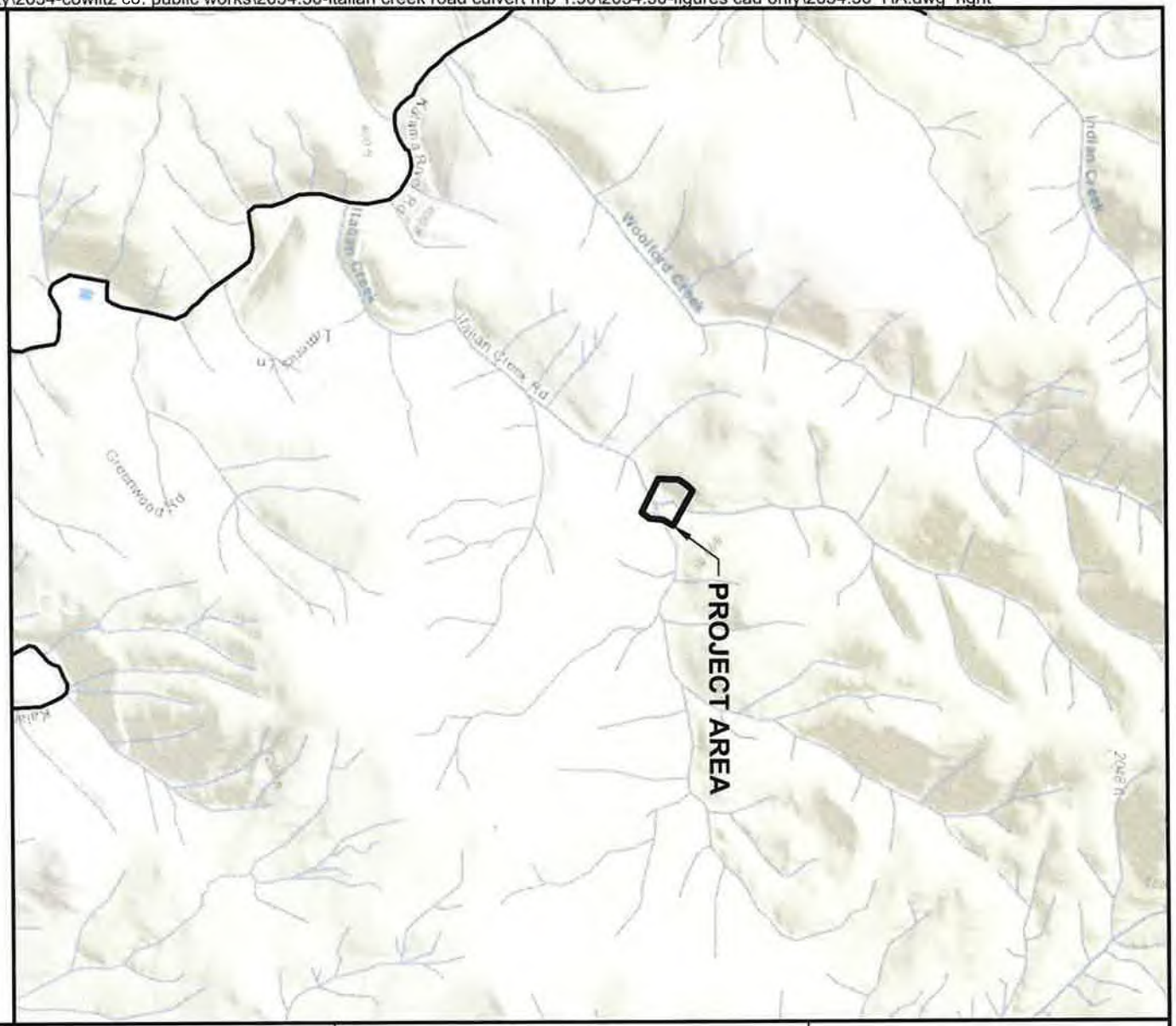


LEGEND:

- Site Boundary
- WRIAs & WAUs
- WRIA Boundaries
- Watershed Administrative Units
- Fish Distribution
- All SWIFD Listed Species

NOTE:
Map provided on-line by WA State Dept of Fish & Wildlife at web address: https://geo.nwifc.org/swifd/

0 2500 5000
SCALE IN FEET

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371

PURPOSE: Replace Culvert

DATUM: NAD83
ADJACENT PROPERTY OWNERS: See JARPA

STATEWIDE WA INTEGRATED FISH DISTRIBUTION (SWIFD)
APPLICANT: Cowlitz County Public Works
PROJECT NAME: Italian Creek Road Culvert MP 1.90
REFERENCE #: Not Yet Assigned
SITE LOCATION ADDRESS:
near 451 Italian Creek Road
Kalama, WA

PROPOSED: In-Water Work

IN Unnamed Stream
NEAR: Kalama River
COUNTY: Cowlitz **STATE:** WA
SHEET 13 **OF** 13
DATE: 1/5/24

Above: View north from photostation 1 on January 25, 2023. This is the downstream end of the culvert.

Below: View south from photostation 1 on January 25, 2023. This is downstream of the culvert.

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371
Fax: (360) 414-9305

DATE: 1/25/23
DWN: LH
PRJ. MGR: LH
PROJ.#: 2054.30

Photoplate 1
Site Photos
Level II Habitat Assessment
Italian Creek Road Culvert MP 1.90
Cowlitz County, Washington

Above: View south from photostation 2 on January 25, 2023. Photo taken from road showing culvert outlet.

Below: View showing culvert outlet on January 25, 2023.

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371
Fax: (360) 414-9305

DATE: 1/25/23
DWN: LH
PRJ. MGR: LH
PROJ.#: 2054.30

Photoplate 2
Site Photos
Level II Habitat Assessment
Italian Creek Road Culvert MP 1.90
Cowlitz County, Washington

Above: View of culvert inlet on January 25, 2023.

Below: View north from photostation 3 at culvert inlet January 25, 2023.

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371
Fax: (360) 414-9305

DATE: 1/25/23
DWN: LH
PRJ. MGR: LH
PROJ.#: 2054.30

Photoplate 3
Site Photos
Level II Habitat Assessment
Italian Creek Road Culvert MP 1.90
Cowlitz County, Washington

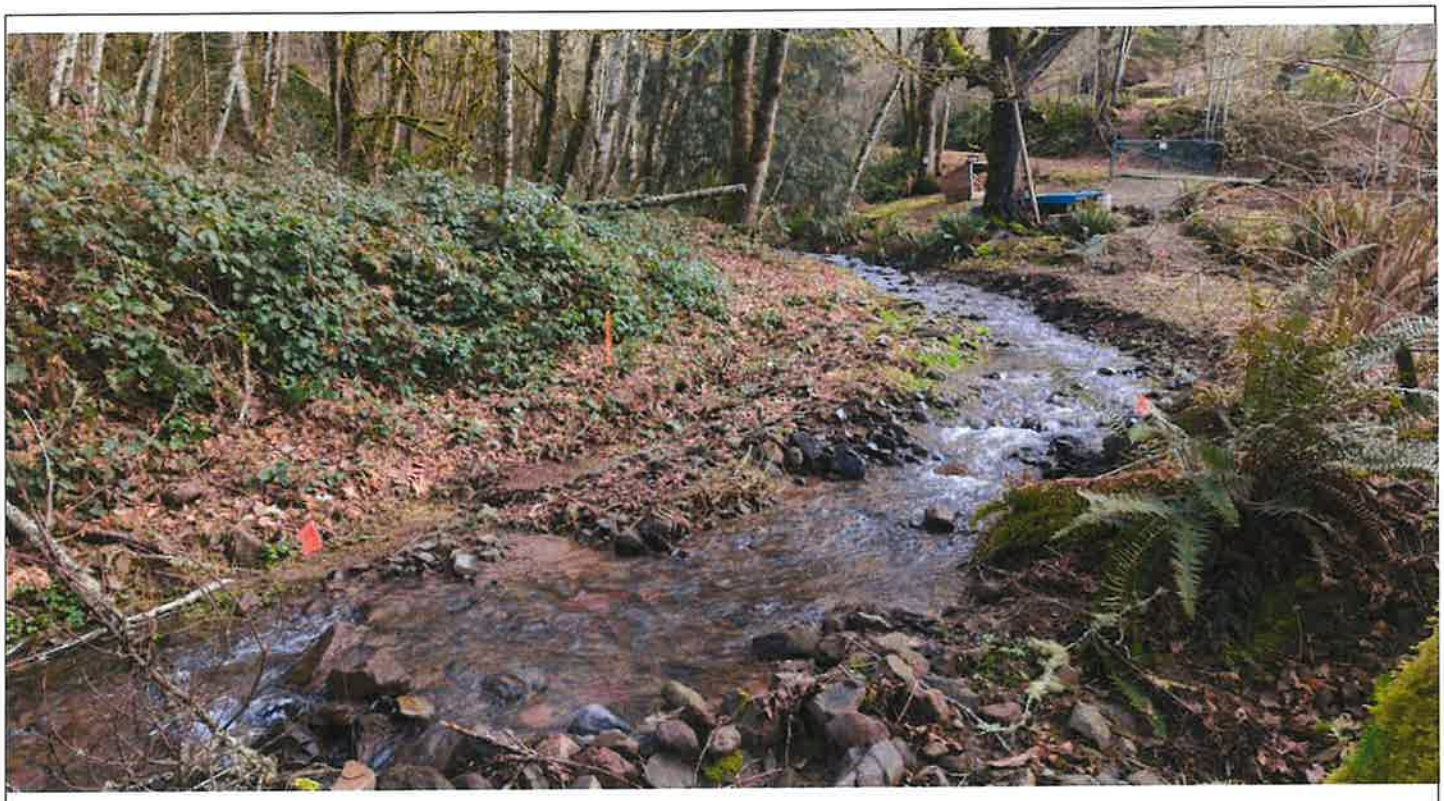
Above: View south at photostation 4 on January 25, 2023 at culvert inlet. Streambed to be reconstructed.

Below: View west from photostation 4 January 25, 2023. Streambed to be reconstructed.

Ecological Land Services
1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371
Fax: (360) 414-9305

DATE: 1/25/23
DWN: LH
PRJ. MGR: LH
PROJ.#: 2054.30

Photoplate 4
Site Photos
Level II Habitat Assessment
Italian Creek Road Culvert MP 1.90
Cowlitz County, Washington



Above: View northeast at photostation 5 on January 25, 2023 upstream of streambed to be reconstructed.

Below: View west from photostation 5 January 25, 2023 at upper extent of streambed to be reconstructed.

Ecological Land Services
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DATE: 1/25/23
DWN: LH
PRJ. MGR: LH
PROJ.#: 2054.30

Photoplate 5
Site Photos
Level II Habitat Assessment
Italian Creek Road Culvert MP 1.90
Cowlitz County, Washington

APPENDIX A

WSDOT Fish Exclusion – Protocol and Standards

FISH EXCLUSION – PROTOCOL AND STANDARDS
Washington State Department of Transportation

Introduction

The Washington State Department of Transportation (WSDOT) requires the following protocol and standards for fish exclusion, capture, handling, and relocation (hereafter referred to as "fish exclusion protocol (FEP)" or "fish moving") to reduce the risk of potential injury to fish during construction.

This protocol generally meets Endangered Species Act (ESA) Section 7 consultation and Hydraulic Project Approval (HPA) requirements, but specific consultation or permit conditions take precedence over any project-specific components that conflict with these best practices.

When to Use this Guidance

This guidance is applicable for work proposed in fish-bearing waters. Work should be conducted in isolation from flowing water, if practicable. **Work shall be allowed in water if:** (1) this FEP is implemented, (2) placement or removal of material (wood or rock, etc.) is small in quantity, (3) installation of best management practices (BMPs) (turbidity curtain, etc.) is performed under site conditions where the potential to affect fish is minimized[1], and/or (4) work is conducted under a declared emergency, under emergency conditions, or when flow conditions preclude safe implementation of this FEP.

Directing Biologist

The FEP shall be planned and supervised by a WSDOT biologist or qualified biologist under contract with WSDOT (hereafter referred to as the Directing Biologist). The Directing Biologist must possess the required knowledge, training, and experience for safe and effective implementation of the FEP (**Appendix A**).

The Directing Biologist shall work with maintenance, construction, and/or environmental staff to plan and manage the FEP. This plan should consider the size and channel characteristics of the area to be isolated, dewatering method (diversion with bypass flume or culvert, washed gravel bags, sheet pile, cofferdam, etc.), and most effective manner by which to move fish.

Assisting Staff

All assisting staff shall have the required training, knowledge, skills, and ability to safely and effectively, move fish (**Appendix A**).

Fish Exclusion - Considerations

The Directing Biologist shall implement the FEP in consideration of the following: (1) habitat connectivity and fish habitat requirements, (2) duration and extent of planned in-water work, (3) anticipated flow and temperature conditions during in-water work, and (4) risk of fish exposure to turbidity or other water quality and site conditions during construction.

[1] WSDOT shall make this determination after consulting with regulatory agencies with jurisdiction, including the Washington State Department of Fish and Wildlife (WDFW), U.S. Fish and Wildlife Service (USFWS), and/or NOAA-National Marine Fisheries Service (NMFS). In some locations the Tribes will have jurisdiction. This exception is not applicable to in-water excavation or work that may increase turbidity beyond the immediate work area for more than 15 minutes.

When the work area to be isolated is small, depth is shallow, and/or conditions are conducive to fish capture, it may be possible to isolate the work area and move fish prior to dewatering or flow diversion.

When the area to be isolated is large, water is deeper, flow volume and/or velocity is higher, and/or conditions are not conducive to fish capture, it may be necessary to commence with dewatering or flow diversion concurrent with fish moving. WSDOT should have oversight and final approval in this situation. The Directing Biologist shall use best professional judgment in implementing the FEP in a manner that minimizes exposure of fish to potential stress or injury.

If the area to be isolated includes only a portion of the wetted channel width (e.g., in large and/or deep rivers), or if a bypass flume or culvert will effectively maintain fish passage during construction, it may be suitable to move fish out of the in-water work area (IWA).

However, if the IWA includes the entire wetted channel width, and it is unlikely that fish passage can be maintained during construction, the Directing Biologist must **decide whether to move fish upstream and/or downstream** of the IWA, depending on available habitat conditions and species captured.

If a large number of fish is to be moved, it may be appropriate to relocate fish both upstream and downstream of the IWA to avoid concentrating fish in areas where their habitat needs may not be met. Where habitat connectivity or quality is poor, the Directing Biologist should determine whether relocated fish will have access to suitable habitat for the duration of planned in-water work. If such habitat is not present in the vicinity, it may be appropriate to relocate fish a greater distance upstream and/or downstream (even thousands of feet or miles). When a distant relocation is deemed necessary, WSDOT shall provide notice in advance to agencies with jurisdiction.

Block Nets

The Directing Biologist shall select block nets that are appropriate for site conditions and fish species present. It may be necessary to contact other WSDOT regions or offices for access to nets, equipment and/or materials. A suitable block net is composed of **3/32-inch knotless stretched nylon**. WDFW may authorize different mesh size depending on site conditions. A vinyl apron or skirt to facilitate securing nests to the channel bottom is recommended.

Block nets must be **secured to both banks and the channel bottom** to prevent failure due to debris accumulation, high flow, and/or flanking. Supplemental block net support may be required (e.g., hardware cloth, affixed metal fence posts, batter T-posts, etc.). Block nets should be **installed at an angle to the direction of flow** (i.e., 45-degree angle if practicable and not directly perpendicular to flow) to reduce the risk of impinging fish. Anchor bags, filled with clean, washed pea gravel, can be used to support nets that may remain in place for more than two weeks or high flow events are expected. Any use or manipulation of native substrates or other materials on site should be incidental and shall not measurably affect the channel bed or bank baseline condition. In most instances, block nets will require pea-gravel bags placed approximately 12-inches downstream to sufficiently reduce velocity and backwater the block net to prevent impingement on the net face.

The Directing Biologist shall **determine appropriate locations for block nets** based on site characteristics and in consideration of the type and extent of planned in-water work. Locations with lower flow volume and/or velocity, uniformity of depth, and good accessibility are preferred. Sites with heavy vegetation, large cobble or boulders, undercut banks, and deep pools should be avoided due to the difficulty of securing and/or maintaining nets. Sites with a narrow channel cross-section (constriction) should be avoided if foreseeable flow conditions might increase likelihood of fish impingement or overwhelm or dislodge the nets.

Except when planning to herd fish upstream, an **upstream block net** (UBN) shall be placed first. With the UBN in place, a second block net can be used as a seine to herd fish downstream, starting at the UBN. When the IWA includes a culvert, deep pools, undercut banks, or other cover attractive to fish (thick overhanging vegetation, rootwads, logjams, etc.) it may be appropriate to isolate these areas, or several areas, of the IWA rather than attempting to herd fish from the entirety of the IWA in a single downstream pass. Try to avoid herding fish into these areas of the IWA.

Fish capture and removal will be most successful if fish are strategically concentrated in areas where they can more easily be seined and netted. Care shall be taken not to herd fish toward areas where they are exposed to sources of stress. If unavoidable, do not allow fish to be concentrated in such areas for more than 30 minutes.

A **downstream block net** (DBN) is typically required to prevent downstream fish from entering the work area.

When gradual dewatering or flow diversion is staged concurrently with fish moving, it may be appropriate to delay installation of the DBN until fish have first been allowed sufficient time to move downstream by their own choosing (volitional movement). Gradual dewatering can be an effective method to reduce the risk of fish stress or injury. Encouragement of volitional fish movement out of the work area is particularly important where the IWA is large and may hold many fish. However, when the IWA includes a culvert, deep pools, undercut banks, or other cover attractive to fish, fish may not move downstream. In this case, the Directing Biologist should use best professional judgment in determining how to best move fish.

Block nets shall remain in place until work is complete and conditions are suitable for the reintroduction of fish.[2] Block nets require frequent inspection and debris removal. Inspection may be conducted by the WSDOT Environmental Compliance Inspector or contractors that have been provided on-site training. They shall immediately notify the Directing Biologist if any impinged, injured or deceased fish are observed or net repair/adjustment is necessary. An individual trained in fish handling shall be assigned the responsibility of safely relocating any impinged fish and repairing nets.

Net inspection frequency shall be in accordance with Standard Specification 8.31.3(5). They shall, at a minimum, be inspected at least three times daily or as requested by the Directing Biologist. An inspection shall be completed at the start, middle and end of the workday. On non-working days, an inspection shall be performed between 6:00 am and 8:00 am, 11:00 am and 1:00 pm and 4:00 pm and 6:00 pm. Nets may need to be checked more frequently for the first 24 hours after a significant rainfall, change in flow volume or velocity, or significant windstorm that can result in leaf drop. If fish are impinged on the net or weather and/or flow conditions change significantly, the Directing Biologist shall adjust the frequency of net inspections to minimize risk to fish.

Pumps: If dewatering and/or flow diversion requires the use of pumps, this work shall comply with the HPA issued by the Washington Department of Fish and Wildlife (WDFW) as well as any Terms and Conditions issued by the USFWS and/or NMFS in a Biological Opinion. Commitments may also appear in ESA minimization measures or the project description.

Pump intakes shall be screened to prevent fish from entering the intake. Screens shall comply with Washington State law (RCW 77.57.010 and 77.57.070), guidelines provided by the NMFS,[3] and the HPA. If pumps are to be used for a longer period of time to divert flow around the IWA, the

[2] If a FEP is implemented for installing a cofferdam BMP, AND construction is isolated from suitable fish habitat by the cofferdam, AND construction is scheduled for a long period of time (weeks, months), it may be appropriate to remove block nets and allow fish to re-enter suitable habitat from which they were moved.

[3] National Marine Fisheries Service. 2011. Anadromous Salmonid Passage Facility Design. Chapter 11: Fish Screen and Bypass Facilities. NMFS Northwest Region, July 2011, 140 p.

dewatering plan shall address contingencies for extremes in flow and/or weather. The plan shall include ready access to a larger, or additional, backup pump with appropriately-screened intake. Pumps must be monitored outside of active construction hours/days. There must be sufficient fuel safely stored onsite.

Once the Directing Biologist confirms that (1) the work area is isolated and all fish have been excluded, (2) there is no risk of entraining fish, and (3) a contingency plan is in place (including a routine schedule for inspection), then pumps may be operated **without a screened intake**. Note that block nets do not meet screening criteria.

Moving Fish

Methods for the safe relocation of fish are described below. At most locations, a combination of methods may be necessary.

In order to avoid and minimize the risk of injury to fish, **an attempt to seine and/or net fish should always precede the use of an electrofisher**. Via visual observation techniques, including snorkeling, surveying with polarized glasses, or using Plexiglas-bottomed buckets, the effectiveness of seining/netting can be determined.

If fish moving has not been addressed during ESA consultation and fish listed under the ESA may be present, the Directing Biologist must stop work and reinitiate Section 7 consultation with the Services in advance of in-water work. Work conducted under a declared emergency, or emergency conditions, shall follow established ESA notification protocol.

