



City of Tacoma
Environmental Services Department

SPECIFICATION NO. ES24-0056F

**FOSS SHORELINE RESTORATION
OUTFALL 230A REPAIR PROJECT**

Project No. ENV-03027-21

CITY OF TACOMA
ENVIRONMENTAL SERVICES DEPARTMENT

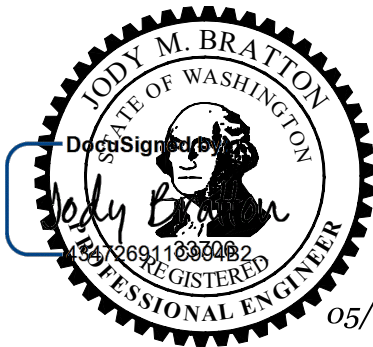
REQUEST FOR BIDS, SPECIAL PROVISIONS, BID PROPOSAL AND CONTRACT

FOR

SPECIFICATION NO.
ES24-0056F

FOSS SHORELINE RESTORATION
OUTFALL 230A REPAIR PROJECT

PROJECT NO. ENV-03027-21



05/08/2024

Jody Bratton, P.E.
Science & Engineering Division
Environmental Services Department

326 East D Street
Tacoma, Washington 98421-1801

SPECIFICATION NO. ES24-0056F

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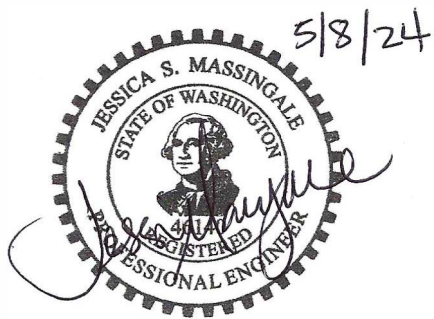
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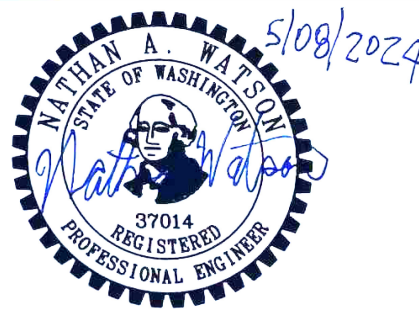
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Division 01 and 02
Jessi Massingale, P.E.
Floyd|Snider
Two Union Square
601 Union Street, Suite 600
Seattle, WA 98101



Division 31
Nathan Watson, P.E.
Kpff Consulting Engineers
1601 Fifth Avenue, Suite 1300
Seattle, WA 98101



**City of Tacoma
ENVIRONMENTAL SERVICES/SCIENCE AND ENGINEERING DIVISION**

**REQUEST FOR BIDS ES24-0056F
FOSS SHORELINE RESTORATION OUTFALL 230A REPAIR PROJECT**

Submittal Deadline: 11:00 a.m., Pacific Time, Tuesday, June 4, 2024

Submittals must be received by the City’s Procurement and Payables Division prior to 11:00 a.m. Pacific Time.

For electronic submittals, the City of Tacoma will designate the time of receipt recorded by our email, sendbid@cityoftacoma.org, as the official time of receipt. This clock will be used as the official time of receipt of all parts of electronic bid submittals. For in person submittals, the City of Tacoma will designate the time of receipt recorded by the timestamp located at the lobby security desk, as the official time of receipt. Late submittals will be returned unopened and rejected as non-responsive.

Submittal Delivery: Sealed submittals will be received as follows:

<p>By Email: sendbid@cityoftacoma.org Maximum file size: 35 MB. Multiple emails may be sent for each submittal</p>	<p>In Person: Tacoma Public Utilities Administration Building North, Main Floor, Lobby Security Desk 3628 South 35th Street Tacoma, WA 98409 Monday – Friday 8:00 am to 4:30 pm</p>
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Bid Opening: Submittals must be received by the City’s Procurement and Payables Division prior to 11:00 a.m. Pacific Time. Sealed submittals in response to a RFB will be opened Tuesday’s at 11:15 AM by a purchasing representative and read aloud during a public bid opening held at the Tacoma Public Utilities Administrative Building North, 3628 S. 35th Street, Tacoma, WA 98409, conference room M-1, located on the main floor. They will also be held virtually Tuesday’s at 11:15 AM. Attend [via this link](#) or call 1 (253) 215 8782. Submittals in response to an RFP, RFQ or RFI will be recorded as received. As soon as possible, after 1:00 PM, on the day of submittal deadline, preliminary results will be posted to www.TacomaPurchasing.org.

Solicitation Documents: An electronic copy of the complete solicitation documents may be viewed and obtained at the City’s plan distribution service provider, ARC, 632 Broadway, Tacoma, WA, or by going to <http://www.e-arc.com/location/tacoma>. Prospective bidders will be required to pay reproduction costs. A list of vendors registered for this solicitation is also available at their website.

Pre-Proposal Meeting: A pre-proposal meeting will not be held.

Project Scope: The project Foss Shoreline Restoration Outfall 230A Repair Project will implement erosion maintenance and repair work to the slope cap off the Outfall 230A apron to include excavation, placement and disposal of required slope cap materials and underlying sediments, followed by placement of quarry spall filter, geotextile and heavy loose rip rap sized to prevent further erosion of the slope. A final layer of round streambed cobbles will be placed to fill the void spaces within the heavy loose riprap armoring for habitat enhancement. The extent of the slope cap repair area off the Outfall 230A apron is approximately 180 square feet and will occur primarily below 0 feet mean lower low water. All repair work will be completed during low-tide conditions but nearly all work will be conducted below the water line from a barge.

Estimate: \$131,000

Paid Sick Leave: The City of Tacoma requires all employers to provide paid sick leave in accordance with Washington State law.

Americans with Disabilities Act (ADA Information): The City of Tacoma, in accordance with Section 504 of the Rehabilitation Act (Section 504) and the Americans with Disabilities Act (ADA), commits to nondiscrimination on the basis of disability, in all of its programs and activities. Specification materials can be made available in an alternate format by emailing the contact listed below in the *Additional Information* section.

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

Additional Information: Requests for information regarding the specifications may be obtained by contacting Stan Rowden II, Senior Buyer by email to srowden@cityoftacoma.org.

Protest Policy: City of Tacoma protest policy, located at www.tacomapurchasing.org, specifies procedures for protests submitted prior to and after submittal deadline.

 **Meeting sites are accessible to persons with disabilities. Reasonable accommodations for persons with disabilities can be arranged with 48 hours advance notice by calling 253-502-8468.**

SPECIAL REMINDER TO ALL BIDDERS

HEALTH & SAFETY: Be sure to comply with all City of Tacoma health and safety requirements.

PLEASE NOTE: Be sure you have complied with all specifications and requirements and have signed all required documents.

YOUR ATTENTION IS PARTICULARLY CALLED to the following forms, which must be executed in full and submitted with your bid response:

1. **BID PROPOSAL:** The unit prices bid must be shown in the space provided. Check your computations for omissions and errors.
2. **SIGNATURE PAGE:** To be filled in and executed by a duly authorized officer or representative of the bidding entity. If the bidder is a subsidiary or doing business on behalf of another entity, so state, and provide the firm name under which business is hereby transacted.
3. **BID BOND:** The Bid Bond must be executed by the person legally authorized to sign the bid, and must be properly signed by the representatives of the surety company unless the bid is accompanied by a certified check. If Bid Bond is furnished, the form furnished by the City must be followed; no variations from the language thereof will be accepted. The amount of the Bid Bond must be not less than 5% of the total amount bid.

Original bid bonds or cashier's check will be delivered to:

City of Tacoma
Procurement and Payables Division
Tacoma Public Utilities
3628 S. 35th Street
Tacoma, WA 98409

4. **CERTIFICATION OF COMPLIANCE WITH WAGE PAYMENT STATUTES:** Bidder shall complete this form in its entirety to ensure compliance with state legislation (SHB 2017).
5. **STATE RESPONSIBILITY AND RECIPROCAL BID PREFERENCE INFORMATION:** Bidder shall complete this form in its entirety to ensure compliance with state legislation (SHB 2010).

POST AWARD FORMS EXECUTED UPON AWARD:

- A. **CONTRACT:** Must be executed by the successful bidder.
- B. **PAYMENT BOND TO THE CITY OF TACOMA:** Must be executed by the successful bidder and his/her surety company.
- C. **PERFORMANCE BOND TO THE CITY OF TACOMA:** Must be executed by the successful bidder and his/her surety company.

D. CERTIFICATE OF INSURANCE: Shall be submitted with all required endorsements.

E. GENERAL RELEASE.

CODE OF ETHICS: The successful bidder agrees that its violation of the City's Code of Ethics contained in TMC Chapter 1.46 shall constitute a breach of the contract subjecting the contract to termination.

**CITY OF TACOMA
FINANCE/PURCHASING DIVISION
SPECIAL NOTICE TO BIDDERS**

Public works and improvement projects for the City of Tacoma are subject to Washington state law and Tacoma Municipal Code, including, but not limited to the following:

I. STATE OF WASHINGTON

A. RESPONSIBILITY CRITERIA – STATE OF WASHINGTON

In order to be considered a responsible bidder the bidder must meet the following mandatory state responsibility criteria contained in RCW 39.04.350:

1. Have a current certificate of registration as a contractor in compliance with chapters 18.27 RCW, 18.106 RCW, 70.87 RCW, 19.28 RCW, which must have been in effect **at the time of bid submittal**;
2. Have a current Washington Unified Business Identifier (UBI) number;
3. If applicable:
 - a. Have Industrial Insurance (workers' compensation) coverage for the bidder's employees working in Washington, as required in Title 51 RCW;
 - b. Have a Washington Employment Security Department number, as required in Title 50 RCW;
 - c. Have a Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW and;
4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 (unlicensed or unregistered contractors) or 39.12.065(3) (prevailing wage).
5. Have received training on the requirements related to public works and prevailing wage under this chapter and chapter 39.12 RCW and must designate a person or persons to be trained on these requirements. The training must be provided by the department of labor and industries or by a training provider whose curriculum is approved by the department. Bidders that have completed three or more public works projects and have had a valid business license in Washington for three or more years are exempt from this subsection.

B. RECIPROCAL PREFERENCE FOR RESIDENT CONTRACTORS:

Effective March 30, 2012, RCW 39.04.380 imposes a reciprocal preference for resident contractors. Any bid received from a non-resident contractor from a state that provides an in-state percentage bidding preference is subject application of a comparable percentage disadvantage.

A non-resident contractor from a state that provides an in-state percentage bidding preference means a contractor that:

1. Is from a state that provides a percentage bid preference to its resident contractors bidding on public works projects, and
2. Does not have a physical office located in Washington at the time of bidding on the City of Tacoma public works project.

The state of residence for a non-resident contractor is the state in which the contractor was incorporated, or if not a corporation, the state in which the contractor's business entity was formed.

The City of Tacoma will evaluate all non-resident contractors for an out of state bidder preference. If the state of the non-resident contractor provides an in state contractor preference, a comparable percentage disadvantage will be applied to the non-resident contractor's bid prior to contract award. The responsive and lowest and best responsible bidder after application of any non-resident disadvantage will be awarded the contract.

The reciprocal preference evaluation does not apply to public works procured pursuant to RCW 39.04.155, RCW 39.04.280, federally funded competitive solicitations where such agencies prohibit the application of bid preferences, or any other procurement exempt from competitive bidding.

Bidders must provide the City of Tacoma with their state of incorporation or the state in which the business entity was formed and include whether the bidder has a physical office located in Washington.

The bidder shall submit documentation demonstrating compliance with above criteria on the enclosed State Responsibility and Reciprocal Bidder Information form.

C. SUBCONTRACTOR RESPONSIBILITY

1. The Contractor shall include the language of this subcontractor responsibility section in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. The requirements of this section apply to all subcontractors regardless of tier.
2. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:
 - a. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;
 - b. Have a current Washington Unified Business Identifier (UBI) number;
 - c. If applicable, have:
 - a. Have Industrial Insurance (workers' compensation) coverage for the bidder's employees working in Washington, as required in Title 51 RCW;
 - b. A Washington Employment Security Department number, as required in Title 50 RCW;
 - c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
 - d. An electrical contractor license, if required by Chapter 19.28 RCW;
 - e. An elevator contractor license, if required by Chapter 70.87 RCW and;
3. Not be disqualified from bidding on any public works contract under RCW 39.06.010 (unlicensed or unregistered contractors) or 39.12.065(3) (prevailing wage).

II. CITY OF TACOMA

A. SUPPLEMENTAL RESPONSIBILITY CRITERIA – CITY OF TACOMA:

In order to be considered a responsible bidder, the prospective bidder shall have all of the following qualifications set forth in Tacoma Municipal Code 1.06.262:

1. Adequate financial resources or the ability to secure such resources;
2. The necessary experience, stability, organization and technical qualifications to perform the proposed contract;
3. The ability to comply with the required performance schedule, taking into consideration all existing business commitments;
4. A satisfactory record of performance, integrity, judgment and skills; and
5. Be otherwise qualified and eligible to receive an award under applicable laws and regulations.
 - a. Bidder Responsibility. Bidders shall not be in violation of 39.04.350 RCW Bidder Responsibility Criteria - Supplemental Criteria.

In addition to the mandatory bidder responsibility criteria listed immediately above, the City may, in addition to price, consider any or all of the following criteria contained in Tacoma Municipal Code Chapter 1.06.262 in determining bidder responsibility:

1. The ability, capacity, experience, stability, technical qualifications and skill of the respondent to perform the contract;
2. Whether the respondent can perform the contract within the time specified, without delay or interference;
3. Integrity, reputation, character, judgment, experience, and efficiency of the respondents, including past compliance with the City's Ethics Code;
4. Quality of performance of previous contracts;
5. Previous and existing compliance with laws and ordinances relating to contracts or services;
6. Sufficiency of the respondent's financial resources;
7. Quality, availability, and adaptability of the supplies, purchased services or public works to the particular use required;
8. Ability of the respondent to provide future maintenance and service on a timely basis;
9. Payment terms and prompt pay discounts;
10. The number and scope of conditions attached to the submittal;
11. Compliance with all applicable City requirements, including but not limited to the City's Ethics Code and its Equity in Contracting and Local Employment and Apprenticeship Training programs;
12. Other qualification criteria set forth in the specification or advertisement that the appropriate department or division head determines to be in the best interests of the City.

The City may require bidders to furnish information, sworn or certified to be true, to demonstrate compliance with the City responsibility criteria set forth above. If the city manager or director of utilities is not satisfied with the sufficiency of the information provided, or if the prospective respondent does not substantially meet all responsibility requirements, any submittal from such respondent must be disregarded.

B. ADDITIONAL SUPPLEMENTAL CRITERIA – NOT APPLICABLE

C. MODIFICATIONS TO SUPPLEMENTAL CRITERIA

Potential bidders may request modifications to the City's **supplemental criteria** by submitting a written request to the Purchasing Division via email to bids@cityoftacoma.org no later than 5:00 p.m. Pacific Time, three days prior to the submittal deadline. Please include the Specification No. and Title when submitting such requests. Requests must include justification for why certain criteria should be modified. Requests received after this date and time will not be considered.

The City will respond to a timely submitted request prior to the bid opening date. Changes to the supplemental criteria, if warranted, will be issued by addendum to the solicitation documents and posted to the City's website for the attention of all prospective bidders.

D. DETERMINATION OF BIDDER RESPONSIBILITY

If the City determines the bidder does not meet the criteria above and is therefore not a responsible bidder, the City shall notify the bidder in writing with the reasons for its determination. If the bidder disagrees, the bidder may appeal the determination in a manner consistent with the City's Protest Policy. Appeals are coordinated by the Purchasing Division heard by the Procurement and Payables Division manager for contracts less than or equal to \$500,000 and by Contracts and Awards Board for contracts greater than \$500,000.

PART I

BID PROPOSAL AND CONTRACT FORMS

BID PROPOSAL

SPECIFICATION NO. ES24-0056F
Foss Shoreline Restoration Outfall 230A Repair

The undersigned hereby certifies that he/she has examined the location and construction details of work as outlined on the Plans and Specifications for Project No. ENV-03027-21 and has read and thoroughly understands the Plans and Specifications and contract governing the work embraced in this improvement and the method by which payment will be made for said work, and hereby proposes to undertake and complete the work embraced in this improvement in accordance with said Plans, Specifications and contract and at the following schedule of rates and prices:

NOTE: 1. Unit prices of all items, all extensions and total amount of bid should be shown.
Show unit prices in figures only.

<u>ITEM NO.</u>	<u>ITEM DESCRIPTION</u>	<u>ESTIMATED QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
1.	Mobilization/Demobilization and General Requirements	1 Lump Sum	Lump Sum	\$ _____
2.	Surveying and Field Verification	1 Lump Sum	Lump Sum	\$ _____
3.	Temporary Bypass System	1 Lump Sum	Lump Sum	\$ _____
4.	Excavation and Disposal	180 Cubic Yards	\$ _____	\$ _____
5.	Import and Place Quarry Spall Filter	6 Tons	\$ _____	\$ _____
6.	Import and Place Weighted Filter Fabric	270 Square Feet	\$ _____	\$ _____
7.	Import and Place Heavy Loose Riprap	34 Tons	\$ _____	\$ _____
8.	Import and Place Streambed Cobbles	6 Tons	\$ _____	\$ _____
Base Bid (Subtotal Item No. 1 through 8)			\$ _____	
10.3% Sales Tax (Item No. 1 through 8)			\$ _____	
Grand Total			\$ _____	

SIGNATURE PAGE

**CITY OF TACOMA
Environmental Services / Science & Engineering**

All submittals must be in ink or typewritten, executed by a duly authorized officer or representative of the bidding/proposing entity, and received and time stamped as directed in the **Request for Bids page near the beginning of the specification**. If the bidder/proposer is a subsidiary or doing business on behalf of another entity, so state, and provide the firm name under which business is hereby transacted.

**REQUEST FOR BIDS SPECIFICATION NO. ES24-0056F
Foss Shoreline Restoration Outfall 230A Repair**

The undersigned bidder/proposer hereby agrees to execute the proposed contract and furnish all materials, labor, tools, equipment and all other facilities and services in accordance with these specifications.

The bidder/proposer agrees, by submitting a bid/proposal under these specifications, that in the event any litigation should arise concerning the submission of bids/proposals or the award of contract under this specification, Request for Bids, Request for Proposals or Request for Qualifications, the venue of such action or litigation shall be in the Superior Court of the State of Washington, in and for the County of Pierce.

Non-Collusion Declaration

The undersigned bidder/proposer hereby certifies under penalty of perjury that this bid/proposal is genuine and not a sham or collusive bid/proposal, or made in the interests or on behalf of any person or entity not herein named; and that said bidder/proposer has not directly or indirectly induced or solicited any contractor or supplier on the above work to put in a sham bid/proposal or any person or entity to refrain from submitting a bid/proposal; and that said bidder/proposer has not, in any manner, sought by collusion to secure to itself an advantage over any other contractor(s) or person(s).

Bidder/Proposer's Registered Name

Signature of Person Authorized to Enter Date
into Contracts for Bidder/Proposer

Address

Printed Name and Title

City, State, Zip

(Area Code) Telephone Number / Fax Number

Authorized Signatory E-Mail Address

State Business License Number
in WA, also known as UBI (Unified Business Identifier) Number

E.I.No. / Federal Social Security Number Used on Quarterly
Federal Tax Return, U.S. Treasury Dept. Form 941

State Contractor's License Number
(See Ch. 18.27, R.C.W.)

E-Mail Address for Communications

Addendum acknowledgement #1 _____ #2 _____ #3 _____ #4 _____ #5 _____

THIS PAGE MUST BE SIGNED AND RETURNED WITH SUBMITTAL.

Herewith find deposit in the form of a cashier's check in the amount of \$ _____ which amount is not less than 5-percent of the total bid.

SIGN HERE _____

BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as Principal, and _____, as Surety, are held and firmly bound unto the City of Tacoma, as Obligee, in the penal sum of _____ dollars, for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for

according to the terms of the proposal or bid made by the Principal therefor, and the Principal shall duly make and enter into a contract with the Obligee in accordance with the terms of said proposal or bid and award and shall give bond for faithful performance thereof, with Surety or Sureties approved by the Obligee; or if the Principal shall, in case of failure to do so, pay and forfeit to the Obligee the penal amount of the deposit specified in the call for bids, then this obligation shall be null and void; otherwise it shall be and remain in full force and effect and the Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages, the amount of this bond.

SIGNED, SEALED AND DATED THIS _____ DAY OF _____, 20_____.

PRINCIPAL:

SURETY:

_____, 20_____

Received return of deposit in the sum of \$ _____



City of Tacoma

Certification of Compliance with Wage Payment Statutes

The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date May 14, 2024, that the bidder is not a “willful” violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction.

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

Bidder

Signature of Authorized Official*

Printed Name

Title

Date

City

State

Check One:

Individual

Partnership

Joint Venture

Corporation

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

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

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

Specification No. _____

Name of Bidder: _____

State Responsibility and Reciprocal Bid Preference Information

Certificate of registration as a contractor
(Must be in effect at the time of bid submittal):

Number: _____

Effective Date: _____

Expiration Date: _____

Current Washington Unified Business Identifier
(UBI) Number:

Number: _____

Do you have industrial insurance (workers' compensation)
Coverage nor your employees working in Washington?

Yes No
 Not Applicable

Washington Employment Security Department Number

Number: _____

Not Applicable

Washington Department of Revenue state excise tax
Registration number:

Number: _____

Not Applicable

Have you been disqualified from bidding any public
works contracts under RCW 39.06.010 or 39.12.065(3)?

Yes No
If yes, provide an explanation of your
disqualification on a separate page.

Do you have a physical office located in the state of
Washington?

Yes No

If incorporated, in what state were you incorporated?

State: _____ Not Incorporated

If not incorporated, in what state was your business
entity formed?

State: _____

Have you completed the training required by RCW
39.04.350, or are you on the list of exempt businesses
maintained by the Department of Labor and Industries?

Yes No

CONTRACT

Resolution No.
Contract No.

This Contract is made and entered into effective as of [Month], [Day], [Year] (“Effective Date”) by and between the City of Tacoma, a Municipal Corporation of the State of Washington (“City”), and [supplier name as it appears in Ariba, including dbas or trade names] (“Contractor”).

That in consideration of the mutual promises and obligations hereinafter set forth the Parties hereto agree as follows:

- I. Contractor shall fully execute and diligently and completely perform all work and provide all services and deliverables described herein and in the items listed below each of which are fully incorporated herein and which collectively are referred to as “Contract Documents”:

 1. Specification No. [Spec Number] [Spec Title] together with all authorized addenda.
 2. Contractor’s submittal [or specifically described portions thereof] dated [Enter Submittal Date] submitted in response to Specification No. [Spec Number] [Spec Title].
 3. Describe with specific detail and list separately any other documents that will make up the contract (fee schedule, work schedule, authorized personnel, etc.) or any other additional items mutually intended to be binding upon the parties.

- II. If federal funds will be used to fund, pay or reimburse all or a portion of the services provided under the Contract, the terms and conditions set forth at this Appendix A are incorporated into and made part of this Contract and CONTRACTOR will comply with all applicable provisions of Appendix A and with all applicable federal laws, regulations, executive orders, policies, procedures, and directives in the performance of this Contract.

If CONTRACTOR’s receipt of federal funds under this Contract is as a sub-recipient, a fully completed Appendix B, “Sub-recipient Information and Requirements” is incorporated into and made part of this Contract.
- III. In the event of a conflict or inconsistency between the terms and conditions contained in this document entitled Contract and any terms and conditions contained the above referenced Contract Documents the following order of precedence applies with the first listed item being the most controlling and the last listed item the least controlling:
 1. Contract, inclusive of Appendices A and B.
 2. List remaining Contract Documents in applicable controlling order.
- IV. The Contract terminates on xxxxx, and may be renewed for xxxxxxxx
- V. The total price to be paid by City for Contractor’s full and complete performance hereunder, including during any authorized renewal terms, may not exceed:
\$[Dollar Amount], plus any applicable taxes.
- VI. Contractor agrees to accept as full payment hereunder the amounts specified herein and in Contract Documents, and the City agrees to make payments at the times and in the manner and upon the terms and conditions specified. Except as may be otherwise provided herein or in Contract Documents Contractor shall provide and bear the expense of all equipment, work and labor of any sort whatsoever that may be required for the transfer of materials and for constructing and completing the work and providing the services and deliverables required by this Contract.
- VII. The City’s preferred method of payment is by ePayables (Payment Plus), followed by credit card (aka procurement card), then Electronic Funds Transfer (EFT) by Automated Clearing House (ACH), then check or other cash equivalent. CONTRACTOR may be required to have the capability of accepting the City’s ePayables or credit card methods of payment. The City of Tacoma will not accept price changes or pay additional fees when ePayables (Payment Plus) or credit card is used. The City, in its sole discretion, will determine the method of payment for this Contract.

VIII. Failure by City to identify a deficiency in the insurance documentation provided by Contractor or failure of City to demand verification of coverage or compliance by Contractor with the insurance requirements contained in the Contract Documents shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

IX. Contractor and for its heirs, executors, administrators, successors, and assigns, does hereby agree to the full performance of all the requirements contained herein and in Contract Documents.

It is further provided that no liability shall attach to City by reason of entering into this Contract, except as expressly provided herein.

IN WITNESS WHEREOF, the Parties hereto have accepted and executed this Contract, as of the Effective Date stated above, which shall be Effective Date for bonding purposes as applicable.

CITY OF TACOMA:

CONTRACTOR:

Signature:

Signature:

Name:

Name:

Title:

Title:

(City of Tacoma use only - blank lines are intentional)

Director of Finance: _____

Deputy/City Attorney (approved as to form): _____

Approved By: _____

Approved By: _____

Approved By: _____

Approved By: _____

Approved By: _____

Approved By: _____

**APPENDIX A
FEDERAL FUNDING**

1. Termination for Breach

CITY may terminate this Contract in the event of any material breach of any of the terms and conditions of this Contract if CONTRACTOR's breach continues in effect after written notice of breach and 30 days to cure such breach and fails to cure such breach.

2. Prevailing Wages

1. If federal, state, local, or any applicable law requires CONTRACTOR to pay prevailing wages in connection with this Contract, and CONTRACTOR is so notified by the CITY, then CONTRACTOR shall pay applicable prevailing wages and otherwise comply with the Washington State Prevailing Wage Act (RCW 39.12) in the performance of this Contract.
2. If applicable, a Schedule of Prevailing Wage Rates and/or the current prevailing wage determination made by the Secretary of Labor for the locality or localities where the Contract will be performed is made of part of the Contract by this reference. If prevailing wages apply to the Contract, CONTRACTOR and its subcontractors shall:
 - i. Be bound by and perform all transactions regarding the Contract relating to prevailing wages and the usual fringe benefits in compliance with the provisions of Chapter 39.12 RCW, as amended, the Washington State Prevailing Wage Act and/or the Davis-Bacon Act (40 U.S.C. 3141- 3144, and 3146-3148) and the requirements of 29 C.F.R. pt. 5 as may be applicable, including the federal requirement to pay wages not less than once a week.
 - ii. Ensure that no worker, laborer or mechanic employed in the performance of any part of the Contract shall be paid less than the prevailing rate of wage specified on that Schedule and/or specified in a wage determination made by the Secretary of Labor (unless specifically preempted by federal law, the higher of the Washington state prevailing wage or federal Davis-Bacon rate of wage must be paid.
 - iii. Immediately upon award of the Contract, contact the Department of Labor and Industries, Prevailing Wages section, Olympia, Washington and/or the federal Department of Labor, to obtain full information, forms and procedures relating to these matters. Per such procedures, a Statement of Intent to Pay Prevailing Wages and/or other or additional documentation required by applicable federal law, must be submitted by CONTRACTOR and its subcontractors to the CITY, in the manner requested by the CITY, prior to any payment by the CITY hereunder, and an Affidavit of Wages Paid and/or other or additional documentation required by federal law must be received or verified by the CITY prior to final Contract payment.

3. COPELAND ANTI-KICKBACK ACT

For Contracts subject to Davis Bacon Act the following clauses will be incorporated into the Contract:

- A. CONTRACTOR shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this Contract.
- B. CONTRACTOR or subcontractor shall insert in any subcontracts the clause above and such other clauses federal agencies may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts.

The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these Contract clauses.

- C. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12.

4. EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this Contract, CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. If the CONTRACTOR does over \$10,000 in business a year that is funded, paid or reimbursed with federal funds, CONTRACTOR will take specific and affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

- A. Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- B. CONTRACTOR will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- C. CONTRACTOR will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.
- D. CONTRACTOR will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- E. CONTRACTOR will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- F. In the event of CONTRACTOR's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated, or suspended in whole or in part and the CONTRACTOR may be declared ineligible for further federally funded contracts in accordance with procedures

authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

- G. CONTRACTOR will include the portion of the sentence immediately preceding paragraph (A) and the provisions of paragraphs (A) through (G) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. CONTRACTOR will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event CONTRACTOR becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

5. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

- A. Overtime requirements. Neither CONTRACTOR or subcontractor contracting for any part of the Contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- B. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (3)(A) of this section the CONTRACTOR and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such CONTRACTOR and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (3)(A) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (3)(A) of this section.
- C. Withholding for unpaid wages and liquidated damages. The CITY shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the CONTRACTOR or subcontractor under any such contract or any other Federal

contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such CONTRACTOR or sub-contractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (3)(B) of this section.

- D. Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (3)(A) through (D) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime CONTRACTOR shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (3)(A) through (D) of this section.

6. CLEAN AIR ACT

- A. CONTRACTOR agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
- B. CONTRACTOR agrees to report each violation to the CITY and understands and agrees that the CITY will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

CONTRACTOR agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with federal funds.

7. FEDERAL WATER POLLUTION CONTROL ACT

- A. CONTRACTOR agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
- B. CONTRACTOR agrees to report each violation to the CITY and understands and agrees that the CITY will, in turn, report each violation as required to assure notification to the appropriate federal agency.
- C. CONTRACTOR agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with federal funding.

8. DEBARMENT AND SUSPENSION

- A. This Contract is a Covered Transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the CONTRACTOR is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).
- B. CONTRACTOR must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier Covered Transaction it enters into.

- C. This certification is a material representation of fact relied upon by the CITY. If it is later determined that the CONTRACTOR did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to CITY, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
- D. CONTRACTOR agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C throughout the period of this Contract and to include a provision requiring such compliance in its lower tier covered transactions.

9. BYRD ANTI-LOBBYING AMENDMENT

- A. Contractors who apply or bid for an award of \$100,000 or more shall file the required certification with CITY. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the CITY.
- B. If applicable, CONTRACTOR must sign and submit to the CITY the certification required by Appendix A to 44 CFR Part 18 contained at Appendix A-1 to this Contract.

10. PROCUREMENT OF RECOVERED MATERIALS

- A. In the performance of this Contract, CONTRACTOR shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:
 - i. Competitively within a timeframe providing for compliance with the contract performance schedule;
 - ii. Meeting contract performance requirements; or
 - iii. At a reasonable price.
- B. Information about this requirement, along with the list of EPA- designated items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.
- C. CONTRACTOR also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

APPENDIX A-1

**APPENDIX A to 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING
Certification for Contracts, Grants, Loans, and Cooperative Agreements**

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap.38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Name and Title of Contractor's Authorized Official

Date

APPENDIX B—Sub-recipient information and requirements

Pursuant to 2 CFR 200.332(a)(1) Federal Award Identification

(i) Agency Name (must match the name associated with its unique entity identifier)		(ii) Unique Entity Identifier <i>(i.e., DUNS)</i>	City of Tacoma Number for This Agreement
(iii) Federal Award Identification Number (FAIN)	(iv) Federal Award Date	(v) Federal Period of Performance Start and End Date	(vi) Federal Budget Period Start and End Date
(vii) Amount of Federal Funds <i>Obligated</i> to the agency <i>by this action</i> : \$	(viii) Total Amount of Federal Funds <i>Obligated</i> to the agency	(ix) Total Amount of the Federal Award <i>Committed</i> to the agency \$	
(x) Federal Award Project Description: CORONAVIRUS STATE AND LOCAL FISCAL RECOVERY FUNDS– City of Tacoma			
(xi) Federal Awarding Agency: DEPARTMENT OF THE TREASURY	Pass-Through Entity: City of Tacoma	Awarding Official Name and Contact Information:	
(xii) Assistance Listing Number and Name (the pass-through entity must identify the dollar amount made available under each Federal award and the Assistance Listing number at time of disbursement)			(xiii) Identification of Whether the Award is R&D
(xiv) Indirect Cost Rate for the Federal Award	Award Payment Method (lump sum payment or reimbursement) REIMBURSEMENT		



PAYMENT BOND TO THE CITY OF TACOMA

Resolution No. [Enter Reso # Here]
Bond No.

That we, the undersigned, [Supplier name] _____
as principal, and _____
as a surety, are jointly and severally held and firmly bound to the CITY OF TACOMA, in the penal sum of,
[\$dollar value], plus any applicable taxes _____, for the payment whereof Contractor and Surety bind themselves,
their executors, administrators, legal representatives, successors and assigns, jointly and severally, firmly by these presents.

This obligation is entered into in pursuance of the statutes of the State of Washington, the Ordinances of the City of Tacoma.

WHEREAS, under and pursuant to the City Charter and general ordinances of the City of Tacoma, the said City has or is about to enter with the above bounden principal, a contract, providing for

Specification No. [Enter Spec # Here]

Specification Title: [Enter Spec Title Here]

Contract No. [Enter Contract # Here]

(which contract is referenced to herein and is made a part hereof as though attached hereto), and

WHEREAS, the said principal has accepted, the said contract, and undertake to perform the work therein provided for in the manner and within the time set forth.

This statutory payment bond shall become null and void, if and when the Principal, its heirs, executors, administrators, successors, or assigns shall pay all persons in accordance with RCW 39.08, 39.12, and 60.28, including all workers, laborers, mechanics, subcontractors, and materialmen, and all person who shall supply such contractor or subcontractor with provisions and supplies for the carrying on of such work, and all taxes incurred on said Contract under Titles 50 and 51 RCW and all taxes imposed on the Principal under Title 82 RCW; and if such payment obligations have not been fulfilled, this bond shall remain in full force and effect.

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

No suit or action shall be commenced hereunder by any claimant unless claimant shall have given the written notices to the City, and where required, the Contractor, in accordance with RCW 39.08.030.

The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of claims which may be properly filed in accordance with RCW 39.08 whether or not suit is commenced under and against this bond.

If any claimant shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgment and attorney fees as provided by RCW 39.08.030, shall also pay such costs and attorney fees as may be incurred by the City as a result of such suit. Venue for any action arising out of or in connection with this bond shall be in Pierce County, WA.

Surety companies executing bonds must be authorized to transact business in the State of Washington as surety and named in the current list of "Surety Companies Acceptable in Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Department of the Treasury.

Resolution No. [Enter Reso # Here]
Specification No. [Enter Spec # Here]
Contract No. [Enter Contract # Here]

One original bond shall be executed, and be signed by the parties' duly authorized officers. This bond will only be accepted if it is accompanied by a fully executed power of attorney for the office executing on behalf of the surety.

Principal: [Supplier name]

By: _____

Surety:

By: _____

Agent's Name: _____

Agent's Address: _____



PERFORMANCE BOND TO THE CITY OF TACOMA

Resolution No. [Enter Reso # Here]
Bond No.

That we, the undersigned, [Supplier Name] _____
as principal, and _____
as a surety, are jointly and severally held and firmly bound to the CITY OF TACOMA, in the penal sum of
\$[dollar value], plus any applicable tax, for the payment whereof Contractor and Surety bind themselves,
their executors, administrators, legal representatives, successors and assigns, jointly and severally, firmly by these presents.

This obligation is entered into in pursuance of the statutes of the State of Washington, the Ordinances of the City of Tacoma.

WHEREAS, under and pursuant to the City Charter and general ordinances of the City of Tacoma, the said City has or is about to enter with the above bounden principal, a contract, providing for

Specification No. [Enter Spec # Here] _____
Specification Title: [Enter Spec Title Here] _____
Contract No. [Enter Contract # Here] _____

(which contract is referenced to herein and is made a part hereof as though attached hereto), and

WHEREAS, the said principal has accepted, the said contract, and undertake to perform the work therein provided for in the manner and within the time set forth.

This statutory performance bond shall become null and void, if and when the principal, its heirs, executors, administrators, successors, or assigns shall well and faithfully perform all of the Principal's obligations under the Contract and fulfill all terms and conditions of all duly authorized modifications, additions and changes to said Contract that may hereafter be made, at the time and in the manner therein specified; and if such performance obligations have not been fulfilled, this bond shall remain in force and effect.

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

If the City shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgement, shall pay all costs and attorney's fees incurred by the City in enforcement of its rights hereunder. Venue for any action arising out of in in connection with this bond shall be in Pierce County, Washington.

Surety companies executing bonds must be authorized to transact business in the State of Washington as surety and named in the current list of "Surety Companies Acceptable in Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Department of the Treasury.

One original bond shall be executed, and signed by the parties' duly authorized officers. This bond will only be accepted if it is accompanied by a fully executed power of attorney for the office executing on behalf of the surety.

Principal: [Supplier name]

By: _____

Surety:

By: _____

Agent's Name: _____

Agent's Address: _____

GENERAL RELEASE TO THE CITY OF TACOMA

The undersigned, named as the contractor for _____
between _____ and the City of Tacoma,
(Themselves or Itself) dated _____, 20____, hereby releases the City of Tacoma, its departmental officers and agents from any and all claim or claims whatsoever in any manner whatsoever at any time whatsoever arising out of and/or in connection with and/or relating to said contract, excepting only the equity of the undersigned in the amount now retained by the City of Tacoma under said contract, to-wit the sum of \$_____.

Signed at Tacoma, Washington this _____ day of _____, 20____.

Contractor

By _____

Title _____

P A R T I I

**GENERAL CONDITIONS FOR
WASHINGTON STATE FACILITY CONSTRUCTION**

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PART 1 – GENERAL PROVISIONS

1.01 DEFINITIONS

- A. “Application for Payment” means a written request submitted by Contractor to A/E for payment of Work completed in accordance with the Contract Documents and approved Schedule of Values, supported by such substantiating data as Owner or A/E may require.
- B. “Architect,” “Engineer,” or “A/E” means a person or entity lawfully entitled to practice architecture or engineering, representing Owner within the limits of its delegated authority.
- C. “Change Order” means a written instrument signed by Owner and Contractor stating their agreement upon all of the following: (1) a change in the Work; (2) the amount of the adjustment in the Contract Sum, if any, and (3) the extent of the adjustment in the Contract Time, if any.
- D. “Claim” means Contractor’s exclusive remedy for resolving disputes with Owner regarding the terms of a Change Order or a request for equitable adjustment, as more fully set forth in Part 8.
- E. “Contract Award Amount” is the sum of the Base Bid and any accepted Alternates.
- F. “Contract Documents” means the Advertisement for Bids, Instructions for Bidders, completed Bid Form, General Conditions, Modifications to the General Conditions, Supplemental Conditions, Public Works Contract, other Special Forms, Drawings and Specifications, and all addenda and modifications thereof.
- G. “Contract Sum” is the total amount payable by Owner to Contractor, for performance of the Work in accordance with the Contract Documents, including all taxes imposed by law and properly chargeable to the Work, except Washington State sales tax.
- H. “Contract Time” is the number of calendar days allotted in the Contract Documents for achieving Substantial Completion of the Work.
- I. “Contractor” means the person or entity who has agreed with Owner to perform the Work in accordance with the Contract Documents.
- J. “Day(s)”: Unless otherwise specified, day(s) shall mean calendar day(s).”
- K. “Drawings” are the graphic and pictorial portions of the Contract Documents showing the design, location, and dimensions of the Work, and may include plans, elevations, sections, details, schedules, and diagrams.
- L. “Final Acceptance” means the written acceptance issued to Contractor by Owner after Contractor has completed the requirements of the Contract Documents, as more fully set forth in Section 6.09 B.
- M. “Final Completion” means that the Work is fully and finally complete in accordance with the Contract Documents, as more fully set forth in Section 6.09 A.
- N. “Force Majeure” means those acts entitling Contractor to request an equitable adjustment in the Contract Time, as more fully set forth in paragraph 3.05A.
- O. “Notice” means a written notice which has been delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended or, if delivered or sent by registered or certified mail, to the last business address known to the party giving notice.

- P. "Notice to Proceed" means a notice from Owner to Contractor that defines the date on which the Contract Time begins to run.
- Q. "Owner" means the state agency, institution, or its authorized representative with the authority to enter into, administer, and/or terminate the Work in accordance with the Contract Documents and make related determinations and findings.
- R. "Person" means a corporation, partnership, business association of any kind, trust, company, or individual.
- S. "Prior Occupancy" means Owner's use of all or parts of the Project before Substantial Completion, as more fully set forth in Section 6.08 A.
- T. "Progress Schedule" means a schedule of the Work, in a form satisfactory to Owner, as further set forth in Section 3.02.
- U. "Project" means the total construction of which the Work performed in accordance with the Contract Documents may be the whole or a part and which may include construction by Owner or by separate contractors.
- V. "Project Record" means the separate set of Drawings and Specifications as further set forth in paragraph 4.02A.
- W. "Schedule of Values" means a written breakdown allocating the total Contract Sum to each principal category of Work, in such detail as requested by Owner.
- X. "Specifications" are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.
- Y. "Subcontract" means a contract entered into by Subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind for or in connection with the Work.
- Z. "Subcontractor" means any person, other than Contractor, who agrees to furnish or furnishes any supplies, materials, equipment, or services of any kind in connection with the Work.
- AA. "Substantial Completion" means that stage in the progress of the Work when the construction is sufficiently complete, as more fully set forth in Section 6.07.
- AB. "Work" means the construction and services required by the Contract Documents, and includes, but is not limited to, labor, materials, supplies, equipment, services, permits, and the manufacture and fabrication of components, performed, furnished, or provided in accordance with the Contract Documents.

1.02 ORDER OF PRECEDENCE

Any conflict or inconsistency in the Contract Documents shall be resolved by giving the documents precedence in the following order:

1. Signed Public Works Contract, including any Change Orders.
2. Supplemental Conditions.
3. Modifications to the General Conditions.
4. General Conditions.

5. Specifications. Provisions in Division 1 shall take precedence over provisions of any other Division.
6. Drawings. In case of conflict within the Drawings, large scale drawings shall take precedence over small scale drawings.
7. Signed and Completed Bid Form.
8. Instructions to Bidders.
9. Advertisement for Bids.

1.03 EXECUTION AND INTENT

Contractor Representations: Contractor makes the following representations to Owner:

1. Contract Sum reasonable: The Contract Sum is reasonable compensation for the Work and the Contract Time is adequate for the performance of the Work, as represented by the Contract Documents;
2. Contractor familiar with project: Contractor has carefully reviewed the Contract Documents, visited and examined the Project site, become familiar with the local conditions in which the Work is to be performed, and satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services and other items to be furnished and all other requirements of the Contract Documents, as well as the surface and subsurface conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof;
3. Contractor financially capable: Contractor is financially solvent, able to pay its debts as they mature, and possesses sufficient working capital to complete the Work and perform Contractor's obligations required by the Contract Documents; and
4. Contractor can complete Work: Contractor is able to furnish the plant, tools, materials, supplies, equipment and labor required to complete the Work and perform the obligations required by the Contract Documents and has sufficient experience and competence to do so.

PART 2 – INSURANCE AND BONDS

2.01 CONTRACTOR'S LIABILITY INSURANCE

General insurance requirements: Prior to commencement of the Work, Contractor shall obtain all the insurance required by the Contract Documents and provide evidence satisfactory to Owner that such insurance has been procured. Review of the Contractor's insurance by Owner shall not relieve or decrease the liability of Contractor. Companies writing the insurance to be obtained by this part shall be licensed to do business under Chapter 48 RCW or comply with the Surplus Lines Law of the State of Washington. Contractor shall include in its bid the cost of all insurance and bond costs required to complete the base bid work and accepted alternates. Insurance carriers providing insurance in accordance with the Contract Documents shall be acceptable to Owner, and its A.M. Best rating shall be indicated on the insurance certificates.

- A. Term of insurance coverage: Contractor shall maintain the following insurance coverage during the Work and for one year after Final Acceptance. Contractor shall also maintain the following insurance coverage during the performance of any corrective Work required by Section 5.16.

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1. General Liability Insurance: Commercial General Liability (CGL) on an Occurrence Form. Coverage shall include, but not be limited to:
 - a. Completed operations/products liability;
 - b. Explosion, collapse, and underground; and
 - c. Employer's liability coverage.
 2. Automobile Liability Insurance: Automobile liability
- B. Industrial Insurance compliance: Contractor shall comply with the Washington State Industrial Insurance Act and, if applicable, the Federal Longshoremen's and Harbor Workers' Act and the Jones Act.
- C. Insurance to protect for the following: All insurance coverages shall protect against claims for damages for personal and bodily injury or death, as well as claims for property damage, which may arise from operations in connection with the Work whether such operations are by Contractor or any Subcontractor.
- D. Owner as Additional Insured: All insurance coverages shall be endorsed to include Owner as an additional named insured for Work performed in accordance with the Contract Documents, and all insurance certificates shall evidence the Owner as an additional insured.

2.02 COVERAGE LIMITS

Insurance amounts: The coverage limits shall be as follows:

- A. Limits of Liability shall not be less than \$1,000,000 Combined Single Limit for Bodily Injury and Property Damage (other than Automobile Liability) Each Occurrence; Personal Injury and Advertising Liability Each Occurrence.
- B. \$2,000,000 Combined Single Limit Annual General Aggregate.
- C. \$2,000,000 Annual Aggregate for Products and Completed Operations Liability.
- D. \$1,000,000 Combined Single Limit for Automobile Bodily Injury and Property Damage Liability, Each Accident or Loss.

2.03 INSURANCE COVERAGE CERTIFICATES

- A. Certificate required: Prior to commencement of the Work, Contractor shall furnish to Owner a completed certificate of insurance coverage.
- B. List Project info: All insurance certificates shall name Owner's Project number and Project title.
- C. Cancellation provisions: All insurance certificates shall specifically require 45 Days prior notice to Owner of cancellation or any material change, except 30 Days for surplus line insurance.

2.04 PAYMENT AND PERFORMANCE BONDS

Conditions for bonds: Payment and performance bonds for 100% of the Contract Award Amount, plus state sales tax, shall be furnished for the Work, using the Payment Bond and Performance Bond form published by and available from the American Institute of Architects (AIA) – form A312. Prior to execution of a Change Order that, cumulatively with previous Change Orders, increases the Contract Award Amount by 15% or more, the Contractor shall provide either new payment and performance bonds for the

revised Contract Sum, or riders to the existing payment and performance bonds increasing the amount of the bonds. The Contractor shall likewise provide additional bonds or riders when subsequent Change Orders increase the Contract Sum by 15% or more. No payment or performance bond is required if the Contract Sum is \$35,000 or less and Contractor agrees that Owner may, in lieu of the bond, retain 50% of the Contract Sum for the period allowed by RCW 39.08.010.

2.05 ALTERNATIVE SURETY

When alternative surety required: Contractor shall promptly furnish payment and performance bonds from an alternative surety as required to protect Owner and persons supplying labor or materials required by the Contract Documents if:

- A. Owner has a reasonable objection to the surety; or
- B. Any surety fails to furnish reports on its financial condition if required by Owner.

2.06 BUILDER'S RISK

- A. Contractor to buy Property Insurance: Contractor shall purchase and maintain property insurance in the amount of the Contract Sum including all Change Orders for the Work on a replacement cost basis until Substantial Completion. For projects not involving New Building Construction, "Installation Floater" is an acceptable substitute for the Builder's Risk Insurance. The insurance shall cover the interest of Owner, Contractor, and any Subcontractors, as their interests may appear.
- B. Losses covered: Contractor property insurance shall be placed on an "all risk" basis and insure against the perils of fire and extended coverage and physical loss or damage including theft, vandalism, malicious mischief, collapse, false work, temporary buildings, debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for A/E's services and expenses required as a result of an insured loss.
- C. Waiver of subrogation rights: Owner and Contractor waive all subrogation rights against each other, any Subcontractors, A/E, A/E's subconsultants, separate contractors described in Section 5.20, if any, and any of their subcontractors, for damages caused by fire or other perils to the extent covered by property insurance obtained pursuant to this section or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by Owner as fiduciary. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

PART 3 – TIME AND SCHEDULE

3.01 PROGRESS AND COMPLETION

Contractor to meet schedule: Contractor shall diligently prosecute the Work, with adequate forces, achieve Substantial Completion within the Contract Time, and achieve Final Completion within a reasonable period thereafter.

3.02 CONSTRUCTION SCHEDULE

- A. Preliminary Progress Schedule: Unless otherwise provided in Division 1, Contractor shall, within 14 Days after issuance of the Notice to Proceed, submit a preliminary Progress Schedule. The Progress Schedule shall show the sequence in which Contractor proposes to perform the Work,

and the dates on which Contractor plans to start and finish major portions of the Work, including dates for shop drawings and other submittals, and for acquiring materials and equipment.

- B. Form of Progress Schedule: Unless otherwise provided in Division 1, the Progress Schedule shall be in the form of a bar chart, or a critical path method analysis, as specified by Owner. The preliminary Progress Schedule may be general, showing the major portions of the Work, with a more detailed Progress Schedule submitted as directed by Owner.
- C. Owner comments on Progress Schedule: Owner shall return comments on the preliminary Progress Schedule to Contractor within 14 Days of receipt. Review by Owner of Contractor's schedule does not constitute an approval or acceptance of Contractor's construction means, methods, or sequencing, or its ability to complete the Work within the Contract Time. Contractor shall revise and resubmit its schedule, as necessary. Owner may withhold a portion of progress payments until a Progress Schedule has been submitted which meets the requirements of this section.
- D. Monthly updates and compliance with Progress Schedule: Contractor shall utilize and comply with the Progress Schedule. On a monthly basis, or as otherwise directed by Owner, Contractor shall submit an updated Progress Schedule at its own expense to Owner indicating actual progress. If, in the opinion of Owner, Contractor is not in conformance with the Progress Schedule for reasons other than acts of Force Majeure as identified in Section 3.05, Contractor shall take such steps as are necessary to bring the actual completion dates of its work activities into conformance with the Progress Schedule, and if directed by Owner, Contractor shall submit a corrective action plan or revise the Progress Schedule to reconcile with the actual progress of the Work.
- E. Contractor to notify Owner of delays: Contractor shall promptly notify Owner in writing of any actual or anticipated event which is delaying or could delay achievement of any milestone or performance of any critical path activity of the Work. Contractor shall indicate the expected duration of the delay, the anticipated effect of the delay on the Progress Schedule, and the action being or to be taken to correct the problem. Provision of such notice does not relieve Contractor of its obligation to complete the Work within the Contract Time.

3.03 OWNER'S RIGHT TO SUSPEND THE WORK FOR CONVENIENCE

- A. Owner may suspend Work: Owner may, at its sole discretion, order Contractor, in writing, to suspend all or any part of the Work for up to 90 Days, or for such longer period as mutually agreed.
- B. Compliance with suspension; Owner's options: Upon receipt of a written notice suspending the Work, Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of cost of performance directly attributable to such suspension. Within a period up to 90 Days after the notice is delivered to Contractor, or within any extension of that period to which the parties shall have agreed, Owner shall either:
 - 1. Cancel the written notice suspending the Work; or
 - 2. Terminate the Work covered by the notice as provided in the termination provisions of Part 9.
- C. Resumption of Work: If a written notice suspending the Work is cancelled or the period of the notice or any extension thereof expires, Contractor shall resume Work.
- D. Equitable Adjustment for suspensions: Contractor shall be entitled to an equitable adjustment in the Contract Time, or Contract Sum, or both, for increases in the time or cost of performance

directly attributable to such suspension, provided Contractor complies with all requirements set forth in Part 7.

3.04 OWNER'S RIGHT TO STOP THE WORK FOR CAUSE

- A. Owner may stop Work for Contractor's failure to perform: If Contractor fails or refuses to perform its obligations in accordance with the Contract Documents, Owner may order Contractor, in writing, to stop the Work, or any portion thereof, until satisfactory corrective action has been taken.
- B. No Equitable Adjustment for Contractor's failure to perform: Contractor shall not be entitled to an equitable adjustment in the Contract Time or Contract Sum for any increased cost or time of performance attributable to Contractor's failure or refusal to perform or from any reasonable remedial action taken by Owner based upon such failure.

3.05 DELAY

- A. Force Majeure actions not a default; Force Majeure defined: Any delay in or failure of performance by Owner or Contractor, other than the payment of money, shall not constitute a default hereunder if and to the extent the cause for such delay or failure of performance was unforeseeable and beyond the control of the party ("Force Majeure"). Acts of Force Majeure include, but are not limited to:
1. Acts of God or the public enemy;
 2. Acts or omissions of any government entity;
 3. Fire or other casualty for which Contractor is not responsible;
 4. Quarantine or epidemic;
 5. Strike or defensive lockout;
 6. Unusually severe weather conditions which could not have been reasonably anticipated; and
 7. Unusual delay in receipt of supplies or products which were ordered and expedited and for which no substitute reasonably acceptable to Owner was available.
- B. Contract Time adjustment for Force Majeure: Contractor shall be entitled to an equitable adjustment in the Contract Time for changes in the time of performance directly attributable to an act of Force Majeure, provided it makes a request for equitable adjustment according to Section 7.03. Contractor shall not be entitled to an adjustment in the Contract Sum resulting from an act of Force Majeure.
- C. Contract Time or Contract Sum adjustment if Owner at fault: Contractor shall be entitled to an equitable adjustment in Contract Time, and may be entitled to an equitable adjustment in Contract Sum, if the cost or time of Contractor's performance is changed due to the fault or negligence of Owner, provided the Contractor makes a request according to Sections 7.02 and 7.03.
- D. No Contract Time or Contract Sum adjustment if Contractor at fault: Contractor shall not be entitled to an adjustment in Contract Time or in the Contract Sum for any delay or failure of performance to the extent such delay or failure was caused by Contractor or anyone for whose acts Contractor is responsible.

- E. Contract Time adjustment only for concurrent fault: To the extent any delay or failure of performance was concurrently caused by the Owner and Contractor, Contractor shall be entitled to an adjustment in the Contract Time for that portion of the delay or failure of performance that was concurrently caused, provided it makes a request for equitable adjustment according to Section 7.03, but shall not be entitled to an adjustment in Contract Sum.
- F. Contractor to mitigate delay impacts: Contractor shall make all reasonable efforts to prevent and mitigate the effects of any delay, whether occasioned by an act of Force Majeure or otherwise.

3.06 NOTICE TO OWNER OF LABOR DISPUTES

- A. Contractor to notify Owner of labor disputes: If Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay timely performance in accordance with the Contract Documents, Contractor shall immediately give notice, including all relevant information, to Owner.
- B. Pass through notification provisions to Subcontractors: Contractor agrees to insert a provision in its Subcontracts and to require insertion in all sub-subcontracts, that in the event timely performance of any such contract is delayed or threatened by delay by any actual or potential labor dispute, the Subcontractor or Sub-subcontractor shall immediately notify the next higher tier Subcontractor or Contractor, as the case may be, of all relevant information concerning the dispute.

3.07 DAMAGES FOR FAILURE TO ACHIEVE TIMELY COMPLETION

A. Liquidated Damages

- 1. Reason for Liquidated Damages: Timely performance and completion of the Work is essential to Owner and time limits stated in the Contract Documents are of the essence. Owner will incur serious and substantial damages if Substantial Completion of the Work does not occur within the Contract Time. However, it would be difficult if not impossible to determine the exact amount of such damages. Consequently, provisions for liquidated damages are included in the Contract Documents.
- 2. Calculation of Liquidated Damages amount: The liquidated damage amounts set forth in the Contract Documents will be assessed not as a penalty, but as liquidated damages for breach of the Contract Documents. This amount is fixed and agreed upon by and between the Contractor and Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain. This amount shall be construed as the actual amount of damages sustained by the Owner, and may be retained by the Owner and deducted from periodic payments to the Contractor.
- 3. Contractor responsible even if Liquidated Damages assessed: Assessment of liquidated damages shall not release Contractor from any further obligations or liabilities pursuant to the Contract Documents.

B. Actual Damages

Calculation of Actual Damages: Actual damages will be assessed for failure to achieve Final Completion within the time provided. Actual damages will be calculated on the basis of direct architectural, administrative, and other related costs attributable to the Project from the date when Final Completion should have been achieved, based on the date Substantial Completion is actually achieved, to the date Final Completion is actually achieved. Owner may offset these costs against any payment due Contractor.

PART 4 – SPECIFICATIONS, DRAWINGS, AND OTHER DOCUMENTS

4.01 DISCREPANCIES AND CONTRACT DOCUMENT REVIEW

- A. Specifications and Drawings are basis of the Work: The intent of the Specifications and Drawings is to describe a complete Project to be constructed in accordance with the Contract Documents. Contractor shall furnish all labor, materials, equipment, tools, transportation, permits, and supplies, and perform the Work required in accordance with the Drawings, Specifications, and other provisions of the Contract Documents.
- B. Parts of the Contract Documents are complementary: The Contract Documents are complementary. What is required by one part of the Contract Documents shall be binding as if required by all. Anything mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both.
- C. Contractor to report discrepancies in Contract Documents: Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by Owner. If, during the performance of the Work, Contractor finds a conflict, error, inconsistency, or omission in the Contract Documents, it shall promptly and before proceeding with the Work affected thereby, report such conflict, error, inconsistency, or omission to A/E in writing.
- D. Contractor knowledge of discrepancy in documents – responsibility: Contractor shall do no Work without applicable Drawings, Specifications, or written modifications, or Shop Drawings where required, unless instructed to do so in writing by Owner. If Contractor performs any construction activity, and it knows or reasonably should have known that any of the Contract Documents contain a conflict, error, inconsistency, or omission, Contractor shall be responsible for the performance and shall bear the cost for its correction.
- E. Contractor to perform Work implied by Contract Documents: Contractor shall provide any work or materials the provision of which is clearly implied and is within the scope of the Contract Documents even if the Contract Documents do not mention them specifically.
- F. Interpretation questions referred to A/E: Questions regarding interpretation of the requirements of the Contract Documents shall be referred to the A/E.

4.02 PROJECT RECORD

- A. Contractor to maintain Project Record Drawings and Specifications: Contractor shall legibly mark in ink on a separate set of the Drawings and Specifications all actual construction, including depths of foundations, horizontal and vertical locations of internal and underground utilities and appurtenances referenced to permanent visible and accessible surface improvements, field changes of dimensions and details, actual suppliers, manufacturers and trade names, models of installed equipment, and Change Order Proposals (COP). This separate set of Drawings and Specifications shall be the "Project Record."
- B. Update Project Record weekly and keep on site: The Project Record shall be maintained on the project site throughout the construction and shall be clearly labeled "PROJECT RECORD." The Project Record shall be updated at least weekly noting all changes and shall be available to Owner at all times.
- C. Final Project Record to A/E before Final Acceptance: Contractor shall submit the completed and finalized Project Record to A/E prior to Final Acceptance.

4.03 SHOP DRAWINGS

- A. Definition of Shop Drawings: "Shop Drawings" means documents and other information required to be submitted to A/E by Contractor pursuant to the Contract Documents, showing in detail: the proposed fabrication and assembly of structural elements; and the installation (i.e. form, fit, and attachment details) of materials and equipment. Shop Drawings include, but are not limited to, drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, samples, and similar materials furnished by Contractor to explain in detail specific portions of the Work required by the Contract Documents. For materials and equipment to be incorporated into the Work, Contractor submittal shall include the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the item. When directed, Contractor shall submit all samples at its own expense. Owner may duplicate, use, and disclose Shop Drawings provided in accordance with the Contract Documents.
- B. Approval of Shop Drawings by Contractor and A/E: Contractor shall coordinate all Shop Drawings, and review them for accuracy, completeness, and compliance with the Contract Documents and shall indicate its approval thereon as evidence of such coordination and review. Where required by law, Shop Drawings shall be stamped by an appropriate professional licensed by the state of Washington. Shop Drawings submitted to A/E without evidence of Contractor's approval shall be returned for resubmission. Contractor shall review, approve, and submit Shop Drawings with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of Owner or separate contractors. Contractor's submittal schedule shall allow a reasonable time for A/E review. A/E will review, approve, or take other appropriate action on the Shop Drawings. Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings until the respective submittal has been reviewed and the A/E has approved or taken other appropriate action. Owner and A/E shall respond to Shop Drawing submittals with reasonable promptness. Any Work by Contractor shall be in accordance with reviewed Shop Drawings. Submittals made by Contractor which are not required by the Contract Documents may be returned without action.
- C. Contractor not relieved of responsibility when Shop Drawings approved: Approval, or other appropriate action with regard to Shop Drawings, by Owner or A/E shall not relieve Contractor of responsibility for any errors or omissions in such Shop Drawings, nor from responsibility for compliance with the requirements of the Contract Documents. Unless specified in the Contract Documents, review by Owner or A/E shall not constitute an approval of the safety precautions employed by Contractor during construction, or constitute an approval of Contractor's means or methods of construction. If Contractor fails to obtain approval before installation and the item or work is subsequently rejected, Contractor shall be responsible for all costs of correction.
- D. Variations between Shop Drawings and Contract Documents: If Shop Drawings show variations from the requirements of the Contract Documents, Contractor shall describe such variations in writing, separate from the Shop Drawings, at the time it submits the Shop Drawings containing such variations. If A/E approves any such variation, an appropriate Change Order will be issued. If the variation is minor and does not involve an adjustment in the Contract Sum or Contract Time, a Change Order need not be issued; however, the modification shall be recorded upon the Project Record.
- E. Contractor to submit 5 copies of Shop Drawings: Unless otherwise provided in Division 1, Contractor shall submit to A/E for approval 5 copies of all Shop Drawings. Unless otherwise indicated, 3 sets of all Shop Drawings shall be retained by A/E and 2 sets shall be returned to Contractor.

4.04 ORGANIZATION OF SPECIFICATIONS

Specification organization by trade: Specifications are prepared in sections which conform generally with trade practices. These sections are for Owner and Contractor convenience and shall not control Contractor in dividing the Work among the Subcontractors or in establishing the extent of the Work to be performed by any trade.

4.05 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS, AND OTHER DOCUMENTS

- A. A/E, not Contractor, owns Copyright of Drawings and Specifications: The Drawings, Specifications, and other documents prepared by A/E are instruments of A/E's service through which the Work to be executed by Contractor is described. Neither Contractor nor any Subcontractor shall own or claim a copyright in the Drawings, Specifications, and other documents prepared by A/E, and A/E shall be deemed the author of them and will, along with any rights of Owner, retain all common law, statutory, and other reserved rights, in addition to the copyright. All copies of these documents, except Contractor's set, shall be returned or suitably accounted for to A/E, on request, upon completion of the Work.
- B. Drawings and Specifications to be used only for this Project: The Drawings, Specifications, and other documents prepared by the A/E, and copies thereof furnished to Contractor, are for use solely with respect to this Project. They are not to be used by Contractor or any Subcontractor on other projects or for additions to this Project outside the scope of the Work without the specific written consent of Owner and A/E. Contractor and Subcontractors are granted a limited license to use and reproduce applicable portions of the Drawings, Specifications, and other documents prepared by A/E appropriate to and for use in the execution of their Work.
- C. Shop Drawing license granted to Owner: Contractor and all Subcontractors grant a non-exclusive license to Owner, without additional cost or royalty, to use for its own purposes (including reproduction) all Shop Drawings, together with the information and diagrams contained therein, prepared by Contractor or any Subcontractor. In providing Shop Drawings, Contractor and all Subcontractors warrant that they have authority to grant to Owner a license to use the Shop Drawings, and that such license is not in violation of any copyright or other intellectual property right. Contractor agrees to defend and indemnify Owner pursuant to the indemnity provisions in Section 5.03 and 5.22 from any violations of copyright or other intellectual property rights arising out of Owner's use of the Shop Drawings hereunder, or to secure for Owner, at Contractor's own cost, licenses in conformity with this section.
- D. Shop Drawings to be used only for this Project: The Shop Drawings and other submittals prepared by Contractor, Subcontractors of any tier, or its or their equipment or material suppliers, and copies thereof furnished to Contractor, are for use solely with respect to this Project. They are not to be used by Contractor or any Subcontractor of any tier, or material or equipment supplier, on other projects or for additions to this Project outside the scope of the Work without the specific written consent of Owner. The Contractor, Subcontractors of any tier, and material or equipment suppliers are granted a limited license to use and reproduce applicable portions of the Shop Drawings and other submittals appropriate to and for use in the execution of their Work under the Contract Documents.

PART 5 – PERFORMANCE

5.01 CONTRACTOR CONTROL AND SUPERVISION

- A. Contractor responsible for Means and Methods of construction: Contractor shall supervise and direct the Work, using its best skill and attention, and shall perform the Work in a skillful manner. Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work, unless the

Contract Documents give other specific instructions concerning these matters. Contractor shall disclose its means and methods of construction when requested by Owner.

- B. Competent Superintendent required: Performance of the Work shall be directly supervised by a competent superintendent who has authority to act for Contractor. The superintendent must be satisfactory to the Owner and shall not be changed without the prior written consent of Owner. Owner may require Contractor to remove the superintendent from the Work or Project site, if Owner reasonably deems the superintendent incompetent, careless, or otherwise objectionable, provided Owner has first notified Contractor in writing and allowed a reasonable period for transition.
- C. Contractor responsible for acts and omissions of self and agents: Contractor shall be responsible to Owner for acts and omissions of Contractor, Subcontractors, and their employees and agents.
- D. Contractor to employ competent and disciplined workforce: Contractor shall enforce strict discipline and good order among all of the Contractor's employees and other persons performing the Work. Contractor shall not permit employment of persons not skilled in tasks assigned to them. Contractor's employees shall at all times conduct business in a manner which assures fair, equal, and nondiscriminatory treatment of all persons. Owner may, by written notice, request Contractor to remove from the Work or Project site any employee Owner reasonably deems incompetent, careless, or otherwise objectionable.
- E. Contractor to keep project documents on site: Contractor shall keep on the Project site a copy of the Drawings, Specifications, addenda, reviewed Shop Drawings, and permits and permit drawings.
- F. Contractor to comply with ethical standards: Contractor shall ensure that its owner(s) and employees, and those of its Subcontractors, comply with the Ethics in Public Service Act RCW 42.52, which, among other things, prohibits state employees from having an economic interest in any public works contract that was made by, or supervised by, that employee. Contractor shall remove, at its sole cost and expense, any of its, or its Subcontractors' employees, if they are in violation of this act.

5.02 PERMITS, FEES, AND NOTICES

- A. Contractor to obtain and pay for permits: Unless otherwise provided in the Contract Documents, Contractor shall pay for and obtain all permits, licenses, and inspections necessary for proper execution and completion of the Work. Prior to Final Acceptance, the approved, signed permits shall be delivered to Owner.
- B. Allowances for permit fees: If allowances for permits or utility fees are called for in the Contract Documents and set forth in Contractor's bid, and the actual costs of those permits or fees differ from the allowances in the Contract Documents, the difference shall be adjusted by Change Order.
- C. Contractor to comply with all applicable laws: Contractor shall comply with and give notices required by all federal, state, and local laws, ordinances, rules, regulations, and lawful orders of public authorities applicable to performance of the Work.

5.03 PATENTS AND ROYALTIES

Payment, indemnification, and notice: Contractor is responsible for, and shall pay, all royalties and license fees. Contractor shall defend, indemnify, and hold Owner harmless from any costs, expenses, and liabilities arising out of the infringement by Contractor of any patent, copyright, or other intellectual property right used in the Work; however, provided that Contractor gives prompt notice, Contractor shall not be responsible for such defense or indemnity when a particular design, process, or product of a

particular manufacturer or manufacturers is required by the Contract Documents. If Contractor has reason to believe that use of the required design, process, or product constitutes an infringement of a patent or copyright, it shall promptly notify Owner of such potential infringement.

5.04 PREVAILING WAGES

- A. Contractor to pay Prevailing Wages: Contractor shall pay the prevailing rate of wages to all workers, laborers, or mechanics employed in the performance of any part of the Work in accordance with RCW 39.12 and the rules and regulations of the Department of Labor and Industries. The schedule of prevailing wage rates for the locality or localities of the Work, is determined by the Industrial Statistician of the Department of Labor and Industries. It is the Contractor's responsibility to verify the applicable prevailing wage rate.
- B. Statement of Intent to Pay Prevailing Wages: Before payment is made by the Owner to the Contractor for any work performed by the Contractor and subcontractors whose work is included in the application for payment, the Contractor shall submit, or shall have previously submitted to the Owner for the Project, a Statement of Intent to Pay Prevailing Wages, approved by the Department of Labor and Industries, certifying the rate of hourly wage paid and to be paid each classification of laborers, workers, or mechanics employed upon the Work by Contractor and Subcontractors. Such rates of hourly wage shall not be less than the prevailing wage rate.
- C. Affidavit of Wages Paid: Prior to release of retainage, the Contractor shall submit to the Owner an Affidavit of Wages Paid, approved by the Department of Labor and Industries, for the Contractor and every subcontractor, of any tier, that performed work on the Project.
- D. Disputes: Disputes regarding prevailing wage rates shall be referred for arbitration to the Director of the Department of Labor and Industries. The arbitration decision shall be final and conclusive and binding on all parties involved in the dispute as provided for by RCW 39.12.060.
- E. Statement with pay application; Post Statements of Intent at job site: Each Application for Payment submitted by Contractor shall state that prevailing wages have been paid in accordance with the prefiled statement(s) of intent, as approved. Copies of the approved intent statement(s) shall be posted on the job site with the address and telephone number of the Industrial Statistician of the Department of Labor and Industries where a complaint or inquiry concerning prevailing wages may be made.
- F. Contractor to pay for Statements of Intent and Affidavits: In compliance with chapter 296-127 WAC, Contractor shall pay to the Department of Labor and Industries the currently established fee(s) for each statement of intent and/or affidavit of wages paid submitted to the Department of Labor and Industries for certification.
- G. Certified Payrolls: Consistent with WAC 296-127-320, the Contractor and any subcontractor shall submit a certified copy of payroll records if requested.

5.05 HOURS OF LABOR

- A. Overtime: Contractor shall comply with all applicable provisions of RCW 49.28 and they are incorporated herein by reference. Pursuant to that statute, no laborer, worker, or mechanic employed by Contractor, any Subcontractor, or any other person performing or contracting to do the whole or any part of the Work, shall be permitted or required to work more than eight hours in any one calendar day, provided, that in cases of extraordinary emergency, such as danger to life or property, the hours of work may be extended, but in such cases the rate of pay for time employed in excess of eight hours of each calendar day shall be not less than one and one-half times the rate allowed for this same amount of time during eight hours of service.

- B. 4-10 Agreements: Notwithstanding the preceding paragraph, RCW 49.28 permits a contractor or subcontractor in any public works contract subject to those provisions, to enter into an agreement with its employees in which the employees work up to ten hours in a calendar day. No such agreement may provide that the employees work ten-hour days for more than four calendar days a week. Any such agreement is subject to approval by the employees. The overtime provisions of RCW 49.28 shall not apply to the hours, up to forty hours per week, worked pursuant to any such agreement.

5.06 NONDISCRIMINATION

- A. Discrimination prohibited by applicable laws: Discrimination in all phases of employment is prohibited by, among other laws and regulations, Title VII of the Civil Rights Act of 1964, the Vietnam Era Veterans Readjustment Act of 1974, Sections 503 and 504 of the Vocational Rehabilitation Act of 1973, the Equal Employment Act of 1972, the Age Discrimination Act of 1967, the Americans with Disabilities Act of 1990, the Civil Rights Act of 1991, Presidential Executive Order 11246, Executive Order 11375, the Washington State Law Against Discrimination, RCW 49.60, and Gubernatorial Executive Order 85-09. These laws and regulations establish minimum requirements for affirmative action and fair employment practices which Contractor must meet.

B. During performance of the Work:

1. Protected Classes: Contractor shall not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, marital status, or the presence of any physical, sensory, or mental disability, Vietnam era veteran status, or disabled veteran status, nor commit any other unfair practices as defined in RCW 49.60.
2. Advertisements to state nondiscrimination: Contractor shall, in all solicitations or advertisements for employees placed by or for it, state that all qualified applicants will be considered for employment, without regard to race, creed, color, national origin, sex, age, marital status, or the presence of any physical, sensory, or mental disability.
3. Contractor to notify unions and others of nondiscrimination: Contractor shall send to each labor union, employment agency, or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the labor union, employment agency, or workers' representative of Contractor's obligations according to the Contract Documents and RCW 49.60.
4. Owner and State access to Contractor records: Contractor shall permit access to its books, records, and accounts, and to its premises by Owner, and by the Washington State Human Rights Commission, for the purpose of investigation to ascertain compliance with this section of the Contract Documents.
5. Pass through provisions to Subcontractors: Contractor shall include the provisions of this section in every Subcontract.

5.07 SAFETY PRECAUTIONS

- A. Contractor responsible for safety: Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Work.
- B. Contractor safety responsibilities: In carrying out its responsibilities according to the Contract Documents, Contractor shall protect the lives and health of employees performing the Work and other persons who may be affected by the Work; prevent damage to materials, supplies, and equipment whether on site or stored off-site; and prevent damage to other property at the site or adjacent thereto. Contractor shall comply with all applicable laws, ordinances, rules, regulations,

and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss; shall erect and maintain all necessary safeguards for such safety and protection; and shall notify owners of adjacent property and utilities when prosecution of the Work may affect them.

