MANDATORY PREBID MEETING

May 20, 2026
TIME 9:00 AM

To be held via Mirosoft Teams

Click her to Join
https://teams.microsoft.com/meet/229370571952526?p=lUy4d9r9Mqa4ZVHtHz
Meeting ID: 229 370 571 952 526
Passcode: jD7rB7c8

Need help? | System reference
Dial in by phone
+1 971-323-0035,,114007811#
United States, Portland
Find a local number
Phone conference ID: 114 007 811#

Bureau of Environmental Services

PREQUALIFICATION

IS NOT

REQUIRED

BID NUMBER DOC2192253027

SW 61ST CULVERT REPLACEMENT

Project Number E11640

May 2026

Refer Questions to:
Alex Miller
Procurement Specialist
Phone: (503) 865-6317
alexzandria.miller@portlandoregon.gov

Submit Bid to:
Procurement Services online website at:
https://procure.portlandoregon.gov/bso

BIDS DUE:

June 4, 2026

by 2:00 PM

PROCUREMENT SERVICES

GENERAL BIDDING REQUIREMENTS

Doc2192253027

SW 61st Culvert Replacement

Project Number E11640

GENERAL BIDDING REQUIREMENTS

- Notice to Bidders
- Bid Process Contacts
- Instructions to Bidders
- Bid Form
- Fillable Bid Bond Place Holder
- Non-Collusion Affidavit
- Assignment of Anti-Trust Rights
- State of Oregon First-Tier Subcontractor Disclosure Requirements
- Subcontractor Disclosure Specifications
- Workforce Training & Training Program
- Sample Contract

PROJECT SPECIFICTIONS

- Signature Pages
- Project Specifications Table of Contents
- Work-to-be-done
- Special Provisions

PROJECT PLANS AND DETAILS

- Project Plans
- Standard Details

PERMITS

- USACE NWP Verification Letter (NWP – 2024-00401)
- DEQ 401 Water Quality Certification Approval
- City of Portland Street Opening Permit

APPENDIX

- Geotechnical Report
- Level 2 Environmental Report
- Other

NOTICE TO BIDDERS
BIDS ARE DUE BY 2:00 P.M.

This checklist is provided for the use and convenience of bidders. Please refer to the bid documents for requirements, as we cannot guarantee this list is complete. The responsibility for compliance with all requirements remains with the bidder. All submissions are made to Procurement Services.

PRIOR TO BID OPENING: The contractor shall have a current active license from the Oregon Construction Contractors Board. If required by the bid documents, contractors may also be required to attend a pre-bid conference. Contractors also are expected to be aware of, and base their bids upon, all addenda that might be issued prior to bid opening.

1. ☐ Prequalification by City of Portland (*Prequalification Application must be filed with Procurement Services at least 10 days prior to bid opening, unless that time period has been changed by a prequalification application or the Instructions to Bidders.)* "**Submit application at:** https://portlandoregon.diversitycompliance.com"

2. ☒ **Current, active CCB license** is required to submit a bid as stated in Chapter 5.10 of the Code of the City of Portland. Specialty licensing as required in the Bid Specifications (shown below)
   Specialty license: ☐ None
   Specialty license: ☐ None

3. ☒ Addenda ***(check for receipt of all addenda and acknowledge all addenda before submitting bid)***

4. ☒ Mandatory prebid conference scheduled

Checked items must be submitted WITH the Bid.

1. ☒ Bid *(see Instructions to Bidders)*
2. ☒ Bid Security *(see Instructions to Bidders)*
3. ☒ Non-Collusion Affidavit
4. ☐ Other

Checked items must be submitted VIA EMAIL TO BUYER BY 4:00 PM on the day of the bid opening.

1. ☒ State of Oregon – First Tier Subcontractor Disclosure Form required if bid is greater than $100,000. *(see State of Oregon Subcontractor Disclosure form for requirements)*

Checked items must be submitted electronically via the City's Contract Compliance Reporting System (previously Form 1)

1. ☒ City of Portland Subcontractor Disclosure Specifications - UTILIZATION PLAN (UP) - DUE from the apparent low bidder WITHIN 24 HOURS OF NOTIFICATION BY CITY OF PORTLAND.

Low Bidders:

1. ☒ Workforce Training and Hiring Program *(see Workforce Training Specification for requirements)*
2. ☒ Certification as an EEO Affirmative Action Employer http://procure.portlandoregon.gov/
3. ☒ Equal Benefits Compliance
4. ☐ Clean Air Construction – Fleet Registration Portland.gov/cac/TheYard - Uncheck this box or delete if under $1million
5. ☐ Low Carbon Concrete Requirements – Uncheck this box or delete if less that 50 cubic yards of concrete

PROJECT CONTACTS
NAMES, ADDRESSES, AND PHONE NUMBERS

During the bidding process, bidders should direct all questions to Alex Miller for this project.

The following names, addresses, and phone numbers are included for the convenience of the Bidders and Contractor:

Certification as an EEO Affirmative Action Employer:
Procurement Services
1120 SW 5th Avenue, Room 1035
Portland, OR 97204-1972
(503) 823-5047
(503) 865-3455 FAX
https://procure.portlandoregon.gov/bso/

Submittal of Electronic Bids:
https://procure.portlandoregon.gov

Purchase of "Standard Construction Specifications":
Permit Application Center
BDS Building, First Floor
1900 SW 4th Avenue
Portland, OR 97204-1971
(503) 823-7660

Subcontractor Equity Program / Workforce Training & Hiring
Anthony Sweeney
Procurement Services
1120 SW 5th Avenue, Room 1035
Portland, OR 97204-1972
anthony.sweeney@portlandoregon.gov

INSTRUCTIONS TO BIDDERS

1.0 SECURING DOCUMENTS

Bid documents are available electronically at: http://procure.portlandoregon.gov.

All Bidders who submit bids on this project are required to have copies of a complete set of Bid Documents (plans and specifications), and all addenda issued prior to the bid due date. If there is any question as to the Bid Documents or addenda, contact Procurement Services.

If you intend to submit a bid on this project, you must be registered as a Seller at: http://procure.portlandoregon.gov

1.1 INCORPORATION OF STANDARD CONSTRUCTION SPECIFICATIONS

Bidder shall incorporate all applicable provisions of the City of Portland Standard Construction Specifications, published July 2020, into their bid. The Standard Construction Specification may be downloaded at: https://www.portland.gov/sites/default/files/2021/2020-city-of-portland-standard-construction-specifications_0.pdf

All work done, and materials used on this project and the legal relations between the parties and the Contractor's requirements shall be as set forth in said Standard Specifications, except as specially and specifically modified or deleted by these Special Specifications. If there is any difference, discrepancy or conflict between these Special Specifications and the General Requirements of the City of Portland, the Special Specifications as set forth here shall apply. The 2020 Standard Construction Specifications may be purchased direct from the City of Portland, Development Services Center, 1900 SW 4th Avenue, Portland, Oregon, phone (503) 823-7660.

2.0 SUBMITTING BIDS

2.1 BID FORM

2.1.1 The bid and all other required documents as specified in the Notice to Bidders must be submitted electronically through SAP Business Network on or before the bid due date and time. The State of Oregon First Tier Subcontractor Disclosure Form must be emailed directly to the Buyer by 4:00 p.m. day of bid opening if not submitted with the bid; contact information is indicated on the cover of the Bid Document. Instructions for Submitting a Construction ITB in SAP Business Network are available at the following link: *SAP Business Network Electronic Submittal Guide*. All required bid documents shall be submitted as an attachment in SAP Business Network as a single pdf document using a naming convention which includes Bid Number, Project Title and Contractors name in that order with the use of abbreviations being acceptable (i.e. 0000XXXXProjNameXYZConstCo.pdf). The total base bid amount (excluding any/all alternates) shall also be submitted as an Item amount in SAP Business Network as described in the Instructions for Submitting a Construction ITB in SAP Business Network. Failure to include the required bid docs as an attachment shall deem the bid non-responsive. **NOTE: Bidders should allow for a sufficient amount of time for the bid entry/document**

upload process in SAP Business Network in order to ensure timely submission.

Bidders wishing to listen to the public opening via a conference call may use the Dial-In number and Conference Code provided below:

Local US Dial-in: (971) 256-0996
Conference Code: 949530

Callers that dial in before the host will be placed on hold until the host dials in.

2.1.2 All bids must be submitted using the forms included in the Invitation for Bid and all applicable blanks giving general information must be filled in and signed by the Bidder or a duly authorized agent. All bids must be clearly and distinctly typed or written in black or blue ink. Any statement accompanying and tending to qualify a bid may cause rejection of such bid unless a statement is required in a bid embracing alternatives.

2.1.3 Bidders shall bid on all items included in the bid. Bids that are incomplete or fail to include all items contained in the plans and specifications may be rejected.

2.1.4 Bidders should reference the Notice to Bidders for a list of forms to be submitted with the Bid with special attention required regarding 2.5 Bid Security.

2.2 WITHDRAWAL, MODIFICATION OF BID

Submittals in writing to revise electronic Bids will not be permitted. However, the Bidder may withdraw and re-open as described in the Instructions for Submitting a Construction ITB in BuySpeed as many times as necessary up until the Bid Open date/time. All electronic Bid submittals must meet all requirements and deadlines for submitting electronic Bids.

2.3 LATE BIDS

Bids received after the scheduled bid due date and time will not be accepted.

2.4 COST OF BIDS

This Invitation for Bid does not commit the City to pay any costs incurred by any Bidder in the submission of their bid, or in making any necessary studies or designs for the preparation thereof.

2.5 BID SECURITY

No bid will be considered unless accompanied by a certified check, cashier's check, or a bid bond for an amount not less than ten percent (10%) of the aggregate amount of the bid. It shall be payable to the City of Portland as a guarantee that the bid shall be irrevocable for a period of sixty (60) calendar days, unless otherwise specified, after the bid opening date and time and as liquidated damages should the Bidder fail or neglect to furnish the required performance bond and insurance and execute a contract within ten

(10) calendar days after receiving said contract from the Chief Procurement Officer for execution. The bid security shall be retained for a period-of-time in accordance with City of Portland Code 5.10.

For Bids submitted electronically, the bid security should be submitted as part of the aforementioned single pdf submission and shall be in color. The City reserves the right to request the original bid security after bid opening if the electronic format is not acceptable to the City Attorney's Office.

2.6 CONFLICT OF INTEREST

A Bidder submitting a bid hereby certifies that no officer, agent or employee of the City who has a pecuniary interest in this bid has participated in the contract negotiations on the part of the City, that the bid is made in good faith without fraud, collusion, or connection of any kind with any other Bidder of the same Invitation for Bids, and that the Bidder is competing solely in its own behalf without connection with, or obligation to, any undisclosed person or firm. No bid will be considered unless accompanied by the notarized Non-Collusion Affidavit form included in the Invitation for Bid.

The City reserves the right to request the original notarized Non-Collusion Affidavit after bid opening if the electronic format is not acceptable.

3.0 LEGAL REQUIREMENTS

3.1 LAWS, ORDINANCES, AND REGULATIONS

The Bidder is presumed to be familiar with all Federal, State and local laws, ordinances, and regulations, which in any manner affect the personnel, material or equipment used in the proposed Work. Bidders agree that if awarded a contract, the successful Bidder will comply with all applicable federal, state and local laws, ordinances, and regulations. The successful bidder shall comply with Title VI of the Civil Rights Act of 1964 and its corresponding regulations as further described at: Civil Rights Title VI and Racial Equity Program | Portland.gov.

The successful bidder must maintain an anti-harassment policy in compliance with The City's HR 2.02 Prohibition Against Workplace Harassment Discrimination and Retaliation policy which can be found at: https://www.portlandoregon.gov/citycode/article/12121.

3.2 SPECIFIC STATUTES AND ORDINANCES

The Bidder's attention is called to the requirements of Oregon Revised Statutes Chapter 279A, 279B, 279C, and to Title 17 and Chapter 5.10 of the City of Portland Code with reference to public improvement contracts, purchasing in general, and to contractor's procedures and pre-qualification requirements.

3.3 EQUAL EMPLOYMENT OPPORTUNITY (EEO) CERTIFICATION

All Bidders must be certified as Equal Employment Opportunity Employers as prescribed by Portland Public Contracting Rule 5.33.076. Failure to receive EEO compliance prior to the date and time of bid opening may result in delaying the award of the contract. Details of certification requirements are available from Procurement Services, 1120 SW Fifth

Avenue, Room 1035, Portland, Oregon 97204, (503) 823-5047, or on Procurement Services' website under the Contractor Resources page. In order to be EEO certified, Bidders must complete the online form at: http://procure.portlandoregon.gov.

3.4 NON-DISCRIMINATION IN EMPLOYEE BENEFITS (EQUAL BENEFITS)

The successful Bidder must be in compliance with the City's Equal Benefits Program as prescribed by Portland Public Contracting Rule 5.33.077 prior to contract award. Details of compliance requirements are available from Procurement Services, 1120 SW Fifth Avenue, Room 1035, Portland, Oregon 97204, (503) 823-5047, or on Procurement Services' website under the Contractor Resources page. In order to comply, Bidders must complete the online form at: http://procure.portlandoregon.gov.

3.5 PRE-QUALIFICATION OF BIDDERS

PRE-QUALIFICATION IS NOT REQUIRED

All public improvement projects with an engineer's estimate of $500,000 or greater requires pre-qualification.

The City has moved the prequalification process to an online platform through Ariba. Contractors must first be registered in Ariba in order to submit a prequalification application. Please go to the following link for more information on how to register your company: Key Project Information Page For Suppliers | Portland.gov Once you are registered in Ariba and you need to submit a general prequalification request or a bid specific request please email your request to prequalapps@portlandoregon.gov. Completed prequalification applications, including all required documentation, must be received by Procurement Services at least ten (10) days prior to the date of bid opening, unless specifically stated otherwise in the advertisement. Pre-qualification applications received less than ten (10) days prior to the bid opening may be processed or rejected at the City's sole discretion. If the application is not approved the City will notify the bidder in a timely matter per City Code 5.10.

3.6 DRUG TESTING PROGRAM

Pursuant to ORS 279.505 (2), the Contractor awarded the contract shall demonstrate that an employee drug-testing program is in place.

3.7 AMERICANS WITH DISABILITIES ACT

Bidders agree that if awarded a contract, the successful Bidder will comply with all applicable provisions of the Americans with Disabilities Act of 1990, 42 USC Section 12101 et seq and subsequent amendments thereto. If any Bidder requires special assistance or auxiliary aids during the bidding process, please notify Procurement Services, (503) 823-5047, or TDD (503) 823-6868, at least two (2) business days prior to the required assistance.

3.8 BUSINESS TAX COMPLIANCE

A current business tax registration is required before doing business with the City (reference City Code Chapter 7.02). Persons whose gross receipts from all business, both within and without the City, amounts to less than $50,000 may be exempt, information

related to complying with the business tax registration is available at: http://www.portlandoregon.gov/revenue/29320.

3.9 CONSTRUCTION AND LANDSCAPE CONTRACTORS BOARDS

Construction contractors must be licensed with the State of Oregon Construction Contractors Board in accordance with ORS 701.021 and any other specialty licensing as required in the bid specification prior to submitting a bid to the City. For information contact:

CONSTRUCTION CONTRACTORS BOARD
700 Summer St. NE, Suite #300
Salem, OR 97310
(503) 378-4621
(website) http://www.ccb.state.or.us

A Landscape Contractors Board license is required in accordance with ORS 671.530 if the bid specification includes landscape work as defined by ORS 671.510. For information contact:

LANDSCAPE CONTRACTORS BOARD
2111 Front St. NE, Suite #2-101
Salem, OR 97301
(503) 378-5909
http://www.oregon.gov/LCB/

3.10 CORPORATE RESPONSIBILITY

The City of Portland is committed to contracting with equitably aware and environmentally responsible businesses. The City values and supports diversity, advancing equity, and is dedicated to expanding economic opportunities by growing both the demand for and capacity of local contractors and workforce, including those owned by people of color and women. On July 31, 2025, Mayor Keith Wilson issued an executive order directing City employees, programs, and services to comply with all applicable federal civil-rights and nondiscrimination laws, including but not limited to the Civil Rights Act of 1964. The City is currently reviewing its programs to ensure compliance with both the Mayor's executive order and applicable federal law, as interpreted by the courts. For this Invitation to Bid, the Subcontractor Equity Program (SEP) requirements do not apply; however, Bidders will provide equal opportunity and access in subcontracting for all businesses, including minority- and women-owned businesses, as an equal opportunity employer. The successful Bidder will provide a subcontractor utilization plan listing all subcontractors and material suppliers that are engaged to perform Work on the project in accordance with the Subcontractor Disclosure Specifications contained herein. The successful Bidder must also provide demographic and certification data to the City for all subcontractors and material suppliers that are engaged to perform the work.

4.0 PRE-BID REQUIREMENTS

4.1 EXAMINATION OF BID DOCUMENTS & WORKSITE

Before submitting a bid, each Bidder shall carefully examine the Drawings, read the Specifications and all Addenda and visit the site of the Work. Each Bidder shall fully inform themselves prior to submitting a bid as to all existing conditions and limitations under which

the Work is to be performed and shall include in the bid a sum to cover all costs of all items necessary to perform the Work as set forth in the Bid Documents. No allowance will be made to any Bidder because of lack of such examination or knowledge. Submission of a bid will be construed as conclusive evidence that the Bidder has made such examination.

4.2 CLARIFICATION OF BID DOCUMENTS PRIOR TO BID - ADDENDA

4.2.1 Requests for additional information or interpretation of the bid document shall be submitted to the Buyer no later than seven (7) days before the deadline for submission of bids. Bid due date is indicated on the cover of the Bid Document.

4.2.2 If, in the opinion of the City, additional information or clarification is required, an addendum will be issued to all plan holders on record in Procurement Services. Any addenda issued by the Chief Procurement Officer seventy-two (72) hours or more before the scheduled closing time for filing bids shall be binding upon the Bidder. Failure of the Bidder to receive or obtain such addenda shall not excuse them from compliance therewith if they are awarded the contract.

4.2.3 Oral instructions or information given by City Officers, employees or agents to Bidders concerning this Bid Document or the work in general shall not bind the City.

4.3 PRE-BID CONFERENCE

A pre-bid conference may be scheduled to answer Bidders' questions. See front cover of Bid Document for date, time and place. If a mandatory pre-bid conference is scheduled, only General Contractors are required to attend, it is optional for sub-contractors.

If an insufficient number of General Contractors or their representatives attend the Mandatory Pre-Bid conference scheduled for this project, the City may decide to hold a 2nd Mandatory Pre-Bid conference to solicit additional interest and provide a more competitive bidding process.

5.0 CONTRACT AWARD

5.1 BASIS OF AWARD

5.1.1 The contract, if awarded, will be made to the lowest, responsive and responsible Bidder offering the lowest unit price base bid.

5.1.2 Determination of the lowest responsive, responsible bid is subject to review by the City Attorney.

5.1.3 The City reserves the right to accept or reject any or all bids in whole or in part, and waives irregularities not affecting substantial rights; and may reject for good cause all bids upon the City's finding that it is in the public interest to do so.

5.1.4 Award of contract, if awarded, will be made within sixty (60) calendar days after the date of bid opening unless otherwise stated in the Bid Documents.

5.2 EXECUTION OF CONTRACT DOCUMENTS

5.2.1 The Contract Form to be executed by the City and the successful Bidder for the Work is a standard form of the City of Portland, Oregon. Such form, incorporated into these Bid Documents by reference only and not physically contained herein, may be reviewed by prospective Bidders at Procurement Services, by contacting the Buyer for this project, Alex Miller at (503) 823-865-6317 or by email alexzandria.miller@portlandoregon.gov

5.2.2 If the contract total is $50,000 or less, a purchase order may be used to confirm the City's acceptance of a bid.

5.2.3 The Bidder to whom the Contract is awarded shall, within ten (10) calendar days after receipt of Contract forms from the Chief Procurement Officer, sign and deliver to the Chief Procurement Officer all required copies.

5.2.4 At or prior to delivery of the signed Contract, the Contractor shall deliver to the Chief Procurement Officer a Performance Bond, a separate Payment Bond, any other bonds and policies of insurance or insurance certificates with additional insured endorsement form(s) attached as required by the Contract Documents.

5.2.5 Failure or refusal to furnish the signed Contract, bonds and/or insurance policies or certificates in a form satisfactory to the City within the time stated above shall be just cause for cancellation of the award, withdrawal of the Contract, and forfeiture of the Bid Guaranty.

5.3 ELECTRONIC PAYMENTS

It is the City's policy to pay its vendor invoices via electronic funds transfers through the automated clearing house (ACH) network. To initiate payment of invoices, vendors shall execute the City's standard ACH Vendor Payment Authorization Agreement which is available on the City's website at: http://www.portlandoregon.gov/brfs/article/409834.

Upon verification of the data provided, the Payment Authorization Agreement will authorize the City to deposit payment for services rendered directly into vendor accounts with financial institutions. All payments shall be in United States currency.

6.0 PERFORMANCE AND PAYMENT BONDS

6.1 Performance and payment bonds are required for contracts with a value of $150,000 and above. The forms for the Performance Bond and the Payment Bond, to be executed by the successful Bidder for the Work and delivered to the City not later than the date of execution of the Contract, are the standard forms of the City of Portland, Oregon. Such forms, incorporated into these Bid Documents by reference only and not physically contained herein, may be reviewed by prospective Bidders at Procurement Services, City of Portland, 1120 SW 5th Avenue, Room 1035, Portland, Oregon, 97204, phone (503) 823-5047.

6.2 Bonds, in an amount equal to one hundred percent (100%) of the Contract Sum, shall be satisfactory to the City and shall be executed by a corporate surety licensed to do business in the State of Oregon. The attorney in fact who executed the Bonds on behalf of the

surety shall affix thereto a certified and current copy of his power of attorney and shall indicate the monetary limit of such power.

7.0 PREFERENCES FOR GOOD & SERVICES AND NON-RESIDENT CONTRACTOR

7.1 ORS 279A.120 requires that, in all public contracts, the public contracting agency shall prefer goods or services that have been manufactured or produced in this State if price, fitness, availability and quality are otherwise equal. In determining the lowest responsive bidder, the City shall add a percent increase on the bid of a nonresident bidder equal to the percent, if any, of the preference given to that bidder in the state in which the bidder resides.

7.2 Where a public contract is awarded to a nonresident contractor and the contract price exceeds $10,000, the Contractor shall promptly report to the Oregon Department of Revenue on forms provided by the Department of Revenue, the total contract price, terms of payment, length of contract and such other information as the Department of Revenue may require before final payment on the contract can be made. For purposes of this subsection, a nonresident contractor is one who is not domiciled in or registered to do business in the State of Oregon. The Oregon Department of Revenue Nonresident Bidder Form is available at: https://www.oregon.gov/DOR/forms/FormsPubs/nonresident-bidder_800-020.pdf.

8.0 LOCAL BUSINESS PREFERENCE

Residents of the State of Oregon and SW Washington benefit from optimizing local businesses and services, and the local employment opportunities they generate. As such the City desires to employ local businesses in the purchase, lease, or sale of any personal property, public improvements or services. Therefore, the City shall prefer goods or services that have been manufactured or produced by a local business if price, fitness, availability and quality are otherwise equal.

9.0 WAGE RATES

9.1 State of Oregon, Bureau of Labor and Industries (BOLI) prevailing wage rates are required to be paid to all workers for all work on contracts that total $50,000 and above, unless exempt.

9.2 State of Oregon, Bureau of Labor and Industries (BOLI) prevailing wage rates are required to be paid to workers in each trade or occupation that the Contractor or Subcontractor uses in performing all or part of the work on this project. The applicable prevailing wage rates for this project will be the rates in the BOLI publication titled “Prevailing Wage Rates for Public Works Contracts in Oregon” effective on **January 5, 2026,** including the applicable amendments dated **April 5, 2026**, which are hereby incorporated into this contract by this reference. Workers must be paid not less than the specified minimum hourly rate of wage in accordance with ORS 279C.838 and 279C.840. You can download your copy from www.oregon.gov/boli. If you need additional copies, contact Bureau of Labor & Industries, 1800 NE 1st Ave Portland, OR 97201; phone (971) 673-0839

9.3 The City of Portland is required to pay the Prevailing Wage Rate (PWR) fee directly to the Oregon Bureau of Labor and Industries. Therefore, Contractor acknowledges that this fee has not been included in the bid amount for this project.

9.4 The Contractor awarded the contract is required to post a Public Works Bond with the Oregon Contractors Construction Board (OCCB) unless exempt prior to start of work on the project.

9.5 Subcontractors awarded the contract are required to post a Public Works Bond with the Oregon Contractors Construction Board (OCCB) unless exempt prior to start of work on the project.

9.6 Workforce Training & Hiring Program Compliance Recordkeeping. The Contractor shall utilize LCPtracker to track and demonstrate Workforce Training & Hiring Program compliance. The Contractor and all Subcontractors of $100,000 or more must submit reporting electronically utilizing LCPtracker starting with the first Certified Payroll Report (CPR) and every CPR thereafter. The City will provide the Contractor and each applicable Subcontractor with a User ID and password to access the City LCPtracker reporting system, if one has not already been provided. Webinars, training materials and telephone support on how to use the system are available to contractors. Electronic submittal of workforce reporting requires entry of weekly payroll information including, but not limited to, employee identification, work classification, total hours worked, wage rate, overtime, if any, and fringe benefit rates paid. Specific information on the LCPtracker System is available through the following website: www.lcptracker.com.

9.7 State Labor Compliance. In accordance with ORS 279C.845, the Contractor and all Subcontractors must submit certified payrolls and labor compliance documentation starting with the first Certified Payroll Report (CPR) and every CPR thereafter Once printed, fill out the missing schedule information, sign the certified statement and submit as required to the City's Owner's Representative.

10.0 OWNERS RESPONSIBILITIES UNDER THE CONTRACT

The City will assign a project manager who will be the contractor's sole source of contact for decision processing for the project. The project manager will arrange for and coordinate other City resources necessary to construct the project with the exception of planning, permitting, and other regulatory agencies of the City. The project manager will be responsible for assuring that requests for clarifications and change proposals are processed in a timely manner. The project manager will provide the contractor with such drawings and specifications as needed to complete work.

11.0 REPORTING REQUIREMENTS

Contractor shall cooperate with the City with respect to its reporting requirements for financial and programmatic data resulting from the expenditure of City funds, as follows:

11.1 Contractor shall provide an estimate of the number and types of jobs created or retained by the project at the beginning of the project. If Contractor uses vendors in the project, include direct jobs created or retained by the vendors.

11.2 Contractor shall report actual performance results consisting of the number and types of jobs created and/or retained at final completion of the project.

11.3 Contractor must include these requirements in any subcontracts awarded for the project.

11.4 Reports shall be submitted upon request. The Contractor's timely, complete, accurate, and truthful compliance with the reporting obligations constitutes a material element of the Contractor's performance of this contract. Failure to submit these reports shall be deemed noncompliance, and the City may withhold any amounts otherwise due to the Contractor under this contract until the Contractor has submitted the reports.

12.0 PROTEST OF CONTRACTOR SELECTION

Bidders are permitted to challenge the City's decision to award a contract. Portland City Code 5.10 describes in detail the protest and appeal procedures when a bid process is officially protested.

For each formal bid project not exempted from the competitive bidding procedures of ORS 279C.335 Procurement Services shall post a Notice of Intent to Award upon determination of the lowest responsive and responsible bidder. The Notice of Intent to Award shall be posted in the same manner of the solicitation.

A Bidder who is adversely affected or aggrieved by the award of contract shall have seven (7) calendar days from the issuance of the Notice of Intent to Award to file a bid protest. The protest must be filed in writing to the Chief Procurement Officer and must specify the grounds upon which the protest is based. To be valid, a protest must come from an actual Bidder for the contract who claims to be the rightful awardee. A protest is not valid if filed by a Bidder who cannot show that it would be awarded the contract if its protest were accepted.

The Chief Procurement Officer will review the protest and issue a written decision. If the Bidder disagrees with the decision of the Chief Procurement Officer, the Chief Procurement Officer may refer to the Contract Board of Appeals or City Council as he/she determines. The request for appeal must be filed with the Chief Procurement Officer within seven (7) calendar days from the date of the written decision. The request must describe the specific reason for the appeal request, and is limited to those matters that were raised in the original protest letter.

ADDENDA
The undersigned acknowledges receipt of all addenda issued to this solicitation.

PREVAILING WAGES
Bidder acknowledges the requirements of this solicitation in regards to the State of Oregon Prevailing Wage requirements or the federal prevailing wage requirements or both as required by ORS 279C.838 or 279C.840 or 40 USC § 276A will be complied with. (HB 2041, § 25)

Effective January 1, 2008, the City of Portland is required to pay the Prevailing Wage Rate (PWR) fee of 1/10 of 1% of the total contract price directly to the Oregon Bureau of Labor and Industries (Ref. HB 2021). **Therefore, by signing this form Contractor acknowledges that this fee has not been included in the bid amount for this project.**

RESIDENT BIDDER
All bidders must state whether they are an Oregon resident bidder or a non-resident bidder. As defined in ORS 279A.120, a resident bidder is one who has paid unemployment taxes or income taxes in the state during the 12 calendar months immediately preceding bid submission, has a business address in Oregon, and has stated in their bid to be a resident bidder.
Check one: Bidder is (___) a resident bidder or is (___) a non-resident bidder. **If a nonresident bidder, the bidder certifies residency of (insert name of state where the bidder is a resident):**_____

ASSIGNMENT OF ANTI-TRUST RIGHTS
The undersigned acknowledges if they enter into a contract they will be assigning to the Owner any Claim for relief that the Contractor has or may have in the future by reason of violation of 15 USC SS 1-15 or ORS 646.725 or ORS 646.730.

Date: _____

Name of Firm: _____

Street Address: _____

City of: _____ State _____ Zip _____

Name:_____
(Original Signature) (Title)

Name: (Print) _____

Phone: _____ Fax _____

Email: _____

EEO ☐ EBO ☐ (see instructions to bidders 3.3 and 3.4)

Employer Identification Number _____

SIC or Type of Business _____

Construction Contractors Board Registration Number _____

City of Portland Business Tax Registration Number _____

Firm is a Corporation _____ Partnership _____ Proprietorship _____

If Incorporated, Registered in the State of: _____

If a Partnership, list partners: _____

_____

If a Proprietorship, name of principal: _____

CITY OF PORTLAND, OREGON
BID FORM
BUREAU OF ENVIRONMENTAL SERVICES

TO THE CHIEF PROCUREMENT OFFICER:

The undersigned, having full knowledge of the quality of the material and labor to be performed, hereby proposes to perform all labor and furnish all materials necessary for the **SW 61st Culvert Replacement** for the unit prices set opposite the different items of the material to be furnished and the work to be done as herein below stated:

BID NUMBER Doc2192253027

NO.	ITEMS OF WORK AND MATERIALS	SPEC REFERENCE	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
1	MOBILIZATION	00210	1			
2	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	00221	1			
3	FLAGGERS, AS DIRECTED BY OWNER	00223	80			
4	TEMPORARY TYPE ORANGE PLASTIC MESH FENCE	00270	20			
5	EROSION CONTROL	00280	1			
6	POLLUTION CONTROL PLAN	00290	1			
7	REMOVE AND DISPOSE OF WOODEN STRUCTURE	00310	1			
8	CLEARING AND GRUBBING	00320	1			
9	GROUTED RIPRAP, CLASS 50	00390	2			
10	VIDEO INSPECTION OF SEWERS, MAINLINE	00401	37			
11	TRENCH BACKFILL, CLASS B	00405	5			
12	TRENCH EXCAVATION, COMMON	00405	37			
13	POTHOLE EXCAVATION	00405	2			
14	12 INCH PIPE, PVC ASTM D3034 SDR 35, BEDDING TYPE: D	00445	8			
15	30 INCH PIPE, PVC AWWA C-900 PC 165, BEDDING TYPE: D	00445	37			
16	CONCRETE INLETS, TYPE G-2MA	00470	1			
17	PRECAST CONCRETE HEADWALL	00470	1			
18	RETAINING WALL, CAST-IN-PLACE CONCRETE RIGID SEMI-GRAVITY CANTILEVER	596C	1			

NO.	ITEMS OF WORK AND MATERIALS	SPEC REFERENCE	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
19	AGGREGATE BASE	00640	5			
20	TRENCH RESURFACING W/O BASE, ACP, 9 INCH	00744	24			
21	TOPSOIL	01040	5			
22	REMOVE AND REINSTALL MAILBOX SUPPORTS	01070	2			
23	STREAM DIVERSION AND DEWATERING	01091	1			
					TOTAL BID	**$** _____

The Bid Bond is provided as a separate fillable form in Ariba

NON-COLLUSION AFFIDAVIT

STATE OF_____**Contract Bid No.** _____

COUNTY OF_____

I, **(Type/Print Name)**_____, state that I am **(Position Title)**_____**o**f **(Name of Firm)**_____and that I am authorized to make this affidavit on behalf of my firm, and its owners, directors, and officers. I am the person responsible in my firm for the price(s) and the amount of this bid.

I state that:

1. The price(s) and the amount of this bid have been arrived at independently and without consultation, communication or agreement with any other contractor, bidder, or potential bidder, except as disclosed on the attached appendix.
2. Neither the price(s) nor the amount of this bid, and neither the approximate price(s) nor approximate amount of this bid, have been disclosed to any other firm or person who is a bidder or potential bidder, and the price(s), not approximate amount, will not be disclosed before bid opening.
3. No attempt has been made or will be made to induce any firm or person to refrain from bidding on this contract, or to submit a bid higher than this bid, or to submit any intentionally high or noncompetitive bid or other form of complementary bid.
4. The bid of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive bid.
5. **(Name of Firm)**_____, its affiliates, subsidiaries, officers, directors and employees are not currently under investigation by any governmental agency and have not in the last four (4) years been convicted or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract, except as described in the attached appendix.

I state that **(Name of Firm)**_____understands and acknowledges that the above representations are material and important and will be relied on by **THE CITY OF PORTLAND, OREGON** in awarding the contract(s) for which this bid is submitted. My firm understands that any misstatement in this affidavit is and shall be treated as fraudulent concealment from **THE CITY OF PORTLAND, OREGON** of the true facts relating to the submission of bids for this contract.

_____

(Signature)

Subscribed and sworn to before me this_____day of_____**, 20____**

_____

NOTARY PUBLIC

My commission expires_____

ASSIGNMENT OF ANTI TRUST RIGHTS

By entering into a contract, the Contractor, for consideration paid to the Contractor under the contract, does irrevocably assign to the City of Portland any claim for relief or cause of action which the Contractor now has or which may accrue to the Contractor in the future, including, at the City's option, the right to control any such litigation on such claim for relief or cause of action, by reason of violation of 15 USC SS 1-15 or ORS 646.725 or ORS 646.730, in connection with any goods or services provided to the contractor by any person, which goods or services are used, in whole or in part, for the purpose of carrying out the Contractor's obligation under this contract.

In the event the Contractor hires subcontractors to perform any of the Contractor's duties under the contract, the Contractor shall require the subcontractor to irrevocably assign to the City of Portland, as a third party beneficiary any right, title or interest that has accrued or may accrue to the subcontractor by reasons of any violation of 15 USC SS 1-15, ORS 646.725 or ORS 646.730, including, at the City's option, the rights to control of any litigation arising there under, in connection with any goods or services provided to the subcontractor by any person, in whole or in part, for the purpose of carrying out the subcontractor's obligations as agreed to by the Contractor in pursuance of the completion of the contract.

In connection with this assignment, it is an express obligation of the Contractor that it will take no action which will in any way diminish the value of the rights conveyed or assigned hereunder to the City of Portland. It is an express obligation of the Contractor to advise the City Auditor or the Office of the City Attorney of Portland, Oregon:

1. In advance, of its intention to commence any action on its own behalf regarding such claims for relief or causes of action;

2. Immediately, upon becoming aware of the fact that an action has been commenced on its own behalf by some other person or persons, of the dependency of such action; and

3. The date on which it notified the obligor(s) of any such claims for relief or causes of action of the fact of its assignment to the City of Portland.

Furthermore, it is understood or agreed that in the event that any payment under such claim is made to the Contractor, it shall promptly pay over to the City of Portland its proportionate share thereof, if any, assigned to the state hereunder.

SUBCONTRACTOR DISCLOSURE SPECIFICATIONS

I. SUBCONTRACTOR DISCLOSURE REQUIREMENTS

A completed Utilization Plan (UP) is required to be submitted electronically in the City's Contract Compliance Reporting System (CCRS) by the apparent low bidder ***within 24 hours of notification by the City of Portland***. On-screen instructions in the CCRS will guide you through the UP process. The UP must list ALL subcontractors to be used on the project, their corresponding type of work, certification type as applicable, and their subcontract amount, regardless of the dollar amount. If the project Bid Form includes Owner-Directed items of work and materials, they shall not be included in the UP. If the project Bid Form includes bid alternates for additional work, materials and/or methods of construction, bidders shall list ALL first-tier subcontractors that will be used if the City awards the bid alternate(s). Bidders also must identify all types of work that will be self-performed. After submission of the UP, you may review your Dashboard for status updates. The UP will become a part of the resulting contract for the project. Failure by the apparent low bidder to complete and submit the UP in the time specified, may result in the bid being determined non-responsive and the bid will be rejected. If for any reason the apparent low bidder is not awarded the contract or its bid is rejected, the next apparent low bidder will be required to submit their UP.

II. REPORTING REQUIREMENTS AFTER CONTRACT AWARD

A. MONTHLY SUBMITTAL OF SUBCONTRACTOR PAYMENTS DUE BY THE 15th OF EACH MONTH

The Contractor shall submit subcontractor payments via the Contract Compliance Reporting System (CCRS) by the 15th of each month once work has commenced and shall ensure that subcontractors confirm in CCRS receipt of the payments reported. If a subcontractor fails to confirm payment by the end of the month, the City will assume the subcontractor has been paid, as reported, and will confirm payment on the subcontractor's behalf. Subprime firms are also responsible for reporting participation of lower tier subcontractors.

If any changes occur to subcontract values or subcontractors disclosed in the UP during the reporting period, the Contractor shall notify the Contract Compliance Specialist no later than the 15th of each month.

B. SUBCONTRACTOR CHANGES AFTER BID SUBMISSION

1. If any subcontractor is added or replaced after the bid is submitted or the contract

is awarded, the Contractor will ensure it provides equal opportunity and access in subcontracting to all businesses in accordance with its equal opportunity employer obligations. Contractor will not unlawfully discriminate on the basis of any protected class or characteristic including race, color, national origin (including limited English proficiency), sex, sexual orientation, gender identity, age, religion or non-religion, disability, marital status, familial status, or source of income.

2. The Contractor must contact businesses in writing to advise them of potential subcontracting opportunities and ensure that they have an equal opportunity to compete for work by providing all businesses contacted the same information and informing them of the date and time that sub-bids are due.

3. All subcontractor changes/requests shall be made in the CCRS and will include supporting documentation of the foregoing prior to making any changes.

4. The Contractor shall not add, delete, or replace any subcontractor without prior written consent of the Compliance Services Manager.

WORKFORCE TRAINING & HIRING PROGRAM
Contractor Checklist

The City's Workforce Training and Hiring Program (the "Workforce Program") applies to all City-Owned Projects estimated at $200,000 or more and Subcontracts of $100,000 or more.

It is the Contractor's responsibility to read and fully understand this section of the bid specifications and to comply with all provisions of the Workforce Program, regardless of whether they appear on this checklist. *Contractors shall include in their bid all costs associated with complying with the Workforce Program.*

The Contractor and all applicable Subcontractors are required to provide all workforce utilization-related data electronically in Procurement Services labor compliance reporting system. The Contractor is responsible for ensuring all Subcontractors have completed all requested items.

Information related to Contractor access of the web-based labor compliance reporting system will be provided to a designated point of contact upon award of the Contract.

CHECKLIST

For Contracts of $200,000 or more and Subcontracts of $100,000 or more, Contractors must:

1. Before starting work on this Project confirm registration as a training agent with the Bureau of Labor and Industries (BOLI), Apprenticeship & Training Division. Not a BOLI registered training agent? Contact BOLI (971-673-0760), for further information.

2. Ensure that a minimum of 20% of labor hours in each apprenticeable trade are worked by state registered Apprentices. Contractors shall fulfill the 20% apprenticeship requirement without exceeding the Apprentice ratios approved by the applicable apprenticeship program, if working more than 300 hours in any given trade.

3. Provide opportunities for, and remove barriers to, employment in contractor's workforce for everyone, including people of color and women, at both journey and apprentice level.

4. Make all reasonable and necessary efforts to provide workforce opportunities to all persons in the city of Portland, including recruitment of all workers which includes people of color and women through the unions, the apprenticeship programs and other community organizations, as described herein.

5. Maintain written documentation of all requests for workers from the unions, apprenticeship programs, and community organizations.

6. When an Apprentice is hired, notify the City's Contract Compliance Specialist assigned to the Project.

7. Submit weekly certified payroll reports via the labor compliance reporting system no later than the 5th of each month.

WORKFORCE TRAINING AND HIRING PROGRAM

I. PURPOSE

A. General Program Description

As our region grows and the construction industry with it, the City of Portland recognizes the need to maximize apprenticeship and employment opportunities for workers in the construction trades through a concerted effort to connect its community members to the growing industry opportunities. The City's goals include: (1) having a strong pipeline of skilled workers to fill the anticipated shortages; (2) ensuring that City contracting dollars provide fair and equal opportunities to all Portlanders, including the jurisdictions' diverse populations; and (3) contracting with equitably aware and environmentally responsible businesses.

The Workforce Training & Hiring Program ("Workforce Program") is administered for the City of Portland, by Procurement Services. The Workforce Program applies to all City-Owned Projects estimated at $200,000 or more and to each Subcontractor having a subcontract on a project of $100,000 or more. The Contractor and all Subcontractors are encouraged to fulfill the Workforce Program requirements even if their Contracts are less than these amounts.

Contractors shall make reasonable efforts to provide opportunities for, and remove barriers to, employment in its workforce for everyone, including people of color and women, at all levels of its business. Contractors can make reasonable efforts to ensure that their workforce provides opportunities for everyone by recruiting, training and employing workers from the unions, apprenticeship programs, and community organizations.

For purposes of the Workforce Program specifications, the following definitions shall apply:

"Apprentice" shall mean an individual who is enrolled with a state or federally registered apprenticeship program.

"Contract" shall mean the contract awarded as a result of this solicitation.

"Contractor" shall mean the prime Contractor to whom a Contract is awarded.

The term ***"people of color"*** shall include members of either sex who are Black or African American, Latino/a/e/x or Hispanic, Asian, Native Hawaiian or Pacific Islander, American Indian, Alaskan Native or Indigenous Peoples of the Americas and Middle Eastern or North African.

"Owner" shall mean the government agency that awarded the Contract or leveraged public involvement in the Project through a loan or development agreement.

"Project" shall include all work performed pursuant to the Contract.

"**Subcontractor**" shall mean an entity that the Contractor enters into a subcontract to perform work of $100,000 or more.

B. Organization of Workforce Program Requirements

The Workforce Program specifications are divided into several parts.

Section II - refers to the action the Contractor must take in order to be eligible for award of a contract.

Section III - lists the actions that must be taken by the Contractor to meet contractual obligations.

Section IV - refers to remedies available to the Owner if a Contractor fails to meet the requirements of the Workforce Program specifications.

Section V - refers to the Owner's ability to monitor compliance with the Workforce Program specification by examination of Contractor and Subcontractor records.

II. SUBMISSION OF REQUIRED DOCUMENTATION PRIOR TO PRE-CONSTRUCTION MEETING:

The Contractor shall thoroughly read this Workforce Program specification and commit to perform all requirements described herein. The Contractor shall submit, prior to the Notice to Proceed, the following information:

A. Workforce Plan (Exhibit 2) – The Contractor must submit a comprehensive plan outlining how it intends to meet the apprentice utilization requirements for the Project. The plan shall include the following information, for all Subcontractors:

- A list of all trades/crafts to be used on the Project, including an estimate of work hours by each trade/craft and the total hours to be used;
- An estimate of the number of Apprentice work hours and percentage to be used by each trade/craft on the Project;
- An estimate of the start date for each trade/craft;
- A description of efforts the Contractor intends to make to ensure that the Apprentice utilization requirements are met; and
- A description of any assistance the Contractor believes will be necessary from the City to meet the apprenticeship utilization requirements.

The Workforce Plan will be reviewed with the Contract Compliance Specialist at the pre-construction meeting to ensure that efforts are made to achieve the apprenticeship requirements.

III. ACTIONS REQUIRED TO SATISFY CONTRACTUAL OBLIGATIONS

A. Make Reasonable Efforts to Provide Equal Opportunity and Access

1. The Contractor and its Subcontractors, at any tier level, will provide opportunities for, remove barriers to, and create an environment where workers are retained, in its workforce for everyone, including people of color and women, at all levels of its business.

2. Provide written documentation of its recruitment efforts. Contractors and Subcontractors must follow the process for hiring, requesting, recruiting or replacing workers described in Section III, subsection F.

B. Ensure Compliance by Subcontractors

1. The Contractor shall ensure that each Subcontractor, at any tier, shall comply with all the provisions of the Workforce Program specifications. Contractors shall include in their price all costs associated with this requirement. No change order will be executed in order for the

Contractor to comply with the Workforce Program specifications.

2. The Contractor shall provide a copy of this Workforce Program specification to all Subcontractors.

C. Register as a Training Agent

1. The Contractor shall register with the Bureau of Labor & Industries Apprenticeship and Training Division as a training agent and ensure that all Subcontractors are registered as training agents, prior to beginning work. Registration as a training agent in a specific trade is not required (1) if there are no training opportunities in that trade on the Project, based on the maximum ratio allowed by BOLI, or (2) if working under 300 hours. Training agent status may be verified by visiting the Apprenticeship and Training Division website.

2. Training programs registered or recognized by BOLI may be used to fulfill training requirements under the Workforce Program specifications. Other training alternatives must be approved by the City's Compliance Services Manager.

3. Training is intended to be primarily on-the-job training in apprenticeable crafts, and does not include classifications such as flag person, timekeeper, office engineer, estimator, bookkeeper, clerk/typist, fire fighter, or secretary. Hours performed in crafts, which are not apprenticeable occupations are exempt from the training requirements.

4. Exemptions to the training requirements must be approved by the Compliance Services Manager in writing prior to starting work on the Project. Written requests for exemptions related to the training requirements will be considered only for extreme circumstances during the course of the Project and must be approved in writing. All requests to exempt all or any portion of the work on a Project shall be submitted to the Compliance Specialist 14 calendar days before any work on the Project begins on the *Workforce Training & Hiring Exemption Form*.

D. Reporting

1. Weekly Payroll Reports must be submitted by the Contractor and Subcontractors, via the labor compliance reporting system, no later than the 5th of each month and will be used to track attainment toward the City's Apprentice utilization requirement. All hours subject to prevailing wage rates on public projects, shall be reported.

   Contractors wishing to use the labor compliance reporting system to file a certified copy of their payroll report (WH-38) must print a copy of the CPR Report by State, which can be found in the Reports tab in system. Once printed, fill out the missing schedule information, sign the certified statement and submit as required to the City's Project Manager.

2. The Contractor shall provide timely copies of all required information to the City. On a monthly basis, the City will provide a copy of the Apprentice Hours Report to the Contractor within 30 days of the end of each month. The Apprentice Hours Report will reflect the contractors determined to have deficient apprenticeship hours, so a timely plan may be developed to remedy any deficiency.

E. Use of Apprentices

The Contractor and Subcontractors shall:

1. Ensure that a minimum of 20% of labor hours in each apprenticeable trade performed on the Project are worked by state registered Apprentices throughout the duration of the Project. The 20% apprenticeship requirement shall be met without exceeding the Apprentice ratios approved by the applicable apprenticeship program, if working in excess of 300 hours in any given trade.

2. Pay all Apprentices the wages required by any applicable collective bargaining contract or pursuant to state or federal law and regulations.

3. Not use workers previously employed at journey-level or those who have successfully completed a training course leading to journey-level status to satisfy the requirements of these provisions.

4. Notify the Contract Compliance Specialist when an Apprentice is hired for the Project.

5. Count Apprentice hours as follows:

   (a) Hours worked on the Project by Apprentices enrolled in state-approved apprenticeship programs.

   If the Contractor or Subcontractor is unable to fulfill its 20% requirement with Apprentices actively enrolled in state-approved apprenticeship programs, then they may also use methods (b) and (c) below;

   (b) Hours worked on the Project by Apprentices who are required to be away from the job site for related training during the course of the Project, but only if the Apprentice is rehired by the same employer after completion of training; the Contractor and Subcontractors must submit a letter from the apprenticeship program verifying the dates and hours of completed training; and

   (c) Hours worked on the Project by graduates of state-registered apprenticeship programs, provided that such hours are worked within the 12-month period following the Apprentice's completion date.

F. Hiring, Requesting, Recruiting or Replacing Workers

The Contractor and Subcontractors must follow all these steps when hiring, requesting, recruiting or replacing workers:

For Apprentices:

1. Using the Worker Request Form, contact the appropriate apprenticeship program or dispatch center to request Apprentices who are enrolled in the apprenticeship program; and

2. If the apprenticeship program is unable to supply an Apprentice and if the program is open for applications or allows direct entry from the Oregon Employment Division, make reasonable and necessary efforts to recruit Apprentice applicants from WorkSource at the Oregon Employment

Department, and seek to enroll them into an apprenticeship program.

WorkSource Oregon is Oregon's largest source for job ready applicants:

- Recruitment Services are local, statewide, and nationwide
- Computerized job match system matches applicants to job qualifications
- On-the-job training resources available to offset cost of new hires
- Go to: www.imatchskills.org or call 503-257-HIRE

For All Workers:

1. Provide opportunities for everyone, including people of color and women, and remove barriers in hiring, requesting, recruiting or replacing workers.

2. Contractors are notified that direct hiring of employees (such as "walk-ons") without providing notification of that job opportunity may not be sufficient to establish the Contractor's efforts to satisfy this requirement.

3. Document employment efforts. Use the Worker Request Form to keep a ***written*** record of requests to:

   a. Union halls for signatory contractors;
   b. Union or open shop apprenticeship programs;
   c. The Oregon Employment Department. Go to: www.imatchskills.org or call 503-257-HIRE;
   d. State-registered pre-apprenticeship programs: http://www.oregon.gov/BOLI/ATD/pages/a_ag_partners.aspx

4. Documentation will be requested by the Owner if a Contractor is not following their Workforce Plan. When requested, the Contractor shall provide that documentation to the Contract Compliance Specialist within seven (7) calendar days.

   NOTE: Contractors may contact the Contract Compliance Specialist for assistance related to any of the above issues.

IV. CONSEQUENCES OF NONCOMPLIANCE WITH WORKFORCE PROGRAM REQUIREMENTS

The City's commitment to the Workforce Program is reflected, in part, by the cost of administering the program. Failure to meet the requirements of the Workforce Program negates such funding and impairs the City's efforts to promote and provide fair and equal opportunities to the public as a whole as a result of the expenditure of public funds, and achieve its goals as stated in Article I.A. Therefore, the parties mutually agree that failure to meet the requirements of this section of the specifications, including but not limited to the submission of required documentation, constitutes a material breach of the Contract.

In the event of a breach of this section of the Contract, the Owner may take any or all the following actions:

A. Withholding Progress Payments

The Owner may withhold all or part of any progress payment or payments until the Contractor has

remedied the breach of Contract. If progress payments are withheld, the Contractor shall not be entitled to interest on said payments.

If a Subcontractor(s) is responsible for noncompliance with the Workforce Program requirements, the Owner may choose to withhold only their portion of the progress payment.

B. Retain Sums as Liquidated Damages for Failure to Comply with Workforce Program Specifications

The parties mutually agree that it would be difficult, if not impossible, to assess the actual damage incurred by the Owner for the Contractor's failure to comply with the Workforce Program specifications. The parties further agree that it is difficult, if not impossible, to determine the cost to the Owner when workforce opportunities are not provided. Therefore, if the Contractor fails to comply with the Workforce Program provisions of this Contract, the Contractor agrees to pay, as liquidated damages, the sum of $250 per day for each day of missed apprenticeship hours or until the breach of Contract is remedied. Liquidated damages may be assessed for failure to meet the 20% apprenticeship training requirements by the Contractor and each required Subcontractor in each trade employed.

Liquidated damages will be calculated based on the training hours not provided at a rate of $250 per day. For example, if the Contractor was required to provide 200 hours of carpenter training (20% of 1,000 total carpenter hours), and the Contractor only provided 150 training hours, then the difference (50 hours) is divided by 8 (one day of work) to determine the number of days of undelivered training. (50/8 = 6.25 x $250 = $1,562.50).

For violations of Section III, subsection F, $1,000 in liquidated damages may also be assessed for each instance of failing to follow the inclusive hiring process.

These liquidated damages are independent of any liquidated damages that may be assessed due to any delay in the project caused by the Contractor's failure to comply with the provisions of the Contract.

C. Retain Sums as Liquidated Damages for Delay

The Contractor agrees that any delay to the specified contract time as a result of their failure to comply with the requirements of these specifications shall subject them to the amount of liquidated damages specified elsewhere in the Contract.

D. Notification of Possible Debarment

By executing this Contract, the Contractor agrees that it has been notified that failure to comply with the requirements of this portion of the Contract may lead to their disqualification from bidding on and receiving other City contracts.

E. Other Remedies

The remedies that are noted above do not limit any other remedies available to the City if the Contractor fails to meet the requirements of the Workforce Program specifications.

V. REVIEW OF RECORDS

If the City reasonably believes that a violation of the requirements of the Workforce Program specifications has occurred, the City is entitled to review the books and records of the Contractor and any Subcontractors

employed on the Project to which the requirements of these specifications are applicable to determine whether such a violation has or has not occurred.

If the Contractor or a Subcontractor fails to provide the books and records for inspection and copying when requested, such failure shall constitute a material breach of this Contract and permit the imposition of any of the remedies noted in Section IV above, including the withholding of all or part of any progress payment.

ATTACHMENTS:

Recommended Recruitment & Retention Practices
Worker Request Form

RESOURCES:

Copies of all required forms, including the Workforce Plan and Worker Request Form can be downloaded in the labor compliance reporting system.

For information on State-Approved Apprenticeship Programs and a list of community resources to help with the recruitment of workers, visit the Bureau of Labor and Industries, Apprenticeship and Training Division website.

For a list of community resources to help with the recruitment of women or women-identified persons and people of color, please visit: http://www.oregon.gov/BOLI/ATD/pages/a_ag_partners.aspx

If you have questions after reading the information contained herein and visiting the resources above, please contact the Contract Compliance Specialist identified in the bid documents or the Compliance Services Manager at:

Cathleen Massier, Compliance Services Manager	(503) 823-8335	Cathleen.Massier@portlandoregon.gov
Kas Smiley, Compliance Specialist	(503) 865-6321	Kas.Smiley@portlandoregon.gov
Jamarcus Grant, Compliance Specialist	(503) 504-1364	Jamarcus.Grant@portlandoregon.gov
Anthony Sweeney, Compliance Specialist	(971) 378-7501	Anthony.Sweeney@portlandoregon.gov
Tamara Knox, Compliance Specialist	(503) 865-6322	Tamara.Knox@portlandoregon.gov
Ay Saechao, Compliance Specialist	(503) 865-6323	Ay.Saechao@portlandoregon.gov
Lisa Vanlue, Compliance Specialist	(503) 823-8270	Lisa.Vanlue@portlandoregon.gov

RECOMMENDED RECRUITMENT & RETENTION PRACTICES

A. Recruitment Efforts

Recruitment efforts are those sincere and result-oriented actions taken by the Contractor and Subcontractors to accomplish the objectives of the City's Workforce Training & Hiring Program. Recruitment efforts include, but are not limited to:

1. Work with your Joint Apprenticeship Training Committee (JATC) to encourage recruitment opportunities for all community members, including people of color and women, for existing or future job opportunities.
2. Assist your JATC by conducting a workshop with community organizations and employees including employees of color and female employees, to request their ideas on how to increase employment of groups underrepresented in the trades.
3. Support the efforts of your JATC by giving all apprentices referred a fair chance to perform successfully, allowing for possible lack of prior experience. Recognize that you are responsible for providing on-the-job training, and that all apprentices should not be expected to have prior experience.
4. Participate in job fairs, school-to-work, and community events to recruit all workers, including people of color and women, into the construction trades.
5. Allow scheduled job site visits by participants in community programs, as safety allows, increasing awareness of job and training opportunities in the construction trades.
6. Keep applications of those not selected for an opening. Contact when opening occurs.

B. Retention Efforts

The Contractor and Subcontractor shall endeavor to retain all workers, including people of color and women by implementing steps such as the following:

1. Maintain a harassment-free workplace.
2. Ensure that employees are knowledgeable about the company's policies if they need to report a harassment problem.
3. Make reasonable attempts to keep apprentices working and train them in all work processes described in the apprenticeship standards.
4. Review and disseminate, at least annually, the company's EEO policy under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions.
5. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies.
6. Take steps to reduce feelings of isolation for all workers, including people of color and women, to curb hostile attitudes and behavior (e.g., provide access to support group system).
7. Provide adequate toilet facilities for all workers, including women and nonbinary people, on the job site.
8. Match apprentices who may need support to complete their apprenticeship programs with a journey-level mentor.

WORKER REQUEST FORM

To the Contractor:

Please complete and send this form when requesting workers to fulfill all hiring requirements for this project. A copy of the form must be sent to the Compliance Specialist assigned to the project.

To: Click or tap here to enter text.
From: Click or tap here to enter text.
Phone: Click or tap here to enter text.
Email: Click or tap here to enter text.
Business Name: Click or tap here to enter text.
Business Address: Click or tap here to enter text.
Project Name: Click or tap here to enter text.