When fish listed under the ESA may be present, the Directing Biologist shall insure that fish moving adheres, at a minimum, to the following guidelines:

(1) Only dip nets and seines composed of knotless (non-abrasive) material shall be used.

(2) Electrofishing equipment shall be used only after less-injurious methods have removed most, if not all, fish over 300 mm, by completing a minimum of three passes with seins and/or nets.

(3) The success of fish moving shall be confirmed prior to dewatering or other work within the IWA.

(4) Fish listed under the ESA shall not be held in containers for more than 10 minutes unless containers are dark-colored, lidded, and fitted with a portable aerator.

(5) A plan for achieving efficient and rapid return of fish to suitable habitat will be developed before fish moving.

Minnow Traps

Baited Minnow Traps are typically used before seining. They shall be inspected at least four times daily to remove captured fish and thereby minimize predation in the trap. Traps should be checked more frequently if temperatures exceed 15 degrees C (59 F).

Traps may be left in the IWA overnight. However, predation in the trap may present an unacceptable risk because large sculpin and other predators are typically more active at night. The Directing Biologist shall consider the risk of predation when determining whether to utilize traps at night.

Seining

Seining is the preferred method for fish capture. Other methods shall be used when seining is not

possible or is proven ineffective. Seines, once pursed, should remain in the water while fish are removed with dip nets. Seines with a bag are advantageous because they minimize handling stress. They are also preferred when obstructions inhibit access to water or when seine deployment/retrieval is difficult.

In general, seining is more effective if fish, especially juvenile fish, are moved away ("flushed") from under cover. Flush efficiency can be increased by conducting seining during dawn or dusk, in conjunction with snorkeling. In flowing waters, especially where flow volume and/or velocity is higher, seines that employ a heavy lead line and variable mesh size are preferred. Small mesh sizes are more effective across the full spectrum of fish sizes (and age classes), but they also increase resistance and can make seine deployment/retrieval more difficult in flowing waters. Seines with a small-diameter mesh size in the bag (or body), and a larger, less resistant, mesh size in the wings, may be more effective and efficient.

Dip Nets

Dip Nets shall be used in conjunction with seining. This method is particularly effective during gradual dewatering or flow diversion. To minimize stress and risk of injury to fish, dewatering or flow diversion should proceed at a measured pace (within constraints), to encourage the volitional downstream movement of fish, and reduce the risk of stranding. Work shall not proceed unless there are sufficient staff and materials on site to properly relocate fish. Generally, this will require a minimum of two staff (three, if electrofishing).

Once netted, fish shall remain in water until transferred to a bucket, cooler, or holding tank. Dip nets which retain a volume of water (sanctuary nets) are preferred. However, sanctuary nets may be ineffective where flow volume or velocity is higher due to increased resistance. Where water depth is shallow and/or fish are concentrated in very small receding pools or coarse substrate, a small aquarium net may be a more effective option.

Connecting Rod Snake

A Connecting Rod Snake (CRS) can be used to flush fish out of culverts. Like other cover attractive to fish, culverts (especially long culverts), can present a challenge in moving fish. A first step in implementing the FEP should be to place block nets immediately upstream and/or downstream of culvert to minimize the number of fish that might seek cover within the culvert. Fish should then be herded into areas where they can be easily seined and netted. Once fish have been relocated, the block net downstream of the culvert should be removed so that fish inside the culvert can volitionally move downstream – or be flushed with the CRS.

Electrofishing

Electrofishing shall be performed only when other methods to move fish have proven impracticable or ineffective at removing all fish. Larger fish (adult and sub-adult fish with longer spine lengths) are more susceptible to electrofishing injury than smaller fish. The Directing Biologist shall confirm that other fish-moving methods have been attempted before using an electrofisher. An electrofisher should not be used in water where visibility less than 0.5 meter.

The following performance measures shall apply to the use of an electrofisher:

(1) Upon request, the WSDOT shall allow the Services, WDFW, and in some cases the Tribes to observe fish capture and removal operations. Work conducted under a declared emergency, or emergency conditions, shall follow established ESA notification protocols.

(2) **Electrofishing shall only be conducted when a Directing Biologist is present,** possessing the required training and experience (Appendix A).

(3) The Directing Biologist shall ensure that electrofishing is conducted using the **minimum voltage, pulse width, and rate settings necessary** to elicit galvanotaxis. Water conductivity shall be measured prior to work to determine appropriate settings. Electrofishing methods and equipment shall comply with guidelines outlined by the NMFS[4] and USFWS[5] if bull trout may be present.

(4) The **initial and maximum settings** listed in **Table 1** shall serve as guidelines when electrofishing in waters that may support ESA-listed fish. Only DC or pulsed DC current shall be used. Many modern electrofishers are equipped with a setup, or initialization, function. The Directing Biologist shall have the discretion to use this function to identify proper initial settings.

Electrofishing shall begin with initial settings. If fish do not exhibit a response, the settings shall be gradually increased until galvanotaxis is achieved. The lowest effective settings shall be used to minimize risks to both personnel and fish. **The Directing Biologist shall ensure the safety of all staff** and provide necessary safety equipment and materials (insulated waders and gloves, first aid/CPR kit, safety plan with emergency contacts and phone numbers, etc.). Only individuals that are trained and familiar with the use of electrofishing equipment should provide direct assistance during work.

Table 1. Guidelines for initial and maximum settings for backpack electrofishing[6]

	Initial Settings	Conductivity (µS/cm)	Maximum Settings
Voltage	100 V	≤300	800 V
		>300	400 V
Pulse Width	500µs	-----	5 ms
Pulse Rate	15 Hz	-----	60 Hz (>40Hz may injure more fish)

(5) **Electrofishing shall not be conducted** where spawning adults or redds with incubating eggs may be exposed to the electrical current. As a general rule, waters that support anadromous salmon should not be electrofished from **October 15 to May 15**, and non-anadromous waters (resident fish only) from **November 1 to May 15**. If located within waters that may support bull trout, especially waters that support spawning and rearing, seasonal limitations on the use of electrofishing equipment may be more restrictive. If a more restrictive work window is identified during ESA consultation, that window shall apply.

(6) **An individual shall be stationed at the DBN** during electrofishing to recover stunned fish in the event they are flushed downstream and impinged against the net.

[4] National Marine Fisheries Service. 2000. Guidelines for electrofishing waters containing salmonids listed under the Endangered Species Act.

[5] U.S Fish and Wildlife Service. 2012 Recommended Fish Exclusion, Capture, Handling, and Electroshocking Protocols and Standards

[6] Adapted from NMFS Backpack Electrofishing Guidelines, June 2000, and WDFW Electrofishing Guidelines for Stream Typing, May 2001.

(7) The operator of the electrofisher shall use caution to **prevent fish from coming into direct contact with the anode**. Under most conditions, the zone of potential fish injury extends approximately 0.5 meter from the anode. Netting shall not be attached to the anode as this practice presents an increased risk of direct contact and injury. Extra care shall be taken near in-water structures or undercut banks, in shallow waters, or where fish densities are high. Under these conditions fish are more likely to come into close or direct contact with the anode and/or voltage gradients may be intensified. When electrofishing areas near cover, fish that avoid capture may be repeatedly exposed to the electrical current. Repeated or prolonged exposure to electrical current presents a higher risk of injury. As such, the electrofisher settings should be adjusted to accommodate changing conditions in the field.

(8) **Once galvanotaxis is observed**, the IWA shall be worked systematically. The number of passes shall be kept to a minimum, but, dependent upon the numbers of fish and site characteristics, shall be at the discretion of the Directing Biologist. Electrofishing shall not be conducted unless there are sufficient staff and materials on site. Fish shall be immediately removed from the electrical field to avoid repeat exposure. **Fish shall not be held in dip nets while electrofishing is in progress** (i.e., while continuing to capture additional fish). When flow velocity or turbulence is higher (e.g., within riffles), it may be difficult to see and net fish. In this scenario, fish may evade capture, resulting in repeated exposure, and/or may become impinged on the DBN. A "frame net," or small portable block net, approximately three feet in width, can be effective under these conditions when immediately downstream of the anode.

(9) **The condition of captured fish shall be carefully observed and documented**. Dark bands on the body and/or extended recovery times are signs of stress or injury. When such signs are noted, settings for the electrofishing unit may require adjustment. The Directing Biologist should also consider modifications to the way electrofishing is conducted. If adjustments do not lessen the frequency (or severity) of observed stress, the Directing Biologist shall have the authority to postpone work. Each captured fish shall be capable of remaining upright and actively swimming prior to release. If necessary the fish should be revived in aerated holding tanks.

(10) **Electrofishing shall not be conducted** when aquatic visibility is less than0.5 meter, water conductivity exceeds 350 µS/cm, or when water temperature exceeds 18°C (64 F) or is less than 4°C (39 F).

Fish Handling, Holding and Release

(1) Fish moving shall be conducted such that **handling is minimized**.

(2) Fish shall **remain in water** during seining/netting, handling, and transfer for release.

(3) The Directing Biologist shall **document** fish species, number, condition at release, and release location. Fish tissue shall not be sampled, or fish anesthetized, unless allowed under the WSDOT Section 10 scientific collection permit.

(4) Individuals handling fish shall ensure that their **hands are clean** and free of substances potentially harmful to fish, including, but not limited to, sunscreen, lotion, and insect repellent.

(5) Water quality shall be maintained in buckets, coolers, or holding tanks that are used to hold and transfer captured fish. Clean water from the natal stream shall be used. Aerators shall be used, as necessary, to provide well-oxygenated water. Holding containers are to be **monitored frequently**, shaded where possible, and work adjusted appropriately, to minimize fish stress. If fish are held for more than a few minutes prior to release, the Directing Biologist should consider using **dark-colored, lidded containers** only. Fish shall not be held in containers for more than 10

minutes, unless those containers are dark-colored, lidded, and fitted with a portable aerator.

(6) Captured fish shall be held in **low densities** to avoid overcrowding. Large fish shall be separated from smaller fish to **prevent predation**. Water-to-water fish transfer shall be implemented, whenever possible.

(7) **Release sites** shall be determined by the Directing Biologist in consideration of site characteristics (flow, temperature, available refuge and cover, etc.) as well as the class of fish captured (out-migrating smolt, kelt, pre-spawn migrating adult, etc.). More than one site may be selected to provide for varying needs and to separate prey-sized fish from larger fish.

(8) Any **ESA-listed fish incidentally killed** shall be preserved and delivered to the appropriate authority, upon request. Photos are recommended to facilitate later identification if the specimen is lost or deteriorates.

(9) If the limits on take of ESA-listed species are exceeded, or if **incidental take** is approaching and may exceed specified limits, the Directing Biologist shall postpone work and notify the federal agency (or agencies) with jurisdiction. If dewatering or flow diversion is incomplete and still in-progress, WSDOT shall take remedial actions directed at maintaining sufficient quantity and quality of flow to reduce the potential for fish stress and/or injury. If conditions contributing to fish stress and/or injury may worsen before the federal agency with jurisdiction can be contacted, WSDOT should attempt to safely move fish to a suitable location near the capture site.

Reintroduction of Flow and Fish to the IWA

If fish moving involves placement of block nets, the Directing Biologist shall ensure that the nets remain in place until work is complete and conditions are suitable for the reintroduction of fish.

Flow shall be gradually reintroduced to the IWA to prevent channel bed or bank instability, excessive scour, or elevated turbidity and sedimentation. The Directing Biologist shall ensure that no fish are stranded during reintroduction of flow. If conditions causing, or contributing to, fish stress and/or injury are observed, WSDOT shall take remedial action, including, but not limited to, a more gradual reintroduction of flow.

Temporary structures and materials (block nets, posts and anchors, bypass flume or culvert, gravel bags, sheet pile or similar cofferdam, etc.) shall be removed at the completion of work. Block net removal is to be overseen by the Directing Biologist.

Documentation

(1) Work area isolation and fish moving shall be documented in a logbook with the following information: project location, date, methods, personnel, water temperature, conductivity, visibility, electrofishing equipment settings, and other comments.

(2) All fish handled shall be documented: number of each species, condition at release, and location of release. Photograph individuals that are not confidently identified.

(3) If fish are observed in distress, a fish kill occurs, or water quality problems develop (including equipment leaks or spills), the Directing Biologist shall immediate notify WSDOT management, who in turn, shall notify the WDFW as required by the HPA. Notification shall consist of a phone call or voice mail message directed to the Area Habitat Biologist.

(4) Any **ESA-listed species incidentally killed** shall be documented and the appropriate authority

(USFWS and/or NMFS) notified within two working days. If the Directing Biologist is a consultant, he/she shall immediately notify WSDOT, who will, in turn, notify the Services.

Initial notification shall consist of a phone call or voice mail message, directed to the nearest USFWS Law Enforcement Office, the Washington Fish and Wildlife Office at (360) 753-9440, the NMFS Office of Law Enforcement at (800) 853-1964, and the Washington State Habitat Office at (360) 753-9530.

Any **dead specimens** shall be kept whole and preserved on ice or frozen until WSDOT receives a response and further directions from the appropriate authority. If WSDOT receives no response within five working days, the Directing Biologist shall have the discretion to dispose of specimens. Initial notification shall be followed by a second notification in writing. All notifications shall provide, at a minimum, the following: date, time, WSDOT point of contact (the Directing Biologist and/or supervisor), project name (with USFWS and/or NMFS tracking number, if available), precise location of incidentally killed, injured and/or unrecovered fish, number of specimens and species, cause of death or unrecoverable injury, and measures taken to address the cause of mortality. If the limit of authorized incidental take is exceeded, the written notification shall also include an explanation of the circumstances causing or contributing to take.

(5) The final condition of the IWA, including temporary bypass, shall be documented in qualitative terms, including any obvious signs of channel bed or bank instability resulting from work. WSDOT shall document any remedial actions taken to correct channel instability as well as the final condition of the IWA.

Safety

Implementing the FEP must comply with WSDOT safety requirements. In certain circumstances, it may be appropriate to conduct work without an IWA (not move fish) to ensure safety. In-water work at night is generally not permissible. If the Directing Biologist determines that night work is required, it must be pre-approved by WSDOT management, including the safety officer, as well as regulatory agencies with jurisdiction.

Equipment Sanitation

To minimize the risk of spreading invasive species, aquatic parasites, and/or disease, the Directing Biologist shall ensure that all equipment and materials are cleaned and dried per protocol[7] before using them at another aquatic area. It is recommended having two or more outfits for different locations on consecutive days. Once equipment is fully dried, it should remain dry for at least 48 hours before use. Felt-soled shoes are prohibited.

[7] WDFW Invasive Species Management Protocols, Version 4, September 2022

APPENDIX A - TRAINING REQUIREMENTS

Directing Biologist

1. Completion of a two-day electrofishing class.

2. Training in fish ecology and identification.

3. 100 hours of electrofishing experience in the Pacific Northwest (PNW), at least 20 hours of which should have been in the last 5 years in the PNW.

4. Possession of a current CPR certification.

5. Possession of a current first aid certification.

6. Demonstrated understanding of aquatic invasive species and the appropriate decontamination methods.

7. Demonstrated ability to interpret contract plan sheets/specification, contactor schedule and plans prepared by the contractor.

8. Ability to move fish per the most current version of the "WSDOT Fish Exclusion Protocols and Standards"

9. Must develop and deliver on site field training that includes the following elements:

(a) Safety plan.

(b) Fish exclusion plan.

(c) Role and responsibility of each participant. Assisting staff may include WSDOT and consulting biologists, and non-biologists (contractors) assigned limited responsibilities. The directing biologist will provide constant supervision when assigning responsibilities to contractors.

(d) Fish identification and species expected.

(e) Fish handling techniques.

(f) Seine, net, and electrofisher techniques (and electrofisher settings).

(g) Basic terminology (galvanotaxis, narcosis, and tetany).

(h) How electrofishing attracts fish.

(i) How to recognize signs of fish stress or injury.

(j) Sorting fish by size.

(k) Proper fish holding in buckets to ensure water quality and address predation

(l) Hand cleanliness and gear sanitation protocol.

(m) Review of common mistakes.

(n) Discuss personal floatation devices, if required.

Trained Biologists

People without a class or 100 hours – "trained" is a good classification for people that have worked under a directing bio and could operate an electrofisher under direct supervision (have to have 40 hours in USFWS protocol). In other words, people who have the experience but maybe not the time but will get the experience/time to qualify as a directing bio because they are under the direct supervision of the directing bio.

Assisting Staff

1. Must possess training, knowledge, skills and ability to ensure proper handling of fish and safety of staff conducting work (see Directing Biologist responsibility #9 above).
2. Possession of a current first aid certification and current CPR certification (this should be a standard for all assisting staff and is typically included in conjunction with first aid certification).

APPENDIX B

Mitigation Plan

Ecological Land Services

Mitigation Plan

February 16, 2024

Italian Creek Road Culvert MP 1.90

Cowlitz County, Washington

Prepared for

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SIGNATURE PAGE

The information in this report was compiled and prepared under the supervision and direction of the undersigned.

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Sheet 2 Existing Conditions
Sheet 3 Existing Conditions Detail
Sheet 4 Construction Impacts
Sheet 5 Proposed Conditions
Sheet 6 Proposed Conditions Creek Bypass Plan, Profile & Details
Sheet 7 Proposed Conditions Phase 1 Access Plan, Profile & Section
Sheet 8 Proposed Conditions Phase 2 Access Plan, Profile & Section
Sheet 9 Proposed Conditions Final Roadway Plan, Profile & Section
Sheet 10 Proposed Conditions Creek Plan, Profile & Sections
Sheet 10 WDFW Priority Habitats and Species
Sheet 11 WDNR Stream Type Map
Sheet 12 Statewide Washington Integrated Fish Distribution (SWIFD)
Photoplates 1 through 5

CONTACTS

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Proposed Development Project

Applicant and Location

Cowlitz County Department of Public Works proposes to remove an existing undersized culvert and installing a new culvert in an unnamed tributary to Italian Creek (Type F; fish-bearing) that passes under Italian Creek Road at milepost (MP) 1.90 (Sheet 1). The project is in the Cowlitz County right-of-way of Italian Creek Road in Section 31, Township 6 North, and Range 1 East of the Willamette Meridian. The project center point is at latitude 46.040854, longitude -122.721388. The project is also within Water Resources Inventory Area 27 (Kalama-Lewis watersheds). Project figures and photoplates are attached.

Site Description

The study area includes an undeveloped, forested slope and a single-family residence north of Italian Creek Road. South of Italian Creek Road is a single-family residence and active pasture for small livestock.

Streams

The unnamed stream with the culvert to be replaced is a Type F (fish-bearing) stream that is a tributary to Italian Creek (Type F; fish-bearing) (WDNR 2023a; Sheets 1, 2, 3, 12). This stream is mis-identified on the USGS map on Sheet 1. The mainstem of Italian Creek is adjacent to Italian Creek Road.

The Washington Department of Fish and Wildlife (WDFW) area habitat biologist, George Fornes, met onsite with ELS and Cowlitz County Public Works engineers on February 16, 2023, to determine the ordinary high-water mark (OHWM) and average bankfull width. His comments are incorporated into this report.

The culvert is located about 185 feet upstream from the unnamed stream's confluence with Italian Creek. WDFW's *Statewide Washington Integrated Fish Distribution* map shows that no salmon, steelhead, or bull trout are present in the project vicinity (WDFW 2023a, b), and there is no accessible fish habitat to the project site due to a 25-foot-tall waterfall downstream of the project area. Additionally, a natural barrier that serves as a complete passage barrier is located downstream at the confluence of Italian Creek and Kalama River as mapped by WDFW Washington State Fish Passage Maps (WDFW 2023b, Site ID 700139).

The unnamed Type F stream and Italian Creek are considered "Waters of the State" by Cowlitz County (Table *CCC 19.15.130-A*) but are not shorelines of the state. According to *CCC Table 19.15.130-B,* riparian habitat area (RHA) width is 100 feet wide for Type F waters with a channel width less than or equal to 20 feet. The area between the OHWM and half the RHA (0 to 50 feet) is the inner RHA for streams that are not within shoreline jurisdiction. The outer

half of the RHA (50-100 feet) is the outer RHA. The entire project area south of the road falls within the RHA for unnamed Type F stream as well as for Italian Creek to the south. Because all proposed work will be within the inner/outer RHA of the unnamed Type F stream, only impacts to this stream are discussed.

The unnamed Type F stream's bankfull width is 10 feet on average and is approximately the same width as the biological OHWM. Upstream of the culvert, streambed material consists of cobbles, gravel, and a small amount of sediment and sand concentrated at the culvert inlet. The steepest stream gradient is near the culvert and is about 5 percent. The stream gradient is much lower and a gentler slope further upstream. The unnamed Type F stream has flow year round. Streambanks upstream of the culvert are partially incised, while farther upstream there are steeply cut banks and a defined channel with large and small woody material throughout, creating small pools and riffle or glide habitat. Downstream of the culvert, the streambanks are nearly vertical, and in-water habitat is limited to only riffle or glide habitat. Substrate consists of small cobbles and gravel. No large woody material is present in the stream downstream of the culvert to its confluence with Italian Creek.