- C. Contractor to maintain safety records: Contractor shall maintain an accurate record of exposure data on all incidents relating to the Work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. Contractor shall immediately report any such incident to Owner. Owner shall, at all times, have a right of access to all records of exposure.
- D. Contractor to provide HazMat training: Contractor shall provide all persons working on the Project site with information and training on hazardous chemicals in their work at the time of their initial assignment, and whenever a new hazard is introduced into their work area.
1. Information. At a minimum, Contractor shall inform persons working on the Project site of:
 - a. WAC: The requirements of chapter 296-62 WAC, General Occupational Health Standards;
 - b. Presence of hazardous chemicals: Any operations in their work area where hazardous chemicals are present; and
 - c. Hazard communications program: The location and availability of written hazard communication programs, including the required list(s) of hazardous chemicals and material safety data sheets required by chapter 296-62 WAC.
 2. Training. At a minimum, Contractor shall provide training for persons working on the Project site which includes:
 - a. Detecting hazardous chemicals: Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);
 - b. Hazards of chemicals: The physical and health hazards of the chemicals in the work area;
 - c. Protection from hazards: The measures such persons can take to protect themselves from these hazards, including specific procedures Contractor, or its Subcontractors, or others have implemented to protect those on the Project site from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used; and
 - d. Hazard communications program: The details of the hazard communications program developed by Contractor, or its Subcontractors, including an explanation of the labeling system and the material safety data sheet, and how employees can obtain and use the appropriate hazard information.
- E. Hazardous, toxic or harmful substances: Contractor's responsibility for hazardous, toxic, or harmful substances shall include the following duties:
1. Illegal use of dangerous substances: Contractor shall not keep, use, dispose, transport, generate, or sell on or about the Project site, any substances now or hereafter designated as, or which are subject to regulation as, hazardous, toxic, dangerous, or

harmful by any federal, state or local law, regulation, statute or ordinance (hereinafter collectively referred to as "hazardous substances"), in violation of any such law, regulation, statute, or ordinance, but in no case shall any such hazardous substance be stored more than 90 Days on the Project site.

2. Contractor notifications of spills, failures, inspections, and fines: Contractor shall promptly notify Owner of all spills or releases of any hazardous substances which are otherwise required to be reported to any regulatory agency and pay the cost of cleanup. Contractor shall promptly notify Owner of all failures to comply with any federal, state, or local law, regulation, or ordinance; all inspections of the Project site by any regulatory entity concerning the same; all regulatory orders or fines; and all responses or interim cleanup actions taken by or proposed to be taken by any government entity or private party on the Project site.
- F. Public safety and traffic: All Work shall be performed with due regard for the safety of the public. Contractor shall perform the Work so as to cause a minimum of interruption of vehicular traffic or inconvenience to pedestrians. All arrangements to care for such traffic shall be Contractor's responsibilities. All expenses involved in the maintenance of traffic by way of detours shall be borne by Contractor.
- G. Contractor to act in an emergency: In an emergency affecting the safety of life or the Work or of adjoining property, Contractor is permitted to act, at its discretion, to prevent such threatened loss or injury, and Contractor shall so act if so authorized or instructed.
- H. No duty of safety by Owner or A/E: Nothing provided in this section shall be construed as imposing any duty upon Owner or A/E with regard to, or as constituting any express or implied assumption of control or responsibility over, Project site safety, or over any other safety conditions relating to employees or agents of Contractor or any of its Subcontractors, or the public.

5.08 OPERATIONS, MATERIAL HANDLING, AND STORAGE AREAS

- A. Limited storage areas: Contractor shall confine all operations, including storage of materials, to Owner-approved areas.
- B. Temporary buildings and utilities at Contractor expense: Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be provided by Contractor only with the consent of Owner and without expense to Owner. The temporary buildings and utilities shall be removed by Contractor at its expense upon completion of the Work.
- C. Roads and vehicle loads: Contractor shall use only established roadways or temporary roadways authorized by Owner. When materials are transported in prosecuting the Work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by federal, state, or local law or regulation.
- D. Ownership and reporting by Contractor of demolished materials: Ownership and control of all materials or facility components to be demolished or removed from the Project site by Contractor shall immediately vest in Contractor upon severance of the component from the facility or severance of the material from the Project site. Contractor shall be responsible for compliance with all laws governing the storage and ultimate disposal. Contractor shall provide Owner with a copy of all manifests and receipts evidencing proper disposal when required by Owner or applicable law.
- E. Contractor responsible for care of materials and equipment on-site: Contractor shall be responsible for the proper care and protection of its materials and equipment delivered to the Project site. Materials and equipment may be stored on the premises subject to approval of

Owner. When Contractor uses any portion of the Project site as a shop, Contractor shall be responsible for any repairs, patching, or cleaning arising from such use.

- F. Contractor responsible for loss of materials and equipment: Contractor shall protect and be responsible for any damage or loss to the Work, or to the materials or equipment until the date of Substantial Completion, and shall repair or replace without cost to Owner any damage or loss that may occur, except damages or loss caused by the acts or omissions of Owner. Contractor shall also protect and be responsible for any damage or loss to the Work, or to the materials or equipment, after the date of Substantial Completion, and shall repair or replace without cost to Owner any such damage or loss that might occur, to the extent such damages or loss are caused by the acts or omissions of Contractor, or any Subcontractor.

5.09 PRIOR NOTICE OF EXCAVATION

- A. Excavation defined; Use of locator services: "Excavation" means an operation in which earth, rock, or other material on or below the ground is moved or otherwise displaced by any means, except the tilling of soil less than 12 inches in depth for agricultural purposes, or road ditch maintenance that does not change the original road grade or ditch flow line. Before commencing any excavation, Contractor shall provide notice of the scheduled commencement of excavation to all owners of underground facilities or utilities, through locator services.

5.10 UNFORESEEN PHYSICAL CONDITIONS

- A. Notice requirement for concealed or unknown conditions: If Contractor encounters conditions at the site which are subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then Contractor shall give written notice to Owner promptly and in no event later than 7 Days after the first observance of the conditions. Conditions shall not be disturbed prior to such notice.
- B. Adjustment in Contract Time and Contract Sum: If such conditions differ materially and cause a change in Contractor's cost of, or time required for, performance of any part of the Work, the Contractor may be entitled to an equitable adjustment in the Contract Time or Contract Sum, or both, provided it makes a request therefore as provided in Part 7.

5.11 PROTECTION OF EXISTING STRUCTURES, EQUIPMENT, VEGETATION, UTILITIES AND IMPROVEMENTS

- A. Contractor to protect and repair property: Contractor shall protect from damage all existing structures, equipment, improvements, utilities, and vegetation: at or near the Project site; and on adjacent property of a third party, the locations of which are made known to or should be known by Contractor. Contractor shall repair any damage, including that to the property of a third party, resulting from failure to comply with the requirements of the Contract Documents or failure to exercise reasonable care in performing the Work. If Contractor fails or refuses to repair the damage promptly, Owner may have the necessary work performed and charge the cost to Contractor.
- B. Tree and vegetation protection: Contractor shall only remove trees when specifically authorized to do so, and shall protect vegetation that will remain in place.

5.12 LAYOUT OF WORK

- A. Advanced planning of the Work: Contractor shall plan and lay out the Work in advance of operations so as to coordinate all work without delay or revision.

- B. Layout responsibilities: Contractor shall lay out the Work from Owner-established baselines and bench marks indicated on the Drawings, and shall be responsible for all field measurements in connection with the layout. Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the Work. Contractor shall be responsible for executing the Work to the lines and grades that may be established. Contractor shall be responsible for maintaining or restoring all stakes and other marks established.

5.13 MATERIAL AND EQUIPMENT

- A. Contractor to provide new and equivalent equipment and materials: All equipment, material, and articles incorporated into the Work shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in the Contract Documents. References in the Specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard quality and shall not be construed as limiting competition. Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of A/E, is equal to that named in the specifications, unless otherwise specifically provided in the Contract Documents.
- B. Contractor responsible for fitting parts together: Contractor shall do all cutting, fitting, or patching that may be required to make its several parts fit together properly, or receive or be received by work of others set forth in, or reasonably implied by, the Contract Documents. Contractor shall not endanger any work by cutting, excavating, or otherwise altering the Work and shall not cut or alter the work of any other contractor unless approved in advance by Owner.
- C. Owner may reject defective Work: Should any of the Work be found defective, or in any way not in accordance with the Contract Documents, this work, in whatever stage of completion, may be rejected by Owner.

5.14 AVAILABILITY AND USE OF UTILITY SERVICES

- A. Owner to provide and charge for utilities: Owner shall make all reasonable utilities available to Contractor from existing outlets and supplies, as specified in the Contract Documents. Unless otherwise provided in the Contract Documents, the utility service consumed shall be charged to or paid for by Contractor at prevailing rates charged to Owner or, where the utility is produced by Owner, at reasonable rates determined by Owner. Contractor will carefully conserve any utilities furnished.
- B. Contractor to install temporary connections and meters: Contractor shall, at its expense and in a skillful manner satisfactory to Owner, install and maintain all necessary temporary connections and distribution lines, together with appropriate protective devices, and all meters required to measure the amount of each utility used for the purpose of determining charges. Prior to the date of Final Acceptance, Contractor shall remove all temporary connections, distribution lines, meters, and associated equipment and materials.

5.15 TESTS AND INSPECTION

- A. Contractor to provide for all testing and inspection of Work: Contractor shall maintain an adequate testing and inspection program and perform such tests and inspections as are necessary or required to ensure that the Work conforms to the requirements of the Contract Documents. Contractor shall be responsible for inspection and quality surveillance of all its Work and all Work performed by any Subcontractor. Unless otherwise provided, Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. Contractor shall give Owner timely notice of when and

where tests and inspections are to be made. Contractor shall maintain complete inspection records and make them available to Owner.

- B. Owner may conduct tests and inspections: Owner may, at any reasonable time, conduct such inspections and tests as it deems necessary to ensure that the Work is in accordance with the Contract Documents. Owner shall promptly notify Contractor if an inspection or test reveals that the Work is not in accordance with the Contract Documents. Unless the subject items are expressly accepted by Owner, such Owner inspection and tests are for the sole benefit of Owner and do not:
1. Constitute or imply acceptance;
 2. Relieve Contractor of responsibility for providing adequate quality control measures;
 3. Relieve Contractor of responsibility for risk of loss or damage to the Work, materials, or equipment;
 4. Relieve Contractor of its responsibility to comply with the requirements of the Contract Documents; or
 5. Impair Owner's right to reject defective or nonconforming items, or to avail itself of any other remedy to which it may be entitled.
- C. Inspections or inspectors do not modify Contract Documents: Neither observations by an inspector retained by Owner, the presence or absence of such inspector on the site, nor inspections, tests, or approvals by others, shall relieve Contractor from any requirement of the Contract Documents, nor is any such inspector authorized to change any term or condition of the Contract Documents.
- D. Contractor responsibilities on inspections: Contractor shall promptly furnish, without additional charge, all facilities, labor, material and equipment reasonably needed for performing such safe and convenient inspections and tests as may be required by Owner. Owner may charge Contractor any additional cost of inspection or testing when Work is not ready at the time specified by Contractor for inspection or testing, or when prior rejection makes reinspection or retest necessary. Owner shall perform its inspections and tests in a manner that will cause no undue delay in the Work.

5.16 CORRECTION OF NONCONFORMING WORK

- A. Work covered by Contractor without inspection: If a portion of the Work is covered contrary to the requirements in the Contract Documents, it must, if required in writing by Owner, be uncovered for Owner's observation and be replaced at the Contractor's expense and without change in the Contract Time.
- B. Payment provisions for uncovering covered Work: If, at any time prior to Final Completion, Owner desires to examine the Work, or any portion of it, which has been covered, Owner may request to see such Work and it shall be uncovered by Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an adjustment in the Contract Sum for the costs of uncovering and replacement, and, if completion of the Work is thereby delayed, an adjustment in the Contract Time, provided it makes such a request as provided in Part 7. If such Work is not in accordance with the Contract Documents, the Contractor shall pay the costs of examination and reconstruction.
- C. Contractor to correct and pay for non-conforming Work: Contractor shall promptly correct Work found by Owner not to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed, or

completed. Contractor shall bear all costs of correcting such nonconforming Work, including additional testing and inspections.

- D. Contractor's compliance with warranty provisions: If, within one year after the date of Substantial Completion of the Work or designated portion thereof, or within one year after the date for commencement of any system warranties established under Section 6.08, or within the terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, Contractor shall correct it promptly after receipt of written notice from Owner to do so. Owner shall give such notice promptly after discovery of the condition. This period of one year shall be extended, with respect to portions of Work first performed after Substantial Completion, by the period of time between Substantial Completion and the actual performance of the Work. Contractor's duty to correct with respect to Work repaired or replaced shall run for one year from the date of repair or replacement. Obligations under this paragraph shall survive Final Acceptance.
- E. Contractor to remove non-conforming Work: Contractor shall remove from the Project site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by Contractor nor accepted by Owner.
- F. Owner may charge Contractor for non-conforming Work: If Contractor fails to correct nonconforming Work within a reasonable time after written notice to do so, Owner may replace, correct, or remove the nonconforming Work and charge the cost thereof to the Contractor.
- G. Contractor to pay for damaged Work during correction: Contractor shall bear the cost of correcting destroyed or damaged Work, whether completed or partially completed, caused by Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.
- H. No Period of limitation on other requirements: Nothing contained in this section shall be construed to establish a period of limitation with respect to other obligations which Contractor might have according to the Contract Documents. Establishment of the time period of one year as described in Section 5.16D relates only to the specific obligation of Contractor to correct the Work, and has no relationship to the time within which the Contractor's obligation to comply with the Contract Documents may be sought to be enforced, including the time within which such proceedings may be commenced.
- I. Owner may accept non-conforming Work and charge Contractor: If Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, Owner may do so instead of requiring its removal and correction, in which case the Contract Sum may be reduced as appropriate and equitable.

5.17 CLEAN UP

Contractor to keep site clean and leave it clean: Contractor shall at all times keep the Project site, including hauling routes, infrastructures, utilities, and storage areas, free from accumulations of waste materials. Before completing the Work, Contractor shall remove from the premises its rubbish, tools, scaffolding, equipment, and materials. Upon completing the Work, Contractor shall leave the Project site in a clean, neat, and orderly condition satisfactory to Owner. If Contractor fails to clean up as provided herein, and after reasonable notice from Owner, Owner may do so and the cost thereof shall be charged to Contractor.

5.18 ACCESS TO WORK

Owner and A/E access to Work site: Contractor shall provide Owner and A/E access to the Work in progress wherever located.

5.19 OTHER CONTRACTS

Owner may award other contracts; Contractor to cooperate: Owner may undertake or award other contracts for additional work at or near the Project site. Contractor shall reasonably cooperate with the other contractors and with Owner's employees and shall carefully adapt scheduling and perform the Work in accordance with these Contract Documents to reasonably accommodate the other work.

5.20 SUBCONTRACTORS AND SUPPLIERS

- A. Subcontractor Responsibility: The Contractor shall include the language of this paragraph in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. Upon request of the Owner, the Contractor shall promptly provide documentation to the Owner demonstrating that the subcontractor meets the subcontractor responsibility criteria below. The requirements of this paragraph apply to all subcontractors regardless of tier. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:
1. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;
 2. Have a current Washington Unified Business Identifier (UBI) number;
 3. If applicable, have:
 - a. Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RCW;
 - b. A Washington Employment Security Department number, as required in Title 50 RCW;
 - c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
 - d. An electrical contractor license, if required by Chapter 19.28 RCW;
 - e. An elevator contractor license, if required by Chapter 70.87 RCW.
 4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065 (3).
 5. On a project subject to the apprenticeship utilization requirements in RCW 39.04.320, not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for the one-year period immediately preceding the date of the Owner's first advertisement of the project.
- B. Provide names of Subcontractors and use qualified firms: Before submitting the first Application for Payment, Contractor shall furnish in writing to Owner the names, addresses, and telephone numbers of all Subcontractors, as well as suppliers providing materials in excess of \$2,500. Contractor shall utilize Subcontractors and suppliers which are experienced and qualified, and meet the requirements of the Contract Documents, if any. Contractor shall not utilize any Subcontractor or supplier to whom the Owner has a reasonable objection, and shall obtain Owner's written consent before making any substitutions or additions.

- C. Subcontracts in writing and pass through provision: All Subcontracts must be in writing. By appropriate written agreement, Contractor shall require each Subcontractor, so far as applicable to the Work to be performed by the Subcontractor, to be bound to Contractor by terms of the Contract Documents, and to assume toward Contractor all the obligations and responsibilities which Contractor assumes toward Owner in accordance with the Contract Documents. Each Subcontract shall preserve and protect the rights of Owner in accordance with the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. However, nothing in this paragraph shall be construed to alter the contractual relations between Contractor and its Subcontractors with respect to insurance or bonds.
- D. Coordination of Subcontractors; Contractor responsible for Work: Contractor shall schedule, supervise, and coordinate the operations of all Subcontractors. No Subcontracting of any of the Work shall relieve Contractor from its responsibility for the performance of the Work in accordance with the Contract Documents or any other obligations of the Contract Documents.
- E. Automatic assignment of subcontracts: Each subcontract agreement for a portion of the Work is hereby assigned by Contractor to Owner provided that:
1. Effective only after termination and Owner approval: The assignment is effective only after termination by Owner for cause pursuant to Section 9.01 and only for those Subcontracts which Owner accepts by notifying the Subcontractor in writing; and
 2. Owner assumes Contractor's responsibilities: After the assignment is effective, Owner will assume all future duties and obligations toward the Subcontractor which Contractor assumed in the Subcontract.
 3. Impact of bond: The assignment is subject to the prior rights of the surety, if any, obligated under any bond provided in accordance with the Contract Documents.

5.21 WARRANTY OF CONSTRUCTION

- A. Contractor warranty of Work: In addition to any special warranties provided elsewhere in the Contract Documents, Contractor warrants that all Work conforms to the requirements of the Contract Documents and is free of any defect in equipment, material, or design furnished, or workmanship performed by Contractor.
- B. Contractor responsibilities: With respect to all warranties, express or implied, for Work performed or materials furnished according to the Contract Documents, Contractor shall:
1. Obtain warranties: Obtain all warranties that would be given in normal commercial practice;
 2. Warranties for benefit of Owner: Require all warranties to be executed, in writing, for the benefit of Owner;
 3. Enforcement of warranties: Enforce all warranties for the benefit of Owner, if directed by Owner; and
 4. Contractor responsibility for subcontractor warranties: Be responsible to enforce any subcontractor's, manufacturer's, or supplier's warranties should they extend beyond the period specified in the Contract Documents.
- C. Warranties beyond Final Acceptance: The obligations under this section shall survive Final Acceptance.

5.22 INDEMNIFICATION

- A. Contractor to indemnify Owner: Contractor shall defend, indemnify, and hold Owner and A/E harmless from and against all claims, demands, losses, damages, or costs, including but not limited to damages arising out of bodily injury or death to persons and damage to property, caused by or resulting from:
1. Sole negligence of Contractor: The sole negligence of Contractor or any of its Subcontractors;
 2. Concurrent negligence: The concurrent negligence of Contractor, or any Subcontractor, but only to the extent of the negligence of Contractor or such Subcontractor; and
 3. Patent infringement: The use of any design, process, or equipment which constitutes an infringement of any United States patent presently issued, or violates any other proprietary interest, including copyright, trademark, and trade secret.
- B. Employee action and RCW Title 51: In any action against Owner and any other entity indemnified in accordance with this section, by any employee of Contractor, its Subcontractors, Sub-subcontractors, agents, or anyone directly or indirectly employed by any of them, the indemnification obligation of this section shall not be limited by a limit on the amount or type of damages, compensation, or benefits payable by or for Contractor or any Subcontractor under RCW Title 51, the Industrial Insurance Act, or any other employee benefit acts. In addition, Contractor waives immunity as to Owner and A/E only, in accordance with RCW Title 51.

PART 6 – PAYMENTS AND COMPLETION

6.01 CONTRACT SUM

Owner shall pay Contract Sum: Owner shall pay Contractor the Contract Sum plus state sales tax for performance of the Work, in accordance with the Contract Documents.

6.02 SCHEDULE OF VALUES

Contractor to submit Schedule of Values: Before submitting its first Application for Payment, Contractor shall submit to Owner for approval a breakdown allocating the total Contract Sum to each principal category of work, in such detail as requested by Owner (“Schedule of Values”). The approved Schedule of Values shall include appropriate amounts for demobilization, record drawings, O&M manuals, and any other requirements for Project closeout, and shall be used by Owner as the basis for progress payments. Payment for Work shall be made only for and in accordance with those items included in the Schedule of Values.

6.03 APPLICATION FOR PAYMENT

- A. Monthly Application for Payment with substantiation: At monthly intervals, unless determined otherwise by Owner, Contractor shall submit to Owner an itemized Application for Payment for Work completed in accordance with the Contract Documents and the approved Schedule of Values. Each application shall be supported by such substantiating data as Owner may require.
- B. Contractor certifies Subcontractors paid: By submitting an Application for Payment, Contractor is certifying that all Subcontractors have been paid, less earned retainage in accordance with RCW 60.28.011, as their interests appeared in the last preceding certificate of payment. By submitting an Application for Payment, Contractor is recertifying that the representations set forth in Section 1.03, are true and correct, to the best of Contractor’s knowledge, as of the date of the Application for Payment.

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- C. Reconciliation of Work with Progress Schedule: At the time it submits an Application for Payment, Contractor shall analyze and reconcile, to the satisfaction of Owner, the actual progress of the Work with the Progress Schedule.
- D. Payment for material delivered to site or stored off-site: If authorized by Owner, the Application for Payment may include request for payment for material delivered to the Project site and suitably stored, or for completed preparatory work. Payment may similarly be requested for material stored off the Project site, provided Contractor complies with or furnishes satisfactory evidence of the following:
1. Suitable facility or location: The material will be placed in a facility or location that is structurally sound, dry, lighted and suitable for the materials to be stored;
 2. Facility or location within 10 miles of Project: The facility or location is located within a 10-mile radius of the Project. Other locations may be utilized, if approved in writing, by Owner;
 3. Facility or location exclusive to Project's materials: Only materials for the Project are stored within the facility or location (or a secure portion of a facility or location set aside for the Project);
 4. Insurance provided on materials in facility or location: Contractor furnishes Owner a certificate of insurance extending Contractor's insurance coverage for damage, fire, and theft to cover the full value of all materials stored, or in transit;
 5. Facility or location locked and secure: The facility or location (or secure portion thereof) is continuously under lock and key, and only Contractor's authorized personnel shall have access;
 6. Owner right of access to facility or location: Owner shall at all times have the right of access in company of Contractor;
 7. Contractor assumes total responsibility for stored materials: Contractor and its surety assume total responsibility for the stored materials; and
 8. Contractor provides documentation and Notice when materials moved to site: Contractor furnishes to Owner certified lists of materials stored, bills of lading, invoices, and other information as may be required, and shall also furnish Notice to Owner when materials are moved from storage to the Project site.

6.04 PROGRESS PAYMENTS

- A. Owner to pay within 30 Days: Owner shall make progress payments, in such amounts as Owner determines are properly due, within 30 Days after receipt of a properly executed Application for Payment. Owner shall notify Contractor in accordance with chapter 39.76 RCW if the Application for Payment does not comply with the requirements of the Contract Documents.
- B. Withholding retainage; Options for retainage: Owner shall retain 5% of the amount of each progress payment until 45 Days after Final Acceptance and receipt of all documents required by law or the Contract Documents, including, at Owner's request, consent of surety to release of the retainage. In accordance with chapter 60.28 RCW, Contractor may request that monies reserved be retained in a fund by Owner, deposited by Owner in a bank or savings and loan, or placed in escrow with a bank or trust company to be converted into bonds and securities to be held in escrow with interest to be paid to Contractor. Owner may permit Contractor to provide an appropriate bond in lieu of the retained funds.

- C. Title passes to Owner upon payment: Title to all Work and materials covered by a progress payment shall pass to Owner at the time of such payment free and clear of all liens, claims, security interests, and encumbrances. Passage of title shall not, however, relieve Contractor from any of its duties and responsibilities for the Work or materials, or waive any rights of Owner to insist on full compliance by Contractor with the Contract Documents.
- D. Interest on unpaid balances: Payments due and unpaid in accordance with the Contract Documents shall bear interest as specified in chapter 39.76 RCW.

6.05 PAYMENTS WITHHELD

- A. Owner's right to withhold payment: Owner may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any payment to such extent as may be necessary to protect Owner from loss or damage for reasons including but not limited to:
1. Non-compliant Work: Work not in accordance with the Contract Documents;
 2. Remaining Work to cost more than unpaid balance: Reasonable evidence that the Work required by the Contract Documents cannot be completed for the unpaid balance of the Contract Sum;
 3. Owner correction or completion Work: Work by Owner to correct defective Work or complete the Work in accordance with Section 5.16;
 4. Contractor's failure to perform: Contractor's failure to perform in accordance with the Contract Documents; or
 5. Contractor's negligent acts or omissions: Cost or liability that may occur to Owner as the result of Contractor's fault or negligent acts or omissions.
- B. Owner to notify Contractor of withholding for unsatisfactory performance: In any case where part or all of a payment is going to be withheld for unsatisfactory performance, Owner shall notify Contractor in accordance with chapter 39.76 RCW.

6.06 RETAINAGE AND BOND CLAIM RIGHTS

Chapters 39.08 RCW and 60.28 RCW incorporated by reference: Chapters 39.08 RCW and 60.28 RCW, concerning the rights and responsibilities of Contractor and Owner with regard to the performance and payment bonds and retainage, are made a part of the Contract Documents by reference as though fully set forth herein.

6.07 SUBSTANTIAL COMPLETION

Substantial Completion defined: Substantial Completion is the stage in the progress of the Work (or portion thereof designated and approved by Owner) when the construction is sufficiently complete, in accordance with the Contract Documents, so Owner has full and unrestricted use and benefit of the facilities (or portion thereof designated and approved by Owner) for the use for which it is intended. All Work other than incidental corrective or punch list work shall be completed. Substantial Completion shall not have been achieved if all systems and parts are not functional, if utilities are not connected and operating normally, if all required occupancy permits have not been issued, or if the Work is not accessible by normal vehicular and pedestrian traffic routes. The date Substantial Completion is achieved shall be established in writing by Owner. Contractor may request an early date of Substantial Completion which must be approved by Change Order. Owner's occupancy of the Work or designated portion thereof does not necessarily indicate that Substantial Completion has been achieved.

6.08 PRIOR OCCUPANCY

- A. Prior Occupancy defined; Restrictions: Owner may, upon written notice thereof to Contractor, take possession of or use any completed or partially completed portion of the Work ("Prior Occupancy") at any time prior to Substantial Completion. Unless otherwise agreed in writing, Prior Occupancy shall not: be deemed an acceptance of any portion of the Work; accelerate the time for any payment to Contractor; prejudice any rights of Owner provided by any insurance, bond, guaranty, or the Contract Documents; relieve Contractor of the risk of loss or any of the obligations established by the Contract Documents; establish a date for termination or partial termination of the assessment of liquidated damages; or constitute a waiver of claims.
- B. Damage; Duty to repair and warranties: Notwithstanding anything in the preceding paragraph, Owner shall be responsible for loss of or damage to the Work resulting from Prior Occupancy. Contractor's one year duty to repair any system warranties shall begin on building systems activated and used by Owner as agreed in writing by Owner and Contractor.

6.09 FINAL COMPLETION, ACCEPTANCE, AND PAYMENT

- A. Final Completion defined: Final Completion shall be achieved when the Work is fully and finally complete in accordance with the Contract Documents. The date Final Completion is achieved shall be established by Owner in writing, but in no case shall constitute Final Acceptance which is a subsequent, separate, and distinct action.
- B. Final Acceptance defined: Final Acceptance shall be achieved when the Contractor has completed the requirements of the Contract Documents. The date Final Acceptance is achieved shall be established by Owner in writing. Prior to Final Acceptance, Contractor shall, in addition to all other requirements in the Contract Documents, submit to Owner a written notice of any outstanding disputes or claims between Contractor and any of its Subcontractors, including the amounts and other details thereof. Neither Final Acceptance, nor final payment, shall release Contractor or its sureties from any obligations of these Contract Documents or the payment and performance bonds, or constitute a waiver of any claims by Owner arising from Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Final payment waives Claim rights: Acceptance of final payment by Contractor, or any Subcontractor, shall constitute a waiver and release to Owner of all claims by Contractor, or any such Subcontractor, for an increase in the Contract Sum or the Contract Time, and for every act or omission of Owner relating to or arising out of the Work, except for those Claims made in accordance with the procedures, including the time limits, set forth in Part 8.

PART 7 – CHANGES

7.01 CHANGE IN THE WORK

- A. Changes in Work, Contract Sum, and Contract Time by Change Order: Owner may, at any time and without notice to Contractor's surety, order additions, deletions, revisions, or other changes in the Work. These changes in the Work shall be incorporated into the Contract Documents through the execution of Change Orders. If any change in the Work ordered by Owner causes an increase or decrease in the Contract Sum or the Contract Time, an equitable adjustment shall be made as provided in Section 7.02 or 7.03, respectively, and such adjustment(s) shall be incorporated into a Change Order.
- B. Owner may request COP from Contractor: If Owner desires to order a change in the Work, it may request a written Change Order Proposal (COP) from Contractor. Contractor shall submit a Change Order Proposal within 14 Days of the request from Owner, or within such other period as mutually agreed. Contractor's Change Order Proposal shall be full compensation for

implementing the proposed change in the Work, including any adjustment in the Contract Sum or Contract Time, and including compensation for all delays in connection with such change in the Work and for any expense or inconvenience, disruption of schedule, or loss of efficiency or productivity occasioned by the change in the Work.

- C. COP negotiations: Upon receipt of the Change Order Proposal, or a request for equitable adjustment in the Contract Sum or Contract Time, or both, as provided in Sections 7.02 and 7.03, Owner may accept or reject the proposal, request further documentation, or negotiate acceptable terms with Contractor. Pending agreement on the terms of the Change Order, Owner may direct Contractor to proceed immediately with the Change Order Work. Contractor shall not proceed with any change in the Work until it has obtained Owner's approval. All Work done pursuant to any Owner-directed change in the Work shall be executed in accordance with the Contract Documents.
- D. Change Order as full payment and final settlement: If Owner and Contractor reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, such agreement shall be incorporated in a Change Order. The Change Order shall constitute full payment and final settlement of all claims for time and for direct, indirect, and consequential costs, including costs of delays, inconvenience, disruption of schedule, or loss of efficiency or productivity, related to any Work either covered or affected by the Change Order, or related to the events giving rise to the request for equitable adjustment.
- E. Failure to agree upon terms of Change Order; Final offer and Claims: If Owner and Contractor are unable to reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, Contractor may at any time in writing, request a final offer from Owner. Owner shall provide Contractor with its written response within 30 Days of Contractor's request. Owner may also provide Contractor with a final offer at any time. If Contractor rejects Owner's final offer, or the parties are otherwise unable to reach agreement, Contractor's only remedy shall be to file a Claim as provided in Part 8.
- F. Field Authorizations: The Owner may direct the Contractor to proceed with a change in the work through a written Field Authorization (also referred to as a Field Order) when the time required to price and execute a Change Order would impact the Project.

The Field Authorization shall describe and include the following:

1. The scope of work
2. An agreed upon maximum not-to-exceed amount
3. Any estimated change to the Contract Time
4. The method of final cost determination in accordance with the requirements of Part 7 of the General Conditions
5. The supporting cost data to be submitted in accordance with the requirements of Part 7 of the General Conditions

Upon satisfactory submittal by the Contractor and approval by the Owner of supporting cost data, a Change Order will be executed. The Owner will not make payment to the Contractor for Field Authorization work until that work has been incorporated into an executed Change Order.

7.02 CHANGE IN THE CONTRACT SUM

A. General Application

1. Contract Sum changes only by Change Order: The Contract Sum shall only be changed by a Change Order. Contractor shall include any request for a change in the Contract Sum in its Change Order Proposal.

2. Owner fault or negligence as basis for change in Contract Sum: If the cost of Contractor's performance is changed due to the fault or negligence of Owner, or anyone for whose acts Owner is responsible, Contractor shall be entitled to make a request for an equitable adjustment in the Contract Sum in accordance with the following procedure. No change in the Contract Sum shall be allowed to the extent: Contractor's changed cost of performance is due to the fault or negligence of Contractor, or anyone for whose acts Contractor is responsible; the change is concurrently caused by Contractor and Owner; or the change is caused by an act of Force Majeure as defined in Section 3.05.
 - (a) Notice and record keeping for equitable adjustment: A request for an equitable adjustment in the Contract Sum shall be based on written notice delivered to Owner within 7 Days of the occurrence of the event giving rise to the request. For purposes of this part, "occurrence" means when Contractor knew, or in its diligent prosecution of the Work should have known, of the event giving rise to the request. If Contractor believes it is entitled to an adjustment in the Contract Sum, Contractor shall immediately notify Owner and begin to keep and maintain complete, accurate, and specific daily records. Contractor shall give Owner access to any such records and, if requested shall promptly furnish copies of such records to Owner.

 - (b) Content of notice for equitable adjustment; Failure to comply: Contractor shall not be entitled to any adjustment in the Contract Sum for any occurrence of events or costs that occurred more than 7 Days before Contractor's written notice to Owner. The written notice shall set forth, at a minimum, a description of: the event giving rise to the request for an equitable adjustment in the Contract Sum; the nature of the impacts to Contractor and its Subcontractors of any tier, if any; and to the extent possible the amount of the adjustment in Contract Sum requested. Failure to properly give such written notice shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.

 - (c) Contractor to provide supplemental information: Within 30 Days of the occurrence of the event giving rise to the request, unless Owner agrees in writing to allow an additional period of time to ascertain more accurate data, Contractor shall supplement the written notice provided in accordance with subparagraph a. above with additional supporting data. Such additional data shall include, at a minimum: the amount of compensation requested, itemized in accordance with the procedure set forth herein; specific facts, circumstances, and analysis that confirms not only that Contractor suffered the damages claimed, but that the damages claimed were actually a result of the act, event, or condition complained of and that the Contract Documents provide entitlement to an equitable adjustment to Contractor for such act, event, or condition; and documentation sufficiently detailed to permit an informed analysis of the request by Owner. When the request for compensation relates to a delay, or other change in Contract Time, Contractor shall demonstrate the impact on the critical path, in accordance with Section 7.03C. Failure to provide such additional information and documentation within the time allowed or within the format required shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.

- (d) Contractor to proceed with Work as directed: Pending final resolution of any request made in accordance with this paragraph, unless otherwise agreed in writing, Contractor shall proceed diligently with performance of the Work.
 - (e) Contractor to combine requests for same event together: Any requests by Contractor for an equitable adjustment in the Contract Sum and in the Contract Time that arise out of the same event(s) shall be submitted together.
3. Methods for calculating Change Order amount: The value of any Work covered by a Change Order, or of any request for an equitable adjustment in the Contract Sum, shall be determined by one of the following methods:
- a. Fixed Price: On the basis of a fixed price as determined in paragraph 7.02B.
 - b. Unit Prices: By application of unit prices to the quantities of the items involved as determined in paragraph 7.02C.
 - c. Time and Materials: On the basis of time and material as determined in paragraph 7.02D.
4. Fixed price method is default; Owner may direct otherwise: When Owner has requested Contractor to submit a Change Order Proposal, Owner may direct Contractor as to which method in subparagraph 3 above to use when submitting its proposal. Otherwise, Contractor shall determine the value of the Work, or of a request for an equitable adjustment, on the basis of the fixed price method.

B. Change Order Pricing – Fixed Price

Procedures: When the fixed price method is used to determine the value of any Work covered by a Change Order, or of a request for an equitable adjustment in the Contract Sum, the following procedures shall apply:

- 1. Breakdown and itemization of details on COP: Contractor's Change Order Proposal, or request for adjustment in the Contract Sum, shall be accompanied by a complete itemization of the costs, including labor, material, subcontractor costs, and overhead and profit. The costs shall be itemized in the manner set forth below, and shall be submitted on breakdown sheets in a form approved by Owner.
- 2. Use of industry standards in calculating costs: All costs shall be calculated based upon appropriate industry standard methods of calculating labor, material quantities, and equipment costs.
- 3. Costs contingent on Owner's actions: If any of Contractor's pricing assumptions are contingent upon anticipated actions of Owner, Contractor shall clearly state them in the proposal or request for an equitable adjustment.
- 4. Markups on additive and deductive Work: The cost of any additive or deductive changes in the Work shall be calculated as set forth below, except that overhead and profit shall not be included on deductive changes in the Work. Where a change in the Work involves additive and deductive work by the same Contractor or Subcontractor, small tools, overhead, profit, bond and insurance markups will apply to the net difference.
- 5. Breakdown not required if change less than \$1,000: If the total cost of the change in the Work or request for equitable adjustment does not exceed \$1,000, Contractor shall not be required to submit a breakdown if the description of the change in the Work or request for equitable adjustment is sufficiently definitive for Owner to determine fair value.

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6. Breakdown required if change between \$1,000 and \$2,500: If the total cost of the change in the Work or request for equitable adjustment is between \$1,000 and \$2,500, Contractor may submit a breakdown in the following level of detail if the description of the change in the Work or if the request for equitable adjustment is sufficiently definitive to permit the Owner to determine fair value:
- a. lump sum labor;
 - b. lump sum material;
 - c. lump sum equipment usage;
 - d. overhead and profit as set forth below; and
 - e. insurance and bond costs as set forth below.
7. Components of increased cost: Any request for adjustment of Contract Sum based upon the fixed price method shall include only the following items:
- a. Craft labor costs: These are the labor costs determined by multiplying the estimated or actual additional number of craft hours needed to perform the change in the Work by the hourly labor costs. Craft hours should cover direct labor, as well as indirect labor due to trade inefficiencies. The hourly costs shall be based on the following:
 - (1) Basic wages and benefits: Hourly rates and benefits as stated on the Department of Labor and Industries approved "statement of intent to pay prevailing wages" or a higher amount if approved by the Owner. Direct supervision shall be a reasonable percentage not to exceed 15% of the cost of direct labor. No supervision markup shall be allowed for a working supervisor's hours.
 - (2) Worker's insurance: Direct contributions to the state of Washington for industrial insurance; medical aid; and supplemental pension, by the class and rates established by the Department of Labor and Industries.
 - (3) Federal insurance: Direct contributions required by the Federal Insurance Compensation Act; Federal Unemployment Tax Act; and the State Unemployment Compensation Act.
 - (4) Travel allowance: Travel allowance and/or subsistence, if applicable, not exceeding those allowances established by regional labor union agreements, which are itemized and identified separately.
 - (5) Safety: Cost incurred due to the Washington Industrial Safety and Health Act, which shall be a reasonable percentage not to exceed 2% of the sum of the amounts calculated in (1), (2), and (3) above.
 - b. Material costs: This is an itemization of the quantity and cost of materials needed to perform the change in the Work. Material costs shall be developed first from actual known costs, second from supplier quotations or if these are not available, from standard industry pricing guides. Material costs shall consider all available discounts. Freight costs, express charges, or special delivery charges, shall be itemized.

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- c. Equipment costs: This is an itemization of the type of equipment and the estimated or actual length of time the construction equipment appropriate for the Work is or will be used on the change in the Work. Costs will be allowed for construction equipment only if used solely for the changed Work, or for additional rental costs actually incurred by the Contractor. Equipment charges shall be computed on the basis of actual invoice costs or if owned, from the current edition of one of the following sources:
- (1) Associated General Contractors Washington State Department of Transportation (AGC WSDOT) Equipment Rental Agreement current edition, on the Contract execution date.
 - (2) The National Electrical Contractors Association for equipment used on electrical work.
 - (3) The Mechanical Contractors Association of America for equipment used on mechanical work.

The EquipmentWatch Rental Rate Blue Book shall be used as a basis for establishing rental rates of equipment not listed in the above sources. The maximum rate for standby equipment shall not exceed that shown in the AGC WSDOT Equipment Rental Agreement, current edition on the Contract execution date.

- d. Allowance for small tools, expendables & consumable supplies: Small tools consist of tools which cost \$250 or less and are normally furnished by the performing contractor. The maximum rate for small tools shall not exceed the following:
- (1) 3% for Contractor: For Contractor, 3% of direct labor costs.
 - (2) 5% for Subcontractors: For Subcontractors, 5% of direct labor costs.

Expendables and consumables supplies directly associated with the change in Work must be itemized.

- e. Subcontractor costs: This is defined as payments Contractor makes to Subcontractors for changed Work performed by Subcontractors of any tier. The Subcontractors' cost of Work shall be calculated and itemized in the same manner as prescribed herein for Contractor.
- f. Allowance for overhead: This is defined as costs of any kind attributable to direct and indirect delay, acceleration, or impact, added to the total cost to Owner of any change in the Contract Sum. If the Contractor is compensated under Section 7.03D, the amount of such compensation shall be reduced by the amount Contractor is otherwise entitled to under this subsection (f). This allowance shall compensate Contractor for all noncraft labor, temporary construction facilities, field engineering, schedule updating, as-built drawings, home office cost, B&O taxes, office engineering, estimating costs, additional overhead because of extended time, and any other cost incidental to the change in the Work. It shall be strictly limited in all cases to a reasonable amount, mutually acceptable, or if none can be agreed upon to an amount not to exceed the rates below:
- (1) Projects less than \$3 million: For projects where the Contract Award Amount is under \$3 million, the following shall apply:

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- (a) Contractor markup on Contractor Work: For Contractor, for any Work actually performed by Contractor's own forces, 16% of the first \$50,000 of the cost, and 4% of the remaining cost, if any.
 - (b) Subcontractor markup for Subcontractor Work: For each Subcontractor (including lower tier subcontractors), for any Work actually performed by its own forces, 16% of the first \$50,000 of the cost, and 4% of the remaining cost, if any.
 - (c) Contractor markup for Subcontractor Work: For Contractor, for any work performed by its Subcontractor(s) 6% of the first \$50,000 of the amount due each Subcontractor, and 4% of the remaining amount if any.
 - (d) Subcontractor markup for lower tier Subcontractor Work: For each Subcontractor, for any Work performed by its Subcontractor(s) of any lower tier, 4% of the first \$50,000 of the amount due the sub-Subcontractor, and 2% of the remaining amount if any.
 - (e) Basis of cost applicable for markup: The cost to which overhead is to be applied shall be developed in accordance with Section 7.02B 7a. – e.
- (2). Projects more than \$3 million: For projects where the Contract Award Amount is equal to or exceeds \$3 million, the following shall apply:
- (a) Contractor markup on Contractor Work: For Contractor, for any Work actually performed by Contractor's own forces, 12% of the first \$50,000 of the cost, and 4% of the remaining cost, if any.
 - (b) Subcontractor markup for Subcontractor Work: For each Subcontractor (including lower tier subcontractors), for any Work actually performed by its own forces, 12% of the first \$50,000 of the cost, and 4% of the remaining cost, if any.
 - (c) Contractor markup for Subcontractor Work: For Contractor, for any Work performed by its Subcontractor(s), 4% of the first \$50,000 of the amount due each Subcontractor, and 2% of the remaining amount if any.
 - (d) Subcontractor markup for lower tier Subcontractor Work: For each Subcontractor, for any Work performed by its Subcontractor(s) of any lower tier, 4% of the first \$50,000 of the amount due the sub-Subcontractor, and 2% of the remaining amount if any.
 - (e) Basis of cost applicable for markup: The cost to which overhead is to be applied shall be developed in accordance with Section 7.02B 7a. – e.
- g. Allowance for profit: Allowance for profit is an amount to be added to the cost of any change in contract sum, but not to the cost of change in Contract Time for which contractor has been compensated pursuant to the conditions set forth in Section 7.03. It shall be limited to a reasonable amount, mutually acceptable, or if none can be agreed upon, to an amount not to exceed the rates below:
- (1) Contractor / Subcontractor markup for self-performed Work: For Contractor or Subcontractor of any tier for work performed by their forces, 6% of the cost developed in accordance with Section 7.02B 7a. – e.

- (2) Contractor / Subcontractor markup for Work performed at lower tier: For Contractor or Subcontractor of any tier for work performed by a subcontractor of a lower tier, 4% of the subcontract cost developed in accordance with Section 7.02B 7a. – h.
- h. Insurance and bond premiums: Cost of change in insurance or bond premium: This is defined as:
 - (1) Contractor's liability insurance: The cost of any changes in Contractor's liability insurance arising directly from execution of the Change Order; and
 - (2) Payment and Performance Bond: The cost of the additional premium for Contractor's bond arising directly from the changed Work.

The cost of any change in insurance or bond premium shall be added after overhead and allowance for profit are calculated in accordance with subparagraph f. and g above.

C. Change Order Pricing – Unit Prices

- 1. Content of Owner authorization: Whenever Owner authorizes Contractor to perform Work on a unit-price basis, Owner's authorization shall clearly state:
 - a. Scope: Scope of work to be performed;
 - b. Reimbursement basis: Type of reimbursement including pre-agreed rates for material quantities; and
 - c. Reimbursement limit: Cost limit of reimbursement.
- 2. Contractor responsibilities: Contractor shall:
 - a. Cooperate with Owner and assist in monitoring the Work being performed. As requested by Owner, Contractor shall identify workers assigned to the Change Order Work and areas in which they are working;
 - b. Leave access as appropriate for quantity measurement; and
 - c. Not exceed any cost limit(s) without Owner's prior written approval.
- 3. Cost breakdown consistent with Fixed Price requirements: Contractor shall submit costs in accordance with paragraph 7.02B and satisfy the following requirements:
 - a. Unit prices must include overhead, profit, bond and insurance premiums: Unit prices shall include reimbursement for all direct and indirect costs of the Work, including overhead, profit, bond, and insurance costs; and
 - b. Owner verification of quantities: Quantities must be supported by field measurement statements signed by Owner.

D. Change Order Pricing – Time-and-Material Prices

- 1. Content of Owner authorization: Whenever Owner authorizes Contractor to perform Work on a time-and-material basis, Owner's authorization shall clearly state:
 - a. Scope: Scope of Work to be performed;

- b. Reimbursement basis: Type of reimbursement including pre-agreed rates, if any, for material quantities or labor; and
 - c. Reimbursement limit: Cost limit of reimbursement.
2. Contractor responsibilities: Contractor shall:
- a. Identify workers assigned: Cooperate with Owner and assist in monitoring the Work being performed. As requested by Owner, identify workers assigned to the Change Order Work and areas in which they are working;
 - b. Provide daily timesheets: Identify on daily time sheets all labor performed in accordance with this authorization. Submit copies of daily time sheets within 2 working days for Owner's review.
 - c. Allow Owner to measure quantities: Leave access as appropriate for quantity measurement;
 - d. Perform Work efficiently: Perform all Work in accordance with this section as efficiently as possible; and
 - e. Not exceed Owner's cost limit: Not exceed any cost limit(s) without Owner's prior written approval.
3. Cost breakdown consistent with Fixed Price requirements: Contractor shall submit costs in accordance with paragraph 7.02B and additional verification supported by:
- a. Timesheets: Labor detailed on daily time sheets; and
 - b. Invoices: Invoices for material.

7.03 CHANGE IN THE CONTRACT TIME

- A. COP requests for Contract Time: The Contract Time shall only be changed by a Change Order. Contractor shall include any request for a change in the Contract Time in its Change Order Proposal.
- B. Time extension permitted if not Contractor's fault: If the time of Contractor's performance is changed due to an act of Force Majeure, or due to the fault or negligence of Owner or anyone for whose acts Owner is responsible, Contractor shall be entitled to make a request for an equitable adjustment in the Contract Time in accordance with the following procedure. No adjustment in the Contract Time shall be allowed to the extent Contractor's changed time of performance is due to the fault or negligence of Contractor, or anyone for whose acts Contractor is responsible.
- 1. Notice and record keeping for Contract Time request: A request for an equitable adjustment in the Contract Time shall be based on written notice delivered within 7 Days of the occurrence of the event giving rise to the request. If Contractor believes it is entitled to adjustment of Contract Time, Contractor shall immediately notify Owner and begin to keep and maintain complete, accurate, and specific daily records. Contractor shall give Owner access to any such record and if requested, shall promptly furnish copies of such record to Owner.
 - 2. Timing and content of Contractor's Notice: Contractor shall not be entitled to an adjustment in the Contract Time for any events that occurred more than 7 Days before Contractor's written notice to Owner. The written notice shall set forth, at a minimum, a description of: the event giving rise to the request for an equitable adjustment in the

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Contract Time; the nature of the impacts to Contractor and its Subcontractors of any tier, if any; and to the extent possible the amount of the adjustment in Contract Time requested. Failure to properly give such written notice shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.

3. Contractor to provide supplemental information: Within 30 Days of the occurrence of the event giving rise to the request, unless Owner agrees in writing to allow an additional period of time to ascertain more accurate data, Contractor shall supplement the written notice provided in accordance with subparagraph 7.03B.2 with additional supporting data. Such additional data shall include, at a minimum: the amount of delay claimed, itemized in accordance with the procedure set forth herein; specific facts, circumstances, and analysis that confirms not only that Contractor suffered the delay claimed, but that the delay claimed was actually a result of the act, event, or condition complained of, and that the Contract Documents provide entitlement to an equitable adjustment in Contract Time for such act, event, or condition; and supporting documentation sufficiently detailed to permit an informed analysis of the request by Owner. Failure to provide such additional information and documentation within the time allowed or within the format required shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.
 4. Contractor to proceed with Work as directed: Pending final resolution of any request in accordance with this paragraph, unless otherwise agreed in writing, Contractor shall proceed diligently with performance of the Work.
- C. Contractor to demonstrate impact on critical path of schedule: Any change in the Contract Time covered by a Change Order, or based on a request for an equitable adjustment in the Contract Time, shall be limited to the change in the critical path of Contractor's schedule attributable to the change of Work or event(s) giving rise to the request for equitable adjustment. Any Change Order Proposal or request for an adjustment in the Contract Time shall demonstrate the impact on the critical path of the schedule. Contractor shall be responsible for showing clearly on the Progress Schedule that the change or event: had a specific impact on the critical path, and except in case of concurrent delay, was the sole cause of such impact; and could not have been avoided by resequencing of the Work or other reasonable alternatives.
- D. Cost of change in Contract Time: Contractor may request compensation for the cost of a change in Contract Time in accordance with this paragraph, 7.03D, subject to the following conditions:
1. Must be solely fault of Owner or A/E: The change in Contract Time shall solely be caused by the fault or negligence of Owner or A/E;
 2. Procedures: Contractor shall follow the procedure set forth in paragraph 7.03B;
 3. Demonstrate impact on critical path: Contractor shall establish the extent of the change in Contract Time in accordance with paragraph 7.03C; and
 4. Limitations on daily costs: The daily cost of any change in Contract Time shall be limited to the items below, less the amount of any change in the Contract Sum the Contractor may otherwise be entitled to pursuant to Section 7.02B 7f for any change in the Work that contributed to this change in Contract Time:
 - a. Non-productive supervision or labor: cost of nonproductive field supervision or labor extended because of delay;
 - b. Weekly meetings and indirect activities: cost of weekly meetings or similar indirect activities extended because of the delay;

- c. Temporary facilities or equipment rental: cost of temporary facilities or equipment rental extended because of the delay;
- d. Insurance premiums: cost of insurance extended because of the delay;
- e. Overhead: general and administrative overhead in an amount to be agreed upon, but not to exceed 3% of the Contract Award Amount divided by the originally specified Contract Time for each Day of the delay.

PART 8 – CLAIMS AND DISPUTE RESOLUTION

8.01 CLAIMS PROCEDURE

- A. Claim is Contractor's remedy: If the parties fail to reach agreement on the terms of any Change Order for Owner-directed Work as provided in Section 7.01, or on the resolution of any request for an equitable adjustment in the Contract Sum as provided in Section 7.02 or the Contract Time as provided in Section 7.03, Contractor's only remedy shall be to file a Claim with Owner as provided in this section.
- B. Claim filing deadline for Contractor: Contractor shall file its Claim within 120 Days from Owner's final offer made in accordance with paragraph 7.01E, or by the date of Final Acceptance, whichever occurs first.
- C. Claim must cover all costs and be documented: The Claim shall be deemed to cover all changes in cost and time (including direct, indirect, impact, and consequential) to which Contractor may be entitled. It shall be fully substantiated and documented. At a minimum, the Claim shall contain the following information:
 - 1. Factual statement of Claim: A detailed factual statement of the Claim for additional compensation and time, if any, providing all necessary dates, locations, and items of Work affected by the Claim;
 - 2. Dates: The date on which facts arose which gave rise to the Claim;
 - 3. Owner and A/E employee's knowledgeable about Claim: The name of each employee of Owner or A/E knowledgeable about the Claim;
 - 4. Support from Contract Documents: The specific provisions of the Contract Documents which support the Claim;
 - 5. Identification of other supporting information: The identification of any documents and the substance of any oral communications that support the Claim;
 - 6. Copies of supporting documentation: Copies of any identified documents, other than the Contract Documents, that support the Claim;
 - 7. Details on Claim for Contract Time: If an adjustment in the Contract Time is sought: the specific days and dates for which it is sought; the specific reasons Contractor believes an extension in the Contract Time should be granted; and Contractor's analysis of its Progress Schedule to demonstrate the reason for the extension in Contract Time;
 - 8. Details on Claim for adjustment of Contract Sum: If an adjustment in the Contract Sum is sought, the exact amount sought and a breakdown of that amount into the categories set forth in, and in the detail as required by Section 7.02; and

9. Statement certifying Claim: A statement certifying, under penalty of perjury, that the Claim is made in good faith, that the supporting cost and pricing data are true and accurate to the best of Contractor's knowledge and belief, that the Claim is fully supported by the accompanying data, and that the amount requested accurately reflects the adjustment in the Contract Sum or Contract Time for which Contractor believes Owner is liable.
- D. Owner's response to Claim filed: After Contractor has submitted a fully documented Claim that complies with all applicable provisions of Parts 7 and 8, Owner shall respond, in writing, to Contractor as follows:
1. Response time for Claim less than \$50,000: If the Claim amount is less than \$50,000, with a decision within 60 Days from the date the Claim is received; or
 2. Response time for Claim of \$50,000 or more: If the Claim amount is \$50,000 or more, with a decision within 60 Days from the date the Claim is received, or with notice to Contractor of the date by which it will render its decision. Owner will then respond with a written decision in such additional time.
- E. Owner's review of Claim and finality of decision: To assist in the review of Contractor's Claim, Owner may visit the Project site, or request additional information, in order to fully evaluate the issues raised by the Claim. Contractor shall proceed with performance of the Work pending final resolution of any Claim. Owner's written decision as set forth above shall be final and conclusive as to all matters set forth in the Claim, unless Contractor follows the procedure set forth in Section 8.02.
- F. Waiver of Contractor rights for failure to comply with this Section: Any Claim of the Contractor against the Owner for damages, additional compensation, or additional time, shall be conclusively deemed to have been waived by the Contractor unless made in accordance with the requirements of this Section.

8.02 ARBITRATION

- A. Timing of Contractor's demand for arbitration: If Contractor disagrees with Owner's decision rendered in accordance with paragraph 8.01D, Contractor shall provide Owner with a written demand for arbitration. No demand for arbitration of any such Claim shall be made later than 30 Days after the date of Owner's decision on such Claim; failure to demand arbitration within said 30 Day period shall result in Owner's decision being final and binding upon Contractor and its Subcontractors.
- B. Filing of Notice for arbitration: Notice of the demand for arbitration shall be filed with the American Arbitration Association (AAA), with a copy provided to Owner. The parties shall negotiate or mediate under the Voluntary Construction Mediation Rules of the AAA, or mutually acceptable service, before seeking arbitration in accordance with the Construction Industry Arbitration Rules of AAA as follows:
1. Claims less than \$30,000: Disputes involving \$30,000 or less shall be conducted in accordance with the Northwest Region Expedited Commercial Arbitration Rules; or
 2. Claims greater than \$30,000: Disputes over \$30,000 shall be conducted in accordance with the Construction Industry Arbitration Rules of the AAA, unless the parties agree to use the expedited rules.
- C. Arbitration is forum for resolving Claims: All Claims arising out of the Work shall be resolved by arbitration. The judgment upon the arbitration award may be entered, or review of the award may

occur, in the superior court having jurisdiction thereof. No independent legal action relating to or arising from the Work shall be maintained.

- D. Owner may combine Claims into same arbitration: Claims between Owner and Contractor, Contractor and its Subcontractors, Contractor and A/E, and Owner and A/E shall, upon demand by Owner, be submitted in the same arbitration or mediation.
- E. Settlement outside of arbitration to be documented in Change Order: If the parties resolve the Claim prior to arbitration judgment, the terms of the resolution shall be incorporated in a Change Order. The Change Order shall constitute full payment and final settlement of the Claim, including all claims for time and for direct, indirect, or consequential costs, including costs of delays, inconvenience, disruption of schedule, or loss of efficiency or productivity.

8.03 CLAIMS AUDITS

- A. Owner may audit Claims: All Claims filed against Owner shall be subject to audit at any time following the filing of the Claim. Failure of Contractor, or Subcontractors of any tier, to maintain and retain sufficient records to allow Owner to verify all or a portion of the Claim or to permit Owner access to the books and records of Contractor, or Subcontractors of any tier, shall constitute a waiver of the Claim and shall bar any recovery.
- B. Contractor to make documents available: In support of Owner audit of any Claim, Contractor shall, upon request, promptly make available to Owner the following documents:
 - 1. Daily time sheets and supervisor's daily reports;
 - 2. Collective bargaining agreements;
 - 3. Insurance, welfare, and benefits records;
 - 4. Payroll registers;
 - 5. Earnings records;
 - 6. Payroll tax forms;
 - 7. Material invoices, requisitions, and delivery confirmations;
 - 8. Material cost distribution worksheet;
 - 9. Equipment records (list of company equipment, rates, etc.);
 - 10. Vendors', rental agencies', Subcontractors', and agents' invoices;
 - 11. Contracts between Contractor and each of its Subcontractors, and all lower-tier Subcontractor contracts and supplier contracts;
 - 12. Subcontractors' and agents' payment certificates;
 - 13. Cancelled checks (payroll and vendors);
 - 14. Job cost report, including monthly totals;
 - 15. Job payroll ledger;
 - 16. Planned resource loading schedules and summaries;

17. General ledger;
 18. Cash disbursements journal;
 19. Financial statements for all years reflecting the operations on the Work. In addition, the Owner may require, if it deems it appropriate, additional financial statements for 3 years preceding execution of the Work;
 20. Depreciation records on all company equipment whether these records are maintained by the company involved, its accountant, or others;
 21. If a source other than depreciation records is used to develop costs for Contractor's internal purposes in establishing the actual cost of owning and operating equipment, all such other source documents;
 22. All nonprivileged documents which relate to each and every Claim together with all documents which support the amount of any adjustment in Contract Sum or Contract Time sought by each Claim;
 23. Work sheets or software used to prepare the Claim establishing the cost components for items of the Claim including but not limited to labor, benefits and insurance, materials, equipment, Subcontractors, all documents which establish the time periods, individuals involved, the hours for the individuals, and the rates for the individuals; and
 24. Work sheets, software, and all other documents used by Contractor to prepare its bid.
- C. Contractor to provide facilities for audit and shall cooperate: The audit may be performed by employees of Owner or a representative of Owner. Contractor, and its Subcontractors, shall provide adequate facilities acceptable to Owner, for the audit during normal business hours. Contractor, and all Subcontractors, shall make a good faith effort to cooperate with Owner's auditors.

PART 9 – TERMINATION OF THE WORK

9.01 TERMINATION BY OWNER FOR CAUSE

- A. 7 Day Notice to Terminate for Cause: Owner may, upon 7 Days written notice to Contractor and to its surety, terminate (without prejudice to any right or remedy of Owner) the Work, or any part of it, for cause upon the occurrence of any one or more of the following events:
1. Contractor fails to prosecute Work: Contractor fails to prosecute the Work or any portion thereof with sufficient diligence to ensure Substantial Completion of the Work within the Contract Time;
 2. Contractor bankrupt: Contractor is adjudged bankrupt, makes a general assignment for the benefit of its creditors, or a receiver is appointed on account of its insolvency;
 3. Contractor fails to correct Work: Contractor fails in a material way to replace or correct Work not in conformance with the Contract Documents;
 4. Contractor fails to supply workers or materials: Contractor repeatedly fails to supply skilled workers or proper materials or equipment;
 5. Contractor failure to pay Subcontractors or labor: Contractor repeatedly fails to make prompt payment due to Subcontractors or for labor;

6. Contractor violates laws: Contractor materially disregards or fails to comply with laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction; or
 7. Contractor in material breach of Contract: Contractor is otherwise in material breach of any provision of the Contract Documents.
- B. Owner's actions upon termination: Upon termination, Owner may at its option:
1. Take possession of Project site: Take possession of the Project site and take possession of or use all materials, equipment, tools, and construction equipment and machinery thereon owned by Contractor to maintain the orderly progress of, and to finish, the Work;
 2. Accept assignment of Subcontracts: Accept assignment of subcontracts pursuant to Section 5.20; and
 3. Finish the Work: Finish the Work by whatever other reasonable method it deems expedient.
- C. Surety's role: Owner's rights and duties upon termination are subject to the prior rights and duties of the surety, if any, obligated under any bond provided in accordance with the Contract Documents.
- D. Contractor's required actions: When Owner terminates the Work in accordance with this section, Contractor shall take the actions set forth in paragraph 9.02B, and shall not be entitled to receive further payment until the Work is accepted.
- E. Contractor to pay for unfinished Work: If the unpaid balance of the Contract Sum exceeds the cost of finishing the Work, including compensation for A/E's services and expenses made necessary thereby and any other extra costs or damages incurred by Owner in completing the Work, or as a result of Contractor's actions, such excess shall be paid to Contractor. If such costs exceed the unpaid balance, Contractor shall pay the difference to Owner. These obligations for payment shall survive termination.
- F. Contractor and Surety still responsible for Work performed: Termination of the Work in accordance with this section shall not relieve Contractor or its surety of any responsibilities for Work performed.
- G. Conversion of "Termination for Cause" to "Termination for Convenience": If Owner terminates Contractor for cause and it is later determined that none of the circumstances set forth in paragraph 9.01A exist, then such termination shall be deemed a termination for convenience pursuant to Section 9.02.

9.02 TERMINATION BY OWNER FOR CONVENIENCE

- A. Owner Notice of Termination for Convenience: Owner may, upon written notice, terminate (without prejudice to any right or remedy of Owner) the Work, or any part of it, for the convenience of Owner.
- B. Contractor response to termination Notice: Unless Owner directs otherwise, after receipt of a written notice of termination for either cause or convenience, Contractor shall promptly:
1. Cease Work: Stop performing Work on the date and as specified in the notice of termination;

2. No further orders or Subcontracts: Place no further orders or subcontracts for materials, equipment, services or facilities, except as may be necessary for completion of such portion of the Work as is not terminated;
 3. Cancel orders and Subcontracts: Cancel all orders and subcontracts, upon terms acceptable to Owner, to the extent that they relate to the performance of Work terminated;
 4. Assign orders and Subcontracts to Owner: Assign to Owner all of the right, title, and interest of Contractor in all orders and subcontracts;
 5. Take action to protect the Work: Take such action as may be necessary or as directed by Owner to preserve and protect the Work, Project site, and any other property related to this Project in the possession of Contractor in which Owner has an interest; and
 6. Continue performance not terminated: Continue performance only to the extent not terminated
- C. Terms of adjustment in Contract Sum if Contract terminated: If Owner terminates the Work or any portion thereof for convenience, Contractor shall be entitled to make a request for an equitable adjustment for its reasonable direct costs incurred prior to the effective date of the termination, plus reasonable allowance for overhead and profit on Work performed prior to termination, plus the reasonable administrative costs of the termination, but shall not be entitled to any other costs or damages, whatsoever, provided however, the total sum payable upon termination shall not exceed the Contract Sum reduced by prior payments. Contractor shall be required to make its request in accordance with the provisions of Part 7.
- D. Owner to determine whether to adjust Contract Time: If Owner terminates the Work or any portion thereof for convenience, the Contract Time shall be adjusted as determined by Owner.

PART 10 – MISCELLANEOUS PROVISIONS

10.01 GOVERNING LAW

Applicable law and venue: The Contract Documents and the rights of the parties herein shall be governed by the laws of the state of Washington. Venue shall be in the county in which Owner's principal place of business is located, unless otherwise specified.

10.02 SUCCESSORS AND ASSIGNS

Bound to successors; Assignment of Contract: Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party shall assign the Work without written consent of the other, except that Contractor may assign the Work for security purposes, to a bank or lending institution authorized to do business in the state of Washington. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations set forth in the Contract Documents.

10.03 MEANING OF WORDS

Meaning of words used in Specifications: Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Reference to standard specifications, manuals, or codes of any technical society, organization, or association, or to the code of any governmental authority,

whether such reference be specific or by implication, shall be to the latest standard specification, manual, or code in effect on the date for submission of bids, except as may be otherwise specifically stated. Wherever in these Drawings and Specifications an article, device, or piece of equipment is referred to in the singular manner, such reference shall apply to as many such articles as are shown on the drawings, or required to complete the installation.

10.04 RIGHTS AND REMEDIES

No waiver of rights: No action or failure to act by Owner or A/E shall constitute a waiver of a right or duty afforded them under the Contract Documents, nor shall action or failure to act constitute approval or an acquiescence in a breach therein, except as may be specifically agreed in writing.

10.05 CONTRACTOR REGISTRATION

Contractor must be registered or licensed: Pursuant to RCW 39.06, Contractor shall be registered or licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27.

10.06 TIME COMPUTATIONS

Computing time: When computing any period of time, the day of the event from which the period of time begins shall not be counted. The last day is counted unless it falls on a weekend or legal holiday, in which event the period runs until the end of the next day that is not a weekend or holiday. When the period of time allowed is less than 7 days, intermediate Saturdays, Sundays, and legal holidays are excluded from the computation.

10.07 RECORDS RETENTION

Six year records retention period: The wage, payroll, and cost records of Contractor, and its Subcontractors, and all records subject to audit in accordance with Section 8.03, shall be retained for a period of not less than 6 years after the date of Final Acceptance.

10.08 THIRD-PARTY AGREEMENTS

No third party relationships created: The Contract Documents shall not be construed to create a contractual relationship of any kind between: A/E and Contractor; Owner and any Subcontractor; or any persons other than Owner and Contractor.

10.09 ANTITRUST ASSIGNMENT

Contractor assigns overcharge amounts to Owner: Owner and Contractor recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the purchaser. Therefore, Contractor hereby assigns to Owner any and all claims for such overcharges as to goods, materials, and equipment purchased in connection with the Work performed in accordance with the Contract Documents, except as to overcharges which result from antitrust violations commencing after the Contract Sum is established and which are not passed on to Owner under a Change Order. Contractor shall put a similar clause in its Subcontracts, and require a similar clause in its sub-Subcontracts, such that all claims for such overcharges on the Work are passed to Owner by Contractor.

10.10 HEADINGS AND CAPTIONS

Headings for convenience only: All headings and captions used in these General Conditions are only for convenience of reference, and shall not be used in any way in connection with the meaning, effect, interpretation, construction, or enforcement of the General Conditions, and do not define the limit or describe the scope or intent of any provision of these General Conditions.

P A R T I I I

**SUPPLEMENTAL CONDITIONS
AS MODIFIED BY THE CITY OF TACOMA**

**SECTION 00 73 00
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Section 00 73 00

PART 1 GENERAL PROVISIONS

1.01 DEFINITIONS

Replace Article O in Section 1.01 with the following City Supplemental Conditions:

- O. "Notice" means a written or electronic notice which has been delivered to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended or, if delivered or sent by registered or certified mail to the last business address known to the party giving notice.

Replace Article Q in Section 1.01 with the following City Supplemental Conditions:

- Q. "Owner" means the City or its authorized representative with the authority to enter into, administer, and/or terminate the work in accordance with the Contract Documents and make related determinations and findings. *Add the following articles to Section 1.01 of Supplemental Conditions:*
- AB. "Abbreviations" refer to trade association names and titles of general standards that are frequently abbreviated. Where such acronyms or abbreviations are used in the specifications or other Contract documents, they mean recognized name of the trade association, standards generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations" published by Gale Research Co., available in most libraries.
- AC. "Alternate Bid" (or Alternate) is an amount stated in the Bid to be added or deducted from the amount of the Base Bid if the corresponding change in project scope or materials or methods of construction described in the Bidding Documents is accepted.
- AD. "Base Bid" is the sum stated in the Bid for which the Bidder offers to perform the work described as the base, to which work may be added or deducted for sums stated in Alternate Bids and Unit Prices. The Base Bid does not include Force Account work and taxes.
- AE. "Calendar Day" is the 24-hour period from midnight to midnight.
- AF. "City" is the City of Tacoma.
- AG. "Contracting Agency" (or City) is the City of Tacoma.
- AH. "Contract Provisions" is the publication addressing the work required for an individual project. At the time of the call for bids, the Contract provisions may include, for a specific individual project, the general conditions, supplements to the general conditions, the special provisions, a listing of the applicable standard plans, the prevailing minimum hourly wage rates, Contract forms, affirmative action requirements, LEAP and SBE.

- AI. "Engineer" is the City of Tacoma's registered design professional who will act as the City's authorized representative when so designated by the City.
- AJ. "Furnish" is used to mean supply and deliver to the project site, ready for unloading, unpacking, assembly, installation and other.
- AK. "Holiday(s)" means the following calendar days: January 1st, 3rd Monday of January, 3rd Monday of February, last Monday of May, July 4th, 1st Monday of September, November 11th, 4th Thursday of November, 4th Friday of November, December 25th. If a holiday is on a Saturday, the previous Friday will be observed as a holiday. If the holiday is on a Sunday, the following Monday will be observed as a holiday.
- AL. "Indicated" refers to graphic representations, notes or schedules on the drawings, or other paragraphs or schedules in the specifications, and similar requirements in the Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help the reader locate the reference; no limit on location is intended.
- AM. "Install" is used to describe operations at the project site including the actual unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- AN. "Installer" is the Contractor or an entity engaged by the Contractor, either as an employee, subcontractor, or Contractor of lower tier for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
- AO. "Provide" means to furnish and install, complete and ready for intended use.
- AP. "Project Site" is the space available to the Contractor for performance of construction activities, either exclusively or in conjunction with others performing other work as part of the project. The extent of the project site is shown in the plans and may or may not be identical with the description of the land on which the project is to be built.
- AQ. "Unit Price" is an amount stated in the Bid as a price per unit of measurement for materials or services as described in the Contract Documents.
- AR. "Utility Owner" is used to describe a service, light, power, water, gas, and telecommunications by a public utility.

1.02 ORDER OF PRECEDENCE

Replace the entire Section 1.02 with the following City Supplemental Conditions:

Any conflict or inconsistency in the Contract Documents shall be resolved by giving the documents precedence in the following order:

- A. Addenda.
- B. Signed Public Works Contract, including any Change Orders, and any Special Forms.
- C. Supplemental Conditions as modified by the City of Tacoma.
- D. General Conditions for Washington State Facility Construction.
- E. Specifications – provisions in Division 1 shall take precedence over provisions of any other Division.
- F. Amendments to Specifications.
- G. Drawings – in case of conflict within the Drawings, large scale drawings shall take precedence over small scale drawings.
- H. Construction Documents Appendices.
- I. Signed and Completed Form of Proposal.
- J. Instructions to Bidders.
- K. Advertisement for Bids.

1.03 EXECUTION AND INTENT

Replace Section 1.03.2 with the following City Supplemental Conditions:

- 2. Contractor familiar with project: Contractor has carefully reviewed the Contract Documents, become familiar with the local conditions in which the Work is to be performed, and satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services and other items to be furnished and all other requirements of the Contract Documents, as well as the surface and subsurface conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof;

Add the following paragraph to Section 1.03 of City Supplemental Conditions:

The intent of the Contract is to be prescribing a complete work. Omissions from the Contract of details of work, which are necessary to carry out the Contract, shall not relieve the Contractor from performing the omitted work.

1.04 SUBSTITUTIONS

Add the following new Section 1.04 to General Provisions:

- A. Approved Equals
 - 1. Unless an item is indicated as "No substitute", special brands, when named, are intended to describe the standard of quality, performance or use desired. Equal items will be considered by the City, provided that the respondent specifies the brand and model, and provides all the descriptive literature, independent test results, product samples, local servicing and parts availability to enable the City to evaluate the proposed "equal".

2. The decision of the City as to what items are equal shall be final and conclusive. If the City elects to purchase a brand represented by the respondent to be an "equal", the City's acceptance of the item is conditioned on the City's inspection and testing after receipt. If, in the sole judgement of the City, the item is determined not to be an equal, the item shall be returned at the respondent's expense.
 3. When the brand name, or level of quality is not stated by the respondent, it is understood the offer is exactly as specified. If more than one brand name is specified, respondent must clearly indicate the brand and model/part number being bid.
- B. Substitution Requests Prior to Bid: Refer to Bid Submittal Package and Specification Section 01 61 00, Common Products for allowable process for substitutions prior to the bid.
- C. Substitution Requests made after Award of Contract: Requests for approval of substitute materials or products will not be considered, except if one or more of the following conditions exists.
1. Indicate one or more reasons why substitution is required with Substitution Request.
 - a. Unavailability: A substitution is required because the specified item is not available, due to factors beyond the control of the Contractor or subcontractor. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the work promptly or coordinate activities properly.
 - b. Unsuitability: Subsequent information or changes disclose inability of the specified item to perform as intended, and where the Contractor certifies that the proposed substitution will overcome such non-performance.
 - c. Regulatory Requirements: Final interpretations of Code, regulatory requirements, safety requirements, or insurance requirements necessitate a change to due inability of the specified item to conform, and the proposed substitution can be approved.
 - d. Warranty: Manufacturer or fabricator cannot certify or warrant performance of specified item as required, and where the Contractor certifies that the proposed substitution will provide the required warranty.
 - e. Owner's Benefit: Acceptance of the proposed substitution is clearly in the Owner's best interest because of cost, quality, or other consideration. In requesting a substitution under this clause, the Contractor shall furnish substantiation of any such reason.
 2. During the construction period, Contractor will be notified in writing of decision to accept or reject the Substitution Request by the Owner.

Permission to make any substitution after award of Contract shall be effected by a Change Order.

