Lewis County
Department of Public Works
Engineering Division

CONTRACT PROVISIONS AND PLANS

FOR CONSTRUCTION OF:

CRUMB ROAD MP 0.17

CULVERT REPLACEMENT

SM 20F630050017
FEMA PROJECT No. 4539-DR-WA-PW 121
June 9, 2022

Lewis County Public Works
2025 NE Kresky Ave.
Chehalis, WA 98532-2626
Approved for Construction:

RODNEY TROY LAKEY
STATE OF WASHINGTON
139873
REGISTERED
PROFESSIONAL ENGINEER
9-JUN-22

Project Engineer

County Engineer

6-9-22
Date

BOARD OF COUNTY COMMISSIONERS
Sean Swope, District No. 1
Lindsey R. Pollock, DVM, District No. 2
F. Lee Grose, District No. 3

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INTRODUCTION

The following Special Provisions are made a part of this contract and supersede any conflicting provisions of the 2022 Standard Specifications for Road, Bridge, and Municipal Construction.

The said Standard Specifications, the WSDOT Standard Plans, and WSDOT Construction Manual, together with the Special Provisions and the attached plans hereinafter contained, covering all work specified under this contract are incorporated and hereby made a part of this contract. The Special Provisions hereinafter contained shall supersede any conflicting provisions of the Standard Specifications, the WSDOT Standard Plans, and WSDOT Construction Manual.

Several types of Special Provisions are included in this contract; General, Region, Bridges and Structures, and Project Specific. Special Provisions types are differentiated as follows:

(date)	General Special Provision
(******)	Notes a revision to a General Special Provision and also notes a Project Specific Special Provision.
(APWA GSP)	American Public Works Association General Special Provision

General Special Provisions are similar to Standard Specifications in that they typically apply to many projects, usually in more than one Region. Usually, the only difference from one project to another is the inclusion of variable project data, inserted as a "fill-in".

Project Specific Special Provisions normally appear only in the contract for which they were developed.

The following paragraph pertaining to the Standard Specifications shall obtain and be made a part of this contract:

> Wherever the word "State" or "Contracting Agency" is used it shall mean Lewis County; that wherever the words "Secretary (Secretary of Transportation)" are used they shall mean Lewis County Engineer; that wherever the words "State Treasurer" are used they shall mean Lewis County Treasurer; that wherever the words "State Auditor" are used they shall mean Lewis County Auditor; that wherever the words "Motor Vehicle Fund" are used they shall mean Lewis County Road Fund.

SPECIAL PROVISIONS

DIVISION 1
GENERAL REQUIREMENTS

1-01, DESCRIPTION OF WORK

(March 13, 1995)

This contract provides for the improvement of *** Crumb Road MP 0.17 by installing a stream bypass, detour road installation, removing the existing culvert, shoring, excavation, driving wood pile for foundation stabilization, buried structure installation (29-ft span by 12.5-ft high by 60-ft long precast concrete box culvert), streambed restoration, large woody debris construction, road restoration, guardrail, hydroseeding, planting mitigation *** and other related work, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications.

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.

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

(******)

The first paragraph of section 1-02.2 is revised to read:

Copies of the plans and specifications are on file in the office of:

Lewis County Public Works Department
2025 N.E. Kresky Avenue
Chehalis, Washington 98532
(360) 740-1123 Ext. 7

The second paragraph of section 1-02.2 is revised to read:

Prospective bidders may obtain plans and specifications from Lewis County Public Works Department in Chehalis, Washington or download from Lewis County Website at www.lewiscountywa.gov.

1-02.6 Preparation Of Proposal
(August 2, 2004)

The fifth and sixth paragraphs of Section 1-02.6 are deleted.

1-02.9 Delivery of Proposal
(January 19, 2022 APWA GSP, Option A)

Delete this section and replace it with the following:

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
- DBE Bid Item Breakdown (WSDOT 272-054)
- DBE Trucking Credit Form (WSDOT 272-058)

DBE Utilization Certification
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 and/or GFE Documentation
The DBE Written Confirmation Documents and/or GFE Documents are not required to be submitted with the Proposal. The DBE Written Confirmation Document(s) and/or GFE (if any) 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 Written Confirmation Documentation

from each DBE firm listed on the Bidder's completed DBE Utilization Certification and/or the GFE as required by Section 1-02.6.

DBE Bid Item Breakdown and DBE Trucking Credit Form

The DBE Bid Item Breakdown and the DBE Trucking Credit Forms (if applicable) 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 and a DBE Trucking Credit Form for each DBE Trucking firm listed on the DBE Utilization Certification, however, minor errors and corrections to DBE Bid Item Breakdown or DBE Trucking Credit Forms will be returned for correction for a period up to five calendar days (not including Saturdays, Sundays and Holidays) after the time for delivery of the Proposal. A DBE Bid Item Breakdown or DBE Trucking Credit Forms that are still incorrect after the correction period will be determined to be non-responsive.

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" (DBE confirmations, or GFE documentation) that is received after the time specified above, 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.

1-02.12 Public Opening Of Proposal

(******)

Section 1-02.12 is supplemented with the following:

Date and Time of Bid Opening

The Board of County Commissioners of Lewis County or designee, will open sealed proposals and publicly read them aloud at or after 12:30 p.m. on **June 23, 2022**, at the Lewis County Courthouse, Chehalis, Washington, for the Crumb Rd MP 0.17 Culv. Replacement Project, SM 20F630050017.

SEALED BIDS MUST BE DELIVERED BY OR BEFORE
12:30 P.M. on Thursday, June 23, 2022

(Lewis County official time is displayed on Axxess Intertel phones in the office of the Board of County Commissioners. **Bids submitted after 12:30 PM will not be considered for this project**.)

Delivery and Marking of Sealed Bid Proposals

Sealed proposals must be delivered to the Clerk of the Board of Lewis County Commissioners (351 N.W. North Street, Room 210, CMS-01, Chehalis, Washington 98532) by or before **12:30 p.m.** on the date specified for opening, and in an envelope clearly marked: ***"SEALED BID FOR THE CRUMB RD. MP 0.17 CULVERT REPLACEMENT PROJECT SM 20F630050017, TO BE OPENED AT OR AFTER 12:30 P.M. ON JUNE 23, 2022".***

1-02.13 Irregular Proposals

(October 1, 2020 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 authorized Proposal form furnished by the Contracting Agency is not used or is altered;
   c. The completed Proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
   d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
   e. A price per unit cannot be determined from the Bid Proposal;
   f. The Proposal form is not properly executed;
   g. The Bidder fails to submit or properly complete a Subcontractor list, if applicable, as required in Section 1-02.6;
   h. The Bidder fails to submit or properly complete a Disadvantaged Business Enterprise Certification, if applicable, as required in Section 1-02.6;
   i. The Bidder fails to submit written confirmation 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;
   j 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 was made;
   k. The Bidder fails to submit a DBE Bid Item Breakdown form, 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;
   l. The Bidder fails to submit DBE Trucking Credit Forms, 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;
   m. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or
   n. More than one Proposal is submitted for the same project from a Bidder under the same or different names.

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. Receipt of Addenda is not acknowledged;
   d. 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
   e. If Proposal form entries are not made in ink.

1-02.14 Disqualification of Bidders

(May 17, 2018 APWA GSP, Option B)

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; or does not meet Supplemental Criteria 1-7 listed in this Section.

The Contracting Agency will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1), and Supplemental Criteria 1-2. Evidence that the Bidder meets Supplemental Criteria 3-7 shall be provided by the Bidder as stated later in this Section.

1. **Delinquent State Taxes**

   A Criterion: The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue without a payment plan approved by the Department of Revenue.

   B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder does not owe delinquent taxes to the Washington State Department of Revenue, or if delinquent taxes are owed to the Washington State Department of Revenue, the Bidder must submit a written payment plan approved by the Department of Revenue, to the Contracting Agency by the deadline listed below.

2. **Federal Debarment**

   A Criterion: The Bidder shall not currently be debarred or suspended by the Federal government.

   B. Documentation: The Bidder shall not be listed as having an "active exclusion" on the U.S. government's "System for Award Management" database (www.sam.gov).

3. **Subcontractor Responsibility**

   A Criterion: The Bidder's standard subcontract form shall include the subcontractor responsibility language required by RCW 39.06.020, and the Bidder shall have an established procedure which it utilizes to validate the responsibility of each of its subcontractors. The Bidder's subcontract form shall also include a requirement that each of its subcontractors shall have and document a similar procedure to determine whether the sub-tier subcontractors with whom it contracts are also "responsible" subcontractors as defined by RCW 39.06.020.

   B. Documentation: The Bidder, if and when required as detailed below, shall submit a copy of its standard subcontract form for review by the Contracting Agency, and a written description of its procedure for validating the responsibility of subcontractors with which it contracts.

4. **Claims Against Retainage and Bonds**

   A Criterion: The Bidder shall not have a record of excessive claims filed against the retainage or payment bonds for public works projects in the three years prior to the bid submittal date, that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its subcontractors, suppliers, and workers, unless

there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

B. Documentation: The Bidder, if and when required as detailed below, shall submit a list of the public works projects completed in the three years prior to the bid submittal date that have had claims against retainage and bonds and include for each project the following information:

- Name of project
- The owner and contact information for the owner;
- A list of claims filed against the retainage and/or payment bond for any of the projects listed;
- A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.

5. **Public Bidding Crime**

A Criterion: The Bidder and/or its owners shall not have been convicted of a crime involving bidding on a public works contract in the five years prior to the bid submittal date.

B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder and/or its owners have not been convicted of a crime involving bidding on a public works contract.

6. **Termination for Cause / Termination for Default**

A Criterion: The Bidder shall not have had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder has not had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date; or if Bidder was terminated, describe the circumstances. .

7. **Lawsuits**

A Criterion: The Bidder shall not have lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency

B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder has not had any lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, or shall submit a list of all lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date, along with a written explanation of the

circumstances surrounding each such lawsuit. The Contracting Agency shall evaluate these explanations to determine whether the lawsuits demonstrate a pattern of failing to meet of terms of construction related contracts

As evidence that the Bidder meets the Supplemental Criteria stated above, the apparent low Bidder must submit to the Contracting Agency by 12:00 P.M. (noon) of the second business day following the bid submittal deadline, a written statement verifying that the Bidder meets the supplemental criteria together with supporting documentation (sufficient in the sole judgment of the Contracting Agency) demonstrating compliance with the Supplemental Criteria. The Contracting Agency reserves the right to request further documentation as needed from the low Bidder and documentation from other Bidders as well to assess Bidder responsibility and compliance with all bidder responsibility criteria. The Contracting Agency also reserves the right to obtain information from third-parties and independent sources of information concerning a Bidder's compliance with the mandatory and supplemental criteria, and to use that information in their evaluation. The Contracting Agency may consider mitigating factors in determining whether the Bidder complies with the requirements of the supplemental criteria.

The basis for evaluation of Bidder compliance with these mandatory and supplemental criteria shall include any documents or facts obtained by Contracting Agency (whether from the Bidder or third parties) including but not limited to: (i) financial, historical, or operational data from the Bidder; (ii) information obtained directly by the Contracting Agency from others for whom the Bidder has worked, or other public agencies or private enterprises; and (iii) any additional information obtained by the Contracting Agency which is believed to be relevant to the matter.

If the Contracting Agency determines the Bidder does not meet the bidder responsibility criteria above 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.

Request to Change Supplemental Bidder Responsibility Criteria Prior To Bid: Bidders with concerns about the relevancy or restrictiveness of the Supplemental Bidder Responsibility Criteria may make or submit requests to the Contracting Agency to modify the criteria. Such requests shall be in writing, describe the nature of the concerns, and propose specific modifications to the criteria. Bidders shall submit such requests to the Contracting Agency no later than five (5) business days prior to the bid submittal deadline and address the request to the Project Engineer or such other person designated by the Contracting Agency in the Bid Documents.

1-02.15 Pre Award Information
(August 14, 2013 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

1-03.2 Award of Contract

Section 1-03.2 is supplemented with the following:

(******)

The Contracting Agency reserves the right to delay the award until all environmental permits and right of way agreements have been completed.

1-03.3 Execution of Contract

(January 19, 2022 APWA GSP)

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 15 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 5 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
(November 30, 2018 APWA GSP)

Revise this section to read:

Any decision 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.

1-05, CONTROL OF WORK

(March 13, 1995)

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.

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

Delete the sixth and seventh paragraphs of this section.

1-05.14 Cooperation With Other Contractors
Section 1-05.14 is supplemented with the following:
(March 13, 1995)

Other Contracts Or Other Work
It is anticipated that the following work adjacent to or within the limits of this project will be performed by others during the course of this project and will require coordination of the work:

$$ Utilities and/or Utility Contractors. The contractor's attention is directed to Section 1-07.17 these Special Provisions. $$

1-05.15 Method of Serving Notices
(March 25, 2009 APWA GSP)
Revise the second paragraph to read:

All correspondence from the Contractor shall be directed to the Project Engineer. All correspondence from the Contractor constituting any notification, notice of protest, notice of dispute,

or other correspondence constituting notification required to be furnished under the Contract, must be in paper format, hand delivered or sent via mail delivery service to the Project Engineer's office. Electronic copies such as e-mails or electronically delivered copies of correspondence will not constitute such notice and will not comply with the requirements of the Contract.

1-07, LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

1-07.1 Laws to be Observed

(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 Taxes

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).

1-07.5 Environmental Regulations

Section 1-07.5 is supplemented with the following:

(September 20, 2010)

Environmental Commitments

The following Provisions summarize the requirements, in addition to those required elsewhere in the Contract, imposed upon the Contracting Agency by the various documents referenced in the Special Provision **Permits and Licenses**. Throughout the work, the Contractor shall comply with the following requirements:

(April 1, 2019)

The Contractor shall notify the Engineer a minimum of ***10*** calendar days prior to commencing any work in sensitive areas, mitigation areas, and wetland buffers. Installation of construction fencing is excluded from this notice requirement.

(April 1, 2019)

No ***staging*** is allowed within ***50*** feet of ***a wetland or waterbody***. No ***refueling or storage of hazardous materials*** is allowed within ***150*** feet of any wetland or waterbody.

(August 3, 2009)

Payment

All costs to comply with this special provision for the environmental commitments and requirements are incidental to the contract and are the responsibility of the Contractor. The Contractor shall include all related costs in the associated bid prices of the contract.

1-07.5(2) State Department of Fish And Wildlife

Section 1-07.5(2) is supplemented with the following:

(April 2, 2018)

The following Provisions summarize the requirements, in addition to those required elsewhere in the Contract, imposed upon the Contracting Agency by the Washington State Department of Fish and Wildlife. Throughout the work, the Contractor shall comply with the following requirements:

The Contractor may begin Work below the Ordinary High Water Line on ***July 15*** and must complete all the Work by ***September 30***.

(April 2, 2018)

All costs to comply with this special provision are incidental to the Contract and are the responsibility of the Contractor. The Contractor shall include all related costs in the associated bid prices of the Contract.

1-075(5) U.S. Army Corps of Engineers

Section 1-07.5(5) is supplemented with the following:

(April 2, 2018)

The following Provisions summarize the requirements, in addition to those required elsewhere in the contract, imposed upon the Contracting Agency by the U.S. Army Corps of Engineers. Throughout the work, the Contractor shall comply with the following requirements.

(February 25, 2013)

Temporary structures and dewatering areas under the jurisdiction of the U.S. Army Corps of Engineers must maintain normal downstream flows and prevent upstream and downstream flooding to the maximum extent practicable.

(April 2, 2018)

All costs to comply with this special provision are incidental to the Contract and are the responsibility of the Contractor. The Contractor shall include all related costs in the associated bid prices of the Contract.

1-07.6 Permits and Licenses

Section 1-07.6 is supplemented with the following:

(January 2, 2018)

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. Copies of these permits, including a copy of the Transfer of Coverage form, when applicable, are required to be onsite at all times.

Contact with the permitting agencies, concerning the below-listed permits(s), shall be made through the Engineer with the exception of when the Construction Stormwater General Permit coverage is transferred to the Contractor, direct communication with the Department of Ecology is allowed. 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.

(September 20, 2010)

Permit, Approval, Certification or Concurrence	Permitting Agency	Permit Number
Section 404 Nationwide Permit 3	US Army Corps of Engineers	TBD
Hydraulic Permit Approval	Washington Department of Fish and Wildlife	TBD

The contractor shall ensure that all permit conditions have been read, understood and will be complied with. The Project Environmental Review Form must be signed by the contractor to document this work and general HPA provisions are included in Appendix F.

1-07.7 Load Limits

Section 1-07.7 is supplemented with the following:

(******)
If the source of materials provided by the Contractor necessitates hauling over roads other than Lewis County roads, the Contractor shall, at the Contractor's expense, make all arrangements for the use of the haul routes.

Any vehicle providing material paid for by the ton, on the project, will provide licensed tonnage for that vehicle.

1-07.9 Wages

General

Section 1-07.9(1) is supplemented with the following:

(******)
The State rates incorporated in this contract are applicable to all construction activities associated with this contract.

(April 2, 2007)
Application of Wage Rates for the Occupation of Landscape Construction
State prevailing wage rates for public works contracts are included in this contract and show a separate listing for the occupation:

Landscape Construction, which includes several different occupation descriptions such as: Irrigation and Landscape Plumbers, Irrigation and Landscape Power Equipment Operators, and Landscaping or Planting Laborers.

In addition, federal wage rates that are included in this contract may also include occupation descriptions in Federal Occupational groups for work also specifically identified with landscaping such as:

Laborers with the occupation description, Landscaping or Planting, or

Power Equipment Operators with the occupation description, Mulch Seeding Operator.

If Federal wage rates include one or more rates specified as applicable to landscaping work, then Federal wage rates for all occupation descriptions, specific or general, must be considered and compared with corresponding State wage rates. The higher wage rate, either State or Federal, becomes the minimum wage rate for the work performed in that occupation.

Contractors are responsible for determining the appropriate crafts necessary to perform the contract work. If a classification considered necessary for performance of the work is missing from the Federal Wage Determination applicable to the contract, the Contractor shall initiate a request for approval of a proposed wage and benefit rate. The Contractor shall prepare and submit Standard Form 1444, Request for Authorization of Additional Classification and Wage Rate available at http://www.wdol.gov/docs/sf1444.pdf , and submit the completed form to the Project Engineer's office. The presence of a classification wage on the Washington State Prevailing Wage Rates For Public Works Contracts does not exempt the use of form 1444 for the purpose of determining a federal classification wage rate.

1-07.11 Requirements For Nondiscrimination

Section 1-07.11 is supplemented with the following:

(September 3, 2019)

Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)

1. The Contractor's attention is called to the Equal Opportunity Clause and the Standard Federal Equal Employment Opportunity Construction Contract Specifications set forth herein.

2. The goals and timetables for minority and female participation set by the Office of Federal Contract Compliance Programs, expressed in percentage terms for the Contractor's aggregate work force in each construction craft and in each trade on all construction work in the covered area, are as follows:

Women - Statewide

Timetable	Goal
Until further notice	6.9%

Minorities - by Standard Metropolitan Statistical Area (SMSA)

Spokane, WA:

SMSA Counties:

Spokane, WA 2.8

WA Spokane.

Non-SMSA Counties 3.0

WA Adams; WA Asotin; WA Columbia; WA Ferry; WA Garfield; WA Lincoln, WA Pend Oreille; WA Stevens; WA Whitman.

Richland, WA

SMSA Counties:

Richland Kennewick, WA 5.4

WA Benton; WA Franklin.

Non-SMSA Counties 3.6

WA Walla Walla.

Yakima, WA:
SMSA Counties:
Yakima, WA 9.7
WA Yakima.
Non-SMSA Counties 7.2
WA Chelan; WA Douglas; WA Grant; WA Kittitas; WA Okanogan.

Seattle, WA:
SMSA Counties:
Seattle Everett, WA 7.2
WA King; WA Snohomish.
Tacoma, WA 6.2
WA Pierce.
Non-SMSA Counties 6.1
WA Clallam; WA Grays Harbor; WA Island; WA Jefferson; WA Kitsap; WA Lewis; WA Mason; WA Pacific; WA San Juan; WA Skagit; WA Thurston; WA Whatcom.

Portland, OR:
SMSA Counties:
Portland, OR-WA 4.5
WA Clark.
Non-SMSA Counties 3.8
WA Cowlitz; WA Klickitat; WA Skamania; WA Wahkiakum.

These goals are applicable to each nonexempt Contractor's total on-site construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, or federally assisted project, contract, or subcontract until further notice. Compliance with these goals and time tables is enforced by the Office of Federal Contract compliance Programs.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, in each construction craft and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goal shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of $10,000 or more that are Federally funded, at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the Subcontractor; employer identification number of the Subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed. The notification shall be sent to:

U.S. Department of Labor
Office of Federal Contract Compliance Programs Pacific Region
Attn: Regional Director

San Francisco Federal Building
90 – 7th Street, Suite 18-300
San Francisco, CA 94103(415) 625-7800 Phone
(415) 625-7799 Fax

4. As used in this Notice, and in the contract resulting from this solicitation, the Covered Area is as designated herein.

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)

1. As used in these specifications:

    a. Covered Area means the geographical area described in the solicitation from which this contract resulted;

    b. Director means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

    c. Employer Identification Number means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U. S. Treasury Department Form 941;

    d. Minority includes:

        (1) Black, a person having origins in any of the Black Racial Groups of Africa.

        (2) Hispanic, a fluent Spanish speaking, Spanish surnamed person of Mexican, Puerto Rican, Cuban, Central American, South American, or other Spanish origin.

        (3) Asian or Pacific Islander, a person having origins in any of the original peoples of the Pacific rim or the Pacific Islands, the Hawaiian Islands and Samoa.

        (4) American Indian or Alaskan Native, a person having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has

employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith effort to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of this Special Provision. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its action. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

    a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

    b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

    c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunity and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the U.S. Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of the obligations under 7a through 7p of this Special Provision provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensure that the concrete benefits of the program are reflected in the Contractor's minority and female work-force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrate the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspensions, terminations and cancellations of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of this Special Provision, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the government and to keep records. Records shall at least include, for each employee, their name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, the Contractors will not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

16. Additional assistance for Federal Construction Contractors on contracts administered by Washington State Department of Transportation or by Local Agencies may be found at:

    Washington State Dept. of Transportation
    Office of Equal Opportunity
    PO Box 47314
    310 Maple Park Ave. SE
    Olympia WA
    98504-7314
    Ph: 360-705-7090
    Fax: 360-705-6801
    http://www.wsdot.wa.gov/equalopportunity/default.htm

1-07.17 Utilities And Similar Facilities

(April 2, 2007)

Section 1-07.17 is supplemented with the following:

Locations and dimensions shown in the Plan 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:

Lewis County P.U.D. No. 1
321 NW Pacific
Chehalis, WA 98532
Telephone: (360) 748-9261

LUMEN
Dioni Cariaga
Network Implementation Engineer II
411 S Kaiser Rd, Olympia, WA 98502
tel: 206-733-5261 / cell: 360-250-2596
dioni.cariaga@lumen.com

The Contractor shall call the Underground locate service (800-424-5555) two to ten days prior to construction at each project site. The Contractor shall notify the Utility Owner of any utilities that are within two feet of the planned construction. The above list of Utility Owners may not be complete. As per RCW 19.122 it shall be the Contractors responsibility to contact the owners of utilities known or suspected of having services close to the project site.

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, 2016 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.

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

H. 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.

I. 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.

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:

$1,000,000	Each Occurrence
$2,000,000	General Aggregate
$2,000,000	Products & Completed Operations Aggregate
$1,000,000	Personal & Advertising Injury each offence
$1,000,000	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.

1-08, PROSECUTION AND PROGRESS

1-08.0 Preliminary Matters

(May 25, 2006 APWA GSP)

Add the following new section:

1-08.0(1) Preconstruction Conference

(October 10, 2008 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 establish normal working hours for the work;
5. To review safety standards and traffic control; and
6. 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 3 working days 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

1-08.1 Subcontracting
(December 19, 2019 APWA GSP, Option A)

Prior to any subcontractor or lower tier subcontractor beginning work, the Contractor shall submit to the Engineer a certification (WSDOT Form 420-004) that a written agreement between the Contractor and the subcontractor or between the subcontractor and any lower tier subcontractor has been executed. This certification shall also guarantee that these subcontract agreements include all the documents required by the Special Provision Federal Agency Inspection.

A Subcontractor or lower tier Subcontractor will not be permitted to perform any work under the contract until the following documents have been completed and submitted to the Engineer:

1. Request to Sublet Work (WSDOT Form 421-012), and
2. Contractor and Subcontractor or Lower Tier Subcontractor Certification for Federal-aid Projects (WSDOT Form 420-004).

The Contractor shall submit to the Engineer a completed Monthly Retainage Report (WSDOT Form 272-065) within 15 calendar days after receipt of every monthly progress payment until every Subcontractor and lower tier Subcontractor's retainage has been released.

The ninth paragraph, beginning with "On all projects, …" is revised to read:

The Contractor shall certify to the actual amount received from the Contracting Agency and amounts paid to all firms that were used as Subcontractors, lower tier subcontractors, manufacturers, regular dealers, or service providers on the Contract. This includes all Disadvantaged, Minority, Small, Veteran or Women's Business Enterprise firms. This Certification shall be submitted to the Engineer on a monthly basis each month between Execution of the Contract and Physical Completion of the

Contract using the application available at: https://wsdot.diversitycompliance.com. A monthly report shall be submitted for every month between Execution of the Contract and Physical Completion regardless of whether payments were made or work occurred.

1-08.3(2)A Type A Progress Schedule
(March 13, 2012 APWA GSP)

Revise this section to read:

The Contractor shall submit $$ 3 $$ copies of a Type A Progress Schedule no later than at the preconstruction conference, or some other mutually agreed upon submittal time. The schedule may be a critical path method (CPM) schedule, bar chart, or other standard schedule format. Regardless of which format used, the schedule shall identify the critical path. The Engineer will evaluate the Type A Progress Schedule and approve or return the schedule for corrections within 15 calendar days of receiving the submittal.

Contractor's Weekly Activities
(******)

The Contractor shall submit a weekly schedule to the Engineer (prior to the beginning of each work week). The schedule shall indicate the Contractor's proposed activities for the forthcoming week along with the hours of work. This will permit the Engineer to more effectively provide the contract engineering and inspection for the Contractor's operations.

The written weekly activity schedule shall be submitted to the Engineer or a designated assistant before the end of the last shift on the next to the last working day of the week preceding the indicated activities, or other mutually agreeable time. The written weekly look ahead shall be discussed at a weekly on-site meeting between the Contractor's representative (PM, Site Foreman, etc.) and the Contracting Agency's staff members (Asst. County Engineer, PM, inspector, Environmental—depending on upcoming planned work) at a mutually agreed upon recurring day/time.

If the Contractor proceeds with work not indicated on the weekly activity schedule, or in a sequence differing from that which has been shown on the schedule, the Engineer may require the Contractor to delay unscheduled activities until they are included on a subsequent weekly activity schedule.

Separately, and in addition to the weekly schedule, the Contractor shall submit weekly a summary of project activities to the Engineer. The summary of activities shall include a report of the nature and progress of each of the major activities that were advanced on the project within the previous week. It shall be sufficiently detailed that a composite history of the project develops. The locations and approximate quantity guardrail and traffic control work shall be reported. Unusual activity, and conditions or events that may affect the course of the project shall also be reported.

1-08.4 Prosecution of Work

Delete this section and replace it with the following:

1-08.4 Notice to Proceed and Prosecution of Work
(July 23, 2015 APWA GSP)

Notice to Proceed will be given after the contract has been executed and the contract bond and evidence of insurance have been approved and filed by the Contracting Agency. The Contractor shall not commence with the work until the Notice to Proceed has been given by the Engineer. The Contractor shall commence construction activities on the project site within ten days of the Notice to

Proceed Date, unless otherwise approved in writing. The Contractor shall diligently pursue the work to the physical completion date within the time specified in the contract. Voluntary shutdown or slowing of operations by the Contractor shall not relieve the Contractor of the responsibility to complete the work within the time(s) specified in the contract.

When shown in the Plans, the first order of work shall be the installation of high visibility fencing to delineate all areas for protection or restoration, as described in the Contract. Installation of high visibility fencing adjacent to the roadway shall occur after the placement of all necessary signs and traffic control devices in accordance with 1-10.1(2). Upon construction of the fencing, the Contractor shall request the Engineer to inspect the fence. No other work shall be performed on the site until the Contracting Agency has accepted the installation of high visibility fencing, as described in the Contract.

1-08.5 Time for Completion

(January 19, 2022 APWA GSP, Option B)

Revise the third and fourth paragraphs to read:

Contract time shall begin on the first working day following the 14 calendar day after the Notice to Proceed date. If the Contractor starts work on the project at an earlier date, then contract time shall begin on the first working day when onsite work begins.

Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and any partial or whole day the Engineer declares as unworkable. The statement will be identified as a Written Determination by the Engineer. If the Contractor does not agree with the Written Determination of working days, the Contractor shall pursue the protest procedures in accordance with Section 1-04.5. By failing to follow the procedures of Section 1-04.5, the Contractor shall be deemed as having accepted the statement as correct. If the Contractor is approved to work 10 hours a day and 4 days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily be charged as a working day, then the fifth day of that week will be charged as a working day whether or not the Contractor works on that day.

Revise the sixth paragraph to read:

The Engineer will give the Contractor written notice of the completion date of the contract after all the Contractor's obligations under the contract have been performed by the Contractor. The following events must occur before the Completion Date can be established:

1. The physical work on the project must be complete; and
2. The Contractor must furnish all documentation required by the contract and required by law, to allow the Contracting Agency to process final acceptance of the contract. The following documents must be received by the Project Engineer prior to establishing a completion date:
   a. Certified Payrolls (per Section 1-07.9(5)).
   b. Material Acceptance Certification Documents
   c. Monthly Reports of Amounts Credited as DBE Participation, as required by the Contract Provisions.
   d. Final Contract Voucher Certification

e. Copies of the approved "Affidavit of Prevailing Wages Paid" for the Contractor and all Subcontractors

f. A copy of the Notice of Termination sent to the Washington State Department of Ecology (Ecology); the elapse of 30 calendar days from the date of receipt of the Notice of Termination by Ecology; and no rejection of the Notice of Termination by Ecology. This requirement will not apply if the Construction Stormwater General Permit is transferred back to the Contracting Agency in accordance with Section 8-01.3(16).

g. Property owner releases per Section 1-07.24

(******)
This project shall be physically completed within *** **55** *** 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

1-09.7 Mobilization
Section 1-09.7 is supplemented with the following:

(******)

The Contracting Agency has provided an area on-site for temporary staging and stockpiling within planned HMA removal areas. Existing asphalt surfaces designated to remain shall not be used for stockpiling material or any other activity that may result in damage to the existing road surface. Any damage to the existing asphalt designated to remain shall be repaired at the Contractor's expense, consistent with the project HMA surfacing depth requirements, at the full lane width, and contiguous with planned HMA along each lane.

1-09.9 Payments

(March 13, 2012 APWA GSP)

Delete the first four paragraphs and replace them with the following:

The basis of payment will be the actual quantities of Work performed according to the Contract and as specified for payment.

The Contractor shall submit a breakdown of the cost of lump sum bid items at the Preconstruction Conference, to enable the Project Engineer to determine the Work performed on a monthly basis. A breakdown is not required for lump sum items that include a basis for incremental payments as part of the respective Specification. Absent a lump sum breakdown, the Project Engineer will make a determination based on information available. The Project Engineer's determination of the cost of work shall be final.

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 payments. 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.

1-09.9(1) Retainage

Section 1-09.9(1) is supplemented with the following:

Retainage of 5 percent shall be as required by RCW 60.28.011.

1-09.11 Disputes and Claims

1-09.11(3) Time Limitation and Jurisdiction

(November 30, 2018 APWA GSP)

Revise this section to read*:*

For the convenience of the parties to the Contract it is mutually agreed by the parties that any 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 any 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 any such claims or causes of action. It is further mutually agreed by the parties that when any 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 any records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

1-09.13 Claims Resolution

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

(January 19, 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 any 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:

(January 10, 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://altssa.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

1-10.2(2) Traffic Control Plans

(******)
Section 1-10.2(2) is supplemented with the following:

A traffic control plan has been included in the Contract Plans for two-way traffic detour adjacent to the construction area. At various times, work may require flagger controlled alternating one-way traffic during working hours. The Contractor shall submit a flagger controlled Traffic Plan (MUTCD TA-10 or equivalent) for Agency approval prior to implementation. Two-way traffic shall be restored during non-working hours. All signs and traffic control devices required for this project (as shown on the Traffic Control Plan and approved alternating one-way flagger controlled plans) shall be the Contractor's responsibility to furnish, erect, maintain, and remove immediately after construction. The Contractor shall adopt the Traffic Control Plan in writing to the Engineer or furnish a new plan for review.

If determined by the Engineer that additional signing (not shown on the Traffic Control Plan) is needed, it shall be the Contractor's responsibility to furnish, erect, and maintain these additional signs at no cost to the Contracting Agency.

1-10.2(3) Conformance to Established Standards

(******)

Section 1-10.2(3) is supplemented with the following:

The latest revision of the WSDOT Manual M54-44 "Work Zone Traffic Control Guidelines" (WZTCG) is hereby made a part of this contract by reference as if contained fully herein.

1-10.4 Measurement

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

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

(August 2, 2004)

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

DIVISION 2
EARTHWORK

2-01, CLEARING, GRUBBING, AND ROADSIDE CLEANUP

2-01.1 Description

(March 13, 1995)

Section 2-01.1 is supplemented with the following:

Clearing and grubbing on this project shall be performed within the following limits:

The area staked in the field by the Engineer prior to bid opening.

2-01.3(1) Clearing

******

Section 2-01.3(1)1 is supplemented with the following:

The Contractor shall not disturb trees marked "Protect Existing Tree" in the Contract Plans and marked in the field. Several trees to be saved exist within or very near the construction project fill limits / traffic

detour road. The Contractor shall pay particular attention to and shall protect trees to be saved and provide minimal limb removal necessary for vehicle clearance (at the detour road area) and/or minimal limb removal for crane swing safety.

Trees marked "To Be Removed" north of Crumb Road shall be limbed and decked for the adjacent property owner's use/disposal. The Contractor shall place decked logs within Parcel #029788-001-000 at an agreed upon location with the property owner (Clevenger).

2-02, REMOVAL OF STRUCTURES AND OBSTRUCTIONS

2-02.1 Description

Section 2-02.1 is supplemented with the following:

(******)
This work shall consist of removing miscellaneous items listed in Special Provision Section 2-02.3.

Work shall include removal of approximately 160 linear feet of existing fence located on Parcel #029788-01-000 (Clevenger). Existing fencing material on this parcel shall be saved and stockpiled for the property owner. Additionally, the Contractor shall supply material and construct approximately 130 linear feet of 4-strand barb wire fence along the temporary easement limits at the northwest quadrant on Parcel #029788-01-000 (Clevenger). This temporary fence shall connect to the existing fence to ensure livestock is adequately contained. This temporary fence shall be abandoned in-place to allow the property owner to install permanent fencing after all construction is completed.

The Contractor shall remove and dispose of any and all other wire fencing encountered during construction of the project.

2-02.3 Construction Requirements

Section 2-02.3 is supplemented with the following:

Removing Miscellaneous Items

(******)
The following miscellaneous items shall be removed and disposed (Disp.) of or salvaged (Salv.):

*** Raised or recessed pavement markers (Disp.) ***
*** Flexible Guide Post (Disp.) ***
*** 11.4'x7.3'x36' Squash CMP Culvert (Disp.) ***
*** Wire Fence at Parcel #029788-01-000 (Salv.) ***
*** Wire Fence outside Parcel #029788-01-000 (Disp.) ***

2-02.4 Measurement

Section 2-02.4 is supplemented with the following:

No specific unit of measurement will apply to the lump sum item of "Removal of Structure and Obstruction". Existing traffic signs to be adjusted or moved shall be considered incidental to this bid item. All existing traffic signs shall remain the property of Lewis County.

2-02.5 Payment

Section 2-02.5 is supplemented with the following:

Payment will be made in accordance with Section 1-04.1, for the following Bid item when it is included in the Proposal:

(******)
"Removal of Structures and Obstructions", lump sum.
Wire fence removal and salvage of the existing fence for the property owner and material supply, construction and abandoning in-place a 4-strand barb wire fence along the temporary easement at Parcel #029788-01-000 shall be considered incidental to and included with the Lump Sum bid price of this bid item. If pavements, sidewalks, curbs, or gutters lie within an excavation area, their removal will be paid for as part of the quantity removed in excavation.

2-03, ROADWAY EXCAVATION AND EMBANKMENT

2-03.1 Description

(******)
Section 2-03.1 is supplemented with the following:

After culvert construction is completed and traffic is restored to Crumb Road, all components or the Temporary Traffic Bypass Road shall be completely removed and disposed of at an approved waste site. All items incorporated in the construction of the Temporary Traffic Bypass Road shall be considered Roadway Excavation. The Contractor may request to salvage and re-use Temporary Traffic Bypass Road crushed surfacing material for construction of guardrail landings only (outside the HMA limits). Re-used material will be truck measured for conversion to crushed surfacing measurement/payment. Contaminated crushed surfacing will not be accepted for use.

2-03.3 Construction Requirements

(******)
2-03.3(7) Disposal of Surplus Material
Section 2-03.3(7) is supplemented with the following:

No waste site has been provided to the Contractor for the disposal of unsuitable and excess excavation material. The Contractor shall make his own arrangement to acquire a site for the disposal of unsuitable and excess excavation material.

The Contractor shall obtain all environmental permits required for the disposal of the unsuitable excavation material. The Contracting Agency must approve the waste site prior to it being utilized. Approval cannot be given until the Contracting Agency receives copies of all environmental approvals.

All costs for acquiring a disposal site and for the loading, hauling, and disposal of unsuitable and excess excavation material shall be considered incidental to the project and be included in the unit contract prices for the various items of work therein.

2-03.3(14)M Excavation of Channels and Ditches
Section 2-03.3(14)M is supplemented with the following:

******
The Contractor shall protect existing vegetation and channel slopes outside the stream re-grade areas. All excavation and construction activities shall be conducted within the cut limits of the project

staked by the Engineer, access roads through areas not designated for clearing shall not be permitted.

2-03.4 Measurement

Section 2-03.4 is supplemented with the following:

(March 13, 1995)

Only one determination of the original ground elevation will be made on this project. Measurement for roadway excavation and embankment will be based on the original ground elevations recorded previous to the award of this contract. Control stakes will be set during construction to provide the Contractor with all essential information for the construction of excavation and embankments.

Earthwork quantities will be computed, either manually or by means of electronic data processing equipment, by use of the average end area method or by the finite element analysis method utilizing digital terrain modeling techniques.

Copies of the ground cross-section notes will be available for the bidder's inspection, before the opening of bids, at the County Engineer's office.

Upon award of the contract, copies of the original ground cross-sections will be furnished to the successful bidder on request to the Project Engineer.

2-03.5 Payment

Section 2-03.5 is supplemented with the following:

(******)

"Roadway Excavation Incl. Haul" shall include the removal and disposal of approximately 500 S.Y. of asphalt material (existing road surface, thickness varies as indicated in the Contract Plans) and complete removal of all material used construct the Temporary Traffic Bypass Road. The existing asphalt road surfacing material shall be considered and included in Roadway Excavation Incl. Haul quantities and shall be measured and paid in accordance with the requirements of Sections 2-03.4 and 2-03.5.

2-09, STRUCTURE EXCAVATION

2-09.1 Description

(******)

Section 2-09.1 is supplemented with the following:

EPS29 Geofoam

This Work includes partial backfilling of structure excavation with geofoam.

Temporary Stream Diversion for Structure & Channel Excavation

Temporary Stream Diversion for Structure & Channel Excavation work shall consist of installation and maintenance of stream diversion/bypass for the creek during all in-water construction. Temporary Stream Diversion for Structure Excavation shall be conducted in a manner that does not violate State Water Quality Standards. All work in and adjacent to the stream shall be accomplished in strict accordance with the requirements of the WDFW HPA. This work also consists of adjustments to the location of the dewatering systems as deemed necessary by the Contractor to complete the project and comply with all environmental regulations, permits, specifications and special provisions for this project.

The Contracting Agency has depicted a Temporary Stream Diversion Plan on Sheet 4 of 16 in the Contract Plans for the Contractor's approval. The Contractor may submit a different plan as outlined below for approval by the Engineer at their discretion.

Upon completion of in-water construction, the Contractor shall promptly remove all stream diversion materials and equipment as directed by the Engineer. Disposal of surplus material and debris remaining from dewatering operations shall be incidental to and included in this item of work. The Stream Diversion Plan is an integral component of stormwater management for this site. If work is required above the ordinary high water mark after the in-water work window has expired, additional BMPs not shown in the Contract Plans shall be proposed by the Contractor for approval by the Engineer. BMPs installed and maintained after the in-water work window has expired shall control stormwater generated from the site during final construction activities. Payment for BMPs shall be per Contract Unit Bid prices or via Section 1-09.

Minimum Stream Flows

At all times of operation the Contractor's temporary stream diversion shall be designed to convey the following minimum flow rate of water in cubic feet per second:

*** 8.3 CFS***

During all phases of the diversion/bypass installation and decommissioning, the Contractor shall maintain flows downstream of the project site.

A Contingency System is required for this Project. The capacity of the combined temporary stream diversion system and the Contingency System shall be designed to convey the following minimum flow rate of water in cubic feet per second:

*** 13.7 CFS ***

Submittals

One week prior to beginning stream diversion/bypass and dewatering work, the Contractor shall submit the following in writing to the Engineer for approval:

1. Plans for the installation and commissioning of the dewatering system throughout the duration of the structure excavation.

    a) Drawings for Information: Show arrangement, locations, and details of temporary diversion structure, pump locations and discharge line, discharge point, temporary erosion control, and removal of stranded fish.
    b) Include a written report outlining control procedures to be adopted if stream bypass problems arise. Photograph or videotape, in sufficient detail, existing conditions of adjoining construction and site improvements that might be misconstrued as damage caused by stream bypass operations.
2. Method of stream diversion/bypass throughout the duration of the structure excavation.

Work shall not commence until the submittals are approved in writing by the Engineer.

2-09.2 Materials

(******)

Section 2-09.21 is supplemented with the following:

EPS29 Geofoam

ASTM D6817-17

Geofoam shall be expanded polystyrene (EPS29) formed by the expansion of polystyrene resin beads or granules in a molding process. Reprocessed polystyrene foam (regrind) or recycled polystyrene shall not be used. Geofoam shall be tested by the manufacturer in accordance with ASTM D6817-17 and shall have the following minimum properties:

Type -ASTM D6817-17	EPS29
Density, min, lb/ft3	1.80
Compressive Resistance @ 1% deformation, min, psi.	10.9
Flexural Strength, min, psi.	50
Oxygen Index, min, volume%	24.0

The geofoam shall contain a flame-retardant additive and shall have UL Certification of Classification as to External Fire Exposure and Surface Burning Characteristics. Geofoam shall be treated to prevent insect attack and vector intrusion.

2-09.3 Construction Requirements

(******)

Section 2-09.3 in supplemented with the following:

EPS29 Geofoam

Geofoam blocks shall have the following minimum dimensions:

Thickness	1 inch
Width	12 inches
Length	36 inches

Dimensional Tolerance - The acceptable length, width, and thickness tolerance of geofoam shall not exceed ± 0.5 %. The blocks must have perpendicular faces. The perpendicular plane shall not deviate by more than 0.12 inch over a 20-inch distance.

Each geofoam block shall be marked with the manufacturer's identification, date of manufacture, type, and weight (or density).

Damage - Geofoam as delivered to the project site shall have no defects that will adversely affect its service and workability qualities. Material units that manifest unacceptable surface or volumetric damage as determined by the Engineer shall be replaced at no expense to the contracting agency.

Surface Damage - Damage to load-bearing geofoam surfaces shall be limited to less than 20% of the equivalent load bearing area of the unit.

Volume Damage - Volumetric damage of geofoam shall be limited to less than 1% of the volume of a single unit.

Geofoam shall be cured a minimum of 24 hours before testing, inspection, or shipping. UV (Ultra-Violet) Degradation- Discoloration and dusting of geofoam caused by the extensive exposure to sunlight is a defect that will adversely affect its service and is grounds for rejection.

EPS29 Geofoam Submittals

The contractor shall submit to the Engineer a Manufacturer's Certificate of Compliance in accordance with Section 1-06.3 for the first 100 cubic yards and a Manufacturer's Certificate of Compliance will be required for every 1,500 cubic yards thereafter. The Manufacturer's Certificate of Compliance shall include inspection reports showing that the geofoam is in compliance with the UL Fire Exposure properties and ASTM D6817-11 physical properties.

At least 7 calendar days prior to the start of Work requiring the geofoam blocks, the Contractor shall submit a Type 1 Working Drawing for the following:

1. A plan sheet showing a profile and section view of the proposed partial structure excavation backfill. The drawing shall clearly indicate the size, type, location, and orientation of all geofoam blocks. The drawing shall also identify the minimum soil cover thickness that will overlay the blocks prior to ending dewatering.

2. The location and type of connectors.

3. Proposed placement methods.

4. Manufacturer's recommendations for handling, storing, cutting, and connecting the blocks.

EPS29 Geofoam *Protection and Storage*

Geofoam blocks and connectors shall be handled and stored in accordance with Section 1-06.4 and the manufacturer's recommendations.

Geofoam is combustible and shall not be exposed to open flame or any source of ignition.

Geofoam shall be protected from damage and vandalism. The contractor shall maintain any protective coverings or barriers that are installed to protect the geofoam. Protective coverings and barriers shall not be incorporated in the permanent works and shall be removed prior to installing adjacent embankment sections and permanent concrete fascia.

EPS29 Geofoam Damage and Repair of In-Place Geofoam Blocks

Geofoam blocks having damage shall be handled as follows:

1. Blocks with less than 1 cubic foot damaged and with less than 20 percent of the total volume of the block damaged will be considered undamaged.

2. Blocks with more than 1 cubic foot but less than 36 cubic feet of damage may be filled with sand, provided the total damage does not exceed 20 percent of the total block volume.

3. Blocks with over 36 cubic feet of damage or more than 20 percent of the block volume damaged may not be used. Damaged blocks shall be replaced by the Contractor at no additional cost to the Contracting Agency.

    3. The undamaged portions of blocks with over 36 cubic feet of damage or more than 20 percent of the block volume damaged may be used where smaller blocks are required provided that the entire damaged area is removed.

EPS29 Geofoam Block Cutting

Blocks shall be cut using a saw or hot wire.

EPS29 Geofoam Block Selection, Arrangement, Orientation, and Placement

The Contractor shall select the geofoam block sizes and shall determine the arrangement, orientation, and stacking pattern to be used for the geofoam embankment so that the geofoam fill conforms to the lines and grades as detailed by this change order in the revised and added Plan sheets, these Specifications, and the Contractor's submittal.

The geofoam blocks shall be arranged so the block edges do not form continuous vertical joints. All blocks shall accurately fit relative to adjacent blocks. No gaps greater than 0.75-inch will be allowed on joints, vertical or horizontal.

The surface of a layer of geofoam blocks upon which additional geofoam blocks will be placed shall be horizontal with a variation in surface tolerance of no more than 0.05 feet in any 10-foot interval.

A single lift of geofoam blocks shall be no more than 1 block wide. The blocks shall fit snugly against the culvert and shoring with no more than 0.75-inch-wide gap. If corrugated shoring (e.g., Z-sheets) are used, block shall fit snugly against the closest corrugation, and the gap between the shoring and geofoam shall be filled with Gravel Borrow prior to placing the next lift of geofoam or soil backfill.

***Subgrade Preparation for* EPS29 Geofoam**

The subgrade for geofoam shall consist of the top of the Load Transfer Platform and be graded to the elevations shown in the plans. There shall be no holes or protruding objects. Prepare the graded surface in accordance with Section 2-03.3.

EPS29 Geofoam Stabilization

The Contractor shall provide temporary weighting and/or guying as necessary to anchor the geofoam until all the blocks are built into a homogeneous mass and the shoring is withdrawn.

Temporary Stream Diversion Preparation

Protect facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by stream diversion operations.

Install the stream diversion system to ensure minimum interference with the existing streambed, and other facilities surrounding the dewatering site.

Disturbance of the bed and banks should be limited to that necessary to place the structure, embankment protection, and any required channel modification associated with the installation. All disturbed areas should be protected from erosion within seven (7) calendar days of completion using vegetation or other means.