During the site visit, a large (approximately 25-foot tall) natural waterfall was observed on Italian Creek downstream of the site. This waterfall is located approximately 800 feet upstream of the culvert that passes Italian Creek beneath Greenwood Road. The waterfall is not mapped by any available mapping website. The waterfall creates a natural fish-passage barrier to anadromous fish species. There is another natural barrier further downstream at the confluence of Italian Creek and the Kalama River (WDFW Site ID 700139). Available habitat in the project area is limited to local fish species only.

Riparian Habitat

Riparian vegetation downstream of culvert is mostly narrow through the livestock grazing area, but there is a partially closed canopy over the stream. It is dominated by Himalayan blackberry, but portions consist of three strata; *Trees*: red alder, *Shrubs*: vine maple and Himalayan blackberry, *Herbaceous*: sword fern, creeping buttercup, and reed canarygrass.

Riparian vegetation upstream of culvert is wide on the north side of the stream, covers the stream, and consists of three strata; *Trees*: bigleaf maple, western red cedar, Douglas fir; *Shrubs*: Indian plum, beaked hazelnut, Himalayan blackberry; and *Herbaceous*: deer fern, sword fern, wood sorrel, Pacific bleeding heart, water parsley, reed canarygrass, and stinging nettle. The single-family residence in the RHA north of Italian Creek Road has many ornamental trees and woody shrubs.

Project Description

Cowlitz County Public Works is proposing to replace a failing and undersized culvert in a fish-bearing stream. The existing culvert is a 36-inch diameter and 36-foot long, corrugated metal

pipe (CMP) that has been damaged during previous flood events. According to a neighbor, a culvert upstream on Italian Creek failed sometime in the recent past, resulting in the surrounding road fill to be washed downstream to this culvert. This material blocked and flooded the surrounding culvert inlet and resulted in stream flows crossing Italian Creek Road, damaging the existing culvert and changing the streambed in the adjacent area. The upstream culvert failure has not been confirmed on-the-ground. The proposed project will replace this existing culvert with a 14-foot span, 5-foot rise, and 45-foot long precast concrete bottomless box culvert, widen the roadway near the creek, and reconstruct the streambed adjacent to the new, appropriately sized culvert.

Project construction is proposed in two phases. Phase 1 will include the temporary stream bypass, traffic bypass road installation, replacing the southern portion of the culvert within the existing road prism, and graveling Italian Creek Road to prepare for Phase 2 traffic. Phase 2 includes directing traffic to the newly graveled Italian Creek Road section, removing the temporary traffic bypass road, reshaping the stream channel at the new culvert inlet, removing the temporary stream bypass, and resurfacing Italian Creek Road.

A total of 2 trees will be removed within the inner riparian habitat area (RHA) of the Type F stream. Tree removal is necessary to facilitate stream bypass installation and for culvert replacement. Surrounding topography will generally be the same post-project, and the stream channel will not be changed, except at the new culvert inlet and outlet. Equipment access will be limited to uplands and no driving mechanisms will enter the water.

Impact Avoidance and Minimization Measures

The project has been designed to avoid and minimize impacts to habitats and species that may potentially occur in the vicinity of the project area. Several design features are proposed to avoid and minimize adverse impacts to the aquatic and riparian environment as listed below:

1. Meet the requirements of all environmental permits from local, state, and federal agencies.
2. Work will be conducted within the in-water work window of July 15 through September 30 that will be confirmed by WDFW.
3. Capture fish according to WSDOT protocol (see Appendix B).
4. No equipment driving mechanisms will enter the stream.
5. Refuel and maintain construction equipment at least 150 feet away from any waterbody.
6. Check for fuel leaks at the beginning of each construction day.
7. Surrounding cuts, BMP such as silt fence, wattle, or straw bales will be installed, if appropriate.
8. Prior to returning flow to the new channel, all exposed streambed material below the new OHWM will be rinsed, and all turbid water will be pumped into the riparian area for infiltration.

9. Stabilize disturbed areas with hydroseeding or rock and remove temporary BMPs after soils have stabilized.
10. Regularly inspect and maintain the road, banks, and culvert.

PROJECT IMPACT SUMMARY

Project impacts to in-water and riparian habitat have been divided between temporary construction impacts and permanent impacts. The project will also result in re-establishing the streambed to more natural conditions than the bottom of the existing culvert.

Approximately 11 square feet of streambed above the road will be permanently impacted, and 488 square feet of streambed will be restored above and below the culvert. Permanent inner and outer RHA impacts will be 2,222 square feet and 725 square feet, respectively. Two native trees will be removed from the inner RHA. Because the culvert will be bottomless, 720 square feet of streambed will be re-established. Table 1 shows details of all impacts and habitat gains from the project.

Table 1. Construction Impacts, Permanent Impacts, and Habitat Gain Summary

Temporary Construction Impacts			
Habitat Area	Fill Material	Square Feet	Cubic Yards
Waterward of OHWM (culvert inlet/outlet)	Channel Fill Material*	188	15
Inner RHA	3" minus crushed rock	2,151	160
Outer RHA	3" minus crushed rock	228	17
Permanent Construction Impacts			
Habitat Area	Material	Square Feet	Cubic Yards
Waterward of OHWM	Channel Fill Material*	11	1
Inner RHA	3" minus crushed rock	2,222	164
Outer RHA	3" minus crushed rock	725	54
Habitat Gain			
Below OHWM (streambed re-establishment and restoration)	Streambed	720+488 (total: 1,208)	---
Inner RHA	Shrubs Trees	704 4 trees	---

*Channel Fill Material = 10-inch-minus, well-graded mixture of rounded cobbles, gravel, and sand with Type Two streambed boulders in the percentages listed below:

9-03.11(1) Streambed Sediment (2.5" minus)	35% to 45%
9-03.11(4) 10" Streambed Cobbles	45% to 55%
9-03.11(5) Type Two Streambed Boulders (18" to 28")	8% to 12%

Proposed Mitigation

Mitigation Goal

The mitigation goal is to compensate for unavoidable project impacts to stream and riparian habitats .

Mitigation Strategy

Mitigation credits cannot be purchased because the site is outside of the Coweeman Mitigation Bank service area, and there is no in-lieu fee program. There is sufficient space for mitigation to be performed onsite in the permanent road easement.

Mitigation strategy includes enhancing re-establishing about 70 linear feet of natural streambed habitat to allow a smooth transition from the bottomless culvert to the upstream and downstream areas. The strategy also includes enhancing the inner RHA by controlling invasive blackberries, planting four red alder, and adding to providing streambank stabilization and instream cover by planting native willows along the restored streambed. The remaining planting areas will be enhanced by adding native understory plants within the inner RHA to provide water-quality functions from road runoff, as well as wildlife habitat and organic input into the stream.

Permanent instream impacts include 11 square feet of fill material waterward of the OHWM. In habitat modeling programs, such as the Habitat Equivalency Analysis used by the National Marine Fisheries Service, the ratio to measure riparian habitat functions in relation to in-water impacts is 2:1. Therefore, 11 square feet of fill will be subtracted from the 1,208 square feet of stream restoration and re-establishment areas to leave 1,197 square feet of instream habitat to be used for calculating RHA mitigation needs. At a ratio of 0.5:1 stream habitat to RHA habitat, this will compensate for 2,394 square feet of RHA impacts.(1,197 x 2 = 2,394) This project will create 2,947 square feet of inner and outer RHA impacts, leaving 580 square feet of RHA impacts to meet mitigation needs (2,974 – 2,394 = 580).

This plan proposes to plant the restored streambanks with native Sitka willow (*Salix sitchensis*) and two adjacent areas within the permanent road easement with native understory plants for a total of 644 square feet of inner RHA enhancement (64 square feet more than the required area).

Mitigation Objectives and Performance Standards

The following objectives and performance standards will mitigate for unavoidable impacts and will be used to measure the mitigation plan's success.

<u>Objective 1</u>: Re-establish instream habitat through the culvert and restore instream habitat near its inlet and outlet for a smooth streambed transition to the existing streambed.

Performance Standard 1a: Place channel material in the streambed in areas shown on the figure set and in the specifications.

This performance standard will be met when the as-built report shows streambed material in the culvert and streambed near the culvert.

Objective 2: Improve inner RHA habitat by planting native trees and native shrubs.

Performance Standard 2a: Install 4 red alder trees; native willows on the restored streambanks; and in the 644 square feet in the inner RHA, remove invasive blackberries, and plant native shrubs.

This performance standard will be met when the as-built report, showing this area has been planted with native trees and shrubs as shown on the figure set, is submitted to the U.S. Army Corps of Engineers, Washington Department of Ecology, Washington Department of Fish and Wildlife, and Cowlitz County within 3 months of project completion.

Performance Standard 2b. In Year 1 and Year 2 (Year 1 begins after the first full growing season after planting) native trees and shrubs will achieve 100 percent survival and invasive blackberries will be less than 10 percent coverage in the planted areas.

If dead plants are replaced, this performance standard will be met.

Performance Standard 2c. In Years 3 through 5, there will be at least 80 percent survival of planted shrubs and trees.

This performance standard will be met if dead plants are replaced to achieve this survival requirement - or if natural colonization results in an 80 percent stem count of the original number of plants.

Objective 3: Protect the planted areas.

Performance Standard 3a: Annually inspect the planting area for 3 years to ensure mitigation requirements are being met.

This performance standard will be met when the annual monitoring report is submitted to Cowlitz County, Washington Department of Fish and Wildlife, the Department of Ecology, and the U.S. Army Corps of Engineers December 31st of each monitoring year.

Performance Standard 3b: Show in each of the 3 monitoring years that non-native invasive plant species are controlled so that native species are able to grow unimpeded.

This performance standard will be met when the monitoring report with at least one photograph is submitted to Cowlitz County, Washington Department of Fish and Wildlife, the Department of Ecology, and the U.S. Army Corps of Engineers by December 31st of each monitoring year.

PLANTING PLAN

Native species were selected based on their ability to grow in the area to provide streambank stability, shade, organic material into the stream, and food and shelter for wildlife. Trees will provide these functions and will eventually provide large wood to the river to create instream habitat complexity. Native shrub species were selected that currently grow along the riverbanks and that will create a multi-layered canopy. There are currently some red alders growing in this area, so this species was selected as the tree for planting to meet the county's 2:1 replacement requirement.

Any garbage and invasive blackberries in planting areas will be removed prior to planting and will continue to be controlled during the maintenance and monitoring period. Trees will be planted as shown on the figure, and shrubs will be planted on 5-foot centers (25 square feet per plant). Planting details are summarized in the following table.

Table 2. Planting Specifications (644 square feet of inner RHA)

Species	Spacing (feet)	Minimum Size and Type	Quantity
Red Alder (Alnus rubra)	---	1-gallon container or larger	4
Plant on the Streambanks (~400 sf) Sitka Willow (*Salix sitchensis*)	5	3' cuttings	20
Plant above Streambanks (~244 sf) Salal *(Gaultheria shallon)*	5	1-gallon container or larger	6
Blue Elderberry *(Sambucus nigra ssp. cerulea)*	5	1-gallon container or larger	6
		Total Plants	36

Notes:

1. If a shrub species listed above is not available at the time of planting, it can be substituted with another shrub; however, it must match the same wet or dry soil requirements as the shrub that was not available. Suggestions for shrubs farther from the water include cascara, red elderberry, or another shrub species growing in the area.
2. Plant numbers above represent final plant numbers for live plants. It may be best to obtain a few extra of each species to account for damaged or missing plants from the order.

PLANT MATERIALS AND PLANTING SPECIFICATIONS

The native trees and shrubs will be installed during the late fall to early spring when the plants are dormant and the soil moisture conditions are favorable for planting. Native plants

specified for mitigation are designed to enhance riparian and aquatic habitats. Plants are best installed in the late fall but can also be installed into early spring when the site conditions are wettest and the cuttings are dormant.

General Plant Specifications

- Plant the native trees and shrubs during the late fall to early spring (October-March) at the spacing identified in the planting table.
- All plant materials will be kept cool and moist prior to installation.
- All plant materials will have well developed roots and sturdy stems, with an appropriate root to shoot ratio.
- No damaged or desiccated roots or diseased plants will be accepted.

Cuttings

- Cuttings will be purchased from a native-plant nursery or cut from a local source.
- Cuttings will be a minimum of 3-feet long and between ½- to 1-inch in diameter.
- Cuttings will be kept cool and moist prior to being planted.
- Cutting stock should be installed within 1 to 2 days of cutting.
- Unplanted cutting stock will be properly stored at the end of each planting day to prevent desiccation.
- The cutting stock should be inspected by a person experienced in determining high-quality stock, and they should reject unacceptable plant materials.
- At least two-thirds of each cutting will be inserted into the soil, and at least two buds will be above ground.
- A planting bar may be necessary to install the cutting to the correct depth.

Plant Containerized and Bareroot Trees and Shrubs

- Dig the hole several inches wider than the size of the root system.
- Position the planted species' root collar so that it is at or slightly above the level of the surrounding soil to allow for settling.
- Backfill the hole with soil.
- Gently compact the soil around the planted species to eliminate air spaces.
- Irrigate all newly installed plants as site and weather conditions warrant.

MONITORING AND REPORTING, MAINTENANCE PLAN, CONTINGENCY PLAN, AND IMPLEMENTATION SCHEDULE

AS-BUILT REPORT

An as-built report submitted within three months of planting. It will include the following items:

- Completed as-built report approximately one page long summarizing any deviations from the plan.

- A site plan that shows changes that occurred to the planting area during plant installation. The drawing will be labeled "as-built" and will include the as-built monitoring date.
- Establish at least two photopoints where photographs will be taken.
- Photographs of the installed plants taken at photopoints.

MONITORING

Vegetative monitoring will be conducted during the growing season from May through September. When a month is selected for monitoring, it will occur during this month every year, preferably within the same 2 weeks, to obtain comparable results.

The following information will be gathered during each monitoring event:

- Determine the percent survival.
- Determine the general health of plants, noting specific problems and potential causes.
- Photographs of plantings from photopoints. Locations will be shown on the site map and will be included in each monitoring report.

MONITORING REPORT

Monitoring reports will be submitted no later than December 31 for 5 years during Year 1, 2, 3, and 5 of monitoring, to the U.S. Army Corps of Engineers, the Washington Department of Ecology, Washington Department of Fish and Wildlife, and Cowlitz County. Reports will discuss how performance standards are being met. The following items will be included in the report:

- One page monitoring report that includes content required by the Corps (see Appendix A).
- The as-built site plan updated to show any changes that have occurred to the mitigation planting area since the last report, such as plants that have died and been replaced.
- Photographs taken from established photopoints during monitoring.

MAINTENANCE PLAN

Planted trees and shrubs will be maintained as often as necessary to ensure that the performance standards are met. Maintenance includes performing the following actions:

- Inspect the plantings at least once annually, or more often as appropriate, and maintain to achieve the performance standards specified in the subsection titled "Mitigation Goals, Objectives, and Performance Standards."
- Irrigate planted trees and shrubs during the dry season for the first 2 to 3 years after planting, if necessary. Water should be delivered at a minimum rate of 1 gallon per plant every 4 weeks. Adjust as necessary based on site and weather conditions.
- Remove competing vegetation from around the base of native plants during first 2 to 3 years after planting and as needed thereafter.

- Replace dead or failed plants to meet the minimum performance standards. Replaced plants will be installed as described for the original installation.

CONTINGENCY PLAN

If mitigation areas are failing or the performance criteria are not met, steps will be taken to correct the situation in a timely manner. The following steps will be implemented when an area is identified as failing or potentially failing:

1. Identify the cause(s) of the failure or potential failure.
2. Identify the extent of the failure or potential failure.
3. Implement corrective actions such as irrigating and replanting.
4. Document the activities and include this data in the monitoring reports.
5. In the event that a routine corrective action will not correct the problem, immediately consult with the appropriate agencies.
6. Evaluate recommendations from resource agency staff and implement recommendations in a timely manner.

RESPONSIBLE PARTY

Funding for onsite corrective actions will be the responsibility of the applicant.

MITIGATION SCHEDULE

The following schedule shows anticipated timing for completing the tasks outlined in this plan. This assumes construction will occur in 2024. If it occurs in subsequent years, then adjust the planting times, as-built report, and monitoring years accordingly.

Construction Year (assuming 2024)

October 2024 to March 2025	Plant shrubs and trees.
May - November	Ongoing maintenance and watering, as needed.

As-Built Report

January 2025 to June 2025	As-built report submitted within 3 months from date of planting.

Year 1 (2026)

May through September	Vegetative monitoring.
May - November	Ongoing maintenance and watering, as needed.
December 31	Submit monitoring report.

Year 2 (2027)

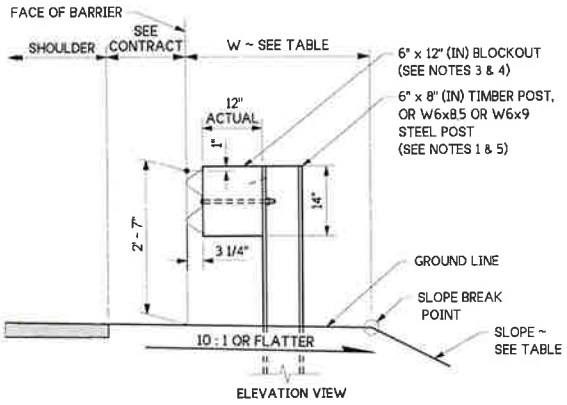
May through September	Vegetative monitoring during the same month as in Year 1.
May - November	Ongoing maintenance and watering, as needed.
December 31	Submit monitoring report.

Year 3 (2028)

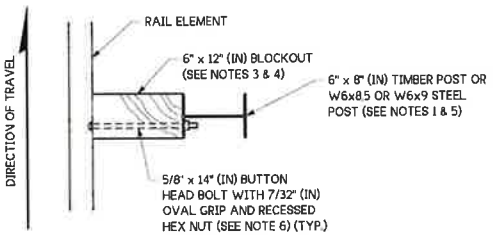
May through September	Vegetative monitoring during the same month as in Year 1.
May - November	Ongoing maintenance and watering, as needed.
December 31	Submit monitoring report.