3. The Contractor shall accompany any request for substitution with such drawings, specifications, samples, manufacturer's literature, performance data, and other information necessary to describe and evaluate the proposed substitution completely as defined in Section 01 61 00 of the Technical Specifications. The burden of proof shall be on the Contractor.
4. Redesign and Coordination: In making request for approval of substitute materials, the Contractor must represent that it has investigated the proposed product and, in its opinion, it is equal or equivalent in all respects to that specified. Also, Contractor will coordinate all trades including changes thereto as may be required, that it waives all claims for additional costs which subsequently.

1.05 DISQUALIFICATION OF BIDDERS

Add the following new Section 1.06 to City Supplemental Conditions:

- A. A bidder may be deemed not responsible and the proposal rejected by the City for any of the following:
 1. More than one proposal is submitted for the same project from a bidder under the same or different name;
 2. Evidence of collusion exists with any other bidder. Participants in collusion will be restricted from submitting further bids;
 3. A bidder is not pre-qualified for the work or to the full extent of the bid;
 4. An unsatisfactory performance record exists based on past or current work;
 5. There is uncompleted work which might hinder or prevent the prompt completion of the work bid upon;
 6. The bidder failed to settle bills for labor or materials on past or current Contracts;
 7. The bidder has failed to complete a written public Contract or has been convicted of a crime arising from a previous public Contract;
 8. The bidder is unable, financially or otherwise, to perform the work;
 9. A bidder is not authorized to do business in the state of Washington;
 10. Failure by the Contractor to properly review the project documents and/or site;
 11. Bid Evaluation Submittals are not provided in the time specified;
 12. The Contractor fails to meet the SBE requirements as described in these documents;
 13. Receipt of addenda is not acknowledged; or
 14. There are any other reasons deemed proper by the City.

15. Contractor has altered in any form or fashion the City's bid proposal form

1.06 AWARD OF CONTRACT

Add the following new Section 1.06 to City Supplemental Conditions:

- A. The Owner reserves the right to Award, in any order or combination, such Additives, Deductives, or Alternates, as may be set forth in the Bid Forms.

1.07 MINIMUM EXPERIENCE REQUIREMENTS

Add the following new Section 1.07 to the City Supplemental Conditions:

The Bidder shall submit if required as part of its bid submittal package the necessary information on the Statement of Qualifications Project Experience Form to demonstrate compliance with the minimum experience requirements. The City reserves the right to request for clarifying or additional information.

1.08 UTILITY COORDINATION

Add the following new Section 1.08 to City Supplemental Conditions:

- A. The Contractor shall coordinate his/her work with all utilities and other organizations, which have their facilities within the project area. A Utility coordination meeting with all the utility organization shall be coordinated. These may include but are not limited to
 - 1. City of Tacoma Water Division, Contact: Gary Gates, Phone: 253-502-8742
 - 2. City of Tacoma Power Division, Contact: Daniel Pitsch, Phone: 253-502-8229
 - 3. City of Tacoma Sewer Utility, Contact: Merita Trohimovich Pollard, Phone: 253-502-2103
 - 4. Puget Sound Energy, Contact: Greg Potter, Phone: 253-841-6242 ext. 10
 - 5. Century Link , Contact: Judy Cissell, Phone: 206-733-8860
 - 6. One Call Locators Service: 1-800-424-5555
 - 7. Comcast communications: Contact: Customer Service, Phone: 877-824-2288
- B. The Contractor is responsible for location of private underground utilities within the private property which are not maintained by an outside utility company, and which are not located through the One Call Locators Service.
 - 1. The Contractor shall provide and pay for private locator service to locate private utilities.

1.09 TRAFFIC CONTROL

Add the following new Section 1.09 to City Supplemental Conditions:

- A. All road closures, obstructions, or detours will require approval by the Owner. The Contractor must submit a written request 24-hours in advance of any

planned work that will impact a roadway. There is no guarantee that such request will be granted.

- B. The design, construction, and maintenance of all detours, including traffic control, traffic control signage, and ADA access and pedestrian access is the sole responsibility of the Contractor. This includes detours both outside the limits of the project and within the limits of the project.
- C. For any road closures, obstructions, or detours, the Contractor shall submit a traffic control plan for approval by the Owner. The detour plan shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), state standard specifications, and these specifications.
- D. The Contractor shall be responsible for obtaining all permits necessary to implement the traffic control plan.

PART 2 INSURANCE AND BONDS

2.01 CONTRACTOR'S LIABILITY INSURANCE

General insurance requirements: Prior to commencement of the Work, Contractor shall obtain all the insurance required by the Contract Documents and provide evidence satisfactory to Owner that such insurance has been procured. Review of the Contractor's insurance by Owner shall not relieve or decrease the liability of Contractor. Companies writing the insurance to be obtained by this part shall be licensed to do business under Chapter 48 RCW or comply with the Surplus Lines Law of the State of Washington. Contractor shall include in its bid the cost of all insurance and bond costs required to complete the base bid work and accepted alternates. Insurance carriers providing insurance in accordance with the Contract Documents shall be acceptable to Owner, and its A.M. Best rating shall be indicated on the insurance certificates. A.M. Best Rating shall not be lower than A(-) VII.

Replace Section 2.01.A of Insurance and Bonds with the following City Supplemental Conditions:

- A. Term of insurance coverage: Contractor shall maintain the following insurance coverage during the Work and for two years after Final Completion. Contractor shall also maintain the following insurance coverage during the performance of any corrective Work required by Section 5.16.
 - 1. Commercial General Liability Insurance shall be written on an Insurance Services Office form CG0001 (04 13) or the equivalent. Coverage shall include, but not be limited to:
 - a. Completed operations/products liability;
 - b. Explosion, collapse, and underground;
 - c. Employer's liability coverage..

2. Automobile Liability Insurance on shall be written on an insurance Services office form CA0001 or the equivalent. Contractor must also maintain an MCS 90 endorsement of equivalent and a CA 9948 endorsement or equivalent if “Pollutants” are to be transported.
- B. Industrial insurance compliance: Contractor shall comply with the Washington State.
- C. Insurance to protect the following:
- D. Owner as Additional Insured: All insurance coverages shall be endorsed to include City as an additional insured for both ongoing and completed operations using Insurance Services Office Forms CG2010 and CG2037 or the equivalent for Work performed in accordance with the Contract Documents, and all insurance certificates shall be accompanied with the policy endorsement showing the City as an additional insured. Contractor’s insurance shall be primary and non-contributory with any insurance or self- insurance maintained by the City and contain a “separation of insured” provision and a “waiver of subrogation” clause favor of City of Tacoma (Owner)

Add the following new Section 2.01.E to City Supplemental Conditions:

- E. Any additional coverage specifically required within the project manual.

2.02 COVERAGE LIMITS

Replace Section 2.02 with City Supplemental Conditions:

Commercial General Liability:

\$1,000,000 Each Occurrence, \$2,000,000 General Aggregate

\$2,000,000 Products-Completed Operations Aggregate

\$1,000,000 Personal Injury & Advertising Injury

Employers Liability:

\$1,000,000 each employee

\$1,000,000 each accident

\$1,000,000 policy limit

Commercial Automobile Liability:

\$1,000,000 each accident for any vehicle for bodily injury and property damage.

Workers Compensation: Statutory

Professional Liability:

\$1M per claim and \$2M in the aggregate

2.03 INSURANCE COVERAGE CERTIFICATES

Add the following Articles to Section 2.03 with City Supplemental Conditions:

D. The following shall be required:

1. The Contractor shall furnish acceptable proof of insurance coverage on an Acord Certificate of insurance or the equivalent.
2. A copy of the additional insured endorsements must accompany the insurance certificate. A copy of each of the endorsement are required. Additional insured primary and non-contributory, and waiver of subrogation..

E. The following additional requirements apply:

1. Contractor shall provide with the certificate, evidence of the amount of any deductible or self-insured retention under the policy.
2. It is the Contractor's responsibility to keep an up-to-date Certificate of Insurance on file with the City throughout the contract and must provide 30 day notice of any cancellation.

G. All Insurance coverage the Contractor is required to maintain under this Article shall be written on an "occurrence" basis and not on a "claims made" basis.

2.04 PAYMENT AND PERFORMANCE BONDS

Replace the entire Section 2.04 with the following City Supplemental Conditions:

A Performance Bond shall be obtained by the Contractor utilizing the form entitled "Performance Bond to the City of Tacoma" as found at the front of the Contract Document under "Contract Forms". Contractor shall provide a Performance Bond, including power of attorney, for 100 percent of the amount of his/her bid (including sales tax) per RCW 39.08 securing performance of work; all Contract obligations; materials, payment of laborers, Manufacturers and subcontractors.

In the event that the Contractor intends to have a subcontractor perform all or any portion of the project, the Contractor should consider requiring its own performance bond from the subcontractor to guarantee successful performance of this project component.

2.05 ADDITIONAL BOND SECURITY

Add Section 2.05 with the following City Supplemental Conditions:

D. The Contract amount is increased by 20% or more.

2.06 BUILDER'S RISK

Add Section 2.06.A with the following City Supplemental Conditions:

- A. For projects not involving New Building Construction, 'Installation Floater' is an acceptable substitute for the Builder's Risk Insurance.

Add the following provisions Article B of Section 2.06 of Insurance and Bonds:

- B. Reasonable compensation for A/E services and expenses required as a result of an insured loss shall not exceed \$300,000.00. Any deductible provision in the Builder's Risk Insurance will be paid for by the City, but shall not exceed \$10,000.00. Flood, earthquake, and terrorism insurance are not required under this Contract.

PART 3 TIME AND SCHEDULE

3.02 CONSTRUCTION SCHEDULE

Replace Article C Section 3.02 with the following City Supplemental Conditions:

- C. Owner comments on Progress Schedule: Owner shall return comments on the preliminary Progress Schedule to Contractor within 7 Days of receipt. Review by Owner of Contractor's schedule does not constitute an approval or acceptance of Contractor's construction means, methods, or sequencing, or its ability to complete the Work within the Contract Time. Contractor shall revise and resubmit its schedule, as necessary. Owner may withhold a portion of progress payments until a Progress Schedule has been submitted which meets the requirements of this section.

Replace Section 3.02.D with the following City Supplemental Conditions:

- D. Submit a revised Progress Schedule that includes a three (3) week ahead scheduled work with each pay application, or as directed by the City, indicating but not limited to:

PART 1 Actual starts and finishes of activities and changes in slack or float, lags and leads for each item;

PART 2 Percent complete;

PART 3 Changes in network logic.

Content of each revised Progress Schedule shall be the same information required in Section 3.02.B above.

- a. Problem areas; anticipated delay; and impact of these on Schedule.
- b. Report corrective action taken, or proposed, and its effect.
- c. Should actual progress fall more than two (2) weeks behind the progress identified in the Target Schedule, the Contractor shall explain the cause and will take the necessary steps to alter the construction schedule to comply with the Contract Completion date.

Payment will not be made until Progress Schedule revisions are up to date and accurate.

3.05 DELAY

Replace the entire Section 3.05 with the following City Supplemental Conditions:

- A. Avoidable delays in the prosecution or completion of the Work shall include all delays that might have been avoided by the exercise of care, prudence, foresight, or diligence on the part of the Contractor. Avoidable delays may include, but are not limited to:
1. Reasonable loss of time resulting from the necessity of submitting drawings to the City for acceptance,
 2. Collecting survey/field/analytical information,
 3. Site management and coordination,
 4. Measurements and inspections,
 5. Subcontractor management, and
 6. Such interruptions as may occur in the prosecution of the Work on account of the reasonable interference of other Contractors employed by the City,

These delays, which may interrupt the prosecution of parts of the Work, while at the time may be unavoidable but do not necessarily prevent or delay the prosecution of other parts of the Work, or prevent the completion of the whole Work within the time herein specified, will be deemed avoidable within the meaning of this Contract.

- B. Unavoidable delays in the prosecution of completion of the Work under this Contract shall include all delays which may result through causes beyond the control of the Contractor, and which he could not have provided against by the exercise of care, prudence, foresight, or diligence. Unavoidable delays shall hereinafter be referred to as "Force Majeure".

Force Majeure includes, but is not limited to:

1. Acts of God or the public enemy;
2. Acts or omissions of any government entity;
3. Fire or other casualty for which Contractor is not responsible;
4. Quarantine or epidemic;
5. Strike or defensive lockout;
6. Orders issued by the Owner, changing the amount of Work to be accomplished in excess of 25% per single change.
7. Failure of the Owner to provide rights-of-entry.

These delays shall be considered unavoidable so far as they necessarily interfere with the Contractor's completion of the whole Work.

- D. Whenever the Contractor foresees any delay in the prosecution of the Work, and in any event immediately upon the occurrence of any such delay, the Contractor shall submit a written notice to the City as provided in Section 7.02 of the General Conditions. The City may determine whether the delay is to be considered avoidable or unavoidable ("Force Majeure"), how long it

continues, and to what extent the prosecution and completion of the Work are to be delayed thereby.

Contractor may be entitled to an equitable adjustment in the Contract Sum, if the cost or time of Contractor's performance is changed due to the fault or negligence of City, provided the Contractor makes a request according to sections 7.02 and 7.03.

After the completion of any part or the whole of the Work, the City, in approving the amount due the Contractor, will assume that any and all delays which have occurred in its prosecution and completion have been avoidable, except such delays as shall have been called to the attention of the City in writing as per Section 7.02 at the time of their occurrence, and later found by the City to have been unavoidable. The Contractor shall make no claims that any delay not called to the attention of the City, in writing, at the time of its occurrence has been an unavoidable delay ("Force Majeure").

- E. For delays which are unavoidable ("Force Majeure"), as determined by the City, an extension of time beyond the time specified for completion will be allowed, within which to complete the Contract. The Contractor will not be charged, because of any extension of time for such unavoidable delay, any liquidated damages or engineering and related costs, as are charged in the case of avoidable delays. Contractors overhead cost associated with "Force Majeure" are excluded from equitable adjustment.
- F. If the Work called for under this Contract is not finished and completed by the Contractor, in all parts and in accordance with all requirements in the time specified, including extensions of time granted because of an unavoidable delay; the Contractor will be charged liquidated damages, or direct engineering and related costs as provided for in the Standard Specifications.

In addition, the City shall charge to the Contractor, and may deduct from the [mal payment for the Work, all engineering and related costs incurred by the City in connection with the Work during the period of such extension or extensions. The City shall make the final determination as to the appropriateness of charges required to complete the Work.
- G. The granting of any extension of time on account of delays, which in the judgment of the City are avoidable delays, shall in no way operate as a waiver on the part of the City of its rights under this Contract.

3.07 DAMAGES FOR FAILURE TO ACHIEVE TIMELY COMPLETION

Add Section 3.07.A to City Supplemental Conditions:

- (a) Time is of the essence on the Contract. Delays inconvenience the City's daily operation and add undue time and cost required for administration, engineering, inspections, and supervision. Accordingly, the Contractor agrees:

1. To Pay (according to the following formula) liquidated damages for each calendar day beyond the number of days established for final completion, and
2. To authorize the City to deduct these liquidated damages from any money due or coming due to the Contractor.

LIQUIDATED DAMAGES FORMULA

$$LD = \frac{0.20C}{T}$$

Where: LD = liquidated damages per calendar day (rounded to nearest dollar)

C = original contract amount for Work Order

T = original time for final completion

When the contract work has progressed to the extent that the City has full use and benefit of the facilities, both from the operational and safety standpoint, and only minor incidental work, replacement of temporary substitute facilities, or correction or repair remains to physically complete of the total contract, the City may determine the work is substantially complete. The City will notify the Contractor in writing of the substantial completion date. For overruns in contract time occurring after the date so established, the formula for liquidated damages as shown above will not apply. For overruns in contract time occurring after the substantial completion date, liquidated damages shall be assessed on the basis of direct engineering and related costs assignable to the project until actual final completion date of all the contract work. The Contractor shall complete the remaining work as promptly as possible.

3.08 SUSPENSION OF WORK

Add Section 3.08 to City Supplemental Conditions:

- A. The City may order suspension of all or any part of the work if:
 1. The Contractor does not comply with the contract or the City's orders.
- B. When ordered by the City to suspend or resume work, the Contractor shall do so immediately.
- C. If the work is suspended for reason (1) above, the period of work stoppage will be counted as calendar days maintaining the original contract completion requirement. The lost work time, however, shall not relieve the Contractor from any Contract responsibility.
- D. If the work is suspended for reason (2) above, the period of work stoppage will be counted as working days. The lost work time, however, shall not relieve the Contractor from any contract responsibility.

- E. If the performance of all or any part of the work is suspended, delayed, or interrupted for an unreasonable period of time by an act of the Contracting Agency in the administration of the Contract, or by failure to act within the time specified in the Contract (or if no time is specified), the City will make an adjustment for any increase in the cost or time for the performance of the Contract (excluding profit, overhead, home office expense, supervisory personnel labor not specifically assigned to the project) necessarily caused by the suspension, delay, or interruption. However, no adjustment will be made for any suspension, delay, or interruption if (1) the performance would have been suspended, delayed or interrupted by any other cause, including the fault or negligence of the Contractor, or (2) an equitable adjustment is provided for or excluded under any other provision of the Contract.
- F. If the Contractor believes that the performance of the work is suspended, delayed, or interrupted for an unreasonable period of time and such suspension, delay, or interruption is the responsibility of the Contracting Agency, the Contractor shall immediately submit a written request for equitable adjustment to the Engineer as provided in Section 7.02. No adjustment shall be allowed for any costs incurred more than 2 calendar days before the date the Engineer receives the Contractor's written request for equitable adjustment. If the Contractor contends damages have been suffered as a result of such suspension, delay, or interruption, the protest shall not be allowed unless the request for equitable adjustment (stating the amount of damages) is asserted in writing within 14 calendar days of end of the delay. The Contractor shall keep full and complete records of the costs and additional time of such suspension, delay, or interruption and shall permit the Engineer to have access to those records and any other records as may be deemed necessary by the Engineer to assist in evaluating the protest.
- G. The City will determine if an equitable adjustment in cost or time is due as provided in this section. The equitable adjustment for increase in costs, if due, shall be subject to the limitations provided in Section 7.02, provided that no profit of any kind will be allowed on any increase in cost necessarily caused by the suspension, delay, or interruption.
- H. Request for extensions of time will be evaluated in accordance with Section 7.03.
- I. No claim by the Contractor under this clause shall be allowed unless the Contractor has followed the procedures provided in this Section and Sections 7.02 and 7.03.
- J. Contractor shall notify surety of all claims.

3.09 MAINTENANCE DURING SUSPENSION

Add Section 3.09 with City Supplemental Conditions:

- A. Before and during any suspension (as described in Section 3.08) the Contractor shall protect the work from damage or deterioration. Suspension shall not relieve the Contractor from anything the Contract requires unless this section states otherwise.

- B. After any suspension, the Contractor shall retain all responsibilities the Contract assigns for repairing or restoring the construction area to the requirement of the plans.

3.10 EXECUTION OF CONTRACT – SCHEDULE

Add Section 3.10 to City Supplemental Conditions:

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

Within 5 calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract, an insurance certification and a satisfactory bond as required.

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

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within 5 calendar days after the award date stated above, the Contracting Agency may grant up to a maximum of 2 additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.

PART 4 SPECIFICATIONS, DRAWINGS, AND OTHER DOCUMENTS

4.03 SHOP DRAWINGS

Replace Section 4.03.E with City Supplemental Conditions:

E. Contractor to submit Shop Drawings electronically: Unless otherwise provided in Division 1, Contractor shall submit to Owner for approval Shop Drawings electronically through e-Builder.

Add Section 4.03.F with City Supplemental Conditions:

F. The Contractor shall submit a submittal schedule with dates for Shop Drawings within 7 Calendar Days of issuance of Notice To Proceed.

4.05 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS, AND OTHER DOCUMENTS

Add Section 4.05.E with City Supplemental Conditions:

- E. The Contractor may pick up, at their own cost, additional plans and specifications from ARC located at 632 Broadway, Tacoma, Washington 98402 or by going to <http://www.nwcontractorsnetwork.com>.

PART 5 PERFORMANCE

5.02 PERMITS, FEES AND NOTICES

Add Section 5.02.A with City Supplemental Conditions:

- A. The actual cost of the general building permit shall be paid directly to the permitting agency by the City.

5.04 PREVAILING WAGES

Add Section 5.04.H with City Supplemental Conditions:

- H. Copies of approved Intents to Pay Prevailing Wages for the Contractor and all subcontractors shall be submitted with the Contractor's first application for payment. As additional subcontractors perform work on the project, their approved Intent forms shall be submitted with the Contractor's next application for payment.
1. The Contractor and all subcontractors shall promptly submit to the City certified payroll copies if requested, with the second pay application.
 2. The City of Tacoma reserves the right to withhold payment if the Contractor does not provide copies of Certified Payroll with each application of payment.

5.07 SAFETY PRECAUTIONS

Replace Section 5.07.A with City Supplemental Conditions:

- B. In performing this Contract, the Contractor shall provide for protecting the lives and health of employees and other persons; preventing damage to property, materials, supplies, and equipment; and avoid work interruptions. For these purposes, the Contractor shall:
1. Follow Washington Industrial Safety and Health Act (WISHA) regional directives and provide a site-specific safety program that will require an accident prevention and hazard analysis plan for the Contractor and each subcontractor on the work site. The Contractor shall submit a site-specific safety plan to the City's representative prior to the initial scheduled construction meeting.
 2. Provide adequate safety devices and measures including, but not limited to, the appropriate safety literature, notice, training, permits, placement and use of barricades, signs, signal lights, ladders, scaffolding, staging, runways, hoist, construction elevators, shoring, temporary lighting, grounded outlets, wiring, hazardous materials, vehicles, construction processes, and equipment required by Chapter 19.27 RCW, State Building Code (Uniform Building, Electrical, Mechanical, Fire, and Plumbing Codes); Chapter 212-12 WAC,

Fire Marshal Standards, Chapter 49.17 RCW, WISHA; Chapter 296-155 WAC, Safety Standards for Construction Work; Chapter 296-65 WAC; WISHA Asbestos Standard; WAC 296-62-071, Respirator Standard; WAC 296-62, General Occupation Health Standards, WAC 296-24, General Safety and Health Standards, WAC 296-24, General Safety and Health Standards, Chapter 49.70 RCW, and Right to Know Act.

3. Comply with the State Environmental Policy Act (SEPA), Clean Air Act, Shoreline Management Act, and other applicable federal, state, and local statutes and regulations dealing with the prevention of environmental pollution and the preservation of public natural resources.
4. Post all permits, notices, and/or approvals in a conspicuous location at the construction site.
5. Provide any additional measures that the City determines to be reasonable and necessary for ensuring a safe environment in areas open to the public. Nothing in this part shall be construed as imposing a duty upon the City or A/E to prescribe safety conditions relating to employees, public, or agents of the Contractors.
6. All construction personnel shall wear highly visible reflective vests and hardhats while on North End Treatment Plant property.

5.10 UNFORESEEN PHYSICAL CONDITIONS

Replace Section 5.10.A with City Supplemental Conditions:

- A. Notice requirement for concealed or unknown conditions: If Contractor encounters conditions at the site which are subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then Contractor shall give written notice to Owner promptly and in no event later than 2 Days after the first observance of the conditions. Conditions shall not be disturbed prior to such notice.

5.15 TESTS AND INSPECTION

. Replace Section 5.15.A with City Supplemental Conditions:

- A. The City will enlist and pay for the services of a qualified testing agency to provide quality control, third party testing, and special inspection services as stated specifically in Division 01 and Technical Specifications of the Project Specifications. All other testing or inspecting shall be by Contractor's 3rd Party Agency and paid for by Contractor.
 1. Tests and Inspections shall include the following minimum requirements:
 - a. Preparatory Inspection (pre-installation meetings): This shall be performed prior to beginning any work and shall include:

- b. A review of applicable specifications;
- c. A review of the Contract plans;
- d. A check to assure that all materials and/or equipment have been tested, submitted and approved;
- e. A check to assure that provisions have been made to provide control inspection and testing;
- f. Examination of the work area to assure that all required preliminary work has been completed and is in Contract compliance;
- g. A physical examination of required materials, equipment and sample work to assure that they conform to approved shop drawings or submitted data and are properly stored;
- h. Discussion of procedures for constructing the work, including repetitive deficiencies, construction tolerances and workmanship standards specified in the documents.
- i. Initial Inspection: This shall be performed as soon as work begins on a definable feature of work and the following shall be accomplished:
- j. A check of preliminary work to ensure that it is in Contract compliance and review of the preparatory meeting minutes;
- k. Verification of full Contract compliance and verify that required control inspection and testing is underway;
- l. Establish level of workmanship, verify that it meets minimum acceptable workmanship standards, and compare work with sample panels, etc., as appropriate;
- m. Resolve all differences;
- n. This inspection phase shall be repeated for each new crew on site performing the work, or any time standards are not being met.
- o. Follow-Up Inspections: These follow up inspections shall be performed daily to assure continuing compliance with contract requirements, including control testing, until completion of the particular feature of work. The City or City's representative may require joint Contractor inspections at any time and on a periodic basis to evaluate the effectiveness of the quality control system.
- p. Tests: All operation and acceptance tests, where specified, are to be performed to verify control measures are adequate.
- q. Costs for re-testing work that was previously tested but did not meet the requirements for the work shall be the responsibility of the Contractor.

5.20 SUBCONTRACTORS AND SUPPLIERS

Replace Section 5.20.B with City Supplemental Conditions:

- B. The Contractor shall submit the Request for Sublet Form provided by the City of Tacoma for every subcontractor used on the project prior to construction. Contractor shall not utilize any subcontractor or manufacturer to whom the City has a reasonable objection, and shall obtain City's written consent before making any substitutions or additions.

Add Section 5.20.F, 5.20.G, 5.20.H, 5.20.I with City Supplemental Conditions:

- F. The LEAP and EIC Programs have been adopted by the City to counteract economic and social ills, which accompany high rates of unemployment within the City of Tacoma.
1. The Tacoma City Council established the LEAP Program for Public Works Contracts pursuant to City of Tacoma Ordinance No. 26301. The primary goal for this program is to provide an opportunity for City of Tacoma and Empowerment Zone/Enterprise Community residents to acquire skills, enter Apprenticeship Programs, and perform work that provides living wages.
 2. The Tacoma City Council established the EIC Program for Public Works Contracts pursuant to City of Tacoma Ordinance No. 28625. The primary goal for this program is to ensure equitable participation of historically under-utilized business enterprises, by establishing goals for their utilization in public Contracting.
- G. The Contractor shall not subcontract work unless the City approves in writing. Each request to subcontract shall be on the form the City provides. The subcontractor shall be a licensed State of Washington Contractor and shall have a valid City of Tacoma business license. If the City requests, the Contractor shall provide proof that the subcontractor has the experience, ability, and equipment the work requires. The City will approve the request only if satisfied with the proposed subcontractor's record, equipment, experience, and ability. Approval to subcontract shall not:
- a. Relieve the Contractor of any responsibility to carry out the Contract;
 - b. Relieve the Contractor of any obligations or liability under the Contract and the Contractor's bond;
 - c. Create any Contract between the Contracting Agency and the subcontractor; or
 - d. Convey to the subcontractor any rights against the Contracting Agency.
- H. The Contracting Agency will not consider the following as subcontracting:
- e. Purchase of sand, gravel, crushed stone, crushed slag, batched concrete aggregates, ready mix concrete, off-site fabricated structural steel, other off-site fabricated items, and any other materials supplied by established and recognized commercial plants
- I. If City determines that any subcontractor is performing services in an unsatisfactory manner or is not completing the Work in accordance with the requirements of the Contract Documents or is otherwise undesirable or unacceptable, City will by written notice so notify Contractor. Contractor shall then take immediate steps to rectify and correct the situation. If City and Contractor mutually agree such actions are

ineffective or infeasible, Contractor shall terminate such subcontractor.
Subcontracting by subcontractors will be subject to the same regulations.

5.21 WARRANTY OF CONSTRUCTION

Add Section 5.21.D with City Supplemental Conditions:

D. Warranties shall commence upon issuance of Substantial Completion.

Add Section 5.23 with City Supplemental Conditions:

5.23 ADJACENT PROPERTIES AND FACILITIES

A. Contractor shall be responsible for negotiations of any waivers or alternate arrangements required to enable transportation of materials to the site at the Contractor's expense. The Contractor shall provide City with any written agreements as a matter of record only.

B. Maintain conditions of access road to site such that access is not hindered as the result of construction related deterioration.

PART 6 PAYMENTS AND COMPLETION

6.02 SCHEDULE OF VALUES

Add Section 6.02 with City Supplemental Conditions:

Subcontracted Work shall be paid to the Contractor on the basis of Contractor's actual cost of amounts properly paid to such subcontractors. A Schedule of Values shall be submitted for the Work of each subcontractor, as well as suppliers providing materials in excess of \$2,500.00. The total for all progress payments shall not exceed the Contract Sum, as may be adjusted by Change Orders. The General Contractor shall provide a schedule of values for Lump Sum bid items for review and acceptance.

The General Contractor shall be required to submit signed lien waivers by Corporate Office for all parties. The General Contractor shall submit the anticipated cash flow for the project and update monthly.

6.03 APPLICATION FOR PAYMENT

Replace Article B in Section 6.03 with the following City provision:

B. Contractor certifies Subcontractors paid: By submitting an Application for Payment, Contractor is certifying that all Subcontractors have been paid, less earned retainage in accordance with RCW 60.28.011, as their interests appeared in the last preceding certificate of payment. By submitting an Application for Payment, Contractor is recertifying that the representations set forth in section 1.03 are true and correct, to the best of Contractor's knowledge, as of the date of the Application for Payment. Contractor shall submit application for payment on AIA form G702/G703, with modifications made for payment certification. Payment shall be certified by a corporate officer of the Contractor.

Replace Article D In Section 6.03 with the following City provision:

- D. Payment for material delivered to site or stored off-site: If authorized by Owner, the Application for Payment may include request for payment for material delivered to the Project site and suitably stored, or for completed preparatory work. No payment will be made for material stored at an alternate location. The Contractor shall comply with or furnish satisfactory evidence of the following:

Delete items 1 through 8 of Article D of Section 6.03 of Payments and Completion and replace with the following:

- 1 Contractor assumes total responsibility for stored materials: Contractor and its surety assume total responsibility for the stored materials; and
2. Title: Title to all Work and materials covered by an accepted and paid Application For Payment shall pass to the Owner at the time of such payment, free and clear of all liens, claims, security interest, and encumbrances. Passage of title shall not, however, (1) relieve Contractor from any of its duties and responsibilities for the Work or materials, (2) waive any rights of the Owner to insist on full compliance by Contractor with the Contract requirements, or (3) constitute acceptance of the Work or materials

6.04 PROGRESS PAYMENTS

Add Section 6.04.E with City Supplemental Conditions:

E. Taxes.

Unless otherwise required in this Specification, applicable federal, state, city and local taxes shall be included in the submittal as indicated below. The total cost to the City, including all applicable taxes, may be the basis for Contract award determination. As used herein, the term "taxes" shall include any and all taxes, assessments, fees, charges, interest, penalties, and/or fines imposed by applicable laws and regulations in connection with the procurement of goods and/or services hereunder.

1. Federal Excise Tax

The City of Tacoma is exempt from federal excise tax. The City will furnish a Federal Excise Tax Exemption certificate, if required. If the Respondent fails to include applicable tax in its submittal, then Respondent shall be solely responsible for the payment of said tax.

2. State and Local Sales Tax

The City of Tacoma is subject to Washington state sales tax. It is the Respondent's obligation to state the correct sales tax percentage and include the applicable Washington state, city, and local sales tax as a separate line item(s) in the submittal.

3. City of Tacoma Business and Occupation Tax

It is the Respondent's obligation to include City of Tacoma Business and Occupation tax in the unit and/or lump sum prices submitted; it shall not be shown separately on the submittal.

Per Sub-Title 6A of the City of Tacoma Municipal Code, transactions with the City of Tacoma may be subject to the City's Business and Occupation Tax.

It is the responsibility of the Respondent awarded the Contract to register with the City of Tacoma's Tax and License Division, 733 South Market Street, Room 21, Tacoma, WA 98402-3768, telephone (253) 591-5252, website <http://www.cityoftacoma.org/Page.aspx?nid+201>.

4. Any or All Other Taxes

Any or all other taxes are the responsibility of the Respondent unless otherwise required by law.

6.07 SUBSTANTIAL COMPLETION

Add Section 6.07.A with City Supplemental Conditions:

A. The prerequisites for issuance of a Certificate of Substantial Completion by the City are as follows:

1. Submit the final progress payment showing 100% completion for the work being claimed as substantially complete. List any incomplete items of work along with their value and an explanation of why the work is incomplete.
2. Coordinate with the City for changeover of all insurance coverage.
3. Submit all warranties, guarantees, maintenance agreements, and workmanship/warranty bonds as required by the Contract Documents.
4. Deliver all tools, spare parts, "Attic Stock" and other deliverables to the City as required by the Contract Documents.
5. Submit Record Drawings as required by the Contract Documents
6. Perform all work as required to obtain a Certificate of Occupancy.
7. Punch List Procedures
 - i. Prior to Substantial Completion (approximately 10 working days) Contractor provide its own initial Punch List (List of Deficiencies) for the Owner's review. Owner shall review and make edits as they deem appropriate. The List of Deficiencies will be sent back to the Contractor for the Contractor to perform the work. The Contractor must complete the work in a satisfactorily manner before the Owner will accept.

6.09 FINAL COMPLETION, ACCEPTANCE, AND PAYMENT

Add Section 6.09.A with City Supplemental Conditions:

A. Final Completion shall be the same as Physical Completion.

Add Section 6.09.D with City Supplemental Conditions:

D. Prerequisites for Final Acceptance

1. Obtain the City's written approval that all items on the List of Deficiencies as prepared by the Contractor have been completed.
2. Submit consent of Surety. Provide the standard form of the surety company or submit consent using the AIA Document G-707 form.
3. Submit all Record Drawings and Record Specifications.
4. Complete final clean up and repair of items damaged during construction.
5. Reinsertion Procedure
 - i. Upon receipt of the Contractor's Notice that work on the List of Deficiencies has been completed, the City will visit the site to determine if the work has progressed to an acceptable level of quality justifying a final inspection. If Contractor's work is acceptable and complete the Owner shall issue written acceptance of corrections so stated on List of Deficiencies.

PART 7 CHANGES

7.01 CHANGE IN THE WORK

Replace Section 7.01.B with City Supplemental Conditions:

- B. If City desires to order a change in the Work, it may request a written Change Order proposal from Contractor. Contractor shall submit a Change Order proposal within 7 days of the request from City, or within such other period as mutually agreed. Contractor's Change Order proposal shall be full compensation for implementing the proposed change in the Work, including any adjustment in the Contract Sum or Contract Time, and including compensation for all delays in connection with such change in the Work and for any expense or inconvenience, disruption of schedule, or loss of efficiency or productivity occasioned by the change in the Work.

Replace Section 7.01.E with City Supplemental Conditions:

- E. Failure to agree upon terms of Change Order; Final offer and Claims: If Owner and Contractor are unable to reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, Contractor may at any time in writing, request a final offer from Owner. Owner shall provide Contractor with its written response within 14 Days of Contractor's request. Owner may also provide Contractor with a final offer at any time. If Contractor rejects Owner's final offer, or the parties are otherwise unable to reach agreement, Contractor's only remedy shall be to file a Claim as provided in Part 8.

Add Section 7.01.G with City Supplemental Conditions:

G. Change Order Documentation

1. A log will be maintained by the Contractor subject to review and comment by Owner for each of the documents identified in this section leading up to issuances of Change Order. These logs will record transmittals, suspense dates, review stopovers, dates of actions, and other specific pertinent information to track the progress of the subject documents. The Owner reserves the right to dispute any and all entries to which the Contractor shall include in said log.
2. The City reserves the right to include and exclude as many Requests for Proposals and or Change Order Proposals into one Change Order as the City determines is in its best interest.

7.02 CHANGE IN THE CONTRACT SUM

Replace Section 7.02.A.2(b) and (c) with City Supplemental Conditions:

- (b) Content of notice for equitable adjustment; Failure to comply: Contractor shall not be entitled to any adjustment in the Contract Sum for any occurrence of events or costs that occurred more than 2 Days before Contractor's written notice to Owner. The written notice shall set forth, at a minimum, a description of: the event giving rise to the request for an equitable adjustment in the Contract Sum; the nature of the impacts to Contractor and its Subcontractors of any tier, if any; and to the extent possible the amount of the adjustment in Contract Sum requested. Failure to properly give such written notice shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.
- (c) Contractor to provide supplemental information: Within 14 Days of the occurrence of the event giving rise to the request, unless Owner agrees in writing to allow an additional period of time to ascertain more accurate data, Contractor shall supplement the written notice provided in accordance with subparagraph a. above with additional supporting data. Such additional data shall include, at a minimum: the amount of compensation requested, itemized in accordance with the procedure set forth herein; specific facts, circumstances, and analysis that confirms not only that Contractor suffered the damages claimed, but that the damages claimed were actually a result of the act, event, or condition complained of and that the Contract Documents provide entitlement to an equitable adjustment to Contractor for such act, event, or condition; and documentation sufficiently detailed to permit an informed analysis of the request by Owner. When the request for compensation relates to a delay, or other change in Contract Time, Contractor shall demonstrate the impact on the critical path, in accordance with Section 7.03C. Failure to provide such additional information and documentation within the time allowed or within the format required shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.

Replace Section 7.02.B.4 with City Supplemental Condition:

4. Markups on additive and deductive Work: The cost of any additive or deductive changes in the Work shall be calculated as set forth below, except that overhead and profit shall not be included on deductive changes in the Work unless deductive change exceeds \$10,000.
Where a change in the Work involves additive or deductive Work by the same Contractor or Subcontractor, small tools, overhead, profit, bond and insurance markups will apply to the net difference.

Replace Section 7.02.B.7.a(1) with City Supplemental Conditions:

1. Basic wages and benefits: Hourly rates and benefits as stated on the Department of Labor and Industries approved "statement of intent to pay prevailing wages" or a higher amount if approved by the City only if supported by certified payrolls. Direct supervision shall be a reasonable percentage not to exceed 10% of the cost of direct labor. No supervision markup shall be allowed for a working supervisor's hours.

Delete Section 7.02.B.7.a(4) in its entirety.

Replace Section 7.02.B.7.d with City Supplemental Conditions:

Allowance for small tools, expendables & consumable supplies: Small tools consist of tools which cost \$250 or less and are normally furnished by the performing contractor.

The maximum rate for small tools shall not exceed the following:

- A. 1% for Contractor: For Contractor, 1% of direct labor costs.
- B. 2% for Subcontractors: For Subcontractor, 2% if direct labor costs.

Expendables and consumables supplies directly associated with the change in Work must be itemized.

Replace Section 7.02.B.7.f(1)(a) with City Supplemental Conditions, Projects less than \$3 million:

- a. Contractor markup on Contractor Work for Overhead: For Contractor, for any Work actually performed by Contractor's own forces, 10% of the first \$50,000 of the cost, and 4% of the remaining cost, if any.

Replace Section 7.02.B.7.f(1)(b) with City Supplemental Conditions, Projects less than \$3 million:

- b. Subcontractor markup for Subcontractor Work for Overhead: For each Subcontractor (including lower tier subcontractors), for any Work actually performed by its own forces, 12% of the first \$50,000 of the cost, and 4% of the remaining cost, if any.

Replace Section 7.02.B.7.f(1)(c) with City Supplemental Conditions, Projects less than \$3 million:

- c. Contractor markup for Subcontractor Work: For Contractor, for any work performed by its Subcontractor(s) 6% of the first \$50,000 of the amount due each Subcontractor, and 4% of the remaining amount, if any.

Replace Section 7.02.B.7.f(1)(d) with City Supplemental Conditions, Projects less than \$3 million:

- d. Subcontractor markup for lower tier Subcontractor Work: For each Subcontractor, for any Work performed by its Subcontractor(s) of any lower tier, 4% of the first \$50,000 of the amount due the sub-Subcontractor, and 2% of the remaining amount if any.

Replace Section 7.02.B.7.f(1)(e) with City Supplemental Conditions, Projects less than \$3 million:

- e. Basis of cost applicable for markup: The cost to which overhead is to be applied shall be developed in accordance with Section 7.02B 7a. – e.

Replace Section 7.02.B.7.g(1) with City Supplemental Conditions:

1. Contractor / Subcontractor markup for self-performed Work for Profit: For Contractor or Subcontractor of any tier for work performed by their forces, 5% of the cost developed in accordance with Section 7.02B 7a.-e.

Replace Section 7.02.B.7.g(2) with City Supplemental Conditions:

2. Contractor / Subcontractor markup for Work performed at lower tier for Profit: For Contractor or Subcontractor of any tier for work performed by a subcontractor of a lower tier, 5% of the subcontract cost developed in accordance with Section 7.02B 7a – h.

Replace Section 7.02.B.7.h(1) with City Supplemental Conditions:

1. Contractor's liability insurance: The cost of any changes in Contractor's liability insurance arising directly from execution of the Change Order shall not exceed 1%; and

Replace Section 7.02.B.7.h(2) with City Supplemental Conditions:

2. Payment and Performance Bond: The cost of the additional premium for Contractor's bond arising directly from the changed Work shall not exceed 1.5%.

Add Section 7.02C, 7.02.D with City Supplemental Conditions:

All mark-ups per Section 7.02.B.7.f

Add Section 7.02.D with City Supplemental Conditions:

4. Subcontractor and sub-subcontractor proposals to the Contractor for time and material Work shall include all direct costs plus overhead, profit, taxes, bond, and insurance costs, calculated as provided in Section 7.02B.

7.03 CHANGE IN THE CONTRACT TIME

Replace Section 7.03.B.2 with City Supplemental Conditions:

2. Timing and content of Contractor's Notice: Contractor shall not be entitled to an adjustment in the Contract Time for any events that occurred more than 2 Days before Contractor's written notice to Owner. The written notice shall set forth, at a minimum, a description of: the event giving rise to the request for an equitable adjustment in the Contract Time; the nature of the impacts to Contractor and its Subcontractors of any tier, if any; and to the extent possible the amount of the adjustment in Contract Time requested. Failure to properly give such written notice shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.

Replace Section 7.03.B.3 with City Supplemental Conditions:

3. Within 14 days of the occurrence of the event giving rise to the request, unless city agrees in writing to allow an additional period of time to ascertain more accurate data, contractor shall supplement the written notice provided in accordance with subparagraph 7.03.B.2 with additional supporting data. such additional data shall include, at a minimum: the amount of delay claimed, itemized in accordance with the procedure set forth herein; specific facts, circumstances, and analysis that confirms not only that contractor suffered the delay claimed, but that the delay claimed was actually a result of the act, event, or condition complained of, and that the contract documents provide entitlement to an equitable adjustment in contract time for such act, event, or condition; and supporting documentation sufficiently detailed to permit an informed analysis of the request by City. Failure to provide such additional information and documentation within the time allowed or within the format required shall, to the extent city's interests are prejudiced, constitute a waiver of contractor's right to an equitable adjustment.

Replace Section 7.03.D.4.a with City Supplemental Conditions:

- a. Non-productive supervision or labor: cost of Contractor and its crews specifically assigned to the project. Home office cost is not allowed.

Delete section 7.03.D.4.b in its entirety.

Replace Section 7.03.D.4.c with City Supplemental Conditions:

- c. Temporary facilities or equipment rental: cost of temporary facilities or equipment rental extended because of the delay, at invoiced cost, no mark-ups allowed.

Replace Section 7.03.D.4.d with City Supplemental Conditions:

- d. Insurance premiums: cost of insurance by invoice extended because of the delay

Replace Section 7.03.D.e with City Supplemental Conditions:

- e. Overhead: general and administrative overhead in an amount to be agreed upon, but not to exceed 1% of the Contract Award Amount divided by the originally specified Contract Time for each Day of the delay.

Add Section 7.03.E with City Supplemental Conditions:

- E. Notwithstanding any other provision of the Contract Documents, no claim by the Contractor for an equitable adjustment hereunder will be allowed if not asserted within seven (7) days of discovery.

7.04 DELETED OR TERMINATED WORK

Add the following new Section 7.04 with City Supplemental Conditions:

- A. If the Agreement is terminated for convenience in accordance with Section 9.02, or as modified or if any item of Work is deleted in whole or in part, payment will be made for partially completed items mutually agreed or as determined by the City in the proportion that the partially completed Work is to the total item. No claim for damages of any kind or for loss of anticipated profits on deleted or uncompleted work will be allowed because of the termination or deductive Change Order.
- B. If the Agreement is terminated for convenience or parts of the Work are deleted, the Contract Time shall be adjusted as the Parties agree. If the Parties cannot agree, the City shall determine the equitable adjustment for Contract Time.
- C. Acceptable materials ordered by the Contractor or delivered on the Work prior to the date the Work was terminated or deleted by the City, will either be purchased from the Contractor by the City at the actual cost and shall become the property of the City, or the City will reimburse the Contractor for the actual costs connected with returning these materials to the Manufacturers.

D. If Agreement is terminated prior to the Notice to Proceed, no cost will be incurred by either party.

PART 8 CLAIMS AND DISPUTE RESOLUTION

8.01 CLAIMS PROCEDURE

Replace Section 8.01.B with City Supplemental Conditions:

B. Claim filing deadline for Contractor: Contractor shall file its Claim within 30 days from Owner's final offer made in accordance with paragraph 7.01E, or by the date of Substantial Completion, whichever occurs first.

Replace Section 8.01.C.6 with City Supplemental Conditions:

6. Copies of supporting documentation: Copies of any identified documents, inclusive of the Contract Documents, that support the Claim;

Replace Section 8.01.D.1 and 8.01.D.2 with City Supplemental Conditions:

1. Response time for Claim less than \$50,000: If the Claim amount is less than \$50,000, with a decision within 30 Days from the date the Claim is received; or
2. Response time for Claims of \$50,000 or more: If the Claim amount is \$50,000 or more, with a decision within 45 Days from the date the Claim is received, or with notice to Contractor of the date by which it will render its decision. City will then respond with a written decision in such additional time.

Add the following Section 8.01.G with City Supplemental Conditions:

8. Contractor shall fully investigate its subcontractor's claims and process said claim(s) as Contractor's Claim. Any and all claims which do not meet notification requirements shall be considered null and void.

8.02 ARBITRATION

Replace Section 8.02.B with City Supplemental Conditions:

B. Filing of Notice of arbitration: Notice of the demand for arbitration shall be filed with the American Arbitration Association (AAA), in the state where project is located, with a copy provided to the City. The parties shall negotiate or mediate under the Voluntary Construction Mediation Rules of AAA, or mutually acceptable service, before seeking arbitration in accordance with the Construction Industry Arbitration Rules of AAA as follows:

1. Claims for less than \$30,000: Disputes involving \$30,000 or less shall be conducted in accordance with the Northwest Region Expedited Commercial Arbitration Rules; or
2. Claims greater than \$30,000: Disputes over \$30,000 shall be conducted in accordance with the Construction Industry Arbitration Rules of AAA, unless the parties agree to use the expedited rules.

8.03 CLAIMS AUDIT

Add Section 8.03.B with City Supplemental Conditions:

25. Schedules
26. Expediting Records and Information
27. Privilege documentation shall be allowed for all Claims of \$500,000 and over.

8.04 AUDIT

Add the following new Section 8.04.A with City Supplemental Conditions:

- A. At such times as City deems necessary for reasonable cause, Contractor shall permit the City to inspect and audit all pertinent books and records of the Contractor and its subcontractors or other persons or entities that have performed work in connection with or related to the Contractor's Work under this Agreement. The audit may take place up to three years after Completion. The books and records are to be made available at reasonable times in Pierce County, Washington, or at such other reasonable location as City selects. At City's request, Contractor shall supply City with, or shall permit City to make a copy of, any books and records and any portion thereof. Contractor shall ensure that such inspection, audit and copying right is a condition of any Subcontract, agreement or other arrangement under which any person or entity is permitted to perform work in connection with or related to the Work under this Agreement. Any failure of the Contractor to incorporate contract requirements shall be at the expense of the Contractor.

PART 9 TERMINATION OF THE WORK

9.01 TERMINATION BY CITY FOR CAUSE

Add the following Articles to Section 9.01 with City Supplemental Conditions:

- H. If the Contractor defaults, fails, or neglects to carry out the Work in accordance with the Contract Documents, the City may give written notice to cure the problem within seven (7) days. If the problem is not cured or the City determines the effort for correction is inadequate within this time, the City may give a second notice to cure within seven (7) days. If the problem is not cured within this time, the City may issue a notice to terminate for cause, which shall be effective immediately upon issuance.

- I. The City rights to the site are subject to the rights and duties of the surety, if any, that may be obligated under any bond provided in accordance with the Contract Documents.
- J. In a termination situation, the City reserves the right to use any subcontractor, material Manufacturer, fabricator, or any vendor originally contracted by the Contractor or to assign their Contract with the Contractor to the City. The cost of completing the work shall include additional management, design services, legal fees, and other associated costs to complete the project as scheduled.
- K. The Contractor will be terminated for cause if any employee, agent, or representative of the Contractor gives, or offers to give, any gratuity such as a gift or entertainment to an official, employee, officer, or agent of the City.

9.02 TERMINATION BY CITY FOR CONVENIENCE

Add Section 9.02.C with City Supplemental Conditions:

- C. This Contract may be terminated by the City upon fourteen (14) days written notice to the Contractor in the event the City determines it is in the best interest of the City to terminate this project. If such termination occurs, cost incurred by the Contractor for any bid/proposal preparation prior to award of contract is the sole responsibility of the Contractor. The City shall only pay the Contractor for work completed and materials or equipment delivered after Notice to Proceed as previously approved by the City.

PART 10 MISCELLANEOUS PROVISIONS

No provisions were made by the City of Tacoma.

END OF SUPPLEMENTAL CONDITIONS

PART IV

TECHNICAL PROVISIONS

TECHNICAL PROVISIONS

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TECHNICAL PROVISIONS

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DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 11 00 – SUMMARY OF WORK

SECTION 01 11 00 – SUMMARY OF WORK
PART 1 – GENERAL

1.01 THE PROJECT

- A. Project Title: FOSS SHORELINE RESTORATION OUTFALL 230A REPAIR PROJECT, TACOMA, WASHINGTON
- B. The Project:
 - 1. The Project is being implemented by the City of Tacoma (City) to perform slope repair to address the eroding slope cap at the mouth of City Outfall 230A on the Thea Foss and Wheeler-Osgood Waterways.
 - 2. The original Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedial action conducted in 2005 in the portion of remedial area (RA) 8 where Outfall 230A was later constructed included placement of a thick slope cap. Independent of the CERCLA remedial project, in 2022, the City completed construction of a new outfall, Outfall 230A, and reconstructed the surrounding slope cap within this portion of RA 8. The Project primarily consists of excavation of existing material at the mouth of the outfall along the shoreline and import and placement of erosion protection and habitat materials.
- C. Project Location: Outfall 230A is located within RA 8 of the Thea Foss and Wheeler Osgood Waterways Remediation Project in Tacoma, Washington. No address is provided for the actual project location. Refer to the project plans in Appendix A for the site location.
- D. Any prospective Bidder desiring an explanation or interpretation of the Bid Documents shall request the explanation or interpretation in writing by close of business 6 business days preceding the bid opening to allow a written reply to reach all prospective Bidders before the submission of their Bids.

1.02 SUMMARY OF WORK INCLUDED IN THE CONTRACT

- A. The following summary of work is presented for the convenience of the Contractor and is not intended to be comprehensive or indicate the Contractor's sequence of activity unless otherwise specified elsewhere in the Contract Documents. The Contractor shall be responsible for

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 11 00 – SUMMARY OF WORK

completing all work elements described in the Contract Documents. The Contract Drawings are included as Appendix A.

- B. The Work includes, but is not limited to, the following:
3. Preparing Project submittals and implementation of Project health and safety related Work.
 4. Establishing the Contractor barge preparation, access and staging and environmental controls and Best Management Practices (BMPs).
 5. Constructing flow bypass for the outfall during excavation and repair work.
 6. Excavating existing slope cap materials and native soil to specified depth within the limits of construction (LOC) as shown on the Contract Drawings including remaining trench stabilization material, streambed river cobbles and sediment. Temporarily storing of excavated materials on the barge, separate from new material being placed within the limits of construction area until proper disposal, as shown on Contract Drawings.
 7. Performing physical testing of material to be imported per Project Specifications to ensure it meets the requirements of the Contract.
 8. Importing, placing and grading the following material types to the identified limits, grades, contours, thicknesses, slopes and tolerances (refer to Specification 31 00 00 – Earthwork for material specifications):
 - a. Geotextile Fabric
 - b. Heavy loose Riprap
 - c. Quarry Spalls filter material
 - d. Streambed Cobbles

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 11 00 – SUMMARY OF WORK

9. Performing water quality monitoring during construction and maintain a debris boom with a minimum 3-foot curtain during all work.
10. Profiling excavated materials for disposal using analytical data provided in Appendix B and Appendix E and transporting of excavated materials to an approved subtitle D facility.
11. Restoring areas disturbed due to construction to pre-construction conditions or better, unless otherwise specified in the Contract Documents.
12. Performing post-construction as-built survey to document as-built grades and site features.
13. Performing final site cleanup including removal of temporary site controls and garbage (if any) from the site.

1.03 EXISTING CONDITIONS

- A. The existing conditions shown on the Contract Drawings are based on as-built information shown on the City of Tacoma Environmental Services Department March 2023 Jefferson Avenue & Hood Street Surface Water Interceptor Record Drawings.
- B. Environmental Conditions:
 1. The Project site is the location of a slope capped area that was constructed in 2005 as part of the Thea Foss and Wheeler-Osgood Waterways Remediation Project. The 2023 *Thea Foss and Wheeler-Osgood Waterways Remediation Project, Year 17 Monitoring Long-Term Monitoring Plan Event Report*. Prepared by City of Tacoma and Floyd|Snider. Dated 23 January, 2024.
 2. Contaminated material confined within the slope cap may be encountered during excavation activities that are expected to extend below the existing slope cap. To pre-characterize the material for disposal, a combination of new surface samples of the existing cap material (Appendix E) and existing data from past sampling of the slope surface and underlying sediments (Appendix B) will be provided to the Contractor. The Contractor will use these data to establish a profile for the material and identify a proposed landfill disposal option for City and USEPA approval.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 11 00 – SUMMARY OF WORK

1.04 TIME FOR COMPLETION

- A. The Contractor shall generally work normal business hours Monday through Friday as described in Section 01 14 00, *Work Restrictions* unless approved by the City in writing. Work on weekends and outside of normal business hours is anticipated based on low tide windows.
- B. Substantial Completion: The Project shall be substantially completed by September 30, 2024. See Section 01 77 00 –Closeout Procedures for requirements for Substantial Completion.
- C. Final Completion: The Contractor shall achieve Final Completion 30 calendar days after the date of Substantial Completion. See Section 01 77 00 – Closeout Procedures for requirements for Final Completion.

1.05 ENVIRONMENTAL DOCUMENTATION OF SUBSTANTIVE COMPLIANCE, LICENSES AND FEES

- A. Remedial actions at a facility pursuant to a consent decree are not required to obtain permits; rather, on such projects, government agencies review projects for compliance with the substantive provisions of governing regulations. The City has received preliminary concurrence that the substantive requirements of all pertinent regulating agencies' provisions have been met by the project, and that permits to authorize the work are not required. Appendix C contains environmental documentation of substantive compliance from the City of Tacoma and the USEPA. Prior to bidding, the Contractor shall review and become familiar with the Appendix C documents and should bid and construct the project in accordance with these conditions. In the event that the Appendix C documents are pending at the time of bidding, the City will give the documents to the selected Contractor for review as soon as they are available. The Contractor will be required to meet all conditions specified in these Appendix C documents, which are listed below:
 - 1. EPA's Clean Water Act 404 ARAR Memo: Substantive Water Quality Requirements for the Outfall 230A Slope Cap Repair Plan Project.
 - 2. City of Tacoma Outfall 230A Slope Cap Repair Project – Substantive Equivalency Memorandum, January 31, 2024, indicating the City Planning and Development Services concurrence of substantive compliance with local site development requirements.
- B. Any fines resulting from the Contractor's inability to comply with the substantive requirements and conditions shall be the responsibility of

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 11 00 – SUMMARY OF WORK

the Contractor. Any such fines or penalties incurred by the City, as permittee, which are due to the actions of the Contractor, shall be withheld from progress payments until the fines/penalties are paid by the Contractor to the City. If the fines/penalties attributable to the Contractor are not paid by Final Completion, the City will reduce the Contract Sum by the amount of the fines owed to the City.

- C. Licenses: Contractor shall obtain all licenses associated with construction activities, such as business licenses, contractors' licenses and vehicle and equipment licenses. All costs for licenses shall be included in the Contract Sum.
- D. Test and Inspection Fees: Contractor shall pay all fees charged by authorities having jurisdiction and from serving utility companies and agencies, for tests and inspections conducted by those authorities, companies and agencies (if applicable). The City shall reimburse Contractor for actual amount of such fees, without mark-up. These fees must be substantiated and required for performing the Work. The Contractor shall notify the City and obtain approval for these fees prior to paying them to receive reimbursement.

1.06 SUBMITTALS

- A. For the City's records, submit copies of licenses, certifications, inspection reports, receipts for fee payments, and similar documents, correspondence, and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work. Maintain copies at Project Site.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 14 00 – WORK RESTRICTIONS

SECTION 01 14 00 – WORK RESTRICTIONS
PART 1 – GENERAL

1.01 SUMMARY

- A. This section includes requirements and restrictions related to the Work activities performed at the Project Site, including tidal limitations, regulatory work window, use of premises, access corridors, work hours and protection of existing utilities. Other restrictions imposed by federal, state and local substantive requirements shall also apply.

1.02 TIDAL LIMITATIONS

- A. Project repair work will be completed during low-tide conditions (below the Mean Lower Low Water elevation indicated in the Contract Documents) to provide improved visibility. Nearly all of the work will be conducted below the water line.
- B. Based on predicted tides in June through September 2024 for National Oceanic and Atmospheric Association (NOAA) for Tacoma, Washington Tidal Station Number 9446484 (<https://tidesandcurrents.noaa.gov/noaatidepredictions.html?id=9446484>), a limited number of days are available to the Contractor to place material under low tide conditions within the Project area.
- C. A barge will be used for water-side site access, excavation stockpiling and material staging. The contractor will submit a plan as part of the CQCP for how to minimize the slope cap disturbance from barge spuds during construction to protect the integrity of the slope cap and contain the underlying sediments.

1.03 REGULATORY WORK WINDOW

- A. The regulatory allowed work window for work performed below the HTL is from July 15, 2024, to February 15, 2025. No construction work shall be permitted outside this work window.

1.04 WORK HOURS AND RESTRICTIONS

- A. All work activities will generally be performed during Normal Work Hours from 7:00a.m. to 7:00 p.m., Monday through Friday, excluding weekends and holidays, or as otherwise approved in advance by the City. Due to tidal limitations, it is anticipated that work on weekends and holidays may be necessary. The Contractor shall provide a notice to the City to obtain approval for weekends and holidays work as described below. All costs for working weekends and holidays, as necessary, shall be included in the contract price.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 14 00 – WORK RESTRICTIONS

- B. Normal Work Hours are subject to availability of adequate daylight to safely perform the Work.
- C. Work hours and noise control established by any ordinance, law, or regulations will supersede the requirements of this Section.
- D. Contractor shall conduct all Work between sunrise and sunset when there is adequate light so that the Work can be conducted safely and the City can effectively observe the Work. For work allowed to be performed outside of daylight hours, the Contractor shall furnish adequate lighting. Contractor shall provide adequate lighting at all times.
- E. Contractor may conduct regular equipment maintenance (e.g., inspection, adjustments, lubrication) and minor repairs during hours outside of the Normal Work Hours defined in this Section in accordance with the approved Contractor-provided SPCC Plan.
- F. Any variation from Normal Work Hours or work holidays will be subject to approval by the City; such approval will not be unreasonably withheld. Contractor shall submit notice to the City no less than 7 days and confirm 24 hours prior to requesting any necessary variation from Normal Work Hours, to allow for adequate review and coordination of staff. Contractor shall provide written notice to the City which shall include Work activities to be conducted outside of Normal Work Hours and the hours and days that those activities will be conducted.
- G. Emergency repairs of equipment outside of Normal Work Hours may be performed without the 7-day notice, but the Contractor shall verbally notify the City prior to such emergency maintenance and shall follow-up with a written notice to document the reason for the change.

1.05 CONTRACTOR'S USE OF PROJECT SITE

- A. Contractor shall confine all operations, including the storage of materials, to the designated Work areas of the Project Site as shown in the Contract Drawings, or as otherwise approved in writing by the City.
- B. Contractor shall be responsible for arranging for, and paying the costs of any necessary off-site storage.
- C. Contractor's use of the premises shall be limited to the Work being performed in accordance with the Contract Documents.
- D. Contractor shall not occupy, cross, or otherwise use any of the Work areas until applicable authorizations and permissions have been obtained from regulating agencies.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 14 00 – WORK RESTRICTIONS

- E. Contractor shall be responsible for the security and safety of Contractor's equipment, facilities, and Work areas. The City shall not be liable for loss or damage of Contractor's tools, vehicles, equipment, or materials, whatever the cause.
- F. Contractor shall be responsible for any damage to roadways, facilities, utilities, trees or structures on or adjacent to the Site due to negligence, carelessness, actions, errors or omissions on the part of the Contractor.

1.06 ACCESS CORRIDORS

- A. The access to the Site will be from the water as no access is available from upland. A barge will be used to approach and conduct the repair activities. The only work that is permitted in the upland area of the site will be for stormwater bypass activities. Contractor shall provide access on barge for USEPA, Design or City representation for visual inspection of work.

1.07 THE CITY'S USE OF PROJECT SITE

- A. The Contractor shall provide the City and their representatives, regulatory agency representatives and others, as designated by the City, access to the Work in progress.
 - 1. The City and their representatives shall be authorized to enter the Project Site to observe and document the Work activities and coordinate communications and activities.
 - 2. The number of the City and regulatory agency personnel shall be determined at the City's discretion depending on the type and sensitivity of the Work being performed.
- B. Contractor shall provide the City all reasonable access to the Work to photograph, document, measure, sample, or other activities as required by the City.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 29 40 – APPLICATIONS FOR PAYMENT

SECTION 01 29 40 – APPLICATIONS FOR PAYMENT
PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes:
1. Schedule of Values.
 2. Procedures for preparation and submittal of Applications for Payment.

1.02 FORMAT

- A. Develop satisfactory spreadsheet-type form generated from the Progress Schedule.
- B. When Change Orders are executed, add Change Orders at end of listing of scheduled activities:
1. Identify change order by number and description.
 2. Provide cost of change order in appropriate column.
- C. After completing, submit Application for Payment.
- D. City will review application for accuracy.
- E. Execute application with signature of responsible officer of Contractor.

1.03 SUBSTANTIATING DATA

- A. Provide Substantiating Data with cover letter identifying:
1. City's specification number and project number.
 2. Project name and location.
 3. Contractor's name and address.
 4. Application number and date of submittal.
 5. Detailed list of enclosures.
 6. For stored products with item number and identification on application, description of specific material, and proof of insurance coverage for offsite stored products.
 7. Submit certified payroll.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 29 40 – APPLICATIONS FOR PAYMENT

1.04 SUBMITTALS

- A. Application for Payment and Substantiating Data with cover letter: Submit one (1) hard copy.

1.05 SCHEDULE OF VALUES

- A. Submit for City review and acceptance, in conjunction with the Baseline Schedule, a Schedule of Values per Documents 00 72 00 and 00 73 00 identifying costs of all construction activities as generated by the schedule. Equate the aggregate of these costs to the Contract Sum.
- B. Submit corrected schedule of values within 5 calendar days upon receipt of reviewed Schedule of Values.
- C. Provide certified payroll statements with application for payment.
- D. Additional breakdown requirements:
 - 1. For items on which progress payments will be requested for materials or equipment purchased/fabricated/delivered but not yet installed, show "initial value" for payment request and "value added" for subsequent stage(s) of completion on that unit of Work. Identify materials stored on- site or off-site.
 - 2. For each line item of installed value exceeding 10 percent of the Contract Sum, show breakdown by major products or plant operations under each item for ease of review and confirmation of Work completed. Identify material and labor as separate items.
 - 3. Identify each administrative and procedural requirement as a separate line item:
 - a. Mobilization.
 - b. Administration Costs.
 - c. Construction schedule.
 - d. Bonds and insurance.
 - e. Demolition and repair.
 - f. Cleanup.
 - g. Record Documents.
 - h. Special warranties.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 29 40 – APPLICATIONS FOR PAYMENT

- i. Temporary facilities.
4. The minimum value shall be no less than 2-percent of the Contract Sum for each requirement listed:
 - a. Cleanup.
 - b. Record Documents.
 - c. Operation and Maintenance Manuals.
5. Round figures to nearest dollar amount.
6. Coordinate items of the Schedule of Values so that there is a corresponding item in the Construction Progress Schedule. If activities are added or removed from the Progress Schedule, revise the Schedule of Values and resubmit.

1.06 PAYMENT APPLICATION

A. General:

1. Submit itemized payment request as required in Documents 00 72 00 and 00 73 00 together with Schedule of Values and other submittals as listed herein or elsewhere in the Contract Document.
2. Except as otherwise indicated, sequence of progress payments is to be regular, and each must be consistent with previous applications and payments; it is recognized that certain applications involve extra requirements, including initial application, application at times of Substantial Completion, and final payment application.
3. By submitting an Application for Payment, Contractor is certifying that to the best of Contractor's knowledge, information, and belief, the work covered by each Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by him for work for which previous Applications for Payment were issued and payments received from the City, and that current payment is now due.
4. Contractor certifying Subcontractor payment: In accordance with Documents 00 72 00 and 00 73 00.

- B. Submit progress payment requests at progress meetings.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 29 40 – APPLICATIONS FOR PAYMENT

- C. Each Application for Payment shall be consistent with previous applications and payments as certified and paid for by City:
 - 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements as set forth in other Division 01 Sections.
- D. Payment Application Times: The City at the pre-construction meeting will establish the date for each progress payment and the period of construction Work covered by each Application for Payment.
- E. Payment Application Forms: In accordance with Documents 00 72 00 and 00 73 00, use American Institute of Architects (AIA) Documents G702 & G703.

Provide with continuation sheets for the schedule of values, and place the following paragraphs at the end for signatures:

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Document, that all amounts have been paid by the contractor to employees, subcontractors, suppliers, etc. for Work for which previous Certificates for Payment were issued and payments received from the City, and that current payments shown herein is now due. (Contracting Firm)

By _____ Date _____
(SIGN IN INK)

- F. Application Preparation: Complete every entry on form. Notarize and execute by an Officer of the Company authorized to sign legal documents on behalf of Contractor. City will return incomplete applications without action:
 - 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 - 2. Include amounts of Change Orders issued before last day of construction period covered by application.
- G. Transmittal: Electronic signed and notarized each Application for Payment to City by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments, if required:
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 29 40 – APPLICATIONS FOR PAYMENT

- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Statement of Intent to pay prevailing wages.
 3. Schedule of Values.
 4. Contractor's Construction Schedule (preliminary if not final).
 5. Products list.
 6. Schedule of unit prices.
 7. Submittals Schedule (preliminary if not final).
 8. List of Contractor's staff assignments.
 9. List of Contractor's principal suppliers and subcontractors.
 10. Copies of authorizations and licenses from City for performance of the Work.
 11. Initial progress report.
 12. Report of preconstruction conference.
 13. Certificates of insurance and insurance policies.
 14. Performance and payment bonds.
 15. Data needed to acquire City's insurance.
 16. Other documents as may be required in the Contract Documents.
- I. Construction Schedule Update: Submit with applications for payment a revised updated project CPM schedule for evaluation and measurement of actual work-in-place with said applications for payment:
1. Application for Payment at Substantial Completion: In accordance with Documents 00 72 00 and 00 73 00.
 2. Final Payment Application: In accordance with Documents 00 72 00 and 00 73 00.
- J. Notarization and Signed Receipts: Contractor's Affidavit:
1. After the first request for payment, all copies of each subsequent request shall be accompanied by Contractor's notarized original signature with the statement that all subcontractors and suppliers have been paid to date as their interests appeared in the last payment received (less earned retainage applicable to subcontractors). And shall also be accompanied by a signed receipt from the Principal

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 29 40 – APPLICATIONS FOR PAYMENT

Subcontractors and Suppliers stating that all sub-subcontractors, suppliers, wages, fringes, and taxes arising out of such subcontract have been paid in full as their interest appeared in the last payment received. Any amounts withheld from any subcontractor's or supplier's payment due to lack of performance, or other reason, shall be fully documented with the statement, indicating the amount and justification of payment(s) withheld.

2. No application for payment by the Contractor shall be processed unless accompanied by both the affidavit and the receipts.

1.07 PAYMENT FOR STORED MATERIAL

- A. Payment for stored items will be subject to the following:
 1. On-Site Materials: Progress payments shall be made for permanent materials and equipment to be incorporated in the Work and properly protected and stored on the project site with invoices from the original supplier provided to substantiate the value.
 2. Off-Site Materials: No payment will be made for materials stored off site, unless otherwise allowed in the General or Supplementary Conditions.
- B. Stored materials items may be included in monthly application for payment only after drawing and data submittals, if any are required, have been completed per Contract Documents. A maximum of 90 percent will be paid for materials stored.
- C. Partial payment for materials and equipment in advance of installation shall not constitute acceptance thereof and will not relieve Contractor of full responsibility for condition and subsequent acceptance by the City. Faulty materials discovered will be rejected even though partial payment may have been made.

1.08 FORCE ACCOUNT

- A. The City will indicate to the Contractor when Work is to be performed under Force Account:
 1. Force account work administered by the Contractor shall be consistent with the requirements of the Contract Documents.
 2. Prior to performing Force Account Work, the Contractor shall submit an equipment list containing equipment type, horsepower, attachments, etc.
- B. Payment for Force Account Work shall be agreed to in writing by the City and Contractor prior to performance of the Force Account Work.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 29 40 – APPLICATIONS FOR PAYMENT

1.09 OVERTIME

- A. Overtime, double shifts and longer than normal shifts will not be considered reason or justification for extra compensation, unless specifically approved in advance and in writing by the City.

1.10 SUBSTANTIATING DATA

- A. When City requires substantiating information, submit data in a timely manner justifying line item amounts in question.

1.11 CONSENT OF SURETY

- A. Prior to Final Acceptance, Contractor shall submit Consent of Surety from Contractor's Bonding Agency.

PART 2 – PRODUCTS – (NOT USED)

PART 3 – EXECUTION – (NOT USED)

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION

SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION
PART 1 – GENERAL

1.01 PROJECT SUPERVISION

A. Contractor's Supervision

1. The Contractor shall provide the services of a full-time, experienced construction field superintendent who shall be assigned to the job during the course of the Work.
 - a. Construction field superintendent shall be experienced in placement and grading of material, and implementing construction projects in the intertidal/shoreline areas.
 - b. The person designated as construction field superintendent shall have direct charge of the work and shall be authorized to accept and execute all orders and directions issued by the City.
 - c. The construction field superintendent shall be readily available during normal work hours for consultation with the City and be physically on the Project Site during Site activities.
 - d. The construction field superintendent shall not be removed or replaced during the entire course of the contract work without the written approval of the City.
2. The Contractor shall manage the Project. The Contractor shall inform the City with information throughout the work so that they can make informed and effective decisions.
3. Unprofessional behavior of any kind by contractor and subcontractor personnel is unacceptable and will not be tolerated on this Project.
 - a. The City will direct the Contractor to immediately remove any contractor or subcontractor personnel from the Project, for the duration of the Project, that exhibit unprofessional behavior to the City and their representatives, regulatory agency personnel or general public, property owner or property tenant and replace with competent personnel that are acceptable to the City.
 - b. Upon notification by the City, the Contractor's failure to immediately address and correct any displays of

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION

unprofessional behavior by its personnel or by subcontractor personnel, or to remove personnel exhibiting such behavior when directed to do so by the City is grounds for termination of the contract for cause.

- B. The City's Supervision
 - 1. The City's Project/Construction Manager or the Engineer, or their designee will represent the City on the Project Site.
 - 2. City's Construction Manager will be responsible for communications with the Contractor and City's field inspector will provide construction oversight.

1.02 MEETINGS

The Contractor's Project Manager and/or Project Superintendent shall attend, at a minimum, the following meetings with the City and/or the Engineer:

- A. Pre-construction Meeting:
 - 1. Following the award, the City will notify the selected bidder of the time and date of a preconstruction meeting. The pre-construction meeting will be conducted in Tacoma and may include a site visit to Project Site. The following is the requested attendee list and suggested agenda:
 - a. The City:
 - 1) The City Construction Manager
 - 2) The City Project Manager
 - 3) The City's Engineer
 - 4) The City's Inspection Team
 - b. The Contractor:
 - 1) Project Manager
 - 2) Superintendent
 - 3) Contract Administrator (if required)
 - 4) Major Subcontractors (as required)

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION

- 5) Major Suppliers (as required)
- c. Other representatives as determined by the City.
- d. Final agenda for pre-construction meeting will be developed at later date (prior to the meeting). The following presents the suggested Agenda:
 - 1) Communications and routing
 - 2) Execution of the Contract
 - 3) Discussion of the General Conditions
 - 4) Discussion of the Special Conditions
 - 5) Change Order Process
 - 6) Terms and Conditions of Payment
 - 7) Discussion of the Project Elements
 - 8) Use of the Project Site (work and staging areas)
 - 9) Temporary facilities and controls (security, TESC, and environmental)
 - 10) Work Restrictions
 - 11) Pre-Construction Submittals
 - 12) Contractor's Construction Schedule
 - 13) Topics requested by the City, Contractor, or the Engineer
 - 14) Site visit
 - 15) Other issues, if any

B. Special Meetings:

Special meetings may be held at the City's request when a problem or deficiency is present or likely to occur. The purpose of these meetings will be to define and discuss a problem or recurring work deficiency, review alternative solutions, and identify a plan to efficiently and effectively resolve the problem or deficiency. Special meetings may also be held if regulatory agencies request meetings to discuss conditions and substantive requirements or other regulatory requirements.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION

1. Contractor's Project Manager and/or Project Superintendent shall attend special meetings.
 2. Contractor's Project Manager and/or Project Superintendent shall attend other meetings at the City's request to coordinate Contractor's activities with related work being conducted by the City.
 3. Contractor's Project Manager and/or Project Superintendent's attendance at off-site meetings with regulatory agencies or other parties shall be arranged as necessary. Contractor shall participate in off-site meetings at no additional cost to the City.
- C. Health and Safety Meetings:
1. Contractor shall conduct health and safety meetings for Contractor personnel as required by Contractor's health and safety plan, including but not limited to daily tailgate safety meetings. The City and/or Engineer may attend Contractor's health and safety meetings, as needed, to be aware of work conditions or health and safety concerns that could affect the City or the Engineer or the coordination or execution of the Work.