Isolation of the construction site from stream flow shall be accomplished using techniques such as:

By pumping the stream flow around the site .
The installation of a sheetpile or sandbag wall.
The use of a water-filled cofferdam.

Exception may be granted if siltation or turbidity is reduced to acceptable levels by means approved by the Engineer and the Washington Department of Fish and Wildlife (WDFW).

Temporary Stream Diversion Installation

Install the stream diversion system utilizing pipes, pumps, culverts, flexible hose or similar methods complete with pump equipment, standby power and pumps, valves, appurtenances, water disposal, and surface-water controls.

It is anticipated that a pump bypass system will be utilized to by-pass stream around the excavation area. Pumps shall be continuously monitored during working and non-working hours.

Provide standby equipment on-site available for immediate operation, to maintain stream bypass on continuous basis if any part of system becomes inadequate or fails. At a minimum the Contractor shall provide and have on hand additional pumps as a backup to the stream bypass system. If stream bypass requirements are not satisfied due to inadequacy or failure of stream bypass system, restore damaged structures and foundation soils at no additional expense to the County.

Any fish stranded in the construction area or diversion reach shall be safely moved to the flowing stream.

Any wastewater from project activities and dewatering shall be routed to an area outside the ordinary high water line to allow settling of fine sediments and other contaminants prior to being discharged back into the subject stream. Do not permit open-sump pumping that leads to loss of fines, soil piping, subgrade softening, and slope instability. Dewatering operations shall comply with regulatory water disposal requirements of authorities having jurisdiction. The stream diversion/bypass and shall be sufficiently maintained to avoid significant leaks that may result in flows through the work zone. All in-water work shall be in strict conformance with permits obtained for this project.

Remove and dispose of the stream bypass system from project site three business days after the new stream channel has been fully completed and approved by the Engineer (to allow permitting agency review prior to removing stream bypass). Upon decommissioning, flows shall be reintroduced gradually (24-hour to 48-hour time frame) so as to minimize the mobilization of sediments.

2-09.3(1)E Backfilling

(******)

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

Native material removed from structure excavation within the top 2-feet from the original surface shall be stockpiled during construction. BMP's shall be used for stockpiled material. Following structure completion, the Contractor shall use stockpiled native material to shape the exterior 2-feet of grading at culvert ends and transitions to existing streambanks. Native material shall be graded to allow drainage towards the new stream channel and shaped to provide a smooth transition to the existing terrain.

2-09.4 Measurement

(******)

Section 2-09.4 in supplemented with the following:

"EPS29 Geofoam", per cubic yard.

Measurement of EPS29Geofoam will be by the in-place volume in cubic yards. The upper limit of the volume calculation will be four feet above the load transfer platform. No measurement will be made of wasted or unused material.

No specific unit of measurement will apply to "Temporary Stream Diversion".

2-09.5 Payment

(******)

Section 2-09.5 in supplemented with the following:

Payment will be made in accordance with Section 1-04.1 for the following bid item included in the proposal:

"EPS29 Geofoam", per cubic yard.
The agreed upon price per cubic yard for " EPS29 Geofoam " shall be full compensation for all costs to furnish and install the EPS29 Geofoam, and includes the costs for cutting geofoam and backfilling the corrugations between geofoam and shoring, if applicable.

"Shoring or Extra Excavation", lump sum.
Structural Shoring shall be required for this Contract. Extra Excavation shall not be an option due to site's soil conditions as outlined in the project's Geotechnical Report (Appendix A). The lump sum contract price for "Shoring or Extra Excavation" shall be full payment to perform structural shoring as indicated in the Contract Plans.

"Temporary Stream Diversion", lump sum.
The lump sum contract price for "Temporary Stream Diversion" shall be full payment to perform the work as specified, including dewatering, stream diversion/bypass, and any sandbagging, pumping, fish exclusion, sediment removal, filtration or other materials necessary to complete the work.

2-12, CONSTRUCTION GEOSYNTHETIC

2-12.2 Materials

(******)
Section 2-12.2 is supplemented with the following:

Biaxial Geogrid shall consist of a network of integrally connected polymer tensile elements with open apertures and minimum long-term design tensile strength of 200 pounds per foot. Acceptable materials are TenCate Miragrid 2XT, Stratagrid SGB 30, Hanes Geo Components TerraGrid SX3030, or Engineer approved equal.

2-12.3 Construction Requirements

(******)
Section 2-12.3 is supplemented with the following:

Biaxial Geogrid for Load Transfer Platform
Piles shall be cutoff approximately 0.2-feet above excavation limits (as depicted in the Contract Plans) and Gravel Borrow Incl. Haul shall be compacted to a point approximately 0.3-feet above the pile cutoff elevation to begin Biaxial Geogrid construction. The working platform shall be graded smooth and level.

Biaxial geogrid shall be laid smooth and without excessive wrinkles. The fill material specified in the plans shall be placed on the biaxial geogrid in such a manner that there will be no vehicles or equipment driven directly on the biaxial geogrid. Under no circumstances shall fill be dropped on biaxial geogrid from a height greater than 5 ft above the surface of the biaxial geogrid.

Pegs, pins, or the manufacturer's recommended method shall be used to hold the fabric taught in place until the fill is placed.

Biaxial geogrid shall be placed with continuous pieces along either the short or long axis of the load transfer platform. Connections between the parallel pieces of biaxial geogrid shall be provided

Connections shall be a mechanical splice utilizing a joining bar or by the manufacturer's recommended system that produces a minimum junction efficiency of 93 percent. The joining bar shall be inserted as shown on the plans. The joining bar shall be a high-density polyethylene bar with minimum cross-sectional area of 0.25 square inches, or a grade 60 no. 6 reinforcing steel bar. The joining bar shall run the full length or width of the load transfer platform. The joining bar may be made up of individual segments not less than 6 ft butted together. Joining by overlapping is not allowed.

Biaxial geogrid shall be pretensioned during installation as follows. After the working platform has been construed, lay and join the first layer of biaxial geogrid. Begin spreading the first lift of material at the center of one end of the load transfer platform. As material is spread from one end of the load transfer platform to the other, the center of the advancing fill shall be kept ahead of the outside edges of the lift. The biaxial geogrid shall be manually pulled taut prior to fill placement.

Gravel Borrow Incl. Haul shall be compact using Method B per section 2-03.3(14)C modified as follows. Compaction equipment shall be a walk-behind vibratory sled or smooth drum roller weighing less than 4 tons. Compaction shall not occur with the smooth drum roller until at least 2 ft of fill is placed above the tops of the load transfer platform piles.

2-12.4 Measurement

(******)

Section 2-12.4 is supplemented with the following:

Measurement of Biaxial Geogrid will be by the in-place area in square yards.

2-12.5 Payment

(******)

Section 2-12.5 is supplemented with the following:

Biaxial Geogrid, per square yard.

The agreed upon price per square yard for Biaxial Geoegrid" shall be full compensation for all costs to furnish and install the Biaxial Geogrid. The cost for placing, staking, joining, and tensioning shall be incidental. The cost for placement and compaction of gravel borrow to construct the load transfer platform shall be included in Gravel Borrow Incl. Haul as described in Section 2-03. No measurement will be made of wasted or unused Biaxial Geogrid material.

DIVISION 3
PRODUCTION FROM QUARRY AND PIT SITES AND STOCKPILING

3-01 PRODUCTION FROM QUARRY AND PIT SITES

3-01.4 Contractor Furnished Material Sources

3-01.4(1) Acquisition and Development

(******)

Section 3-01.4(1) is supplemented with the following:

No source has been provided for any materials necessary for the construction of this project.

DIVISION 5
SURFACE TREATMENTS AND PAVEMENTS

(******)

5-04, HOT MIX ASPHALT

(******)

Delete Section 5-04 and amendments, 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.

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.

The term “Approach” shall include Road approaches, driveways, and extensions.

Superintendents, Labor, and Equipment of Contractor

The Contractor shall have a sufficient number of qualified personnel on the project to insure the following minimum crew size:

One paving superintendent
One paver operator
Two screed operators
Three roller operators
Two rakers

These workers shall be present and not assigned to dual activities that would stop them from fulfilling their assigned task while the paver is in operation. There will be one assigned supervisor who will be in charge of paving operations and who will be responsible for work performed.

Fiber Reinforced HMA:

This work shall consist of providing and placing Fiber Reinforced HMA in accordance with these Specifications and the lines, grades, thicknesses and typical cross-sections shown in the plans.

Definitions:

- Reinforcing Fibers: High tensile strength synthetic aramid fiber blend specially formulated to reinforce hot mix asphalt.
- Fiber Reinforced Asphalt Concrete (FRAC): A mixture of hot mix asphalt and reinforcing fibers that has greater resistance to rutting, thermal cracking, fatigue cracking, and reflective cracking as compared to conventional non-fiber asphalt mixes.
- Aramid Dispersion State Ratio (ADSR): A measure of the dispersion efficiency of the Reinforcing Fibers within asphalt mixes. ADSR is calculated by comparing the mass

of aramid in the individual state to the total mass of extracted aramid fibers, expressed as a percentage.

(******)

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	9-03.8(3)B
Mineral Filler	9-03.8(5)
Recycled Material	9-03.21
Portland Cement	9-01
Sand	9-03.1(2)
(As noted in 5-04.3(5)C for crack sealing)	
Joint Sealant	9-04.2
Foam Backer Rod	9-04.2(3)A

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 in the leveling course only. No RAP will be accepted for the wearing course. The RAP shall be sampled and tested at a frequency of one sample for every 1,000 tons produced and not less than ten samples per project. The asphalt content and gradation test data shall be reported to the Contracting Agency when submitting the mix design for approval on the QPL. The Contractor shall include the RAP as part of the mix design as defined in these Specifications.

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

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.

Reinforcing Fibers:

1. Provide a reinforcing fiber blend of virgin polyolefins and virgin aramids that meets the requirements in Table 1 and Table 2 below:

Table 1

Reinforcing Fiber Material Properties			
Property	**Standard**	**Polyolefin**	**Aramid**
Form	Manufacturer Certification	Serrated	Monofilament
Nominal Specific Gravity	ASTM D276	0.91	1.44
Tensile Strength (psi)	ASTM D7269	NA[1]	400,000
Length (in)	Manufacturer Certification	0.75	0.75

1. Polyolefin fibers will melt or become plastically deformed during production

Table 2

Reinforcing Fiber Performance Properties			
Performance Measure	**Test Method**	**Standard**	**Requirement**
Dispersion Efficiency	Aramid Dispersion State Ratio (ADSR)	Modified ASTM D2172	≥ 85%
Field Performance Cracking Resistance	Pavement Condition Index	ASTM D6433	≥ 10 PCI Points increase, Minimum 4 years
Resistance to Permanent Deformation (Rutting)	Flow Number (FN)	AASTHO TP79	≥ 75% increase

2. If an aramid-based fiber blend is proposed that does not meet all of the material properties in Table 1 above, performance test results meeting Table 2 above and complying with Part 2 of Section 5-04.2(2) below a substitute fiber blend shall be submitted at least one week prior to bid date for approval by engineer.

3. Non-aramid fiber blends will not be considered as acceptable alternatives to this specification

5-04.2(1) How to Get a 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 if approved by the Engineer, in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, 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 & sig-nature) 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;

- 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 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 Equivalent Single Axle Loads (ESAL's) appropriate for the required use.

Reinforcing Fibers:

1. Submit the following as part of material approval prior to construction:

a. Representative fiber product sample.
b. Fiber product data sheet and certification from the Manufacturer that the fiber product supplied meets the requirements of this specification.
c. Manufacturer's instructions and general recommendations.
d. Performance test results of ADSR testing from a minimum of three separate laboratory trials to validate dispersion efficiency.
e. Performance results of PCI testing from a minimum of three separate field trials to validate cracking resistance.
f. Performance test results of FN testing from a minimum of three separate laboratory trials to validate rutting resistance.
g. A minimum of five unique project examples and references where the reinforcing fiber product was used within 250 miles of the project location

****NOTE: Testing is NOT required on samples from the job mix. Submit previously completed lab testing only.**

2. Performance testing requirements

All historical test results submitted to validate the fiber's performance in asphalt mixes shall be from previously completed laboratory and field trials using plant-mixed FRAC only. **Testing is NOT required on samples from the job mix.**

Performance testing must be from laboratory trials at a fiber dosage rate equal to the rate proposed for the project. Tests must be performed by an AASHTO accredited laboratory or nationally recognized university testing lab and must be reviewed and approved by the project engineer.

a. Aramid Dispersion State Ratio (ADSR) Tests from a minimum of three (3) separate laboratory trials.
    1. Perform ADSR test based on modified ASTM D2172 procedures as provided in the document entitled "Extraction of Aramid Fibers from Fiber Reinforced Asphalt Concrete – Special Test Method". A copy of the modified extraction methodology can be obtained by making an inquiry to the Pavement and Materials Laboratory at Arizona State University at NCE@asu.edu.
    2. To validate ADSR results, average extracted aramid fiber quantity must equal 0.007 percent by total sample weight with no individual result less than 0.005 percent of the total sample weight.
    3. All tested fiber mixes must achieve a minimum ADSR of 85%.

b. Pavement Condition Index (PCI) side by side comparison from a minimum of three (3) field trails with a minimum in-service pavement age of four years.
    1. PCI surveys shall be performed according to ASTM D6433.
    2. Tests results shall include a control and a fiber reinforced pavement section. FRAC mix shall be identical to control mix except for the inclusion of fibers added at the same dosage as proposed on the project.
    3. In field performance sections shall be subject to the same environmental and traffic conditions. A minimum surface area of 500 yd^2 per FRAC and control section is required.
    4. PCI results from fiber sections shall show a minimum 10 PCI points greater than the control section after a minimum of 4 years.

c. Flow Number (FN) Tests from a minimum of three (3) separate laboratory trials.
    1. Perform FN tests using the protocol from AASHTO TP79.
    2. Tests results shall include a control and a fiber reinforced mix. FRAC mix shall be identical to control mix except for the inclusion of fibers added at the same dosage as proposed on the project.
    3. Results from fiber specimens shall show an average FN increase of at least 75% over control specimens.

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 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.

The Contractor shall deliver the mixture to the paving machine at a rate that provides continuous operation of the paving machine, except for unavoidable delay or breakdown. If excessive stopping of the paving machine occurs during paving operations, the Engineer may suspend paving operations until the mixture deliver rate matches the paving machine operation.

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

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5-04.3(4)A1 General

When the Proposal includes a pay item for crack sealing, seal all cracks ¼ inch in width and greater. If the Proposal does not include an item for crack sealing or sealed joints it shall be incidental to and included in the unit contract price per ton for the HMA

Cleaning: Ensure that cracks are thoroughly clean, dry and free of all loose and foreign material when filling with crack sealant material. Use a hot compressed air lance to dry and warm the pavement surfaces within the crack immediately prior to filling a crack with the sealant material. Do not overheat pavement. Do not use direct flame dryers. Routing cracks is not required.

Sand Slurry: For cracks that are to be filled with sand slurry, thoroughly mix the components and pour the mixture into the cracks until full. Add additional CSS-1 cationic emulsified asphalt to the sand slurry as needed for workability to ensure the mixture will completely fill the cracks. Strike off the sand slurry flush with the existing pavement surface and allow the mixture to cure. Top off cracks that were not completely filled with additional sand slurry. Do not place the HMA overlay until the slurry has fully cured.

The sand slurry shall consist of approximately 20 percent CSS-1 emulsified asphalt, approximately 2 percent portland cement, water (if required), and the remainder clean Class 1 or 2 fine aggregate per section 9-03.1(2). The components shall be thoroughly mixed and then poured into the cracks and joints until full. The following day, any cracks or joints that are not completely filled shall be topped off with additional sand slurry. After the sand slurry is placed, the filler shall be struck off flush with the existing pavement surface and allowed to cure. The HMA overlay shall not be placed until the slurry has fully cured. The requirements of Section 1-06 will not apply to the portland cement and sand used in the sand slurry.

In areas where HMA will be placed, use sand slurry to fill the cracks.

In areas where HMA will not be placed, fill the cracks as follows:

1. Cracks ¼ inch to 1 inch in width - fill with hot poured sealant.
2. Cracks greater than 1 inch in width – fill with sand slurry.

Hot Poured Sealant: For cracks that are to be filled with hot poured sealant, apply the material in accordance with these requirements and the manufacturer's recommendations. Furnish a Type 1 Working Drawing of the manufacturer's product information and recommendations to the Engineer prior to the start of work, including the manufacturer's recommended heating time and temperatures, allowable storage time and temperatures after initial heating, allowable reheating criteria, and application temperature range. Confine hot poured sealant material within the crack. Clean any overflow of sealant from the pavement surface. If, in the opinion of the Engineer, the Contractor's method of sealing the cracks with hot poured sealant results in an excessive amount of material on the pavement surface, stop and correct the operation to eliminate the excess material.

5-04.3(4)A2 Crack Sealing Areas Prior to Paving

In areas where HMA will be placed, use sand slurry to fill the cracks.

5-04.3(4)A3 Crack Sealing Areas Not to be Paved

In areas where HMA will not be placed, fill the cracks as follows:

A. Cracks ¼ inch to 1 inch in width - fill with hot poured sealant.
B. Cracks greater than 1 inch in width – fill with sand slurry.

5-04.3(4)B Vacant

5-04.3(4)C Pavement Repair

All planning bituminous pavement shall be complete before performing 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

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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. 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.

Reinforcing Fibers:

1. Delivery & Storage: Deliver fiber-reinforcement to plant in sealed, undamaged containers with labels intact and legible, indicating material name and lot number. Store materials covered and off the ground. Keep sand and dust out of boxes and do not allow boxes to become wet.

2. Add aramid and polyolefin reinforcing fiber blends at a dosage rate of one (1) pound per one (1) ton of asphalt.

3. Add alternative aramid fiber blends at a rate proposed by the manufacturer that achieves the ADSR, PCI, and FN results required in Section 5-04.2.

4. Have a fiber manufacturer's representative on site during mixing and production. This requirement can be waived if fiber manufacturer and asphalt producer can supply evidence of manufacturer's brand of fiber being successfully produced a minimum of three times at the asphalt plant to be used for the project.

5. Batch Plant. When a batch plant is used, add fiber to the aggregate in the weigh hopper and increase both dry and wet mixing times. Ensure that the fiber is uniformly distributed before the injection of asphalt cement into the mixture.

6. Drum Plant:
   a. Inject fibers through the RAP collar by feeding them with a blower tube system. Rate the feeding of fibers with the rate the plant is producing asphalt mix. If there is any evidence of fiber balls at the discharge chute, increase the mixing time and/or temperature or change the angle of the fiber feeder line to increase dry mixing time.
   b. When using a blower tube system, add fibers continuously and in a steady uniform manner. Provide automated proportioning devices and control delivery within ±10% of the mass of the fibers required. Perform an equipment calibration to the satisfaction of the fiber manufacturer's representative to show that the fiber is being accurately metered and uniformly distributed into the mix.

      Include the following with the blower tube system:

      - Low level indicators
      - No-flow indicators
      - A printout of feed rate status in pounds/minute
      - A section of transparent pipe in the fiber supply line for observing consistency of flow or feed.
      - Manufacturer's representative's approval of fiber addition system

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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"		0.20 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.

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.

Spreading and Finishing
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The Contractor shall meet with the Engineer or representative by the end of each working day to verify and confirm in writing and by signature the daily yields and quantities.

If the Contractor fails to follow this procedure, the Contractor accepts the Engineer's estimated quantities for the work completed that day.

Overages
The Contractor shall not exceed the negotiated quantity on any section by more than **five percent (5%)**, unless directed by the Engineer except HMA used for Middle Fork Road. Middle Fork Road shall be as shown in the Contract Plans or directed by the Engineer. Any material placed on each individual section in excess of the five percent shall be at the Contractor's expense.

This provision shall not relieve the Contractor of his/her responsibility to complete each section in its entirety.

Reinforcing Fibers:

1. Follow manufacturer's representative's recommendations for placement of FRAC.
2. Collect a small sample (10-20kg) of mix from the discharge chute during first 50 tons of production. If there are one or more undistributed fiber clips or bundles,

adjust mixing operations per manufacturer's recommendations to eliminate fiber bundles.

3. Visually observe FRAC mix in the back of first three trucks and every tenth truck thereafter to confirm adequate blending of the fiber.
4. Remove any observed fiber bundles from placed mixture and adjust operations per the manufacturer's recommendation to eliminate future fiber bundle development.

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	+/-5%	+/- 8%
No. 8 Sieve	+/- 4%	+/-8%
No. 200 sieve	+/- 1.0%	+/- 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 Con**tent – 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.

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 AASH-TO 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 to 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 Composite Pay Factor (CPF) shall be performed.

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

Testing of HMA for compliance of V_a will be 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 Composite Pay Factor (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 Composite Pay Factor (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 Composite Pay Factor (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 Composite Pay Factor (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 ASSHTO T 355, 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 WSDOT FOP for ASSHTO T 355 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.

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.

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 compaction test locations will be determined by the Engineer in accordance with WSDOT Test Method T 716.

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. The Contracting Agency will determine the random sample location using WSDOT Test Method T 716.

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 Composite Pay Factor (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 PFi 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

5-04.3(12)B1 HMA Sawcut and Seal

Prior to placing HMA on the bridge deck, establish sawcut alignment points at both ends of the bridge paving joint seals to be placed at the bridge ends, and at interior joints within the bridge deck when and where shown in the Plans. Establish the sawcut alignment points in a manner that they remain functional for use in aligning the sawcut after placing the overlay.

Submit a Type 1 Working Drawing consisting of the sealant manufacturer's application procedure.

Construct the bridge paving joint seal as specified ion the Plans and in accordance with the detail shown in the Standard Plans. Construct the sawcut in accordance with the detail shown in the Standard Plan. Construct the sawcut in accordance with Section 5-05.3(8)B and the manufacturer's application procedure.

5-04.3(12)B2 Paved Panel Joint Seal

Construct the paved panel joint seal in accordance with the requirements specified in section 5-04.3(12)B1 and the following requirement:

1. Clean and seal the existing joint between concrete panels in accordance with Section 5-01.3(8) and the details shown in the Standard Plans.

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 planning (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 (Milling) 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.

Locations of existing surfacing to be planed are as shown in the Drawings.

For mainline planing operations, use equipment with automatic controls and with sensors for either or both sides of equipment. The controls shall be capable of sensing the grade from an outside reference line, or a mat-referencing device. The automatic controls shall have a transverse slope controller capable of maintaining the mandrel at the desired transverse slope (expressed as a percentage) within plus or minus 0.1 percent.

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.

The Contractor where necessary shall plane or grind, and provide any hand work necessary to work around utility appurtenances, castings, lids, curbs, gutters, sidewalks, manholes, and catch basins to provide smooth transition of pavement to the finished thickness and grade as staked in the field or approved by the Engineer.

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, Metro 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 Paving Plan and for Planing Plan:
   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, to public convenience and safety, and to other con-tractors who may operate in the Project Site.
   d. Notifications required of Contractor activities, and coordinating with other entities and the public as necessary.
   e. Description of the sequencing of installation and types of temporary pavement markings as it relates to planning and to 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, street car rail, and castings, before planning, see 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 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 equipment as it relates to meeting Specification requirements.

c. Number of JMFs to be placed, and if more than one JMF how the Contractor will ensure different JMFs are distinguished, how pavers and MTVs are distinguished if more than one JMF is being placed at the time, 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

HMA approaches shall be constructed at the locations shown in the Plans or where staked by the Engineer. The Work shall be performed in accordance with Section 5-04.

(******)

5-04.4 Measurement

"HMA Class 3/8 In. PG 58H-22 Fiber Reinforced" per Ton.

(******)

5-04.5 Payment

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

"HMA Class 3/8 In. PG 58H-22 Fiber Reinforced" per Ton.

The unit contract price per ton for "HMA Class 3/8 In. PG 58H-22 Fiber Reinforced" shall be full compensation for all costs, including paving reinforcing fiber, 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.

(******)

5-04.5(1) Quality Assurance Price Adjustment

In the event that test results indicate the HMA does not meet specifications, a change order will be issued for the price adjustments for Quality of HMA Mixture and Quality of HMA Compaction based upon these specifications.

(******)

5-04.5(1)B Price Adjustments for Quality of HMA Compaction

The maximum CPF of a compaction lot is 1.00.

For each compaction lot of HMA when the CPF is less than 1.00, a Nonconforming 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 the NCCF, the quantity of HMA in the lot in tons and the unit contract price per ton of the mix.

(******)
The CPF shall be as follows:

Compaction	CPF
91.0% to 91.9%	95%
90.0% to 90.9%	90%
89.0% to 89.9%	80%
88.0% to 88.9%	75%
At or below 87.9%	Mix is removed

DIVISION 6
STRUCTURES

6-20 BURIED STRUCTURES

(*****)
The proposed 29-Ft Span by 12.5-Ft Tall by 60-ft Long Precast Concrete Split Box Culvert referenced and depicted throughout the Contract Plans shall be considered "Agency Designed Buried Structure No. 1" for this Contract. Additionally, Lewis County shall supply and deliver the 29-ft wide by 12.5-ft high by 60-ft long precast concrete split box culvert units as depicted in the Contract Plans for the project. The Contractor shall coordinate with the manufacturer for delivery of precast units. The Contractor should anticipate potential shipping delays due multiple unit deliveries, delivery truck round trips, and restrictive travel times on the Interstate 5 corridor. The Contractor shall be responsible for offloading the precast units from the delivery vehicle. The Contractor shall verify the condition of the precast concrete split box culvert units and shall assume responsibility of the structure upon receipt from the manufacturer at the project site. **The Contractor shall be solely responsible for coordination with the manufacturer for delivery of precast concrete units.**

Adjacent precast units shall be connected by welding the weld-tie anchors in accordance with the manufacturer's requirements. After connecting the weld-tie anchors, the Contractor shall paint the exposed metal surfaces with one coat of field primer. Keyways shall be filled with non-shrink grout conforming to manufacturer's requirements. The Contractor shall erect and backfill precast reinforced concrete split box culverts in accordance with the erection sequence specified in the shop drawings as approved by the Engineer, and construction equipment shall not be placed on the structure until grout has attained a minimum compressive strength of 2,500 psi.

Lewis County shall supply and deliver the 29-ft wide by 12.5-ft high by 60-ft long precast concrete split box culvert units as depicted in the Contract Plans for the project. Therefore all references to manufacturing and shipping specifications listed in Section 6-20 are not applicable and deleted from this Contract. The Contractor shall adhere to all requirements in Section 6-20 pertaining to culvert placement tolerances, preconstruction conference, assembly requirements, etc., associated with offloading and setting the structure at the project site.

For the Contractor's convenience, the Crumb Rd, MP 0.17 Hydraulic Memo is available on Lewis County's website (CallForBids - Project List (lewiscountywa.gov). Additionally, the project's Geotechnical Evaluation Report is made part of this Contract via inclusion as Appendix A.

6-20..4 Measurement
Section 6-20.4 is supplemented with the following:

"Agency Designed Buried Structure No. 1" shall not be measured.

6-20.5 Payment
Section 6-20.5 is supplemented with the following:

"Agency Designed Buried Structure No. 1", lump sum.
The lump sum contract price for "Agency Designed Buried Structure No. 1" shall be full pay for performing the work as specified, including: offloading owner furnished Precast Concrete Structure Units from delivery vehicles, erecting the structure (all split box culvert sections), and all other work and miscellaneous materials required complete the structure including; furnishing and installing non-shrink grout, furnishing and constructing weld ties (primer all metal surfaces), waterproofing precast unit joints and finishing all exposed precast surfaces with a Class 2 finish. The Contractor shall be fully responsible for all shipping coordination along with any and all additional costs as a result of shipping coordination/delays from the manufacturer to the project site.

DIVISION 7
Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains, and Conduits

7-02.1 Description
Section 7-02.1 is supplemented with the following:

(******)
The work includes a field fit coupling from an existing 48-inch diameter CMP to an 18-inch diameter pipe for the temporary pipe extension at a tributary drainage within the project limits. The field fit coupling shall be Contractor designed (and Agency approved) using sandbags, plastic, etc. to provide a temporary connection for the pipe extension when the temporary traffic detour road is being utilized. Additionally, the 18-inch diameter pipe shall follow the tributary drainage alignment and may require a 45-degree elbow.

7-02.5 Payment
Section 7-02.5 is supplemented with the following:

(******)
"Schedule A Culv. Pipe 18 In. Diam.", per linear foot.
All costs for supplying, installation, labor, minor excavation, field fit coupling (to an existing 48-inch diameter culvert), 45-degree elbow, and any other work involved shall be include in the per linear foot bid item price, no additional compensation will be provided for temporary culvert work.

DIVISION 8
MISCELLANEOUS CONSTRUCTION

8-02 ROADSIDE RESTORATION

8-02.1 Description
Section 8-02.1 is supplemented with the following:

(******)

The work described in this section, regardless of the nature or type of the materials encountered, includes supplying plant material, planting, installing plant protectors, installing bark mulch areas/rings (at tree and shrub locations) and installing identification stakes as shown in the Contract Plans, marked in the field, and as directed by the Engineer. This work shall be accomplished in accordance with all environmental permits regulating the work.

8-02.3 Construction Requirements

8-02.3(9)C Seeding with Fertilizers and Mulches

Section 8-02.3(9)C is supplemented with the following:

Seed Mix - Roadside: 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 by Common Name and (Botanical name)	Pounds Pure Live Seed (PLS) Per Acre
Elymus glaucus Blue Wildrye	34.4
Hordeum brachyantherum Meadow Barley	29.6
Lolium multiflorum Sterile Annual Ryyegrass	8.8
Festuca idahonesis Idaho Fescue	5.6
Festuca ovina Sheep Fescue	0.8
Deschampsia elongata Slender Hairgrass	0.48
Koeler cristata Prairie Junegrass	0.32
Total Pounds PLS Per Acre	80

After seeding the Contractor shall be responsible to ensure a healthy stand of grass, otherwise, the Contractor shall, restore eroded areas, clean up materials, and reapply the seed, at no cost to the Contracting Agency.

Seeds shall be certified “Weed Free,” indicating there are no noxious or nuisance weeds in the seed.

8-02.3(6) Mulch and Amendments

(******)

Section 8-02.3(6) is supplemented with the following:

Long-Term Wood Cellulose Fiber mulch shall be applied at a rate of 4,000 pounds per acre with all permanent seed mixes and shall conform to Section 9-14.4(2)A Long-Term Mulch of the Standard Specifications. No more than 2,000 pounds shall be applied in any single lift.

Tackifiers with mulch tracer shall be applied per the manufacturer's recommendation. PAM shall be added to seed mixes at the time of hydraulic application. Application rates and methods shall conform to Section 8-01.3(2)E of the Standard Specifications.

No fertilizer shall be used at this project site.

8-02.3(8)B Plant Installation
(******)
Section 8-02.3(8) is supplemented with the following:

STREAM PLANTING MITIGATION CONSTRUCTION

The Contractor shall grade, plant, and otherwise construct mitigated planting areas as shown in the Contract Plans, marked in the field, and required by the Engineer. The planting of the enhancement sites shall be performed by a biologist, horticulturist, landscape architect or other similar professional. The credentials of the supervisor of this work shall be approved by the Engineer prior to beginning work on this item.

Planting Zones
Planting zones shall be as depicted in the Contract Plans.

8-02.3(13) Plant Establishment
(******)
Section 8-02.3(13) is replaced with the following:

The Contractor shall provide a one-year plant guarantee period from the date of final acceptance, in accordance with performance standards of local, state and federal permits. At the end of the one-year guarantee period, all dead and unacceptable plant materials shall be replaced by the Contractor at the Contractor's expense. The Contractor shall provide maintenance and monitoring efforts during the guarantee period.

All shrubs and trees in the Planting Mitigation area shall be marked with an independent monitoring stake and include a 3-foot diameter mulch ring 3-inches in depth. Bark mulch shall be pulled back 3 inches from the plant base. Wood monitoring stakes shall be installed to a depth of 18 inches. Wood monitoring stakes shall be 2-inch square wood stakes three to four feet above grade (buried 18-inches). The top six inches of the monitoring stakes shall be painted and color coded to species, to aid in identification of dead and/or missing species.

Plant Protectors shall be placed around all tree and shrub species to be planted with the exception of *willow stakes* and *snoberry*. Plant protectors shall be made of solid flexible plastic and should be held in place with bamboo or wood stakes. Plant protectors shall be installed to a depth of three inches below the soil surface and extend nine to twelve inches above the surface. Stakes should extend a minimum two inches below and minimum two inches above the plant protector and be placed 2 to 3 inches away from the plant. Plant protectors shall be secured to stakes with a minimum of two zip ties or equivalent.

8-02.3(14) Plant Replacement

(******)

8-02.03(14) is supplemented with the following:

Monitoring stakes will be installed to a depth of 18 inches. Monitoring stakes shall be 2-inch square wood stakes three feet minimum above grade. The top six inches of the monitoring stakes shall be painted, with permanent paint (anticipated to last a period of 5 years) with the color key provided by Lewis County, to aid in identification of future dead and/or missing species.

8-02.4 Measurement

Section 8-02.4 is supplemented with the following:

(******)

"Planting Mitigation Construction", no specific unit of measure will apply to this lump sum item. Items specified are approximate and are provided for estimating purposes only. The successful Contractor shall provide the Contracting Agency a lump sum breakdown of all items after bid award.

8-02.5 Payment

Section 8-02.5 is supplemented with the following:

"Planting Mitigation Construction" per lump sum.

The unit contract price per Lump Sum for "Planting Mitigation Construction" shall be full compensation for furnishing and installing all plants, live stakes, monitoring stakes, Bark Mulch, and plant protectors - as described in Special Provision and in accordance with the USACE NWP Permit on the project site and all other applicable requirements and regulations. Material descriptions and construction requirements are as described in this Special Provision. The long term monitoring and maintenance (after the one-year plant guarantee period) shall be completed by others.

"Seeding and Mulching" per acre.

The unit contract price per acre for "Seeding and Mulching" shall be full pay for furnishing and installing the specified seed mix, long-term mulch, and PAM, chemical weed and grass control/removal immediately prior to seeding to produce the specified surface conditions, scarification of compacted areas, minor filling of ruts, and all material and equipment necessary and incidental to the approved application of the specified seed.

8-11, GUARDRAIL

8-11.3(1) Beam Guardrail

(******)

Section 8-11.3(1) is supplemented with the following:

All posts for this project shall be galvanized steel posts. See Section 9-16.3(2) Posts and Blocks of these Special Provisions.

8-15 RIPRAP

8-15.1 Description

(******)

Section 8-15.1 is supplemented with the following:

This work consists of furnishing, mixing, and placing aggregates for Streambed Material and installing anchored Large Woody Debris as shown in the Contract Plans. The aggregates shall be of the type specified and in conformity with the lines and grades and dimensions shown in the Contract Plans or established by the Engineer. Anchored Large Woody Debris shall be of the size and type as specified in the Contract Plans and these Special Provisions.

8-15.2 Materials

(******)

Section 8-15.2 is supplemented with the following:

Streambed Sediment	9-03.11(1)
4" Streambed Cobbles	9-03.11(2)
8" Streambed Cobbles	9-03.11(2)
12" Streambed Cobbles	9-03.11(2)
Two Man Streambed Boulders	9-03.11(3)

Streambed Sand

Material shall be clean, naturally occurring water rounded material. Manufactured aggregate is not allowed. Streambed Sand shall be a 3/8" maximum gradation, meeting the following requirements for grading as shown in the table below.

Sieve Size	Percent Passing
1/2"	99-100
3/8"	90-100
No. 4	90-100
No. 8	32-67
No. 200	2-10

Large Woody Debris (LWD)

Large woody debris shall consist of 16-inch diameter varying trunk length log stems with root wads attached as shown in the Contract Plans. Root wads shall consist of stout root balls with all roots attached (do not trim fine roots) that form a 6-ft root wad diameter minimum as depicted in the Contract Plans. Large woody debris shall be imported green (not stockpiled) Douglas fir or Western Red Cedar species that are sound and free from rot or decay. The log diameter at breast height (DBH) shall be measured 4.5 feet from the rootwad, and not include local widening at the root wad.

LWD Ballast Boulders

Ballast rock for LWD shall be naturally occurring rock (round or sub-angular boulders) and roughly equi-dimensional; length not more than 2.5 times the width or thickness as measured at the middle of the stone. Rock is to be hard, durable, and abrasive resistant stone free from seams, cracks, cleavage planes, laminations, organics, and debris. The minimum weight of each ballast rock shall be 2,500 lbs.

8-15.3 Construction Requirements

(******)

Section 8-15.3 is supplemented with the following:

Streambed Material

Streambed Material shall consist of all stream restoration aggregate material (sediment, cobble, sand, boulders, etc.) designed for this project including: Streambed Mix, Meander Bar Mix, and Streambed Sand placed within the stream as described in these Special Provisions and depicted in the Contract Plans.

Streambed Mix

The Contractor shall create "Streambed Mix" by combining 1 part Streambed Sediment, 2 parts 4" Cobbles and 2 parts 8" Cobbles on-site or prior to hauling. Place Streambed Mix in the new stream channel and culvert as profiled and detailed in the Contract Plans. Streambed Mix shall be placed in 1-foot (maximum) lifts. Approximately 0.25-feet of Streambed Sand shall be placed on top of each 1-foot lift of Streambed Mix to provide stability to the cobble/sediment mix and fill all voids. Streambed Sand shall be thoroughly watered to create a uniform, non-porous Streambed Mix at each 1-foot layer. Applications of water and infilling Streambed Sand shall be repeated until all visible voids are filled and the surface is sealed at each 1-foot layer of Streambed Mix. Each layer shall be visually accepted by the Engineer prior to beginning construction of the successive lift.

Meander Bar Mix

The Contractor shall create "Meander Bar Mix" by combining 1 part Streambed Sediment and 4 parts 12" Cobbles on-site or prior to hauling. Place Meander Bar Mix in the new stream channel within the culvert section as depicted, profiled and detailed in the Contract Plans. Meander Bar Mix shall be placed in 1-foot (maximum) lifts. Approximately 0.25-feet of Streambed Sand shall be placed on top of each 1-foot lift of Meander Bar Mix to provide stability to the cobble mix and fill all voids. Streambed Sand shall be thoroughly watered to create a uniform, non-porous Meander Bar Mix at each 1-foot layer. Applications of water and infilling Streambed Sand shall be repeated until all visible voids are filled and the surface is sealed at each 1-foot layer of Meander Bar Mix. Each layer shall be visually accepted by the Engineer prior to beginning construction of the successive lift.

Streambed Boulders

Two Man Streambed Boulders shall be partially buried (1/3 exposed surface) within the Streambed Mix and situated 1-ft to 3-ft from the constructed low flow channel within the stream regrade area. Final location of Two Man Streambed Boulders shall be field determined by the Engineer.

The following breakdown of material components associated with the anticipated Streambed Material is provided for the Contractor's convenience for bidding purposes, Bid Item payment will be based on actual quantity placed and accepted by the Engineer:

Streambed Material Approximate Quantities

200 Ton	Streambed Sediment
150 Ton	4" Cobbles
150 Ton	8" Cobbles
150 Ton	12" Cobbles
15 Ton	Two Man Streambed Boulders
75 Ton	Streambed Sand

Streambed Material Preconstruction Conference

A streambed material preconstruction conference shall be held at least 5 working days prior to the Contractor beginning streambed construction to discuss the goals and methods of streambed construction, which shall include construction procedures, personnel, and proposed equipment.

Those attending shall include:

1. Contractor: The superintendent, on site supervisor, foreman, the Environmental Compliance Lead and any other personnel that will have on-site responsibility for Streambed Material and Streambed Boulder placement.
2. Owner: The Assistant County Engineer, Design Engineer, Environmental Planner, Hydraulics Engineer, and key inspection personnel.
3. Representatives from interested permitting agencies and affected Tribes will be invited by Owner.

Notice of the meeting date shall be given to the Engineer 14 calendar days prior to this meeting taking place.

Large Woody Debris (LWD)

This work consists of minor excavation and backfill to place large woody debris along the toe or bank of the stream channel slope as depicted and in the Contract Plans. Care shall be taken when handling log materials to minimize damage such as abrasion, splitting, crushing and shearing to the tree trunk and root wads. LWD damaged by handling shall be replaced at the Contractor's expense.

Log to Ballast Rock Connection

The Contractor shall place ballast rocks as shown in the Plans or as directed by the Engineer with the placement of each LWD. The Contractor shall first drill and install wire rope (drilled through or with epoxy) prior to placing rock. Secure bonding of the epoxy shall be tested by lifting rock off the ground by only holding on the wire rope. Placing of ballast rocks shall be carried out by excavator. End dumping, using chutes or similar methods will not be permitted. After placing the rock at its' proper location as directed by the Engineer, wrap wire rope around logs as shown in typical details in the Plans. Wherever wire rope is wrapped around a Log, a 1 to 1-½ inch deep notch shall be cut into the Log approximately half way around. The wire rope shall be fitted into the notch, tensioned to ~¼ of the wire rope working load, and secured to itself using three (3) wire rope clips or other approved attachment method. Wire rope clips shall be spot welded (or threads fouled) after tightening to prevent loosening or theft. Each LWD piece shall be anchored with rock ballast near the root wad end and cut end. Rock ballast shall be one round or sub-angular boulder/rock (2,500-lbs minimum and drilled through or epoxied) installed upstream of LWD.

8-15.4 Measurement

(******)

Section 8-15.4 is supplemented with the following:

"Streambed Material" shall be measured per Ton.

Streambed Material per ton shall include all components of Streambed Mix, Meander Bar Mix, Streambed Sand, and Two-Man Streambed Boulders as described above. The unit contract price per ton for Streambed Material shall be full pay for furnishing all labor, mixing, haul, tools, materials, water and equipment required to place material as shown in the Contract Plans or as directed by the Engineer.

"Large Woody Debris" shall be measured per Each installed regardless of length.

8-15.5 Payment

(******)

Section 8-15.5 is supplemented with the following:

"Streambed Material" per Ton.
The unit contract price per ton for Streambed Material (Streambed Mix, Meander Bar Mix, Streambed Sand, and Two-Man Streambed Boulders) specified shall be full pay for furnishing all labor, tools, equipment, water and materials required to construct the stream channel as depicted in the Contract Plans or as directed by the Engineer.

"Large Woody Debris", per Each.
Payment for "Large Woody Debris" per each, shall be full pay for the Work described in this Section including excavation, backfilling and compaction native material, supplying and installing logs with root wads, supplying and installing ballast rock, supplying and installing wire rope with wire clips, staples, epoxy and all other work required to complete Large Woody Debris anchoring and installation.

DIVISION 9
MATERIALS

(******)

SECTION 9-02, BITUMINOUS MATERIALS

9-02.1 Asphalt Material, General

The second paragraph is revised to read:

The Asphalt Supplier of Performance Graded (PG) asphalt binder and emulsified asphalt shall have a Quality Control Plan (QCP) in accordance with WSDOT QC 2 "Standard Practice for Asphalt Suppliers That Certify Performance Graded and Emulsified Asphalts". The Asphalt Supplier's QCP shall be submitted and receive the acceptance of the WSDOT State Materials Laboratory. Once accepted, any change to the QCP will require a new QCP to be submitted for acceptance. The Asphalt Supplier of PG asphalt binder and emulsified asphalt shall certify through the Bill of Lading that the PG asphalt binder or emulsified asphalt meets the Specification requirements of the Contract.

9-02.1(4) Performance Graded Asphalt Binder (PGAB)

This section's title is revised to read:

Performance Graded (PG) Asphalt Binder

The first paragraph is revised to read:

PG asphalt binder meeting the requirements of AASHTO M 332 Table 1 of the grades specified in the Contract shall be used in the production of HMA. For HMA with greater than 20 percent RAP by total weight of HMA, or any amount of RAS, the new asphalt binder, recycling agent and recovered asphalt (RAP and/or RAS) when blended in the proportions of the mix design shall meet the PG asphalt binder requirements of AASHTO M 332 Table 1 for the grade of asphalt binder specified by the Contract.

The second paragraph, including the table, is revised to read:

In addition to AASHTO M 332 Table 1 specification requirements, PG asphalt binders shall meet the following requirements:

	Additional Requirements by Performance Grade (PG) Asphalt Binders

Property	Test Method	PG58S-22	PG58H-22	PG58V-22	PG64S-28	PG64H-28	PG64V-28
RTFO Residue: Average Percent Recovery @ 3.2 kPa	AASHTO T 350[1]			30% Min.	20% Min.	25% Min.	30% Min.
[1]Specimen conditioned in accordance with AASHTO T 240 – RTFO.							

The third paragraph is revised to read:

The RTFO J_{nrdiff} and the PAV direct tension specifications of AASHTO M 332 are not required.

This section is supplemented with the following:

If the asphalt binder verification sample test results fail to meet AASHTO Test Method T 350 "Standard Method of Test for Multiple Stress Creep Recovery (MSCR) Test of Asphalt Binder Using a Dynamic Shear Rheometer (DSR)" for average percent recovery @ 3.2 kPa for the applicable grades of binder in accordance with Section 9-02.1(4), the Contracting Agency may elect to test the sample using AASHTO Test Method T 301 "Standard Method of Test for Elastic Recovery Test of Asphalt Materials by Means of a Ductilometer."

When AASHTO T 301 is used, a minimum of 65% elastic recovery (ER) will be required when tested at 25°C ± 0.5°C.

9-03 AGGREGATES

9-03.8 Aggregates for Hot Mix Asphalt

9-03.8 (2) HMA Test Requirements

(******)

Section 9-03.8(2) is supplemented with the following:

ESAL's

The number of ESAL's for the design and acceptance of the HMA for Interstate Avenue shall be *** 1*** million.

9-03.8(7) HMA Tolerances and Adjustments

(******)

Delete item 1 and replace it with the following:

1. **Job Mix Formula Tolerances**. After the JMF is determined as required in 5-04.3(7)A, the constituents of the mixture at the time of acceptance shall conform to the following tolerances:

	Nonstatistical Evaluation	Commercial Evaluation
Aggregate, percent passing		
1", ¾", ½", and 3/8" sieves	±6%	±8%
U.S. No. 4 sieve	±6%	±8%
U.S. No. 8 sieve	±4%	±8%

U.S. No. 16 sieve	±4%	±8%
U.S. No. 30 sieve	±4%	±8%
U.S. No. 50 sieve	±4%	±8%
U.S. No. 100 sieve	±4%	±8%
U.S. No. 200 sieve	±2.0%	±3.0%
Asphalt Binder	±0.5%	±0.7%
VMA	1.5% below minimum value in 9-03.8(2)	
VFA	min. and max. as listed in 9-03.8(2)	
Va	2.5% minimum and 5.5% maximum	

These tolerance limits constitute the allowable limits as described in Section 1-06.2. The tolerance limit for aggregate shall not exceed the limits of the control points section, except the tolerance limits for sieves designated as 100% passing will be 99-100.

9-16.3(2) Posts and Blocks

Section 9-16.3(2) is supplemented with the following:

(******)

All guardrail posts shall be galvanized steel.

POWER EQUIPMENT

(******)

The successful bidder will be required to furnish the County a list of all equipment that they anticipate utilizing on this project.

The bidder's attention is directed to the attached Power Equipment Form, which the successful bidder will be required to complete and return with the contract documents. This information will enable hourly rental rates to be computed by the County, utilizing the "Rental Rate Blue Book for Construction Equipment". No payment for any force account work will be allowed until this form has been returned and accepted by the County.

E-VERIFY

(******)

“Effective June 21st, 2010, all contracts with a value of ≥ $100,000 shall require that the awarded contractor register with the Department of Homeland Security E-Verify program. Contractors shall have sixty days after the execution of the contract to register and enter into a Memorandum of Understanding (MOU) with the Department of Homeland Security (DHS) E-Verify program. After completing the MOU the contractor shall have an additional sixty days to provide a written record on the authorized employment status of their employees and those of any sub-contractor(s) currently assigned to the contract. Employees hired during the execution of the contract and after submission of the initial verification will be verified to the county within 30 days of hire, as reported from the E-Verify program. The contractor will continue to update the County on all corrective actions required and changes made during the performance of the contract.”

BOND

(******)

The Bidder's special attention is directed to the attached bond form, which the successful bidder will be required to execute and furnish the County. **NO OTHER BOND FORMS WILL BE ACCEPTED.** The bond shall be for the full amount of the contract.