APPENDIX F

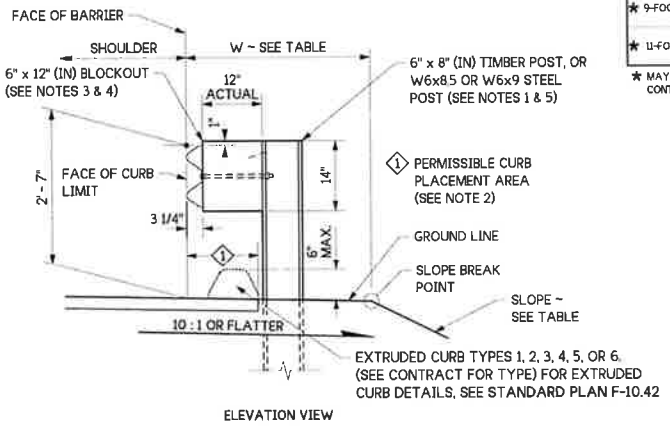
APPLICABLE STANDARD PLANS



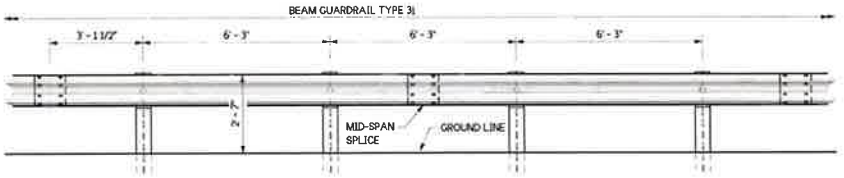
TYPICAL ELEVATION ~ WITHOUT CURB



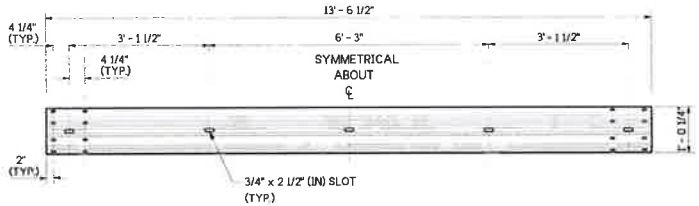
PLAN VIEW



TYPICAL SECTION ~ WITH CURB



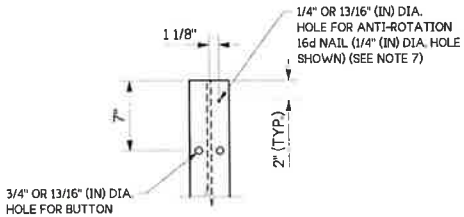
TYPICAL ELEVATION



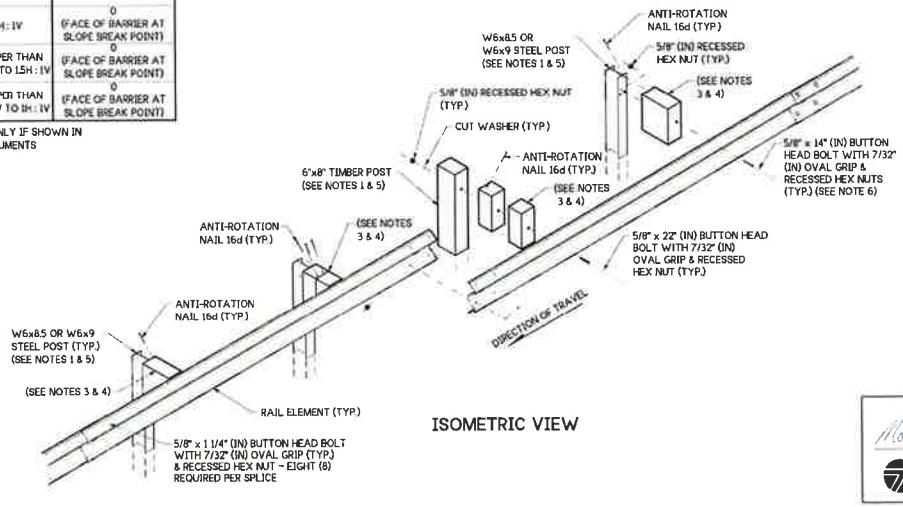
TYPICAL RAIL ELEMENT

SLOPE/EMBANKMENT TABLE FOR 6', 8', 9', AND 11' LONG POSTS		
POST LENGTH	SLOPE	W (FT)
6-FOOT	2H : 1V OR FLATTER	2.5 MIN
6-FOOT	1H : 1V OR FLATTER	4.0 MIN
8-FOOT	STEEPER THAN 2H : 1V TO 1H : 1V	2.5 MIN
8-FOOT	2H : 1V	0 (FACE OF BARRIER AT SLOPE BREAK POINT)
★ 9-FOOT	STEEPER THAN 2H 1V TO 1.5H : 1V	0 (FACE OF BARRIER AT SLOPE BREAK POINT)
★ 11-FOOT	STEEPER THAN 1.5H : 1V TO 1H : 1V	0 (FACE OF BARRIER AT SLOPE BREAK POINT)

★ MAY BE USED ONLY IF SHOWN IN CONTRACT DOCUMENTS



STEEL POST



ISOMETRIC VIEW

NOTES

1. Refer to Standard Plan C-1b for additional details not shown on this plan.
2. Extend shoulder pavement to provide a base for the extruded curb. See Contract Plans for exceptions to distances shown.
3. Use a single block or combination of blocks (no more than two (2) to achieve the actual 12" (in) offset. See **Standard Specification Section 9-16.3(2)**. Wood blocks shall be secured to the posts with anti-rotation nails. If combination blocks are used, the adjacent blocks shall be toenailed with two 16d galvanized nails to prevent block rotation.
4. Wood blocks are shown. Blocks of an approved alternative material may be used. See **Standard Specification Section 9-16.3(2)**.
5. All posts for any standard barrier run shall be of the same type; timber or steel.
6. Attach blockouts to steel posts using bolt holes on approaching traffic side of post web.
7. Anti-rotation holes in steel posts are not required when using blocks with anti-rotation features (e.g., routered blocks).

Oct 12, 2023

BEAM GUARDRAIL TYPE 31

STANDARD PLAN C-20.10-09

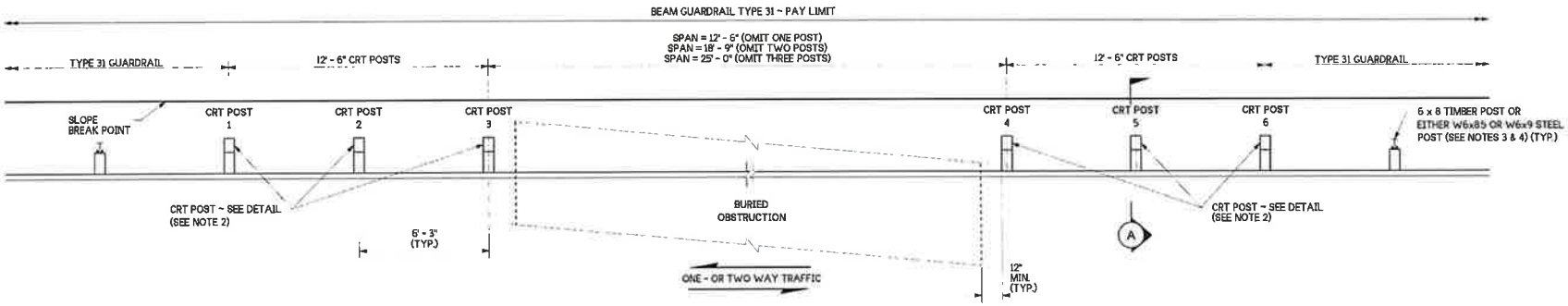
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

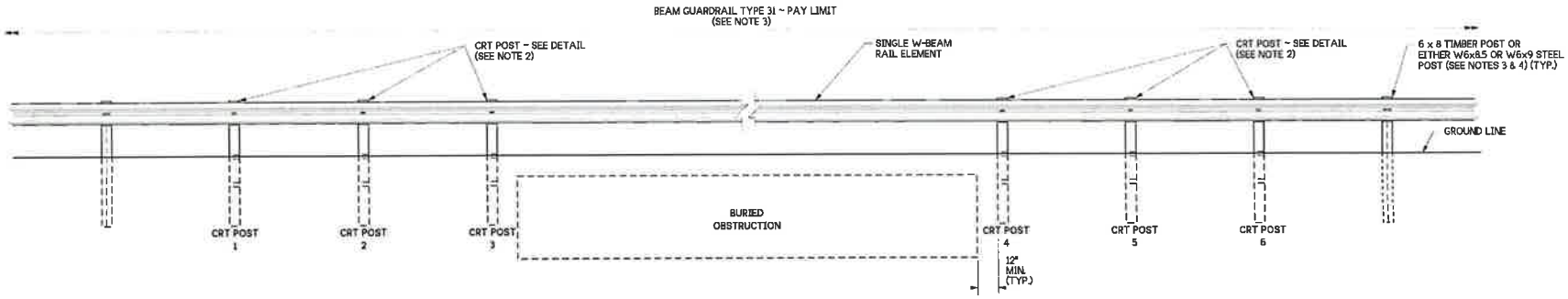
Oct 12, 2023

STATE DESIGN ENGINEER

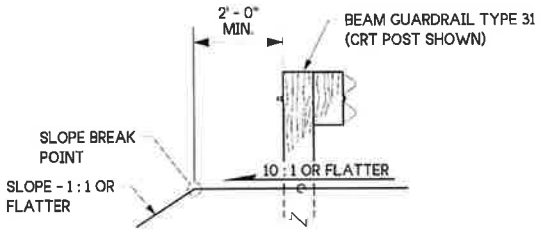
Washington State Department of Transportation



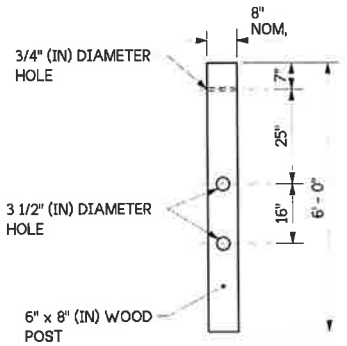
PLAN



ELEVATION



SECTION (A)
(SEE NOTE 5)



CONTROLLED RELEASING TERMINAL (CRT) POST DETAIL

NOTES:

1. For additional details not shown on this plan, refer to Standard Plan C-20.10 and C-1b.
2. CRT post to be wood.
3. Install at least 62' - 6" (10 post spacings) of Type 31 guardrail upstream and downstream from CRT posts 1 and 6. Length includes terminals and anchors.
4. Install at least 62' - 6" (10 post spacings) of tangent Type 31 guardrail from CRT Posts 3 and 4 before starting a taper or radius rail guardrail.
5. Grading requirements for spans without headwalls must begin at least 43' - 9" (7 posts spacings) before CRT post 3, extend thru the obstruction area, and end at least 43' - 9" (7 post spacings) after CRT post 4.
6. Grading requirements for spans w/ headwalls must extend 43' - 9" (7 post spacings) minimum upstream and downstream from CRT posts 3 and 4.

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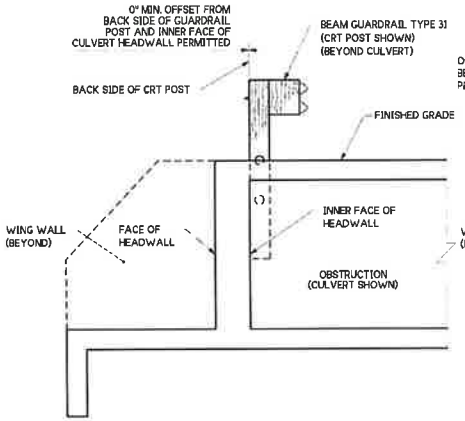
Oct 12, 2023

BEAM GUARDRAIL TYPE 31
PLACEMENT 12' - 6", 18' - 9",
OR 25' - 0" SPAN
STANDARD PLAN C-20.40-10

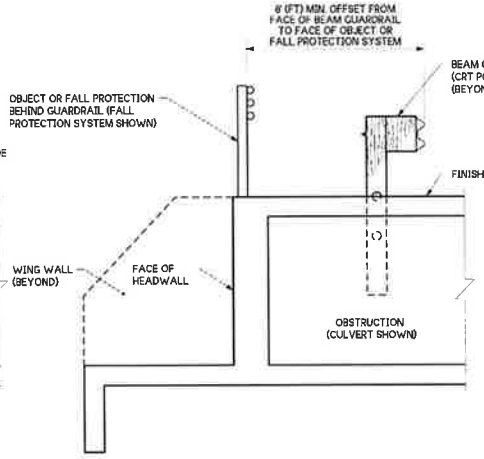
SHEET 1 OF 2 SHEETS

APPROVED FOR PUBLICATION
Mark A Hanes Oct 12, 2023
STATE DESIGN ENGINEER
Washington State Department of Transportation



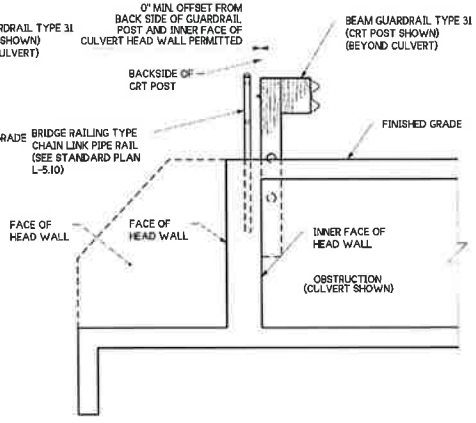
SECTION (B1)

(NO FIXED OBJECTS OR FALL PROTECTION PLACED BEHIND LONG SPAN GUARDRAIL SYSTEM)



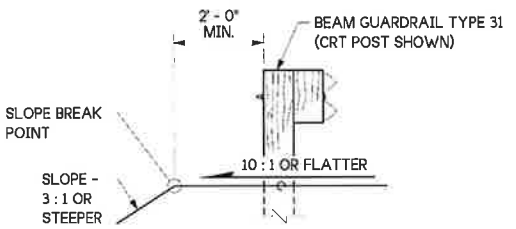
SECTION (B2)

(FIXED OBJECTS OR FALL PROTECTION (OTHER THAN TYPE CHAIN LINK PIPE RAIL (STD. PLAN L-5.10) PLACED BEHIND LONG SPAN GUARDRAIL SYSTEM)



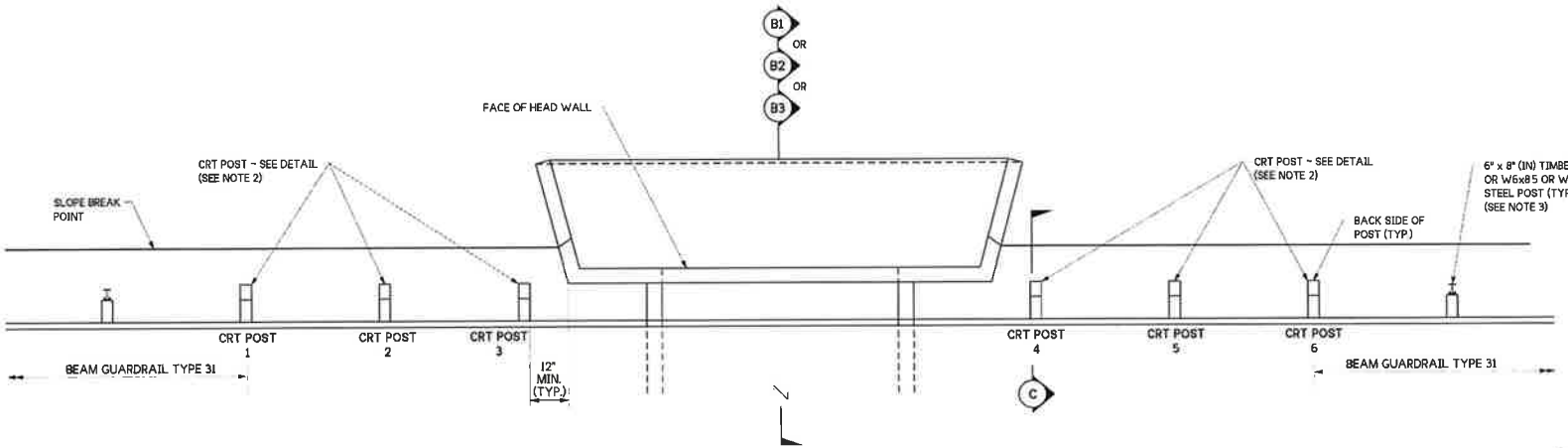
SECTION (B3)

(BRIDGE RAILING TYPE CHAIN LINK PIPE RAIL (STD. PLAN L-5.10) PLACED BEHIND LONG SPAN GUARDRAIL SYSTEM)



SECTION (C)

(CRT POSTS 1 - 6) (SEE NOTE 6)



SPAN WITH HEADWALL DETAIL

(CULVERT SHOWN)

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Oct 12, 2023

BEAM GUARDRAIL TYPE 31
PLACEMENT 12' - 6", 18' - 9", OR 25' - 0" SPAN
STANDARD PLAN C-20.40-10

SHEET 2 OF 2 SHEETS

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Oct 12, 2023

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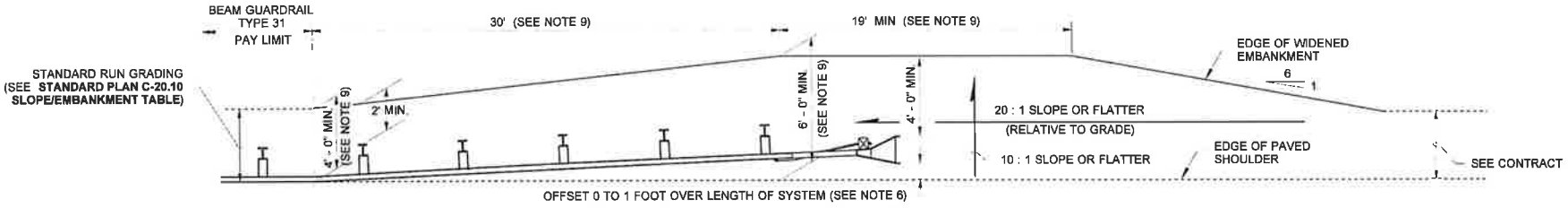
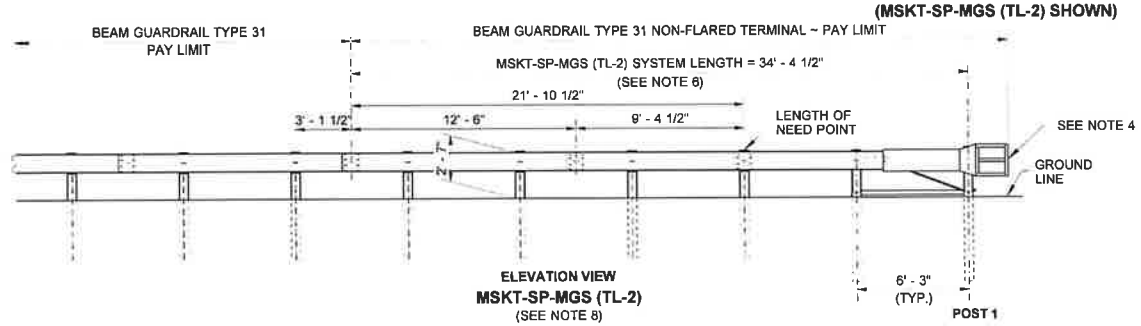
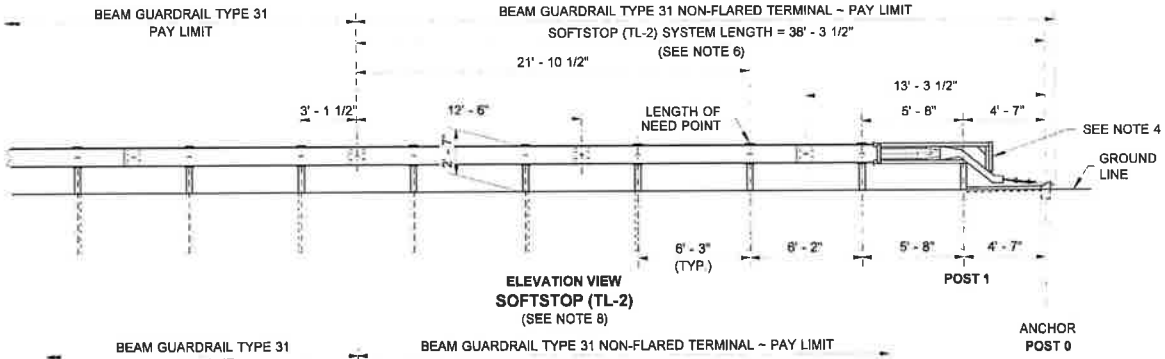


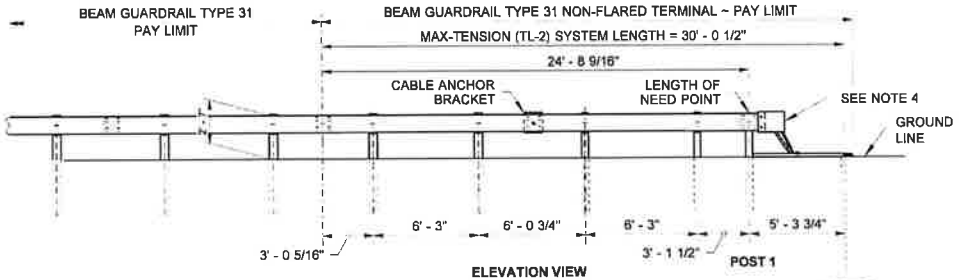
PLAN VIEW
(MSKT-SP-MGS (TL-2) SHOWN)



ELEVATION VIEW
MSKT-SP-MGS (TL-2)
(SEE NOTE 8)



ELEVATION VIEW
SOFTSTOP (TL-2)
(SEE NOTE 8)



ELEVATION VIEW
MAX-TENSION (TL-2)
(SEE NOTE 8)

NOTES

1. The Implementation of the Manual for Assessment of Safety Hardware (MASH) criteria may result in the acceptance of guardrail terminal systems currently not shown on this plan. Non-Flared terminals shall be selected from the WSDOT Qualified Products List (QPL) or approved through the WSDOT Request for Approval of Materials (RAM) process.
2. This terminal is MASH compliant at Test Level Two (TL-2) and may be used in applications with posted speed of 45 mph or less.
3. An MSKT-SP-MGS (TL-2) as manufactured by Road Systems, Inc, SOFTSTOP (TL-2) as manufactured by Trinity Highway Products, LLC, or MAX-TENSION (TL-2) as manufactured by Lindsay Transportation Solutions, shall be installed according to manufacturer's recommendations.
4. A reflectorized object marker shall be installed according to manufacturer's recommendations.
5. Snow load rail washers are not allowed.
6. Provide an offset between 0 to 1 foot so that the impact head does not encroach onto the paved shoulder. The offset is provided over the length of the terminal system from the center of the last post splice to either: (1) The face of the impact head at its leading edge (MSKT-SP-MGS), or (2) The center of anchor **Post 0** (Softstop or Max-Tension). Provide the maximum offset where practicable.
7. For terminal details, see WSDOT approved manufacturer's drawings.
8. These terminals are supplied with steel posts only. They can be used with beam guardrail Type 31 runs, composed of steel or wood guardrail posts.
9. The widened embankment dimensions shown on this plan will satisfy the installation requirements of all 3 guardrail terminal systems shown on this plan.