1.03 NOTIFICATION POINTS

- A. The Contractor shall notify the City at all milestone points prior to proceeding further to allow inspection of the Contractor's Work progress. The City or the Engineer may request additional Notification points. Milestone points include, but are not limited to, the following:
1. Following installation of temporary environmental controls and survey control.
 2. Prior to importing heavy loose rip rap, quarry spalls filter material and streambed river cobbles from source.
 3. Prior to and following the placement of all material to the requirements of design.
 4. Following final site cleanup activities, and temporary controls removal.

1.04 SUBMITTALS

- A. Project Schedule: The Contractor shall submit a Preliminary Project Schedule in accordance with the submittal timing requirements identified in Section 01 33 00 – Submittal Procedures. The schedule shall include all critical path items. The schedule shall be used to evaluate progress of

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION

work based on the Pay Items. The schedule shall show the Contractor's planned order and interdependence of activities, and sequence of work. The schedule shall be updated weekly or as often as requested by the City. The Project Schedule shall display the following information, at a minimum:

1. Date of Notice to Proceed;
 2. Durations, starts and finishes of installation of temporary construction facilities and environmental controls, surveying, site preparation activities and all other support activities necessary for material placement Work;
 3. Durations, starts and finishes of material (heavy loose rip rap, quarry spalls filter material, and streambed cobbles) import and placement activities;
 4. Interrelationships and dependence of activities;
 5. Planned vs. actual status for each activity;
 6. Preliminary punch list;
 7. Substantial completion;
 8. Punch list;
 9. Final inspection; and
 10. Final completion.
- B. Daily Construction Reports: The Contractor daily construction reports shall contain description of all work performed during that day, names of Contractor personnel, equipment on site and hours worked, volume of material imported and placed that day and to date, volume of debris and trash exported that day and to date, downtime and delays to the operations, safety issues/concerns, other relevant comments concerning the conduct of the operation, and the signature of the Contractor's Superintendent. The daily construction reports shall include results of inspections, surveys and monitoring activities.
- C. Project Management and Coordination Plan: Submit Project Management and Coordination Plan in accordance with the submittal timing requirements identified in Section 01 33 00 – Submittal Procedures. The plan shall identify following:
1. Resume of Project Superintendent(s).

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION

2. Identification of key personnel and their contact information. Contractor shall also identify their organization's administrator on the list.
3. List of major sub-contractors and their key personnel's contact information.
4. Detailed project staffing plan showing staffing levels for each task and phase of Work.
5. List of major Equipment, Systems, and Materials.
6. List of permits and approvals to be obtained by Contractor.

1.05 CONSTRUCTION SCHEDULE REGARDING SUBMITTALS

- A. The Contractor is hereby notified that the City will not defer liquidated damages or waive specified requirements due to project delays resulting from Contractor actions or inaction (including Contractor insufficient planning) or other causes, including but not limited to:
 1. Contractor's late or inadequately packaged submittals, or submittals that require more than two City reviews before approval by the City.
 2. The Contractor shall specifically note that requirements for import soil require the Contractor to identify and test multiple materials from multiple suppliers to obtain material that meets the specifications. The Contractor shall include material testing as line items in the project schedule.

1.06 DIRECTION FROM CITY OF TACOMA

- A. All direction regarding the Project shall be obtained from the City.

PART 2 – PRODUCTS – (NOT USED)

PART 3 – EXECUTION – (NOT USED)

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 32 20 – WEB BASED CONSTRUCTION DOCUMENT MANAGEMENT

SECTION 01 32 20 – WEB BASED CONSTRUCTION DOCUMENT MANAGEMENT
PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. This Section specifies requirements for web-based construction document management.

1.02 REQUIREMENTS

- A. The City, Engineer, and Contractor shall utilize e-Builder® ASP software (e-Builder) and protocols as the primary means for submission and tracking of data and documents (unless specified otherwise in this Section) throughout the duration of the Contract. Certain documents (such as those requiring original signatures, product samples and large format documents) will require hard-copy submittal instead. This specification section describes document submittal procedures and requirements for e-Builder submittal requirements only. Refer to Section 01 33 0 - Submittal Procedures which describes general submittal procedures and submittal content requirements:

1. e-Builder is a web-based electronic media site hosted by Trimble, Inc.
2. e-Builder is paid for by the City. Access to the web site will be by individuals who are licensed users.
3. Access to the e-Builder project will be made available by the City for up to a total of four (4) licensed user accounts for Contractor's personnel at no cost. The joint use of this system is to facilitate electronic exchange of information, automation of key processes, and overall management of Contract Documentation.
4. The joint use of this system is to facilitate electronic exchange of information, automation of key processes, and overall management of Contract Documentation.
5. e-Builder shall be the primary means of project information submission and management.

- B. User Access Limitations:

1. The City will control the Contractor's access to e-Builder by allowing access and assigning user profiles to accepted Contractor personnel. User profiles will define levels of access into the system; determine assigned function based authorizations and user privileges. The Contractor may choose to provide subcontractors and suppliers access to e-Builder through the Contractor's accounts. Entry of information exchanged and transferred between the Contractor and its

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 32 20 – WEB BASED CONSTRUCTION DOCUMENT MANAGEMENT

subcontractors and suppliers on e-Builder shall be the responsibility of the Contractor.

2. Only entities with a direct contract with the City will be allowed to be an authorized user. The Engineer reserves the right to perform a security check on all potential users.

C. Joint Ownership of Data:

1. Data entered in a collaborative mode (entered with the intent to share as determined by permissions and workflows within the e-Builder system) by the City, Engineer, and the Contractor will be jointly owned. The use of CAD files, processes or design information distributed in this system is intended only for the project specified herein. **DO NOT POST PRIVATE OR YOUR COMPANY CONFIDENTIAL ITEMS IN THE DATABASE!**
2. The City may, at the City's discretion, provide electronic copies of CAD Drawings of the Contract Drawings for Contractor's use in preparing submittal drawings. The Contractor must complete and submit the indemnification form for City approval before electronic files will be released. Contractor shall be responsible for distributing copies of CAD drawings to subcontractors for use in submittal drawings. Contractor shall not release any drawings to subcontractors without first receiving and forwarding a copy of the completed release and indemnification paperwork signed by the subcontractor to the City. Release form will be provided upon request by Contractor to use City issued CAD drawings. City makes no representations as to the accuracy or completeness of CAD Drawings as they relate to the Contract Drawings.

D. Automated System Notification and Audit Log Tracking:

1. Review comments made (or lack thereof) by the City on Contractor submitted documentation shall not relieve the Contractor from compliance with requirements of the Contract Documents. The Contractor is responsible for managing, tracking, and documenting the Work to comply with the requirements of the Contract Documents. City's acceptance via automated system notifications or audit logs extends only to the face value of the submitted documentation and does not constitute validation of the Contractor's submitted information.

E. Computer Requirements:

1. The Contractor shall use computer hardware and software that meets the requirements of the e-Builder system as recommended by Trimble, Inc. to access and utilize e-Builder. As recommendations are modified

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 32 20 – WEB BASED CONSTRUCTION DOCUMENT MANAGEMENT

by e- Builder, the Contractor will upgrade their system(s) to meet or exceed the recommendations. Upgrading of the Contractor's computer systems will not be justification for a cost or time modification to the Contract.

2. The Contractor shall ensure that connectivity to the e-Builder system is accomplished through DSL, cable, T-1 or wireless communications systems. The City will not be liable for any delays associated from the usage of e-Builder including, but not limited to slow response time, down time periods, connectivity problems, or loss of information. The Contractor will ensure that connectivity to the e-Builder system meets the minimum requirements described in this Section. Under no circumstances shall the usage of the e-Builder be grounds for a time extension or cost adjustment to the contract.
3. The e-Builder mobile application is available on the iOS and Android platforms only.

F. Contractor Responsibility:

1. The Contractor shall be responsible for the validity of their information placed in e-Builder and for the abilities of their personnel.
2. Accepted users shall be knowledgeable in the use of computers, including Internet Browsers, email programs, CAD drawing applications, Microsoft Office Suite, and Adobe Portable Document Format (PDF) document distribution program.
3. The Contractor shall utilize the existing forms in e-Builder to the maximum extent possible. If a form does not exist in e-Builder the Contractor must include a form of their own or provided by the Engineer as an attachment to a submittal. City may create an e-Builder form based on Contractor request.
4. Adobe PDF documents will be created through electronic conversion rather than optically scanned whenever possible. The Contractor is responsible for the training of their personnel in the use of e-Builder (outside what is provided by the City) and the other programs indicated above as needed. e-Builder may be contacted directly to provide training as needed at proposer's cost.

G. Documents that shall be transmitted and otherwise processed utilizing the e- Builder system shall include, but not be limited to the following:

1. Construction Correspondence
2. Submittals

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 32 20 – WEB BASED CONSTRUCTION DOCUMENT MANAGEMENT

3. Requests for Information and responses
4. Change Order Requests
5. Meeting Minutes and Agendas

1.03 SUBMITTALS

- A. Establish a list of all submittals in accordance with Section 01 33 00 - Submittal Procedures, and identify which submittals are anticipated to be submitted through e-Builder and which submittals in paper form only.

1.04 TRAINING & SUPPORT

- A. One group training session scheduled by the City will be provided for the Contractor at an City training facility. The training session duration is generally 1 hour.
- B. Companies may also obtain group training from e-Builder at their own expense. Contact e-Builder for availability and cost.
- C. e-Builder will provide on-going support through on-line help files and technical support available at support@e-builder.net or 1-888-288-5717.

PART 2 – PRODUCTS

2.01 DESCRIPTION

- A. e-Builder project management application (no equal) provided by e-Builder, Inc. at: <https://assetlifecycle.trimble.com/en/products/software/e-builder> .

PART 3 – EXECUTION

3.01 UTILIZATION

- A. e-Builder shall be utilized in connection with all document and information management required by these Contract Documents otherwise in the Specifications.
- B. Track and send notifications for all documents requiring City input (such as submittals, RFIs and change orders) using the e-Builder system. In cases requiring hard-copy submittal, also submit the submittal cover (or transmittal cover sheet) sheet simultaneously through e-Builder.

3.02 RECORD KEEPING

- A. Except for paper documents which require original signatures or large format documents (greater than 11 x 17 inches) and photographic

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 32 20 – WEB BASED CONSTRUCTION DOCUMENT MANAGEMENT

documentation, all documents shall be submitted by transmission solely in electronic form to the e-Builder web site by licensed users, except as noted otherwise:

1. The City and their representatives and the Contractor shall respond to documents received in electronic form through the web site, and consider them as if received in paper document form.
2. The City and their representatives and the Contractor reserves the right to and shall reply or respond by transmissions in electronic form on the web site to documents actually received in paper document form.
3. The City and their representatives and the Contractor reserves the right to and shall copy any paper document into electronic form and make same available on the web site.
4. Paper documents with original signature(s) shall be submitted for certain key forms. Once received, reviewed and otherwise completed, the City will scan and upload these signed forms to e-Builder. The following are some but not all of the paper documents which require original signature:
 - a. Contract.
 - b. Change Orders.
 - c. Application & Certificates for Payment.

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 33 00 – SUBMITTAL PROCEDURES

SECTION 01 33 00 – SUBMITTAL PROCEDURES
PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. This Section specifies general and procedural requirements for submittals required for performance of the Work.
- B. Insofar as practical, and unless specifically noted otherwise, the Contractor, City and Engineer will utilize the City’s web-based construction document management system (e-Builder) to process submittals.
- C. Additional requirements for administrative submittals are provided in other Sections of the Contract Documents. Such submittals include, but are not limited to:
 - 1. Permits.
 - 2. Applications for Payment.
 - 3. Contractor’s Construction Progress Schedule and Progress Schedule updates.
 - 4. Guarantees.
 - 5. Representative product samples.
 - 6. Substitutions.
 - 7. Submittals related to each Work element.

1.02 DEFINITIONS

- A. Certificates: means document affirmations by the Contractor, subcontractor, or manufacturer entities that the work is in accordance with the Contract Documents.
- B. Manufacturer's instructions: means instructions, stipulations, directions, and recommendations issued in printed form by the manufacturer of a product addressing handling, installation, erection, and application of the product; manufacturer’s instructions are not prepared especially for the Work.
- C. Product data: usually consists of manufacturers' printed data sheets or catalog pages illustrating the products to be incorporated into the project. This provides information about building materials, including dimensions, manufacturer, model, quantity, use and performance characteristics, finish, warranty details, and more.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 33 00 – SUBMITTAL PROCEDURES

- D. Samples: full-size actual products intended to illustrate the products to be incorporated into the project. These are examples of the physical products that the Contractor will use in construction.
- E. Shop drawings: Shop drawings are prepared specifically for the project to illustrate details, dimensions, and other data necessary for satisfactory fabrication or construction that are not shown in the contract documents. Shop drawings could include graphic line-type drawings, single-line diagrams, or schedules and lists of products and their application.
- F. Submittals: means work plans, site plans, survey results, schedules, test results, product data, and others that demonstrate how Contractor intends to conform with the Contract Documents.

1.03 GENERAL INSTRUCTIONS

- A. The City, Engineer and Contractor shall utilize e-Builder software (e-Builder is a registered trademark of e-Builder, Inc.) as the primary means for submission of data and documents (unless specified otherwise in this Section) throughout the duration of the Contract. Certain documents (such as those requiring original signatures, product samples and large format documents) will require hard-copy submittal instead. This specification section describes document submittal procedures and requirements for e-Builder submittal requirements only. Refer to Section 01 32 20 - Web Based Construction Document Management which describes general Web-based construction document management procedures.
- B. Provide submittals that are specified or reasonably required for construction, operation, and maintenance of the Work.
- C. Contractor shall not utilize or copy any Contract Documents in part or whole as the primary basis for submittal approval. Each submittal shall clearly demonstrate the Contractor's understanding of the scope required.
- D. Edit all submittals so that the submittal specifically applies to only the equipment or material furnished. Neatly cross out all extraneous text, options, models, etc. that do not apply to the equipment being furnished, so that the information remaining is only applicable to the equipment or material being furnished.
- E. Prepare submittals in the English language. Do not include information in other languages.
- F. Present measurements in customary American units (feet, inches, pounds, etc.). Metric units will not be acceptable.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 33 00 – SUBMITTAL PROCEDURES

- G. Show dimensions, construction details, wiring diagrams, controls, manufacturers, catalog numbers, and all other pertinent details.
- H. Where multiple submittals are required, provide a separate submittal for each specification section:
 - 1. To expedite construction, the Contractor may make more than one (1) submittal per specification section, but a single submittal may not cover more than one specification section.
 - 2. The only exception to this requirement is when one specification section covers the requirements for a component of equipment or material specified in another section.
- I. Submittals must be clear and legible, and of sufficient size for presentation of information:
 - 1. Minimum page size shall be 8 1/2 inches by 11 inches.
 - 2. Maximum page size shall be 11 inches by 17 inches.
- J. Submittals in electronic media format:
 - 1. In accordance with Section 01 32 20 - Web Based Construction Document Management.
 - 2. General: Provide all information in PC compatible format using Windows operating system as utilized by the Engineer and City.
 - 3. Text: Provide text documents and manufacturer's literature using Portable Document Format (PDF) as utilized by the City and Engineer.
 - 4. Graphics: Provide all graphic submittals (drawings, diagrams) utilizing Portable Document Format (PDF) as utilized by the Engineer and City.
 - 5. Contractor using other software shall be required to provide to the Engineer conclusive evidence of 100 percent data transfer compatibility.

1.04 SUBMITTAL CONTENTS

- A. Submittal Transmittal Form is provided in at the end of this Section:
 - 1. Substitute forms require City approval based on forms providing the same information, statements, and certifications.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 33 00 – SUBMITTAL PROCEDURES

2. Required submittal numbering format: Submittal number--resubmittal number:
 - a. Example: 132-1:
 - 1) “132” indicates the submittal number is 132.
 - 2) “1” indicates the first resubmittal of Submittal 132.
 - b. Contractor may add a separate numbering scheme for Contractor’s internal use. However, all correspondence with City must include the required submittal numbering.
3. Specification section: Include with each submittal a copy of the relevant specification section, including relevant addendum updates:
 - a. Indicate in the left margin, next to each pertinent paragraph, either compliance with a check (√) or deviation with a consecutive number (1, 2, 3).
 - b. Provide a list of all numbered deviations with a clear explanation and reason for the deviation.
4. Drawings: Include with each submittal a copy of the relevant Drawing, including relevant addendum or change order updates. Areas affected by addendum or change order updates shall be clearly identified using a “bubble” designation and referenced with the addendum or change order number:
 - a. Indicate either compliance with a check (√) or deviation with a consecutive number (1, 2, 3).
 - b. Provide a list of all numbered deviations with a clear explanation and reason for the deviation.
 - c. Provide field dimensions and relationship to adjacent or critical features of the Work or materials.
5. Other information or materials as needed.

1.05 SUBMITTAL FORMAT

- A. Fully indexed with a tabbed divider for every component.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 33 00 – SUBMITTAL PROCEDURES

- B. Sequentially number pages within the tabbed sections:
 - 1. Submittals that are not fully indexed and tabbed with sequentially numbered pages, or are otherwise unacceptable, will be returned without review.
- C. Organize submittals in the same order as the items are referenced, listed, and/or organized in the specification section.
- D. For submittals that cover multiple devices used in different areas under the same specification section, the submittal for the individual devices must list the area where the device is used.
- E. Consolidate electronic format submittals with multiples pages into a single file.
- F. Bookmarks:
 - 1. Bookmarks shall match the table of contents.
 - 2. Bookmark each section (tab) and heading.
 - 3. Drawings: Bookmark at a minimum, each discipline, area designation, or appropriate division.
 - 4. At file opening, display all levels of bookmarks as expanded.

1.06 SUBMITTAL PROCEDURE

- A. Contractor: Prepare submittal information in sufficient detail to show compliance with specified requirements:
 - 1. Determine and verify quantities, field dimensions, product dimensions, specified design and performance criteria, materials, catalog numbers, and similar data.
 - 2. Coordinate submittal with other submittals and with the requirements of the Contract Documents.
 - 3. Check, verify, and revise submittals as necessary to bring them into conformance with Contract Documents and actual field conditions.
- B. Contractor: stamp, sign and date submittals indicating review and approval:
 - 1. Signature indicates Contractor has satisfied submittal review responsibilities and constitutes Contractor's written approval of submittal.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 33 00 – SUBMITTAL PROCEDURES

2. Submittals without Contractor's signature will be returned to the Contractor unreviewed. Subsequent submittal of this information will be counted as the first resubmittal.
- C. Contractor: Send submittal to City:
1. Provide specified number of copies of submittal.
 2. Delivery:
 - a. Deliver electronic submittals to City using web based construction document management system described in Section 01 32 20 - Web Based Construction Document Management.
 - b. Deliver hard-copy submittals (if necessary) to City at the Center for Urban Waters, unless another mutually agreeable place is designated. Also submit submittal cover sheet using web based construction document management system described in Section 01 32 20 - Web Based Construction Document Management.
 3. Timeliness: Schedule and make submissions and resubmissions in accordance with the requirements of the individual specification sections and in such a sequence as to cause no delay in Work.
 4. Contractor assumes risk of expense and delays when proceeding with work related to required submittals without review and acceptance.
- D. City: Review submittal and provide response:
1. Review description:
 - a. City will be entitled to rely upon the accuracy or completeness of designs, calculations, or certifications made by licensed professionals accompanying a particular submittal whether a stamp or seal is required by Contract Documents or Laws and Regulations.
 - b. City's review of submittals shall not release Contractor from Contractor's responsibility for performance of requirements of Contract Documents. City's review will not release Contractor from fulfilling purpose of installation or from Contractor's liability to replace defective work.
 - c. City's review of shop drawings, samples, or test procedures will be only for conformance with design concepts and for compliance with information given in Contract Documents.
 - d. City's review does not extend to:

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 33 00 – SUBMITTAL PROCEDURES

- 1) Accuracy of dimensions, quantities, or performance of equipment and systems designed by Contractor.
 - 2) Contractor's means, methods, techniques, sequences, or procedures except when specified, indicated on the Drawings, or required by Contract Documents.
 - 3) Safety precautions or programs related to safety which shall remain the sole responsibility of the Contractor.
- e. City can accept or reject any exception at their sole discretion.
2. Review timeframe:
- a. Except as may be provided in technical specifications, a submittal will be returned within 7 calendar days.
 - b. When a submittal cannot be returned within the specified period, City will, within a reasonable time after receipt of the submittal, give notice of the date by which that submittal will be returned.
 - c. City's acceptance of progress schedule containing submittal review times less than those specified or agreed to in writing by City will not constitute City's acceptance of review times.
 - d. All submittals to be submitted and approved before Contractor mobilization (with the exception of post-construction submittals).
 - e. Critical submittals:
 - 1) Contractor will notify City in writing that timely review of a submittal is critical to the progress of Work.
 - 2) City will provide decision on request.
 - 3) Written acceptance of request:
 - a) Written agreement by City to reduce submittal review time will be made only for unusual situations.
 - b) Written rejection of request.
3. Schedule delays:
- a. No adjustment in Contract Times or Contract Price will be allowed due to City's review of submittals if:

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 33 00 – SUBMITTAL PROCEDURES

- 1) Contractor fails to submit appropriate submittals in adequate timeframe to procure necessary equipment and maintain project schedule.
 - 2) City has failed to review and return first submission within the agreed upon time frame.
 - 3) Contractor demonstrates that delay in progress of Work is directly attributable to City's failure to return submittal within time indicated and accepted by City.
4. Review responses: 1 copy of submittal will be returned to Contractor with one of the following reviewer's response and stamp:
- a. Reviewed:
 - 1) Contractor may proceed with the work described in the submittal.
 - b. Reviewed with Comments:
 - 1) Contractor shall incorporate all review comments into the work, but resubmittal of an amended submittal package is not required.
 - 2) Resubmit only the portion of package necessary to respond to City's comments.
 - c. Revise and Resubmit:
 - 1) Contractor shall incorporate the review comments into a complete revised package and resubmit it for review.
 - d. Rejected:
 - 1) Contractor shall review comments.
 - 2) Contractor shall develop a new submittal package with materials, equipment, methods, etc. that meet the requirements of the Contract Documents.
 - e. Submittal not reviewed, filed for record:
 - 1) Contractor has no further action required.
 - f. Submittal not reviewed:

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 33 00 – SUBMITTAL PROCEDURES

- 1) Submittals not required by these Contract Documents will be returned to the Contractor without review.
- E. Contractor: Prepare resubmittal, if applicable:
1. Clearly identify each correction or change made.
 2. Include a response in writing to each of the City’s comments or questions for submittal packages that are resubmitted in the order that the comments or questions were presented throughout the submittal:
 - a. Acceptable responses to City’s comments are listed below:
 - 1) “Incorporated” City’s comment or change is accepted, and appropriate changes are made.
 - 2) “Response” City’s comment not incorporated. Explain why comment is not accepted or requested change is not made. Explain how requirement will be satisfied in lieu of comment or change requested by City.
 - b. Any resubmittal that does not contain responses to the City’s previous comments shall be returned “Revise and Resubmit”. No further review by the City will be performed until a response for previous comments has been received.
 3. Review costs:
 - a. Costs incurred by City because of additional reviews of a particular submittal after the second time it has been reviewed shall be borne by Contractor. The cost of this will be equal to the actual invoiced amount by the City or City’s representative for review.
 - b. Reimbursement to City will be made by deducting such costs from Contractor's subsequent progress payments.

1.07 SUBMITTAL REQUIREMENTS

- A. General:
1. Submittals shall be made in electronic format in accordance with Section 01 32 20 - Web Based Construction Document Management. Electronic submittals shall be supplemented with paper documents, which either require original signatures or large format documents (greater than 11 by 17 inches).
 2. All paper documents submitted by the Contractor shall be in accordance with the City of Tacoma’s Sustainable Purchasing Policy

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 33 00 – SUBMITTAL PROCEDURES

(Resolution 38248). Documents shall be produced on recycled paper containing the highest level of post-consumer and recycled content available. At a minimum, paper with 30 percent post-consumer recycled content shall be used.

3. Number of hard copies: 5 minimum except where noted:
 - a. City: 3 copies.
 - b. Engineer: 2 copies.
 - c. Contractor: Remaining copies.

1.08 SUBMITTALS

- A. The Contractor shall submit the Contractor's Schedule of Submittals in accordance with the submittal timing requirements identified in the Submittal Schedule in this Section. Schedule of Submittals shall include updates to reflect the progression of the Project.
 1. The Contractor shall prepare and keep current, for review by the City, the Contractor's Schedule of Submittals which shall be coordinated with the Contractor's Project Schedule.
 2. The Contractor's Schedule of Submittals shall provide sufficient time for City submittal review as described in this Section.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 SUBMITTAL SCHEDULE

- A. Check each Specification Section for the complete submittal requirements.
 1. The Submittal Schedule identifies in broad terms the general nature of the submittals that are required from the Contractor.
 2. The information contained in this Submittals Schedule is provided for the convenience of the Contractor.
 3. This list may not be complete.
 4. This list does not include submittals required in Division 00.
 5. All submittals are subject to EPA review and approval.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 33 00 – SUBMITTAL PROCEDURES

- B. References to “prior to use”, “prior to installation” or similar, in the Latest Allowable Submittal Date is the requirement for the Contractor to have received a submittal approval from the City.

Project Manual Section	Section Title	Submittal	Submittal Date
01 11 00	Summary of Work	Licenses, certifications, inspection reports, receipts for fee payments, and similar documents, correspondence, and records	Within 48 hours of receiving documents, correspondence, and records from agencies
01 14 00	Work Restrictions	Request for variance from normal work hours	7 days prior to requested variance
01 29 40	Application for Payment	Application for Payment and Substantiating Data with cover letter	Monthly
		Schedule of Values	On the day of Pre-Construction Meeting
01 31 00	Project Management and Coordination	Project Schedule	On the day of Pre-Construction Meeting
		Daily Construction Reports	Every day
		Project Management and Coordination Plan	On the day of Pre-Construction Meeting
01 33 00	Submittal Procedures	Contractor’s Schedule of Submittals	On the day of Pre-Construction Meeting and every week thereafter

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 33 00 – SUBMITTAL PROCEDURES

Project Manual Section	Section Title	Submittal	Submittal Date
01 35 00	Health and Safety Requirements	Site-specific Health and Safety Plan	On the day of Pre-Construction Meeting
		Certificates of Personnel HAZWOPER Training	On the day of Pre-Construction Meeting
		Summary of Daily Safety Meeting Minutes	As requested by City
01 45 00	Construction Quality Control	Construction Quality Control Plan	On the day of Pre-Construction Meeting
01 57 00	Temporary Environmental Controls and Monitoring	Environmental Protection Plan	On the day of Pre-Construction Meeting
		Statement of Understanding with Water Quality Monitoring Protection Plan (WQMPP) Requirements	On the day of Pre-Construction Meeting
		Water Quality Monitoring Forms	Weekly (by noon on Monday following water quality monitoring)
		Water Quality Monitoring Report	If required due to water quality violation (refer to WQMPP [Appendix D] for details)
		Spill Prevention Control and Countermeasures (SPCC) Plan	On the day of Pre-Construction Meeting
1 71 23	Surveying	Surveying Plan	On the day of Pre-Construction Meeting
		Surveyor Qualifications	On the day of Pre-Construction Meeting
		Date/time for performing Post-Construction As-Built Survey	At least 3 days prior to performing Post-Construction As-Built Survey

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 33 00 – SUBMITTAL PROCEDURES

Project Manual Section	Section Title	Submittal	Submittal Date
		Post-Construction As-Built Survey Data	Within 3 weeks after Substantial Completion
01 78 39	Project Record Documents	Draft Project Record	At Substantial Completion Inspection
		Final Project Record	Prior to Final Completion
		Final Red-Line Drawings	14 days after Substantial Completion
02 22 00	Existing Conditions Assessments	Photos, videos, and notes to document existing conditions assessment	1 week prior to mobilization
31 00 00	Earthwork	Earthwork Plan	Seven days prior to the commencement of excavation
		Pertinent material source and associated test records	Seven days prior to the commencement of excavation
		Daily Activities Report	At the end of each day throughout construction

END OF SECTION



City of Tacoma

Environmental Services Department

Transmittal of Outfall 230A Repair Project Submittal (attached to each submittal)

TO: _____

Date: _____

Submittal No.: _____

New Submittal Resubmittal

Project: _____

Project No.: _____

Specification No.: _____

FROM: _____

Submittal Type: Shop Drawing Sample Informational

Deferred

No. of Copies	Description of Item Submitted (Type, Size, Model No., Etc.)	Spec and Para No.	Drawing or Brochure No.	Contains Variations to Contract	
				No	Yes

Contractor certifies that (i) Contractor has complied with the requirements of Contract Documents in preparation, review and submission of designated Submittal and (ii) the Submittal is complete and in accordance with the Contract Documents and requirements of laws and regulations and governing agencies.

By: _____

Contractor (Authorized Signature)

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 35 00 – HEALTH AND SAFETY REQUIREMENTS

SECTION 01 35 00 – HEALTH AND SAFETY REQUIREMENTS
PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Work.
- B. In carrying out its responsibilities according to the Contract Documents, Contractor shall protect the lives and health of employees performing the Work, and other persons who may be affected by the Work; prevent damage to property, materials, supplies, and equipment, whether onsite or stored offsite; and prevent damage to other properties adjacent to the site. Contractor shall comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property, or to protect them from damage, injury, or loss; shall erect and maintain all necessary safeguards for such safety and protection; and shall notify owners of adjacent property and utilities when prosecution of the Work may affect them.
- C. Nothing provided in this Section shall be construed as imposing any duty upon the City or the Engineer with regard to, or as constituting any express or implied assumption of control or responsibility over, Project Site safety, or over any other safety conditions relating to employees or agents of Contractor or any of its Subcontractors, or the public.

1.02 SUBMITTALS

- A. The Contractor shall submit a Site-specific health and safety plan as follows:
 - 1. This health and safety plan must be followed by the Contractor; and
 - 2. A minimum of one (1) copy shall be available and accessible at the Project Site at all times.
- B. Submit certificates of personnel training for HAZWOPER to the City prior to the pre-construction meeting and update during the project as needed.
- C. Maintain a summary of minutes from daily safety meetings on file. Submit to the City when requested.
- D. Provide submittals for the City's review in accordance with the submittal timings requirements of Section 01 33 00 – Submittal Procedures.

PART 2 – PRODUCTS (NOT USED)

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 35 00 – HEALTH AND SAFETY REQUIREMENTS

PART 3 – EXECUTION

3.01 PERSONNEL DISCLOSURE AND TRAINING

- A. Contractor shall provide all persons working on the Project Site with information and training on hazardous chemicals in their work at the time of their initial assignment, and whenever a new hazard is introduced into their work area.
1. Information: At a minimum, Contractor shall inform persons working on the Project Site of:
 - a. The requirements of Chapter 296-62 WAC, General Occupational Health Standards.
 - b. Exposure to hazardous chemicals is not anticipated as areas of excavation are outside the work limits are defined by the Contract Drawings.
 2. Training: At a minimum, Contractor shall provide training for persons working on the Project Site, which includes:
 - a. Contractor's and their subcontractor's personnel shall be trained in accordance with the requirements of Chapter 296- 62/-843 WAC, Occupational Safety and Health Administration (OSHA) and Washington Industrial Safety and Health Act (WISHA).
 - b. While exposure to hazardous chemicals is not expected, Contractor's and their sub-contractors' personnel working within the intertidal portions of the site and personnel that have potential for exposure to site contamination shall be current on their OSHA 40-hour Hazardous Waste Operations and Emergency Response Standards (HAZWOPER) training.
 - c. Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.).
 - d. The physical and health hazards of the chemicals in the work area.
 - e. The measures such persons can take to protect themselves from these hazards, including specific procedures Contractor, or its Subcontractors, or others have

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 35 00 – HEALTH AND SAFETY REQUIREMENTS

implemented to protect those on the Project Site from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used.

3. The details of the hazard communication program developed by Contractor or its Subcontractors, including an explanation of the labeling system and the MSDS, and how employees can obtain and use the appropriate hazard information.

3.02 EXPOSURE AND SAFETY MANAGEMENT

- A. Contractor shall be responsible for achieving and maintaining a safe work site.
- B. Contractor shall promptly notify the City of all spills or releases of any hazardous substances that are otherwise required to be reported to any regulatory agency and pay the cost of cleanup. Contractor shall promptly notify the City of all failures to comply with any federal, state, or local law, regulation, or ordinance; all inspections of the Project Site by any regulatory entity concerning the same; all regulatory orders or fines; and all responses or interim cleanup actions taken by or proposed to be taken by any government entity or private party on the Project Site.
- C. All Work shall be performed with due regard for the safety of the public. Contractor shall perform the Work so as to cause a minimum of interruption of vehicular traffic or inconvenience to pedestrians.
 1. All arrangements to care for such traffic shall be Contractor's responsibilities.
 2. All expenses involved in the maintenance of traffic by way of detours shall be borne by Contractor.
- D. Contractor shall maintain an accurate record of exposure data on all incidents relating to the Work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. Contractor shall immediately report any such incident to the City. The City shall, at all times, have a right of access to all records of exposure.
- E. The Contractor shall furnish, erect, and maintain such fences, barriers, lights, and signs and provide such flagging and guards as are necessary in the opinion of the City to give adequate warning to the property owner and their employees, contractors, and customers of the construction of any dangerous condition which may be encountered as a result thereof.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 35 00 – HEALTH AND SAFETY REQUIREMENTS

- F. The Contractor shall meet all safety requirements of WAC 296-155-650 Part N, Excavation, Trenching, and Shoring (if applicable).
- G. Contractor shall supervise construction activities to ensure that no part of the Work, completed or in progress, shall be subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
 - 1. Excessively high or low temperatures
 - 2. Excessive high or low humidity
 - 3. Water or ice
 - 4. Chemicals
 - 5. Heavy traffic
 - 6. Unprotected storage
 - 7. Improper shipping or handling
 - 8. Theft
 - 9. Vandalism

3.03 EMERGENCIES

- A. In an emergency affecting the safety of life or the Work or of adjoining property, Contractor is permitted to act, at its discretion, to prevent such threatened loss or injury, and Contractor shall so act if so authorized or instructed.
- B. Contractor shall maintain an accurate record of exposure data on all incidents relating to the Work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. Contractor shall immediately report any such incident to the City. The City shall, at all times, have a right of access to all records of exposure.

3.04 HEALTH AND SAFETY PLAN REQUIREMENTS

- A. Prepare a Site Health and Safety Plan (HASP) in accordance with OSHA 29 CFR 1910.120 and all applicable Washington State regulations. As a minimum, the Contractor's Site HASP shall set forth definite procedures for informing workers about health and safety, for instructing workers in safe practices, for assuring that workers are using appropriate safety

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 35 00 – HEALTH AND SAFETY REQUIREMENTS

equipment and safe work practices and for reporting accidents. Also include:

1. Description of work to be performed and anticipated chemical and/or physical hazards associated with the work.
2. A series of maps of the Site illustrating the locations of anticipated hazards and areas of control for those hazards.
3. Hazardous material inventory and material safety data sheets (MSDSs) for all chemicals which will be brought on site.
4. Engineering controls/equipment to be used to protect against anticipated hazards.
5. Personal protective equipment and clothing including head, foot, skin, eye, ear and respiratory protection.
6. Procedures which will be used for:
 - a. Lockout/tagout;
 - b. Fall protection;
 - c. Hazards;
 - d. Suspect materials;
 - e. Confined-space entry;
 - f. Odorous conditions and toxic gases.
7. Exposure monitoring to be used to evaluate actual hazards compared with anticipated conditions.
8. Site housekeeping procedures and personal hygiene practices.
9. Personnel and equipment decontamination plan, if necessary.
10. Administrative controls.
11. Emergency plan including:
 - a. Locations of and route to nearest hospital.
 - b. Locations of first aid kits, fire extinguishers, and portable eye washes.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 35 00 – HEALTH AND SAFETY REQUIREMENTS

- c. Person who will be responsible in the event of an emergency.
 - d. Site personnel trained in first aid and/or CPR.
 - 12. Medical surveillance program for site personnel before, during, and after completion of site work.
 - 13. Name and qualifications of person preparing the Site HASP and person designated to implement and enforce the plan.
 - 14. Signatory page for site personnel and visitors to acknowledge receipt, understanding, and agreement to comply with the plan.
- B. Conduct daily tailgate safety meetings/job safety briefings and prepare minutes to be submitted to the City upon request. The Contractor shall prepare his/her own form on which to document daily safety meetings. This form shall be completed each workday and filed as part of the project record. The Contractor shall submit a summary of minutes from daily safety meetings when requested by the City.
- C. If Health and Safety issues arise frequently, the Contractor may be required to provide an additional full-time Health and Safety professional on site, at the expense of the Contractor, to ensure compliance with all applicable Health and Safety rules and regulations.

3.05 CONTRACTOR'S SITE SAFETY AND HEALTH OFFICER

- A. Contractor shall provide a person designated as the Site Safety and Health Officer, who is thoroughly trained in rescue procedures, HAZWOPER, and the use of all necessary safety equipment. The person must be present at all times while work is being performed.
- B. The Contractor's designated Site Safety and Health Officer shall conduct inspections of the site in accordance with the Site HASP to determine the HASP's effectiveness and shall immediately correct any deficiencies identified.
- C. The Site Safety and Health Officer shall be empowered with the delegated authority to order any person or worker on the project site to follow the safety rules. Failure to observe these rules is sufficient cause for removal of the person or worker(s) from this project.
- D. The Site Safety and Health Officer is responsible for determining the extent to which any safety equipment must be utilized, depending on conditions encountered at the site.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 35 00 – HEALTH AND SAFETY REQUIREMENTS

3.06 PERSONAL PROTECTIVE EQUIPMENT

- A. The Project Site is designated for modified Level D personal protective equipment (PPE) as defined by OSHA, which includes a hard hat, steel toe boots, high-visibility vest, and safety glasses.

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 41 00 – REGULATORY REQUIREMENTS

SECTION 01 41 00 – REGULATORY REQUIREMENTS
PART 1 – GENERAL

1.01 AUTHORITY OF CODES, ORDINANCES AND STANDARDS

- A. All codes, ordinances and standards referenced in the Contract Documents shall have the full force and effect as though printed in the entirety in the Contract Documents.

1.02 PRECEDENCE OF CODES, ORDINANCES AND STANDARDS

- A. Where specified requirements differ from the requirements of applicable codes, ordinances and standards, the more stringent requirements shall take precedence.
- B. Where the Contract Documents requires or describe products or execution of better quality, higher standard or greater size than required by applicable codes, ordinances and standards, the Contract Documents shall take precedence so long as such increase is legal.
- C. Where no requirements are identified in the Contract Documents, comply with all requirements of applicable codes, ordinances and standards of authorities having jurisdiction.

1.03 APPLICABLE CODES, LAWS AND ORDINANCES

- A. Performance of the Work shall be governed by all applicable laws, ordinances, rules and regulations of Federal, State and local governmental agencies and jurisdictions having authority over the Project.
- B. Performance of the Work shall meet or exceed the minimum requirements of the series of Codes published by the International Code Council (ICC) and the National Electrical Code (NEC), as adopted and interpreted by local authorities having jurisdiction.
- C. Performance of the Work shall be accomplished in conformance with all rules and regulations of public utilities, utility districts and other agencies serving the facility.
- D. Where such laws, ordinances, rules, and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to the Contract Time and Contract Sum, except where changes in laws, ordinances, rules and regulations occur subsequent to the execution date of the Contract Documents.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 41 00 – REGULATORY REQUIREMENTS

1.04 DATE OF CODES, LAWS AND ORDINANCES

- A. The applicable edition of all codes shall be that adopted at the time of issuance of permits by authorities having jurisdiction or the execution of the Contract Documents, whichever is applicable, and shall include all modifications and additions adopted by that jurisdiction and the City. The applicable date of laws and ordinances shall be that of the date of performance of the Work.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES

SECTION 01 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES
BID FORM - SCHEDULE OF VALUES

(Not including Washington State Sales Tax)

Item No.	Item of Work	Unit	Estimated Quantity	Total Price (numbers, in U.S. dollars)
1	Mobilization/Demobilization and General Requirements	LS	1	\$
2	Surveying and Field Verification	LS	1	\$
3	Temporary Bypass System	LS	1	\$
4	Excavation and Disposal	Cubic Yards	180	\$
5	Import And Place Quarry Spall Filter	Tons	6	\$
6	Import and Place Weighted Filter Fabric	Square Feet	270	\$
7	Import and Place Heavy Loose Riprap	Tons	34	\$
8	Import and Place Streambed Cobbles	Tons	6	\$
Total Base Bid				\$

PART 1 – GENERAL

1.01 Description of Measurement of Work

- A. This Section includes a description of the requirements and procedures for measurement of Work performed, the documentation required to verify the amount of Work, and procedures for obtaining payment for the Work performed.
- B. The Work, as described in the Contract Documents, for which payment will be made is to be completed on a unit price or lump sum basis, as described in this specifications section.
- C. The payment made for each item listed as lump sum or unit price will constitute full compensation for furnishing all labor, materials, and equipment, and performing any associated Contractor quality control and

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all associated Work required for that lump sum or unit price item for which separate payment is not otherwise provided.

D. Applicable Technical Specifications

- Section 01 11 00 Summary of Work
- Section 01 14 00 Work Restrictions
- Section 01 29 40 Applications for Payment
- Section 01 31 00 Project Management and Coordination
- Section 01 32 20 Web Based Construction Document Management
- Section 01 33 00 Submittal Procedures
- Section 01 35 00 Health and Safety Requirements
- Section 01 41 00 Regulatory Requirements
- Section 01 45 00 Construction Quality Control
- Section 01 57 00 Temporary Environmental Controls and Monitoring
- Section 01 77 00 Closeout Procedures
- Section 01 78 39 Project Record Documents
- Section 31 00 00 Earthwork
- Section 31 23 19 Temporary Off-site Stormwater Re-route
- Section 31 35 00 Slope Protection

E. Applicable Drawings

- Sheet 1 Title Sheet
- Sheet 2 Legend, Abbreviations, and General Notes
- Sheet 3 Foss Shoreline Restoration Plan
- Sheet 4 Stormwater Outfall Section

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1.02 Bid Descriptions

1. MOBILIZATION/DEMobilIZATION AND GENERAL REQUIREMENTS

a. Work Description:

This Bid Item includes, but is not limited to, mobilization/demobilization of personnel, equipment, supplies and incidentals to/from the project site; obtaining project-specific bonds and insurances; project administration and management; coordination and supervision of contractor's subcontractors and suppliers work; coordination and meetings with the City, City's representatives and regulatory agencies; preparation of all required submittals including the SPCC; obtaining construction-related permits that have not been obtained already by the City (if a need is determined); maintaining construction quality control; implementing health and safety requirements; and completing construction closeout procedures, as specified in the Contract Documents as well as any other work elements that are not identified as a separate pay item in the project's Schedule of Values.

Contractor shall provide all labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

No additional payment will be made for supervision, safety, quality control, environmental protection measures, dust control, noise control, transportation, or other incidental activities associated with this lump sum item.

b. Measurement and Payment

i. *Bid Item (1) Mobilization/Demobilization and General Requirements* will be paid as a percentage of this item's lump sum value provided in the project's Schedule of Values based upon the percentage of actual construction completed at the time of the payment estimate.

ii. Mobilization/Demobilization and General Requirements payment in first progress payment shall not exceed 50% for this item.

2. SURVEYING AND FIELD VERIFICATION

a. Work Description:

This Bid Item includes completing surveying and field verification work in accordance with the requirements of Contract Documents,

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SECTION 01 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES

as well as providing survey results to the City in PDF and CAD format.

Contractor shall provide all labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

No additional payment will be made for supervision, safety, quality control, environmental protection measures, dust control, noise control, transportation, or other incidental activities associated with this lump sum item.

b. Measurement and Payment:

Bid Item (2), Surveying and Field Verification will be paid as a percentage of this item's lump sum value provided in the project's Schedule of Values based upon the percentage of work completed under this item at the time of the payment estimate.

3. TEMPORARY BYPASS SYSTEM

a. Work Description:

This bid item includes requirements for implementing a temporary bypass system for the purpose of diverting existing storm flow around work area for duration of the project in accordance with the requirements of the Contract Documents.

Contractor shall provide all labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

No additional payment will be made for supervision, safety, quality control, environmental protection measures, dust control, noise control, transportation, or other incidental activities associated with this lump sum item.

b. Measurement and Payment:

Bid item (3), Temporary Bypass System, will be paid as a percentage of this item's lump sum value provided in the project's Schedule of Values based upon the percentage of work completed under this item at the time of the payment estimate.

4. EXCAVATION AND DISPOSAL

a. Work Description:

This bid item includes, but is not limited to, completing excavation at the mouth of Outfall 230A to the lines and grades shown on the

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Contract Drawings and stockpiling materials on barge. The Contractor shall dispose of any excavated material at an approved location.

No additional payment will be made for supervision, safety, quality control, environmental protection measures, dust control, noise control, transportation, or other incidental activities associated with this unit price item.

b. Measurement and Payment:

Bid Item (4), Excavation and Disposal will be paid based on certified weight tickets from the disposal facility. Payments will be made on a basis of actual tons disposed of at the unit price shown on the Bid Form.

5. IMPORT AND PLACE QUARRY SPALL FILTER MATERIAL

a. Work Description:

This Bid Item includes, but is not limited to, performing required material testing; and importing, placing, and grading Quarry Spall Filter material to lines and grades shown in the Contract Drawings and in accordance with the requirements of Contract Documents.

Contractor shall provide all labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

No additional payment will be made for supervision, safety, quality control, environmental protection measures, dust control, noise control, transportation, or other incidental activities associated with this unit price item.

b. Measurement and Payment:

Bid Item (5), Import and Place Quarry Spall Filter Material will be measured based on certified weight tickets provided by the material supplier. Payments will be made on a basis of actual tons imported to meet design limits and tolerances, at the unit price shown on the Bid Form. No payment shall be made for material placed outside the design limits and tolerances unless such placement is specifically directed by the City.

6. IMPORT AND PLACE WEIGHTED FILTER FABRIC

a. Work Description:

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This Bid Item includes, but is not limited to, procuring, and placing geotextile material with integrated weights in accordance with the requirements of Contract Documents.

Contractor shall provide all labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

No additional payment will be made for supervision, safety, quality control, environmental protection measures, dust control, noise control, transportation, or other incidental activities associated with this unit price item.

b. Measurement and Payment:

Bid Item (6), Import and Place Geotextile Fabric will be measured based on actual square footage of area covered by filter fabric material. Contractor shall account for lapses as specified in the Contract Drawings at no additional cost to the project. Payments will be made on a basis of actual geotextile material coverage placed to meet design criteria, at the unit price shown on the Bid Form. No payment shall be made for material placed outside the design limits and tolerances unless such placement is specifically directed by the City.

7. IMPORT AND PLACE HEAVY LOOSE RIPRAP MATERIAL

a. Work Description:

This Bid Item includes, but is not limited to, performing required material testing; and importing, placing, and grading Heavy Loose Riprap material to lines and grades shown in the Contract Drawings and in accordance with the requirements of Contract Documents.

Contractor shall provide all labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

No additional payment will be made for supervision, safety, quality control, environmental protection measures, dust control, noise control, transportation, or other incidental activities associated with this unit price item.

b. Measurement and Payment:

Bid Item (7), Import and Place Heavy Loose Riprap Material will be measured based on certified weight tickets provided by the material supplier. Payments will be made on a basis of actual tons

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imported to meet design limits and tolerances, at the unit price shown on the Bid Form. No payment shall be made for material placed outside the design limits and tolerances unless such placement is specifically directed by the City.

8. IMPORT AND PLACE STREAMBED COBBLES MATERIAL

a. Work Description:

This Bid Item includes, but is not limited to, performing required material testing; and importing, placing, and grading Streambed Cobble material to lines and grades shown in the Contract Drawings and in accordance with the requirements of Contract Documents.

Contractor shall provide all labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

No additional payment will be made for supervision, safety, quality control, environmental protection measures, dust control, noise control, transportation, or other incidental activities associated with this unit price item.

b. Measurement and Payment:

Bid Item (8), Import and Place Streambed Cobble Material will be measured based on certified weight tickets provided by the material supplier. Payments will be made on a basis of actual tons imported to meet design limits and tolerances, at the unit price shown on the Bid Form. No payment shall be made for material placed outside the design limits and tolerances unless such placement is specifically directed by the City.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 45 00 – CONSTRUCTION QUALITY CONTROL

SECTION 01 45 00 – CONSTRUCTION QUALITY CONTROL
PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. This section describes the Contractor's general quality control requirements, duties, and responsibilities during execution of the Contract Work. Detailed quality control requirements are presented in individual Sections of the Specifications and the Outfall 230A Slope Cap Repair Plan.
- B. The Contractor shall establish, provide, and maintain effective quality control methods and procedures that will be taken to assure that all materials and completed construction conform to requirements of the Contract Documents and manufacturer's recommendations. Although the guidelines are established and certain minimum requirements are specified herein and elsewhere in the Contract Documents, the Contractor shall assume full responsibility for accomplishing the stated purpose.
- C. The Contractor shall be prepared to discuss and present at the Pre-construction Meeting its understanding of the quality control requirements. The Contractor shall not begin any construction or production of materials until quality control requirements of the Contract Documents are met.
- D. The Contractor shall additionally provide a plan for how to effectively conduct the following items: minimize the slope cap disturbance from barge spuds during construction to protect the integrity of the slope cap and contain the underlying sediments; fully segregate the excavated material from the new materials to be placed; implement an effective and monitored stormwater bypass system to prevent flow of water through the outfall during repair activities including generator fueling as needed and consistent with the SPCC; and with all other specific items addressed in the Outfall 230A Slope Cap Repair Plan.

1.02 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturer's instructions, including each step in the sequence.
- C. Should manufacturer's instructions conflict with the Contract Documents, request clarification from the City before proceeding.

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SECTION 01 45 00 – CONSTRUCTION QUALITY CONTROL

- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes or specified requirements indicate higher standards or more precise workmanship.
- E. Persons performing work shall be qualified to produce required and specified quality.

1.03 REFERENCES AND STANDARDS

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with the requirements of the standard, except where more rigid requirements are specified by applicable codes.
- B. Conform to references and standards by date of issue current on date of Contract Documents, except where a specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.

1.04 SUBMITTALS

- A. Construction Quality Control Plan:
 - 1. The Contractor shall prepare and submit a project specific Quality Control Plan that details the planned quality control monitoring and inspections that the Contractor will perform to verify its work is in compliance with the project plans, specifications and objectives. The plan should also describe remedies that will be used to address any deficiencies that are discovered during those inspections, monitoring and testing.
 - 2. The Construction Quality Control Plan must also include plans for work execution, as summarized in 1.01 D of this section and described in the Outfall 230A Slope Cap Repair Plan included in Appendix B.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 CONTRACTOR QUALITY CONTROL

- A. Documentation

The Contractor shall maintain current quality control records of all inspections and tests performed. These records shall include factual evidence that the required inspections or tests have been performed, including type and number of inspections or tests involved; results of

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SECTION 01 45 00 – CONSTRUCTION QUALITY CONTROL

inspections or tests; nature of defects, deviations, causes for rejection, proposed corrective action; and corrective actions taken. Required material testing is described in Section 31 35 00 Slope Protection.

B. Non-compliance

The City may notify the Contractor of any non-compliance with project quality control requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Failure to take corrective action shall be grounds for the City to withhold payment for those items not performed based on the costs for the items as listed in the Bid Items/Schedule of Values.

In cases where quality control activities do not comply with the contract provisions, or where the Contractor fails to properly operate and maintain effective quality control, as determined by the City, the City may:

1. Direct the Contractor to replace ineffective or unqualified quality control personnel or subcontractors.
2. Hire a third party to carry out the functions and operations of the Contractor's quality control requirements. Costs incurred by the City to implement quality control requirements of the Contract Documents that are Contractor's responsibility or to otherwise remedy the Contractor's non-compliance with quality-related provisions of the Contract shall be deducted from the total amount due the Contractor.
3. Order the Contractor to stop operations until appropriate corrective actions are taken.

C. Any failure by the City to notify the Contractor of any non-compliance with any of the foregoing requirements shall not be deemed as a waiver of its enforcement rights hereunder and that the Contractor is still bound by the terms and conditions of said requirement.

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND MONITORING

SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND MONITORING
PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. Contractor shall provide temporary environmental controls during construction including but not limited to temporary erosion and sediment controls (TESC), marine environmental controls and water quality monitoring, decontamination, dust and air emissions controls, noise controls, site maintenance, oil spill prevention and control. This section also specifies requirements for water quality monitoring during construction.
- B. The information provided in the Contract Documents shall be considered a minimum for the anticipated construction conditions. Additional controls and BMPs necessary to protect environmental quality in accordance with the requirements of Contract Documents, federal, state and local substantive requirements, laws and regulations shall be provided by the Contractor.
- C. The Contractor shall coordinate installation and inspections of the temporary environmental controls and BMP's with the City, as necessary.

1.02 PERMIT/SUBSTANTIVE REQUIREMENTS APPLICABLE TO ENVIRONMENTAL QUALITY

- A. The Contractor shall adhere and conform to all applicable provisions, conditions and requirements of the federal, state, and local substantive requirements. A list of the environmental documentation of the substantive requirements that the City has obtained for the project is provided in Section 01 11 00 Part 1.05. Copies of the environmental documentation that were obtained by the City are included in Appendix C of the Contract Documents and are incorporated herein the project requirements to be met in executing the Work.
- B. The Contractor shall also adhere and conform to the WQMPP prepared for the City for project construction. Water quality monitoring shall be completed by the Contractor as detailed in the WQMPP. The WQMPP is included in Appendix D of the Contract Documents.
- C. The Contractor shall comply with all applicable federal, state, and local substantive requirements, laws, and regulations.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND MONITORING

1.03 SEQUENCING AND SCHEDULING

- A. The implementation of temporary environmental controls must be coordinated by the Contractor with all site preparation and material placement activities, and in such a manner as to ensure that sediment-laden water does not violate applicable local, state, and federal water standards, or adversely impact adjacent properties.
 - 1. Contractor shall install and verify the working condition of all temporary environmental controls and BMPs prior to any material placement or other construction.
 - 2. Temporary environmental control items shall be installed and replaced, as necessary, throughout the construction duration.

1.04 TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

- A. Prevent silt-laden water from entering the waterway from the stormwater bypass.
- B. Contractor shall establish TESC per applicable regulatory requirements.
- C. Adequate temporary erosion and sediment control materials will be maintained on-site as needed to accommodate unanticipated events in response to weather conditions and/or construction activities.
- D. Routine inspections of the erosion control measures on the barge and at the shoreline stormwater bypass discharge point, will be conducted daily during construction by the contractor certified erosion and sediment control lead (CESCL) to ensure the effectiveness of the measures and to determine the need for maintenance or additional control measures.
- E. At project completion, all areas damaged by TESC shall be repaired to pre- construction conditions.

1.05 MARINE ENVIRONMENTAL CONTROL AND WATER QUALITY MONITORING

- A. The slope cap repair action will be performed from a barge, as upland access is not available. Work in or near waters of the State shall be completed so as to minimize turbidity, erosion, and other water quality impacts.
- B. The Contractor shall adhere to the WQMPP and all BMPs contained in the WQMPP, in full (Appendix D).
- C. The contractor shall provide passive filtration for any water that discharges from any sediment barges. Filtration shall be of a quality to

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SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND MONITORING

ensure the contractor conforms to the water quality monitoring standards required by this contract and within the WQMPP.

- D. As applicable, the Contractor shall identify and employ means and materials necessary to prevent silt-laden construction related runoff from entering the waters of the State.
- E. All project activities shall be conducted in a manner that minimizes the disturbance or siltation of adjacent water and prevents the accidental discharge of petroleum product, chemicals or other toxic or deleterious substances into the waters of the State. The Contractor shall be responsible for retrieval of any floating oil or sheen from the work area and any damages resulting from the loss.
- F. During construction work, the Contractor shall have a boat available at all times to conduct water quality monitoring, manage the turbidity curtain, and retrieve debris from the water.
- G. Any turbidity associated with project activities shall be minimal, localized and temporary, and shall be limited inside the point of compliance allowed by the EPA's Clean Water Act 404 ARAR Memo (Appendix C) and the WQMPP (Appendix D) for the project. Water quality impacts shall be limited to the point of compliance and will otherwise comply with WAC 173-201A.
- H. Water Quality Monitoring:

Water quality monitoring activities shall be performed by the Contractor. Visual water quality monitoring activities shall be performed by designated and appropriately trained personnel throughout Construction during Normal Working Hours (including any work outside these hours due to tidal limitations), as described in Section 01 14 00.

The Contractor is responsible for achieving Water Quality criteria as defined in EPA's Clean Water Act 404 ARAR Memo and the WQMPP (Appendices C and D, respectively), and applicable local, state and federal standards. The Contractor shall complete necessary adjustments to their work activities and BMPs to ensure compliance with EPA's Clean Water Act 404 ARAR Memo and the project WQMPP. All activities shall be performed in a manner that does not adversely impact water quality. Violations of any water quality requirements listed in EPA's Clean Water Act 404 ARAR Memo and WQMPP may result in work stoppage by regulators and City. Any delay past September 30th due to a violation needs to be approved by the City. And the Contractor shall be responsible for all fines or other mitigation resulting from exceedance of allowable water quality limits.

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SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND MONITORING

- I. Visual monitoring will be conducted during all maintenance and repair work. The point of compliance for a temporary area of mixing shall be a radius of 150 feet from center point of the placement area or activity (i.e., point of turbidity discharge). If triggered, metered monitoring locations will be selected based on the location of the construction activity and to intercept any visible turbidity plumes originating from the construction operations. If turbidity is observed at any time at or beyond 150 feet from the water's edge directly downslope from the point of construction disturbance, instrumented monitoring will be triggered immediately (refer to WQMPP [Appendix D] for details).
- J. A sorbent boom with minimum 3-foot curtain will be placed between the work area and the point of compliance during all repair work.
- K. Clean Water Act 404 ARAR Memo and the WQMPP are both considered part of the Contract Documents. The Contractor shall review these documents provided as appendices and understand their responsibility.
- L. Contractor shall prevent transporting and introducing aquatic invasive species by thoroughly cleaning all equipment, boots and other gear before use at the Project Site and as needed throughout construction to provide the protection against transporting and introducing aquatic invasive species.

1.06 DECONTAMINATION

The following decontamination requirements shall apply if sub-surface contaminated sediment is exposed during construction:

- A. Contractor shall provide a drainage and collection system for water generated during decontamination procedures (if water is used for decontamination).
- B. All construction equipment (earthwork equipment, hand tools etc.) that has been in contact with contaminated or potentially contaminated sediment shall be decontaminated prior to leaving/demobilizing from the Project Site and prior to using such equipment in other clean areas of the site.
- C. Surfactants and detergents must be approved by the City prior to use in decontamination operations.

1.07 NOISE CONTROL

- A. Contractor shall be responsible for conducting all Work in accordance with applicable local, state and federal Laws and Regulations concerning

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SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND MONITORING

- noise or sound levels including the City of Tacoma noise control requirements (Tacoma Municipal Code [TMC] Chapter 8.122).
- B. The City will have authority to direct Contractor to stop Work or modify Work methods or activities as necessary, to comply with the City of Tacoma noise control requirements (TMC Chapter 8.122) and other applicable codes.
 - C. Workers shall not be exposed to noise levels that exceeds OSHA and NIOSH permissible noise exposure limits.
 - D. Contractor shall control the Work at all times, such that sound levels measured at or within a receiving property do not exceed the ambient sound level (established by OSHA and NIOSH) by 10 dBA outdoors and 6 dBA indoors (7 AM to 10 PM), and 5 dBA outdoors and 3 dBA indoors (10 PM to 7 AM) per the City of Tacoma's noise control ordinance requirements.
 - E. Contractor's vehicles and equipment shall be outfitted with mufflers and other sound attenuating equipment.

1.08 SPILL PREVENTION AND CONTROL

- A. The Contractor shall submit a Spill Prevention Control and Countermeasures (SPCC) Plan in accordance with WSDOT Standard Specification 1-07.15 and applicable federal, state, and local substantive requirements. This plan will provide preventive measures to avoid/contain a release, and corrective actions for mitigating any release. The SPCC Plan will provide procedures to ensure the proper management of oil, gasoline and solvents used in the operation and maintenance of construction equipment and that equipment remains free of external petroleum-based products prior to entering the work area and during the work and for making any necessary repairs prior to returning the equipment to operation in the work area. The SPCC Plan will also include adequate procedures to respond to accidental releases of materials (petroleum hydrocarbons, solvents, etc.) and specify materials that will be available on site to respond to accidental releases or spills.
- B. An emergency spill containment kit shall be located on site, on the barge and near the bypass operation, containing an adequate supply of materials (such as a vacuum pump, booms, diapers and other absorbent materials) to control and contain deleterious materials in the event of an accidental spill.
- C. Fueling and waste storage areas shall be distinctly identified and established only on barge(s). No additional fueling and waste storage

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areas shall be established by the Contractor without prior approval from the City. The Contractor will include in its CQCP submittal (Section 01 45 00) a plan for generator fueling as needed consistent with the SPCC). Fueling and waste storage areas will be equipped with spill prevention and control materials.

- D. The Contractor shall be responsible for prevention, containment, and cleanup of spills associated with oil, solvent, fuel and other petroleum products used in the Contractor's operations. All such prevention, containment and cleanup costs shall be borne by the Contractor.
- E. The Contractor shall, at a minimum, take the following measures regarding spill prevention, containment and cleanup:
 - 1. Fuel hoses, lubrication equipment, hydraulically operated equipment, oil drums, and other equipment and facilities shall be inspected regularly for drips, leaks, or signs of damage, and shall be maintained and stored properly to prevent spills. Proper security shall be maintained to discourage vandalism.
 - 2. Secondary containment shall be placed under any equipment or tank stored on site to prevent spills from escaping to waterways.
 - 3. All visible oil spills shall be immediately contained using dikes, straw bales, or other appropriate means and removed using sand, ground clay, sawdust, or other absorbent material, which shall be properly disposed of by the Contractor. Waste materials shall be temporarily stored in drums or other leak-proof containers after cleanup and during transport to disposal. Waste materials shall be disposed off-property at an approved facility. Any manifest from the disposal facility shall be provided to the City.
 - 4. If petroleum sheen, oil, or debris is observed in the water, the contractor will immediately stop work. Corrective actions will be implemented to make repairs to equipment, address the spill, or modify construction activities or BMPs and conduct appropriate notifications with the City Project Manager and USEPA. Work may resume after the corrective actions have been deemed effective, after the turbidity complies with the water quality standard, and as directed by the City or USEPA.
 - 5. In the event of a discharge of oil, fuel, or chemicals, the following agencies will be notified:
 - a. City of Tacoma, Environmental Compliance Spill Hotline at (253) 502-2222

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SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND MONITORING

- b. Washington State Department of Ecology’s Northwest Regional Office Environmental Reporting at (206) 594-0000
- c. The Washington Emergency Management Division at (800) 258-5990
- d. The National Response Center at (800) 424-8802.

EMERGENCY/CONTINGENCY MEASURES

- B. Any work that is out of compliance with the provisions of permits including EPA’s Clean Water Act (CWA) 404 Memo, or conditions causing distressed or dying fish, or any discharge of oil, fuel, or chemicals into state waters, or onto land with a potential for entry into state waters, is prohibited. If these occur, the Contractor shall immediately take the following actions:
 - 1. Cease operations that are causing the compliance problem.
 - 2. Assess the cause of the water quality problem and take appropriate measures to correct the problem and/or prevent further environmental damage.
 - 3. Immediately notify the City and the City will notify EPA. The City will notify both the USEPA Remedial Project Manager (RPM) and the USEPA Water Quality Specialist (WQS) as follows:
 - a. USEPA RPM: Carolyn Huynh (206) 553-0454; huynh.carolyn@epa.gov
 - b. USEPA WQS: Sarah Burgess (206) 553-2998; burgess.sarah@epa.gov
 - 4. In the event of finding distressed or dying fish, the Contractor shall stop work immediately and notify the City. The City will notify EPA.
 - 5. The notification should include the following:
 - a. A description of the nature, extent, and cause of noncompliance.
 - b. The period of noncompliance, including the date and time of noncompliance, and anticipated time when the activity will return to compliance.
 - c. The steps taken to minimize, eliminate, and prevent a recurrence of the noncompliance action.

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6. In addition to the email or phone notification, the City shall submit the detailed, contractor-prepared written report to USEPA within 3 days of the noncompliance, and the report will provide a description of the nature of the violation, the sampling results and location, photographs, a description of the BMPs that were or will be implemented to prevent further violations, and any other pertinent information.
7. In the event of a discharge of oil, fuel, or chemicals into state waters, or onto land with a potential for entry into state waters, containment and cleanup efforts shall begin immediately and be completed as soon as possible, taking precedence over normal work. The following agencies will be notified: (1) City of Tacoma, Environmental Compliance Spill Hotline at (253) 502-2222, (2) Washington State Department of Ecology's Northwest Regional Office Environmental Reporting at (206) 594-0000, (3) the Washington Emergency Management Division at (800) 258-5990, and (4) the National Response Center at (800) 4248802.

1.09 MAINTENANCE OF TEMPORARY ENVIRONMENTAL CONTROLS

- A. The implementation, maintenance, replacement and upgrading of temporary environmental controls shall be the responsibility of the Contractor until Final Completion.
 1. During the Contract Time, temporary environmental controls installed by the Contractor may require maintenance, relocation or upgrading. This Work shall be performed by the Contractor as needed and/or directed by the City.
 2. Contractor shall pay for all costs associated with the construction, maintenance, upgrading and removal of temporary environmental controls throughout the Contract Time.
- B. Contractor shall monitor and maintain temporary environmental controls and BMPs throughout the Contract Time of the Project. This includes but is not limited to:
 1. Replace or update temporary environmental controls and BMPs that are not observed to be functional by the Contractor, City or Engineer.
 2. If the marine turbidity curtain is observed to be dislodged from its original location or not providing its intended function, deploy resources necessary to restore (or reposition) location of marine

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turbidity curtain, replace damaged sections of the turbidity curtain as necessary such that the silt curtain meets its intended function.

1.10 SITE MAINTENANCE

- A. The Contractor shall keep the Project Site clean and free from excess dirt, rubbish, and debris at all times. Materials and equipment shall be removed from the site when they are no longer necessary. Upon completion of the Contract Work and before final acceptance, the Project Site shall be cleared of equipment, unused materials, and dirt and rubbish to present a clean and neat appearance in conformance with the present condition of the Project Site.
- B. Waste material of any kind shall not be permitted to accumulate, remain at the Project Site, nor on the adjacent street areas.
- C. In the event that waste material, refuse, debris or rubbish is not removed from the Project Site, or on adjacent streets by the Contractor, the City reserves the right to have such material removed and the expense of the removal and disposal charged to the Contractor deducted from the pay application for the month this occurs.

1.11 SUBMITTALS

- A. The Contractor shall prepare and submit an Environmental Protection Plan.
 - 1. Contractor prepared Environmental Protection Plan shall incorporate the temporary environmental controls requirements of the Contract Drawings and Specifications.
 - 2. Environmental Protection Plan shall include BMPs and measures described herein, EPA's Clean Water Act 404 Memo (Appendix C) and the WQMPP (Appendix D), along with BMPs specific to contractor's project schedule and specific equipment to be used on site.
 - 3. Provide layout for temporary environmental controls and construction layout including but not limited to TESC and Marine Environmental Controls. Also present locations of temporary field office locations, contractor staging and parking areas, site access corridors, etc.
 - 4. Describe means, methods, and materials to be used for implementing temporary environmental controls including but not limited to TESC, Marine Environmental Controls, Decontamination, Dust and Noise Controls.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND MONITORING

5. Include manufacturer’s catalog cut sheets or a sample of materials to be used.
 6. Describe equipment to be used for water quality monitoring (if applicable) as described in the WQMPP. Include at a minimum: reference to the instrument user manual, how the meter will be obtained/calibrated in the event it is needed, and identify personnel responsible for water quality monitoring.
- B. Statement of Understanding with WQMPP Requirements: Submit a letter that the Contractor has read the WQMPP provided in Appendix D and understands water quality monitoring requirements for the project.
 - C. Water quality monitoring reports including water quality monitoring forms and site plans in accordance with WQMPP (Appendix D).
 - D. Submittals for materials to be used for Temporary Environmental Controls.
 - E. The Contractor shall submit a Spill Prevention Control and Countermeasures (SPCC) Plan.
 - F. Submit all submittals in accordance with the submittal timing requirements identified in SECTION 01 33 00 – SUBMITTAL PROCEDURES

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Refer to Contract Drawings for requirements for the types of products and materials to be used for temporary environmental controls.
- B. Temporary environmental controls products and materials used shall meet the City’s most current Stormwater Management Manual (SWMM) requirements and federal, state and local requirements, which are included in Appendix C.
- C. Turbidity curtain shall meet following requirements:
 1. Type: Turbidity curtain used on site shall meet the specifications of commercially available Type 2 turbidity curtains (also called as Type 2 silt curtain, Type 2 silt barrier, etc.).
 2. Floatation: A minimum diameter of 6 inches.
 3. Curtain (Skirt) Depth: A minimum of 3 feet.

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4. Span/section: A minimum of 50 feet. Each span/section shall be connected in accordance with manufacturer's recommendations with no void left in between spans/sections where silt/turbidity can escape.
5. Color: Bright color (yellow or orange are recommended) to enhance visibility to boaters.
6. Fabric: Fabric shall be a minimum of 18 oz/square yard PVC-coated polyester or nylon.
7. Bottom Tension and Ballast: 5/16-inch steel chain
8. Top or Center Tension: 5/16-inch steel cable
9. Furling (reefing) System: Depending on Contractor's approach to ensure that the turbidity curtain does not ground during lowest predicted tide during construction period, turbidity curtain may contain a furling (reefing) system and lines to allow curtain's depth to be adjusted to changing water depth.
10. Anchoring System: Anchoring system shall consist of noncorrosive galvanized steel anchor, anchor chain and rope and anchor buoy. Anchor system shall be connected to the turbidity curtain at various anchoring points by connecting anchor buoy to the bottom chain of the curtain using a rope painter. Anchor rope (lines) shall be attached to the anchor buoy and not directly to the bottom of the curtain.

PART 3 – EXECUTION (NOT USED)

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 71 23 – SURVEYING AND FIELD VERIFICATION

SECTION 01 71 23 – SURVEYING AND FIELD VERIFICATION
PART 1 – GENERAL

1.01 SUMMARY

- A. This section presents the requirements for performing surveying necessary to ensure that material excavation and placement activities are completed within the specified limits, grades, contours, thicknesses, slopes, and tolerances.
- B. The scope of the Contractor-provided survey consists of furnishing all materials, labor, and equipment necessary for completing construction surveying work described herein, or elsewhere in the Contract Documents.
- C. Survey work includes, but is not limited to, the following:
 - 1. **Layout of Work and Field Verification Points:** Perform layout of the work and establish control/field verification points to be used for survey and field verification.
 - 2. **Post-Construction As-Built Survey(s):** Perform post-construction as-built survey no later than the day following the completion and acceptance of all material placement and site restoration activities by the City, to record the as-built conditions at the site.

1.02 SURVEY DATA PRESENTED ON THE DRAWINGS

- A. The survey data used on Drawings is from available as-built drawings from installation of outfall system.
- B. This survey data, in electronic form, is available to the Contractor upon request.

1.03 QUALIFICATIONS

- A. Hydrographic surveying shall be performed by a NSPS-THSOA Certified Hydrographer with a minimum of 5 years of documented experience with hydrographic survey data collection and processing. The hydrographic surveyor shall be familiar with US Army Corps of Engineers Hydrographic Survey Standards as documented in ACOE EM-1110-2-1003 – Hydrographic Surveying, shall be experienced in dredging and marine work, and shall be familiar with the use (and quality control of) all applicable electronic survey instruments proposed for use on this project. The hydrographic surveyor shall also be knowledgeable of the requirements for hydrographic survey data processing and the specific deliverables to the Owner related to the analysis of the survey results, including, but not limited to: color contour plots, cross section

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 71 23 – SURVEYING AND FIELD VERIFICATION

development, detailed dredge volume reports, and surface (TIN) creation. The hydrographic surveyor statement of qualifications shall be submitted to the Owner for approval.

1.04 SURVEY REFERENCE DATUM AND DATUM CONVERSION

A. All surveys performed for this Work shall be referenced to the following survey datum and benchmark unless otherwise approved by the City:

1. Horizontal:

Washington State Plane Coordinate System South Zone, North American Datum 1983

2. Vertical:

NGVD 29. Per Tacoma Public Works Vertical Datums

3. Benchmark:

Port of Tacoma Project Datum, Benchmark “Tidal 22 1933” consists of a standard brass disk stamped “TIDAL 22 1933” set in the concrete sidewalk on the north side and east end of the east 11th Street Bridge over the Puyallup River.