LEWIS COUNTY ESTIMATES AND PAYMENT POLICY

(******)

Payment cutoff shall be the last day of each month, inclusive of that day. On or before the 5th day of each calendar month during the term of this contract, the Contracting Agency shall prepare monthly Progress Payments for work completed and material furnished. If the Contractor agrees, the Contractor will approve the Progress Payment and return the estimate to the Contracting Agency by the 15th day of that same calendar month. The Contracting Agency shall prepare a voucher based upon the approved Progress Payment and payment based thereon shall be due the Contractor near the 10th day of the next calendar month. Material Supply contracts involving delivery of prefabricated material or stockpile material only (no physical work on Contracting Agency property) may be reimbursed via Contractor generated invoices upon written approval by the Engineer. Reimbursement by invoice shall not be subject to late charges listed on the Contractor's standard invoice form.

When the Contractor reports the work is completed he/she shall then notify the Contracting Agency. The Contracting Agency shall inspect the work and report any deficiencies to the Contractor. When the Contracting Agency is satisfied the work has been completed in accordance with all plans and specifications, the Contracting Agency shall then accept the work.

Upon completion of all work described in this Contract, the Contracting Agency shall prepare a Final Progress Payment and Final Contract Voucher for approval by the Contractor and processing for final payment. Release of the Contract Bond will be 60 days following Contracting Agency Final Acceptance of Contract, provided the conditions of Section 1-03.4 and Section1-07.2 of these Special Provisions have been satisfied.

APPENDICES

(July 12, 1999)

The following appendices are attached and made a part of this contract:

****** APPENDIX A:
Geotechnical Engineering Report

APPENDIX B:
Washington State Prevailing Wage Rates
Wage Rate Supplement
Wage Rate Benefit Code Key

APPENDIX C:
Bid Proposal Documents

APPENDIX D:
Contract Documents

APPENDIX E:
Federal Contract Provisions

APPENDIX F:
Environmental Permit Documents

APPENDIX G:
Approved Culvert Shop Drawings
Contract Plans ******

(January 10, 2022)
Standard Plans
The State of Washington Standard Plans for Road, Bridge and Municipal Construction M21-01, effective September 13, 2021, is made a part of this contract.

The Standard Plans are revised as follows:

B-90.40
Valve Detail – DELETED

C-8
DELETED

C-8A
DELETED

C-20.10
Note 1: "Refer to Standard Plan C-1b and C-20.11 for additional details not shown on this plan." is revised to read: "Refer to Standard Plan C-1b for additional details not shown on this plan."

C-60.10
Sheet 1, ADD Note: NOTE: STEEL WELDED WIRE REINFORCEMENT DEFORMED FOR CONCRETE MAY BE SUBSTITUTED FOR REINFORCING STEEL IN ACCORDANCE WITH STANDARD SPECIFICATION, SECTION 6-10.3

Sheet 2, New Note 5: The connecting pin may be fabricated with a forged head as shown on Standard Plan C-60.15."

C-60.80
DELETED

C-85.16
DELETED

C-85.20
DELETED

D-10.10
Wall Type 1 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT Bridge Design Manual (BDM) and the revisions stated in the 11/3/15 Bridge Design memorandum.

D-10.15
Wall Type 2 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the 11/3/15 Bridge Design memorandum.

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
Wall Type 7 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the 11/3/15 Bridge Design memorandum.

D-10.45
Wall Type 8 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the revisions stated in the 11/3/15 Bridge Design memorandum.

D-15.10
STD Plans D-15 series “Traffic Barrier Details for Reinforced Concrete Retaining Walls” are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

D-15.20
STD Plans D-15 series “Traffic Barrier Details for Reinforced Concrete Retaining Walls” are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

D-15.30
STD Plans D-15 series “Traffic Barrier Details for Reinforced Concrete Retaining Walls” are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

G-90.11
DELETED

G-90.40
DELETED

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-20.26

Add Note 1, “1. One accessible pedestrian pushbutton station per pedestrian pushbutton post.”

J-20.16
View A, callout, was – LOCK NIPPLE, is revised to read; CHASE NIPPLE

J-21.10
Sheet 1, Elevation View, Round Concrete Foundation Detail, callout – “ANCHOR BOLTS ~ □” (IN) x 30” (IN) FULL THREAD ~ THREE REQ’D. PER ASSEMBLY” IS REVISED TO READ: “ANCHOR BOLTS ~ □” (IN) x 30” (IN) FULL THREAD ~ FOUR REQ’D. PER ASSEMBLY”
Sheet 1 of 2, Elevation view (Round), add dimension depicting the distance from the top of the foundation to find 2 #4 reinforcing bar shown, to read; 3” CLR.. Delete “(TYP.)” from the 2 □” CLR. dimension, depicting the distance from the bottom of the foundation to find 2 # 4 reinf. Bar.
Sheet 1 of 2, Elevation view (Square), add dimension depicting the distance from the top of the foundation to find 1 #4 reinforcing bar shown, to read; 3” CLR. Delete “(TYP.)” from the 2 □” CLR. dimension, depicting the distance from the bottom of the foundation to find 1 # 4 reinf. Bar.
Sheet 2 of 2, Elevation view (Round), add dimension depicting the distance from the top of the foundation to find 2 #4 reinforcing bar shown, to read; 3” CLR. Delete “(TYP.)” from the 2 □” CLR. dimension, depicting the distance from the bottom of the foundation to find 2 # 4 reinf. Bar.
Sheet 2 of 2, Elevation view (Square), add dimension depicting the distance from the top of the foundation to find 1 #4 reinforcing bar shown, to read; 3” CLR. Delete “(TYP.)” from the 2 □” CLR. dimension, depicting the distance from the bottom of the foundation to find 1 # 4 reinf. Bar.
Detail F, callout, “Heavy Hex Clamping Bolt (TYP.) ~ 3/4” (IN) Diam. Torque Clamping Bolts (see Note 3)” is revised to read; “Heavy Hex Clamping Bolt (TYP.) ~ 3/4” (IN) Diam. Torque Clamping Bolts (see Note 1)”
Detail F, callout, “3/4” (IN) x 2’ – 6” Anchor Bolt (TYP.) ~ Four Required (See Note 4)” is revised to read; “3/4” (IN) x 2’ – 6” Anchor Bolt (TYP.) ~ Three Required (See Note 2)”

J-21.15
Partial View, callout, was – LOCK NIPPLE ~ 1 □” DIAM., is revised to read; CHASE NIPPLE ~ 1 □” (IN) DIAM.

J-21.16
Detail A, callout, was – LOCKNIPPLE, is revised to read; CHASE NIPPLE

J-22.15
Ramp Meter Signal Standard, elevation, dimension 4’ - 6” is revised to read; 6’-0”
(2x) Detail A, callout, was – LOCK NIPPLE ~ 1 □” DIAM. is revised to read; CHASE NIPPLE ~ 1 □” (IN) DIAM.

J-40.10
Sheet 2 of 2, Detail F, callout, “12 – 13 x 1 □” S.S. PENTA HEAD BOLT AND 12” S. S. FLAT WASHER” is revised to read; “12 – 13 x 1 □” 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.”

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-40.00-00.....8/11/09
A-40.10-04.....7/31/19
A-40.15-00.....8/11/09
A-40.20-04.....1/18/17
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A-50.10-01……...8/17/21
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-10.20-02.....3/2/18
B-10.40-02.....8/17/21
B-10.70-02……8/17/21
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-25.60-02.....2/27/18
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-30.40-03.....2/27/18
B-30.50-03.....2/27/18
B-30.60-00……..9/9/20
B-30.70-04.....2/27/18
B-30.80-01.....2/27/18
B-30.90-02.....1/26/17
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B-35.40-00.....6/8/06
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
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B-60.20-02.....9/9/20
B-60.40-01.....2/27/18
B-65.20-01.....4/26/12
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B-70.20-00.....6/1/06
B-70.60-01.....1/26/17
B-75.20-03.....8/17/21
B-75.50-01.....6/10/08
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.....9/9/20
C-1b.....9/9/20
C-1d.....10/31/03
C-2c.....8/12/19
C-4f.....8/12/19
C-6a.....10/14/09
C-7.....6/16/11
C-7a.....6/16/11
C-8.....2/10/09
C-8a.....7/25/97
C-20.10-07.....8/20/21
C-20.14-04.....8/12/19
C-20.15-02.....6/11/14
C-20.18-03.....8/12/19
C-20.40-08.....8/20/21
C-20.41-03.....8/20/21
C-20.42-05.....7/14/15
C-20.45.02.....8/12/19
C-22.16-07.....9/16/20
C-22.40-08.....9/16/20
C-22.45-05.....9/16/20
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C.24.10-02.....8/12/19
C-25.20-07.....8/20/21
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C-25.26-05.....8/20/21
C-25.30-01…….8/20/21
C-25.80-05.....8/12/19
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C-60.20-00……9/24/20
C-60.30-01……8/17/21
C-60.40-00……..8/17/21
C-60.45-00……..8/17/21
C-60.50-00……..8/17/21
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C-85.10-00.....4/8/12
C-85.11-01.....9/16/20
C-85.15-02.....8/27/21
C-85-18-02.....8/20/21

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D-2.08-00.....11/10/05
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D-2.34-01.....1/6/09
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D-2.46-02……8/13/21
D-2.60-00.....11/10/05
D-2.62-00.....11/10/05
D-2.64-01.....1/6/09
D-2.66-00.....11/10/05
D-2.68-00.....11/10/05
D-2.80-00.....11/10/05
D-2.84-00.....11/10/05
D-2.88-00.....11/10/05
D-2.92-00.....11/10/05
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D-3.17-02……5/9/16
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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

E-1.....2/21/07
E-2.....5/29/98
E-4.....8/27/03
E-4a.....8/27/03

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F-10.18-02.....9/24/20
F-10.40-04.....9/24/20
F-10.42-00.....1/23/07
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F-10.64-03.....4/22/14
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F-40.14-03.....6/29/16
F-40.15-04.....9/25/20
F-40.16-03.....6/29/16
F-45.10-03.....8/13/21
F-80.10-04.....7/15/16

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G-90.30-04……7/11/17
G-95.10-02.....6/28/18

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G-95.20-03.....6/28/18
G-95.30-03.....6/28/18

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H-70.20-02.....8/17/21

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I-30.17-01.....6/12/19
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I-30.40-02.....6/12/19
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I-60.10-01.....6/10/13
I-60.20-01.....6/10/13
I-80.10-02.....7/15/16

J-10.....7/18/97
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J-10.22-02.....8/18/21
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J-12.16-00……6/28/18
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J-22.16-03.....7/10/15
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J-29.16-02.....7/21/16
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J-40.20-03…...4/28/16
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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-50.05-00……7/21/17
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J-75.45-02……6/1/16
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-86.10-00……6/28/18
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J-90.20-03…….6/28/18
J-90.21-02……6/28/18
J-90.50-00……6/28/18

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J-28.22-00.....8/07/07
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J-60.12-00…....5/20/13

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K-80.34-00……8/17/21
K-80.35-01.....9/16/20
K-80.37-01.....9/16/20

L-10.10-02.....6/21/12
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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

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M-1.60-03.....9/25/20
M-1.80-03.....6/3/11
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M-2.21-00……..7/10/15
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M-3.20-03.....9/25/20
M-3.30-04.....9/25/20
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-9.60-00……..2/10/09
M-11.10-03.....8/7/19
M-12.10-02……9/25/20
M-15.10-01.....2/6/07
M-17.10-02.....7/3/08
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M-20.30-04.....2/29/16
M-20.40-03.....6/24/14
M-20.50-02.....6/3/11
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M-24.40-02.....4/20/15
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M-24.66-00……7/11/17
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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-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

APPENDIX A

GEOTECHNICAL ENGINEERING REPORT

Technical Memorandum

TO:	Mr. Rodney Lakey, PE, Senior Engineer, Lewis County Public Works
FROM:	Benjamin Ford, PE, and Daniel Simpson, PE
DATE:	March 31, 2021
RE:	**Summary of Geotechnical Engineering Services** **Crumb Road MP 0.17 Culvert Replacement** **Morton, Washington** **Project No. 1647008.010.013**

Introduction

This memorandum summarizes the results of geotechnical engineering services provided by Landau Associates, Inc. (LAI) in support of the Crumb Road MP 0.17 Culvert Replacement project in Morton, Washington (site; Figure 1). Services were provided in accordance with the scope outlined in Task Order No. 2 between LAI and Lewis County Public Works (County, project owner).

This memorandum has been prepared with information provided by the County and with data collected during LAI's geotechnical field exploration and laboratory testing programs.

Project Understanding

The County proposes to replace a culvert at Crumb Road milepost 0.17. The existing culvert consists of a corrugated metal squash pipe, measuring 11 feet (ft) wide by 7 ft high, that carries Highland Creek beneath Crumb Road. The roadway shoulder at the culvert inlet was damaged during recent flooding events.

The County plans to replace the culvert with a 29-ft-wide-by-12-ft-high concrete split box culvert. The replacement culvert design does not include wing walls. Minor modifications will be made to the creek alignment and roadway profile.

Surface Conditions

The site consists of a two-lane asphalt road (Crumb Road) built on an embankment at the existing culvert crossing. The maximum fill height of the embankment is approximately 11 ft. The roadway has sloughed near the culvert outlet. The creek bank is forested with coniferous and deciduous trees with an understory of vegetation common to the area. Site topography is shown on Figure 2.

Geologic Conditions

Geologic information for the site and the surrounding area was obtained from the *Geologic Map of the Centralia Quadrangle, Washington* (Schasse 1987). Surficial deposits in the vicinity of the

site are mapped as alluvium (Qal), a unit that typically consists of unconsolidated or semi-consolidated, alluvial clay, silt, sand, gravel, and cobble deposits. Basaltic andesite and andesite flows (Tva) are mapped in the vicinity of the site and consist of volcanic deposits of basaltic andesite and andesite with interbeds of flow breccia, shale, tuff, and volcanic sandstone.

The subsurface conditions observed in LAI's December 2020 and February 2021 explorations were generally consistent with the mapped geology for the site; however, the alluvium observed in LAI's explorations was consistent with catastrophic flood deposits, not included in the geologic description. Undocumented embankment fill also was encountered in LAI's explorations.

Subsurface Conditions

LAI explored site subsurface conditions on December 22, 2020 by advancing two hollow-stem auger borings (B-1 and B-2). Holocene Drilling, Inc., subcontracted by LAI, advanced boring B-1 approximately 51.5 ft below ground surface (bgs) and boring B-2 42.7 ft bgs.

LAI returned to the site on February 17, 2021 and advanced two cone penetrometer test soundings (CPT-1 and CPT-2). In Situ Engineering, subcontracted by LAI, advanced sounding CPT-1 approximately 65.3 ft bgs and sounding CPT-2 43.5 ft bgs. The approximate locations of the explorations are shown on Figure 2.

LAI personnel monitored the field explorations, collected representative soil samples, and maintained a detailed record of the subsurface soil and groundwater conditions observed. Subsurface conditions were described using the soil classification system shown on Figure 3, in general accordance with ASTM International (ASTM) standard test method D2488, *Standard Practice for Description and Identification of Soils (Visual-Manual Procedures).* Summary boring logs are presented on Figures 4 and 5. CPT data are presented on Figures 6 and 7.

Samples were transported to LAI's soils laboratory for further examination and testing. Natural moisture content tests were performed on select soil samples in accordance with ASTM standard test method D2216-19, *Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass.* The natural moisture content is shown as "W = xx" (i.e., percent of dry weight) in the "Test Data" column on Figures 4 and 5.

Atterberg limits determinations were performed on select soil samples in accordance with ASTM standard test method D4318-00, S*tandard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.* Samples selected for Atterberg limits determinations are designed with an "AL" in the "Test Data" column on Figures 4 and 5. The results of the Atterberg limits determinations are presented on Figure 8.

Field log descriptions were checked against the laboratory samples and updated in accordance with ASTM standard test method D2487, *Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System).*

Soil Conditions

The soils observed underlying existing surface conditions (i.e., asphalt pavement) were categorized into three general units:

- **Fill:** Fill was observed in borings B-1 and B-2 and in soundings CPT-1 and CPT-2. This unit consisted of silty, sandy, fine to coarse gravel in a medium dense, moist condition. The fill extended approximately 2.5 to 3.0 ft bgs.
- **Alluvium:** Alluvium was observed beneath the fill in all four explorations. The alluvium consisted of silt with variable sand, gravel, and organic content; of fine-fibrous peat; of organic silt with variable sand and organic content; or of sand with variable silt and gravel content. The alluvium was in a very soft/loose to medium stiff/dense, moist to wet condition. Boring B-1 was terminated in this unit.
- **Basalt:** Very dense, weathered basalt was observed beneath the alluvium in boring B-2 and in soundings CPT-1 and CPT-2. These explorations were terminated at the contact between the alluvium and basalt units.

Groundwater

During LAI's December 2020 field investigation, groundwater was observed at 12.0 ft bgs in boring B-1 and at 19.5 ft bgs in boring B-2.

Groundwater conditions will vary depending on local subsurface conditions, weather conditions, and other factors. Furthermore, groundwater levels are expected to fluctuate seasonally, with maximum groundwater levels occurring during late winter and early spring. LAI anticipates that site groundwater levels will approximate the surface water elevation of nearby Highland Creek.

Conclusions and Recommendations

Based on the subsurface conditions observed in LAI's explorations, mitigation will be required to provide adequate foundation support for the proposed culvert replacement. The following key points should be considered when preparing project plans and specifications:

- **Timber pile ground improvement (GI):** Highly compressible peat and organic silt were observed in LAI's explorations. LAI recommends that timber piles are installed beneath the proposed culvert to reduce seismic effects and settlement risks. A load transfer platform (LTP) should be used to distribute point loads from the timber piles.
- **Embankment settlement:** Differential settlement may occur at the transition between the roadway embankment and culvert structure, where existing embankment soil will be

replaced with structural fill (assumed to be 20 percent heavier). The following measures should be taken to mitigate embankment settlement:

  - Cantilever shoring (sheet pile/cofferdam), extending to elevation 902 ft or more, should be placed 3 ft from the neat line of the structure. This distance can be extended to provide adequate workspace.
  - To reduce backfill to a net-zero increase, the initial 4 ft of structural fill (wall backfill), placed between the culvert and shoring system, should consist of expanded polystyrene (EPS) geofoam. To limit the potential for buoyancy/uplift, the EPS geofoam should not be placed in areas with less than 8 ft of soil cover.
  - To provide a smooth transition across the structure, final paving should be completed 60 days after construction. If final paving is completed earlier, pavement repair or releveling may be required.

- **Dewatering:** Low-permeability, water-bearing soil was observed at the proposed excavation depths. As such, the contractor should anticipate the need for construction dewatering. The sheet pile shoring system recommended above can be used to facilitate dewatering. LAI anticipates that groundwater entering the sheet pile shoring system (cutoff wall/cofferdam) can be managed with conventional sumps and pumps.
- **Moisture-sensitive soil:** Site soils are highly moisture sensitive and not suitable for reuse as structural fill.

LAI discussed other structure types and foundation support options with the County when preparing this memorandum. Several conventional structure types or foundation support options were ruled out due to the presence of an approximately 30-ft layer of alluvium containing fibrous peat and organic silt. Structures with an abutment (steel or precast concrete bridge) or continuous footing (three-sided concrete/metal arch) typically could be supported by a driven H-pile foundation; however, the weak alluvium layer will not provide adequate lateral support for H-pile-supported structures. As such, three-sided structures and a pile-supported precast steel/concrete bridge were determined not to be feasible culvert replacement options. Conventional construction replacement options are limited to a bridge (with a drilled shaft-supported foundation) or timber pile-supported ground improvement (with a load transfer platform).

Seismic Design

Buried structures (culverts) with span lengths of 20 ft or more typically are designed for seismic loading. Culverts with span lengths of less than 20 ft typically do not require seismic design. The design parameters in Table 1 were determined in accordance with the American Association of State Highway and Transportation Officials' (AASHTO) *LRFD* (Load and Resistance Factor Design) *Bridge Design Specifications* (2017). AASHTO recommends using a "7 percent probability of

exceedance in 75 years" (nominal 1,000-year earthquake) design event to develop a design spectrum for culvert structures (2017).

Table 1. Seismic Design Parameters

Site Class	M	PGA (g)	A_s (g)	S_s (g)	S_1 (g)	F_a	F_v	F_{PGA}
E	7.11	0.325	0.366	0.743	0.245	1.215	3.019	1.126

A_s = site-adjusted peak ground acceleration
F_a, F_v = acceleration (0.2-second period) and velocity (1.0-second period) site coefficients, respectively
F_{PGA} = peak ground acceleration coefficient
g = acceleration due to gravity
M = design earthquake moment magnitude
PGA = peak ground acceleration
S_s, S_1 = 0.2-second and 1.0-second period spectral accelerations, respectively

Soil Liquefaction and Lateral Spreading

LAI used the software program WSliq to evaluate the potential for seismically induced soil liquefaction during the design-level earthquake. The results of LAI's evaluation indicate that the portion of alluvium consisting of organic silt ("OH" on Figures 4 and 5) would be susceptible to liquefaction during the design seismic event. Given the distance between the site and the nearest known active crustal faults, the risk of ground rupture due to surface faulting is low.

Provided LAI's geotechnical recommendations are incorporated into the project design, the proposed culvert replacement will resist seismically induced settlement and lateral spreading loads. If present, soil liquefaction could cause retained soils outside of the culvert to spread toward the culvert, thereby increasing seismic lateral load on the sides of the culvert beyond typical values. Approach embankments may settle/deform following the design-level earthquake.

Culvert Structure

The culvert structure will be supported on a shallow foundation with a LTP and timber pile ground improvement. LAI assumes that backfill within the structural excavation zone will consist of EPS29 geofoam, conforming to ASTM standard test method D6817, *Standard Specification for Rigid Cellular Polystyrene Geofoam,* and Select Borrow, conforming to the requirements in Section 9-03.14(2) of the Washington State Department of Transportation's 2021 *Standard Specifications for Road, Bridge, and Municipal Construction* (*2021 WSDOT Standard Specifications*). LAI also assumes that the Select Borrow will be compacted to at least 95 percent of its maximum dry density. Table 2 includes soil parameters for design of the culvert walls.

Table 2. Culvert Design Parameters

Parameter	Value
Backfill soil unit weight (pcf)	125
Backfill soil submerged unit weight (pcf)	63
Backfill soil internal angle of friction (degrees)	34
At-rest earth pressure coefficient (K_0)	0.44
Seismic earth pressure coefficient – Restrained (K_e)	0.30
Later spreading earth pressure coefficient (K_{LS})[(a)]	0.50
Ultimate passive resistance (pcf)	440
Ultimate submerged passive resistance (pcf)	220
Ultimate coefficient of sliding	Cast-in-place: 0.57

(a) Developed using limit-equilibrium analysis. K_{LS}, in conjunction with K_O and K_e, should be incorporated into the project design to mitigate the effects of lateral spreading.
pcf = pounds per cubic foot

The initial 4 ft of structural fill, placed above the LTP, should consist of EPS29 geofoam with a minimum compressive resistance of 10.9 pounds per square inch at 1 percent strain. The geofoam should extend between the culvert wall and the sheet pile shoring system. The geofoam should not be placed in areas with less than 8 ft of ground cover; this minimum cover depth provides a factor of safety of 2 for uplift resistance. The nominal bearing resistances in Table 3 can be used to design the culvert shallow foundation.

Table 3. Shallow Foundation Design Nominal Bearing Resistance

Culvert Type	Foundation Width (ft)	Nominal Bearing Resistance (ksf)	
		Strength and Extreme Limit States	Service Limit State (1-inch settlement)
Closed Bottom	30 to 32	2.0	2.0

Note: One-half of the service limit settlement could occur as differential settlement.
ft = feet
ksf = kips per square foot

The resistance factors in Table 4 can be used to design shallow foundations (AASHTO 2017).

Table 4. Shallow Foundation Resistance Factors

Limit State	Bearing	Sliding
Strength	0.45	Precast concrete: 0.90
Extreme	0.90	0.90
Service	1.0	1.0

Ground Improvement

The site is underlain by very soft, highly compressible peat and organic silt deposits that will not provide suitable foundation support for the replacement culvert. GI will be required to mitigate seismically induced settlement. LAI recommends that GI includes the use of timber piles and a LTP (Figure 9). GI was designed in general accordance with the criteria in WSDOT's *Geotechnical Design Manual* (2020) and in Volume II of the Federal Highway Administration's *Ground Modification Methods Reference Manual* (2017).

Timber Piles

LAI recommends that timber piles are installed beneath the proposed culvert structure. Piles should be arranged in a triangular pattern and spaced 5 ft on center, as shown on Figure 9. Piles should meet the requirements in Section 9-10.1 of the *2021 WSDOT Standard Specifications* and should have a minimum tip diameter of 7 inches. The peeling requirements in Section 9-10.1(4) may be omitted.

A nominal axial pile capacity of 45 tons should be used for piles driven to the contact between the alluvium and basalt units. Minimum pile tip elevations are provided on Figure 9. LAI recommends assuming that the pile tip elevation will extend 10 ft beyond the pile lengths shown on Figure 9 (maximum pile length of approximately 55 ft).

Pile driving should be performed in accordance with the requirements in Section 6-05 of the *2021 WSDOT Standard Specifications.* The hammer used to drive the piles should satisfy the requirements in Section 6-05.3(9)B of the *2021 WSDOT Standard Specifications.* Pile capacity can be determined in accordance with the criteria in Section 6-05.3(12) of the *2021 WSDOT Standard Specifications* (i.e., the WSDOT pile-driving formula). This formula should be applied to end-of-driving conditions only.

LAI recommends that a qualified geotechnical or civil engineer observes pile installation, collects and interprets installation data, and monitors for variations in subsurface conditions. The engineer should confirm that piles have been driven to the required penetration depths and were not damaged during installation.

Load Transfer Platform

A LTP will be required to distribute point loads from the individual timber piles to a uniform pressure. The LTP should consist of four layers of geotextile and compacted structural fill (FHWA 2017), as shown on Figure 9. LAI recommends using a polyester biaxial geogrid with a long-term design strength and cross direction of at least 200 pounds per foot, per Geosynthetic Institute standard practice GG4(a).

Structural fill should consist of Gravel Borrow that meets the requirements in Section 9-03.14(1) of the *2021 WSDOT Standard Specifications.* The initial layer of fill should be compacted to at least 92 percent of its maximum dry density, and the remaining fill should be compacted to at least 95 percent of its maximum dry density. Compaction should extend to the edge of the LTP.

Fill must be placed in a manner that tensions the geogrid. A dozer could be used to push backfill from one edge of the geogrid to the other. Alternatively, each geogrid layer could be tensioned and staked prior to placement of fill material. End-dumping or dumping with an excavator bucket without staking could cause wrinkling or untensioning of the geogrid.

Embankment Settlement

Compressible soil beneath the approach embankments is susceptible to long-term consolidation settlement from new loads. Settlement will occur where existing embankment soil is replaced with structural fill (assumed to be 20 percent heavier). The use of geofoam backfill and sheet pile shoring will help reduce settlement. LAI recommends that sheet pile or similar cantilever shoring systems are used to limit the extent of excavations. Sheet pile shoring systems should be placed 3 ft from the outboard edges of the proposed culvert structure and should extend to a minimum elevation of 902 ft.

LAI anticipates 1 inch or less of consolidation settlement at the transition between the culvert structure and the existing roadway embankment; 90 percent of the settlement will occur within 2 to 3 months of construction. LAI recommends that embankment fill is allowed to settle for at least 60 days prior to paving. If fill is not allowed to settle before paving, pavement repairs or releveling may be required.

Construction Considerations

The following key points should be considered when developing project plans and specifications:

- **Reuse of site soil:** Site soil has a high fines and moisture content and should not be reused as structural fill.
- **Pile driving:** Pile damage could occur when the pile tip encounters basalt. The contractor should use construction means and methods, including appropriate hammer selection, to limit the potential for pile damage.
- **Structural fill:** Select Borrow, as described in Section 9-03.14(2) of the *2021 WSDOT Standard Specifications,* is a suitable source of structural fill. During periods of wet weather, the fines content should not exceed 5 percent, based on the minus ¾-inch fraction. Structural fill should be used as backfill within the limits of structural excavations.

- **Sheet pile shoring systems:** Installation of sheet pile shoring systems/cutoff walls is considered feasible in soft/loose to dense soils. Cobbles and/or boulders may be present throughout the site. The contractor should be prepared to manage such oversized material.
- **Temporary excavations:** Temporary excavations should be completed in accordance with the guidelines set forth in Section 2-09 of the *2021 WSDOT Standard Specifications.* Actual excavation trench configurations and the maintenance of safe working conditions, including temporary excavation stability, are the responsibilities of the contractor. Temporary excavations in excess of 4 ft should be shored or sloped in accordance with the requirements outlined in Safety Standards for Construction Work, Part N (Washington State Department of Labor and Industries, Chapter 296-155 Washington Administrative Code). The soil likely to be exposed in the excavation sidewalls should be considered Type C. The maximum allowable excavation inclination in Type C soils is 1.5 horizontal to 1 vertical (1.5H:1V). The parameters in Table 5 can be used to design engineered shoring systems.

Table 5. Recommended Soil Parameters for Design of Temporary Shoring

Soil Unit	Moist Unit Weight (pcf)	Submerged Unit Weight (pcf)	Cohesion (psf)	Internal Angle of Friction (degrees)
Fill	125	63	0	32
Alluvium (ML/OH/GP-GM)	110	48	0	32
Alluvium (PT)	60	0	0	32

pcf = pounds per cubic foot
psf = pounds per square foot

- **Dewatering/bypass:** LAI anticipates that shallow or perched groundwater can be managed with sumps, pumps, cutoff walls, and/or diversion systems. More substantial dewatering will be required for construction completed within 1 to 2 ft of the surface water elevation of Highland Creek. During construction, groundwater and surface water should be controlled to provide a dry, stable work area. Completing construction during the summer and early fall, when Highland Creek is at its lowest levels, will reduce dewatering needs.

  Site soils are fine-grained and unlikely to produce a significant quantity of groundwater. Use of a sheet pile shoring system will facilitate construction dewatering.
- **Roadway embankment:** Embankments should be constructed with 2H:1V slopes or flatter, in accordance with the requirements in Section 2-03 of the *2021 WSDOT Standard Specifications.*
- **Oversized material:** Cobbles and boulders are often found in alluvial soils and may be encountered during excavation. The contractor should be prepared to manage such oversized material.

Use of This Technical Memorandum

Landau Associates has prepared this technical memorandum for the exclusive use of Lewis County Public Works for specific application to the Crumb Road MP 0.17 Culvert Replacement project in Morton, Washington. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of Landau Associates. Reuse of the information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that, within the limitations of scope, schedule, and budget, its services have been provided in a manner consistent with that level of skill and care ordinarily exercised by members of the profession currently practicing in the same locality, under similar conditions as this project. Landau Associates makes no other warranty, either express or implied.

Closing

We trust that this technical memorandum provides you with sufficient information to proceed with the project. If you have questions or comments, or if we can be of further service, please contact Benjamin Ford at (360) 791-3178 or at bford@landauinc.com.

LANDAU ASSOCIATES, INC.

Benjamin Ford, PE
Associate

BJF/DCS/mcs
[Y:\1647\008.010\R\CRUMB ROAD MP 0.17 CULVERT REPLACEMENT TECHNICAL MEMORANDUM 03.31.2021.DOCX]

Attachments: Figure 1. Vicinity Map
Figure 2. Site and Exploration Plan
Figure 3. Soil Classification System and Key
Figures 4 and 5. Logs of Borings B-1 and B-2
Figures 6 and 7. Cone Penetrometer Test Soundings CPT-1 and CPT-2
Figure 8. Plasticity Chart
Figure 9. Ground Improvement and Load Transfer Platform Design Details

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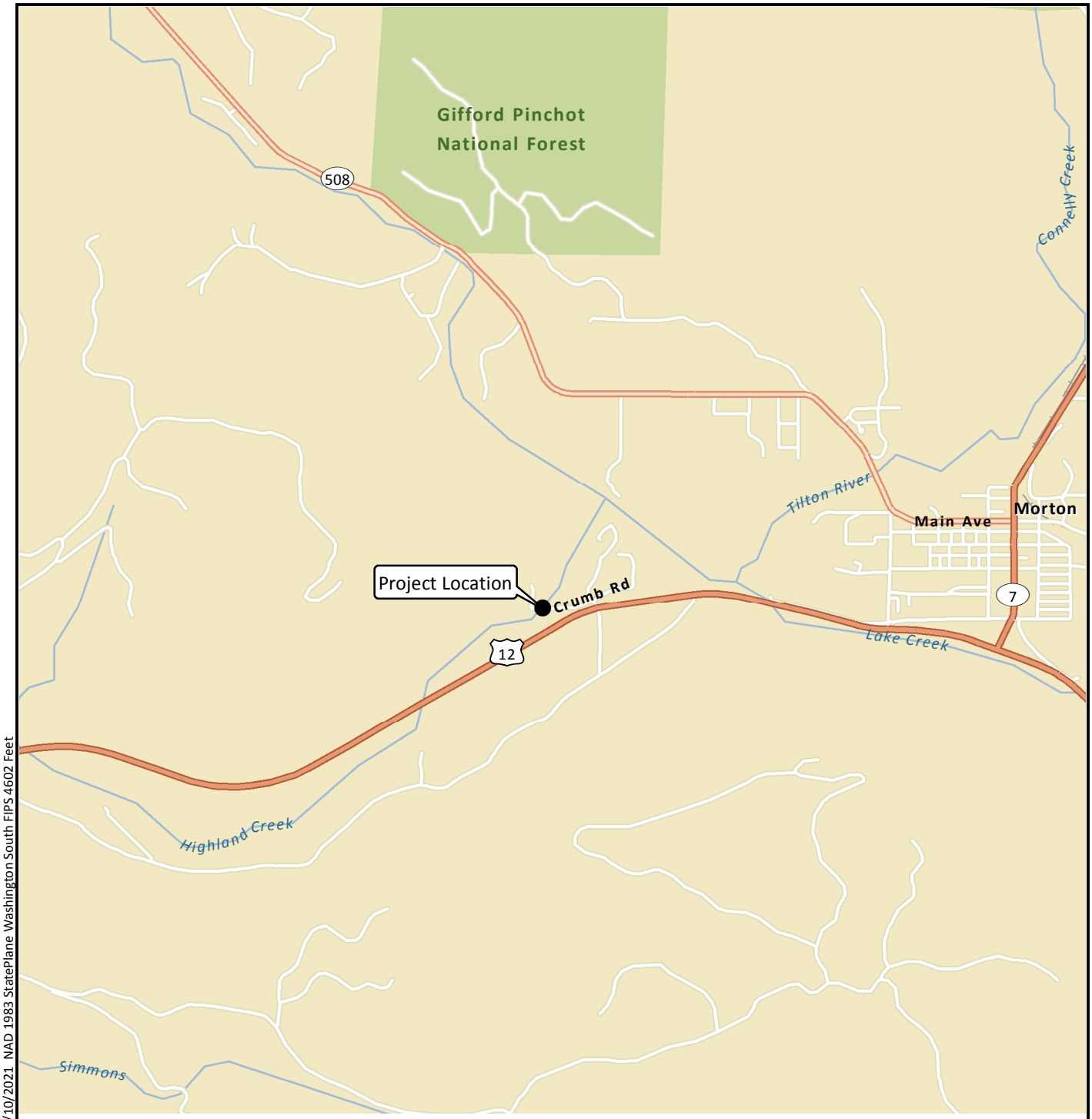


N

0 0.5 1

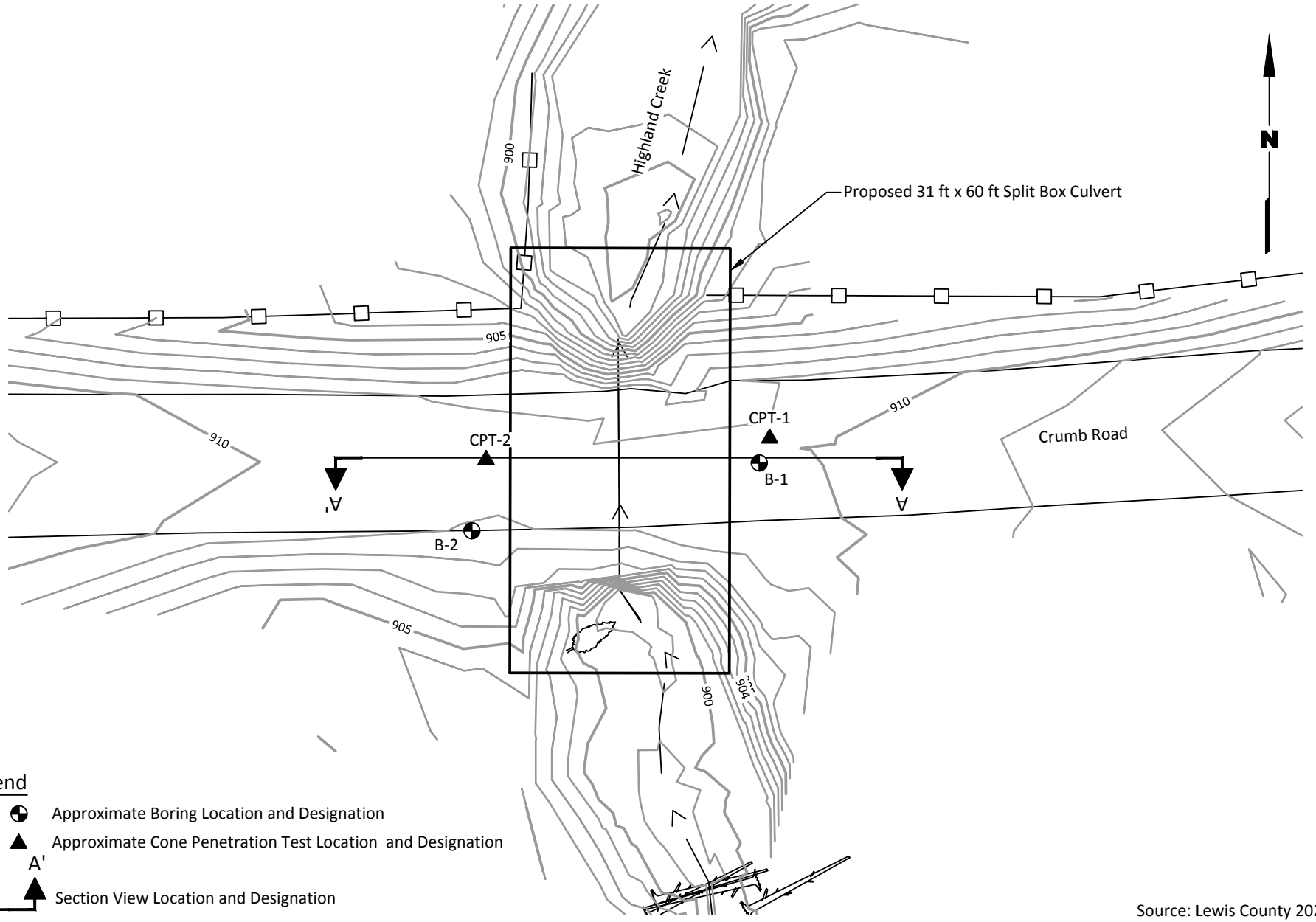
Miles

Data Source: Esri.

G:\Projects\1647\008\010\013\F01VicMap.mxd 3/10/2021 NAD 1983 StatePlane Washington South FIPS 4602 Feet

LANDAU ASSOCIATES

Crumb Road MP 0.17 Culvert Replacement Morton, Washington	**Vicinity Map**	Figure 1



Source: Lewis County 2021

LANDAU ASSOCIATES

Crumb Road
MP 0.17 Culvert Replacement
Morton, Washington

Site and Exploration Plan

Figure
2

Soil Classification System

MAJOR DIVISIONS			GRAPHIC SYMBOL	USCS LETTER SYMBOL[1]	TYPICAL DESCRIPTIONS [2][3]
COARSE-GRAINED SOIL (More than 50% of material is larger than No. 200 sieve size)	GRAVEL AND GRAVELLY SOIL (More than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (Little or no fines)		GW	Well-graded gravel; gravel/sand mixture(s); little or no fines
				GP	Poorly graded gravel; gravel/sand mixture(s); little or no fines
		GRAVEL WITH FINES (Appreciable amount of fines)		GM	Silty gravel; gravel/sand/silt mixture(s)
				GC	Clayey gravel; gravel/sand/clay mixture(s)
	SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)		SW	Well-graded sand; gravelly sand; little or no fines
				SP	Poorly graded sand; gravelly sand; little or no fines
		SAND WITH FINES (Appreciable amount of fines)		SM	Silty sand; sand/silt mixture(s)
				SC	Clayey sand; sand/clay mixture(s)
FINE-GRAINED SOIL (More than 50% of material is smaller than No. 200 sieve size)	SILT AND CLAY (Liquid limit less than 50)			ML	Inorganic silt and very fine sand; rock flour; silty or clayey fine sand or clayey silt with slight plasticity
				CL	Inorganic clay of low to medium plasticity; gravelly clay; sandy clay; silty clay; lean clay
				OL	Organic silt; organic, silty clay of low plasticity
	SILT AND CLAY (Liquid limit greater than 50)			MH	Inorganic silt; micaceous or diatomaceous fine sand
				CH	Inorganic clay of high plasticity; fat clay
				OH	Organic clay of medium to high plasticity; organic silt
	HIGHLY ORGANIC SOIL			PT	Peat; humus; swamp soil with high organic content

OTHER MATERIALS	GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
PAVEMENT		AC or PC	Asphalt concrete pavement or Portland cement pavement
ROCK		RK	Rock (See Rock Classification)
WOOD		WD	Wood, lumber, wood chips
DEBRIS		DB	Construction debris, garbage

Notes:
1. USCS letter symbols correspond to symbols used by the Unified Soil Classification System and ASTM classification methods. Dual letter symbols (e.g., SP-SM for sand or gravel) indicate soil with an estimated 5-15% fines. Multiple letter symbols (e.g., ML/CL) indicate borderline or multiple soil classifications.
2. Soil descriptions are based on the general approach presented in the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), outlined in ASTM D 2488. Where laboratory index testing has been conducted, soil classifications are based on the Standard Test Method for Classification of Soils for Engineering Purposes, as outlined in ASTM D 2487.
3. Soil description terminology is based on visual estimates (in the absence of laboratory test data) of the percentages of each soil type and is defined as follows:

Primary Constituent:	> 50%	"GRAVEL," "SAND," "SILT," "CLAY," etc.
Secondary Constituents:	> 30% and ≤ 50%	"very gravelly," "very sandy," "very silty," etc.
	> 15% and ≤ 30%	"gravelly," "sandy," "silty," etc.
Additional Constituents:	> 5% and ≤ 15%	"with gravel," "with sand," "with silt," etc.
	≤ 5%	"with trace gravel," "with trace sand," "with trace silt," etc., or not noted.

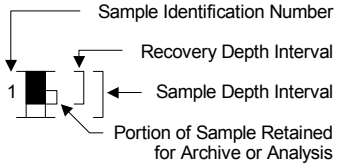
4. Soil density or consistency descriptions are based on judgement using a combination of sampler penetration blow counts, drilling or excavating conditions, field tests, and laboratory tests, as appropriate.

Drilling and Sampling Key

SAMPLER TYPE

Code	Description
a	3.25-inch O.D., 2.42-inch I.D. Split Spoon
b	2.00-inch O.D., 1.50-inch I.D. Split Spoon
c	Shelby Tube
d	Grab Sample
e	Single-Tube Core Barrel
f	Double-Tube Core Barrel
g	2.50-inch O.D., 2.00-inch I.D. WSDOT
h	3.00-inch O.D., 2.375-inch I.D. Mod. California
i	Other - See text if applicable
1	300-lb Hammer, 30-inch Drop
2	140-lb Hammer, 30-inch Drop
3	Pushed
4	Vibrocore (Rotosonic/Geoprobe)
5	Other - See text if applicable

SAMPLE NUMBER & INTERVAL



Field and Lab Test Data

Code	Description
PP = 1.0	Pocket Penetrometer, tsf
TV = 0.5	Torvane, tsf
PID = 100	Photoionization Detector VOC screening, ppm
W = 10	Moisture Content, %
D = 120	Dry Density, pcf
-200 = 60	Material smaller than No. 200 sieve, %
GS	Grain Size - See separate figure for data
AL	Atterberg Limits - See separate figure for data
GT	Other Geotechnical Testing
CA	Chemical Analysis

Groundwater

▽ Approximate water level at time of drilling (ATD)

▼ Approximate water level at time after drilling/excavation/well

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Crumb Road
MP 0.17 Culvert Replacement
Morton, Washington

Soil Classification System and Key

Figure 3

B-1

LAI Project No: 1647008.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: Hollow-Stem Auger
Ground Elevation (ft): Not Measured
Drilled By: Holocene Drilling Inc.
Logged By: BP Date: 12/22/20

Depth (ft)	Elevation (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0							AC	2 inches of asphalt over 3 inches of crushed rock base course **(ASPHALT)**	
							GM		
		S-1	b2	6			ML	Brown, silty, sandy, fine to coarse GRAVEL (medium dense, moist) **(FILL)**	
5		S-2	b2	3				Brown SILT with organics (medium stiff, moist) **(ALLUVIUM)** -Grades to soft	
		S-3	b2	1				-Grades to very soft, moist to wet, and with sand -Sand lens observed at 8.6 ft bgs	
10		S-4	b2	0	W = 328		PT	Black-brown, fine-fibrous PEAT (very soft, moist)	12.0 ft ATD
15		S-5	b2	0	W = 471				
							OH	Dark gray, organic SILT (very soft, moist)	
20		S-6	b2	0	W = 55		PT	Black-brown, fibrous PEAT (very soft, moist to wet)	
							OH	Dark gray, organic SILT (very soft, wet)	
25		S-7	b2	0	W = 137				
30		S-8	b2	0	W = 133 AL				
35									

Moisture Content (%)
Plastic Limit — Liquid Limit
20 40 60 80

▲ SPT N-Value ▲
△ Non-Standard N-Value △
20 40 60 80

× Fines Content (%) ×
20 40 60 80

328
471
137
133

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1647008.01 3/30/21 Y:\1647\008.010\T\1647008.010.GPJ SOIL BORING LOG WITH GRAPH

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Crumb Road
MP 0.17 Culvert Replacement
Morton, Washington

Log of Boring B-1

Figure 4 (1 of 2)

B-1

LAI Project No: 1647008.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: Hollow-Stem Auger
Ground Elevation (ft): Not Measured
Drilled By: Holocene Drilling Inc.
Logged By: BP Date: 12/22/20

Depth (ft)	Elevation (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
35		S-9	b2	0	W = 192		OH	Tan-gray, organic SILT (very soft, wet) **(ALLUVIUM)** -Sand lens observed at 36 ft bgs	
40		S-10	b2	0	W = 151 AL				
45		S-11	b2	2				-Grades to soft -Grades to gray and with sand	
50		S-12 A S-12 B	b2	0			SP-SM	Gray, fine to coarse SAND with silt (very loose, wet)	

Moisture Content (%) — Plastic Limit — Liquid Limit
20 40 60 80
▲ SPT N-Value ▲
△ Non-Standard N-Value △
20 40 60 80
× Fines Content (%) ×
20 40 60 80

192
151

Boring Completed 12/22/20
Total Depth of Boring = 51.5 ft.