Worker Request

I am a contractor on a City of Portland Project, which falls under the Workforce Training and Hiring Program. This project requires me to make reasonable and necessary efforts to Provide opportunities for, and remove barriers to, employment for everyone, including people of color and women, at both journey and apprentice level. I am using this form to document my request for a worker(s) for employment with my company.

Number/Level of Workers Needed: ☐ Apprentice / Click or tap here to enter text. ☐ Journey / Click or tap here to enter text.

Trade/Occupation: Click or tap here to enter text. **Job Site Location:** Click or tap here to enter text.

Work Starts: Click or tap here to enter text. **Expected Length of Employment:** Click or tap here to enter text.

Please provide a brief description of the job requirements: Click or tap here to enter text.

This job requires (select all that apply):

☐Driver's License ☐Physical Exam ☐Union Membership ☐Background Check
☐Hard Hat ☐Gloves ☐Hard-Toed Boots ☐Minimum Education
☐Minimum Age ☐Drug Test ☐Section 3 Worker ☐Other Click or tap here to enter text.

Duties (list the actual tasks that the employee will perform on the jobsite: Click or tap here to enter text.

Hours per week: Click or tap here to enter text. ☐**Full Time** ☐ **Part Time**

TO BE FILLED OUT BY REFERRING PARTY:
Please complete this section and send back to the requesting Contractor with a copy to the City of Portland, Contract Compliance Specialist.

☐ **We were able to dispatch a worker meeting the guidelines above:**
Name of worker(s): Click or tap here to enter text.
Name of worker(s): Click or tap here to enter text.
Name of worker(s): Click or tap here to enter text.
☐ **We were unable to dispatch a worker meeting the guidelines above.**

SAMPLE CONSTRUCTION CONTRACT

BID NUMBER

CONTRACT NUMBER ____

FOR

Office of Public Works, Bureau of Portland Water Bureau

Pursuant to Portland City Code 5.10

This Contract, made and entered into this day of , 2025, between , ("Contractor"), a [XXXX corporation/partnership] of the State of [state name] and the City of Portland, a municipal corporation of the State of Oregon ("City"). Collectively, Contractor and City shall be referred to as "parties" and each may individually be referenced as "party".

THE PARTIES AGREE AS FOLLOWS:

1. City shall pay Contractor the sum of for the Work to be performed OR a sum based on the unit prices and/or lump sums established by the Contract Documents. The item numbers, quantities, description and unit prices applicable under this contract are as follows:
Buyer to insert unit price bid list here.

2. The following unit prices shall prevail for adding and/or deleting work items from those indicated by the Contract documents, and prices shall remain in effect for the life of the contract.

3. Contractor hereby agrees to perform the Work specified in the Contract Documents.

4. Contractor shall begin work as stated in the Notice to Proceed from the City. Contractor shall order all materials and equipment and commence work hereunder in accordance with the Specifications and complete the Work in all respects within calendar days.

5. The Contract Documents include this document and those documents identified in the Bid Documents and include, but are not limited to:

    a. The Plans, and Specifications Addenda No. One (1), Two (2) and, Three (3)

    b. The Standard Construction Specifications 2020filed in the Office of the City Auditor, and

    c. The Contractor's Bid or proposal.

6. That no officer or employee of the City is or shall be entitled to any share, part, or benefit(s) derived from this contract, except as permitted by City Code and City Human Resource policies.

7. That Contractor will provide a Performance Bond, Payment Bond, and Certificate(s) of Insurance with Additional Insured Endorsement form(s) attached, as required by the Contract Documents.

8. The Contractor will provide the Acknowledgement/Release Certification Form and Warranty Guarantee required by the Contract Documents.

9. The Prevailing Wage Rates for this project shall be the rates published by Oregon Bureau of Labor and

Industries (BOLI) on January 5, 2025, including the applicable amendments dated April 5, 2025, which are hereby incorporated into this contract by this reference. Delete the highlighted area if it doesn't apply

10. Time is of the essence. Therefore, if Contractor fails to complete this project within the time specified or within any extension of time, Contractor shall pay as fixed and agreed, liquidated damages in the sum of for each and every day of delay pursuant to the Contract Documents.

11. Non-Availability of Funds: Every obligation of the City under this Agreement is conditioned upon the availability of funds appropriated or allocated for the fulfillment of the City's obligations. If funds are not allocated and available for the continuance of this Agreement, the Agreement may be terminated by the City at the end of the period for which the funds are available. No liability shall accrue to the City if this provision is exercised, and the City shall not be obligated or liable for any future payments as a result of termination under this paragraph.

APPENDIX A

Contractor shall observe all applicable state and local laws pertaining to public contracts including the City's Equal Benefits Ordinance and its administrative rules, all of which are incorporated by this reference. Failure to comply with the Ordinance permits the City to impose sanctions or require remedial actions as stated in Section 13.1 of the rules, ORS Chapters 279A, 279B and 279C require every public contract to contain certain provisions. Pursuant to those chapters, the following provisions shall be a part of this contract, as applicable.

Pursuant to ORS 279B.220, on every public contract, the contractor shall make payment promptly, as due, to all persons supplying to the contractor labor or material for the performance of the work provided for in the contract; shall pay all contributions or amounts due the Industrial Accident Fund from the contractor or subcontractor incurred in the performance of the contract; not permit any lien or claim to be filed or prosecuted against the state or a county, school district, municipality, municipal corporation or subdivision thereof, on account of any labor or material furnished, and; pay to the Department of Revenue all sums withheld from employees under ORS 316.167.

- Pursuant to ORS 279C.505, on public improvement contracts, the contractor shall make payments promptly, as due, to all persons supplying to such contractor labor or material for the prosecution of the work provided for in such contract. The contractor shall pay all contributions or amounts due the Industrial Accident Fund from such contractor or subcontractor incurred in the performance of the contract. The contractor shall not permit any lien or claim to be filed or prosecuted against the state, county, school district, municipality, municipal corporation or subdivision thereof, on account of any labor or material furnished. The contractor shall pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167. Contractor shall demonstrate that an employee drug-testing program is in place.

- Pursuant to ORS 279C.510 (1), in every public contract for demolition the contractor shall salvage or recycle construction and demolition debris, if feasible and cost-effective. Pursuant to ORS 279B.225 and 279C.510 (3) in every public contract and every public improvement contract for lawn and landscape maintenance, the contractor shall compost or mulch yard waste material at an approved site, if feasible and cost-effective.

- Pursuant to ORS 279B.230(1), in every public contract, the contractor shall promptly, as due, make payment to any person, co-partnership, association or corporation furnishing medical, surgical and hospital care services or other needed care and attention, incident to sickness or injury, to the employees of the contractor, of all sums that the contractor agrees to pay for the services and all moneys and sums that the contractor collected or deducted from the wages of employees under any law, contract or agreement for the purpose of providing or paying for the services.

- Pursuant to ORS 279B.230(2), in every public contract, all subject employers working under the contract are either employers that will comply with ORS 656.017 or employers that are exempt under ORS 656.126.

- Pursuant to ORS 279B.235(1), persons may not be employed for more than 10 hours in any one day, or 40 hours in any one week, except in cases of necessity, emergency or when the public policy absolutely requires it. In such cases, the employee shall be paid a) at least time and half pay for all overtime in excess of 8 hours in any one day or 40 hours in any one week when the work week is five consecutive days, Monday through Friday; or b) for all overtime in excess of 10 hours in any one day or 40 hours in any one week when the work week if four consecutive days, Monday through Friday; and c) for all work performed on Saturday and on any legal holiday specified in ORS 279B.020.

- Pursuant to ORS 279C.515(1), on public improvement contracts, if the contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the contractor or a subcontractor by any person in connection with the public contract as such claim becomes due, the proper officer or officers representing the state, county, school district, municipality, municipal corporation or subdivision thereof, as the case may be, may pay such claim to the person furnishing the labor or services and charge the amount of the payment against funds due or to become due the contractor by reason of such contract. The payment of a claim in the manner authorized by ORS 279C.515 shall not relieve the contractor or the contractor's surety from obligation with respect to any unpaid claims.

- Pursuant to ORS 279C.515(2), on public improvement contracts, if the contractor or a first-tier subcontractor fails, neglects or refuses to make payment to a person furnishing labor or materials in connection with the public improvement contract within 30 days after receipt of payment from the contract agency or a contractor, the contractor or first-tier subcontractor shall owe the person the amount due plus interest charges commencing at the end of the 10-day period that payment is due under ORS 279C.580(4) and ending upon final payment, unless payment is subject to a good faith dispute as defined in ORS 279C.580. The rate of interest charged to the contractor or first-tier subcontractor on the amount due shall equal three times the discount rate on 90-day commercial paper in effect at the Federal Reserve Bank in the Federal Reserve district that includes Oregon on the date that is 30 days after the date when payment was received from the contracting agency or from the contractor, but the rate of interest may not exceed 30 percent. The amount of interest may not be waived.

- Pursuant to ORS 279C.515 (3), in every public improvement contract and every contract related to the public improvement contractor, if the contractor or subcontractor fails, neglects or refuses to make payment to a person furnishing labor or materials in connection with the public improvement contract, the person may file a complaint with the Construction Contractors Board, unless payment is subject to a good faith dispute as defined in ORS 279C.580.

- Pursuant to ORS 279C.520, no person shall be employed for more than 10 hours in any one day, or 40 hours in any one week, except in cases of necessity, emergency, or where the public policy absolutely requires it, and in such cases, except in cases of contracts for personal services as defined in ORS 279C.100, the employee shall be paid at least time and a half pay for all overtime in excess of eight hours a day or 40 hours in any one week when the work week is five consecutive days, Monday through Friday; or for all overtime in excess of 10 hours a day or 40 hours in any one week when the work week is four consecutive days, Monday through Friday; and for all work performed on Saturday and on any legal holiday specified in ORS 279C.540. The contractor shall give notice to employees who work on a public contract in writing, either at the time of hire or before commencement of work on the contract, or by posting a notice in a location frequented by employees, of the number of hours per day and days per week that the employees may be required to work. In the case of contracts for personal services as defined in ORS279C.100, an employee shall be paid at least time and a half for all overtime worked in excess of 40 hours in any one week, except for individuals under these contracts who are excluded under ORS 653.010 to 653.261 or under 29 U.S.C. sections 201 to 209 from receiving overtime. Persons employed under contracts for services shall receive at least time and a half pay for work performed on the legal holidays specified in a collective bargaining agreement or in ORS 279C.540 (1) (b)(B) to (G) and for all time worked in excess of 10 hours a day or in excess of 40 hours in a week, whichever is greater. The contractor shall give notice to employees who work on a contract for services in writing, either at the time of hire or before commencement of work on the contract, or by posting a notice in a location frequented by employees, of the number of hours per day and days per week that the employees may be required to work.

- Pursuant to ORS 279C.530(1), in every public improvement contract, the contractor shall promptly, as due, make payment to any person, co-partnership, association or corporation, furnishing medical, surgical and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such contractor, of all sums which the contractor agrees to pay for such services and all monies and sums which the contractor collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such service. In every public contract, subject to ORS 279C, all employers working under the contract are subject employers that shall comply with

ORS 656.017.

- Pursuant to ORS 279C.580(3)(a), the contractor shall include in each public improvement subcontract for property or services entered into by the contractor and a subcontractor, including a material supplier, for the purpose of performing a construction contract, a payment clause that obligates the contractor to pay the subcontractor for satisfactory performance under its subcontract within 10 days out of such amounts as are paid to the contractor by the public contracting agency under such contract, and an interest penalty clause that obligates the contractor to pay to the subcontractor an interest penalty on amounts due in the case of each payment not made in accordance with the payment clause included in the subcontract pursuant to ORS 279C.580 (3), for the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made, and computed at the rate specified in ORS279C.515 (2).

- Pursuant to ORS 279C.580(4), the contractor shall include in each of its subcontracts for a public improvement, for the purpose of performance of such contract condition, a provision requiring the subcontractor to include a payment clause and an interest penalty clause conforming to the standards of ORS 279C.580 (B) (4) in each of its subcontracts and to require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.

- Pursuant to ORS 279C.830(1)(a) workers shall be paid not less than the specified minimum hourly rate of wage in accordance with ORS 279C.838 and 279C.840.

Feb, 2020

Contract Number: _____

Contract Description: _____

This contract may be signed in two (2) or more counterparts, each of which shall be deemed an original, and which, when taken together, shall constitute one (1) and the same agreement.

The parties agree the City and Contractor may conduct this transaction, including any contract amendments, by electronic means, including the use of electronic signatures.

CONTRACTOR SIGNATURE(S)

(Affix Corporate Seal)

Contractor Name

BY: _____ Date: _____

Name:_____

Title:_____

Address:

Telephone No:
Email:

STATE OF OREGON
CONTRACTORS BOARD NUMBER

Contract Number: **3000XXXX**

Contract Description: **Name of Project**

CITY OF PORTLAND SIGNATURES:

Approved:

By: _____ Date: _____
Chief Procurement Officer

Approved:

By: N/A Date: _____
Office of City Auditor

Approved as to Form:

By: _____ Date: _____
Office of City Attorney

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

This Page Intentionally Blank

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

CITY OF PORTLAND, OREGON

BUREAU OF ENVIRONMENTAL SERVICES

Keith Wilson, Mayor
Ting Lu, Bureau Director
Paul Suto P.E., Chief Engineer

SW 61ST CULVERT REPLACEMENT

PROJECT E11640

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

This Page Intentionally Blank

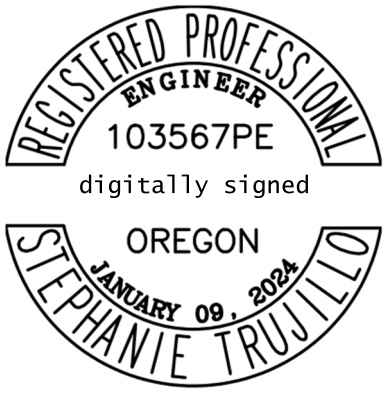
Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

CITY OF PORTLAND

BUREAU OF ENVIRONMENTAL SERVICES
SPECIAL PROVISIONS
FOR

SW 61st Culvert Replacement
SW 61st Right of Way at 11009 SW 61st Avenue
E11640

PROFESSIONAL OF RECORD CERTIFICATION(s):

Seal w/signature  Expires 06/30/2026	Signing as the Professional of Record for the Special Provisions sections listed below: Section: ***00210, 00220, 00221, 00222, 00270, 00275, 00280, 00290, 00291, 00310, 00401, 00405, 00440, 00445, 00470, 00495, 00640, 00734, 00850, 00865, 01030, 01070, 01091***
Seal w/signature  Expires: 06/30/2027	Signing as the Professional of Record for the Special Provisions sections listed below: Section: ***00530, 00540, 00596C***

CONSOLIDATED SPECIAL PROVISIONS

The preparer of the consolidated special provisions for this

Project: By: Chris Lastomirsky Date: March

2, 2026

SPECIAL PROVISIONS

Table of Contents

WORK TO BE DONE 1
APPLICABLE SPECIFICATIONS 1
OWNER'S REPRESENTATIVE/ ENGINEER 2
TIME FOR COMPLETION 2

PART 00100 – GENERAL CONDITIONS

Section 00130 – Award and Execution of Contract 3
Section 00150 – Control of Work 3
Section 00165 - Quality of Materials 11
Section 00170 - Legal Relations and Responsibilities 11
Section 00180 – Prosecution and Progress 12
Section 00195 - Payment 13
Section 00197 - Payment for Force Account Work 13

Definitions and Abbreviations Used in the Technical Specifications 13

PART 00200 – TEMPORARY FEATURES AND APPURTENANCES

Section 00210 - Mobilization 14
Section 00220 – Accommodation for Public Traffic 14
Section 00221 – Common Provisions for Work Zone Traffic Control 17
Section 00222 – Temporary Traffic Control Signs 18
Section 00223 – Work Zone Traffic Control Labor and Vehicles 18
Section 00228 – Temporary Pedestrian and Bicyclist Routing 21
Section 00275 – Trench Protection 22
Section 00280 – Erosion and Sediment Control 22
Section 00290 - Environmental Protection 22
Section 00291 – Contaminated Media 23

PART 00300 - ROADWORK

Section 00310 – Removal of Structures and Obstructions 24

PART 00400 - DRAINAGE AND SEWERS

Section 00401 – Video and Electronic Inspection of Sewers 24
Section 00405 - Trench Excavation, Bedding and Backfill 24
Section 00440 – Commercial Grade Concrete 25
Section 00445 - Sanitary, Storm and Culvert Pipe 26
Section 00470 – Maintenance Holes, Catch Basins and Inlets 27
Section 00490 - Work on Existing Sewers and Structures 28
Section 00495 – Trench Resurfacing 28

PART 00500 - BRIDGES

Section 00530 - Steel Reinforcement for Concrete 28
Section 00540 – Structural Concrete 29
Section 00596C – Cast-in-Place Concrete Retaining Walls 30

PART 00600 - BASES

Section 00640 - Aggregate Subbase, Base, and Shoulders 31

PART 00700 – WEARING SURFACES

Section 00744 – Asphalt Concrete Pavement 32

PART 01000 – RIGHT-OF-WAY DEVELOPMENT AND CONTROL

Section 01091 - Stream Restoration And Enhancement 34

PART 02000 - MATERIALS

Section 02001 – Concrete 35
Section 02410 – Concrete and Plastic Pipe 46
Section 02510 - Reinforcement 46

Type of Facility	Type of Work
Storm Sewer	Reconstruction

SPECIAL PROVISIONS

WORK TO BE DONE

The SW 61st Culvert Replacement project involves upsizing a 24" CMP culvert to a 30" RCP below the following street:

SW 61st Ave. between SW Pomona St. and SW Dickinson St.

Improvements shall consist of those items of work listed in the proposal and as shown in the Contract Documents. The Contractor shall perform all labor, and furnish all materials, equipment and incidentals required to make each item complete. Work shall include, but not be limited to:

1. Construct, maintain, and remove temporary work zone traffic control measures.
2. Construct, maintain, and remove erosion control measures.
3. Perform all removal of structures and obstructions, clearing and grubbing, and earthwork operations.
4. Construct drainage system including culvert and inlet leads.
5. Construct roadway improvements including trench excavation, aggregate base, Hot Mix Asphalt Concrete wearing surfaces.
6. Place pavement markings and striping (to be performed by others)
7. Perform or install roadside development including seeding, mailboxes.
8. Construct cast-in-place and pre-cast headwalls.
9. Provide full compliance with the requirements and terms of the Permits provided in the Appendix.

APPLICABLE SPECIFICATIONS

The Specification that is applicable to the Work on this Project is the 2020 edition of the "City of Portland, Standard Construction Specifications".

All number references in these Special Provisions shall be understood to refer to the Sections and subsections of the Standard Construction Specifications bearing like numbers and to sections and subsections contained in these Special Provisions in their entirety.

OWNER'S REPRESENTATIVE ENGINEER

Owner's Representative:	Josh Crosier CM 1120 SW 5th Ave, Suite 765 Portland, Oregon 97204 503-823-8013
Engineer:	Stephanie Trujillo, PE 1120 SW 5th Ave, Suite 765 Portland, Oregon 97204 503-307-2832

TIME FOR COMPLETION

See subsection 00180.50(d) for the time to complete all Work under the Contract.

The written Notice to Proceed will be sent to the Contractor in accordance with subsection 00130.80(b).

* * * * * *

PART 00100 – GENERAL CONDITIONS

The Specifications that are applicable to the Work on this Project is the 2020 edition of the City of Portland, Standard Construction Specifications, as modified in these Special Provisions. All Sections apply, whether or not modified or referenced in the Special Provisions.

All number references in these Special Provisions shall be understood to refer to the Sections and subsections of the Standard Construction Specifications bearing like numbers and to Sections and subsections contained in these Special Provisions in their entirety.

Comply with part 00100 of the 2020 edition of the City of Portland Standard Construction Specifications (SCS), except as modified below:

Section 00130 – Award and Execution of Contract

Comply with section 00130 of the Standard Construction Specifications.

Section 00150 – Control of Work

Comply with section 00150 of the Standard Construction Specifications modified as follows:

00150.01 Internet Based Project Management Requirements

(a) Scope - This section specifies a web-based project management system, Heron, required for use by the Contractor and the Owner for the processing of construction documents and for collaboration and communications on all Contract related work. Unless otherwise indicated, it is the Contractor's responsibility to utilize Heron when performing all project communications. The Owner may, at any time during the Contract period, elect to start, stop, re-start, or completely discontinue the use of Heron, in part or in its entirety. If so, the Owner will direct the Contractor to provide communication and Construction Documents via direct delivery, email, or other conventional means, as approved.

(b) e-Builder / Heron definitions:

(1) Electronic documents - The electronic form or image of Project communications that can be stored on and retrieved from an electronic storage device through a collaboration system over the Internet, including all written and graphic products produced with computer software or converted to electronic form or electronic image by computer software.

(2) e-Builder / Heron – An web-based project management and collaboration system made and supported by e-Builder® for facilitating real time communication of project data, documents, and project information, to assist in the management of construction projects. e-Builder serves as a single source of project information for communication among project participants by automating various tasks in an organization of modules. It provides secure, permissions-based access by requiring the identification of all users and approval of access rights. Users may access e-Builder Enterprise® for desktop using Windows®,

Apple®, or Android® devices and e-Builder Mobile® using Apple® or Android™ devices. Information may be obtained via the internet at http://www.e-builder.net/.

(3) Notice - As defined in 00110.20. Also defined as the time and date when a document is sent to the other party as recorded in Heron.

(4) Project Communication(s) - All written documentation and communications required by the Contract Documents including, but not limited to: correspondence, reports, notices, written documents, demands, instruments, directives, submittals, transmittals, RFI's, certified payrolls, progress drawings, notices of change, payment applications, change orders, claims, change order requests, field orders, proposal requests, meeting agendas and minutes, substitution requests, test reports, monitoring reports, punch lists, and all other formal Contract communications, unless otherwise indicated in this Section.

(5) Secure Documents - A secure form of the original or created electronic document that communicates the content and information of the original document and prevents alteration of the original document.

(c) Submittals:

(1) Follow section 00150.35 submittal requirements and procedures.

a. The Contractor shall utilize the populated items in the Submittal Register, when available.
b. Each submittal package shall contain one item, or, if approved, a closely related group of items which serve as one functional unit.
c. Each submittal item shall consist of one or more PDF document, which shall not have any restrictions or permissions associated with the file. Documents containing text shall be searchable.

(2) Identify the names of staff to be initially granted user licenses for accessing Heron. Submit the following for each proposed authorized Heron user within ten days of the contract award:

a. Name, title and company affiliation.

b. Address, phone number, and email address.

c. Specific job-related functions.

d. Level of authority within the Contractor's organization.

e. Level of permissions access requested for each user, for accessing each Heron module.

f. Date at which e-Builder / Heron access is required.

(3) Submit an updated list of authorized users on a quarterly basis or more frequently as needed, to indicate users to be added or removed.

(4) Provide proposed schedule of attendance for e-Builder / Heron training sessions.

(d) Project communications:

(1) All official Project communication and collaboration will take place in e-Builder / Heron by entering data, and distributing documents directly within the system, or by scanning and uploading project documents into the system for distribution. Unless otherwise indicated, no other form of written project communication will be recognized.

(2) Create construction submittals in e-builder's/Heron's submittal module. Distribute reports, documents, samples, etc. that cannot be processed through Heron according to 00150.35. Use Heron to track processing of submittals. Scan and/or upload support documentation into e-Builder/ Heron.

(3) The Owner's Representative will respond to all documents using the appropriate module. Documents distributed electronically via e-Builder/Heron will be considered official documentation. Documents requiring formal signature including change orders will be signed electronically and distributed via e-Builder/Heron unless indicated otherwise.

(4) Private or confidential documents should not be posted to e-Builder/Heron. If private or confidential document are required by the Owner, they shall be submitted in hard copy per section 00150.03(d)(10).

(5) This Section shall not relieve the Contractor of its obligations to provide the Owner's Representative with As-Built Drawings in the physical form specified in section 00150.10.

(6) All scanned documents shall meet the requirements for Adobe files.

(7) Owner's Representative will provide guidelines on how to name the project documents to be distributed in e-Builder/Heron prior to the Contractor uploading into the system. Contractor will comply with the naming conventions required by the Owner's Representative throughout the duration of the project.

(8) Submittal packages entered in e-Builder/Heron will require a short subject description. This will permit easier grouping and searching of submittals throughout the course of the project. Submittal Titles shall be formatted: [Project Number or relevant sheet #] SUB [Submittal and submittal number] and a Document Title. Example: E10669/C01 SUB 03 TRAFFIC CONTROL TCP at SW 1st & Jefferson. Note: the Submittal Item Number is assigned automatically by e-Builder.

(e) Access Requirements:

(1) Internet and a company email is required to access the system unless otherwise approved. The Owner will provide user accounts to access and use eBuilder/Heron throughout the project.

(2) Users of the eBuilder/Heron website will be permitted access only to this Project, in accordance with permission levels configured by the Owner. Access will only be permitted to certain modules within the Project. Requests to change permission levels must be submitted to the Owner's Representative.

(3) Contractor shall maintain the list of authorized users to reflect current authorized users of e-Builder/Heron.

(4) Contractor shall protect the security of the eBuilder/Heron system by limiting access to authorized users only. Do not allow 'sharing' of usernames. Contractor shall take appropriate precautions to maintain the security of the eBuilder/Heron system and ensure that Owner's Representative is notified immediately of any user who is no longer authorized to use the system so that their user account can be de-activated.

(f) Computer / network system requirements – The Contractor shall be responsible for having the computer hardware, software and broadband internet connection for accessing the e-Builder website to fully comply with the Contract Documents. See more information at https://www.e-builder.net/support/optimization for supported internet browsers.

(1) Internet access recommendation is a high speed Internet connection for best performance.

(2) Minimum computer operating system recommendation for optimal performance is Windows 10 and 11 and OSX Version 10.8 or later.

(3) Supported internet browsers include Microsoft Edge 91 or later, *Google Chrome99, *Mozilla Firefox 91, Safari 14 or later. *Recommended for optimal performance.

(g) Training:

(1) All Contractor personnel who will be using e-Builder are required to attend a minimum of one (1)-hour training conducted by the Owner prior to the Notice to Proceed. Training will be scheduled by the Owner.

(2) Designate one staff person to serve as an on-site trained e-Builder/Heron resource for the Contractor's users. Owner will provide support to the Contractor's personnel for assistance in effectively utilizing the software and providing technical support when appropriate.

(h) Use requirements:

(1) Use e-Builder/Heron as the Project file storage system with a file folder structure created by the Owner to organize the Project documents.

(2) Abide by all policies, procedures, and standards established by the Owner for the use and application of e-Builder/Heron.

(3) Comply with applicable laws and regulations regarding electronic transmission of documents requiring professional engineering stamps or signatures, including provision of hard copies of such documents as appropriate.

(4) Project communications that require the signature of authorized persons will utilize approved secure electronic digital signature software.

(5) Use of e-Builder/Heron will not replace or change any contractual responsibilities. Provide an adequate number of users to properly manage the document process in accordance with the Contract.

(i) Restrictions and limitations:

(1) All Project communications submitted to the Owner's Representative through e-Builder after 3:00 PM, Monday through Friday, will be acknowledged no earlier than the following business day.

(2) For Project communication purposes, business days and hours are defined as Monday through Friday, 7:30 AM to 4:30 PM, Pacific Time, excluding the Owner's holidays.

(3) User access rights to the e-Builder/ Heron site are limited to this Contract only.

(4) Access permission levels will be established by the Owner.

(j) Temporary Downtime:

(1) In the event that the e-Builder/Heron system is temporarily unavailable, continue with project communications utilizing other electronic means, email preferred, or hard copies to transmit and receive project communications.

(2) Maintain records of all project communication during the eBuilder/Heron downtime and upload the records to e-Builder when it is operational.

(3) Notify the Owner's Representative by telephone or email when e-Builder/Heron is not functional.

(k) Owner Responsibility:

(1) Provide user access to the e-Builder / Heron system for the duration of the Contract.

(2) Manage the e-Builder/Heron program, site, user accounts and the permissions level for all users of the system.

(3) Provide e-Builder/ Heron training for personnel using the system for Heron users identified by the Contractor.

(4) Provide technical support (administration) for e-Builder/Heron through the e-Builder system vendor.

(5) Provide guidelines regarding the organization and format of the e-Builder/Heron modules and the access permission requirements for each module or element thereof.

(6) Allow Contractor to upload, download, view, and markup files, based on permissions established by the Owner.

(7) Track history of revisions and activities with respect to each document submitted or managed within e-Builder/Heron.

(8) With the prior approval of Owner's Representative, exceptions may be made to allow specific items to be transmitted, submitted, responded to, or distributed in hard copy only. In these instances, e-Builder/Heron shall be used to track and expedite processing of these items.

(l) **Measurement and payment** - It is the Contractor's responsibility to utilize e-Builder/Heron when performing all Project Communications. All materials, equipment, and labor to utilize eBuilder/Heron will be incidental to the work.

Add the following subsection:

00150.05 Weekly Certified Payroll Reporting – For low bid projects:

Weekly Certified Payroll Reports shall be submitted by the Contractor and their subcontractors via LCP Tracker, no later than the 5th of each month. All hours subject to prevailing wage rates on public projects shall be reported. LCP Tracker is web-based and can be accessed at the following Internet address: www.lcptracker.net

00150.30 Delivery of Notices – Replace this subsection with the following:

Written notices, when required to be delivered via first class mail, shall be mailed to the address provided by the Owner's Representative at the Preconstruction Conference or a copy shall be sent to the email provided by the Owner's Representative. Notices delivered first class mail shall be deemed delivered five (5) Working Days following the postmarked date.

00150.35(h)(4) "REJECTED"- Replace the reference in this subsection to "00150.35(h)(3)".

Add the following subsection:

00150.35(l) Unstamped Working Drawings - Unstamped Working Drawings will be designated on the face of the Drawing, as "approved", "approved as noted", or "returned for correction" by the Owner.

00150.40 Cooperation and Superintendence by the Contractor- Add the following to the end of these subsections:

(b)(5) Provide emergency contact information for after hours or in case of an emergency.

(d) In the third sentence after the word "disorderly," add the following: ", or who violates the City of Portland HRAR 2.02 referenced in section 00150.40(e)."

00150.50(c) UtilitiesError! Bookmark not defined. - Add the following to the end of this subsection.

(12) The Contractor shall protect private underground utilities during the Work, including but not limited to water service pipe beyond the meter box and sewer laterals behind the curb, by performing at least one of the following actions as approved by the Owner's Representative:

(a) Locate and mark underground utilities using a private locating service that is listed on the Oregon Utility Notification Center web site prior to excavation.

(b) Self-perform locates and mark underground utilities using non-excavation standard locating equipment and as-built information that follows or exceeds the rules adopted by the Oregon Utility Notification Center.

(c) Use hand or vacuum excavation methods to determine precise location of subsurface utilities prior to mechanical excavation.

00150.50(e)(3) Utility information - Add the following paragraphs:

The following organizations may be adjusting utilities within the work area during the life of this Contract with adjustment work estimated to be completed by the following time frame.

	Utility	Estimated completed date (time)
1.	City of Portland Water Bureau	Relocating Water Main to be completed before NTP June 2026.
2.	NW Natural	Relocating Gas Main to be completed before NTP June 2026.

00150.50(e)(6) Utility Information/Contacts - Add the following paragraphs:

Utilities and their field coordinators including but are not limited to the following:

Utility Company	Contact Person	Telephone No.
Pacific Power & Light	(Update) Daren Dixon	503-280-2702
Lumen Broadband	Relocations	855-244-6468
Lumen pole moves	David Dodd	503-616-6291
Portland General Electric	24-hour Contact Number	503-464-7777
Comcast	(Update) Leroy Soumokil	503-596-3770
NW Natural	Ryan Winfree NWNSunsetEngineering@nwnatural.com Brock Inman NWNCentralEngineering@nwnatural.com	Ofc 503-610-7693
City of Portland Sewers	BES Utility Locating Supervisor	503-823-1761
City of Portland Water Bureau	Roy Martinez	503-823-8311
City of Portland Water Bureau	Kira Brant	503-865-6261
City of Portland ADA Ramp & Right of Way Inspection		503-823-7002
City of Portland Signals/Lighting	Nelson Chi	503-823-8456

00150.50(e) Utility information: - Add the following subsections:

(10) Comply with Portland Water Bureau "Guidelines for Utility Protection**"** and utility protection plan as follows:

Assessment Level	Instructions
Level I - -None-	A PWB inspector may need to be onsite. Work may require pipe support. A Utility protection plan (UPP) may be required.
Level II - -None	A PWB Inspector may need to be on site during construction. A Utility protection plan (UPP) is required. If unsafe conditions are encountered this requirement could escalate to a site-specific, Engineered (stamped/sealed) Utility protection plan (EUPP)
Level III - -None-	Provide a site-specific, engineered (stamped/sealed) Utility protection plan (EUPP) for supporting and maintaining in service any existing transmission and distribution water mains 16" and larger if: 1) the trench is wider than 6 feet, 2) the sewer is greater than 6 feet below the water main, 3) shoring is 3 feet or less from the water main, and/or 4) as directed by the Owner's Representative.
Required Shutoff of Water main. **-None**	Example: The 36" water line will be required to be shut down by PWB, with the following requirements and period restrictions: a. Shutoff during the off-peak season only (October 1 – March31). b. Allow up to a 1-week shutdown duration with additional PWB Time needed to isolate, drain Chlorinate and repressurize. c. Subject to existing operational conditions, such as unusual demand or other conflicting shutdown, etc.
Other - C02	PWB relocating 4" water main

Project work requires verification by potholing or exploratory excavation of potential utility conflicts in advance of actual work. Commence work by potholing for utility conflicts as indicated in the Contract Documents or as directed by the Owner's Representative. Submit results immediately following the potholing operations. Depending on results, the design may be slightly modified by Owner to accommodate conflicts. For all potholing or exploratory excavation of Portland Water Bureau (PWB) water facilities, contact the **Public Works Inspection Supervisor at 503-823-8311** two (2) working days in advance to coordinate PWB Inspection assistance.

Sewer laterals constructed less than 2 (two) feet from existing water service lines require protection of existing water service.

Provide minimum three (3) foot clearance between the outside surface of existing water mains and the outside of any new sewer inlets or maintenance holes and five (5) feet to laterals or mainlines, or as otherwise approved. Protect and maintain in service the existing water mains and service lines during excavation for and construction of adjacent inlets and pipe crossings.

Provide minimum one and a half (1.5) feet of clearance underneath or overtop of existing water mains where they are crossed by new inlet pipes, or as otherwise approved. Submit a Compaction Plan for backfill material placed between the water main and the proposed sewer main or lateral where the pipe crosses underneath the water main with less than one and one half (1.5) feet of clearance.

00150.97(c) Responsibility for Materials and Workmanship– Add this to the end of the numbered list:

(4) Correcting the defects, errors, omissions, or replacement of unsatisfactory Work Materials as necessary for compliance, and the Contractor shall be responsible for all costs. The Contractor shall make any corrections that do not involve the public water system such as surface restoration, landscaping, valve boxes, hydrants pads, vaults and meter boxes.

Section 00165 - Quality of Materials

Comply with section 00165 of the Standard Construction Specifications modified as follows:

00165.04 Costs of Testing - The Project is administered by BES. Use Method (B) for this project.

00165.10(a) Materials Acceptance Guides - Add the following paragraph:

For this Project, use Section 5 of the MFTP. Field tested materials will be accepted for the Project according to the Type (E) testing program.

00165.91(c) Fabrication Inspection Expense – Replace the sentence that begins “This Subsection applies…” with the following sentence:

This Subsection applies to all fabricated items or manufactured Materials that are inspected by Owner personnel.

Section 00170 - Legal Relations and Responsibilities

Comply with section 00170 of the Standard Construction Specifications modified as follows:

00170.03(c)(1) Rights-Of-Way, Easements and Premises- Replace (c)(1) with the following:

(1) All necessary existing dedicated Rights-of-Way;

Add the following Subsection:

00170.66 Owner/operator data - The Contractor shall furnish data to the Owner for each owner/operator providing trucking services. The data must be provided before the time the services are provided and must include without limitation for each owner/operator:

- Drivers name;
- Copy of drivers license;
- Vehicle identification number;
- Copy of vehicle registration;
- Motor vehicle license plate number;
- Motor carrier plate number;
- Copy of ODOT Motor Carrier 1A Permit: and
- Name of owner/operator from the side of the truck.

Section 00180 – Prosecution and Progress

Comply with Section 00180 of the Standard Specifications modified as follows:

00180.40 Limitation of Operations - Add the following:

(c) Work Restrictions - The Contactor shall comply with the following restrictions to the prosecution of the Work, and all submitted Construction Schedules shall address these restrictions:

(1) Allow 30 Days after successful disinfection for PWB crews to complete the new main tie-in to the existing system.

00180.41(j) Project Work Schedules - Add the following to the end of the subsection.

A type "A" schedule will be required under the Contract.

00180.42(b) Preconstruction Conference Submittals - Add the following item(s):

(16) Cast in place Headwall (00596C.05)
(17) Precast Headwall (00470.02(d))

(18) Material Safety Data Sheets for all hazardous chemical products to be used by the Contractor on this project (00290.20(b))
(19) Site Specific Safety and Health Plan (00170.60(f))
(20) A list of Contractor Furnished Safety Equipment (00170.60(g))
(21) Aluminum Pedestrian fence (01069)

Add the following subsection:

00180.50(a) Contract Time to Complete Work – The Contractor shall complete all Work to be done under the Contract no later than September 30

00180.80(b) Liquidated Damages - Add the following paragraph:

(6) Liquidated damages will be assessed in the amount of five hundred dollars ($*500*) per Calendar Day.

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

Section 00195 - Payment

Comply with section 00195 of the Standard Construction Specifications modified as follows:

00195.90(a) Final Payment – in the last sentence delete the words “and approval by the City Auditor and the Chief Procurement Officer.”

00195.90(g) Final Payment – Replace the paragraph with the following:

Payment will be made to the Contractor within 30 days of Acceptance of the Work.

00195.90(h) Final Payment – Replace the last sentence that begins with “Thereafter, upon approval…” with the following:

City Auditor and the Chief Procurement Officer approval is required.

Section 00197 - Payment for Force Account Work

Comply with section 00197 of the Standard Construction Specifications modified as follows:

00197.20(a) Equipment Payment - Replace the last sentence with the following:

Equipment use approved by the Owner’s Representative will be paid at the rental rates given in the most current edition of the Rental Rate Blue Books for Construction Equipment, Volumes 1, 2, and 3, published by EquipmentWatch, 3200 Rice Mine Road NE, Tuscaloosa, AL 35406, phone 1-888-307-1713.
Email:EQWClientServices@randallreilly.com website:www.equipmentwatch.com/contact-us/.

Definitions and Abbreviations Used in the Technical Specifications

Add the following definitions:

Approved - Where used in conjunction with the Owner's response to requests, applications, inquiries, and reports by the Contractor, the meaning of the term "approved" will be held to the limitations of the Owner Representative's responsibilities and duties as specified in the General Requirements.

In no case will "approved" by the Owner's Representative be interpreted as a release of the Contractor from responsibilities to fulfill requirements of the Contract Documents.

Property Owner - The person(s) listed on the county tax records as the legal owner of a specific piece of real property.

Property Owner's Authorized Representative - The person(s) the property owner has designated in writing to represent their interests in regard to their property.

Replace this definition with the following.

Cementitious Materials – Materials that have cementing value if used in grout, mortar, or concrete, including portland cement, blended hydraulic cements, expansive cement, fly ash, raw or calcinated natural pozzolan, ground-glass pozzolan, slag cement, and silica fume.

Add the following abbreviations:

CIV	Cast Iron Valve Box and Cover
DI	Ductile Iron
IEEE	Institute of Electrical and Electronic Engineers
NTP	Notice to Proceed
SCS	Standard Construction Specifications

PART 00200 – TEMPORARY FEATURES AND APPURTENANCES

Section 00210 - Mobilization

Comply with section 00210 of the Standard Construction Specifications modified as follows:

Add the following three subsections:

00210.10 Project Signing - Provide a minimum of two "Clean River Project" signs. Camera-ready artwork will be provided for the Project signage. Signs shall be made in accordance with section 00221. Project signage and can be downloaded at https://www.portlandoregon.gov/bes/68515.

00210.60 Clean River Signing - Maintain signs in accordance with section 00221.40.

Add the following subsection:

00210.91 Lump Sum Basis - Payment for the item "Mobilization" includes furnishing, installing, maintaining, moving and removing the "Clean River Project" signage.

Section 00220 – Accommodations for Public Traffic

Comply with Section 00220 of the Standard Specifications modified as follows:

00220.02(a)(6) General Requirements - Replace the number with the following:

(6) Provide approved protection and delineation with reflective elements between each work area and public traffic.

00220.02(a) General Requirements - Add the following numbered bullet*(*s*)* to the end of this subsection:

(14) Where construction is expected to impact private improvements within the right of way, provide notice to Owner's Representative a minimum of 15 business days prior to the work, and place Owner provided door hangers for affected properties. Private improvements may include but are not limited to plantings, landscaping, retaining walls, private walkways, planter boxes, and irrigation. Cut and cap any irrigation systems encountered in the excavation area and remove and dispose of improvements that are not removed by the property owner within 15 business days of the notification, as required for construction and directed by Owner's Representative. Restore the disturbed area as directed by the Owner's Representative. Do not reinstate private irrigation systems.

(15) In coordination with the Owner's Representative, Contractor shall provide notice to public agencies impacted by disruption or restriction of traffic or access to property as a result of project related TCM:

Agency - Company - Residence	Contact	Contact Info
United States Postal Service	Operator	503-282-5025, randy.m.harbaugh@usps.gov
Portland Fire Bureau	Fire Liaison	fire.liaison@portlandoregon.gov
	Kari Schimel	Kari.schimel@portlandoregon.gov
Portland Police Bureau	Sgt. Justin Damerville	503-793-4577
	Lt. Brian Hughes	503-545-3883
American Medical Response (AMR)	Communications Center Management Team	PDX_COMM_MGMT@amr.net
Portland Bureau of Emergency Communications	Operator	503-823-0911
Portland Bureau of Emergency Management	Dan Douthit	dan.douthit@portlandoregon.gov
TriMet Bus	Field Operations	bsc@trimet.org
TriMet Rail	Field Operations	rsc@trimet.org
Portland Public School Transportation		Transportation@pps.net
Centennial Public School Transportation	Cheryl Wangeman	503-762-3650 cheryl_wangeman@csd28j.org
	Cindy Merrill	503-762-3674 cindy_merrill@csd28j.org
David Douglas Public School Transportation	Janet Mauldin (Transportation Manager)	503-256-6526 janet_mauldin@ddsd40.org
	Todd Heninger (Transportation Supervisor)	503-256-6526 todd_heninger@ddsd40.org
Parkrose Public School Transportation	Teresa Hoop (Transportation Supervisor)	503-408-2140 teresa_hooper@parkrose.k12.or.us
	Sharie Lewis (Director of Business Services & Operations)	503-408-2103 shari_lewis@parkrose.k12.or.us

	Michael Lopes Serrao (Superintendent)	503-408-2140 michael_lopes-serrao@parkrose.k12.or.us
Reynolds Public School Transportation	Rehana Nelson (Transportation Coordinator)	503-492-4921x3310 rnelson@rsd7.net
	T.J. Crockett (Transportation Supervisor)	503-492-4921x3442 tcrockett@rsd7.net
Portland Transportation Maintenance	Dispatch	503-823-1700
Portland Traffic Signal and Street Lighting – District Signal Engineer	***Nelson Chi***	nelson.chi@portlandoregon.gov 503-823-8456
Portland Homeless Program		Report campsite online at pdxreporter.org, and then send email to reportpdx@portlandoregon.gov with the report #and the project information on why the site needs to be cleared.

00220.03 Work Zone Notifications - Add the following paragraph(s) to the end of the subsection:

School Bus Routes – Provide a minimum of 30 days' notice to the impacted school district before implementing any TCM that require a school bus reroute.

Garbage Hauler Routes – Provide a minimum of seven (7) days' notice to the impacted garbage hauler provider(s) before implementing any TCM that affect garbage haul routes within the project.
Visit https://tinyurl.com/PDXgarbagehaulers

Add the following subsection:

00220.03(b) Street Use Permits – Obtain an Authorization to Implement Temporary Street Use Permit (TSUP) from PBOT prior to any on-street parking closures, lane closures, bicycle lane closures, street closures, sidewalk closures, or sidewalk uses. Visit the PBOT TSUP website at www.tsup.info for process, fees, and application.

00220.40(g) Lane Restrictions - Replace this Section including Section number and title with the following:

Do not close any traffic lanes or sidewalks unless otherwise approved or specified in the following lane requirements. Remove all barricades and objects from lanes open to traffic.

Replace subsection (1) with the following:

(1) Project Specific:

SW 61st Ave – SW Dickinson St to SW Pomona St
SW 61st Ave is classified as a neighborhood collector, city bikeway, city walkway, local service transit street, and a major emergency response street.

• Notify emergency responders one (1) week prior to starting work on this street. This street is a major emergency response route. Accommodate emergency vehicles when possible.
• Paving of this block may occur during daytime hours Monday thru Sunday 8 AM to 5 PM. You may either close the road to pave or flag during paving to maintain one lane in each direction.
• Grinding and paving of the *(*northbound and southbound*)* lanes of SW 61st Ave from SW Dickinson St to the south paving limit or from SW Pomona St to the north paving limit may occur during daytime hours Monday thru Sunday 8AM to 5PM.
• Contractor may close this street while maintaining local access at all times. Available work hours will be 7 AM to 6 PM; Monday-Saturday. Plate and open street to traffic after work hours if possible. Detour traffic from north and south to SW 60th Ave. Use appropriate detour signage. Inform BOEC (steve.mawdsley@portlandoregon.gov) and fire.liaison@portlandoregon.gov of closure. Use Portable Changeable Message Sign boards to inform public of street closure if closing street more than 3 days.
• Maintain all private driveway ingress & egress movements unless otherwise approved by the Owner's Representative.

• Contractor may flag one lane at time during hours of 7 AM to 6 PM Monday thru Saturday. Must provide one flagger per approach.

• **In lieu of flagging, contractor may close the northbound or southbound direction separately to implement a half street closure and detour traffic to SW 60th.**

• This street is not a Trimet bus route.

Pedestrian Accommodation
• Do not close more than one crosswalk within any intersection at any time.
• Maintain pedestrian access on both sides of the street at all times, unless otherwise approved by the Owner.
• Maintain temporary ADA compliant crossings at all times at the intersections of SW 61st and SW Dickenson unless otherwise shown on sheet C2.
• Only one consecutive block of sidewalk may be constructed at one time.

Add the following subsection:

00220.44 Garbage/Recycle Receptacles - Provide and maintain access to the garbage/recycle receptacles for the haulers.

Section 00221 – Common Provisions for Work Zone Traffic Control

Comply with Section 00221 of the Standard Construction Specifications modified as follows:

00221.01 Standards – Add the following lettered bullet:

h) PBOT "Traffic Design Manual, Volume 2: Temporary Traffic Control", available on the PBOT website.

00221.80 Measurement - Add the following at end of this subsection:

(c) All flagging and flagger station lighting, as shown and described in the Contract Documents at the time of bid, will be measured by Method "C", and are incidental to Temporary Protection and Direction of Traffic.
(d) All flagging and flagger station lighting submitted to meet, in full or in part, the requirements in 00220.40(g)(1) are incidental to Temporary Protection and Direction of Traffic and no measurement will be made.
(e) Temporary Electrical Items, as specified in 00225.45, will be measured by Method "A".
(f) Flaggers, as directed by the Owner for changes in the scope that increase the need for flaggers after the time of bid, will be measured by Method "A".
(g) All other Work Zone Traffic Control Items will be measured by Method "C", and, is incidental to Temporary Protection and Direction of Traffic.

Section 00222 – Temporary Traffic Control Signs

Comply with section 00222 of the Standard Construction Specifications modified as follows:

(11) Install an "EROSION CONCERNS" sign on *(*street name*)*, at each end of the project. Place the sign according to sign spacing "A" from the "TCD Spacing Table" shown on the ODOT standard drawings, or as shown in the plans. Install the sign so that the sign face is rotated 90 degrees to approaching traffic and faces the roadway centerline. The traffic engineer will determine the sign legend. Include "EROSION CONCERNS?", *(*project name*)*, and "503-823-1414". Use fluorescent orange TVII, Type VIII, Type IX, or Type X sheeting background with black nonreflective permanent legend according to 02910.02. Remove all "EROSION CONCERNS" signs at the end of the Contract time or as directed by the Owner's Representative.

Section 00223 – Work Zone Traffic Control Labor and Vehicles

Comply with Section 00223 of the Standard Construction Specifications modified as follows:

00223.31 Traffic Supervision – Replace this subsection with the following:

00223.31 Traffic Supervision:

(a) Traffic Control Supervisor When the Contract Documents includes an item for a TCS, provide a TCS who meets the requirements of 00223.30. Do not designate the project superintendent as the TCS. The TCS shall possess a current ODOT "Oregon Certified Traffic Control Supervisor" card. A TCS with a current card from another state's transportation department, or from the American Traffic Safety Services Association, may obtain an Oregon Certified TCS card upon successful completion of ODOT's Recertification Class.

Before beginning work on the project, the TCS shall:

- File with the Owner's Representative and local police their name and a telephone number at which the TCS can be contacted at all times.

- Have the documents listed in section 00221.01(c) and applicable standards, specifications and Contract Documents available at all times.

The duties of the TCS include the following:

(1) Monitor work zone traffic control measures, operations, activities, and conditions, including lane closures, lane or traffic shifts, detours, flagging operations, rolling slowdowns, and temporary traffic signal work.

(2) Review all applicable requirements of the Contract Documents to ensure the convenience, safety, and orderly movement of motor vehicle, bicycle, and pedestrian traffic.

(3) Attend meetings specifically scheduled to discuss the TCP and TCM.

(4) Discuss proposed TCM and coordinate implementation of the TCP with the Contractor and the Owner's Representative.

(5) Make revisions to he TCP according to the following:

a. Make temporary revisions to the TCP in the event of an emergency and immediately follow up with and report any changes to the Owner's Representative.

b. Notify the Owner's Representative before making any revisions to the TCP and indicate why revisions are necessary.

c. The TCS may make minor revisions to the TCP to accommodate site conditions if the original intent of the TCP is maintained and revisions have been approved by the Owner's Representative.

d. If the Contractor requests to use a modified Owner's TCP or a TCP developed by the Contractor, the TCS shall ensure a TCP showing the revisions are submitted according to section 00221.06 and section 00150.35.

(6) Coordinate the implementation and operation of all TCM, including those of subcontractors, suppliers, and any adjacent construction or maintenance operation.

(7) Provide oversight in maintaining all TCM on the project site.

(8) Coordinate the project's activities (such as ramp, road, or lane closures) with appropriate police, fire control agencies, city or county agencies, medical emergency responders, school districts, postmaster, and public transit agencies.

(9) At least once per TCS construction work shift, conduct a TCD inspection according to the following:

a. Inspect following initial placement or installation of TCD.

b. Inspect devices in place for proper location, installation, operation, quality, cleanliness, and effectiveness on public traffic.

c. Inspect TCD effectiveness in daylight and at night.

d. Inspect post-mounted signs.

e. Inspect temporary illumination and flagger station lighting at night, when in place.

f. Conduct additional TCD inspections for extended periods as requested by the Owner's Representative.

(10) Prepare and sign a daily traffic control inspection report or at another frequency as approved. Submit the report to the Owner's Representative no later than the end of the next working day. As a minimum, include the following items in the report:

a. When signs and TCD are installed and removed.

b. Locations of signs and TCD.

c. Revisions to the TCP (include copy of signed approval by the Owner's Representative).

d. Lighting used at night.

e. Observations of traffic conditions.

f. When TCD are damaged or replaced.

g. How TCD were damaged and by whom.

h. Accidents or incidents occurring within the work zone.

The TCS shall not act as a flagger or pilot car operator, except in the event of an emergency. The TCS may relieve the flagger or pilot car operator for a period of less than 15 minutes, not to exceed one (1) hour per construction work shift.

Make arrangements so that the TCS will be available every day, on call at all times, and available upon the Owner Representative's request at other than normal working hours.

The TCS shall report to the project site within one (1) hour after being notified in the event of a work zone incident during non-work periods. The TCS shall have appropriate personnel, equipment, and material available at all times to expeditiously correct any deficiency in the TCM for the project.

Notify the Owner's Representative of an alternate TCS who can assume the duties of the assigned TCS in the event of that person's inability to fulfill the duties of the position. The alternate TCS shall be adequately trained and certified according to 00223.30 and 00223.31. Notify the Owner's Representative at least 12 hours before designating the TCS for the following 12-hour period. Make succeeding notifications within 24 hours every time a subsequent TCS is appointed to the project.

(b) Traffic Control Inspection Without TCS When the Contract Documents do not require an item for a TCS, or when TCS is not onsite for a work shift, designate a trained person who shall be on the project site during working hours and on call at all other times, and who:

1. Meets the requirements of 00223.30.

2. Inspects and maintains TCD location, operation, quality, cleanliness, and effectiveness.

3. Is equipped with a cellular telephone.

4. Is equipped with a two-way radio, when necessary.

5. Has the authority to assign and control flagging operations.

6. Has filed their name and phone number with the Owner's Representative and local police.

7. Notifies the Owner's Representative of any corrective measures made to the TCP if the TCP is not functioning as required, or to accommodate site conditions. The designated person shall follow the TCP and shall not implement changes to the TCP before revisions are approved by the Owner's Representative.

8. Prepares and signs a daily traffic control inspection report upon the initial installation of TCM and each working day when any modification, removal, or reinstallation of TCM are made, or as directed by the Owner's Representative. Submit completed reports to the Owner's Representative no later than the end of the next working day.

9. Shall report to the project site within one (1) hour after being notified in the event of a work zone incident during non-work periods.

00223.90 Payment – Replace pay item (a) as follows:

Pay Item	**Unit of Measurement**
(a) Flaggers, As Directed by Owner…….	Hour

Replace the paragraph that begins "Payment for item (a)…" with the following paragraph:

Item (a) is for the payment of flaggers in the event the Owners Representative modifies the scope of work as shown in the Contract Documents at the time of bid, and that this modification of the scope of work increases the need for flaggers, or as determined to be necessary as directed by the Owner. The Owner's Representative will give the Contractor the authorization in writing. Payment will be made on a straight hour basis for work performed. No separate measurement or payment will be made for flagger overtime.

Section 00228 - Temporary Pedestrian and Bicyclist Routing

Comply with Section 00228 of the Standard Construction Specifications modified as follows:

00228.00 Scope - Replace this subsection, except subsection number and title, with the following:

In addition to the requirements of Section 00221, this work consists of furnishing, installing, operating, maintaining, inspecting, and removing temporary devices for accommodating pedestrians and bicyclists through a work zone.

00228.80(a) Length Basis - Replace this subsection, except subsection number and title, with the following:

Pedestrian channelizing devices, bicycle channelizing devices, and temporary pedestrian bridges will be measured on the length basis upon delivery to the project. The quantities will be limited to those in the accepted TCP.

Section 00275 – Trench Protection

Comply with Section 00275 of the Standard Construction Specifications and modified as follows:

00275.90 Payment - Delete the sentence that begins with the, “Payment will be included in payment made..”

Add the following to the end of this section:

The use of steel plates is incidental to the Work.

Section 00280 – Erosion and Sediment Control

Comply with section 00280 of the Standard Construction Specifications modified as follows:

00280.03 Erosion Control Standards – Replace this subsection with the following.

When designing, applying, installing, maintaining, inspecting, and removing erosion and sediment control devices, use and follow the current version of Title 10 Erosion and Sediment Control Regulations and the City of Portland Erosion and Sediment Control Manual.

00280.65 Sweeping – All Project areas shall be kept clean for the duration of the project. To prevent material from entering waterways or drain systems, clean and sweep the Project area with vacuum-assisted sweeper able to remove sediment, particulate matter, and erosion accumulation visible on paved surfaces. Sweeping using manual methods or mechanical sweepers need approval from the Owner’s Representative. Adjust the frequency of sweeping to ensure compliance with the ESCP and Project conditions. Reasonable measures shall be used to prevent dust from becoming airborne during operation where materials creating dust is handled, transported, or stored.

00280.90 Payment – Inlet protection, fiber roll wattles, and sediment fence shall be incidental to Erosion Control, and no separate payment will be made.

Section 00290 - Environmental Protection

Comply with section 00290 of the Standard Construction Specifications modified as follows:

00290.05 Pollution Control Measures - Prevent, control and abate pollution of the environment. Comply with new or amended environmental pollution Laws, not contemplated at the time of bid preparation according to section 00140.50 and ORS 279C.525. Provide visual or meter turbidity monitoring as required by applicable permits.

00290.29 Health and Safety - Replace the first paragraph with the following.

(a) Pollution Control Measures – Prevent, control, and abate pollution of the environment. Comply with new or amended environmental pollution laws, City of Portland Environmental Resolutions, Clean Air Construction requirements, and City of Portland's "Erosion Control Manual" according to section 00140.50 and ORS 279C.525. Comply with the following requirements

To the end of the section 00290.29(a)(1) add the following**:**

e. When leaf blowers are used electric or battery-powered leaf blowers are required by the Project.

00290.29(a)(5) Off-On-Site Tracking – Replace with the following:

No discharges from saturated soils are allowed in the right-of-way.

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

Perform in-water work only within the regulated in-water work period: July 15 to September 30.

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

Section 00291 – Contaminated Media

Comply with Section 00291 of the Standard Construction Specifications modified as follows:

00291.02 Environmental Site Assessment Report – Add the following to the end of this subsection:

The following environmental assessments are provided for this project.

- Level 1 ESA
- Level 2 ESA

00291.02(a) Summary of Project Site Contaminants - Add the following to the end of this subsection:

No contaminants were encountered during site investigations.