Jul 18, 2024

BEAM GUARDRAIL TYPE 31 NON-FLARED TERMINAL (POSTED SPEED 45 MPH AND BELOW)

STANDARD PLAN C-22.45-07

SHEET 1 OF 1 SHEET

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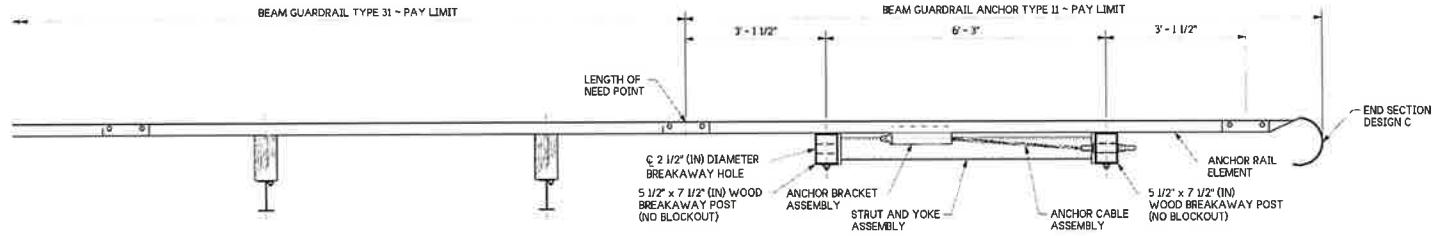
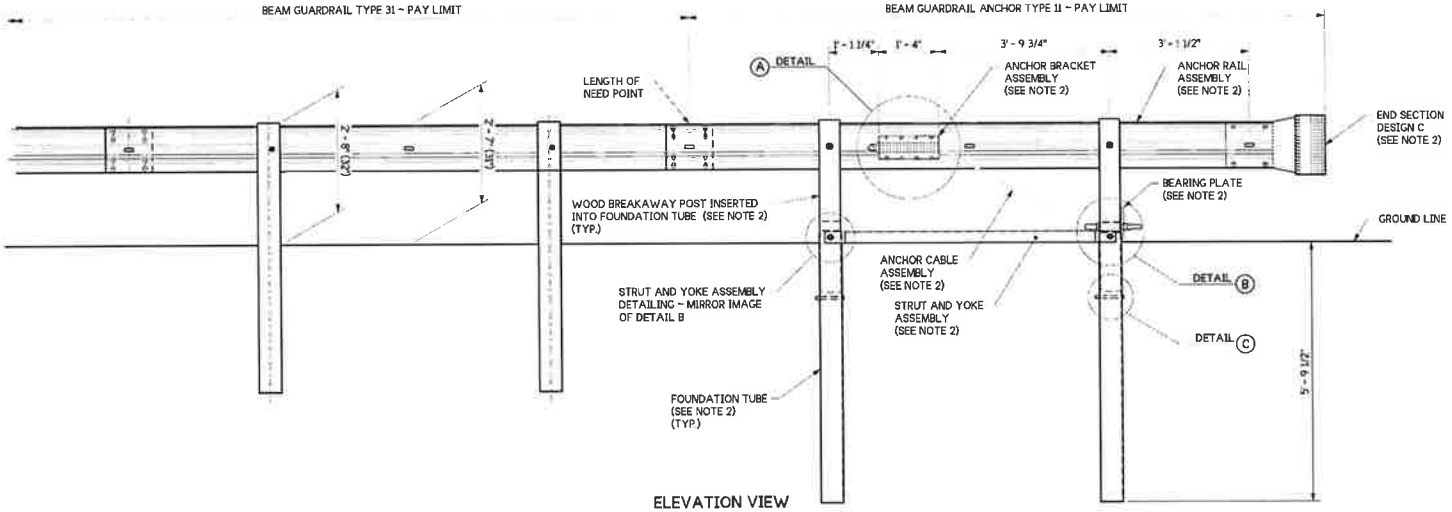
Mark A Hains Jul 21, 2024

STATE DESIGN ENGINEER

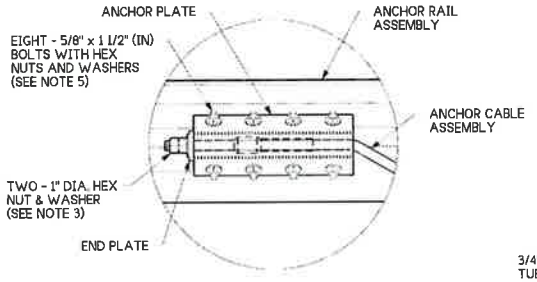
Washington State Department of Transportation



PLAN VIEW

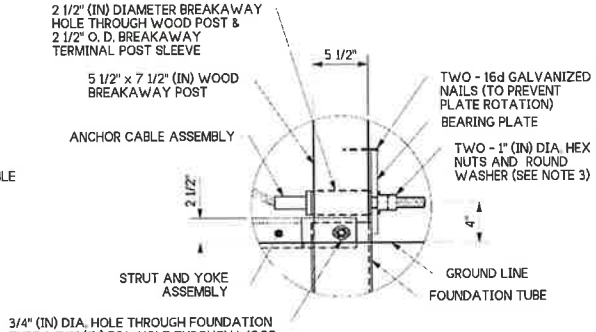


ELEVATION VIEW



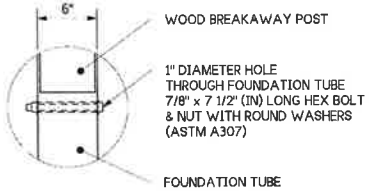
DETAIL (A)

ASSEMBLED ANCHOR BRACKET ASSEMBLY



DETAIL (B)

ANCHOR END POST ASSEMBLY



DETAIL (C)

NOTES

1. For typical rail element and post details not shown on this plan refer to **Standard Plans C-20.10** and **C-1b.**
2. For additional details not shown, see Sheet 2 of this Plan.
3. Fasten the Anchor Cable using two 1" (in) nuts and washer, at both ends of cable. Outside nut shall be torqued against inside nut a minimum of 100 ft.-lbs.
4. It is permissable to fabricate the anchor plate from 1/4" (in) thick plates welded to equal strength and dimensions as shown.
5. Eight 5/8" x 1 1/2" (in) machine bolts with hex nut and washer. Place washer on face side of rail.
6. Galvanizing of Anchor metal components shall be in accordance with **Standard Specification Section 9-16.3(5).**
7. See **Standard Plans C-20.14** or **C-20.18** for proper placement of Type 11 Anchors in front of fixed features.

Oct 13, 2023

BEAM GUARDRAIL TYPE 31 ~ ANCHOR TYPE 11

STANDARD PLAN C-23.70-01

SHEET 1 OF 2 SHEETS

APPROVED FOR PUBLICATION

Mark C Hanes Oct 16, 2023

STATE DESIGN ENGINEER

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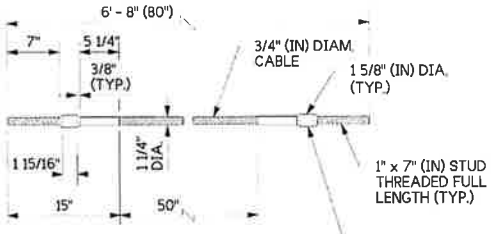
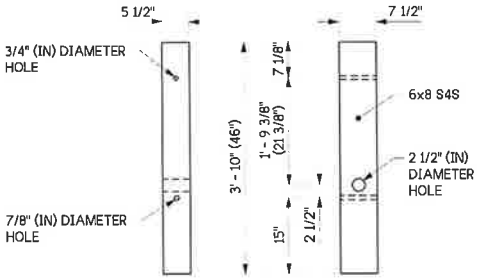
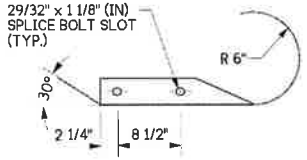


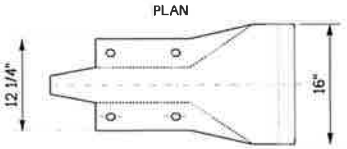
ANCHOR CABLE ASSEMBLY DETAIL



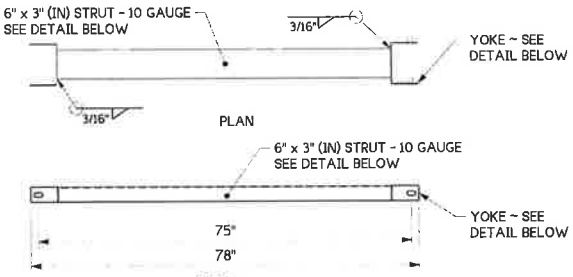
WOOD BREAKAWAY POST DETAIL

BREAKAWAY TERMINAL POST SLEEVE DETAIL
(ASTM A53 GRADE B, SCHEDULE 40)

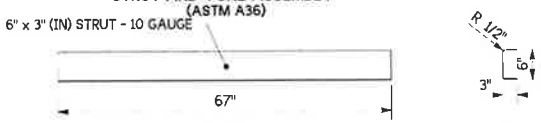




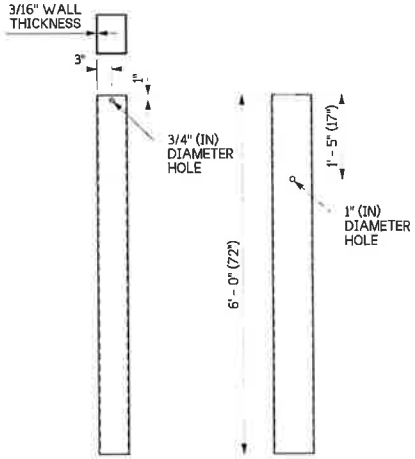
ELEVATION
DESIGN C END SECTION



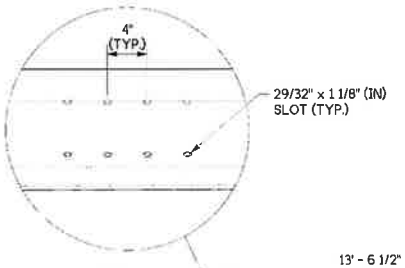
STRUT AND YOKE ASSEMBLY
(ASTM A36)

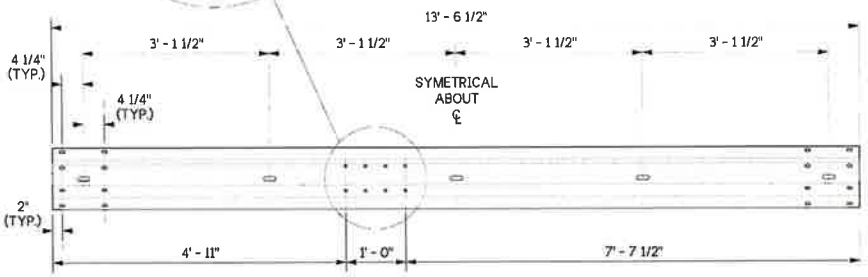


STRUT DETAIL

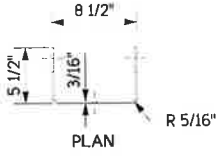


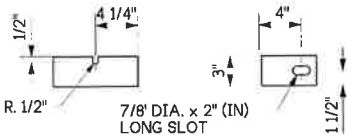
FOUNDATION TUBE DETAIL
(ASTM A500 GRADE B, STEEL)



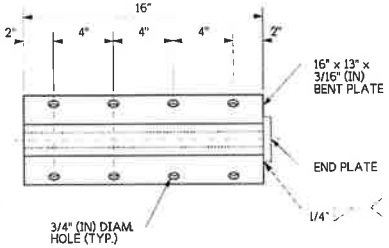


ANCHOR RAIL ELEMENT DETAIL

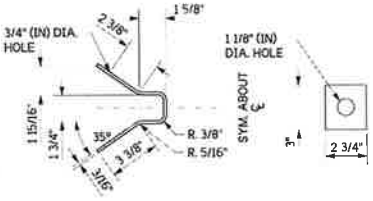




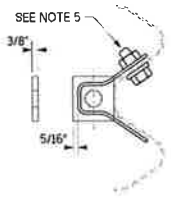
YOKE DETAIL



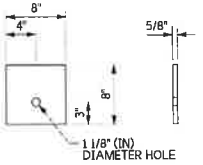
ANCHOR PLATE DETAIL
(SEE NOTE 4)
(ASTM A36)



ANCHOR BRACKET ASSEMBLY DETAIL



END PLATE DETAIL
(ASTM A36)



ELEVATION END

BEARING PLATE DETAIL
(ASTM A36)

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Oct 13, 2023

BEAM GUARDRAIL TYPE 31 ~ ANCHOR TYPE 11

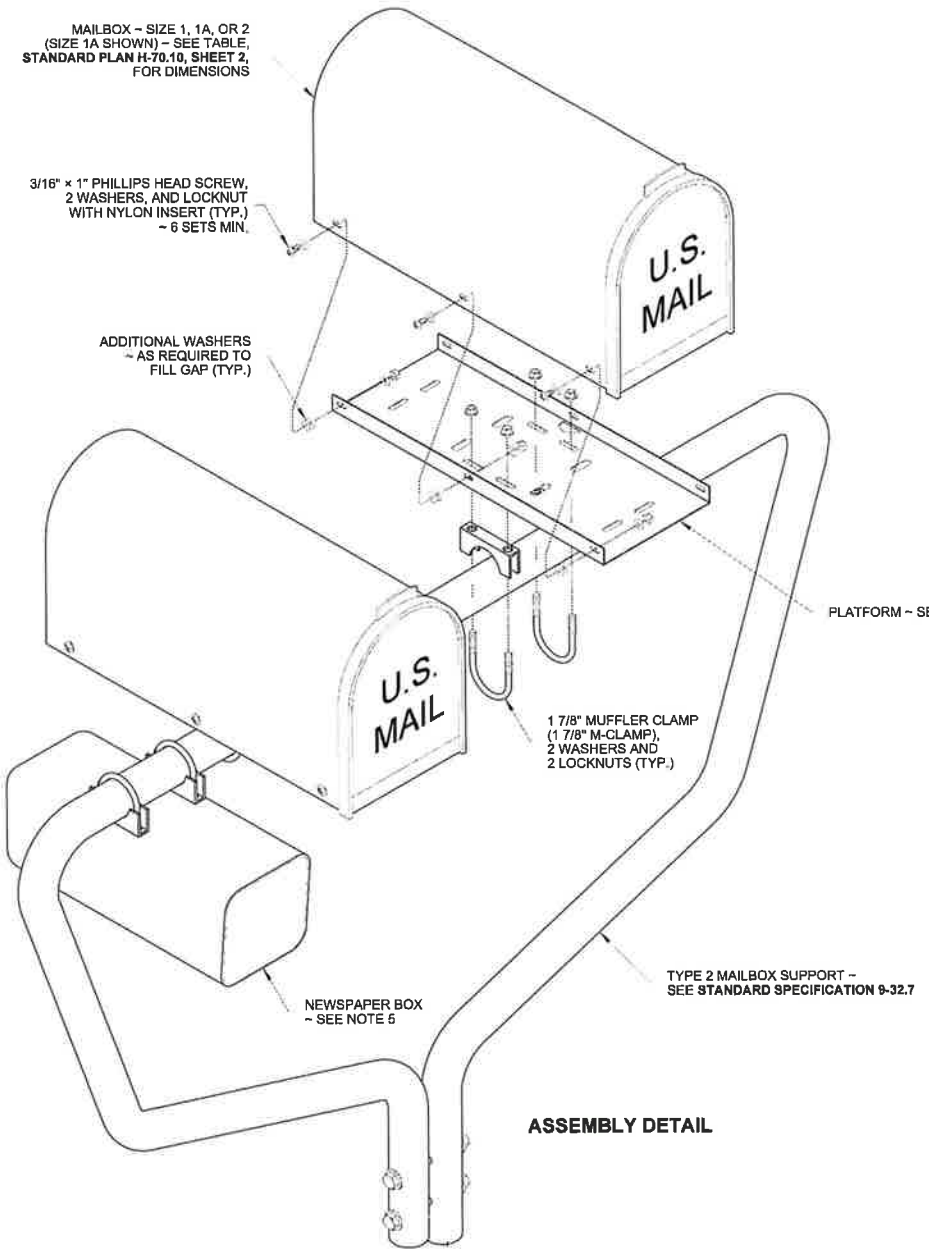
STANDARD PLAN C-23.70-01

SHEET 2 OF 2 SHEETS

APPROVED FOR PUBLICATION
Mark A Harris Oct 16, 2023
STATE DESIGN ENGINEER

Washington State Department of Transportation

DRAWN BY: MARK SUJKA



ASSEMBLY DETAIL

NOTES

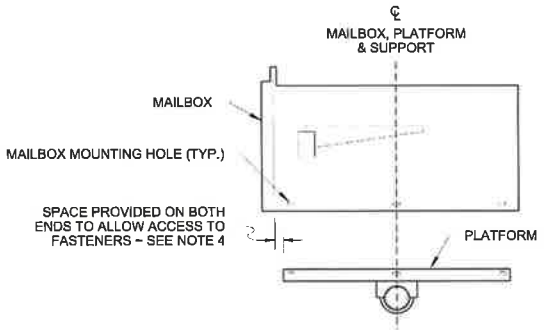
1. The anchoring system shall meet MASH crash test criteria. The V-wing socket and wedge assembly installed in a concrete base as detailed in this plan is deemed MASH compliant by WSDOT. Other MASH compliant anchoring systems manufactured by or recommended by the Type 2 support manufacturer are allowed to be used in lieu of the V-wing socket and wedge assembly.

2. A maximum of five mailboxes may be installed on a Type 2 Support. The combined weight of the empty mailboxes shall not exceed 30 LBs. If different sized mailboxes are used on a Type 2 support, the center position mailboxes must either be the same size as the edge position mailboxes or larger than the edge position mailboxes.

3. The Platform design shown in this plan is detailed in the PLATFORM DETAIL, **Standard Plan H-70.10, Sheet 2**. The design features slots that accomodate several types of mailbox supports; only those slots necessary for assembling the type being installed are required. An adjustable platform may be used in lieu of this platform design. Adjustable platforms must fit the 1 7/8" (in) M-Clamp.

4. Center the mailbox on the platform to ensure space for the mailbox door to open and to allow space for installing the fasteners (see ALIGNMENT DETAIL). Spacing of mailbox mounting holes varies among manufacturers. Attachment of the mailbox to the platform may require drilling additional holes through the mailbox to fit the platform.

5. Attach a newspaper box to a Type 2 Support with two 1 7/8" (in) Muffler Clamps spaced 4" (in) apart. Field drill 7/16" (in) holes in the newspaper box to fit. Newspaper boxes must not extend beyond the front of the mailbox when the mailbox door is closed.