55 60 65 70

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1647008.01 3/30/21 Y:\1647\008.010\T\1647008.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Crumb Road
MP 0.17 Culvert Replacement
Morton, Washington

Log of Boring B-1

Figure 4 (2 of 2)

B-2

LAI Project No: 1647008.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: Hollow-Stem Auger
Ground Elevation (ft): Not Measured
Drilled By: Holocene Drilling Inc.
Logged By: BP Date: 12/22/20

Depth (ft)	Elevation (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description
0							AC	2 inches of asphalt over 3 inches of crushed rock base course **(ASPHALT)**
							GM	
		S-1	b2	0			ML	Brown, silty, sandy, fine to coarse GRAVEL (medium dense, moist) **(FILL)**
5		S-2	b2	3				Brown, gravelly, sandy SILT with organics (very soft, moist) **(ALLUVIUM)**
		S-3	b2	7				-Grades to soft with sand and without gravel -Grades to black-brown, very sandy, with organics, and medium stiff
10		S-4	b2	11				-Grades to stiff
							GP-GM	Brown, sandy, fine to coarse GRAVEL with silt (medium dense, wet)
							PT	Black-brown, fine-fibrous PEAT (very soft, wet)
15		S-5	b2	0	W = 210			-Lens of sand observed at 16.5 ft bgs
20		S-6	b2	0	W = 194		OH	Tan-gray, organic SILT (very soft, wet)
25		S-7	b2	0	W = 196 AL			
30		S-8	b2	0	W = 149			
35								

Groundwater: ▽ 19.5 ft ATD

Moisture Content (%)
Plastic Limit — Liquid Limit
20 40 60 80

▲ SPT N-Value ▲
△ Non-Standard N-Value △
20 40 60 80

× Fines Content (%) ×
20 40 60 80

210
194
196
LL = 131
149

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1647008.01 3/30/21 Y:\1647\008.010\T\1647008.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Crumb Road
MP 0.17 Culvert Replacement
Morton, Washington

Log of Boring B-2

Figure 5 (1 of 2)

B-2

LAI Project No: 1647008.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: Hollow-Stem Auger
Ground Elevation (ft): Not Measured
Drilled By: Holocene Drilling Inc.
Logged By: BP Date: 12/22/20

Depth (ft)	Elevation (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Groundwater
35		S-9	b2	0	W = 150 AL		OH	
40		S-10	b2	0				
		S-11	b2	50/ 2"			BST	

Tan-gray, organic SILT (very soft, wet)
(ALLUVIUM)
-Lens of sand observed at 36 ft bgs

Dark gray BASALT (very dense, wet)
(BASALT)

Boring Completed 12/22/20
Total Depth of Boring = 42.7 ft.

Moisture Content (%)
Plastic Limit — Liquid Limit
20 40 60 80

▲ SPT N-Value ▲
△ Non-Standard N-Value △
20 40 60 80

× Fines Content (%) ×
20 40 60 80

150 H

50/ 2"

45 50 55 60 65 70

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1647008.01 3/30/21 Y:\1647\008.010\T\1647008.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Crumb Road
MP 0.17 Culvert Replacement
Morton, Washington

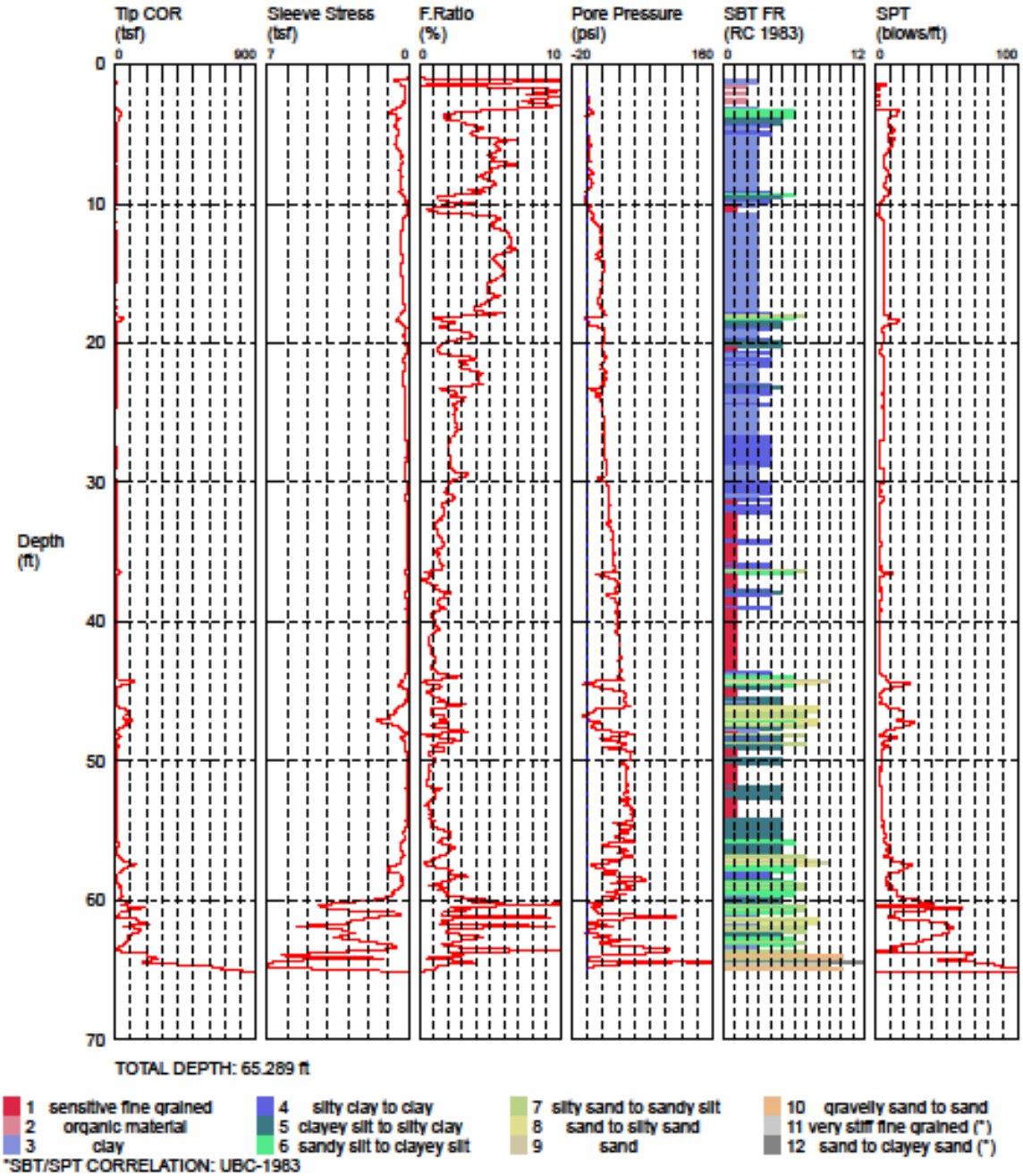
Log of Boring B-2

Figure 5 (2 of 2)

CPTu-01

CPT CONTRACTOR: In Situ Engineering
CUSTOMER: Landau Associates
LOCATION: Morton
JOB NUMBER: 1647008. 010. 011
COMMENT: Crumb Rd Culvert Replacement
COMMENT:

OPERATOR: Okbay
CONE ID: DDG1369
TEST DATE: 2/17/2021 9:51:58 AM
PREDRILL: 3 ft
BACKFILL: 20% Grout & Bentonite Chips
SURFACE PATCH: Cold Patch



3/16/21 Y:\1647\008.010\R\F06 CPTSoundings.docx

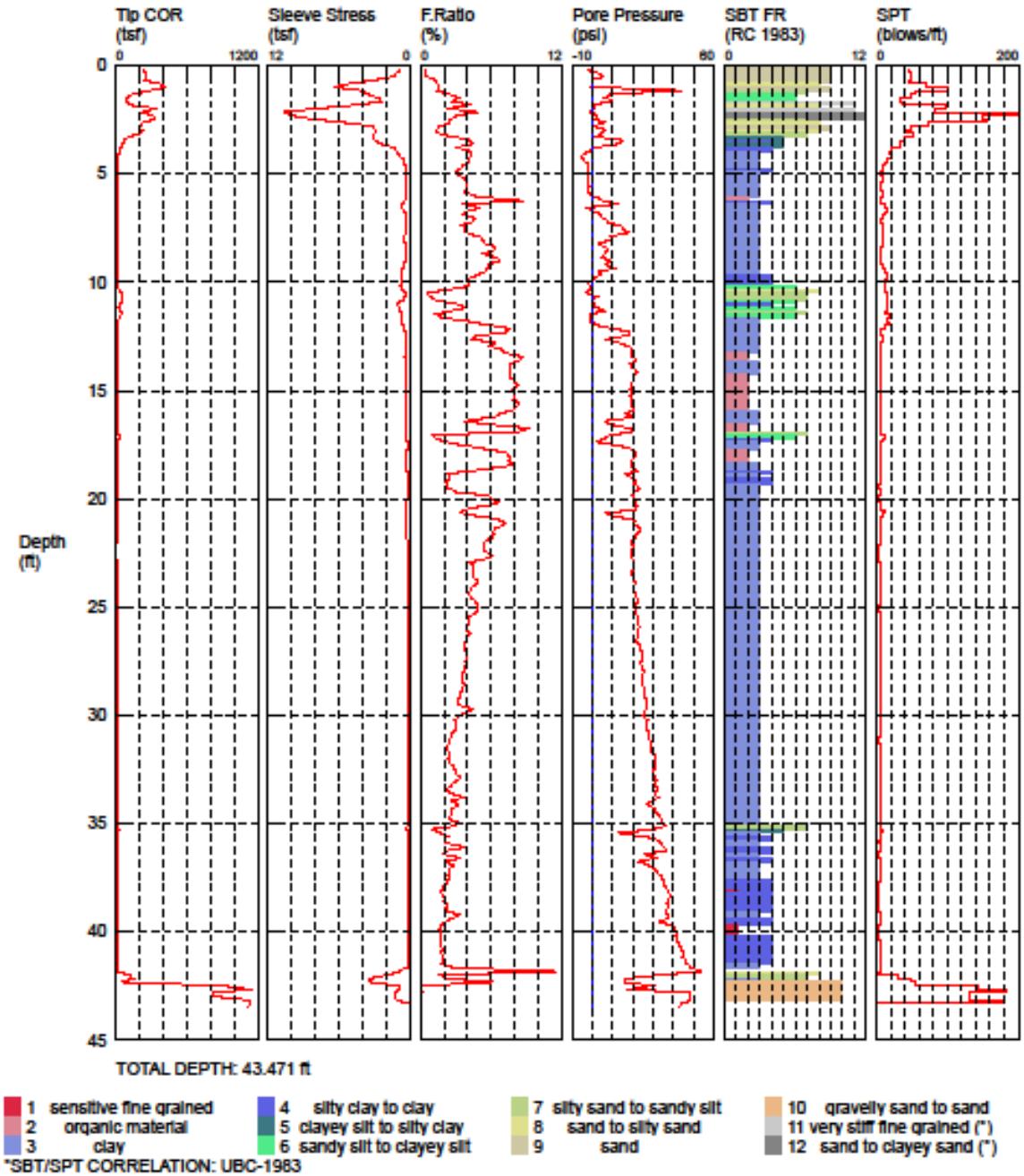
LANDAU ASSOCIATES

Crumb Road MP 0.17 Culvert Replacement Morton, Washington	**Cone Penetrometer Test Sounding CPT-1**	Figure 6

CPTu-02

CPT CONTRACTOR: In Situ Engineering
CUSTOMER: Landau Associates
LOCATION: Morton
JOB NUMBER: 1647008. 010. 011
COMMENT: Crumb Rd Culvert Replacement
COMMENT:

OPERATOR: Okbay
CONE ID: DDG1369
TEST DATE: 2/17/2021 11:47:27 AM
PREDRILL: 0 ft
BACKFILL: 20% Grout & Bentonite Chips
SURFACE PATCH: Cold Patch



3/16/21 Y:\1647\008.010\R\F07 CPTSoundings.docx

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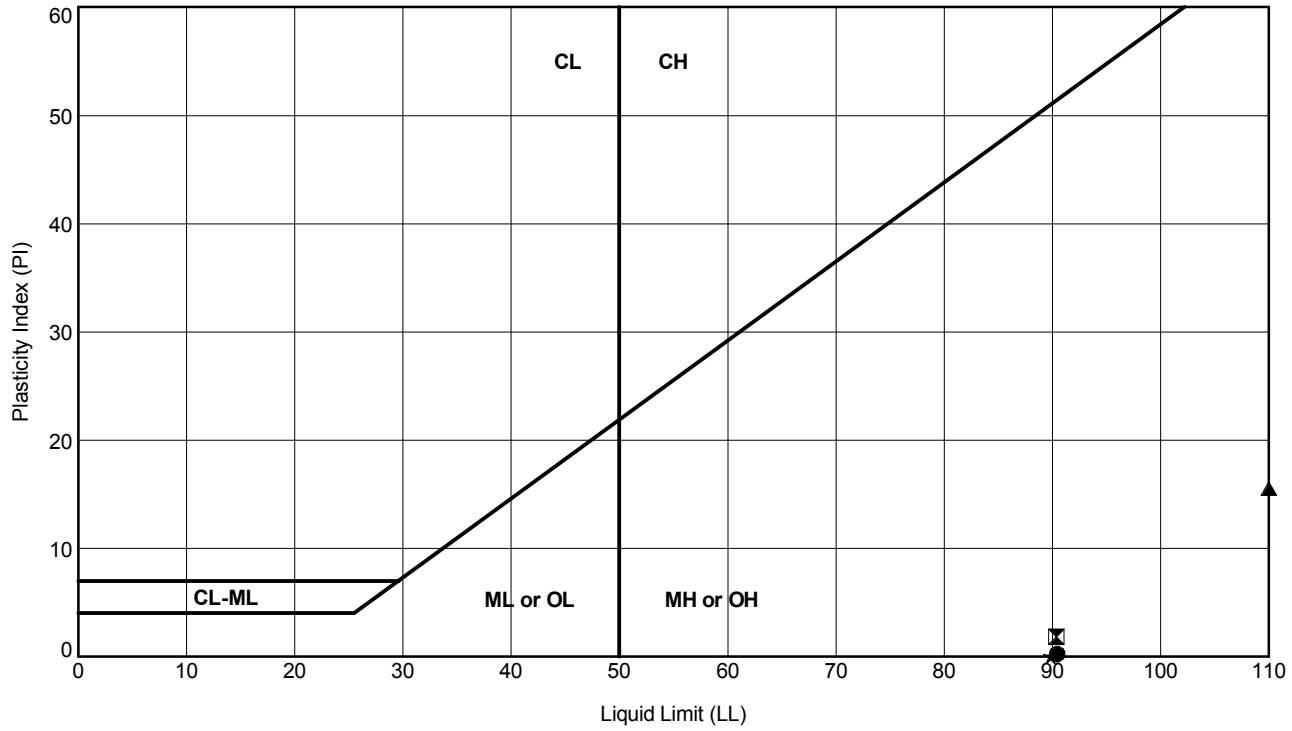
Crumb Road MP 0.17 Culvert Replacement Morton, Washington	**Cone Penetrometer Test Sounding CPT-2**	Figure 7



ATTERBERG LIMIT TEST RESULTS

Symbol	Exploration Number	Sample Number	Depth (ft)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Natural Moisture (%)	Soil Description	Unified Soil Classification
●	B-1	S-8	30.0	90	90	0	133	Organic SILT	OL
⧓	B-1	S-10	40.0	90	89	1	151	Organic SILT	OL
▲	B-2	S-7	25.0	131	115	16	196	Organic SILT	OL
★	B-2	S-9	35.0	90	93	-3	150	Organic SILT	OL

ASTM D 4318 Test Method

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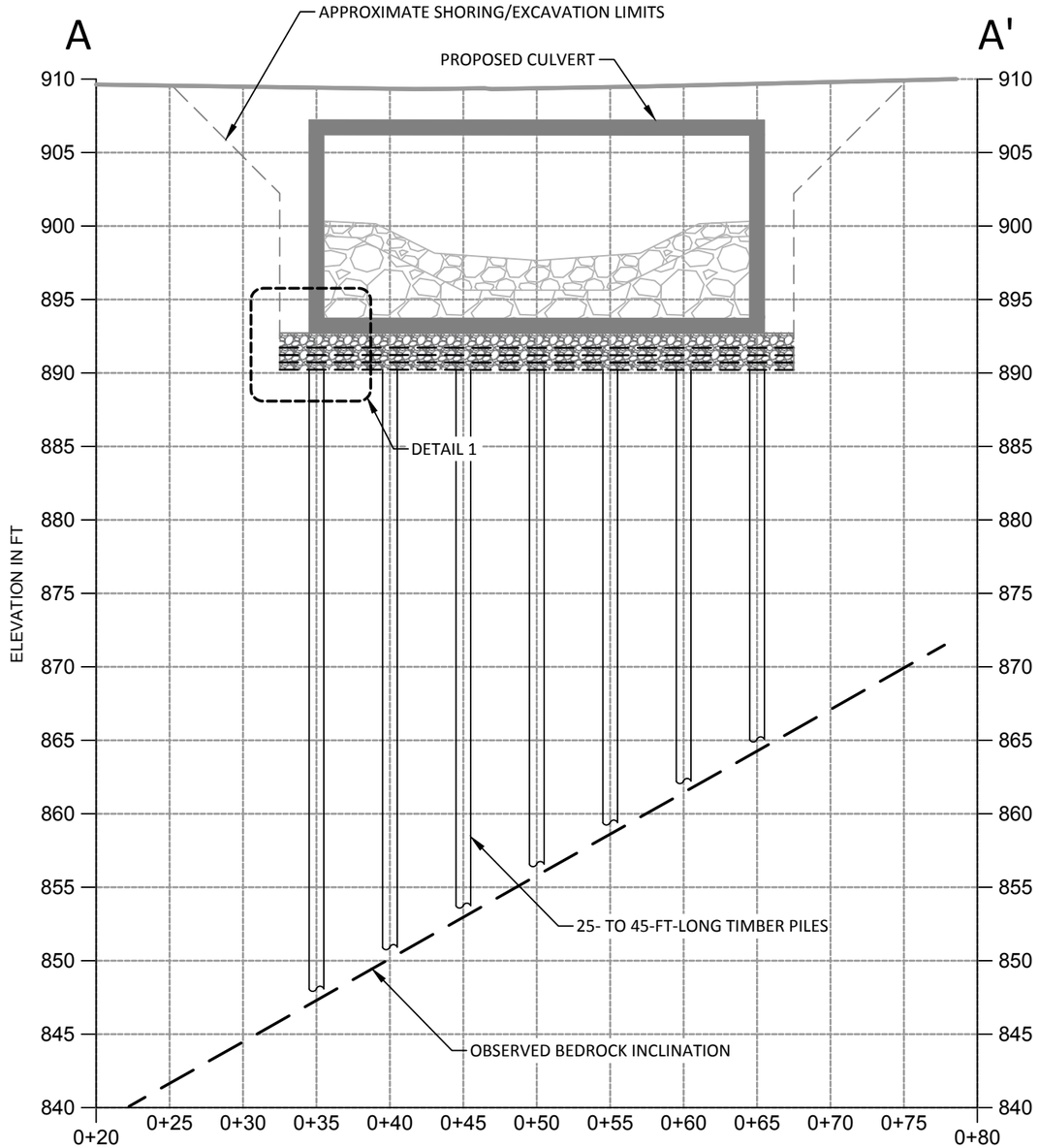
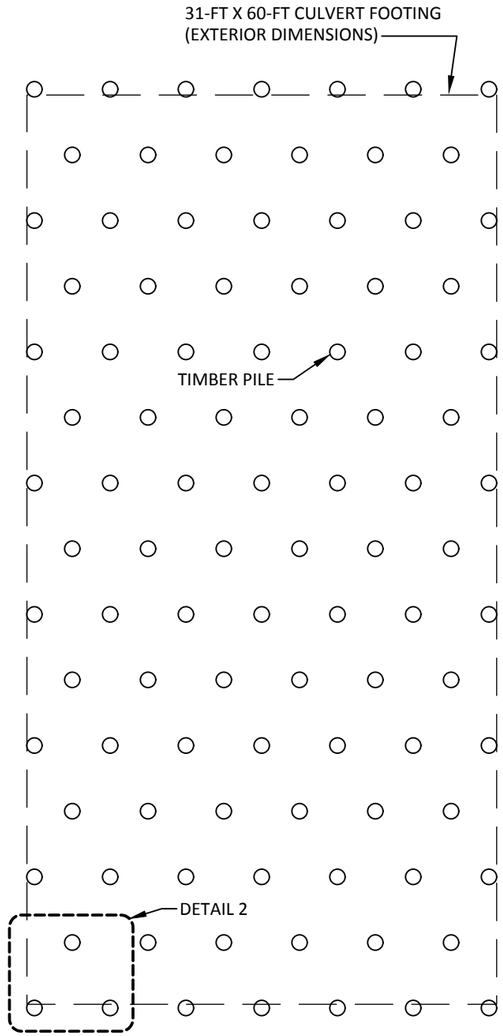
Crumb Road
MP 0.17 Culvert Replacement
Morton, Washington

Plasticity Chart

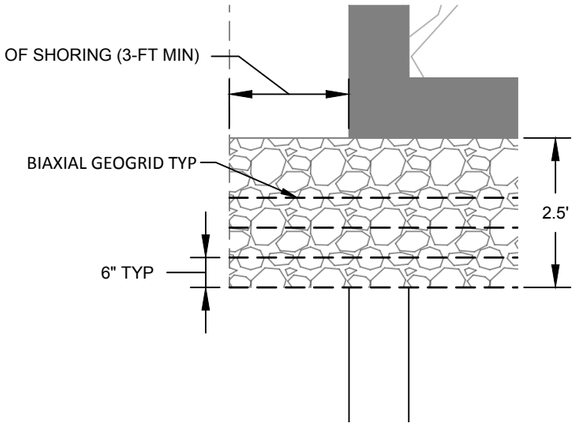
Figure 8



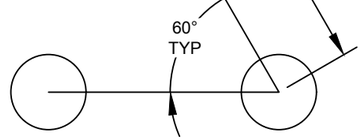
GROUND IMPROVEMENT SECTION A-A'



GROUND IMPROVEMENT PLAN VIEW



DETAIL 1 - LOAD TRANSFER PLATFORM
NTS



DETAIL 2 - PILE SPACING
NTS

Legend

FT	Feet, Foot
LTP	Load Transfer Platform
MIN	Minimum
NTS	Not to Scale
TYP	Typical

Source: Lewis County 2021

0 10 20
Scale in Feet

LANDAU ASSOCIATES

Crumb Road MP 0.17 Culvert Replacement Morton, Washington	**Ground Improvement and Load Transfer Platform Design Details**	Figure 9

APPENDIX B

WASHINGTON STATE PREVAILING WAGE RATES

INCLUDING:

State Wage Rates

Wage Rate Supplements

Wage Rate Benefit Codes

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: 6/8/2022

County	Trade	Job Classification	Wage	Holiday	Overtime	Note	*Risk Class
Lewis	Asbestos Abatement Workers	Journey Level	$54.62	5D	1H		View
Lewis	Boilermakers	Journey Level	$72.54	5N	1C		View
Lewis	Brick Mason	Journey Level	$63.32	7E	1N		View
Lewis	Brick Mason	Pointer-Caulker-Cleaner	$63.32	7E	1N		View
Lewis	Building Service Employees	Janitor	$14.49		1		View
Lewis	Building Service Employees	Shampooer	$14.49		1		View
Lewis	Building Service Employees	Waxer	$14.49		1		View
Lewis	Building Service Employees	Window Cleaner	$14.49		1		View
Lewis	Cabinet Makers (In Shop)	Journey Level	$23.17		1		View
Lewis	Carpenters	Acoustical Worker	$68.19	15J	4C		View
Lewis	Carpenters	Bridge, Dock And Wharf Carpenters	$68.19	15J	4C		View
Lewis	Carpenters	Carpenter	$68.19	15J	4C		View
Lewis	Carpenters	Floor Finisher	$68.19	15J	4C		View
Lewis	Carpenters	Floor Layer	$68.19	15J	4C		View
Lewis	Carpenters	Scaffold Erector	$68.19	15J	4C		View
Lewis	Cement Masons	Application of all Composition Mastic	$67.41	15J	4U		View
Lewis	Cement Masons	Application of all Epoxy Material	$66.91	15J	4U		View
Lewis	Cement Masons	Application of all Plastic Material	$67.41	15J	4U		View
Lewis	Cement Masons	Application of Sealing Compound	$66.91	15J	4U		View
Lewis	Cement Masons	Application of Underlayment	$67.41	15J	4U		View
Lewis	Cement Masons	Building General	$66.91	15J	4U		View
Lewis	Cement Masons	Composition or Kalman	$67.41	15J	4U		View

		Floors					
Lewis	Cement Masons	Concrete Paving	$66.91	15J	4U		View
Lewis	Cement Masons	Curb & Gutter Machine	$67.41	15J	4U		View
Lewis	Cement Masons	Curb & Gutter, Sidewalks	$66.91	15J	4U		View
Lewis	Cement Masons	Curing Concrete	$66.91	15J	4U		View
Lewis	Cement Masons	Finish Colored Concrete	$67.41	15J	4U		View
Lewis	Cement Masons	Floor Grinding	$67.41	15J	4U		View
Lewis	Cement Masons	Floor Grinding/Polisher	$66.91	15J	4U		View
Lewis	Cement Masons	Green Concrete Saw, self-powered	$67.41	15J	4U		View
Lewis	Cement Masons	Grouting of all Plates	$66.91	15J	4U		View
Lewis	Cement Masons	Grouting of all Tilt-up Panels	$66.91	15J	4U		View
Lewis	Cement Masons	Gunite Nozzleman	$67.41	15J	4U		View
Lewis	Cement Masons	Hand Powered Grinder	$67.41	15J	4U		View
Lewis	Cement Masons	Journey Level	$66.91	15J	4U		View
Lewis	Cement Masons	Patching Concrete	$66.91	15J	4U		View
Lewis	Cement Masons	Pneumatic Power Tools	$67.41	15J	4U		View
Lewis	Cement Masons	Power Chipping & Brushing	$67.41	15J	4U		View
Lewis	Cement Masons	Sand Blasting Architectural Finish	$67.41	15J	4U		View
Lewis	Cement Masons	Screed & Rodding Machine	$67.41	15J	4U		View
Lewis	Cement Masons	Spackling or Skim Coat Concrete	$66.91	15J	4U		View
Lewis	Cement Masons	Troweling Machine Operator	$67.41	15J	4U		View
Lewis	Cement Masons	Troweling Machine Operator on Colored Slabs	$67.41	15J	4U		View
Lewis	Cement Masons	Tunnel Workers	$67.41	15J	4U		View
Lewis	Divers & Tenders	Bell/Vehicle or Submersible Operator (Not Under Pressure)	$122.46	15J	4C		View
Lewis	Divers & Tenders	Diver	$122.49	15J	4C	8V	View
Lewis	Divers & Tenders	Diver On Standby	$81.04	15J	4C		View
Lewis	Divers & Tenders	Diver Tender	$73.60	15J	4C		View
Lewis	Divers & Tenders	Manifold Operator	$73.60	15J	4C		View
Lewis	Divers & Tenders	Manifold Operator Mixed Gas	$78.60	15J	4C		View
Lewis	Divers & Tenders	Remote Operated Vehicle Operator/Technician	$73.60	15J	4C		View
Lewis	Divers & Tenders	Remote Operated Vehicle Tender	$68.64	15J	4C		View
Lewis	Dredge Workers	Assistant Engineer	$73.62	5D	3F		View
Lewis	Dredge Workers	Assistant Mate (Deckhand)	$73.05	5D	3F		View
Lewis	Dredge Workers	Boatmen	$73.62	5D	3F		View
Lewis	Dredge Workers	Engineer Welder	$75.03	5D	3F		View
Lewis	Dredge Workers	Leverman, Hydraulic	$76.53	5D	3F		View
Lewis	Dredge Workers	Mates	$73.62	5D	3F		View

Lewis	Dredge Workers	Oiler	$73.05	5D	3F		View
Lewis	Drywall Applicator	Journey Level	$68.19	15J	4C		View
Lewis	Drywall Tapers	Journey Level	$67.91	5P	1E		View
Lewis	Electrical Fixture Maintenance Workers	Journey Level	$14.49		1		View
Lewis	Electricians - Inside	Cable Splicer	$81.91	5C	1G		View
Lewis	Electricians - Inside	Journey Level	$76.57	5C	1G		View
Lewis	Electricians - Inside	Lead Covered Cable Splicer	$87.23	5C	1G		View
Lewis	Electricians - Inside	Welder	$81.91	5C	1G		View
Lewis	Electricians - Motor Shop	Craftsman	$15.37		1		View
Lewis	Electricians - Motor Shop	Journey Level	$14.69		1		View
Lewis	Electricians - Powerline Construction	Cable Splicer	$88.89	5A	4D		View
Lewis	Electricians - Powerline Construction	Certified Line Welder	$81.65	5A	4D		View
Lewis	Electricians - Powerline Construction	Groundperson	$52.91	5A	4D		View
Lewis	Electricians - Powerline Construction	Heavy Line Equipment Operator	$81.65	5A	4D		View
Lewis	Electricians - Powerline Construction	Journey Level Lineperson	$81.65	5A	4D		View
Lewis	Electricians - Powerline Construction	Line Equipment Operator	$70.02	5A	4D		View
Lewis	Electricians - Powerline Construction	Meter Installer	$52.91	5A	4D	8W	View
Lewis	Electricians - Powerline Construction	Pole Sprayer	$81.65	5A	4D		View
Lewis	Electricians - Powerline Construction	Powderperson	$60.75	5A	4D		View
Lewis	Electronic Technicians	Journey Level	$48.88	6Z	1B		View
Lewis	Elevator Constructors	Mechanic	$103.81	7D	4A		View
Lewis	Elevator Constructors	Mechanic In Charge	$112.09	7D	4A		View
Lewis	Fabricated Precast Concrete Products	Journey Level	$14.49		1		View
Lewis	Fabricated Precast Concrete Products	Journey Level - In-Factory Work Only	$14.49		1		View
Lewis	Fence Erectors	Fence Erector	$46.29	15J	4V	8Y	View
Lewis	Fence Erectors	Fence Laborer	$46.29	15J	4V	8Y	View
Lewis	Flaggers	Journey Level	$46.29	15J	4V	8Y	View
Lewis	Glaziers	Journey Level	$72.41	7L	1Y		View
Lewis	Heat & Frost Insulators And Asbestos Workers	Journey Level	$82.02	15H	11C		View
Lewis	Heating Equipment Mechanics	Journey Level	$91.83	7F	1E		View
Lewis	Hod Carriers & Mason Tenders	Journey Level	$57.31	15J	4V	8Y	View
Lewis	Industrial Power Vacuum Cleaner	Journey Level	$14.49		1		View
Lewis	Inland Boatmen	Boat Operator	$61.41	5B	1K		View

Lewis	Inland Boatmen	Cook	$56.48	5B	1K		View
Lewis	Inland Boatmen	Deckhand	$57.48	5B	1K		View
Lewis	Inland Boatmen	Deckhand Engineer	$58.81	5B	1K		View
Lewis	Inland Boatmen	Launch Operator	$58.89	5B	1K		View
Lewis	Inland Boatmen	Mate	$57.31	5B	1K		View
Lewis	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Cleaner Operator, Foamer Operator	$14.49		1		View
Lewis	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Grout Truck Operator	$14.49		1		View
Lewis	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Head Operator	$14.49		1		View
Lewis	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Technician	$14.49		1		View
Lewis	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Tv Truck Operator	$14.49		1		View
Lewis	Insulation Applicators	Journey Level	$68.19	15J	4C		View
Lewis	Ironworkers	Journeyman	$80.28	7N	1O		View
Lewis	Laborers	Air, Gas Or Electric Vibrating Screed	$54.62	15J	4V	8Y	View
Lewis	Laborers	Airtrac Drill Operator	$56.31	15J	4V	8Y	View
Lewis	Laborers	Ballast Regular Machine	$54.62	15J	4V	8Y	View
Lewis	Laborers	Batch Weighman	$46.29	15J	4V	8Y	View
Lewis	Laborers	Brick Pavers	$54.62	15J	4V	8Y	View
Lewis	Laborers	Brush Cutter	$54.62	15J	4V	8Y	View
Lewis	Laborers	Brush Hog Feeder	$54.62	15J	4V	8Y	View
Lewis	Laborers	Burner	$54.62	15J	4V	8Y	View
Lewis	Laborers	Caisson Worker	$56.31	15J	4V	8Y	View
Lewis	Laborers	Carpenter Tender	$54.62	15J	4V	8Y	View
Lewis	Laborers	Cement Dumper-paving	$55.62	15J	4V	8Y	View
Lewis	Laborers	Cement Finisher Tender	$54.62	15J	4V	8Y	View
Lewis	Laborers	Change House Or Dry Shack	$54.62	15J	4V	8Y	View
Lewis	Laborers	Chipping Gun (30 Lbs. And Over)	$55.62	15J	4V	8Y	View
Lewis	Laborers	Chipping Gun (Under 30 Lbs.)	$54.62	15J	4V	8Y	View
Lewis	Laborers	Choker Setter	$54.62	15J	4V	8Y	View
Lewis	Laborers	Chuck Tender	$54.62	15J	4V	8Y	View
Lewis	Laborers	Clary Power Spreader	$55.62	15J	4V	8Y	View
Lewis	Laborers	Clean-up Laborer	$54.62	15J	4V	8Y	View
Lewis	Laborers	Concrete Dumper/Chute Operator	$55.62	15J	4V	8Y	View
Lewis	Laborers	Concrete Form Stripper	$54.62	15J	4V	8Y	View
Lewis	Laborers	Concrete Placement Crew	$55.62	15J	4V	8Y	View
Lewis	Laborers	Concrete Saw	$55.62	15J	4V	8Y	View

		Operator/Core Driller					
Lewis	Laborers	Crusher Feeder	$46.29	15J	4V	8Y	View
Lewis	Laborers	Curing Laborer	$54.62	15J	4V	8Y	View
Lewis	Laborers	Demolition: Wrecking & Moving (Incl. Charred Material)	$54.62	15J	4V	8Y	View
Lewis	Laborers	Ditch Digger	$54.62	15J	4V	8Y	View
Lewis	Laborers	Diver	$56.31	15J	4V	8Y	View
Lewis	Laborers	Drill Operator (Hydraulic, Diamond)	$55.62	15J	4V	8Y	View
Lewis	Laborers	Dry Stack Walls	$54.62	15J	4V	8Y	View
Lewis	Laborers	Dump Person	$54.62	15J	4V	8Y	View
Lewis	Laborers	Epoxy Technician	$54.62	15J	4V	8Y	View
Lewis	Laborers	Erosion Control Worker	$54.62	15J	4V	8Y	View
Lewis	Laborers	Faller & Bucker Chain Saw	$55.62	15J	4V	8Y	View
Lewis	Laborers	Fine Graders	$54.62	15J	4V	8Y	View
Lewis	Laborers	Firewatch	$46.29	15J	4V	8Y	View
Lewis	Laborers	Form Setter	$54.62	15J	4V	8Y	View
Lewis	Laborers	Gabian Basket Builders	$54.62	15J	4V	8Y	View
Lewis	Laborers	General Laborer	$54.62	15J	4V	8Y	View
Lewis	Laborers	Grade Checker & Transit Person	$57.31	15J	4V	8Y	View
Lewis	Laborers	Grinders	$54.62	15J	4V	8Y	View
Lewis	Laborers	Grout Machine Tender	$54.62	15J	4V	8Y	View
Lewis	Laborers	Groutmen (Pressure) Including Post Tension Beams	$55.62	15J	4V	8Y	View
Lewis	Laborers	Guardrail Erector	$54.62	15J	4V	8Y	View
Lewis	Laborers	Hazardous Waste Worker (Level A)	$56.31	15J	4V	8Y	View
Lewis	Laborers	Hazardous Waste Worker (Level B)	$55.62	15J	4V	8Y	View
Lewis	Laborers	Hazardous Waste Worker (Level C)	$54.62	15J	4V	8Y	View
Lewis	Laborers	High Scaler	$56.31	15J	4V	8Y	View
Lewis	Laborers	Jackhammer	$55.62	15J	4V	8Y	View
Lewis	Laborers	Laserbeam Operator	$55.62	15J	4V	8Y	View
Lewis	Laborers	Maintenance Person	$54.62	15J	4V	8Y	View
Lewis	Laborers	Manhole Builder-Mudman	$55.62	15J	4V	8Y	View
Lewis	Laborers	Material Yard Person	$54.62	15J	4V	8Y	View
Lewis	Laborers	Motorman-Dinky Locomotive	$55.62	15J	4V	8Y	View
Lewis	Laborers	nozzleman (concrete pump, green cutter when using combination of high pressure air & water on concrete & rock, sandblast, gunite, shotcrete, water blaster, vacuum blaster)	$57.31	15J	4V	8Y	View

Lewis	Laborers	Pavement Breaker	$55.62	15J	4V	8Y	View
Lewis	Laborers	Pilot Car	$46.29	15J	4V	8Y	View
Lewis	Laborers	Pipe Layer (Lead)	$57.31	15J	4V	8Y	View
Lewis	Laborers	Pipe Layer/Tailor	$55.62	15J	4V	8Y	View
Lewis	Laborers	Pipe Pot Tender	$55.62	15J	4V	8Y	View
Lewis	Laborers	Pipe Reliner	$55.62	15J	4V	8Y	View
Lewis	Laborers	Pipe Wrapper	$55.62	15J	4V	8Y	View
Lewis	Laborers	Pot Tender	$54.62	15J	4V	8Y	View
Lewis	Laborers	Powderman	$56.31	15J	4V	8Y	View
Lewis	Laborers	Powderman's Helper	$54.62	15J	4V	8Y	View
Lewis	Laborers	Power Jacks	$55.62	15J	4V	8Y	View
Lewis	Laborers	Railroad Spike Puller - Power	$55.62	15J	4V	8Y	View
Lewis	Laborers	Raker - Asphalt	$57.31	15J	4V	8Y	View
Lewis	Laborers	Re-timberman	$56.31	15J	4V	8Y	View
Lewis	Laborers	Remote Equipment Operator	$55.62	15J	4V	8Y	View
Lewis	Laborers	Rigger/Signal Person	$55.62	15J	4V	8Y	View
Lewis	Laborers	Rip Rap Person	$54.62	15J	4V	8Y	View
Lewis	Laborers	Rivet Buster	$55.62	15J	4V	8Y	View
Lewis	Laborers	Rodder	$55.62	15J	4V	8Y	View
Lewis	Laborers	Scaffold Erector	$54.62	15J	4V	8Y	View
Lewis	Laborers	Scale Person	$54.62	15J	4V	8Y	View
Lewis	Laborers	Sloper (Over 20")	$55.62	15J	4V	8Y	View
Lewis	Laborers	Sloper Sprayer	$54.62	15J	4V	8Y	View
Lewis	Laborers	Spreader (Concrete)	$55.62	15J	4V	8Y	View
Lewis	Laborers	Stake Hopper	$54.62	15J	4V	8Y	View
Lewis	Laborers	Stock Piler	$54.62	15J	4V	8Y	View
Lewis	Laborers	Swinging Stage/Boatswain Chair	$46.29	15J	4V	8Y	View
Lewis	Laborers	Tamper & Similar Electric, Air & Gas Operated Tools	$55.62	15J	4V	8Y	View
Lewis	Laborers	Tamper (Multiple & Self-propelled)	$55.62	15J	4V	8Y	View
Lewis	Laborers	Timber Person - Sewer (Lagger, Shorer & Cribber)	$55.62	15J	4V	8Y	View
Lewis	Laborers	Toolroom Person (at Jobsite)	$54.62	15J	4V	8Y	View
Lewis	Laborers	Topper	$54.62	15J	4V	8Y	View
Lewis	Laborers	Track Laborer	$54.62	15J	4V	8Y	View
Lewis	Laborers	Track Liner (Power)	$55.62	15J	4V	8Y	View
Lewis	Laborers	Traffic Control Laborer	$49.50	15J	4V	9C	View
Lewis	Laborers	Traffic Control Supervisor	$52.45	15J	4V	9C	View
Lewis	Laborers	Truck Spotter	$54.62	15J	4V	8Y	View
Lewis	Laborers	Tugger Operator	$55.62	15J	4V	8Y	View
Lewis	Laborers	Tunnel Work-Compressed Air Worker 0-30 psi	$142.82	15J	4V	9B	View
Lewis	Laborers	Tunnel Work-Compressed Air Worker 30.01-44.00	$147.85	15J	4V	9B	View

		psi					
Lewis	Laborers	Tunnel Work-Compressed Air Worker 44.01-54.00 psi	$151.53	15J	4V	9B	View
Lewis	Laborers	Tunnel Work-Compressed Air Worker 54.01-60.00 psi	$157.23	15J	4V	9B	View
Lewis	Laborers	Tunnel Work-Compressed Air Worker 60.01-64.00 psi	$159.35	15J	4V	9B	View
Lewis	Laborers	Tunnel Work-Compressed Air Worker 64.01-68.00 psi	$164.45	15J	4V	9B	View
Lewis	Laborers	Tunnel Work-Compressed Air Worker 68.01-70.00 psi	$166.35	15J	4V	9B	View
Lewis	Laborers	Tunnel Work-Compressed Air Worker 70.01-72.00 psi	$168.35	15J	4V	9B	View
Lewis	Laborers	Tunnel Work-Compressed Air Worker 72.01-74.00 psi	$170.35	15J	4V	9B	View
Lewis	Laborers	Tunnel Work-Guage and Lock Tender	$57.41	15J	4V	8Y	View
Lewis	Laborers	Tunnel Work-Miner	$57.41	15J	4V	8Y	View
Lewis	Laborers	Tunnel Work-Miner	$57.41	7A	4V	8Y	View
Lewis	Laborers	Vibrator	$55.62	15J	4V	8Y	View
Lewis	Laborers	Vinyl Seamer	$54.62	15J	4V	8Y	View
Lewis	Laborers	Watchman	$42.08	15J	4V	8Y	View
Lewis	Laborers	Welder	$55.62	15J	4V	8Y	View
Lewis	Laborers	Well Point Laborer	$55.62	15J	4V	8Y	View
Lewis	Laborers	Window Washer/Cleaner	$42.08	15J	4V	8Y	View
Lewis	Laborers - Underground Sewer & Water	General Laborer & Topman	$54.62	15J	4V	8Y	View
Lewis	Laborers - Underground Sewer & Water	Pipe Layer	$55.62	15J	4V	8Y	View
Lewis	Landscape Construction	Landscape Construction/Landscaping Or Planting Laborers	$42.08	15J	4V	8Y	View
Lewis	Landscape Construction	Landscape Operator	$71.95	7A	3K	8X	View
Lewis	Landscape Maintenance	Groundskeeper	$14.49		1		View
Lewis	Lathers	Journey Level	$68.19	15J	4C		View
Lewis	Marble Setters	Journey Level	$63.32	7E	1N		View
Lewis	Metal Fabrication (In Shop)	Fitter	$15.16		1		View
Lewis	Metal Fabrication (In Shop)	Laborer	$14.49		1		View
Lewis	Metal Fabrication (In Shop)	Machine Operator	$14.49		1		View
Lewis	Metal Fabrication (In Shop)	Painter	$14.49		1		View
Lewis	Metal Fabrication (In Shop)	Welder	$15.16		1		View
Lewis	Millwright	Journey Level	$69.74	15J	4C		View
Lewis	Modular Buildings	Cabinet Assembly	$14.49		1		View
Lewis	Modular Buildings	Electrician	$14.49		1		View

Lewis	Modular Buildings	Equipment Maintenance	$14.49		1		View
Lewis	Modular Buildings	Plumber	$14.49		1		View
Lewis	Modular Buildings	Production Worker	$14.49		1		View
Lewis	Modular Buildings	Tool Maintenance	$14.49		1		View
Lewis	Modular Buildings	Utility Person	$14.49		1		View
Lewis	Modular Buildings	Welder	$14.49		1		View
Lewis	Painters	Journey Level	$47.70	6Z	2B		View
Lewis	Pile Driver	Crew Tender	$62.69	15J	4C		View
Lewis	Pile Driver	Crew Tender/Technician	$62.69	15J	4C		View
Lewis	Pile Driver	Hyperbaric Worker - Compressed Air Worker 0-30.00 PSI	$85.00	15J	4C		View
Lewis	Pile Driver	Hyperbaric Worker - Compressed Air Worker 30.01 - 44.00 PSI	$90.00	15J	4C		View
Lewis	Pile Driver	Hyperbaric Worker - Compressed Air Worker 44.01 - 54.00 PSI	$94.00	15J	4C		View
Lewis	Pile Driver	Hyperbaric Worker - Compressed Air Worker 64.01 - 68.00 PSI	$106.50	15J	4C		View
Lewis	Pile Driver	Hyperbaric Worker - Compressed Air Worker 68.01 - 70.00 PSI	$108.50	15J	4C		View
Lewis	Pile Driver	Hyperbaric Worker - Compressed Air Worker 70.01 - 72.00 PSI	$110.50	15J	4C		View
Lewis	Pile Driver	Hyperbaric Worker - Compressed Air Worker 72.01 - 74.00 PSI	$112.50	15J	4C		View
Lewis	Pile Driver	Journey Level	$68.64	15J	4C		View
Lewis	Plasterers	Journey Level	$64.14	7Q	1R		View
Lewis	Plasterers	Nozzleman	$67.64	7Q	1R		View
Lewis	Playground & Park Equipment Installers	Journey Level	$14.49		1		View
Lewis	Plumbers & Pipefitters	Journey Level	$82.22	5A	1G		View
Lewis	Power Equipment Operators	Asphalt Plant Operator	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators	Assistant Engineer	$69.28	7A	3K	8X	View
Lewis	Power Equipment Operators	Barrier Machine (zipper)	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Batch Plant Operator: Concrete	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Bobcat	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators	Brokk - Remote Demolition Equipment	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators	Brooms	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators	Bump Cutter	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Cableways	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators	Chipper	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Compressor	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators	Concrete Pump: Truck Mount With Boom	$73.15	7A	3K	8X	View

		Attachment Over 42m					
Lewis	Power Equipment Operators	Concrete Finish Machine - laser Screed	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Conveyors	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators	Cranes Friction: 200 tons and over	$75.90	7A	3K	8X	View
Lewis	Power Equipment Operators	Cranes, A-frame: 10 tons and under	$69.28	7A	3K	8X	View
Lewis	Power Equipment Operators	Cranes: 100 tons through 199 tons, or 150’ of boom (including jib with attachments)	$74.40	7A	3K	8X	View
Lewis	Power Equipment Operators	Cranes: 20 tons through 44 tons with attachments	$73.01	7A	3K	8X	View
Lewis	Power Equipment Operators	Cranes: 200 tons- 299 tons, or 250’ of boom including jib with attachments	$75.17	7A	3K	8X	View
Lewis	Power Equipment Operators	Cranes: 300 tons and over or 300’ of boom including jib with attachments	$75.90	7A	3K	8X	View
Lewis	Power Equipment Operators	Cranes: 45 tons through 99 tons, under 150’ of boom(including jib with attachments)	$73.66	7A	3K	8X	View
Lewis	Power Equipment Operators	Cranes: Friction cranes through 199 tons	$75.17	7A	3K	8X	View
Lewis	Power Equipment Operators	Cranes: through 19 tons with attachments, A-frame over 10 tons	$72.45	7A	3K	8X	View
Lewis	Power Equipment Operators	Crusher	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Deck Engineer/deck Winches (power)	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Derricks: on building work	$73.66	7A	3K	8X	View
Lewis	Power Equipment Operators	Dozers D-9 & Under	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators	Drill Oilers: Auger Type, Truck Or Crane Mount	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators	Drilling Machine	$73.89	7A	3K	8X	View
Lewis	Power Equipment Operators	Elevator and man-lift: permanent and shaft type	$69.28	7A	3K	8X	View
Lewis	Power Equipment Operators	Finishing Machine, Bidwell And Gamaco & Similar Equipment	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Forklift: 3000 lbs and over with attachments	$72.45	7A	3K	8X	View
Lewis	Power Equipment Operators	Forklifts: under 3000 lbs. with attachments	$69.28	7A	3K	8X	View

Lewis	Power Equipment Operators	Grade Engineer: Using Blueprints, Cut Sheets,etc.	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Gradechecker/stakeman	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators	Guardrail punch/Auger	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Horizontal/directional Drill Locator	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators	Horizontal/directional Drill Operator	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Hydralifts/boom trucks: 10 tons and under	$69.28	7A	3K	8X	View
Lewis	Power Equipment Operators	Hydralifts/boom trucks: over 10 tons	$72.45	7A	3K	8X	View
Lewis	Power Equipment Operators	Loader, Overhead 8 Yards. & Over	$73.89	7A	3K	8X	View
Lewis	Power Equipment Operators	Loader, Overhead, 6 Yards. But Not Including 8 Yards	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators	Loaders, Overhead Under 6 Yards	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Loaders, Plant Feed	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Loaders: Elevating Type Belt	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators	Locomotives, All	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Material Transfer Device	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Mechanics: all (Leadmen - $0.50 per hour over mechanic)	$74.40	7A	3K	8X	View
Lewis	Power Equipment Operators	Motor patrol graders	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators	Oil Distributors, Blower Distribution & Mulch Seeding Operator	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators	Outside Hoists (elevators and manlifts), Air Tuggers, Strato	$72.45	7A	3K	8X	View
Lewis	Power Equipment Operators	Overhead, bridge type Crane: 20 tons through 44 tons	$73.01	7A	3K	8X	View
Lewis	Power Equipment Operators	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Overhead, bridge type: 100 tons and over	$74.40	7A	3K	8X	View