1.05 SURVEY METHOD, ACCURACY AND DENSITY FOR POST-CONSTRUCTION AS-BUILT SURVEYS

A. Survey shall be completed using hydrographic (water-based) multi-beam survey.

1. Hydrographic survey shall be performed during the highest tide available. Contractor shall get City’s approval on date/time for performing hydrographic survey.

B. At the time of final completion, a post-construction bathymetric survey of all components of the shoreline restoration will be performed for final acceptance of the Work. The post-construction survey will be performed in a manner to represent the conditions at the time of final completion. All hydrographic surveys shall meet the current United States Army Corps of Engineers (USACE) Hydrographic Surveying Manual standards. Hydrographic survey shall be performed using acoustic multi-beam survey system.

C. Horizontal accuracy requirement is ± 0.1 feet.

D. Vertical accuracy requirements is ± 0.01 feet.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 71 23 – SURVEYING AND FIELD VERIFICATION

1.06 SUBMITTALS

- A. Surveying Plan:
 - 1. Describe survey equipment and method that the Contractor proposes to use to perform surveys.
 - 2. Identify the location of permanent project benchmark that the Contractor plans to establish at the site.
- B. Professional Surveyor Qualifications:
 - 1. Provide resume and license number of the lead surveyor, and the insurance certificate.
- C. Date/time of performing hydrographic survey.
- D. Initial Field Verification Points Figure(s) and Table
- E. Updated Field Verification Points Figure(s) and Table
- F. Date/time of performing hydrographic survey for Post-Construction Survey.
- G. Post-Construction As-Built Survey(s) Data.

1.07 SURVEY SUBMITTAL REQUIREMENTS

- A. Electronic Survey Data Deliverable Requirements: The Contractor shall be responsible for filtering all survey data and providing the City with electronic files containing corrected topography/bathymetry (xyz data files). Electronic files shall contain CAD files (AutoCAD version 2018 or newer), Portable Document Format (PDF) and point files (ASCII text).
 - 1. All survey files shall identify the datum used for the survey.
 - 2. Both AutoCAD and PDF files shall be a plan view and identify the location of project benchmark established by the Contractor on site with its northing, easting, and elevation, and shall present the north arrow, scale, contours at 1-foot intervals at a minimum.
 - 3. Both AutoCAD and PDF files shall be stamped, signed, and dated by the surveyor.
 - 4. AutoCAD electronic files submitted for each survey shall have full functionality and layering conventions conforming to National CAD standards, including all supporting files (reference, shape, and plot files).

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 71 23 – SURVEYING AND FIELD VERIFICATION

5. PDF file shall be in 11-inch by 17-inch format.
 6. Point file shall present the following information for each survey point. Prior to submitting point files from a hydrographic survey, the Contractor shall optimize and average the point clouds to a density of 1 point per 1-foot grid (if the point file is denser than this).
 - a. Point number and description.
 - b. Northing and Easting.
 - c. Elevation.
 7. Electronic files for survey submittals not conforming to these requirements shall not be accepted.
- B. Contractor shall combine topographic and hydrographic survey data (if used) collected for Post-Construction As-Built Surveys and provide City with a single file.
- C. Surveys drawings shall be reviewed by the Contractor before submittal to the City for conformance to the indicated requirements and achievement of the tolerances. Non-conforming surveys will be rejected. Surveys indicating material placement not per allowable tolerances shall be grounds for requiring the Contractor to complete corrective action.

PART 2 – PRODUCTS

2.01 EQUIPMENT AND MATERIAL

- A. The contractor is responsible for identifying and procuring all equipment and materials necessary to complete the work described herein.

PART 3 – EXECUTION

3.01 GENERAL

- A. All survey work shall be conducted using the project benchmark (standard brass disk stamped “TIDAL 22 1933” described in Article 1.04) and survey control points and data as shown on the Contract Drawings. Calculations, surveying, and measuring required for setting and maintaining the necessary lines and grades shall be Contractor’s responsibility.
- B. Detailed survey records shall be maintained, including a description of the work performed on each shift, the methods utilized, and the control points used. The record shall be adequate to allow the survey to be reproduced.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 71 23 – SURVEYING AND FIELD VERIFICATION

- C. The Contractor survey procedures (positioning modes, equipment calibration, data reduction, adjustment, processing, and plotting) shall conform to industry standards. Failure to perform and process such surveys in accordance with the recognized standards will result in a rejection and nonpayment for work performed.
- D. Contractor surveys shall be of adequate precision and data density for Contractor to document conformance to the plans at the allowable tolerances.
- E. The Contractor shall conduct and document the quality control procedures recommended by the equipment manufacturer.
- F. The City reserves the right to retain an independent surveyor to periodically check the Contractor's survey. Surveying performed by the City will be at no cost to the Contractor.

3.02 SURVEY CONTROL

- A. The Contractor shall verify the location, coordinates, and elevation of existing benchmark (standard brass disk stamped "TIDAL 22 1933" set in the concrete sidewalk on the north side and east end of the east 11th Street Bridge over the Puyallup River).
- B. The Contractor shall install a permanent project benchmark at the site at the location approved by the City and provide northing, easting, and elevation of this benchmark to the City. The Contractor shall protect this benchmark throughout the construction and replace, if damaged.
- C. The Contractor shall install additional temporary benchmarks and survey controls as necessary for the performance of the work. The Contractor shall be responsible for maintaining, replacing (as necessary) and removing temporary benchmarks and survey controls following their intended use.

3.03 FIELD VERIFICATION

- A. Excavation:
 - 1. Progress surveys and City inspection will not be required for excavation.
- B. Quarry Spall Filter Material:
 - 1. The Contractor shall verify that excavation and Quarry Spall Filter material placement activities are being completed within the specified limits, grades, contours, elevations, slopes, and tolerances.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 71 23 – SURVEYING AND FIELD VERIFICATION

- a. If the work quality and survey data does not meet the design requirement, City will notify the Contractor of non-compliance and the area of non-compliance. The Contractor shall excavate/place/regrade material (as necessary) and resurvey until the work quality and survey data indicates that the design requirements are met.
- C. Filter Fabric Material:
1. Contractor shall not install any Filter Fabric material on top of the Quarry Spall Filter until the specified limits, grades, contours, elevations, slopes, and tolerances has been met.
- D. Heavy Loose Riprap Material:
1. Contractor shall not install any Heavy Loose Riprap material on top of the Filter Fabric material until the specified limits, grades, contours, elevations, slopes, and tolerances has been met.
- E. Streambed Cobble Material:
1. The Contractor shall verify that Streambed Cobble material placement activities are being completed within the specified limits, grades, contours, elevations, slopes, and tolerances.
 2. The Contractor shall provide surveyed elevations of the final surface to the City. The City will review the work quality and surveyed elevations measured in the field as compared to target design elevations, and will provide a response to the Contractor:
 - a. If the work quality and survey data meet the design requirement, City will provide an approval.
 - b. If the work quality and survey data does not meet the design requirement, City will notify the Contractor of non-compliance and the area of non-compliance. The Contractor shall place/regrade material (as necessary) and resurvey until the work quality and survey data indicates that the design requirements are met.
 3. The Contractor shall record the approved surveyed data/elevations and submit the survey data in an electronic format to the City for documentation purposes in accordance with the Electronic Survey Data Deliverable Requirements specified under Article 1.07 – Survey Submittal Requirements. The Contractor shall cross-check with the City in the field (as necessary) to ensure that the approved survey data is being recorded. Any errors made by the Contractor during survey data collection or recording that results in removal, replacement, and regrading of material to meet design requirements shall be solely Contractor’s responsibility at no additional cost to the City.
 4. Survey Timing Requirement :
 - a. The Contractor shall perform the survey above the Heavy Loose Riprap no later than one day following completion

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 71 23 – SURVEYING AND FIELD VERIFICATION

and acceptance of all material placement and site restoration activities by the City.

3.04 POST-CONSTRUCTION AS-BUILT SURVEY

- A. The purpose of the post-construction as-built survey is to record the as-built condition of the site after the completion of construction and City's acceptance of the Work.
- B. The Contractor performed post-construction as-built survey shall present the following, at a minimum:
 - 1. Property boundaries.
 - 2. Topography/bathymetry.
 - 3. MLLW, HTL, and MHHW lines.
 - 4. Limits of construction are 10-foot offset from constructed revetment (outfall apron) section as shown in the Contract Documents.
 - 5. All other existing surface features within the project work limits as shown in the Contract Documents.
- C. The requirements for horizontal extent presented for Contractor detailed above shall apply to post-construction as- built survey.
- D. The Contractor shall prepare and submit survey files for the post-construction as-built survey referenced to both project datum (Tidal 22) and MLLW.
- E. The final as-built survey and the final review and acceptance by the City of the as-built survey shall be completed prior to Contractor's request for final acceptance of the Contract Work.

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 74 00 – CLEANING AND WASTE MANAGEMENT

SECTION 01 74 00 – CLEANING AND WASTE MANAGEMENT
PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. Contractor shall conduct cleaning and waste disposal operations in full compliance with federal, state, and local laws, regulations, and environmental and anti-pollution regulations.
 - 1. Remove waste materials from the site and dispose of in a lawful manner.
 - 2. Cleaning activities shall include affected areas of the Project Site that are used as part of the Work, including the stormwater bypass area.
- B. The Contractor shall be responsible for performing necessary analysis, obtaining disposal approval, and disposing of wastes at landfills approved by the City.
- C. Burying of debris, rubbish or other waste material generated from the Project Site is not permitted unless the debris, rubbish or other waste material are managed in such a way by landfills approved by the City.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 COLLECTION AND DISPOSAL OF WASTE

- A. Collect waste from the Work Area of the Project Site daily. Do not hold waste materials more than seven (7) days during normal weather or three (3) days when the temperature is expected to rise above 80 degrees F (27 degrees C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.

3.02 FINAL CLEANING

- A. Before Final Completion, final cleaning of the Project Site shall be performed by the Contractor. Contractor shall leave the Project Site, including all adjacent properties, and all adjacent City rights-of-way free of any associated waste or debris from the project and returned to the pre-construction condition satisfactory to the City.
 - 1. Clean the Project Site disturbed by construction activities. Sweep any paved areas broom clean. Unpaved areas shall be re-graded, if necessary, and restored to pre-existing conditions or better.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 74 00 – CLEANING AND WASTE MANAGEMENT

2. Remove tools, construction equipment, machinery, and surplus material from the Project Site.
- B. If Contractor fails to clean up the Project Site to the satisfaction of the City, after reasonable notice is provided by the City, the City may do so and the costs incurred by the City shall be charged to Contractor on the final payment.

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 77 00 – CLOSEOUT PROCEDURES

SECTION 01 77 00 – CLOSEOUT PROCEDURES
PART 1 – GENERAL

1.01 DESCRIPTION

- A. Contractor shall refer to SECTION 00 72 00 – GENERAL CONDITIONS and SECTION 00 73 00 – SUPPLEMENTAL CONDITIONS as modified by the City of Tacoma for the definition, guidance and requirements for Substantial Completion, Final Completion, and Final Acceptance.
- B. These requirements include, but are not limited to, Contractor's notification requirements to the City, specified inspections, and submittal of Project Record documents.

1.02 SUBSTANTIAL COMPLETION DEFINITION FOR THIS PROJECT

- A. Substantial Completion shall include, but not be limited to, the following:
 - 1. All excavation and material placement work being completed.

1.03 SUBSTANTIAL COMPLETION INSPECTION

- A. Contractor shall give the City a minimum of five (5) days' notice to request a Substantial Completion inspection.
- B. On receipt of a request for an inspection for Substantial Completion by the City, the City and Engineer shall proceed with the inspection with the Contractor. This inspection shall include the development of a punch list of items that require the Contractor's attention and correction to achieve Substantial Completion and/or work remaining to be accomplished in order for the Contractor to achieve Final Completion of the Project.
 - 1. The City may add additional items to the punch list at any time between Substantial Completion and Final Completion.
- C. If the Project is not deemed Substantially Complete, the City shall conduct a repeat inspection when requested by the Contractor, provided the Contractor assures the City that the Work has been Substantially Completed.
 - 1. The City will issue a written notice of Substantial Completion following this inspection or shall advise Contractor of Work that must be corrected or completed before the notice will be issued.
- D. Results of the completed Substantial Completion inspection shall form the basis of identifying any outstanding requirements for achieving Final Completion.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 77 00 – CLOSEOUT PROCEDURES

1.04 FINAL COMPLETION INSPECTION

- A. Upon completion of all punch list items identified during the Substantial Completion inspection and the completion of all remaining Work items identified by the City or Contractor, Contractor and the City with the Engineer shall together perform an inspection to verify that Contract requirements, including corrective actions on punch list items, have been completed.
- B. Contractor shall provide the City a minimum of five (5) days' notice to request a Final Completion inspection.
- C. On verification that all project work has been completed, and upon receipt of the completed Project Record file, the City shall issue a Notice of Final Completion to the Contractor.

1.05 WARRANTY

- A. Shoreline restoration performed under this contract is under warranty for 12 months from the date of substantial completion.
- B. An inspection visit of the Work shall be performed by Contractor and the City with the Engineer approximately 4 weeks prior to the end of the 12 month warranty period that begins at Substantial Completion.
 - 1. Contractor shall contact the City to coordinate these inspection visits a minimum of two (2) calendar weeks in advance.
- C. During this inspection visit, Contractor and the City shall view the condition of Work since Final Completion, verify whether the Work still meets the requirements of Contract Documents, and identify deficiencies in the Work that do not conform to Contract Documents.
 - 1. Work under warranty that does not meet the requirements of Contract Documents shall be considered Remedy Work and scheduled for repair or replacement, as appropriate.

1.06 REMEDY WORK

- A. Scheduling for Remedy Work shall be submitted to the City by Contractor after the warranty inspection visit. All Remedy Work shall be performed and completed no later than thirty (30) calendar days after the inspection visit, unless otherwise authorized by the City.
- B. Work to be remedied shall be replaced or rebuilt to comply with the requirements of the Contract Documents. The Contractor is responsible for the cost of correcting noncomplying and defective Work that is not in compliance with the Contract Documents.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 77 00 – CLOSEOUT PROCEDURES

1.07 FINAL ACCEPTANCE

- A. The City shall issue the Notice of Final Acceptance when all Contract requirements have been satisfied.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 78 39 – PROJECT RECORD DOCUMENTS

SECTION 01 78 39 – PROJECT RECORD DOCUMENTS
PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. Throughout progress of the Work, the Contractor shall maintain an accurate record of all Project Record Documents and Red-line Drawings.

1.02 QUALITY ASSURANCE

- A. General: The Contractor has full responsibility for maintenance of changes to the Project Record Documents.
- B. Accuracy of Records: Thoroughly coordinate all changes to the Contract Drawings by making red-line entries on an ongoing basis on a single set of drawings maintained at the job site. Accuracy shall be such that future uses of information showing the as-built condition of the Contract Work may reasonably rely on the information shown. The City's approval of the accuracy and current status of the record of changes to the Redlines will be a prerequisite to the City's approval of requests for each progress payment. Appropriate payment may be withheld if Redlines are not up to date at the times of periodic applications for progress payments.

1.03 PROJECT RECORDS

- A. Contractor shall maintain Project Records including all submittals, change orders, RFIs, survey documentation, import facility weigh tickets or receipts, warranties, daily and weekly monitoring forms and/or reports, permits/substantive requirements, etc. in their files.
- B. Contractor shall submit the Project Records to the City as per the requirements of the Contract Documents. Project Records files shall be submitted to the City electronically using e-Builder (construction management software).

1.04 RED-LINE DRAWING REQUIREMENTS

- A. General: Preparation of Red-Line Drawings is a requirement of the Contract. The Contractor is required to revise the Contract Drawings to document the changes during construction to produce an as-built record of the project.
- B. Red-Line Drawings:
 - 1. General: The Contractor shall revise one set of Contract Drawings by redline process to show the as-built conditions during the course of the Project. These working, Red-Line Drawings shall be kept accurate and current throughout the progress of the Work.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 78 39 – PROJECT RECORD DOCUMENTS

2. Progress Submittals: Prior to submitting each request for progress payment, secure the City’s approval of the working Red-Line Drawing as currently maintained.
3. Final Red-Line Drawings Submittal: After approval of the current “Red Line” Drawings by the City, and within 14 days after Substantial Completion, and prior to Final Payment request, submit (one copy) of the final Red-Line Drawings to the City.

1.05 HANDLING OF RED-LINE DRAWINGS

- A. During execution of the Work, the Contractor shall use all means necessary to maintain a record of changes to the Contract drawings completely protected from deterioration and from loss and damage. Such changes shall be recorded upon the Red-Line Drawings which will be composed of Contractor markups on project drawing prints supplied by the City.

1.06 MAINTENANCE OF RED-LINE DRAWINGS

- A. Identification: Upon receipt of the project drawings described in paragraph 2.01 above, identify each of the Documents with the title “RED-LINE.”
- B. Preservation: In consideration of the Contract completion time, frequent use of the Red-Line Drawings for making new entries and for examination, and the conditions under which these activities will be performed, devise a suitable method for protecting the project Red-Line Drawings to the approval of the City.
- C. Do not use the Red-Line Drawings for any purpose except entry of new data and for review by the City.
- D. Making Entries to the Red-Lines Drawings:
 1. The working and final Red-Line Drawings shall show, at a minimum, the following information:
 - a. All changes in the work generated by documents such as Change Orders, Requests for Information (RFI) and Contractor-originated proposals. Identify the documents generating changes from the as-bid Contract Documents. These changes shall show the actual work with the same level of accuracy and completeness as the original Contract documents.

DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 78 39 – PROJECT RECORD DOCUMENTS

- b. Any sketches that accompanied the Change Order/Directive attached to the drawing sheet or the back of the sheet preceding it.
- c. The actual location, identification and sizes of material, equipment, utilities and elements of the project to the same level of detail as the original as-bid Contract Drawings.
- d. The correct scale, grade, elevations, dimensions and coordinates of changes.
- e. Changes or modifications that result from final inspection.

1.07 SUBMITTALS

- A. Final Red-Line Drawings as discussed herein.

PART 2 – PRODUCTS

2.01 PROJECT DRAWINGS

- A. Promptly following award of the Contract, secure from the City one full size set of paper prints of the Contract Drawings for recording as-built conditions.

PART 3 – EXECUTION (NOT USED)

END OF SECTION

DIVISION 02 – EXISTING CONDITIONS
SECTION 02 22 00 – EXISTING CONDITIONS ASSESSMENT

SECTION 02 22 00 – EXISTING CONDITIONS ASSESSMENT
PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. Prior to commencing earth disturbing or material placement activities, the Contractor shall perform all necessary existing conditions assessments at the Project Site to facilitate and permit the Contractor to return and restore the Project Site to match or exceed its original condition or conditions as specified in the Contract Documents. Limits of existing conditions assessment shall extend, at a minimum, 50 feet beyond the Project Site.

- B. Existing conditions assessments shall include, but are not limited to:
 - 1. Photographic and/or video documentation of surface and above ground features including but not limited to outfall structure and slope cap materials at the Project Site before commencing construction.

 - 2. Photographic and/or video documentation of the locations and conditions of underground utilities (if applicable).

1.02 SUBMITTALS

- A. Photographs, video documentation and notes of existing site conditions assessments for all surfaces at least one week prior to commencing earth disturbing or material placement activities at the Project Site.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

DIVISION 31 – EARTHWORK
SECTION 31 00 00 – EARTHWORK

SECTION 31 00 00 – EARTHWORK
PART 1 – GENERAL

1.01 SUMMARY

- A. Earthwork described in this Section includes the following:
1. Excavation and removal of excavated material within the construction area and disposal of excavated material offsite at an approved facility.
 2. Placement of Quarry Spall Filter in the areas shown on the Contract Drawings.
 3. Placement of Filter Fabric material as shown on the Contract Drawings.
 - 4.____Placement of Heavy Loose Riprap as shown on the Contract Drawings.
 - 5.____Placement of Streambed Cobbles in the areas shown on the Contract Drawings.

1.02 RELATED SECTIONS

- A. Section 01 45 00 – Construction Quality Control
- B. Section 01 71 23 – Surveying and Field Verification
- C. Section 31 35 00 – Slope Protection

1.03 DEFINITIONS

- A. Heavy Loose Riprap: Angular stone used to construct the revetment (outfall apron) structures and shoreline protection areas.
- B. Quarry Spall Filter: Layer of small stones used for bedding/filter layer between the existing native soil and the geotextile fabric in areas as shown on the Contract Drawings.
- C. Filter Fabric: Non-woven geotextile fabric placed as shown on the Contract Drawings.
- D. Streambed Cobbles: Naturally occurring water rounded gravel material used as shown on the Contract Drawings.
- E. Excavation: Material removed from the shoreline in preparation for the revetment (outfall apron) repair.

DIVISION 31 – EARTHWORK
SECTION 31 00 00 – EARTHWORK

- F. Revetment (Outfall Apron): Completed structure including heavy loose riprap and streambed cobbles where applicable.

1.04 REFERENCES

- A. American Society for Testing and Materials (ASTM)
- B. American Association of State Highway and Transportation Officials (AASHTO)
- C. Standard Specifications for Road, Bridge, and Municipal Construction as prepared by the Washington Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter, 2024 Edition.

1.05 SUBMITTALS

- A. Earthwork Plan: The Contractor shall submit a detailed work plan description for conducting all excavation, grading, and revetment (outfall apron) construction activities including, but not limited to, excavation, re-handling, and disposal of material. This plan shall describe methods, sequence of construction, and equipment proposed for conducting the work. This plan shall include methods and sequence of construction in relation to the tides and changing water levels. This plan shall be submitted to the City of Tacoma seven days prior to the commencement of excavation.
 - 1. Earthwork Plan shall include provisions/measures to be utilized to protect existing concrete energy dissipator and outfall structure during excavation and revetment (outfall apron) construction.
- B. Daily Activities Report: The Contractor shall provide a daily record of construction activities and shall document percent of project completion, updated limits and progress of Earthwork, and adverse weather conditions or other problems that cause problems for each day there are on-site work activities. The daily reports shall be submitted to the City of Tacoma at the end of each day throughout the duration of construction.
- C. The City of Tacoma must approve all pre-construction submittals before construction is allowed to begin.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Imported materials shall be tested and certified to be free of contaminants as approved by the Project Representative.

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- B. The Project Representative maintains the right to reject any materials that have been determined to be substandard for any reason. In the event of rejection, it shall be the responsibility of the Contractor to remove all rejected material from the site at its sole expense.
- C. Contractor shall visually inspect each load of imported material upon delivery for the presence of foreign, recycled or reprocessed material. Material shall be rejected due to identification of such material or substandard test results. The Project Representative may at any time perform an independent inspection.
- D. All Heavy Loose Riprap, Quarry Spall Filter, and Streambed Cobble material shall be sourced or quarried and transported from sources less than 500 miles from the site.

2.02 MATERIAL SOURCE CHARACTERIZATION

- A. Material source characterization shall be performed as specified in Section 31 35 – Slope Protection to assure that materials used for Outfall 230A slope cap repair are natural, native, and virgin materials, free of unwanted materials including debris or recycled materials, and meet the requirements of these specifications. Any material that has been determined to be substandard by the Engineer for any reason will be rejected. In the event that a material is rejected, it shall be removed from the site at no cost to the City of Tacoma.

2.03 FILTER FABRIC

- A. Filter Fabric/Geotextile Material shall meet the requirements for American Society for Testing and Materials (ASTM)
- B. Filter Fabric/Geotextile Material shall be 8 ounces per square yard, non-woven, needle-punched polypropylene with the following minimum average roll values.

PROPERTY	ASTM METHOD	UNITS	MIN. AVG. ROLL VALUE
Grab Tensile	D4632	lbs	205
Grab Elongation	D4632	%	50
Puncture Strength	D4833	lbs	130
Trapezoidal Tear	D4533	lbs	85
Mullen Burst	D3786	psi	400
Apparent Opening Size	D4751	US Sieve	80

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Water Flow Rate	D4491	gpm/sf	90
Permittivity	D4491	sec-1	1.40
Permeability	D4491	cm/sec	0.38
UV Resistance (500 hrs)	--	% retained	70

- C. Filter Fabric/Geotextile Material shall have integrated weights attached to the fabric to allow for setting fabric material below water surface. Contractor to confirm weight used is sufficient to effectively place the fabric without buoyant forces impacting placement.

2.04 IMPORTED QUARRY SPALL FILTER

- A. Quarry Spall Filter shall consist of broken stone from an approved source with a minimum of three fractured faces. Quarry Spall Filter shall be free of fines and not be contaminated by foreign materials such as fibers, wood, steel, asphalt, sealant, soil, plastic, or other deleterious material; free from segregation, seams, cracks or other defects; and shall conform with the following test requirements:

Aggregate Property	Test method	Requirement
Degradation Factor	WSDOT Test Method T113	15 minimum
Los Angeles Wear, 500 Rev.	AASHTO T 96	50% maximum
Specific Gravity, SSD	AASHTO T 85	2.55 minimum

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- B. The grading of the Quarry Spall Filter shall be confirmed by the Engineer by visual inspection prior to transport to the site. Quarry Spall Filter shall conform to the following gradation requirements:

Percent Passing	(Smaller)
<u>Size (Inches)</u>	
8	100
3	40 max
3/4	10 max

2.05 IMPORTED HEAVY LOOSE RIPRAP

- A. Heavy Loose Riprap shall consist of broken stone from an approved source that is hard, sound, dense, and durable. It shall be free from seams, cracks, and other defects tending to destroy its resistance to weather and seawater. Dry unit weight shall not be less than 160 pounds per solid cubic foot.
- B. Riprap shall meet the following test requirements:

Aggregate Property	Test method	Requirement
Degradation Factor	WSDOT Test Method T113	15 minimum
Los Angeles Wear, 500 Rev.	AASHTO T 96	50% maximum
Specific Gravity, SSD	AASHTO T 85	2.55 minimum

- C. Broken stone shall be 28 inches nominal diameter with 50-80% passing smaller. The minimum thickness of the Heavy Loose Riprap layer shall be 1.5 times the nominal stone diameter. The grading of the Heavy Loose Rip Rap shall be confirmed by the Engineer by visual inspection prior to transport to the site. Rock for Riprap shall be angular, each piece having its

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greatest dimension not greater than three times its least dimension, and shall meet the following gradation requirements:

<u>Size (Inches)</u>	<u>Percent Passing (Smaller)</u>
42	100
36	80 to 95
28	50 to 80
22	15 to 50
14	15 Max

2.06 IMPORTED STREAMBED COBBLES

- A. Streambed cobbles shall consist of 2"-6" cobbles. The streambed cobbles shall consist of rounded aggregates that are naturally occurring water rounded aggregates. Aggregates from quarries, ledge rock and talus slopes are not acceptable. Streambed Cobbles shall be from an approved source, uniform in quality and free from wood, roots, bark and other extraneous materials. The individual particles shall be free from all objectionable coating and shall contain no organic matter or soft friable particles. Deleterious materials may be determined visually or be tested in accordance with AASHTO T 194 or AASHTO T267. Streambed Cobbles shall meet the following test requirements for quality:

Aggregate Property	Test method	Requirement
Degradation Factor	WSDOT Test Method T113	15 minimum
Los Angeles Wear, 500 Rev.	AASHTO T 96	50% maximum
Specific Gravity, SSD	AASHTO T 85	2.55 minimum

- B. The grading of the cobbles shall be confirmed by the Engineer by visual inspection prior to transport to the site. Streambed Cobbles shall conform to the following gradation requirements:

<u>Size (Inches)</u>	<u>Percent Passing (Smaller)</u>
8	100
6	70-90
2	30-60
3/4	10 max

PART 3 – EXECUTION

3.01 SCHEDULE

- A. The Contractor shall keep the City of Tacoma aware of the timing and duration of project activities. Any changes or delays regarding the information provided to the City of Tacoma shall be communicated as soon as it is known.

3.02 WORK LAYOUT

- A. Contractor is responsible for conducting all pre-construction surveying and staking required for laying out the work for the excavation and revetment (outfall apron) construction activities. All construction staking work shall be reviewed by the City before any excavation starts and fill work activities. Construction survey work shall be conducted according to the applicable requirements of Section 01 71 23 – Surveying and Field Verification.
- B. An accurate method of horizontal and vertical control shall be established by the Contractor prior to the start of Quarry Spall Filter placement work in accordance with the applicable requirements of Section 01 71 23 – Surveying and Field Verification. The Contractor shall layout the work using the work points provided on the Contract Drawings.

3.03 GENERAL EXCAVATION

- A. Excavation
 - 1. The Contractor shall locate, identify, and protect existing utilities from damage during construction activities. The Contractor shall pre-mark all areas where excavation and grading operations are to occur. Areas to be excavated shall have all deleterious material removed prior to the start of excavations. The deleterious material shall be disposed of off-site in a legal manner by the Contractor, at no additional expense to the City of Tacoma.
 - 2. The Contractor shall be aware that the existing conditions at the project site are dynamic and subject to change. Preconstruction survey of work areas shall be conducted, and the results reviewed with the City of Tacoma at least 10 days prior to the start of construction.
 - 3. Unauthorized excavation consists of removal of materials beyond indicated sub-grade elevations or dimensions without specific direction by the City of Tacoma. Unauthorized excavation and

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remedial work directed by the City shall be at the Contractor's expense.

4. Excavation work shall not occur until the appropriate approved BMPs and water quality protection measures have been installed as described in the project WQMPP and approved by the City of Tacoma.
 - a. Excavation work shall be completed to the limits and grades shown on the Contract Drawings.
 - b. Excavated materials shall be stockpiled on a barge for disposal at locations to adhere to permit documents, or as instructed by the City of Tacoma.
5. Excavated materials are the property of the Contractor and shall be disposed of offsite in a legal manner.

B. Stability of Excavations

1. Slope sides of excavations to comply with local codes and ordinances having jurisdiction. Maintain sides and slopes of excavations in a safe condition until completion of installation of new revetment (outfall apron) structure.
2. The Contractor is responsible for the design and adequacy of all temporary excavation slopes. The Contractor shall comply with all applicable regulations governing temporary excavation slopes, including Occupational Safety and Health Administration (OSHA and WISHA).
3. All excavation which will in any manner affect the bearing capacity of the soil foundation presently supporting existing structures, pavements, pipe beds, etc. shall be performed so as not to disturb existing soils to remain. Do not undermine or weaken the bearing of existing structure foundations, or upland infrastructure.

3.04 DISPOSAL OF EXCAVATED MATERIAL

- A. Material excavated shall be hauled and disposed of at a Contractor selected and City approved Subtitle D facility. The Contractor shall provide the manifest from the disposal facility to the City.
- B. Contractor will use data provided in Appendix B and Appendix E to pre-characterize the material for disposal, establish a profile for the material, and identify a proposed landfill disposal option for City and USEPA approval.

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3.05 TOLERANCES

A. General:

1. Contractor shall excavate and grade to all excavated surfaces shown in the Contract Drawings to a vertical and horizontal tolerance of +/- 6 inches.

3.06 INSPECTION

- A. Slope lines, grades, and depth of excavation will be visually inspected by the City.

3.07 MISPLACED MATERIAL

- A. Should the Contractor, during the execution of the work, lose, dump, sink or misplace any material, machinery, or appliance, the Contractor shall be solely responsible for its recovery. The Contractor shall give immediate verbal notice, followed by written confirmation, of the description and location of such obstructions to the City of Tacoma and shall mark and buoy such obstructions until they are removed.
- B. If material is placed outside the limits shown in the Contract Drawings, the Contractor shall be responsible for retrieval of the material or procurement of alternate material (of equal volume). The Contractor shall be responsible for costs and any penalties associated with damage caused by material placement outside of the limits shown in the Contract Drawings, as well as costs associated with the procurement of alternate material as necessary.
- C. Should the Contractor refuse, neglect, or delay compliance with this requirement, such obstructions may be removed by the City of Tacoma, and the expense charged to the Contractor, or recovered from the bond. The liability of the Contractor for the removal of a vessel wrecked or sunk without his fault or negligence shall be limited to that provided in Sections 15, 19, and 20 of the River and Harbor Act of 3 March 1899 (33 U.S.C. 410 et seq.).

END OF SECTION

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SECTION 31 23 19 – TEMPORARY OFF-SITE STORMWATER RE-ROUTE

SECTION 31 23 19 – TEMPORARY OFF-SITE STORMWATER RE-ROUTE

PART 1 – GENERAL

1.06 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section. Work related to this section is described in the following sections.
1. Section 00 31 00 – PM and Coordination
 2. Section 01 33 00 – Submittal Procedures
 3. Section 01 45 00 – Construction Quality Control
 4. Section 01 57 13 – TESC
 5. Section 31 00 00 – Earthwork

1.07 DESCRIPTION OF WORK

- A. The work includes providing all supervision, labor, materials, and equipment required to temporarily divert stormwater from off-site terminal conveyance systems until substantial completion of work.

1.08 QUALITY ASSURANCE

- A. It shall be the sole responsibility of the Contractor to control the rate and effect of the bypass pumping operations in such a manner as to prevent any backwater effects.
- B. Pumping systems shall be designed by the Contractor.
- C. Contractor shall provide suitable spill control and containment measures to avoid environmental contamination by pumps, fuels, or lubricants.

1.09 SUBMITTALS

- A. A temporary Off-Site Stormwater Reroute Plan shall be included as part of the Construction Quality Control Plan (CQCP – see Section 01 45 00) that includes the proposed means and methods for temporarily intercepting existing off-site stormwater conveyance systems as indicated on the Contract Drawings and handling the dewatering discharge. This includes pump(s), piping, generator(s), and temporary pipe plugs to be

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SECTION 31 23 19 – TEMPORARY OFF-SITE STORMWATER RE-ROUTE

used as a part of this work. Work affected by the plan shall not be performed until the plan is approved by the Engineer.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Products required to accomplish, or to be incorporated into, the work of this section shall be selected by the Contractor, subject to review by the Engineer.
- B. Provide sufficient pumping equipment and other machinery to assure that the operations of the stormwater bypass system can be maintained.

PART 3 – EXECUTION

3.01 GENERAL

- A. Adequate pumping equipment shall be provided to handle and dispose of the water without damage or flooding of adjacent properties or infrastructure. The systems shall be capable of continuous (24-hour per day) operation and for the project's duration.
- B. Contractor shall size and determine the pump(s) required to ensure proper bypass without any backwater effects to the overall City stormwater system.
- C. Contractor shall place temporary plug securely. Temporary plug shall be a pneumatic plug and provide full isolation of the downstream system from upstream stormwater. Upon substantial completion of the project, the plug shall be removed.
- D. Generator(s) shall be provided by the contractor and sufficient to power the system for the project's duration.

END OF SECTION

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SECTION 31 35 00 – SLOPE PROTECTION

SECTION 31 35 00 – SLOPE PROTECTION

PART 1 – GENERAL

1.10 DESCRIPTION OF WORK

A. The work described in this specification includes identification, characterization, and approval of materials used for Outfall 230A repair in a slope cap area in the Thea Foss and Wheeler-Osgood Waterways. Materials to be used for repair activities may include the following:

1. Quarry spall filter;
2. Heavy loose riprap;
3. Geotextile; and
4. Streambed cobbles.

1.11 QUALITY ASSURANCE

A. Sampling, testing, and inspection for compliance with this specification shall be in accordance with the requirements specified herein.

1.12 STANDARD SPECIFICATIONS

A. The Standard Specifications for the work described in this section shall be the Standard Specifications for Road, Bridge, and Municipal Construction as prepared by the Washington Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter, 2024 Edition.

1.13 SUBMITTALS

The following submittals shall be provided for slope cap repair materials:

- A. Source Identification (per Paragraph 2.02-A).
- B. Material Source Characterization (per Paragraph 2.02).
- C. Shipping Receipts and Material Volumes for slope maintenance materials (per Paragraph 3.01).

Test reports shall be provided by a laboratory that is independent of the supplier. Slope cap repair materials shall be provided from a source approved by the U.S. Environmental Protection Agency (USEPA).

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SECTION 31 35 00 – SLOPE PROTECTION

PART 2 - PRODUCTS

2.02 GENERAL

- A. Materials shall be of the quality, size, shape, and gradation specified herein. Material sources shall be selected well in advance of the time when the material will be required in the work. Suitable representative samples and test reports, as described below, must be submitted to, and approved by the Engineer prior to delivery of materials to the jobsite.

2.03 MATERIAL SOURCE CHARACTERIZATION

Material source characterization shall be performed as specified below to assure that materials used for Outfall 230A slope cap repair are natural, native, and virgin materials, free of unwanted materials including debris or recycled materials, and meet the requirements of these specifications. Any material that has been determined to be substandard by the Engineer for any reason will be rejected. In the event that a material is rejected, it shall be removed from the site at no cost to the City of Tacoma. Slope cap repair activities will use materials approved for use by the USEPA.

The Material Source Characterization will consist of Source Identification (2.02 A), Source Inspection (2.02 B), and Grain Size Distribution (2.02 C. 1 and 2). The Contractor shall submit a characterization of any and all imported material prior to any on-site placement.

- A. Source Identification:
Prior to material source sampling, documentation of the origin of each type of material to be used on the Project including the names, addresses, and source identification numbers and maps identifying specific location(s) of material source(s).
- B. Source Inspection:
All material sources shall be inspected at the source by the Engineer and the supplier(s) of the material. The witnessing of the inspection by the Engineer shall in no way release the supplier(s) from complying with the Specifications and in no way shall be construed as approval of any particular source of material.
- C. Testing, Reporting, and Certification:
Samples of the source material which include heavy loose rip rap, quarry spall filter, and streambed cobbles shall undergo all of the following tests. Heavy loose rip rap, quarry spall filter, and streambed cobbles will meet the requirements of 2.04, 2.05, and 2.06 respectively.
1. Grain Size Distribution (ASTM D 422-63).

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2. Particle Specific Gravity (ASTM D 854).
3. Weight per unit volume of uncompacted materials.

The results of such tests shall be provided at least two weeks before delivery of the materials to the jobsite. The results of each test shall be provided in a report that clearly identifies the following:

1. Source of samples.
2. Sampling dates.
3. Supplier's certification that the samples tested and the results provided are representative of materials that shall be delivered to the site.

D. Inspection of Materials at the Jobsite:

Slope cap repair materials shall be visually inspected upon delivery. Materials shall be inspected for the presence of foreign, recycled, or reprocessed material. Material may be rejected due to identification of any such material or as a result of substandard test results. Materials may be segregated for testing based on appearance or odor. Segregated material may be tested according to procedures at the City of Tacoma's discretion. Substandard repair materials may be rejected at no cost to The City of Tacoma.

2.04 GEOTEXTILE

- A. The intent of the geotextile is to provide a permeable barrier that allows water movement, but acts to contain the existing subsurface.
- B. Geotextile fabric shall be 8 ounces per square yard, non-woven, needle-punched polypropylene with the following minimum average roll values.

PROPERTY	ASTM METHOD	UNITS	MIN. AVG. ROLL VALUE
Grab Tensile	D4632	lbs	205
Grab Elongation	D4632	%	50
Puncture Strength	D4833	lbs	130
Trapezoidal Tear	D4533	lbs	85
Mullen Burst	D3786	psi	400
Apparent Opening Size	D4751	US Sieve	80
Water Flow Rate	D4491	gpm/sf	90

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Permittivity	D4491	sec-1	1.40
Permeability	D4491	cm/sec	0.38
UV Resistance (500 hrs)	--	% retained	70

2.05 HEAVY LOOSE RIPRAP

A. Heavy Loose Riprap shall consist of broken stone from an approved source that is hard, sound, dense, and durable. It shall be free from seams, cracks, and other defects tending to destroy its resistance to weather and seawater. Dry unit weight shall not be less than 160 pounds per solid cubic foot.

B. Riprap shall meet the following test requirements:

Aggregate Property	Test method	Requirement
Degradation Factor	WSDOT Test Method T113	15 minimum
Los Angeles Wear, 500 Rev.	AASHTO T 96	50% maximum
Specific Gravity, SSD	AASHTO T 85	2.55inimum

C. Broken stone shall be 28 inches nominal diameter with 50-80% passing smaller. The minimum thickness of the Heavy Loose Riprap layer shall be 1.5 times the nominal stone diameter. The grading of the Heavy Loose Rip Rap shall be confirmed by the Engineer by visual inspection prior to transport to the site. Rock for Riprap shall be angular, each piece having its greatest dimension not greater than three times its least dimension, and shall meet the following gradation requirements:

<u>Size (Inches)</u>	<u>Percent Passing (Smaller)</u>
42	100
36	80 to 95
28	50 to 80
22	15 to 50
14	15 Max

2.06 Quarry Spall Filter

A. Quarry Spall Filter shall consist of broken stone from an approved source

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with a minimum of three fractured faces. Quarry Spall Filter shall be free of fines and not be contaminated by foreign materials such as fibers, wood, steel, asphalt, sealant, soil, plastic, or other deleterious material; free from segregation, seams, cracks or other defects; and shall conform with the following test requirements:

Aggregate Property	Test method	Requirement
Degradation Factor	WSDOT Test Method T113	15 minimum
Los Angeles Wear, 500 Rev.	AASHTO T 96	50% maximum
Specific Gravity, SSD	AASHTO T 85	2.55 minimum

- B. The grading of the Quarry Spall Filter shall be confirmed by the Engineer by visual inspection prior to transport to the site. Quarry Spall Filter shall conform to the following gradation requirements:

<u>Percent Passing</u>	<u>Size (Inches)</u>	<u>(Smaller)</u>
	8	100
	3	40 max
	3/4	10 max

2.07 STREAMBED COBBLES

- A. Streambed cobbles shall consist of 2”-6” cobbles. The streambed cobbles shall consist of rounded aggregates that are naturally occurring water rounded aggregates. Aggregates from quarries, ledge rock and talus slopes are not acceptable. Streambed Cobbles shall be from an approved source, uniform in quality and free from wood, roots, bark and other extraneous materials. The individual particles shall be free from all objectionable coating and shall contain no organic matter or soft friable particles. Deleterious materials may be determined visually or be tested in accordance with AASHTO T 194 or AASHTO T267. Streambed Cobbles shall meet the following test requirements for quality:

Aggregate Property	Test method	Requirement
Degradation Factor	WSDOT Test Method T113	15 minimum

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Los Angeles Wear, 500 Rev.	AASHTO T 96	50% maximum
Specific Gravity, SSD	AASHTO T 85	2.55 minimum

- B. The grading of the cobbles shall be confirmed by the Engineer by visual inspection prior to transport to the site. Streambed Cobbles shall conform to the following gradation requirements:

<u>Percent Passing</u> <u>Size (Inches)</u>	<u>(Smaller)</u>
8	100
6	70-90
2	30-60
3/4	10 max

PART 3 – EXECUTION

3.01 GENERAL

- A. The supplier shall provide daily reports of the quantities of slope cap repair materials used to the Engineer. The reports shall include tabulated summaries of volumes placed for each material. Shipping receipts for all materials delivered to the site shall also be submitted on a daily basis to the City of Tacoma.
- B. Contractor shall submit a Construction Quality Control Plan (CQCP; refer to Section 01 45 00 – Construction Quality Control) with supporting documentation to the Engineer showing the proposed methods for minimizing slope cap disturbance from spudding. The Engineer will require up to 20 calendar days from the date the plan is received until it is returned to the Contractor. The Contractor shall not proceed with the work represented by the plan until comments from the Engineer have been addressed.

3.02 Material Placement

- A. All slope protection materials shall be placed starting from the lower elevations and working towards the higher elevations.
- B. Place the geotextile in the prepared installation area according to engineered plans. The fabric should be stretched as tight and as flat as possible. Overlap the edges of adjacent rolls by 3 feet minimum. Secure

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the fabric with stainless steel weights along the edges and overlapping portions.

- C. Place riprap over geotextile filter blanket and quarry spall filter in a manner that will not displace the underlying material, with largest rock against the slope and the remainder of the rock placed around such that the smaller rock will key into the larger rock to form a tight blanket. Dress all aggregate material to match the thicknesses shown in plan.
- D. If the contractor's placement methods do not provide satisfactory results as specified, as determined by the Engineer, then the contractor shall change the placement methods to achieve satisfactory results. Changes to the placement methods or reworking aggregate material shall occur at no additional cost to the City.

END OF SECTION

APPENDIX A

PLAN SET (PROVIDED VIA SEPARATE DOCUMENT)

APPENDIX B

2024 OUTFALL 230A REPAIR PLAN

Memorandum

To: Carolyn Huynh, USEPA Regional Project Manager
Copies: Jody Bratton and Laura Nokes, City of Tacoma
From: Brett Beaulieu, Erin Cosnowski, Danielle Gallaher, and Jessi Massingale,
Floyd|Snider
Date: April 15, 2024
Project No: Thea Foss and Wheeler-Osgood Waterways LTMP
Re: **2024 Outfall 230A Slope Cap Repair Plan**

INTRODUCTION

The U.S. Environmental Protection Agency- (USEPA-) approved Long-Term Monitoring Plan (LTMP) for the Thea Foss and Wheeler-Osgood Waterway Remediation Project requires that low tide inspections of capped shoreline areas be performed to verify the physical integrity of the intertidal portion of the slope caps and containment of underlying contaminated sediment. The most recent low tide slope cap inspection and monitoring activities occurred in June 2023 as part of the Year 17 long-term monitoring and maintenance program. During this Year 17 low-tide slope cap inspection, erosion of some of the cap material off the mouth of City Outfall 230A in Remedial Area (RA) 8 was documented. USEPA has identified the slope cap off the outfall mouth or apron as requiring repair by the City of Tacoma (City). The location of Outfall 230A within RA 8 is presented on Figure 1. This memorandum summarizes slope cap repair activities to be performed off the Outfall 230A apron in 2024 as part of the long-term monitoring and maintenance program for the Thea Foss and Wheeler-Osgood Waterways.

To address this erosion and repair the slope cap off the Outfall 230A apron, the slope cap will be repaired by a general contractor on behalf of the City in general accordance with the *Thea Foss and Wheeler-Osgood Waterways Slope Area Maintenance Plan* (City of Tacoma 2007) and will include placement of required slope cap materials over the exposed slope, including heavy loose riprap to prevent erosion of the slope and round streambed cobbles for habitat enhancement. The following sections summarize the existing slope cap condition and the repair activities to be performed. Additionally, Outfall 230A Slope Cap Repair Design Drawings are provided in Attachment 1 to this memorandum.

SLOPE CAP REPAIR AREA CONDITIONS

The original Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedial action conducted in 2005 in the portion of RA 8 where Outfall 230A was later constructed included placement of a thick slope cap. This slope cap consists of a minimum 18-inch-thick layer of slope cap “filter” material consisting of sand and gravel, covered by a minimum 18-inch-thick layer of armor rock (riprap and/or quarry spalls), and habitat mix placed on top of the armor rock to fill the interstices of the larger stone and provide appropriate substrate for habitat enhancement. Additional details on the slope cap materials are included in Table 1-3 from the Thea Foss and Wheeler-Osgood Waterways Remediation Project Remedial Action Report (City of Tacoma 2020), which is included as Attachment 2. The original Biological Opinion covering this slope cap remedial action was issued in 2004 (National Marine Fisheries Service 2004).

Independent of the CERCLA remedial project, in 2022, the City completed construction of a new outfall, Outfall 230A, and reconstructed the surrounding slope cap within this portion of RA 8. As part of that work, the slope cap off the outfall apron was replaced with a minimum 18-inch-thick layer of trench stabilization material, covered by a minimum 12-inch-thick layer of pipe zone bedding and followed by the placement of a minimum 12-inch-thick layer of round streambed cobbles. Trench stabilization materials used consisted of 2-inch minus aggregate for gravel base (9-03.10; WSDOT and APWA 2023). Refer to Attachment 3.

During the Year 17 low-tide slope cap inspection of the RA 8 slope cap area in June 2023, it was observed that the 12-inch-thick layer of cobbles (2 to 6 inches in diameter) originally placed off the new outfall apron were no longer present, and geotextile on the northern side of the slope just below the outfall apron was exposed. Underlying gravel and sand were observed off the apron, approximately half of a foot below the top ledge of the apron and extending out into the waterway. Photographs of the Outfall 230A slope cap area taken during the 2023 low-tide slope cap inspections are presented in Attachment 4. Section 2.6 and Appendix C of the *Year 17 Monitoring Long-Term Monitoring Plan Event Report* (City of Tacoma 2024) provide additional information about this slope cap area identified for repair.

The extent of the slope cap repair area off the Outfall 230A apron is approximately 180 square feet. Based on review of the 2023 low-tide inspection photographs, the slope cap repair work in this area will primarily occur at or just below 0 feet mean lower low water. All repair work will be completed during low-tide conditions, but nearly all of the work will be conducted below the water line.

PROPOSED REPAIR ACTION

The slope cap repair action will be performed from a barge and will involve excavation and disposal of existing cap material and underlying sediments, followed by placement of quarry spall filter, geotextile, and heavy loose riprap appropriately sized for the Outfall 230A flows to prevent

erosion of the slope. A final layer of round streambed cobbles will be placed to fill the void spaces within the heavy loose riprap armoring for habitat enhancement.

The basis of design for the repair includes observations of the previous design and current site conditions, rock sizing calculations, and Outfall 230A construction permit requirements for habitat enhancement. The previous design for Outfall 230A did not include an armoring layer required for thick slope cap construction, which resulted in the erosion and the need for repair. Rock sizing is based on Outfall 230A flow discharge data and a review of estimated peak outfall flows under different scenarios calculated using basin characteristics and hydrologic model simulations. The repair includes replacement of the round streambed cobbles for habitat enhancement similar to what was required for Outfall 230A construction and consistent with the conditions of the Nationwide Permit 27 for the construction of Outfall 230A (Jefferson-Hood Street Surface Water Interceptor, NWS-2017-595-WRD, Attachment 5). For the repair, streambed cobbles will be placed within the void spaces between the heavy loose riprap approximately to the surface of the slope, to enhance habitat while preventing erosion of cobbles. Material specifications for heavy loose riprap, streambed cobbles, quarry spall filter, and geotextile to be used for the repair action are presented in Attachment 6. The materials used for the repair will be characterized and tested in accordance with the material specifications.

The contractor will select the equipment and construction methods that will achieve the project requirements in the most efficient and cost-effective manner, while complying with the general procedures below as well as all the best management practices (BMPs) provided throughout this document. The general procedures to be followed by the contractor for the slope cap repairs off the apron of City Outfall 230A area include the following:

- Staging of construction equipment and materials will be performed on a barge used to access the slope cap repair area.
 - No upland access to the repair is available.
 - The use of spuds will be minimized during the repair, as the work will be performed within a slope cap area that extends approximately 90 feet into the waterway from the mouth of the outfall. The integrity of the slope cap must be maintained to contain the underlying sediments, some of which are contaminated.
 - The contractor will submit a Construction Quality Control Plan (CQCP) for how to minimize the slope cap disturbance from the barge spuds during construction. The plan for minimizing slope cap disturbance will include the equipment and BMPs that the contractor will use above what is specified in the contract documents provided for bid.
- Excavation of existing cap material and underlying sediment are necessary in the repair area to facilitate placement of the heavy loose riprap and streambed cobbles. The excavated material will be disposed of in a landfill approved by the City of Tacoma and USEPA. To pre-characterize the material for disposal, a combination of new

surface samples of the existing cap material and existing data from past sampling of the slope surface prior to remedial construction—including surface samples of slope cap material placed on the slope collected during the Operations, Maintenance, and Monitoring Plan (OMMP) monitoring—will be provided to the contractor. The contractor will use these data to establish a profile for the material and identify a proposed landfill disposal option for City and USEPA approval.

- Prior to construction, two samples of the existing cap material to be excavated will be collected from representative locations at the exposed shoreline from a depth of 0 to 6 inches. Samples will be analyzed by the City for an analyte list that includes the Thea Foss sediment contaminants of concern (City of Tacoma 2006, 2020) and additional analytes that will be used for waste profiling. These additional analytes are total petroleum hydrocarbons (diesel- and heavy oil-range organics) and the Resource Conservation and Recovery Act metals barium, chromium, and selenium. Conventional analytes including grain size, total organic carbon, ammonia, and total sulfides have been omitted. The analytes are listed in Table 1. The results of sampling will be provided to USEPA for inclusion in the 404 Applicable or Relevant and Appropriate Requirements (ARARs) memorandum.
- Sampling results for existing sediment data from the outfall vicinity are included in Table 2, and locations are shown on Figure 1. Composite OMMP sampling location of slope cap material SC-08B (City of Tacoma 2016) and underlying sediment sample locations RD-B31 and RD2-BO1 (City of Tacoma 1999) are considered appropriate to pre-characterize the excavated material, along with the new surface samples. As indicated in Table 2, the slope cap results include an estimated value that exceeded the SQO for benzoic acid, and the sediment results include a sample and duplicate that exceeded the SQO for mercury.
- For slope cap reconstruction off the Outfall 230A apron:
 - Review design drawings for the slope cap repair (Attachment 1) and material placement instructions (Attachment 6).
 - Cover slope cap area following excavation with the quarry spall filter (minimum 6 inches), geotextile, and heavy loose riprap specified thickness of a minimum of 18 inches, up to 3.5 feet. The minimum thickness for heavy loose riprap is based on a slope cap requirement (City of Tacoma 2020), and the maximum thickness is specified based on rock diameter (refer to Attachment 1). The City will use estimated volumes and the contractor-provided surveying techniques to confirm placement of the specified thickness of material and the submitted truck tickets to record the material placement.
 - Place streambed cobbles over the heavy loose riprap layer to fill void spaces and meet the existing surface, based on a volume of streambed cobbles necessary to fill the void space (equivalent depth of 6 inches). Confirm the final surface elevation with survey techniques.

BEST MANAGEMENT PRACTICES

The following BMPs will be implemented during this slope cap repair. These BMPs are also included in the Water Quality Monitoring and Protection Plan (WQMPP; Attachment 7). Additional BMPs may be implemented, as necessary, to avoid potential impacts to surface water and potential for transport of contaminated materials.

- Repair work will be completed during periods of low tide to the extent possible, to avoid/minimize potential impacts to surface water quality and allow visual monitoring of the in-water work.
- All work below the high tide line will be conducted during the allowable in-water work window for Commencement Bay, from July 15, 2024, to February 15, 2025.
- Site access will be from the water. Repair activities will be completed using water-based equipment (e.g., barge and/or boat). As part of the CQCP, the contractor will submit a plan for how and where the barge will be set up to perform the work.
- Materials will be imported to the site using water-based equipment (e.g., barge or boat). Construction equipment and materials will be stored on a barge. When material is not in use, the contractor will place Visqueen or a similar product over materials to prevent erosion.
- Excavated cap material and sediments will be segregated from imported materials. Drainage from excavated material will be contained from coming into contact with imported materials. As part of the CQCP, the contractor will submit a plan for how materials will be segregated and how drainage will be managed.
- The contractor will submit a plan as part of the CQCP for how to minimize the slope cap disturbance from barge spuds during construction to protect the integrity of the slope cap and contain the underlying sediments. The plan should include the equipment and BMPs that the contractor will use.
- A debris boom with a minimum 3-foot curtain with suitable weight or anchoring system will be deployed and maintained during the project.
- Any deployed boom and turbidity curtain will be managed to ensure that fish cannot be trapped in or stranded by the boom and curtain on falling tides and that escape for fish is available at the lowest margin of the curtain.
- Visual water quality monitoring by designated and appropriately trained personnel will be conducted in accordance with the WQMPP (Attachment 7) throughout construction.
- Work areas will be “buttoned up” and left in a completed state or otherwise stabilized with surface and/or perimeter erosion controls after each session of work, to reduce the potential for turbidity during rising tides.

- An emergency spill containment kit will be located on-site containing an adequate supply of materials (such as a vacuum pump, sorbent booms, diapers, and other absorbent materials) to control and contain deleterious materials in the event of an accidental spill.
- Any fueling conducted on a barge will involve specific fueling BMPs and will have spill containment systems in place.
- All equipment used below the high tide line will utilize biodegradable hydraulic fluid.
- The contractor will perform work during a period of no anticipated rainfall or low rainfall to minimize scour and excavated surface during construction, including at the outfall bypass discharge point. The contractor should expect that the outfall will have continuous flow and that it will be necessary to divert outfall flow from the work area. Work during no or low rainfall will help with management of excavated materials and clean construction materials on the barge. As part of the CQCP, the contractor will submit a plan for how the stormwater bypass and any contact rainwater on the barge will be managed.
- Adequate temporary erosion and sediment control materials will be maintained on-site as needed to accommodate unanticipated events in response to weather conditions and/or construction activities.
- Routine inspections of the erosion control measures on the barge and at the shoreline stormwater bypass discharge point will be conducted daily during construction by the contractor certified erosion and sediment control lead (CESCL) to ensure the effectiveness of the measures and to determine the need for maintenance or additional control measures.
- Streambed cobbles, quarry spall filter material, and heavy loose riprap will be cleaned and washed prior to being transported to the site to reduce fines present in the material.
- Construction-related debris will be cleaned up daily. Proper conservation measures (e.g., containment devices) will be used to ensure that debris will not contaminate surface waters.
- Waste materials, including excavated cap material and sediments, construction-related debris, miscellaneous garbage and/or other debris removed from the project site, will be transported off-site for disposal in accordance with applicable regulations. The barge storage methods/locations while on-site and when underway must ensure that no materials enter the water or cause water quality degradation.
- Anthropogenic debris within the project footprint will be removed and disposed of off-site, including any treated wood, garbage, etc., within the project limits.

- If dead or distressed fish are observed, the fish will be collected (as described in Section 6.2 of the WQMPP) and project work will cease, to allow review by the City and USEPA.
- The contractor will be responsible for the preparation of a Spill, Prevention, Control, and Countermeasure (SPCC) plan and a CQCP to be used for the duration of the project. These plans will be reviewed and approved by the City and USEPA.
- The contractor will prevent transporting and introducing aquatic invasive species to and from the project area by thoroughly cleaning all equipment, boots, and other gear before and after use at this job site.

WATER QUALITY MONITORING

A WQMPP has been prepared for the project that describes water quality protection measures, monitoring parameters, methods, and evaluation criteria, as well as corrective actions and notification procedures to be followed during construction activities. Water quality monitoring forms are included in the WQMPP (Attachment 7). A summary of the water quality monitoring is included herein.

The following actions will be taken if persistent turbidity emanating from the project area reaches the point of compliance:

- Repair activities will temporarily cease while appropriate measures are taken to correct the problem or situation.
- The USEPA project manager and Water Quality Specialist will be notified of the occurrence and of the measures taken to correct the situation.

CONSTRUCTION MANAGEMENT

Oversight and inspection of the repair will be performed by a City representative. The inspector will be present during all repair activities to perform the following activities:

- Document construction progress.
- Verify that construction activities are being performed according to design.
- Ensure that BMPs and water quality monitoring are being implemented and are performed in accordance with this Outfall 230A Slope Cap Repair Plan, the WQMPP, and the approved SPCC and CQCP.

Construction progress will be documented with photographs and preparation of a daily inspection log.

PERFORMANCE OF WORK

USEPA and any affected property owners will be notified 30 days prior to performance of the repair activities. Within 30 days following the completion of construction activities, a

memorandum will be prepared and submitted to USEPA to document the work performed on the slope cap off the Outfall 230A apron. Similar to previous slope cap repair documentation, this memorandum will include (1) a summary of the repair activities performed and the BMPs implemented during the repair work and (2) the following as attachments: slope cap repair photographs; field notes; water quality monitoring forms; and documentation of the physical characterization, thicknesses, and final surveyed elevations of the slope cap repair materials.

The construction documentation memorandum will be included as an attachment to the next LTMP that will be prepared. Low-tide slope cap area inspections will continue to be performed in accordance with the LTMP to ensure that this slope cap repair area is effectively containing the underlying contaminated materials, with the next inspection occurring in 2028.

REFERENCES

City of Tacoma. 1999. *Thea Foss and Wheeler-Osgood Waterways Round 3 Data Evaluation and Pre-Design Evaluation Report*. Prepared by City of Tacoma and Hart Crowser. 30 September.

_____. 2006. *Thea Foss and Wheeler-Osgood Waterways Remediation Project Operations, Maintenance, and Monitoring Plan*. Prepared by City of Tacoma, Floyd|Snider, and Grette Associates. September.

_____. 2007. *Slope Area Maintenance Plan, Thea Foss and Wheeler-Osgood Waterways Remediation Project*. Prepared by City of Tacoma and Floyd|Snider. February.

_____. 2016. *Thea Foss and Wheeler-Osgood Waterways Remediation Project, Year 10 Monitoring Sediment and Cap Performance and Early Warning Monitoring Preliminary Findings Memorandum*. Prepared by City of Tacoma and Floyd|Snider. 10 October.

_____. 2020. *Thea Foss and Wheeler-Osgood Waterways Remediation Project, Remedial Action Report*. Prepared by City of Tacoma and Floyd|Snider. 7 December.

_____. 2024. *Thea Foss and Wheeler-Osgood Waterways Remediation Project, Year 17 Monitoring Long-Term Monitoring Plan Event Report*. Prepared by City of Tacoma and Floyd|Snider. 23 January.

National Marine Fisheries Service. 2004. *Biological Opinion and Essential Fish Habitat Consultation for the Thea Foss and Wheeler-Osgood Waterways Superfund Remediation Action, Commencement Bay Nearshore/Tideflats Superfund Site, Tacoma, Washington (HUC 17110019, Puget Sound)*. NMFS Tracking No. 2003/00717. 11 March.

Washington Department of Transportation (WSDOT) and American Public Works Association (APWA) 2023. *Standard Specifications for Road, Bridge, and Municipal Construction, M 41-10*.

LIST OF ATTACHMENTS

Figure 1	Slope Cap Repair Location
Table 1	Analytes List
Table 2	Sediment Sampling Results in the Vicinity of Outfall 230A
Attachment 1	Outfall 230A Slope Cap Repair Design Drawings
Attachment 2	Table 1-3 from Thea Foss and Wheeler-Osgood Waterways Remediation Project Remedial Action Report
Attachment 3	Aggregate for Gravel Base Specification 9-03.10
Attachment 4	2023 Slope Cap Inspection Photographs by Outfall 230A
Attachment 5	Nationwide Permit 27, Jefferson-Hood Street Surface Water Interceptor, NWS-2017-595-WRD
Attachment 6	Outfall 230A Slope Cap Repair Material Specifications
Attachment 7	Water Quality Monitoring and Protection Plan

Tables

**Table 1
Analytes List**

Analyte
Conventionals
Total Solids (%)
Metals
Antimony
Arsenic
Barium
Cadmium
Chromium
Copper
Lead
Nickel
Selenium
Silver
Zinc
Mercury
LPAHs
2-Methylnaphthalene
Acenaphthene
Acenaphthylene
Anthracene
Fluorene
Naphthalene
Phenanthrene
Total LPAH
HPAHs
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(a)fluoranthene (total)
Benzo(g,h,i)perylene
Chrysene
Dibenzo(a,h)anthracene
Fluoranthene
Indeno(1,2,3-cd)pyrene
Pyrene
Total HPAH
Phthalates
Dimethyl phthalate
Diethylphthalate
Di-n-butyl phthalate
Butyl benzyl phthalate
bis(2-ethylhexyl)phthalate

Table 1
Analytes List

Analyte
Phthalates (cont.)
Di-n-octyl phthalate
Phenol
2-Methylphenol
4-Methylphenol
2,4-Dimethylphenol
Pentachlorophenol
Benzyl alcohol
Benzoic acid
Miscellaneous Compounds
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
1,2,4-Trichlorobenzene
Hexachlorobenzene
Dibenzofuran
Hexachlorobutadiene
N-Nitrosodiphenylamine
Total Petroleum Hydrocarbons (TPH)
TPH—Diesel- and heavy oil-range organics
Pesticides
p,p'-DDD
p,p'-DDE
p,p'-DDT
Polychlorinated Biphenyls (PCBs)
PCB-1016
PCB-1221
PCB-1232
PCB-1242
PCB-1248
PCB-1254
PCB-1260
PCBs (total)

Abbreviations:

DDD Dichlorodiphenyldichloroethane

DDE Dichlorodiphenyldichlorethylene

DDT Dichlorodiphenyltrichloroethane

HPAH High molecular weight polycyclic aromatic hydrocarbon

LPAH Low molecular weight polycyclic aromatic hydrocarbon

Table 2
Sediment Sampling Results in the Vicinity of Outfall 230A

			OMMP Slope Cap Material Sampling in Vicinity				Pre-Remedial Sediment Characterization in Vicinity		
	Sample ID		SC-08B-Y2	SC-08B-Y4	SC-08B-Y7	SC-08B-Y10	RD-B31		RD2-B01
	Sample Date		6/3/2008	6/15/2010	6/25/2013	06/07/2016	8/22/1994	8/22/1994	9/7/1995
	Sample Depth		0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm
Parameter	Units	SQO							
Conventionals									
Total Organic Carbon	mg/kg	NC	2,750 J	10,500	14,200	11,500	--	--	--
Total Organic Carbon	%	NC	--	--	--	--	1.8	1.8	--
Total Solids	%	NC	90.0	85.4	82.9	81.3	71.91	68.78	71.2
Metals									
Antimony	mg/kg	150	0.72 U	1.64 J	0.671 J	0.642	51.8 J	54.7 J	--
Arsenic	mg/kg	57	4.46	4.79	3.84 J	4.47	11.5	11.1	--
Cadmium	mg/kg	5.1	0.493	0.246 U	0.490 U	0.472 U	0.57	0.5	--
Copper	mg/kg	390	6.68	74.5	29.8	32.1	116	111	31.3
Lead	mg/kg	450	6.76	23.6	46.9	19.5	142 J	116 J	--
Nickel	mg/kg	140	12.3	120	18.7	26.4	52.7 J	49.9 J	--
Silver	mg/kg	6.1	2.09 J	0.246 U	0.490 U	0.472 U	0.47 U	0.43 U	--
Zinc	mg/kg	410	34.8	73.0	81.4	79.9	253	310	49.2 J
Mercury	mg/kg	0.59	0.016	0.069 U	0.0398	0.0439	2.8	6	0.0603
Semivolatile Organic Compounds									
<i>Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs)</i>									
2-Methylnaphthalene	µg/kg	670	2.6 U	82 U	97 U	83 U	48 J	51 J	--
Acenaphthene	µg/kg	500	2.3 U	82 U	97 U	83 U	44 J	34 J	--
Acenaphthylene	µg/kg	1,300	2.3 U	82 U	97 U	83 U	260	130	--
Anthracene	µg/kg	960	3.7 J	82 U	97 U	83 U	230	130	--
Fluorene	µg/kg	540	1.9 U	82 U	97 U	83 U	140 J	110	--
Naphthalene	µg/kg	2,100	3.5 J	82 U	97 U	83 U	190 U	40 J	--
Phenanthrene	µg/kg	1,500	23	82 U	170	1,400	1,500	970	--
Total LPAH	µg/kg	5,200	30 J	82 U	170	1,400	2,222 J	1,465 J	--
<i>High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)</i>									
Benzo(a)anthracene	µg/kg	1,600	15	82 U	180	140	970	460	--
Benzo(a)pyrene	µg/kg	1,600	36 U	82 U	180	200	830	470	--
Benzo(a)fluoranthene (total)	µg/kg	3,600	53	220	450	510	3,200 J	1,720 J	--
Benzo(g,h,i)perylene	µg/kg	720	35 U	82 U	97 U	99	280	240	--
Chrysene	µg/kg	2,800	27	130	240	390	1,100	530	--
Dibenzo(a,h)anthracene	µg/kg	230	41 U	82 U	97 U	26	130 J	59 J	--
Fluoranthene	µg/kg	2,500	46	240	360	1,200	2,300	1,200	--
Indeno(1,2,3-cd)pyrene	µg/kg	690	38 U	82 U	97 U	110	380	200	--
Pyrene	µg/kg	3,300	43	160	340	790	2,000	1,200	--
Total HPAH	µg/kg	17,000	184	750	1,750	3,500	11,190 J	6,079 J	--
<i>Other</i>									
Dimethyl phthalate	µg/kg	160	1.5 U	82 U	97 U	33 U	190 U	95 U	--
Diethylphthalate	µg/kg	200	32 U	82 U	97 U	83 U	190 U	95 U	--
Di-n-butyl phthalate	µg/kg	1,400	32 U	82 U	97 U	83 U	190 U	95 U	--
Butyl benzyl phthalate	µg/kg	900	30 U	82 U	97 U	83 U	190 U	95 U	--

Table 2
Sediment Sampling Results in the Vicinity of Outfall 230A

Parameter			OMMP Slope Cap Material Sampling in Vicinity				Pre-Remedial Sediment Characterization in Vicinity		
	Sample ID		SC-08B-Y2	SC-08B-Y4	SC-08B-Y7	SC-08B-Y10	RD-B31		RD2-B01
	Sample Date		6/3/2008	6/15/2010	6/25/2013	06/07/2016	8/22/1994	8/22/1994	9/7/1995
	Sample Depth		0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm
Parameter	Units	SQO							
Semivolatile Organic Compounds (cont.)									
<i>Other (cont.)</i>									
bis(2-ethylhexyl)phthalate	µg/kg	1,300	140	930	420	210	280	260 U	--
Di-n-octyl phthalate	µg/kg	6,200	35 U	82 U	160	83 U	950 U	480 U	--
Phenol	µg/kg	420	8.7	82 UJ	100 UJ	83 U	190 U	95 U	--
2-Methylphenol	µg/kg	63	4.5 U	4.1 U	5 UJ	4 U	190 U	95 U	--
4-Methylphenol	µg/kg	670	2.4 U	82 UJ	100 UJ	83 U	--	--	--
2,4-Dimethylphenol	µg/kg	29	1.8 U	4.1 UJ	5 UJ	4 U	190 U	95 U	--
Pentachlorophenol	µg/kg	360	42 U	4.1 U	100 UJ	83 U	190 U	95 U	--
Benzyl alcohol	µg/kg	73	23 U	5.17	10 UJ	14 UJ	190 U	95 U	--
Benzoic acid	µg/kg	650	61 U	118 J	250 UJ	820 J	950 U	480 U	--
1,2-Dichlorobenzene	µg/kg	50	2.2 UJ	4.1 U	5 U	4 U	190 U	95 U	--
1,3-Dichlorobenzene	µg/kg	170	2.4 UJ	4.1 U	39 U	33 U	190 U	95 U	--
1,4-Dichlorobenzene	µg/kg	110	2.5 UJ	4.1 U	39 U	33 U	190 U	95 U	--
1,2,4-Trichlorobenzene	µg/kg	51	2.5 U	4.10 U	5 U	4 U	190 U	95 U	--
Hexachlorobenzene	µg/kg	22	1.7 U	4.10 U	5 U	4 U	2.4 U	2.4 U	--
Dibenzofuran	µg/kg	540	2.2 U	82 U	97 U	83 U	74 J	61 J	--
Hexachlorobutadiene	µg/kg	11	2.7 U	4.10 U	5 U	4 U	1.9 J	2.4 U	--
N-Nitrosodiphenylamine	µg/kg	28	1.9 U	4.10 U	10 U	8 U	190 U	95 U	--
Pesticides									
p,p'-DDD	µg/kg	16	4.9 U	8.2 U	9.7 U	4.0 U	4.7 U	4.7 U	--
p,p'-DDE	µg/kg	9	2.4 U	8.2 U	9.7 U	4.0 U	4.7 U	4.7 U	--
p,p'-DDT	µg/kg	34	7.3 UJ	8.2 U	9.7 U	4.0 U	4.7 U	4.7 U	--
Polychlorinated Biphenyls (PCBs)									
PCB-1016	µg/kg	NC	9.7 U	16 U	19 U	20 U	47 U	47 U	--
PCB-1221	µg/kg	NC	9.7 U	16 U	19 U	20 U	47 U	47 U	--
PCB-1232	µg/kg	NC	9.7 U	16 U	19 U	20 U	47 U	47 U	--
PCB-1242	µg/kg	NC	12 U	16 U	19 U	20 U	47 U	47 U	--
PCB-1248	µg/kg	NC	12 U	16 U	19 U	20 U	47 U	47 U	--
PCB-1254	µg/kg	NC	12 U	16 U	19 U	20 U	47 U	47 U	--
PCB-1260	µg/kg	NC	12 U	16 U	19 U	20 U	47 U	47 U	--
PCBs (total)	µg/kg	300	12 U	16 U	19 U	20 U	47 U	47 U	--

Notes:

Concentrations highlighted in red exceed the SQO.

NC No SQO criterion

ND Not detected

-- No result available.