ALIGNMENT DETAIL

SEE NOTE 4

JOHN PATRICK DONAHUE — STATE OF WASHINGTON — 29023 — REGISTERED PROFESSIONAL ENGINEER

Aug 17, 2021

MAILBOX SUPPORT TYPE 2

STANDARD PLAN H-70.20-02

SHEET 1 OF 2 SHEETS

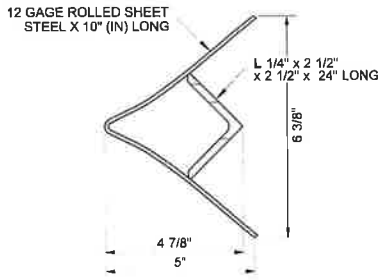
APPROVED FOR PUBLICATION

Aug 17, 2021

STATE DESIGN ENGINEER

Washington State Department of Transportation

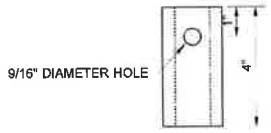
DRAWN BY: MARK SUJKA



TOP

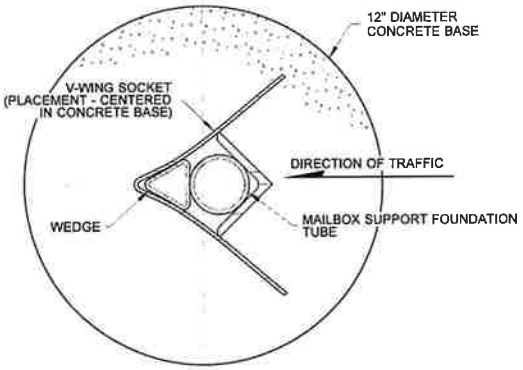
V-WING SOCKET DETAIL

TOP



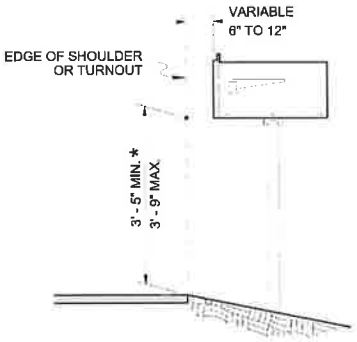
ELEVATION

WEDGE DETAIL

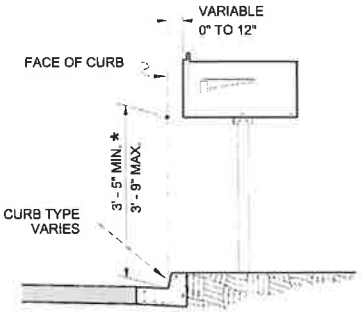


SECTION (A)

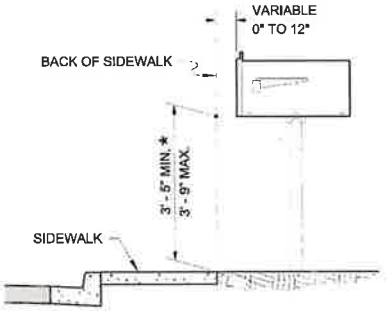
V-WING SOCKET AND WEDGE ASSEMBLY DETAIL
(PLACEMENT - TOP OF ASSEMBLY
FLUSH WITH CONCRETE BASE SURFACE)



AT EDGE OF SHOULDER



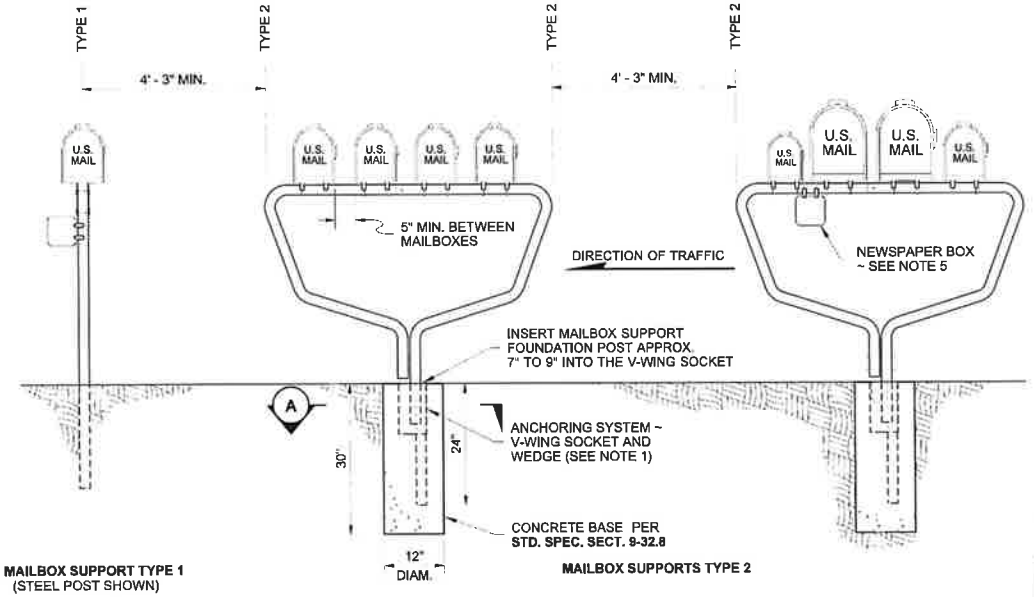
BEHIND CURB



BEHIND SIDEWALK

* UNLESS OTHERWISE SHOWN IN THE PLANS

MAILBOX PLACEMENT SECTIONS



MAILBOX SUPPORT TYPE 1
(STEEL POST SHOWN)
FOR DETAILS,
SEE **STANDARD PLAN H-70.10**

MAILBOX SUPPORTS TYPE 2

SPACING DETAIL

JOHN PATRICK DONAHUE
STATE OF WASHINGTON
29023
REGISTERED
PROFESSIONAL ENGINEER

Aug 17, 2021

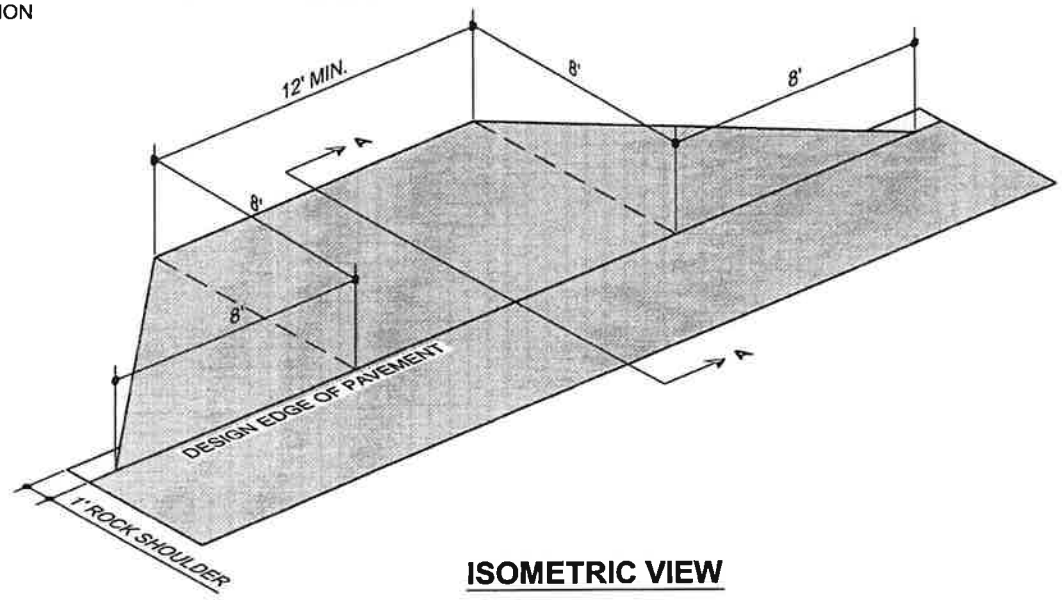
MAILBOX SUPPORT TYPE 2

STANDARD PLAN H-70.20-02

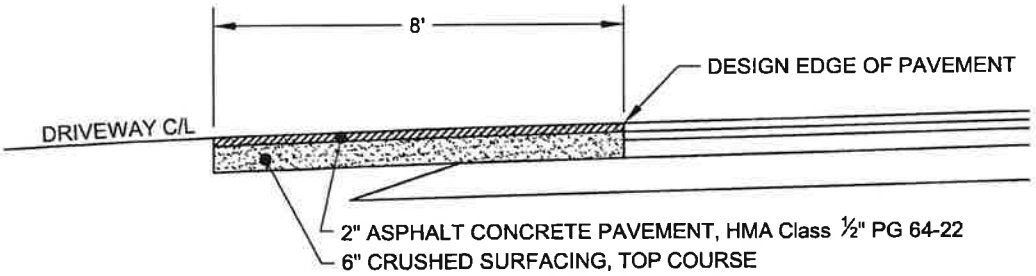
SHEET 2 OF 2 SHEETS

APPROVED FOR PUBLICATION
Aug 17, 2021
STATE DESIGN ENGINEER
Washington State Department of Transportation

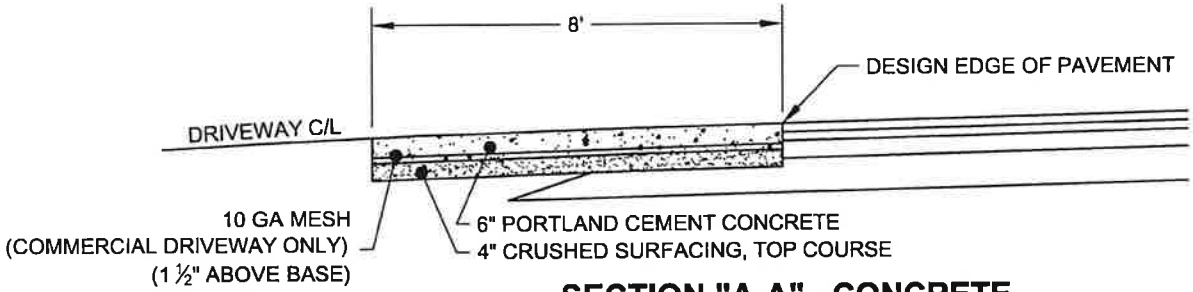
ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE LATEST EDITION OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION



ISOMETRIC VIEW



SECTION "A-A" - ASPHALT



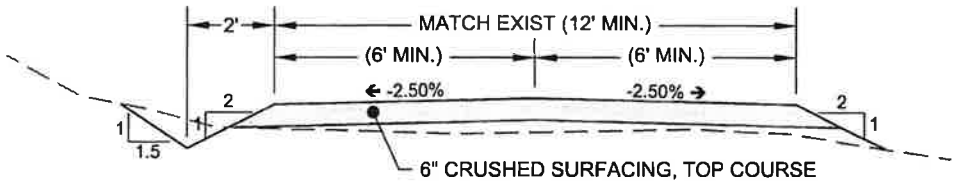
SECTION "A-A" - CONCRETE

NOTES:

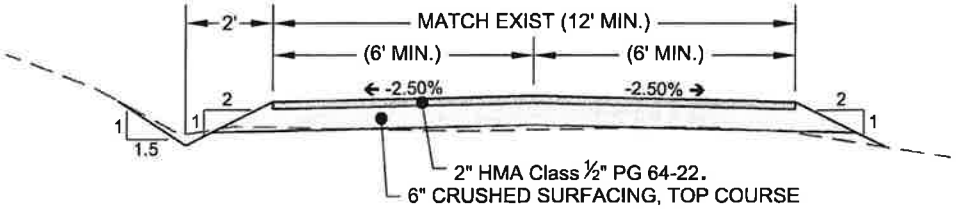
1. Concrete shall have a minimum compresive strength of 3000 p.s.i. after 28 days - 6 sack mix.

RGL DESIGNED BY JMC 3/6/07 DRAWN BY KAC APPROVED BY 3-21-07 DATE	**STANDARD APPROACH** **ASPHALT OR CONCRETE APRON** **N T S**	COWLITZ COUNTY WASHINGTON	DEPARTMENT OF PUBLIC WORKS 207 4th AV. NORTH KELSO, WASHINGTON 98626 **DRAWING:CC-1317**	SHEET 1 OF 1

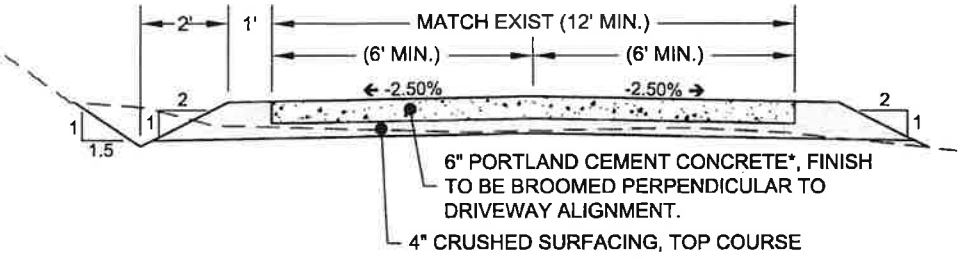
ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE LATEST EDITION OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION



TYPICAL GRAVEL DRIVEWAY SECTION



TYPICAL ASPHALT DRIVEWAY SECTION



TYPICAL CONCRETE DRIVEWAY SECTION

NOTE:

* Concrete shall have a minimum compressive strength of 3000 p.s.i. after 28 days - 6 sack mix.

RGL DESIGNED BY JMC 3/6/07 DRAWN BY KAC APPROVED BY 3-21-07 DATE	**STANDARD DRIVEWAY** **TYPICAL SECTIONS** **N T S**	COWLITZ COUNTY WASHINGTON	DEPARTMENT OF PUBLIC WORKS 207 4th AV. NORTH KELSO, WASHINGTON 98625 DRAWING:CC-1318	SHEET 1 OF 1

RECOMMENDED SIGN SPACING = X (1)		
RURAL ROADS & URBAN ARTERIALS	35-40 MPH	350'±
RURAL ROADS & URBAN ARTERIALS RESIDENTAL & BUSINESS DISTRICTS	25-30 MPH	200'± (2)
URBAN STREETS	25 MPH OR LESS	100'± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

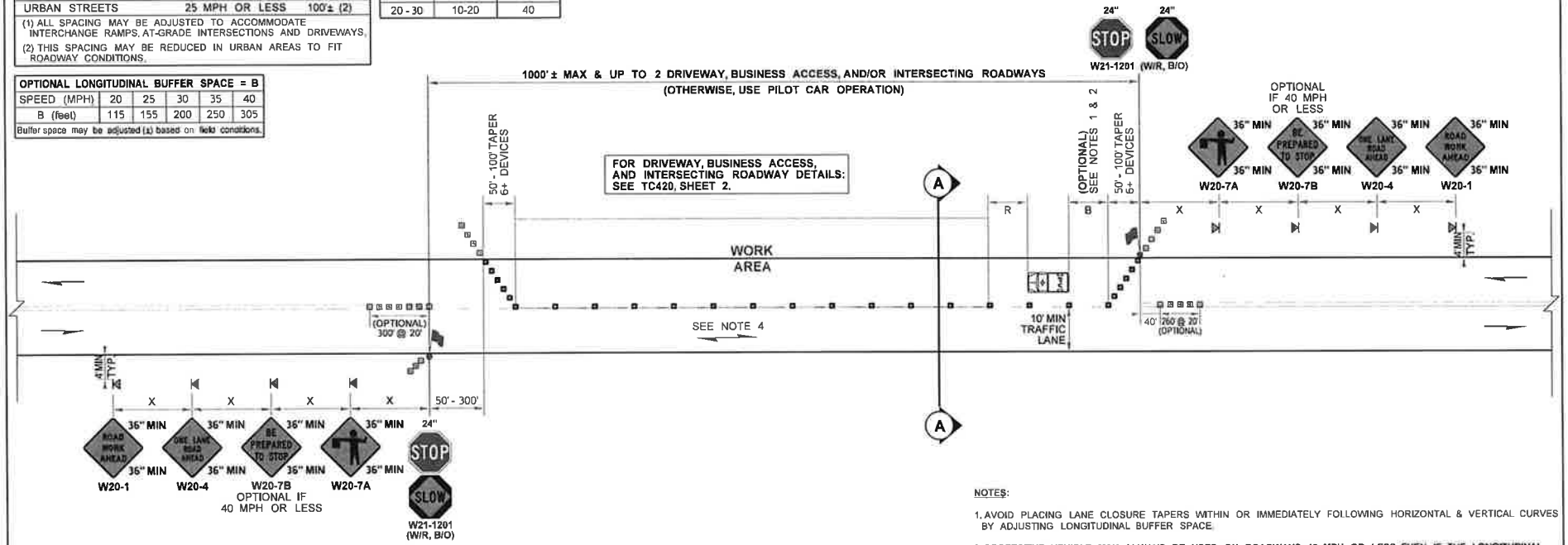
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

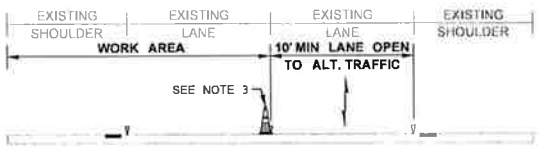
MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
35 - 40	10-20	60
20 - 30	10-20	40

PROTECTIVE VEHICLE ROLL AHEAD DISTANCE = R
STRATEGICALLY POSITION WORK VEHICLE TO PROTECT WORK CREW. 40' - 80' RECOMMENDED.

OPTIONAL LONGITUDINAL BUFFER SPACE = B					
SPEED (MPH)	20	25	30	35	40
B (feet)	115	155	200	250	305

Buffer space may be adjusted (±) based on field conditions.





SECTION (A-A)

LEGEND:

- TEMPORARY SIGN LOCATION
- 28" REFLECTIVE TRAFFIC CONE (SEE NOTE 3)
- OPTIONAL CHANNELIZATION DEVICE
- PROTECTIVE VEHICLE (SEE NOTE 2)
- FLAGGER

NOTES:

1. AVOID PLACING LANE CLOSURE TAPERS WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL & VERTICAL CURVES BY ADJUSTING LONGITUDINAL BUFFER SPACE.
2. **PROTECTIVE VEHICLE MAY ALWAYS BE USED ON ROADWAYS 40 MPH OR LESS, EVEN IF THE LONGITUDINAL BUFFER SPACE IS REDUCED OR ELIMINATED.** ADDITIONAL PVs MAY BE ADDED AT SEPARATE WORK CREWS.
3. MAY SHIFT LATERALLY. 36" TRAFFIC CONES, 42" TALL CHANNELIZATION DEVICES, OR TRAFFIC SAFETY DRUMS OK.
4. PEDESTRIAN & BICYCLIST ACCOMMODATIONS (ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES):
   (A) ALLOW PEDESTRIANS TO USE THE PAVED SHOULDER OR ADJACENT PATH OPPOSITE THE WORK AREA
   (B) COMBINE BIKES & VEHICULAR TRAFFIC. BIKES TO CLEAR PRIOR TO RELEASING ONCOMING TRAFFIC
   (C) PROVIDE FREE SHUTTLE (WORK TRUCK, VAN, OR BUS MAY BE USED)
5. SEE STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS:
   1-07.8(1) HIGH-VISIBILITY APPAREL
   1-10.3(1)A FLAGGERS AND NIGHTTIME ILLUMINATION
   1-10.3(2)A TRAFFIC CONTROL PROCEDURES
   9-35.1 24-INCH STOP/SLOW PADDLE SIZE
6. FOR PROJECT-SPECIFIC REQUIREMENTS, SEE SPECIAL PROVISIONS.
7. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
8. ACTUAL CENTERLINE PAVEMENT MARKINGS MAY VARY.

ALTERNATING 1-LANE, 2-WAY TRAFFIC: FLAGGER-CONTROLLED (HIGHWAYS, 40 MPH OR LESS)

NOT TO SCALE

FILE NAME	C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\420Hwy40-AltTrafficFlagger.dgn								Plot 1
TIME	2:05:04 PM				REGION NO. 10	STATE WASH	FED.AID PROJ.NO.		PLAN SHEET NO. TC420
DATE	4/2/2024				JOB NUMBER				
PLOTTED BY	LintzF								
DESIGNED BY					CONTRACT NO.	LOCATION NO.			SHEET 1 OF 4 SHEETS
ENTERED BY									
CHECKED BY									
PROJ. ENGR.									
REGIONAL ADM.		REVISION	DATE	BY					

P.E. STAMP BOX — DATE

P.E. STAMP BOX — DATE

Washington State Department of Transportation

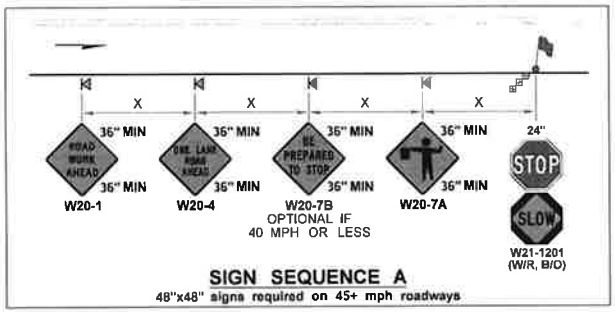
TYPICAL TRAFFIC CONTROL PLANS

NOTES:

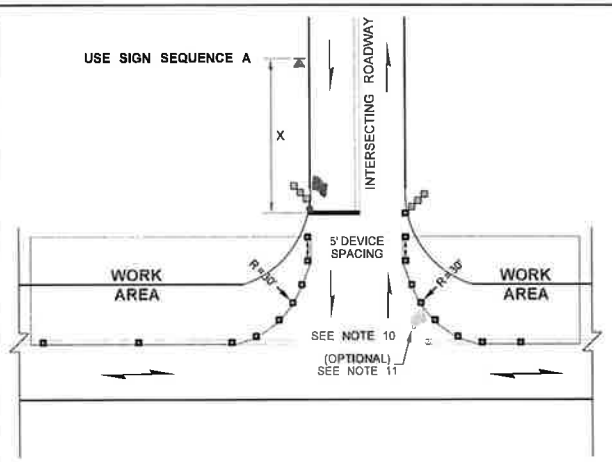
9. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC420, SHEET 1.

10. WORK MAY BRIEFLY OCCUR WITHIN LANE CLOSURE ACROSS INTERSECTING ROADWAY APPROACHES, BUSINESS ACCESSES, OR DRIVEWAYS. **MAY HOLD APPROACH OR ACCESS TRAFFIC FOR 5 MINUTES OR LESS** (ENGINEER MAY ACCEPT HOLDS UP TO 10 MINUTES) WHILE RESTRICTING TURNS FROM MAINLINE. CHANNELIZATION DEVICES DELINEATING APPROACH OR ACCESS MAY BE REMOVED OR RELOCATED AS NEEDED.

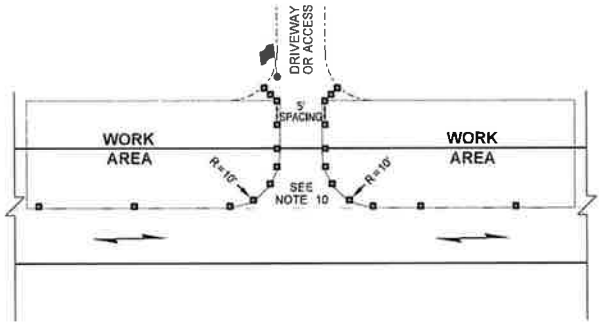
11. SINGLE FLAGGER (WITH RED FLAG/ RED GLOW CONE FLASHLIGHT) MAY BE ADDED TO THE INTERSECTING ROADWAY APPROACH TO HELP GUIDE ALTERNATING & TURNING TRAFFIC.