Lewis	Power Equipment Operators	Overhead, bridge type: 45 tons through 99 tons	$73.66	7A	3K	8X	View
Lewis	Power Equipment Operators	Pavement Breaker	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators	Pile Driver (other Than Crane Mount)	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Plant Oiler - Asphalt, Crusher	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators	Posthole Digger, Mechanical	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators	Power Plant	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators	Pumps - Water	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators	Quad 9, HD 41, D10 And Over	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators	Quick Tower: no cab, under 100 feet in height based to boom	$69.28	7A	3K	8X	View
Lewis	Power Equipment Operators	Remote Control Operator On Rubber Tired Earth Moving Equipment	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators	Rigger and Bellman	$69.28	7A	3K	8X	View
Lewis	Power Equipment Operators	Rigger/Signal Person, Bellman(Certified)	$72.45	7A	3K	8X	View
Lewis	Power Equipment Operators	Rollagon	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators	Roller, Other Than Plant Mix	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators	Roller, Plant Mix Or Multi-lift Materials	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators	Roto-mill, Roto-grinder	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Saws - Concrete	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators	Scraper, Self Propelled Under 45 Yards	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Scrapers - Concrete & Carry All	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators	Scrapers, Self-propelled: 45 Yards And Over	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators	Service Engineers: equipment	$72.45	7A	3K	8X	View
Lewis	Power Equipment Operators	Shotcrete/gunite Equipment	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators	Shovel, Excavator, Backhoe, Tractors Under 15 Metric Tons	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	$73.89	7A	3K	8X	View
Lewis	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 90 Metric	$74.64	7A	3K	8X	View

		Tons					
Lewis	Power Equipment Operators	Slipform Pavers	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators	Spreader, Topsider & Screedman	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators	Subgrader Trimmer	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Tower Bucket Elevators	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators	Tower Crane: over 175' through 250' in height, base to boom	$75.17	7A	3K	8X	View
Lewis	Power Equipment Operators	Tower crane: up to 175' in height base to boom	$74.40	7A	3K	8X	View
Lewis	Power Equipment Operators	Tower Cranes: over 250’ in height from base to boom.	$75.90	7A	3K	8X	View
Lewis	Power Equipment Operators	Transporters, All Track Or Truck Type	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators	Trenching Machines	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators	Truck Crane Oiler/Driver: 100 tons and over	$73.01	7A	3K	8X	View
Lewis	Power Equipment Operators	Truck crane oiler/driver: under 100 tons	$72.45	7A	3K	8X	View
Lewis	Power Equipment Operators	Truck Mount Portable Conveyor	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators	Welder	$73.66	7A	3K	8X	View
Lewis	Power Equipment Operators	Wheel Tractors, Farmall Type	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators	Yo Yo Pay Dozer	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Asphalt Plant Operator	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Assistant Engineer	$69.28	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Barrier Machine (zipper)	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Batch Plant Operator: Concrete	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Bobcat	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Brokk - Remote Demolition Equipment	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Brooms	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Bump Cutter	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground	Cableways	$73.15	7A	3K	8X	View

	Sewer & Water						
Lewis	Power Equipment Operators- Underground Sewer & Water	Chipper	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Compressor	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Over 42m	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Concrete Finish Machine - laser Screed	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Conveyors	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Cranes Friction: 200 tons and over	$75.90	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Cranes, A-frame: 10 tons and under	$69.28	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Cranes: 100 tons through 199 tons, or 150’ of boom (including jib with attachments)	$74.40	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Cranes: 20 tons through 44 tons with attachments	$73.01	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Cranes: 200 tons- 299 tons, or 250’ of boom including jib with attachments	$75.17	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Cranes: 300 tons and over or 300’ of boom including jib with attachments	$75.90	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Cranes: 45 tons through 99 tons, under 150’ of boom(including jib with attachments)	$73.66	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Cranes: Friction cranes through 199 tons	$75.17	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Cranes: through 19 tons with attachments, A-frame over 10 tons	$72.45	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground	Crusher	$72.51	7A	3K	8X	View

	Sewer & Water						
Lewis	Power Equipment Operators- Underground Sewer & Water	Deck Engineer/deck Winches (power)	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Derricks: on building work	$73.66	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Dozers D-9 & Under	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Drill Oilers: Auger Type, Truck Or Crane Mount	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Drilling Machine	$73.89	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Elevator and man-lift: permanent and shaft type	$69.28	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Finishing Machine, Bidwell And Gamaco & Similar Equipment	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Forklift: 3000 lbs and over with attachments	$72.45	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Forklifts: under 3000 lbs. with attachments	$69.28	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Grade Engineer: Using Blueprints, Cut Sheets,etc.	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Gradechecker/stakeman	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Guardrail punch/Auger	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Horizontal/directional Drill Locator	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Horizontal/directional Drill Operator	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Hydralifts/boom trucks: 10 tons and under	$69.28	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground	Hydralifts/boom trucks: over 10 tons	$72.45	7A	3K	8X	View

	Sewer & Water						
Lewis	Power Equipment Operators- Underground Sewer & Water	Loader, Overhead 8 Yards. & Over	$73.89	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Loader, Overhead, 6 Yards. But Not Including 8 Yards	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Loaders, Overhead Under 6 Yards	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Loaders, Plant Feed	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Loaders: Elevating Type Belt	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Locomotives, All	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Material Transfer Device	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Mechanics: all (Leadmen - $0.50 per hour over mechanic)	$74.40	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Motor patrol graders	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Oil Distributors, Blower Distribution & Mulch Seeding Operator	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Outside Hoists (elevators and manlifts), Air Tuggers, Strato	$72.45	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Overhead, bridge type Crane: 20 tons through 44 tons	$73.01	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Overhead, bridge type: 100 tons and over	$74.40	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Overhead, bridge type: 45 tons through 99 tons	$73.66	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Pavement Breaker	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Pile Driver (other Than Crane Mount)	$72.51	7A	3K	8X	View

Lewis	Power Equipment Operators- Underground Sewer & Water	Plant Oiler - Asphalt, Crusher	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Posthole Digger, Mechanical	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Power Plant	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Pumps - Water	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Quad 9, HD 41, D10 And Over	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Quick Tower: no cab, under 100 feet in height based to boom	$69.28	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Remote Control Operator On Rubber Tired Earth Moving Equipment	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Rigger and Bellman	$69.28	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Rigger/Signal Person, Bellman(Certified)	$72.45	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Rollagon	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Roller, Other Than Plant Mix	$68.82	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Roller, Plant Mix Or Multi-lift Materials	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Roto-mill, Roto-grinder	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Saws - Concrete	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Scraper, Self Propelled Under 45 Yards	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Scrapers - Concrete & Carry All	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Scrapers, Self-propelled: 45 Yards And Over	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Service Engineers: equipment	$72.45	7A	3K	8X	View
Lewis	Power Equipment	Shotcrete/gunite	$68.82	7A	3K	8X	View

	Operators- Underground Sewer & Water	Equipment					
Lewis	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoe, Tractors Under 15 Metric Tons	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	$73.89	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Slipform Pavers	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Spreader, Topsider & Screedman	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Subgrader Trimmer	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Tower Bucket Elevators	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Tower Crane: over 175' through 250' in height, base to boom	$75.17	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Tower crane: up to 175' in height base to boom	$74.40	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Tower Cranes: over 250’ in height from base to boom.	$75.90	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Transporters, All Track Or Truck Type	$73.15	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Trenching Machines	$71.95	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Truck Crane Oiler/Driver: 100 tons and over	$73.01	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Truck crane oiler/driver: under 100 tons	$72.45	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Truck Mount Portable Conveyor	$72.51	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground Sewer & Water	Welder	$73.66	7A	3K	8X	View
Lewis	Power Equipment Operators- Underground	Wheel Tractors, Farmall Type	$68.82	7A	3K	8X	View

	Sewer & Water						
Lewis	Power Equipment Operators- Underground Sewer & Water	Yo Yo Pay Dozer	$72.51	7A	3K	8X	View
Lewis	Power Line Clearance Tree Trimmers	Journey Level In Charge	$57.22	5A	4A		View
Lewis	Power Line Clearance Tree Trimmers	Spray Person	$54.32	5A	4A		View
Lewis	Power Line Clearance Tree Trimmers	Tree Equipment Operator	$57.22	5A	4A		View
Lewis	Power Line Clearance Tree Trimmers	Tree Trimmer	$51.18	5A	4A		View
Lewis	Power Line Clearance Tree Trimmers	Tree Trimmer Groundperson	$38.99	5A	4A		View
Lewis	Refrigeration & Air Conditioning Mechanics	Journey Level	$82.21	5A	1G		View
Lewis	Residential Brick Mason	Journey Level	$21.96		1		View
Lewis	Residential Carpenters	Journey Level	$24.89		1		View
Lewis	Residential Cement Masons	Journey Level	$16.79		1		View
Lewis	Residential Drywall Applicators	Journey Level	$36.07		1		View
Lewis	Residential Drywall Tapers	Journey Level	$24.48		1		View
Lewis	Residential Electricians	Journey Level	$41.03	5A	1B		View
Lewis	Residential Glaziers	Journey Level	$25.40		1		View
Lewis	Residential Insulation Applicators	Journey Level	$28.53		1		View
Lewis	Residential Laborers	Journey Level	$23.10		1		View
Lewis	Residential Marble Setters	Journey Level	$21.96		1		View
Lewis	Residential Painters	Journey Level	$18.76		1		View
Lewis	Residential Plumbers & Pipefitters	Journey Level	$26.35		1		View
Lewis	Residential Refrigeration & Air Conditioning Mechanics	Journey Level	$32.89		1		View
Lewis	Residential Sheet Metal Workers	Journey Level	$33.28		1		View
Lewis	Residential Soft Floor Layers	Journey Level	$14.86		1		View
Lewis	Residential Sprinkler Fitters (Fire Protection)	Journey Level	$20.28		1		View
Lewis	Residential Stone Masons	Journey Level	$21.96		1		View
Lewis	Residential Terrazzo Workers	Journey Level	$14.86		1		View
Lewis	Residential Terrazzo/Tile Finishers	Journey Level	$14.86		1		View
Lewis	Residential Tile Setters	Journey Level	$14.86		1		View
Lewis	Roofers	Journey Level	$59.00	5A	2O		View
Lewis	Roofers	Using Irritable Bituminous Materials	$62.00	5A	2O		View
Lewis	Sheet Metal Workers	Journey Level (Field or Shop)	$91.83	7F	1E		View
Lewis	Sign Makers & Installers	Journey Level	$18.04		1		View

	(Electrical)						
Lewis	Sign Makers & Installers (Non-Electrical)	Journey Level	$54.62	15J	4V	8Y	View
Lewis	Soft Floor Layers	Journey Level	$54.41	5A	3J		View
Lewis	Solar Controls For Windows	Journey Level	$14.49		1		View
Lewis	Sprinkler Fitters (Fire Protection)	Journey Level	$66.01	7J	1R		View
Lewis	Stage Rigging Mechanics (Non Structural)	Journey Level	$14.49		1		View
Lewis	Stone Masons	Journey Level	$63.32	7E	1N		View
Lewis	Street And Parking Lot Sweeper Workers	Journey Level	$16.00		1		View
Lewis	Surveyors	Chain Person	$71.30	7A	3K		View
Lewis	Surveyors	Instrument Person	$71.95	7A	3K		View
Lewis	Surveyors	Party Chief	$73.15	7A	3K		View
Lewis	Telecommunication Technicians	Journey Level	$48.88	6Z	1B		View
Lewis	Telephone Line Construction - Outside	Cable Splicer	$38.27	5A	2B		View
Lewis	Telephone Line Construction - Outside	Hole Digger/Ground Person	$25.66	5A	2B		View
Lewis	Telephone Line Construction - Outside	Telephone Equipment Operator (Light)	$31.96	5A	2B		View
Lewis	Telephone Line Construction - Outside	Telephone Lineperson	$36.17	5A	2B		View
Lewis	Terrazzo Workers	Journey Level	$58.71	7E	1N		View
Lewis	Tile Setters	Journey Level	$58.71	7E	1N		View
Lewis	Tile, Marble & Terrazzo Finishers	Finisher	$49.54	7E	1N		View
Lewis	Traffic Control Stripers	Journey Level	$50.51	7A	1K		View
Lewis	Truck Drivers	Asphalt Mix Over 16 Yards	$69.20	15J	11I	8L	View
Lewis	Truck Drivers	Asphalt Mix To 16 Yards	$68.36	15J	11I	8L	View
Lewis	Truck Drivers	Dump Truck	$68.36	15J	11I	8L	View
Lewis	Truck Drivers	Dump Truck & Trailer	$69.20	15J	11I	8L	View
Lewis	Truck Drivers	Other Trucks	$69.20	15J	11I	8L	View
Lewis	Truck Drivers - Ready Mix	Transit Mix	$69.20	15J	11I	8L	View
Lewis	Well Drillers & Irrigation Pump Installers	Irrigation Pump Installer	$18.18		1		View
Lewis	Well Drillers & Irrigation Pump Installers	Oiler	$14.49		1		View
Lewis	Well Drillers & Irrigation Pump Installers	Well Driller	$18.00		1		View

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.]

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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.

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.

Overtime Codes Continued

1. 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.

   O. All hours worked on Sundays and holidays shall be paid at one and one-half times 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.

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.

Overtime Codes Continued

4. 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.

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.

V. Work performed in excess of ten (10) hours of straight time per day when four ten (10) hour shifts are established or outside the normal shift (5 am to 6pm), and all work on Saturdays, except for make-up days shall be paid at time and one-half (1 ½) the straight time rate.

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.

W. 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.

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.

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.

   Y. 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 shift, and all work on Saturdays shall be paid at time and one-half the straight time rate. All work performed after 6:00 pm Saturday to 6:00 am Monday and holidays shall be paid at double the straight time rate of pay.

   Any shift starting between the hours of 6:00 pm and midnight shall receive an additional one dollar ($1.00) per hour for all hours worked that shift.

   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.

   Z. 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 20% over the hourly rate of wage. Work performed on Sundays may be paid at double time. All hours worked on holidays shall be paid at double the hourly rate of wage.

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.

Overtime Codes Continued

11. 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.

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.

Overtime Codes Continued

11. I. 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. 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.

Any shift starting between the hours of 6:00 pm and midnight shall receive an additional two dollar ($2.00) per hour for all hours worked that shift.

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).

I. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).

J. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Eve Day, And Christmas Day (7).

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).

Holiday Codes Continued

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).

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.

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.

Holiday Codes Continued

7. 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.

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.

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.

Holiday Codes Continued

7. 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.

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, 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.

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.

Holiday Codes Continued

7. 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.

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, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Eve Day, and Christmas Day (8). When the following holidays fall on a Saturday (New Year's Day, Independence Day, and Christmas Day) the preceding Friday will be considered as the holiday; should they fall on a Sunday, the following Monday shall be considered as the holiday.

I. Holidays: New Year's Day, President's Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, the last regular workday before Christmas (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

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.

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.

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

8. 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.)

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.)

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.

APPENDIX C

BID PROPOSAL DOCUMENTS

INCLUDING:

Notice to Contractor

Proposal Form

Non-Collusion Declaration

Proposal Signature Page

Certification of Compliance with Wage Payment Statutes

Lewis County Department of Public Works

Josh S Metcalf, PE, Director

Tim Fife, PE, County Engineer

NOTICE TO CONTRACTORS

NOTICE IS HEREBY GIVEN that the Board of County Commissioners of Lewis County or designee, will open sealed proposals and publicly read them aloud at or after 12:30 p.m. on **Thursday, June 23, 2022**, at the Lewis County Courthouse in Chehalis, Washington for the Crumb Road MP 0.17 Culvert Replacement Project, SM 20F630050017. This contract provides for the improvement of *** Crumb Road MP 0.17 by installing a stream bypass, detour road installation, removing the existing culvert, shoring, excavation, driving wood pile for foundation stabilization, buried structure installation (29'x12.5'x60' concrete box culvert), streambed restoration, large woody debris construction, road restoration, guardrail, hydroseeding, planting mitigation *** and other related work, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications.

SEALED BIDS MUST BE DELIVERED BY OR BEFORE
12:30 P.M. on Thursday, June 23 2022

(Lewis County official time is displayed on Axxess Intertel phones in the office of the Board of County Commissioners. **Bids submitted after 12:30 PM will not be considered for this project**.)

Sealed proposals must be delivered to the Clerk of the Board of Lewis County Commissioners (351 N.W. North Street, Room 210, CMS-01, Chehalis, Washington 98532), by or before **12:30 P.M.** on the date specified for opening, and in an envelope clearly marked: ***"SEALED BID FOR THE CRUMB ROAD MP 0.17 CULVERT REPLACEMENT PROJECT, SM 20F630050017 (FEMA PROJECT No. 4539-DR-WA-PW 121), TO BE OPENED ON OR AFTER 12:30 P.M. ON THURSDAY, JUNE 23, 2022".***

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 contract bond within the time stated in the specifications, the bid proposal deposit shall be forfeited to the Lewis County Public Works Department.

Informational copies of maps, plans and specifications are on file for inspection in the office of the County Engineer of Lewis County in Chehalis, Washington. The contract documents may be viewed and downloaded from Lewis County's Web Site @ www.lewiscountywa.gov or you may call the Lewis County Engineers office @ (360)740-2612 and request a copy be mailed to you. All Contractor questions and Lewis County clarifying answers will be posted on our website and emailed to all Contractors registered on Lewis County's Planholder List. Plan or specification changes shall be accomplished through official project addendums.

The Lewis County Public Works Department in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises as defined at 49 CFR Part 26 will be afforded full opportunity to

submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin, or sex in consideration for an award.

PROPOSAL

TO: BOARD OF COUNTY COMMISSIONERS
LEWIS COUNTY
CHEHALIS, WASHINGTON 98532

This certifies that the undersigned has examined the location of the Crumb Road MP 0.17 Culvert Replacement Project - SM 20F630050017, in Lewis County, Washington, and that the plans, specifications and contract governing the work embraced in these improvements, and the method by which payment will be made for said work is understood. The undersigned hereby proposes to undertake and complete the work embraced in this improvement, or as much thereof as can be completed with the money available in accordance with the said plans, specifications and contract, and the following schedules of rates and prices:

NOTE: Unit prices for all items, all extensions, and total amount of bid shall be shown. All entries must be typed or entered in ink.

ITEM NO.	PLAN QUANTITY	ITEM DESCRIPTION	UNIT PRICE DOLLARS CENTS	AMOUNT DOLLARS CENTS
1	1 L.S.	Mobilization	LUMP SUM	$
2	0.35 ACRE	Clearing and Grubbing	$	$
3	1 L.S.	Removal of Structures and Obstructions	LUMP SUM	$
4	990 C.Y.	Roadway Excavation Incl. Haul	$	$
5	455 C.Y.	Common Borrow Incl. Haul	$	$
6	60 C.Y.	EPS29 GeoFoam	$	$
7	520 C.Y.	Select Borrow Incl. Haul	$	$
8	475 Ton	Gravel Borrow Incl. Haul	$	$
9	125 C.Y.	Channel Excavation Incl. Haul	$	$
10	5 EACH	Large Woody Debris	$	$
11	740 Ton	Streambed Material	$	$
12	33 L.F.	Schedule A Culv. Pipe 18 In. Dia.	$	$
13	45 L.F.	Schedule A Culv. Pipe 24 In. Dia.	$	$
14	4,410 L.F.	Furnishing Timber Pile - Untreated	$	$
15	98 Each	Driving Timber Pile - Untreated	$	$
16	1 L.S.	Temporary Stream Diversion	LUMP SUM	$
17	1,360 C.Y.	Structure Excavation Class A Incl. Haul	$	$
18	1 L.S.	Shoring or Extra Excavation Class A Incl. Haul	LUMP SUM	$
19	1 L.S.	Agency Designed Buried Structure No. 1	LUMP SUM	$
20	820 TON	Crushed Surfacing Base Course	$	$
21	250 TON	Crushed Surfacing Top Course	$	$
22	160 Ton	HMA Cl. 3/8 In. PG 58H-22 Fiber Reinforced	$	$

ITEM NO.	PLAN QUANTITY	ITEM DESCRIPTION	UNIT PRICE DOLLARS CENTS	AMOUNT DOLLARS CENTS
23	1,120 S.Y.	Biaxial Geogrid	$	$
24	0.25 ACRE	Seeding and Mulching	$	$
25	100 S.Y.	Erosion Control Blanket	$	$
26	125 S.Y.	Stabilized Construction Entrance	$	$
27	1 Est.	Erosion/Water Pollution Control	$5,000.00	$5,000.00
28	1 L.S.	Planting Mitigation Construction	LUMP SUM	$
29	500 L.F.	High Visibility Silt Fence	$	$
30	4 Each	Beam Guardrail Type 31 Non-Flared Terminal	$	$
31	75 L.F.	Beam Guardrail Type 31	$	$
32	600 L.F.	Paint Line	$	$
33	1 L.S.	Project Temporary Traffic Control	LUMP SUM	$
34	1 L.S.	Trimming and Cleanup	LUMP SUM	$
35	0 Est.	Reimbursement for Third Party Damage	$0.00	$0.00
36	1 L.S.	SPCC Plan	LUMP SUM	$
			TOTAL BID	$

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.

PROPOSAL - SIGNATURE PAGE

The bidder is hereby advised that by signature of this proposal he/she is deemed to have acknowledged all requirements and signed all certificates contained herein.

A proposal guaranty in an amount of five percent (5%) of the total bid, based upon the approximate estimate of quantities at the above prices and in the form as indicated below, is attached hereto:

CASH ☐ IN THE AMOUNT OF_____

CASHIER'S CHECK ☐ _____ DOLLARS

CERTIFIED CHECK ☐ ($_____) PAYABLE TO THE LEWIS COUNTY TREASURER

PROPOSAL BOND ☐ IN THE AMOUNT OF 5% OF THE BID

** Receipt is hereby acknowledged of addendum(s) No.(s) _____, _____, _____, & _____

SIGNATURE OF AUTHORIZED OFFICIAL(S)

Proposal Must be Signed _____

Firm Name _____

Address _____

_____

_____

State of Washington Contractor's License No. _____

Unified Business Identifier (U.B.I.) No. _____

Telephone No. _____

Federal ID No. _____

Note:

This proposal form is not transferable and any alteration of the firm's name entered hereon without prior permission from the Lewis County Engineer will be cause for considering the proposal irregular and subsequent rejection of the bid.

*Attach Power of Attorney

Lewis County Department of Public Works

Josh Metcalf, PE, Director

Tim Fife, PE, County Engineer

Certification of Compliance with Wage Payment Statutes

The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date ( ), 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.

I certify under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

_____
Bidder's Business Name

_____
Signature of Authorized Official*

_____
Printed Name

_____
Title

_____ _____ _____
Date City State

Check One:
Sole Proprietorship ☐ Partnership ☐ Joint Venture ☐ Corporation ☐

State of Incorporation, or if not a corporation, State where business entity was formed:

_____

If a co-partnership, give firm name under which business is transacted:

_____

** If a corporation, proposal must be executed in the corporate name by the president or vice-president (or any other corporate officer accompanied by evidence of authority to sign). If a co-partnership, proposal must be executed by a partner.*

APPENDIX D

CONTRACT DOCUMENTS

INCLUDING:

Contract Form

Contract Bond

Power Equipment List

CONTRACT

THIS AGREEMENT, made and entered into this __ day of _____, 2022, between the BOARD OF COUNTY COMMISSIONERS of LEWIS COUNTY, State of Washington, acting under and by virtue of RCW 36.77.040, hereinafter called

the Board, and _____ of _____

for___sel___, heirs, executors, administrators, successors and assigns, hereinafter called the Contractor.

WITNESSETH:

That in consideration of the payments, covenants and agreements hereinafter mentioned to be made and performed by the parties hereto, the parties hereto covenant and agree as follows:

DESCRIPTION OF WORK:

1. The Contractor shall do all work and furnish all material necessary to improve Crumb Road MP 0.17 by installing a stream bypass, detour road installation, removing the existing culvert, shoring, excavation, driving wood pile for foundation stabilization, buried structure installation (29'x12.5'x60' concrete box culvert), streambed restoration, large woody debris construction, road restoration, guardrail, hydroseeding, planting mitigation and other work, all in Lewis County Washington, in accordance with and as described in the attached plans and specifications, and in full compliance with the terms, conditions and stipulations herein set forth and attached, now referred to and by such reference incorporated herein and made a part hereof as fully for all purposes as if here set forth at length, and shall perform any alterations in or additions to the work covered by this contract and every part thereof and any extra work which may be ordered as provided in this contract and every part thereof.

The Contractor shall provide and be at the expense of all materials, labor, carriage, tools, implements and conveniences and things of every description that may be requisite for the transfer of materials and for constructing and completing the work provided for in this contract and every part thereof.

2. The County hereby promises and agrees with the Contractor to hire and does hire the Contractor to provide the materials and to do and cause to be done the above described work and to complete and furnish the same according to the attached plans and specifications and the terms and conditions herein contained, and hereby contracts to pay for the same according to the schedule of unit or itemized prices at the time and in the manner and upon the conditions provided for in this contract and every part thereof. The County further agrees to hire the contractor to perform any alterations in or conditions to the work covered by this contract and every part thereof and any force account work that may be ordered and to pay for the same under the terms of this contract and the attached plans and specifications.

3. The Contractor for himself, and for his heirs, executors, administrators, successors and assigns, does hereby agree to the full performance of all the covenants herein contained upon the part of the Contractor.

4. It is further provided that no liability shall attach to the County be reason of entering into this contract, except as expressly provided herein.

5. CANCELLATION OF CONTRACT FOR VIOLATION OF STATE POLICY

This contract, pursuant to RCW 49.28.040 to RCW 49.28.060, may be canceled by the officers or agents of the Owner authorized to contract for or supervise the execution of such work, in case such work is not performed in accordance with the policy of the State of Washington.

6. DOCUMENTS COMPRISING CONTRACT

All documents hereto attached, including but not being limited to the advertisement for bids, information for bidders, bid proposal form, general conditions (if any), special conditions (if any), complete specifications and the complete plans, are hereby made a part of this contract.

IN WITNESS WHEREOF, the said Contractor has executed this instrument, and the said Board of County Commissioners of aforesaid County, pursuant to resolution duly adopted, has caused this instrument to be executed by and in the name of said Board by its Chairman, duly attested by its Clerk, the day and year first above written, and the seal of said Board to be hereunto affixed on the date in this instrument first above written.

_____

By:_____

_____
Contractor

Performance of foregoing contract assured in accordance with the terms of the accompanying bond.

Dated: _____, 2022

By:_____
Surety

By:_____
Attorney-in-fact

APPROVED AS TO FORM:

JONATHAN MEYER Prosecuting Attorney

By:_____
Civil Deputy

APPROVED:

_____

County Engineer

Contract – 2

CONTRACT BOND FOR **Bond No. _____**
LEWIS COUNTY, WASHINGTON

WE, _____ d/b/a _____
(Insert legal name of Contractor) (Insert trade name of Contractor, if any)

(hereinafter "Principal"), and _____ (hereinafter "Surety"), are held and firmly bound unto **LEWIS COUNTY, WASHINGTON** (hereinafter "County"), as Obligee, in an amount (in lawful money of the United States of America) equal to the total compensation and expense reimbursement payable to Principal for satisfactory completion of Principal's work under Contract No. **SM 20F630050017** between Principal and County, which total is ***initially*** _____Dollars ($_____), for the payment of which sum Principal and Surety bind themselves, their executors, administrators, legal representatives, successors and assigns, jointly and severally, firmly by these presents.. Said contract (hereinafter referred to as "the Contract") is for the **Crumb Rd MP 0.17 Culvert Replacement Project** and is made a part hereof by this reference. The Contract includes the original agreement as well as all documents attached thereto or made a part thereof and amendments, change orders, and any other document modifying, adding to or deleting from said Contract any portion thereof.

This Bond is executed in accordance with the laws of the State of Washington, and is subject to all provisions thereof and the ordinances of County insofar as they are not in conflict therewith, and is entered into for the use and benefit of County, and all laborers, mechanics, subcontractors, and materialmen, and all persons who supply such person or persons, or subcontractors, with provisions or supplies for the carrying on of the work covered by Contract No. **SM 20F630050017,** between the below-named Contractor and County for the **Crumb Rd MP 0.17 Culvert Replacement Project**, a copy of which Contract, by this reference is made a part hereof and is hereinafter referred to as "the Contract." (The Contract as defined herein includes the aforesaid agreement together with all of the Contract documents including addenda, exhibits, attachments, modifications, alterations, and additions thereto, deletions therefrom, amendments and any other document or provision attached to or incorporated into the Contract)

THE CONDITION OF THIS OBLIGATION is such that if Contractor shall promptly and faithfully perform the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

THE PARTIES FURTHER ACKNOWLEDGE & AGREE AS FOLLOWS:

(1) Surety hereby consents to, and waives notice of, any alteration, change order, or other modification of the Contract and any extension of time made by County, except that any single or cumulative change order amounting to more than twenty-five percent (25%) of the penal sum of this bond shall require Surety's written consent.

(2) Surety recognizes that the Contract includes provisions for additions, deletions, and modifications to the work or Contract Time and the amounts payable to Contractor. Subject to the limitations contained in paragraph (1) above, no such change or any combination thereof, shall void or impair Surety's obligation hereunder.

(3) Surety is subject to the provisions contained in Section 1-03.4, "Contract Bond," of the Washington State Department of Transportation (WSDOT) Standard Specifications for Road, Bridge, and Municipal Construction. And such provisions are incorporated by reference. A copy may be viewed at WSDOT's website www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/.

(4) Whenever County has declared Contractor to be in default and County has given Surety written notice of such declaration, Surety shall promptly (in no event more than thirty [30] days following receipt of such notice), specify, in written notice to County, which of the following actions Surety intends to take to remedy such default, and thereafter shall:

(a) Remedy the default within fifteen (15) days after its notice to County, as stated in such notice; or

(b) Assume within fifteen (15) days following its notice to County, full responsibility for the completion of the Contract in accordance with all of its provisions, as stated in such notice, and become entitled to payment of the balance of the Contract sum as provided in the Contract; or

(c) Pay County upon completion of the Contract, in cash, the cost of completion together with all other reasonable costs and expenses incurred by County as a result of Contractor's default, including but not limited to those incurred by County to mitigate its losses, which may include but are not limited to attorneys' fees and the cost of efforts to complete the work prior to Surety's exercising any option available to it under this Bond; or

(d) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon a determination by County and Surety jointly of the lowest responsible bidder, arrange for one or more agreements between such bidder and County, and make available as work progresses (even though there is a default or a succession of defaults under such agreement(s) for completion arranged for under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract price, but not exceeding, including other costs and damages for which Surety may be liable hereunder, the penal sum of this Bond. The term "balance of the Contract price," as used in this paragraph, shall mean the total amount payable by County to Contractor under the Contract, less the amount properly paid by County to Contractor.

(5) If County commences suit and obtains judgment against Surety for recovery hereunder, then Surety, in addition to such judgment, shall pay all costs and attorneys' fees incurred by County in enforcement of County's rights hereunder. The venue for any action arising out of or in connection with this bond shall be in Lewis County, Washington.

(6) No right or action shall accrue on this Bond to or for the use of any person or corporation other than Lewis County, except as herein provided.

(7) No rider, amendment or other document modifies this Bond except as follows, which by this reference is incorporated herein:

SURETY'S QUALIFICATIONS: Every Surety named on this bond must appear on the United States Treasury Department's most current list (Circular 570 as amended or superseded) and be authorized by the Washington State Insurance Commissioner to transact business as a surety in the State of Washington. In addition, the Surety must have a current rating of at least A-:VII in A. M. Best's Key Rating Guide.

INSTRUCTIONS FOR SIGNATURES: This bond must be signed by the president or a vice-president of a corporation; the managing general partner of a partnership; managing joint venturer of a joint venture; manager of a limited liability company or, if no manager has been designated, a member of such LLC; a general partner of a limited liability partnership; or the owner(s) of a sole proprietorship. If the bond is signed by any other representative, the Principal must attach currently-dated, written proof of that signer's authority to bind the Principal, identifying and quoting the provision in the corporate articles of incorporation, bylaws, Board resolution, partnership agreement, certificate of formation, or other document authorizing delegation of signature authority to such signer, and confirmation acceptable to the County that such delegation was in effect on the date the bond was signed. **A NOTARY PUBLIC MUST ACKNOWLEDGE EACH SIGNATURE BELOW.**

FOR THE SURETY:

By _____
(Signature of Attorney-in-Fact)

_____
(Type or print name of Attorney-in-Fact)

_____
(Type or print telephone number for Attorney-in-Fact)

FOR THE PRINCIPAL:

By:_____
(Signature of authorized signer for Contractor)

_____
(Type or print name of signer for Contractor)

_____
(Type or print title of signer for Contractor)

STATE OF _____)
) ss: **ACKNOWLEDGMENT FOR CONTRACTOR**
COUNTY OF _____)

On this _____ day of _____, ____, before me a notary public in and for the State of _____, duly commissioned and sworn, personally appeared _____, the person described in and who executed the foregoing bond, and acknowledged to me that _____ signed and sealed said bond as the free and voluntary act and deed of the Contractor so identified in the foregoing bond for the uses and purposes therein mentioned, and on oath stated that _____is authorized to execute said bond for the Contractor named therein. WITNESS my hand and official seal hereto affixed the day and year in this certificate first above written.

_____ _____
(Signature of Notary Public) (Print or type name of Notary Public)

Notary Public in and for the State of _____ residing at _____
My commission expires _____. ***SEAL*** ➔

STATE OF _____)
) ss: **ACKNOWLEDGMENT FOR SURETY**
COUNTY OF _____)

On this _____ day of _____, ____, before me a notary public in and for the State of _____, duly commissioned and sworn, personally appeared _____, Attorney-in-Fact for the Surety that executed the foregoing bond, and acknowledged said bond to be the free and voluntary act and deed of the Surety for the uses and purposes therein mentioned, and on oath stated that _____ is authorized to execute said bond on behalf of the Surety, and that the seal affixed on said bond or the annexed Power of Attorney is the corporate seal of said Surety. WITNESS my hand and official seal hereto affixed the day and year in this certificate first above written.

_____ _____
(Signature of Notary Public) (Print or type name of Notary Public)

Notary Public in and for the State of _____ residing at _____
My commission expires _____. ***SEAL*** ➔

POWER EQUIPMENT LIST

The undersigned furthermore certifies that he/she is thoroughly aware that time is of the essence for the completion of this contract within the time specified in the special provisions, and hereby agrees to provide the Engineer a list of his power equipment to be used on this project.

This equipment list will be used in computing any Force Account that may be performed within this contract.

The Contractor must complete this form in its entirety.

POWER EQUIPMENT

Type of Equipment	Make	Model Number	Serial Number	* Capacity	Year Built

APPENDIX E

FEDERAL CONTRACT PROVISIONS

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.

APPENDIX F

ENVIRONMENTAL PERMIT DOCUMENTS

General HPA Provisions

TIMING-PLANS-INVASIVE SPECIES CONTROL

1. Timing limitation: You may begin the project o n July 1, 2022, and you must complete the project by September 30, 2026.
2. Timing limitation: Work below ordinary high water line must occur between July 15th and September 30th.
3. Department of Fish and Wildlife will notify you or your agent before conducting the inspection.
4. 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, except as modified by this Hydraulic Project Approval. You must have a copy of these plans available on site during all phases of the project construction
5. Invasive species control: Follow Level 1 Decontamination protocol for low risk locations. Thoroughly remove visible dirt and organic 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. Properly dispose of any water and chemicals used to clean gear and equipment. For contaminated or high risk sites please refer to the Level 2 Decontamination protocol. You can find this and additional information in the Washington Department of Fish and Wildlife's "Invasive Species Management Protocols", available online athttps://wdfw.wa.gov/publications/01490/wdfw01490.pdf.

NOTIFICATION REQUIREMENTS

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.
7. Pre-, during, 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, one day before removing the temporary bypass 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 Protocols (November 2012), available online at http://wdfw.wa.gov/publications/01490/wdfw01490.pdf.

STAGING, JOB SITE ACCESS, AND EQUIPMENT

8. 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.

9. Clearly mark boundaries to establish the limit of work associated with site access and construction.
10. Limit the removal of bankline vegetation to the minimum amount needed to construct the project.
11. Retain all natural habitat features on the bed or banks including large woody material and boulders. You may move these natural habitat features during construction but you must place them near the preproject location before leaving the job site.
12. Confine the use of equipment to the specific access and work corridor shown in the approved plans.
13. Equipment used for this project may operate waterward of the ordinary high water line, provided the drive mechanisms (wheels, tracks, tires, etc.) do not enter or operate waterward of the ordinary high water line.
14. Check equipment daily for leaks and complete any required repairs in an upland location before using the equipment in or near the water.
15. 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

16. Work in the dry watercourse (when no natural flow is occurring in the channel, or when flow is diverted around the job site).
17. Protect all disturbed areas from erosion. Maintain erosion and sediment control until all work and cleanup of the job site is complete.
18. All erosion control materials that will remain onsite must be composed of 100% biodegradable materials.
19. Straw used for erosion and sediment control, must be certified free of noxious weeds and their seeds.
20. 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.
21. 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.
22. Route construction water (wastewater) from the project to an upland area above the limits of anticipated floodwater. Remove fine sediment and other contaminants before discharging the construction water to waters of the state.
23. 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 unless the material is approved by the Washington Department of Fish and Wildlife for reuse in the project.

CONSTRUCTION MATERIALS

24. Use only clean, suitable material as fill material (no trash, debris, car bodies, tires, asphalt, concrete, etc.)

IN-WATER WORK AREA ISOLATION USING BLOCK NETS

25. Isolate fish from the work area using block nets.

26. Install block nets at sites with reduced flow volume or velocity, uniform depth, and good accessibility.
27. Install block nets at an angle to the direction of flow (not perpendicular to the flow) to avoid entrapping fish in the nets.
28. After the first block net is secured at the upstream end, use a second block net to herd fish downstream and out of the project area.
29. Install a downstream block net if fish may reenter the work area from downstream.
30. To anchor block nets, place bags filled with clean round gravel along the bottom of the nets.
31. Secure block nets along both banks and the channel bottom to prevent failure from debris accumulation, high flows, and/or flanking
32. To keep fish out of the job site, leave block nets in place until the work is complete and conditions are suitable for fish.
33. Check block nets at least three times a day for entangled fish and accumulated debris.
34. Isolate pump hose intakes with block nets so that fish cannot get near the intake.

IN-WATER WORK AREA ISOLATION USING A TEMPORARY BYPASS

35. Use the least-impacting feasible method to temporarily bypass water from the work area. Consider the physical characteristics of the site and the anticipated volume of water flowing through the work area.
36. Isolate fish from the work area by using either a total or partial bypass to reroute the stream through a temporary channel or pipe.
37. Install a cofferdam or similar device at the upstream and downstream end of the bypass to prevent backwater from entering the work area.
38. Sequence the work to minimize the duration of dewatering
39. During all phases of bypass installation and decommissioning, maintain flows downstream of the project site to ensure survival of all downstream fish.
40. Return diverted water to the channel immediately downstream of the work area. Dissipate flow energy from the diversion to prevent scour or erosion of the channel and bank.
41. If the bypass is a pumped diversion, once started it must run continuously until it is no longer necessary to bypass flows. This requires back-up pumps on-site and twenty-four-hour monitoring for overnight operation.
42. If the diversion inlet is a pump diversion in a fish-bearing stream, the pump intake structure must have a fish screen installed, operated, and maintained in accordance with RCW 77.57.010 and 77.57.070. Screen the pump intake with one of the following:
    a.) Perforated plate: 0.094 inch (maximum opening diameter);
    b.) Profile bar: 0.069 inch (maximum width opening); or
    c.) Woven wire: 0.087 inch (maximum opening in the narrow direction).
    The minimum open area for all types of fish screens is twenty-seven percent. The screened intake facility must have enough surface area to ensure that the velocity through the screen is less than 0.4 feet per second. Maintain fish screens to prevent injury or entrapment of fish.
43. The fish screen must remain in place whenever water is withdrawn from the stream through the pump intake.

FISH LIFE REMOVAL

44. All persons participating in capture and removal must have training, knowledge, and skills in the safe handling of fish life.

45. If electrofishing is conducted, a person with electrofishing training must be on-site to conduct or direct all electrofishing activities.
46. Ensure block nets are placed upstream and downstream of the in-water work area before capturing and removing fish life.
47. Capture and safely move fish life from the work area to the nearest suitable free-flowing water.

CULVERT

48. Install and maintain the culvert to ensure unimpeded fish passage.
49. 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).
50. Countersink the stream simulation culvert a minimum of thirty percent and a maximum of fifty percent of the culvert rise, but not less than two feet.
51. Size streambed material to mimic the stream's natural gradation as found in nearby reference channel reaches. Place a minimum of 24 inches deep of clean, rounded and well-graded (includes all size classes) material. Angular rock is not permitted within the channel or culvert.
52. 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.
53. Protect structural fill associated with the culvert installation from erosion to the 100-year peak flow.
54. Approach material must be structurally stable and composed of material that if eroded into the water will not harm fish life.
55. 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 HPA and provide prompt repair.

DEMOBILIZATION AND CLEANUP

56. Upon completion of the project, restore the disturbed bed, banks, and riparian zone to preproject condition to the extent possible.
57. 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.
58. To prevent fish from stranding, backfill trenches, depressions, and holes in the bed that may entrain fish during high water or wave action.
59. 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.
60. Seed areas disturbed by construction activities with a native seed mix suitable for the site that has at least one quick-establishing plant species.
61. Replant the job site with the plant species composition and planting densities approved by the Washington Department of Fish and Wildlife.
62. Upon completion of the project, remove all materials or equipment from the site and dispose of all excess spoils and waste materials in an upland area above the limits of anticipated floodwater.

63. 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.
64. Remove temporary erosion and sediment control methods after job site is stabilized or within three months of project completion, whichever is sooner.

Project Environmental Review Form

Project Location Information	
Contractor: TBD	Date: 6-9-22
Project Address/Road MP: Crumb Rd MP 0.17	
Priority: ☐ Emergency ☐ Urgent ☒ Routine	

Specific Project Information	
Task/project and brief description of project: Lewis County proposes to replace an existing 11-foot wide by 7-foot high by 34-foot long structure with a 29-foot wide by 12-foot high by 60-foot long precast concrete split box culvert. Additional construction will include the placement of streambed mix, installation of large woody material, and regrade of the channel approximately 34 feet downstream and 18 feet upstream of the proposed structure. Meander bars and streambed boulders will be installed within the culvert to retain channel complexity within the culvert over time.	
Purpose: During storm events in January and February of 2020 flooding washed out material from beneath the culvert as well as a portion of the headwall threatening failure of the roadway.	
Equipment to be used: Crane, excavator, dump trucks, etc.	
Size/length of culverts: 11' wide x 7' high x 34' long	
Total cubic yards of material to be removed/placed: See attached plans.	Material Type: See attached plans
Depth, Width and Length of ditch/area where material to be removed/placed: See attached plans	
Project start date: TBD per HPA	Project end date: March 1, 2023

Environmental Information	
Approximate areas of any exposed soil: See attached plans	
Any flowing/standingwater at this site? Yes	
Name of waterbody or nearest stream (if known): Highland Creek	Location of work from waterbody/wetland: In and adjcaent
Are fish potentially present Yes ☒ No ☐ If so contact environmental	Fish Exclusion Needed? Yes ☒ No ☐
Contact Environmental Yes ☒ No ☐	Contact Name: Ann Weckback Date contacted: N/A

BMP's to be used:

☒ Cofferdam	☐ Coir Log	☒ Silt Fence	☐ Concrete Containment
☒ Dewatering	☐ Triangular Silt Dike	☒ Erosion Control Fabric	☐ Diaper Netting
☒ Stream Bypass	☐ Rock Check Dam	☒ Hydroseeding	☒ Stabilized Construction Entrance
☐ Vactoring	☐ Straw Wattles	☒ Mulching	
☐ Turbidity Curtain	☒ Sand Bags	☒ Hand Seeding	☐ Inlet Protection
☐ Riprap	☐ Straw Bales	☐ Live Staking	☐ Dust Control
☐ Streambed Gravel	☐ Other_____		

Certified Erosion and Sediment Control Lead: TBD	Phone: TBD

Comments:

- Proposed project must follow all provisions of the USACE and WDFW permits as well as those listed in the special contract provisions.
- All in-water work shall occur within the period outlined in the HPA.

Project Environmental Review Form

Contractor: TBD	Project Address: Crumb Rd MP 0.17
Date Investigated: N/A	Latitude/Longitude:
Findings: N/A	
BMP's: Silt Fence, High Visibility Silt Fence Stabilized Construction Entrance, Spill Kits, Cofferdams, Sand Bags, Dewatering, Fish Rescue, Stream Bypass, Streambed Mix, Biodegradable Erosion Control Blanket, Settling of Zone of Isolation, Hand Seeding, Hydroseeding, Plantings	

Permitting Information

Permit	Permit Required		Initials	Date Applied	Date Received	Permit Number	Comments
HPA	Yes ☒	No ☐		5-9-22	TBD	TBD	GHPA ☐ HPA ☒
Clear & Grade	Yes ☒	No ☐		2-17-22	TBD	G22-00007	
Shoreline	Yes ☐	No ☒					
Ecology	Yes ☐	No ☒					
Corps	Yes ☒	No ☐		2-17-22	TBD	TBD	
	NWP #: NWS-2022-148				PCN? Yes ☒ No ☐		

Work Start Information

Allowed Work Window: TBD per HPA

Permit Expiration: TBD

Fish Exclusion Needed? Yes ☒ No ☐	WDFW Notification? Yes ☒ No ☐
Are plantings required? Yes ☒ No ☐	Is monitoring required? Yes ☒ No ☐
Was there a pre-maintenance or pre-construction meeting? Yes ☒ No ☐	
Additional Information:	

Environmental Planner

Environmental Approval: Yes ☐ No ☐

_____ _____

Signature Date

Contractor Superintendent

I have read and understood all permit conditions.

_____ _____

Signature Date

Certified Erosion and Sediment Control Lead

I have read and understood all permit conditions.