Abbreviations:

cm Centimeters

DDD Dichlorodiphenyldichloroethane

DDE Dichlorodiphenyldichloroethylene

DDT Dichlorodiphenyltrichloroethane

µg/kg Micrograms per kilogram

mg/kg Milligrams per kilogram

OMMP Operations, Maintenance, and Monitoring Plan

SQO Sediment Quality Objective

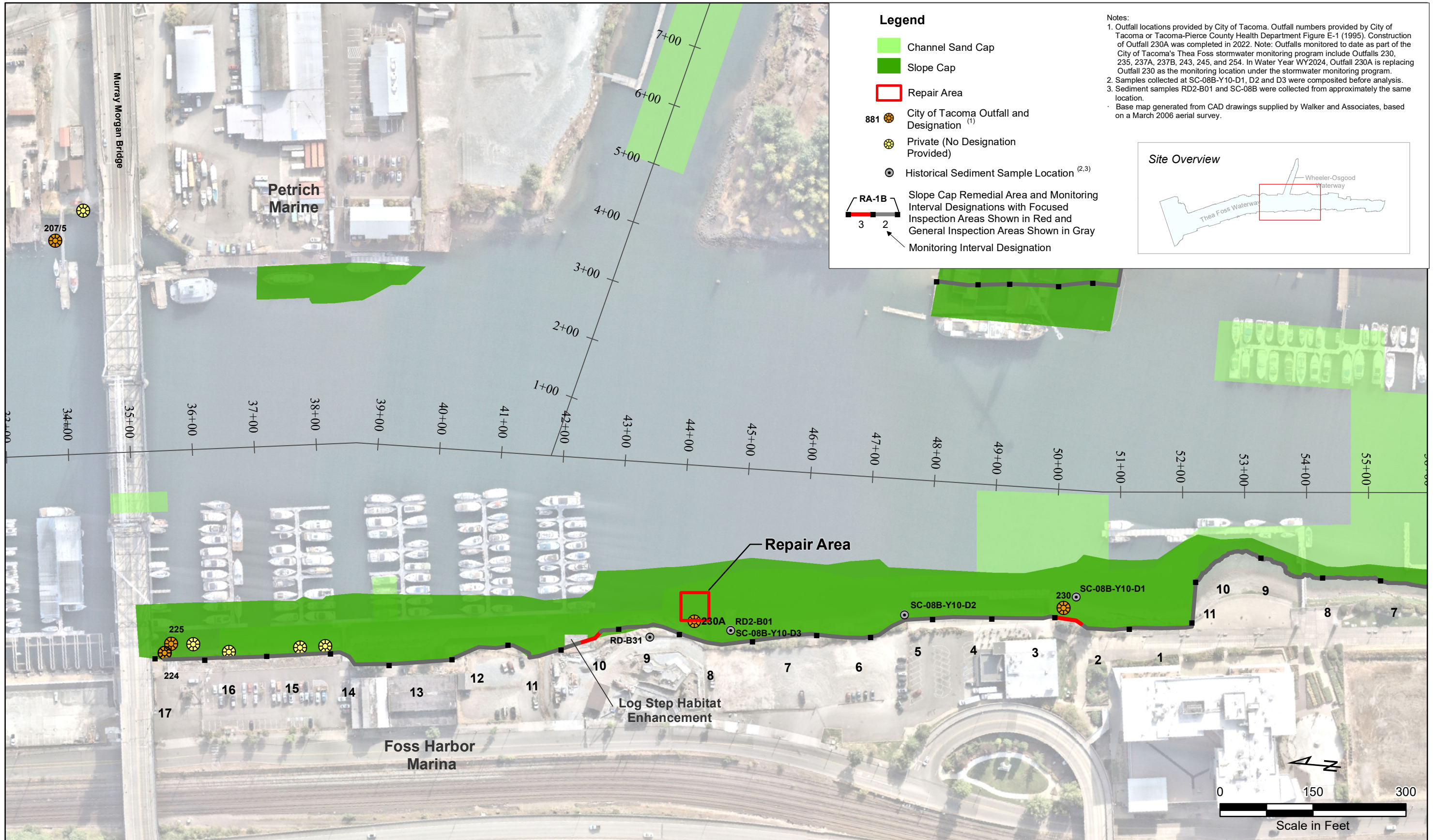
Qualifiers:

J The analyte was analyzed for and positively identified, but the associated numerical value is an estimate.

U Undetected at the given reporting limit.

UJ The analyte was analyzed for and not detected, but the associated numerical value is an estimate.

Figure



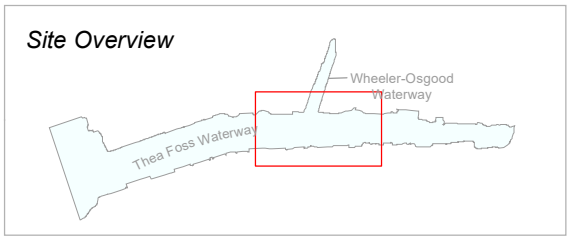
Legend

- Channel Sand Cap
 - Slope Cap
 - Repair Area
 - City of Tacoma Outfall and Designation ⁽¹⁾
 - Private (No Designation Provided)
 - Historical Sediment Sample Location ^(2,3)
 - RA-1B
- Slope Cap Remedial Area and Monitoring Interval Designations with Focused Inspection Areas Shown in Red and General Inspection Areas Shown in Gray Monitoring Interval Designation

Notes:

1. Outfall locations provided by City of Tacoma. Outfall numbers provided by City of Tacoma or Tacoma-Pierce County Health Department Figure E-1 (1995). Construction of Outfall 230A was completed in 2022. Note: Outfalls monitored to date as part of the City of Tacoma's Thea Foss stormwater monitoring program include Outfalls 230, 235, 237A, 237B, 243, 245, and 254. In Water Year WY2024, Outfall 230A is replacing Outfall 230 as the monitoring location under the stormwater monitoring program.
2. Samples collected at SC-08B-Y10-D1, D2 and D3 were composited before analysis.
3. Sediment samples RD2-B01 and SC-08B were collected from approximately the same location.

Base map generated from CAD drawings supplied by Walker and Associates, based on a March 2006 aerial survey.



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**Thea Foss and Wheeler-Osgood Waterways
2024 Outfall 230A Slope Cap Repair Plan**

**Figure 1
Slope Cap Repair Location**

Attachment 1
Outfall 230A Slope Cap Repair Design Drawings



FOSS SHORELINE RESTORATION - OUTFALL 230A REPAIR

TACOMA, WASHINGTON

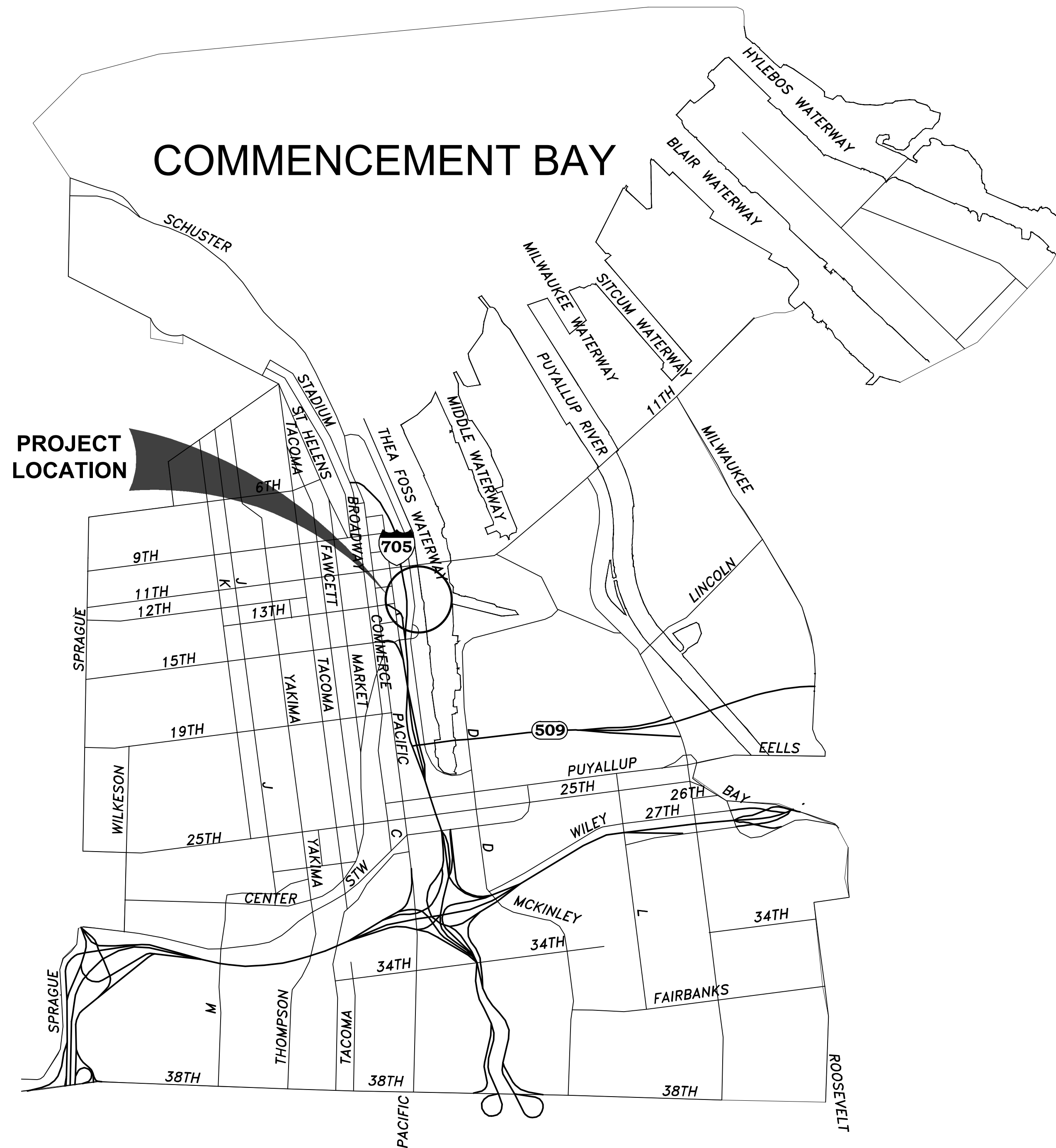
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MAINTENANCE AND REPAIR PLAN ATTACHMENT NO. 1

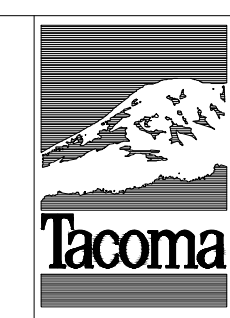
INDEX OF DRAWINGS		
SHEET NO.	DWG NO.	TITLE OF DRAWINGS
01	G1.00	TITLE SHEET
02	G1.01	LEGEND, ABBREVIATIONS, AND GENERAL NOTES
03	C1.01	FOSS SHORELINE RESTORATION PLAN
04	C1.02	STORMWATER OUTFALL SECTION



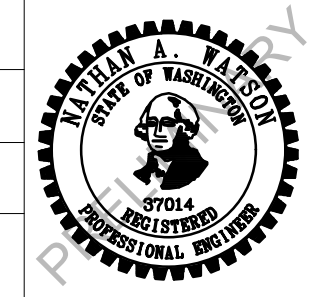
VICINITY MAP
SCALE: NTS



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NO	REVISION	DATE	APPD	FINAL CONSTRUCTION CHECKED	DATE	SCALE
					04/05/2024	NTS
				BY	DESIGNED	CHECKED
				RDT	SS	SS
				DATE	DRAWN	PROJECT NAME
				RDT	RDT	
				FIELD BOOKS	DRAWING NAME	
					G1.00_TITLE SHEET.DWG	



CITY OF TACOMA
PUBLIC WORKS DEPARTMENT
FOSS SHORELINE RESTORATION - OUTFALL 230A REPAIR
TITLE SHEET

SPEC. NO.	ES24-0056F
WBS NO.	ENV-03027-21
SHEET NO.	G1.00
SHEET	1 OF 4

100% DESIGN PLAN - NOT FOR CONSTRUCTION

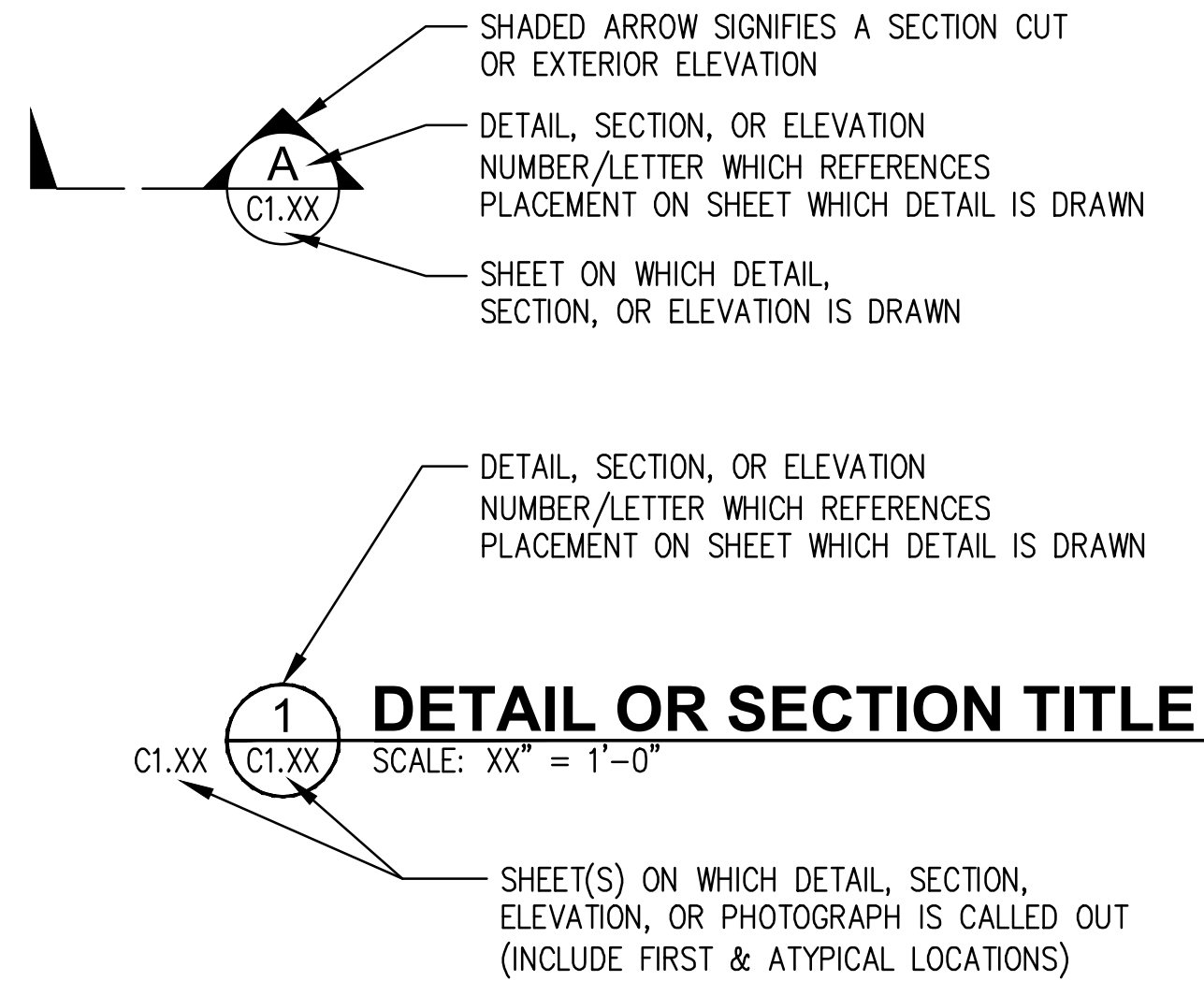
ABBREVIATIONS:

∅	DIA
&	AND
±	APPROXIMATELY
C	CENTERLINE
=	EQUALS
'	FOOT
#	NUMBER
%	PERCENT
APPROX	APPROXIMAT (-E, -LY)
AVE	AVENUE
BMP	BEST MANAGEMENT PRACTICES
BTWN	BETWEEN
CB	CATCH BASIN
COT	CITY OF TACOMA
CONC	CONCRETE
CONN	CONNECT/CONNECTION
CONST	CONSTRUCT (-ION)
CONT	CONTINU (-ED, -OUS, -ATION)
CONTR	CONTRACTOR
COORD	COORDINATE
CY	CUBIC YARD
DEG	DEGREES
DIA	DIAMETER
DIM	DIMENSION (-S)
DIP	DUCTILE IRON PIPE
EA	EACH
EHW	EXTREME HIGH WATER
EL/ELEV	ELEVATION
ELW	EXTREME LOW WATER
ENGR	ENGINEER
EQ	EQUAL (-LY)
EQUIP	EQUIPMENT
EXIST, EX	EXISTING
FDN	FOUNDATION
FT	FEET, FOOT
GALV	GALVANIZE (-D)
GENL	GENERAL
HAT	HIGHEST ASTRONOMICAL TIDE
HDPE	HIGH DENSITY POLYETHYLENE
HDPF	HIGH DENSITY POLYURETHANE FOAM
HH	HANDHOLE
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH (-ES)
L	LENGTH
LB	POUND (-S)
LF	LINEAR FEET
MAX	MAXIMUM
ME	MATCH EXISTING
MH	MANHOLE
MHHW	MEAN HIGHER HIGH WATER
MHW	MEAN HIGH WATER
MIN	MINIMUM
MISC	MISCELLANEOUS
MLLW	MEAN LOWER LOW WATER
MLW	MEAN LOW WATER
MPH	MILES PER HOUR
N	NORTH
N/A	NOT APPLICABLE
NAVD/NAVD88	NORTH AMERICAN VERTICAL DATUM
NE	NORTHEAST
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPP	OPPOSITE
PCF	POUNDS PER CUBIC FEET
PROJ	PROJECT
PVC	POLY VINYL CHLORIDE
QTY	QUANTITY
R	RADIUS, REMOTE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REF	REFERENCE
REQ'D	REQUIRED
REV	REVISION
S	SOUTH
SCHED	SCHEDULE
SDMH	STORM DRAIN MANHOLE

GENERAL NOTES:

- ALL SAFETY CODES, REGULATIONS, AND SPECIFICATIONS SHALL BE COMPLIED WITH FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGGERS, OR OTHER DEVICES TO PROVIDE FOR PUBLIC SAFETY.
- ALL INDICATED SCALES ON THE DRAWINGS ARE APPROXIMATE AND DIMENSIONS SHOWN TAKE PRECEDENCE OVER SCALED DISTANCES.
- UNLESS DESIGNATED TO BE REMOVED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES IN PLACE, WHETHER SHOWN OR NOT SHOWN ON THE DRAWINGS.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING FEATURES WHICH ARE TO REMAIN IN PLACE. ALL NEW AND EXISTING IMPROVEMENTS DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE EXPEDITIOUSLY REPAIRED OR RECONSTRUCTED AT THE CONTRACTOR'S EXPENSE WITHOUT ADDITIONAL COMPENSATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING RECORD DRAWINGS FOR ALL WORK THROUGHOUT THE COURSE OF CONSTRUCTION.
- THE WORK ZONE WILL NOT BE ACCESSIBLE FROM LANDSIDE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SUPPLY ALL NECESSARY EQUIPMENT TO PERFORM CONSTRUCTION ACTIVITIES IN WATER.
- CONTRACTOR MUST SUBMIT A PLAN OUTLINING STRATEGIES AND BEST MANAGEMENT PRACTICES FOR MINIMIZING DISTURBANCE TO THE EXISTING SLOPE CAP DUE TO SPUDGING, SEE SPECIFICATIONS.
- THE CONTRACTOR SHALL MAINTAIN THE SITE IN A NEAT AND ORDERLY CONDITION.
- THE CONTRACTOR SHALL RESTORE ALL AREAS AFFECTED BY THE CONTRACTOR'S WORK AND OPERATIONS.
- THE USE OF COPPER OR GALVANIZED/ZINC-BASED MATERIALS FOR COMPONENTS THAT MAY BE EXPOSED TO STORMWATER IS PROHIBITED. ALL METAL PARTS MUST BE CORROSION-RESISTANT. EXAMPLES INCLUDE ALUMINUM, STAINLESS STEEL, AND PLASTIC. ZINC AND GALVANIZED MATERIALS ARE DISCOURAGED BECAUSE OF AQUATIC TOXICITY. PAINTED METAL PARTS SHOULD NOT BE USED BECAUSE OF POOR LONGEVITY.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITY SYSTEMS, AS SHOWN HEREON, ARE TAKEN FROM AS-BUILT PLANS AND ARE SHOWN IN AN APPROXIMATE WAY ONLY.
- HORIZONTAL DATUM:
WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83/91.
- VERTICAL DATUM:
NGVD 29. PER CITY OF TACOMA BENCHMARKS.

MLLW AND MHW ELEVATIONS DRAWN FROM A "TACOMA PUBLIC WORKS VERTICAL DATUM" CONVERSION SHEET, USING THE NGS TIDAL ELEVATION DATA FOR BENCHMARK "TIDAL 22 1933", PID:SY0536.
MHW = 5.84 FEET,
MLLW = -5.96 FEET.



LEGEND:

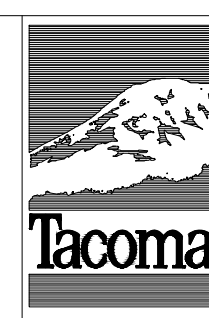
	SS FLAG
	WA FLAG
	SD FLAG
	FLAG NOTE
	BENCH MARK
	KEYNOTE
	REVISION DELTA
	GRID SYMB 1
	GRID SYMB 2
	GRID SYMB 3
	MLLW
	WATER VALVE
	FDC
	CAP

LEGEND (CONTINUED):

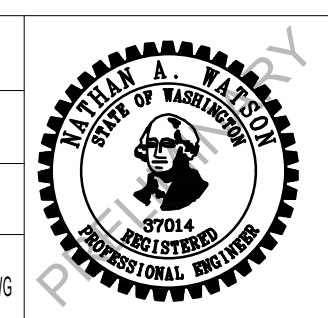
	DEBRIS BOOM
	FENCE
	LIMITS OF WORK
	SILT FENCE, CONSTRUCTION FENCE, HIGH VISIBILITY FENCE
	SLOPE
	SPOT ELEVATION
	CONTOUR LINE
	FLOW DIRECTION
	CENTERLINE
	STORM DRAIN LINE
	SD - CATCH BASIN
	MANHOLE
	LIGHT POLE
	INLET PROTECTION
	CONSTRUCTION ACCESS GATE



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NO	REVISION	DATE	APPD
FINAL CONSTRUCTION CHECKED		DATE	SCALE
BY		04/05/2024	NTS
DATE		DESIGNED	CHECKED
FIELD BOOKS		RDT	SS
DRAWING NAME		DRAWN	PROJECT NAME
G1.01 LEGEND, ABBREVIATIONS, AND GENERAL NOTES.DWG		RDT	



CITY OF TACOMA
PUBLIC WORKS DEPARTMENT

FOSS SHORELINE RESTORATION - OUTFALL 230A REPAIR

LEGEND, ABBREVIATIONS, AND GENERAL NOTES

SPEC. NO.	ES24-0056F
WBS NO.	ENV-03027-21
SHEET NO.	G1.01
SHEET	2 OF 4

100% DESIGN PLAN - NOT FOR CONSTRUCTION

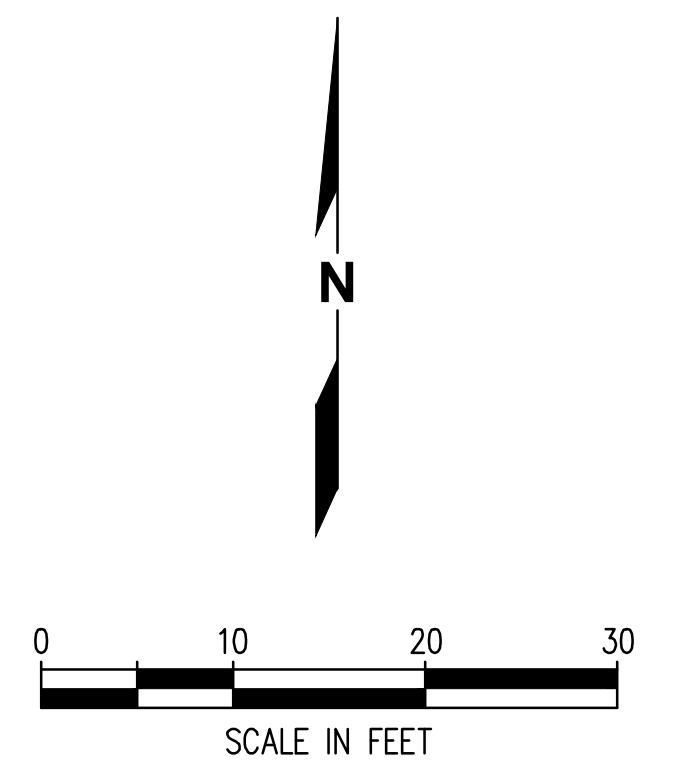


NOTES

1. TO MAINTAIN MINIMUM PERFORMANCE STANDARDS, CONTRACTOR SHALL REMOVE ANY SEDIMENT FROM THE EXISTING OUTFALL STRUCTURE IF THE ACCUMULATED SEDIMENT EXCEEDS 10% OF THE DESIGN DEPTH.
2. CONTRACTOR SHALL COORDINATE WORK WITH OTHER ONGOING CONSTRUCTION NEAR OUTFALL 230A AND ADJACENT AREAS.
3. FOR ALL EARTHWORK INCLUDING WORK DONE IN THE WET, CONTRACTOR SHALL SEQUENCE WORK SO THAT NO SUBGRADE MATERIAL IS EXPOSED FOR MORE THAN A SINGLE TIDE CYCLE WITHOUT RIPRAP BEING PLACED OVER TOP TO MINIMIZE EROSION OF SOIL.
4. CONTRACTOR SHALL DEPLOY AND MAINTAIN DEBRIS BOOM WITH MINIMUM 3-FOOT CURTAIN WITH SUITABLE WEIGHT OR ANCHORING SYSTEM FOR THE PROJECT DURATION. CONTRACTOR SHALL DETERMINE IDEAL ANCHOR LOCATIONS FOR BALLAST TO MAINTAIN MINIMUM 3-FOOT DEPTH BELOW WATER SURFACE. DEBRIS BOOM SHALL BE ANCHORED ABOVE MHHW.
5. CONTRACTOR IN COORDINATION WITH COT MAINTENANCE CREW SHALL CONSTRUCT A TEMPORARY BYPASS SYSTEM TO CONTROL AND MAINTAIN STORM DRAIN FLOW DURING CONSTRUCTION.
6. THE TEMPORARY BYPASS SYSTEM MUST BE DESIGNED FOR EXPECTED FLOWS. CONTRACTOR MUST HAVE SPARE PUMPS ON SITE FOR REPLACEMENT IN THE EVENT OF PUMP FAILURE. SEE SPECIFICATIONS FOR FLOW CRITERIA.
7. REMOVE TEMPORARY BYPASS SYSTEM AND RESTORE THE AREA TO PRE-DIVERSION CONDITIONS WITHIN 5 DAYS AFTER BYPASS IS NO LONGER NEEDED.
8. ALL REPAIR ACTIVITIES WILL BE PERFORMED WITHIN THE EXISTING THEA FOSS WATERWAY SLOPE CAP AREA.

LEGEND

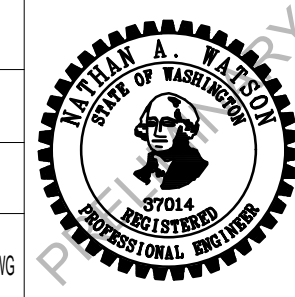
- EX CONCRETE
- EX EMERGENT ZONE PLANTINGS
- METRO PARKS TACOMA PROPERTY
- EX FENCE
- EX CONTOUR
- PROJECT WORK LIMITS
- DEBRIS BOOM
- WATER LEVEL
- HEAVY LOOSE RIPRAP A
C1.02



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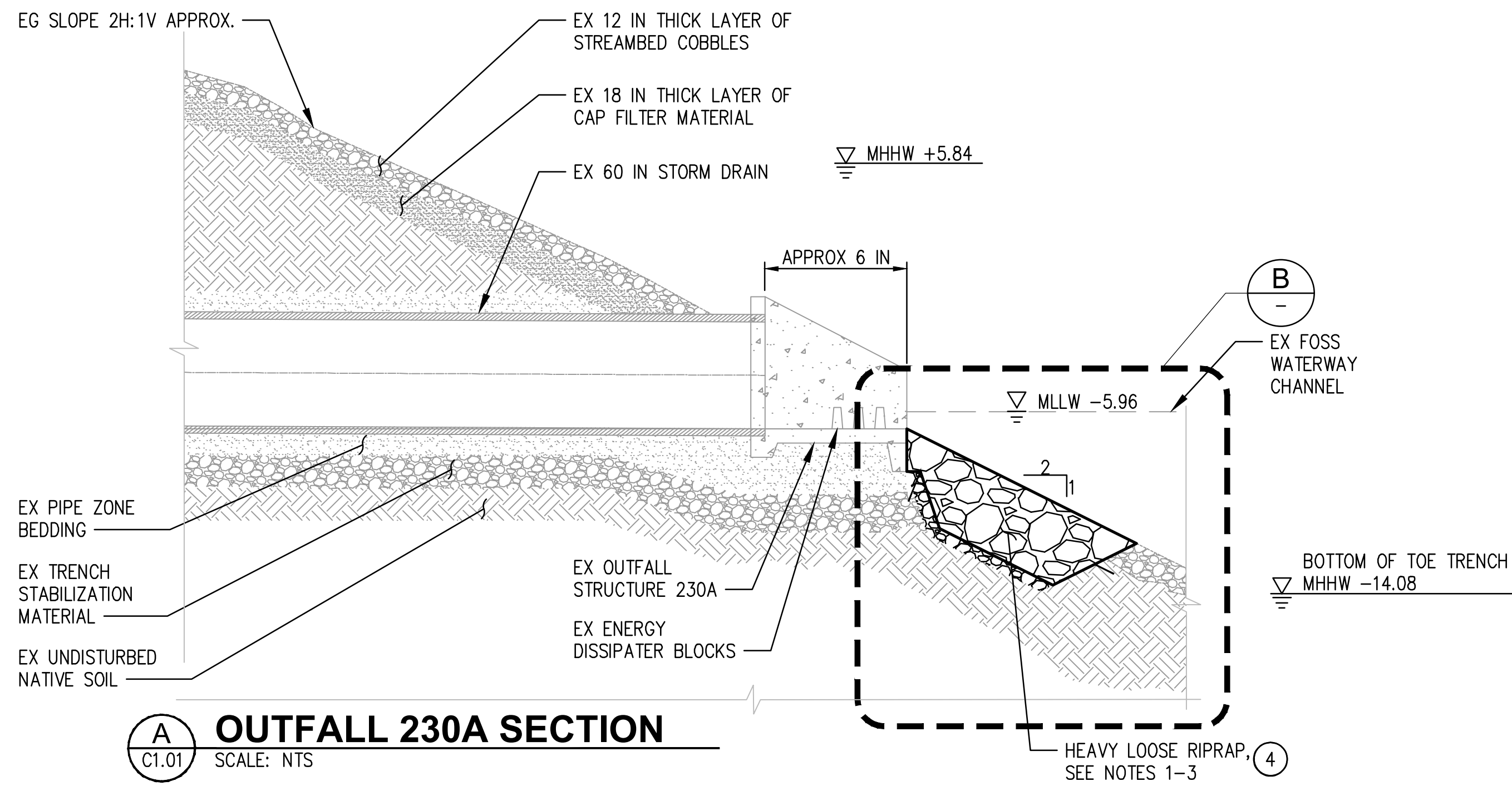
NO	REVISION	DATE	APPD



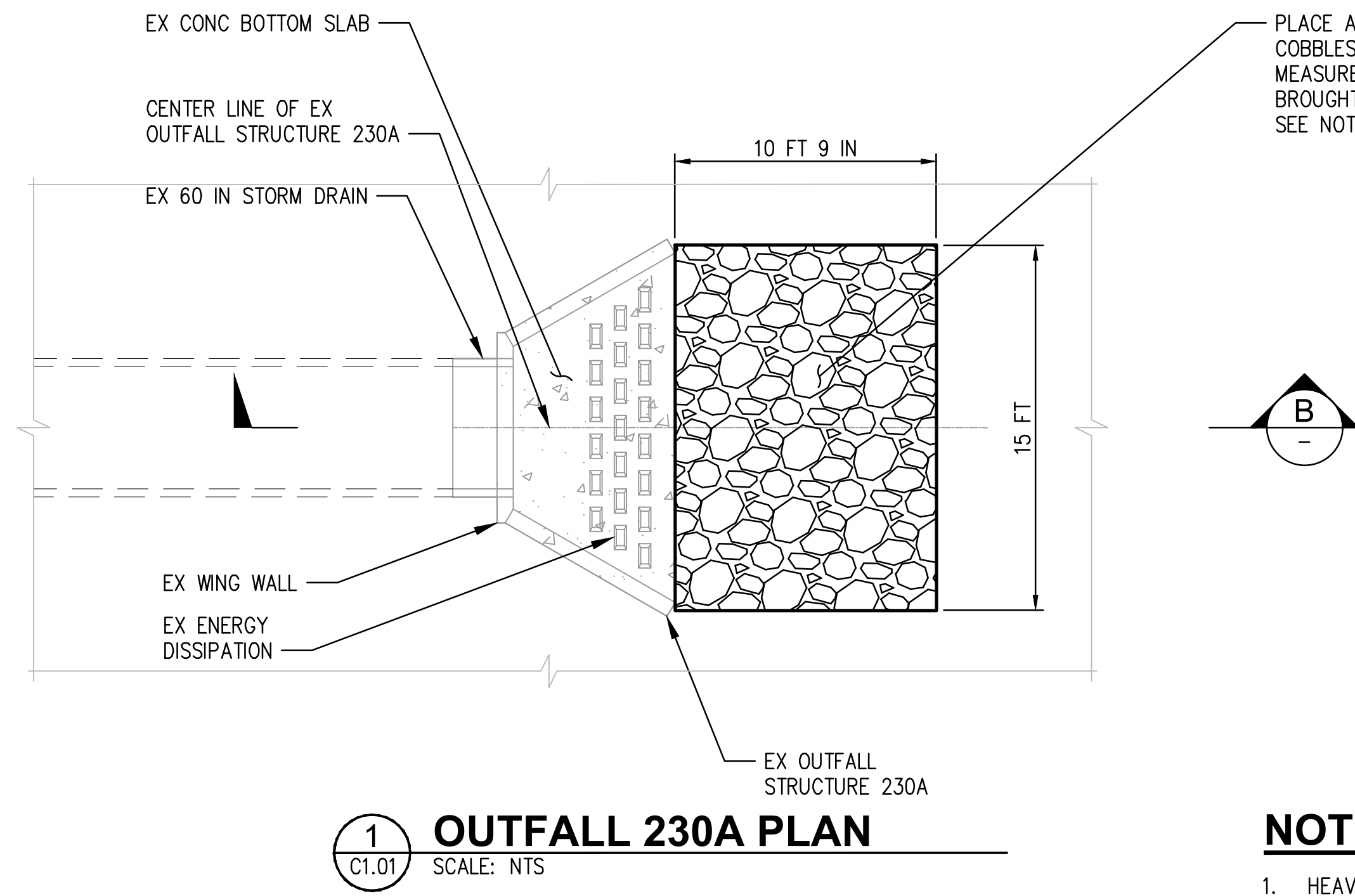
CITY OF TACOMA
PUBLIC WORKS DEPARTMENT
FOSS SHORELINE RESTORATION - OUTFALL 230A REPAIR
FOSS SHORELINE RESTORATION PLAN

SPEC. NO.	ES24-0056F
WBS NO.	ENV-03027-21
SHEET NO.	C1.01
SHEET	3 OF 4

100% DESIGN PLAN - NOT FOR CONSTRUCTION



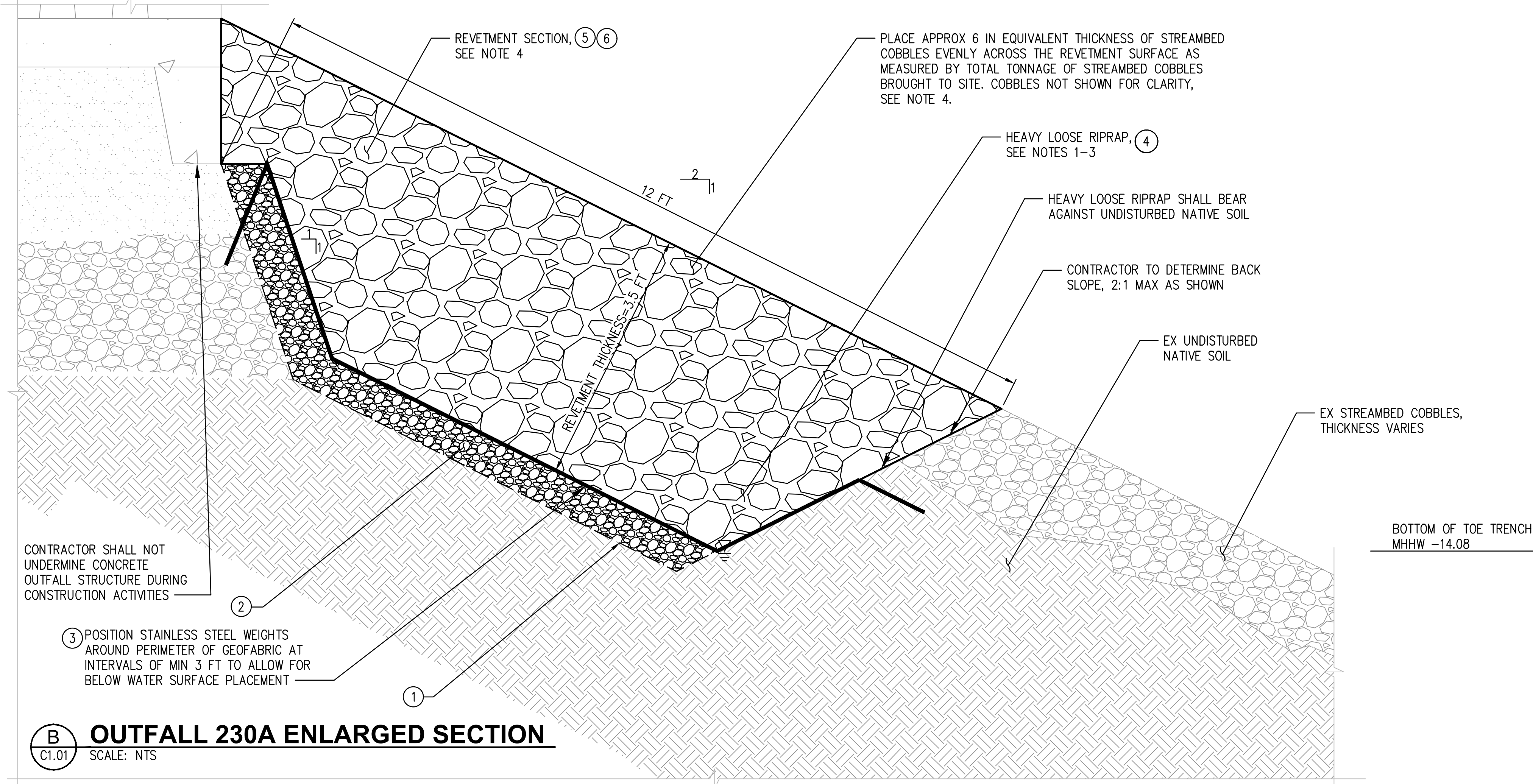
A OUTFALL 230A SECTION
C1.01 SCALE: NTS



1 OUTFALL 230A PLAN
C1.01 SCALE: NTS

NOTES

1. HEAVY LOOSE RIPRAP SHALL BE A MEDIAN NOMINAL DIAMETER OF 28 INCHES WITH 50-80% PASSING SMALLER, SEE SPECIFICATIONS. HEAVY LOOSE RIPRAP SHALL BE VISUALLY ACCEPTED BY THE ENGINEER.
2. HEAVY LOOSE RIPRAP SHALL BE HARD AND ANGULAR AND OF SUCH QUALITY THAT IT WILL NOT DISINTEGRATE ON EXPOSURE TO WATER OR WEATHERING AND SHALL BE SUITABLE IN ALL RESPECTS FOR THE PURPOSE INTENDED.
3. THE USE OF RECYCLED MATERIALS IS NOT PERMITTED FOR THIS APPLICATION.
4. TOP OF REVETMENT SHALL MATCH EXISTING GRADE. CONTRACTOR SHALL VISUALLY INSPECT REVETMENT SURFACE TO CONFIRM VOIDS ARE COMPLETELY FILLED WITH STREAMBED COBBLES. CONTRACTOR SHALL CONFER THE ENGINEER AND THE CITY OF TACOMA FOR FINAL VERIFICATION.



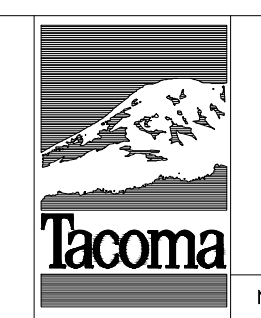
B OUTFALL 230A ENLARGED SECTION
C1.01 SCALE: NTS

CONSTRUCTION NOTES

- 1 LIMITS OF EXCAVATION
- 2 PLACE 6 IN MIN QUARRY SPALL FILTER, SEE SPECIFICATIONS.
- 3 PLACE FILTER FABRIC BETWEEN HEAVY LOOSE RIPRAP AND QUARRY SPALL FILTER SURFACE. FILTER FABRIC SHALL BE KEYED IN AT THE TOP AND BOTTOM OF BANK, MINIMUM 12 IN.
- 4 START PLACEMENT OF HEAVY LOOSE RIPRAP FROM THE TOE WORKING UPWARDS TOWARDS TOP OF SLOPE.
- 5 REVETMENT FINAL GRADE SHALL MATCH EXISTING SIDE SLOPE OF 2:1.
- 6 REVETMENT THICKNESS SHALL BE 1.5 TIMES MEDIAN NOMINAL HEAVY LOOSE RIPRAP DIAMETER, SEE SPECIFICATIONS.

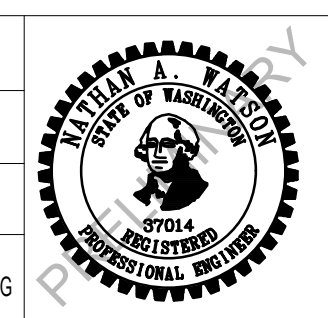


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NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED	DATE 04/05/2024	SCALE NTS
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BY RDT	SS	
DATE	PROJECT NAME	
DRAWN RDT		
FIELD BOOKS	DRAWING NAME	
	C1.02_STORMWATER OUTFALL SECTION.DWG	



CITY OF TACOMA
PUBLIC WORKS DEPARTMENT
FOSS SHORELINE RESTORATION - OUTFALL 230A REPAIR
STORMWATER OUTFALL SECTION

SPEC. NO.	ES24-0056F
WBS NO.	ENV-03027-21
SHEET NO.	C1.02
SHEET	4 OF 4

100% DESIGN PLAN - NOT FOR CONSTRUCTION

Attachment 2

**Table 1-3 from Thea Foss and Wheeler-Osgood Waterways Remediation Project
Remedial Action Report**

**Table 1-3
Summary of Completed Remedial Actions, Descriptions, and Remedial Areas**

Action	Action and Material Description	Remedial Areas
Natural Recovery	Areas that are not designated for active remedial action because the area was expected to recover naturally (i.e., surface sediment concentrations to meet the Sediment Quality Objectives [SQOs]) within 10 years of completion of sediment remedial action.	RA NR-1, RA NR-2, RA NR-3, RA NR-4, and northern portions of RA 5, RA 6, and RA 7
Enhanced Natural Recovery	Placement of a thin layer (i.e., 6 inches) of sand (material referred to as channel sand cap material) to facilitate natural recovery in the 10 years following completion of the remedial action. Channel sand cap material is composed of imported sand (i.e., 100 percent passing the 3/8-inch sieve size, 85 to 100 percent passing the No. 4 sieve size, and 25 to 45 percent passing the No. 10 sieve size) from an upland quarry.	RA 7
Dredged to Clean	Removal of sediment with contaminant concentrations greater than the SQOs to the final dredge surface.	RA 5, RA 6, RA 15, RA 16, and RA 17
Dredged and Backfilled	Placement of sand (material referred to as channel sand cap material) to meet the surrounding grade (i.e., surrounding sediment surface elevation) in an area where dredging has removed sediment with contaminant concentrations greater than the SQOs. Channel sand cap material is composed of imported sand (i.e., 100 percent passing the 3/8-inch sieve size, 85 to 100 percent passing the No. 4 sieve size, and 25 to 45 percent passing the No. 10 sieve size) from an upland quarry.	RA 2, RA 4, and RA 12
Channel Sand Cap	Placement of a minimum of 3 feet of channel sand cap material to confine underlying sediment with contaminant concentrations greater than the SQOs. Channel sand cap material is composed of imported sand (i.e., 100 percent passing the 3/8-inch sieve size, 85 to 100 percent passing the No. 4 sieve size, and 25 to 45 percent passing the No. 10 sieve size) from an upland quarry.	RA 1A, RA 6, RA 7A, RA 9, RA 16, RA 17, RA 18, RA 19A, RA 19B, RA 20, RA 21, RA 22, and the sheen source removal area near RA 12

**Table 1-3
Summary of Completed Remedial Actions, Descriptions, and Remedial Areas**

Action	Action and Material Description	Remedial Areas
Slope Cap	<p>Placement of a minimum of 18 inches of slope cap filter material as a confining layer, followed by placement of a minimum of 18 inches of armor rock (i.e., riprap or quarry spalls), followed by placement of habitat mix on the surface of the armor rock to confine underlying sediment with contaminant concentrations greater than the SQOs. Slope cap filter material is composed of imported sand and gravel (i.e., 100 percent passing the 6-inch sieve size, 35 to 65 percent passing the No. 4 sieve size, and 15 to 45 percent passing the No. 10 sieve size) from an upland quarry. Armor material used was either light riprap, heavy riprap, or quarry spalls supplied by an upland quarry. Light riprap is composed of large angular rock 12 to 15 inches in size with up to 25 percent by weight smaller than 12 inches and the portion smaller than 12 inches composed of crushed rock greater than the No. 4 sieve size. Heavy riprap is large angular rock lighter than 1,000 pounds with 55 to 90 percent of the rock lighter than 400 pounds, 20 to 50 percent of the rock lighter than 50 pounds, and 5 to 15 percent of the rock lighter than 2 pounds. Quarry spalls consist of broken stone from an approved source that is free from segregation, seams, cracks, or other defects and conform with the quality and gradation requirements for quarry spalls in the Washington State Standard Specifications.¹ Habitat mix is composed of an imported sand and gravel (i.e., 100 percent passing the 2-inch sieve size, 40 to 60 percent passing the No. 4 sieve size, and 30 to 50 percent passing the No. 10 sieve size) supplied by an upland quarry.</p>	<p>RA 1B, RA 3, RA 5, RA 8 (including adjacent portions of RA 6, RA 7, and RA 7A), RA 14, RA 19A, RA 19B, and RA 20</p>
Grout Mat Cap	<p>A mat placed to confine sediment with contaminant concentrations greater than the SQOs. The grout mat cap installed in RA 3 during the 2003 early remedial action was composed of an articulating block mat (ABM) overlain by a Uniform Section Mat (USM) spread over the remedial area. Each of these mat layers was injected with grout to form a 6-inch-thick layer of concrete. In the 2003 to 2006 remedial action work, the grout mat cap placed in portions of RA 19A, RA 19B, RA 21, and RA 22 consisted of one layer of USM placed over the remedial area and injected with grout to form a 6-inch-thick layer of concrete. Refer to the channel sand cap and slope cap descriptions above for additional details on the materials used to cover the grout mat cap placed in RA 19A, RA 19B, RA 21, and RA 22.</p>	<p>RA 3, RA 19A, RA 19B, RA 21, and RA 22</p>

**Table 1-3
Summary of Completed Remedial Actions, Descriptions, and Remedial Areas**

Action	Action and Material Description	Remedial Areas
Thin-Layer Sand Cap	Placement of a thin layer (i.e., minimum of 6 inches) of clean material (i.e., channel sand cap material) following dredging to return this area back to the original mudline elevation and to cover remaining elevated sediment concentrations for metals on the post-dredge surface. Channel sand cap material is composed of imported sand (i.e., 100 percent passing the 3/8-inch sieve size, 85 to 100 percent passing the No. 4 sieve size, and 25 to 45 percent passing the No. 10 sieve size) from an upland quarry.	Murray Morgan Bridge Remedial Action Area
Habitat Enhancement	Modification to an existing shoreline area to enhance habitat development that may include constructing a benched area at a specific elevation, modifying the substrate, and/or installing large woody debris and/or plants. Refer to the slope cap description above for additional details on the materials used as part of the habitat enhancement construction.	RA 8, RA 20, and at the head of the Thea Foss Waterway
Slope Rehabilitation	Removal of anthropogenic debris (e.g., concrete, piling) and/or placement of import material (e.g., slope cap filter material, armor rock, and habitat mix) to stabilize, flatten, and/or provide more suitable habitat. Refer to the slope cap description above for additional details on the materials used as part of the slope rehabilitation construction.	RA 10, RA 11, RA 13, and RA 15

Note:

- The remedial action construction material specifications for quarry spalls referenced Section 9-13.6 of the Washington State Standard Specifications. Under the current Standard Specifications, quarry spall specifications are now provided in Section 9-13.1(5).

Attachment 3
Aggregate for Gravel Base Specification 9-03.10

9-03.10 Aggregate for Gravel Base

Gravel base shall consist of granular material, either naturally occurring or processed. It shall be essentially free from various types of wood waste or other extraneous or objectionable materials. It shall have such characteristics of size and shape that it will compact readily, and the maximum particle size shall not exceed $\frac{3}{8}$ of the depth of the layer being placed.

Gravel base shall meet the following requirements for grading and quality when placed in hauling vehicles for delivery to the roadway or during manufacture and placement into a temporary stockpile. The exact point of acceptance will be determined by the Engineer.

Sieve Size	Percent Passing
2"	75-100
No. 4	22-100
No. 200	0-10
Dust Ratio:	$\frac{2}{3}$ max.
Sand Equivalent	30 min.

All percentages are by weight.

Gravel base material retained on a No. 4 sieve shall contain not more than 0.20 percent by weight of wood waste.

Attachment 4
2023 Slope Cap Inspection Photographs by Outfall 230A



Photograph 1. City Outfall 230A outlet to the Thea Foss and Wheeler-Osgood waterways west bank during the Year 17 low-tide slope cap inspection as part of the Long-Term Monitoring Plan (LTMP) taken at -3.1 feet mean lower low water (MLLW). Loss of slope cap material, round river cobbles, placed off the outfall apron exposing gravel and sand below top ledge of the apron.

Date: 6/6/2023
Direction: North (upstream)



Photograph 2. City Outfall 230A apron along the Thea Foss and Wheeler-Osgood waterways west bank during the Year 17 low-tide slope cap inspection as part of the Long-Term Monitoring Plan (LTMP) taken at -3.1 feet MLLW. Loss of slope cap material, round river cobbles, placed off the outfall apron exposing geotextile, gravel, and sand below top ledge of the apron.

Date: 6/6/2023
Direction: North (upstream)



Photograph 3. City Outfall 230A outlet structure from farther up the slope taken during the Year 17 slope cap inspection as part of the Long-Term Monitoring Plan for the Thea Foss and Wheeler-Osgood waterways taken at -3.1 feet MLLW. Loss of slope cap material, round river cobbles, placed off the outfall apron exposing gravel and sand below top ledge of the apron.

Date: 6/6/2023

Direction: East

Attachment 5
Nationwide Permit 27, Jefferson-Hood Street Surface Water Interceptor,
NWS-2017-595-WRD



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, SEATTLE DISTRICT
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

Regulatory Branch

December 28, 2020

Ms. Kristy Beardemphl
City of Tacoma
326 East D Street
Tacoma, Washington 98421

Reference: NWS-2017-595-WRD
Tacoma, City of
(Jefferson-Hood Street
Surface Water Interceptor)

Dear Ms. Beardemphl:

We have reviewed your application to place fill over 629 square feet to construct a 60-inch diameter stormwater outfall and associated splash pad in the Thea Foss Waterway at Tacoma, Washington. Based on the information you provided to us, Nationwide Permit (NWP) 7, *Outfall Structures and Associated Intake Structures* and *NWP 27 Aquatic Habitat Restoration, Establishment, and Enhancement Activities* (Federal Register January 6, 2017, Vol. 82, No. 4), authorizes your proposal as depicted on the enclosed drawings dated December 14, 2020.

In order for this authorization to be valid, you must ensure the work is performed in accordance with the enclosed *NWP 7 and NWP 27, Terms and Conditions* and the following special conditions:

- a. In order to meet the requirements of the Endangered Species Act you may conduct the authorized activities from September 1 through February 15 in any year this permit is valid. You shall not conduct work authorized by this permit from February 16 through August 31 in any year this permit is valid.
- b. This U.S. Army Corps of Engineers (Corps) permit does not authorize you to take a threatened or endangered species, in particular the Puget Sound Chinook, Puget Sound Steelhead, Puget Sound Georgia Basin Bocaccio Rockfish, Puget Sound Georgia Basin yelloweye Rockfish, and Southern Resident Killer Whale. In order to legally take a listed species, you must have a separate authorization under the Endangered Species Act (ESA; e.g., an ESA Section 10 permit, or ESA Section 7 consultation Biological Opinion (BO) with non-discretionary "incidental take" provisions with which you must comply). The

enclosed BO(s) prepared by the National Marine Fisheries Service (NMFS) dated September 28, 2020, contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with the specified “incidental take” in the BO (NMFS Reference Number WCRO-2019-00727). Your authorization under this Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take of the enclosed BO. These terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit. The NMFS is the appropriate authority to determine compliance with the terms and conditions of its BO and with the ESA.

c. You must implement and abide by the Endangered Species Act (ESA) requirements and/or agreements set forth in the *Biological Assessment and Essential Fish Habitat Evaluation Jefferson and Hood Street Surface Water Interceptor Project* dated November 2, 2018, in its entirety. The U.S. Fish and Wildlife Service (USFWS) provided the enclosed Letter of Concurrence with a finding of “may affect, not likely to adversely affect” based on this document on March 1, 2019 (USFWS Reference Number 01EWF00-2019-I-0350). The USFWS will be informed of this permit issuance. Failure to comply with the commitments made in this consultation constitutes non-compliance with the ESA and your U.S. Army Corps of Engineers permit. The USFWS is the appropriate authority to determine compliance with ESA.

d. Incidents where any individuals of fish species, marine mammals and/or sea turtles listed by National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) under the Endangered Species Act appear to be injured or killed as a result of discharges of dredged or fill material into waters of the U.S. or structures or work in navigable waters of the U.S. authorized by this Nationwide Permit verification shall be reported to NOAA Fisheries, Office of Protected Resources at (301) 713-1401 and the Regulatory Office of the Seattle District of the U.S. Army Corps of Engineers at (206) 764-3495. The finder should leave the animal alone, make note of any circumstances likely causing the death or injury, note the location and number of individuals involved and, if possible, take photographs. Adult animals should not be disturbed unless circumstances arise where they are obviously injured or killed by discharge exposure or some unnatural cause. The finder may be asked to carry out instructions provided by NOAA Fisheries to collect specimens or take other measures to ensure that evidence intrinsic to the specimen is preserved.

e. You shall implement and abide by the *Jefferson & Hood Street Surface Water Interceptor Project, City of Tacoma, Pierce County, Washington, Archaeological Resources Monitoring and Inadvertent Discovery Plan – USACE Jurisdictional APE* dated February 2019. A professional archaeologist shall be on-site to monitor for the presence of

archaeological resources during all ground disturbing activities.

For compliance with CERCLA:

f. The applicant shall notify the Environmental Protection Agency (EPA) at least 7 days prior to the start of permitted construction to allow for observation of work. Documentation of the sources of shoreline construction materials, along with the characterization of the materials must be coordinated with EPA prior to project construction.

g. A description of how materials removed from the waterway during sheetpile cofferdam construction and stored on site for reuse must be included in the Contaminated Medium Mangement Plan (CMMP) for EPA review.

h. During cofferdam construction, shoreline surfaces should be protected during tidal inundation to avoid loss of underlying materials.

i. During cofferdam removal, sheetpile must be carefully removed to avoid bringing potentially contaminated sediments to the surface. The CMMP must provide an explanation of how this will be prevented and if underlying contaminated sediments are brought to the surface, how they will be managed.

j. The interface between the existing slope cap materials and the newly placed materials must be carefully managed during and after construction. Specifics should be discussed in the CMMP.

k. The applicant shall provide as-built drawings and as-built report to EPA within 60 days of project completion with elevations and datums clearly marked. Report shall include types and amounts of any materials permanently removed from the shoreline and taken for disposal, including final disposition.

l. The applicant shall maintain and monitor installed large woody debris and anchoring systems to ensure these features do not damage or cause unexpected erosion of shoreline cap materials. Newly installed shoreline features should be included in the City of Tacoma's visual inspection of waterway shoreline cap areas as required in the City's approved Long-Term Monitoring Plan for the waterway.

m. By accepting this permit, you agree to accept such potential liability for response costs, response activity and natural resource damages as you would have under the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 et seq. (CERCLA) or the Model Toxics Control Act, R.C.W. 70.105 (MTCA) absent the issuance of this permit. Further, you agree that this permit does not provide you with any

defense from liability under the CERCLA or the MTCA. Additionally, you shall be financially responsible for any incremental response costs attributable under CERCLA or MTCA to your activities under this permit in the Commencement Bay / Thea Foss Waterway.

We have reviewed your project pursuant to the requirements of the Endangered Species Act, the Magnuson-Stevens Fishery Conservation and Management Act and the National Historic Preservation Act. We have determined this project complies with the requirements of these laws provided you comply with all of the permit general and special conditions.

Please be reminded that Special Condition “b” of your permit requires that you implement and abide by the Endangered Species Act (ESA) requirements set forth in the Biological Opinion (BO) for this project. The non-discretionary terms and conditions are listed in Section 2.9.4. In particular, you must provide photos of the project and report as-built information, as described in the BO.

The authorized work complies with the Washington State Department of Ecology’s (Ecology) Water Quality Certification (WQC) requirements and Coastal Zone Management (CZM) consistency determination response for this NWP. No further coordination with Ecology for WQC and CZM is required.

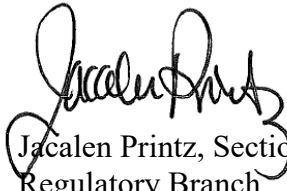
You have not requested a jurisdictional determination for this proposed project. If you believe the U.S. Army Corps of Engineers does not have jurisdiction over all or portions of your project you may request a preliminary or approved jurisdictional determination (JD). If one is requested, please be aware that we may require the submittal of additional information to complete the JD and work authorized in this letter may not occur until the JD has been completed.

Our verification of this NWP authorization is valid until March 18, 2022, 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 18, 2022, you will have until March 18, 2023, to complete the activity under the enclosed terms and conditions of this NWP. Failure to comply with all terms and conditions of this NWP verification invalidates this authorization and could result in a violation of Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act. You must also obtain all local, State, and other Federal permits that apply to this project.

Upon completing the authorized work, you must fill out and return the enclosed *Certificate of Compliance with Department of the Army Permit*. Thank you for your cooperation during the permitting process. We are interested in your experience with our Regulatory Program and encourage you to complete a customer service survey. These documents and information about

our program are available on our website at www.nws.usace.army.mil, select “Regulatory Branch, Permit Information” and then “Contact Us.” If you have any questions, please contact the project manager at daniel.a.krenz@usace.army.mil or (206) 316-3153.

Sincerely,



Jacalen Printz, Section Chief
Regulatory Branch

Enclosures

cc: letter only via email to Washington Department of Ecology, Federal Permit Coordinator at:
ecyrefedpermits@ecy.wa.gov

cc via email: w/drawings only:

U.S. Fish and Wildlife Service, wfwoctap@fws.gov

National Marine Fisheries Service, frankie.johnson@noaa.gov

Environmental Protection Agency, barton.justine@epa.gov



US Army Corps
of Engineers ®
Seattle District

NATIONWIDE PERMIT 27

Terms and Conditions



Effective Date: March 19, 2017

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- A. Description of Authorized Activities
 - B. U.S. Army Corps of Engineers (Corps) National General Conditions for all NWP
 - C. Corps Seattle District Regional General Conditions
 - D. Corps Regional Specific Conditions for this NWP
 - E. Washington Department of Ecology (Ecology) Section 401 Water Quality Certification (401 Certification): General Conditions
 - F. Ecology 401 Certification: Specific Conditions for this NWP
 - G. Coastal Zone Management Consistency Response for this NWP
-

In addition to any special condition that may be required on a case-by-case basis by the District Engineer, the following terms and conditions must be met, as applicable, for a Nationwide Permit (NWP) authorization to be valid in Washington State.

A. DESCRIPTION OF AUTHORIZED ACTIVITIES

27. Aquatic Habitat Restoration, Enhancement, and Establishment Activities. Activities in waters of the United States associated with the restoration, enhancement, and establishment of tidal and non-tidal wetlands and riparian areas, the restoration and enhancement of non-tidal streams and other non-tidal open waters, and the rehabilitation or enhancement of tidal streams, tidal wetlands, and tidal open waters, provided those activities result in net increases in aquatic resource functions and services.

To be authorized by this NWP, the aquatic habitat restoration, enhancement, or establishment activity must be planned, designed, and implemented so that it results in aquatic habitat that resembles an ecological reference. An ecological reference may be based on the characteristics of an intact aquatic habitat or riparian area of the same type that exists in the region. An ecological reference may be based on a conceptual model developed from regional ecological knowledge of the target aquatic habitat type or riparian area.

To the extent that a Corps permit is required, activities authorized by this NWP include, but are not limited to: the removal of accumulated sediments; the installation, removal, and maintenance of small water control structures, dikes, and berms, as well as discharges of dredged or fill material to restore appropriate stream channel configurations after small water control structures, dikes, and berms, are removed; the installation of current deflectors; the enhancement, rehabilitation, or re-establishment of riffle and pool stream structure; the placement of in-stream habitat structures; modifications of the stream bed and/or banks to enhance, rehabilitate, or re-establish stream meanders; the removal of stream barriers, such as undersized culverts, fords, and grade control structures; the backfilling of artificial channels; the removal of existing drainage structures, such as drain tiles, and the filling, blocking, or reshaping of drainage ditches to restore wetland hydrology; the installation of structures or fills necessary to restore or enhance wetland or stream hydrology; the construction of small nesting islands; the construction of open water areas; the construction of oyster habitat over unvegetated bottom in tidal waters; shellfish seeding; activities needed to reestablish vegetation, including plowing or discing for seed bed preparation and the planting of appropriate wetland species; re-establishment of submerged aquatic vegetation in areas where those plant communities previously existed; re-establishment of tidal wetlands in tidal waters where those wetlands previously existed; mechanized land clearing to remove non-native invasive, exotic, or nuisance vegetation; and other related activities. Only native plant species should be planted at the site.

This NWP authorizes the relocation of non-tidal waters, including non-tidal wetlands and streams, on the project site provided there are net increases in aquatic resource functions and services. Except for the relocation of non-tidal waters on the project site, this NWP does not authorize the conversion of a stream or natural wetlands to another aquatic habitat type (e.g., the conversion of a stream to wetland or vice versa) or uplands. Changes in wetland plant communities that occur when wetland hydrology is more fully restored during wetland rehabilitation activities are not considered a conversion to another aquatic habitat type. This NWP does not authorize stream channelization. This NWP does not authorize the relocation of tidal waters or the conversion of tidal waters, including tidal wetlands, to other aquatic uses, such as the conversion of tidal wetlands into open water impoundments. Compensatory mitigation is not required for activities authorized by this NWP since these activities must result in net increases in aquatic resource functions and services.

Reversion. For enhancement, restoration, and establishment activities conducted: (1) In accordance with the terms and conditions of a binding stream or wetland enhancement or restoration agreement, or a wetland establishment agreement, between the landowner and the U.S. Fish and Wildlife Service (FWS), the Natural Resources Conservation Service (NRCS), the Farm Service Agency (FSA), the National Marine Fisheries Service (NMFS), the National Ocean Service (NOS), U.S. Forest Service (USFS), or their designated state cooperating agencies; (2) as voluntary wetland restoration, enhancement, and establishment actions documented by the NRCS or USDA Technical Service Provider pursuant to NRCS Field Office Technical Guide standards; or (3) on reclaimed surface coal mine lands, in accordance with a Surface Mining Control and Reclamation Act permit issued by the Office of Surface Mining Reclamation and Enforcement (OSMRE) or the applicable state agency, this NWP also authorizes any future discharge of dredged or fill material associated with the reversion of the area to its documented prior condition and use (i.e., prior to the restoration, enhancement, or establishment activities). The reversion must occur within five years after expiration of a limited term wetland restoration or establishment agreement or permit, and is authorized in these circumstances even if the discharge occurs after this NWP expires. The five-year reversion limit does not apply to agreements without time limits reached between the landowner and the FWS, NRCS, FSA, NMFS, NOS, USFS, or an appropriate state cooperating agency. This NWP also authorizes discharges of dredged or fill material in waters of the United States for the reversion of wetlands that were restored, enhanced, or established on prior-converted cropland or on uplands, in accordance with a binding agreement between the landowner and NRCS, FSA, FWS, or their designated state cooperating agencies (even though the restoration, enhancement, or establishment activity did not require a section 404 permit). The prior condition will be documented in the original agreement or permit, and the determination of return to prior conditions will be made by the Federal agency or appropriate state agency executing the agreement or permit. Before conducting any reversion activity the permittee or the appropriate Federal or state agency must notify the district engineer and include the documentation of the prior condition. Once an area has reverted to its prior physical condition, it will be subject to whatever the Corps Regulatory requirements are applicable to that type of land at the time. The requirement that the activity results in a net increase in aquatic resource functions and services does not apply to reversion activities meeting the above conditions. Except for the activities described above, this NWP does not authorize any future discharge of dredged or fill material associated with the reversion of the area to its prior condition. In such cases a separate permit would be required for any reversion.

Reporting. For those activities that do not require pre-construction notification, the permittee must submit to the district engineer a copy of: (1) The binding stream enhancement or restoration agreement or wetland enhancement, restoration, or establishment agreement, or a project description, including project plans and location map; (2) the NRCS or USDA Technical Service Provider documentation for the voluntary stream enhancement or restoration action or wetland restoration, enhancement, or establishment action; or (3) the SMCRA permit issued by OSMRE or the applicable state agency. The report must also include information on baseline ecological conditions on the project site, such as a delineation of wetlands, streams, and/or other aquatic habitats. These documents must be submitted to the district

engineer at least 30 days prior to commencing activities in waters of the United States authorized by this NWP.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing any activity (see general condition 32), except for the following activities: (1) Activities conducted on non-Federal public lands and private lands, in accordance with the terms and conditions of a binding stream enhancement or restoration agreement or wetland enhancement, restoration, or establishment agreement between the landowner and the FWS, NRCS, FSA, NMFS, NOS, USFS or their designated state cooperating agencies; (2) Voluntary stream or wetland restoration or enhancement action, or wetland establishment action, documented by the NRCS or USDA Technical Service Provider pursuant to NRCS Field Office Technical Guide standards; or (3) The reclamation of surface coal mine lands, in accordance with an SMCRA permit issued by the OSMRE or the applicable state agency. However, the permittee must submit a copy of the appropriate documentation to the district engineer to fulfill the reporting requirement. (Authorities: Sections 10 and 404) Note: This NWP can be used to authorize compensatory mitigation projects, including mitigation banks and in-lieu fee projects. However, this NWP does not authorize the reversion of an area used for a compensatory mitigation project to its prior condition, since compensatory mitigation is generally intended to be permanent.

B. CORPS NATIONAL GENERAL CONDITIONS FOR ALL NWPs

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. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

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

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

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

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.
6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).
7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.
8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.
9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).
10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.
11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.
12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.
13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.
14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.
15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.
16. Wild and Scenic Rivers. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible

inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. (b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. The permittee shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status. (c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: <http://www.rivers.gov/>.

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

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which “may affect” a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur. (b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA. (c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the proposed activity. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps. (d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs. (e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take”

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

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required. (g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.nmfs.noaa.gov/pr/species/esa/> respectively.

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

20. Historic Properties. (a) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied. (b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act. If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106. (c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out

appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect. Where the non-Federal applicant has identified historic properties on which the activity might have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. (d) For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps. (e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

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

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment. (a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters. (b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district

engineer may authorize activities under these NWP's only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal: (a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site). (b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal. (c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. (d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation to ensure that the activity results in no more than minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)). (e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. Restored riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses. (f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWP's, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation. (2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f)). (3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation. (4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting

a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). (5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided. (6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs. (h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management. (i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature: “When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include: (a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions; (b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and (c) The signature of the permittee certifying the completion of the activity and mitigation. The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a “USACE project”), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission is not authorized by NWP until the appropriate Corps office issues the section 408 permission to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as

possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures. For single and complete linear projects, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-Federal permittees, if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-Federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the “study river” (see general condition 16); and

(10) For an activity that requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from the Corps office having jurisdiction over that USACE project.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is an NWP PCN and must include all of the applicable information required in paragraphs (b)(1) through (10) of this general condition. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals. (d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity’s compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity’s adverse environmental effects so that they are no more than minimal. (2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of stream bed; (iii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iv) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes. (3) When agency coordination is required, the district engineer will immediately provide (e.g., via 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 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.

District Engineer's Decision: 1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the individual crossings of waters of the United States to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51, 52, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects. For those NWPs that have a waivable 300 linear foot limit for losses of intermittent and ephemeral stream bed and a 1/2-acre limit (i.e., NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52), the loss of intermittent and ephemeral stream bed, plus any other losses of jurisdictional waters and wetlands, cannot exceed 1/2-acre. 2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method

may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns. 3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters (e.g., streams). The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer. 4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31, or to evaluate PCNs for activities authorized by NWPs 21, 49, and 50), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

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).

C. CORPS SEATTLE DISTRICT REGIONAL GENERAL CONDITIONS: The following conditions apply to all NWPs for the Seattle District in Washington State, unless specified.

1. Project Drawings: Drawings must be submitted with pre-construction notification (PCN). Drawings must provide a clear understanding of the proposed project, and how waters of the U.S. will be affected. Drawings must be originals and not reduced copies of large-scale plans. Engineering drawings are not required. Existing and proposed site conditions (manmade and landscape features) must be drawn to scale.

2. Aquatic Resources Requiring Special Protection: Activities resulting in a loss of waters of the United States in mature forested wetlands, bogs and peatlands, aspen-dominated wetlands, alkali wetlands, vernal pools, camas prairie wetlands, estuarine wetlands, wetlands in coastal lagoons, and wetlands in dunal systems along the Washington coast cannot be authorized by a NWP, except by the following NWPs:

- NWP 3 – Maintenance
- NWP 20 – Response Operations for Oil and Hazardous Substances
- NWP 32 – Completed Enforcement Actions
- NWP 38 – Cleanup of Hazardous and Toxic Waste

In order to use one of the above-referenced NWPs in any of the aquatic resources requiring special protection, prospective permittees must submit a PCN to the Corps of Engineers (see NWP general condition 32) and obtain written authorization before commencing work.

3. New Bank Stabilization in Tidal Waters of Puget Sound: Activities involving new bank stabilization in tidal waters in Water Resource Inventory Areas (WRIAs) 8, 9, 10, 11 and 12 (within the areas identified on Figures 1a through 1e on Corps website) cannot be authorized by NWP.

4. Commencement Bay: The following NWPs may not be used to authorize activities located in the Commencement Bay Study Area (see Figure 2 on Corps website):

- NWP 12 – Utility Line Activities (substations)
- NWP 13 – Bank Stabilization
- NWP 14 – Linear Transportation Projects
- NWP 23 – Approved Categorical Exclusions
- NWP 29 – Residential Developments
- NWP 39 – Commercial and Institutional Developments
- NWP 40 – Agricultural Activities
- NWP 41 – Reshaping Existing Drainage Ditches
- NWP 42 – Recreational Facilities
- NWP 43 – Stormwater and Wastewater Management Facilities

5. Bank Stabilization: All projects including new or maintenance bank stabilization activities require PCN to the Corps of Engineers (see NWP general condition 32). For new bank stabilization projects only, the following must be submitted to the Corps of Engineers:

- a. The cause of the erosion and the distance of any existing structures from the area(s) being stabilized.
- b. The type and length of existing bank stabilization within 300 feet of the proposed project.
- c. A description of current conditions and expected post-project conditions in the waterbody.
- d. A statement describing how the project incorporates elements avoiding and minimizing adverse environmental effects to the aquatic environment and nearshore riparian area, including vegetation impacts in the waterbody.

In addition to a. through d., the results from any relevant geotechnical investigations can be submitted with the PCN if it describes current or expected conditions in the waterbody.

6. Crossings of Waters of the United States: Any project including installing, replacing, or modifying crossings of waters of the United States, such as culverts or bridges, requires submittal of a PCN to the

Corps of Engineers (see NWP general condition 32). If a culvert is proposed to cross waters of the U.S. where salmonid species are present or could be present, the project must apply the stream simulation design method from the Washington Department of Fish and Wildlife located in the *Water Crossing Design Guidelines* (2013), or a design method which provides passage at all life stages at all flows where the salmonid species would naturally seek passage. If the stream simulation design method is not applied for a culvert where salmonid species are present or could be present, the project proponent must provide a rationale in the PCN sufficient to establish one of the following:

- a. The existence of extraordinary site conditions.
- b. How the proposed design will provide equivalent or better fish passage and fisheries habitat benefits than the stream simulation design method.

If a culvert is proposed to cross waters of the U.S. where salmonid species are present or could be present, project proponents must provide a monitoring plan with the PCN that specifies how the proposed culvert will be assessed over a five-year period from the time of construction completion to ensure its effectiveness in providing passage at all life stages at all flows where the salmonid species would naturally seek passage. Culverts installed under emergency authorization that do not meet the above design criteria will be required to meet the above design criteria to receive an after-the-fact nationwide permit verification.

7. Stream Loss: A PCN is required for all activities that result in the loss of any linear feet of stream beds. No activity shall result in the loss of any linear feet of perennial stream beds or the loss of greater than 300 linear feet of intermittent and/or ephemeral stream beds. A stream may be rerouted if it is designed in a manner that maintains or restores hydrologic, ecologic, and geomorphic stream processes, provided there is not a reduction in the linear feet of stream bed. Streams include brooks, creeks, rivers, and historical waters of the U.S. that have been channelized into ditches. This condition does not apply to ditches constructed in uplands. Stream loss restrictions may be waived by the district engineer on a case-by-case basis provided the activities result in net increases of aquatic resource functions and services.

8. Mitigation: Pre-construction notification is required for any project that will result in permanent wetland losses that exceed 1,000 square feet. In addition to the requirements of General Condition 23 (Mitigation), compensatory mitigation at a minimum one-to-one ratio will be required for all permanent wetland losses that exceed 1,000 square feet. When a PCN is required for wetland losses less than 1,000 square feet, the Corps of Engineers may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation for impacts to marine waters, lakes, and streams will be determined on a case-by-case basis. If temporary impacts to waters of the U.S. exceed six months, the Corps of Engineers may require compensatory mitigation for temporal effects.