PART 00300 - ROADWORK

Section 00310 – Removal of Structures and Obstructions

Comply with section 00310 of the Standard Construction Specifications and modified as follows:

Add the following:

00310.10 Remove and Dispose of Wooden Structure – Remove and dispose a wooden structure covering the culvert inlet adjacent to 11008 SW 61st Ave. The structure is approximately 6' W x 8' L x 1' H

00310.91 Lump Sum Basis – Replace the following with:

Pay Item

(b) Remove and dispose of Wooden Structure……..Lump Sum

PART 00400 - DRAINAGE AND SEWERS

Section 00401 – Video and Electronic Inspection of Sewers

Comply with section 00401 of the Standard Construction Specifications modified as follows:

00401.21 Service Line Lateral Inspection Equipment – Add the following sentence to the end of this paragraph:

(a) Push Camera - As required by the Owner's Representative provide the recording of push camera inspection in accordance with section 00401.40(h). Recordings must be integrated with inspection equipment. Screen recordings by handheld devices is prohibited. No skewed, or unfocused video.

Section 00405 - Trench Excavation, Bedding and Backfill

Comply with section 00405 of the Standard Construction Specifications modified as follows:

Add the following section.

00405.02 ***Definitions***

Nominal – The rounded "size" used to talk about a given pipe.

OD-Controlled – The "nominal" size is referring to the OD (outside diameter), which is set for the given size. The ID (inside diameter) changes as wall thickness changes.

ID-Controlled – The “nominal” size is referring to the ID, which is set for the given size. The OD changes as wall thickness changes.

Add the following subsections:

00405.41(b) Trench Width - Replace the last sentence in the paragraph with the following Refer to the table in section 00405.81 for minimum trench width for various diameter pipes.

Delete the Minimum Trench Width table in this section.

Replace this section with the following.

00405.46(c)(2) Class A, B, C or D Backfill

(2) Class A, B, C, or D Backfill - Backfill trench above the pipe zone to the specified grade, or as shown on the plans, in lifts of eight (8) inch loose depth to three (3) feet loose depth depending on compaction equipment and material, unless water settling combined with mechanical compaction is allowed as provided herein.

Should be replaced with:

(2) Class A, B, C, or D Backfill - Backfill trench above the pipe zone to the specified grade, or as shown on the plans, in lifts of eight (8) inch loose depth to three (3) feet loose depth depending on compaction equipment and material. Ponding, jetting or water settling will not be permitted unless previously approved by the owner.

00405.80(b) Width – width for calculating excavation and backfill volume for pipe will be based on the diameter of the pipe barrel or width of the conduit as follows.

Nominal Diameter of Sewer Pipe	Add	Pay Width of Sewer Trench
Less than 15 inches	N/A	30 inches
15 inches through less than 30 inches	18	OD plus 18 inches
30 inches through less than 48 inches	22	OD plus 22 inches
48 inches through less than 69 inches	42	OD plus 42 inches
69 inches and larger	46	OD plus 46 inches

00405.80(g) Trench Excavation, Bedding, and Backfill for Inlet Lead Pipe - Delete the first (g) in this subsection in its entirety.

00405.92 Incidental Basis – Replace the third paragraph in this section with the following:

Excavation, bedding, and backfill for pipes four (4) inches or less in diameter will be incidental to the pipe pay items(s), and no separate payment will be made.

Section 00440 – Commercial Grade Concrete

Comply with Section 00440 of the Standard Construction Specifications modified as follows:

00440.10 Materials - Row seven, “Modifiers”, replace "02030” with “02035”.

Add the following to the end of the list in this subsection.

Supplementary Cementitious Materials …….02030

00440.11 Proportioning – Furnish in writing to the Owner the proportions by weight of each of the applicable materials listed in section 00440.10.

00440.12 Properties of CGC – Furnish a workable mixture of CGC that is uniform in composition and consistency and has the following characteristics:

- Entrained Air – 4.0 percent to 7.0 percent
- Slump – Five (5) inches or less
- Compressive Strength – Minimum 3,000 psi at 28 days (unless otherwise specified)
- Temperature – Minimum 50 degrees Fahrenheit to maximum 90 degrees Fahrenheit

Add the following section.

00440.17 Required Submittals for Mix Designs – Submit mix design information required per section 02001.35, submit Concrete Mix Usage Reports per section 02001.70.

Section 00445 - Sanitary, Storm and Culvert Pipe

Comply with Section 00445 of the Standard Construction Specifications modified as follows:

00445.40(e) Delete the last sentence in this section that begins with “Make the connection so a standard pipe joint is…”

00445.43(a) General - Add the following to the end of this subsection:

Gasketed/boot connections for new PVC/ HDPE/ DI pipe to new precast concrete maintenance holes as approved and submitted in lieu of grouted connections specified in 00445.43(c) and 00445.43(d). Gasketed/ boot connections are not permitted for new and / or reconstructed connections to existing maintenance holes (MH) or with connection pipe materials other than PVC/HDPE/DI unless otherwise approved by Owner. Gasketed / boot connections shall meet the requirement of ASTM C923 and shall be installed according to the manufacturer’s recommendations. No gasketed connections for RCP will be allowed unless otherwise approved by Owner.

The Contractor shall ensure connections provide a positive watertight seal. No concrete or grout shall be placed between the gasketed connection and the MH core without a flex joint. Use an approved flexible filler to prevent sticks, leaves and debris build up.

00445.72 Pipe Testing - Replace the first paragraph in this section with the following.

(a) General - Perform the test in a manner satisfactory to the Owner’s Representative. Provide testing equipment that gives observable and accurate measurements of either air or water leakage under the specified test conditions. The pressure gauge used in air testing shall have minimum divisions of 0.1 psi and verified within 12 months of the date of the air test to have

an accuracy of 0.1 psi. Air testing method shall be time pressure drop. Calibrate the gauges for air testing.

00445.73 Deflection Testing- Delete HDPE in the first sentence.

00445.80 Measurement – Remove “Pipe zone Material” in the first sentence**.**

00445.81 Pipes and Appurtenances- Remove the words “and depth” from this sentence.

Add the following to the end of this section.

00445.81(a) Pipes - Pipe zone materials and labor are incidental to pipe length measurements.

Section 00470 – Maintenance Holes, Catch Basins and Inlets

Comply with section 00470 of the Standard Construction Specifications modified as follows:

Add the following to the of the first sentence in this section.

00470.02 SubmittalsError! Bookmark not defined. - Submit the following for review, two (2) weeks prior to start of work, in a single package, following the requirements of subsection 00150.35:

c) **Gasketed connections-** Submit details of the proposed connection to the Owner including product data regarding the brand name of gasketed connections, the manufacturer’s recommendations, and recommendations of deflection parameters.
d) **Pre-cast concrete headwall-** Submit details of the proposed precast headwall including product data, brand name, manufacturers specifications including reinforcement.

00470.40 General - Make the following changes:

00470.40(b) Pipe Connections – Delete the 2nd and 3rd paragraphs and add the following paragraph:

Where gasketed/boot connections are used, they shall be installed by the maintenance hole manufacturer and arrive on site with the gasketed/boot connections. Prior written approval from the Owner is required for maintenance holes to be shipped without boots installed. Follow the manufacturer’s recommendation on annular space grouting. Do not grout annular space under the gasketed/boot connections.

Where gasketed/boot connections are not approved per 00445.43(a), grout pipe connections to maintenance holes so they are watertight, using non-shrink grout conforming to 02440.50 filling the annular space completely. Do not use field-fabricated waterstops or improvised adapters. For flexible pipe only, full or partial pipe sections may be stubbed into the maintenance hole as required. Use approved sanded maintenance hole adapters where pipe enters the maintenance hole or inlet.

For rigid pipe only, all connections to maintenance holes, sedimentation maintenance holes, sumps, and inlets shall have a joint located within 18 inches of the structure wall.

00470.85 Pre-cast Concrete Headwall - The measurement for Precast concrete headwall will be made on a lump sum basis.

00470.90 Payment
(u) Pre-Cast Concrete Headwall (HW-01)

Item (u) includes pre-cast concrete headwall, excavation, aggregate base, backfill, shoring, metal handrail (section 00759), concrete channel, loose riprap, and all associated materials.

Section 00490 - Work on Existing Sewers and Structures

Comply with section 00490 of the Standard Construction Specifications modified as follows:

00490.11 - High Early Strength Concrete – delete this subsection in its entirety.

Section 00495 - Trench Resurfacing

Comply with Section 00495 of the Standard Construction Specifications modified as follows:

Existing pavement core drilling log is provided in the Appendix.

Add the following subsection:

00495.45 Replacement of Damaged Pavement - Notify the Owner of any damaged pavement and meet with Owner's Representative to determine final saw cut boundaries and identify trench resurfacing limits. Extend resurfacing to competent existing pavement where a clean joint or cut can be made and where the remaining section of existing pavement is large enough to remain stable under normal street loads. Complete all saw cuts according to section 00405.47.

(a) Pre-existing Damaged Pavement - Final pavement restoration must comply with PBOT Pavement Restoration Standards. The final restoration area will be determined onsite by Owner's Representative.

PART 00500 - BRIDGES

Section 00530 - Steel Reinforcement for Concrete

Comply with section 00530 of the Standard Construction Specifications modified as follows:

00530.30 Mechanical Splice Installers - Replace the bullet that begins "Construct each splice sample with two..." with the following bullet:

- Construct each splice sample with two equal lengths of straight reinforcing bar so the total length of the assembled splice sample is at least 72 inches for No. 3 through No. 8 bars and at least 96 inches for No. 9 through No. 18 bars.

00530.42(c)(1) General – Replace the paragraph that begins “When approved, dowels may be replaced…” with the following paragraph:

For staged construction, dowels may be replaced by reinforcing bars with threaded sleeve mechanical splice couplers embedded in the portion of concrete placed first and threaded reinforcing bars inserted in the couplers after forms are removed. Approval by the Owner’s Representative is required for the substitution. Construct assemblies that develop 125 percent of the specified minimum yield strength of the dowels shown or specified. Construct reinforcing bars that have effective splice or development lengths equal to the replaced dowels.

00530.42(c)(2)a. General - Replace the paragraph that begins “Furnish labor, Material and Equipment …” with the following paragraph:

Furnish labor, Material and Equipment for fabricating sample mechanical splices at no additional cost to the Owner. All sample splices will be tested by the Owner at the Owner’s expense.

00530.42(c)(2)(c) Testing - Replace the sentence that begins "Construct test splices with two..." with the following sentence:

Construct test splices with two equal lengths of straight reinforcing bar so that the total length of the assembled splice is not less than 72 inches for No. 3 through No. 8 bars and not less than 96 inches for No. 9 through No. 18 bars.

00530.42(c)(3) Installation – Replace this subsection, except for the subsection number and title, with the following:

Install splices in the presence of the Owner’s Representative. Splices made without the Owner’s Representative present will be rejected.

Do not place stirrups and other reinforcing bars between a mechanical splice sleeve and the surface of the concrete where it would impair the specified clearance. Instead, place additional reinforcement as necessary at no additional cost to the Owner.

When using epoxy coated reinforcing bars, coat mechanical splices prior to installation according to ASTM A775. After the splices are attached to the rebar, coat exposed areas of bare steel and seal the rebar to splice interface with a manufacturer recommended patching material according to ASTM A775.

00530.90 Payment - Replace this subsection with the following:

No separate or additional payment will be made for reinforcement, clips, wire, separators, wire chairs, and other material used in fastening the reinforcement in place.

SECTION 00540 - STRUCTURAL CONCRETE

Comply with Section 00540 of the Standard Specifications modified as follows:

00540.52 Removal of Forms and Falsework and Subsequent Loading - Add the following as a new paragraph after the second paragraph:

The maturity method, AASHTO T 325 or ASTM C1074, may be used to estimate the percent of specified concrete strength for determining form and falsework removal and subsequent loading. Install at least two maturity thermocouples for each Day's final placement in areas where the maturity method will be used for estimating concrete strength for determining form and falsework removal and subsequent loading. When the maturity method is used, the Owner's Representative may verify the maturity method with strength specimens. Establish a new strength-maturity relationship if strength specimens deviate more than 10 percent from the maturity-estimated strengths. Suspend use of the maturity method for determining form removal and subsequent loading when the strength-maturity relationship deviates by more than 10 percent until a new strength maturity relationship is established.

(Use the following subsection .53(b) when Class 1 surface finish is required.)

00540.53(b) Class 1 Surface Finish (Ground and Coated) - Replace this subsection with the following subsection:

00540.53(b) Class 1 Surface Finish (Ground, Sacked, and Coated) - After completion of the general surface finish, grind the surface with a power grinder or an equivalent method to remove laitance and surface film. Sack the surface to fill all holes using a paste of fine mortar sand, cement, water, and bonding agent. The ratio of bonding agent to water shall be one part bonding agent to two parts water, or as recommended by the manufacturer. Apply coating according to 00540.53(d).

Section 00596C - Cast-in-Place Concrete Retaining Walls

Comply with Section 00596C of the Standard Specifications modified as follows:

00596C.11 Backfill – Add the following subsection:

(c) Granular Wall Backfill – Furnish granular wall backfill material for walls meeting the requirements of Section 02630.11.

00596C.42(b) Maximum Density and Optimum Moisture Content - Replace this subsection, except for the subsection number and title, with the following:

Determine maximum density and optimum moisture content of the retaining wall granular backfill material according to AASHTO T 99 Standard Proctor Method A, with coarse particle correction according to ODOT TM 223.

00596C.42(c) Moisture Content - Replace this subsection, except for the subsection number and title, with the following:

Prepare the retaining wall granular backfill material to within minus 4 percent to plus 2 percent of optimum moisture content at the time of compacting. Add water to material that does not contain sufficient moisture and thoroughly mix. Remove excess moisture by manipulation, aeration, drainage, or other means before compacting.

00596C.80 Measurement - Add the following to the end of this subsection:

The estimated quantities of concrete and steel reinforcement for retaining wall systems are as follows:

Structure Number	Material	Estimated Quantities
HW-02	Concrete	10 cu. yd.
HW-02	Reinforcement	1100 lb.

00596C.90 Payment - In the paragraph that begins " No separate or additional payment…", add the following bullets after the third bullet:

- Cutoff wall / key, headwall, wingwall, and any additional cast-in-place wall elements
- Class 1 finish (section 00540.53(b))
- Base Aggregate
- Bedding
- Reinforcement
- Metal handrail (section 00759)
- Object marker signage
- Shoring
- Loose riprap
- Dewatering
- Over-excavation for convenience

PART 00600 - BASES

Section 00640 - Aggregate Subbase, Base, and Shoulders

Comply with section 00640 of the Standard Construction Specifications modified as follows:

Add the following to the end of this section.

00640.41 Hauling and Placing

Send a delivery ticket with each load of aggregate supplied to the project or delivery tickets must be submitted by the following work shift. Each delivery ticket shall include the following information:

a) Aggregate supplier’s name, address, and telephone number
b) Address and telephone number of source if different from above
c) Material size and description
d) Size of load

Replace this subsection with the following:

00640.80(b) Volume Basis - Aggregate base for trench resurfacing will be measured on the volume basis, computed using the following dimensions:

1) **Length** - The length will be the horizontal distance along the length of the centerline of installed pipe.

2) **Width** - According to section 00405.80(b).

3) **Depth** – As specified in subsection 00495.42 and per current Portland Bureau of Transportation (PBOT) Standard Drawings

PART 00700 – WEARING SURFACES

Section 00744 – Asphalt Concrete Pavement

Comply with section 00744 of the Standard Construction Specifications modified as follows:

00744.02 Definitions - Add the following definition:

Fiber Reinforced Asphalt Concrete (FRAC) – WMAC with fiber reinforcement additives.

00744.11(a) Asphalt Cement - Replace the first sentence of the first paragraph with the following:

Use PG 70-22 asphalt for the wearing course(s) on this project. Use PG 64-22 asphalt for the base course(s) on this project. Use Warm Mix Asphalt Cement (WMAC) between April 1st and October 30th. WMAC or Hot Mix Asphalt Cement (HMAC) may be used between November 1st and March 31st.

Remove and replace the table with following:

Nominal Compacted Thickness of Individual Lifts and Courses as Shown on the Typical Section of the Plans	**All Levels**	**Level 1 And Level 2**	**Level 3**	**Level 3**	**Level 4**	**Level 4**
		All Courses	**Travel Lane Wearing Course**	**All other Courses**	**Travel Lane Wearing Course**	**All other Courses**
	Surface Temperature*	**From – To Inclusive**	**From – To Inclusive**	**From – To Inclusive**	**From – To Inclusive**	**From – To Inclusive**
Less than 2 inches	60 °F	All Year**	3/15 - 30-Sep	All Year**	3/15 - 30-Sep	All Year**

2 inches - 2 1/2 inches	50 °F	All Year**	3/15 - 30-Sep	All Year**	3/15 - 30-Sep	All Year**
Greater than 2 1/2 inches	40° F	All Year**	3/1 - 9/30	All Year**	3/1 - 9/30	All Year**
Temporary	40 °F	All Year**	All Year**	All Year**	All Year**	All Year**

00744.43 (a) Hauling - Add the following to the end of this section.

Send a delivery ticket with each load of ACP supplied to the project. Each delivery ticket shall include the following information:

1) ACP supplier's name, address, and telephone number
2) Address and telephone number of batch plant if different from above
3) Date and time the ACP batch was produced
4) Unique mix design (JMF) number
5) Size of load batched

Add the following subsection:

00744.46 Preparation of Underlying Surfaces - All bases and foundations on which the pavement is to be constructed shall meet the applicable specifications in Part 00600 and be approved prior to the start of paving. Repair existing bases and foundations according to section 00748. Trim broken or ragged edges to firm material when directed.

Treat all paved surfaces on and against which MHMAC is to be placed with an asphalt tack coat, according to section 00730. Immediately before applying the tack coat, clean and dry the surface to be tacked. Remove all material, loose or otherwise, that will reduce adhesion of the tack by brooming, flushing with water or other approved methods.

Level and compact depressed areas with MHMAC as specified or directed. Perform leveling work as a separate operation and at the locations and to the extent as shown or directed. Spread the leveling material with a paving machine, unless otherwise directed.

Protect all existing structures from the overlay operation and check and clean as necessary after the overlay.

The pavement surface shall be dry prior to the preparation work and paving. Remove existing pavement markers, recessed markers, and pavement legends prior to paving. Remove pavement legends according to section 00850.

00744.49 Compaction - Replace the first paragraph with the following:

Immediately after the ACP has been spread, struck off, and surface irregularities and other defects remedied, roll it uniformly with rollers meeting the requirements of section 00744.24 until compacted to a minimum of 91 percent MAMD. Perform finish rolling and continue until all roller marks are eliminated.

00744.90 Payment - Replace the first paragraph with the following:

The accepted quantities of ACP incorporated into the project, whether recycled materials are used or not, will be paid for at the Contract unit price, per ton, for the item "Level 2, Resurfacing w/o base ACP Asphalt, 9 Inch."

In the bulleted list after "The following will be inserted …", replace the third bullet with the following:

- The grade of asphalt (64-22 or 70-22) will be inserted in the third blank.

Add the following bullet:

- The words "in leveling", "in temporary", or "in leveling and temporary" will be inserted in the fourth blank when applicable.

PART 01000 – RIGHT-OF-WAY DEVELOPMENT AND CONTROL

Section 01091 – Stream Restoration and Enhancement

Section 01091 is not a Standard Construction Specification and is included in this project by Unique Special Provision.

01091.00 Scope Error! Bookmark not defined. - The Work includes furnishing and placing Stream Diversion and Site Dewatering materials.

01091.02 Definitions Error! Bookmark not defined.**:**

Stream Diversion and Dewatering – Diversion of stream flow and groundwater discharge required to provide and maintain dry access to regulated work areas per or in conjunction with the work area isolation plan for the project as described in Section 00290.

01091.03 Submittals Error! Bookmark not defined.- Submit four weeks prior to start of the Work and in accordance with Section 00150.35 and applicable permits, the following for Owner's review and approval:

(a) Stream Diversion and Dewatering Plan (SDDP)

(1) Site plan showing the proposed layout and location of all SDDP elements of the Work. Include staging of materials and equipment.

(2) Specification of materials and equipment used to implement, maintain and monitor the SDDP.

(3) Monitoring, operation, and maintenance plan to ensure Work area(s) remain dewatered during the duration of the Work.

(4) Account for flow rates shown in the Contract Documents, plus undetermined rates of seepage into work areas. Refer to Section 00290 and permits for additional requirements.

(5) Identify and include 24-hour contact information for the competent person responsible for installation, operation and maintenance of the SDDP.

Measurement

01091.80 Measurement Error! Bookmark not defined. – Measurement for Stream Diversion and Dewatering will be made on the Lump Sum basis

(a) Stream Diversion and Dewatering Plan (SDDP) – No measurement will be made for the Stream Diversion and Dewatering Plan.

Payment

01091.90 Payment Error! Bookmark not defined. - The accepted quantities will be paid for at the Contract unit price per unit of measurement for one or more of the following unique pay items:

Pay Item	Unit of Measurement
(a) Stream Diversion and Dewatering	Lump Sum

Item (a) includes all costs incurred for providing, installing operating and maintaining Stream Diversion and Dewatering, pipes, pumps, sandbags, sediment mat, Turbidity monitoring, and Work Isolation during the duration of the Work, per Section 00290. No additional payments will be made for outfall energy dissipation system.

PART 02000 – MATERIALS

Section 02001 – Concrete

Comply with section 02001 of the Standard Construction Specifications modified as follows:

02001.00 Scope – Replace the first paragraph with the following:

This section includes the requirements for the properties, submittals, production, quality control and acceptance of portland cement concrete (concrete) for structural, precast prestressed, and paving applications.

Add the following subsection:

02001.02 Abbreviations and Definitions:

EPD Environmental Product Declaration
f'_c Minimum Specified Compressive Strength at 28 days
f'_{cr} Required Average Compressive Strength

SCM Supplementary Cementitious Materials
w/cm Ratio Water-Cementitious Material Ratio

Environmental Product Declaration - Product-specific third-party verified Type III environmental declaration that provides quantified environmental data using predetermined parameters in accordance with ISO 14025 and/or ISO 21930 standards

Internally Cured Concrete - Concrete designed to utilize lightweight fine aggregate to mitigate shrinkage.

Moderate Exposure - Elevations below 1,000 feet

Severe Exposure - Elevations 1,000 feet and above

02001.10 Materials - Add the following to the list:

Supplementary Cementitious Materials…….02030
Synthetic Fiber Reinforcing…….02045

Replace “Admixtures” and “Modifiers” in the list with the following:

Chemical Admixtures……...02040
Concrete Modifiers……..…….02035

Add the following subsection:

02001.15 Concrete Mix Design - Submit current or new mix design, prepared by a CCT, meeting the requirements of subsection 02001.35, for each required class of concrete to the Owner’s Representative for review. Allow 21 Calendar Days for the review. Design mix by the volumetric method in ACI 211.1 to achieve the properties of subsections 02001.20 and 02001.30 when tested according to subsection 02001.15(b). Provide a concrete mix design that is workable, placeable, finishable, and meets the Contract Documents. Concrete placement shall not occur until the Owner’s Representative approves the concrete mix design. Review of concrete mix designs does not relieve the Contractor of the responsibility to provide concrete meeting the requirements of the Contract Documents.

(a) Current Mix - Mix designs that meet the requirements for the specified class of concrete and are currently being used or have been used within the past 12 months on any project, public or private may be submitted for review. Provide individual tests results that comprise the average if more than one data point exists. For paving designs the flexural strength testing must be from within the last two years. For HPC designs the length change and permeability tests must be from within the last two (2) years.

(b) New Mix - Make at least one trial batch for each concrete mix design. Notify the Owner’s Representative at least 48 hours before making each trial batch. The Owner’s Representative may witness preparation and testing. Prepare and test trial batches using the same materials, at the same proportions, and having the same plastic properties of concrete that will be used in the project. Simulate haul time, batching sequence and mixing conditions to ensure the trial batch is representative of the

mixture that will be delivered to the project. Furnish all materials, equipment, testing and work required for designing the mixes at no additional cost to the Owner.

(1) Trial Batch Plastic Properties - For each trial batch, test according to the following test methods:

Test	Test Method
Sampling Fresh Concrete	WAQTC TM 2 / ASTM C 172
Concrete Temperature	AASHTO T 309 / ASTM C 1064
Slump	AASHTO T 119 [1] /ASTM C 143 [1]
Air Content	AASHTO T 152 / ASTM C 231
Density	AASHTO T 121 / ASTM C 138
Yield	AASHTO T 121 / ASTM C 138
Molding Concrete Specimens	AASHTO T 23 or R 39 [2] /ASTM C 31 [2]
Water Cementitious Material Ratio	AASHTO T 121 (ASTM C 138)

[1] For drilled shaft concrete test the slump retention by subsequent tests at half-hour intervals for the duration of the estimated drilled shaft placement, including temporary casing extraction. Report in table or graphical format.

[2] Cast cylinders in single use plastic molds

(2) Trial Batch Hardened Properties - When applicable, test properties according to the following test methods:

Test	Test Method
Compressive Strength	AASHTO T 22 (ASTM C 511, ASTM C 39)
Flexural Strength	AASHTO T 97 (ASTM C 78)
Length Change	AASHTO T 160 (ASTM C 157)
Permeability	AASHTO T 277 (ASTM C 1202)

a. Compressive Strength Tests – Unless otherwise specified, for each trial batch, cast and cure at least three (3) test cylinders according to AASHTO T 23 (ASTM C 31) or AASHTO R 39 (ASTM C 192), in six (6) inch by 12 inch or four (4) inch by eight (8) inch single use plastic molds. The use of unbonded caps according to ASTM C1231 is permitted. Test at 28 days according to AASHTO T 22 (ASTM C 39).

b. Flexural Strength Tests - For each paving concrete trial batch, cast and cure at least three flexural beams according to AASHTO T 23 (ASTM C 31) or AASHTO R 39 (ASTM C 192). Test flexural beams at 28 days according to AASHTO T 97 (ASTM C 78).

c. Length Change Tests - For all HPC mix designs, except for precast bridge rail elements, make at least three specimens from the trial batch for length change testing. Sample prisms shall have a square, four (4) inches by four (4) inches cross section. Wet cure the samples until they have reached an age of 28 days, including the period in the molds. Following the wet cure, air store and measure samples according to AASHTO T 160 (ASTM C 157), Section 11.1.2 for 28 days. Report length change results at total specimen age of 56 days.

d. Permeability Tests - For alternate HPC mix designs, make at least three (3) specimens from the trial batch for permeability testing. Prepare, cure, dry and test according to AASHTO T 277 (ASTM C 1202). Report permeability in coulombs at 90 days.

02001.20 Concrete Properties, Tolerances, and Limits - Modify as follows:

Replace Table 02001-1 in paragraph (a) Strength with the following:

Table 02001-1

Concrete Strength and Water/Cementitious Material (w/cm) Ratio

Type of Concrete	Strength f'_c (psi)	Maximum w/cm Ratio
Structural	3300	0.50
	3300 (Seal)	0.45
	4000	0.48
	4000 (Drilled Shaft)	
	HPC4500	0.40
	HPC (IC) 4500	
	5000 +	0.40
Paving	4000	0.44
	5000	0.48
PPCM's (with cast-in- place decks and no entrained air)	5500	0.44
	6000 +	0.42

Add the following after Table 02001-1:

(1) Required Average Compressive Strength (f'_{cr}) - Except for PPCM designs, provide calculations demonstrating compliance with either of the following using the ASTV from either field results or trial batch cylinders.

a. Use the *k*-factor in Table 02001-1b to adjust for total number of test results considered in calculating the sample standard deviation. Use larger of two values of f'_{cr} calculated.

Table 02001-1a

Concrete Required average compressive strength f'_{cr} if data are available to establish a sample standard deviation, psi

f'_c, psi	f'_{cr}, psi
	Use the larger of:
5000 or less	$f'_{cr} = f'_c + 1.34ks$
	$f'_{cr} = f'_c + 2.33ks - 500$

Over 5000	$f'_{cr} = f'_c + 1.34ks$s
	$f'_{cr} = 0.90\ f'_c + 2.33ks$s
Notes: f'_{cr} is required average compressive strength; f'_c is specified concrete strength; k is factor from Table 02001-2b; and s is standard deviation of 28-day cylinder strengths which have been obtained within the past 24 months and spanning no less than 45 calendar days for a class of concrete within 1000 psi of that specified and shall consist of at least 15 tests.	

Table 02001-1b	
k-factor for increasing sample standard deviation for number of strength tests considered in calculating standard deviation	
Total number of tests considered	***k*-factor for increasing sample standard deviation**
15	1.16
20	1.08
25	1.03
30 or more	1.00
Note: Linear interpolation for intermediate number of tests is acceptable.	

b. If field strength test records are not available to calculate sample standard deviation, establish required average compressive strength f'_{cr} in accordance with Table 02001-2c.

Table 02001-1c	
Required average compressive strength of f'_{cr} if data are not available to establish standard deviation	
f_c', psi	**f'_{cr}, psi**
Less than 3000	$f'_c + 1000$
3000 to 5000	$f'_c + 1200$
Over 5000	$1.1\ f'_c + 700$

02001.20(a) Strength – Add the following below Table 02001-1:

(1) Required Average Compressive Strength (¦''cr) - Except for PPCM designs, provide calculations demonstrating compliance with ACI 301 section 4.2.3.3 using the ASTV from either field results or trial batch cylinders.

(2) Flexural Strength - Provide paving concrete mix designs with a minimum of 600 psi at 28 Days.

02001.20(b) Air Entrainment

Table 02001-2- Replace the Severe Exposure (Percent) column with the following:

Air Entrainment
Severe Exposure (Percent)
7.5

7.0
6.0
6.0
5.5

02001.20 - Replace "Concrete with HRWRA" in Table 02001-3 in paragraph (c) Slump with the following:

Concrete Slump	
Condition	**Slump**
Concrete with HRWRA	6" ± 2"

Add the following to the end of this subsection:

02001.20 Concrete Properties, Tolerances, and Limits –

(e) Durability - For HPC designs, except designs for precast bridge rail elements, the following additional requirements apply:

Test	Test Method		Acceptance Value
Length Change	AASHTO T 160	ASTM C 157	-0.045%
Permeability	AASHTO T 277	ASTM C 1202	1,000 Coulombs (max.) at 90 days [1]

[1] Only required for alternate HPC designs. See subsection 02001.30(b)(2).

(f) Embodied Carbon – The following embodied carbon thresholds apply to all concrete types listed in Table 02001-3a and are measured by global warming potential (GWP). GWP shall be calculated in units of kilograms of carbon dioxide-equivalent (kg CO2e). The GWP of a specific concrete mix shall be verified by a product-specific Type III Environmental Product Declaration (EPD) that is 3rd party verified and within its 5-year period of validity. Compliance with the embodied carbon thresholds can be achieved on a "per mix" basis or "project average basis," as further defined in 2001.20(f)(1) and 2001.20(f)(2).

(1) Embodied Carbon Thresholds – Per Mix
The embodied carbon of a concrete mix, based on an approved EPD, shall not exceed the value given in Table 02001-3a (per CY).

Table 02001-3a: Concrete Embodied Carbon Thresholds (per CY)

	Maximum GWP (kg CO2e)/CY		
Concrete Strength (psi) (1)	**Portland Cement Concrete (PCC) including: Commercial Grade Concrete (CGC), Concrete Pavement, High-Performance Concrete (HPC)/Structural Concrete**	**Lightweight Concrete**	**Controlled Low-Strength Material (CLSM)**
2500	180		180

3000	200	396	
4000	242	440	
5000	295	483	
6000	312		
8000	373		

(1) For concrete strengths between the stated values, use linear interpolation to determine cement and/or embodied carbon limits, rounded to the nearest whole number.
Example: for a 3300psi CGC mix:
(242-200)/(4000-3000) = 0.042
(0.042*(3300-3000)) + 200 = 212.6
213 is the Maximum GWP/CY for a 3300psi mix.

(2) Embodied Carbon Thresholds – Project Average

Total embodied carbon (EC_{proj}) of all concrete mix designs within the same project shall not exceed the project limit ($EC_{allowed}$) determined using Table 2001-3a and Equation EC1.

Equation EC1

$EC_{proj} < EC_{allowed}$

where

$EC_{proj} = \Sigma EC_n \, v_n$ *and* $EC_{allowed} = \Sigma EC_{th} \, v_n$

and

n = the total number of concrete mixtures for the project
EC_n = the embodied carbon for mixture n per approved EPD, GWP/CY
EC_{th} = the embodied carbon threshold for mixture n per Table 1, GWP/CY
v_n = the volume of mixture n concrete to be placed, CY

Contractor can use CY or cubic meters for calculation, but must keep same units throughout

Project Average Example

Project includes the following mixes:

Type/Strength	Total Volume used on project (CY)	Mix-Specific GWP per approved EPD (GWP [kg CO2e]/CY)
CGC 3300psi	5,000	185
HPC 5000psi	4,000	330
CGC 4000psi	8,000	230

$EC_{allowed}$ = (5,000*213) + (4,000*295) + (8,000*242)
= 4,181,000
EC_{proj} = (5,000*185) + (4,000*330) + (8,000*230)
= 4,085,000
Confirmed. $EC_{proj} < EC_{allowed}$

(3) Embodied Carbon Compliance

a. Per Mix. The Contractor shall submit the required EPD(s) and any linear interpolation calculations to the Owner's Representative to demonstrate that each mix's GWP is under the applicable threshold. The Owner's Representative shall submit basic mix info and EPDs to

concreteEPD@portlandoregon.gov for program data tracking purposes.

b. Project Average. The Contractor shall, in consultation with the project engineer, submit the required EPD(s) and Project Average calculations to the Owner's Representative to demonstrate compliance. The Owner's Representative shall submit basic mix info, EPDs, and Project Average calculations to concreteEPD@portlandoregon.gov for program data tracking purposes.

(4) Embodied Carbon Exemptions

a. A concrete mix for which the total projected use (volume) is less than 50 CY over the entire project is not subject to the embodied carbon requirements.

b. The contractor may seek a temporary exemption to the embodied carbon requirements if the applicable concrete producer can demonstrate that supply chain constraints outside the producer's control mean that producing a compliant mix for the application is temporarily not possible.

1) For projects using multiple mixes and pursuing a Project Average compliance approach, a prime contractor shall demonstrate that the supply chain constraint is such that it affects all project mixes or enough project concrete volume that it is not possible to meet the embodied carbon requirements through the Project Average approach.

2) A supply chain constraint exemption request is only valid when the timing of the constraint aligns with when the mix is actually needed on the project. Supply chain constraint exemptions shall be project specific and only valid for the duration of the supply chain constraint or duration of the formation of a unique concrete element of the project.

c. Temporary exemption requests pertaining to supply chain constraints should be submitted to the Owner's Representative. The Owner's Representative shall then submit the exemption request documentation to concreteEPD@portlandoregon.gov for review/consultation and final approval. The exemption request should include:

1) Specific mix identifying information;

2) Anticipated quantity subject to the exemption;

3) Anticipated application, project identifying information, and timeframe related to the use of the mix;

4) Explanation of the supply chain constraint and the due diligence actions pursued to overcome the constraint; and

5) Estimated duration of the supply chain constraint and associated rationale.

02001.30 Concrete Mix Design - Replace this subsection with the following:

02001.30 Concrete Constituents:

(a) Portland Cement - Use cement meeting the criteria in section 02010.

(b) Supplementary Cementitious Materials - SCM meeting the criteria in section 02030 may be used subject to the following limits:

(1) For Severe Exposure concrete applications percent SCM is limited as follows:

Separate SCM	**Maximum**
Fly ash or natural or ground-glass pozzolans	25%
GGBFS	50%
Silica fume	10%

Combined SCM	**Maximum**
Fly ash, natural or ground-glass pozzolans, and silica fume	35%
Fly ash, natural or ground-glass pozzolans, pozzolans, slag, and silica fume	50%

(c) Blended Hydraulic Cement - Blended hydraulic cement may be used subject to the limits of 02001.30(b) and 02010.20.

(d) Chemical Admixtures - Use chemical admixtures according to the manufacturer's recommendations. Use WRA in all seal concrete and in Class 5000 concrete or greater. Use HRWRA in all HPC.

Use a hydration stabilizer from the CPL in all concrete for bridge decks. Use an appropriate amount to extend the initial set time of the concrete by 90 minutes.

(e) Aggregate - If the nominal maximum size of the coarse Aggregate is not included as a part of the class of concrete, or shown on the Plans, any size from 1 1/2 inch to 3/8 inch nominal maximum size Aggregate may be used according to ACI guidelines except:

- Use 1 1/2 inch nominal maximum size Aggregates in bridge deck concrete.
- Use 1 1/2 inch nominal maximum size Aggregates in paving concrete unless otherwise indicated.
- Use 3/8 inch nominal maximum size Aggregates in drilled shafts unless otherwise indicated.

(1) HPC Coarse Aggregate Content - Proportion all HPC for a minimum coarse Aggregate absolute solid volume according to Table 02001-4:

Table 02001-4

Absolute Solid Volume	
Maximum Nominal Aggregate Size	**Cu. Yd. (Aggregate) / Cu. Yd. (concrete)**
3/8"	0.36
1/2"	0.38
3/4"	0.40
1"	0.42
1 1/2"	0.44

Two or more Aggregate products or sources meeting Specifications may be blended to improve concrete properties. Blending non-specification Aggregate Materials, except for gradation, with specification Materials is not allowed.

(f) Synthetic Fiber Reinforcing for Concrete - Synthetic fiber reinforcing may be used in

high performance concrete (HPC) and shall meet the requirements stated in Section 02045. Any synthetic fiber reinforcing shall be used according to the manufacturer's recommendations at the rate designated on the CPL. Fiber packaging is not allowed in the mixed concrete.

02001.31 Concrete Mix Design Constituents – Delete the entire subsection

02001.32 New Mix Designs – See subsection 2001.15.

02001.33 - Required Over Design Strength f'_{cr} for New Mix Designs – Delete the entire subsection.

02001.34 Current Mix Designs – Delete the entire subsection.

02001.36 Adjusting Concrete Proportions – Delete the entire subsection.

02001.40 Concrete Production – Replace this subsection with the following:

Produce concrete according to the sections for "Measuring Materials", "Batching Plant", "Mixers and Agitators", and "Mixing and Delivery" of ASTM C94, Standard Specification for Ready-Mixed Concrete.

When mixing and delivery haul time or placement conditions warrant exceeding the time of discharge, submit a detailed breakdown of the estimated time needed from batching to discharge of a load along with the measures that will be taken to ensure slump, temperature and uniformity will be maintained. This request must be submitted in advance and may establish a new time limit at the Owner's Representative's discretion.

(a) Adjusting Concrete Proportions - After a mix design has been reviewed and accepted, submit any proposed adjustments to concrete proportions for review. Significant changes to the mix design, as determined by the Owner's Representative, may require verification of performance by trial batch according to subsection 02001.15. Significant changes include, but are not limited to the following:

- Decreases in cementitious material content.
- Changes in cement source.
- Increases in SCM quantity replacing cement.
- Changes in SCM source.
- Substitution of aggregates from a different source.
- Admixture product changes.
- Large admixture dosage changes, excluding seasonal adjustments for air entraining agents and Type A or D water reducers (± 25 oz/cubic yard).

Add the following subsection:

02001.61 Acceptance of Concrete - Acceptance of concrete will be according to section 00165 and the following:

(a) Aggregate - Acceptance of aggregate will be according to subsection 02690.20.

(b) Plastic Concrete - Acceptance of plastic concrete will be based on tests performed by the Contractor's QCT, according to the tolerances and limits of subsection 02001.20, when discharged within the time allotted in subsection 02001.40.

(c) Hardened Concrete - Cast and cure test specimens according to AASHTO T 23 (ASTM C 31) in six (6) inch x12 inch or four (4) inch x eight (8) inch, single-use plastic molds and test at 28 days according to AASHTO T 22 (ASTM C 39).

(1) General - For all classes of concrete, acceptance of hardened concrete will be based on an analysis of compressive strength tests of cylinders cast by the QCT.

(2) Acceptance - Hardened concrete with an ASTV meeting or exceeding the specified design strength, f'_c will be accepted for strength. If the ASTV is less than f'_c but at least 85 percent of f'_c, the Owner's Representative may review the results to determine if the concrete represented by the cylinders is suitable for the intended purpose. Remove concrete that has an ASTV less than 85 percent of f'_c unless otherwise authorized, in writing, by the Owner's Representative. If the concrete is removed, the cost of removal, replacement and all related Work is the Contractor's responsibility. If the Owner's Representative determines that the concrete is suitable for the intended purpose, the concrete may be allowed to remain in place, subject to a price adjustment according to subsection 00150.25. If an ASTV falls below f'_c, the Contractor may submit a written plan outlining a proposed alternate method of evaluating compressive strength. Submit the plan for review by the Owner's Representative within three (3) days of the test. Provide evidence that a reasonable f'_c (over-design) was maintained and that there is credible evidence (besides low strength) which warrants consideration of this option. The Owner's Representative may allow an alternate method of acceptance if the compressive strength test results are determined to be suspect from definable external factors.

02001.70 – Concrete Mix Usage Reports - Replace this subsection with the following:

Submit on a quarterly basis a concrete mix usage report containing the following fields:

- Customer name
- Project name
- Delivery site address
- Date
- Ticket number
- Plant number
- Plant name
- Mix ID/number
- Mix name/description
- Design strength at 28 days (or other timeframe as specified)
- Design w/cm ratio
- Portland cement (pound/cubic yard)
- Each SCM (pound/cubic yard)
- Each admixture (volume/cubic yard)
- Volume supplied (cubic yard)
- Unit price ($/cubic yard)
- Mix-specific global warming potential (GWP)

If the project timeframe is shorter than one (1) calendar year quarter, then the concrete mix usage report shall be submitted at the end of the project. Quarterly concrete mix usage reports shall be submitted to concreteEPD@portlandoregon.gov by the 15th of the month following the end of the applicable calendar-year quarter.

Section 02410 – Concrete and Plastic Pipe

Comply with section 2410 of the Standard Construction Specifications.

Section 02510 - Reinforcement

Comply with Section 02510 of the Standard Construction Specifications modified as follows:

02510.10 Deformed Bar Reinforcement - Replace this subsection, except for the subsection number and title, with the following:

Furnish deformed bar reinforcement from the CPL and conforming to the requirements of ASTM A706, AASHTO M31 (ASTM A615), AASHTO M334, or ASTM A1035. Unless otherwise specified or shown, all reinforcing bars shall be Grade 60.

02510.20 Mechanical Splices - Replace this subsection, except for the subsection number and title, with the following:

Furnish mechanical splices from the CPL. Where bars of different sizes or strengths are connected, the governing strength shall be the strength of the smaller or weaker bar.

- Type 1 Mechanical Splices - Furnish Type 1 Mechanical Splices that develop at least 125 percent of the specified minimum yield strength of the reinforcing bars. Type 1 Mechanical Splices are not allowed for column bars.
- Type 2 Mechanical Splices - Furnish Type 2 Mechanical Splices that develop at least 125 percent of the specified minimum yield strength of the reinforcing bars and 100 percent of the specified tensile strength of the reinforcing bars.
- Total slip displacement - Measure displacement after loading in tension to 30.0 ksi and relaxing to 3.0 ksi. The displacement for bars up to No. 14 shall not exceed 0.01 inches. The displacement for No. 18 bar shall not exceed 0.03 inches.

02510.25 Headed Bar Reinforcement - Replace this subsection, except for the subsection number and title, with the following:

Furnish Class HA headed steel bar from the CPL for concrete reinforcement. The headed steel bar shall develop the specified minimum tensile strength of the reinforcing bars, according to ASTM A970. Ferrous-filler coupling sleeves and welded headed steel bars are not allowed for concrete reinforcement.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

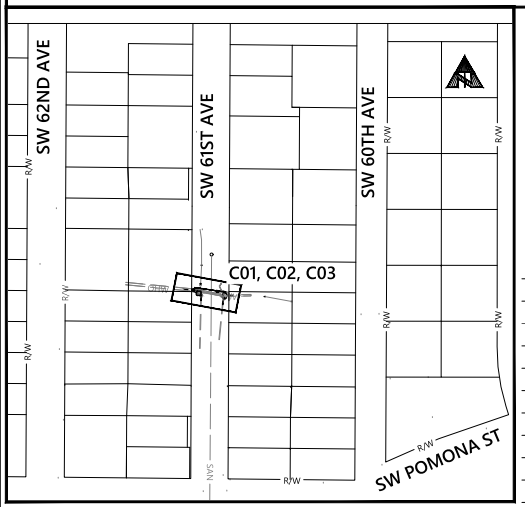
This Page Intentionally Blank

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

PROJECT PLANS AND DETAILS

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

SW 61ST - CULVERT REPLACEMENT



PROJECT AREA
SCALE: 1" = 100'

SITE ADDRESS:
11009 SW 61ST AVE
PORTLAND, OR 97219

LEGEND:

EXISTING

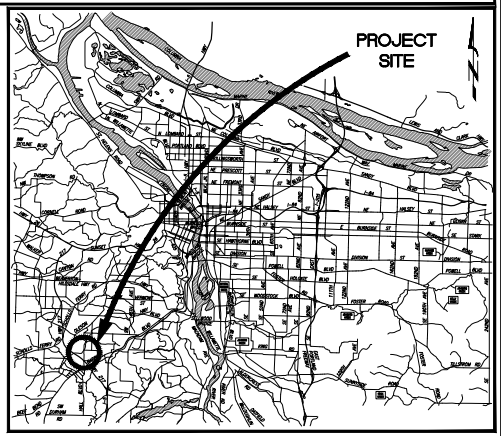
- MAILBOX
- MAINTENANCE HOLE
- CULVERT IN
- CULVERT OUT
- POLE WITH STREET LIGHT
- DECIDUOUS TREE
- CONIFEROUS TREE
- WM — WATER METER
- STM — STORM SEWER MAIN
- EOP — EOP — EDGE OF PAVEMENT
- E — E — ELECTRICAL UNDER GROUND
- EC — ENVIRONMENTAL CONSERVATION
- EP — ENVIRONMENTAL PROTECTION
- G — G — GAS LINE
- PE — PERMANENT EASEMENT
- SEWER SERVICE LATERAL
- P/L — P/L — PROPERTY LINE
- R/W — R/W — RIGHT-OF-WAY
- SAN — SANITARY SEWER MAIN
- W — W — WATER LINE
- DITCH, STORM DITCH

PROPOSED

- INLET PROTECTION
- FIELD INLET
- CONCRETE HEADWALL
- PUMP
- EZ — EXCLUSION ZONE FENCING
- X — X — X — PEDESTRIAN RAIL
- CULVERT
- INLET PIPE/DEWATERING PIPE
- PERFORATED DRAIN PIPE
- SEWER ABANDONMENT
- CLASS 50 RIP RAP

ABBREVIATIONS:

AVE	AVENUE
BES	BUREAU OF ENVIRONMENTAL SERVICES
CI	CAST IRON
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT OR COUNTY
CSP	CONCRETE SEWER PIPE
DI	DUCTILE IRON
DIA	DIAMETER
DWG	DRAWING
EL, ELEV	ELEVATION
EXIST, EXTG, EX.	EXISTING
FT	FOOT OR FEET
HORIZ	HORIZONTAL
HW	HEADWALL
IE	INVERT ELEVATION
MAX	MAXIMUM
MH	MAINTENANCE HOLE
MIN	MINIMUM
NO.	NUMBER
NTS	NOT TO SCALE
OHW	ORDINARY HIGH WATER
PGE	PORTLAND GENERAL ELECTRIC
PVC	POINT OF CURVATURE, VERTICAL CURVE OR POLYVINYL CHLORIDE
PWB	PORTLAND WATER BUREAU
RCP	REINFORCED CONCRETE PIPE
SF, SQ FT	SQUARE FEET
SQ.	SQUARE
ST	STREET
STA	STATION
STD	STANDARD
TEMP	TEMPORARY
TYP	TYPICAL
UTIL	UTILITY
VERT	VERTICAL
W/	WITH



PORTLAND, OREGON
VICINITY MAP
NOT TO SCALE

GENERAL NOTES:

1. EXISTING GRADES AND ELEVATIONS SHOWN IN PROFILE WERE PROVIDED BY THE CITY OF PORTLAND AND TAKEN ALONG THE CENTERLINE STATIONED ALIGNMENT OF CULVERT. VERIFY ALL ELEVATIONS AND GRADES.
2. UTILITIES AND SERVICE LATERALS AS SHOWN IN THE CONTRACT DOCUMENTS ARE AT APPROXIMATE LOCATIONS. VERIFY ALL LOCATIONS IN THE FIELD PRIOR TO CONSTRUCTION.
3. NOT ALL WATER OR GAS SERVICE LATERALS ARE SHOWN.
4. RECONNECT EXISTING INLET OR CATCH BASIN PIPES AS SHOWN IN THE CONTRACT DOCUMENTS, UNLESS OTHERWISE DIRECTED BY THE OWNER'S REPRESENTATIVE.
5. SUPPORT UTILITIES, AS REQUIRED, TO PROTECT IN PLACE.
6. CONSTRUCT PER CURRENT CITY OF PORTLAND STANDARD DETAILS AND DRAWINGS, UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS OR DIRECTED BY THE OWNER'S REPRESENTATIVE.
7. ALL INLET PIPING SHALL BE EITHER ASTM F714 DR 26 HDPE OR ASTM D3034 PVC SDR-35. FOR G-1 INLETS INSTALL 10-INCH DIAMETER PIPE AND FOR G-2 INLETS INSTALL 12-INCH DIAMETER PIPE.
8. CONTRACTOR TO COORDINATE WITH NW NATURAL TO RELOCATE GAS MAIN. CONTACT RYAN WINFREE, (503) 610-7765, srw@nwnatural.com.

DESIGN CRITERIA AND ASSUMPTIONS:

1. NO EXCEPTIONS TO CITY STANDARDS OR OTHER REGULATORY REQUIREMENTS WERE TAKEN DURING THE DESIGN OF THIS PROJECT.
2. WATER QUALITY TREATMENT AND DETENTION ARE NOT REQUIRED FOR THIS PROJECT PER THE CURRENT STORMWATER MANAGEMENT MANUAL.
3. ENVIRONMENTAL ZONES EXIST WITHIN THE PROJECT BOUNDARY.
4. ESTIMATED PEAK SUMMER FLOW RATE RANGE = 2-18 CFS.

CONSTRUCTION NOTES:

1. PROTECT EXISTING RUBBLE AND TIMBER RETAINING WALL.
2. CONSTRUCT G2MA INLET PER ODOT STD DWG. RD364.
3. CONNECT PIPE TO STRUCTURE.
4. CONSTRUCT RETAINING WALL, CAST-IN-PLACE CONCRETE RIGID SEMI-GRAVITY CANTILEVER. SEE DETAIL SHEET S01.
5. PROTECT UTILITY IN PLACE.
6. REMOVE AND REINSTALL MAILBOX SUPPORTS.
7. PERMANENTLY RELOCATE MAILBOX TO LOCATION INDICATED BY THE OWNER'S REPRESENTATIVE.
8. CONTRACTOR TO SALVAGE AND STOCKPILE CONCRETE LANDSCAPE BLOCKS AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
9. CONSTRUCT PRE-CAST CONCRETE HEADWALL.
10. RELOCATE EXISTING UTILITY (BY OTHERS).
11. REMOVE PIPE.
12. CONSTRUCT GROUTED CLASS 50 RIP RAP.
13. CONSTRUCT SIDE MOUNTED ALUMINUM PEDESTRIAN RAIL PER ODOT STD. DWG. BR246.
14. CONSTRUCT CONCRETE CHANNEL PER DETAIL 1, SHEET CD01.
15. INSTALL TREE PROTECTION FENCING - C, AS SHOWN, PER COP STD. DWG. P-582.

NOTICE TO EXCAVATORS:

ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS 503-232-1987).

POTENTIAL UNDERGROUND FACILITY OWNERS

Dig Safely.

Call the Oregon One-Call Center
DIAL 811 or 1-800-332-2344

EMERGENCY TELEPHONE NUMBERS

NW NATURAL GAS	
M-F 7am-6pm	503-226-4211 Ext.4313
AFTER HOURS	503-226-4211
PGE	503-464-7777
LUMEN	1-800-573-1311
CITY BUREAU OF MAINTENANCE	503-823-1700
CITY WATER	503-823-4874
VERIZON	1-800-483-1000

SHEET INDEX

SHEET NUMBER	SHEET TITLE	SHEEET DESCRIPTION
1	G01	COVER SHEET, VINCINITY MAP LEGEND, NOTES, SHEET INDEX
2	C01	EXISTING CONDITIONS PLAN AND PROFILE SW 61ST AVE N. OF SW POMONA ST ADJ218 TO ADJ217
3	C02	PROPOSED CONDITIONS PLAN AND PROFILE SW 61ST AVE N. OF SW POMONA ST HW-01 TO HW-02
4	C03	PROPOSED CONDITIONS DEWATERING AND DIVERSION PLAN
5	CD01	CIVIL DETAILS
6	S01	STRUCTURAL DETAILS DESIGN CRITERIA AND STRUCTURAL NOTES
7	S02	STRUCTURAL DETAILS HEADWALL 2 (HW-02)
8	CE01	EROSION CONTROL PLAN NOTES AND DETAILS

CITY OF PORTLAND VERTICAL DATUM AND OCRS83.PORTLANDIF

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

XREF(S) USED: E11640_XBMAP,E11640_XDSPLET1640_XSURV
ROTATION ANGLE: 0d0'0"
CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY ____ CHECKED BY ____
FINAL MAP DATA
DRAWING NAME: E11640_G-SHEETS.dwg

DESIGNED BY
CAD BY SM
CHECKED BY BY
DATE APPROVED 3/20/2026
ENGR. SUPV.
CONST. SUPV.
ENGR. DIV. MGR.