_____ _____

Signature Date

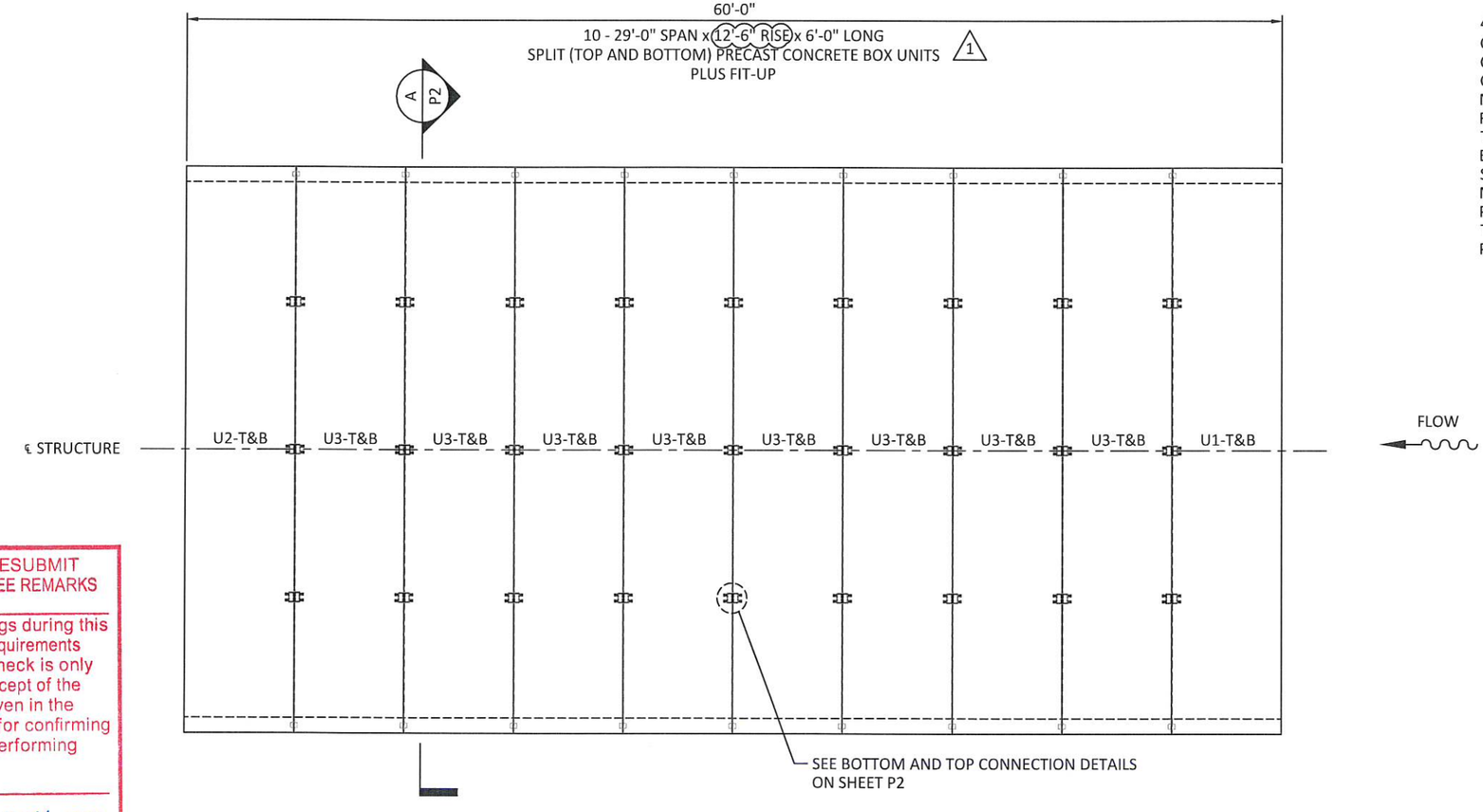
APPENDIX G

APPROVED CULVERT SHOP DRAWINGS

CONTRACT PLANS

CRUMB ROAD MP 0.17
CULVERT REPLACEMENT

LEWIS COUNTY WASHINGTON



BRIDGE LAYOUT PLAN

0 2' 4' 8'

DESIGN NOTES

1. THIS STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS "LRFD BRIDGE DESIGN SPECIFICATIONS", 9TH EDITION AND INTERIM SPECIFICATIONS TO DATE. DESIGN LOADS ARE AS FOLLOWS:
   BRIDGE UNITS: HL-93
   DESIGN FILL HEIGHT: 2'-0" MIN. TO 4'-0" MAX.
   PGA: 0.325 g

2. THE FOUNDATIONS FOR THIS PROJECT ARE DESIGNED BY OTHERS.

3. CONFORMANCE TO THESE DRAWINGS, SPECIFICATIONS, AND EXISTING CONDITIONS, INCLUDING HYDRAULIC CAPACITY, SCOUR, GRADING AND SOIL CONDITIONS SHALL BE VERIFIED BY OTHERS.

4. THE ENGINEER HAS NOT BEEN RETAINED OR COMPENSATED TO PROVIDE DESIGN AND/OR CONSTRUCTION REVIEW SERVICES RELATED TO THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES OR PROCEDURES FOR THE CONTRACTOR TO PERFORM THE WORK. THE UNDERTAKING OF PERIODIC SITE VISITS BY THE ENGINEER SHALL NOT BE CONSTRUED AS SUPERVISION OF ACTUAL CONSTRUCTION NOR MAKE HIM RESPONSIBLE FOR PROVIDING A SAFE PLACE FOR THE PERFORMANCE OF THE WORK BY THE CONTRACTOR, SUB-CONTRACTOR OR ANY PERSON ON THE SITE.

X NO EXCEPTIONS ___REVISE & RESUBMIT
___MAKE CORRECTIONS NOTED ___REJECTED SEE REMARKS

Corrections or comments made on the shop drawings during this review do not relieve contractor from compliance with requirements of the contract plans and special provisions. This check is only for review of general conformance with the design concept of the project and general compliance with information given in the contract documents. The contractor is responsible for confirming and correlating all quantities and dimensions and performing his work in a safe and satisfactory manner.

BY: _____ DATE: 26-MAY-22

LEWIS COUNTY PUBLIC WORKS
2025 NE KRESKY AVE, CHEHALIS, WA 98532

SHEETS P1 – P7 DATED MAY 19, 2022

JEFFREY JOSEPH VON HANDORF
STATE OF WASHINGTON
54694
REGISTERED
PROFESSIONAL ENGINEER

MAY 19, 2022

FOR APPROVAL

Jeffrey J Von Handorf
Digitally signed by Jeffrey J Von Handorf
DN: cn=Jeffrey J Von Handorf, o=Pretek Group, ou=Engineering, email=jjvonhandorf@pretekgroup.com, c=US
Date: 2022.05.19 15:53:17 -04'00'

	DATE	DESCRIPTION	ENG
7			
6			
5			
4			
3			
2			
1	5/19/22	INCREASE RISE BY 6"	JCC

CRUMB ROAD MP 0.17 CULVERT REPLACEMENT

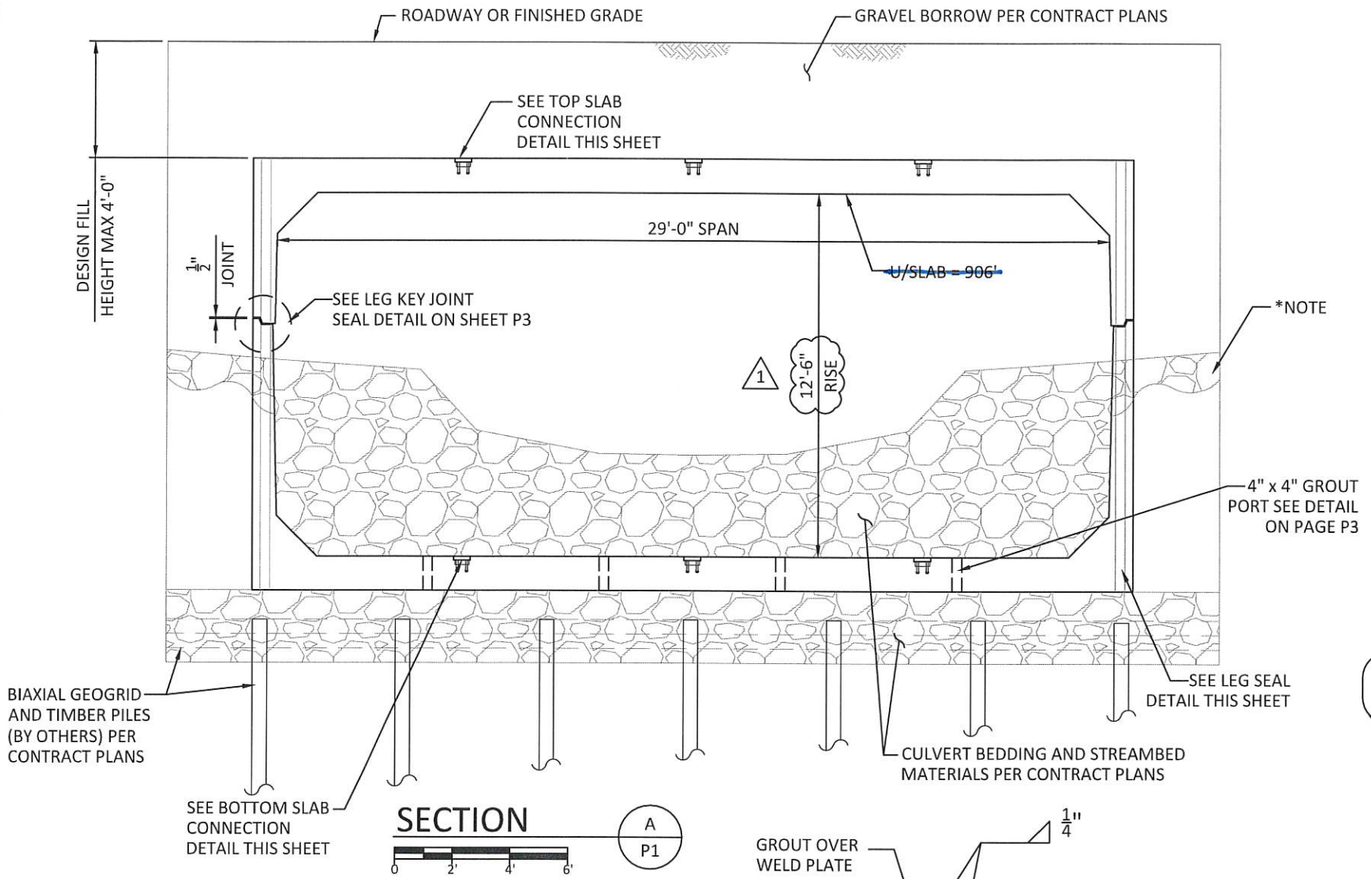
LOCALE: LEWIS COUNTY STATE: WA

PROVIDED BY:
JENSEN PRECAST
5415 189TH STREET E
PUYALLUP, WA 98375
PHONE 253-929-1818

DESIGNED BY:
PRETEK GROUP
P.O. BOX 351
BELLBROOK, OH 45305
800.241.0925

PROJECT NUMBER: 22-136
DATE: 4/27/2022
DESIGNED BY: SLP
DRAWN BY: JRW
CHECKED BY: JJV

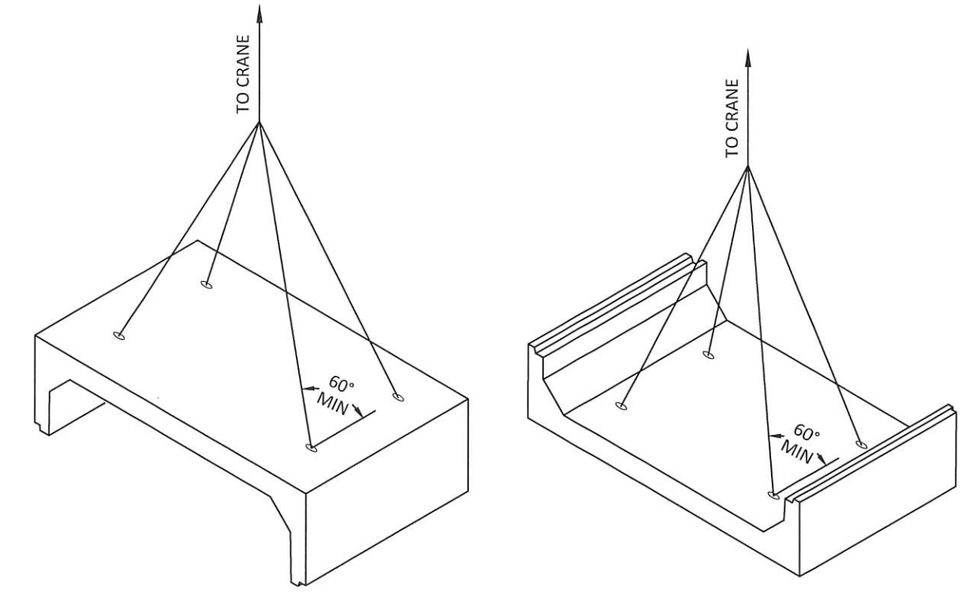
P1



SECTION

A / P1

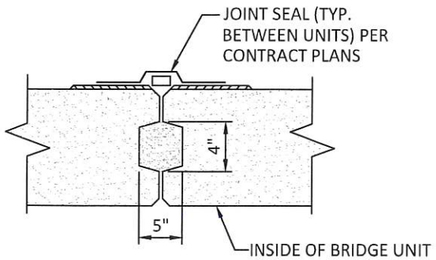
0 2' 4' 6'



4-POINT BOX RIGGING

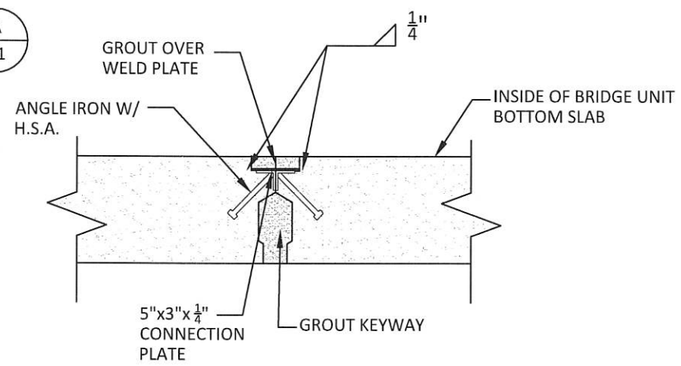
(LOADING/UNLOADING & MOVING)

*NOTE:
DIFFERENTIAL FILL BETWEEN INSIDE AND OUTSIDE OF BOX SHALL NOT EXCEED 24".



JOINT SEAL DETAIL AT LEGS

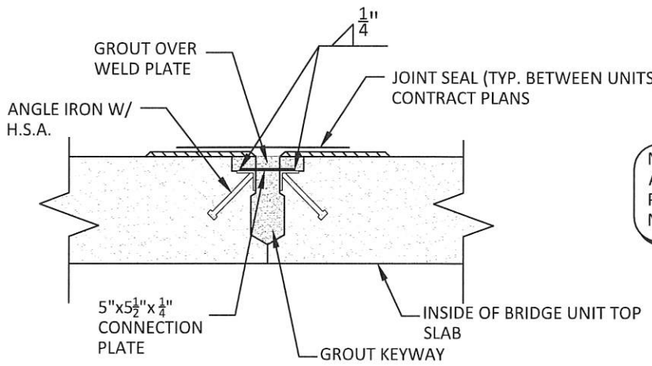
NOT TO SCALE



BOTTOM SLAB CONNECTION AND KEYWAY DETAIL

NOT TO SCALE

NOTE: AFTER ERECTION, JOINTS SHALL BE FILLED WITH NON-SHRINK GROUT. OMIT KEY ON EXTERIOR FACES OF PIECES MARKED "B-U1" & "B-U2"



TOP SLAB CONNECTION AND KEYWAY DETAIL

NOT TO SCALE

NOTE: AFTER ERECTION, JOINTS SHALL BE FILLED WITH NON-SHRINK GROUT. OMIT KEY ON EXTERIOR FACES OF PIECES MARKED "T-U1" & "T-U2"

NOTE:
ALL KEYWAYS, GROUT PORTS, AND RECESS POCKETS TO BE GROUTED WITH 4,000 PSI NON-SHRINK GROUT.

JEFFREY JOSEPH VON HANDORF
STATE OF WASHINGTON
54694
REGISTERED
PROFESSIONAL ENGINEER

MAY 19, 2022

FOR APPROVAL

	DATE	DESCRIPTION	ENG
7			
6			
5			
4			
3			
2			
1	5/19/22	INCREASE RISE BY 6"	JCC

CRUMB ROAD MP 0.17 CULVERT REPLACEMENT

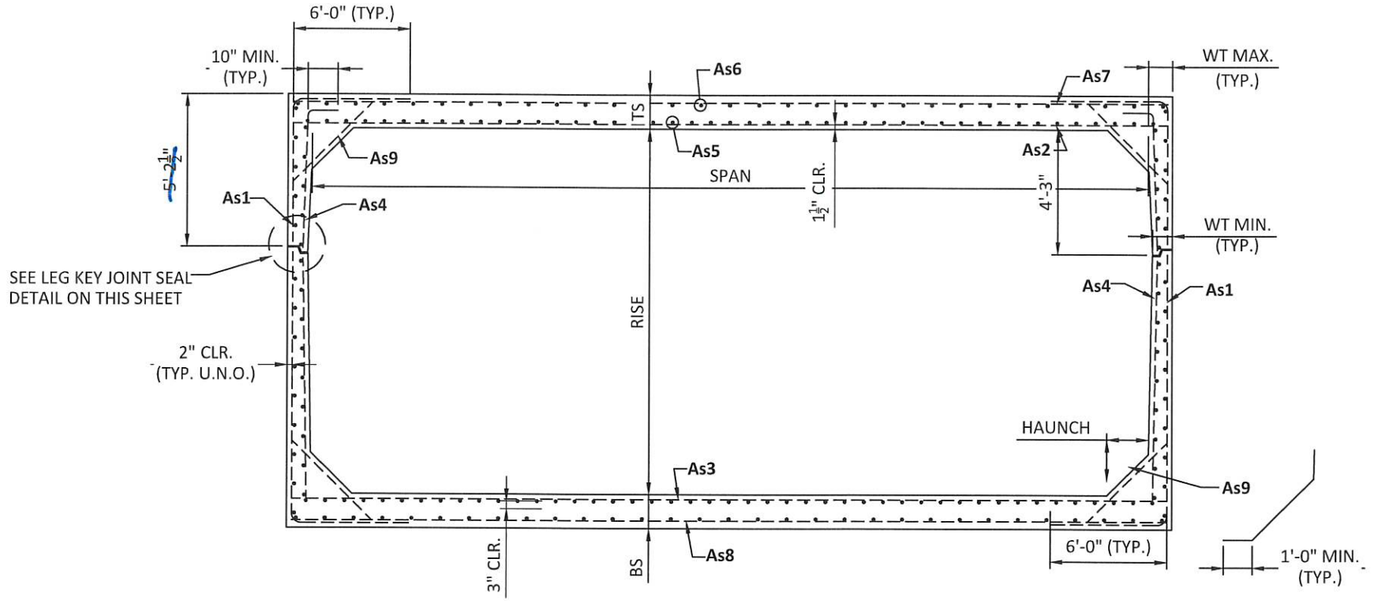
LOCALE: LEWIS COUNTY STATE: WA

PROVIDED BY:
JENSEN PRECAST
5415 189TH STREET E
PUYALLUP, WA 98375
PHONE 253-929-1818

DESIGNED BY:
PRETEK GROUP
P.O. BOX 351
BELLBROOK, OH 45305
800.241.0925

PROJECT NUMBER: 22-136
DATE: 4/27/2022
DESIGNED BY: SLP
DRAWN BY: JRW
CHECKED BY: JJV

P2



29'x~~12'~~ 12'-6" BOX CULVERT
TYPICAL REINFORCING SECTION

DESIGN DATA:

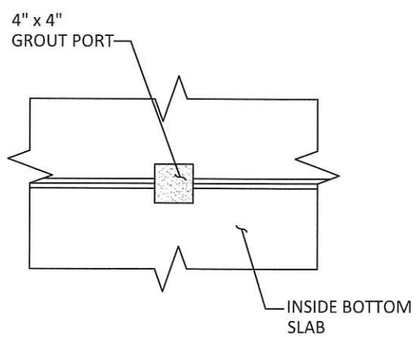
1. CONCRETE COMPRESSIVE STRENGTH SHALL BE 6,000 PSI MINIMUM AT 28 DAYS
2. REINFORCING STEEL SHALL BE REINFORCING BARS, WITH MINIMUM YIELD STRENGTH OF 60,000 PSI.
3. DESIGN LOAD: HL-93
4. 1½" REINFORCING CLEAR COVER ON BOTTOM OF TOP SLAB, 3" ON BOTTOM OF BOTTOM SLAB, AND 2" ON ALL OTHER SURFACES
5. DEPTH OF EARTH COVER = 2'-0" MIN. TO 4'-0" MAX.

SECTION CHARACTERISTICS:

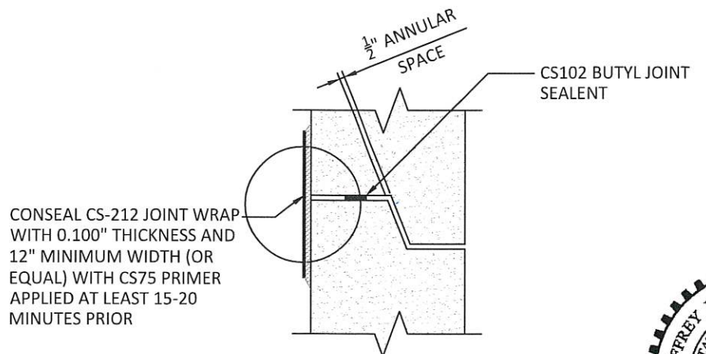
SPAN: 29'-0"
RISE: 12'-6" (1)
WT: VARIES, 10" MAX TO 8¼" MIN (WALL THICKNESS)
TS: 14" (TOP SLAB)
BS: 14" (BOTTOM SLAB)
HAUNCH: 17"

AREA OF STEEL REQUIRED (IN²/FT):

(1)
As1 = 0.744 (#5 @ 5" O.C.)
As2 = 4.00 (#9 @ 3" O.C.)
As3 = 3.16 (#8 @ 3" O.C.)
As4 = 0.31 (#5 @ 1'-0" O.C.)
As5 = 0.133 (#4 @ 1'-6" O.C.)
As6 = 0.133 (#4 @ 1'-6" O.C.)
As7 = 0.31 (#5 @ 1'-0" O.C.)
As8 = 0.31 (#5 @ 1'-0" O.C.)
As9 = 0.31 (#5 @ 1'-0" O.C.)



GROUT PORT DETAIL
NOT TO SCALE



JOINT SEAL DETAIL AT LEG KEY
NOT TO SCALE

JEFFREY JOSEPH VON HANDORF
STATE OF WASHINGTON
54694
REGISTERED
PROFESSIONAL ENGINEER

MAY 19, 2022

FOR APPROVAL

	DATE	DESCRIPTION	ENG
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2			
1	5/19/22	INCREASE RISE BY 6"	JCC

CRUMB ROAD MP 0.17 CULVERT REPLACEMENT

LOCALE: LEWIS COUNTY
STATE: WA

PROVIDED BY:
JENSEN PRECAST
5415 189TH STREET E
PUYALLUP, WA 98375
PHONE 253-929-1818

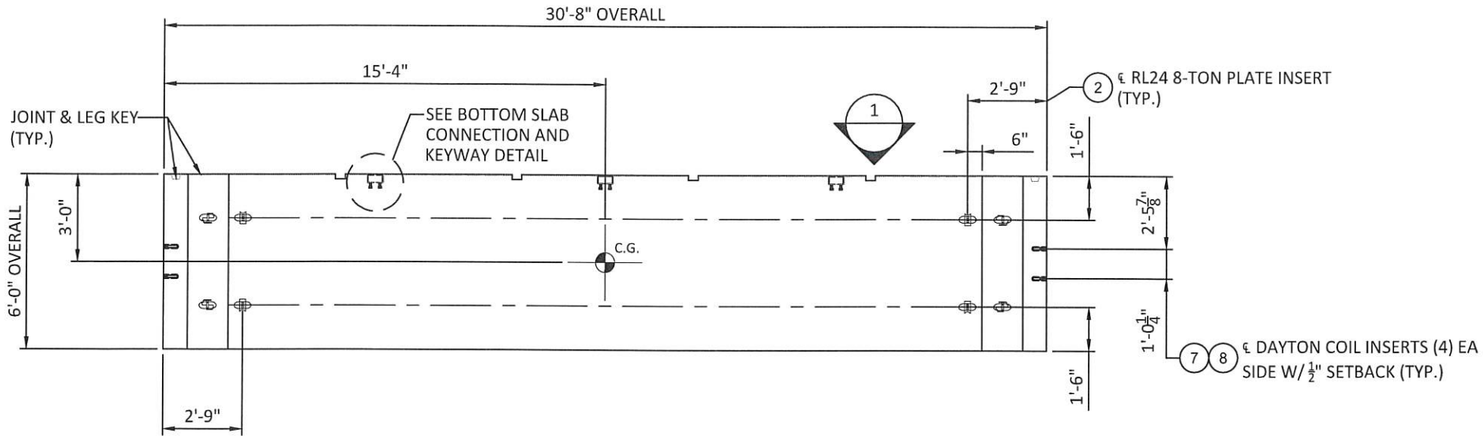
DESIGNED BY:
PRETEK GROUP
P.O. BOX 351
BELLBROOK, OH 45305
800.241.0925

PROJECT NUMBER: 22-136
DATE: 4/27/2022
DESIGNED BY: SLP
DRAWN BY: JRW
CHECKED BY: JJV

P3

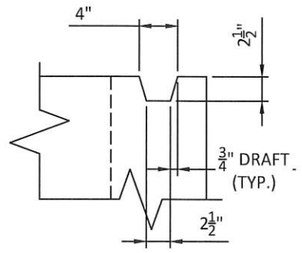
BILL OF MATERIALS (U1B & U2B)		
ITEM	QTY	DESCRIPTION
①	11.16 YD³	CONCRETE 6,000 PSI MIX (4,200 PSI STRIP)
②	8	RL24 8-TON PLATE LIFTING INSERT (79042)
⑤	3	ANGLE PLATE: 2"x 2" W/ (2) ½"Ø x 6" H.S.A.
⑦	8	DAYTON STR COIL INSERT: 1"Ø x 6"
⑧	8	1"Ø x 1/2" PVC PIPE

QTYS ARE FOR EA. UNIT

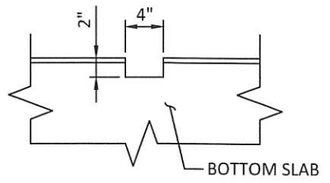


PLAN - U1-B & U2-B (BASE)

UNIT WEIGHT = 45,183 LBS

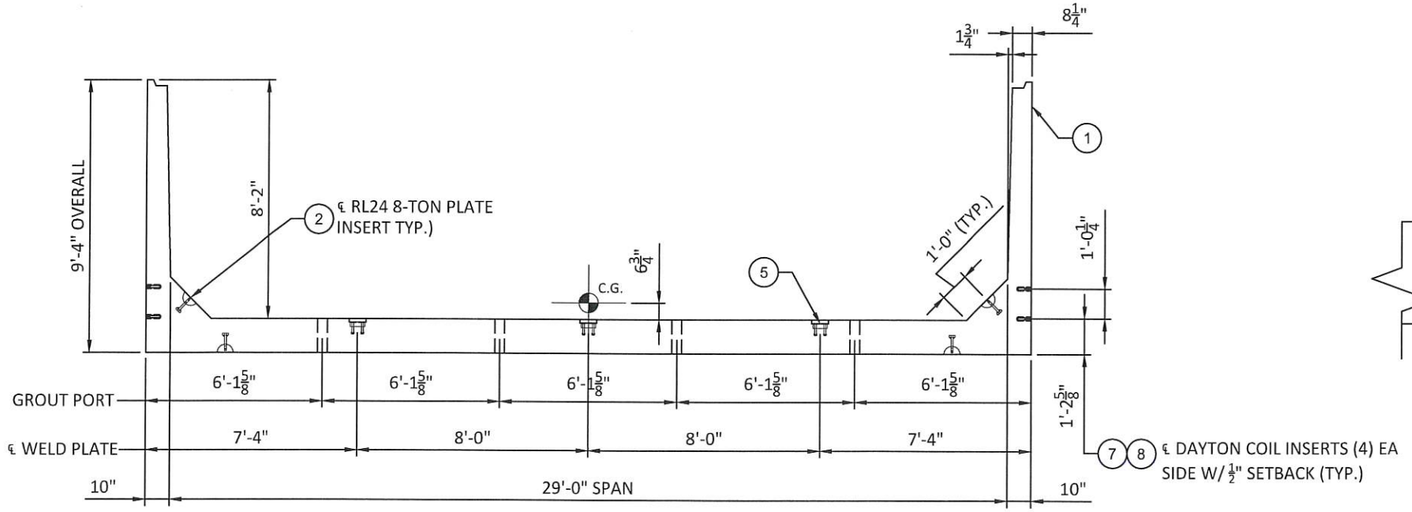


LEG GROUT KEYWAY DETAIL

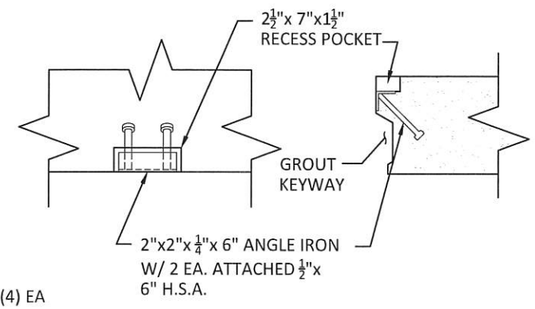


GROUT PORT DETAIL

TOP VIEW



ELEVATION 1



BOTTOM SLAB CONNECTION & GROUT KEYWAY DETAIL

DESIGN NOTES

1. ALL EDGES TO HAVE ¾" CHAMFER.
2. SEE SHEET P3 FOR UNIT STEEL REINFORCING.

JEFFREY JOSEPH VON HANDORF
STATE OF WASHINGTON
54694
REGISTERED
PROFESSIONAL ENGINEER

MAY 19, 2022

FOR APPROVAL

	DATE	DESCRIPTION	ENG
7			
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2			
1	5/19/22	NO CHANGES THIS SHEET	JCC

CRUMB ROAD MP 0.17 CULVERT REPLACEMENT

LOCALE: LEWIS COUNTY

STATE: WA

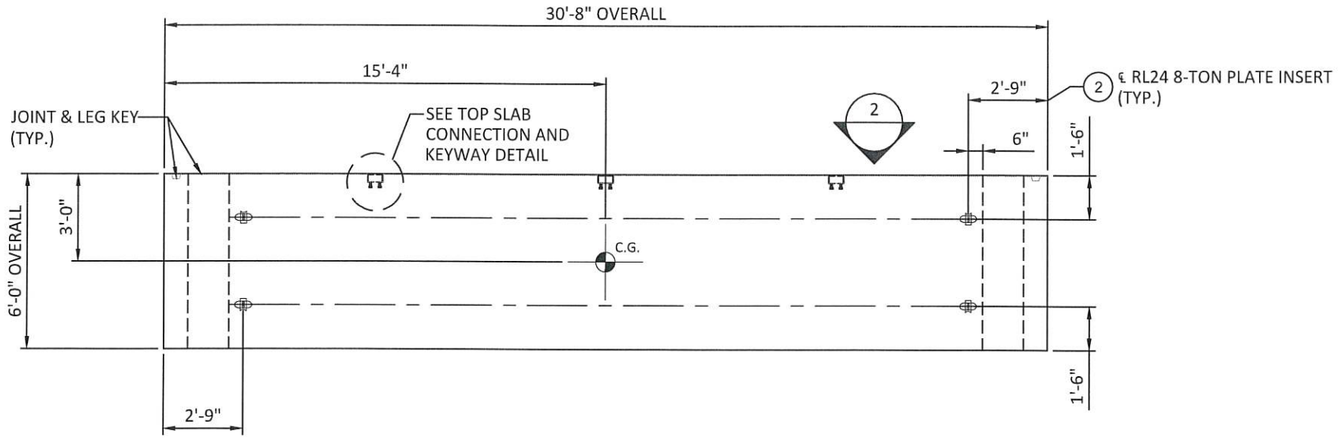
PROVIDED BY: JENSEN PRECAST
5415 189TH STREET E
PUYALLUP, WA 98375
PHONE 253-929-1818

DESIGNED BY: PRETEK GROUP
P.O. BOX 351
BELLBROOK, OH 45305
800.241.0925

PROJECT NUMBER: 22-136
DATE: 4/27/2022
DESIGNED BY: SLP
DRAWN BY: JRW
CHECKED BY: JJV

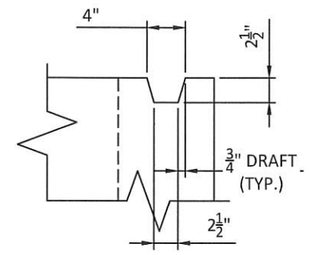
BILL OF MATERIALS (U1T & U2T)		
ITEM	QTY	DESCRIPTION
①	9.99 YD³	CONCRETE 6,000 PSI MIX (4,200 PSI STRIP)
②	4	RL24 8-TON PLATE LIFTING INSERT (79042)
⑤	3	ANGLE PLATE: 2"x 2" W/ (2) $\frac{1}{2}$"Ø x 6" H.S.A.

QTYS ARE FOR EA. UNIT

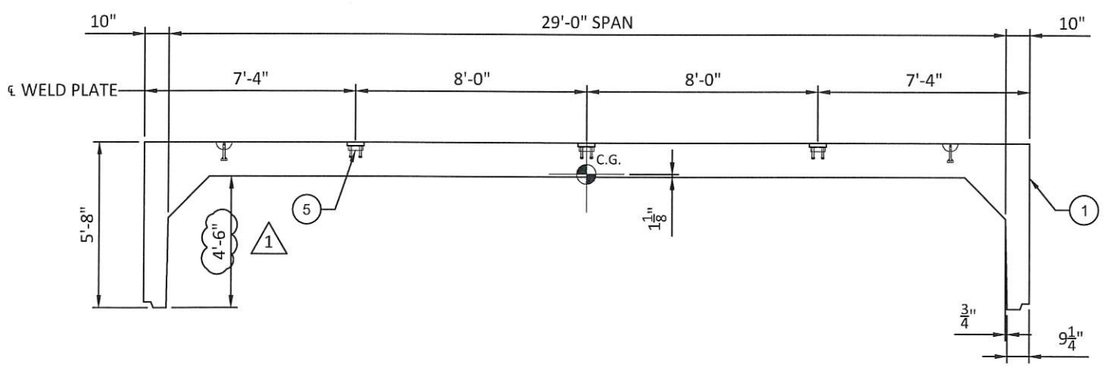


PLAN - U1-T & U2-T (TOP)

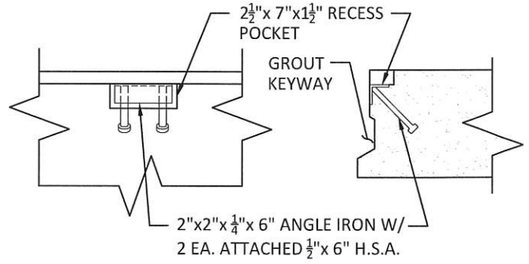
UNIT WEIGHT = 40,478 LBS 1



LEG GROUT KEYWAY DETAIL



ELEVATION 2



TOP SLAB CONNECTION & GROUT KEYWAY DETAIL

DESIGN NOTES

1. ALL EDGES TO HAVE ¾" CHAMFER.
2. SEE SHEET P3 FOR UNIT STEEL REINFORCING.

JEFFREY JOSEPH VON HANDORF
STATE OF WASHINGTON
54694
REGISTERED PROFESSIONAL ENGINEER

MAY 19, 2022

FOR APPROVAL

	DATE	DESCRIPTION	ENG
7			
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1	5/19/22	INCREASE RISE BY 6"	JCC

CRUMB ROAD MP 0.17 CULVERT REPLACEMENT

LOCALE: LEWIS COUNTY

STATE: WA

PROVIDED BY:
JENSEN PRECAST
5415 189TH STREET E
PUYALLUP, WA 98375
PHONE 253-929-1818

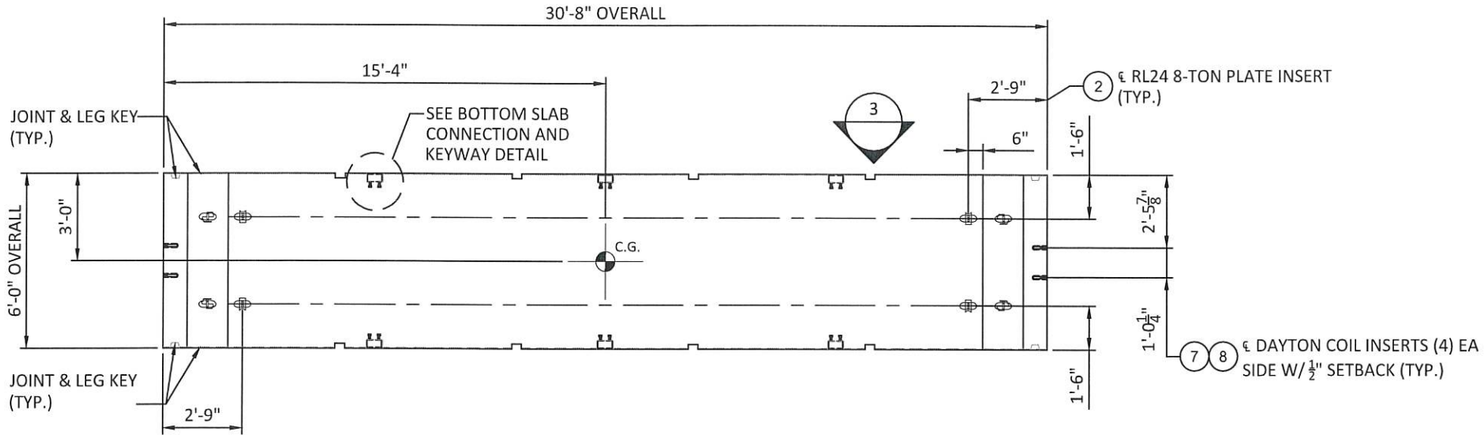
DESIGNED BY:
PRETEK GROUP
P.O. BOX 351
BELLBROOK, OH 45305
800.241.0925

PROJECT NUMBER: 22-136
DATE: 4/27/2022
DESIGNED BY: SLP
DRAWN BY: JRW
CHECKED BY: JJV

P5

BILL OF MATERIALS (U3B)		
ITEM	QTY	DESCRIPTION
①	11.16 YD³	CONCRETE 6,000 PSI MIX (4,200 PSI STRIP)
②	8	RL24 8-TON PLATE LIFTING INSERT (79042)
⑤	3	ANGLE PLATE: 2"x 2" W/ (2) $\frac{1}{2}$"Ø x 6" H.S.A.
⑦	8	DAYTON STR COIL INSERT: 1"Ø x 6"
⑧	8	1"Ø x 1/2" PVC PIPE

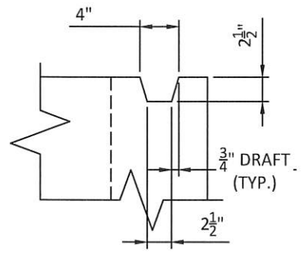
QTYS ARE FOR EA. UNIT



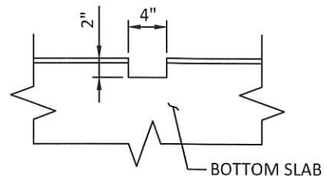
PLAN - U3-B (BASE)

UNIT WEIGHT = 45,183 LBS

(8) PIECES NEEDED

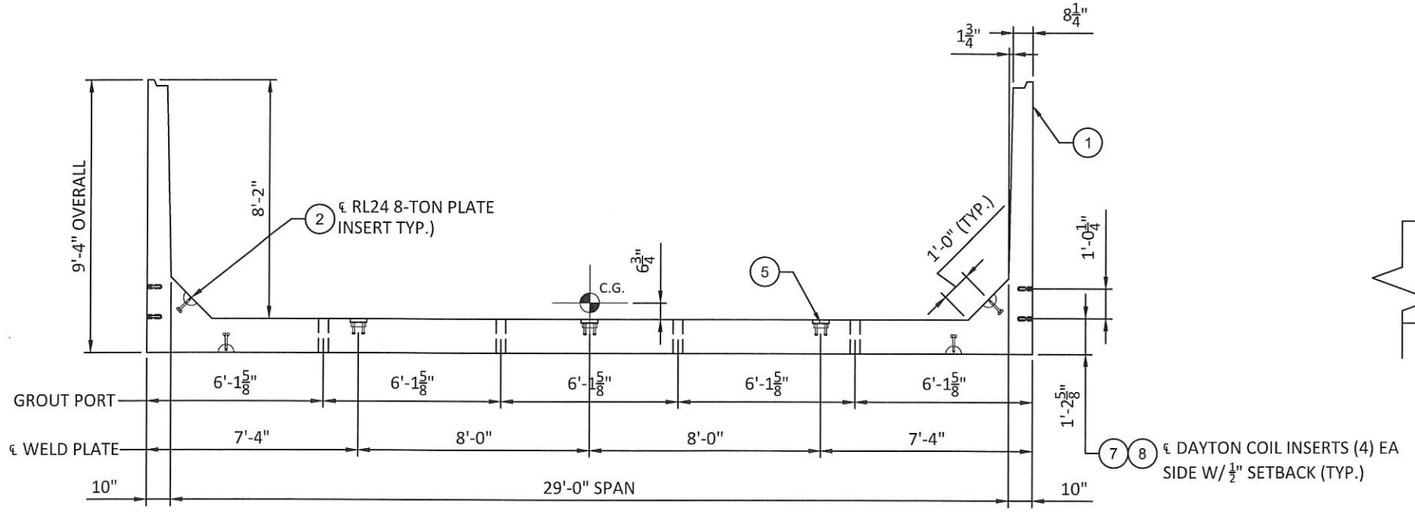


LEG GROUT KEYWAY DETAIL

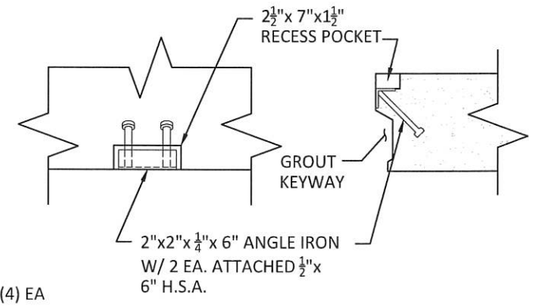


GROUT PORT DETAIL

TOP VIEW



ELEVATION ③



BOTTOM SLAB CONNECTION & GROUT KEYWAY DETAIL

DESIGN NOTES

1. ALL EDGES TO HAVE $\frac{3}{4}$" CHAMFER.
2. SEE SHEET P3 FOR UNIT STEEL REINFORCING.

JEFFREY JOSEPH VON HANDORF
STATE OF WASHINGTON
54694
REGISTERED
PROFESSIONAL ENGINEER

MAY 19, 2022

FOR APPROVAL

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7			
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1	5/19/22	NO CHANGES THIS SHEET	JCC

CRUMB ROAD MP 0.17 CULVERT REPLACEMENT

LOCALE: LEWIS COUNTY

STATE: WA

PROVIDED BY:
JENSEN PRECAST
5415 189TH STREET E
PUYALLUP, WA 98375
PHONE 253-929-1818

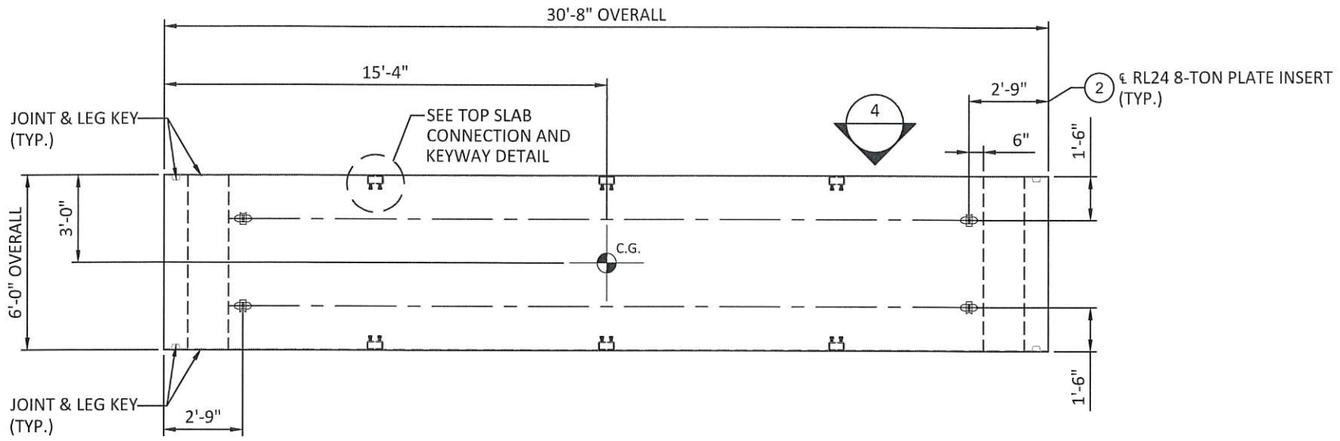
DESIGNED BY:
PRETEK GROUP
P.O. BOX 351
BELLBROOK, OH 45305
800.241.0925

PROJECT NUMBER: 22-136
DATE: 4/27/2022
DESIGNED BY: SLP
DRAWN BY: JRW
CHECKED BY: JJV

P6

BILL OF MATERIALS (U3T)		
ITEM	QTY	DESCRIPTION
①	9.99 YD³	CONCRETE 6,000 PSI MIX (4,200 PSI STRIP)
②	4	RL24 8-TON PLATE LIFTING INSERT (79042)
⑤	3	ANGLE PLATE: 2"x 2" W/ (2) $\frac{1}{2}$"Ø x 6" H.S.A.