9. Magnuson-Stevens Fishery Conservation and Management Act – Essential Fish Habitat Essential Fish Habitat (EFH) is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. If EFH may be adversely affected by a proposed activity, the prospective permittee must provide a written EFH assessment with an analysis of the effects of the proposed action on EFH. The assessment must identify the type(s) of essential fish habitat (i.e., Pacific salmon, groundfish, and/or coastal-pelagic species) that may be affected. If the Corps of Engineers determines the project will adversely affect EFH, consultation with NOAA Fisheries will be required. Federal agencies should follow their own procedures for complying with the requirements of the Magnuson-Stevens Fishery Conservation and Management Act. If PCN is required for the proposed activity, Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

10. Forage Fish: For projects in forage fish spawning habitat, in-water work must occur within designated forage fish work windows, or when forage fish are not spawning. If working outside of a designated work window, or if forage fish work windows are closed year round, work may occur if the

work window restriction is released for a period of time after a forage fish spawning survey has been conducted by a biologist approved by the Washington State Department of Fish and Wildlife (WDFW). Forage fish species with designated in-water work windows include Pacific sand lance (*Ammodytes hexapterus*), Pacific herring (*Clupea pallasii*), and surf smelt (*Hypomesus pretiosus*). This RGC does not apply to NWP 48, *Commercial Shellfish Aquaculture Activities*. Please see specific regional conditions for NWP 48.

11. Notification of Permit Requirements: The permittee must provide a copy of the nationwide permit authorization 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. The permittee must ensure all appropriate contractors and any other parties performing the authorized work at the project site have read and understand relevant NWP conditions as well as plans, approvals, and documents referenced in the NWP letter. A copy of these documents must be maintained onsite throughout the duration of construction.

12. Construction Boundaries: Permittees must clearly mark all construction area boundaries before beginning work on projects that involve grading or placement of fill. Boundary markers and/or construction fencing must be maintained and clearly visible for the duration of construction. Permittees should avoid and minimize removal of native vegetation (including submerged aquatic vegetation) to the maximum extent possible.

13. Temporary Impacts and Site Restoration

- a. Temporary impacts to waters of the U.S. must not exceed six months unless the prospective permittee requests and receives a waiver by the district engineer. Temporary impacts to waters of the U.S. must be identified in the PCN.
- b. No more than 1/2 acre of waters of the U.S. may be temporarily filled unless the prospective permittee requests and receives a waiver from the district engineer (temporary fills do not affect specified limits for loss of waters associated with specific nationwide permits).
- c. Native soils removed from waters of the U.S. for project construction should be stockpiled and used for site restoration. Restoration of temporarily disturbed areas must include returning the area to pre-project ground surface contours. If native soil is not available from the project site for restoration, suitable clean soil of the same textural class may be used. Other soils may be used only if identified in the PCN.
- d. The permittee must revegetate disturbed areas with native plant species sufficient in number, spacing, and diversity to restore affected functions. A maintenance and monitoring plan commensurate with the impacts, may be required. Revegetation must begin as soon as site conditions allow within the same growing season as the disturbance unless the schedule is approved by the Corps of Engineers. Native plants removed from waters of the U.S. for project construction should be stockpiled and used for revegetation when feasible. Temporary Erosion and Sediment Control measures must be removed as soon as the area has established vegetation sufficient to control erosion and sediment.
- e. If the Corps determines the project will result in temporary impacts of submerged aquatic vegetation (SAV) that are more than minimal, a monitoring plan must be submitted. If recovery is not achieved by the end of the monitoring period, contingencies must be implemented, and additional monitoring will be required.

This RGC does not apply to NWP 48, *Commercial Shellfish Aquaculture Activities*. Please see specific regional conditions for NWP 48.

D. CORPS REGIONAL SPECIFIC CONDITIONS FOR THIS NWP:

1. A pre-construction notification (PCN) must be submitted to the district engineer (see NWP general condition 32) for any proposed project located in a Department of the Army permit compensatory mitigation site, Comprehensive Environmental Response, Compensation and Liability Act (Superfund)

site, Resource Conservation and Recovery Act hazardous waste clean-up site, Washington State Department of Ecology compensatory mitigation site, or Washington State Model Toxics Control Act clean-up site.

2. For projects subject to PCN, if there is a loss of waters of the U.S., the project proponent must explain in the PCN why the loss is necessary and show how it would be fully offset by the beneficial elements of the project.
3. The PCN must contain a description of pre-project site conditions (including photographs), aquatic functions the site provides, and benefits anticipated from project construction.
4. The project proponent must include maintenance and monitoring plans with the PCN.
5. Restoration projects involving shellfish seeding must use shellfish native to the watershed.

E. ECOLOGY 401 CERTIFICATION: GENERAL CONDITIONS

In addition to all the Corps National and Seattle Districts' Regional permit conditions, the following State General Section 401 Water Quality Certification (Section 401) conditions apply to all Nationwide Permits whether **certified** or **partially certified** in the State of Washington.

1. **For in-water construction activities.** Ecology Section 401 review is required for projects or activities authorized under NWP that will cause, or may be likely to cause or contribute to an exceedance of a State water quality standard (Chapter 173-201A WAC) or sediment management standard (Chapter 173-204 WAC). State water quality standards and sediment management standards are available on Ecology's website. Note: In-water activities include any activity within a wetland and/or activities below the ordinary high water mark (OHWM).
2. **Projects or Activities Discharging to Impaired Waters.** Ecology Section 401 review is required for projects or activities authorized under NWP if the project or activity will occur in a 303(d) listed segment of a waterbody or upstream of a listed segment and may result in further exceedances of the specific listed parameter. To determine if your project or activity is in a 303(d) listed segment of a waterbody, visit Ecology's Water Quality Assessment webpage for maps and search tools.
3. **Application.** For projects or activities that will require Ecology Section 401 review, applicants must provide Ecology with a Joint Aquatic Resources Permit Application (JARPA) along with the documentation provided to the Corps, as described in National General Condition 32, Pre-Construction Notification, including, when applicable: (a) A description of the project, including site plans, project purpose, direct and indirect adverse environmental effects the project would cause, best management practices (BMPs), and any other Department of the Army or federal agency permits used or intended to be used to authorize any part of the proposed project or any related activity. (b) Drawings indicating the Ordinary High Water Mark (OHWM), delineation of special aquatic sites and other waters of the state. Wetland delineations must be prepared in accordance with the current method required by the Corps and shall include Ecology's Wetland Rating form. Wetland rating forms are subject to review and verification by Ecology staff. Guidance for determining the OHWM is available on Ecology's website. (c) A statement describing how the mitigation requirement will be satisfied. A conceptual or detailed mitigation or restoration plan may be submitted. See State General Condition 5 for details on mitigation requirements. (d) Other applicable requirements of Corps Nationwide Permit General Condition 32, Corps Regional Conditions, or notification conditions of the applicable NWP. (e) Within 180 calendar days from receipt of applicable documents noted above **and** a copy of the final authorization letter from the Corps providing coverage for a proposed project or activity under the NWP Program Ecology will provide the applicant notice of whether an individual Section 401 will be required for the project. If

Ecology fails to act within a year after receipt of **both** of these documents, Section 401 is presumed waived.

4. Aquatic resources requiring special protection. Certain aquatic resources are unique, difficult-to-replace components of the aquatic environment in Washington State. Activities that would affect these resources must be avoided to the greatest extent possible. Compensating for adverse impacts to high value aquatic resources is typically difficult, prohibitively expensive, and may not be possible in some landscape settings. Ecology Section 401 review is required for activities in or affecting the following aquatic resources (and not prohibited by Seattle District Regional General Condition): (a) Wetlands with special characteristics (as defined in the Washington State Wetland Rating Systems for western and eastern Washington, Ecology Publications #14-06-029 and #14-06-030):

- Estuarine wetlands.
- Wetlands of High Conservation Value.
- Bogs.
- Old-growth and mature forested wetlands.
- Wetlands in coastal lagoons.
- Interdunal wetlands.
- Vernal pools.
- Alkali wetlands.

(b) Fens, aspen-dominated wetlands, camas prairie wetlands. (c) Marine water with eelgrass (*Zostera marina*) beds (except for NWP 48). (d) Category I wetlands. (e) Category II wetlands with a habitat score ≥ 8 points. This State General Condition does not apply to the following Nationwide Permits: NWP 20 – *Response Operations for Oil and Hazardous Substances*, NWP 32 – *Completed Enforcement Actions*

5. Mitigation. Applicants are required to show that they have followed the mitigation sequence and have first avoided and minimized impacts to aquatic resources wherever practicable. For projects requiring Ecology Section 401 review with unavoidable impacts to aquatic resources, adequate compensatory mitigation must be provided.

(a) Wetland mitigation plans submitted for Ecology review and approval shall be based on the most current guidance provided in Wetland Mitigation in Washington State, Parts 1 and 2 (available on Ecology’s website) and shall, at a minimum, include the following:

- i. A description of the measures taken to avoid and minimize impacts to wetlands and other waters of the U.S.
- ii. The nature of the proposed impacts (i.e., acreage of wetlands and functions lost or degraded).
- iii. The rationale for the mitigation site that was selected.
- iv. The goals and objectives of the compensatory mitigation project.
- v. How the mitigation project will be accomplished, including construction sequencing, best management practices to protect water quality, proposed performance standards for measuring success and the proposed buffer widths.
- vi. How it will be maintained and monitored to assess progress towards goals and objectives. Monitoring will generally be required for a minimum of five years. For forested and scrub-shrub wetlands, 10 years of monitoring will often be necessary.
- vii. How the compensatory mitigation site will be legally protected for the long term.

Refer to Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Ecology Publication #06-06-011b) and Selecting Wetland Mitigation Sites Using a Watershed Approach (Ecology Publications #09-06-032 (Western Washington) and #10-06-007 (Eastern Washington)) for guidance on selecting suitable mitigation sites and developing mitigation plans. Ecology encourages the use of alternative mitigation approaches, including credit/debit methodology, advance mitigation, and other programmatic approach such as mitigation banks and in-lieu fee programs. If you are interested in proposing use of an alternative mitigation approach, consult with the appropriate Ecology regional staff person. Information on alternative mitigation approaches is available on Ecology’s website.

(b) Mitigation for other aquatic resource impacts will be determined on a case-by-case basis.

6. Temporary Fills. Ecology Section 401 review is required for any project or activity with temporary fill in wetlands or other waters of the state for more than 90 days, unless the applicant has received written approval from Ecology. Note: This State General Condition does not apply to projects or activities authorized under NWP 33, *Temporary Construction, Access, and Dewatering*

7. Stormwater pollution prevention: All projects that involve land disturbance or impervious surfaces must implement stormwater pollution prevention or control measures to avoid discharge of pollutants in stormwater runoff to waters of the State.

(a) For land disturbances during construction, the applicant must obtain and implement permits (e.g., Construction Stormwater General Permit) where required and follow Ecology's current stormwater manual.

(b) Following construction, prevention or treatment of on-going stormwater runoff from impervious surfaces shall be provided.

Ecology's Stormwater Management and Design Manuals and stormwater permit information are available on Ecology's website.

8. State Section 401 Review for PCNs not receiving 45-day response from the Seattle District. In the event the Seattle District Corps does not issue a NWP authorization letter within 45 calendar days of receipt of a **complete** pre-construction notification, the applicant must contact Ecology for Section 401 review prior to commencing work.

F. ECOLOGY 401 CERTIFICATION: SPECIFIC CONDITIONS FOR THIS NWP:

Certified subject to conditions. Ecology Section 401 review is required for projects or activities authorized under this NWP if:

1. The project or activity involves fill in tidal waters.
2. The project or activity affects ½ acre or more of wetlands.
3. The project or activity is a mitigation bank or an advanced mitigation site.

The project or activity is in or adjoining a known contaminated or cleanup site.

G. COASTAL ZONE MANAGEMENT CONSISTENCY RESPONSE FOR THIS NWP:

(Note: This only applies in the following counties: Clallam, Grays Harbor, Island, Jefferson, King, Kitsap, Mason, Pacific, Pierce, San Juan, Skagit, Snohomish, Thurston, Wahkiakum and Whatcom)

Response: Ecology concurs that this NWP is consistent with the CZMP, subject to the following condition: An individual Coastal Zone Management Consistency Determination is required for project or activities under this NWP if State Section 401 review is required.

General Conditions: For Non-Federal Permittees

1. Necessary Data and Information. A Coastal Zone Management Program "Certification of Consistency" form is required for projects located within a coastal county. "Certification of Consistency" forms are available on Ecology's website. The form shall include a description of the proposed project or activity and evidence of compliance with the applicable enforceable policies of the Washington Coastal Zone Management Program (CZMP). Also, a map of the site location is required.

2. Timing. Within 6 months from receipt of the necessary data and information, Ecology will provide a federal consistency determination for the proposed project or activity. If Ecology fails to act within the 6 month period, concurrence with the CZMP is presumed.

General Conditions: For Federal Permittees (Agencies)

1. Necessary Data and Information. Federal agencies shall submit the determination, information, and analysis required by 15 CFR 930.39 to obtain a federal consistency determination.

2. Timing. Within 60 days from receipt of the necessary data and information, Ecology will provide a federal consistency determination for the proposed project or activity. If Ecology fails to act within the 60 day period, concurrence with the CZMP is presumed.

Attachment 6
Outfall 230A Slope Cap Repair Material Specifications

Outfall 230A Slope Cap Repair Material Specifications

GENERAL

1.01 DESCRIPTION OF WORK

The work described in this specification includes identification, characterization, and approval of materials used for Outfall 230A repair in a slope cap area in the Thea Foss and Wheeler-Osgood Waterways. Materials to be used for repair activities may include the following:

- Quarry spall filter;
- Heavy loose riprap;
- Geotextile; and
- Streambed cobbles.

1.02 QUALITY ASSURANCE

Sampling, testing, and inspection for compliance with this specification shall be in accordance with the requirements specified herein.

1.03 STANDARD SPECIFICATIONS

The Standard Specifications for the work described in this section shall be the Standard Specifications for Road, Bridge, and Municipal Construction as prepared by the Washington Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter, 2024 Edition.

1.04 SUBMITTALS

The following submittals shall be provided for slope cap repair materials:

- A. Source Identification (per Paragraph 2.02-A).
- B. Material Source Characterization (per Paragraph 2.02).
- C. Shipping Receipts and Material Volumes for slope maintenance materials (per Paragraph 3.01).

Test reports shall be provided by a laboratory that is independent of the supplier. Slope cap repair materials shall be provided from a source approved by the U.S. Environmental Protection Agency (USEPA).

PART 2 - PRODUCTS

2.01 GENERAL

Materials shall be of the quality, size, shape, and gradation specified herein. Material sources shall be selected well in advance of the time when the material will be required in the work. Suitable representative samples and test reports, as described below, must be submitted to, and approved by the Engineer prior to delivery of materials to the jobsite.

Outfall 230A Slope Cap Repair Material Specifications

2.02 MATERIAL SOURCE CHARACTERIZATION

Material source characterization shall be performed as specified below to assure that materials used for Outfall 230A slope cap repair are natural, native, and virgin materials, free of unwanted materials including debris or recycled materials, and meet the requirements of these specifications. Any material that has been determined to be substandard by the Engineer for any reason will be rejected. In the event that a material is rejected, it shall be removed from the site at no cost to the City of Tacoma. Slope cap repair activities will use materials approved for use by the USEPA.

The Material Source Characterization will consist of Source Identification (2.02 A), Source Inspection (2.02 B), and Grain Size Distribution (2.02 C. 1 and 2). The Contractor shall submit a characterization of any and all imported material prior to any on-site placement.

A. Source Identification

Prior to material source sampling, documentation of the origin of each type of material to be used on the Project including the names, addresses, and source identification numbers and maps identifying specific location(s) of material source(s).

B. Source Inspection

All material sources shall be inspected at the source by the Engineer and the supplier(s) of the material. The witnessing of the inspection by the Engineer shall in no way release the supplier(s) from complying with the Specifications and in no way shall be construed as approval of any particular source of material.

C. Testing, Reporting, and Certification

Samples of the source material comprising slope cap filter material and habitat mix shall undergo all of the following tests. Rip rap and quarry spall filter will meet the requirements of 2.04 and 2.05, respectively.

1. Grain Size Distribution (ASTM D 422-63).
2. Particle Specific Gravity (ASTM D 854).
3. Weight per unit volume of uncompacted materials.

The results of such tests shall be provided at least two weeks before delivery of the materials to the jobsite. The results of each test shall be provided in a report that clearly identifies the following:

1. Source of samples.
2. Sampling dates.
3. Supplier's certification that the samples tested and the results provided are representative of materials that shall be delivered to the site.

Outfall 230A Slope Cap Repair Material Specifications

D. Inspection of Materials at the Jobsite

Slope cap repair materials shall be visually inspected upon delivery. Materials shall be inspected for presence of foreign, recycled, or reprocessed material. Material may be rejected due to identification of any such material or as a result of substandard test results. Materials may be segregated for testing based on appearance or odor. Segregated material may be tested according to procedures at the City of Tacoma's discretion. Substandard repair materials may be rejected at no cost to The City of Tacoma.

2.03 GEOTEXTILE

A. The intent of the geotextile is to provide a permeable barrier that allows water movement, but acts to contain the existing subsurface.

B. Geotextile fabric shall be 8 ounces per square yard, non-woven, needle-punched polypropylene with the following minimum average roll values.

PROPERTY	ASTM METHOD	UNITS	MIN. AVG. ROLL VALUE
Grab Tensile	D4632	lbs	205
Grab Elongation	D4632	%	50
Puncture Strength	D4833	lbs	130
Trapezoidal Tear	D4533	lbs	85
Mullen Burst	D3786	psi	400
Apparent Opening Size	D4751	US Sieve	80
Water Flow Rate	D4491	gpm/sf	90
Permittivity	D4491	sec-1	1.40
Permeability	D4491	cm/sec	0.38
UV Resistance (500 hrs)	--	% retained	70

Outfall 230A Slope Cap Repair Material Specifications

2.04 HEAVY LOOSE RIPRAP

- A. Heavy Loose Riprap shall consist of broken stone from an approved source that is hard, sound, dense, and durable. It shall be free from seams, cracks, and other defects tending to destroy its resistance to weather and seawater. Dry unit weight shall not be less than 160 pounds per solid cubic foot.
- B. Riprap shall meet the following test requirements:

Aggregate Property	Test method	Requirement
Degradation Factor	WSDOT Test Method T113	15 minimum
Los Angeles Wear, 500 Rev.	AASHTO T 96	50% maximum
Specific Gravity, SSD	AASHTO T 85	2.55 minimum

- C. The grading of the Heavy Loose Rip Rap shall be confirmed by the Engineer by visual inspection prior to transport to the site. Rock for Riprap shall be angular, each piece having its greatest dimension not greater than three times its least dimension, and shall meet the following gradation requirements:

<u>Size (Inches)</u>	<u>Percent Passing (Smaller)</u>
42	100
36	70 to 95
28	40 to 70
22	15 to 40
14	15 Max

2.05 QUARRY SPALL FILTER

- A. Quarry Spall Filter shall consist of broken stone from an approved source with a minimum of three fractured faces. Quarry Spall Filter shall be free of fines and not be contaminated by foreign materials such as fibers, wood, steel, asphalt, sealant, soil, plastic, or other deleterious material; free from segregation, seams, cracks or other defects; and shall conform with the following test requirements:

Aggregate Property	Test method	Requirement
Degradation Factor	WSDOT Test Method T113	15 minimum
Los Angeles Wear, 500 Rev.	AASHTO T 96	50% maximum
Specific Gravity, SSD	AASHTO T 85	2.55 minimum

Outfall 230A Slope Cap Repair Material Specifications

- B. The grading of the Quarry Spall Filter shall be confirmed by the Engineer by visual inspection prior to transport to the site. Quarry Spall Filter shall conform to the following gradation requirements:

<u>Percent Passing Size (Inches)</u>	<u>(Smaller)</u>
8	100
3	40 max
3/4	10 max

2.06 STREAMBED COBBLES

- A. Streambed cobbles shall consist of 2"-6" cobbles. The streambed cobbles shall consist of rounded aggregates that are naturally occurring water rounded aggregates. Aggregates from quarries, ledge rock and talus slopes are not acceptable. Streambed Cobbles shall be from an approved source, uniform in quality and free from wood, roots, bark and other extraneous materials. The individual particles shall be free from all objectionable coating and shall contain no organic matter or soft friable particles. Deleterious materials may be determined visually or be tested in accordance with AASHTO T 194 or AASHTO T267. Streambed Cobbles shall meet the following test requirements for quality:

Aggregate Property	Test method	Requirement
Degradation Factor	WSDOT Test Method T113	15 minimum
Los Angeles Wear, 500 Rev.	AASHTO T 96	50% maximum
Specific Gravity, SSD	AASHTO T 85	2.55 minimum

- B. The grading of the cobbles shall be confirmed by the Engineer by visual inspection prior to transport to the site. Streambed Cobbles shall conform to the following gradation requirements:

<u>Percent Passing Size (Inches)</u>	<u>(Smaller)</u>
8	100
6	70-90
2	30-60
3/4	10 max

Outfall 230A Slope Cap Repair Material Specifications

PART 3 - EXECUTION

3.01 GENERAL

- A. The supplier shall provide daily reports of the quantities of slope cap repair materials used to the Engineer. The reports shall include tabulated summaries of volumes placed for each material. Shipping receipts for all materials delivered to the site shall also be submitted on a daily basis to the City of Tacoma.
- B. Contractor shall submit a plan with supporting documentation to the Engineer showing the proposed methods for minimizing slope cap disturbance from spudding. The Engineer will require up to 20 calendar days from the date the plan is received until it is returned to the Contractor. The Contractor shall not proceed with the work represented by the plan until comments from the Engineer have been addressed.

3.02 MATERIAL PLACEMENT

- A. All slope protection materials shall be placed starting from the lower elevations and working towards the higher elevations.
- B. Place the geotextile in the prepared installation area according to engineered plans. The fabric should be stretched as tight and as flat as possible. Overlap the edges of adjacent rolls by 3 feet minimum. Secure the fabric with stainless steel weights along the edges and overlapping portions.
- C. Place riprap over geotextile filter blanket and quarry spall filter in a manner that will not displace the underlying material, with largest rock against the slope and the remainder of the rock placed around such that the smaller rock will key into the larger rock to form a tight blanket. Dress all aggregate material to match the thicknesses shown in plan.
- D. If the contractor's placement methods do not provide satisfactory results as specified, as determined by the Engineer, then the contractor shall change the placement methods to achieve satisfactory results. Changes to the placement methods or reworking aggregate material shall occur at no additional cost to the City.

END OF SECTION

Outfall 230A Slope Cap Repair Material Specifications

GENERAL

1.01 DESCRIPTION OF WORK

The work described in this specification includes identification, characterization, and approval of materials used for Outfall 230A repair in a slope cap area in the Thea Foss and Wheeler-Osgood Waterways. Materials to be used for repair activities may include the following:

- Quarry spall filter;
- Heavy loose riprap;
- Geotextile; and
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1.02 QUALITY ASSURANCE

Sampling, testing, and inspection for compliance with this specification shall be in accordance with the requirements specified herein.

1.03 STANDARD SPECIFICATIONS

The Standard Specifications for the work described in this section shall be the Standard Specifications for Road, Bridge, and Municipal Construction as prepared by the Washington Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter, 2024 Edition.

1.04 SUBMITTALS

The following submittals shall be provided for slope cap repair materials:

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- B. Material Source Characterization (per Paragraph 2.02).
- C. Shipping Receipts and Material Volumes for slope maintenance materials (per Paragraph 3.01).

Test reports shall be provided by a laboratory that is independent of the supplier. Slope cap repair materials shall be provided from a source approved by the U.S. Environmental Protection Agency (USEPA).

PART 2 - PRODUCTS

2.01 GENERAL

Materials shall be of the quality, size, shape, and gradation specified herein. Material sources shall be selected well in advance of the time when the material will be required in the work. Suitable representative samples and test reports, as described below, must be submitted to, and approved by the Engineer prior to delivery of materials to the jobsite.

Outfall 230A Slope Cap Repair Material Specifications

2.02 MATERIAL SOURCE CHARACTERIZATION

Material source characterization shall be performed as specified below to assure that materials used for Outfall 230A slope cap repair are natural, native, and virgin materials, free of unwanted materials including debris or recycled materials, and meet the requirements of these specifications. Any material that has been determined to be substandard by the Engineer for any reason will be rejected. In the event that a material is rejected, it shall be removed from the site at no cost to the City of Tacoma. Slope cap repair activities will use materials approved for use by the USEPA.

The Material Source Characterization will consist of Source Identification (2.02 A), Source Inspection (2.02 B), and Grain Size Distribution (2.02 C. 1 and 2). The Contractor shall submit a characterization of any and all imported material prior to any on-site placement.

A. Source Identification

Prior to material source sampling, documentation of the origin of each type of material to be used on the Project including the names, addresses, and source identification numbers and maps identifying specific location(s) of material source(s).

B. Source Inspection

All material sources shall be inspected at the source by the Engineer and the supplier(s) of the material. The witnessing of the inspection by the Engineer shall in no way release the supplier(s) from complying with the Specifications and in no way shall be construed as approval of any particular source of material.

C. Testing, Reporting, and Certification

Samples of the source material comprising slope cap filter material and habitat mix shall undergo all of the following tests. Rip rap and quarry spall filter will meet the requirements of 2.04 and 2.05, respectively.

1. Grain Size Distribution (ASTM D 422-63).
2. Particle Specific Gravity (ASTM D 854).
3. Weight per unit volume of uncompacted materials.

The results of such tests shall be provided at least two weeks before delivery of the materials to the jobsite. The results of each test shall be provided in a report that clearly identifies the following:

1. Source of samples.
2. Sampling dates.
3. Supplier's certification that the samples tested and the results provided are representative of materials that shall be delivered to the site.

Outfall 230A Slope Cap Repair Material Specifications

D. Inspection of Materials at the Jobsite

Slope cap repair materials shall be visually inspected upon delivery. Materials shall be inspected for presence of foreign, recycled, or reprocessed material. Material may be rejected due to identification of any such material or as a result of substandard test results. Materials may be segregated for testing based on appearance or odor. Segregated material may be tested according to procedures at the City of Tacoma's discretion. Substandard repair materials may be rejected at no cost to The City of Tacoma.

2.03 GEOTEXTILE

A. The intent of the geotextile is to provide a permeable barrier that allows water movement, but acts to contain the existing subsurface.

B. Geotextile fabric shall be 8 ounces per square yard, non-woven, needle-punched polypropylene with the following minimum average roll values.

PROPERTY	ASTM METHOD	UNITS	MIN. AVG. ROLL VALUE
Grab Tensile	D4632	lbs	205
Grab Elongation	D4632	%	50
Puncture Strength	D4833	lbs	130
Trapezoidal Tear	D4533	lbs	85
Mullen Burst	D3786	psi	400
Apparent Opening Size	D4751	US Sieve	80
Water Flow Rate	D4491	gpm/sf	90
Permittivity	D4491	sec-1	1.40
Permeability	D4491	cm/sec	0.38
UV Resistance (500 hrs)	--	% retained	70

Outfall 230A Slope Cap Repair Material Specifications

2.04 HEAVY LOOSE RIPRAP

- A. Heavy Loose Riprap shall consist of broken stone from an approved source that is hard, sound, dense, and durable. It shall be free from seams, cracks, and other defects tending to destroy its resistance to weather and seawater. Dry unit weight shall not be less than 160 pounds per solid cubic foot.
- B. Riprap shall meet the following test requirements:

Aggregate Property	Test method	Requirement
Degradation Factor	WSDOT Test Method T113	15 minimum
Los Angeles Wear, 500 Rev.	AASHTO T 96	50% maximum
Specific Gravity, SSD	AASHTO T 85	2.55 minimum

- C. The grading of the Heavy Loose Rip Rap shall be confirmed by the Engineer by visual inspection prior to transport to the site. Rock for Riprap shall be angular, each piece having its greatest dimension not greater than three times its least dimension, and shall meet the following gradation requirements:

<u>Size (Inches)</u>	<u>Percent Passing (Smaller)</u>
42	100
36	70 to 95
28	40 to 70
22	15 to 40
14	15 Max

2.05 QUARRY SPALL FILTER

- A. Quarry Spall Filter shall consist of broken stone from an approved source with a minimum of three fractured faces. Quarry Spall Filter shall be free of fines and not be contaminated by foreign materials such as fibers, wood, steel, asphalt, sealant, soil, plastic, or other deleterious material; free from segregation, seams, cracks or other defects; and shall conform with the following test requirements:

Aggregate Property	Test method	Requirement
Degradation Factor	WSDOT Test Method T113	15 minimum
Los Angeles Wear, 500 Rev.	AASHTO T 96	50% maximum
Specific Gravity, SSD	AASHTO T 85	2.55 minimum

Outfall 230A Slope Cap Repair Material Specifications

- B. The grading of the Quarry Spall Filter shall be confirmed by the Engineer by visual inspection prior to transport to the site. Quarry Spall Filter shall conform to the following gradation requirements:

<u>Percent Passing Size (Inches)</u>	<u>(Smaller)</u>
8	100
3	40 max
3/4	10 max

2.06 STREAMBED COBBLES

- A. Streambed cobbles shall consist of 2"-6" cobbles. The streambed cobbles shall consist of rounded aggregates that are naturally occurring water rounded aggregates. Aggregates from quarries, ledge rock and talus slopes are not acceptable. Streambed Cobbles shall be from an approved source, uniform in quality and free from wood, roots, bark and other extraneous materials. The individual particles shall be free from all objectionable coating and shall contain no organic matter or soft friable particles. Deleterious materials may be determined visually or be tested in accordance with AASHTO T 194 or AASHTO T267. Streambed Cobbles shall meet the following test requirements for quality:

Aggregate Property	Test method	Requirement
Degradation Factor	WSDOT Test Method T113	15 minimum
Los Angeles Wear, 500 Rev.	AASHTO T 96	50% maximum
Specific Gravity, SSD	AASHTO T 85	2.55 minimum

- B. The grading of the cobbles shall be confirmed by the Engineer by visual inspection prior to transport to the site. Streambed Cobbles shall conform to the following gradation requirements:

<u>Percent Passing Size (Inches)</u>	<u>(Smaller)</u>
8	100
6	70-90
2	30-60
3/4	10 max

Outfall 230A Slope Cap Repair Material Specifications

PART 3 - EXECUTION

3.01 GENERAL

- A. The supplier shall provide daily reports of the quantities of slope cap repair materials used to the Engineer. The reports shall include tabulated summaries of volumes placed for each material. Shipping receipts for all materials delivered to the site shall also be submitted on a daily basis to the City of Tacoma.
- B. Contractor shall submit a plan with supporting documentation to the Engineer showing the proposed methods for minimizing slope cap disturbance from spudding. The Engineer will require up to 20 calendar days from the date the plan is received until it is returned to the Contractor. The Contractor shall not proceed with the work represented by the plan until comments from the Engineer have been addressed.

3.02 MATERIAL PLACEMENT

- A. All slope protection materials shall be placed starting from the lower elevations and working towards the higher elevations.
- B. Place the geotextile in the prepared installation area according to engineered plans. The fabric should be stretched as tight and as flat as possible. Overlap the edges of adjacent rolls by 3 feet minimum. Secure the fabric with stainless steel weights along the edges and overlapping portions.
- C. Place riprap over geotextile filter blanket and quarry spall filter in a manner that will not displace the underlying material, with largest rock against the slope and the remainder of the rock placed around such that the smaller rock will key into the larger rock to form a tight blanket. Dress all aggregate material to match the thicknesses shown in plan.
- D. If the contractor's placement methods do not provide satisfactory results as specified, as determined by the Engineer, then the contractor shall change the placement methods to achieve satisfactory results. Changes to the placement methods or reworking aggregate material shall occur at no additional cost to the City.

END OF SECTION

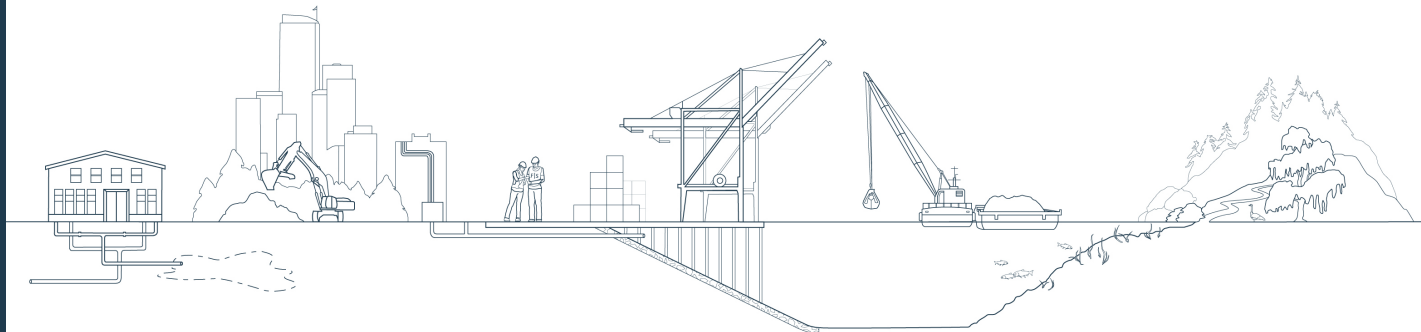
Attachment 7
Water Quality Monitoring and Protection Plan

Water Quality Monitoring and Protection Plan

Thea Foss and Wheeler-Osgood Waterways

Prepared for
City of Tacoma

April 2024



FLOYD | SNIDER
strategy ■ science ■ engineering



LIMITATIONS

This report has been prepared for the exclusive use of the City of Tacoma, their authorized agents, and regulatory agencies. It has been prepared following the described methods and information available at the time of the work. No other party should use this report for any purpose other than that originally intended, unless Floyd|Snider agrees in advance to such reliance in writing. The information contained herein should not be utilized for any purpose or project except the one originally intended. Under no circumstances shall this document be altered, updated, or revised without written authorization of Floyd|Snider.

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Figure 1 Example Water Quality Monitoring Locations when Instrumented Monitoring Triggered

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Appendix A Daily and Instrumented Water Quality Monitoring Forms

List of Abbreviations

Abbreviation	Definition
ARAR	Applicable or Relevant and Appropriate Requirement
BMP	Best management practice
CESCL	Certified erosion and sediment control lead
City	City of Tacoma
CQCP	Construction Quality Control Plan
CWA	Clean Water Act
HTL	High tide line
NTU	Nephelometric turbidity units
RA	Remedial area
RPM	Remedial Project Manager
SPCCP	Spill, Prevention, Control, and Countermeasure Plan
USEPA	U.S. Environmental Protection Agency
WAC	Washington Administrative Code
WQMPP	Water Quality Monitoring and Protection Plan
WQS	Water Quality Specialist

1.0 Introduction

This Water Quality Monitoring and Protection Plan (WQMPP) has been prepared on behalf of the City of Tacoma (City) and identifies monitoring and best management practices (BMPs) associated with the repair of the slope cap off the mouth of City Outfall 230A within the Thea Foss Waterway. The project site is located on the west bank of the Thea Foss Waterway, south of the Murray Morgan Bridge in Tacoma, Washington.

The WQMPP has been prepared to meet the requirements of the U.S. Environmental Protection Agency's (USEPA's) forthcoming Clean Water Act (CWA) 404 Applicable or Relevant and Appropriate Requirements (ARARs) Memorandum and Section 401 of the CWA during construction.

This plan describes water quality protection measures, monitoring parameters, methods, and evaluation criteria, as well as corrective actions and notification procedures to be followed during construction activities. The contractor selected to perform the construction activities will be required to comply with the requirements and procedures specified in this plan, as well as with the contract specifications.

1.1 PROJECT DESCRIPTION

This project includes implementation of slope cap repair work off of the City Outfall 230A apron in remedial area (RA) 8 where erosion was observed during the Year 17 low-tide slope cap inspection (Figure 1). USEPA has identified the slope cap off the outfall apron as requiring repair by the City. In brief, the project includes slope repair activities that will be performed by a general contractor on behalf of the City. These activities include excavation followed by placement of appropriate slope cap repair materials over the exposed slope, including placement of quarry spall filter, geotextile, and heavy loose riprap to prevent erosion of the slope. This will be followed by placement of round river cobbles for habitat enhancement.

This WQMPP will be implemented during the repair activities. All work below the high tide line (HTL) will be conducted during the allowable in-water work window for Commencement Bay from July 15, 2024, to February 15, 2025. Excavation and placement of repair materials is anticipated to occur in an approximately 180-square-foot area just waterward of the outfall apron of Outfall 230A.

1.2 ADAPTIVE MANAGEMENT

This WQMPP details the approach to be followed for monitoring and includes corrective actions and steps to be taken if there are exceedances of water quality standards during the project. However, circumstances may arise during project implementation that require a modification to the methods, procedures, sampling locations, frequencies, and corrective actions presented in this plan.

Any substantive changes to the monitoring approach will be done in coordination with the City and USEPA.

2.0 Water Quality Protection Measures

The following BMPs will be implemented during this slope cap repair. Additional BMPs may be implemented, as necessary, to avoid potential impacts to surface water.

- Repair work will be completed during periods of low tide to the extent possible, to maximize work in the dry and avoid/minimize potential impacts to surface water quality and allow visual monitoring of the in-water work.
- All work below the HTL will be conducted during the allowable in-water work window for Commencement Bay, from July 15, 2024, to February 15, 2025.
- Site access will be from the water. Repair activities will be completed using water-based equipment (e.g., barge and/or boat). As part of the Construction Quality Control Plan (CQCP), the contractor will submit a plan for how and where the barge will be set up to perform the work.
- Materials will be imported to the site using water-based equipment (e.g., barge or boat). Construction equipment and materials will be stored on a barge. When material is not in use, the contractor will place Visqueen or similar product over materials to prevent erosion.
- Excavated cap material and sediments will be segregated from imported materials. Drainage from excavated material will be contained from coming into contact with imported materials. As part of the CQCP, the contractor will submit a plan for how materials will be segregated and how drainage will be managed.
- The contractor will submit a plan as part of the CQCP for how to minimize the slope cap disturbance from barge spuds during construction to protect the integrity of the slope cap and contain the underlying sediments. The plan should include the equipment and BMPs that the contractor will use.
- A debris boom with a minimum 3-foot curtain with suitable weight or anchoring system will be deployed and maintained during the project.
- Any deployed boom and turbidity curtain will be managed to ensure that fish cannot be trapped in or stranded by the boom and curtain on falling tides and that escape for fish is available at the lowest margin of the curtain.
- Visual water quality monitoring by designated and appropriately trained personnel will be conducted in accordance with this WQMPP throughout construction.
- Work areas will be “buttoned up” and left in a completed state or otherwise stabilized with surface and/or perimeter erosion controls after each session of work in the dry, to reduce the potential for turbidity during rising tides.
- An emergency spill containment kit will be located on-site containing an adequate supply of materials (such as a vacuum pump, sorbent booms, diapers, and other absorbent materials) to control and contain deleterious materials in the event of an accidental spill.

- Any fueling conducted on a barge will involve specific fueling BMPs and will have spill containment systems in place.
- All equipment used below the HTL will utilize biodegradable hydraulic fluid.
- The contractor will perform work during a period of no anticipated rainfall or low rainfall to minimize scour and excavated surface during construction, including at the outfall bypass discharge point. The contractor should expect that the outfall will have continuous flow and that it will be necessary to divert outfall flow from the work area. Work during no or low rainfall will help with management of excavated materials and clean construction materials on the barge. As part of the CQCP, the contractor will submit a plan for how the stormwater bypass will be managed.
- Adequate temporary erosion and sediment control materials will be maintained on-site as needed to accommodate unanticipated events in response to weather conditions and/or construction activities.
- Routine inspections of the erosion control measures on the barge and at the shoreline stormwater bypass discharge point will be conducted daily during construction by the contractor certified erosion and sediment control lead (CESCL) to ensure the effectiveness of the measures and to determine the need for maintenance or additional control measures.
- Streambed cobbles, quarry spall filter material, and heavy loose riprap will be cleaned and washed prior to being transported to the site to reduce fines present in the material.
- Construction-related debris will be cleaned up daily. Proper conservation measures (e.g., containment devices) will be used to ensure that debris will not contaminate surface waters.
- Waste materials, including excavated cap material and sediments, construction-related debris, miscellaneous garbage and/or other debris removed from the project site, will be transported off site for disposal in accordance with applicable regulations. The barge storage methods/locations while on-site and when underway must ensure that no materials enter the water or cause water quality degradation.
- Anthropogenic debris within the project footprint will be removed and disposed of off-site, including any treated wood, garbage, etc., within the project limits.
- If dead or distressed fish are observed, the fish will be collected (as described in Section 6.2) and project work will cease, to allow review by the City and USEPA.
- The contractor will be responsible for the preparation of a Spill, Prevention, Control, and Countermeasure Plan (SPCCP) and a CQCP to be used for the duration of the project. These plans will be reviewed and approved by the City and USEPA.
- The contractor will prevent transporting and introducing aquatic invasive species to and from the project area by thoroughly cleaning all equipment, boots, and other gear before and after use at this job site.

3.0 Water Quality Monitoring Objectives, Standards, and Criteria

The objective of water quality monitoring is to demonstrate that construction activities do not result in exceedances of the applicable water quality standards.

Visual water quality monitoring will be performed in work areas during all maintenance and repair work to ensure that construction activities do not negatively impact adjacent surface water quality. Monitoring for turbidity and effectiveness of BMPs will be conducted in all areas of disturbance and areas used for access, including in the barge area, to ensure that turbid drainage from stored or excavated material is not discharging to the waterway and there are no turbid discharges from the stormwater bypass discharge point on the shoreline. Instrumented monitoring using a turbidity meter will only be conducted when triggered (if visible turbidity is seen beyond the 150-foot point of compliance boundary, as described in Section 3.1.2, 4.0, and Section 5.1).

3.1 WATER QUALITY STANDARDS

3.1.1 Turbidity

The water quality monitoring turbidity standards applicable to this project per Washington Administrative Code (WAC) 173-201A-200(1)(e) and water quality criteria include the following:

- Turbidity shall not exceed 10 Nephelometric Turbidity Units (NTU) over the background turbidity when the background turbidity is less than 50 NTU.
- Turbidity shall not exceed a 20% increase when the background turbidity is more than 50 NTU.
- Visible turbidity cannot occur beyond the 150-foot point of compliance boundary from the activity.

3.1.2 Point of Compliance

Per WAC 173-201A-200, for marine waters, the point of compliance for a temporary area of mixing shall be a radius of 150 feet from center point of the placement area or activity (i.e., point of turbidity discharge). If triggered, metered monitoring locations will be selected based on the location of the construction activity and to intercept any visible turbidity plumes originating from the construction operations. Visible turbidity greater than background beyond the 150-foot point of compliance boundary is considered an exceedance of the water quality standard.

If instrumented water quality criteria exceedances occur at the standard point of compliance of 150 feet, despite the implementation of BMPs, then the City can request to USEPA that the point of compliance be extended to 300 or 500 feet, depending on the nature of the turbidity exceedance. An extension to the allowable point of compliance can be requested because the material being placed is clean, and because the preference to conduct as much work in the dry as feasible necessitates work during extreme tides. Any point of compliance extension must be coordinated with the City, USEPA, and the construction team.

4.0 Water Quality Monitoring Plan

The following subsections describe where and when monitoring will occur, and how compliance with the water quality standards will be addressed.

4.1 ROUTINE VISUAL MONITORING—ALL ACTIVITIES

Visual water quality monitoring will be performed by the contractor in all work areas, materials storage areas (including barge/boat), stormwater bypass outlet areas, and areas of disturbance during all maintenance and repair work to ensure that construction activities do not negatively impact adjacent surface water quality. All repair work will be completed during low-tide conditions, but nearly all of the work will be conducted below the water line.

Visual water quality observations and any necessary corrective actions will be documented on the daily water quality monitoring form provided in Appendix A. For consistency, the contractor shall have one designated and appropriately trained individual to conduct the monitoring.

There shall be no release of turbid water or materials from staging/storage work barges/vessels, and thus no turbidity observed beyond the point of compliance.

In the event persistent turbidity is observed emanating from the project area toward the 150-foot point of compliance, additional BMPs will be considered and implemented. For example, the debris boom with minimum 3-foot curtain that will be used throughout the project may be relocated to manage the persistent turbidity.

If turbidity is observed at any time beyond 150 feet from water's edge directly downslope from the point of the placement area or activity, instrumented monitoring will be triggered immediately, as described in Section 4.2.

4.2 INSTRUMENTED MONITORING—IF TRIGGERED

Instrumented monitoring will be conducted if turbidity is observed out to the 150-foot point of compliance boundary during routine visual monitoring during any project activity.

4.2.1 Monitoring Stations

During all instrumented monitoring, monitoring will occur at the station described in this section, measured from the point of placement area or activity (distances are described below). Figure 1 shows the Compliance Station downcurrent from a known construction disturbance (e.g., placement of riprap). The background station is situated upcurrent of the construction activity. The actual positions of the stations will be adjusted in the field using the best professional judgment of the monitoring crew and will be based on any potential exceedance, tidal cycle, observations of the direction of current, or visible turbidity plume (if applicable).

In the field, it may be necessary to take turbidity measurements at more than the stations described below (i.e., discretionary stations) to understand the influence of water crossing the site. For example, it may be apparent that more than one separate turbidity plume is seen extending toward the 150-foot point of compliance. In this case, the contractor would have a compliance station towards both plumes.

1. **Background Station.** There will be a minimum of one Background Station, positioned approximately 300 feet upcurrent of the point of placement area or activity and beyond the influence of construction activities. The Background Station(s) will be in an area with physical characteristics (e.g., water depth, influence of Puyallup River silt plume) similar to those of the main area of construction activity. The Background Station(s) will be monitored first during every instrumented event because the turbidity standard is based on comparison with background levels. If 300 feet upcurrent from the activity is not appropriate, the Background Station can be positioned farther than 300 feet from the activity, beyond the influence of construction activities.
2. **Early Warning Station.** There will be a minimum of one Early Warning Station, and it will be positioned approximately 100 feet downcurrent of the point of placement area or activity. The objective of monitoring at the Early Warning Station(s) at 100 feet is to have an early indication of whether exceedances of the water quality standards may occur at the point of compliance (i.e., 150 feet) if construction activities continue without modification to the BMPs being implemented. It provides an adaptive management process to adjust the construction activities or BMPs prior to a water quality standard exceedance at the point of compliance. Any NTU measurement that initially exceeds the water quality criterion at the Early Warning Station(s) will be referred to as an “elevation.” If an elevation is confirmed, monitoring will occur at the 150-foot point of compliance and BMPs should be adjusted to avoid an actual exceedance at the point of compliance, as described below.
3. **Compliance Station.** There will be a minimum of one monitoring station at this distance, along the 150-foot point of compliance boundary downcurrent from the location of placement area or activity, targeting any observable turbidity plume. The objective of monitoring at the Compliance Station(s) is to take turbidity measurements and, if there are exceedances, implement additional BMPs or corrective actions to achieve compliance with water quality standards.

4.2.2 Monitoring Depths

Monitoring will be conducted at the following three depths in the water column at each station. It is important to monitor water quality at each of these depths.

1. Surface—Within 3 feet (approximately 1 meter) of the water surface
2. Middle—At mid-depth in the water column
3. Bottom—Within 3 feet (approximately 1 meter) of the mudline

Sample measurements from each of the three depths will be compared to each of the three corresponding depths at the Background Station. Depths and direction should be adjusted to target a turbidity plume, if present. If the water depth is less than 10 feet, monitoring will be conducted at two depths within the water column (i.e., within 1.5 feet of the surface and at approximately one-half of the total water depth).

4.2.3 Turbidity Compliance

Turbidity measurements from the Early Warning Station and Compliance Station will be compared to the Background Station. Measurements will be taken at the Background Station first, prior to the Early Warning Station and Compliance Station(s). Turbidity measurements from each of the three depths at these stations will be compared to each of the three corresponding depths at the Background Station.

If an elevation of turbidity at the Early Warning Station is confirmed to be from construction (i.e., it is greater than the background measurement), monitoring should occur at the 150-foot Compliance Station. Simultaneous to monitoring at the 150-foot point of compliance, the contractor should modify operations and adjust or implement additional BMPs (e.g., deploy or adjust the turbidity curtain, check the shoreline for any areas where the work areas were not sufficiently “buttoned up” and secure them) and then remeasure the turbidity at the Early Warning Station within 15 minutes.

If an elevation of turbidity is observed at a 150-foot Compliance Station and is confirmed to be from construction activity (e.g., it is greater than 10 NTU over the background measurement at any water depth), the turbidity measurement is considered an exceedance. The contractor should wait 30 minutes to collect another measurement. During this time, the contractor should verify construction equipment is working properly, modify operations, and adjust or implement additional BMPs to bring turbidity into compliance. A discretionary sample may be taken to understand the influence of background and activities.

After 30 minutes has passed, the turbidity measurements at the 100-foot Early Warning Station and 150-foot Compliance Station should be collected again. If a second turbidity measurement still exceeds water quality criteria at the 150-foot Compliance Station, the contractor will temporarily stop work, modify operations, and implement additional BMPs, as necessary, to achieve compliance with turbidity standards. Turbidity measurements should be taken every 30 minutes until turbidity is within compliance. Section 6.0 provides corrective actions and notifications to be implemented if there is an exceedance at the point of compliance.

5.0 Equipment, Documentation, and Reporting

5.1 MONITORING EQUIPMENT

Equipment to be used for the turbidity and water quality monitoring will include the following:

- Water quality meter: Troll 9500, YSI 6920 Sonde (or equivalent)
- Depth sounder or lead line
- Field logbook
- Personal protective equipment
- Camera
- Cellular phone and project contact phone numbers

Turbidity levels will be measured with a water quality meter, which will be properly operated, calibrated, and maintained according to the manufacturer's guidelines and recommendations by qualified personnel before each use. All field analyses will be recorded in a logbook and the specific person who calibrated the equipment will be recorded. The following details shall be submitted as part of the Contractor's Environmental Protection Plan:

- Describe equipment to be used for water quality monitoring (if applicable). Include at a minimum: reference to the instrument user manual, how the meter will be obtained/calibrated in the event it is needed, and identify personnel responsible for water quality monitoring.

5.2 POSITIONING METHODOLOGY

All locations will be positioned by the contractor using standard measurement methods. The contractor will ensure that the accuracy of the location control will be +/- 10 feet.

5.3 WATER QUALITY MONITORING METHODOLOGY

For turbidity monitoring during construction activities, the water quality meter will be lowered to the appropriate water depth and be allowed to equilibrate for approximately 30 seconds, and the final turbidity measurement will be recorded on the instrumented water quality monitoring form (Appendix A).

5.4 DOCUMENTATION OF WATER QUALITY MONITORING

The contractor will retain a field logbook and will fill out a daily water quality monitoring form detailing the visual monitoring activities and instrumented form for turbidity measurement results (if applicable). If there are no exceedances, the contractor will submit the water quality monitoring forms to the City and USEPA by noon on the Monday following each week of construction, or sooner. If there are exceedances, reporting should be immediate. The City will

verify the forms are filled out accurately and will submit them to USEPA on the Thursday following each week of construction.

If there is a violation of state water quality standards, or if the project is out of compliance with any of the forthcoming Section 404 Memorandum conditions, the contractor will prepare a short, detailed report that provides the relevant water quality form(s) with a description of the nature of the violation, the water quality monitoring results and location, photographs, a description of the BMPs that were implemented to prevent further violations, and any other pertinent information. The contractor will submit the report to the City within 2 days following a violation of a water quality standard.

6.0 Corrective Actions and Notification Plan

There are two types of corrective actions that could be implemented, depending on the nature of the water quality impact or exceedance: (1) modifications of operations, and (2) cessation of activities. If water quality criteria are exceeded, the appropriate steps will be taken to identify and correct the problem. If corrective actions do not result in an improvement in water quality at the Compliance Station, construction activities may be halted at the direction of USEPA.

6.1 MODIFICATION OF OPERATIONS

If an exceedance of a water quality standard occurs at the Compliance Station during either visual or instrumented monitoring, or during both, field personnel will temporarily stop work and assess the source of the exceedance or impact, and corrective actions will be evaluated. Once the source has been identified, field personnel will implement operation modifications or other supplemental control measures or BMPs to bring the water quality measurements back into compliance with the criteria.

6.2 CESSATION OF ACTIVITIES

Some conditions require a stop-work response. These conditions are as follows:

- Confirmation of a turbidity exceedance at a Compliance Station (although work can continue when water quality criteria are in compliance).
- The first indication of significant oil sheen in the vicinity of construction activity.
- The first indication of distressed or dying fish in the vicinity of the construction activity.

If petroleum sheen, oil, or debris is observed in the water, the contractor will immediately stop work. Corrective actions will be implemented to make repairs to equipment, address the spill, or modify construction activities or BMPs and conduct appropriate notifications with the City Project Manager and USEPA. Work may resume after the corrective actions have been deemed effective, after the turbidity complies with the water quality standard, and as directed by the City or USEPA.

If distressed or dying fish are observed at the construction site, work will stop immediately and the contractor will immediately notify the City Project Manager, who will immediately notify USEPA. The contractor shall collect fish specimens within the first hour of such conditions. Fish samples shall be photographed and held in refrigeration or on ice until the contractor is instructed by the City and USEPA on next steps. If dying fish are observed and collected, the number, species, and size of fish should be documented on the water quality forms and the location of the dying fish, relative to operations, should be noted.

6.3 EXCEEDANCE NOTIFICATION AND REPORTING

If there is a violation of state water quality standards, or if the project is out of compliance with any of the forthcoming Section 404 Memorandum conditions, the contractor will immediately notify the City. The City will notify both the USEPA Remedial Project Manager (RPM) and the USEPA Water Quality Specialist (WQS) as follows:

- USEPA RPM: Carolyn Huynh (206) 553-0454; huynh.carolyn@epa.gov
- USEPA WQS: Sarah Burgess (206) 553-2998; burgess.sarah@epa.gov

The notification should include the following:

1. A description of the nature, extent, and cause of noncompliance.
2. The period of noncompliance, including the date and time of noncompliance, and anticipated time when the activity will return to compliance.
3. The steps taken to minimize, eliminate, and prevent a recurrence of the noncompliance action.

In addition to the email or phone notification, the City shall submit the detailed, contractor-prepared written report to USEPA within 3 days of the noncompliance, and the report will provide a description of the nature of the violation, the sampling results and location, photographs, a description of the BMPs that were or will be implemented to prevent further violations, and any other pertinent information.

In the event of a discharge of oil, fuel, or chemicals, the following agencies will be notified: (1) City of Tacoma, Environmental Compliance Spill Hotline at (253) 502-2222, (2) Washington State Department of Ecology's Northwest Regional Office Environmental Reporting at (206) 594-0000, (3) the Washington Emergency Management Division at (800) 258-5990, and (4) the National Response Center at (800) 424-8802.

Water Quality Monitoring and Protection Plan

Thea Foss and Wheeler-Osgood Waterways

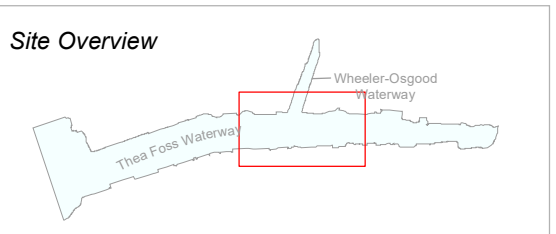
Figure



Legend

- ◆ Point of Disturbance
- Early Warning Station
- Point of Compliance
- Background Location
- 881 ● City of Tacoma Outfall and Designation ⁽¹⁾
- 100-Foot Early Warning Boundary
- 150-Foot Point of Compliance Boundary
- ▣ Outfall 230A Slope Repair Area
- RA-1B Slope Cap Remedial Area and Monitoring Interval Designations with Focused Inspection Areas Shown in Red and General Inspection Areas Shown in Gray
- Monitoring Interval Designation

Notes:
 1. Outfall locations provided by City of Tacoma. Outfall numbers provided by City of Tacoma or Tacoma-Pierce County Health Department Figure E-1 (1995). Construction of Outfall 230A was completed in 2022. Note: Outfalls monitored to date as part of the City of Tacoma's Thea Foss stormwater monitoring program include Outfalls 230, 235, 237A, 237B, 243, 245, and 254. In Water Year WY2024, Outfall 230A is replacing Outfall 230 as the monitoring location under the stormwater monitoring program.
 Base map generated from CAD drawings supplied by Walker and Associates, based on a March 2006 aerial survey.



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 Water Quality Monitoring and Protection Plan**

**Figure 1
 Example Water Quality Monitoring Locations
 when Instrumented Monitoring Triggered**

Water Quality Monitoring and Protection Plan

Thea Foss and Wheeler-Osgood Waterways

Appendix A Daily and Instrumented Water Quality Monitoring Forms

Monitoring Personnel: _____

Date: _____

Construction Activity

During Monitoring: _____

Activity Start Time: _____

Current Field Conditions

Weather: _____

Temperature: _____

Any prior disturbances to water body (e.g., boat wake, presence of potential background turbid conditions)?

(Y/N – Describe): _____

Daily meter calibration performed? (Y/N – Describe): _____

Field Notes (If necessary):

Was the turbidity standard exceeded (no more than 10 NTUs greater than background when background <50 NTU or no more than 20% greater than background when background >50 NTUs)? (Y/N)

If yes to water quality standard exceedances, what corrective action(s) were implemented?

Was USEPA Water Quality Specialist notified of exceedances and action(s)?

Did turbidity return to background after correction action(s)?

Were there any unusual conditions or critical activities that could have affected water quality?

Were any photographs taken as supporting documentation? (Y/N)

Monitoring Station		Background Station	Early Warning Station	Point of Compliance Station	
Location (Distance from point of disturbance)		300 feet minimum upcurrent	100 feet downcurrent	150 feet downcurrent	
Time					
Northing					
Easting					
Tide Status					
Water Quality Monitoring Turbidity Readings (NTUs)	Surface	Initial			
		Confirm			
	Exceedance/Elevation (Yes or No)				
	Middle	Initial			
		Confirm			
	Exceedance/Elevation (Yes or No)				
	Bottom	Initial			
		Confirm			
	Exceedance/Elevation (Yes or No)				
	Evidence of Noncompliance (e.g., debris, petroleum sheen, oil, dying fish) If yes, describe				
If dying fish, was a fish specimen collected and a photo taken?					

Location:	Date:	Time:	
Personnel:	Tide Elevation:		
Construction Activity / Equipment			
Visual Water Quality Monitoring Checklist	N/A	Yes	No
Is work being conducted in the dry?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Was visual water quality monitoring performed during construction or work activity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Was there persistent turbidity observed in the adjacent surface water that warranted deployment of a boom with curtain? If yes, check box to right and add description of action taken below.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Was turbidity observed past 150-foot point of compliance? <u>If yes, check box and fill out Instrumented Water Quality Monitoring Form</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If curtain boom deployed, was area within boom managed to ensure no stranded fish?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were interstitial voids in beach managed to ensure fish could not be stranded on falling tides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were fish or wildlife observed within the work area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did overall surface water quality appear to be acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Containment/Sorbent Boom Checklist			
Type of boom(s) deployed:	<input type="checkbox"/> Debris Containment Curtain	<input type="checkbox"/> Sorbent	
Was the work area fully enclosed by the boom(s)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Describe any observed water quality problems (as applicable; dying fish, sheen, turbidity, etc.):			
Describe additional environmental controls implemented during construction (as applicable):			
Describe any corrective action taken to solve problems described above (as applicable):			

APPENDIX C

**ENVIRONMENTAL DOCUMENTATION OF SUBSTANTIVE
COMPLIANCE**

This will be issued on a later date via addendum

APPENDIX D

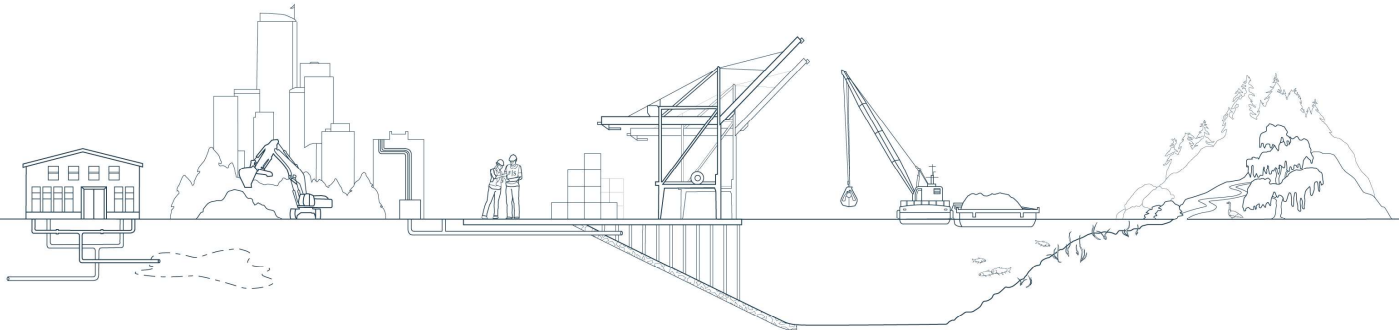
WATER QUALITY MONITORING AND PROTECTION PLAN

Water Quality Monitoring and Protection Plan

Thea Foss and Wheeler-Osgood Waterways

Prepared for
City of Tacoma

April 2024



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LIMITATIONS

This report has been prepared for the exclusive use of the City of Tacoma, their authorized agents, and regulatory agencies. It has been prepared following the described methods and information available at the time of the work. No other party should use this report for any purpose other than that originally intended, unless Floyd|Snider agrees in advance to such reliance in writing. The information contained herein should not be utilized for any purpose or project except the one originally intended. Under no circumstances shall this document be altered, updated, or revised without written authorization of Floyd|Snider.

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List of Abbreviations

Abbreviation	Definition
ARAR	Applicable or Relevant and Appropriate Requirement
BMP	Best management practice
CESCL	Certified erosion and sediment control lead
City	City of Tacoma
CQCP	Construction Quality Control Plan
CWA	Clean Water Act
HTL	High tide line
NTU	Nephelometric turbidity units
RA	Remedial area
RPM	Remedial Project Manager
SPCCP	Spill, Prevention, Control, and Countermeasure Plan
USEPA	U.S. Environmental Protection Agency
WAC	Washington Administrative Code
WQMPP	Water Quality Monitoring and Protection Plan
WQS	Water Quality Specialist

1.0 Introduction

This Water Quality Monitoring and Protection Plan (WQMPP) has been prepared on behalf of the City of Tacoma (City) and identifies monitoring and best management practices (BMPs) associated with the repair of the slope cap off the mouth of City Outfall 230A within the Thea Foss Waterway. The project site is located on the west bank of the Thea Foss Waterway, south of the Murray Morgan Bridge in Tacoma, Washington.

The WQMPP has been prepared to meet the requirements of the U.S. Environmental Protection Agency's (USEPA's) forthcoming Clean Water Act (CWA) 404 Applicable or Relevant and Appropriate Requirements (ARARs) Memorandum and Section 401 of the CWA during construction.

This plan describes water quality protection measures, monitoring parameters, methods, and evaluation criteria, as well as corrective actions and notification procedures to be followed during construction activities. The contractor selected to perform the construction activities will be required to comply with the requirements and procedures specified in this plan, as well as with the contract specifications.

1.1 PROJECT DESCRIPTION

This project includes implementation of slope cap repair work off of the City Outfall 230A apron in remedial area (RA) 8 where erosion was observed during the Year 17 low-tide slope cap inspection (Figure 1). USEPA has identified the slope cap off the outfall apron as requiring repair by the City. In brief, the project includes slope repair activities that will be performed by a general contractor on behalf of the City. These activities include excavation followed by placement of appropriate slope cap repair materials over the exposed slope, including placement of quarry spall filter, geotextile, and heavy loose riprap to prevent erosion of the slope. This will be followed by placement of round river cobbles for habitat enhancement.

This WQMPP will be implemented during the repair activities. All work below the high tide line (HTL) will be conducted during the allowable in-water work window for Commencement Bay from July 15, 2024, to February 15, 2025. Excavation and placement of repair materials is anticipated to occur in an approximately 180-square-foot area just waterward of the outfall apron of Outfall 230A.

1.2 ADAPTIVE MANAGEMENT

This WQMPP details the approach to be followed for monitoring and includes corrective actions and steps to be taken if there are exceedances of water quality standards during the project. However, circumstances may arise during project implementation that require a modification to the methods, procedures, sampling locations, frequencies, and corrective actions presented in this plan.

Any substantive changes to the monitoring approach will be done in coordination with the City and USEPA.

2.0 Water Quality Protection Measures

The following BMPs will be implemented during this slope cap repair. Additional BMPs may be implemented, as necessary, to avoid potential impacts to surface water.

- Repair work will be completed during periods of low tide to the extent possible, to maximize work in the dry and avoid/minimize potential impacts to surface water quality and allow visual monitoring of the in-water work.
- All work below the HTL will be conducted during the allowable in-water work window for Commencement Bay, from July 15, 2024, to February 15, 2025.
- Site access will be from the water. Repair activities will be completed using water-based equipment (e.g., barge and/or boat). As part of the Construction Quality Control Plan (CQCP), the contractor will submit a plan for how and where the barge will be set up to perform the work.
- Materials will be imported to the site using water-based equipment (e.g., barge or boat). Construction equipment and materials will be stored on a barge. When material is not in use, the contractor will place Visqueen or similar product over materials to prevent erosion.
- Excavated cap material and sediments will be segregated from imported materials. Drainage from excavated material will be contained from coming into contact with imported materials. As part of the CQCP, the contractor will submit a plan for how materials will be segregated and how drainage will be managed.
- The contractor will submit a plan as part of the CQCP for how to minimize the slope cap disturbance from barge spuds during construction to protect the integrity of the slope cap and contain the underlying sediments. The plan should include the equipment and BMPs that the contractor will use.
- A debris boom with a minimum 3-foot curtain with suitable weight or anchoring system will be deployed and maintained during the project.
- Any deployed boom and turbidity curtain will be managed to ensure that fish cannot be trapped in or stranded by the boom and curtain on falling tides and that escape for fish is available at the lowest margin of the curtain.
- Visual water quality monitoring by designated and appropriately trained personnel will be conducted in accordance with this WQMPP throughout construction.
- Work areas will be “buttoned up” and left in a completed state or otherwise stabilized with surface and/or perimeter erosion controls after each session of work in the dry, to reduce the potential for turbidity during rising tides.
- An emergency spill containment kit will be located on-site containing an adequate supply of materials (such as a vacuum pump, sorbent booms, diapers, and other absorbent materials) to control and contain deleterious materials in the event of an accidental spill.

- Any fueling conducted on a barge will involve specific fueling BMPs and will have spill containment systems in place.
- All equipment used below the HTL will utilize biodegradable hydraulic fluid.
- The contractor will perform work during a period of no anticipated rainfall or low rainfall to minimize scour and excavated surface during construction, including at the outfall bypass discharge point. The contractor should expect that the outfall will have continuous flow and that it will be necessary to divert outfall flow from the work area. Work during no or low rainfall will help with management of excavated materials and clean construction materials on the barge. As part of the CQCP, the contractor will submit a plan for how the stormwater bypass will be managed.
- Adequate temporary erosion and sediment control materials will be maintained on-site as needed to accommodate unanticipated events in response to weather conditions and/or construction activities.
- Routine inspections of the erosion control measures on the barge and at the shoreline stormwater bypass discharge point will be conducted daily during construction by the contractor certified erosion and sediment control lead (CESCL) to ensure the effectiveness of the measures and to determine the need for maintenance or additional control measures.
- Streambed cobbles, quarry spall filter material, and heavy loose riprap will be cleaned and washed prior to being transported to the site to reduce fines present in the material.
- Construction-related debris will be cleaned up daily. Proper conservation measures (e.g., containment devices) will be used to ensure that debris will not contaminate surface waters.
- Waste materials, including excavated cap material and sediments, construction-related debris, miscellaneous garbage and/or other debris removed from the project site, will be transported off site for disposal in accordance with applicable regulations. The barge storage methods/locations while on-site and when underway must ensure that no materials enter the water or cause water quality degradation.
- Anthropogenic debris within the project footprint will be removed and disposed of off-site, including any treated wood, garbage, etc., within the project limits.
- If dead or distressed fish are observed, the fish will be collected (as described in Section 6.2) and project work will cease, to allow review by the City and USEPA.
- The contractor will be responsible for the preparation of a Spill, Prevention, Control, and Countermeasure Plan (SPCCP) and a CQCP to be used for the duration of the project. These plans will be reviewed and approved by the City and USEPA.
- The contractor will prevent transporting and introducing aquatic invasive species to and from the project area by thoroughly cleaning all equipment, boots, and other gear before and after use at this job site.

3.0 Water Quality Monitoring Objectives, Standards, and Criteria

The objective of water quality monitoring is to demonstrate that construction activities do not result in exceedances of the applicable water quality standards.

Visual water quality monitoring will be performed in work areas during all maintenance and repair work to ensure that construction activities do not negatively impact adjacent surface water quality. Monitoring for turbidity and effectiveness of BMPs will be conducted in all areas of disturbance and areas used for access, including in the barge area, to ensure that turbid drainage from stored or excavated material is not discharging to the waterway and there are no turbid discharges from the stormwater bypass discharge point on the shoreline. Instrumented monitoring using a turbidity meter will only be conducted when triggered (if visible turbidity is seen beyond the 150-foot point of compliance boundary, as described in Section 3.1.2, 4.0, and Section 5.1).

3.1 WATER QUALITY STANDARDS

3.1.1 Turbidity

The water quality monitoring turbidity standards applicable to this project per Washington Administrative Code (WAC) 173-201A-200(1)(e) and water quality criteria include the following:

- Turbidity shall not exceed 10 Nephelometric Turbidity Units (NTU) over the background turbidity when the background turbidity is less than 50 NTU.
- Turbidity shall not exceed a 20% increase when the background turbidity is more than 50 NTU.
- Visible turbidity cannot occur beyond the 150-foot point of compliance boundary from the activity.

3.1.2 Point of Compliance

Per WAC 173-201A-200, for marine waters, the point of compliance for a temporary area of mixing shall be a radius of 150 feet from center point of the placement area or activity (i.e., point of turbidity discharge). If triggered, metered monitoring locations will be selected based on the location of the construction activity and to intercept any visible turbidity plumes originating from the construction operations. Visible turbidity greater than background beyond the 150-foot point of compliance boundary is considered an exceedance of the water quality standard.

If instrumented water quality criteria exceedances occur at the standard point of compliance of 150 feet, despite the implementation of BMPs, then the City can request to USEPA that the point of compliance be extended to 300 or 500 feet, depending on the nature of the turbidity exceedance. An extension to the allowable point of compliance can be requested because the material being placed is clean, and because the preference to conduct as much work in the dry as feasible necessitates work during extreme tides. Any point of compliance extension must be coordinated with the City, USEPA, and the construction team.

4.0 Water Quality Monitoring Plan

The following subsections describe where and when monitoring will occur, and how compliance with the water quality standards will be addressed.

4.1 ROUTINE VISUAL MONITORING—ALL ACTIVITIES

Visual water quality monitoring will be performed by the contractor in all work areas, materials storage areas (including barge/boat), stormwater bypass outlet areas, and areas of disturbance during all maintenance and repair work to ensure that construction activities do not negatively impact adjacent surface water quality. All repair work will be completed during low-tide conditions, but nearly all of the work will be conducted below the water line.

Visual water quality observations and any necessary corrective actions will be documented on the daily water quality monitoring form provided in Appendix A. For consistency, the contractor shall have one designated and appropriately trained individual to conduct the monitoring.

There shall be no release of turbid water or materials from staging/storage work barges/vessels, and thus no turbidity observed beyond the point of compliance.

In the event persistent turbidity is observed emanating from the project area toward the 150-foot point of compliance, additional BMPs will be considered and implemented. For example, the debris boom with minimum 3-foot curtain that will be used throughout the project may be relocated to manage the persistent turbidity.

If turbidity is observed at any time beyond 150 feet from water's edge directly downslope from the point of the placement area or activity, instrumented monitoring will be triggered immediately, as described in Section 4.2.

4.2 INSTRUMENTED MONITORING—IF TRIGGERED

Instrumented monitoring will be conducted if turbidity is observed out to the 150-foot point of compliance boundary during routine visual monitoring during any project activity.

4.2.1 Monitoring Stations

During all instrumented monitoring, monitoring will occur at the station described in this section, measured from the point of placement area or activity (distances are described below). Figure 1 shows the Compliance Station downcurrent from a known construction disturbance (e.g., placement of riprap). The background station is situated upcurrent of the construction activity. The actual positions of the stations will be adjusted in the field using the best professional judgment of the monitoring crew and will be based on any potential exceedance, tidal cycle, observations of the direction of current, or visible turbidity plume (if applicable).

In the field, it may be necessary to take turbidity measurements at more than the stations described below (i.e., discretionary stations) to understand the influence of water crossing the site. For example, it may be apparent that more than one separate turbidity plume is seen extending toward the 150-foot point of compliance. In this case, the contractor would have a compliance station towards both plumes.

1. **Background Station.** There will be a minimum of one Background Station, positioned approximately 300 feet upcurrent of the point of placement area or activity and beyond the influence of construction activities. The Background Station(s) will be in an area with physical characteristics (e.g., water depth, influence of Puyallup River silt plume) similar to those of the main area of construction activity. The Background Station(s) will be monitored first during every instrumented event because the turbidity standard is based on comparison with background levels. If 300 feet upcurrent from the activity is not appropriate, the Background Station can be positioned farther than 300 feet from the activity, beyond the influence of construction activities.
2. **Early Warning Station.** There will be a minimum of one Early Warning Station, and it will be positioned approximately 100 feet downcurrent of the point of placement area or activity. The objective of monitoring at the Early Warning Station(s) at 100 feet is to have an early indication of whether exceedances of the water quality standards may occur at the point of compliance (i.e., 150 feet) if construction activities continue without modification to the BMPs being implemented. It provides an adaptive management process to adjust the construction activities or BMPs prior to a water quality standard exceedance at the point of compliance. Any NTU measurement that initially exceeds the water quality criterion at the Early Warning Station(s) will be referred to as an “elevation.” If an elevation is confirmed, monitoring will occur at the 150-foot point of compliance and BMPs should be adjusted to avoid an actual exceedance at the point of compliance, as described below.
3. **Compliance Station.** There will be a minimum of one monitoring station at this distance, along the 150-foot point of compliance boundary downcurrent from the location of placement area or activity, targeting any observable turbidity plume. The objective of monitoring at the Compliance Station(s) is to take turbidity measurements and, if there are exceedances, implement additional BMPs or corrective actions to achieve compliance with water quality standards.