CITY OF PORTLAND
ENVIRONMENTAL SERVICES
KEITH WILSON
MAYOR
PAUL SUTO, P.E.
CHIEF ENGINEER
APPROVAL
ENVIRONMENTAL SERVICES CHIEF ENGINEER
REG. PROF. ENGR. NO. 82245

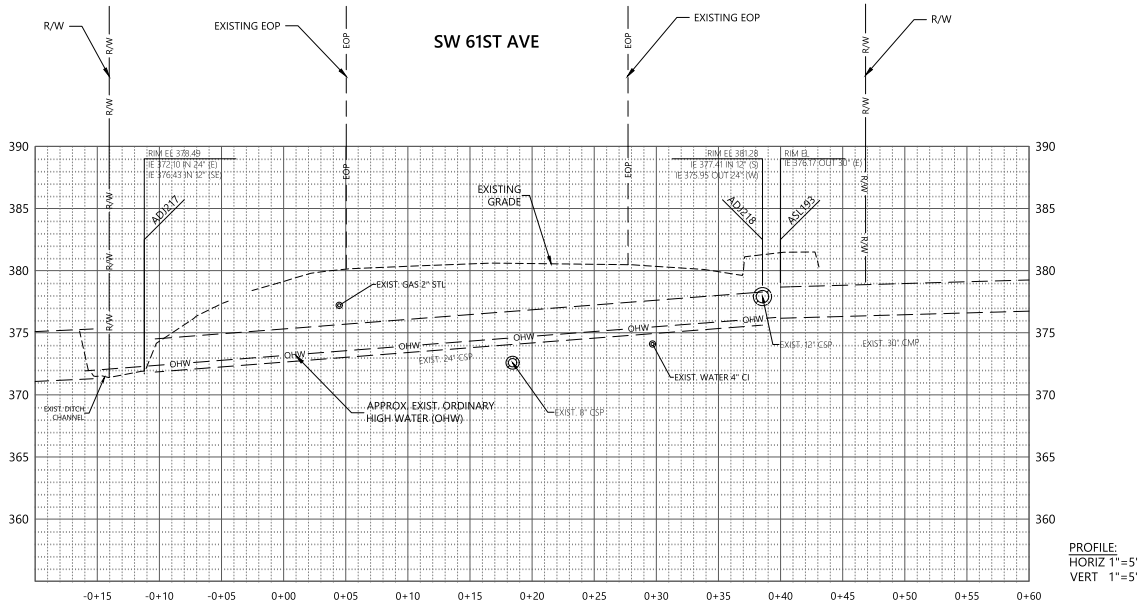
REGISTERED PROFESSIONAL ENGINEER
103567PE
digitally signed
OREGON
JANUARY 09, 2001
STEPHANIE TROUTEAUD
Expires: 06/30/2026

SW 61ST
CULVERT REPLACEMENT
COVER SHEET, VINCINITY MAP
LEGEND, NOTES, SHEET INDEX

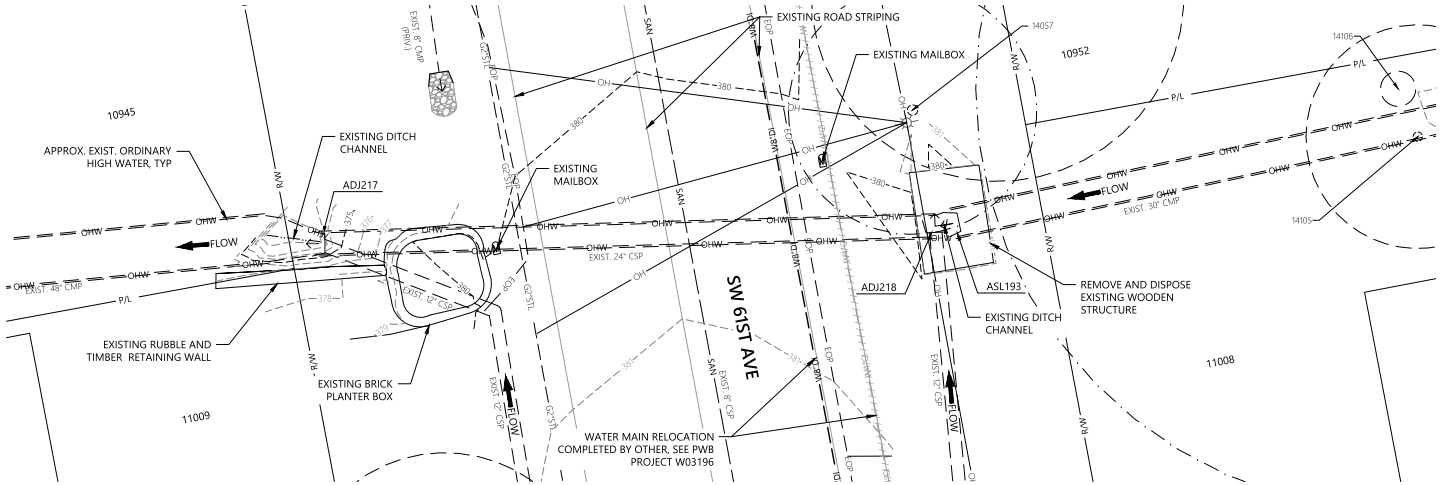
V4 SECTION 4123
JOB NO. E11640
SHEET NO. G01
1 OF 8

Q:\SHAWNPEREZ\E11640_SW_61ST\DWG\E11640_G-SHEETS.DWG 2/27/2026 PEREZ, SHAWN

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306



CULVERT CENTERLINE STATIONING



NO.	DATE	DESCRIPTION	APPD.
REVISION			

XREF(S) USED:	E11640_XBMAP;E11640_XDSPLE11640_XSURV;W03196-OCRS
ROTATION ANGLE:	11d0'0"
CONSTRUCTED BY:	
PROJECT COMPLETED:	
MAP CORRECTED BY:	CHECKED BY:
FINAL MAP DATA	
DRAWING NAME:	E11640_C-SHEETS.dwg

DESIGNED BY	CSL	DATE APPROVED	3/20/2026
CAD BY	SLP	ENGR. SUPV.	RG
CHECKED BY	ST	CONST. SUPV.	ED
		ENGR. DIV. MGR.	SD

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
103567PE
digitally signed
OREGON
JANUARY 09, 2026
STEPHANIE TROUTT
Expires 06/30/2026

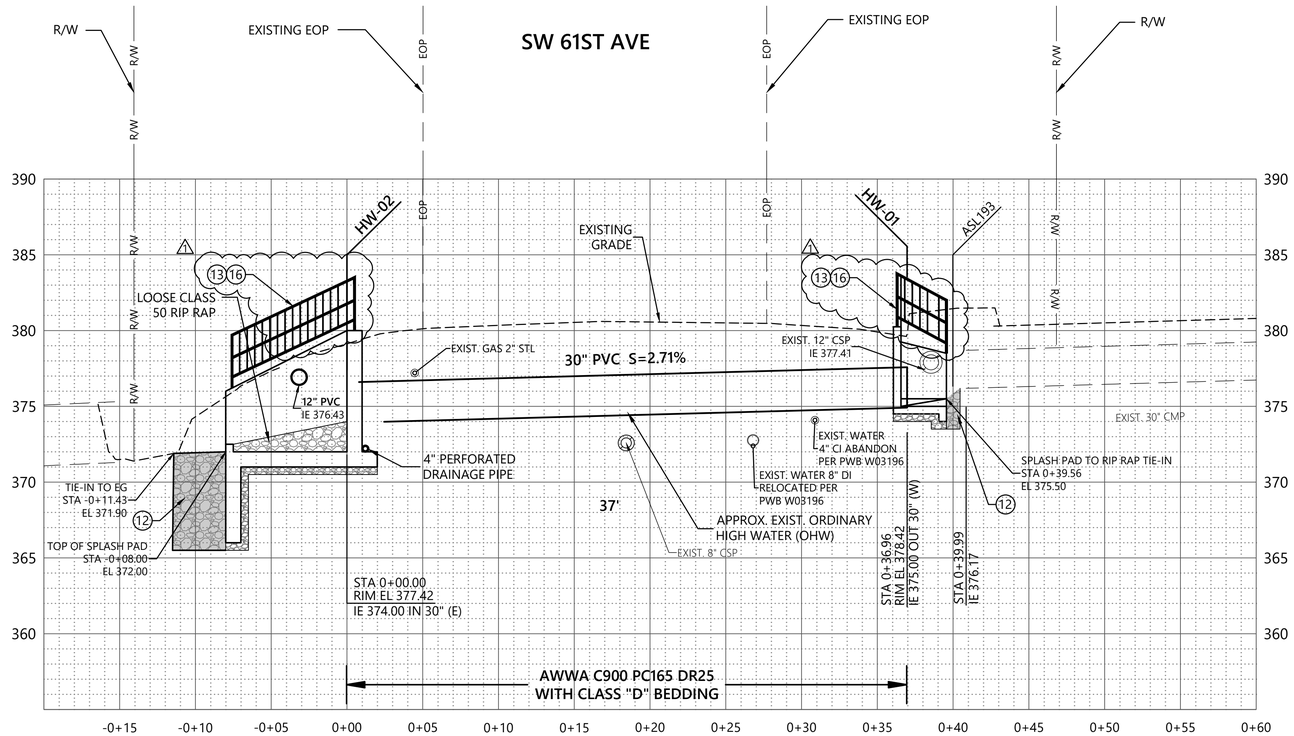
SW 61ST CULVERT REPLACEMENT

EXISTING CONDITIONS PLAN AND PROFILE
SW 61ST AVE N. OF SW POMONA ST
ADJ218 TO ADJ217

1/4 SECTION	4123
JOB NO.	E11640
SHEET NO.	C01
	2 OF 8

Q:\SHAWNPEREZ_E11640_SW_61ST_DWG\E11640_C-SHEETS.DWG 2/27/2026 PEREZ, SHAWN

/<5@>98;A:A7:<=7Â+Â%10$!#- ¸Ã&0°Ã)...Ã)ì*(Ã)*&- 0- $**%1(



CULVERT CENTERLINE STATIONING

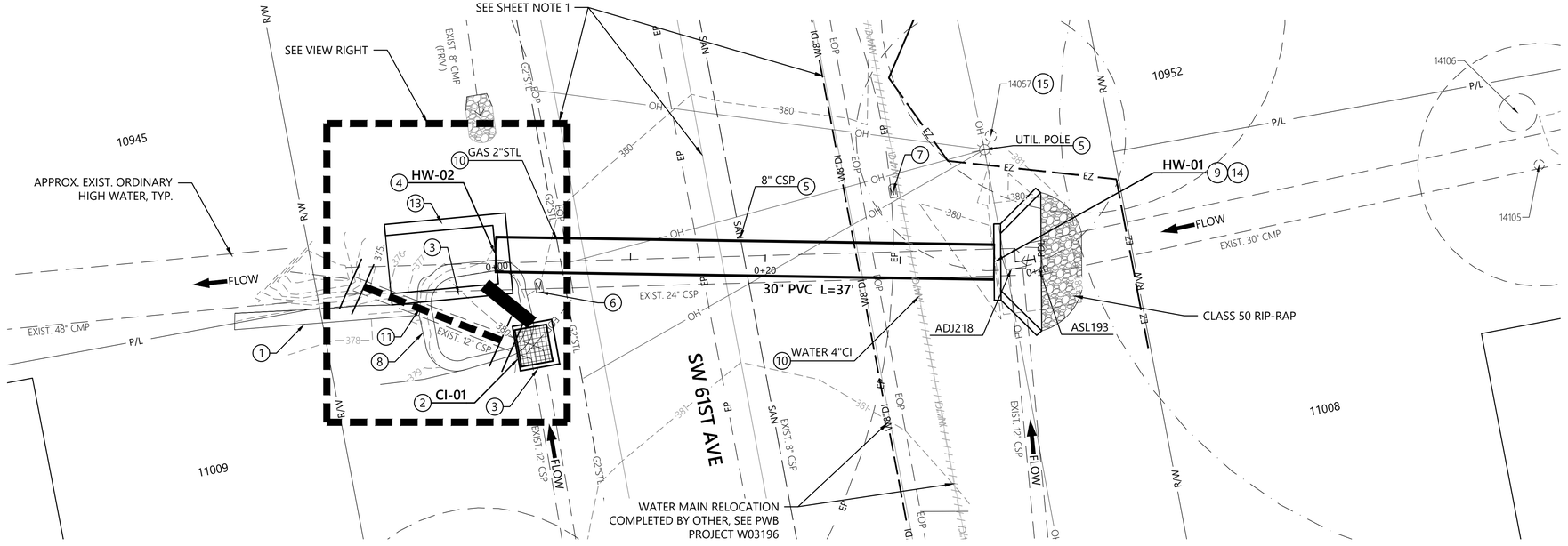
PROFILE:
HORIZ 1"=5'
VERT 1"=5'

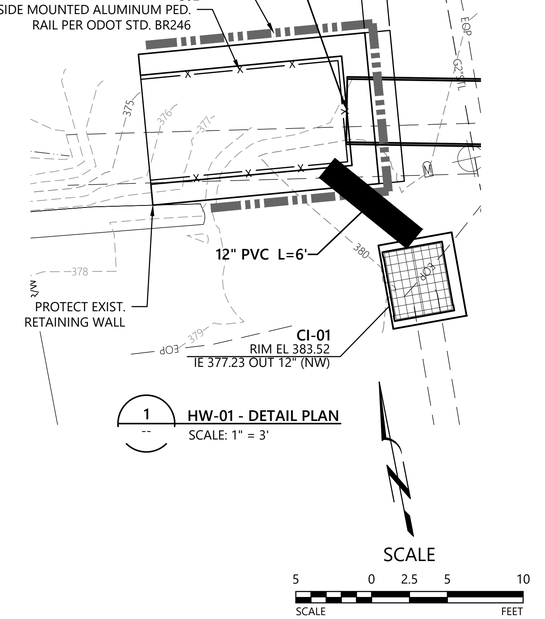
SHEET NOTES:

1. PERMANENT TRAFFIC STRIPING AND MARKING TO BE COMPLETED BY THE BUREAU OF TRANSPORTATION AFTER COMPLETION OF WORK. CONTRACTOR SHALL MAINTAIN ALL TEMPORARY STRIPING AND COORDINATE WITH OWNER'S REPRESENTATIVE WHEN FINAL PAVING IS COMPLETE.

CONSTRUCTION NOTES:

1. PROTECT EXISTING RUBBLE AND TIMBER RETAINING WALL.
2. CONSTRUCT G2MA INLET PER ODOT STD DWG. RD364.
3. CONNECT PIPE TO STRUCTURE.
4. CONSTRUCT RETAINING WALL, CAST-IN-PLACE CONCRETE RIGID SEMI-GRAVITY CANTILEVER. SEE DETAIL SHEET S01.
5. PROTECT UTILITY IN PLACE.
6. REMOVE AND REINSTALL MAILBOX SUPPORTS.
7. PERMANENTLY RELOCATE MAILBOX TO LOCATION INDICATED BY THE OWNER'S REPRESENTATIVE.
8. CONTRACTOR TO SALVAGE AND STOCKPILE CONCRETE LANDSCAPE BLOCKS AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
9. CONSTRUCT PRE-CAST CONCRETE HEADWALL.
10. RELOCATE EXISTING UTILITY (BY OTHERS).
11. REMOVE PIPE.
12. CONSTRUCT GROUTED CLASS 50 RIP RAP.
13. CONSTRUCT SIDE MOUNTED ALUMINUM PEDESTRIAN RAIL PER ODOT STD. DWG. BR246.
14. CONSTRUCT CONCRETE CHANNEL PER DETAIL 1, SHEET CD01.
15. INSTALL TREE PROTECTION FENCING - C, AS SHOWN, PER COP STD. DWG. P-582.
16. INSTALL 12"x36" OBJECT MARKER ON PEDESTRIAN RAIL FACING UPSTREAM ONCOMING TRAFFIC. USE PBOT SIGN NO W2360 - RIGHT SIDE OBJECT MARKER.





1 HW-02 S02

1 -- HW-01 - DETAIL PLAN
SCALE: 1" = 3'

SCALE
5 0 2.5 5 10
SCALE FEET

NO.	DATE	DESCRIPTION	APPD.
1	3/20/2026	ADDED OBJECT MARKERS	ST

REVISION

XREF(S) USED: _E11640_XBMAP;E11640_XDSN;E11640_XSURV;W03196-OCRS
ROTATION ANGLE: 11d0'0"
CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY _____ CHECKED BY _____
FINAL MAP DATA
DRAWING NAME: E11640_C-SHEETS.dwg

DESIGNED BY	CSL	DATE APPROVED	%#" ##"
CAD BY	SLP	ENGR. SUPV.	RG
CHECKED BY	ST	CONST. SUPV.	ED
		ENGR. DIV. MGR.	SD

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
103567PE
6988?BA98;76
OREGON
JANUARY 09, 2026
STEPHANIE TRUJILLO
Expires 06/30/2026

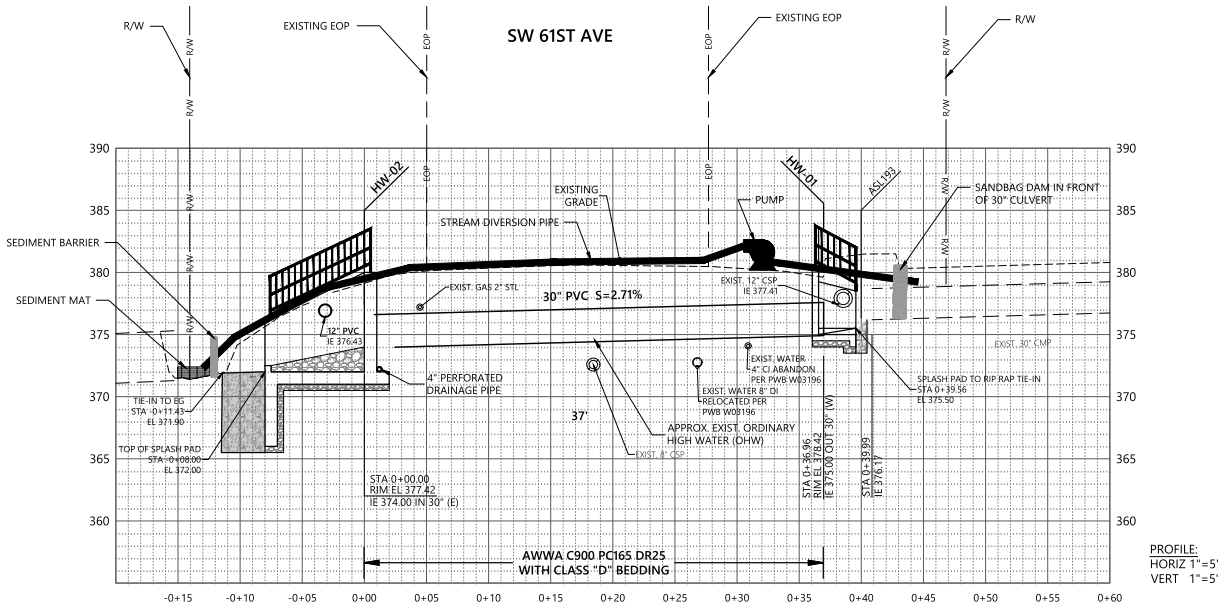
SW 61ST CULVERT REPLACEMENT

PROPOSED CONDITIONS PLAN AND PROFILE
SW 61ST AVE N. OF SW POMONA ST
HW-01 TO HW-02

1/4 SECTION	4123
JOB NO.	E11640
SHEET NO.	C02
	3 OF 8

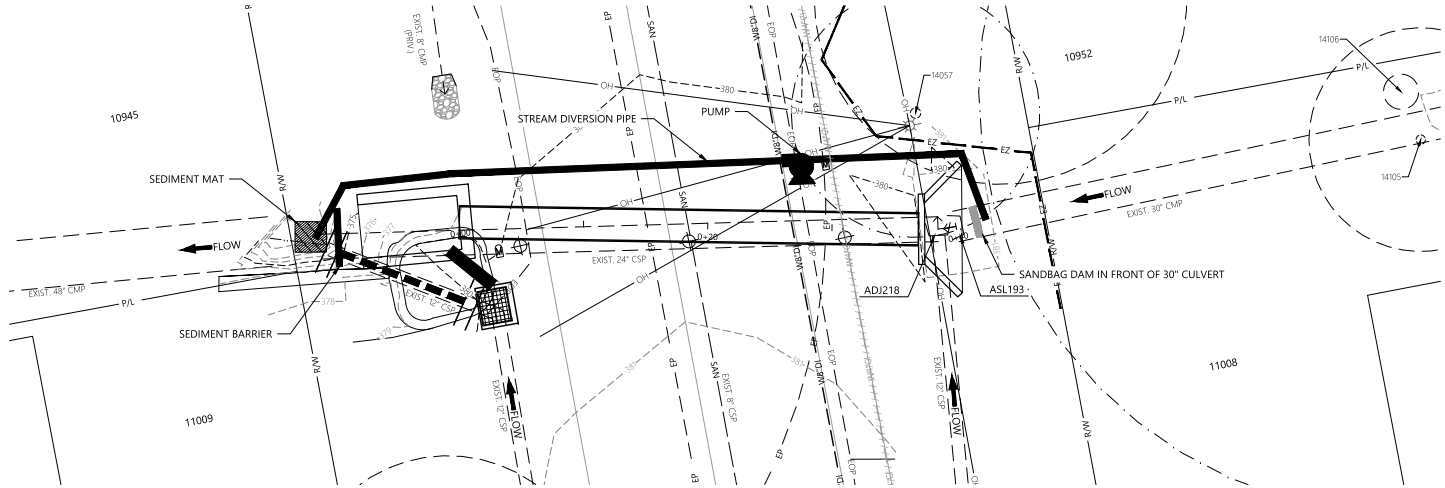
Q:\SHAWNPEREZ\E11640 SW 61ST\DWG\E11640_C-SHEETS.DWG 4/21/2026 PEREZ, SHAWN

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306



PROFILE:
HORIZ 1"=5'
VERT 1"=5'

CULVERT CENTERLINE STATIONING



SHEET NOTES:

1. CONTRACTOR TO SUBMIT A STREAM DIVERSION AND DEWATERING PLAN. CONTRACTOR MAY PROPOSE AN ALTERNATE PLAN TO WHAT IS SHOWN. REFER TO SECTIONS 00290 AND 01091 OF THE SPECIAL PROVISIONS.

SCALE
5 0 2.5 5 10
SCALE FEET

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

XREF(S) USED: E11640_XBMAP,E11640_XDSPLE11640_XSURV;W03196-OCRS
ROTATION ANGLE: 11d0'0"
CONSTRUCTED BY:
PROJECT COMPLETED:
MAP CORRECTED BY: CHECKED BY:
FINAL MAP DATA
DRAWING NAME: E11640_C-SHEETS.dwg

DESIGNED BY	CSL	DATE APPROVED	3/20/2026
CAD BY	SLP	ENGR. SUPV.	RG
CHECKED BY	ST	CONST. SUPV.	ED
		ENGR. DIV. MGR.	SD

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
103567PE
digitally signed
OREGON
JANUARY 09, 2024
STEPHANIE TROUTT
Expires 06/30/2026

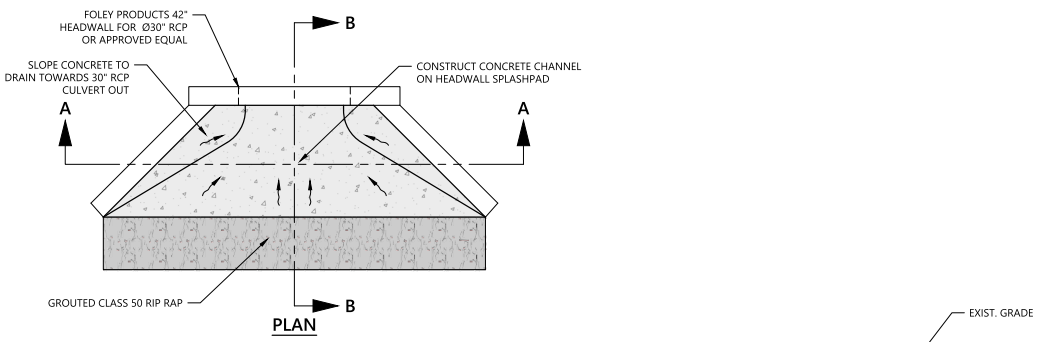
SW 61ST
CULVERT REPLACEMENT

PROPOSED CONDITIONS
DEWATERING AND DIVERSION PLAN

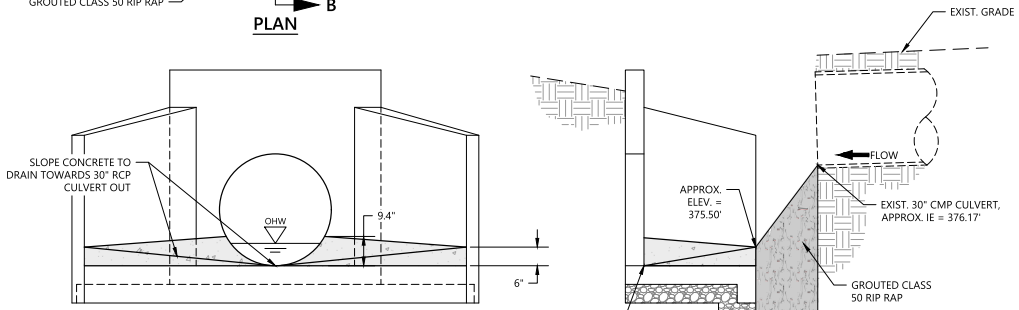
1/4 SECTION	4123
JOB NO.	E11640
SHEET NO.	C03
	4 OF 8

Q:\SHAWNPEREZ_E11640_SW_61ST_DWG\E11640_C-SHEETS.DWG 2/27/2026 PEREZ, SHAWN

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306



PLAN



A-A B-B

1 / C02 HEADWALL 1 (HW-01) CONCRETE CHANNEL
SCALE: NTS

NO.	DATE	DESCRIPTION	APPD.

REVISION

XREF(S) USED:
ROTATION ANGLE:
CONSTRUCTED BY:
PROJECT COMPLETED:
MAP CORRECTED BY: CHECKED BY:
FINAL MAP DATA
DRAWING NAME: E11640_CD-SHEETS.dwg

DESIGNED BY	RR	RR
CAD BY	SLP	RG
CHECKED BY	ST	ED
DATE APPROVED	3/20/2026	
ENGR. SUPV.	RG	
CONST. SUPV.	ED	
ENGR. DIV. MGR.	SD	

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
103567PE
digitally signed
OREGON
JANUARY 09, 2026
STEPHANIE TROUTMAN
Expires 06/30/2026

SW 61ST
CULVERT REPLACEMENT

CIVIL DETAILS

1/4 SECTION	4123
JOB NO.	E11640
SHEET NO.	CD01
	5 OF 8

Q:\SHAWNPEREZ_E11640 SW 61ST_DWG\E11640_CD-SHEETS.DWG 2/27/2026 PEREZ, SHAWN

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

DESIGN CRITERIA:

STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE 9TH EDITION OF THE "AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS." SOIL DESIGN PARAMETERS ARE IN ACCORDANCE WITH THE CITY OF PORTLAND MATERIAL TESTING LAB GEOTECHNICAL REPORT DATED MARCH 14, 2024:

SOIL TYPE	UNIT WEIGHT (PCF)	COHESION (PSF)	FRICTION ANGLE (DEGREES)	ACTIVE EQUIVALENT FLUID PRESSURE (PCF)[1]	SEISMIC LATERAL FORCE[2]
RETAINED MATERIALS - NATIVE SOILS	105	0	28	34	$12*H^2$
FOUNDATION SOIL - GRANULAR FILL	130	0	35		

1. SHEAR KEY PASSIVE PRESSURE - 300 PCF EQUIVALENT FLUID PRESSURE.

2. SEISMIC PRESSURES CALCULATED USING THE MONONOBE-OKABE METHOD, APPLIED AS A DISTRIBUTED LOAD WITH THE CENTROID AT 0.5*H FROM THE BASE OF THE WALL, WHERE H IS THE HEIGHT OF THE WALL FROM THE BASE MEASURED IN FEET.

3. THE RECOMMENDED ALLOWABLE BEARING CAPACITY OF THE SOILS IS 2,00PSF WITH THE UNDERSTANDING THAT IT IS SUPPORTED ON A 6-INCH-THICK LAYER OF COMPACTED GRANULAR FILL.

LIVE LOAD SURCHARGE: 250PSF

GENERAL NOTES:

1. PROVIDE ALL MATERIALS AND PERFORM ALL WORK ACCORDING TO THE "CITY OF PORTLAND STANDARD CONSTRUCTION SPECIFICATIONS 2020".
2. STANDARDS REFERENCED IN THESE NOTES SHALL BE THE LATEST EDITION, UNLESS OTHERWISE NOTED.
3. DETAILS SHALL BE APPLIED TO EVERY LIKE CONDITION WHETHER OR NOT THEY ARE REFERENCED IN EVERY INSTANCE. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS SIMILAR TO THOSE SHOWN.
4. ALL FEATURES OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME TYPE AND CHARACTER AS SHOWN FOR SIMILAR CONDITIONS, SUBJECT TO REVIEW BY THE OWNER'S REPRESENTATIVE.
5. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING FEATURES AND CONDITIONS (DIMENSIONS, ELEVATIONS, ETC.) UPON WHICH THESE DRAWINGS RELY.
6. OMISSIONS OR DISCREPANCIES BETWEEN THE VARIOUS ELEMENTS OF THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING WITH THE WORK.
7. CONSTRUCTION SEQUENCE AND METHODS:
8. THE STRUCTURAL DRAWINGS ARE INTENDED FOR THE STRUCTURE TO ACT AS A WHOLE ONCE CONSTRUCTION IS COMPLETE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE SAFETY AND STABILITY (I.E. TEMPORARY BRACING AND/OR SHORING IF REQUIRED) DURING CONSTRUCTION AS A RESULT OF CONSTRUCTION METHODS AND SEQUENCES.
9. THE CONTRACTOR SHALL TAKE INTO ACCOUNT COLD AND HOT WEATHER CONSTRUCTION AND THE EFFECTS OF THERMAL MOVEMENT DURING THE CONSTRUCTION SCHEDULE.
10. DO NOT CUT OR DRILL ANY REINFORCING. CONTRACTOR TO SCAN OR X-RAY AS NEEDED TO LOCATE REINFORCING PRIOR TO DRILLING.

CONCRETE:

1. THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE OWNER'S REPRESENTATIVE'S TESTING LABORATORY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S. SUBMIT TEST DATA ON EACH PROPOSED MIX FOR REVIEW IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
2. PORTLAND CEMENT SHALL CONFORM TO ASTM C 150 TYPE I OR TYPE II.
3. AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF ASTM C 33 AND PROJECT SPECIFICATIONS.
4. CONCRETE SHALL HAVE THE FOLLOWING 28 DAY STRENGTHS: ALL USES F'C = 4,000 PSI UNLESS NOTED OTHERWISE
5. CONSTRUCTION JOINTS SHALL BE THOROUGHLY AND INTENTIONALLY ROUGHENED (1/4" AMPLITUDE) BY SAND BLASTING OR MECHANICAL MEANS. CLEAN BEFORE POUR. LOCATION TO BE APPROVED BY THE OWNER'S REPRESENTATIVE, ENGINEER. SUBMIT LOCATION PLAN FOR ALL PROPOSED JOINTS NOT INDICATED ON DRAWINGS FOR APPROVAL PRIOR TO BEGINNING WORK.
6. PRIOR TO PLACING CONCRETE, THE CONTRACTOR SHALL ENSURE THAT ALL REINFORCING, EMBEDMENTS AND ANCHOR BOLTS ARE PROPERLY LOCATED AND SECURELY TIED IN PLACE.

REINFORCING STEEL:

1. ALL REINFORCING STEEL FOR CONCRETE CONSTRUCTION SHALL BE PLACED IN CONFORMANCE WITH ACI 318 AND THE "ACI DETAILING MANUAL" AS MODIFIED BY THE PROJECT DRAWINGS AND SPECIFICATIONS.
2. PROVIDE ALL REINFORCING STEEL ACCORDING TO ASTM A706 OR AASHTO M31 ASTM A615) GRADE 60.
3. REINFORCING STEEL SHALL HAVE THE FOLLOWING CONCRETE COVER, UNLESS OTHERWISE NOTED:
   - 3.1. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
   - 3.2. CONCRETE FORMED AND EXPOSED TO EARTH OR WEATHER: 2"
4. ALL REINFORCING STEEL AND EMBEDMENTS TO BE HELD SECURELY IN PLACE PRIOR TO PLACING CONCRETE. PROVIDE SUFFICIENT SUPPORTS TO ALLOW WALKING ON REINFORCEMENT.
5. WELDING OF REINFORCING IS PROHIBITED, UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE.
6. REINFORCEMENT SHALL BE PLACED IN RELATIVE POSITION SHOWN ON THE DRAWINGS.
7. USE THE FOLLOWING SPLICE LENGTHS UNLESS SHOWN OTHERWISE:

REINFORCING SPLICE LENGTHS (CLASS B) GRADE 60 F'C = 4.0KSI, λRC= 0.4, 2IN MIN. CONCRETE CLEAR COVER										
BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14 & #18
UNCOATED	1'-4"	1'-7"	2'-0"	2'-5"	2'-9"	3'-2"	3'-7"	4'-0"	4'-5"	NOT PERMITTED
COATED (1)	1'-5"	1'-11"	2'-5"	2'-10"	3'-4"	3'-9"	4'-3"	4'-10"	5'-4"	NOT PERMITTED
COATED (2)	1'-10"	2'-5"	3'-0"	3'-7"	4'-2"	4'-9"	5'-4"	6'-0"	6'-8"	NOT PERMITTED

8. USE COATED (1) FOR EPOXY COATED BARS WITH COVER AT LEAST $3*D_B$ AND CLEAR SPACING BETWEEN BARS AT LEAST $6*D_B$.
9. USE COATED (2) FOR EPOXY COATED BARS WITH COVER LESS THAN $3*D_B$ OR CLEAR SPACING BETWEEN BARS LESS THAN $6*D_B$.
10. INCREASE ALL SPLICE LENGTHS 30% FOR HORIZONTAL OR NEARLY HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF FRESH CONCRETE IS CAST BELOW THE BAR.
11. SPLICE REINFORCING STEEL AT ALTERNATE BARS, STAGGERED AT LEAST ONE SPLICE LENGTH OR AS FAR AS POSSIBLE, UNLESS SHOWN OTHERWISE.
12. SUPPORT THE BOTTOM MAT REINFORCING STEEL FROM THE FORMS WITH PRECAST MORTAR BLOCKS AT 24" MAXIMUM CENTERS EACH WAY. SUPPORT THE TOP MAT OF REINFORCING STEEL FROM THE BOTTOM MAT OF REINFORCING STEEL WITH WIRE BAR SUPPORTS AS SHOWN IN CHAPTER 3 OF THE "CRSI MANUAL OF STANDARD PRACTICE" (SBU, BBU, OR CHCU). PLACE WIRE BAR SUPPORTS AT 24" MAXIMUM CENTERS.

STRUCTURAL STEEL NOTES:

WELDING NOTES:

1. PRODUCE WELDS ACCORDING TO THE LATEST EDITION OF "AWS D 1.1 STRUCTURAL WELDING CODE FOR STEEL".
2. ALL STRUCTURAL STEEL CONNECTIONS ARE SLIP CRITICAL CONNECTIONS WITH CLASS B FAYING SURFACES UNLESS SHOWN OTHERWISE. (BOLT THREADS SHALL BE EXCLUDED FROM SHEAR PLANE.)
3. TIGHTEN ALL HIGH-STRENGTH BOLTS USING THE "TURN-OF-NUT TIGHTENING" METHOD UNLESS SHOWN OTHERWISE.

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

XREF(S) USED:
ROTATION ANGLE: N/A
CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY ____ CHECKED BY ____
FINAL MAP DATA
DRAWING NAME: E11640_S-SHEETS.dwg

DESIGNED BY: RR
CAD BY: SLP
CHECKED BY: JCG
RES. DESIGN LEAD: CSL
DATE APPROVED: 4/2/2026
ENGR. SUPV.: JCG
CONST. SUPV.: ED
ENGR. DIV. MGR.: SD

APPROVAL:

Signed by: Michael Magee
PBOT CITY ENGINEER — REG. PROF. ENGR. NO. 84470PE

CITY OF PORTLAND
ENVIRONMENTAL SERVICES
KEITH WILSON, MAYOR
PAUL SUTO, P.E., CHIEF ENGINEER

PBOT
KEITH WILSON, MAYOR
MICHAEL MAGEE, P.E., CITY ENGINEER

REGISTERED PROFESSIONAL ENGINEER
80798PE
digitally signed
OREGON
JOHN CAMERON GLASCO
Expires 06/30/2027

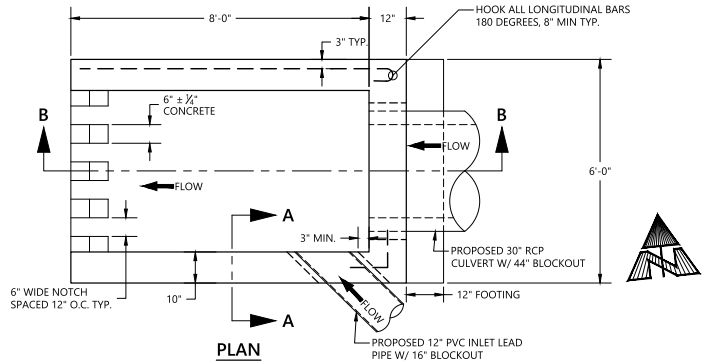
SW 61ST
CULVERT REPLACEMENT

STRUCTURAL DETAILS
DESIGN CRITERIA AND STRUCTURAL NOTES

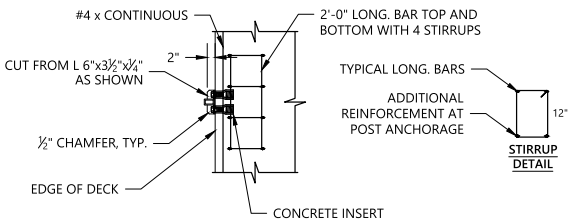
1/4 SECTION: 4123
JOB NO.: E11640
SHEET NO.: S01
6 OF 8

Q:\SHAWNPEREZ\E11640 SW 61ST\DWG\E11640_S-SHEETS.DWG 2/27/2026 PEREZ, SHAWN

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

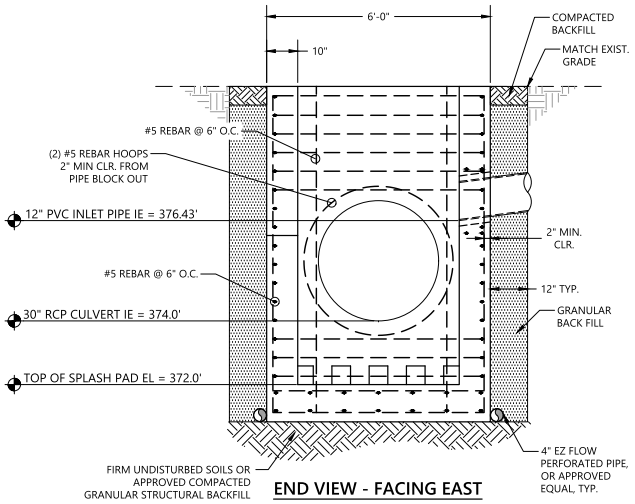


PLAN

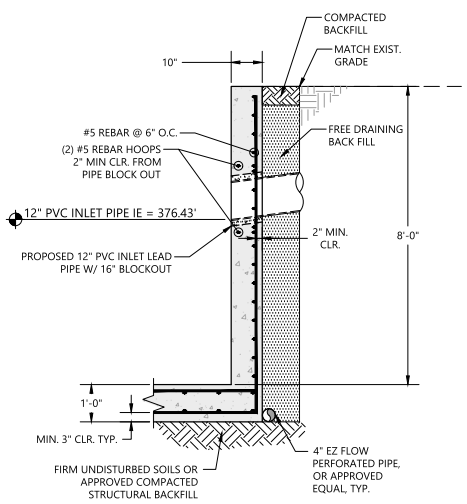


PLAN

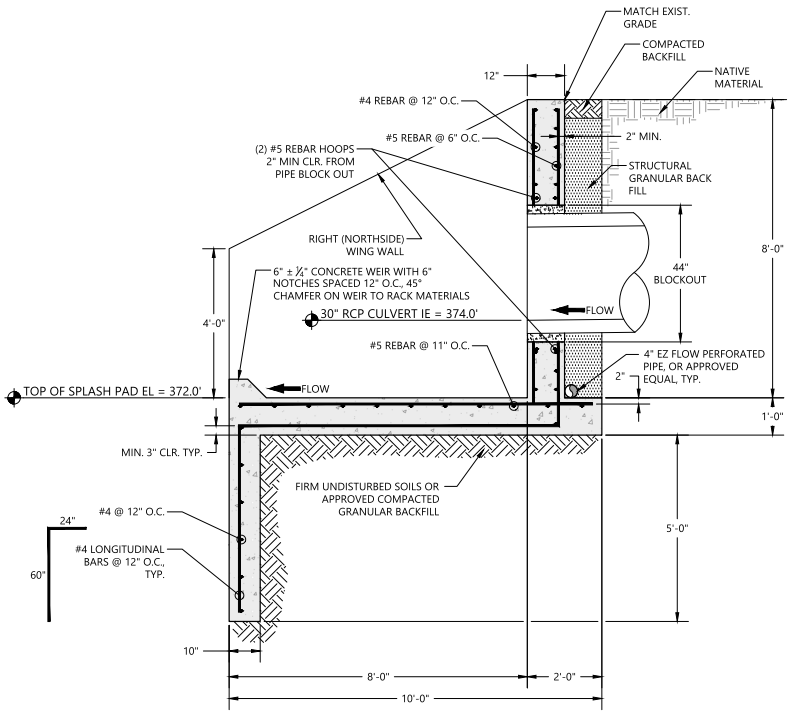
2 / C02 **PEDESTRIAN RAIL SIDE MOUNTING POST REINFORCEMENT - DETAIL**
SCALE: NTS



END VIEW - FACING EAST



A-A
WINGWALL TYP.



B-B

1 / C02 **HEADWALL 2 (HW-02) - STRUCTURAL DETAILS**
SCALE: NTS

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

XREF(S) USED:
ROTATION ANGLE: N/A
CONSTRUCTED BY:
PROJECT COMPLETED:
MAP CORRECTED BY: CHECKED BY:
FINAL MAP DATA
DRAWING NAME: E11640_S-SHEETS.dwg

DESIGNED BY	CSL	DATE APPROVED	4/2/2026
CAD BY	SLP	ENGR. SUPV.	RG
CHECKED BY	ST	CONST. SUPV.	ED
RES. DESIGN LEAD	CSL	ENGR. DIV. MGR.	SD

APPROVAL:
Signed by: Michael Magee
PBOT CITY ENGINEER — REG. PROF. ENGR. NO. 84470PE

CITY OF PORTLAND
ENVIRONMENTAL SERVICES
KEITH WILSON, MAYOR
PAUL SUTO, P.E., CHIEF ENGINEER

PBOT
KEITH WILSON, MAYOR
MICHAEL MAGEE, P.E., CITY ENGINEER

REGISTERED PROFESSIONAL ENGINEER
80798PE
digitally signed
OREGON
JOHN CAMERON GLASCOE
Expires 06/30/2027

SW 61ST
CULVERT REPLACEMENT

STRUCTURAL DETAILS
HEADWALL 2 (HW-02)

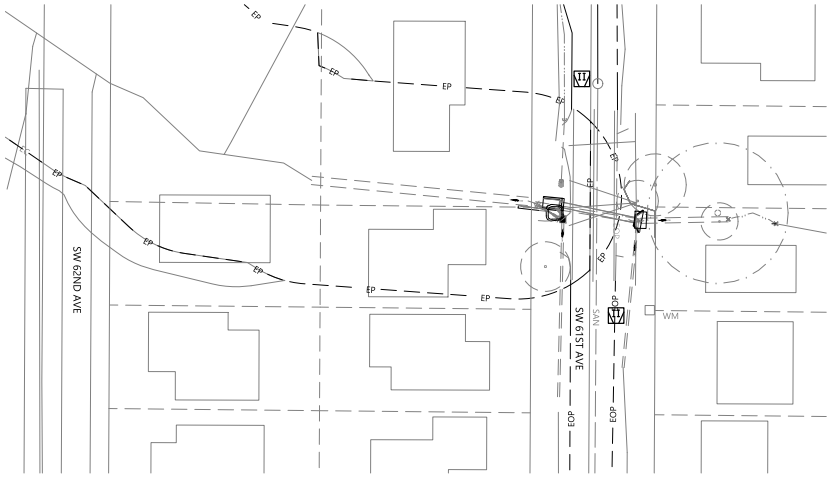
1/4 SECTION	4123
JOB NO.	E11640
SHEET NO.	S02
	7 OF 8

Q:\SHAWNPEREZ_E11640_SW_61ST_DWG\E11640_S-SHEETS.DWG 2/27/2026 PEREZ, SHAWN

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

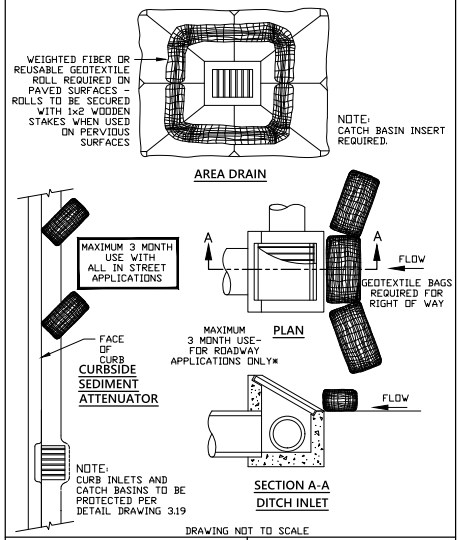
GENERAL NOTES FOR EROSION AND SEDIMENT CONTROL:

1. EROSION AND SEDIMENT CONTROL IS REQUIRED FOR THIS PROJECT.
2. PREPARE AN EROSION AND SEDIMENT CONTROL PLAN (ESCP) BEFORE BEGINNING WORK. KEEP A COPY OF THE ESCP AND THE CITY EROSION AND SEDIMENT CONTROL MANUAL (MARCH 2022) ON SITE AT ALL TIMES DURING THE PROJECT.
3. THE EROSION AND SEDIMENT CONTROL FACILITIES AS SHOWN IN THE CONTRACT DOCUMENTS ARE THE MINIMUM REQUIREMENTS FOR THE ANTICIPATED PROJECT WORK AREA AND SEASONAL CONDITIONS. UPGRADE THESE FACILITIES TO ADDRESS CHANGING WORK OR WEATHER CONDITIONS.
4. SELECT BEST MANAGEMENT PRACTICES (BMPs) FROM THE FOLLOWING DOCUMENTS:
   THE CITY OF PORTLAND EROSION AND SEDIMENT CONTROL MANUAL
   THE STANDARD CONSTRUCTION SPECIFICATIONS
   THE PROJECT CONTRACT DOCUMENTS
5. INSTALL, MONITOR, REPLACE AND UPGRADE ALL FACILITIES AND MEASURES AS SPECIFIED IN THE CONTRACT DOCUMENTS. PERFORM MAINTENANCE TO ENSURE THEIR CONTINUED FUNCTIONING.
6. INSPECT AND MAINTAIN ALL FACILITIES AND MEASURES UNTIL PROJECT WORK AREAS ARE PERMANENTLY RESURFACED OR STABILIZED.
7. COMPLETE AN EROSION CONTROL MONITORING FORM AFTER EACH INSPECTION. INCLUDE THE INSPECTION DATE AND TIME. SUBMIT COMPLETED FORMS THROUGH THE HERON PROCESS. PROVIDE THEM UPON REQUEST TO THE OWNER'S REPRESENTATIVE.
8. NO VISIBLE AND MEASURABLE SEDIMENT SHALL EXIT THE SITE, ENTER A PUBLIC RIGHT-OF-WAY, OR BE DEPOSITED INTO ANY WATER BODY OR STORM DRAINAGE SYSTEM.
9. FOLLOWING A STORM EVENT, INSPECT AND ADJUST, REPAIR, IMPROVE, OR REPLACE ALL DEFICIENT OR FAILING FACILITIES AND MEASURES.
10. PROTECT ALL FUNCTIONING STORMWATER INLETS AND CATCH BASINS FROM RECEIVING UNFILTERED SEDIMENT AND SEDIMENT-LADEN RUNOFF.
11. REMOVE SEDIMENT AND DEBRIS FROM INLETS AND CATCH BASINS BEFORE AND AFTER PAVING. DO NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
12. STABILIZE ALL EXPOSED SOIL IMMEDIATELY FOLLOWING GROUND DISTURBING ACTIVITY.
13. STABILIZE AND PROTECT STOCKPILED SOIL WITH APPROVED MEASURES.
14. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL FACILITIES AFTER THE PROJECT IS COMPLETED AND ACCEPTED BY THE OWNER'S REPRESENTATIVE.
15. INSTALL SEDIMENT FENCE.



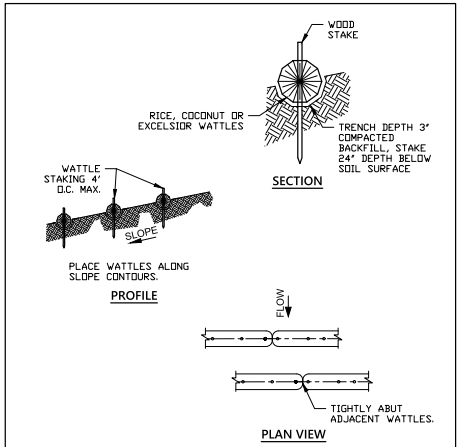
SCALE
30 0 15 30 60
SCALE FEET

*BIOBAGS MUST BE REMOVED AT END OF JOB



DRAWING NOT TO SCALE

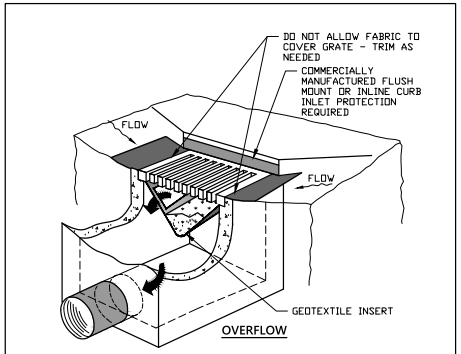
EROSION CONTROL MANUAL	FILTRATION BAGS AND SOCKS: TEMPORARY INLET PROTECTION Detail Drawing 3.16-A



NOTES:
1. STAKING SPECIFICATIONS:
   a. 1"x2" WOODEN STAKES
   b. ADDITIONAL STAKES MAY BE INSTALLED ON DOWNHILL SIDE OF WATTLES, ON STEEP SLOPE OR HIGHLY EROSIVE SOILS.

DRAWING NOT TO SCALE

EROSION CONTROL MANUAL	FIBER ROLLS AND WATTLES: SLOPE INSTALLATION Detail Drawing 3.17-A



NOTES:
RECESSED CURB INLET MUST BE PROTECTED WHEN CURB INLET IS PRESENT. SIZE OF FILTER FABRIC INLET SACK TO BE DETERMINED BY MANUFACTURER.

COMMERCIALLY MANUFACTURED DEVICES RATED AS "HIGH FLOW" REQUIRED IN LOCATIONS WHERE FREQUENT FLOODING OCCURS. GRATES THAT ARE NOT REMOVABLE MAY UTILIZE COMMERCIALLY MANUFACTURED "TOP OF GRATE" DEVICE.

DRAWING NOT TO SCALE

EROSION CONTROL MANUAL	STORM DRAIN INLET INSERT Detail Drawing 3.19-B

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

XREF(S) USED: E11640_XBMAP,E11640_XDSPLAN,E11640_XSURV
ROTATION ANGLE: 0d0'0"
CONSTRUCTED BY:
PROJECT COMPLETED:
MAP CORRECTED BY: CHECKED BY:
FINAL MAP DATA
DRAWING NAME: E11640_CE-SHEETS.dwg

DESIGNED BY	CSL	DATE APPROVED	3/20/2026
CAD BY	SLP	ENGR. SUPV.	RG
CHECKED BY	ST	CONST. SUPV.	ED
		ENGR. DIV. MGR.	SD

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
103567PE
digitally signed
OREGON
JANUARY 09, 2024
STEPHANIE TROUTT
Expires 06/30/2026

SW 61ST
CULVERT REPLACEMENT

EROSION CONTROL PLAN
NOTES AND DETAILS

1/4 SECTION	4123
JOB NO.	E11640
SHEET NO.	CE01
	8 OF 8

Q:\SHAWNPEREZ\E11640 SW 61ST\DWG\E11640_CE-SHEETS.DWG 2/27/2026 PEREZ, SHAWN

Certificate Of Completion

Envelope Id: 3FE302BA-5E96-8CCC-8097-895BEB3914F7
Status: Completed
Subject: Please sign with Docusign: E11640 SW 61ST AVE (STAMPED) 2026-04-21.pdf
Source Envelope:
Document Pages: 1
Signatures: 0
Certificate Pages: 1
Initials: 1
AutoNav: Enabled
EnvelopeId Stamping: Enabled
Time Zone: (UTC-08:00) Pacific Time (US & Canada)

Envelope Originator:
Rick Scott
1120 SW Fifth Avenue, Room 1000
Portland, OR 97204
rick.scott@portlandoregon.gov
IP Address: 74.120.152.141

Record Tracking

Status: Original
4/21/2026 1:42:38 PM
Security Appliance Status: Connected

Holder: Rick Scott
rick.scott@portlandoregon.gov
Pool: StateLocal

Location: DocuSign

Signer Events	Signature	Timestamp
Stephanie Trujillo Stephanie.Trujillo@portlandoregon.gov Security Level: Email, Account Authentication (None)	Initial ST Signature Adoption: Pre-selected Style Using IP Address: 74.120.152.131	Sent: 4/21/2026 1:45:46 PM Viewed: 4/21/2026 1:46:28 PM Signed: 4/21/2026 1:49:32 PM

Electronic Record and Signature Disclosure:
Not Offered via Docusign

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp
Suzie Gorman Suzie.Gorman@portlandoregon.gov Security Level: Email, Account Authentication (None)	COPIED	Sent: 4/21/2026 1:49:33 PM

Electronic Record and Signature Disclosure:
Not Offered via Docusign

Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	4/21/2026 1:45:46 PM
Certified Delivered	Security Checked	4/21/2026 1:46:28 PM
Signing Complete	Security Checked	4/21/2026 1:49:32 PM
Completed	Security Checked	4/21/2026 1:49:33 PM

Payment Events	Status	Timestamps

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

PERMITS

USACE NWP VERIFICATION LETTER (NWP-2024-00401)

DEQ 401 WATER QUALITY CERTIFICATION APPROVAL

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, PORTLAND DISTRICT
P.O. BOX 2946
PORTLAND, OR 97208-2946

January 16, 2026

Regulatory Branch
Corps No. NWP-2024-00401

Ms. Stephani Trujillo
City of Portland Bureau of Environmental Services
1120 SW 5th Avenue
Portland, OR 97204
stephanie.trujillo@portlandoregon.gov

Dear Ms. Trujillo:

The U.S. Army Corps of Engineers (Corps) received your request for Department of the Army authorization to discharge up to 22 cubic yards of fill material into 45 square feet of an unnamed tributary to allow for the replacement of a reinforced concrete pipe and headwall. The project is proposed in an unnamed tributary to South Ash Creek located at on Southwest 61st Avenue in Portland, Multnomah County, Oregon at Latitude/Longitude: 45.4459947 °, -122.739577°. This letter verifies your project as depicted on the enclosed drawings (Enclosure 1) is authorized by Nationwide Permit (NWP) No. 14, Linear Transportation Projects (Federal Register, December 27, 2021, Vol. 86, No. 245).

In order for this authorization to be valid, you must ensure the work is performed in accordance with the enclosed Nationwide Permit 14 Terms and Conditions (Enclosure 2); the Oregon Department of Environmental Quality (DEQ) Section 401 Water Quality Certification Conditions (Enclosure 3); and the following special conditions:

We have reviewed your project pursuant to the requirements of the Endangered Species Act, the Magnuson-Stevens Fishery Conservation and Management Act and the National Historic Preservation Act. We have determined the project complies with the requirements of these laws provided you comply with all of the permit general and special conditions.

The DEQ has issued a Section 401 Water Quality Certification for this project. No further coordination with DEQ is required provided the work is performed in accordance with all of the enclosed conditions.

The Corps did not prepare a jurisdictional determination for this project. The Corps has treated the aquatic resource to be affected by this project as jurisdictional waters of the United States.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

The verification of this NWP is valid until March 14, 2026, unless the NWP is modified, reissued, or revoked prior to that date. If the authorized work has not been completed by that date and you have commenced or are under contract to commence this activity before March 14, 2026, you will have until March 14, 2027, to complete the activity under the enclosed terms and conditions of this NWP. If the work cannot be completed by March 14, 2027, you will need to obtain a new NWP verification or authorization by another type of Department of the Army permit.

Our verification of this NWP is based on the project description and construction methods provided in your permit application. If you propose changes to the project, you must submit revised plans to this office and receive our approval of the revisions prior to performing the work. Failure to comply with all terms and conditions of this NWP verification invalidates this authorization and could result in a violation of Section 404 of the Clean Water Act. You must also obtain all local, state, and other federal permits that apply to this project.

Upon completing the authorized work, you must fill out and return the enclosed *Certification of Compliance with Department of the Army Permit* form (Enclosure 4). We would like to hear about your experience working with the Portland District, Regulatory Branch. Please complete a customer service survey form available on our website (https://regulatory.ops.usace.army.mil/customer-service-survey/).

If you have any questions regarding this NWP verification, please contact Kelley Herbel by telephone at (916) 557-7808 or by email at kelley.c.herbel@usace.army.mil.

FOR THE COMMANDER, LARRY D. CASWELL, JR., PE, PMP, COLONEL, U.S. ARMY, DISTRICT COMMANDER and DISTRICT ENGINEER:

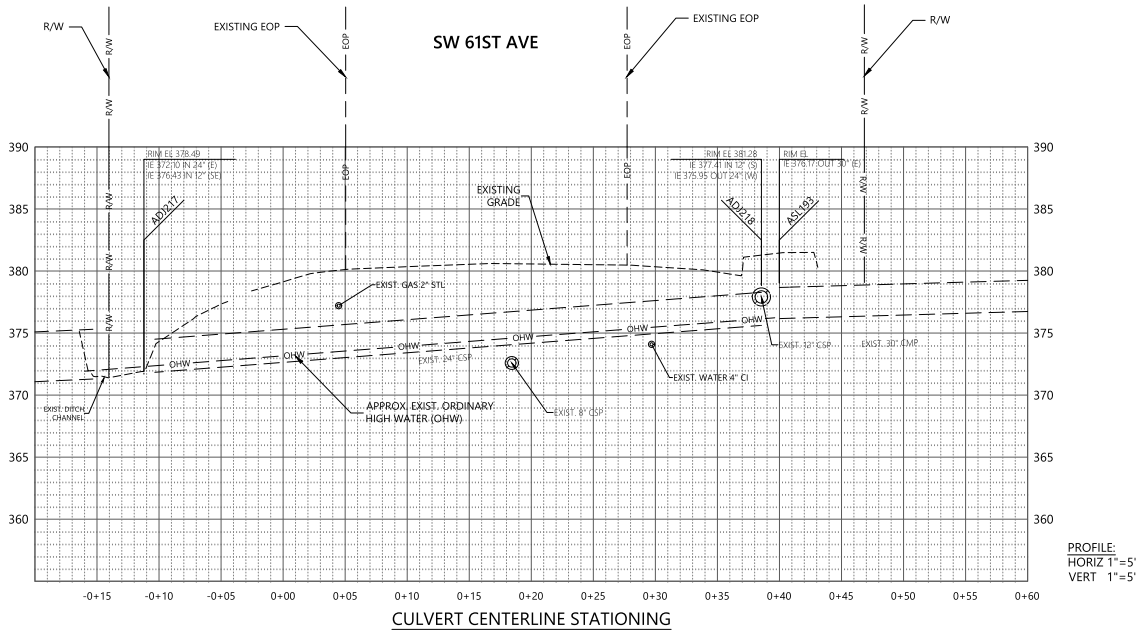
Melody J. White

For: William D. Abadie
Chief, Regulatory Branch

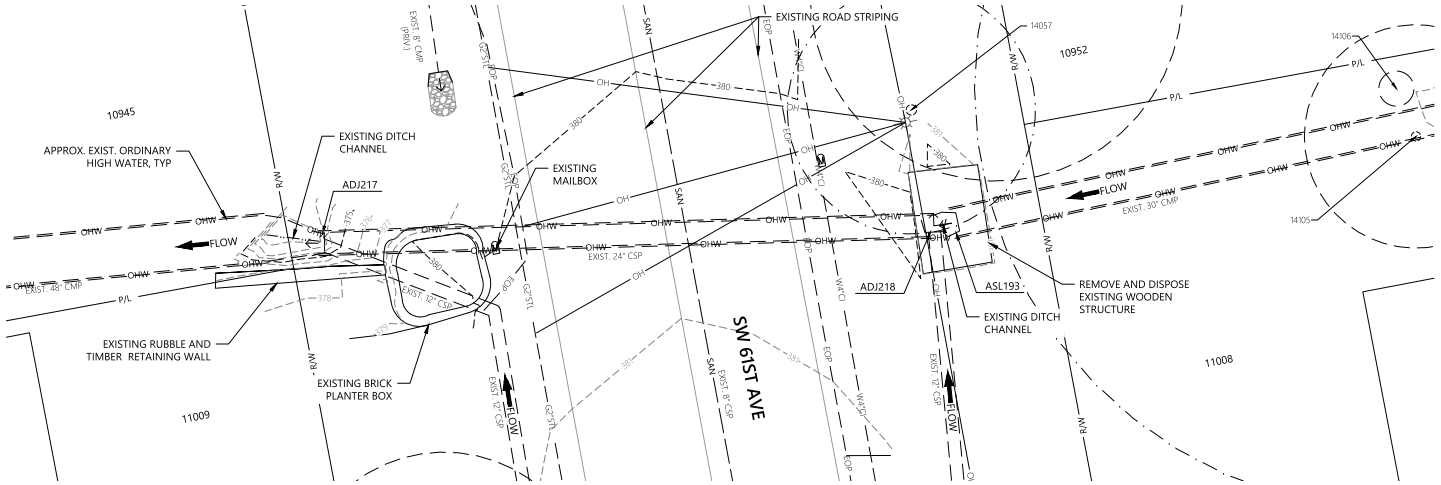
Enclosures

cc:
Oregon Department of State Lands (Kristin Politano, kristin.politano@dsl.oregon.gov)
Oregon Department of Environmental Quality (401certifications@deq.oregon.gov

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306



CULVERT CENTERLINE STATIONING



NO.	DATE	DESCRIPTION	APPD.