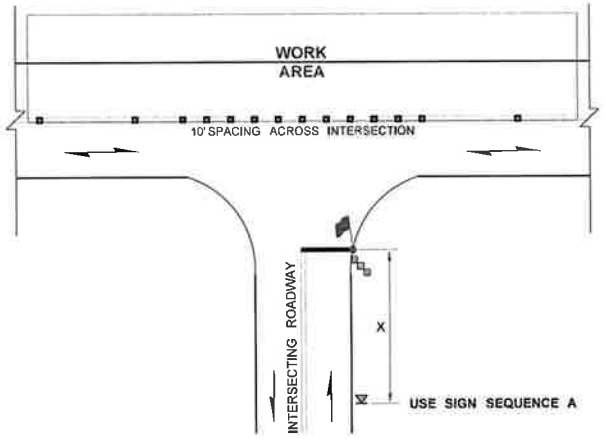
SIGN SEQUENCE A
48"x48" signs required on 45+ mph roadways



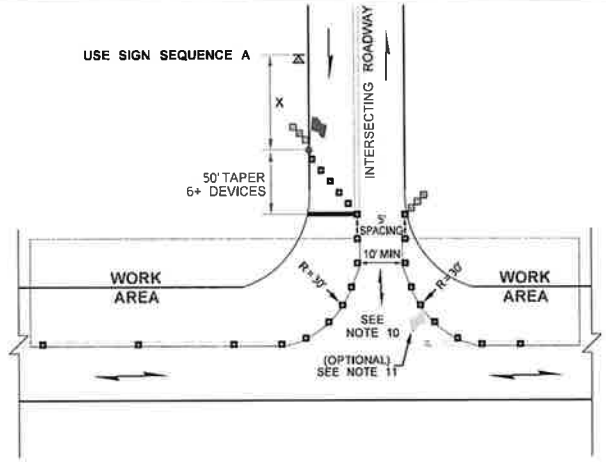
UNSIGNALIZED INTERSECTING ROADWAY DETAIL
SAME SIDE AS LANE CLOSURE (TWO OPEN LANES)



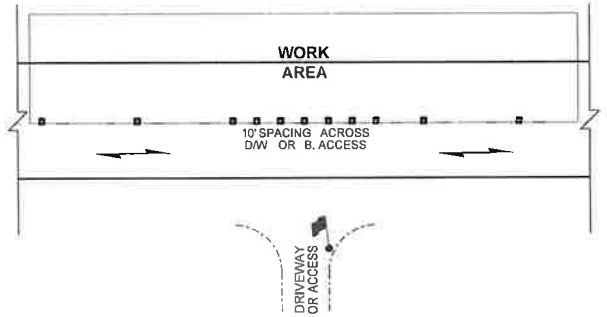
DRIVEWAY OR BUSINESS ACCESS DETAIL
SAME SIDE AS LANE CLOSURE



UNSIGNALIZED INTERSECTING ROADWAY DETAIL
OPPOSITE OF LANE CLOSURE



UNSIGNALIZED INTERSECTING ROADWAY DETAIL
SAME SIDE AS LANE CLOSURE (SINGLE OPEN LANE)



DRIVEWAY OR BUSINESS ACCESS DETAIL
OPPOSITE OF LANE CLOSURE

ALTERNATING 1-LANE, 2-WAY TRAFFIC: FLAGGER-CONTROLLED (HIGHWAYS, 40 MPH OR LESS)

NOT TO SCALE

FILE NAME	C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\420Hwy40-AltTrafficFlagger.dgn				REGION NO. 10	STATE WASH	FED.AID PROJ.NO.		Plot 2
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DATE	4/2/2024				JOB NUMBER			Washington State Department of Transportation	
PLOTTED BY	LintzF								SHEET 2 OF 4 SHEETS
DESIGNED BY					CONTRACT NO.		LOCATION NO.		
ENTERED BY									
CHECKED BY					P.E. STAMP BOX	DATE	P.E. STAMP BOX	DATE	
PROJ. ENGR.									
REGIONAL ADM.		REVISION	DATE	BY				TYPICAL TRAFFIC CONTROL PLANS	

RECOMMENDED SIGN SPACING = X (1)		
RURAL ROADS & URBAN ARTERIALS	35-40 MPH	350'±
RURAL ROADS & URBAN ARTERIALS RESIDENTAL & BUSINESS DISTRICTS	25-30 MPH	200'± (2)
URBAN STREETS	25 MPH OR LESS	100'± (2)

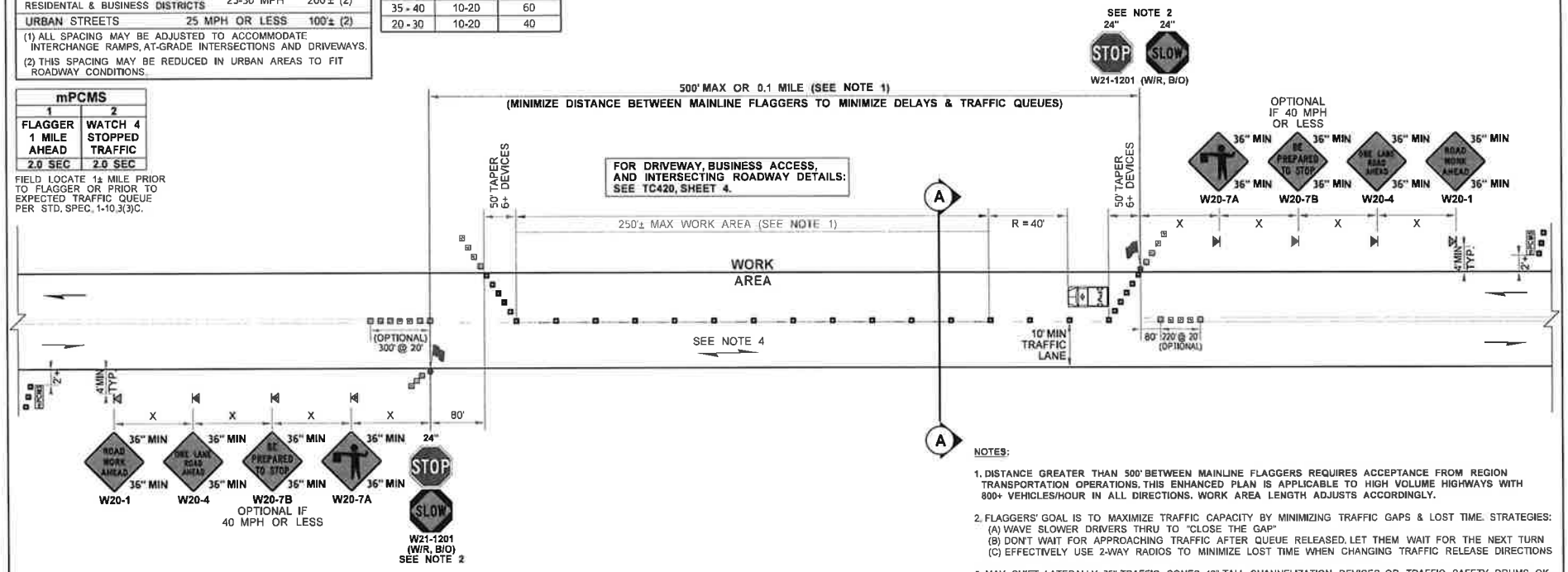
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

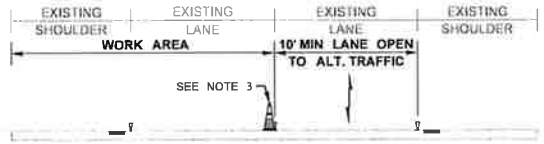
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
35 - 40	10-20	60
20 - 30	10-20	40

mPCMS	
1	2
FLAGGER 1 MILE AHEAD	WATCH 4 STOPPED TRAFFIC
2.0 SEC	2.0 SEC

FIELD LOCATE 1± MILE PRIOR TO FLAGGER OR PRIOR TO EXPECTED TRAFFIC QUEUE PER STD. SPEC. 1-10.3(3)C.





SECTION (A-A)

LEGEND:

- TEMPORARY SIGN LOCATION
- 28" REFLECTIVE TRAFFIC CONE (SEE NOTE 3)
- OPTIONAL CHANNELIZATION DEVICE
- PROTECTIVE VEHICLE
- FLAGGER
- mini PORTABLE CHANGEABLE MESSAGE SIGN (PCMS OK, SEE NOTE 8)

NOTES:

1. DISTANCE GREATER THAN 500' BETWEEN MAINLINE FLAGGERS REQUIRES ACCEPTANCE FROM REGION TRANSPORTATION OPERATIONS. THIS ENHANCED PLAN IS APPLICABLE TO HIGH VOLUME HIGHWAYS WITH 800+ VEHICLES/HOUR IN ALL DIRECTIONS. WORK AREA LENGTH ADJUSTS ACCORDINGLY.
2. FLAGGERS' GOAL IS TO MAXIMIZE TRAFFIC CAPACITY BY MINIMIZING TRAFFIC GAPS & LOST TIME. STRATEGIES:
   (A) WAVE SLOWER DRIVERS THRU TO "CLOSE THE GAP"
   (B) DON'T WAIT FOR APPROACHING TRAFFIC AFTER QUEUE RELEASED. LET THEM WAIT FOR THE NEXT TURN
   (C) EFFECTIVELY USE 2-WAY RADIOS TO MINIMIZE LOST TIME WHEN CHANGING TRAFFIC RELEASE DIRECTIONS
3. MAY SHIFT LATERALLY. 36" TRAFFIC CONES, 42" TALL CHANNELIZATION DEVICES, OR TRAFFIC SAFETY DRUMS OK.
4. PEDESTRIAN & BICYCLIST ACCOMMODATIONS (ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES):
   (A) ALLOW PEDESTRIANS TO USE THE PAVED SHOULDER OR ADJACENT PATH OPPOSITE THE WORK AREA
   (B) COMBINE BIKES & VEHICULAR TRAFFIC. BIKES TO CLEAR PRIOR TO RELEASING ONCOMING TRAFFIC
   (C) PROVIDE FREE SHUTTLE (WORK TRUCK, VAN, OR BUS MAY BE USED)
5. SEE STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS:
   1-07.8(1) HIGH-VISIBILITY APPAREL
   1-10.3(1)A FLAGGERS AND NIGHTTIME ILLUMINATION
   1-10.3(2)A TRAFFIC CONTROL PROCEDURES
   9-35.1 24-INCH STOP/SLOW PADDLE SIZE
6. FOR PROJECT-SPECIFIC REQUIREMENTS, SEE SPECIAL PROVISIONS.
7. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
8. FULL-SIZE PCMS (11'x 6'DISPLAY) MAY BE USED IN LIEU OF mPCMSs. PCMS MESSAGES MAY BE MODIFIED.
9. EXISTING PAVEMENT MARKINGS MAY VARY.

ALTERNATING 1-LANE, 2-WAY TRAFFIC: FLAGGER-CONTROLLED (HIGH VOLUME HIGHWAYS, 40 MPH OR LESS)

NOT TO SCALE

FILE NAME	C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\420Hwy40-Alt\TrafficFlagger.dgn			ACCESS NO. 10	STATE WASH
TIME	2:05:05 PM			JOB NUMBER	FED.AID PROJ.NO.
DATE	4/2/2024				
PLOTTED BY	LintzF				
DESIGNED BY					
ENTERED BY					
CHECKED BY				CONTRACT NO.	LOCATION NO.
PROJ. ENGR.					
REGIONAL ADM.	REVISION	DATE	BY		

P.E. STAMP BOX — DATE

P.E. STAMP BOX — DATE

Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

Plot 3

PLAN REF NO. TC420

SHEET 3 OF 4 SHEETS

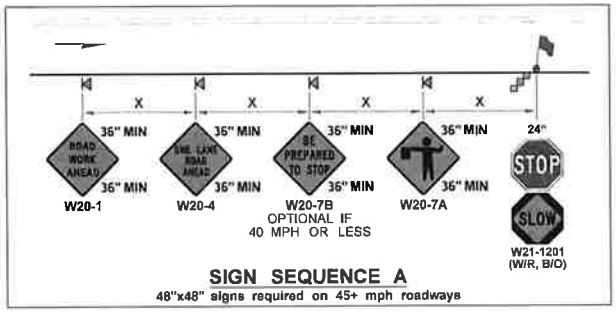
NOTES:

10. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC420, SHEET 3.

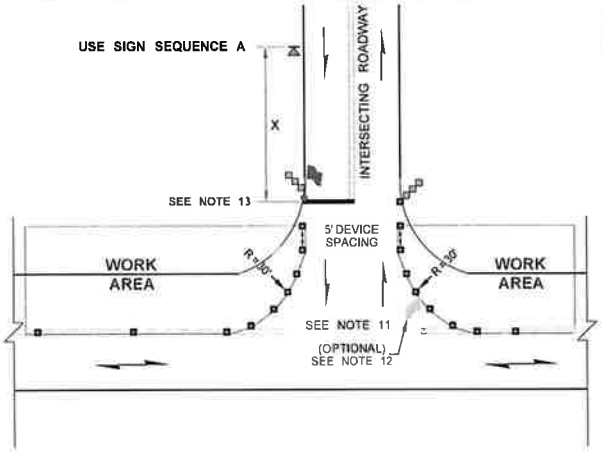
11. WORK MAY BRIEFLY OCCUR WITHIN LANE CLOSURE ACROSS INTERSECTING BUSINESS ACCESSES AND DRIVEWAYS ONLY. **MAY HOLD ACCESS TRAFFIC FOR LESS THAN 1 MINUTE** WHILE RESTRICTING TURNS FROM MAINLINE. CHANNELIZATION DEVICES DELINEATING APPROACH OR ACCESS MAY BE REMOVED OR RELOCATED AS NEEDED.

12. SINGLE FLAGGER (WITH RED FLAG/ RED GLOW CONE FLASHLIGHT) MAY BE ADDED TO THE INTERSECTING ROADWAY APPROACH TO HELP GUIDE ALTERNATING & TURNING TRAFFIC.

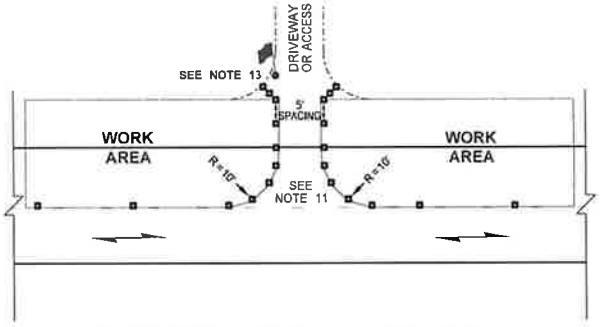
13. **FLAGGERS MAY COLLABORATE TO RELEASE APPROACH/ACCESS AND MAINLINE TRAFFIC TRAVELING IN THE SAME DIRECTION CONCURRENTLY.**



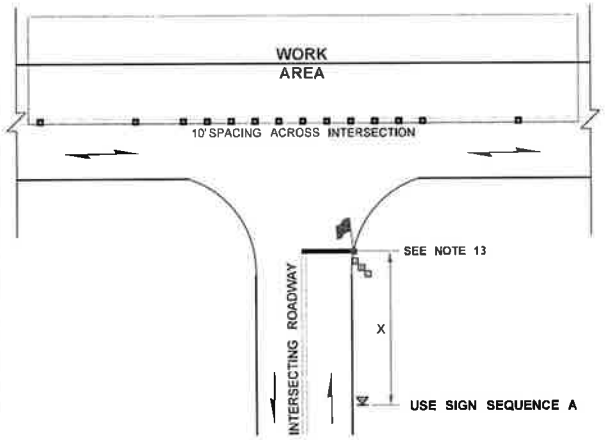
SIGN SEQUENCE A
48"x48" signs required on 45+ mph roadways



UNSIGNALIZED INTERSECTING ROADWAY DETAIL
SAME SIDE AS LANE CLOSURE (TWO OPEN LANES)



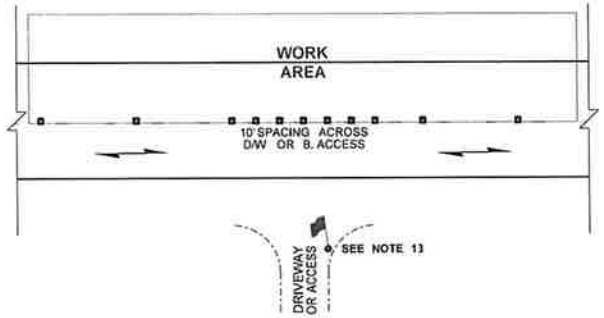
DRIVEWAY OR BUSINESS ACCESS DETAIL
SAME SIDE AS LANE CLOSURE



UNSIGNALIZED INTERSECTING ROADWAY DETAIL
OPPOSITE OF LANE CLOSURE

DETAIL NOT USED
FOR HIGH VOLUME CONFIGURATIONS

UNSIGNALIZED INTERSECTING ROADWAY DETAIL
SAME SIDE AS LANE CLOSURE (SINGLE OPEN LANE)



DRIVEWAY OR BUSINESS ACCESS DETAIL
OPPOSITE OF LANE CLOSURE

ALTERNATING 1-LANE, 2-WAY TRAFFIC: FLAGGER-CONTROLLED (HIGH VOLUME HIGHWAYS, 40 MPH OR LESS)

NOT TO SCALE

FILE NAME	C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\420Hwy40-AltTrafficFlagger.dgn				REGION NO. 10	STATE WASH	FED.AID PROJ.NO.		Plot 4
TIME	2:05:05 PM				JOB NUMBER			Washington State Department of Transportation	PLAN SET NO TC420
DATE	4/2/2024								SHEET 4 OF 4 SHEETS
PLOTTED BY	LintzF				CONTRACT NO.	LOCATION NO.			
DESIGNED BY							P.E. STAMP BOX DATE	P.E. STAMP BOX DATE	
ENTERED BY									
CHECKED BY									
PROJ. ENGR.									
REGIONAL ADM.		REVISION	DATE	BY					TYPICAL TRAFFIC CONTROL PLANS

APPENDIX G

WASHINGTON STATE EMERGENCY MANAGEMENT DIVISION – STATE AND FEDERAL LAWS TO BE OBSERVED

STATE AND FEDERAL LAWS TO BE OBSERVED

The APPLICANT must comply with all state and federal laws in performing all tasks undertaken with respect to the Public Assistance Program. The following sections are included for informational purposes and are not professed to include all relevant laws. It is the APPLICANT's responsibility to comply with all federal, state, and local laws.

1. **EQUAL EMPLOYMENT OPPORTUNITY** – All contracts shall contain a provision requiring compliance with E.O. 11246, "Equal Employment Opportunity," as amended by E.O. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and as supplemented by regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

2. **COPELAND "ANTI-KICKBACK" ACT (18 U.S.C. 874 AND 40 U.S.C. 276c)** – All contracts and subgrants in excess of $2,000 for construction or repair awarded by recipients and subrecipients shall include a provision for compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. 874), as supplemented by Department of Labor regulations (29 CFR part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he is otherwise entitled. The recipient shall report all suspected or reported violations to the Federal awarding agency.

3. **CONTRACT WORK HOURS AND SAFETY STANDARDS ACT (40 U.S.C 327-333)** – Where applicable, all contracts awarded by recipients in excess of $2,000 for construction contracts and in excess of $2,500 for other contracts that involve the employment of mechanics or laborers shall include a provision for compliance with Sections 102 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-333), as supplemented by Department of Labor regulations (29 CFR part 5). Under Section 102 of the Act, each contractor shall be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than 1 ½ times the basic rate of pay for all hours worked in excess of 40 hours in the work week. Section 107 of the Act is applicable to construction work and provides that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous.

These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

4. **RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT** – Contracts or agreements for the performance of experimental, developmental, or research work shall provide for the rights of the Federal Government and the recipient in any resulting invention in accordance with 37 CFR part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

5. **CLEAN AIR ACT (42 U.S.C. 7401 et seq.) AND THE FEDERAL WATER POLLUTION CONTROL ACT(33 U.S.C. 1251 et seq.), as amended** – Contractors and subgrants of amounts in excess of $100,000 shall contain a provision that requires the recipient to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401 et seq.) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251 et seq.) Violations shall be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

6. **BYRD ANTI-LOBBYING AMENDMENT (31 U.S.C. 1352)** – Contractors who apply or bid for an award of $100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose any lobbying in non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient.

7. **DEBARMENT AND SUSPENSION (E.O.s 12549 and 12689)** – No contract shall be made to parties listed on the General Services Administration's List of Parties Excluded from Federal Procurement or Nonprocurement Programs in accordance with E.O.s 12549 and 12689, "Debarment and Suspension." This list contains the names of parties debarred, suspended, or otherwise excluded by agencies, and contractors declared ineligible under statutory or regulatory authority other than E.O. 12549. Contractors with awards that exceed the small

purchase threshold shall provide the required certification regarding its exclusion status and that of its principal employees.