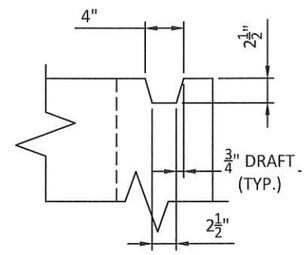
QTYS ARE FOR EA. UNIT



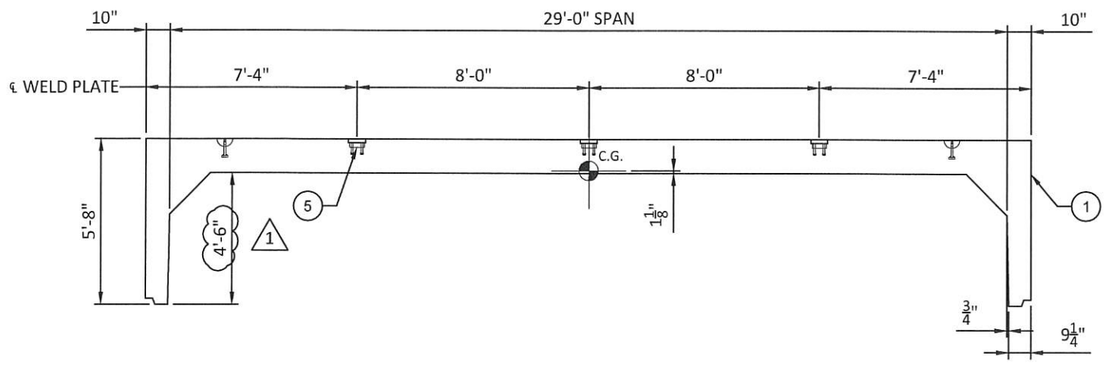
PLAN - U3-T (TOP)

UNIT WEIGHT = 40,478 LBS 1

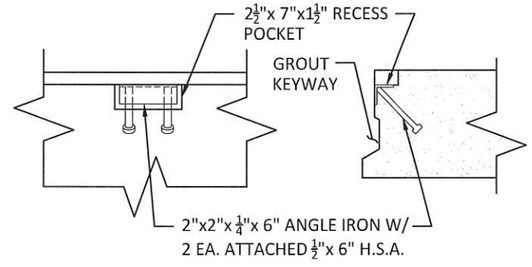
(8) PIECES NEEDED



LEG GROUT KEYWAY DETAIL



ELEVATION 4



TOP SLAB CONNECTION & GROUT KEYWAY DETAIL

DESIGN NOTES

1. ALL EDGES TO HAVE ¾" CHAMFER.
2. SEE SHEET P3 FOR UNIT STEEL REINFORCING.

JEFFREY JOSEPH VON HANDORF — STATE OF WASHINGTON — 54694 — REGISTERED PROFESSIONAL ENGINEER

MAY 19, 2022

FOR APPROVAL

	DATE	DESCRIPTION	ENG
7			
6			
5			
4			
3			
2			
1	5/19/22	INCREASE RISE BY 6"	JCC

CRUMB ROAD MP 0.17 CULVERT REPLACEMENT

LOCALE: LEWIS COUNTY

STATE: WA

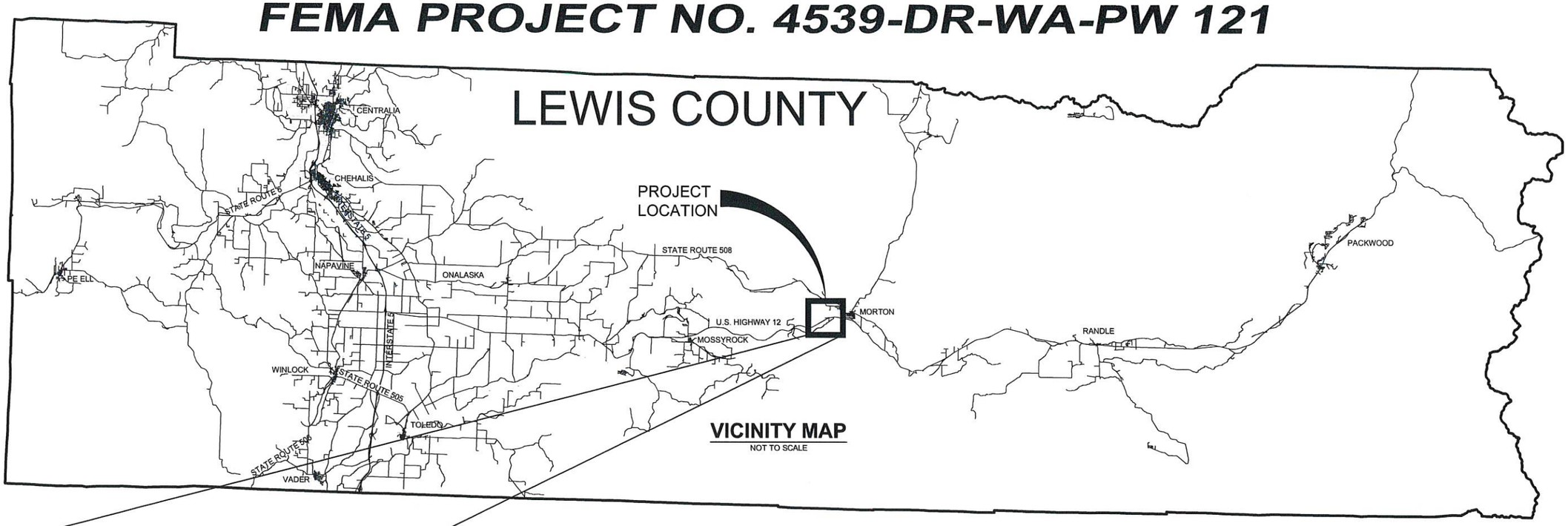
PROVIDED BY:
JENSEN PRECAST
5415 189TH STREET E
PUYALLUP, WA 98375
PHONE 253-929-1818

DESIGNED BY:
PRETEK GROUP
P.O. BOX 351
BELLBROOK, OH 45305
800.241.0925

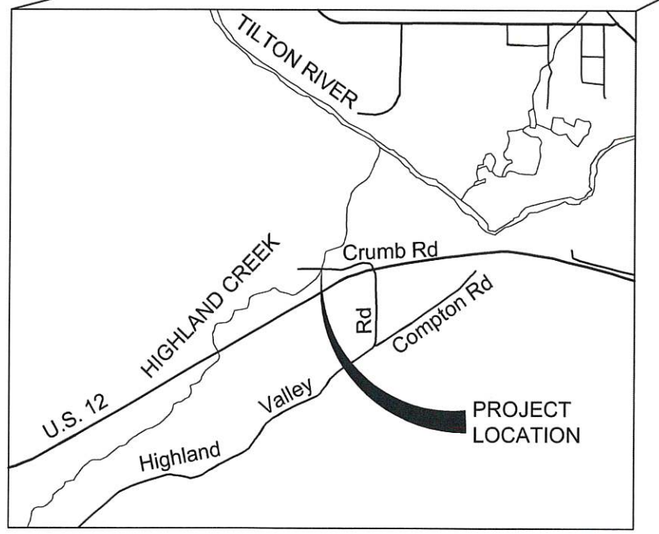
PROJECT NUMBER: 22-136
DATE: 4/27/2022
DESIGNED BY: SLP
DRAWN BY: JRW
CHECKED BY: JJV

P7

CRUMB ROAD MP 0.17 CULVERT REPLACEMENT PROJECT
SM 20F630050017
FEMA PROJECT NO. 4539-DR-WA-PW 121



VICINITY MAP
NOT TO SCALE



SITE LOCATION MAP
SCALE: 1" = 1000' (@ 11X17)

LEWIS COUNTY
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR CONSTRUCTION:

County Engineer

COMMISSIONERS:

SEAN SWOPE, DISTRICT 1
LINDSEY R. POLLOCK, DVM, DISTRICT 2
F. LEE GROSE, DISTRICT 3

Lewis County Department of Public Works

ENGINEERING-
DESIGN SECTION

SHEET INDEX

LAND LINES ARE APPROXIMATE

ITEM NUMBER	STD. ITEM NO.	ITEM DESCRIPTION	TOTAL QUANTITY	UNIT
1	0001	MOBILIZATION	LUMP SUM	LUMP SUM
2	0025 - S.P.	CLEARING AND GRUBBING	0.35	ACRE
3	0050 - S.P.	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP SUM	LUMP SUM
4	0310 - S.P.	ROADWAY EXCAVATION INCL. HAUL	990	C.Y.
5	0405	COMMON BORROW INCL. HAUL	455	C.Y.
6	0405 - S.P.	EPS29 GEOFOAM	60	C.Y.
7	0409	SELECT BORROW INCL. HAUL	520	C.Y.
8	0431	GRAVEL BORROW INCL. HAUL	475	TON
9	1040	CHANNEL EXCAVATION INCL. HAUL	125	C.Y.
10	1072 - S.P.	LARGE WOODY DEBRIS	5	EACH
11	1093 - S.P.	STREAMBED MATERIAL	740	TON
12	1182 - S.P.	SCHEDULE A CULV. PIPE 18 IN. DIAM.	33	L.F.
13	1184	SCHEDULE A CULV. PIPE 24 IN. DIAM.	45	L.F.
14	1364	FURNISHING TIMBER PILING - UNTREATED	4410	L.F.
15	1366	DRIVING TIMBER PILE - UNTREATED	98	EACH
16	3075 - S.P.	TEMPORARY STREAM DIVERSION	LUMP SUM	LUMP SUM
17	4006	STRUCTURE EXCAVATION CLASS A INCL. HAUL	1360	C.Y.
18	4013 - S.P.	SHORING OR EXTRA EXCAVATION CLASS A.	LUMP SUM	LUMP SUM
19	4334	AGENCY DESIGNED BURIED STRUCTURE NO. 1	LUMP SUM	LUMP SUM
20	5100	CRUSHED SURFACING BASE COURSE	820	TON
21	5120	CRUSHED SURFACING TOP COURSE	250	TON
22	5766 - S.P.	HMA CL. 3/8 IN. PG 58H-22 FIBER REINFORCED	160	TON
23	7169 - S.P.	BIAXIAL GEOGRID	1120	S.Y.
24	6422	SEEDING AND MULCHING	0.25	ACRE
25	6455	EROSION CONTROL BLANKET	100	S.Y.
26	6468	STABILIZED CONSTRUCTION ENTRANCE	125	S.Y.
27	6490	EROSION/WATER POLLUTION CONTROL	ESTIMATE	DOLLAR
28	6552 - S.P.	PLANTING MITIGATION CONSTRUCTION	LUMP SUM	LUMP SUM
29	6635	HIGH VISIBILITY SILT FENCE	500	L.F.
30	6719	BEAM GUARDRAIL TYPE 31 NON-FLARED TERMINAL	4	EACH
31	6757	BEAM GUARDRAIL TYPE 31	75	L.F.
32	6806	PAINT LINE	600	L.F.
33	6971 - S.P.	PROJECT TEMPORARY TRAFFIC CONTROL	LUMP SUM	LUMP SUM
34	7490	TRIMMING AND CLEANUP	LUMP SUM	LUMP SUM
35	7725	REIMBURSEMENT FOR THIRD PARTY DAMAGE	ESTIMATE	DOLLAR
36	7736	SPCC PLAN	LUMP SUM	LUMP SUM

Lewis County
Department of Public Works
2025 NE KRESKY AVE.
CHEHALIS WA 98532
PHONE # (360) 740-1123
FAX # (360) 740-2719

DESIGNED BY : RTL
DRAWN BY : WSR
CHECKED BY :
DATE : 06/09/2022

NO.	DATE	REVISION	BY	APP.

CRUMB ROAD M.P. 0.17
CULVERT REPLACEMENT PROJECT

SPECIAL MAINT NO: 90-20F630050017
FEMA PROJ. NO.: 4539-DR-WA-PW 121

SUMMARY OF QUANTITIES

SHEET 2 OF 16

CALL 48 HOURS BEFORE YOU DIG
1-800-424-5555
"It's the Law"
Utilities Underground Location Center

Rodney Troy Lakey, P.E.
Senior Engineer
Design/ENV.

Date: 6/9/2022

RODNEY TROY LAKEY
STATE OF WASHINGTON
#39873
REGISTERED
PROFESSIONAL ENGINEER

SEC. 04 TWP. 12N. RGE. 4E. W.M.

LAND LINES ARE APPROXIMATE

Existing Feature Legend

Right-of-way	R/W R/W R/W
Edge of Pavement	
Centerline	
Ditch	>
Fence	X X
Lot Line	PARCEL PARCEL PARCEL PARCEL
Contour	253
Overhead Power	OHU OHU OHU OHU
Ordinary High Water	OHW OHW OHW OHW
Easement	

Proposed/Future Linetype Legend

Centerline	
Sawcut Line	
Edge Of Pavement	
Cut Line	C C C
Contour	253
Ditch	>
Clear and Grub Limit	CLR CLR CLR CLR
High Visibility Silt Fence	
Wattles	
High Visibility Fence	
Guardrail	
Temporary Easement	EASE EASE EASE

Abbreviation Legend

Acres	AC
Catch Basin	CB
Cubic Feet	CF
Centerline	℄
Compaction	COMP
Concrete	CONC
Construction	CONST
Cubic Yard	CY
Diameter	DIA
Edge Of Pavement	EOP
Elevation	EL
Existing	EXIST
Finished Grade	FG
Foot / Feet	FT
Invert Elevation	IE
Maximum	MAX
Minimum	MIN
Number	No. or #
Ordinary High Water	OHW
Overhead Power	OHP
Point Of Curve	PC
Point Of Tangent	PT
Point Of Vertical Intersection	PVI
Right Of Way	ROW
Sheet	SHT
Station	STA
Standard	STD
Storm	STM
Telephone	TEL
Temporary	TEMP
Typical	TYP
To Be Determined	TBD

Symbol Legend

Existing Power Pole	
Existing Guy Anchor	
Existing Project Bench Mark	
Existing Cable Vault	
Existing Tree (Coniferous, Clump, Deciduous) To Be Saved	
Existing Sign	
Existing Mailbox	
Existing Flow Arrow	
Proposed Flow Arrow	>
Proposed Bypass Culvert Pipe	
Tree To Be Removed	
Proposed Large Woody Debris	
One Man Boulders	

Civil Hatching Legend

- Proposed HMA
- Existing Asphalt
- Asphalt Removal Limit
- Crushed Surface Top Course
- Crushed Surface Base Course
- Select Borrow Incl. Haul
- Undisturbed Soil
- Proposed Shoulder
- Proposed Temporary Traffic Bypass Road
- Meander Bar Mix
- Streambed Mix
- Gravel Borrow Incl. Haul
- Stabilized Construction Entrance

Lewis County
Department of Public Works
2025 NE KRESKY AVE.
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CRUMB ROAD M.P. 0.17
CULVERT REPLACEMENT PROJECT

SPECIAL MAINT NO: 90-20F630050017
FEMA PROJ. NO.: 4539-DR-WA-PW 121

LEGEND

SHEET 3 OF 16

CALL 48 HOURS BEFORE YOU DIG
1-800-424-5555
"It's the Law"
Utilities Underground Location Center

Rodney Troy Lakey, P.E.
Senior Engineer
Design/ENV.

Date: 6/9/2022

RODNEY TROY LAKEY
STATE OF WASHINGTON
#39873
REGISTERED PROFESSIONAL ENGINEER

6/9/2022 10:29 AM

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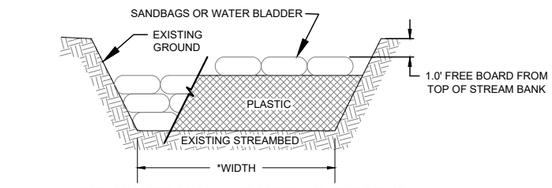
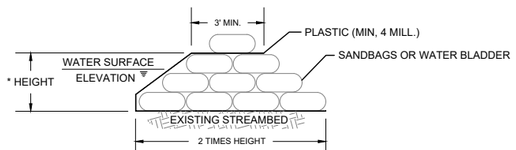


* WIDTH OF COFFER DAM SHALL BE DETERMINED BY THE EXISTING BANK OF THE STREAM AT THE TIME OF CONSTRUCTION.

COFFER DAM - PROFILE VIEW

NOT TO SCALE



* HEIGHT OF COFFER DAM SHALL BE DETERMINED BY THE MINIMUM FLOW REQUIREMENTS FOR THE STREAM BYPASS, SEE SPECIAL PROVISIONS.

COFFER DAM - SECTION VIEW

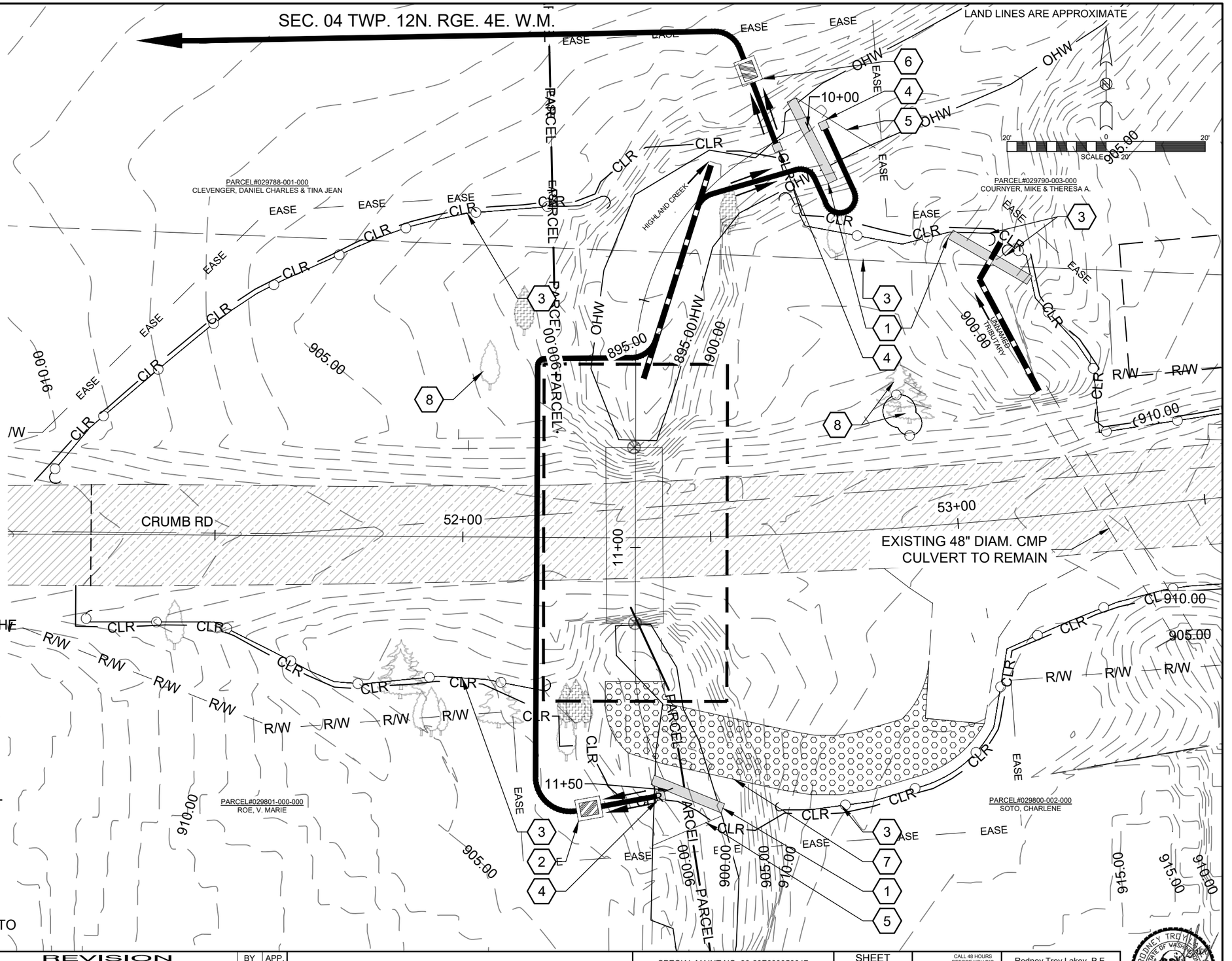
NOT TO SCALE

NOTES:

1. SANDBAGS SHALL BE USED IN ACCORDANCE WITH APPLICABLE PERMITS.
2. INSTALL COFFER DAM AND DEWATER SITE PRIOR TO CONSTRUCTION.
3. PROVIDE 1.0' FREEBOARD, SEE SPECIAL PROVISIONS.

CONSTRUCTION NOTES:

1. INSTALL COFFERDAM PER DETAILS ABOVE AT STREAM STATIONS 10+00 AND 11+50.
2. INSTALL SPILL CONTAINED PUMP SYSTEM FOR TEMPORARY STREAM DIVERSION.
3. INSTALL HIGH VISIBILITY SILT FENCE WITH J-HOOKS AT DOWNHILL ENDS AS DIRECTED BY THE ENGINEER.
4. PUMP INTAKE SCREEN OVER ALL INTAKE AND OUTLET HOSES PER WDFW REQUIREMENTS.
5. FISH DIVERSION SCREEN UPSTREAM OF BYPASS INTAKE AND DOWNSTREAM OF BYPASS OUTLET PER HPA PROVISIONS, 30° ANGLE FROM PERPENDICULAR.
6. INSTALL SPILL CONTAINED PUMP SYSTEM FOR DEWATERING. PUMP WORK WATER NORTHWEST INTO FIELD.
7. STABILIZED CONSTRUCTION ENTRANCE. STREAMBED MIX SHALL BE PLACED IN STREAM CHANNEL PER SHEET 8 AFTER ACCESS ROAD IS NO LONGER NEEDED.
8. PROTECT EXISTING TREES, LIMB IF NECESSARY TO CLEAR TRAFFIC ON DETOUR ROAD.



Lewis County Department of Public Works	2025 NE KRESKY AVE. CHEHALIS WA 98532 PHONE # (360) 740-1123 FAX # (360) 740-2719	DESIGNED BY : RTL DRAWN BY : WSR CHECKED BY : DATE : 06/09/2022

NO.	DATE	REVISION	BY	APP.

CRUMB ROAD M.P. 0.17
CULVERT REPLACEMENT PROJECT

SPECIAL MAINT NO: 90-20F630050017
FEMA PROJ. NO.: 4539-DR-WA-PW 121

SITE PREPARATION, STREAM BYPASS PLAN, AND T.E.S.C.

SHEET 4 OF 16

CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555 "It's the Law" Utilities Underground Location Center

Rodney Troy Lakey, P.E.
Senior Engineer
Design/ENV.

Date: 6/9/2022

RODNEY TROY LAKEY STATE OF WASHINGTON #39873 REGISTERED PROFESSIONAL ENGINEER

6/9/2022 10:29 AM

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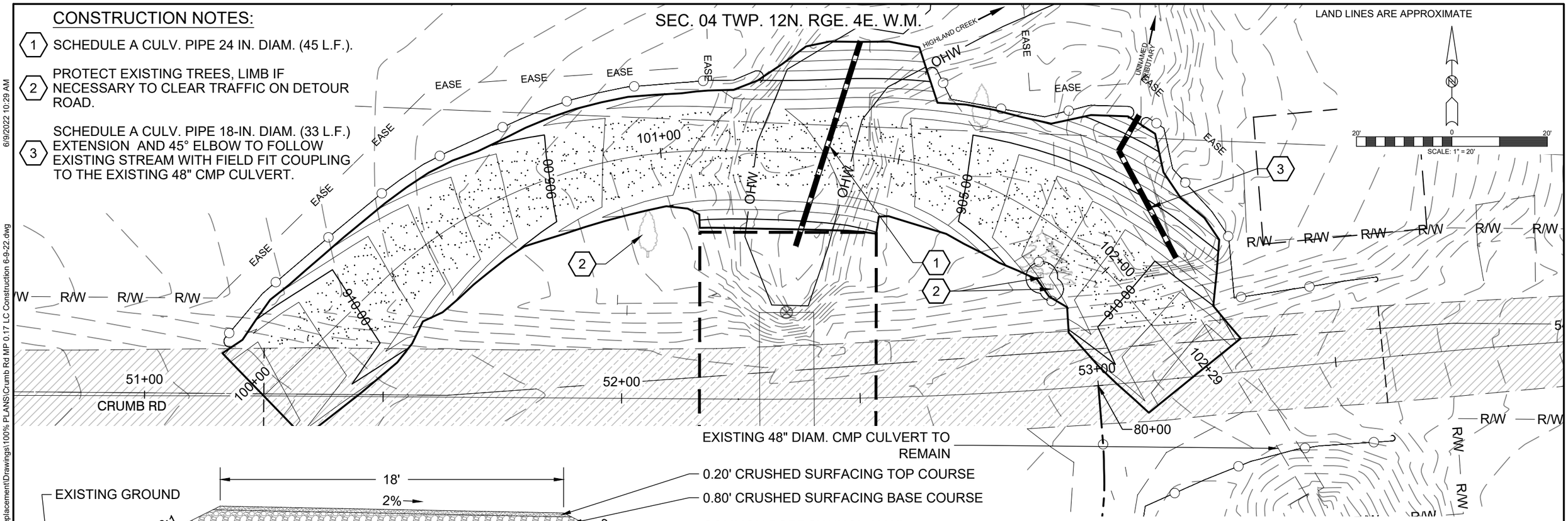
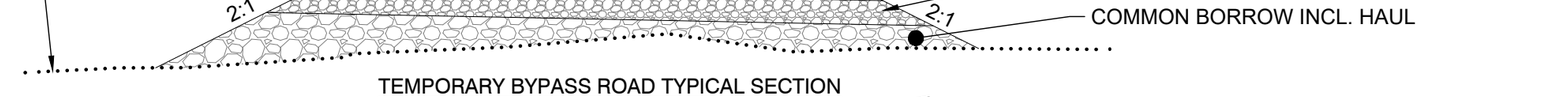
CONSTRUCTION NOTES:

1. SCHEDULE A CULV. PIPE 24 IN. DIAM. (45 L.F.).
2. PROTECT EXISTING TREES, LIMB IF NECESSARY TO CLEAR TRAFFIC ON DETOUR ROAD.
3. SCHEDULE A CULV. PIPE 18-IN. DIAM. (33 L.F.) EXTENSION AND 45° ELBOW TO FOLLOW EXISTING STREAM WITH FIELD FIT COUPLING TO THE EXISTING 48" CMP CULVERT.

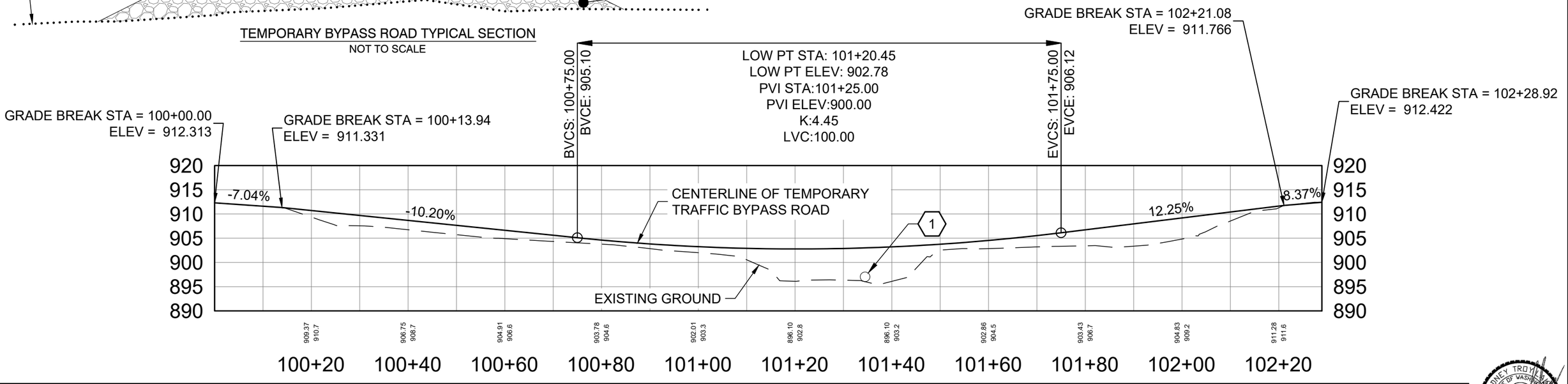
SEC. 04 TWP. 12N. RGE. 4E. W.M.

LAND LINES ARE APPROXIMATE





TEMPORARY BYPASS ROAD TYPICAL SECTION
NOT TO SCALE



Lewis County
Department of Public Works
2025 NE KRESKY AVE.
CHEHALIS WA 98532
PHONE # (360) 740-1123
FAX # (360) 740-2719

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DATE : 06/09/2022

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CRUMB ROAD M.P. 0.17
CULVERT REPLACEMENT PROJECT

SPECIAL MAINT NO: 90-20F630050017
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TEMPORARY TRAFFIC BYPASS ROAD PLAN AND PROFILE

SHEET 5 OF 16

CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555 "It's the Law" Utilities Underground Location Center

Rodney Troy Lakey, P.E.
Senior Engineer
Design/ENV.

Date: 6/9/2022

RODNEY TROY LAKEY — STATE OF WASHINGTON — #39873 — REGISTERED PROFESSIONAL ENGINEER

6/9/2022 10:29 AM

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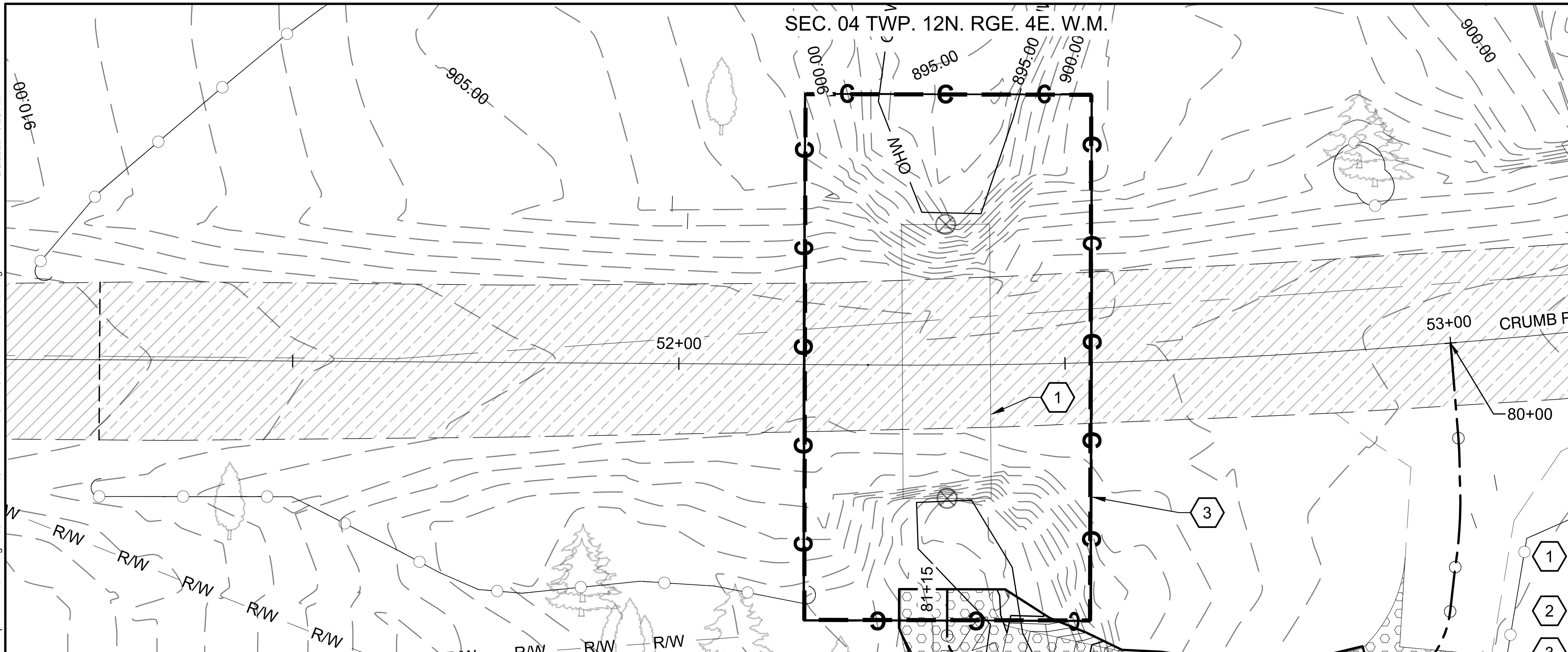
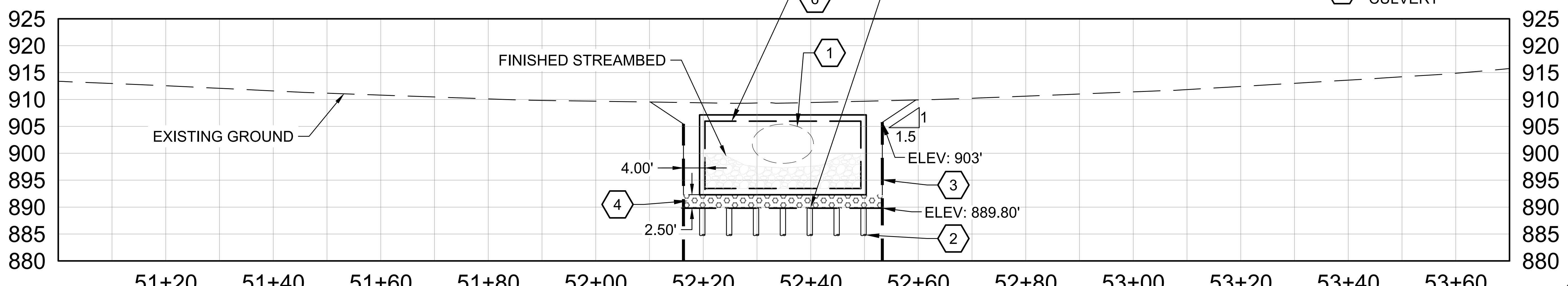


CONSTRUCTION NOTES:

1. EXISTING 11.4' x 7.3' x 37' CMP TO BE REMOVED
2. DRIVEN TIMBER PILE - UNTREATED AT 5' O.C. (TYP.)
3. SHORING (TYP.)
4. LOAD TRANSFER PLATFORM WITH BIAXIAL GEOGRID
5. GRAVEL BORROW INCL. HAUL
6. 29' X 12.5' X 60' CONCRETE BOX CULVERT



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STRUCTURE/STREAM EXCAVATION PLAN AND PROFILE

SHEET 6 OF 16

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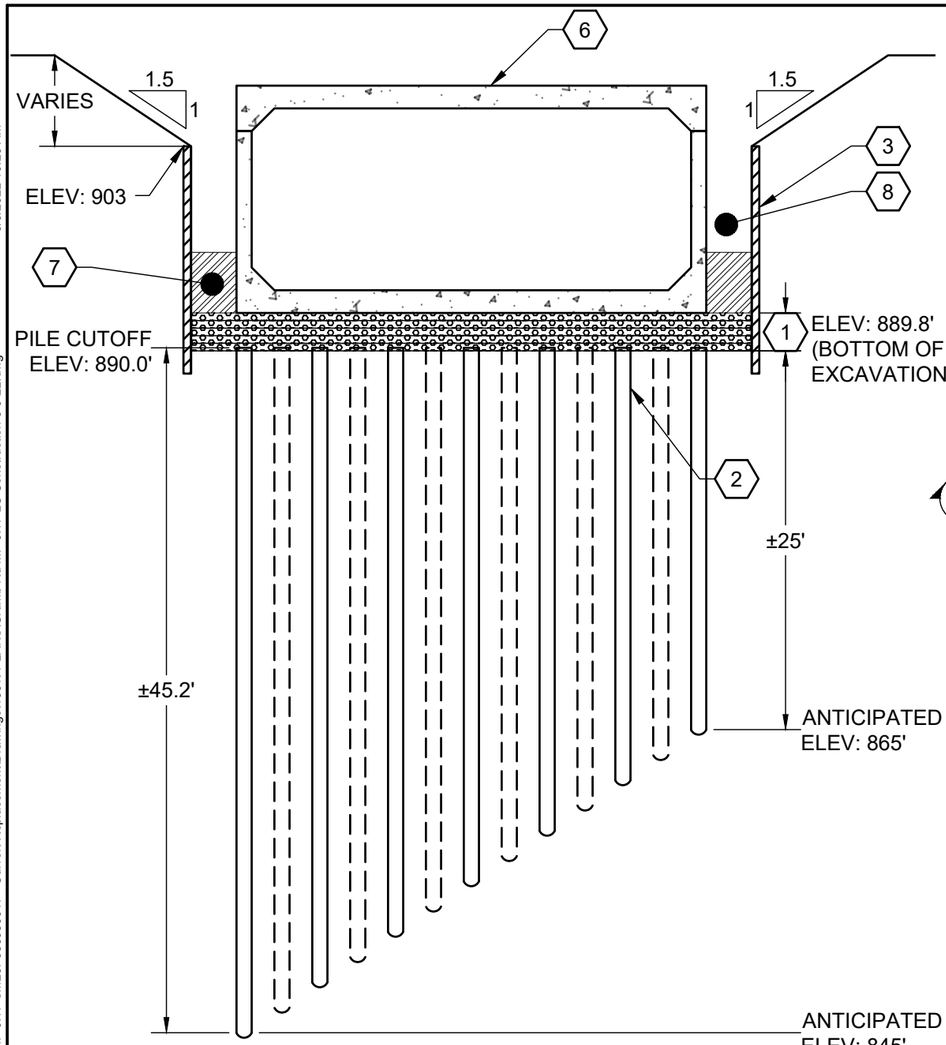
Rodney Troy Lakey, P.E.
Senior Engineer
Design/ENV.

RODNEY TROY LAKEY STATE OF WASHINGTON #39873 REGISTERED PROFESSIONAL ENGINEER

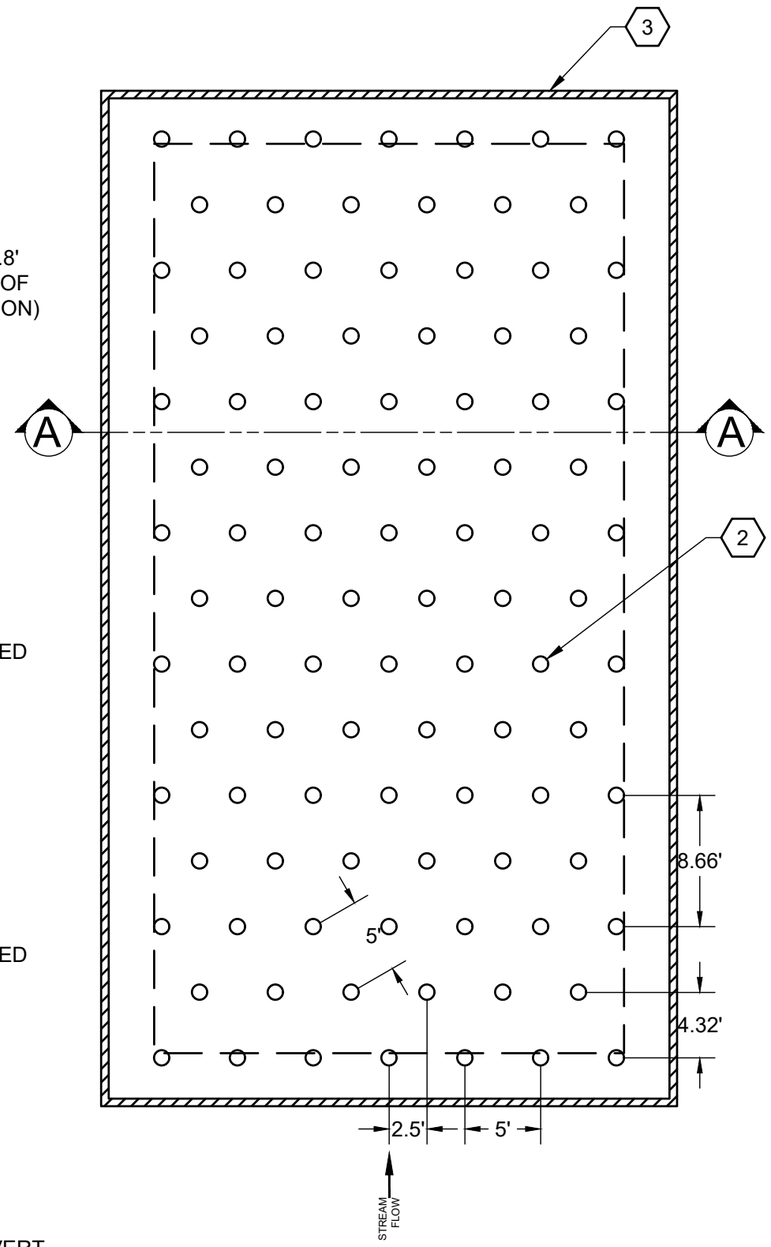
Date: 6/9/2022

SEC. 04 TWP. 12N. RGE. 4E. W.M.



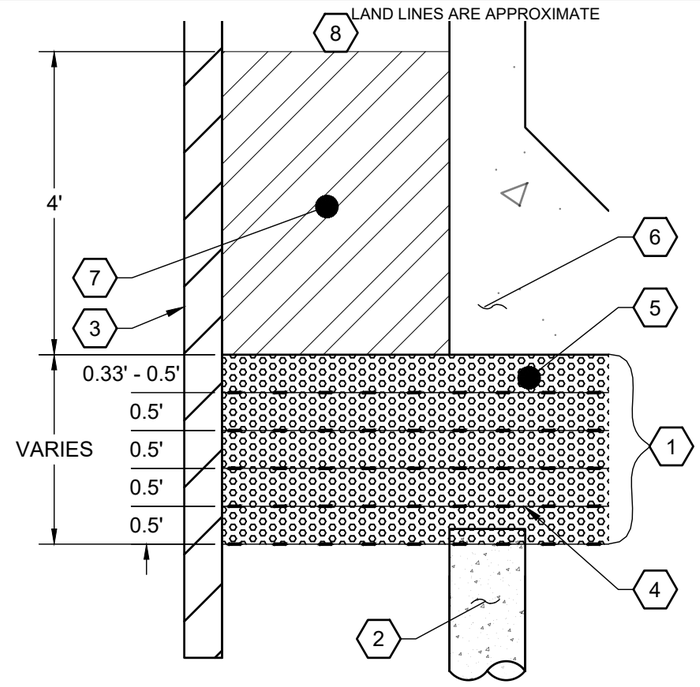
SECTION A-A

1" = 10'



GROUND IMPROVEMENT PLAN VIEW

1" = 10'

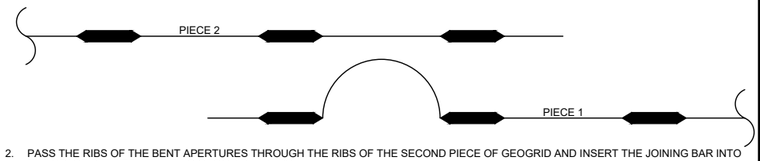


LOAD TRANSFER PLATFORM DETAIL

1" = 2'

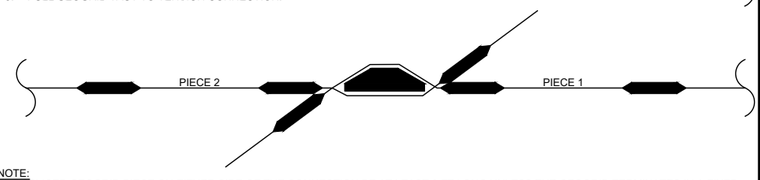
TO FORM A CONNECTIONFOR SPLICING GEOGRID:

1. BEND THE LAST APERTURE OF ONE PIECE OF GEOGRID AS SHOWN:



2. PASS THE RIBS OF THE BENT APERTURES THROUGH THE RIBS OF THE SECOND PIECE OF GEOGRID AND INSERT THE JOINING BAR INTO THE SPACE BETWEEN THE TWO GEOGRID LAYERS.

3. PULL GEOGRID TAUT TO TENSION CONNECTION.



NOTE:
THE SPLICED GEOGRID PIECE ON EITHER SIDE OF THE CONNECTION BE AT LEAST 6-FT LONG UNLESS THE GEOGRID TERMINATES IN A FIXED CONNECTION.

BIAXIAL GEOGRID LONGITUDINAL SPLICE DETAIL

NOT TO SCALE

CONSTRUCTION NOTES:

1. LOAD TRANSFER PLATFORM
2. DRIVEN TIMBER PILE - UNTREATED AT 5' O.C. (TYP.) CUTOFF ELEV: 890'
3. SHORING (TYP.)
4. BIAXIAL GEOGRID (4 LAYERS)
5. GRAVEL BORROW INCL. HAUL
6. 29' X 12.5' CONCRETE BOX CULVERT
7. EPS29 GEOFOAM
8. SELECT BORROW INCL. HAUL ABOVE GEOFOAM/LTP TO ROAD SURFACING

Lewis County
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CULVERT REPLACEMENT PROJECT

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FEMA PROJ. NO.: 4539-DR-WA-PW 121

GROUND IMPROVEMENT DETAILS

SHEET 7 OF 16

CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555 "It's the Law" Utilities Underground Location Center

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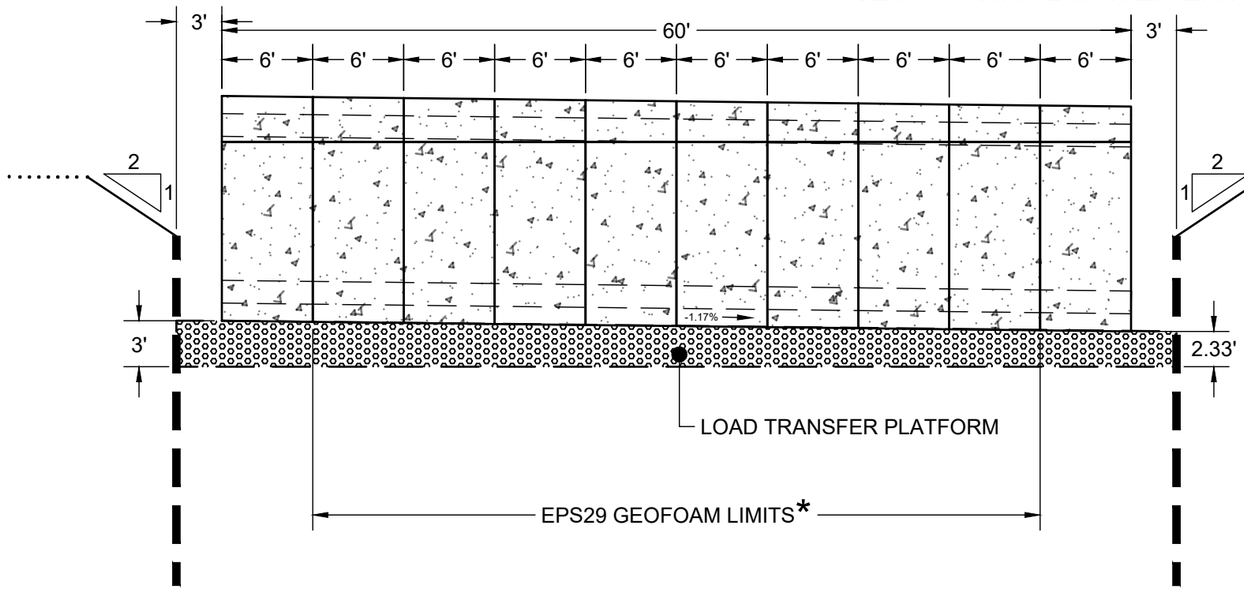
Senior Engineer
Design/ENV.

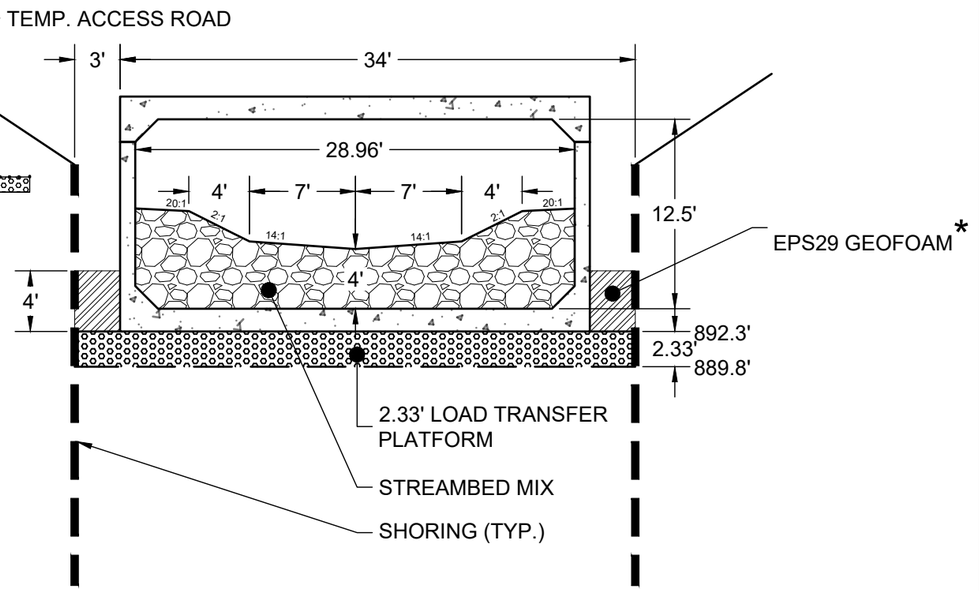
Date: 6/9/2022

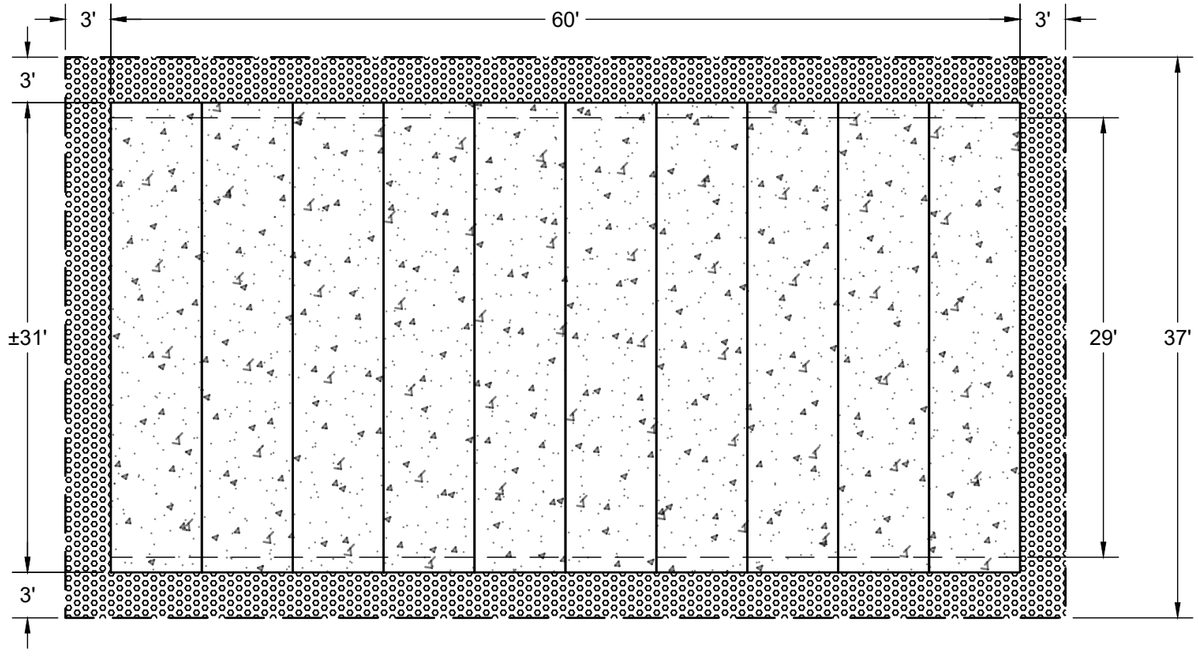
RODNEY TROY LAKEY STATE OF WASHINGTON #39873 REGISTERED PROFESSIONAL ENGINEER

SEC. 04 TWP. 12N. RGE. 4E. W.M.

LAND LINES ARE APPROXIMATE







VIEW FROM DOWNSTREAM LOOKING INTO CULVERT

NOT TO SCALE

*THE INITIAL 4' OF STRUCTURAL FILL PLACED ABOVE THE LOAD TRANSFER PLATFORM (LTP) SHALL CONSIST OF EPS29 GEOFOAM. THE GEOFOAM SHALL EXTEND BETWEEN THE CULVERT WALL AND THE SHEET PILE SHORING SYSTEM. THE GEOFOAM SHALL BE COVERED WITH NO LESS THAN 8' OF GROUND COVER/SELECT BORROW TO RESIST UPLIFT.