REVISION

XREF(S) USED: _E11640_XBMAP;E11640_XDSN;E11640_XSURV
ROTATION ANGLE: 13d0'0"
CONSTRUCTED BY:
PROJECT COMPLETED:
MAP CORRECTED BY: CHECKED BY:
FINAL MAP DATA
DRAWING NAME: E11640_C-SHEETS.dwg

DESIGNED BY: CJ
CAD BY: SAP
CHECKED BY: SP
DATE APPROVED
ENGR. SUPV.: RG
CONST. SUPV.: TP
ENGR. DIV. MGR.: SD

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

DRAFT
90%

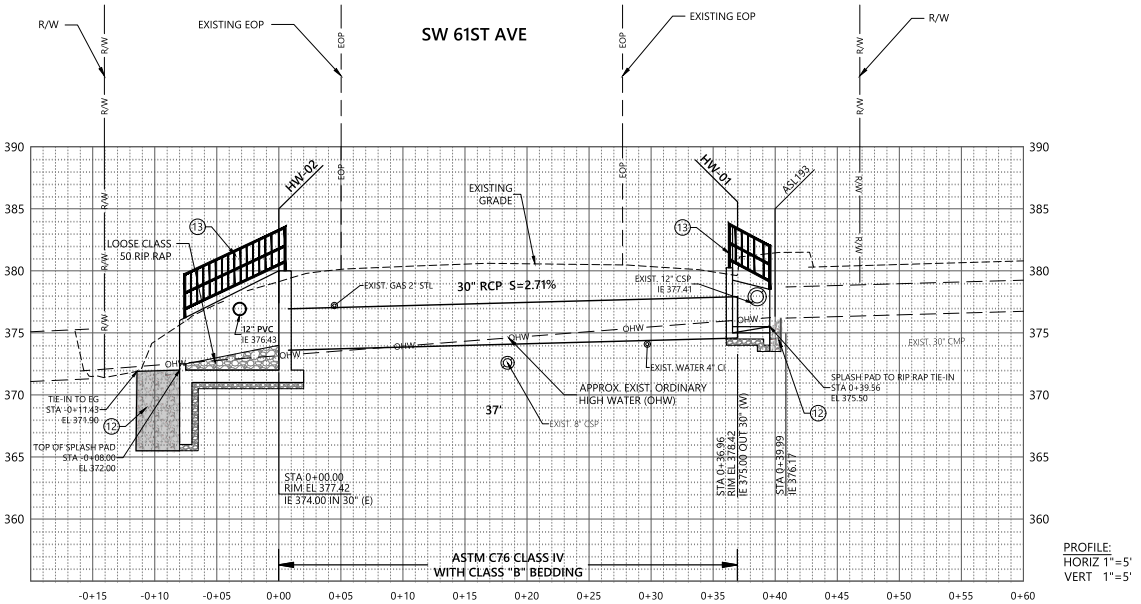
SW 61ST
CULVERT REPLACEMENT

EXISTING CONDITIONS PLAN AND PROFILE
SW 61ST AVE N. OF SW POMONA ST
ADJ218 TO ADJ217

1/4 SECTION: 4123
JOB NO.: E11640
SHEET NO.: C01
2 OF 6

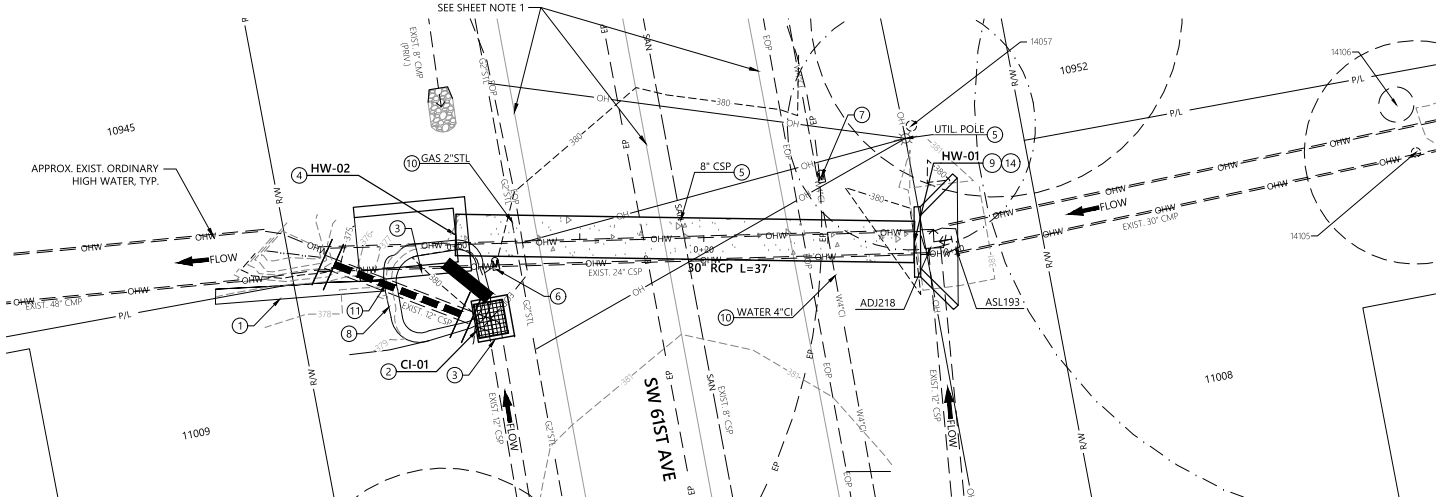
Q:\SHAWNPEREZ\E11640_SW 61ST\DWG\E11640_C-SHEETS.DWG 11/4/2025 PEREZ, SHAWN

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306



PROFILE:
HORIZ 1"=5'
VERT 1"=5'

CULVERT CENTERLINE STATIONING



CONSTRUCTION NOTES:

1. PROTECT EXISTING RUBBLE AND TIMBER RETAINING WALL.
2. CONSTRUCT G2MA INLET PER ODOT STD DWG. RD364.
3. CONNECT PIPE TO STRUCTURE.
4. CONSTRUCT RETAINING WALL, CAST-IN-PLACE CONCRETE RIGID SEMI-GRAVITY CANTILEVER. SEE DETAIL SHEET S01.
5. PROTECT UTILITY IN PLACE.
6. REMOVE AND REINSTALL MAILBOX SUPPORTS.
7. PERMANENTLY RELOCATE MAILBOX TO LOCATION INDICATED BY PROPERTY OWNER.
8. CONTRACTOR TO SALVAGE AND STOCKPILE CONCRETE LANDSCAPE BLOCKS AS DIRECTED BY THE PROPERTY OWNER.
9. CONSTRUCT RETAINING WALL, PREFABRICATED MODULAR GRAVITY.
10. RELOCATE EXISTING UTILITY (BY OTHERS).
11. ABANDON PIPE.
12. CONSTRUCT GROUTED CLASS 50 RIP RAP.
13. CONSTRUCT ALUMINUM PEDESTRIAN FENCE PER ODOT STD. DWGS. RD780, RD781 AND RD782 ON BREAKAWAY ANCHOR POSTS, ATKORE BREAKOUT SIGN POST COUPLER OR APPROVED EQUAL.
14. CONSTRUCT CONCRETE CHANNEL PER DETAIL 1, SHEET CD01.

SHEET NOTES:

1. PERMANENT TRAFFIC STRIPING AND MARKING TO BE COMPLETED BY THE BUREAU OF TRANSPORTATION AFTER COMPLETION OF WORK. CONTRACTOR SHALL MAINTAIN ALL TEMPORARY STRIPING AND COORDINATE WITH OWNER'S REPRESENTATIVE WHEN FINAL PAVING IS COMPLETE.

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

XREF(S) USED: E11640_XBMAP;E11640_XDSN;E11640_XSURV
ROTATION ANGLE: 1'd0'0"
CONSTRUCTED BY:
PROJECT COMPLETED:
MAP CORRECTED BY: CHECKED BY:
FINAL MAP DATA
DRAWING NAME: E11640_C-SHEETS.dwg

DESIGNED BY: CJ
CAD BY: SJH
CHECKED BY: SP
DATE APPROVED
ENGR. SUPV.: RG
CONST. SUPV.: TP
ENGR. DIV. MGR.: SD

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

DRAFT
90%

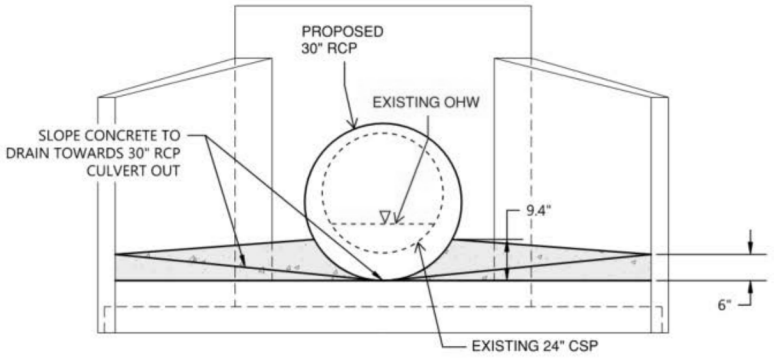
SW 61ST
CULVERT REPLACEMENT

PROPOSED CONDITIONS PLAN AND PROFILE
SW 61ST AVE N. OF SW POMONA ST
HW-01 TO HW-02

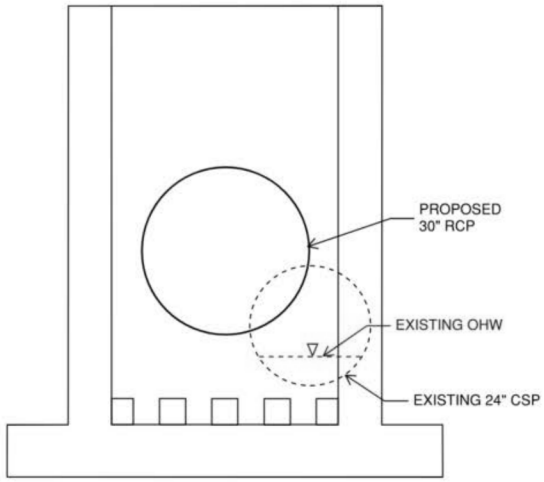
1/4 SECTION: 4123
JOB NO.: E11640
SHEET NO.: C02
3 OF 6

Q:\SHAWNPEREZ\E11640_SW 61ST\DWG\E11640_C-SHEETS.DWG 11/4/2025 PEREZ, SHAWN

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306



UPSTREAM HEADWALL 1
(HW-01)



DOWNSTREAM HEADWALL 2
(HW-02)

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

US Army Corps of Engineers ®
Portland District

Nationwide Permit 14
Terms and Conditions

Effective Date: February 25, 2022

A. Description of Activities Authorized by Nationwide Permit 14
B. Nationwide Permit General Conditions
C. District Engineer's Decision
D. Further Information
E. Portland District Regional General Conditions

In addition to any special conditions that may be required on a case-by-case basis by the District Engineer, the following terms and conditions must be met, as applicable, for a Nationwide Permit authorization to be valid in Oregon.

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

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

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

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

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

exceeds 1/10-acre; or (2) there is a discharge of dredged or fill material in a special aquatic site, including wetlands. (See general condition 32.) (Authorities: Sections 10 and 404)

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

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

Note 3: For NWP 14 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b)(4) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, “District Engineer’s Decision.” The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

B. Nationwide Permit General Conditions

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

1. *Navigation*. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

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

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

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

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

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

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

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

9. *Management of Water Flows*. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

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

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

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

13. *Removal of Temporary Structures and Fills*. Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

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

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

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

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

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

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

17. *Tribal Rights*. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. *Endangered Species*. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA Section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA Section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA Section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA Section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under Section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation)

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

that might be affected by the proposed activity. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA Section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

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

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

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

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

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

19. *Migratory Birds and Bald and Golden Eagles*. The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. *Historic Properties*. (a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under Section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with Section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of Section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA Section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. If NHPA Section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that Section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. *Discovery of Previously Unknown Remains and Artifacts*. Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal,

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

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

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

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

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

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

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

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

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

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

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. *Safety of Impoundment Structures*. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. *Water Quality*. (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA Section 401, a CWA Section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA Section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. *Coastal Zone Management*. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. *Regional and Case-By-Case Conditions*. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA Section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. *Use of Multiple Nationwide Permits*. The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1⁄3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. *Transfer of Nationwide Permit Verifications*. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

_____
(Transferee)

_____
(Date)

30. *Compliance Certification*. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. *Activities Affecting Structures or Works Built by the United States*. If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a “USACE project”), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires Section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the Section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. *Pre-Construction Notification*. (a) *Timing*. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification*: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for Section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification*: The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination*: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

C. District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

D. Further Information

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

E. Portland District Regional Conditions

1. *Notification:* For permittees that received written NWP approval, upon starting the authorized activities, you shall notify the U.S. Army Corps of Engineers, Portland District, Regulatory Branch that the work has started. Notification shall be provided by e-mail to cenwp.notify@usace.army.mil and the email subject line shall include: Corps project number and the project location by county.

2. *Aquatic Resources of Special Concern*: Pre-construction notification to the District Engineer is required for all activities proposed in waters of the U.S. within, or directly

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

affecting, an aquatic resource of special concern. Aquatic resources of special concern are resources that are difficult to replace, unique, and/or have high ecological function. For the purpose of this regional condition, aquatic resources of special concern are native eel grass (Zostera marina) beds, mature forested wetlands, bogs, fens, vernal pools, alkali wetlands, wetlands in dunal systems along the Oregon coast, estuarine wetlands, Willamette Valley wet prairie wetlands, marine gardens, marine reserves, kelp beds, and rocky substrate in tidal waters.

In addition to the content requirements of NWP General Condition (GC) 32, the pre-construction notification must include a statement explaining why the effects of the proposed activity are no more than minimal. Written approval from the District Engineer must be obtained prior to commencing work.

Note: If the District Engineer determines that the adverse effects of the proposed activity are more than minimal, then the District Engineer will notify the applicant that either:

a. the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit;

b. the activity is authorized under the NWP subject to submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or

c. the activity is authorized under the NWP with specific modifications or conditions.

3. *Cultural Resources and Human Burials-Inadvertent Discovery Plan*: In addition to the requirements in NWP GCs 20 and 21, the permittee shall immediately notify the District Engineer if, at any time during the course of the work authorized, human burials, cultural items, or historic properties, as defined by the National Historic Preservation Act and Native American Graves Protection and Repatriation Act, are discovered. The permittee shall implement the following procedures as outlined on the Inadvertent Discovery Plan posted on the Portland District Regulatorywebsite at *https://www.nwp.usace.army.mil/Missions/Regulatory/Nationwide.aspx*

Notify the Portland District Engineer as soon as possible following discovery but in no case later than 24 hours. Notification shall be sent electronically (cenwp.notify@usace.army.mil) and shall identify the Corps project number and clearly specify the purpose is to report a cultural resource discovery. The permittee shall also notify the Corps representative (by email and telephone) identified in the verification letter.

4. *Essential Fish Habitat:* Activities which may adversely affect essential fish habitat, as defined under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), are not authorized by NWP until essential fish habitat requirements have been met by the applicant and the Corps. Non-federal permittees must submit a pre-construction notification to the District Engineer if essential fish habitat may be affected

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

by, or is in the vicinity of, a proposed activity and shall not begin work until notified by the District Engineer that the requirements of the essential fish habitat provisions of the MSA have been satisfied and the activity is authorized. The notification must identify the type(s) of essential fish habitat (e.g., Pacific coast salmon, Pacific coast groundfish, and/or Coastal-pelagic species) managed by a Fishery Management Plan that may be affected. Information about essential fish habitat is available at NOAA's website: *http://www.westcoast.fisheries.noaa.gov*

5. *Bank Stabilization:* Permittee shall include the use of bioengineering techniques and natural materials in the project design to the maximum extent practicable and shall minimize the use of rock. Bioengineering bank stabilization techniques are those that increase the strength and structure of soils with a combination of biological and mechanical elements (e.g., vegetation, root wads and woody debris, rock structures). Riparian plantings shall be included in all project designs unless the permittee can demonstrate that such plantings are not practicable.

6. *Work Area Isolation and Dewatering:* Appropriate best management practices shall be implemented to prevent erosion and to prevent sediments from entering waters of the U.S.

a. All in-water work shall be isolated from the active channel or conducted during low seasonal stream flows to the maximum extent practicable.

b. Cofferdams shall be constructed of non-erosive material, such as concrete jersey barriers, sand and gravel bag dams, or water bladders. Constructing a cofferdam by pushing material from the streambed or sloughing material from the streambanks is not authorized.

c. Sand and gravel bag dams shall be lined with a plastic liner or geotextile fabric to reduce permeability and prevent sediments and/or construction materials from entering waters of the U.S.

d. Upstream and downstream flows shall be maintained by routing flows around the construction site.

e. When dewatering is necessary for construction, a sediment basin, or other applicable method, shall be used to settle sediments prior to releasing the water back into the waterbody. Settled water shall be returned to the waterbody in such a manner as to avoid erosion. Sediment basins shall be placed in uplands.

f. Fish and other aquatic species must be salvaged (i.e., safely captured and relocated away from the project or development site) prior to dewatering. Contact ODFW for additional information regarding fish salvage.

7. *Dredging:* For NWP-authorized activities that involve removal of sediment from waters of the U.S., the permittee shall ensure that any necessary sediment characterization regarding

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

size, composition, and potential contaminants is conducted and reviewed prior to dredging. Sediment characterization must be conducted per the Sediment Evaluation Framework for the Pacific Northwest (available at: *http://www.nwp.usace.army.mil/Missions/Environmental-Stewardship/DMM.aspx*).

Note: The return water from a contained disposal area is defined as a discharge of dredged material by 33 CFR part 323.2(d) and requires separate authorization from the District Engineer (*e.g.*, by NWP 16).

8. *Mechanized Equipment:* In addition to the requirements in NWP GC 11, permittee shall implement the following practices to prevent or minimize impacts to the aquatic environment from mechanized equipment:

a. Operate equipment from the top of a streambank and conduct work outside of the active stream channel, unless specifically authorized by the District Engineer.

b. Spill prevention and containment materials shall be maintained and be readily accessible at vehicle staging areas. The amount of spill response materials (such as straw matting/bales, geotextiles, booms, diapers, and other absorbent materials, shovels, brooms, and containment bags) maintained on-site must be appropriate for the size of the authorized activity.

Note: See Regional Condition 10 regarding timeframes for temporary fills.

9. *Erosion Control:* During construction and until the site is stabilized, the permittee shall ensure all practicable measures are implemented and maintained to prevent erosion and runoff. Temporary stockpiles of excavated or dredged material shall be stabilized to prevent erosion. Once soils or slopes have been stabilized, permittee shall completely remove and properly dispose of or re-use all non-biodegradable components of installed control measures.

10. *Temporary Fills and Impacts:* To ensure no more than minimal adverse environmental effects from temporary fills and impacts to waters of the U.S:

a. Temporary fills and/or impacts to waters of the U.S. shall not exceed six months unless otherwise approved by the District Engineer.

b. No more than one-half (½) acre of waters of the U.S. may be temporarily filled or impacted unless otherwise approved by the District Engineer (temporary fills and impacts do not affect specified limits for loss of waters associated with specific nationwide permits).

c. Native soils and/or sediments removed from waters of the U.S. for project construction shall be stockpiled and used for site restoration to the maximum extent practicable.

d. Site restoration of temporarily filled or impacted areas shall include returning the

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

area to pre-project ground surface contours. The permittee shall appropriately revegetate temporarily filled or impacted areas with native, noninvasive herbs, shrubs, and/or tree species sufficient in number, spacing, and diversity to replace affected aquatic functions.

Note: The Corps will determine compensatory mitigation requirements for temporary fills and impacts on a case-by-case basis depending on the duration and nature of the temporary fill or impact and the type of aquatic resource affected.

11. *Contractor Notification of Permit Requirements:* The permittee must provide a copy of the Nationwide Permit verification letter, conditions, and permit drawings to all contractors and any other parties performing the authorized work, prior to the commencement of any work in waters of the U.S.

12. *Inspection of the Project Site:* The permittee shall allow representatives of the District Engineer to inspect the authorized activity to confirm compliance with nationwide permit terms and conditions. A request for access to the site will normally be made sufficiently in advance to allow a property owner or representative the option to be on site during the inspection.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Oregon
Tina Kotek, Governor

Department of Environmental Quality
Northwest Region
700 NE Multnomah Street, Suite 600
Portland, OR 97232
(503) 229-5263
FAX (503) 229-6945
TTY 711

December 12, 2025

Stephanie Trujillo
City of Portland BES
1120 SW 5th Ave
Portland, OR 97204

RE: 401 Water Quality Certification Approval for Project Number 2024-401, E11640 SW 61st Ave Culvert Replacement

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

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

Duration of Certificate: This 401 WQC for impacts to waters, including dredge and fill activities, is valid for the duration of the USACE Section 404 permit. A new 401 WQC must be requested with any modification of the USACE 404 permit.

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

401 GENERAL CERTIFICATION CONDITIONS

1) **Responsible parties:** This 401 WQC applies to the Applicant. The Applicant is responsible for the work of its contractors and sub-contractors, as well as any other entity that performs work related to this WQC.
Rule: *40 CFR 121, OAR 340-048-0015*
Justification: *DEQ must be aware of responsible parties to ensure compliance.*

2) **Work Authorized:** Work authorized by this 401 WQC is limited to the work described in the Permit Application and additional application materials (hereafter “the permit application materials”), unless otherwise authorized by DEQ. If the project is operated in a manner not

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

consistent with the project description contained in the permit application materials, the Applicant is not in compliance with this 401 WQC and may be subject to enforcement.
Rule: *OAR 340-048-0015*
Justification: *To ensure the project will comply with water quality standards, DEQ must understand all work involved in the construction and operation of the project.*

3) **401 WQC on Site:** A copy of this 401 WQC must be kept on the job site and readily available for reference by the Applicant and its contractors and subcontractors, as well as by DEQ, USACE, National Marine Fisheries Service (NMFS), Oregon Department of Fish and Wildlife (ODFW), and other state and local government inspectors.
Rule: *OAR 340-012*
Justification: *All parties must be aware of and comply with the 401 WQC, including on-site contractors.*

4) **Project Changes:** DEQ may modify or revoke this 401 WQC, in accordance with OAR 340-048-0050, if the project changes or project activities are having an adverse impact on state water quality or beneficial uses, or if the Applicant is otherwise in violation of the conditions of this certification.
Rule: *OAR 340-048-0050*
Justification: *To ensure the project will comply with water quality standards, DEQ must understand all work involved in the construction and operation of the project.*

5) **Land Use Compatibility Statement:** In accordance with OAR 340-048-0020(2) (i), each Applicant must submit findings prepared by the local land use jurisdiction that demonstrates the activity's compliance with the local comprehensive plan. Such findings can be submitted using Section 11 of the Joint Permit Application, signed by the appropriate local official and indicating:

   a. "This project is consistent with the comprehensive plan and land use regulations;" or,

   b. "This project will be consistent with the comprehensive plan and land use regulations when the following local approvals are obtained," accompanied by the obtained local approvals.

   c. Rarely, such as for federal projects on federal land, "this project is not regulated by the comprehensive plan" will be acceptable.

   In lieu of submitting the appropriate section of the USACE & Department of State Lands (DSL) Joint Permit Application, the Applicant may use DEQ's Land Use Compatibility Statement form found at: http://www.oregon.gov/deq/FilterDocs/lucs.pdf
   Rule: *OAR 340-048-0020(2) (i), OAR 340-018*
   Justification: *DEQ must ensure compliance with water quality land use laws at the local level.*

6) **Access:** The Applicant and its contractors must allow DEQ access to the project site with or without prior notice, including staging areas, and mitigation sites to monitor compliance with these 401 WQC conditions, including:

   a. Access to any records, logs, and reports that must be kept under the conditions of this 401 WQC;

   b. To inspect best management practices (BMPs), monitoring or equipment or methods; and

   c. To collect samples or monitor any discharge of pollutants.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Rule: *OAR 340-012*
Justification: *DEQ must inspect facilities for compliance with all state rules and laws.*

7) Failure of any person or entity to comply with this Order may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce its terms.
Rule: *OAR 340-012*
Justification: *If the project is not being constructed or operated as proposed, it may not be consistent with water quality requirements.*

FOR PROJECTS THAT PROPOSE CONSTRUCTION, THE FOLLOWING GENERAL CONDITIONS APPLY

8) **Erosion and Sediment Control**: During construction, erosion control measures must be implemented to prevent or control movement of soil into waters of the state. The Applicant is required to develop and implement an effective erosion and sediment control plan. A project that disturbs more than one acre may be required to obtain a National Pollutant Discharge Elimination System (NPDES) 1200-C construction stormwater general permit**.** Contact the DEQ Stormwater Program for more information at: https://www.oregon.gov/deq/wq/wqpermits/Pages/Stormwater-Construction.aspx

In addition, the Applicant must:

a. Maintain an adequate supply of materials necessary to control erosion at the project construction site.

b. Prohibit erosion of stockpiles. Deploy compost berms, impervious materials, or other effective methods during rain events or when stockpiles are not moved or reshaped for more than 48 hours.

c. Inspect erosion control measures daily and maintain erosion control measures as often necessary to ensure the continued effectiveness of measures. Erosion control measures must remain in place until all exposed soil is stabilized;

i. If monitoring or inspection shows that the erosion and sediment controls are ineffective, Applicant must mobilize immediately to make repairs, install replacements, or install additional controls as necessary.

ii. If sediment has reached 1/3 of the exposed height of a sediment or erosion control, Applicant must remove the sediment to its original contour.

d. Use removable pads or mats to prevent soil compaction at all construction access points through, and staging areas in, riparian or wetland areas to prevent soil compaction, unless otherwise authorized by DEQ.

e. Flag or fence off wetlands not specifically authorized to be impacted to protect from disturbance and/or erosion.

f. Place dredged or other excavated material on upland areas with stable slopes to prevent materials from eroding back into waterways or wetlands.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

g. Place clean aggregate at all construction entrances, and utilize other BMPs, including, but not limited to as truck or wheel washes, when earth moving equipment is leaving the site and traveling on paved surfaces. The tracking of sediment off site by vehicles is prohibited.

Rule: *OAR 340-041-0007(8), ORS 468B.050, CWA Section 402, OAR 340-045*
Justification: *DEQ must ensure that pollution does not enter waterways.*

9) **Deleterious Waste Materials:** The Applicant is prohibited from placing biologically harmful materials and construction debris where they could enter waters of the state, including wetlands (wetlands are waters of the state). This includes, but is not limited to: petroleum products; chemicals; cement cured less than 24 hours; welding slag and grindings; concrete saw cutting by-products; sandblasted materials; chipped paint; tires; wire; steel posts; asphalt; and waste concrete.

The following specific requirements apply:

a. Cure concrete, cement, or grout for at least 24 hours before any contact with flowing waters;

b. Use only clean fill, free of waste and polluted substances;

c. Employ all practicable controls to prevent discharges of spills of harmful materials to surface or groundwater;

d. Maintain at the project construction site, and deploy as necessary, an adequate supply of materials needed to contain deleterious materials during a weather event;

e. Remove all foreign materials, refuse, and waste from the project area

Rule: *OAR 340-041-0007(8), ORS 468B.050, CWA Section 402*
Justification: *DEQ must ensure that pollution does not enter waterways.*

10) **Spill Prevention:** The Applicant must fuel, operate, maintain and store vehicles, and must store construction materials, in areas that will not disturb habitat directly or result in potential discharges.
Rule: *ORS 468B.025(1)(a)*
Justification: *DEQ must ensure that pollution does not enter waterways.*

11) **Spill & Incident Reporting:**

a. In the event that deleterious materials are discharged into state waters, or onto land with a potential to enter state waters, the discharge must be promptly reported to the Oregon Emergency Response Service (OERS, 1-800-452-0311) within 24 hours. Containment and cleanup must begin immediately and be completed as soon as possible.

b. If the project operations cause a water quality problem that results in distressed or dying fish, the operator must immediately: cease operations; take appropriate corrective measures to prevent further environmental damage; collect fish specimens and water samples; and notify DEQ, ODFW, NMFS, and US Fish and Wildlife Service (USFW).

Rule: *ORS 466.645(1); OAR 340-142-0030(1)(b)(B), OAR 340-041*
Justification: *DEQ must ensure that pollution does not enter waterways and must be protective of beneficial uses, including fish.*

12) **Vegetation Protection and Site Restoration:**

a. The Applicant must protect riparian, wetland, and shoreline vegetation in the authorized project area from disturbance through one or more of the following:

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

i. Minimization of project and impact footprint;
ii. Designation of staging areas and access points in open, upland areas;
iii. Fencing and other barriers demarking construction areas; and
iv. Use of alternative equipment (e.g., spider hoe or crane).

b. If authorized work results in vegetative disturbance and the disturbance has not been accounted for in planned mitigation actions, the Applicant must successfully reestablish vegetation to a degree of function equivalent or better than before the disturbance.

c. Pesticides (including herbicides) and fertilizers must be applied per manufacturer's instructions by a professionally licensed applicator. If chemical treatment is necessary, the Applicant is responsible for ensuring that pesticide application laws, including with the NPDES System 2300-A general permit, are met. Please review the information on the following website for more information: https://www.oregon.gov/deq/wq/wqpermits/Pages/Pesticide.aspx

i. For pesticide application within stormwater treatment facilities or within 150 feet of waters of the state, the Applicant must adopt an Integrated Pest Management (IPM) plan that describes pest prevention, monitoring and control techniques with a focus on prevention of inputs to waters of the state, or coverage under an NPDES permit, if required.

ii. Pesticide application should be applied during the dry season and avoid direct water application;

iii. Unless otherwise approved in writing by DEQ, applying surface fertilizer within stormwater treatment facilities or within 50 feet of any stream channel is prohibited.

Rule: *OAR 340-041, OAR 340-012, OAR 340-041-0033*
Justification: *Riparian, wetland, and shoreline vegetation help ensure excess sediment does not enter a waterway, and helps offset potential temperature impacts. DEQ must ensure that pollution does not enter waterways.*

13) **Buffers:** The Applicant shall avoid and protect from harm, all wetlands and provide a 50 foot buffer to waters of the state, unless proposed, necessary, and approved as part of the project. If a local jurisdiction has a more stringent buffer requirement, that requirement will take the place of this certification requirement.
Rule: *OAR 340-041, OAR 340-012*
Justification: *Riparian, wetland, and shoreline buffers help ensure excess sediment does not enter a waterway, and helps offset potential temperature impacts. DEQ must ensure that pollution does not enter waterways.*

14) **Previously Contaminated Soil and Groundwater:** If any contaminated soil or groundwater is encountered, it must be handled and disposed of in accordance with the soil and groundwater management plan for the site, as well as local, state and federal regulations. The Applicant must notify the Environmental Cleanup Section of DEQ at 1-800-452-4011.
Rule: *OAR 340-041, OAR 340-012, OAR 340-122, OAR 340-040*
Justification: *DEQ must ensure that pollution does not enter waterways. As sediments are disturbed, pollutants could become redistributed.*

FOR PROJECTS THAT PROPOSE IN-STREAM WORK IN JURISDICTIONAL WATERS

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

15) **Fish protection/ Oregon Department of Fish and Wildlife timing:** The Applicant must perform in-water work only within the ODFW preferred time window as specified in the *Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources*, or as authorized otherwise under a USACE permit and/or DSL removal/fill permit. Exceptions to the timing window must be recommended by ODFW, NMFS and/or the USFW as appropriate, and approved by DSL when applicable.
Rule: *OAR 340-041-0011*
Justification: *DEQ must be protective of all water quality standards, including beneficial uses such as fish.*

16) **Aquatic life movements:** Any activity that may disrupt the movement of aquatic life living in the water body, including those species that normally migrate through the area, is prohibited. The Applicant must provide unobstructed fish passage at all times during any authorized activity, unless otherwise approved in the approved application.
Rule: *OAR 340-041-0016; OAR 340-041-0028*
Justification: *DEQ must be protective of all water quality standards, including beneficial uses such as fish.*

17) **Isolation of in-water work areas:** The Applicant must isolate in-water work areas from the active flowing stream, unless otherwise authorized as part of the approved application, or authorized by DEQ.
Rule: *OAR 340-041, OAR 340-012, OAR 340-045*
Justification: *DEQ must ensure that pollution does not enter waterways.*

18) **Cessation of Work:** The Applicant must cease project operations under high-flow conditions that will result in inundation of the project area. Only efforts to avoid or minimize turbidity or other resource damage as a result of inundation of the exposed project area are allowed during high-flow conditions.
Rule: *OAR 340-041, OAR 340-012*
Justification: *DEQ must ensure that pollution does not enter waterways*.

19) **Turbidity**: The Applicant must implement BMPs to minimize turbidity during in-water work. Any activity that causes turbidity to exceed 10% above natural stream turbidities is prohibited except as specifically provided below:

    a. **Monitoring**: Turbidity monitoring must be conducted and recorded as described below. Monitoring must occur at two-hour intervals each day when in-water work is being conducted. A properly calibrated turbidimeter is required **unless another monitoring method is proposed and authorized by DEQ**.

        i. **Representative Background Point**: The Applicant must take and record a turbidity measurement every two hours during in-water work at an undisturbed area. A background location shall be established at a representative location approximately 100 feet up-current of the in water activity unless otherwise authorized by DEQ. The background turbidity, location, date, tidal stage (if applicable) and time must be recorded immediately prior to monitoring down-current at the compliance point described below.

        ii. **Compliance Point:** The Applicant must monitor every two hours. A compliance location shall be established at a representative location approximately 100 feet down-current from the disturbance at approximately mid-depth of the waterbody and within any visible plume. The turbidity, location, date, tidal stage (if applicable) and time must be recorded for each measurement.

b. **Compliance**: The Applicant must compare turbidity monitoring results from the compliance points to the representative background levels taken during each two – hour monitoring interval. Pursuant to OAR 340-041-0036, short term exceedances are allowed as followed:

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

c. **Reporting**:
   i. Record all turbidity monitoring required by subsections (a) and (b) above in daily logs which must include: calibration documentation; background NTUs; compliance point NTUs; comparison of the points in NTUs; and location; date; time; and tidal stage (if applicable) for each reading.

   ii. A narrative must be prepared discussing all exceedances with subsequent monitoring, actions taken, and the effectiveness of the actions. Applicant must make available copies of daily logs for turbidity monitoring to regulatory agencies including DEQ, USACE, NMFS, USFWS, and ODFW upon request.

   iii. Keep records on file for the duration of the permit cycle.

d. **BMPs to Minimize In-stream Turbidity:** The Applicant must implement the following BMPs, unless accepted in writing by DEQ:

   i. Sequence/Phasing of work – The Applicant must schedule work activities so as to minimize in-water disturbance and duration of in-water disturbances.

   ii. Bucket control - All in-stream digging passes by excavation machinery and placement of fill in-stream using a bucket must be completed so as to minimize turbidity. All practicable techniques such as employing an experienced equipment operator, not dumping partial or full buckets of material back into the wetted stream, adjusting the volume, speed, or both of the load, or using a closed-lipped environmental bucket must be implemented;

   iii. The Applicant must limit the number and location of stream-crossing events. Establish temporary crossing sites as necessary at the least sensitive areas

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

and amend these crossing sites with clean gravel or other temporary methods as appropriate;

iv. Machinery may not be driven into the flowing channel, unless authorized in writing by DEQ; and

v. Excavated material must be placed so that it is isolated from the water edge or wetlands, and not placed where it could re-enter waters of the state uncontrolled.

vi. Containment measures such as silt curtains, geotextile fabric, and silt fences must be in place and properly maintained in order to minimize in-stream sediment suspension and resulting turbidity.

Rule: *OAR 340-041-0036, OAR 340-041*
Justification: *DEQ must ensure that pollution does not enter waterways.*

SPECIFIC CONDITIONS FOR POST-CONSTRUCTION STORMWATER MANAGEMENT

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

In lieu of a complete stormwater management plan, the Applicant may submit documentation of acceptance of the stormwater into a DEQ permitted NPDES Phase I Municipal Separate Storm Sewer System (MS4).
Rule: *ORS 468B.050, OAR 340-045, OAR 340-041*
Justification: *DEQ must ensure that pollution does not enter waterways.*

21) **Stormwater Management & System Maintenance:** The Applicant is required to implement effective operation and maintenance practices for the lifetime of the proposed facility. Long-term operation and maintenance of stormwater treatment facilities will be the responsibility of the applicant or the entity listed in the approved post-construction stormwater management plan.

Maintenance of stormwater treatment facilities subject to an MS4 permit is regulated by the permit.
Rule: *OAR 340-041, OAR 340-012, OAR 340-045*
Justification: *DEQ must ensure that pollution does not enter waterways.*

22) **Corrective Action May Be Required:** DEQ retains the authority to require corrective action in the event the stormwater management facilities are not built or performing as described in the plan.
Rule: *OAR 340-041, OAR 340-012*
Justification: *DEQ must ensure that pollution does not enter waterways.*

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

CATEGORY SPECIFIC CONDITIONS

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

NWP 7 – Outfall Structures and Associated Intake Structures:

7.1) The following actions are denied certification:

a. Discharge outfalls that are not subject to an NPDES permit; and

b. Outfalls that discharge stormwater without pollutant removal demonstrated to meet water-quality standards prior to discharge to waters of the state.

Rule: *OAR 340-041, OAR 340-012, OAR 340-048, OAR 340-045*
Justification: *DEQ must ensure that pollution does not enter waterways. Untreated stormwater is considered pollution.*

7.2) If an Applicant cannot obtain an NPDES permit or submit an approvable stormwater management plan per DEQ's Guidelines found at: http://www.oregon.gov/deq/FilterDocs/401wqcertPostCon.pdf the Applicant must submit complete project information and water quality impacts analysis directly to DEQ in order to undergo individual 401 WQC evaluation and fulfill public participation requirements.
Rule: *OAR 340-041, OAR 340-012, OAR 340-048, OAR 340-045*
Justification: *DEQ must ensure that pollution does not enter waterways. Untreated stormwater is considered pollution.*

NWP 13 – Bank Stabilization:

13.1) Projects that do not include bioengineering are denied certification, unless a registered professional engineer provides a written statement that non-bioengineered solutions are the only means of protection.
Rule: *OAR 340-041, OAR 340-012, OAR 340-048*
Justification: *DEQ must ensure that pollution does not enter waterways. Hard armoring can increase erosion upstream and downstream of the structure.*

13.2) Projects that propose permanent fill in adjacent wetlands are denied certification.
Rule: *OAR 340-041, OAR 340-012, OAR 340-048*
Justification: *DEQ must ensure that pollution does not enter waterways. Water adjacent wetlands provide water quality benefits.*

13.3) To apply for certification for a project without bioengineering, the Applicant must submit complete project information and water quality impacts analysis directly to DEQ in order to undergo individual 401 WQC evaluation and fulfill public participation requirements.
Rule: *OAR 340-041-0059*
Justification: *DEQ must ensure that pollution does not enter waterways. Hard armoring can increase erosion upstream and downstream of the structure.*

NWP 14 – Linear Transportation:

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

14.1) For projects that include bank stabilization, bioengineering must be a component of the project, unless a registered professional engineer provides a written statement that non-bioengineered solutions are the only means of protection.
Rule: *OAR 340-041, OAR 340-012, OAR 340-048*
Justification: *DEQ must ensure that pollution does not enter waterways. Hard armoring can increase erosion upstream and downstream of the structure.*

14.2) To apply for certification for a project without bioengineering, the Applicant must submit complete project information and water quality impacts analysis directly to DEQ in order to undergo individual 401 WQC evaluation and fulfill public participation requirements.
Rule: *OAR 340-041-0059*
Justification: *DEQ must ensure that pollution does not enter waterways. Hard armoring can increase erosion upstream and downstream of the structure.*

NWP 16 - Return Water from Contained Upland Disposal Areas: Water-quality criteria and guidance values for toxics, per OAR 340-041-0033, are available in Tables 30, 31, and 40 at: https://secure.sos.state.or.us/oard/viewSingleRule.action?ruleVrsnRsn=68746.

16.1) Discharge of return water from contaminated dredged material that exceeds a chronic or acute toxicity water quality standard is prohibited.
Rule: *OAR 340-041-0053(b)(A), OAR 340-041*
Justification: *DEQ must ensure that pollution does not enter waterways.*

16.2) Water removed with contaminated dredged material that could or does exceed chronic water-quality criteria must be contained and disposed of at an appropriately sized and sealed upland facility by evaporation or infiltration.
Rule: *OAR 340-041-0053(b)(A), OAR 340-041*
Justification: *DEQ must ensure that pollution does not enter waterways.*

16.3) If a Modified Elutriate Test (MET) is performed for the known contaminants of concern (CoCs) and CoC concentrations are below DEQ chronic water-quality criteria, return water discharge is not limited.

a. The MET must be performed before dredging.
a. DEQ must approve the list of CoCs and analytical method prior to the Applicant performing the MET.
b. DEQ must review the results and provide approval of discharge from return water, in writing, prior to dredging.

Rule: *OAR 340-041, OAR 340-012, OAR 340-048*
Justification: *DEQ must ensure that pollution does not enter waterways.*

NWP 20 – Response Operations for Oil and Hazardous Waste:

20.1) Coordination with DEQ's Emergency Response program is required. See: http://www.oregon.gov/deq/Hazards-and-Cleanup/env-cleanup/Pages/Emergency-Response.aspx.
Rule: *OAR 340-142-0130(3), OAR 340-041*
Justification: *DEQ must ensure that pollution does not enter waterways.*

NWP 22 – Removal of Vessels:

22.1) Coordination with DEQ's Emergency Response program is required. See:

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

http://www.oregon.gov/deq/Hazards-and-Cleanup/env-cleanup/Pages/Emergency-Response.aspx.
Rule: *OAR 340-041, OAR 340-012, OAR 340-048*
Justification: *DEQ must ensure that pollution does not enter waterways. Vessels may contain various fuels, lubricants, and other possible sources of pollution.*

NWP 31 – Maintenance of Existing Flood Control Facilities:

31.1) Projects in streams with temperature TMDLs which result in a net reduction of riparian shade are prohibited.
Rule: *OAR 340-041-0028, OAR 340-041*
Justification: *DEQ must ensure that pollution does not enter waterways.*

NWP 38 – Cleanup of Hazardous and Toxic Waste:

38.1) For removal of contaminated material from waters, dredging method is limited to diver assisted hydraulic suction, hydraulic suction, closed-lipped environmental bucket, or excavation in the dry, unless otherwise authorized by DEQ.

a. For in-water isolation measures, the Applicant is referred to Appendix D of DEQ's Oregon Erosion and Sediment Control Manual, April 2005 (or most current version), at: DEQ Erosion and Sediment Control Manual
Rule: *OAR 340-041, OAR 340-012, OAR 340-048*
Justification: *DEQ must ensure that pollution does not enter waterways.*

38.2) Discharge to waters of the state resulting from dewatering during dredging or release of return water from an upland facility is prohibited except as provided below.

a. All water removed with sediment must be contained and disposed of at an appropriately sized and sealed upland facility by evaporation or infiltration; or,

b. A Modified Elutriate Test (MET) may be performed for the known Contaminants of Concern (CoCs) and if CoC concentrations are below DEQ chronic water-quality criteria; return water discharge is not limited.

i. The MET must be performed before dredging.
ii. DEQ must approve the list of CoCs and analytical method prior to the Applicant performing the MET.
iii. DEQ must review the results and provide approval of discharge from dewatering and return water in writing prior to dredging.

Rule: *OAR 340-041, OAR 340-012, OAR 340-048*
Justification: *DEQ must ensure that pollution does not enter waterways.*

38.3) Dredged material must be disposed of in compliance with DEQ Rules governing Hazardous Waste (see: http://www.oregon.gov/deq/Hazards-and-Cleanup/hw/Pages/default.aspx) or Solid Waste (see: http://www.oregon.gov/deq/mm/swpermits/Pages/Solid-Waste-Disposal-Sites-and-Landfill.aspx).
Rule: *OAR 340-041, OAR 340-012, OAR 340-048*
Justification: *DEQ must ensure that pollution does not enter waterways.*

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

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Rule: *OAR 340-041, OAR 340-012, OAR 340-048*
Justification: *DEQ must ensure that pollution does not enter waterways.*

NWP 41 - Reshaping Existing Drainage Ditches:

41.1) To the extent practicable, the Applicant must work from only one bank in order to minimize disturbance to existing vegetation, preferably the bank with the least existing vegetation;
Rule: *OAR 340-041, OAR 340-012, OAR 340-048*
Justification: *DEQ must ensure that pollution does not enter waterways.*

41.2) Following authorized work, the Applicant must establish in-stream and riparian vegetation on reshaped channels and side-channels using native plant species wherever practicable. Plantings must be targeted to address water-quality improvement (e.g., provide shade to water to reduce temperature or provide bank stability through root systems to limit sediment inputs). Planting options may include clustering or vegetating only one side of a channel, preferably the side which provides maximum shade.
Rule: *OAR 340-041-0004(5)(a)*
Justification: *Riparian, wetland, and shoreline buffers help ensure excess sediment does not enter a waterway and helps offset potential temperature impacts. DEQ must ensure that pollution does not enter waterways.*

NWP 42 – Recreational Facilities:

42.1) For facilities that include turf maintenance actions, the permittee must develop and implement an Integrated Pest Management Plan (IPM) that describes pest prevention, monitoring and control techniques with a focus on prevention of chemical and nutrient inputs to waters of the state, including maintenance of adequate buffers for pesticide application near salmonid streams, or coverage under an NPDES permit, if required (information is available at: http://www.oregon.gov/deq/wq/wqpermits/Pages/Pesticide.aspx).
Rule: *OAR 340-041-0033, OAR 340-041*
Justification: *DEQ must ensure that pollution does not enter waterways, including excess pesticides and fertilizers.*

NWP 43 – Stormwater Management Facilities:

43.1) Projects that propose the following elements are denied expedited certification:
a. In-stream stormwater facilities;
b. Discharge outfalls not subject to an MS4 NPDES permit; and,
c. Proposals that do not demonstrate pollutant removal to meet water quality standards prior to discharge to waters of the state.
Rule: *OAR 340-041, OAR 340-012, OAR 340-048*
Justification: *DEQ must ensure that pollution does not enter waterways; stormwater is considered a pollutant.*

43.2) To apply for certification for a project with in-stream stormwater facilities, without an NPDES permit, or without submittal of an approvable stormwater management plan per DEQ's Guidelines (at: http://www.oregon.gov/deq/FilterDocs/401wqcertPostCon.pdf), the Applicant must submit complete project information and water quality impacts analysis directly to DEQ in order to undergo individual 401 WQC evaluation and fulfill public participation requirements.
Rule: *OAR 340-041-0059*
Justification: *DEQ must ensure that pollution does not enter waterways; stormwater is considered a pollutant.*

NWP 44 – Mining Activities:

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

44.1) Projects that do not obtain an NPDES 700-PM or Individual permit are denied expedited certification.
Rule: *OAR 340-045-0033, OAR 340-041*
Justification: *DEQ must ensure that pollution does not enter waterways. Excess turbidity can be considered pollution.*

44.2) To apply for certification for a project without an NPDES permit, the Applicant must submit complete project information and water quality impacts analysis directly to DEQ in order to undergo individual 401 WQC evaluation and fulfill public participation requirements.
Rule: *OAR 340-041-0059*
Justification: *DEQ must ensure that pollution does not enter waterways.*

44.3) The State of Oregon requires an In-Water Blasting Permit be obtained per OAR, 635-425-0000. Permittee is advised to contact the nearest ODFW office for further information at: https://www.dfw.state.or.us/lands/inwater/
Rule: *OAR 340-041-0011*
Justification: *DEQ must be protective of all water quality standards, including beneficial uses such as fish.*

NWP 51 – Land-Based Renewable Energy Generation Facilities:

51.1) For associated utility lines with directionally-bored stream or wetland crossings proposed, condition D.1 must be applied.
Rule: *OAR 340-041, OAR 340-012, OAR 340-048*
Justification: *DEQ must ensure that pollution does not enter waterways*

NWP 53 – Removal of Low-Head Dams:

53.1) Projects that do *not* go through a PSET review if sediments are being dispersed are denied certification.
Rule: *OAR 340-041, OAR 340-012, OAR 340-048*
Justification: *DEQ must ensure that pollution does not enter waterways. Sediments can be a carrier of contaminants.*

53.2) To apply for certification for a project without a PSET, the Applicant must submit complete project information and water quality impacts analysis directly to DEQ in order to undergo individual 401 WQC evaluation and fulfill public participation requirements.
Rule: *OAR 340-041-0059*
Justification: *DEQ must ensure that pollution does not enter waterways. Sediments can be a carrier of contaminants.*

NWP 54 – Living Shorelines:

54.1) Projects that do not include bioengineering are denied certification, unless a registered professional engineer provides a written statement that non-bioengineered solutions are the only means of protection.
Rule: *OAR 340-041, OAR 340-012, OAR 340-048*
Justification: *DEQ must ensure that pollution does not enter waterways. Hard armoring can increase erosion in the system.*

NWP 58 – Utility Lines:

58.1) For proposals that include directionally-bored stream or wetland crossings:

a. All drilling equipment, drill recovery and recycling pits, and any waste or spoil produced, must be completely isolated, recovered, then recycled or disposed of to prevent entry into waters of the state. Recycling using a tank instead of drill recovery/recycling pits is preferable;

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

b. In the event that drilling fluids enter a water of the state, the equipment operator must stop work, immediately initiate containment measures and report the spill to the Oregon Emergency Response System (OERS) at 1-800-452-0311.

c. An adequate supply of materials needed to control erosion and to contain drilling fluids must be maintained at the project construction site and deployed as necessary.

d. The Applicant must have a contingency plan in place prior to construction for the inadvertent return of drilling lubricant.

Rule: *OAR 340-142-0030, OAR 340-142-0040(1)*
Justification: *Drilling equipment and fluids that enter a waterbody would likely cause contamination of that waterbody.*

58.2) For proposals that include utility lines through wetlands, include anti-seep collars or equivalent technology to prevent draining the wetlands.

Rule: *OAR 340-041, OAR 340-012, OAR 340-048*
Justification: *DEQ must ensure that pollution does not enter waterways*

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

The DEQ hereby certifies that this project complies with the Clean Water Act and state rules, with the above conditions. If you have any questions, please contact Delia Negru, at 503-593-2493, by email at delia.negru@deq.oregon.gov, or at the address on this letterhead.

Sincerely,

Theresa Burcsu,
Water Quality Manager
Northwest Region

ec: Kelley Herbel, USACE
Kristin Politano, DSL

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

State of Oregon
DEQ Department of Environmental Quality

401 Water Quality Certification Turbidity Monitoring Report

Project Name:	USACE Project #	DSL Project #

Name of Inspector(s):	Turbidimeter Model:	Calibration Standard Type (Circle One)	Calibration Standard Expiration Date:
		Formazin Solution or Gelex	

Sampling Date:	Calibration Values:	*Upstream (Background) Point Location:	*Downstream (Compliance) Point Location:
	_____NTU (Standard) = _____NTU (Reading) _____NTU (Standard) = _____NTU (Reading) _____NTU (Standard) = _____NTU (Reading)	Latitude: Longitude:	Latitude: Longitude:

In-Water Work Start Time:	In-Water Work End Time:	Description of In-Water Work:

Upstream Sample		Downstream Sample		Change in Turbidity (NTU)	Observation of waterbody		NOTES (Describe any modifications made to BMPs)
Time	Turbidity (NTU)	Time	Turbidity (NTU)		Tidal Stage	Note any plume, sheen, floatables, color	

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

State of Oregon
DEQ Department of Environmental Quality

401 Water Quality Certification Turbidity Monitoring Report

** Include a figure with the turbidity sampling forms showing the sampling locations.*

Turbidity: The Applicant must implement appropriate Best Management Practices (BMPs) to minimize turbidity during in-water work. Any activity that causes turbidity to exceed 10% above natural stream turbidity is prohibited except as specifically provided below:

Monitoring: Turbidity monitoring must be conducted and recorded as described below. Monitoring must occur at two hour intervals each day during daylight hours when in-water work is being conducted, including while dewatering or work area isolation measures are in place. A properly calibrated turbidimeter is required unless another monitoring method is proposed and authorized by DEQ.

Representative Background Point: The Applicant must take and record a turbidity measurement every two hours during in-water work at an undisturbed area. A background location shall be established at a representative location approximately 100 feet upcurrent of the in water activity unless otherwise authorized by DEQ. The background turbidity, location, date, tidal stage (if applicable) and time must be recorded immediately prior to monitoring downcurrent at the compliance point described below.

Compliance Point: The must monitor every two hours. A compliance location shall be established at a representative location approximately 100 feet downcurrent from the disturbance at approximately mid-depth of the waterbody and within any visible plume. The turbidity, location, date, tidal stage (if applicable) and time must be recorded for each measurement.

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

Compliance: The Applicant must compare turbidity monitoring results from the compliance points to the representative background levels taken during each two – hour monitoring interval. Pursuant to OAR 340-041-0036, short term exceedances of the turbidity water quality standard are allowed as shown in the monitoring table shown here.

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

BMPs to Minimize In-stream Turbidity: The Applicant must implement the following BMPs, unless otherwise accepted by DEQ:

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

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

U.S. Army Corps of Engineers (USACE)

CERTIFICATION OF COMPLIANCE WITH DEPARTMENT OF THE ARMY PERMIT

For use of this form, see Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899, and Section 103 of the Marine Protection, Research, and Sanctuaries Act; the proponent agency is CECW-COR.

Form Approved -
OMB No. 0710-0003
Expires 2027-10-31

The Agency Disclosure Notice (ADN)

The Public reporting burden for this collection of information, 0710-0003, is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PURPOSE: This form is used by recipients of U.S. Army Corps of Engineer Regulatory permits to certify compliance with the permit terms and conditions.

Your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the U.S. Army Corps of Engineers, Portland District, Regulatory Office.

The certification can be submitted by email at cenwp.notify@usace.army.mil or by mail at the below address:

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the U.S. Army Corps of Engineers, Portland District, Regulatory Office.

U.S. Army Corps of Engineers
Portland District Office
Street Address: P.O. Box 2946
City: Portland State: OR Zip Code: 97208-2946

COMPLETED BY THE CORPS

Corps Action Number: NWP-2024-00401
Permit Type: General Permit
General Permit Number and Name (*if applicable*): Nationwide Permit 14 - Linear Transportation Projects
Name of Permittee: City of Portland
Project Name: SW 61st Street Culvert Replacement
Project Location (*physical address*): 10969 SW 61st Ave
Portland, OR

PERMITTEE'S CERTIFICATION

Date Work Started: _____
Date Work Completed: _____

Enclose photographs showing the completed project (*if available*).

I _____ hereby certify that the work authorized by the above referenced permit has been completed in accordance with all of the permit terms and conditions, and that any required compensatory mitigation has been completed in accordance with the permit conditions.

Name	Date	Signature

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

This Page Intentionally Blank

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

CITY OF PORTLAND STREET OPENING PERMIT

PBOT
PORTLAND BUREAU OF TRANSPORTATION

City of Portland Street Opening Permit

Permit Number:

Issue Date:
Void after 1 year

START WORK NOTIFICATION REQUIRED NO LESS THAN 48 HOURS BEFORE COMMENCING WORK.

PBOT Permitting Portal

Permittee:

Reference Number:

Permission is hereby granted to for all permitted work as depicted on approved plans and within the dedicated or future street area. The scope of work shall not differ from the plans submitted without prior approval.

Commencement of work authorized be this permit acknowledges the permittee's acceptance and adherence of the conditions attached.

Prepared By:

The City of Portland ensures meaningful access to city programs, services, and activities to comply with Civil Rights Title VI and ADA Title II laws and reasonably provides: translation, interpretation, modifications, accommodations, alternative formats, auxiliary aids and services. To request these services or to file a complaint of discrimination, contact 503-823-4000 (311), Relay Service & TTY: 711, or 503-823-5185.

Commencement of work authorized by this permit acknowledges permittee's acceptance of the following conditions:

The permittee agrees to comply with the provisions of the City Charter, Ordinances, Resolutions, Title 17 and Title 33 of the City Code and the City of Portland Standard Construction Specifications pertaining to the above work, and to file a report of the work performed within 48 hours of completion.

The permittee is responsible for complying with Title 10 of the City Code, including all erosion control measures and signs.

The permittee agrees to protect and save harmless the City of Portland, the Director of Transportation, and each of its officers and employees against any injury or damage that may result from the acts of said permittee on or in the said street and against any damage or liability of any character whatsoever arising out of any act of said permittee due to the issuance of this permit.