8. **PUBLIC LAW 88-352, TITLE VI OF THE CIVIL RIGHTS ACT OF 1964(42 U.S.C. 2000d et seq.) (24 CFR Part 1).** The APPLICANT must comply with the provisions of "Public Law 88-352," which refers to Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.). The law provides that no person in the United States shall, on the grounds of race, color or national origin, be denied the benefits of, be excluded from participation in, or be subjected to discrimination under any program or activity receiving federal financial assistance.

9. **SECTION 504 OF THE REHABILITATION ACT, 1973, AS AMENDED (29 U.S.C. 794).** The APPLICANT must comply with Section 504 of the Rehabilitation Act of 1973, as amended, which provides that no otherwise qualified individual shall, solely by reason of his or her disability, be excluded from participation (including employment), denied program benefits or be subjected to discrimination under any program or activity receiving federal assistance funds.

10. **AMERICANS WITH DISABILITIES ACT (42 U.S.C. 12101, et seq.)** The APPLICANT shall comply with the provisions of the Americans with Disabilities Act, 42 U.S.C. 12101, et. seq. That Act provides a comprehensive national mandate to eliminate discrimination against individuals with disabilities. The Act may impose requirements on the APPLICANT in four principle ways: 1) with respect to employment; 2) with respect to the provision of public services; 3) with respect to transportation; 4) with respect to existing facilities and new construction.

11. **THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969 (NEPA) (42 U.S.C Section 4321 et seq., and 24 CFR Part 58).** The APPLICANT shall comply with the provisions of the National Environmental Policy Act of 1969. The purpose of this Act is to attain the widest use of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences. Environmental review procedures, including determining and publishing a Finding of Significance or of No Significance for a proposal, are a necessary part of this process. Pursuant to these provisions, the APPLICANT must also submit environmental certifications to the DEPARTMENT when requesting that funds be released for the project. The APPLICANT must certify that the proposed project will not significantly impact the environment and that the APPLICANT has complied with environmental regulations and fulfilled its obligations to give public notice of the funding request, environmental findings and compliance performance.

12. **EXECUTIVE ORDER 11990, MAY 24, 1977: PROTECTION OF WETLANDS (42 F.R. 26961 et seq.)** The APPLICANT shall comply with Executive Order 11990. The intent of this Executive Order is (1) to avoid, to the extent possible, adverse impacts associated with the destruction or modification of wetland, and (2) to avoid direct or indirect support of new construction in wetlands wherever there is a practical alternative. The APPLICANT, to the extent permitted by law, must avoid undertaking or providing assistance for new construction located in wetlands unless (1) there is no practical alternative to such construction, and (2) the proposed action includes all practical measures to minimize harm to wetlands which may result from such use. In making this determination, the APPLICANT may take into account economic, environmental and other pertinent factors.

13. **EXECUTIVE ORDER 11988, MAY 24, 1977: FLOODPLAIN MANAGEMENT (42 F.R. 26951 et seq)**. The APPLICANT shall comply with the provisions of Executive Order 11988. The intent of this Executive Order is to (1) avoid, to the extent possible, adverse impacts associated with the occupancy and modification of floodplains, and (2) avoid direct or indirect support of floodplain development wherever there is a practical alternative. If the APPLICANT proposes to conduct, support or allow an action to be located in a floodplain, the APPLICANT must consider alternatives to avoid adverse effects and incompatible involvement in the floodplain. If siting in a floodplain is the only practical alternative, the APPLICANT must, prior to taking any action (1) design or modify its actions in order to minimize any potential harm to the floodplain, and (2) prepare and circulate a notice containing an explanation of why the action is proposed to be located in a floodplain.

14. **THE WILD AND SCENIC RIVERS ACT OF 1968, AS AMENDED (16 U.S.C. 1271 et seq.)**. The APPLICANT shall comply with the Wild and Scenic Rivers Act. The purpose of this Act is to preserve selected rivers or sections of rivers in their free-flowing condition, to protect the water quality of such rivers and to fulfill other vital national conservation goals. Federal assistance by loan, grant, license, or other mechanism cannot be provided to water resources construction projects that would have a direct and adverse effect on any river included or designated for study or inclusion in the National Wild and Scenic River System.

15. **COASTAL ZONE MANAGEMENT ACT OF 1972, AS AMENDED (16 U.S.C. 1451 et seq.)**. The APPLICANT shall comply with the Coastal Zone Management Act of 1972, as amended. The intent of this Act is to preserve, protect, develop, and where possible, restore or enhance

the resources of the nation's coastal zone. Federal agencies cannot approve assistance for proposed projects that are inconsistent with the state's Coastal Zone Management program except upon a finding by the U.S. Secretary of Commerce that such a project is consistent with the purpose of this chapter or necessary in the interests of national security.

16. **THE ENDANGERED SPECIES ACT OF 1973, AS AMENDED (16 U.S.C. 1531 et seq.)**. The APPLICANT shall comply with the Endangered Species Act of 1973, as amended. The intent of this Act is to ensure that all federally assisted projects seek to preserve endangered or threatened species. Federally authorized and funded projects must not jeopardize the continued existence of endangered and threatened species or result in the destruction of or modification of habitat of such species which is determined by the U.S. Department of the Interior, after consultation with the state, to be critical.

17. **THE RESERVOIR SALVAGE ACT OF 1960, AS AMENDED BY THE ARCHAEOLOGICAL AND HISTORIC PRESERVATION ACT OF 1974 (16 U.S.C. 469 et seq.)**. Under the Reservoir Salvage Act, the APPLICANT must comply with provisions for the preservation of historical and archaeological data (including relics and specimens) that might otherwise be irreparably lost or destroyed as a result of any alteration of the terrain caused as a result of any federal construction project or federally licensed activity or program. Whenever the APPLICANT finds, or is notified in writing by an appropriate historical or archaeological authority, that its activities in connection with any federal funded construction project or federally licensed project, activity or program may cause irreparable loss or destruction of significant scientific, prehistoric, historical or archaeological data, the APPLICANT must stop work immediately and must notify the U.S. Secretary of Interior and the Department in writing and provide appropriate information concerning the project or program activity.

18. **THE ARCHAEOLOGICAL AND HISTORICAL DATA PRESERVATION ACT OF 1974 (16 U.S.C. 469 a-1 et seq.)**. The APPLICANT shall comply with the Archaeological and Historical Data Preservation Act, which provides for the preservation of historic and archaeological information that would be lost due to development and construction activities as a result of federally funded activities.

19. **THE SAFE DRINKING WATER ACT OF 1974, AS AMENDED (42 U.S.C. Section 201, 300(f) et seq., and U.S.C. Section 349)**. The APPLICANT must comply with the Safe Drinking Water Act, as amended, which is intended to protect underground sources of water.

No commitment for federal financial assistance, according to this Act, shall be entered into for any project, which the U.S. Environmental Protection Agency determines, may contaminate an aquifer that is the sole or principal drinking water source for an area.

20. **THE FEDERAL WATER POLLUTION CONTROL ACT OF 1972, AS AMENDED, INCLUDING THE CLEAR WATER ACT OF 1977, PUBLIC LAW 92-212 (33 U.S.C. SECTION 1251 et seq.).** The APPLICANT must assure compliance with the Water Pollution Control Act, as amended, which provides for the restoration of chemical, physical and biological integrity of the nation's water.

21. **THE SOLID WASTE DISPOSAL ACT, AS AMENDED BY THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976 (42 U.S.C. SECTION 6901 et seq.)** The APPLICANT must assure compliance with the Solid Waste Disposal Act, as amended. The purpose of this Act is to promote the protection of health and the environment and to conserve valuable material and energy resources.

22. **THE FISH AND WILDLIFE COORDINATION ACT OF 1958, AS AMENDED (16 U.S.C. SECTION 661 et seq.)** The APPLICANT must assure compliance with the Fish and Wildlife Coordination Act, as amended. The Act assures that wildlife conservation receives equal consideration and is coordinated with other features of water resources development programs.

23. **RELOCATION ASSISTANCE AND REAL PROPERTY ACQUISITION POLICY, CHAPTER 8.26 RCW**. The APPLICANT shall comply with the provisions of Chapter 8.26 RCW and Chapter 365-24 WAC when its activities involve any acquisition of real property assisted under this Grant Agreement or the displacement of any family, individual, business, nonprofit organization or farm that results from such acquisition.

24. **STATE ENVIRONMENTAL POLICY ACT (SEPA), CHAPTER 43.21 (C) RCW**. The APPLICANT shall comply with the provisions of Chapter 43.21(C) RCW and Chapter 197-11 WAC, the guidelines by which local agencies will (1) require environmental checklists from private and public entities considering an action potentially subject to the Environmental Impact Statement (EIS) requirement of SEPA, (2) make "threshold determinations" that such an action will not have a significant environmental impact, (3) provide for the preparation of a draft and final EIS if the action has significant impact, and (4) circulate the EIS to other agencies and interested parties.

25. **NOISE CONTROL, CHAPTER 70.107 RCW.** The APPLICANT shall assure compliance with the state Noise Control Act. Objectives of the Act are to assist local governments in implementing local noise ordinances and to control and reduce excessive noise in Washington.

26. **SHORELINE MANAGEMENT ACT OF 1971, CHAPTER 90.58 RCW.** The APPLICANT shall comply with the provisions of Chapter 90.58 RCW. This Act defines a planning program and a permit system, which are initiated at the local government level under state guidance. Its purpose is to protect and enhance the state's shoreline and it includes a comprehensive shoreline inventory process and a master program for regulation of shoreline uses. A permit application at the local level must be in compliance with those plans and consistent with the state Coastal Zone Management program if substantial developments and shoreline modifications occur, and a record of the application and decision must be submitted to the state.

27. **STATE BUILDING CODE, CHAPTER 19.27 RCW; ENERGY RELATED BUILDING STANDARDS, CHAPTER 19.27A RCW; AND PROVISIONS IN BUILDINGS FOR AGED AND HANDICAPPED PERSONS, CHAPTER 70.92 RCW.** The APPLICANT shall comply with the provisions of Chapter 19.27 RCW, Chapter 19.27A RCW, Chapter 70.92 RCW and the regulations for building construction and for barrier free facilities adopted by the Washington State Building Code Council pursuant to these statutes. The State Building Code Act provides for a uniform state building code and mandates counties, cities and towns to administer and enforce its provisions. Local governments are authorized to modify the state building code to fit local conditions as long as such modifications do not result in a code that is less than the minimum performance standards and objectives contained in the state code.

28. **OPEN PUBLIC MEETINGS ACT, CHAPTER 42.30 RCW.** The APPLICANT shall comply with provisions of Chapter 42.30 RCW which require that all meetings of the governing body which pertain to this Grant Agreement shall be open to the public except those where specific provision is made for executive sessions pursuant to RCW 42.30.110.

29. **LAW AGAINST DISCRIMINATION, CHAPTER 49.60 RCW.** The APPLICANT shall comply with the provisions of Chapter 49.60 RCW in all activities relating to this Grant Agreement.

30. **GOVERNOR'S EXECUTIVE ORDER 89-10, DECEMBER 11, 1989: PROTECTION OF WETLANDS, AND GOVERNOR'S EXECUTIVE ORDER 90-04, APRIL 21, 1990: PROTECTION OF WETLANDS.** The APPLICANT shall ensure that it avoids any activities that would adversely affect wetlands and adequately mitigates unavoidable impacts. For the purposes of this requirement, except where a contrary definition is provided by statute, mitigation means: (1) avoiding the impact altogether by not taking certain action or part of an action; (2) minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts; (3) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (4) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; (5) compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and (6) monitoring the impact and taking appropriate corrective measures.

    Mitigation for individual actions may include a combination of the above measures. Mitigation may not include any of the above measures to the extent that they may be contrary to statute as applied under the particular circumstances. Emergency work that is essential to save lives and protect property and public health is exempt from these provisions.

31. **PREVAILING WAGES ON PUBLIC WORKS, CHAPTER 39.12 RCW.** The APPLICANT shall comply with the provisions of Chapter 39.12, Prevailing Wages on Public Works. This statute mandates that the prevailing rate of wage, as determined by the State Department of Labor and Industries, be paid to workers performing under public works contracts.

32. **CONTRACTING WITH SMALL MINORITY FIRMS, WOMEN'S BUSINESS ENTERPRISE AND LABOR SURPLUS AREA FIRMS.** In accordance 44 CFR 13.36(e), Contracting With Small and Minority Firms, if employing contractors or suppliers the Contractor will take affirmative steps to assure that minority firms, women's business enterprises, and labor surplus area firms are used when possible. (1) The grantee and subgrantee will take all necessary affirmative steps to assure that minority firms, women's enterprises and labor surplus area firms are used when possible. (2) Affirmative steps shall include: (i) Placing qualified small and minority businesses, and women's business enterprises on solicitation lists; (ii) Assuring that small and minority enterprises are solicited whenever they are potential sources; (iii) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business, and women's business enterprises; (iv)

Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority business, and women's business enterprises; (v) Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce; and (vi) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (e)(2)(i) through (v) of this section.

33. PROHIBITION ON CONTRACTING FOR COVERED TELECOMMUNICATION EQUIPMENT OR SERVICES

(a) *Definitions.* As used in this clause, the terms backhaul; covered foreign country; covered telecommunications equipment or services; interconnection arrangements; roaming; substantial or essential component; and telecommunications equipment or services have the meaning as defined in FEMA Policy 405-143-1, Prohibitions on Expending FEMA Award Funds for Covered Telecommunications Equipment or Services (Interim), as used in this clause—

(b) *Prohibitions.*

(1) Section 889(b) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232, and 2 C.F.R. § 200.216 prohibit the head of an executive agency on or after Aug.13, 2020, from obligating or expending grant, cooperative agreement, loan, or loan guarantee funds on certain telecommunications products or from certain entities for national security reasons.

(2) Unless an exception in paragraph (c) of this clause applies, the contractor and its subcontractors may not use grant, cooperative agreement, loan, or loan guarantee funds from the Federal Emergency Management Agency to:

(i) Procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;

(ii) Enter into, extend, or renew a contract to procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;

(iii) Enter into, extend, or renew contracts with entities that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system; or

(iv) Provide, as part of its performance of this contract, subcontract, or other contractual instrument, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

(c) *Exceptions.*
(1) This clause does not prohibit contractors from providing— (i) A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or (ii) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(2) By necessary implication and regulation, the prohibitions also do not apply to: (i) Covered telecommunications equipment or services that:

i. Are *not used* as a substantial or essential component of any system; *and*
ii. Are *not used* as critical technology of any system.
(ii) Other telecommunications equipment or services that are not considered covered telecommunications equipment or services.

(d) *Reporting requirement.*
(1) In the event the contractor identifies covered telecommunications equipment or services used as a substantial or essential component of any system, or as critical technology as part of any system, during contract performance, or the contractor is notified of such by a subcontractor at any tier or by any other source, the contractor shall report the information in paragraph (d)(2) of this clause to the recipient or subrecipient, unless elsewhere in this contract are established procedures for reporting the information.

(2) The Contractor shall report the following information pursuant to paragraph (d)(1) of this clause:

(i) Within one business day from the date of such identification or notification: The contract number; the order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

(ii) Within 10 business days of submitting the information in paragraph (d)(2)(i) of this clause: Any further available information about

mitigation actions undertaken or recommended. In addition, the contractor shall describe the efforts it undertook to prevent use or submission of covered telecommunications equipment or services, and any additional efforts that will be incorporated to prevent future use or submission of covered telecommunications equipment or services.

(e) *Subcontracts.* The Contractor shall insert the substance of this clause, including this paragraph (e), in all subcontracts and other contractual instruments.

34. DOMESTIC PREFERENCE FOR PROCUREMENTS

As appropriate, and to the extent consistent with law, the contractor should, to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States. This includes, but is not limited to iron, aluminum, steel, cement, and other manufactured products.

For purposes of this clause:
Produced in the United States means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

Manufactured products mean items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

In compliance with section 1225 of the Disaster Recovery Reform Act of 2018, the APPLICANT and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

35. COMPLIANCE WITH FEDERAL LAW, REGULATIONS AND EXECUTIVE ORDERS AND ACKNOWLEDGEMENT OF FEDERAL FUNDING

This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable federal law, regulations, executive orders, FEMA policies, procedures, and directives.

36. NO OBLIGATION BY FEDERAL GOVERNMENT

The federal government is not a party to this contract and is not subject to any obligations or liabilities to the non-federal entity, contractor, or any other party pertaining to any matter resulting from the contract."

37. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

The contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the contractor's actions pertaining to this contract.

38. AFFIRMATIVE SOCIOECONOMIC STEPS

If subcontracts are to be let, the prime contractor is required to take all necessary steps identified in 2 C.F.R. § 200.321(b)(1)-(5) to ensure that small and minority businesses, women's business enterprises, and labor surplus area firms are used when possible.

39. COPYRIGHT AND DATA RIGHTS

License and Delivery of Works Subject to Copyright and Data Rights

The Contractor grants to the APPLICANT, a paid-up, royalty-free, nonexclusive, irrevocable, worldwide license in data first produced in the performance of this contract to reproduce, publish, or otherwise use, including prepare derivative works, distribute copies to the public, and perform publicly and display publicly such data. For data required by the contract but not first produced in the performance of this contract, the Contractor will identify such data and grant to the APPLICANT or acquires on its behalf a license of the same scope as for data first produced in the performance of this contract. Data, as used herein, shall include any work subject to copyright under 17 U.S.C. § 102, for example, any written reports or literary works, software and/or source code, music, choreography, pictures or images, graphics, sculptures, videos, motion pictures or other audiovisual works, sound and/or video recordings, and architectural works. Upon or before the completion of this contract, the Contractor will deliver to the APPLICANT data first produced in the performance of this contract and data required by the contract but not first produced in the performance of this contract in formats acceptable by the APPLICANT.

ATTENTION PROPERTY OWNERS
AND
CONTRACTORS

CALL BEFORE
YOU DIG
1-800-424-5555

The Cowlitz County Utility Coordination Council is comprised of local utilities whose common purpose is to help prevent accidents and damages to their underground facilities. ONE TELEPHONE CALL, 1-800-424-5555, two (2) working days prior to digging will relay a message to these utilities. On the next page is a listing of utilities and entities belonging to the Council.

Forty-eight (48) hours' notice (excluding weekends and holidays) is requested to permit our locators to mark our facilities for you. ONE CALL answering service is available twenty-four (24) hours a day, seven (7) days a week. All calls are recorded. (EMERGENCY LINE LOCATES ARE AVAILABLE AT ALL TIMES).

RCW 19.122.010, Washington Laws, 1988, Chapter 99 on Underground Utilities states that utilities shall be assigned "...responsibilities for locating and keeping accurate records of utility locations, protecting and repairing damage to existing underground facilities, and protecting the public health and safety from interruption in utility services caused by damage to existing underground utility facilities."

Callers are asked to use white paint to show their proposed path of excavation. Each locator uses a different color paint to show their underground facility (see reverse page). Digging should be done by hand 18" on either side of marking until utility is visible, before using other equipment.

PLAN FOR SAFETY – CALL BEFORE YOU DIG
LOCATING SERVICES ARE FREE

Thank you,

Cowlitz County
Utility Coordination Council

THE FOLLOWING LOCAL UTILITIES, ENTITIES AND OTHERS FORM THE COWLITZ COUNTY UTILITY COORDINATION COUNCIL:

		COLOR CODE
POWER	P.U.D. OF COWLITZ COUNTY	RED
GAS	CASCADE NATURAL GAS NORTHWEST PIPELINE CORPORATION OLYMPIC PIPE LINE COMPANY	YELLOW
TELEPHONE	AT&T GENERAL TELEPHONE KALAMA TELEPHONE U.S. SPRINT COMMUNICATIONS CENTURY LINK VERIZON COMMUNICATIONS FRONTIER CASCADE NETWORKS	ORANGE
WATER	BEACON HILL SEWER DISTRICT CITY OF CASTLE ROCK CITY OF KALAMA CITY OF KELSO CITY OF LONGVIEW CITY OF WOODLAND COWLITZ COUNTY PUBLIC WORKS P.U.D. OF COWLITZ COUNTY	BLUE
SEWER	BEACON HILL SEWER DISTRICT CITY OF CASTLE ROCK CITY OF KALAMA CITY OF KELSO CITY OF LONGVIEW CITY OF WOODLAND COWLITZ COUNTY PUBLIC WORKS (includes leachate pipeline)	GREEN
T.V. CABLE	COMCAST WASHINGTON STATE DEPARTMENT OF TRANSPORTATION	ORANGE

(OTHER UTILITIES MAY JOIN IN THE FUTURE – PLEASE ASK THE OPERATOR)

REPORT ALL EMERGENCIES TO "911". All other damages should be reported directly to the utilities involved.

Nicks in insulation of gas, power or telephone should be reported to utilities promptly, as failure later can cause serious injuries or damages.

END OF CONTRACT