4.2.2 Monitoring Depths

Monitoring will be conducted at the following three depths in the water column at each station. It is important to monitor water quality at each of these depths.

1. Surface—Within 3 feet (approximately 1 meter) of the water surface
2. Middle—At mid-depth in the water column
3. Bottom—Within 3 feet (approximately 1 meter) of the mudline

Sample measurements from each of the three depths will be compared to each of the three corresponding depths at the Background Station. Depths and direction should be adjusted to target a turbidity plume, if present. If the water depth is less than 10 feet, monitoring will be conducted at two depths within the water column (i.e., within 1.5 feet of the surface and at approximately one-half of the total water depth).

4.2.3 Turbidity Compliance

Turbidity measurements from the Early Warning Station and Compliance Station will be compared to the Background Station. Measurements will be taken at the Background Station first, prior to the Early Warning Station and Compliance Station(s). Turbidity measurements from each of the three depths at these stations will be compared to each of the three corresponding depths at the Background Station.

If an elevation of turbidity at the Early Warning Station is confirmed to be from construction (i.e., it is greater than the background measurement), monitoring should occur at the 150-foot Compliance Station. Simultaneous to monitoring at the 150-foot point of compliance, the contractor should modify operations and adjust or implement additional BMPs (e.g., deploy or adjust the turbidity curtain, check the shoreline for any areas where the work areas were not sufficiently “buttoned up” and secure them) and then remeasure the turbidity at the Early Warning Station within 15 minutes.

If an elevation of turbidity is observed at a 150-foot Compliance Station and is confirmed to be from construction activity (e.g., it is greater than 10 NTU over the background measurement at any water depth), the turbidity measurement is considered an exceedance. The contractor should wait 30 minutes to collect another measurement. During this time, the contractor should verify construction equipment is working properly, modify operations, and adjust or implement additional BMPs to bring turbidity into compliance. A discretionary sample may be taken to understand the influence of background and activities.

After 30 minutes has passed, the turbidity measurements at the 100-foot Early Warning Station and 150-foot Compliance Station should be collected again. If a second turbidity measurement still exceeds water quality criteria at the 150-foot Compliance Station, the contractor will temporarily stop work, modify operations, and implement additional BMPs, as necessary, to achieve compliance with turbidity standards. Turbidity measurements should be taken every 30 minutes until turbidity is within compliance. Section 6.0 provides corrective actions and notifications to be implemented if there is an exceedance at the point of compliance.

5.0 Equipment, Documentation, and Reporting

5.1 MONITORING EQUIPMENT

Equipment to be used for the turbidity and water quality monitoring will include the following:

- Water quality meter: Troll 9500, YSI 6920 Sonde (or equivalent)
- Depth sounder or lead line
- Field logbook
- Personal protective equipment
- Camera
- Cellular phone and project contact phone numbers

Turbidity levels will be measured with a water quality meter, which will be properly operated, calibrated, and maintained according to the manufacturer's guidelines and recommendations by qualified personnel before each use. All field analyses will be recorded in a logbook and the specific person who calibrated the equipment will be recorded. The following details shall be submitted as part of the Contractor's Environmental Protection Plan:

- Describe equipment to be used for water quality monitoring (if applicable). Include at a minimum: reference to the instrument user manual, how the meter will be obtained/calibrated in the event it is needed, and identify personnel responsible for water quality monitoring.

5.2 POSITIONING METHODOLOGY

All locations will be positioned by the contractor using standard measurement methods. The contractor will ensure that the accuracy of the location control will be +/- 10 feet.

5.3 WATER QUALITY MONITORING METHODOLOGY

For turbidity monitoring during construction activities, the water quality meter will be lowered to the appropriate water depth and be allowed to equilibrate for approximately 30 seconds, and the final turbidity measurement will be recorded on the instrumented water quality monitoring form (Appendix A).

5.4 DOCUMENTATION OF WATER QUALITY MONITORING

The contractor will retain a field logbook and will fill out a daily water quality monitoring form detailing the visual monitoring activities and instrumented form for turbidity measurement results (if applicable). If there are no exceedances, the contractor will submit the water quality monitoring forms to the City and USEPA by noon on the Monday following each week of construction, or sooner. If there are exceedances, reporting should be immediate. The City will

verify the forms are filled out accurately and will submit them to USEPA on the Thursday following each week of construction.

If there is a violation of state water quality standards, or if the project is out of compliance with any of the forthcoming Section 404 Memorandum conditions, the contractor will prepare a short, detailed report that provides the relevant water quality form(s) with a description of the nature of the violation, the water quality monitoring results and location, photographs, a description of the BMPs that were implemented to prevent further violations, and any other pertinent information. The contractor will submit the report to the City within 2 days following a violation of a water quality standard.

6.0 Corrective Actions and Notification Plan

There are two types of corrective actions that could be implemented, depending on the nature of the water quality impact or exceedance: (1) modifications of operations, and (2) cessation of activities. If water quality criteria are exceeded, the appropriate steps will be taken to identify and correct the problem. If corrective actions do not result in an improvement in water quality at the Compliance Station, construction activities may be halted at the direction of USEPA.

6.1 MODIFICATION OF OPERATIONS

If an exceedance of a water quality standard occurs at the Compliance Station during either visual or instrumented monitoring, or during both, field personnel will temporarily stop work and assess the source of the exceedance or impact, and corrective actions will be evaluated. Once the source has been identified, field personnel will implement operation modifications or other supplemental control measures or BMPs to bring the water quality measurements back into compliance with the criteria.

6.2 CESSATION OF ACTIVITIES

Some conditions require a stop-work response. These conditions are as follows:

- Confirmation of a turbidity exceedance at a Compliance Station (although work can continue when water quality criteria are in compliance).
- The first indication of significant oil sheen in the vicinity of construction activity.
- The first indication of distressed or dying fish in the vicinity of the construction activity.

If petroleum sheen, oil, or debris is observed in the water, the contractor will immediately stop work. Corrective actions will be implemented to make repairs to equipment, address the spill, or modify construction activities or BMPs and conduct appropriate notifications with the City Project Manager and USEPA. Work may resume after the corrective actions have been deemed effective, after the turbidity complies with the water quality standard, and as directed by the City or USEPA.

If distressed or dying fish are observed at the construction site, work will stop immediately and the contractor will immediately notify the City Project Manager, who will immediately notify USEPA. The contractor shall collect fish specimens within the first hour of such conditions. Fish samples shall be photographed and held in refrigeration or on ice until the contractor is instructed by the City and USEPA on next steps. If dying fish are observed and collected, the number, species, and size of fish should be documented on the water quality forms and the location of the dying fish, relative to operations, should be noted.

6.3 EXCEEDANCE NOTIFICATION AND REPORTING

If there is a violation of state water quality standards, or if the project is out of compliance with any of the forthcoming Section 404 Memorandum conditions, the contractor will immediately notify the City. The City will notify both the USEPA Remedial Project Manager (RPM) and the USEPA Water Quality Specialist (WQS) as follows:

- USEPA RPM: Carolyn Huynh (206) 553-0454; huynh.carolyn@epa.gov
- USEPA WQS: Sarah Burgess (206) 553-2998; burgess.sarah@epa.gov

The notification should include the following:

1. A description of the nature, extent, and cause of noncompliance.
2. The period of noncompliance, including the date and time of noncompliance, and anticipated time when the activity will return to compliance.
3. The steps taken to minimize, eliminate, and prevent a recurrence of the noncompliance action.

In addition to the email or phone notification, the City shall submit the detailed, contractor-prepared written report to USEPA within 3 days of the noncompliance, and the report will provide a description of the nature of the violation, the sampling results and location, photographs, a description of the BMPs that were or will be implemented to prevent further violations, and any other pertinent information.

In the event of a discharge of oil, fuel, or chemicals, the following agencies will be notified: (1) City of Tacoma, Environmental Compliance Spill Hotline at (253) 502-2222, (2) Washington State Department of Ecology's Northwest Regional Office Environmental Reporting at (206) 594-0000, (3) the Washington Emergency Management Division at (800) 258-5990, and (4) the National Response Center at (800) 424-8802.

Water Quality Monitoring and Protection Plan

Thea Foss and Wheeler-Osgood Waterways

Figure



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**Thea Foss and Wheeler-Osgood Waterways
 Water Quality Monitoring and Protection Plan**

**Figure 1
 Example Water Quality Monitoring Locations
 when Instrumented Monitoring Triggered**

Water Quality Monitoring and Protection Plan

Thea Foss and Wheeler-Osgood Waterways

Appendix A Daily and Instrumented Water Quality Monitoring Forms

Monitoring Personnel: _____

Date: _____

Construction Activity

During Monitoring: _____

Activity Start Time: _____

Current Field Conditions

Weather: _____

Temperature: _____

Any prior disturbances to water body (e.g., boat wake, presence of potential background turbid conditions)?

(Y/N – Describe): _____

Daily meter calibration performed? (Y/N – Describe): _____

Field Notes (If necessary):

Was the turbidity standard exceeded (no more than 10 NTUs greater than background when background <50 NTU or no more than 20% greater than background when background >50 NTUs)? (Y/N)

If yes to water quality standard exceedances, what corrective action(s) were implemented?

Was USEPA Water Quality Specialist notified of exceedances and action(s)?

Did turbidity return to background after correction action(s)?

Were there any unusual conditions or critical activities that could have affected water quality?

Were any photographs taken as supporting documentation? (Y/N)

Monitoring Station		Background Station	Early Warning Station	Point of Compliance Station	
Location (Distance from point of disturbance)		300 feet minimum upcurrent	100 feet downcurrent	150 feet downcurrent	
Time					
Northing					
Easting					
Tide Status					
Water Quality Monitoring Turbidity Readings (NTUs)	Surface	Initial			
		Confirm			
	Exceedance/Elevation (Yes or No)				
	Middle	Initial			
		Confirm			
	Exceedance/Elevation (Yes or No)				
	Bottom	Initial			
		Confirm			
	Exceedance/Elevation (Yes or No)				
	Evidence of Noncompliance (e.g., debris, petroleum sheen, oil, dying fish) If yes, describe				
If dying fish, was a fish specimen collected and a photo taken?					

Location:	Date:	Time:	
Personnel:	Tide Elevation:		
Construction Activity / Equipment			
Visual Water Quality Monitoring Checklist	N/A	Yes	No
Is work being conducted in the dry?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Was visual water quality monitoring performed during construction or work activity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Was there persistent turbidity observed in the adjacent surface water that warranted deployment of a boom with curtain? If yes, check box to right and add description of action taken below.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Was turbidity observed past 150-foot point of compliance? <u>If yes, check box and fill out Instrumented Water Quality Monitoring Form</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If curtain boom deployed, was area within boom managed to ensure no stranded fish?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were interstitial voids in beach managed to ensure fish could not be stranded on falling tides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were fish or wildlife observed within the work area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did overall surface water quality appear to be acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Containment/Sorbent Boom Checklist			
Type of boom(s) deployed:	<input type="checkbox"/> Debris Containment Curtain	<input type="checkbox"/> Sorbent	
Was the work area fully enclosed by the boom(s)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Describe any observed water quality problems (as applicable; dying fish, sheen, turbidity, etc.):			
Describe additional environmental controls implemented during construction (as applicable):			
Describe any corrective action taken to solve problems described above (as applicable):			

APPENDIX E
2024 SAMPLING RESULTS

Table 1
Shallow (0–6 inches) Sediment Sampling Results in the Vicinity of Outfall 230A

			2024 Waste Characterization	
Sample ID			WC-1 ⁽¹⁾	WC-2 ⁽²⁾
Sample Date			4/10/24	4/10/24
Parameter	Units	SQO		
Conventionals				
Total Solids	%	NC	69.1	62.8
Metals				
Antimony	mg/kg	150	1.55	2.55
Arsenic	mg/kg	57	4.56	6.15
Barium	mg/kg	NC	46.1	31.5
Cadmium	mg/kg	5.1	0.358	0.556
Chromium	mg/kg	NC	34.2	35.1
Copper	mg/kg	390	70.8 J	56.5 J
Lead	mg/kg	450	36.6	119
Mercury	mg/kg	0.59	0.0293	0.0633
Nickel	mg/kg	140	27.6	17.4
Selenium	mg/kg	NC	0.0983 U	0.990 U
Silver	mg/kg	6.1	0.492 U	0.495 U
Zinc	mg/kg	410	245 J	430 J
Semivolatile Organic Compounds				
<i>Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs)</i>				
2-Methylnaphthalene	µg/kg	670	670 U	670 U
Acenaphthene	µg/kg	500	63.0 J	1,300 U
Acenaphthylene	µg/kg	1,300	500 U	500 U
Anthracene	µg/kg	960	68.0 J	960 U
Fluorene	µg/kg	540	74.0 J	540 U
Naphthalene	µg/kg	2,100	68.0 J	2,100 U
Phenanthrene	µg/kg	1,500	618 J	1,500 U
Total LPAH	µg/kg	5,200	891 J	2,100 U
<i>High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)</i>				
Benzo(a)anthracene	µg/kg	1,600	228 J	1,600 U
Benzo(a)pyrene	µg/kg	1,600	1,600 U	1,600 U
Benzofluoranthenes (total)	µg/kg	3,600	3,600 U	3,600 U
Benzo(g,h,i)perylene	µg/kg	720	720 U	720 U
Chrysene	µg/kg	2,800	371 J	2,800 U
Dibenzo(a,h)anthracene	µg/kg	230	559 U	620 U
Fluoranthene	µg/kg	2,500	667 J	2,500 U
Indeno(1,2,3-cd)pyrene	µg/kg	690	690 U	690 U
Pyrene	µg/kg	3,300	615 J	77.0 J
Total HPAH	µg/kg	17,000	1,880 J	77.0 J
<i>Other</i>				
Dimethyl phthalate	µg/kg	160	9,280	160 U
Diethylphthalate	µg/kg	200	46.0 J	200 U
Di-n-butyl phthalate	µg/kg	1,400	1,400 U	1,400 U
Butyl benzyl phthalate	µg/kg	900	900 U	136 J
bis(2-ethylhexyl)phthalate	µg/kg	1,300	1,820	597 J
Di-n-octyl phthalate	µg/kg	6,200	6,200 U	6,200 U
Phenol	µg/kg	420	420 U	420 U
2-Methylphenol	µg/kg	63	112 U	124 U
3 & 4-Methylphenol	µg/kg	670	670 U	670 U
2,4-Dimethylphenol	µg/kg	29	112 U	124 U
Pentachlorophenol	µg/kg	360	559 U	620 U

Table 1
Shallow (0–6 inches) Sediment Sampling Results in the Vicinity of Outfall 230A

			2024 Waste Characterization	
Sample ID			WC-1 ⁽¹⁾	WC-2 ⁽²⁾
Sample Date			4/10/24	4/10/24
Parameter	Units	SQO		
Semivolatile Organic Compounds (cont.)				
<i>Other (cont.)</i>				
Benzyl alcohol	µg/kg	73	112 U	124 U
Benzoic acid	µg/kg	650	944 J	481 J
1,2-Dichlorobenzene	µg/kg	50	112 U	124 U
1,3-Dichlorobenzene	µg/kg	170	170 U	170 U
1,4-Dichlorobenzene	µg/kg	110	112 U	124 U
1,2,4-Trichlorobenzene	µg/kg	51	112 U	124 U
Hexachlorobenzene	µg/kg	22	112 U	124 U
Dibenzofuran	µg/kg	540	68.0 J	540 U
Hexachlorobutadiene	µg/kg	11	112 U	124 U
N-Nitrosodiphenylamine	µg/kg	28	112 U	124 U
Pesticides				
p,p'-DDD	µg/kg	16	16 U	16 U
p,p'-DDE	µg/kg	9.0	9.0 U	9.0 U
p,p'-DDT	µg/kg	34	34 U	34 U
Polychlorinated Biphenyls (PCBs)				
PCB-1016	µg/kg	NC	15.6 U	2.80 U
PCB-1221	µg/kg	NC	15.6 U	2.80 U
PCB-1232	µg/kg	NC	15.6 U	2.80 U
PCB-1242	µg/kg	NC	15.6 U	2.80 U
PCB-1248	µg/kg	NC	15.6 U	2.80 U
PCB-1254	µg/kg	NC	15.6 U	2.80 U
PCB-1260	µg/kg	NC	15.6 U	2.80 U
PCBs (total)	µg/kg	300	15.6 U	2.80 U
Total Petroleum Hydrocarbons (TPHs)				
Diesel-range organics	mg/kg	NC	7.20 U	8.00 U
Oil-range organics	mg/kg	NC	422	500

Notes:

- 1 A sample ID of WC-1 has been assigned to the laboratory-designated sample ID "Sediment".
 - 2 A sample ID of WC-2 has been assigned to the laboratory-designated sample ID "Cap Material".
- Detected concentrations highlighted in **red** exceed the SQO.
 Non detect concentrations in *italics* exceed the SQO.
- NC No SQO criterion
 ND Not detected

Abbreviations:

DDD Dichlorodiphenyldichloroethane	µg/kg Micrograms per kilogram
DDE Dichlorodiphenyldichlorethylene	mg/kg Milligrams per kilogram
DDT Dichlorodiphenyltrichloroethane	SQO Sediment Quality Objective

Qualifiers:

- J The analyte was analyzed for and positively identified, but the associated numerical value is an estimate.
- U Undetected at the given reporting limit.



06 May 2024

Jody Bratton
ES Science and Engineering
326 East D Street
Tacoma, WA 98421

Subject: OF 230A Repair

Enclosed are the analytical results for samples collected 04/10/2024.

Quality Control Data are included with the sample results for your review.

If you have any questions concerning this report, call me at (253)502-2130. Please note that remaining samples associated with this report will be discarded **3 months** from the date of this report unless we are notified otherwise.

Sincerely, DocuSigned by:
Stuart Magoon
F41AFFAA30F64EB...

Stuart Magoon
Assistant Division Manager
Environmental Services Laboratory

cc. Laura Nokes

ES Science and Engineering326 East D Street
Tacoma WA, 98421Project: **OF 230A Repair**Project Number: ENV-03027-21-01
Project Manager: Jody Bratton**Reported:**
06-May-24 09:45**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled
Sediment	2403039-01	Soil	Grab	10-Apr-24 13:00
Cap Material	2403039-02	Soil	Grab	10-Apr-24 13:02

CHAIN OF CUSTODY, SAMPLE RECEIPT, PRESERVATION AND STORAGE

The samples were received under appropriate Chain of Custody procedures.

Sample containers were properly preserved and stored in accordance with the applicable method requirements.

HOLDING TIMES

All analyses were performed within the required holding times.

METHODS

The samples were analyzed by the following methods:

Standard Methods 2540G for Total Solids
EPA Method 6020B for Total Metals
EPA Method 7471B for Total Mercury
EPA Method 8270E for Semi-Volatile Organic compounds
EPA Method 8270E SIM for Pesticides and Polychlorinated Biphenyls as Aroclors (PCBs)
Washington State Department of Ecology NWTPH-Dx, 1997 for Diesel and Heavy Oil

PROJECT REPORTING LIMITS

All analytes are reported to the Method Detection Limit (MDL). Values below the Practical Quantitation Limit (PQL) are qualified as estimates (J) and may not be as accurate as values reported greater than the PQL (the low standard or 3 - 5 times the MDL). The 119 mg/Kg result of Lead in sample 2403039-02RE1 "Cap Material" is greater than 20 times the US EPA allowable limit and meets the Tacoma Pierce County Health Department (TPCHD) trigger for Toxic Characteristic Leaching Procedure (TCLP) analysis for Waste Disposal Authorization (WDA).

BLANKS

Blanks were analyzed at the required frequencies of the methods. Analytes were not detected in the blanks, or sample concentrations were greater than 10 times the blank values, or the analytes detected in the blanks were not detected in associated samples.

SURROGATES

Surrogate Standards were added to the samples for Semi-Volatile Organics analyses to monitor system performance. Surrogate recoveries were within the laboratory control limits.

LABORATORY CONTROL SAMPLES

Laboratory Control Samples (LCS) and/or Reference Samples (SRM) were analyzed with these samples for all parameters to evaluate method accuracy. Target analyte recoveries were within laboratory control limits, except for Benzoic Acid, which fell below the lower limit. Benzoic Acid is a known poor performer, the results for Benzoic Acid are reported as estimated (UJ).

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE ANALYSIS

Matrix Spike and/or Matrix Spike Duplicate (MS/MSD) analysis was performed with these samples. The recoveries were within the project control limits, with the exception of Copper and Zinc which fell below the 75% lower limit. The affected source sample (2403039-01RE1) results are reported as estimated (J).

DUPLICATE SAMPLE ANALYSIS

Batch duplicate analyses were performed with these samples to measure method precision. The Relative Percent Differences (RPD) were within the project limits for analytes with concentrations greater than 5 times the reporting limit with the exception of Antimony, Chromium, and Copper, which exceeded the 20% laboratory RPD limit. The affected source sample (2403039-01RE1) results are reported as estimated (J).

INTERNAL STANDARDS

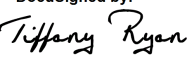
Internal Standards were added to the samples for total metals analyses to monitor instrument performance related to calibration drift of matrix interference in the analysis by ICP-MS. The Internal Standards met the method criteria.

Internal Standards were added to the samples for 8270E Semi-Volatile Organics analyses for quantitation purposes. The area counts of these standards must not vary more than a factor of two from the mid-point standard of the calibration curve according to the method and the retention times must not vary by more than 30 seconds. The internal standard criteria were met with the exception of Perylene-d12 in the undiluted analyses of samples 2403039-01RE2 and 2403039-02RE2. These samples were re-analyzed at a 5x dilution with acceptable Perylene-d12 recoveries, indicating matrix affected this last eluting internal standard. The results for all affected analytes are reported from the dilutions without qualification .

DATA AVAILABILITY

All data associated with the samples contained in this report are archived at the Environmental Services Laboratory and are available upon request.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and project QAPP.

DocuSigned by:

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Reviewed By

ES Science and Engineering

326 East D Street
Tacoma WA, 98421

Project: **OF 230A Repair**

Project Number: ENV-03027-21-01
Project Manager: Jody Bratton

Reported:
06-May-24 09:45

Environmental Services Laboratory

Sediment
2403039-01 (Soil)
10-Apr-24 13:00

Analyte	Result	Project Reporting Goal	PQL	SQO	Units
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Conventional

SM 2540 G-2011	Prepared: 11-Apr-24	Analyzed: 11-Apr-24			
Total Solids		69.1	1.0		%

Metals

EPA 7471B_(1/98)	Prepared: 16-Apr-24	Analyzed: 16-Apr-24			
Mercury		0.0293	0.2	0.0145	0.2 mg/Kg dry

Semi-VOA

WDOE NWTPH-Dx_(1997)	Prepared: 15-Apr-24	Analyzed: 24-Apr-24			
NWTPH-Diesel		7.2 U		7.2	mg/Kg dry
NWTPH-Heavy Oil		422		14.5	mg/Kg dry
<i>Surrogate: 2-Fluorobiphenyl</i>			53.0 %	50-150	
<i>Surrogate: Pentacosane</i>			84.4 %	50-150	
<i>Surrogate: Terphenyl-d14</i>			73.9 %	50-150	

GC/MS-Pesticides

EPA 8270E_6_(6/18) SIM OCP	Prepared: 18-Apr-24	Analyzed: 26-Apr-24			
4,4-DDD		16 U	8	16	16 ug/Kg dry
4,4-DDE		9.0 U	4.5	9.0	9 ug/Kg dry
4,4-DDT		34 U	17	34	34 ug/Kg dry
<i>Surrogate: Decachlorobiphenyl</i>			60.2 %	30-150	
<i>Surrogate: Tetrachloro-meta-xylene</i>			59.0 %	30-150	

Sediment
2403039-01RE1 (Soil)
10-Apr-24 13:00

Analyte	Result	Project Reporting Goal	PQL	SQO	Units
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Metals

EPA 6020B_(7/14)

Prepared: 15-Apr-24

Analyzed: 16-Apr-24

Antimony	1.55	J	75	0.983		mg/Kg dry
Arsenic	4.56		0.05	0.246	5	mg/Kg dry
Barium	46.1		100	4.92		mg/Kg dry
Cadmium	0.358		1	0.246	1	mg/Kg dry
Chromium	34.2	J	5	4.92	5	mg/Kg dry
Copper	70.8	J	200	2.46	390	mg/Kg dry
Lead	36.6		5	0.246	5	mg/Kg dry
Nickel	27.6		70	2.46	140	mg/Kg dry
Selenium	0.983	U	1	0.983	1	mg/Kg dry
Silver	0.492	U	3	0.492	5	mg/Kg dry
Zinc	245	J	210	9.83	410	mg/Kg dry

Semi-VOA

EPA 8270E_6_(6/18) SIM PCB

Prepared: 15-Apr-24

Analyzed: 22-Apr-24

Aroclor-1016	15.6	U	45	15.6		ug/Kg dry
Aroclor-1221	15.6	U	45	15.6		ug/Kg dry
Aroclor-1232	15.6	U	45	15.6		ug/Kg dry
Aroclor-1242	15.6	U	45	15.6		ug/Kg dry
Aroclor-1248	15.6	U	45	15.6		ug/Kg dry
Aroclor-1254	15.6	U	45	15.6		ug/Kg dry
Aroclor-1260	15.6	U	45	15.6		ug/Kg dry
Surrogate: Decachlorobiphenyl			88.5 %	28-144		
Surrogate: Tetrachloro-meta-xylene			65.5 %	31-120		

Sediment
2403039-01RE2 (Soil)
10-Apr-24 13:00

Analyte	Result	Project Reporting Goal	PQL	SQO	Units
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Semi-VOA

EPA 8270E_6_(6/18)

Prepared: 17-Apr-24

Analyzed: 30-Apr-24

1,2,4-Trichlorobenzene	112 U	25	112	51	ug/Kg dry
1,2-Dichlorobenzene	112 U	25	112	50	ug/Kg dry
1,3-Dichlorobenzene	170 U	85	170	170	ug/Kg dry
1,4-Dichlorobenzene	112 U	55	112	110	ug/Kg dry
2,4-Dimethylphenol	112 U	15	112	29	ug/Kg dry
2-Methylnaphthalene	670 U	340	670	670	ug/Kg dry
2-Methylphenol	112 U	32	112	63	ug/Kg dry
3 & 4-Methylphenol	670 U	340	670	670	ug/Kg dry
Acenaphthene	63 J	650	1300	1300	ug/Kg dry
Acenaphthylene	500 U	250	500	500	ug/Kg dry
Anthracene	68 J	480	960	960	ug/Kg dry
Benzo(a)anthracene	228 J	800	1600	1600	ug/Kg dry
Benzoic Acid	944 J	330	650	650	ug/Kg dry
Benzyl Alcohol	112 U	37	112	73	ug/Kg dry
Bis(2-ethylhexyl) phthalate	1820	47	1300	1300	ug/Kg dry
Butyl benzyl phthalate	900 U	450	900	900	ug/Kg dry
Chrysene	371 J	1400	2800	2800	ug/Kg dry
Dibenzofuran	68 J	270	540	540	ug/Kg dry
Diethyl phthalate	46 J	100	200	200	ug/Kg dry
Di-n-butyl phthalate	1400 U	700	1400	1400	ug/Kg dry
Fluoranthene	667 J	1300	2500	2500	ug/Kg dry
Fluorene	74 J	270	540	540	ug/Kg dry
Hexachlorobenzene	112 U	11	112	22	ug/Kg dry
Hexachlorobutadiene	112 U	5	112	11	ug/Kg dry
Naphthalene	68 J	1100	2100	2100	ug/Kg dry
N-Nitrosodiphenylamine	112 U	14	112	28	ug/Kg dry
Pentachlorophenol	559 U	180	559	360	ug/Kg dry
Phenanthrene	618 J	750	1500	1500	ug/Kg dry
Phenol	420 U	210	420	420	ug/Kg dry
Pyrene	615 J	1700	3300	3300	ug/Kg dry

Surrogate: 2,4,6-Tribromophenol

45.1 % 32-120

Surrogate: 2-Fluorobiphenyl

72.7 % 25-120

Surrogate: Terphenyl-d14

92.0 % 58-122

ES Science and Engineering326 East D Street
Tacoma WA, 98421Project: **OF 230A Repair**Project Number: ENV-03027-21-01
Project Manager: Jody Bratton**Reported:**
06-May-24 09:45**Sediment**
2403039-01RE3 (Soil)
10-Apr-24 13:00

Analyte	Result	Project Reporting Goal	PQL	SQO	Units
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Semi-VOA

EPA 8270E_6_(6/18)

Prepared: 17-Apr-24

Analyzed: 30-Apr-24

Benzo(a)pyrene	1600	U	800	1600	1600	ug/Kg dry
Benzo(b,k)fluoranthene	3600	U	1800	3600	3600	ug/Kg dry
Benzo(g,h,i)perylene	720	U	360	720	720	ug/Kg dry
Dibenz(a,h)anthracene	559	U	120	559	230	ug/Kg dry
Dimethyl phthalate	9280		80	559	160	ug/Kg dry
Di-n-octyl phthalate	6200	U	3100	6200	6200	ug/Kg dry
Indeno(1,2,3-cd)pyrene	690	U	350	690	690	ug/Kg dry
<i>Surrogate: 2,4,6-Tribromophenol</i>			<i>51.6 %</i>	<i>32-120</i>		
<i>Surrogate: 2-Fluorobiphenyl</i>			<i>74.0 %</i>	<i>25-120</i>		
<i>Surrogate: Terphenyl-d14</i>			<i>94.9 %</i>	<i>58-122</i>		

Cap Material
2403039-02 (Soil)
10-Apr-24 13:02

Analyte	Result	Project Reporting Goal	PQL	SQO	Units
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Conventional

SM 2540 G-2011	Prepared: 11-Apr-24	Analyzed: 11-Apr-24			
Total Solids		62.8		1.0	%

Metals

EPA 7471B_(1/98)	Prepared: 16-Apr-24	Analyzed: 16-Apr-24			
Mercury		0.0633	0.2	0.0208	0.2 mg/Kg dry

Semi-VOA

EPA 8270E_6_(6/18) SIM PCB	Prepared: 15-Apr-24	Analyzed: 22-Apr-24			
Aroclor-1016		2.80 U	45	2.80	ug/Kg dry
Aroclor-1221		2.80 U	45	2.80	ug/Kg dry
Aroclor-1232		2.80 U	45	2.80	ug/Kg dry
Aroclor-1242		2.80 U	45	2.80	ug/Kg dry
Aroclor-1248		2.80 U	45	2.80	ug/Kg dry
Aroclor-1254		2.80 U	45	2.80	ug/Kg dry
Aroclor-1260		2.80 U	45	2.80	ug/Kg dry
Surrogate: Decachlorobiphenyl			72.2 %	28-144	
Surrogate: Tetrachloro-meta-xylene			66.7 %	31-120	

WDOE NWTPH-Dx_(1997)	Prepared: 15-Apr-24	Analyzed: 24-Apr-24			
NWTPH-Diesel		8.0 U		8.0	mg/Kg dry
NWTPH-Heavy Oil		500		15.9	mg/Kg dry
Surrogate: 2-Fluorobiphenyl			68.4 %	50-150	
Surrogate: Pentacosane			126 %	50-150	
Surrogate: Terphenyl-d14			104 %	50-150	

GC/MS-Pesticides

EPA 8270E_6_(6/18) SIM OCP	Prepared: 18-Apr-24	Analyzed: 26-Apr-24			
4,4-DDD		16 U	8	16	16 ug/Kg dry
4,4-DDE		9.0 U	4.5	9.0	9 ug/Kg dry
4,4-DDT		34 U	17	34	34 ug/Kg dry
Surrogate: Decachlorobiphenyl			48.1 %	30-150	
Surrogate: Tetrachloro-meta-xylene			52.5 %	30-150	

Cap Material
2403039-02RE1 (Soil)
10-Apr-24 13:02

Analyte	Result	Project Reporting Goal	PQL	SQO	Units
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Metals

EPA 6020B_(7/14)

Prepared: 15-Apr-24

Analyzed: 16-Apr-24

Antimony	2.55		75	0.990		mg/Kg dry
Arsenic	6.15		0.05	0.247	5	mg/Kg dry
Barium	31.5		100	4.95		mg/Kg dry
Cadmium	0.556		1	0.247	1	mg/Kg dry
Chromium	35.1		5	4.95	5	mg/Kg dry
Copper	56.5		200	2.47	390	mg/Kg dry
Lead	119		5	0.247	5	mg/Kg dry
Nickel	17.4		70	2.47	140	mg/Kg dry
Selenium	0.990	U	1	0.990	1	mg/Kg dry
Silver	0.495	U	3	0.495	5	mg/Kg dry
Zinc	430		210	9.90	410	mg/Kg dry

Cap Material
2403039-02RE2 (Soil)
10-Apr-24 13:02

Analyte	Result	Project Reporting Goal	PQL	SQO	Units
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Semi-VOA

EPA 8270E_6_(6/18)

Prepared: 17-Apr-24

Analyzed: 30-Apr-24

1,2,4-Trichlorobenzene	124 U	25	124	51	ug/Kg dry
1,2-Dichlorobenzene	124 U	25	124	50	ug/Kg dry
1,3-Dichlorobenzene	170 U	85	170	170	ug/Kg dry
1,4-Dichlorobenzene	124 U	55	124	110	ug/Kg dry
2,4-Dimethylphenol	124 U	15	124	29	ug/Kg dry
2-Methylnaphthalene	670 U	340	670	670	ug/Kg dry
2-Methylphenol	124 U	32	124	63	ug/Kg dry
3 & 4-Methylphenol	670 U	340	670	670	ug/Kg dry
Acenaphthene	1300 U	650	1300	1300	ug/Kg dry
Acenaphthylene	500 U	250	500	500	ug/Kg dry
Anthracene	960 U	480	960	960	ug/Kg dry
Benzo(a)anthracene	1600 U	800	1600	1600	ug/Kg dry
Benzoic Acid	481 J	330	650	650	ug/Kg dry
Benzyl Alcohol	124 U	37	124	73	ug/Kg dry
Bis(2-ethylhexyl) phthalate	597 J	47	1300	1300	ug/Kg dry
Butyl benzyl phthalate	136 J	450	900	900	ug/Kg dry
Chrysene	2800 U	1400	2800	2800	ug/Kg dry
Dibenzofuran	540 U	270	540	540	ug/Kg dry
Diethyl phthalate	200 U	100	200	200	ug/Kg dry
Dimethyl phthalate	160 U	80	160	160	ug/Kg dry
Di-n-butyl phthalate	1400 U	700	1400	1400	ug/Kg dry
Fluoranthene	2500 U	1300	2500	2500	ug/Kg dry
Fluorene	540 U	270	540	540	ug/Kg dry
Hexachlorobenzene	124 U	11	124	22	ug/Kg dry
Hexachlorobutadiene	124 U	5	124	11	ug/Kg dry
Naphthalene	2100 U	1100	2100	2100	ug/Kg dry
N-Nitrosodiphenylamine	124 U	14	124	28	ug/Kg dry
Pentachlorophenol	620 U	180	620	360	ug/Kg dry
Phenanthrene	1500 U	750	1500	1500	ug/Kg dry
Phenol	420 U	210	420	420	ug/Kg dry
Pyrene	77 J	1700	3300	3300	ug/Kg dry

Surrogate: 2,4,6-Tribromophenol

60.3 % 32-120

Surrogate: 2-Fluorobiphenyl

74.4 % 25-120

Surrogate: Terphenyl-d14

93.1 % 58-122

ES Science and Engineering326 East D Street
Tacoma WA, 98421Project: **OF 230A Repair**

Project Number: ENV-03027-21-01

Project Manager: Jody Bratton

Reported:

06-May-24 09:45

Cap Material
2403039-02RE3 (Soil)
10-Apr-24 13:02

Analyte	Result	Project Reporting Goal	PQL	SQO	Units
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Semi-VOA

EPA 8270E_6_(6/18)

Prepared: 17-Apr-24

Analyzed: 30-Apr-24

Benzo(a)pyrene	1600	U	800	1600	1600	ug/Kg dry
Benzo(b,k)fluoranthene	3600	U	1800	3600	3600	ug/Kg dry
Benzo(g,h,i)perylene	720	U	360	720	720	ug/Kg dry
Dibenz(a,h)anthracene	620	U	120	620	230	ug/Kg dry
Di-n-octyl phthalate	6200	U	3100	6200	6200	ug/Kg dry
Indeno(1,2,3-cd)pyrene	690	U	350	690	690	ug/Kg dry

Surrogate: 2,4,6-Tribromophenol

69.4 %

32-120

Surrogate: 2-Fluorobiphenyl

73.9 %

25-120

Surrogate: Terphenyl-d14

90.2 %

58-122

ES Science and Engineering326 East D Street
Tacoma WA, 98421Project: **OF 230A Repair**Project Number: ENV-03027-21-01
Project Manager: Jody Bratton**Reported:**

06-May-24 09:45

**Conventional - Quality Control
Environmental Services Laboratory**

Sample ID	Result	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BHD0090 - SM 2540 G-2011**Duplicate****Source: 2403039-01**

Prepared & Analyzed: 11-Apr-24

BHD0090-DUP1

Total Solids	67.7	1.0	%		69.1			2	35	
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ES Science and Engineering

326 East D Street
Tacoma WA, 98421

Project: **OF 230A Repair**

Project Number: ENV-03027-21-01
Project Manager: Jody Bratton

Reported:
06-May-24 09:45

Metals - Quality Control
Environmental Services Laboratory

Sample ID Analyte	Result	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BHD0082 - EPA 6020B (7/14)

Blank Prepared: 11-Apr-24 Analyzed: 12-Apr-24

BHD0082-BLK1

Antimony	0.237	U	0.237	mg/Kg dry						
Arsenic	0.0488	U	0.0488	mg/Kg dry						
Barium	0.760	U	0.760	mg/Kg dry						
Cadmium	0.0712	U	0.0712	mg/Kg dry						
Chromium	0.222	U	0.222	mg/Kg dry						
Copper	0.370	U	0.370	mg/Kg dry						
Lead	0.0920	U	0.0920	mg/Kg dry						
Nickel	0.186	U	0.186	mg/Kg dry						
Selenium	0.250	U	0.250	mg/Kg dry						
Silver	0.117	U	0.117	mg/Kg dry						
Zinc	3.38	U	3.38	mg/Kg dry						

Reference Prepared: 11-Apr-24 Analyzed: 12-Apr-24

BHD0082-SRM1

Antimony	230		5.74	mg/Kg dry	268		86	10-132		
Arsenic	182		1.18	mg/Kg dry	216		84	57.8-110		
Barium	347		18.4	mg/Kg dry	385		90	78.4-114		
Cadmium	104		1.72	mg/Kg dry	117		89	67-112		
Chromium	244		5.37	mg/Kg dry	253		96	63.5-118		
Copper	127		8.95	mg/Kg dry	134		95	69-115		
Lead	149		2.23	mg/Kg dry	154		97	67.7-110		
Nickel	112		4.50	mg/Kg dry	119		94	63.2-118		
Selenium	97.2		6.04	mg/Kg dry	106		92	58.3-121		
Silver	47.4		2.83	mg/Kg dry	50.6		94	64.7-121		
Zinc	393		81.8	mg/Kg dry	403		97	63.8-118		

Batch BHD0092 - EPA 7471B (1/98)

Blank Prepared & Analyzed: 16-Apr-24

BHD0092-BLK1

Mercury	0.0040	U	0.0040	mg/Kg dry						
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Reference Prepared & Analyzed: 16-Apr-24

BHD0092-SRM1

Mercury	21.7		0.489	mg/Kg dry	24.4		89	63-137		
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ES Science and Engineering

326 East D Street
Tacoma WA, 98421

Project: **OF 230A Repair**

Project Number: ENV-03027-21-01
Project Manager: Jody Bratton

Reported:
06-May-24 09:45

Metals - Quality Control
Environmental Services Laboratory

Sample ID Analyte	Result	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BHD0112 - EPA 6020B (7/14)

Duplicate		Source: 2403039-01RE1			Prepared: 15-Apr-24 Analyzed: 16-Apr-24			
BHD0112-DUP1								
Antimony	2.28	0.585	mg/Kg dry		1.55		38	20
Arsenic	4.89	0.120	mg/Kg dry		4.56		7	20
Barium	38.6	1.87	mg/Kg dry		46.1		18	20
Cadmium	0.370	0.176	mg/Kg dry		0.358		3	20
Chromium	27.5	0.547	mg/Kg dry		34.2		22	20
Copper	141	0.912	mg/Kg dry		70.8		66	20
Lead	37.5	0.227	mg/Kg dry		36.6		2	20
Nickel	27.3	0.459	mg/Kg dry		27.6		1	20
Selenium	0.615 U	0.615	mg/Kg dry		0.615 U			20
Silver	0.288 U	0.288	mg/Kg dry		0.288 U			20
Zinc	252	8.33	mg/Kg dry		245		3	20

Matrix Spike		Source: 2403039-01RE1			Prepared: 15-Apr-24 Analyzed: 16-Apr-24		
BHD0112-MS1							
Antimony	92.3	0.586	mg/Kg dry	98.9	1.55	92	75-125
Arsenic	98.1	0.121	mg/Kg dry	98.9	4.56	95	75-125
Barium	160	1.88	mg/Kg dry	98.9	46.1	115	75-125
Cadmium	94.9	0.176	mg/Kg dry	98.9	0.358	96	75-125
Chromium	122	0.549	mg/Kg dry	98.9	34.2	89	75-125
Copper	142	0.915	mg/Kg dry	98.9	70.8	72	75-125
Lead	132	0.227	mg/Kg dry	98.9	36.6	97	75-125
Nickel	120	0.460	mg/Kg dry	98.9	27.6	94	75-125
Selenium	92.7	0.617	mg/Kg dry	98.9	0.617 U	94	75-125
Silver	95.6	0.289	mg/Kg dry	98.9	0.289 U	97	75-125
Zinc	307	8.36	mg/Kg dry	98.9	245	63	75-125

Semi-VOA - Quality Control
Environmental Services Laboratory

Sample ID Analyte	Result	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch BHD0110 - WDOE NWTPH-Dx (1997)

Blank Prepared: 15-Apr-24 Analyzed: 24-Apr-24

BHD0110-BLK2

NWTPH-Diesel	5.0 U	5.0	mg/Kg wet						
NWTPH-Heavy Oil	10.0 U	10.0	mg/Kg wet						
Surrogate: 2-Fluorobiphenyl	2.64		mg/Kg wet	5.00		52.7	50-150		
Surrogate: Terphenyl-d14	3.30		mg/Kg wet	5.00		66.1	50-150		
Surrogate: Pentacosane	4.07		mg/Kg wet	5.00		81.4	50-150		

Duplicate Source: 2403039-01 Prepared: 15-Apr-24 Analyzed: 24-Apr-24

BHD0110-DUP1

NWTPH-Diesel	7.2 U	7.2	mg/Kg dry		7.2 U			50	
NWTPH-Heavy Oil	439	14.5	mg/Kg dry		422		4.10	50	
Surrogate: 2-Fluorobiphenyl	3.89		mg/Kg dry	7.24		53.8	50-150		
Surrogate: Terphenyl-d14	5.17		mg/Kg dry	7.24		71.4	50-150		
Surrogate: Pentacosane	5.75		mg/Kg dry	7.24		79.5	50-150		

LCS Prepared: 15-Apr-24 Analyzed: 24-Apr-24

BHD0110-BS2

NWTPH-Diesel	25.8	5.0	mg/Kg wet	50.0		51.6	50-150		
NWTPH-Heavy Oil	55.4	10.0	mg/Kg wet	100		55.4	50-150		
Surrogate: 2-Fluorobiphenyl	2.81		mg/Kg wet	5.00		56.3	50-150		
Surrogate: Terphenyl-d14	3.51		mg/Kg wet	5.00		70.1	50-150		
Surrogate: Pentacosane	3.19		mg/Kg wet	5.00		63.9	50-150		

Batch BHD0113 - EPA 8270E_6 (6/18) SIM PCB

Blank Prepared: 15-Apr-24 Analyzed: 22-Apr-24

BHD0113-BLK1

Aroclor-1016	1.13 U	1.13	ug/Kg wet						
Aroclor-1221	1.13 U	1.13	ug/Kg wet						
Aroclor-1232	1.13 U	1.13	ug/Kg wet						
Aroclor-1242	1.13 U	1.13	ug/Kg wet						
Aroclor-1248	1.25 U	1.25	ug/Kg wet						
Aroclor-1254	1.25 U	1.25	ug/Kg wet						
Aroclor-1260	1.25 U	1.25	ug/Kg wet						
Surrogate: Tetrachloro-meta-xylene	259		ug/Kg wet	500		51.8	31-120		
Surrogate: Decachlorobiphenyl	373		ug/Kg wet	500		74.5	28-144		

LCS Prepared: 15-Apr-24 Analyzed: 23-Apr-24

BHD0113-BS2

Aroclor-1254	5040	6.25	ug/Kg wet	10000		50.4	40-132		
Surrogate: Tetrachloro-meta-xylene	253		ug/Kg wet	500		50.5	31-120		
Surrogate: Decachlorobiphenyl	363		ug/Kg wet	500		72.5	28-144		

Matrix Spike Source: 2403039-01RE1 Prepared: 15-Apr-24 Analyzed: 22-Apr-24

Semi-VOA - Quality Control
Environmental Services Laboratory

Sample ID Analyte	Result	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BHD0113 - EPA 8270E 6 (6/18) SIM PCB

BHD0113-MS2

Aroclor-1254	3500	3.43	ug/Kg dry	5490	3.43 U	63.8	50-132			
Surrogate: Tetrachloro-meta-xylene	173		ug/Kg dry	274		63.0	31-120			
Surrogate: Decachlorobiphenyl	244		ug/Kg dry	274		89.0	28-144			

Matrix Spike Dup

Source: 2403039-01RE1 Prepared: 15-Apr-24 Analyzed: 22-Apr-24

BHD0113-MSD2

Aroclor-1254	3120	3.51	ug/Kg dry	5620	3.51 U	55.5	50-132	11.6	25	
Surrogate: Tetrachloro-meta-xylene	155		ug/Kg dry	281		55.0	31-120			
Surrogate: Decachlorobiphenyl	214		ug/Kg dry	281		76.0	28-144			

Batch BHD0138 - EPA 8270E 6 (6/18)

Blank

Prepared: 17-Apr-24 Analyzed: 25-Apr-24

BHD0138-BLK1

Phenol	37 U	37	ug/Kg wet							
1,3-Dichlorobenzene	38 U	38	ug/Kg wet							
1,4-Dichlorobenzene	35 U	35	ug/Kg wet							
Benzyl Alcohol	44 U	44	ug/Kg wet							
1,2-Dichlorobenzene	40 U	40	ug/Kg wet							
2-Methylphenol	45 U	45	ug/Kg wet							
3 & 4-Methylphenol	49 U	49	ug/Kg wet							
2,4-Dimethylphenol	86 U	86	ug/Kg wet							
Benzoic Acid	128 U	128	ug/Kg wet							
1,2,4-Trichlorobenzene	44 U	44	ug/Kg wet							
Naphthalene	46 U	46	ug/Kg wet							
Hexachlorobutadiene	43 U	43	ug/Kg wet							
2-Methylnaphthalene	38 U	38	ug/Kg wet							
Dimethyl phthalate	40 U	40	ug/Kg wet							
Acenaphthylene	39 U	39	ug/Kg wet							
Acenaphthene	41 U	41	ug/Kg wet							
Dibenzofuran	42 U	42	ug/Kg wet							
Diethyl phthalate	39 U	39	ug/Kg wet							
Fluorene	39 U	39	ug/Kg wet							
N-Nitrosodiphenylamine	35 U	35	ug/Kg wet							
Hexachlorobenzene	40 U	40	ug/Kg wet							
Pentachlorophenol	191 U	191	ug/Kg wet							
Phenanthrene	42 U	42	ug/Kg wet							
Anthracene	42 U	42	ug/Kg wet							
Di-n-butyl phthalate	42 U	42	ug/Kg wet							
Fluoranthene	47 U	47	ug/Kg wet							
Pyrene	43 U	43	ug/Kg wet							

ES Science and Engineering

326 East D Street
Tacoma WA, 98421

Project: **OF 230A Repair**

Project Number: ENV-03027-21-01
Project Manager: Jody Bratton

Reported:
06-May-24 09:45

Semi-VOA - Quality Control
Environmental Services Laboratory

Sample ID Analyte	Result	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch BHD0138 - EPA 8270E 6 (6/18)									
Butyl benzyl phthalate	39 U	39	ug/Kg wet						
Bis(2-ethylhexyl) phthalate	38 U	38	ug/Kg wet						
Benzo(a)anthracene	46 U	46	ug/Kg wet						
Chrysene	37 U	37	ug/Kg wet						
Di-n-octyl phthalate	52 U	52	ug/Kg wet						
Benzo(b,k)fluoranthene	85 U	85	ug/Kg wet						
Benzo(a)pyrene	37 U	37	ug/Kg wet						
Indeno(1,2,3-cd)pyrene	41 U	41	ug/Kg wet						
Dibenz(a,h)anthracene	34 U	34	ug/Kg wet						
Benzo(g,h,i)perylene	78 U	78	ug/Kg wet						
Surrogate: 2-Fluorobiphenyl	0.0		ug/Kg wet	500		25-120			
Surrogate: 2,4,6-Tribromophenol	8100		ug/Kg wet	5000	163	32-120			
Surrogate: Terphenyl-d14	0.0		ug/Kg wet	500		58-122			

Batch BHD0273 - EPA 8270E 6 (6/18)

Blank Prepared: 26-Apr-24 Analyzed: 30-Apr-24

BHD0273-BLK1

Phenol	37 U	37	ug/Kg wet						
1,3-Dichlorobenzene	38 U	38	ug/Kg wet						
1,4-Dichlorobenzene	35 U	35	ug/Kg wet						
Benzyl Alcohol	44 U	44	ug/Kg wet						
1,2-Dichlorobenzene	40 U	40	ug/Kg wet						
2-Methylphenol	45 U	45	ug/Kg wet						
3 & 4-Methylphenol	49 U	49	ug/Kg wet						
2,4-Dimethylphenol	86 U	86	ug/Kg wet						
Benzoic Acid	128 U	128	ug/Kg wet						
1,2,4-Trichlorobenzene	44 U	44	ug/Kg wet						
Naphthalene	46 U	46	ug/Kg wet						
Hexachlorobutadiene	43 U	43	ug/Kg wet						
2-Methylnaphthalene	38 U	38	ug/Kg wet						
Dimethyl phthalate	40 U	40	ug/Kg wet						
Acenaphthylene	39 U	39	ug/Kg wet						
Acenaphthene	41 U	41	ug/Kg wet						
Dibenzofuran	42 U	42	ug/Kg wet						
Diethyl phthalate	39 U	39	ug/Kg wet						
Fluorene	39 U	39	ug/Kg wet						
N-Nitrosodiphenylamine	35 U	35	ug/Kg wet						
Hexachlorobenzene	40 U	40	ug/Kg wet						
Pentachlorophenol	191 U	191	ug/Kg wet						
Phenanthrene	42 U	42	ug/Kg wet						

ES Science and Engineering326 East D Street
Tacoma WA, 98421Project: **OF 230A Repair**

Project Number: ENV-03027-21-01

Project Manager: Jody Bratton

Reported:

06-May-24 09:45

Semi-VOA - Quality Control**Environmental Services Laboratory**

Sample ID Analyte	Result	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BHD0273 - EPA 8270E 6 (6/18)

Anthracene	42	U	42	ug/Kg wet						
Di-n-butyl phthalate	42	U	42	ug/Kg wet						
Fluoranthene	47	U	47	ug/Kg wet						
Pyrene	43	U	43	ug/Kg wet						
Butyl benzyl phthalate	39	U	39	ug/Kg wet						
Bis(2-ethylhexyl) phthalate	38	U	38	ug/Kg wet						
Benzo(a)anthracene	46	U	46	ug/Kg wet						
Chrysene	37	U	37	ug/Kg wet						
Di-n-octyl phthalate	52	U	52	ug/Kg wet						
Benzo(b,k)fluoranthene	85	U	85	ug/Kg wet						
Benzo(a)pyrene	37	U	37	ug/Kg wet						
Indeno(1,2,3-cd)pyrene	41	U	41	ug/Kg wet						
Dibenz(a,h)anthracene	34	U	34	ug/Kg wet						
Benzo(g,h,i)perylene	78	U	78	ug/Kg wet						
<i>Surrogate: 2-Fluorobiphenyl</i>	3400			ug/Kg wet	5000		67.6	25-120		
<i>Surrogate: 2,4,6-Tribromophenol</i>	7700			ug/Kg wet	10000		77.3	32-120		
<i>Surrogate: Terphenyl-d14</i>	4700			ug/Kg wet	5000		94.9	58-122		

LCS

Prepared: 26-Apr-24 Analyzed: 30-Apr-24

BHD0273-BS2

Phenol	6000		185	ug/Kg wet	10000		60.0	50-150		
1,3-Dichlorobenzene	5430		190	ug/Kg wet	10000		54.3	50-150		
1,4-Dichlorobenzene	5500		175	ug/Kg wet	10000		55.0	50-150		
Benzyl Alcohol	6320		220	ug/Kg wet	10000		63.2	50-150		
1,2-Dichlorobenzene	5560		200	ug/Kg wet	10000		55.6	50-150		
2-Methylphenol	6120		225	ug/Kg wet	10000		61.2	50-150		
3 & 4-Methylphenol	6400		245	ug/Kg wet	10000		64.0	50-150		
2,4-Dimethylphenol	5470		430	ug/Kg wet	10000		54.7	50-150		
Benzoic Acid	1940	J	640	ug/Kg wet	10000		19.4	50-150		
1,2,4-Trichlorobenzene	6210		220	ug/Kg wet	10000		62.1	50-150		
Naphthalene	6300		230	ug/Kg wet	10000		63.0	50-150		
Hexachlorobutadiene	6140		215	ug/Kg wet	10000		61.4	50-150		
2-Methylnaphthalene	6600		190	ug/Kg wet	10000		66.0	50-150		
Dimethyl phthalate	8100		200	ug/Kg wet	10000		81.0	50-150		
Acenaphthylene	7300		195	ug/Kg wet	10000		73.0	50-150		
Acenaphthene	7450		205	ug/Kg wet	10000		74.5	50-150		
Dibenzofuran	7750		210	ug/Kg wet	10000		77.5	50-150		
Diethyl phthalate	8520		195	ug/Kg wet	10000		85.2	50-150		
Fluorene	8000		195	ug/Kg wet	10000		80.0	50-150		
N-Nitrosodiphenylamine	7870		175	ug/Kg wet	10000		78.7	50-150		

ES Science and Engineering

326 East D Street
Tacoma WA, 98421

Project: **OF 230A Repair**

Project Number: ENV-03027-21-01
Project Manager: Jody Bratton

Reported:
06-May-24 09:45

Semi-VOA - Quality Control
Environmental Services Laboratory

Sample ID Analyte	Result	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BHD0273 - EPA 8270E 6 (6/18)										
Hexachlorobenzene	8050	200	ug/Kg wet	10000		80.5	50-150			
Pentachlorophenol	8460	955	ug/Kg wet	10000		84.6	50-150			
Phenanthrene	8090	210	ug/Kg wet	10000		80.9	50-150			
Anthracene	8130	210	ug/Kg wet	10000		81.3	50-150			
Di-n-butyl phthalate	8020	210	ug/Kg wet	10000		80.2	50-150			
Fluoranthene	8230	235	ug/Kg wet	10000		82.3	50-150			
Pyrene	8850	215	ug/Kg wet	10000		88.5	50-150			
Butyl benzyl phthalate	9090	195	ug/Kg wet	10000		90.9	50-150			
Bis(2-ethylhexyl) phthalate	9290	190	ug/Kg wet	10000		92.9	50-150			
Benzo(a)anthracene	8960	230	ug/Kg wet	10000		89.6	50-150			
Chrysene	8840	185	ug/Kg wet	10000		88.4	50-150			
Di-n-octyl phthalate	8450	260	ug/Kg wet	10000		84.5	50-150			
Benzo(b,k)fluoranthene	16200	425	ug/Kg wet	20000		80.9	50-150			
Benzo(a)pyrene	7930	185	ug/Kg wet	10000		79.3	50-150			
Indeno(1,2,3-cd)pyrene	8230	205	ug/Kg wet	10000		82.3	50-150			
Dibenz(a,h)anthracene	8090	170	ug/Kg wet	10000		80.9	50-150			
Benzo(g,h,i)perylene	7210	390	ug/Kg wet	10000		72.1	50-150			
Surrogate: 2-Fluorobiphenyl	3400		ug/Kg wet	5000		67.1	25-120			
Surrogate: 2,4,6-Tribromophenol	8000		ug/Kg wet	10000		79.6	32-120			
Surrogate: Terphenyl-d14	4200		ug/Kg wet	5000		84.1	58-122			

ES Science and Engineering326 East D Street
Tacoma WA, 98421Project: **OF 230A Repair**

Project Number: ENV-03027-21-01

Project Manager: Jody Bratton

Reported:

06-May-24 09:45

GC/MS-Pesticides - Quality Control
Environmental Services Laboratory

Sample ID Analyte	Result	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch BHD0145 - EPA 8270E 6 (6/18) SIM OCP**Blank** Prepared: 18-Apr-24 Analyzed: 26-Apr-24**BHD0145-BLK1**

4,4-DDE	0.8 J	0.4	ug/Kg wet						
4,4-DDD	0.4 U	0.4	ug/Kg wet						
4,4-DDT	0.5 U	0.5	ug/Kg wet						
Surrogate: Tetrachloro-meta-xylene	290		ug/Kg wet	500		57.6	30-150		
Surrogate: Decachlorobiphenyl	480		ug/Kg wet	500		96.0	30-150		

LCS Prepared: 18-Apr-24 Analyzed: 26-Apr-24**BHD0145-BS1**

4,4-DDE	660	0.4	ug/Kg wet	1000		66.0	50-150		
4,4-DDD	700	0.4	ug/Kg wet	1000		69.5	50-150		
4,4-DDT	700	0.5	ug/Kg wet	1000		70.1	50-150		
Surrogate: Tetrachloro-meta-xylene	310		ug/Kg wet	500		63.0	30-150		
Surrogate: Decachlorobiphenyl	520		ug/Kg wet	500		103	30-150		

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Notes and Definitions

U	Analyte Not Detected at or above the associated value
UJ	Analyte Not Detected at or above the associated estimated value
ND	Analyte NOT DETECTED at or above the reporting limit
E	Analyte was determined above the upper quantitation range of the method. The associated value is an estimate.
NJ	There is evidence the analyte is present. The associated value is an estimate.
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Chain of Custody



326 East D Street
Tacoma
WA, 98421-1801

phone (253) 502-2130
fax (253) 502-2170

Page 1 of 1

Lab Work Order Number 2403039

Client Name ES Science and Engineering		Project Name OF 230A Repair		Requested Analyses								Requested Turn Around			
Client Contact Jody Bratton		Project Number ENV-03027-21-01		DS 60208::As, Ba, Cd, Cr, Cu, Pb, Ni, Se, Ag, Zn DS 7471B::Hg + Sb NWTPH_DX 58270E-DNA Total Solids SVOCs by 82706 PCBs by 8082	Sample Number	Rush requests subject to additional charge.		Rush requests subject to lab approval.		Standard (days)		Expedited (days)		Due Date	
Address 326 East D Street		Project Description Waste Characterization				10		4/15/2024							
City Tacoma		PO Number													
State/Zip WA, 98421		Sampler Signatures													
Phone (253) 502-2188 / (253) 502-2295		Fax													
Sampler Cheronne Oreiro															

Sample Name or Field ID	Sampled Date	Sampled Time	Sample Type	Matrix Code	Container Count	Preservation Code										Sample	Comments	
						250mL WM CG	250mL WM CG											
Sediment	3/29/2024	4/10/24 1300	G	S	3/2" fa	1	1	X	X	X							-01	
Cap Material	3/29/2024	↓ 1312	G	S	3.25" fa	1	1	X	X	X							-02	

Relinquished By	Received By	Date/Time 4/10/24 1355	Comments on ice 6°C Reviewed: 4/10/24
Relinquished By	Received By	Date/Time	
Relinquished By	Received By	Date/Time	
Cooler Numbers and Temperatures			

Matrix Codes: S=Sediment, S=Soil

Data Validation Summary

Prepared by: Chell Black

Date: May 8, 2024

Project ID: COT-LTMP Outfall 230A

Sample Event(s): 2024 Waste Characterization

Sample Delivery Group(s): 2403039

Sample Media: Sediments

A Compliance Screening (USEPA 2A) data quality review was performed on total solids, metals, total petroleum hydrocarbons (TPHs), pesticides, polychlorinated biphenyls (PCBs), and semi-volatile organic compounds (SVOCs) data resulting from laboratory analysis. The data were reviewed using guidance and quality control (QC) criteria documented in the Quality Assurance Project Plan (QAPP), Attachment B-1 to the Thea Foss and Wheeler-Osgood Waterways Long-Term Monitoring Plan (City of Tacoma 2018), *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods* (USEPA 1986), *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA 2020a), and the *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA 2020b).

A total of two sediment samples were submitted to City of Tacoma - Environmental Services Lab (COT-ESL) in Tacoma, Washington, for chemical analysis by SM 2540G, USEPA 6020B, USEPA 7471B, NWTPH-Dx, USEPA 8270E, and USEPA 8270E-SIM. COT-ESL reported results under sample delivery group 2403039.

DATA QUALITY REVIEW

Field and laboratory QC parameters for samples met project criteria with exceptions noted as follows:

Semi-volatile Organic Compounds

All “J” flagged laboratory results reported between the method detection limit (MDL) and practical quantitation limit (PQL) were qualified as “J” per project standardization rules.

The laboratory control sample (LCS) recovery for benzoic acid in LCS BHD0273-BS2 was outside control limits low. The detected sample results for batch BHD0273 were qualified “J” to indicate they are estimated.

Metals

The relative percent difference for copper for the sample/sample duplicate analysis performed on sample "Sediment" (WC-1) was outside control limits. Sample results for batch BHD0112 were qualified "J" to indicate they are estimated.

The copper and zinc matrix spike recoveries for sample "Sediment" (WC-1) were outside control limits low. The sample results for these analytes in batch BHD0112 were qualified "J" to indicate they are estimated.

DATA QUALITY SUMMARY

Based on the data quality review, data are determined to be of acceptable quality for use as reported or qualified.

REFERENCES

City of Tacoma 2018. *Quality Assurance Project Plan for Sediment Chemistry Quality Analysis, Thea Foss and Wheeler-Osgood Waterways Long-Term Monitoring Plan*. Prepared by City of Tacoma and Floyd|Snider. May.

U.S. Environmental Protection Agency (USEPA). 1986. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*. U.S. Prepared by the Office of Solid Waste and Emergency Response. EPA-530/SW-846.

_____. 2020a. *National Functional Guidelines for Organic Superfund Methods Data Review*. Prepared by the Office of Superfund Remediation and Technology Innovation. EPA-540-R-20-005/OLEM 9240.0-51. November.

_____. 2020b. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. Prepared by the Office of Superfund Remediation and Technology Innovation. EPA-542-R-20-006/OLEM 9240.1-66. November.

PART V

STATE PREVAILING WAGE RATES

PREVAILING WAGE RATES

This project requires prevailing wages under [39.12 RCW](#). Any worker, laborer, or mechanic employed in the performance of any part of the work shall be paid not less than the applicable prevailing rate of wage.

The project site is located in Pierce County.

The effective date for prevailing wages on this project will be the **submittal deadline** with these exceptions:

- a. If the project is not awarded within six months of the submittal deadline, the award date is the effective date.
- b. If the project is not awarded pursuant to a competitive solicitation, the date the contract is executed is the effective date.
- c. Janitorial contracts follow WAC 296-127-023.

Except for janitorial contracts, these rates shall apply for the duration of the contract unless otherwise noted in the solicitation.

Look up prevailing rates of pay, benefits, and overtime codes from this link:

<https://secure.lni.wa.gov/wagelookup/>

REQUIRED FILINGS

The contractor and all subcontractors covered under [39.12 RCW](#) shall submit to the Department of Labor and Industries (L&I) for work provided under this contract:

1. A Statement of Intent to Pay Prevailing Wages must be filed with and approved by L&I upon award of contract.
2. An Affidavit of Wages Paid must be filed with and approved by L&I upon job completion.

Payments cannot be released by the City until verification of these filings are received by the engineer. Additional information regarding these filings can be obtained by calling the Department of Labor & Industries, Prevailing Wage at 360-902-5335, <https://www.lni.wa.gov/> or by visiting their MY L&I account.

PART VI
INSURANCE REQUIREMENTS



CITY OF TACOMA INSURANCE REQUIREMENTS FOR CONTRACTS

This Insurance Requirements shall serve as an attachment and/or exhibit form to the Contract. The Agency entering a Contract with City of Tacoma, whether designated as a Supplier, Contractor, Vendor, Proposer, Bidder, Respondent, Seller, Merchant, Service Provider, or otherwise referred to as "Contractor".

1. GENERAL REQUIREMENTS

The following General Requirements apply to Contractor and to Subcontractor(s) performing services and/or activities pursuant to the terms of this Contract. Contractor acknowledges and agrees to the following insurance requirements:

- 1.1. Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the City of Tacoma.
- 1.2. Contractor shall keep in force during the entire term of the Contract, at no expense to the City of Tacoma, the insurance coverage and limits of liability listed below and for Thirty (30) calendar days after completion of all work required by the Contract, unless otherwise provided herein.
- 1.3. Liability insurance policies, except for Professional Liability and Workers' Compensation, shall:
 - 1.3.1. Name the City of Tacoma and its officers, elected officials, employees, and agents as **additional insured**
 - 1.3.2. Be considered primary and non-contributory for all claims with any insurance or self-insurance or limits of liability maintained by the City of Tacoma
 - 1.3.3. Contain a "Waiver of Subrogation" clause in favor of City of Tacoma
 - 1.3.4. Include a "Separation of Insureds" clause that applies coverage separately to each insured and additional insured
 - 1.3.5. Name the "City of Tacoma" on certificates of insurance and endorsements and not a specific person or department
 - 1.3.6. Be for both ongoing and completed operations using Insurance Services Office (ISO) form CG 20 10 04 13 and CG 20 37 04 13 or the equivalent
 - 1.3.7. Be satisfied by a single primary limit or by a combination of a primary policy and a separate excess umbrella
- 1.4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements below. Verification of coverage shall include:
 - 1.4.1. An ACORD certificate or equivalent
 - 1.4.2. Copies of requested endorsements
- 1.5. Contractor shall provide to City of Tacoma Procurement & Payable Division, prior to the execution of the Contract, Certificate(s) of Insurance and endorsements from the insurer certifying the coverage of all insurance required herein. Contract or Permit number and the City of Tacoma Department must be shown on the Certificate of Insurance.
- 1.6. A renewal Certificate of Insurance shall be provided electronically prior to coverage



CITY OF TACOMA INSURANCE REQUIREMENTS FOR CONTRACTS

expiration via email sent annually to coi@cityoftacoma.org.

- 1.7. Contractor shall send a notice of cancellation or non-renewal of this required insurance within Thirty (30) calendar days to coi@cityoftacoma.org.
- 1.8. "Claims-Made" coverages, except for pollution coverage, shall be maintained for a minimum of three years following the expiration or earlier termination of the Contract. Pollution coverage shall be maintained for six years following the expiration of the Contract. The retroactive date shall be prior to or coincident with the effective date of the Contract.
- 1.9. Each insurance policy must be written by companies licensed or authorized (or issued as surplus line by Washington surplus line broker) in the State of Washington pursuant to RCW 48 with an (A-) VII or higher in the A.M. Best key rating guide.
- 1.10. Contractor shall not allow any insurance to be cancelled, voided, suspended, or reduced in coverage/limits, or lapse during any term of this Contract. Otherwise, it shall constitute a material breach of the Contract.
- 1.11. Contractor shall be responsible for the payment of all premiums, deductibles and self-insured retentions, and shall indemnify and hold the City of Tacoma harmless to the extent such a deductible or self-insured retained limit may apply to the City of Tacoma as an additional insured. Any deductible or self-insured retained limits in excess of Twenty Five Thousand Dollars (\$25,000) must be disclosed and approved by City of Tacoma Risk Manager and shown on the Certificate of Insurance.
- 1.12. City of Tacoma reserves the right to review insurance requirements during any term of the Contract and to require that Contractor make reasonable adjustments when the scope of services changes.
- 1.13. All costs for insurance are included in the initial Contract and no additional payment will be made by City of Tacoma to Contractor.
- 1.14. Insurance coverages specified in this Contract are not intended and will not be interpreted to limit the responsibility or liability of Contractor or Subcontractor(s).
- 1.15. Failure by City of Tacoma to identify a deficiency in the insurance documentation or to verify coverage or compliance by Contractor with these insurance requirements shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- 1.16. If Contractor is a government agency or self-insured for any of the above insurance requirements, Contractor shall be liable for any self-insured retention or deductible portion of any claim for which insurance is required. A certification of self-insurance shall be attached and incorporated by reference and shall constitute compliance with this Section.

2. SUBCONTRACTORS



CITY OF TACOMA

INSURANCE REQUIREMENTS FOR CONTRACTS

It is Contractor's responsibility to ensure that each subcontractor obtain and maintain adequate liability insurance coverage that applies to the service provided. Contractor shall provide evidence of such insurance upon City of Tacoma's request. Failure of any subcontractor to comply with insurance requirements does not limit Contractor's liability or responsibility.

3. REQUIRED INSURANCE AND LIMITS

The insurance policies shall provide the minimum coverages and limits set forth below. Providing coverage in these stated minimum limits shall not be construed to relieve Contractor from liability in excess of such limits.

3.1 Commercial General Liability Insurance

Contractor shall maintain Commercial General Liability Insurance policy with limits not less than One Million Dollars (\$1,000,000) each occurrence and Two Million Dollars (\$2,000,000) annual aggregate. This policy shall be written on ISO form CG 00 01 04 13 or its equivalent and shall include product liability especially when a Contract is solely for purchasing supplies. It includes Products and Completed Operations for three years following the completion of work related to performing construction services. It shall be endorsed to include: A per project aggregate policy limit (using ISO form CG 25 03 05 09 or equivalent endorsement)

3.2 Marine General Liability Insurance

Contractor shall maintain Marine General Liability Insurance with limits not less than One Million Dollars (\$1,000,000) each occurrence and Two Million Dollars (\$2,000,000) in the aggregate. Products and Completed Operations shall be maintained for a period of three years following completion of work.

Marine General Liability Insurance policy cannot exclude non-owned watercraft and shall be endorsed to include:

- 3.2.1 A per project aggregate policy limit
- 3.2.2 Personal/Advertising Injury

3.3 Protection and Indemnity Insurance

Contractor shall maintain Protection and Indemnity Insurance with limits of liability not less than One Million Dollars (\$1,000,000) each occurrence and One Million Dollars (\$1,000,000) in the aggregate. This insurance must cover all claims with respect to injuries or damages to persons or property, arising out of the use, operation or ownership of boats, ships, or vessels.

3.4 Commercial (Business) Automobile Liability Insurance

Contractor shall maintain Commercial Automobile Liability policy with limits not less than One Million Dollars (\$1,000,000) each accident for bodily injury and property damage and bodily injury and property damage coverage for owned (if any), non-owned, hired, or leased vehicles. Commercial Automobile Liability Insurance shall be written using ISO form CA 00 01 or equivalent. Contractor must also maintain MCS 90 and CA 99 48 endorsements or equivalent if "Pollutants" are to be transported unless in-transit Pollution coverage is covered under required Contractor's Pollution Liability Insurance.

3.5 Workers' Compensation

Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington, as well as any other similar coverage required for this work by applicable federal laws of other states. Contractor must comply with their domicile State Industrial Insurance laws if it is outside the State of Washington.

3.5.1 Jones Act



CITY OF TACOMA INSURANCE REQUIREMENTS FOR CONTRACTS

Contractor shall maintain insurance coverage for seamen injured during employment resulting from negligence of the owner, master, or fellow crew members in compliance with the statutory requirements of the Jones Act (46 U.S.C Section 688). Contractor shall ascertain if such insurance is required and, if required, shall maintain insurance in compliance with this Act. Contractor is responsible for all civil and criminal liability arising from failure to maintain such coverage.

3.6 Employers' Liability Insurance

Contractor shall maintain Employers' Liability coverage with limits not less than One Million Dollars (\$1,000,000) each employee, One Million Dollars (\$1,000,000) each accident, and One Million Dollars (\$1,000,000) policy limit.

3.7 Pollution Liability Insurance

Contractor shall maintain Pollution Liability or Environmental Liability Insurance with limits not less than One Million Dollars (\$1,000,000) each occurrence and Two Million Dollars (\$2,000,000) in the aggregate. Coverage shall include investigation and defense costs for bodily injury and property damage, loss of use of damaged or destroyed property, Natural Resource Damage, and Hazardous Substance Removal. Such coverage shall provide both on-site and off-site cleanup costs, cover gradual and sudden pollution, and include in its scope of coverage the City of Tacoma damage claims for loss arising out of Contractor's work.

3.8 Other Insurance

Other insurance may be deemed appropriate to cover risks and exposures related to the scope of work or changes to the scope of work required by City of Tacoma. The costs of such necessary and appropriate Insurance coverage shall be borne by Contractor.