The permittee shall notify via START WORK NOTIFICATION on portal, no less than 48 hours prior to expected commencement of work, unless otherwise directed. If work is not started on the expected date, renotification will be necessary. Failure to notify may result in the accrual of additional fees. {Portal Link}

Permittee shall after construction, maintenance, or repairs promptly restore the Street to at least the prior condition or the legally required standard, whichever is greater, in strict compliance with the requirements of this permit.

Permittee shall be responsible for obtaining an approved traffic/pedestrian control plan and permit for proposed traffic/pedestrian control as it impacts the public right-of-way for work under this permit. Work that requires closure of a sidewalk, street, lane or parking shall not commence unless an approved traffic/pedestrian control plan and permit have been obtained. Submit applications at least 10 business days before work. For details go to https://www.portland.gov/transportation/permitting/temporary-street-use-permitting-tsup

Permittee is responsible for complying with OAR 952-001 as they relate to locating facilities and commencement of work.

Permittee is solely responsible for ensuring the safety of existing street trees. Contact Urban Forestry at (503) 823-TREE (8733) or trees@portland.gov prior to commencing work if conflicts with trees or root systems are possible within permit area. Obtain City Forester's approval prior to cutting any tree or root system.

The applicant shall be responsible for restoration and repair of the surface within the area affected by the excavation performed under this permit. The City may, after providing notice to the applicant, refill and/or repave any opening made by the applicant, and the expense thereof shall be paid by the applicant.

The City reserves the right, after providing notice to the applicant, to remove and/or repair any work done by the applicant which, in the determination of the City Engineer, is inadequate. The cost thereof, including the cost of inspection and supervision, shall be paid by the applicant.

All excavations made by the applicant shall be properly safeguarded for the prevention of accidents. All of the applicant’s work shall be done in strict compliance with all applicable rules, regulations, and ordinances of the City.

The applicant’s responsibility for maintain repairs to any surface areas disturbed by its work shall end upon the occurrence of either:

1. A reconstruction of the Public Right-of-Way in an approved manner by the City (curb-to-curb): or

2. Subsequent work at the same location by any other Person franchised, permitted, licensed, or otherwise granted authority by the City, whichever occurs first.

PBOT
PORTLAND BUREAU OF TRANSPORTATION

ADDITIONAL PERMIT CONDITIONS
Permit Number: UP-2026-000368

Commencement of work authorized by this permit acknowledges the permittee's review and acceptance of the following additional conditions:

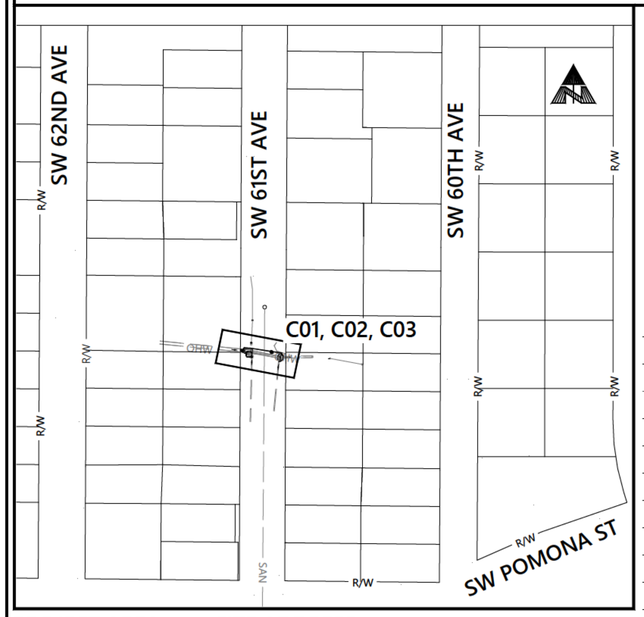
ADDITIONAL PERMIT CONDITIONS:

- BES job E11640
- DE approved for headwalls & pedestrian fencing.

The City of Portland ensures meaningful access to city programs, services, and activities to comply with Civil Rights Title VI and ADA Title II laws and reasonably provides: translation, interpretation, modifications, accommodations, alternative formats, auxiliary aids and services. To request these services or to file a complaint of discrimination, contact 503-823-4000 (311), Relay Service & TTY: 711, or 503-823-5185.

REVISED
6:48 am, Mar 11, 2026

SW 61ST - CULVERT REPLACEMENT



PROJECT AREA
SCALE: 1" = 100'

SITE ADDRESS:
11009 SW 61ST AVE
PORTLAND, OR 97219

GENERAL NOTES:

1. EXISTING GRADES AND ELEVATIONS SHOWN IN PROFILE WERE PROVIDED BY THE CITY OF PORTLAND AND TAKEN ALONG THE CENTERLINE STATIONED ALIGNMENT OF CULVERT. VERIFY ALL ELEVATIONS AND GRADES.
2. UTILITIES AND SERVICE LATERALS AS SHOWN IN THE CONTRACT DOCUMENTS ARE AT APPROXIMATE LOCATIONS. VERIFY ALL LOCATIONS IN THE FIELD PRIOR TO CONSTRUCTION.
3. NOT ALL WATER OR GAS SERVICE LATERALS ARE SHOWN.
4. RECONNECT EXISTING INLET OR CATCH BASIN PIPES AS SHOWN IN THE CONTRACT DOCUMENTS, UNLESS OTHERWISE DIRECTED BY THE OWNER'S REPRESENTATIVE.
5. SUPPORT UTILITIES, AS REQUIRED, TO PROTECT IN PLACE.
6. CONSTRUCT PER CURRENT CITY OF PORTLAND STANDARD DETAILS AND DRAWINGS, UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS OR DIRECTED BY THE OWNER'S REPRESENTATIVE.
7. ALL INLET PIPING SHALL BE EITHER ASTM F714 DR 26 HDPE OR ASTM D3034 PVC SDR-35. FOR G-1 INLETS INSTALL 10-INCH DIAMETER PIPE AND FOR G-2 INLETS INSTALL 12-INCH DIAMETER PIPE.
8. CONTRACTOR TO COORDINATE WITH NW NATURAL TO RELOCATE GAS MAIN. CONTACT RYAN WINFREE, (503) 610-7765, srw@nwnatural.com.

DESIGN CRITERIA AND ASSUMPTIONS:

1. NO EXCEPTIONS TO CITY STANDARDS OR OTHER REGULATORY REQUIREMENTS WERE TAKEN DURING THE DESIGN OF THIS PROJECT.
2. WATER QUALITY TREATMENT AND DETENTION ARE NOT REQUIRED FOR THIS PROJECT PER THE CURRENT STORMWATER MANAGEMENT MANUAL.
3. ENVIRONMENTAL ZONES EXIST WITHIN THE PROJECT BOUNDARY.
4. ESTIMATED PEAK SUMMER FLOW RATE RANGE = 2-18 CFS.

LEGEND:

EXISTING

- MAILBOX
- MAINTENANCE HOLE
- CULVERT IN
- CULVERT OUT
- POLE WITH STREET LIGHT
- DECIDUOUS TREE
- CONIFEROUS TREE
- WM — WATER METER
- STM — STORM SEWER MAIN
- EOP — EOP — EDGE OF PAVEMENT
- E — E — ELECTRICAL UNDER GROUND
- EC — ENVIRONMENTAL CONSERVATION
- EP — ENVIRONMENTAL PROTECTION
- G — G — GAS LINE
- PE — PERMANENT EASEMENT
- SEWER SERVICE LATERAL
- P/L — P/L — PROPERTY LINE
- R/W — R/W — RIGHT-OF-WAY
- SAN — SANITARY SEWER MAIN
- W — W — WATER LINE
- DITCH, STORM DITCH

PROPOSED

- INLET PROTECTION
- FIELD INLET
- CONCRETE HEADWALL
- PUMP
- EZ — EXCLUSION ZONE FENCING
- X — X — X — PEDESTRIAN RAIL
- CULVERT
- INLET PIPE/DEWATERING PIPE
- PERFORATED DRAIN PIPE
- SEWER ABANDONMENT
- CLASS 50 RIP RAP

CONSTRUCTION NOTES:

1. PROTECT EXISTING RUBBLE AND TIMBER RETAINING WALL.
2. CONSTRUCT G2MA INLET PER ODOT STD DWG. RD364.
3. CONNECT PIPE TO STRUCTURE.
4. CONSTRUCT RETAINING WALL, CAST-IN-PLACE CONCRETE RIGID SEMI-GRAVITY CANTILEVER. SEE DETAIL SHEET S01.
5. PROTECT UTILITY IN PLACE.
6. REMOVE AND REINSTALL MAILBOX SUPPORTS.
7. PERMANENTLY RELOCATE MAILBOX TO LOCATION INDICATED BY THE OWNER'S REPRESENTATIVE.
8. CONTRACTOR TO SALVAGE AND STOCKPILE CONCRETE LANDSCAPE BLOCKS AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
9. CONSTRUCT PRE-CAST CONCRETE HEADWALL.
10. RELOCATE EXISTING UTILITY (BY OTHERS).
11. REMOVE PIPE.
12. CONSTRUCT GROUTED CLASS 50 RIP RAP.
13. CONSTRUCT SIDE MOUNTED ALUMINUM PEDESTRIAN RAIL PER ODOT STD. DWG. BR246.
14. CONSTRUCT CONCRETE CHANNEL PER DETAIL 1, SHEET CD01.
15. INSTALL TREE PROTECTION FENCING - C, AS SHOWN, PER COP STD. DWG. P-582.
16. INSTALL 12"x36" OBJECT MARKER ON PEDESTRIAN RAIL FACING UPSTREAM ONCOMING TRAFFIC. USE PBOT SIGN NO W2360 - RIGHT SIDE OBJECT MARKER.

NOTICE TO EXCAVATORS:
ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS 503-232-1987).

POTENTIAL UNDERGROUND FACILITY OWNERS

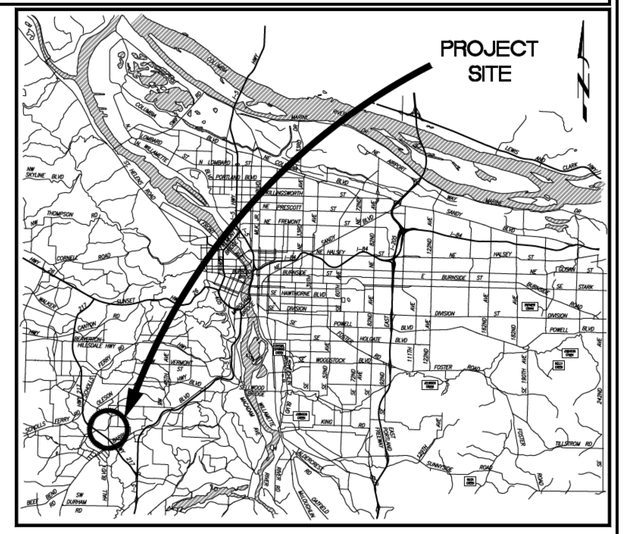
Dig Safely.
Call the Oregon One-Call Center
DIAL 811 or 1-800-332-2344

EMERGENCY TELEPHONE NUMBERS

NW NATURAL GAS	
M-F 7am-6pm	503-226-4211 Ext.4313
AFTER HOURS	503-226-4211
PGE	503-464-7777
LUMEN	1-800-573-1311
CITY BUREAU OF MAINTENANCE	503-823-1700
CITY WATER	503-823-4874
VERIZON	1-800-483-1000

ABBREVIATIONS:

AVE	AVENUE
BES	BUREAU OF ENVIRONMENTAL SERVICES
CI	CAST IRON
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT OR COUNTY
CSP	CONCRETE SEWER PIPE
DI	DUCTILE IRON
DIA	DIAMETER
DWG	DRAWING
EL, ELEV	ELEVATION
EXIST, EXTG, EX.	EXISTING
FT	FOOT OR FEET
HORIZ	HORIZONTAL
HW	HEADWALL
IE	INVERT ELEVATION
MAX	MAXIMUM
MH	MAINTENANCE HOLE
MIN	MINIMUM
NO.	NUMBER
NTS	NOT TO SCALE
OHW	ORDINARY HIGH WATER
PGE	PORTLAND GENERAL ELECTRIC
PVC	POINT OF CURVATURE, VERTICAL CURVE OR POLYVINYL CHLORIDE
PWB	PORTLAND WATER BUREAU
RCP	REINFORCED CONCRETE PIPE
SF, SQ FT	SQUARE FEET
SQ.	SQUARE
ST	STREET
STA	STATION
STD	STANDARD
TEMP	TEMPORARY
TYP	TYPICAL
UTIL	UTILITY
VERT	VERTICAL
W/	WITH



PORTLAND, OREGON
VICINITY MAP
NOT TO SCALE

SHEET INDEX

SHEET NUMBER	SHEET TITLE	SHEEET DESCRIPTION
1	G01	COVER SHEET, VINCINITY MAP LEGEND, NOTES, SHEET INDEX
2	C01	EXISTING CONDITIONS PLAN AND PROFILE SW 61ST AVE N. OF SW POMONA ST ADJ218 TO ADJ217
3	C02	PROPOSED CONDITIONS PLAN AND PROFILE SW 61ST AVE N. OF SW POMONA ST HW-01 TO HW-02
4	C03	PROPOSED CONDITIONS DEWATERING AND DIVERSION PLAN
5	CD01	CIVIL DETAILS
6	S01	STRUCTURAL DETAILS DESIGN CRITERIA AND STRUCTURAL NOTES
7	S02	STRUCTURAL DETAILS HEADWALL 2 (HW-02)
8	CE01	EROSION CONTROL PLAN NOTES AND DETAILS

CITY OF PORTLAND VERTICAL DATUM AND OCRS83.PORTLANDIF

NO.	DATE	DESCRIPTION	APPD.

REVISION

XREF(S) USED: ;E11640_XBMAP;E11640_XDSN;E11640_XSURV
ROTATION ANGLE: 0d0'0"
CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY ____ CHECKED BY ____
FINAL MAP DATA
DRAWING NAME: E11640_G-SHEETS.dwg

DESIGNED BY — CM
CAD BY — SP
CHECKED BY — ST
DATE APPROVED
ENGR. SUPV. — RG
CONST. SUPV. — ED
ENGR. DIV. MGR. — SD

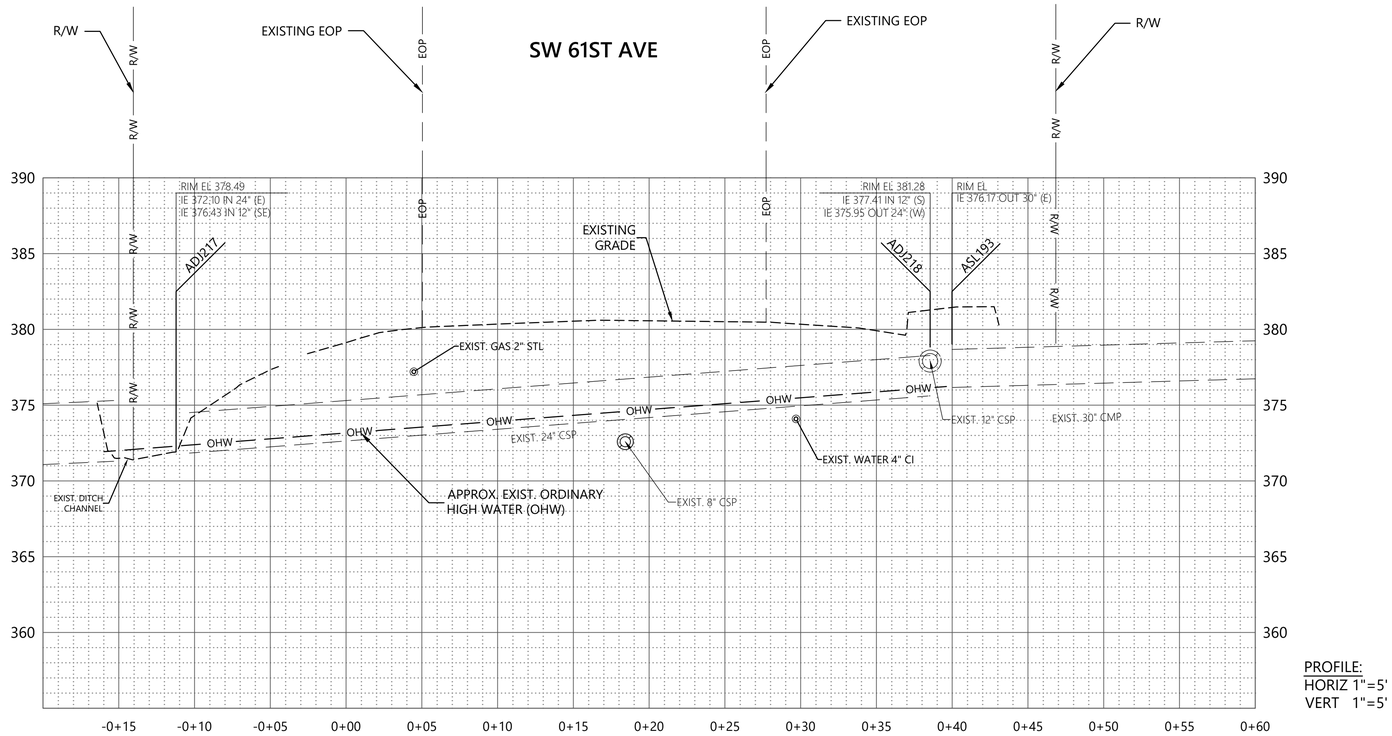
CITY OF PORTLAND
ENVIRONMENTAL SERVICES
KEITH WILSON, MAYOR
PAUL SUTO, P.E., CHIEF ENGINEER
APPROVAL
ENVIRONMENTAL SERVICES CHIEF ENGINEER
REG. PROF. ENGR. NO. 82245

REGISTERED PROFESSIONAL ENGINEER
103567PE
OREGON
JANUARY 09, 2026
STEPHANIE TRUJILLO
Expires 06/30/2026

SW 61ST
CULVERT REPLACEMENT
COVER SHEET, VINCINITY MAP
LEGEND, NOTES, SHEET INDEX

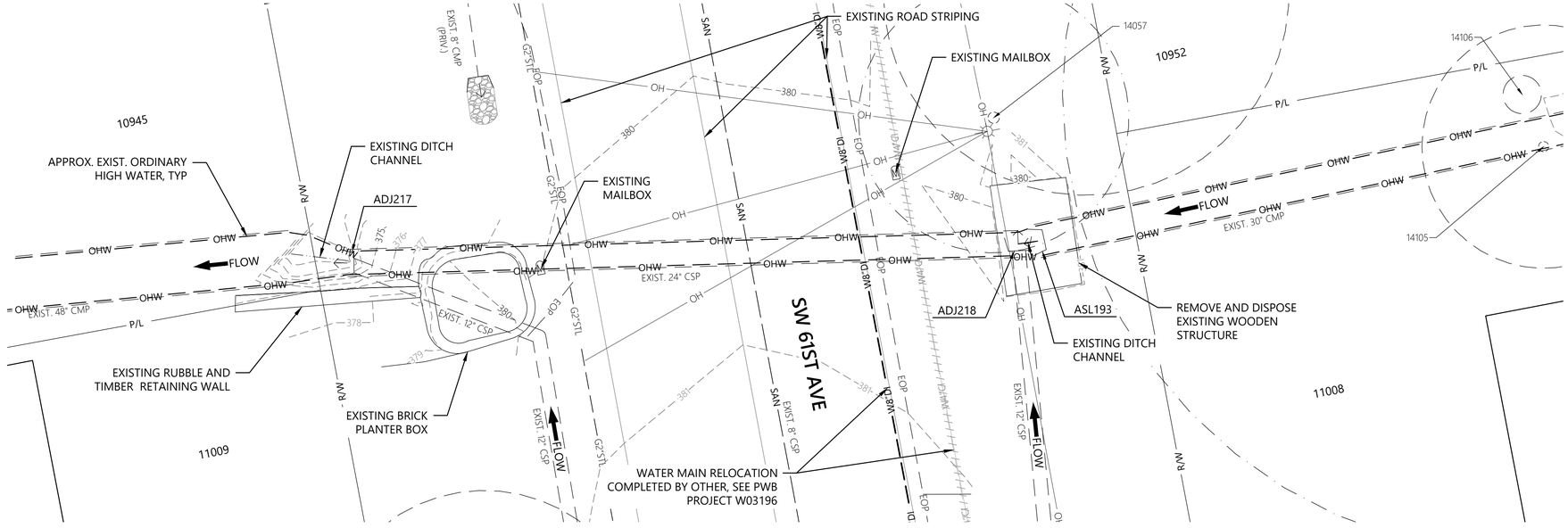
1/4 SECTION 4123
JOB NO. E11640
SHEET NO. G01
1 OF 8

Q:\SHAWNPEREZ\E11640 SW 61ST\DWG\E11640_G-SHEETS.DWG 3/9/2026 PEREZ, SHAWN



PROFILE:
HORIZ 1"=5'
VERT 1"=5'

CULVERT CENTERLINE STATIONING



SCALE

5 0 2.5 5 10

SCALE FEET

NO.	DATE	DESCRIPTION	APPD.

REVISION

XREF(S) USED: ;E11640_XBMAP;E11640_XDSN;E11640_XSURV;W03196-OCRS
ROTATION ANGLE: 11d0'0"
CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY CHECKED BY
FINAL MAP DATA
DRAWING NAME: E11640_C-SHEETS.dwg

DESIGNED BY	CSL	CSL	DATE APPROVED
CAD BY	SLP	SLP	ENGR. SUPV. RG
CHECKED BY	ST	ST	CONST. SUPV. ED
			ENGR. DIV. MGR. SD

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

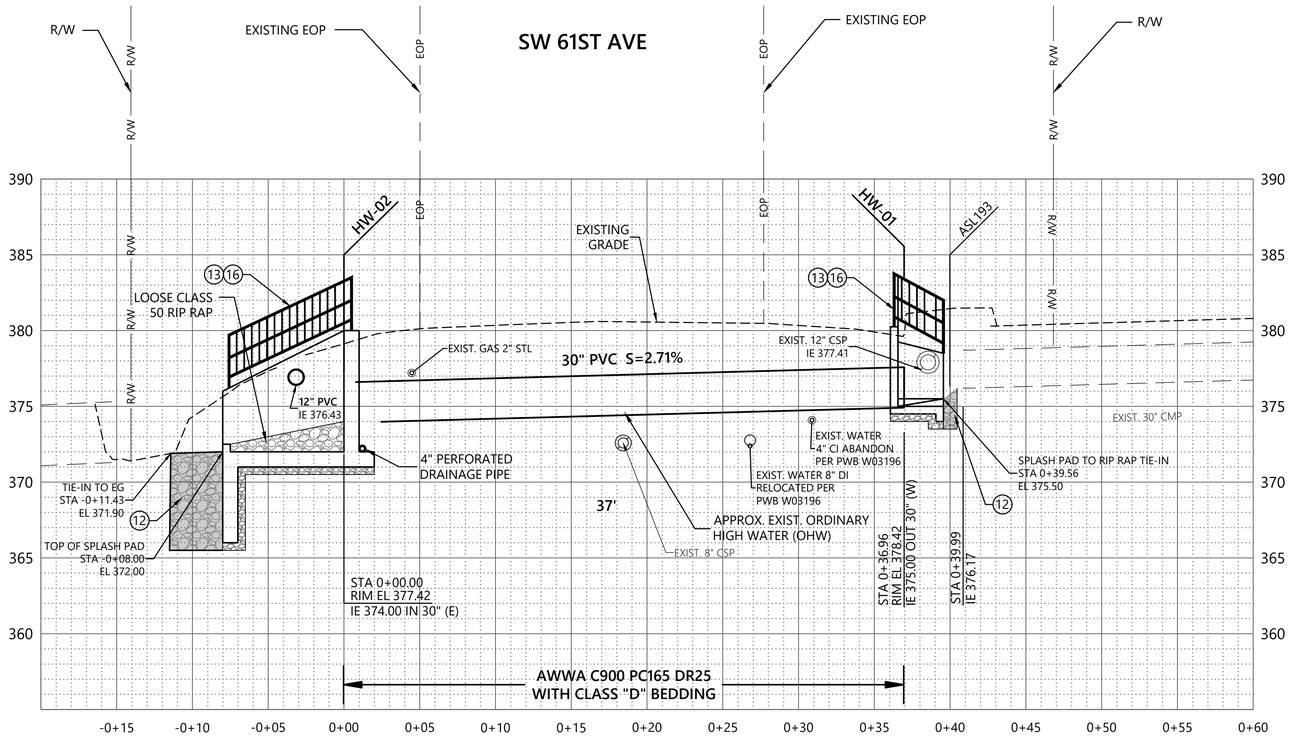
REGISTERED PROFESSIONAL ENGINEER
103567PE
OREGON
JANUARY 09, 2009
STEPHANIE TRUJILLO
Expires 06/30/2026

SW 61ST CULVERT REPLACEMENT

EXISTING CONDITIONS PLAN AND PROFILE
SW 61ST AVE N. OF SW POMONA ST
ADJ218 TO ADJ217

1/4 SECTION 4123
JOB NO. E11640
SHEET NO. C01
2 OF 8

Q:\SHAWNPEREZ\E11640 SW 61ST\DWG\E11640_C-SHEETS.DWG 3/9/2026 PEREZ, SHAWN



CULVERT CENTERLINE STATIONING

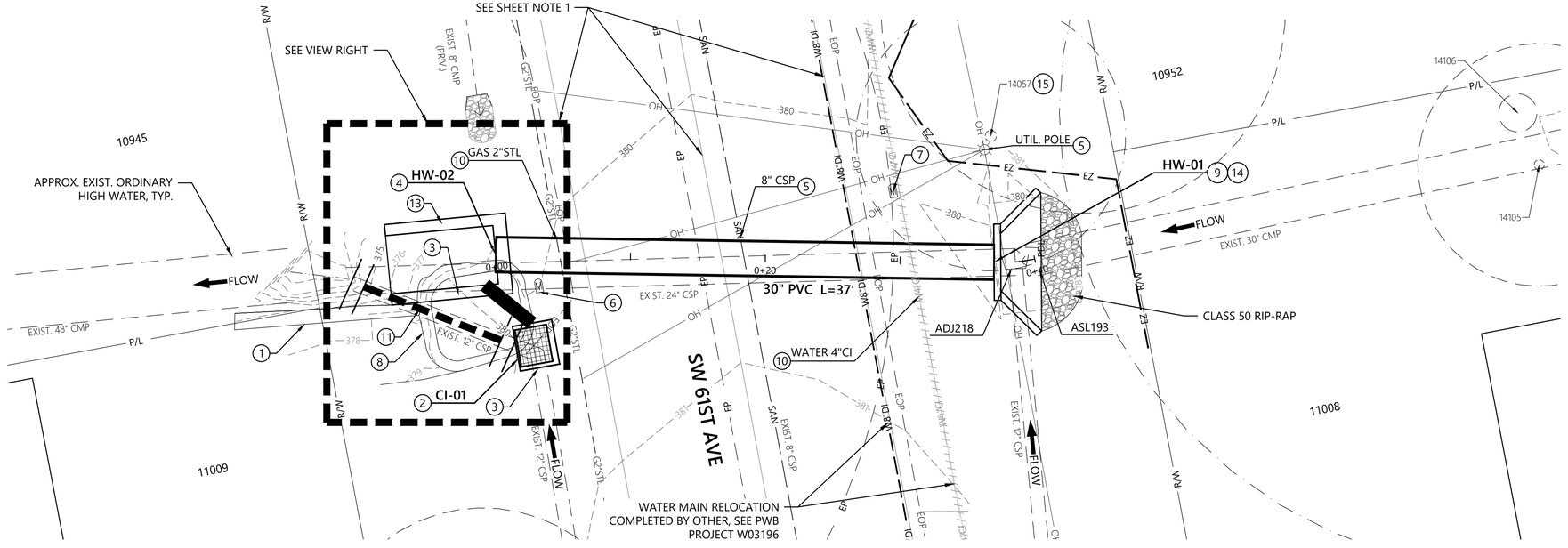
PROFILE:
HORIZ 1"=5'
VERT 1"=5'

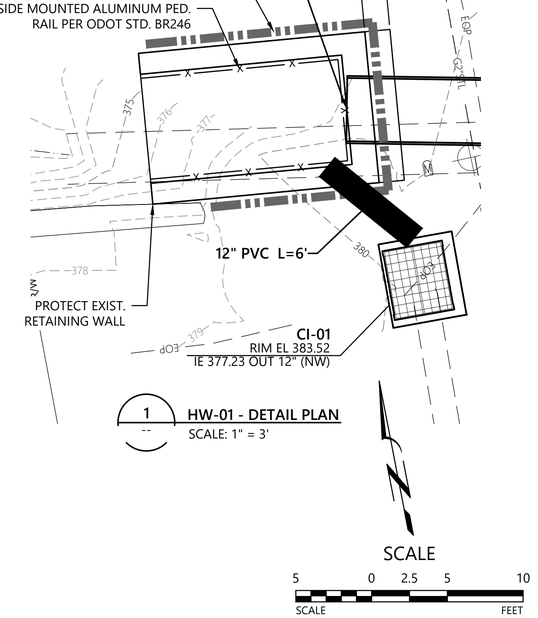
SHEET NOTES:

1. PERMANENT TRAFFIC STRIPING AND MARKING TO BE COMPLETED BY THE BUREAU OF TRANSPORTATION AFTER COMPLETION OF WORK. CONTRACTOR SHALL MAINTAIN ALL TEMPORARY STRIPING AND COORDINATE WITH OWNER'S REPRESENTATIVE WHEN FINAL PAVING IS COMPLETE.

CONSTRUCTION NOTES:

1. PROTECT EXISTING RUBBLE AND TIMBER RETAINING WALL.
2. CONSTRUCT G2MA INLET PER ODOT STD DWG. RD364.
3. CONNECT PIPE TO STRUCTURE.
4. CONSTRUCT RETAINING WALL, CAST-IN-PLACE CONCRETE RIGID SEMI-GRAVITY CANTILEVER. SEE DETAIL SHEET S01.
5. PROTECT UTILITY IN PLACE.
6. REMOVE AND REINSTALL MAILBOX SUPPORTS.
7. PERMANENTLY RELOCATE MAILBOX TO LOCATION INDICATED BY THE OWNER'S REPRESENTATIVE.
8. CONTRACTOR TO SALVAGE AND STOCKPILE CONCRETE LANDSCAPE BLOCKS AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
9. CONSTRUCT PRE-CAST CONCRETE HEADWALL.
10. RELOCATE EXISTING UTILITY (BY OTHERS).
11. REMOVE PIPE.
12. CONSTRUCT GROUTED CLASS 50 RIP RAP.
13. CONSTRUCT SIDE MOUNTED ALUMINUM PEDESTRIAN RAIL PER ODOT STD. DWG. BR246.
14. CONSTRUCT CONCRETE CHANNEL PER DETAIL 1, SHEET CD01.
15. INSTALL TREE PROTECTION FENCING - C, AS SHOWN, PER COP STD. DWG. P-582.
16. INSTALL 12"x36" OBJECT MARKER ON PEDESTRIAN RAIL FACING UPSTREAM ONCOMING TRAFFIC. USE PBOT SIGN NO W2360 - RIGHT SIDE OBJECT MARKER.





NO.	DATE	DESCRIPTION	APPD.
		REVISION	

XREF(S) USED: _E11640_XBMAP;E11640_XDSN;E11640_XSURV;W03196-OCRS
ROTATION ANGLE: 11d0'0"
CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY _____ CHECKED BY _____
FINAL MAP DATA
DRAWING NAME: E11640_C-SHEETS.dwg

DESIGNED BY	CSL	CSL	DATE APPROVED
CAD BY	SLP	SLP	ENGR. SUPV. RG
CHECKED BY	ST	ST	CONST. SUPV. ED
			ENGR. DIV. MGR. SD

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
103567PE
OREGON
JANUARY 09, 2008
STEPHANIE TRUJILLO
Expires 06/30/2026

SW 61ST
CULVERT REPLACEMENT

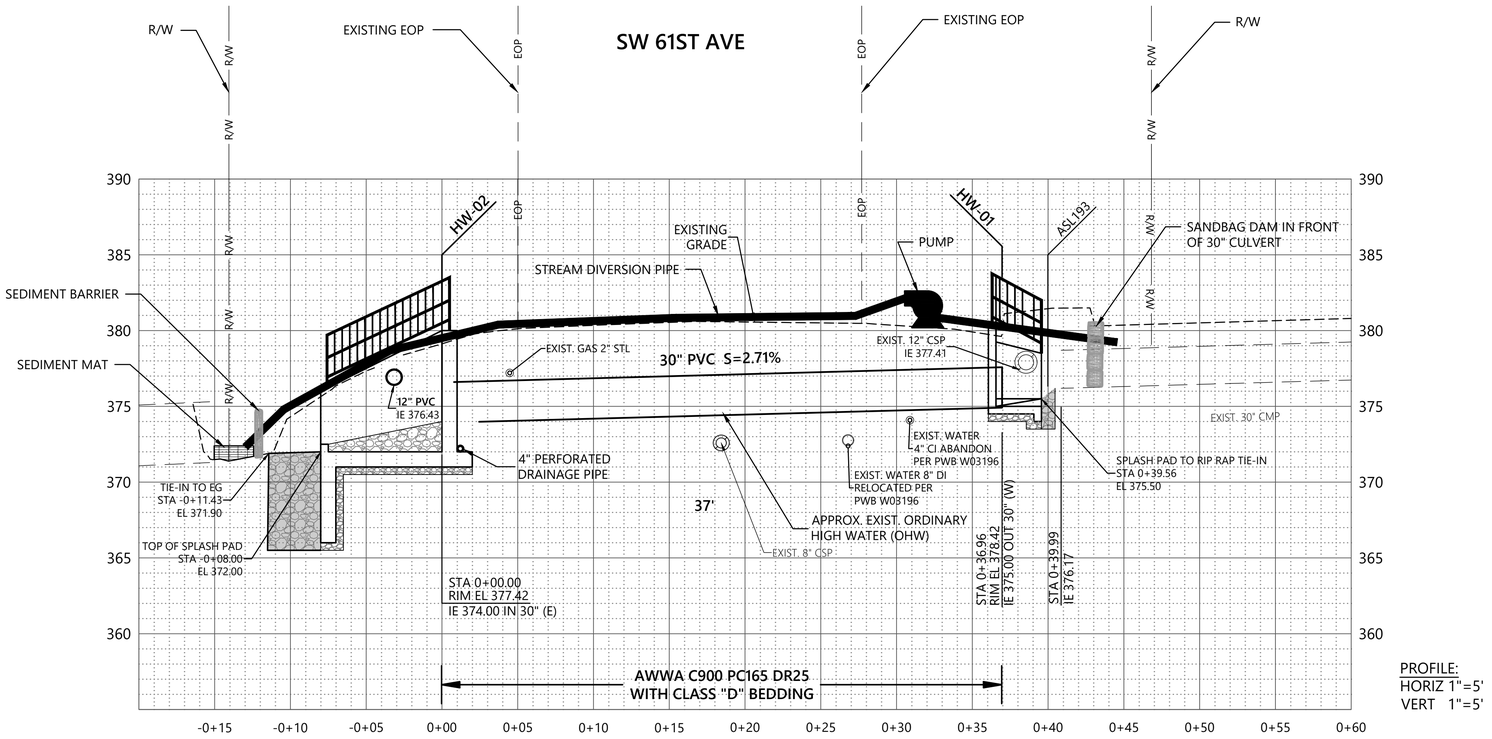
PROPOSED CONDITIONS PLAN AND PROFILE
SW 61ST AVE N. OF SW POMONA ST
HW-01 TO HW-02

1/4 SECTION 4123
JOB NO. E11640
SHEET NO. C02
3 OF 8

Q:\SHAWNPEREZ\E11640 SW 61ST\DWG\E11640_C-SHEETS.DWG 3/9/2026 PEREZ, SHAWN

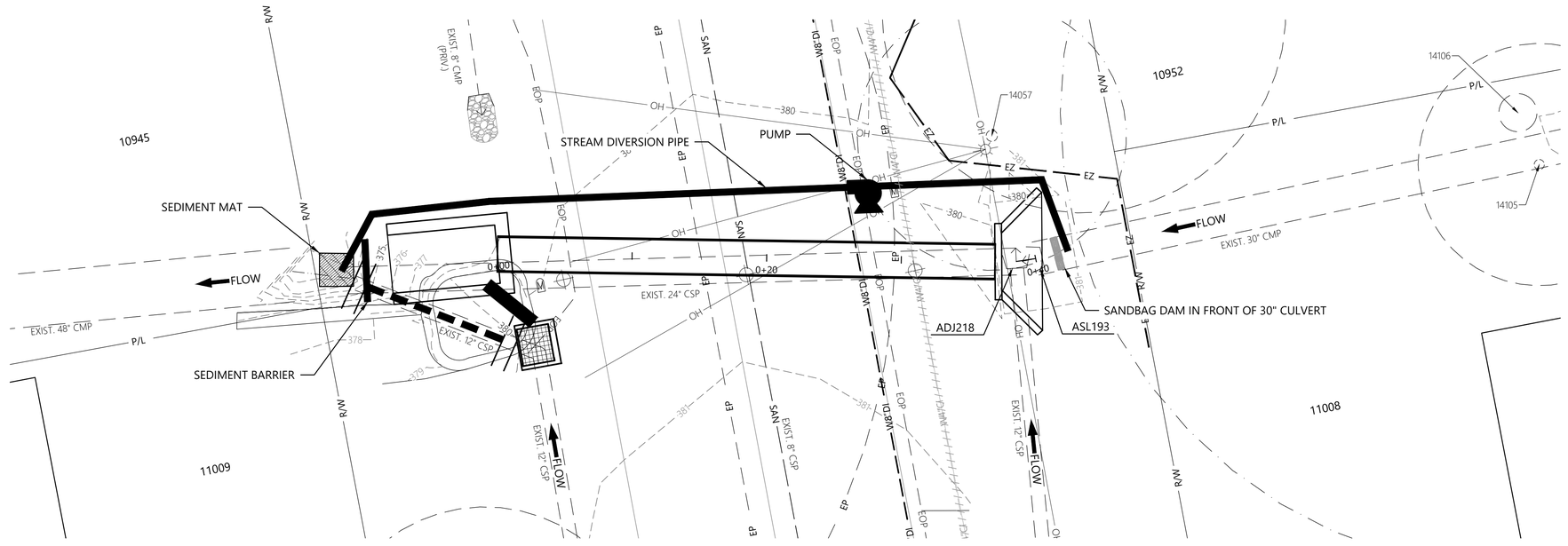
SHEET NOTES:

1. CONTRACTOR TO SUBMIT A STREAM DIVERSION AND DEWATERING PLAN. CONTRACTOR MAY PROPOSE AN ALTERNATE PLAN TO WHAT IS SHOWN. REFER TO SECTIONS 00290 AND 01091 OF THE SPECIAL PROVISIONS.



CULVERT CENTERLINE STATIONING

PROFILE:
HORIZ 1"=5'
VERT 1"=5'



SCALE
5 0 2.5 5 10
SCALE FEET

Q:\SHAWNPEREZ\E11640 SW 61ST\DWG\E11640_C-SHEETS.DWG 3/9/2026 PEREZ, SHAWN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

XREF(S) USED: ;E11640_XBMAP;E11640_XDSN;E11640_XSURV;W03196-OCRS
ROTATION ANGLE: 11d0'0"
CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY CHECKED BY
FINAL MAP DATA
DRAWING NAME: E11640_C-SHEETS.dwg

DESIGNED BY	CSL	DATE APPROVED	
CAD BY	SLP	ENGR. SUPV.	RG
CHECKED BY	ST	CONST. SUPV.	ED
		ENGR. DIV. MGR.	SD

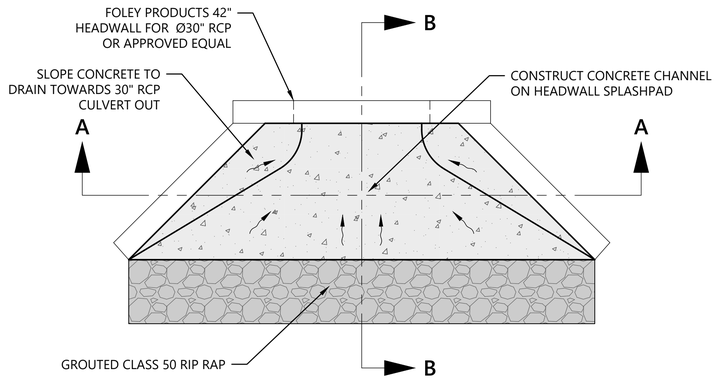
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
103567PE
OREGON
JANUARY 09, 2009
STEPHANIE TRUJILLO
Expires 06/30/2026

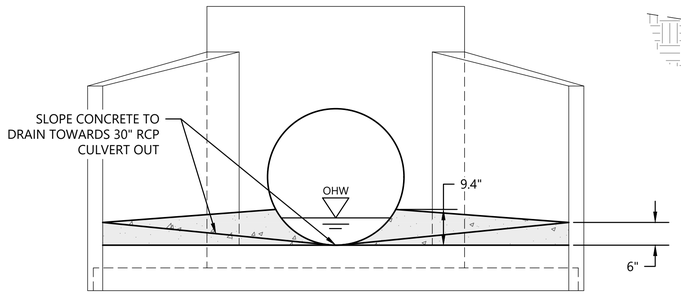
SW 61ST CULVERT REPLACEMENT

PROPOSED CONDITIONS DEWATERING AND DIVERSION PLAN

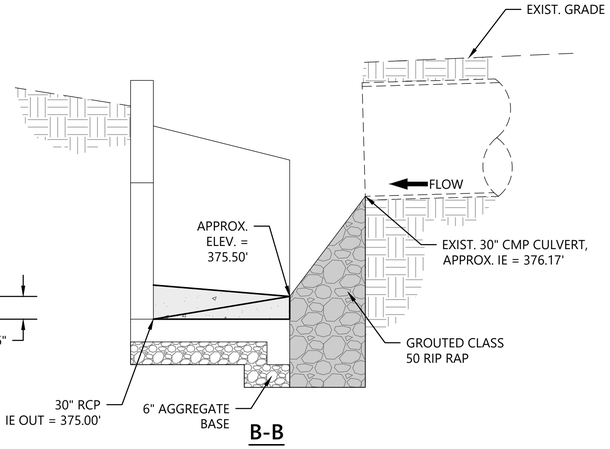
1/4 SECTION 4123
JOB NO. E11640
SHEET NO. C03
4 OF 8



PLAN



A-A



B-B

1 C02 HEADWALL 1 (HW-01) CONCRETE CHANNEL
SCALE: NTS

NO.	DATE	DESCRIPTION	APPD.

REVISION

XREF(S) USED:
ROTATION ANGLE:
CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY ____ CHECKED BY ____
FINAL MAP DATA
DRAWING NAME: E11640_CD-SHEETS.dwg

DESIGNED BY RR	RR	DATE APPROVED	
CAD BY SLP	SLP	ENGR. SUPV. RG	RG
CHECKED BY ST	ST	CONST. SUPV. ED	ED
		ENGR. DIV. MGR. SD	SD

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
103567PE
OREGON
JANUARY 09, 2026
STEPHANIE TRUJILLO
Expires 06/30/2026

SW 61ST
CULVERT REPLACEMENT

CIVIL DETAILS

1/4 SECTION 4123
JOB NO. E11640
SHEET NO. CD01
5 OF 8

Q:\SHAWNPEREZ\E11640 SW 61ST\DWG\E11640_CD-SHEETS.DWG 3/9/2026 PEREZ, SHAWN

DESIGN CRITERIA:

STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE 9TH EDITION OF THE "AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS."
SOIL DESIGN PARAMETERS ARE IN ACCORDANCE WITH THE CITY OF PORTLAND MATERIAL TESTING LAB GEOTECHNICAL REPORT DATED MARCH 14, 2024:

SOIL TYPE	UNIT WEIGHT (PCF)	COHESION (PSF)	FRICTION ANGLE (DEGREES)	ACTIVE EQUIVALENT FLUID PRESSURE (PCF)[1]	SEISMIC LATERAL FORCE[2]
RETAINED MATERIALS - NATIVE SOILS	105	0	28	34	$12*H^2$
FOUNDATION SOIL - GRANULAR FILL	130	0	35		

1. SHEAR KEY PASSIVE PRESSURE - 300 PCF EQUIVALENT FLUID PRESSURE.

2. SEISMIC PRESSURES CALCULATED USING THE MONONOBE-OKABE METHOD, APPLIED AS A DISTRIBUTED LOAD WITH THE CENTROID AT 0.5*H FROM THE BASE OF THE WALL, WHERE H IS THE HEIGHT OF THE WALL FROM THE BASE MEASURED IN FEET.

3. THE RECOMMENDED ALLOWABLE BEARING CAPACITY OF THE SOILS IS 2,00PSF WITH THE UNDERSTANDING THAT IT IS SUPPORTED ON A 6-INCH-THICK LAYER OF COMPACTED GRANULAR FILL.

LIVE LOAD SURCHARGE: 250PSF

GENERAL NOTES:

1. PROVIDE ALL MATERIALS AND PERFORM ALL WORK ACCORDING TO THE "CITY OF PORTLAND STANDARD CONSTRUCTION SPECIFICATIONS 2020".
2. STANDARDS REFERENCED IN THESE NOTES SHALL BE THE LATEST EDITION, UNLESS OTHERWISE NOTED.
3. DETAILS SHALL BE APPLIED TO EVERY LIKE CONDITION WHETHER OR NOT THEY ARE REFERENCED IN EVERY INSTANCE. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS SIMILAR TO THOSE SHOWN.
4. ALL FEATURES OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME TYPE AND CHARACTER AS SHOWN FOR SIMILAR CONDITIONS, SUBJECT TO REVIEW BY THE OWNER'S REPRESENTATIVE.
5. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING FEATURES AND CONDITIONS (DIMENSIONS, ELEVATIONS, ETC.) UPON WHICH THESE DRAWINGS RELY.
6. OMISSIONS OR DISCREPANCIES BETWEEN THE VARIOUS ELEMENTS OF THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING WITH THE WORK.
7. CONSTRUCTION SEQUENCE AND METHODS:
8. THE STRUCTURAL DRAWINGS ARE INTENDED FOR THE STRUCTURE TO ACT AS A WHOLE ONCE CONSTRUCTION IS COMPLETE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE SAFETY AND STABILITY (I.E. TEMPORARY BRACING AND/OR SHORING IF REQUIRED) DURING CONSTRUCTION AS A RESULT OF CONSTRUCTION METHODS AND SEQUENCES.
9. THE CONTRACTOR SHALL TAKE INTO ACCOUNT COLD AND HOT WEATHER CONSTRUCTION AND THE EFFECTS OF THERMAL MOVEMENT DURING THE CONSTRUCTION SCHEDULE.
10. DO NOT CUT OR DRILL ANY REINFORCING. CONTRACTOR TO SCAN OR X-RAY AS NEEDED TO LOCATE REINFORCING PRIOR TO DRILLING.

CONCRETE:

1. THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE OWNER'S REPRESENTATIVE'S TESTING LABORATORY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S. SUBMIT TEST DATA ON EACH PROPOSED MIX FOR REVIEW IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
2. PORTLAND CEMENT SHALL CONFORM TO ASTM C 150 TYPE I OR TYPE II.
3. AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF ASTM C 33 AND PROJECT SPECIFICATIONS.
4. CONCRETE SHALL HAVE THE FOLLOWING 28 DAY STRENGTHS: ALL USES F'C = 4,000 PSI UNLESS NOTED OTHERWISE
5. CONSTRUCTION JOINTS SHALL BE THOROUGHLY AND INTENTIONALLY ROUGHENED (1/4" AMPLITUDE) BY SAND BLASTING OR MECHANICAL MEANS. CLEAN BEFORE POUR. LOCATION TO BE APPROVED BY THE OWNER'S REPRESENTATIVE. ENGINEER. SUBMIT LOCATION PLAN FOR ALL PROPOSED JOINTS NOT INDICATED ON DRAWINGS FOR APPROVAL PRIOR TO BEGINNING WORK.
6. PRIOR TO PLACING CONCRETE, THE CONTRACTOR SHALL ENSURE THAT ALL REINFORCING, EMBEDMENTS AND ANCHOR BOLTS ARE PROPERLY LOCATED AND SECURELY TIED IN PLACE.

REINFORCING STEEL:

1. ALL REINFORCING STEEL FOR CONCRETE CONSTRUCTION SHALL BE PLACED IN CONFORMANCE WITH ACI 318 AND THE "ACI DETAILING MANUAL" AS MODIFIED BY THE PROJECT DRAWINGS AND SPECIFICATIONS.
2. PROVIDE ALL REINFORCING STEEL ACCORDING TO ASTM A706 OR AASHTO M31 ASTM A615) GRADE 60.
3. REINFORCING STEEL SHALL HAVE THE FOLLOWING CONCRETE COVER, UNLESS OTHERWISE NOTED:
   - 3.1. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
   - 3.2. CONCRETE FORMED AND EXPOSED TO EARTH OR WEATHER: 2"
4. ALL REINFORCING STEEL AND EMBEDMENTS TO BE HELD SECURELY IN PLACE PRIOR TO PLACING CONCRETE. PROVIDE SUFFICIENT SUPPORTS TO ALLOW WALKING ON REINFORCEMENT.
5. WELDING OF REINFORCING IS PROHIBITED, UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE.
6. REINFORCEMENT SHALL BE PLACED IN RELATIVE POSITION SHOWN ON THE DRAWINGS.
7. USE THE FOLLOWING SPLICE LENGTHS UNLESS SHOWN OTHERWISE:

REINFORCING SPLICE LENGTHS (CLASS B) GRADE 60 F'C = 4.0KSI, λRC= 0.4, 2IN MIN. CONCRETE CLEAR COVER										
BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14 & #18
UNCOATED	1'-4"	1'-7"	2'-0"	2'-5"	2'-9"	3'-2"	3'-7"	4'-0"	4'-5"	NOT PERMITTED
COATED (1)	1'-5"	1'-11"	2'-5"	2'-10"	3'-4"	3'-9"	4'-3"	4'-10"	5'-4"	NOT PERMITTED
COATED (2)	1'-10"	2'-5"	3'-0"	3'-7"	4'-2"	4'-9"	5'-4"	6'-0"	6'-8"	NOT PERMITTED

8. USE COATED (1) FOR EPOXY COATED BARS WITH COVER AT LEAST $3*D_B$ AND CLEAR SPACING BETWEEN BARS AT LEAST $6*D_B$.
9. USE COATED (2) FOR EPOXY COATED BARS WITH COVER LESS THAN $3*D_B$ OR CLEAR SPACING BETWEEN BARS LESS THAN $6*D_B$.
10. INCREASE ALL SPLICE LENGTHS 30% FOR HORIZONTAL OR NEARLY HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF FRESH CONCRETE IS CAST BELOW THE BAR.
11. SPLICE REINFORCING STEEL AT ALTERNATE BARS, STAGGERED AT LEAST ONE SPLICE LENGTH OR AS FAR AS POSSIBLE, UNLESS SHOWN OTHERWISE.
12. SUPPORT THE BOTTOM MAT REINFORCING STEEL FROM THE FORMS WITH PRECAST MORTAR BLOCKS AT 24" MAXIMUM CENTERS EACH WAY. SUPPORT THE TOP MAT OF REINFORCING STEEL FROM THE BOTTOM MAT OF REINFORCING STEEL WITH WIRE BAR SUPPORTS AS SHOWN IN CHAPTER 3 OF THE "CRSI MANUAL OF STANDARD PRACTICE" (SBU, BBU, OR CHCU). PLACE WIRE BAR SUPPORTS AT 24" MAXIMUM CENTERS.

STRUCTURAL STEEL NOTES:

WELDING NOTES:

1. PRODUCE WELDS ACCORDING TO THE LATEST EDITION OF "AWS D 1.1 STRUCTURAL WELDING CODE FOR STEEL".
2. ALL STRUCTURAL STEEL CONNECTIONS ARE SLIP CRITICAL CONNECTIONS WITH CLASS B FAYING SURFACES UNLESS SHOWN OTHERWISE. (BOLT THREADS SHALL BE EXCLUDED FROM SHEAR PLANE.)
3. TIGHTEN ALL HIGH-STRENGTH BOLTS USING THE "TURN-OF-NUT TIGHTENING" METHOD UNLESS SHOWN OTHERWISE.

Q:\SHAWNPEREZ\E11640 SW 61ST\DWG\E11640_S-SHEETS.DWG 3/9/2026 PEREZ, SHAWN

NO.	DATE	DESCRIPTION	APPD.

REVISION

XREF(S) USED:
ROTATION ANGLE: N/A
CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY CHECKED BY
FINAL MAP DATA
DRAWING NAME: E11640_S-SHEETS.dwg

DESIGNED BY	RR	DATE APPROVED	
CAD BY	SLP	ENGR. SUPV.	JCG
CHECKED BY	JCG	CONST. SUPV.	ED
BES DESIGN LEAD	CSL	ENGR. DIV. MGR.	SD

APPROVAL:

PBOT CITY ENGINEER REG. PROF. ENGR. NO. 84470PE

CITY OF PORTLAND
ENVIRONMENTAL SERVICES
KEITH WILSON, MAYOR
PAUL SUTO, P.E. CHIEF ENGINEER

PBOT PORTLAND BUREAU OF TRANSPORTATION
KEITH WILSON, MAYOR
MICHAEL MAGEE, P.E. CITY ENGINEER

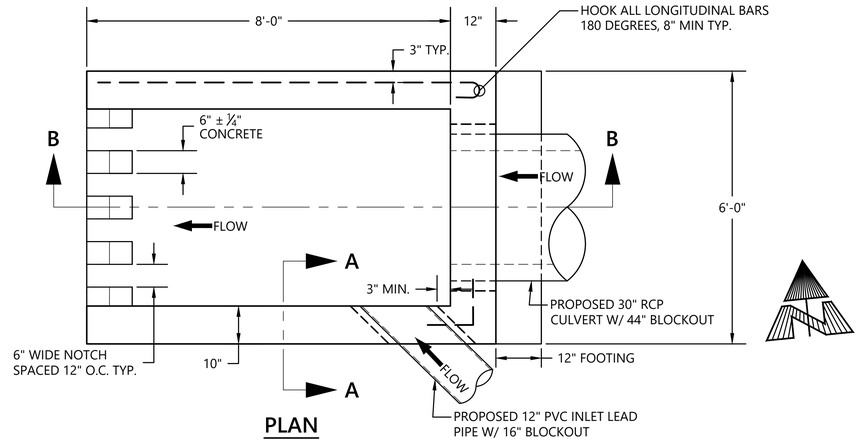
REGISTERED PROFESSIONAL ENGINEER
80798PE
OREGON
JUNE 11, 2008
JOHN CAMERON GLASSON
Expires 06/30/2027

CITY OF PORTLAND OREGON 1851

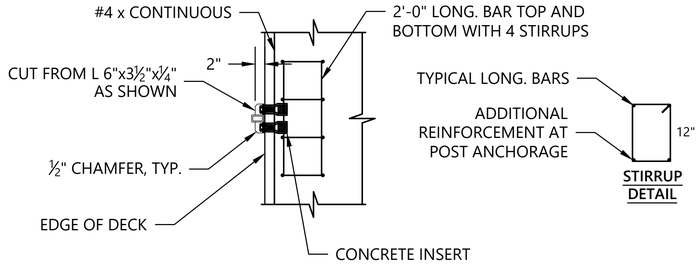
SW 61ST
CULVERT REPLACEMENT

STRUCTURAL DETAILS
DESIGN CRITERIA AND STRUCTURAL NOTES

1/4 SECTION 4123
JOB NO. E11640
SHEET NO. S01
6 OF 8



PLAN

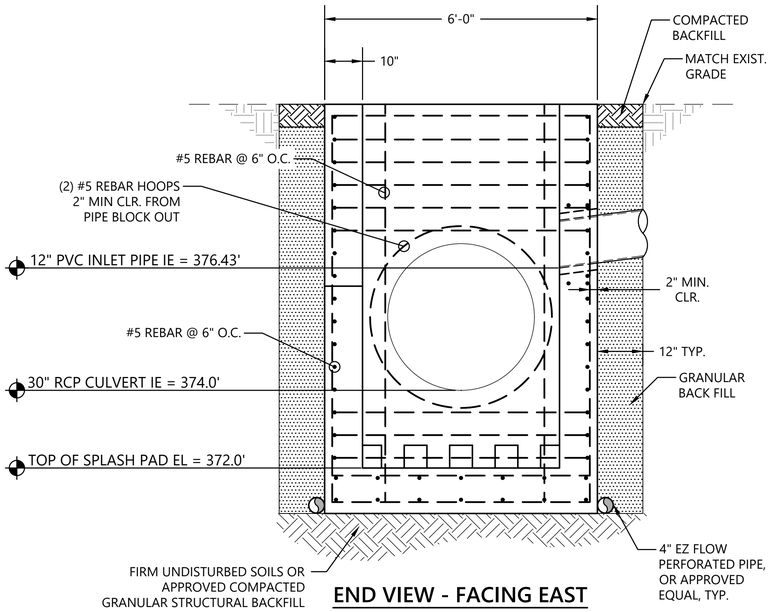


STIRRUP DETAIL

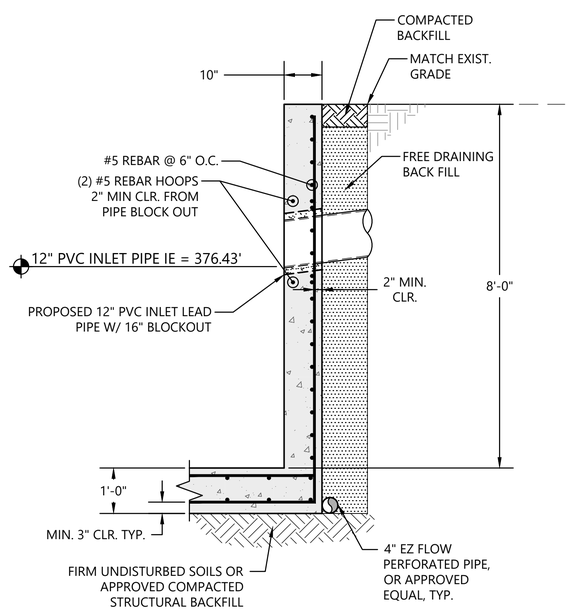
PLAN

2 / C02 **PEDESTRIAN RAIL SIDE MOUNTING POST REINFORCEMENT - DETAIL**

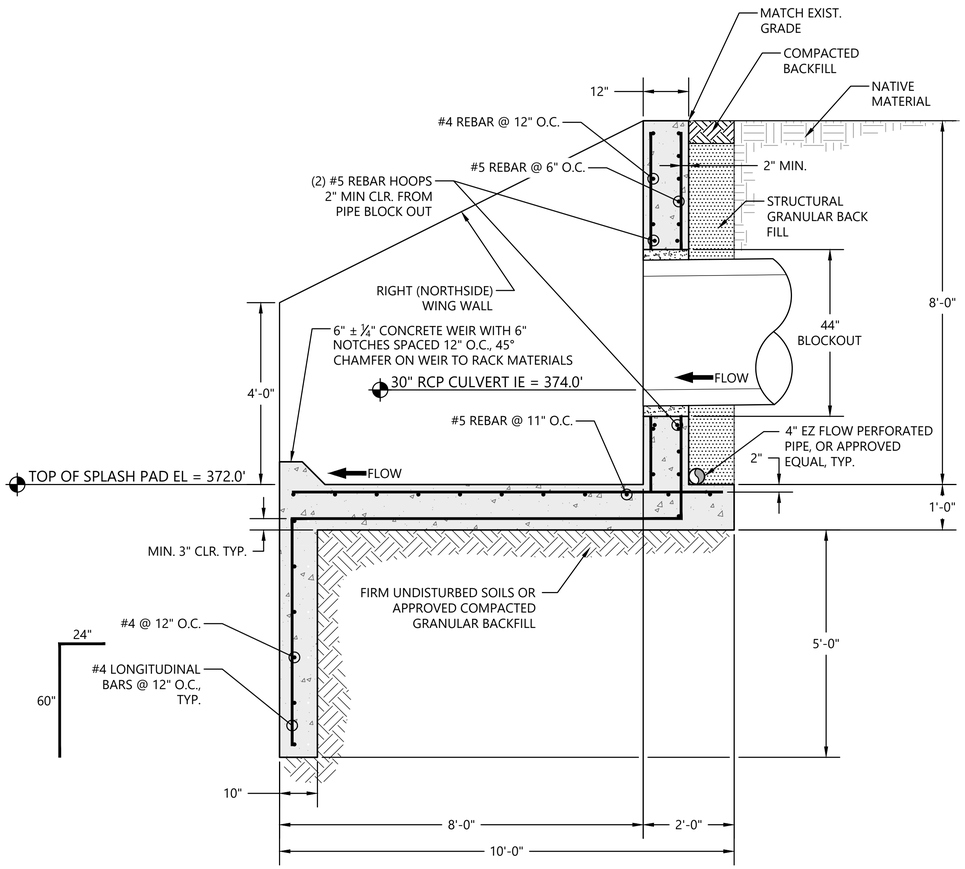
SCALE: NTS



END VIEW - FACING EAST



A-A
WINGWALL TYP.