AGENCY DESIGNED BURIED STRUCTURE NO. 1 (29' SPAN X 12.5' HIGH X 60' LONG PRECAST CONC. BOX CULV.)

NOT TO SCALE

Lewis County
Department of Public Works
2025 NE KRESKY AVE.
CHEHALIS WA 98532
PHONE # (360) 740-1123
FAX # (360) 740-2719

DESIGNED BY : RTL
DRAWN BY : WSR
CHECKED BY :
DATE : 06/09/2022

NO.	DATE	REVISION	BY	APP.

CRUMB ROAD M.P. 0.17
CULVERT REPLACEMENT PROJECT

SPECIAL MAINT NO: 90-20F630050017
FEMA PROJ. NO.: 4539-DR-WA-PW 121

AGENCY DESIGNED BURIED STRUCTURE NO. 1 DETAIL

SHEET 8 OF 16

CALL 48 HOURS BEFORE YOU DIG
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"It's the Law"
Utilities Underground Location Center

Rodney Troy Lakey, P.E.
Senior Engineer
Design/ENV.

Date: 6/9/2022

STATE OF WASHINGTON
RODNEY TROY LAKEY
#39873
REGISTERED PROFESSIONAL ENGINEER

SEC. 04 TWP. 12N. RGE. 4E. W.M.

LAND LINES ARE APPROXIMATE

SCALE: 1" = 20'

STA: 51+77.80 14 LT
STA: 51+37.95 10 LT
STA: 51+25.00 10 LT

STA: 53+60.00 10 LT
STA: 53+21.74 10 RT
STA: 52+86.50 14 LT

STA. 51+25.00
N: 450229.08
E: 1185636.40

STA. 53+60.00
N: 450237.17
E: 118587.03

S89°53'30"E
125.00'

51+00

CRUMB RD

S89°36'36"E
99.49'

52+00

90°

11+00

53+00

N84°10'07"E
47.29'

D=6°13'17"
L=92.30, R=850.00

D=1°30'00"
L=22.25, R=850.00

905.00

910.00

STA: 51+25.00 10 RT
STA: 51+43.37 10 RT
STA: 51+77.93 14 RT

STA: 52+84.59 14 RT
STA: 53+33.76 10 RT
STA: 53+60.00 10 RT

R/W — R/W — R/W — R/W — R/W

EASE

CRUMB RD ALIGN.
STA. 52+34.82

HIGHLAND CREEK ALIGN.
STA. 10+98.01

CONSTRUCTION NOTES:

1. AGENCY DESIGNED BURIED STRUCTURE NO. 1
2. SAWCUT
3. HMA

GRADE BREAK STA = 51+25.00
ELEV. 912.31
MATCH EXISTING ELEVATION

BVCS: 51+61.32
BVCE: 910.75

LOW PT STA: 52+28.75
LOW PT ELEV: 909.30
PVI STA:52+36.32
PVI ELEV:907.52
K:15.68
LVC:150.00

EVCS: 53+11.32
EVCE: 911.47

GRADE BREAK STA = 53+60.00
ELEV. 914.87
MATCH EXISTING ELEVATION

-4.30%

EXISTING GROUND

5.27%

8.97%

PROPOSED FINISHED ROADWAY

BVCS: 53+15.50
BVCE: 911.70

LOW PT STA: 53+15.50
LOW PT ELEV: 911.70
PVI STA:53+37.50
PVI ELEV:912.85
K:11.88
LVC:44.00

EVCS: 53+59.50
EVCE: 914.83

925 920 915 910 905 900 895 890 885 880

9134 912.5 911.67 911.6 910.81 910.8 910.06 910.1 909.56 909.7 909.33 909.4 909.34 909.4 909.61 909.9 910.14 910.6 910.92 911.4 911.94 912.4 913.24 913.6 914.9 915.8

51+20 51+40 51+60 51+80 52+00 52+20 52+40 52+60 52+80 53+00 53+20 53+40 53+60

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SPECIAL MAINT NO: 90-20F630050017
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ROADWAY PLAN AND PROFILE

SHEET 9 OF 16

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Rodney Troy Lakey, P.E.
Senior Engineer
Design/ENV.

Date: 6/9/2022

RODNEY TROY LAKEY
STATE OF WASHINGTON
#39873
REGISTERED PROFESSIONAL ENGINEER

SEC. 04 TWP. 12N. RGE. 4E. W.M.

LAND LINES ARE APPROXIMATE

SCALE: 1" = 20'

STA: 51+87.39 18 LT
STA: 51+77.88 19 LT
STA: 51+87.54 18 RT
STA: 51+77.95 19 RT

END / BEGIN
STA. 52+00.37

END / BEGIN
STA. 52+63.53

END
STA. 52+85.19

STA: 52+67.87 18 LT
STA: 52+86.50 19 LT
STA: 52+66.36 18 RT
STA: 52+84.37 19 RT

BEGIN
STA. 51+79.09

BEGIN
STA. 51+79.21

END / BEGIN
STA. 52+00.50

END / BEGIN
STA. 52+62.38

END
STA. 52+85.19

10+00
11+00
11+50
51+00
52+00
53+00

CRUMB RD

EASE
R/W
905.00
910.00
900.00
895.00

CONSTRUCTION NOTES:

1. BEAM GUARDRAIL TYPE 31 NON-FLARED TERMINAL
2. BEAM GUARDRAIL TYPE 31
3. BEAM GUARDRAIL TYPE 31, PER WSDOT STANDARD PLAN C-20.41 WITH 1.5:1 FILL SLOPE STARTING 4-FT. BEYOND THE FACE OF GUARDRAIL
4. SHOULDER WIDENING WITH 2:1 FILL SLOPES BEYOND SHOULDER EDGE (EXCEPT WITHIN 10-FT OF CULVERT)
5. TRANSITION FROM 2:1 TO 1.5:1 10-FT FROM CULVERT DECK.

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CRUMB ROAD M.P. 0.17
CULVERT REPLACEMENT PROJECT

SPECIAL MAINT NO: 90-20F630050017
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GUARDRAIL DETAILS

SHEET 10 OF 16

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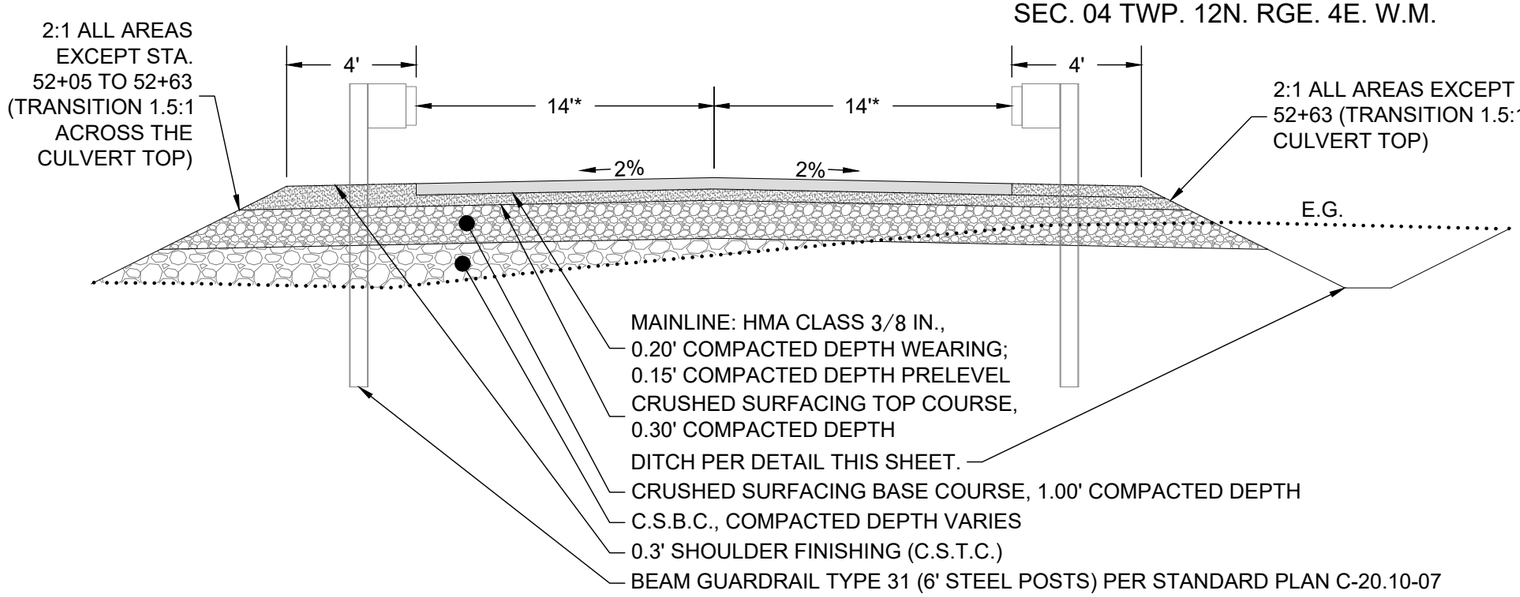
Senior Engineer
Design/ENV.

Date: 6/9/2022

RODNEY TROY LAKEY
STATE OF WASHINGTON
#35973
REGISTERED
PROFESSIONAL ENGINEER

SEC. 04 TWP. 12N. RGE. 4E. W.M.

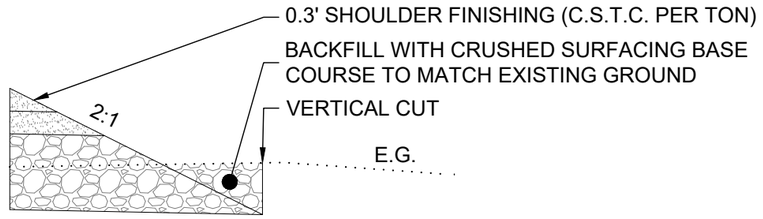
LAND LINES ARE APPROXIMATE



* WIDTH VARIES AT GUARDRAIL LANDINGS AND TRANSITIONS TO EXISTING ROADWAY

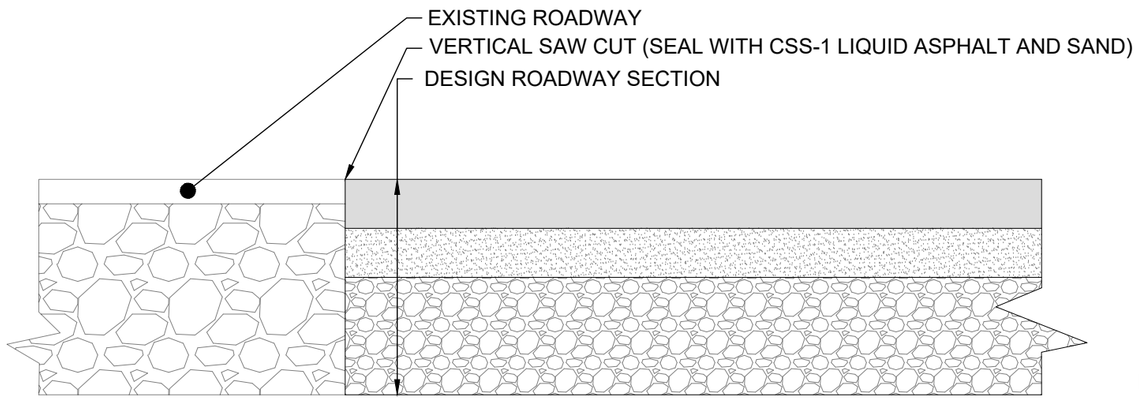
ROADWAY SECTION

NOT TO SCALE



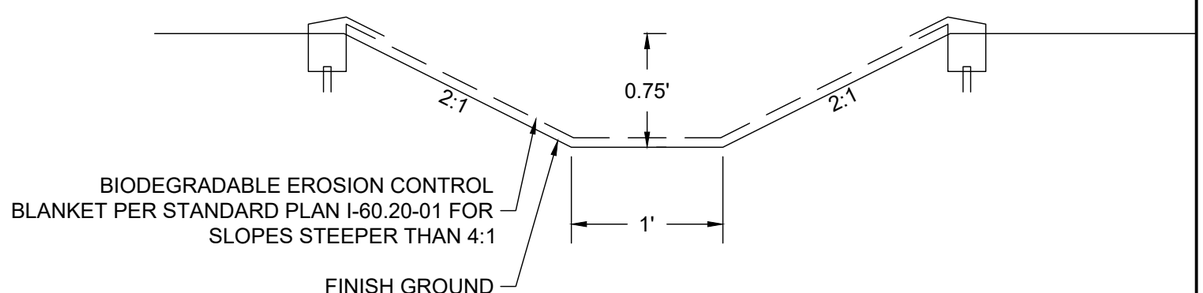
SUBGRADE VERTICAL CUT

NOT TO SCALE



PAVEMENT BUTT JOINT

NOT TO SCALE



ROADSIDE DITCH (TYPICAL)

NOT TO SCALE

Lewis County
Department of Public Works
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CRUMB ROAD M.P. 0.17
CULVERT REPLACEMENT PROJECT

SPECIAL MAINT NO: 90-20F630050017
FEMA PROJ. NO.: 4539-DR-WA-PW 121

ROADWAY DETAILS

SHEET 11 OF 16

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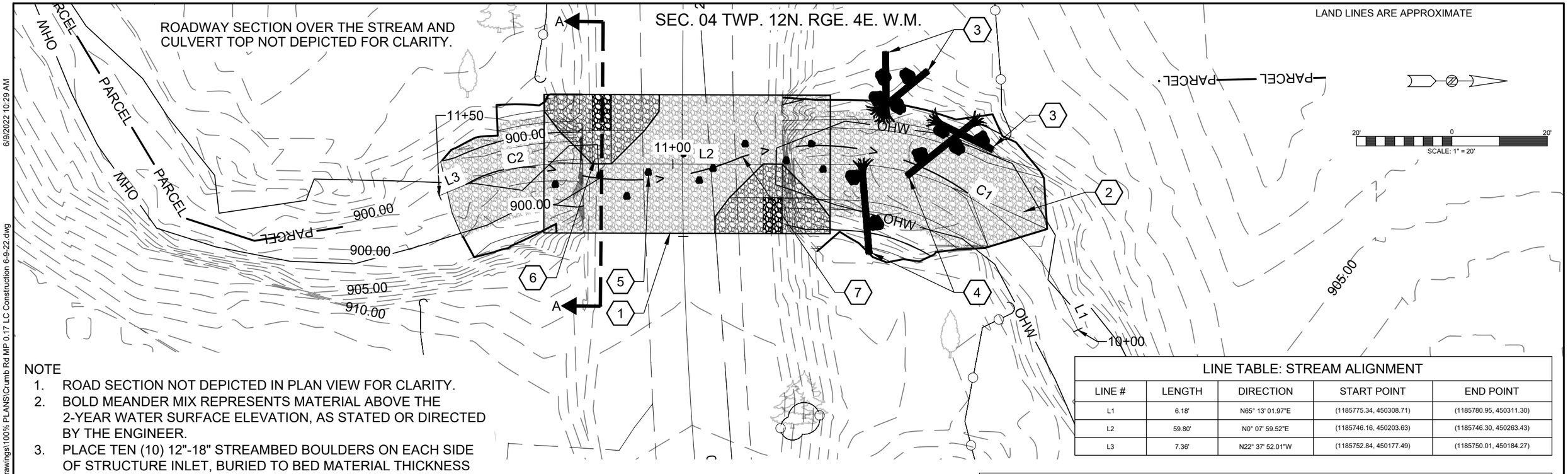
Rodney Troy Lakey, P.E.
Senior Engineer
Design/ENV.

Date: 6/9/2022

RODNEY TROY LAKEY — STATE OF WASHINGTON — 35973 — REGISTERED PROFESSIONAL ENGINEER

6/9/2022 10:29 AM

S:\Engineer_ Road Folders\C Road Files\CRUMB RD - 63005\Crumb MP 0.17 SM20F630050017 - Culvert Replacement\Drawings\100% PLANS\Crumb Rd MP 0.17 LC Construction 6-9-22.dwg

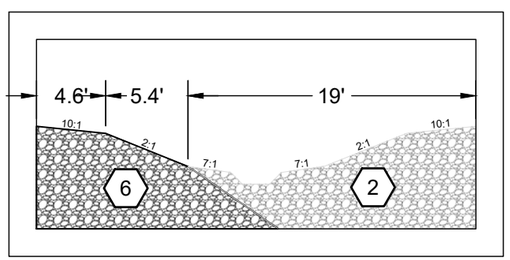


NOTE

1. ROAD SECTION NOT DEPICTED IN PLAN VIEW FOR CLARITY.
2. BOLD MEANDER MIX REPRESENTS MATERIAL ABOVE THE 2-YEAR WATER SURFACE ELEVATION, AS STATED OR DIRECTED BY THE ENGINEER.
3. PLACE TEN (10) 12"-18" STREAMBED BOULDERS ON EACH SIDE OF STRUCTURE INLET, BURIED TO BED MATERIAL THICKNESS UP BANK TO EL. 903' TO TRANSITION NATURAL BANKS TO STRUCTURE

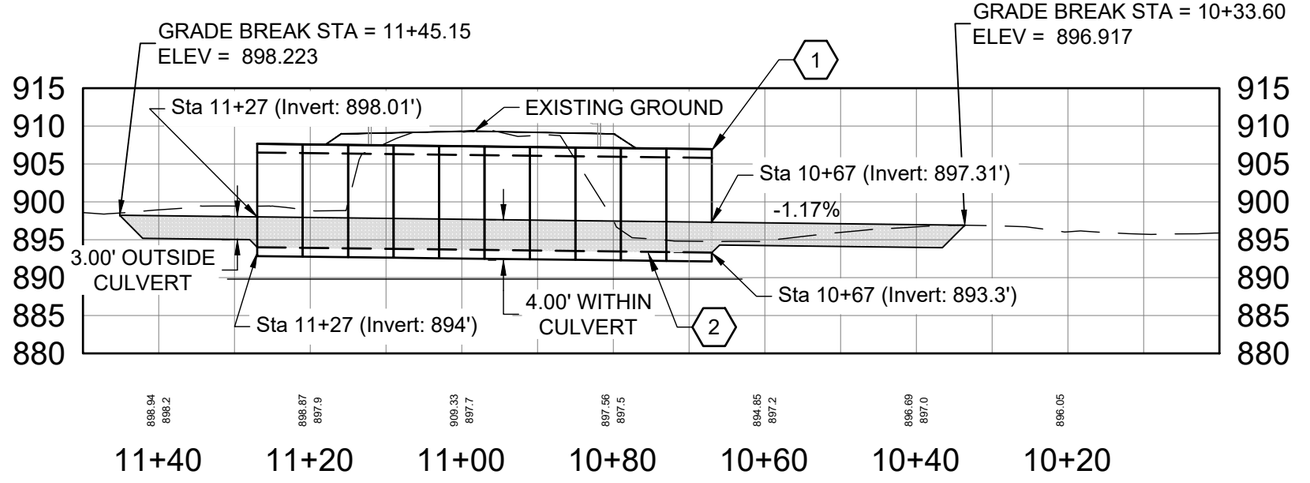
LINE TABLE: STREAM ALIGNMENT				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L1	6.18'	N65° 13' 01.97"E	(1185775.34, 450308.71)	(1185780.95, 450311.30)
L2	59.80'	N0° 07' 59.52"E	(1185746.16, 450203.63)	(1185746.30, 450263.43)
L3	7.36'	N22° 37' 52.01"W	(1185752.84, 450177.49)	(1185750.01, 450184.27)

LINE TABLE: STREAM ALIGNMENT					
LINE #	RADIUS	LENGTH	DIRECTION	START POINT	END POINT
C1	50.00	56.80	N32° 40' 30.75"E	(1185746.30,450263.43)	(1185775.34, 450308.71)
C2	50.00	19.87	N11° 14' 56.24"W	(1185750.01, 450184.27)	(1185746.16, 450203.63)



SECTION A-A

1" = 10'



CONSTRUCTION NOTES:

1. 29' X 12.5' X 60' CONCRETE BOX CULVERT
2. STREAMBED MIX
3. BALLASTED LWD (16" DBH x 15' LONG)
4. BALLASTED LWD (16" DBH x 20' LONG)
5. TWO MAN BOULDERS
6. MEANDER BAR MIX
7. MEANDERING LOW FLOW NOTCH (2' WIDE, 0.5' DEEP)

Lewis County
Department of Public Works
2025 NE KRESKY AVE.
CHEHALIS WA 98532
PHONE # (360) 740-1123
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CRUMB ROAD M.P. 0.17
CULVERT REPLACEMENT PROJECT

SPECIAL MAINT NO: 90-20F630050017
FEMA PROJ. NO.: 4539-DR-WA-PW 121

STREAM PLAN AND PROFILE

SHEET 12 OF 16

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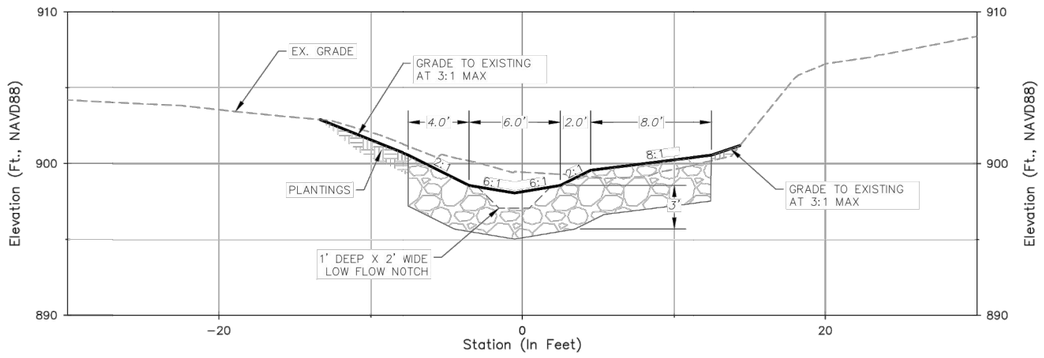
Utilities Underground Location Center

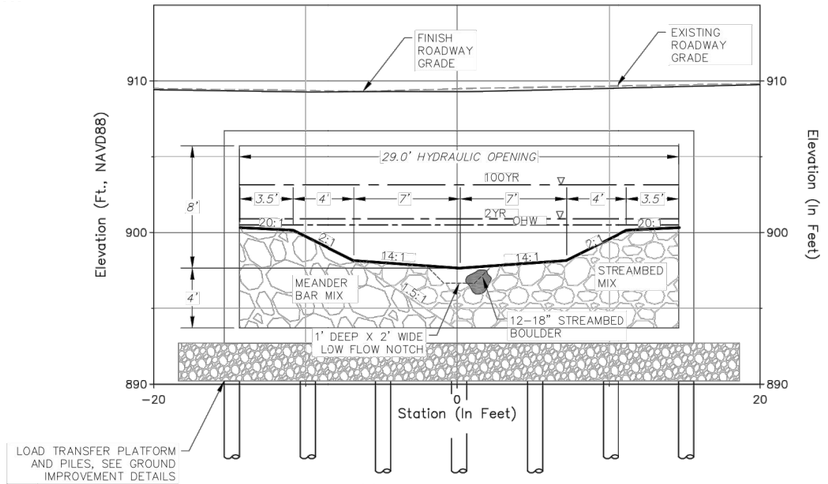
Rodney Troy Lakey, P.E.
Senior Engineer
Design/ENV.
Date: 6/9/2022

STATE OF WASHINGTON #39873 REGISTERED PROFESSIONAL ENGINEER

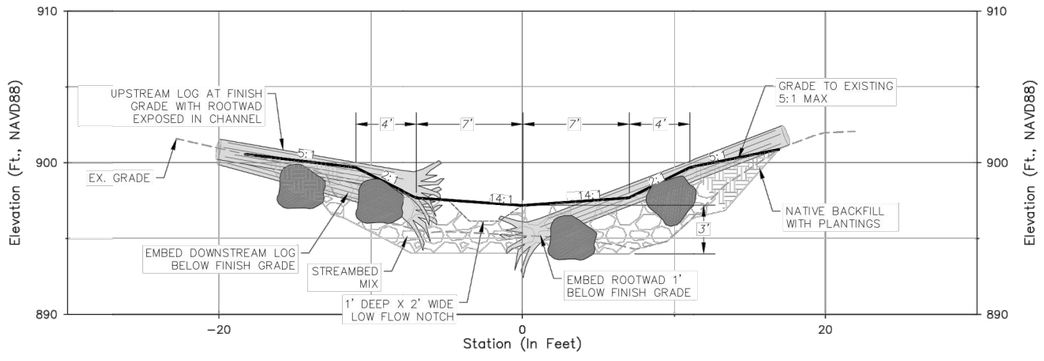
LAND LINES ARE APPROXIMATE



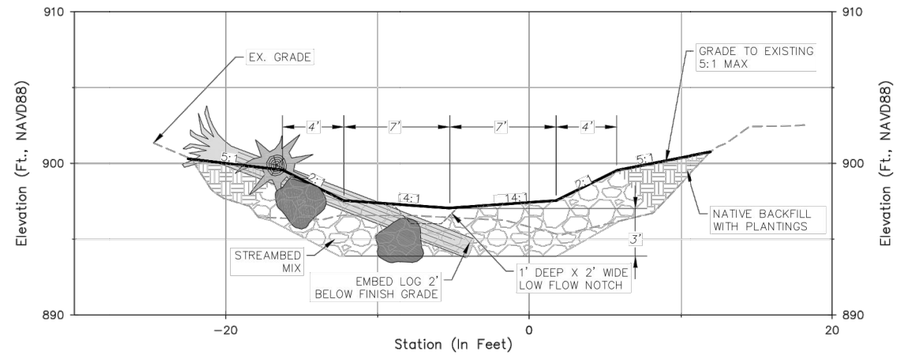
A/1 SECTION
H: 1"=5' V: 1"=5'



B/1 SECTION
H: 1"=5' V: 1"=5'



C/1 SECTION
H: 1"=5' V: 1"=5'



D/1 SECTION
H: 1"=5' V: 1"=5'

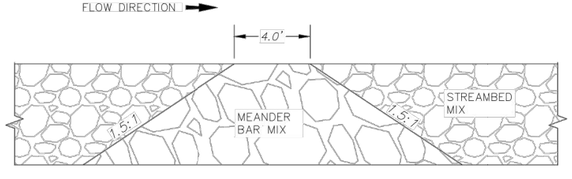
SECTION NOTES
1. LOW FLOW NOTCH NOT REFLECTED IN THE CHANNEL PROFILE. THE LOW FLOW NOTCH WILL BE GRADED IN FOLLOWING PLACEMENT OF ALL MATERIAL TO CONNECT HABITAT ELEMENTS, OR AS DIRECTED BY THE ENGINEER.

MATERIALS NOTES

REFER TO WSDOT STANDARD SPECIFICATIONS 9-03.11 FOR ALL STREAMBED AGGREGATE MIX GRADATIONS.

1. STREAMBED MIX:
   20% STREAMBED SEDIMENT
   40% 4" STREAMBED COBBLES
   40% 8" STREAMBED COBBLES

2. MEANDER BAR MIX:
   20% STREAMBED SEDIMENT
   80% 12" STREAMBED COBBLES



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CRUMB ROAD M.P. 0.17
CULVERT REPLACEMENT PROJECT

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STREAM TYPICAL SECTIONS

SHEET 13 OF 16

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Senior Engineer
Design/ENV.

Date: 6/9/2022

STATE OF WASHINGTON RODNEY TROY LAKEY #39873 REGISTERED PROFESSIONAL ENGINEER

6/9/2022 10:30 AM

S:\Engineer__Road Folders\C Road Files\CRUMB RD - 63005\Crumb MP 0.17 SM20F630050017 - Culvert Replacement\Drawings\100% PLANS\Crumb Rd MP 0.17 LC Construction 6-9-22.dwg

SEC. 04 TWP. 12N. RGE. 4E. W.M.

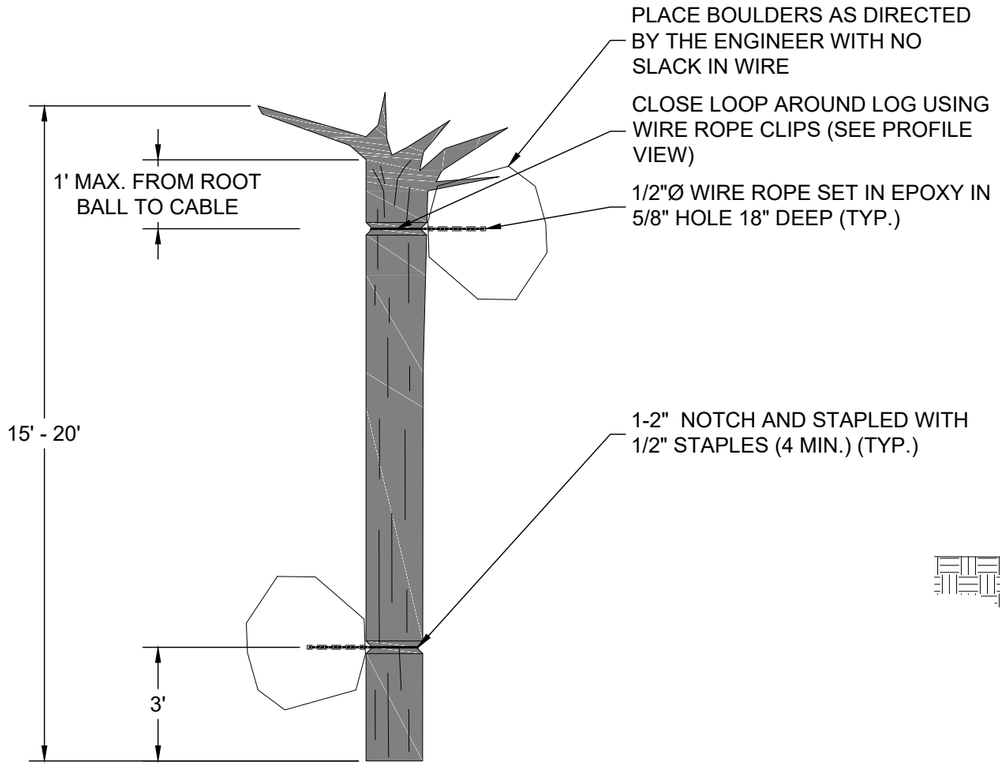
LAND LINES ARE APPROXIMATE

CONSTRUCTION NOTES

1. WOOD SPECIES FOR LARGE WOODY DEBRIS (LWD) PIECES SHALL BE GREEN (NOT STOCKPILED) DOUGLAS FIR OR RED CEDAR UNLESS OTHERWISE SPECIFIED. NO DIMENSIONAL BEAMS OR TIMBERS, HEMLOCK, ALDER, OR OTHER DECIDUOUS TREE SPECIES SHALL BE USED.
2. LWD PIECES: ALL LOGS SHALL HAVE ROOTWADS INTACT.
3. EACH LOG SHALL BE SECURED IN PLACE AT BOTH ENDS BY ANCHORING TO BOULDER ANCHORS AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER. LOG TO LOG CONNECTIONS SHALL BE MADE AT EACH LOG CROSSING AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.
4. BOULDERS USED FOR ANCHORS IN CHANNEL MAY BE ROUND OR SUB-ANGULAR, EACH WEIGHING AT LEAST 2500 LBS, AND SECURED TO THE LOGS WITH NO SLACK IN WIRE ROPE. ALL BOULDERS SHALL BE PLACED ON THE UPSTREAM SIDE OF THE LOG THEY ARE SECURED TO AND EMBEDDED TO A DEPTH EVEN WITH OR BELOW THE BASE OF THE LOG WHERE ATTACHED (UNLESS INSTRUCTED OTHERWISE BY ENGINEER IN FIELD).
5. LWD CONNECTIONS FOR LOG TO ANCHOR, LOG TO BOULDER, AND LOG TO LOG SHALL BE MADE USING GALVANIZED WIRE ROPE. $\frac{1}{2}$" ROPE CLIPS SHALL BE USED TO SECURE WIRE ROPES AS SHOWN IN PLANS OR AS DIRECTED BY THE ENGINEER. TO PREVENT LOOSENING OF ROPE CLIPS THE NUTS SHALL BE SPOT WELDED OR THREADS FOULED.
6. LOGS SHALL BE NOTCHED 1-2" AND STAPLED WITH $\frac{1}{2}$" STAPLES AT ALL WIRE ROPE CONNECTIONS.
7. LOCAL EXCAVATION SHALL BE PERFORMED PRIOR TO, DURING AND AFTER PLACEMENT OF LWD STRUCTURES AS DIRECTED BY THE ENGINEER.
8. SECURE WIRE ROPE TO BOULDERS BY DRILLING 5/8-INCH HOLE 18 INCHES (MINIMUM) INTO BOULDER. CLEAN HOLE WITH COMPRESSED AIR OR OTHER MEANS TO REMOVE DUST AND ROCK PARTICLES. FILL HOLE WITH EPOXY ADHESIVE AND INSERT WIRE ROPE ENSURING ADEQUATE LENGTH REMAINS TO SECURE TO LOG. EPOXY SHALL MEET WSDOT STANDARD SPECIFICATION 9-26.1 TYPE IV. THE GRADE, CLASS, AND OTHER PROPERTIES OF THE EPOXY ADHESIVE SHALL BE AS RECOMMENDED BY THE EPOXY MANUFACTURER AND SUBJECT TO APPROVAL BY THE ENGINEER. THE EPOXY ADHESIVE SHALL BE SUITABLE FOR PROVIDING A LONG-TERM BOND OF THE WIRE ROPE TO THE BOULDER ANCHOR IN SUBMERGED (UNDERWATER) CONDITIONS, DRY CONDITIONS, AND VARIABLE SUBMERGENCE CONDITIONS. EPOXY SHALL BOND THE WIRE ROPE TO THE BOULDER FOR AT LEAST A LOAD CORRESPONDING TO A 10,000 POUND TENSILE LOAD ON THE WIRE ROPE.

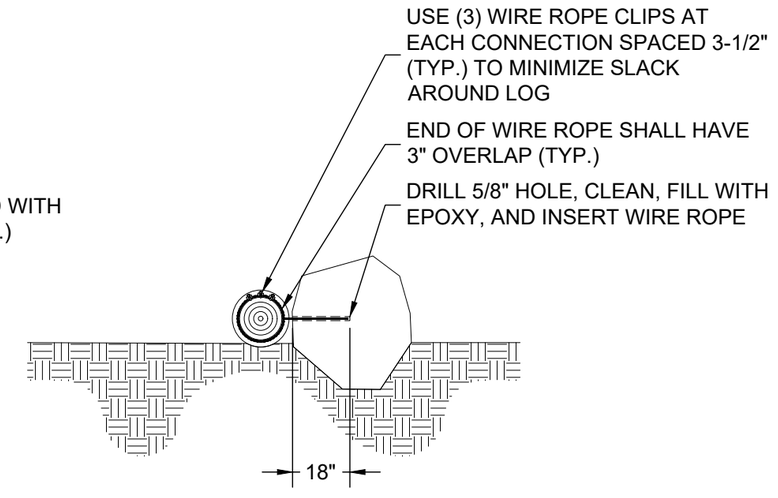
SPECIAL NOTES FOR ALL LOG STRUCTURES

1. DRAWING SHOWS THE PROPOSED LOCATION OF THE LWD STRUCTURES. THE FINAL DESIGN MAY BE MODIFIED BY THE ENGINEER TO SUIT LOCAL CONDITIONS AND AVAILABLE MATERIALS. FURTHER, MODIFICATIONS TO THIS DESIGN MAY BE MADE IN THE FIELD BY THE ENGINEER DURING CONSTRUCTION.
2. TYPICAL DESIGNS ARE MEANT AS A GUIDE ONLY. MODIFICATION TO SUIT SITE CONDITIONS WILL LIKELY BE REQUIRED.



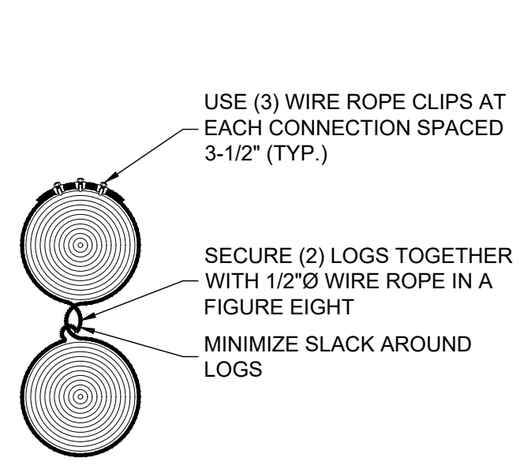
BOULDER TO LWD CONNECTION (PLAN)

SCALE: 1" = 4'



BOULDER TO LWD CONNECTION (PROFILE)

SCALE: 1" = 4'



LWD TO LWD CONNECTION

SCALE: 1" = 2'

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STREAM TYPICAL SECTIONS

SHEET 14 OF 16

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Rodney Troy Lakey, P.E.
Senior Engineer
Design/ENV.

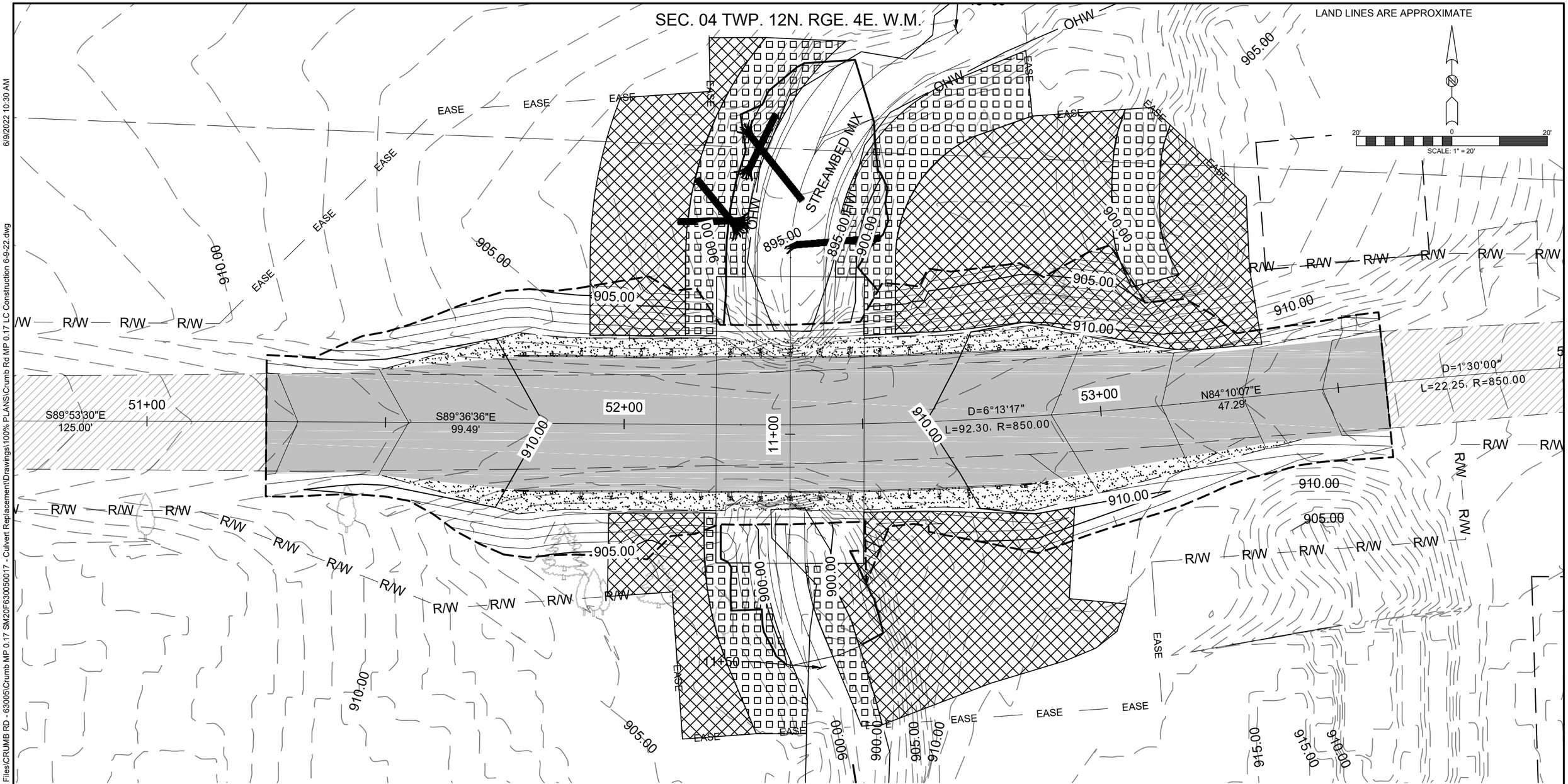
Date: 6/9/2022

RODNEY TROY LAKEY STATE OF WASHINGTON #39873 REGISTERED PROFESSIONAL ENGINEER

SEC. 04 TWP. 12N. RGE. 4E. W.M.

LAND LINES ARE APPROXIMATE

SCALE: 1" = 20'



PLANTING ZONE A - 2632 S.F.

PLANTING ZONE B - 6306 S.F.

S:\Engineer__Road Folders\C Road Files\CRUMB RD - 63005\Crumb MP 0.17 SM20F630050017 - Culvert Replacement\Drawings\100% PLANS\Crumb Rd MP 0.17 LC Construction 6-9-22.dwg

6/9/2022 10:30 AM

Lewis County
Department of Public Works

2025 NE KRESKY AVE.
CHEHALIS WA 98532
PHONE # (360) 740-1123
FAX # (360) 740-2719

DESIGNED BY : RTL
DRAWN BY : WSR
CHECKED BY :
DATE : 06/09/2022

NO.	DATE	REVISION	BY	APP.

CRUMB ROAD M.P. 0.17
CULVERT REPLACEMENT PROJECT

SPECIAL MAINT NO: 90-20F630050017
FEMA PROJ. NO.: 4539-DR-WA-PW 121

PLANTING PLAN

SHEET 15 OF 16

CALL 48 HOURS BEFORE YOU DIG
1-800-424-5555
"It's the Law"
Utilities Underground Location Center

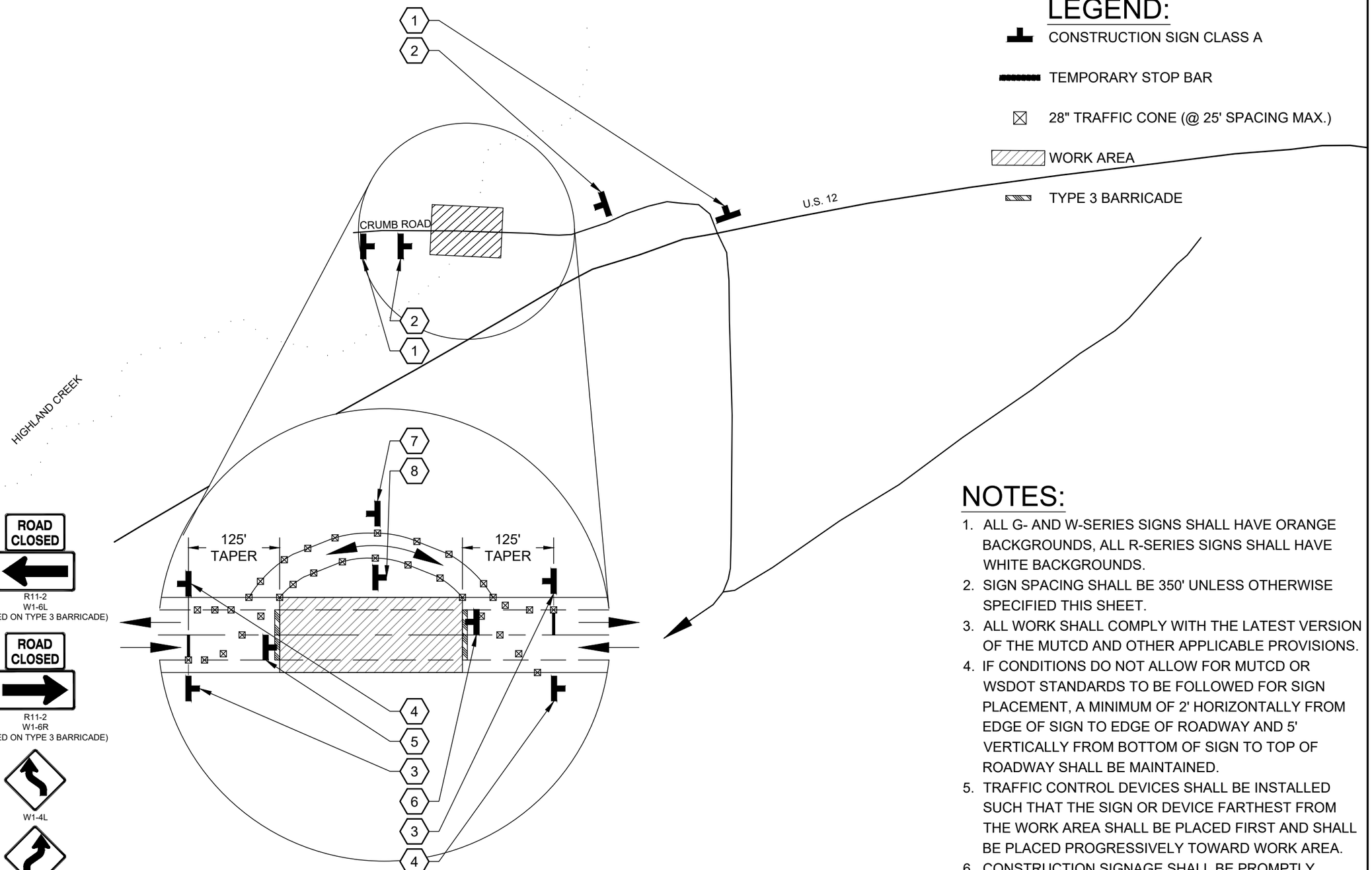
Rodney Troy Lakey, P.E.
Senior Engineer
Design/ENV.

Date: 6/9/2022

RODNEY TROY LAKEY
STATE OF WASHINGTON
#39873
REGISTERED PROFESSIONAL ENGINEER

SEC. 04 TWP. 12N. RGE. 4E. W.M.

LAND LINES ARE APPROXIMATE



LEGEND:

- CONSTRUCTION SIGN CLASS A
- TEMPORARY STOP BAR
- 28" TRAFFIC CONE (@ 25' SPACING MAX.)
- WORK AREA
- TYPE 3 BARRICADE

SIGNAGE NOTES:

1. ROAD WORK AHEAD — W20-1
2. LOOSE GRAVEL / MOTORCYCLES USE EXTREME CAUTION — W8-7, W21-1701P
3. NO CENTER LINE / SPEED LIMIT 25 — W8-12, R2-1
4. END ROAD WORK — G20-2
5. ROAD CLOSED — R11-2, W1-6L (MOUNTED ON TYPE 3 BARRICADE)
6. ROAD CLOSED — R11-2, W1-6R (MOUNTED ON TYPE 3 BARRICADE)
7. W1-4L
8. W1-4R

NOTES:

1. ALL G- AND W-SERIES SIGNS SHALL HAVE ORANGE BACKGROUNDS, ALL R-SERIES SIGNS SHALL HAVE WHITE BACKGROUNDS.
2. SIGN SPACING SHALL BE 350' UNLESS OTHERWISE SPECIFIED THIS SHEET.
3. ALL WORK SHALL COMPLY WITH THE LATEST VERSION OF THE MUTCD AND OTHER APPLICABLE PROVISIONS.
4. IF CONDITIONS DO NOT ALLOW FOR MUTCD OR WSDOT STANDARDS TO BE FOLLOWED FOR SIGN PLACEMENT, A MINIMUM OF 2' HORIZONTALLY FROM EDGE OF SIGN TO EDGE OF ROADWAY AND 5' VERTICALLY FROM BOTTOM OF SIGN TO TOP OF ROADWAY SHALL BE MAINTAINED.
5. TRAFFIC CONTROL DEVICES SHALL BE INSTALLED SUCH THAT THE SIGN OR DEVICE FARTHEST FROM THE WORK AREA SHALL BE PLACED FIRST AND SHALL BE PLACED PROGRESSIVELY TOWARD WORK AREA.
6. CONSTRUCTION SIGNAGE SHALL BE PROMPTLY REMOVED OR COVERED WHENEVER THE MESSAGE IS NOT APPLICABLE OR NOT IN USE.

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TRAFFIC CONTROL PLAN

SHEET 16 OF 16

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