B-B

1 / C02 **HEADWALL 2 (HW-02) - STRUCTURAL DETAILS**

SCALE: NTS

Q:_SHAWNPEREZ_E11640 SW 61ST\DWG\E11640_S-SHEETS.DWG 3/9/2026 PEREZ, SHAWN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

XREF(S) USED:
ROTATION ANGLE: N/A
CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY CHECKED BY
FINAL MAP DATA
DRAWING NAME: E11640_S-SHEETS.dwg

DESIGNED BY	CSL	DATE APPROVED	CSL
CAD BY	SLP	ENGR. SUPV.	RG
CHECKED BY	ST	CONST. SUPV.	ED
BES DESIGN LEAD	CSL	ENGR. DIV. MGR.	SD

APPROVAL:

PBOT CITY ENGINEER REG. PROF. ENGR. NO. 84470PE

CITY OF PORTLAND
ENVIRONMENTAL SERVICES
KEITH WILSON, MAYOR
PAUL SUTO, P.E., CHIEF ENGINEER

PBOT PORTLAND BUREAU OF TRANSPORTATION
KEITH WILSON, MAYOR
MICHAEL MAGEE, P.E., CITY ENGINEER

REGISTERED PROFESSIONAL ENGINEER
80798PE
OREGON
JUNE 11, 2008
JOHN CAMERON GLASSON
Expires 06/30/2027

CITY OF PORTLAND, OREGON 1851

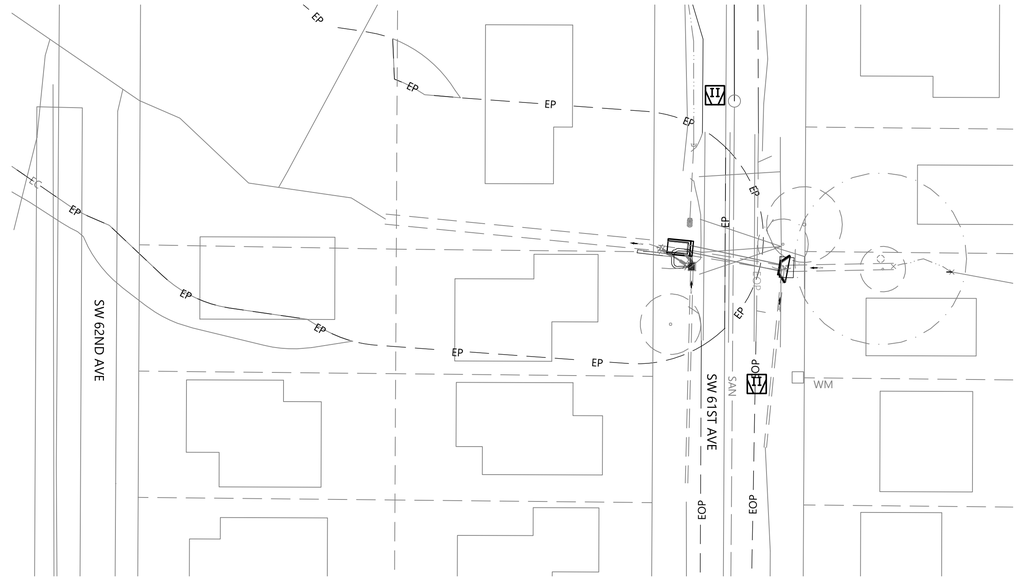
SW 61ST
CULVERT REPLACEMENT

STRUCTURAL DETAILS
HEADWALL 2 (HW-02)

1/4 SECTION	4123
JOB NO.	E11640
SHEET NO.	S02
	7 OF 8

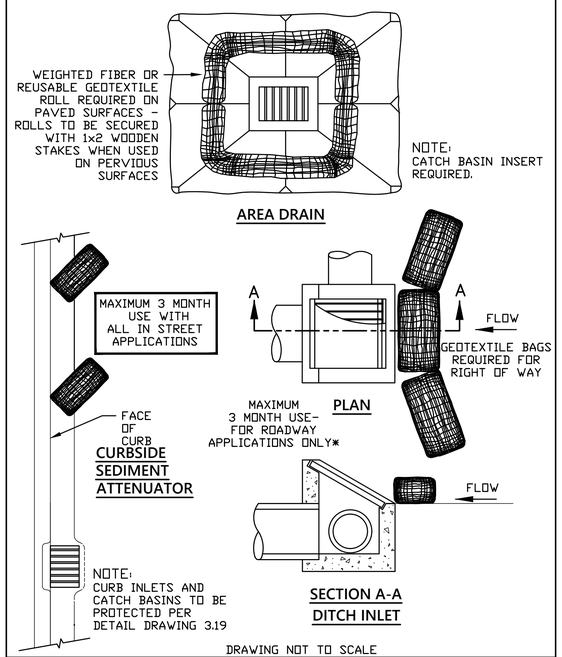
GENERAL NOTES FOR EROSION AND SEDIMENT CONTROL:

1. EROSION AND SEDIMENT CONTROL IS REQUIRED FOR THIS PROJECT.
2. PREPARE AN EROSION AND SEDIMENT CONTROL PLAN (ESCP) BEFORE BEGINNING WORK. KEEP A COPY OF THE ESCP AND THE CITY EROSION AND SEDIMENT CONTROL MANUAL (MARCH 2022) ON SITE AT ALL TIMES DURING THE PROJECT.
3. THE EROSION AND SEDIMENT CONTROL FACILITIES AS SHOWN IN THE CONTRACT DOCUMENTS ARE THE MINIMUM REQUIREMENTS FOR THE ANTICIPATED PROJECT WORK AREA AND SEASONAL CONDITIONS. UPGRADE THESE FACILITIES TO ADDRESS CHANGING WORK OR WEATHER CONDITIONS.
4. SELECT BEST MANAGEMENT PRACTICES (BMPs) FROM THE FOLLOWING DOCUMENTS:
   THE CITY OF PORTLAND EROSION AND SEDIMENT CONTROL MANUAL
   THE STANDARD CONSTRUCTION SPECIFICATIONS
   THE PROJECT CONTRACT DOCUMENTS
5. INSTALL, MONITOR, REPLACE AND UPGRADE ALL FACILITIES AND MEASURES AS SPECIFIED IN THE CONTRACT DOCUMENTS. PERFORM MAINTENANCE TO ENSURE THEIR CONTINUED FUNCTIONING.
6. INSPECT AND MAINTAIN ALL FACILITIES AND MEASURES UNTIL PROJECT WORK AREAS ARE PERMANENTLY RESURFACED OR STABILIZED.
7. COMPLETE AN EROSION CONTROL MONITORING FORM AFTER EACH INSPECTION. INCLUDE THE INSPECTION DATE AND TIME. SUBMIT COMPLETED FORMS THROUGH THE HERON PROCESS. PROVIDE THEM UPON REQUEST TO THE OWNER'S REPRESENTATIVE.
8. NO VISIBLE AND MEASURABLE SEDIMENT SHALL EXIT THE SITE, ENTER A PUBLIC RIGHT-OF-WAY, OR BE DEPOSITED INTO ANY WATER BODY OR STORM DRAINAGE SYSTEM.
9. FOLLOWING A STORM EVENT, INSPECT AND ADJUST, REPAIR, IMPROVE, OR REPLACE ALL DEFICIENT OR FAILING FACILITIES AND MEASURES.
10. PROTECT ALL FUNCTIONING STORMWATER INLETS AND CATCH BASINS FROM RECEIVING UNFILTERED SEDIMENT AND SEDIMENT-LADEN RUNOFF.
11. REMOVE SEDIMENT AND DEBRIS FROM INLETS AND CATCH BASINS BEFORE AND AFTER PAVING. DO NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
12. STABILIZE ALL EXPOSED SOIL IMMEDIATELY FOLLOWING GROUND DISTURBING ACTIVITY.
13. STABILIZE AND PROTECT STOCKPILED SOIL WITH APPROVED MEASURES.
14. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL FACILITIES AFTER THE PROJECT IS COMPLETED AND ACCEPTED BY THE OWNER'S REPRESENTATIVE.
15. INSTALL SEDIMENT FENCE.



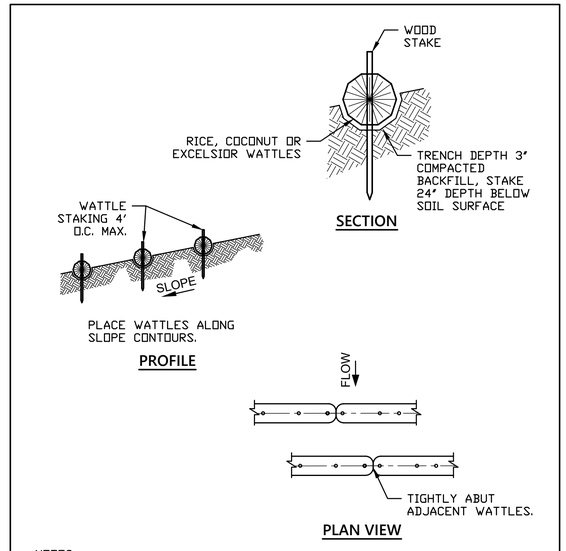
SCALE
30 0 15 30 60
SCALE FEET

***BIOBAGS MUST BE REMOVED AT END OF JOB**



DRAWING NOT TO SCALE

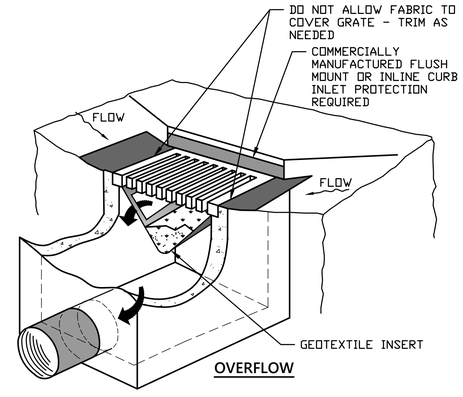
EROSION CONTROL MANUAL	FILTRATION BAGS AND SOCKS: TEMPORARY INLET PROTECTION Detail Drawing 3.16-A



NOTES:
1. STAKING SPECIFICATIONS:
   a. 1"x2" WOODEN STAKES
   b. ADDITIONAL STAKES MAY BE INSTALLED ON DOWNHILL SIDE OF WATTLES, ON STEEP SLOPE OR HIGHLY EROSIVE SOILS.

DRAWING NOT TO SCALE

EROSION CONTROL MANUAL	FIBER ROLLS AND WATTLES: SLOPE INSTALLATION Detail Drawing 3.17-A



NOTES:
RECESSED CURB INLET MUST BE PROTECTED WHEN CURB INLET IS PRESENT. SIZE OF FILTER FABRIC INLET SACK TO BE DETERMINED BY MANUFACTURER.

COMMERCIALLY MANUFACTURED DEVICES RATED AS 'HIGH FLOW' REQUIRED IN LOCATIONS WHERE FREQUENT FLOODING OCCURS. GRATES THAT ARE NOT REMOVABLE MAY UTILIZE COMMERCIALLY MANUFACTURED 'TOP OF GRATE' DEVICE.

DRAWING NOT TO SCALE

EROSION CONTROL MANUAL	STORM DRAIN INLET INSERT Detail Drawing 3.19-B

NO.	DATE	DESCRIPTION	APPD.

REVISION

XREF(S) USED: ;E11640_XBMAP;E11640_XDSN;E11640_XSURV
ROTATION ANGLE: 0d0'0"
CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY ____ CHECKED BY ____
FINAL MAP DATA
DRAWING NAME: E11640_CE-SHEETS.dwg

DESIGNED BY		DATE APPROVED	
CSL	CSL		
CAD BY	SLP	ENGR. SUPV.	RG
SLP		RG	
CHECKED BY	ST	CONST. SUPV.	ED
ST		ED	
		ENGR. DIV. MGR.	SD
		SD	

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
103567PE
OREGON
JANUARY 09, 2008
STEPHANIE TRUJILLO
Expires 06/30/2026

SW 61ST CULVERT REPLACEMENT

EROSION CONTROL PLAN
NOTES AND DETAILS

1/4 SECTION	4123
JOB NO.	E11640
SHEET NO.	CE01
	8 OF 8

Q:\SHAWNPEREZ\E11640 SW 61ST\DWG\E11640_CE-SHEETS.DWG 3/9/2026 PEREZ, SHAWN

PBOT
PORTLAND BUREAU OF TRANSPORTATION

DESIGN EXCEPTION

DESIGN EXCEPTION NUMBER

PROJECT (PERMIT) NAME	PROJECT (PERMIT) NO.
E11640 SW 61st Culvert Replacement	UP-2026-000368
REQUESTED BY (NAME AND TITLE):	**REQUEST DATE**
Chris Lastomirsky, Project Manager	2/26/26

Design Exceptions

☐ Design Speed	☐ Stopping Sight Distance	☐ Sidewalk Width
☐ Lane Width	☐ Clear Zone	☐ Parking Width
☐ Shoulder Width/Shy Distance	☐ Pavement Cross Slope	☐ Diagonal Parking
☐ Bridge Width	☐ Pavement Design Width	☐ Street Lighting
☐ Bridge Rail	☐ Bike Lane Width	☐ Traffic Signal
☐ Vertical Clearance	☐ Bike/Multi-Use Path	☐ Warrant Utility
☐ Structural Capacity	☐ Width ADA Standards	■ (Other)
☐ Grade	☐ Marked Crosswalk	
☐ Horizontal Alignment	☐ Detectable Tactile Color	
☐ Vertical Alignment		

DESIGN EXCEPTION DESCRIPTION (CITE THE STANDARD, GUIDELINE, OR POLICY THAT WILL NOT BE MET):

Pedestrian Fencing (ODOT Std. Dwg. BR246) installed on reinforced concrete headwalls do not meet clear zone guidance published in the AASHTO Roadside Design Guide.

PROJECT DESCRIPTION:

This project will replace an undersized culvert as part of the Urgent Capacity Shell. Due to the deep channel and downstream erosion, a headwall is required to protect the asset. The headwalls will have Pedestrian Fencing BR246 attached to protect the public from falls.

LOCATION OF DESIGN FEATURE (STREET,CROSS STREET, STATIONING AND OFFSET):

SW 61st adjacent to 11008 SW 61st Ave.

REASON(S) FOR DESIGN EXCEPTION:

Pedestrian Fencing (ODOT Std. Dwg. BR246) is required by PBOT Bridges & Structures to mitigate the fall hazard created by the proposed culvert headwall. Existing conditions warrant pedestrian fencing, but it has not been installed previously. The headwall and fencing cannot be located outside the clear zone due to stability impacts on existing private structures and private sewers. Per PBOT traffic engineering, PBOT typically relies upon the clear zone guidance published in the Roadside Design Guide to help inform design decisions when installing fixed objects along a roadside. The recommended clear zone is determined using the design speed and design volume of the roadway. The subject segment of SW 61st Ave has a posted speed limit of 25 mph (reduced from 30 mph in 2025) and an average daily traffic volume of approximately 2,200 vehicles per available traffic data collected in 2025. Therefore, the recommended clear zone in this area is between 12 and 16 feet per the AASHTO Roadside Design Guide. The proposed pedestrian fencing falls within this range.

MITIGATION OPTIONS AND ASSOCIATED COSTS:

Breakaway rail posts were considered, but could not be sourced for this application (do not exist).

COMPATIBILITY WITH ADJACENT STREET SECTIONS:

The proposed design is compatible with adjacent street sections which include the following existing obstructions within the same clear zone envelope: mailboxes, trees, utility poles, shrubs, concrete block planters, drainage ditches, regulatory sign posts, etc.

PROBABLE TIME BEFORE RECONSTRUCTION OF STREET (IF NOT CONSTRUCTED AS PART OF THESE IMPROVEMENTS):

Unknown

RECOMMENDATION:

Approve the installation of the pedestrian fencing within the clear zone, with added delineation. Delineate the upstream ends of the pedestrian fencing using Type 3 object markers (MUTCD sign code: OM-3R, PBOT sign code: W2360).

Please include supporting documentation (plan sections, cross sections, alignment sheets & details)

PREPARED BY (Check all boxes that apply)

EOR PE Stamp & Seal

☒ PROJECT MANAGER Chris Lastomirsky	ADDRESS 1120 SW 5th, Portland Oregon
☒ ENGINEER OF RECORD Cameron Glasgow	
COMPANY NAME City of Portland	EMAIL ADDRESS Cameron.Glasgow@portlandoregon.gov

DO NOT WRITE BELOW THIS LINE - PBOT USE ONLY

CONCURRENCE:

☐ Subject Matter Expert support memo (email) attached, if not provide explanation:

SECTION MANAGER, DATE

DIVISION MANAGER, DATE

APPROVALS:

☐ YES ☐ NO DP&T GROUP MANAGER, DATE

☐ YES ☐ NO CITY TRAFFIC ENGINEER, DATE

☐ YES ☐ NO CITY ENGINEER, Wendy Cawley 3/23/2026

Wendy Cawley DATE

REASON FOR NOT APPROVING

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

This Page Intentionally Blank

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

APPENDIX

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

This Page Intentionally Blank

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Geotechnical Report

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

Materials Testing Laboratory ▪ 1405 N River Street, Bldg 117, Portland, Oregon 97227 ▪ Dawn Uchiyama, Director

March 14, 2024

Chris Lastomirsky
City of Portland
Bureau of Environmental Services
1120 SW Fifth Avenue
Portland, OR 97204-1792

Geotechnical Report
SW 61st Culvert Replacement
Portland, Oregon
BES Project E11640

INTRODUCTION

This report presents the results of the geotechnical investigation completed by the Materials Testing Laboratory (MTL) for the SW 61st Culvert Replacement Project. The existing culvert, a 24-inch diameter corrugated metal pipe (CMP) is hydraulically undersized, leading to flooding of adjacent properties. The project includes: (i) installation of a new 30-inch diameter reinforced concrete pipe (RCP) to increase capacity, (ii) protection of existing retaining wall, and (iii) installation of new inlet and outfall structures. The project area is shown on the site plan, Figure 1.

The purpose of this geotechnical study is to explore subsurface conditions along the proposed culvert replacement and provide recommendations for use in the design and construction of the new pipe. Our scope of work includes a review of pertinent historical records (reports, and geologic and groundwater maps), site reconnaissance, subsurface explorations, laboratory testing, and engineering assessment.

GEOLOGICAL SETTING

According to a geologic map (O-12-02) published by the Oregon Department of Geology and Mineral Industries (DOGAMI) (Ma et al., 2012), the surficial geologic unit in the project area is mapped as basalt of Mount Sylvania, Qbsy (Ma et al., 2012), a member of the Boring Volcanic Field. The Boring Volcanic Field is the name given to numerous small volcanic eruptions and associated basalt flows in the Portland area between 120 thousand to 2.4 million years ago (Ma et al., 2012). The composition of these deposits varies considerably across the Portland Area, depending on elevation and the distance to major drainage channels.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

The geologic unit is described by Ma et al., 2012, as follows:

> **Qbsy-I,** *basalt of Mount Sylvania and loess (Pleistocene)* — Basalt or basaltic andesite tephra and lava flows making up the roughly conical Mount Sylvania.

Based on our exploration, the near surface basalt in the project site appears to have decomposed to a clayey soil.

The U.S. Geological Survey (USGS) has mapped the depth to groundwater within the proposed project site at a depth of greater than 60 below ground surface (bgs) (Snyder, 2008).

FIELD EXPLORATIONS AND TESTING

Our field explorations were performed cooperatively with the Coordinated Site Analysis (CSA) group, who will provide the environmental-related findings in a separate report. The field exploration consisted of one soil boring, Boring B-1, drilled near the proposed culvert replacement alignment. The boring was drilled on January 31, 2025, to a depth of 36.5 feet below ground surface. The approximate location of the boring is shown on Figure 1.

A description of drilling methods and copy of the boring log are provided in Appendix A. Laboratory tests were performed on selected soil samples and the test results are included in Appendix B and shown on the boring log.

SITE CONDITIONS

Surface Conditions

The project site is located in a residential neighborhood of SW Portland along the 1100 block of SW 61st Avenue. SW 61st Avenue is a paved two-lane local roadway, with no curbs, paved shoulders, or sidewalks. Shallow ditches line both sides of the roadway with small diameter pipes conveying stormwater from the ditches to the main drainage channel where the existing culvert runs beneath the roadway.

The existing culvert is a 47-foot-long concrete sewer pipe (CSP) that crosses SW 61st Ave from east to west at a slight diagonal angle to the roadway. The pipe invert elevation drops about 3.5 feet from inlet to outlet with at an approximate pipe depth of 9 to 10 feet bgs. The culvert transports stormwater along an existing drainage channel that flows along private property from 11008 SW 61st Ave to the east to 10945 and 11009 SW 61st Ave to the west. The drainage channel along the private properties is conveyed through pipes that are privately maintained. Between the private conveyance pipes and the culvert are short, 5 to 10 feet long, stretches of open ditches. These channel ditches are approximately 5 to 6 feet deep and are sloped at an approximate 1H:1V angle from the ground surface except on the southern side of the downstream channel where an existing

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

cement block and railroad tie retaining wall supports a near vertical face. This existing retaining wall extends along the public-right-of-way onto the private property at 11009 SW 61st Ave.

Subsurface Conditions
The soil conditions encountered in the project consist of the following units:

- **Pavement:** Boring B-1 encountered about 8 inches of asphalt cement over about 4 inches of aggregate base rock.

- **Residual Soil**
  A lean clay residual soil was encountered below the road pavement extending down to a depth of 26 feet bgs. The soils classified as a Lean Clay (CL) with trace amounts of fine sand from 10 to 20 feet bgs. From 20 to 26 feet bgs, the coarse-grained soil content increased, and the soil classified as a Sandy Lean Clay with Gravel (CL). The lean clay soils were medium to highly plastic with a medium stiff to stiff consistency. Moisture contents ranged from 20.1 to 30.8 percent, liquid limits ranged from 37 to 48, and plasticity limits ranged from 21 to 24.

- **Decomposed Basalt**
  A sandy elastic silt soil was encountered below the lean clay soils at a depth of 26 feet bgs extending to the termination depth of the boring at 36.5 feet bgs. These soils showed a high degree of iron staining and mottling indicative of a basalt that had decomposed through chemical altering to a soil. The soils were a soft in consistency and saturated with a moisture content of 70.9 percent suggesting a perched water table may have formed in the layer due to deeper, more competent basalt preventing water flow. A liquid limit of 65 and a plastic limit of 40 was measured for the soil.

The proposed pipe will likely be founded within the Residual Soil deposits.

Groundwater
Groundwater was encountered at a depth of 29 feet bgs. The groundwater is mostly likely a perched condition associated with deeper, more competent basalt limiting the infiltration of groundwater. Groundwater levels at the site are anticipated to fluctuate throughout the year, rising during extended periods of wet weather.

CONCLUSIONS AND RECOMMENDATIONS

Based on our geotechnical investigation, the following subsurface conditions could impact construction:

- Adjacent nearby utilities, property lines, or existing retaining walls within the influence zone of the proposed excavations may limit a contractor's means or methods.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

- An existing cement block and railroad tie retaining wall at the culvert outlet will need to be supported or removed during construction.

- Soft or wet fine-grained soils may be encountered during excavation, requiring stabilization of the subgrade below the culvert or retaining walls.

Shoring and Excavation

Construction site safety is the responsibility of the Contractor, who is solely responsible for the means, methods, and sequencing of construction operations. Project plans indicate that the project excavations could range from about 6 to 7 feet in depth for installation of the culvert and 9 to 10 feet in depth for installation of the inlet and outlet structures. As indicated above, the cement block and railroad tie retaining wall in the downstream channel will need to be supported or removed during construction.

The design of temporary shoring systems is the responsibility of the Contractor, subject to review and approval by the City of Portland. At a minimum, all excavations must comply with current OR-OSHA excavation standards. For the preliminary design of shoring systems and excavation methods we have classified the soil types we expect to encounter according to OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, and recommend the following soil parameters for the selection and design of shoring:

Soil Parameters for Shoring

Soil	Soil Type	Phi Angle (deg.) Max/Min	Unit Weight (pcf) Max/Min
Fine-grained soils (Clay and Silt)	Type C	30/28	110/105

Most excavations in the project area will encounter Type C soils. Shoring for excavations in Type C soils should be selected and installed using methods to prevent running soils or sloughing.

The soils within the proposed excavation zones may vary significantly across the project area. Our preliminary soil classification is based on the materials encountered in a borehole that was located outside of the proposed trench line. The Contractor should employ a competent person to evaluate subsurface conditions and apply the appropriate shoring system for the conditions encountered.

During open-cut trench excavation, trench widening could occur. Trench geometry and width affect the loading on the newly installed pipe. If trench widths exceed the design trench width for a given pipe diameter (i.e. neat line pay width), the Contractor should consult the pipe manufacturer to confirm that the design Factor of Safety can still be achieved. If the safe trench width is exceeded, the Contractor should provide a construction method that will achieve the design Factor of Safety.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Subsurface utilities within the zone of influence of the proposed trench excavation and soils supporting adjacent utilities within the zone of influence should be braced to prevent lateral movement or utility damage. The zone of influence is defined as a soil wedge extending upward from the bottom corner of the excavation at a gradient of 1.5H:1V. Trench sidewall support may require slide-rail shoring, hydraulic shoring, or backfilling of trench shields. Contractors should follow the most recent version of the City of Portland Standard Construction Specifications (SCS).

Finish slopes should have final grades of 2H:1V or flatter.

Dewatering

Groundwater was encountered in the project borings at a depth of 29 ft bgs. Project excavations are not anticipated to extend to this depth; however, perched groundwater or groundwater seepage may be encountered at shallower depths during excavations. The design of the dewatering system is the responsibility of the Contractor, subject to the approval of the City of Portland. We anticipate that the seepage amounts will be small and can be controlled with pumping from strategically located sumps during excavation.

Culvert Recommendations

We understand that the replacement culvert will likely consist of a 30-inch diameter RCP at a similar depth and alignment to the existing culvert but with a slightly shallower slope. The invert elevation of the culvert is anticipated at an elevation between 372.5 and 374.5 feet (City of Portland datum), approximately 5 to 7 feet below existing ground surface, and will likely encounter medium stiff clays. If unsuitable soils are encountered, such as wet or soft soils, the culvert should be stabilized as recommended by the geotechnical engineer with a method such as over-excavation and replacement with stabilization rock fill.

The culvert and pipe bedding materials and backfill around the culvert should consist of compacted base aggregate that meets the requirements of the City of Portland SCS. The backfill should be compacted in maximum 12-inch-thick lifts to 95% of maximum density as determined by standard proctor (ASTM D 698). Only hand operated compaction equipment should be used within 4 feet of the culvert. If the culvert manufacture provides more stringent culvert backfill material and compaction requirements, the manufacturer's installation requirements should be followed.

Retaining Wall Recommendations

We understand that a cast-in-place cantilevered retaining walls are proposed to support grade near the outlet of the proposed culvert. For unrestrained site retaining walls, we recommend using an active pressure of 34 pounds per cubic foot (pcf) equivalent fluid pressure for design. The seismic lateral force on yielding walls subject to active pressures can be calculated based on a dynamic force of $12H^2$ pounds per lineal foot of wall, as calculated using the Mononobe-Okabe method, where H is the height of the wall measured from the base in feet. The dynamic force should be applied as a distributed load with the centroid located at 0.5H from the base of the wall.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

The required minimum excavation depth to subgrade for the base of the wall is 12 inches below final grade at the front toe of the wall allow room for wall embedment and the underlying levelling pad. The base of the wall should be underlain by a minimum 6-inch-thick levelling pad composed of crushed rock granular fill, and the bottom gravity block should be embedded at least 12 inches below the adjacent finished grade. As indicated previously, after excavation to the required elevations and prior to placing the levelling pad, the exposed wall subgrade should be inspected by a geotechnical engineer for suitability.

We recommend the soil parameters presented in Table 1 for retaining wall analysis.

Table 1. Recommended Soil Parameters for Retaining Wall Design

Soil Type	Unit Weight (pcf)[1]	Cohesion (psf)[2]	Friction Angle (degrees)
Retained Material– Native Soils	105	0	28
Foundation soil –Granular Fill	130	0	35

1. Pounds per cubic foot
2. Pounds per square foot

The recommended allowable bearing capacity of the soils is 2,000 psf with the understanding that it is supported on a 6-inch-thick layer of compacted granular fill. The friction coefficient for wall base resting on granular fill is 0.40.

A shear key may be used to provide additional sliding resistance to the retaining wall. We recommend using a passive pressure of 300 pcf equivalent fluid pressure for the key design. The base of the retaining wall should not be included in the passive resistance unless a permanent pavement is installed in front of the wall to prevent scour of the toe soils.

Surcharges behind the walls within a horizontal distance from the back of the wall equal to twice the height of the wall, such as retained slopes, or roadway should be accounted for in the wall design. We can provide additional information for appropriate wall surcharges if necessary.

A drainage system should be installed behind the walls to prevent buildup of hydrostatic pressures. The drainage system should consist of a minimum 2-foot-thick section of free-draining granular fill behind the entire height of the wall. A minimum 4-inch diameter perforated drainpipe should be placed behind the wall. The pipe should be wrapped in a geotextile fabric. The drainage pipe should be routed with adequate slope to an appropriate location away from the base of the wall and should not be tied directly into the stormwater drain system.

Walls typically experience movement up to 1 percent of the wall height immediately after installation, as the wall rotates and develops lateral earth pressures. We recommend

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

postponing construction of flatwork located adjacent to the retaining wall, at least four weeks after backfilling the wall.

Permanent Slopes
For re-grading of channel slopes, final slopes composed of compacted granular fill should be no steeper than 2H:1V (horizontal:vertical). If steeper permanent slopes are required, we recommend a further evaluation of the geometry and soil conditions to determine whether a reinforced slope (such as geotextile wrapped wall) a buttress (with large angular rock), or a retaining wall can be used to increase stability of the slopes.

Subgrade Evaluation
After site preparation and excavation for the proposed structures, the exposed subgrade should be evaluated by the project geotechnical engineer. Areas that are deemed unsuitable for subgrade such as soft soils should be removed and replaced with compacted structural fill under the direction of the geotechnical engineer. Subgrade should consist of firm native soils or compacted structural fill as approved by the project geotechnical engineer during construction.

STRUCTURAL FILL

General
Structural fill areas include fill placed beneath culverts, inlet/outlet inserts, and retaining walls. Materials used for structural fill, and placement and compaction of fill, should meet the appropriate specifications provided in the latest edition of the City of Portland SCS.

On-site soils (for fill)
Based on our explorations, excavated soils will consist primarily of variable materials including silt and clays. The moisture content of the fine-grained soils will likely be wet of optimum. Generally, under these conditions, soils will be difficult to adequately compact on-site and place as structural fill. If the soils cannot be properly moisture conditioned (dried), we recommend using imported structural fill. Organic soils should not be re-used as structural fill. Furthermore, construction debris, and other deleterious materials should be removed prior to re-using on-site soils for backfills.

Imported Granular Material
Imported granular material used as structural fill should meet the specifications provided in SCS Section 00330.14 (Selected Granular Backfill) or 00330.15 (Selected Stone Backfill), with the exception that the material should have less than 7 percent by dry weight passing a U.S. Standard No 200 Sieve and have at least two mechanically fractured faces. Imported granular material should be placed in lifts no greater than 12 inches thick and compacted to 95 percent of the maximum dry density as determined by ASTM D 698.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Stabilization Material
Stabilization material used for stabilizing trenches should meet the specifications provided in SCS 00405.11 Trench Foundation Stabilization Material. The material should have at least two mechanically fractured faces. Stabilization material should be placed in lifts between 12 inches thick and compacted to a well-keyed, firm condition.

Drain Rock
Drain rock placed in drainage zones should consist of angular, granular material that meets the requirements of the SCS Section 00430.11 (Granular Drain Backfill Material). Drain rock should be compacted to a well-keyed condition. The drain rock should be wrapped in a Type 1 drainage geotextile that meets the specifications provided in SCS Table 02320-1 (Geotextile Property Values). The geotextile should be installed in accordance with SCS 00350 (Geosynthetic Installation).

Aggregate Base
The aggregate base beneath pavements should consist of ¾- or 1 ½ - inch minus material and meet the requirements in SCS 00641 (Aggregate Subbase, Base, and Shoulders). The aggregate should have less than 5 percent by dry weight passing the U.S. Standard No. 200 sieve. The aggregate should be compacted to 95% of the maximum dry density as determined by ASTM D698.

CONSTRUCTION MONITORING

We recommend that we be present on-site during excavation to evaluate the suitability of subgrade soils for the culvert and retaining walls. On-site observations may also aid in recognizing and reconciling other unanticipated soil or groundwater conditions and to verify that design recommendations are appropriate and properly implemented during construction.

The MTL should review the Contractor's submittals including for shoring and dewatering to confirm they are compatible with site conditions. The MTL should also test backfill compaction to determine that work is proceeding in accordance with the plans and specifications.

CLOSURE

The MTL should review the final project plans/specifications and the Contractor's proposed excavation and shoring plan to evaluate if they are compatible with site conditions. The MTL should test backfill compaction.

We appreciate the opportunity to participate in this project. Please contact us if you have questions about this report.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Respectfully,



Jed Stoken, P.E.
Geotechnical Engineer

Viola Lai, P.E., G.E.
Supervising Engineer

Attachments:

Figure 1	Site Plan with Project Boring
Appendix A	Field Explorations
Appendix B	Laboratory Testing

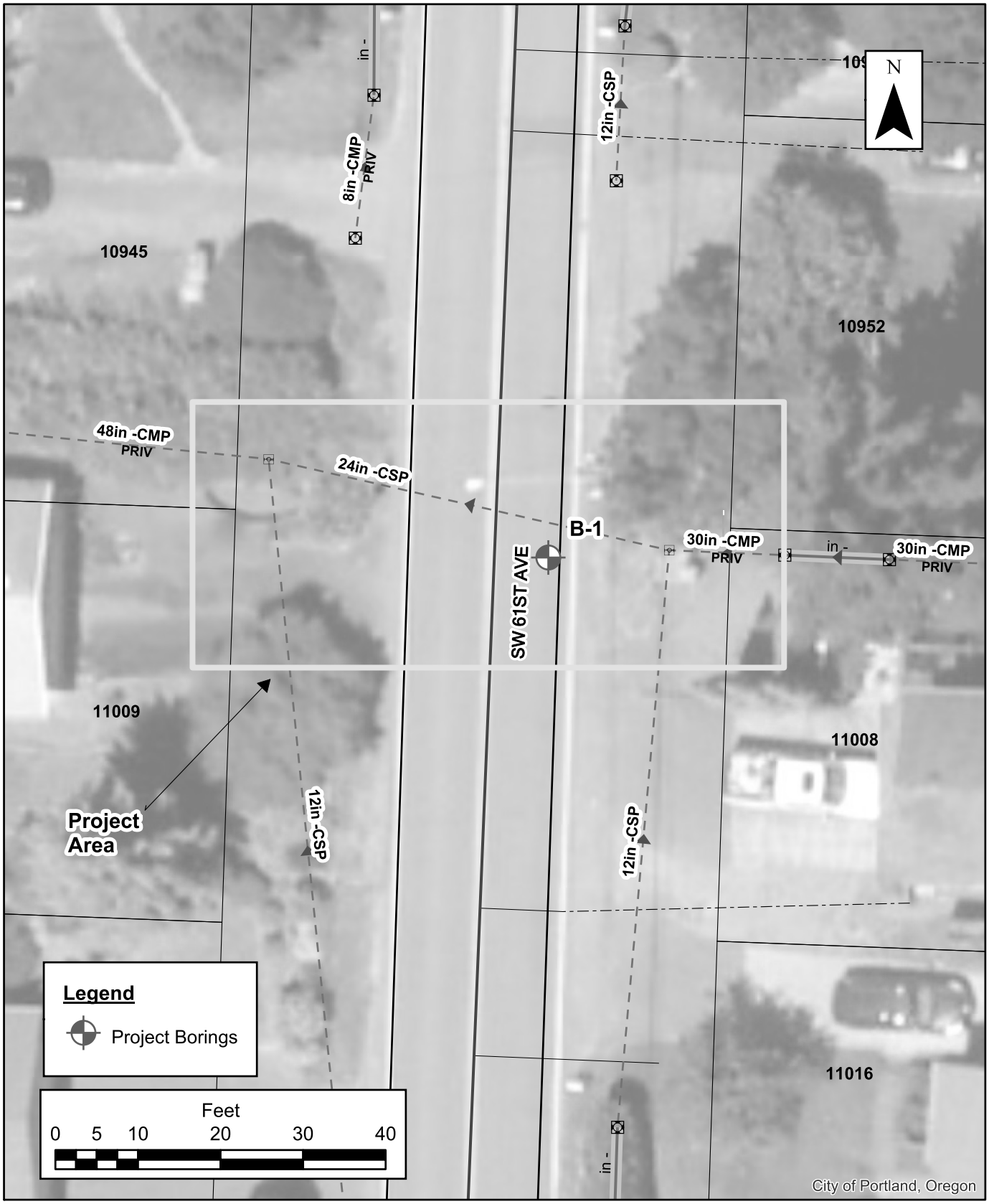
Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

REFERENCES

Ma, L., Madin, I.P., Duplantis, S. and Williams, K, 2012, *Lidar-Based Surficial Geologic Map and Database of the Greater Portland Area, Clackamas, Columbia, Marion, Multnomah, Washington, and Yamhill Counties, Oregon, and Clark County Washington*, Oregon Department of Geology and Mineral Industries, Open-file Report 0-12-02.

Snyder, D.T, 2008, *Estimated Depth to Ground Water and Configuration of the Water Table in the Portland, Oregon Area*. U.S. Geological Survey, Scientific Investigations Report.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306



CITY OF PORTLAND
ENVIRONMENTAL SERVICES
MATERIALS TESTING LABORATORY

SW 61st Culvert Replacement
Portland, OR
Site Plan with Project Boring

Figure
1

JOB NUMBER
E11640

DATE
02/27/2025

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

APPENDIX A: FIELD EXPLORATIONS

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

APPENDIX A: FIELD EXPLORATIONS

The field investigation consisted of drilling one boring, Boring B-1, on January 31, 2025, to a depth of 36.5 feet bgs. The exploration log is included in this appendix. The boring location is shown in the Site Plan, Figure 1. The location of the exploration was estimated by measuring the distance from existing features and should be considered approximate.

The boring was drilled using a truck mounted CME 75 drill rig operated by Western States Soil Conservation, Inc. The drill rig used hollow stem auger techniques to drill the boring. Soil samples were collected at 2.5-foot intervals in the upper 10 feet of the boring and 5-foot intervals thereafter by the Standard Penetration Test (SPT) method in general accordance with ASTM D1586. Two sampler types were used for the SPTs, a 2-inch outside diameter, 1-3/8-inch inside diameter split spoon sampler and a 3-inch outside diameter, 2-1/2-inch inside diameter modified California sampler. Both samplers were driven 18 inches (1.5 feet) into soil with a 140-pound auto-trip hammer with a free-fall of 30 inches. The number of blows required to drive the sampler the last 12 inches (1 foot) into the soil is shown on the exploration log.

A MTL geotechnical engineer logged the boring and obtained samples for visual classification and laboratory testing. Soils encountered in the exploration were field classified in accordance with ASTM D2488*, Standard Practice for Description and Identification of Soils* (Visual-Manual Method). A log of the exploration with soil classifications and sample depths is presented on Figure A-1. Soil names, symbols and terms used to describe soil relative density and consistency used in preparing the boring log are explained on Figure A-2.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

MTL Map I.D. 15809

LOG OF B-1

Equipment **CME75**

Elevation **381 Feet**** Date **1/31/25**

Laboratory Test Results or Remarks	Sample No.	Blows/6"	N Value (Uncorrected)	Content(%) Moisture
	1	2-2-3	5	
P200%= 96.0, LL= 48, PL=24	2	1-3-3	6	30.8
	3	3-5-6	11	
P200%=98.0, LL=37, PL=21	4	2-3-3	6	26.3
	5	2-4-5	9	
P200%=58.3, LL=38, PL=21	6	3-12-38	50	20.1
	7	3-3-5	8	
P200%=52.5, LL=65, PL=40	8	2-0-2	2	70.9
	9	0-2-4	6	

Depth(ft) Sample

0 — Asphalt cement, 8 inches thick.

Aggregate Base, 4 inches thick.

LEAN CLAY (CL) medium stiff to stiff, high plasticity, trace fine sand, moist, dark gray.

5

SEWER

10 — At 9.5 feet, medium plasticity, color changed to brown mottled with light tan.

15

20 — **SANDY LEAN CLAY WITH GRAVEL (CL)** medium stiff, medium plasticity, fine sand, fine to coarse gravel, moist, light brown mottled with light tan.

25 — **SANDY ELASTIC SILT (MH)** soft to medium stiff, high plasticity, fine sand, moist to wet, brown mottled with orange, (decomposed basalt).

30

35 — Hole terminated at 36.5 feet.
Groundwater encountered at 29 feet.

**Elevation based on project survey. COP Datum.

2016 LOG WITH BLOW CTS & SEWER BES E11640 SW 61ST CULVERT REPLACEMENT.GPJ 3/14/25

CITY OF PORTLAND
ENVIRONMENTAL SERVICES
MATERIALS TESTING LABORATORY

SW 61st Culvert Replacement
Portland, OR
Eastbound lane of SW 61st Avenue

FIGURE
A-1

JOB NUMBER	LOGGED BY	REVIEWED BY	DATE PRINTED
E11640	**J. Stoken**	**V. Lai**	**3/11/2025**

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

SOIL CLASSIFICATION CHART

based on ASTM D2487 and D2488

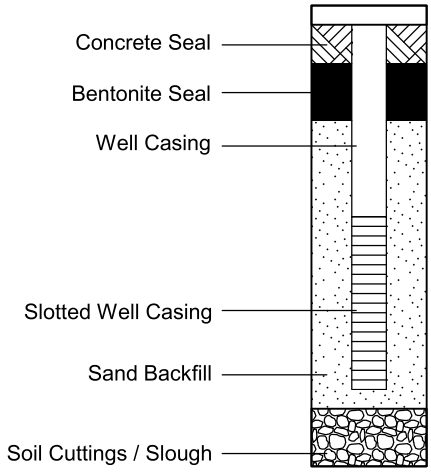
MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVEL
				GP	POORLY-GRADED GRAVEL
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVEL
				GC	CLAYEY GRAVEL
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SAND
				SP	POORLY-GRADED SAND
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SAND
				SC	CLAYEY SANDS
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILT
				CL	LEAN CLAY
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	ELASTIC SILT
				CH	FAT CLAY
				OH	ORGANIC SILT OR CLAY
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOIL

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

SAMPLER TYPE LEGEND

- 2" O.D. Split Spoon Sampler
- 3" O.D. Modified California Sampler
- GeoProbe Push
- Grab Sample
- Shelby Tube
- Approximate Sewer Pipe Invert Depth
- Groundwater Level (ATD = At Time of Drilling)
- Groundwater Level and Date

WELL INSTALLATION DETAILS



APPARENT/RELATIVE DENSITY OR CONSISTENCY VERSUS SPT BLOW COUNTS

COHESIONLESS SOILS		COHESIVE SOILS	
APPARENT DENSITY	SPT N-VALUE (# BLOWS/FT)	CONSISTENCY	SPT N-VALUE (# BLOWS/FT)
VERY LOOSE	< 4	VERY SOFT	< 2
LOOSE	4 - 10	SOFT	2 - 4
MEDIUM DENSE	10 - 30	MEDIUM STIFF	4 - 8
DENSE	30 - 50	STIFF	8 - 15
VERY DENSE	> 50	VERY STIFF	15 - 30
		HARD	> 30

CITY OF PORTLAND
ENVIRONMENTAL SERVICES
MATERIALS TESTING LABORATORY

SW 61st Culvert Replacement
Portland, OR
Terms & Symbols Used on Boring Logs

FIGURE
A-2

JOB NUMBER
E11640

DATE
3/11/2025

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

APPENDIX B: LABORATORY TESTING

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

APPENDIX B: LABORATORY TESTING

Samples were reexamined in the laboratory to confirm field classifications and to select representative samples for testing. Laboratory tests were conducted on selected soil samples collected from the soil borings to assist in the characterization of certain physical properties of the on-site soils. The laboratory tests included moisture content, grain size analysis, and Atterberg limits. Samples tested are noted on the boring log in Appendix A. Tabulated testing summaries and copies of the testing reports for the grain size analysis are included in this Appendix.

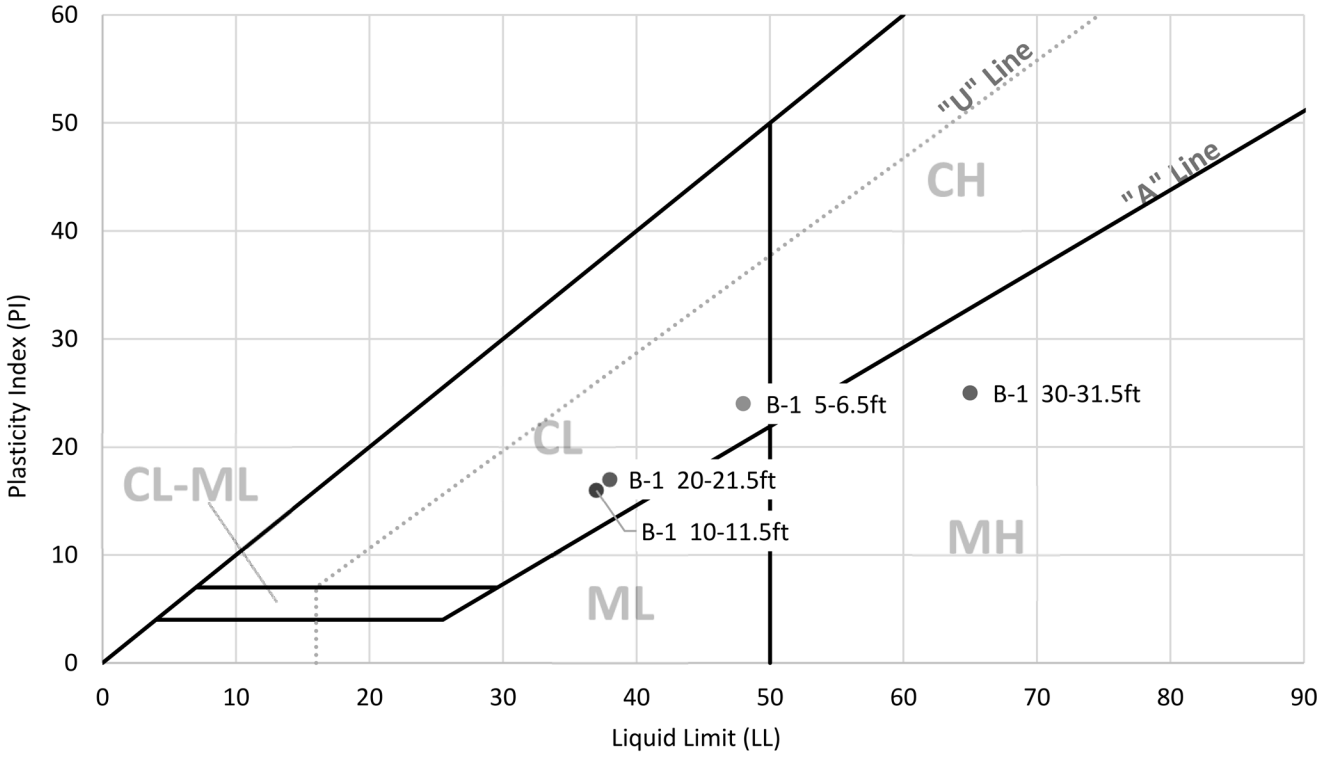
Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Summary of Laboratory Data

3/10/2025

E11640 SW 61st Culvert Replacement

Sample Location		Moisture Content (%)	Dry Density (PCF)	Sieve			Atterberg Limits		
Boring	Depth (ft)			Gravel (%)	Sand (%)	P200 (%)	Liquid Limit	Plastic Limit	Plasticity Index
B-1	5-6.5	30.8				96.0	48	24	24
B-1	10-11.5	26.3				95.0	37	21	16
B-1	20-21.5	20.1				58.3	38	21	17
B-1	30-31.5	70.9				52.5	65	40	25



Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Passing No 200 in Soils

ASTM D1140

Report #: MF0042-000001-00

City of Portland Materials Testing Lab
1405 N River St
Portland, OR 97227
Phone: 503-823-2340

Client:

Bureau of Environmental Services
1120 SW 5TH AVE. RM. 1000
PORTLAND, OR 97204

Project:

E11640 (E11640.W40)
SW 61st Culvert Replacement
1108 SW 61st Ave
Portland, OR

General Information

Sample Number:	781	**Sample Date:**	02/04/2025
Sample From:	Boring	**Sampling Method:**	Auger Boring ASTM D1452
Boring Number:	B-1	**Depth (ft):**	5-6.5
Technician:	Zoie Yetley		

Test Results

Mass of Test Sample Meet Minimum Requirement:	Yes
Test Specimen Contain More Than One Sample Type (layered):	No
Percent of Water Content (Method B):	30.8
Preparation Method:	Method A - Non-Cohesive Soils
Length of Time Sample Soaked (minutes):	1435 (23.92 hours)
Total Dry Sample Mass (grams):	204.6
Material Finer Than 75 µm (No. 200) Sieve (%):	96.0

Test Completed Date:	02/10/2025	**Test Completed By:**	Sheri Dauphinais

Reviewed By: Andrew Weiher
Date: 02/10/2025

This is a FINAL report. These results relate only to the items tested.
This report shall not be reproduced, except in full, without written approval of the City of Portland Materials Testing Lab.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Passing No 200 in Soils

ASTM D1140

Report #: MF0042-000002-00

City of Portland Materials Testing Lab
1405 N River St
Portland, OR 97227
Phone: 503-823-2340

Client:

Bureau of Environmental Services
1120 SW 5TH AVE. RM. 1000
PORTLAND, OR 97204

Project:

E11640 (E11640.W40)
SW 61st Culvert Replacement
1108 SW 61st Ave
Portland, OR

General Information

Sample Number:	782	**Sample Date:**	02/04/2025
Sample From:	Boring	**Sampling Method:**	Auger Boring ASTM D1452
Boring Number:	B-1	**Depth (ft):**	10-11.5
Technician:	Zoie Yetley		

Test Results

Mass of Test Sample Meet Minimum Requirement:	Yes
Test Specimen Contain More Than One Sample Type (layered):	No
Percent of Water Content (Method B):	26.3
Preparation Method:	Method B - Cohesive Soils
Length of Time Sample Soaked (minutes):	1427 (23.78 hours)
Total Dry Sample Mass (grams):	209.4
Material Finer Than 75 µm (No. 200) Sieve (%):	95.0

Test Completed Date:	02/10/2025	**Test Completed By:**	Sheri Dauphinais

Reviewed By: Andrew Weiher
Date: 02/10/2025

This is a FINAL report. These results relate only to the items tested.
This report shall not be reproduced, except in full, without written approval of the City of Portland Materials Testing Lab.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Passing No 200 in Soils

ASTM D1140

Report #: MF0042-000003-00

City of Portland Materials Testing Lab
1405 N River St
Portland, OR 97227
Phone: 503-823-2340

Client:

Bureau of Environmental Services
1120 SW 5TH AVE. RM. 1000
PORTLAND, OR 97204

Project:

E11640 (E11640.W40)
SW 61st Culvert Replacement
1108 SW 61st Ave
Portland, OR

General Information

Sample Number:	784	**Sample Date:**	02/04/2025
Sample From:	Boring	**Sampling Method:**	Auger Boring ASTM D1452
Boring Number:	B-1	**Depth (ft):**	20-21.5
Technician:	Zoie Yetley		

Test Results

Mass of Test Sample Meet Minimum Requirement:	Yes
Test Specimen Contain More Than One Sample Type (layered):	No
Percent of Water Content (Method B):	20.1
Preparation Method:	Method A - Non-Cohesive Soils
Length of Time Sample Soaked (minutes):	1443 (24.05 hours)
Total Dry Sample Mass (grams):	254.2
Material Finer Than 75 µm (No. 200) Sieve (%):	58.3

Test Completed Date:	02/10/2025	**Test Completed By:**	Sheri Dauphinais

Reviewed By: Andrew Weiher
Date: 02/10/2025

This is a FINAL report. These results relate only to the items tested.
This report shall not be reproduced, except in full, without written approval of the City of Portland Materials Testing Lab.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Passing No 200 in Soils

ASTM D1140

Report #: MF0042-000004-00

City of Portland Materials Testing Lab
1405 N River St
Portland, OR 97227
Phone: 503-823-2340

Client:

Bureau of Environmental Services
1120 SW 5TH AVE. RM. 1000
PORTLAND, OR 97204

Project:

E11640 (E11640.W40)
SW 61st Culvert Replacement
1108 SW 61st Ave
Portland, OR

General Information

Sample Number:	786	**Sample Date:**	02/04/2025
Sample From:	Boring	**Sampling Method:**	Auger Boring ASTM D1452
Boring Number:	B-1	**Depth (ft):**	30-31.5
Technician:	Zoie Yetley		

Test Results

Mass of Test Sample Meet Minimum Requirement:	Yes
Test Specimen Contain More Than One Sample Type (layered):	No
Percent of Water Content (Method B):	70.9
Preparation Method:	Method B - Cohesive Soils
Length of Time Sample Soaked (minutes):	262 (4.37 hours)
Total Dry Sample Mass (grams):	179.2
Material Finer Than 75 µm (No. 200) Sieve (%):	52.5

Test Completed Date:	02/10/2025	**Test Completed By:**	Andrew Weiher

Reviewed By: Andrew Weiher
Date: 02/10/2025

This is a FINAL report. These results relate only to the items tested.
This report shall not be reproduced, except in full, without written approval of the City of Portland Materials Testing Lab.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Atterberg Plasticity Index of Soil

ASTM D4318

Report #: MF0046-000001-00

City of Portland Materials Testing Lab
1405 N River St
Portland, OR 97227
Phone: 503-823-2340

Client:

Bureau of Environmental Services
1120 SW 5TH AVE. RM. 1000
PORTLAND, OR 97204

Project:

E11640 (E11640.W40)
SW 61st Culvert Replacement
1108 SW 61st Ave
Portland, OR

Sample Number:	782	**Sample Date:**	02/04/2025
Sample From:	Boring	**Sampling Method:**	Auger Boring ASTM D1452
Boring Number:	B-1	**Depth (ft):**	10-11.5
Technician:	Zoie Yetley		

Max Grain Size (mm): 2.00

As-Received % Moisture: 26.0

Removed #40 Larger Particles: Combination of hand and washing.

% Retain on No. 40 Sieve: 0.8

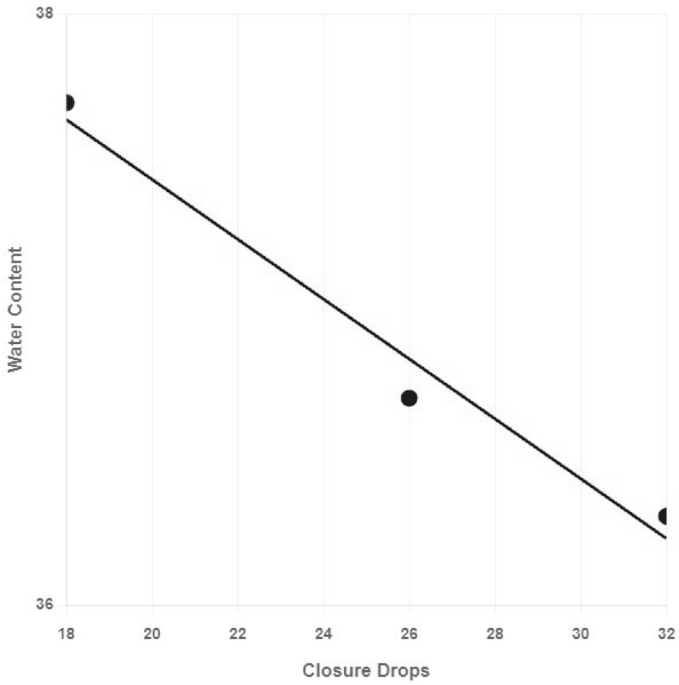
Prepared Sample: Wet

Grooving Tool: Metal

Liquid Limit Method: Method A (Multipoint)

Plastic Limit Procedure: Hand-Rolled

Closure Drops	Water Content
18	37.7
26	36.7
32	36.3



Water Content at 25 Drops: 36.9

Liquid Limit (Method A): **37**

Trial 1 Plastic Limit: 20 **Trial 2 Plastic Limit:** 21 **Average Plastic Limit:** **21**

Plasticity Index: **16**

Test Completed Date: 02/24/2025 **Lab Technician:** Sheri Dauphinais

This is a FINAL report. These results relate only to the items tested.
This report shall not be reproduced, except in full, without written approval of the City of Portland Materials Testing Lab.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Atterberg Plasticity Index of Soil

ASTM D4318

Report #: MF0046-000001-00

City of Portland Materials Testing Lab
1405 N River St
Portland, OR 97227
Phone: 503-823-2340

Client:

Bureau of Environmental Services
1120 SW 5TH AVE. RM. 1000
PORTLAND, OR 97204

Project:

E11640 (E11640.W40)
SW 61st Culvert Replacement
1108 SW 61st Ave
Portland, OR

Reviewed By: Andrew Weiher
Date: 02/24/2025

This is a FINAL report. These results relate only to the items tested.
This report shall not be reproduced, except in full, without written approval of the City of Portland Materials Testing Lab.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Atterberg Plasticity Index of Soil

ASTM D4318

Report #: MF0046-000002-00

City of Portland Materials Testing Lab
1405 N River St
Portland, OR 97227
Phone: 503-823-2340

Client:

Bureau of Environmental Services
1120 SW 5TH AVE. RM. 1000
PORTLAND, OR 97204

Project:

E11640 (E11640.W40)
SW 61st Culvert Replacement
1108 SW 61st Ave
Portland, OR

Sample Number:	784	**Sample Date:**	02/04/2025
Sample From:	Boring	**Sampling Method:**	Auger Boring ASTM D1452
Boring Number:	B-1	**Depth (ft):**	20-21.5
Technician:	Zoie Yetley		

Max Grain Size (mm): 9.50

As-Received % Moisture: 20.0

Removed #40 Larger Particles: Combination of hand and washing.

% Retain on No. 40 Sieve: 8.5

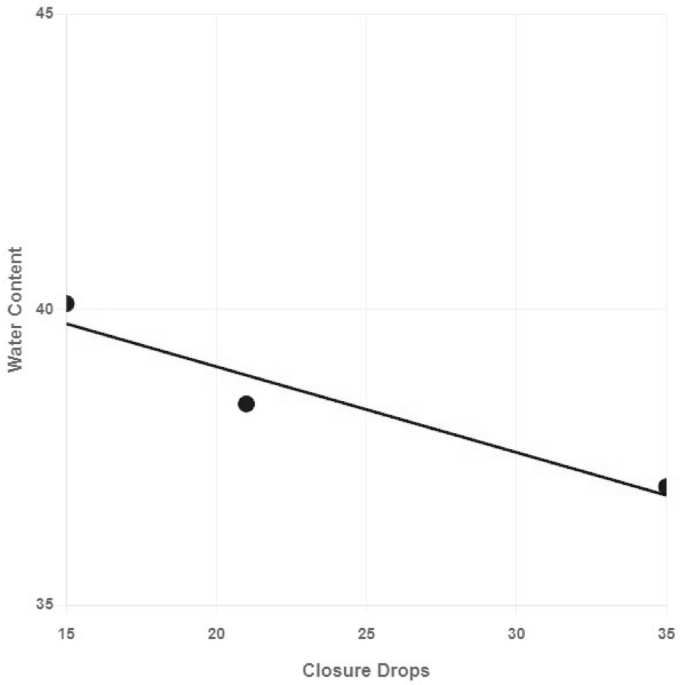
Prepared Sample: Wet

Grooving Tool: Metal

Liquid Limit Method: Method A (Multipoint)

Plastic Limit Procedure: Hand-Rolled

Closure Drops	Water Content
15	40.1
21	38.4
35	37.0



Water Content at 25 Drops: 38.3

Liquid Limit (Method A): **38**

Trial 1 Plastic Limit: 21 **Trial 2 Plastic Limit:** 21 **Average Plastic Limit:** **21**

Plasticity Index: **17**

Test Completed Date: 02/26/2025 **Lab Technician:** Sheri Dauphinais

This is a FINAL report. These results relate only to the items tested.
This report shall not be reproduced, except in full, without written approval of the City of Portland Materials Testing Lab.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Atterberg Plasticity Index of Soil

ASTM D4318

Report #: MF0046-000002-00

City of Portland Materials Testing Lab
1405 N River St
Portland, OR 97227
Phone: 503-823-2340

Client:

Bureau of Environmental Services
1120 SW 5TH AVE. RM. 1000
PORTLAND, OR 97204

Project:

E11640 (E11640.W40)
SW 61st Culvert Replacement
1108 SW 61st Ave
Portland, OR

Reviewed By: Viola Lai
Date: 02/27/2025

This is a FINAL report. These results relate only to the items tested.
This report shall not be reproduced, except in full, without written approval of the City of Portland Materials Testing Lab.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Atterberg Plasticity Index of Soil

ASTM D4318

Report #: MF0046-000003-00

City of Portland Materials Testing Lab
1405 N River St
Portland, OR 97227
Phone: 503-823-2340

Client:

Bureau of Environmental Services
1120 SW 5TH AVE. RM. 1000
PORTLAND, OR 97204

Project:

E11640 (E11640.W40)
SW 61st Culvert Replacement
1108 SW 61st Ave
Portland, OR

Sample Number:	786	**Sample Date:**	02/04/2025
Sample From:	Boring	**Sampling Method:**	Auger Boring ASTM D1452
Boring Number:	B-1	**Depth (ft):**	30-31.5
Technician:	Zoie Yetley		

Max Grain Size (mm): 2.00

As-Received % Moisture: 71.0

Removed #40 Larger Particles: Combination of hand and washing.

% Retain on No. 40 Sieve: 4.0

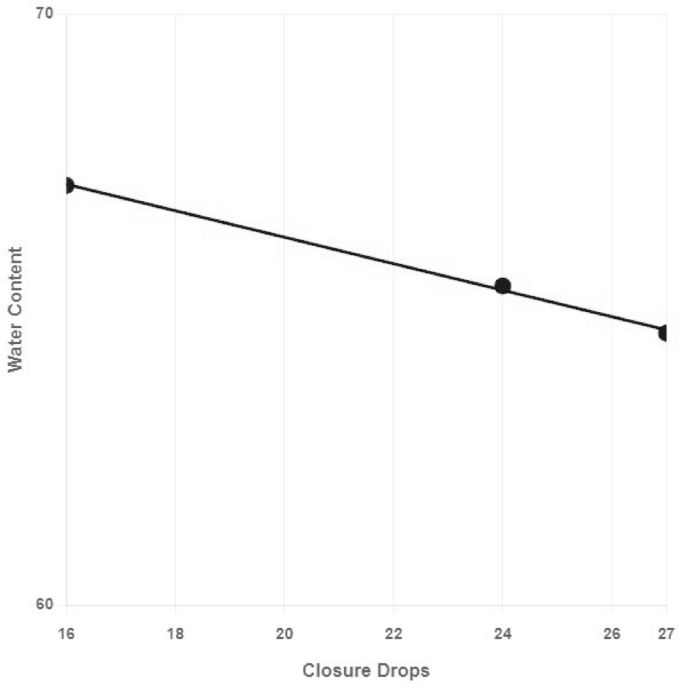
Prepared Sample: Wet

Grooving Tool: Metal

Liquid Limit Method: Method A (Multipoint)

Plastic Limit Procedure: Hand-Rolled

Closure Drops	Water Content
27	64.6
24	65.4
16	67.1



Water Content at 25 Drops: 65.1

Liquid Limit (Method A): **65**

Trial 1 Plastic Limit: 39 **Trial 2 Plastic Limit:** 40 **Average Plastic Limit:** **40**

Plasticity Index: **25**

Test Completed Date: 02/26/2025 **Lab Technician:** Sheri Dauphinais

This is a FINAL report. These results relate only to the items tested.
This report shall not be reproduced, except in full, without written approval of the City of Portland Materials Testing Lab.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Atterberg Plasticity Index of Soil

ASTM D4318

Report #: MF0046-000003-00

City of Portland Materials Testing Lab
1405 N River St
Portland, OR 97227
Phone: 503-823-2340

Client:

Bureau of Environmental Services
1120 SW 5TH AVE. RM. 1000
PORTLAND, OR 97204

Project:

E11640 (E11640.W40)
SW 61st Culvert Replacement
1108 SW 61st Ave
Portland, OR

Reviewed By: Viola Lai
Date: 02/27/2025

This is a FINAL report. These results relate only to the items tested.
This report shall not be reproduced, except in full, without written approval of the City of Portland Materials Testing Lab.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Atterberg Plasticity Index of Soil

ASTM D4318

Report #: MF0046-000004-00

City of Portland Materials Testing Lab
1405 N River St
Portland, OR 97227
Phone: 503-823-2340

Client:

Bureau of Environmental Services
1120 SW 5TH AVE. RM. 1000
PORTLAND, OR 97204

Project:

E11640 (E11640.W40)
SW 61st Culvert Replacement
1108 SW 61st Ave
Portland, OR

Sample Number:	781	**Sample Date:**	02/04/2025
Sample From:	Boring	**Sampling Method:**	Auger Boring ASTM D1452
Boring Number:	B-1	**Depth (ft):**	5-6.5
Technician:	Zoie Yetley		

Max Grain Size (mm): 2.00

As-Received % Moisture: 31.0

Removed #40 Larger Particles: Combination of hand and washing.

% Retain on No. 40 Sieve: 0.1

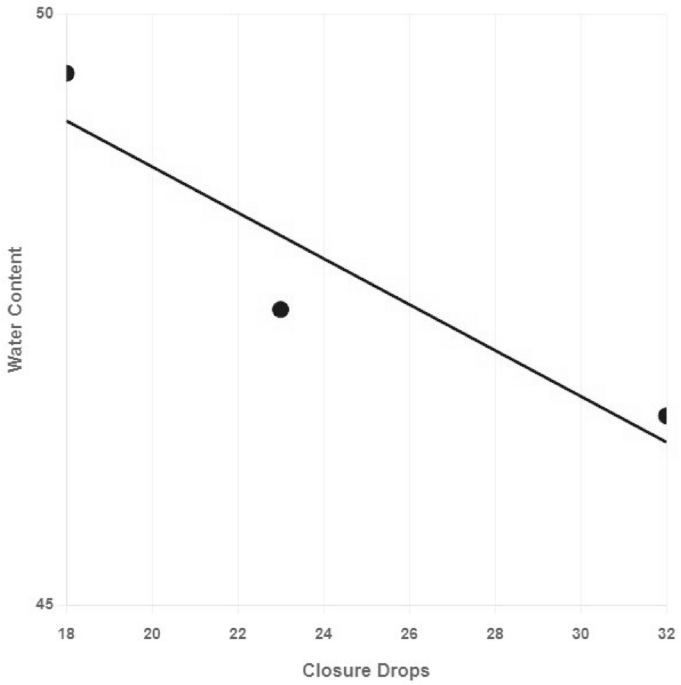
Prepared Sample: Wet

Grooving Tool: Metal

Liquid Limit Method: Method A (Multipoint)

Plastic Limit Procedure: Hand-Rolled

Closure Drops	Water Content
32	46.6
23	47.5
18	49.5



Water Content at 25 Drops: 47.7

Liquid Limit (Method A): **48**

Trial 1 Plastic Limit: 23 **Trial 2 Plastic Limit:** 24 **Average Plastic Limit:** **24**

Plasticity Index: **24**

Test Completed Date: 02/27/2025 **Lab Technician:** Sheri Dauphinais

This is a FINAL report. These results relate only to the items tested.
This report shall not be reproduced, except in full, without written approval of the City of Portland Materials Testing Lab.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Atterberg Plasticity Index of Soil

ASTM D4318

Report #: MF0046-000004-00

City of Portland Materials Testing Lab
1405 N River St
Portland, OR 97227
Phone: 503-823-2340

Client:

Bureau of Environmental Services
1120 SW 5TH AVE. RM. 1000
PORTLAND, OR 97204

Project:

E11640 (E11640.W40)
SW 61st Culvert Replacement
1108 SW 61st Ave
Portland, OR

Reviewed By: Viola Lai
Date: 02/28/2025

This is a FINAL report. These results relate only to the items tested.
This report shall not be reproduced, except in full, without written approval of the City of Portland Materials Testing Lab.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

This Page Intentionally Blank

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Level 2
Environmental Report

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

MEMORANDUM

Date: February 20, 2025

To: Chris Lastomirsky - BES Surface Water Restoration

From: Keir Allison-Bourne - BES CSA Program

CC: Brian Marcum, P.E. – BES CSA Program

RE: E11640 **–** SW 61st Culvert Replacement - Level 2 ESA

1. BACKGROUND AND PURPOSE

The City of Portland's Bureau of Environmental Services (BES), Coordinated Site Assessment (CSA) program was requested to conduct a Level 2 Environmental Site Assessment (ESA) for the SW 61st Culvert Replacement project; BES Project E11640. The project's objective is to increase the capacity of the culvert crossing (BES Asset ID: ADJ218-ADJ217) by replacing the 24" culvert on SW 61st with a 30" culvert due to it causing private property flooding.

The primary purpose of this environmental assessment is to evaluate planned excavation spoils in the project area for potential contamination. The results are used to characterize soil for disposal purposes and to evaluate soil for worker exposure with respect to Oregon Department of Environmental Quality (DEQ), Clean Fill Screening Levels (CFSLs), and Risk-Based Concentrations (RBCs) for construction and excavation workers.

The Level 1 ESA for this project (dated December 18th, 2024) was reviewed to identify historical features of concern, recognized environmental conditions, and to determine appropriate sample procedures, health and safety measures, chemical testing methods, and quality assurance/quality control procedures.

2. SAMPLE COLLECTION

On January 31, 2025, CSA program staff collected a total of two soil samples from one soil boring within the project area. The soil samples were labeled B-1-1 and B-1-2. Sample B-1-1 was advanced to a depth of 2.5 to 4 feet below ground surface (bgs) and sample B-1-2 was advanced to a depth of 7.5 to 9 feet bgs. The sample location is shown on **Figure 1**.

Soil samples were collected using a truck-mounted hollow stem auger drilling rig with a Modified California split-spoon sampler. Each sample was composited in a decontaminated stainless-steel bowl and packed into 4-oz. amber glass jars with Teflon-lined lids. Field sampling personnel donned new Nitrile gloves to collect each sample. Sample jars were labeled, packed into chilled coolers, and transported under chain-of-custody protocol to the City of Portland Water Pollution Control Laboratory (WPCL) for analysis. Sampling was conducted concurrent

The City of Portland complies with all non-discrimination laws including Title VI (Civil Rights) and Title II (ADA).
To request a translation, accommodation or additional information, please call 503-823-7740, or use City TTY 503-823-6868, or Oregon Relay Service: 711.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

with a geotechnical investigation conducted by the BES Material Testing Laboratory (MTL). MTL's findings including soil boring logs are presented under separate cover.

3. LABORATORY ANALYSIS

Samples were analyzed for the following compounds by the laboratory methods specified:

- Total Metals (Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver) by Environmental Protection Agency (EPA) Method 6020.
- Hydrocarbon Identification by NWTPH-HCID.
- Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270-SIM.

4. ANALYTICAL RESULTS

Soil sample results were screened against the DEQ CSFLs for uplands in the Portland Basin (DEQ 2019) and the DEQ RBCs for the soil ingestion, dermal contact, and inhalation exposure pathway for the construction and excavation workers (DEQ 2023). Results are discussed in the following sections. Analytical results were evaluated against DEQ screening criteria and are presented in **Table 1** and **Table 2**. The laboratory reports are provided in **Attachment A.**

TOTAL METALS

Detected metals in samples B-1-1 and B-1-2 were below applicable CSFLs and detections were below RBCs for the construction worker receptor scenario.

HYDROCARBON IDENTIFICATION

Sample B-1-1 had a detection of lube oil below CSFLs and applicable RBCs. No other samples for this project had detections of above their respective laboratory method reporting limits (MRLs).

POLYCYCLIC AROMATIC HYDROCARBONS

Sample B-1-1 had detections of PAHs below CSFLs and applicable RBCs.

5. SUMMARY

Based on the results of this Level 2 ESA, the CSA program has the following recommendations:

SOIL DISPOSAL

No detections were above CSFLs. Soil excavated for this project can be considered clean fill.

WORKER HEALTH AND SAFETY

No detections were above RBCs. The contractor should evaluate the results and take them into consideration when preparing the Site-Specific Safety and Health Plan.

UNANTICIPATED CONTAMINATED MEDIA

If any unanticipated contaminated media (identified by odor, sheen, or other field test) or undocumented fill (containing construction or household debris) is encountered during field activities, please contact the CSA program immediately and follow City of Portland Standard Construction Specification 00291.45. Any material removed from the site having a chemical odor, staining, or sheen will require disposal at an approved landfill.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

6. LIMITATIONS

The purpose of this investigation is to report the findings of sampling and analysis. The samples collected only indicate the presence or absence of contaminants in the samples collected. Contamination may exist in areas not sampled. The focus of the investigation is on hazardous substances likely associated with the historical activities conducted within the subject site. In this context, the term hazardous substance includes the chemicals listed as hazardous substances in the Code of Federal Regulations, Oregon Administrative Rules, and petroleum products. This survey is in effect as of February 20, 2025.

7. REFERENCES

DEQ. June 2023. *Risk-Based Concentrations for Individual Chemicals*.

DEQ. February 2019. *Internal Management Directive: Clean Fill Determinations*.

DEQ. March 2013. *Development of Oregon Background Metals Concentrations in Soil.*

Enclosures

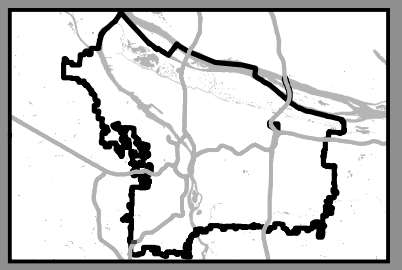
Figure 1	Soil Boring Location
Table 1	Total Metals and Hydrocarbons Analytical Results
Table 2	Polycyclic Aromatic Hydrocarbons Analytical Results
Attachment A	Laboratory Analytical Reports

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

FIGURES

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306





E11640 - SW 61st Ave Culvert Replacement

Figure 1. Soil Boring

Map Created by: Keir Allison-Bourne
February 20, 2025

Soil Boring
Project Boundary
Culvert Outlets
Culvert

N

0 5 10 20 30
Feet

5

Map Produced in ArcMap

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

TABLES

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Table 1. Total Metals and Hydrocarbons Analytical Results

Field Sample ID	Depth Interval (feet bgs)	Lab Sample ID	Collection Date	Total Petroleum Hydrocarbons (TPH) (mg/kg)			Total Metals (mg/kg)							
				Diesel	Lube Oil	Gasoline	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
B-1-1	2.5 - 4	W25B014-01	1/31/2025 9:00	ND	**190**	ND	**1.57**	**159**	**0.083**	**31.2**	**9.13**	**0.0163**	ND	ND
B-1-2	7.5 - 9	W25B014-02	1/31/2025 9:10	ND	ND	ND	**3.7**	**142**	ND	**34.8**	**7.17**	**0.0126**	ND	ND
DEQ Clean Fill Screening Values														
DEQ Clean Fill Screening Values				1100	2800	31	8.8	790	0.63	76	28	0.23	0.71	0.82
DEQ Risk Based Concentrations														
Construction Worker - ingestion, contact, and inhalation				4600	11000	9700	15	69,000	350	530,000	800	110	N/A	1800
Excavation Worker - ingestion, contact, and inhalation				>MAX	>MAX	>MAX	420	>MAX	9700	N/A	800	2900	N/A	49000

Notes:

DEQ = Oregon Department of Environmental Quality

mg/kg = milligrams per kilogram

ND = not detected (method reporting limit)

NA = not available or not applicable

feet bgs = feet below ground surface

>MAX = The constituent RBC for this pathway is calclulated as greater than 1,000,000 mg/kg or 1,000,000 mg/L.

--- = Sample was not analyzed for this constituent.

Bold values = detected concentrations

Red Text = concentrations detected above DEQs Clean Fill Screening Level

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Table 2. Summary of Polycyclic Aromatic Hydrocarbons (PAHs) Analytical Results

Field Sample ID	Depth Interval (feet bgs)	Lab Sample ID	Collection Date	Polycyclic Aromatic Hydrocarbons (ug/kg dry)															
				Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
B-1-1	2.5-4'	W25B014-01	1/31/2025 9:00	ND	ND	ND	ND	ND	ND	**33**	ND	ND	ND	ND	ND	ND	ND	ND	**21**
DEQ Clean Fill Screening Values (ug/kg)																			
DEQ Clean Fill Screening Values				250	120,000	6,800	730	110	1100	25000	11000	3100	110	10000	3700	1100	7.7	5500	10000
DEQ Risk Based Concentrations (ug/kg)																			
Construction Worker - ingestion, contact, and inhalation				2.10E+07	NA	1.10E+08	1.70E+05	1.70E+04	1.70E+05	NA	1.70E+06	1.70E+07	1.70E+04	1.00E+07	1.40E+07	NA	5.80E+05	NA	7.50E+06
Excavation Worker - ingestion, contact, and inhalation				5.90E+08	NA	>MAX	4.80E+06	4.90E+05	4.90E+06	NA	4.90E+07	4.90E+08	4.90E+05	2.80E+08	3.90E+08	NA	1.60E+07	NA	2.10E+08

Notes:

DEQ = Oregon Department of Environmental Quality

ug/kg = micrograms per kilogram

ND = not detected (method reporting limit)

NA = not available or not applicable

feet bgs = feet below ground surface

>MAX = The constituent RBC for this pathway is calclulated as greater than 1,000,000 mg/kg or 1,000,000 mg/L. This substance is deemed not to pose risks in this scenario

--- = Sample was not analyzed for this constituent.

Bold values = detected concentrations

Red Text = concentrations detected above DEQs Clean Fill Screening Level

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

ATTACHMENT A

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

City of Portland
Water Pollution Control Laboratory
6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656
ORELAP Certification ID 4023

LABORATORY ANALYSIS REPORT

Project:	**SW 61st Culvert Replacement**	Client:	Coordinated Site Analysis
Work Order:	**W25B014**	Project Mgr:	John O'Donovan
Received:	1/31/25 14:00		
Submitted By:	CSA		

Sample	Laboratory ID	Matrix	Type	Sample Collection Date Start	End	Qualifier
B-1-1 (2.5-4)	W25B014-01	Soil	Composite	01/31/25 09:00	01/31/25 09:00	
B-1-2 (7.5-9)	W25B014-02	Soil	Composite	01/31/25 09:10	01/31/25 09:10	

Analyte	Result	Units	MRL	Dil.	Batch	Prepared	Analyzed	Method	Qualifier
General Chemistry									
Total Solids									
B-1-1 (2.5-4) : W25B014-01									
Total solids	**80.2**	% W/W	0.02		B25B063	02/05/25	02/06/25	SM 2540G	
B-1-2 (7.5-9) : W25B014-02									
Total solids	**77.8**	% W/W	0.02		B25B063	02/05/25	02/06/25	SM 2540G	
Total Metals									
Total Metals by ICPMS									
B-1-1 (2.5-4) : W25B014-01									
Arsenic	**1.57**	mg/kg dry	0.073	20	B25B047	02/04/25	02/05/25	EPA 6020	
Barium	**159**	mg/kg dry	1.46	20	B25B047	02/04/25	02/05/25	EPA 6020	
Cadmium	**0.083**	mg/kg dry	0.073	20	B25B047	02/04/25	02/05/25	EPA 6020	
Chromium	**31.2**	mg/kg dry	0.583	20	B25B047	02/04/25	02/05/25	EPA 6020	
Lead	**9.13**	mg/kg dry	0.292	20	B25B047	02/04/25	02/05/25	EPA 6020	
Mercury	**0.0163**	mg/kg dry	0.0109	20	B25B047	02/04/25	02/05/25	EPA 6020	
Selenium	ND	mg/kg dry	1.46	20	B25B047	02/04/25	02/05/25	EPA 6020	
Silver	ND	mg/kg dry	0.073	20	B25B047	02/04/25	02/05/25	EPA 6020	
B-1-2 (7.5-9) : W25B014-02									
Arsenic	**3.70**	mg/kg dry	0.074	20	B25B047	02/04/25	02/05/25	EPA 6020	
Barium	**142**	mg/kg dry	1.48	20	B25B047	02/04/25	02/05/25	EPA 6020	
Cadmium	ND	mg/kg dry	0.074	20	B25B047	02/04/25	02/05/25	EPA 6020	
Chromium	**34.8**	mg/kg dry	0.591	20	B25B047	02/04/25	02/05/25	EPA 6020	
Lead	**7.17**	mg/kg dry	0.295	20	B25B047	02/04/25	02/05/25	EPA 6020	
Mercury	**0.0126**	mg/kg dry	0.0111	20	B25B047	02/04/25	02/05/25	EPA 6020	
Selenium	ND	mg/kg dry	1.48	20	B25B047	02/04/25	02/05/25	EPA 6020	
Silver	ND	mg/kg dry	0.074	20	B25B047	02/04/25	02/05/25	EPA 6020	

Reported: 02/20/25 05:35

Jennifer Shackelford

Jennifer Shackelford, Laboratory Manager

The results in this report apply only to the samples analyzed. Qualifiers and case narrative comments are essential to interpretation of the analytical results. Report reproductions and/or data summaries without qualifiers and comments are incomplete.

City of Portland
Water Pollution Control Laboratory
6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656
ORELAP Certification ID 4023

Project:	**SW 61st Culvert Replacement**	Client:	Coordinated Site Analysis
Work Order:	**W25B014**	Received:	01/31/25 14:00

Analyte	Result	Units	MRL	Dil.	Batch	Prepared	Analyzed	Method	Qualifier
Fuels									
Diesel/Oil Hydrocarbons by GC-FID									
B-1-1 (2.5-4) : W25B014-01									F7
Diesel	ND	mg/kg dry	27	1	B25B104	02/06/25	02/07/25	NWTPH-Dx	
Lube oil	**190**	mg/kg dry	53	1	B25B104	02/06/25	02/07/25	NWTPH-Dx	
Surrogate	***Result***		***Expected***	***%Rec***	***Limits(%)***				
o-Terphenyl	*21.8*	mg/kg dry	*21.3*	*102%*	*50-150*	*B25B104*	*02/06/25*	*02/07/25*	*NWTPH-Dx*
Hydrocarbon Scan by GC-FID									
B-1-1 (2.5-4) : W25B014-01									
Gasoline	ND	mg/kg dry	21	1	B25B040	02/04/25	02/04/25	NWTPH-HCID	
Diesel	ND	mg/kg dry	53	1	B25B040	02/04/25	02/04/25	NWTPH-HCID	
Lube oil	**DET**	mg/kg dry	106	1	B25B040	02/04/25	02/04/25	NWTPH-HCID	
Surrogate	***Result***		***Expected***	***%Rec***	***Limits(%)***				
o-Terphenyl	*11.3*	mg/kg dry	*10.6*	*107%*	*50-150*	*B25B040*	*02/04/25*	*02/04/25*	*NWTPH-HCID*
B-1-2 (7.5-9) : W25B014-02									
Gasoline	ND	mg/kg dry	21	1	B25B040	02/04/25	02/04/25	NWTPH-HCID	
Diesel	ND	mg/kg dry	54	1	B25B040	02/04/25	02/04/25	NWTPH-HCID	
Lube oil	ND	mg/kg dry	107	1	B25B040	02/04/25	02/04/25	NWTPH-HCID	
Surrogate	***Result***		***Expected***	***%Rec***	***Limits(%)***				
o-Terphenyl	*10.8*	mg/kg dry	*10.7*	*100%*	*50-150*	*B25B040*	*02/04/25*	*02/04/25*	*NWTPH-HCID*
Semivolatile Organics - SIM									
Polynuclear Aromatic Hydrocarbons by GCMS-SIM									
B-1-1 (2.5-4) : W25B014-01									
Acenaphthene	ND	ug/kg dry	43	20	B25B104	02/06/25	02/12/25	EPA 8270-SIM	
Acenaphthylene	ND	ug/kg dry	43	20	B25B104	02/06/25	02/12/25	EPA 8270-SIM	
Anthracene	ND	ug/kg dry	43	20	B25B104	02/06/25	02/12/25	EPA 8270-SIM	
Benzo(a)anthracene	ND	ug/kg dry	21	20	B25B104	02/06/25	02/12/25	EPA 8270-SIM	
Benzo(a)pyrene	ND	ug/kg dry	21	20	B25B104	02/06/25	02/12/25	EPA 8270-SIM	
Benzo(b)fluoranthene	ND	ug/kg dry	21	20	B25B104	02/06/25	02/12/25	EPA 8270-SIM	
Benzo(g,h,i)perylene	**33**	ug/kg dry	21	20	B25B104	02/06/25	02/12/25	EPA 8270-SIM	
Benzo(k)fluoranthene	ND	ug/kg dry	21	20	B25B104	02/06/25	02/12/25	EPA 8270-SIM	
Chrysene	ND	ug/kg dry	21	20	B25B104	02/06/25	02/12/25	EPA 8270-SIM	
Dibenzo(a,h)anthracene	ND	ug/kg dry	21	20	B25B104	02/06/25	02/12/25	EPA 8270-SIM	
Fluoranthene	ND	ug/kg dry	21	20	B25B104	02/06/25	02/12/25	EPA 8270-SIM	
Fluorene	ND	ug/kg dry	43	20	B25B104	02/06/25	02/12/25	EPA 8270-SIM	
Indeno(1,2,3-cd)pyrene	ND	ug/kg dry	21	20	B25B104	02/06/25	02/12/25	EPA 8270-SIM	
Naphthalene	ND	ug/kg dry	85	20	B25B104	02/06/25	02/12/25	EPA 8270-SIM	
Phenanthrene	ND	ug/kg dry	43	20	B25B104	02/06/25	02/12/25	EPA 8270-SIM	
Pyrene	**21**	ug/kg dry	21	20	B25B104	02/06/25	02/12/25	EPA 8270-SIM	
Surrogate	***Result***		***Expected***	***%Rec***	***Limits(%)***				
2-Methylnaphthalene-d10	*98*	ug/kg dry	*107*	*92%*	*31-129*	*B25B104*	*02/06/25*	*02/12/25*	*EPA 8270-SIM*
Fluoranthene-d10	*100*	ug/kg dry	*107*	*97%*	*63-132*	*B25B104*	*02/06/25*	*02/12/25*	*EPA 8270-SIM*

Reported: 02/20/25 05:35

The results in this report apply only to the samples analyzed. Qualifiers and case narrative comments are essential to interpretation of the analytical results. Report reproductions and/or data summaries without qualifiers and comments are incomplete.

Jennifer Shackelford, Laboratory Manager

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

City of Portland
Water Pollution Control Laboratory
6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656
ORELAP Certification ID 4023

Project:	**SW 61st Culvert Replacement**	Client:	Coordinated Site Analysis
Work Order:	**W25B014**	Received:	01/31/25 14:00

Quality Control Report

General Chemistry - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec *(Limits)*	RPD *(Limit)*	Prepared: Analyzed	Qualifier
Total Solids - Batch B25B063									
Blank (B25B063-BLK1)									
Total solids	ND	% W/W	0.02					02/05/25 :02/06/25	
Duplicate (B25B063-DUP1)			**Source: W25B013-01**						
Total solids	**81.7**	% W/W	0.02		82.3		0.8 (5)	02/05/25 :02/06/25	
Duplicate (B25B063-DUP2)			**Source: W25B015-04**						
Total solids	**76.8**	% W/W	0.02		77.1		0.4 (5)	02/05/25 :02/06/25	

Total Metals - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec *(Limits)*	RPD *(Limit)*	Prepared: Analyzed	Qualifier
Total Metals by ICPMS - Batch B25B047									
Blank (B25B047-BLK1)									
Arsenic	ND	mg/kg wet	0.025					02/04/25 :02/05/25	
Barium	ND	mg/kg wet	0.500					02/04/25 :02/05/25	
Cadmium	ND	mg/kg wet	0.025					02/04/25 :02/05/25	
Chromium	ND	mg/kg wet	0.200					02/04/25 :02/05/25	
Lead	ND	mg/kg wet	0.100					02/04/25 :02/05/25	
Mercury	ND	mg/kg wet	0.00375					02/04/25 :02/05/25	
Selenium	ND	mg/kg wet	0.500					02/04/25 :02/05/25	
Silver	ND	mg/kg wet	0.025					02/04/25 :02/05/25	
Standard Reference Material (B25B047-SRM1)									
Arsenic	**187**	mg/kg wet	1.06	202		93% *(75-125)*		02/04/25 :02/05/25	
Barium	**568**	mg/kg wet	21.2	665		85% *(75-125)*		02/04/25 :02/05/25	
Cadmium	**237**	mg/kg wet	1.06	267		89% *(75-125)*		02/04/25 :02/05/25	
Chromium	**139**	mg/kg wet	8.47	159		88% *(75-125)*		02/04/25 :02/05/25	
Lead	**119**	mg/kg wet	4.24	132		90% *(75-125)*		02/04/25 :02/05/25	
Mercury	**4.14**	mg/kg wet	0.159	4.99		83% *(75-125)*		02/04/25 :02/05/25	
Selenium	**224**	mg/kg wet	21.2	261		86% *(75-125)*		02/04/25 :02/05/25	
Silver	**44.3**	mg/kg wet	1.06	48.2		92% *(75-125)*		02/04/25 :02/05/25	
Duplicate (B25B047-DUP1)			**Source: W25B014-02**						
Arsenic	**3.74**	mg/kg dry	0.074		3.70		1 (20)	02/04/25 :02/05/25	
Barium	**144**	mg/kg dry	1.49		142		0.8 (20)	02/04/25 :02/05/25	
Cadmium	ND	mg/kg dry	0.074		ND		(20)	02/04/25 :02/05/25	
Chromium	**34.5**	mg/kg dry	0.594		34.8		0.9 (20)	02/04/25 :02/05/25	

Reported: 02/20/25 05:35

The results in this report apply only to the samples analyzed. Qualifiers and case narrative comments are essential to interpretation of the analytical results. Report reproductions and/or data summaries without qualifiers and comments are incomplete.

Jennifer Shackelford

Jennifer Shackelford, Laboratory Manager

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

City of Portland
Water Pollution Control Laboratory
6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656
ORELAP Certification ID 4023

Project:	**SW 61st Culvert Replacement**	Client:	Coordinated Site Analysis
Work Order:	**W25B014**	Received:	01/31/25 14:00

Total Metals - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec *(Limits)*	RPD *(Limit)*	Prepared: Analyzed	Qualifier
Total Metals by ICPMS - Batch B25B047									
Duplicate (B25B047-DUP1)			**Source: W25B014-02**						
Lead	**7.24**	mg/kg dry	0.297		7.17		1 (20)	02/04/25 :02/05/25	
Mercury	**0.0125**	mg/kg dry	0.0111		0.0126		0.7 (20)	02/04/25 :02/05/25	
Selenium	ND	mg/kg dry	1.49		ND		(20)	02/04/25 :02/05/25	
Silver	ND	mg/kg dry	0.074		ND		(20)	02/04/25 :02/05/25	
Matrix Spike (B25B047-MS1)			**Source: W25B014-02**						
Arsenic	**16.9**	mg/kg dry	0.185	14.8	3.70	89% *(75-125)*		02/04/25 :02/05/25	
Barium	**357**	mg/kg dry	3.69	222	142	97% *(75-125)*		02/04/25 :02/05/25	
Cadmium	**14.2**	mg/kg dry	0.185	14.8	ND	96% *(75-125)*		02/04/25 :02/05/25	
Chromium	**74.4**	mg/kg dry	1.48	44.3	34.8	89% *(75-125)*		02/04/25 :02/05/25	
Lead	**75.6**	mg/kg dry	0.739	73.9	7.17	93% *(75-125)*		02/04/25 :02/05/25	
Mercury	**0.738**	mg/kg dry	0.0277	0.739	ND	100% *(75-125)*		02/04/25 :02/05/25	
Selenium	**65.9**	mg/kg dry	3.69	73.9	ND	89% *(75-125)*		02/04/25 :02/05/25	
Silver	**14.3**	mg/kg dry	0.185	14.8	ND	97% *(75-125)*		02/04/25 :02/05/25	

Reported: 02/20/25 05:35

Jennifer Shackelford

Jennifer Shackelford, Laboratory Manager

The results in this report apply only to the samples analyzed. Qualifiers and case narrative comments are essential to interpretation of the analytical results. Report reproductions and/or data summaries without qualifiers and comments are incomplete.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

City of Portland
Water Pollution Control Laboratory
6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656
ORELAP Certification ID 4023

Project:	**SW 61st Culvert Replacement**	Client:	Coordinated Site Analysis
Work Order:	**W25B014**	Received:	01/31/25 14:00

Fuels - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec (Limits)	RPD (Limit)	Prepared: Analyzed	Qualifier
Diesel/Oil Hydrocarbons by GC-FID - Batch B25B104									
Blank (B25B104-BLK2)									F7
Diesel	ND	mg/kg wet	25					02/06/25 :02/07/25	
Lube oil	ND	mg/kg wet	50					02/06/25 :02/07/25	
Surrogate									
o-Terphenyl	*21.9*	mg/kg wet		*20.0*		110% *(50-150)*		02/06/25 :02/07/25	
LCS (B25B104-BS2)									F7
Diesel	**238**	mg/kg wet	25	250		95% *(50-150)*		02/06/25 :02/07/25	
Lube oil	**218**	mg/kg wet	50	250		87% *(50-150)*		02/06/25 :02/07/25	
Surrogate									
o-Terphenyl	*25.2*	mg/kg wet		*20.0*		126% *(50-150)*		02/06/25 :02/07/25	
Duplicate (B25B104-DUP2)			**Source: W25A228-14**						F7
Diesel	**47.4**	mg/kg dry	23		63.6		29 (50)	02/06/25 :02/07/25	F13
Lube oil	**50.3**	mg/kg dry	45		119		81 (50)	02/06/25 :02/07/25	M1
Surrogate									
o-Terphenyl	*18.9*	mg/kg dry		*18.1*		104% *(50-150)*		02/06/25 :02/07/25	
Duplicate (B25B104-DUP3)			**Source: W25B067-05**						F7
Diesel	ND	mg/kg dry	250		ND		(50)	02/06/25 :02/07/25	
Lube oil	**1010**	mg/kg dry	490		870		15 (50)	02/06/25 :02/07/25	
Surrogate									
o-Terphenyl	*24.7*	mg/kg dry		*19.8*		125% *(50-150)*		02/06/25 :02/07/25	
Hydrocarbon Scan by GC-FID - Batch B25B040									
Blank (B25B040-BLK1)									
Gasoline	ND	mg/kg wet	17					02/04/25 :02/04/25	
Diesel	ND	mg/kg wet	42					02/04/25 :02/04/25	
Lube oil	ND	mg/kg wet	83					02/04/25 :02/04/25	
Surrogate									
o-Terphenyl	*8.74*	mg/kg wet		*8.33*		105% *(50-150)*		02/04/25 :02/04/25	
Duplicate (B25B040-DUP1)			**Source: W25B013-01**						
Gasoline	ND	mg/kg dry	21		ND			02/04/25 :02/04/25	
Diesel	ND	mg/kg dry	51		ND			02/04/25 :02/04/25	
Lube oil	ND	mg/kg dry	103		ND			02/04/25 :02/04/25	
Surrogate									
o-Terphenyl	*10.7*	mg/kg dry		*10.3*		104% *(50-150)*		02/04/25 :02/04/25	
Duplicate (B25B040-DUP2)			**Source: W25B017-01**						
Gasoline	ND	mg/kg dry	21		ND			02/04/25 :02/04/25	
Diesel	ND	mg/kg dry	54		ND			02/04/25 :02/04/25	
Lube oil	ND	mg/kg dry	107		ND			02/04/25 :02/04/25	
Surrogate									
o-Terphenyl	*11.5*	mg/kg dry		*10.7*		107% *(50-150)*		02/04/25 :02/04/25	

Reported: 02/20/25 05:35

The results in this report apply only to the samples analyzed. Qualifiers and case narrative comments are essential to interpretation of the analytical results. Report reproductions and/or data summaries without qualifiers and comments are incomplete.

Jennifer Shackelford, Laboratory Manager

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

City of Portland
Water Pollution Control Laboratory
6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656
ORELAP Certification ID 4023

Project:	**SW 61st Culvert Replacement**	Client:	Coordinated Site Analysis
Work Order:	**W25B014**	Received:	01/31/25 14:00

Semivolatile Organics - SIM - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec *(Limits)*	RPD *(Limit)*	Prepared: Analyzed	Qualifier
Polynuclear Aromatic Hydrocarbons by GCMS-SIM - Batch B25B104									
Blank (B25B104-BLK1)									
Acenaphthene	ND	ug/kg wet	20					02/06/25 :02/12/25	
Acenaphthylene	ND	ug/kg wet	20					02/06/25 :02/12/25	
Anthracene	ND	ug/kg wet	20					02/06/25 :02/12/25	
Benzo(a)anthracene	ND	ug/kg wet	10					02/06/25 :02/12/25	
Benzo(a)pyrene	ND	ug/kg wet	10					02/06/25 :02/12/25	
Benzo(b)fluoranthene	ND	ug/kg wet	10					02/06/25 :02/12/25	
Benzo(g,h,i)perylene	ND	ug/kg wet	10					02/06/25 :02/12/25	
Benzo(k)fluoranthene	ND	ug/kg wet	10					02/06/25 :02/12/25	
Chrysene	ND	ug/kg wet	10					02/06/25 :02/12/25	
Dibenzo(a,h)anthracene	ND	ug/kg wet	10					02/06/25 :02/12/25	
Fluoranthene	ND	ug/kg wet	10					02/06/25 :02/12/25	
Fluorene	ND	ug/kg wet	20					02/06/25 :02/12/25	
Indeno(1,2,3-cd)pyrene	ND	ug/kg wet	10					02/06/25 :02/12/25	
Naphthalene	ND	ug/kg wet	40					02/06/25 :02/12/25	
Phenanthrene	ND	ug/kg wet	20					02/06/25 :02/12/25	
Pyrene	ND	ug/kg wet	10					02/06/25 :02/12/25	
Surrogate									
2-Methylnaphthalene-d10	*75*	ug/kg wet		*100*		75% *(31-129)*		02/06/25 :02/12/25	
Fluoranthene-d10	*96*	ug/kg wet		*100*		96% *(63-132)*		02/06/25 :02/12/25	
LCS (B25B104-BS1)									
Acenaphthene	**47.2**	ug/kg wet	20	50.0		94% *(49-122)*		02/06/25 :02/12/25	
Acenaphthylene	**50.4**	ug/kg wet	20	50.0		101% *(51-123)*		02/06/25 :02/12/25	
Anthracene	**47.6**	ug/kg wet	20	50.0		95% *(62-115)*		02/06/25 :02/12/25	
Benzo(a)anthracene	**47.6**	ug/kg wet	10	50.0		95% *(63-112)*		02/06/25 :02/12/25	
Benzo(a)pyrene	**47.6**	ug/kg wet	10	50.0		95% *(62-117)*		02/06/25 :02/12/25	
Benzo(b)fluoranthene	**46.8**	ug/kg wet	10	50.0		94% *(53-117)*		02/06/25 :02/12/25	
Benzo(g,h,i)perylene	**43.6**	ug/kg wet	10	50.0		87% *(42-128)*		02/06/25 :02/12/25	
Benzo(k)fluoranthene	**47.2**	ug/kg wet	10	50.0		94% *(53-124)*		02/06/25 :02/12/25	
Chrysene	**47.6**	ug/kg wet	10	50.0		95% *(63-119)*		02/06/25 :02/12/25	
Dibenzo(a,h)anthracene	**43.6**	ug/kg wet	10	50.0		87% *(44-129)*		02/06/25 :02/12/25	
Fluoranthene	**50.0**	ug/kg wet	10	50.0		100% *(63-115)*		02/06/25 :02/12/25	
Fluorene	**46.0**	ug/kg wet	20	50.0		92% *(58-113)*		02/06/25 :02/12/25	
Indeno(1,2,3-cd)pyrene	**44.8**	ug/kg wet	10	50.0		90% *(46-127)*		02/06/25 :02/12/25	
Naphthalene	**51.6**	ug/kg wet	40	50.0		103% *(37-118)*		02/06/25 :02/12/25	
Phenanthrene	**48.8**	ug/kg wet	20	50.0		98% *(49-119)*		02/06/25 :02/12/25	
Pyrene	**51.2**	ug/kg wet	10	50.0		102% *(63-117)*		02/06/25 :02/12/25	
Surrogate									
2-Methylnaphthalene-d10	*89*	ug/kg wet		*100*		89% *(31-129)*		02/06/25 :02/12/25	
Fluoranthene-d10	*110*	ug/kg wet		*100*		112% *(63-132)*		02/06/25 :02/12/25	
Duplicate (B25B104-DUP1)					**Source: W25A228-14**				

Reported: 02/20/25 05:35

The results in this report apply only to the samples analyzed. Qualifiers and case narrative comments are essential to interpretation of the analytical results. Report reproductions and/or data summaries without qualifiers and comments are incomplete.

Jennifer Shackelford, Laboratory Manager

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

City of Portland
Water Pollution Control Laboratory
6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656
ORELAP Certification ID 4023

Project:	**SW 61st Culvert Replacement**	Client:	Coordinated Site Analysis
Work Order:	**W25B014**	Received:	01/31/25 14:00

Semivolatile Organics - SIM - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec *(Limits)*	RPD *(Limit)*	Prepared: Analyzed	Qualifier
Polynuclear Aromatic Hydrocarbons by GCMS-SIM - Batch B25B104									
Duplicate (B25B104-DUP1)			**Source: W25A228-14**						
Acenaphthene	ND	ug/kg dry	18		ND		(30)	02/06/25 :02/12/25	
Acenaphthylene	ND	ug/kg dry	18		ND		(30)	02/06/25 :02/12/25	
Anthracene	ND	ug/kg dry	18		19.6		(30)	02/06/25 :02/12/25	
Benzo(a)anthracene	**68.9**	ug/kg dry	9.1		96.2		33 (30)	02/06/25 :02/12/25	M3
Benzo(a)pyrene	**64.5**	ug/kg dry	9.1		83.5		26 (30)	02/06/25 :02/12/25	
Benzo(b)fluoranthene	**68.5**	ug/kg dry	9.1		129		61 (30)	02/06/25 :02/12/25	M3
Benzo(g,h,i)perylene	**46.7**	ug/kg dry	9.1		71.5		42 (30)	02/06/25 :02/12/25	M3
Benzo(k)fluoranthene	**19.6**	ug/kg dry	9.1		34.1		54 (30)	02/06/25 :02/12/25	M3
Chrysene	**86.2**	ug/kg dry	9.1		151		55 (30)	02/06/25 :02/12/25	M3
Dibenzo(a,h)anthracene	**12.7**	ug/kg dry	9.1		19.6		43 (30)	02/06/25 :02/12/25	M3
Fluoranthene	**92.0**	ug/kg dry	9.1		163		55 (30)	02/06/25 :02/12/25	M3
Fluorene	ND	ug/kg dry	18		ND		(30)	02/06/25 :02/12/25	
Indeno(1,2,3-cd)pyrene	**38.8**	ug/kg dry	9.1		62.8		47 (30)	02/06/25 :02/12/25	M3
Naphthalene	ND	ug/kg dry	36		ND		(30)	02/06/25 :02/12/25	
Phenanthrene	**101**	ug/kg dry	18		196		63 (30)	02/06/25 :02/12/25	M3
Pyrene	**186**	ug/kg dry	9.1		289		43 (30)	02/06/25 :02/12/25	M3
Surrogate									
2-Methylnaphthalene-d10	*80*	ug/kg dry		*90.6*		88% *(31-129)*		02/06/25 :02/12/25	
Fluoranthene-d10	*87*	ug/kg dry		*90.6*		96% *(63-132)*		02/06/25 :02/12/25	
Matrix Spike (B25B104-MS1)			**Source: W25A228-14**						
Acenaphthene	**163**	ug/kg dry	18	179	ND	91% *(49-122)*		02/06/25 :02/12/25	
Acenaphthylene	**178**	ug/kg dry	18	179	ND	99% *(51-123)*		02/06/25 :02/12/25	
Anthracene	**173**	ug/kg dry	18	179	19.6	86% *(62-115)*		02/06/25 :02/12/25	
Benzo(a)anthracene	**202**	ug/kg dry	8.9	179	96.2	59% *(63-112)*		02/06/25 :02/12/25	M3
Benzo(a)pyrene	**202**	ug/kg dry	8.9	179	83.5	66% *(62-117)*		02/06/25 :02/12/25	
Benzo(b)fluoranthene	**194**	ug/kg dry	8.9	179	129	37% *(53-117)*		02/06/25 :02/12/25	M3
Benzo(g,h,i)perylene	**177**	ug/kg dry	8.9	179	71.5	59% *(42-128)*		02/06/25 :02/12/25	
Benzo(k)fluoranthene	**179**	ug/kg dry	8.9	179	34.1	81% *(53-124)*		02/06/25 :02/12/25	
Chrysene	**206**	ug/kg dry	8.9	179	151	31% *(63-119)*		02/06/25 :02/12/25	M3
Dibenzo(a,h)anthracene	**153**	ug/kg dry	8.9	179	19.6	74% *(44-129)*		02/06/25 :02/12/25	
Fluoranthene	**215**	ug/kg dry	8.9	179	163	29% *(63-115)*		02/06/25 :02/12/25	M3
Fluorene	**166**	ug/kg dry	18	179	ND	93% *(58-113)*		02/06/25 :02/12/25	
Indeno(1,2,3-cd)pyrene	**182**	ug/kg dry	8.9	179	62.8	67% *(46-127)*		02/06/25 :02/12/25	
Naphthalene	**172**	ug/kg dry	36	179	ND	96% *(37-118)*		02/06/25 :02/12/25	
Phenanthrene	**225**	ug/kg dry	18	179	196	17% *(49-119)*		02/06/25 :02/12/25	M3
Pyrene	**261**	ug/kg dry	8.9	179	289	-15% *(63-117)*		02/06/25 :02/12/25	M3
Surrogate									
2-Methylnaphthalene-d10	*89*	ug/kg dry		*89.4*		99% *(31-129)*		02/06/25 :02/12/25	
Fluoranthene-d10	*87*	ug/kg dry		*89.4*		97% *(63-132)*		02/06/25 :02/12/25	

Reported: 02/20/25 05:35

Jennifer Shackelford, Laboratory Manager

The results in this report apply only to the samples analyzed. Qualifiers and case narrative comments are essential to interpretation of the analytical results. Report reproductions and/or data summaries without qualifiers and comments are incomplete.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

City of Portland
Water Pollution Control Laboratory
6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656
ORELAP Certification ID 4023

Project:	**SW 61st Culvert Replacement**	Client:	Coordinated Site Analysis
Work Order:	**W25B014**	Received:	01/31/25 14:00

Qualifiers

F13	Detected pattern does not resemble the reported fuel product.
F7	This sample underwent silica gel clean-up.
M1	Matrix duplicate precision measurement indicates non-homogeneous sample matrix. Sample result should be considered an estimate.
M3	Inconsistent results for matrix QC (duplicates and/or matrix spikes) indicate non-homogeneous sample matrix. Sample results should be considered estimates.

Definitions

DET	Analyte Detected	ND	Analyte Not Detected at or above the reporting limit
MRL	Method Reporting Limit	MDL	Method Detection Limit
NR	Not Reportable	dry	Sample results reported on a dry weight basis
% Rec.	Percent Recovery	RPD	Relative Percent Difference
*	This analyte is not certified under NELAP		

Reported: 02/20/25 05:35

Jennifer Shackelford

Jennifer Shackelford, Laboratory Manager

The results in this report apply only to the samples analyzed. Qualifiers and case narrative comments are essential to interpretation of the analytical results. Report reproductions and/or data summaries without qualifiers and comments are incomplete.

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

Date: 1/31/25

Water Pollution Control Laboratory
6543 N. Burlington Ave.
Portland, Oregon 97203-4552
Sample Custodian: (503) 823-5696
General Lab: (503) 823-5681

City of Portland Chain-of-Custody

Bureau of Environmental Services

Lab Work Order #: W25B014

Collected By: KAB + JY

Contact Info:

Client Name: **Coordinated Site Analysis**

Project Name: **SW 61st Culvert Replacement**

Project Number (if applicable): **E11640**

CSA Contact Name: **Brian Marcum / Keir Allison-Bourne**

Requested Analyses

Follow-up Tests:
- [x] Run TCLP metals if limit exceeded
- [ ] Run NWTPH-Dx and NWTPH-Gx if detects on NWTPH-HCID
- [x] Run PAHs if detects on NWTPH-Dx
- [x] Run VOCs if detects on NWTPH-Gx

Turn-Around-Time Request:
Need by Date: _____
- [x] Standard (10 business days)
- [ ] Rush (5 business days)
- [ ] Other: _____

Lab Number	Sample Name	Sample Date	Sample Time	Sample Type	Sample Matrix	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	PCB Aroclors (low-level)	PAHs	Priority Pollutant 13 Metals	RCRA 8 Metals	Total Metals (As, Cd, Cr, Cu, Pb, Hg, Zn)	Total Metals (Cd, Cr, Pb)	VOCs	TOC	HOLD	# of Containers	Remarks
01	B-1-1 (2.5-4)	1/31/25	9:00	C	SL	X						X						3	
02	B-1-2 (7.5-9)	1/31/25	9:10	C	SL	X						X						3	

Relinquished By:	Received By:	Relinquished By:	Received By:
Signature:	Signature:	Signature:	Signature:
Date: 1/31/25	Date: 1/31/25	Date:	Date:
Printed Name: Keir Allison-Bourne	Printed Name: MacKenzie Firl	Printed Name:	Printed Name:
Time: 14:00	Time: 1400	Time:	Time:

CSA Standard WPCL COC

Docusign Envelope ID: D6195F17-04FD-4CC8-B030-188B16293306

WPCL Cooler Receipt Form

Work Order Number: W25B014 **Cooler Receipt Form Filled Out By:** MZ/MC

Project: CSA – SW 61st Culvert

Received on ice: YES NO (circle one) *[If directly from field, indicate here:____]*

Sample(s) Received From: CBWTP fridge____ Client ✓ Courier____ SR fridge ____

Temperature (°C): 7

	Yes	No	N/A
Is the COC present and signed?	✓		
Are sample bottles intact?	✓		
Do the COC and sample labels match?	✓		
Are the appropriate containers used?	✓		
Are samples appropriately preserved?			✓
Are VOA vials completely filled (zero Headspace)?			✓
Are alkalinity bottles completely filled (zero Headspace)? Note if filled in lab.			✓
Are samples received within holding times (except for pH and residual chlorine)?	✓		

Pres. #	Preservative	LIMS ID	Standard Preservation Amounts
1	HNO_3 (1:1) to pH <2		0.5mL/250mL; 1.0mL/500mL; 4-5 drops/50mL centrifuge tube
2	H_2SO_4 (18N) to pH <2		0.4mL/250mL; 0.8mL/500mL ; 1.6mL/1000mL
3	HCl (1:1) to pH <2		2.0mL/500mL; 4.0mL/1000mL
4	HCl (1:1) to pH 2-3		For TOC: 2-5 drops/250mL
5	NaOH to pH >12		4-10 pellets/500mL; 4 mL 10N/1000mL
	pH test strip (0-2.5 & 0-14)	Lot # HC331173 & HC439975	
	Res Cl test strip	Lot # 3250A 2023/06	
	Lead Acetate test paper	Lot # S60125	

Date	Time	Analyst	Sample LIMS ID	Bottle ID	Pres. #	Comments

Comments:_____