



City of Tacoma

ADDENDUM 1

## Environmental Services

**ADDENDUM NO. 1**

**DATE:** May 20, 2024

### REVISIONS TO:

**Request for Bids Specification No. ES24-056F  
Foss Shoreline Restoration Outfall 230A Repair Project**

### NOTICE TO ALL BIDDERS:

This addendum is issued to clarify, revise, add to or delete from, the original specification documents for the above project. This addendum, as integrated with the original specification documents, shall form the specification documents. The noted revisions shall take precedence over previously issued specification documents and shall become part of this contract.

### REVISIONS TO THE SUBMITTAL DEADLINE:

The submittal deadline remains the same.

### REVISIONS TO THE SPECIAL REMINDER TO BIDDERS:

Revision No. 1: Add the following item to the Special Reminder to Bidders:

#### 6. Inquiries

Submit questions concerning this Request for Bids to Stan Rowden II, Senior Buyer, via email [srowden@cityoftacoma.org](mailto:srowden@cityoftacoma.org). Subject line of the email to read ES24-056F – Foss Shoreline Restoration Outfall 230A Repair Project – BIDDER NAME. **Questions are due no later than: Friday, May 24, 2024 by 5:00 p.m.**

Questions marked confidential will not be answered or included. The City reserves the discretion to group similar questions to provide a single answer or not to respond when the requested information is confidential. The answers are not typically considered an addendum. The City will not be responsible for unsuccessful submittal of questions. Written answers to questions will be posted in the event approximately two (2) days after the questions deadline.

### REVISIONS TO THE TECHNICAL PROVISIONS:

Revision No. 1: Add the attached letter from U.S. Environmental Protection Agency Clean Water Act Section 404 ARAR Memo: Substantive Water Quality Requirements for the Outfall 230A Slope Cap Repair Project to Appendix C Environmental Documentation of Substantive Compliance.

### REVISIONS TO THE PLANS:

Revision No. 1: The title block for the project was issued in error indicating City of Tacoma Public Works Department. The revised title block on the attached plans have been updated to indicated Environmental Services Department.



City of Tacoma

## ADDENDUM 1

NOTE: Acknowledge receipt of this addendum by initialing the corresponding space as indicated on the signature page. Vendors who have already submitted their bid/proposal may contact the Purchasing Division at 253-502-8468 and request return of their bid/proposal for acknowledgment and re-submittal. Or, a letter acknowledging receipt of this addendum may be submitted in an envelope marked rrequest for bids Specification No. ES23-0056F Addendum No.1. The City reserves the right to reject any and all bids, including, in certain circumstances, for failure to appropriately acknowledge this addendum.

cc: Jody Bratton, P.E., Science and Engineering Division, Environmental Services Department



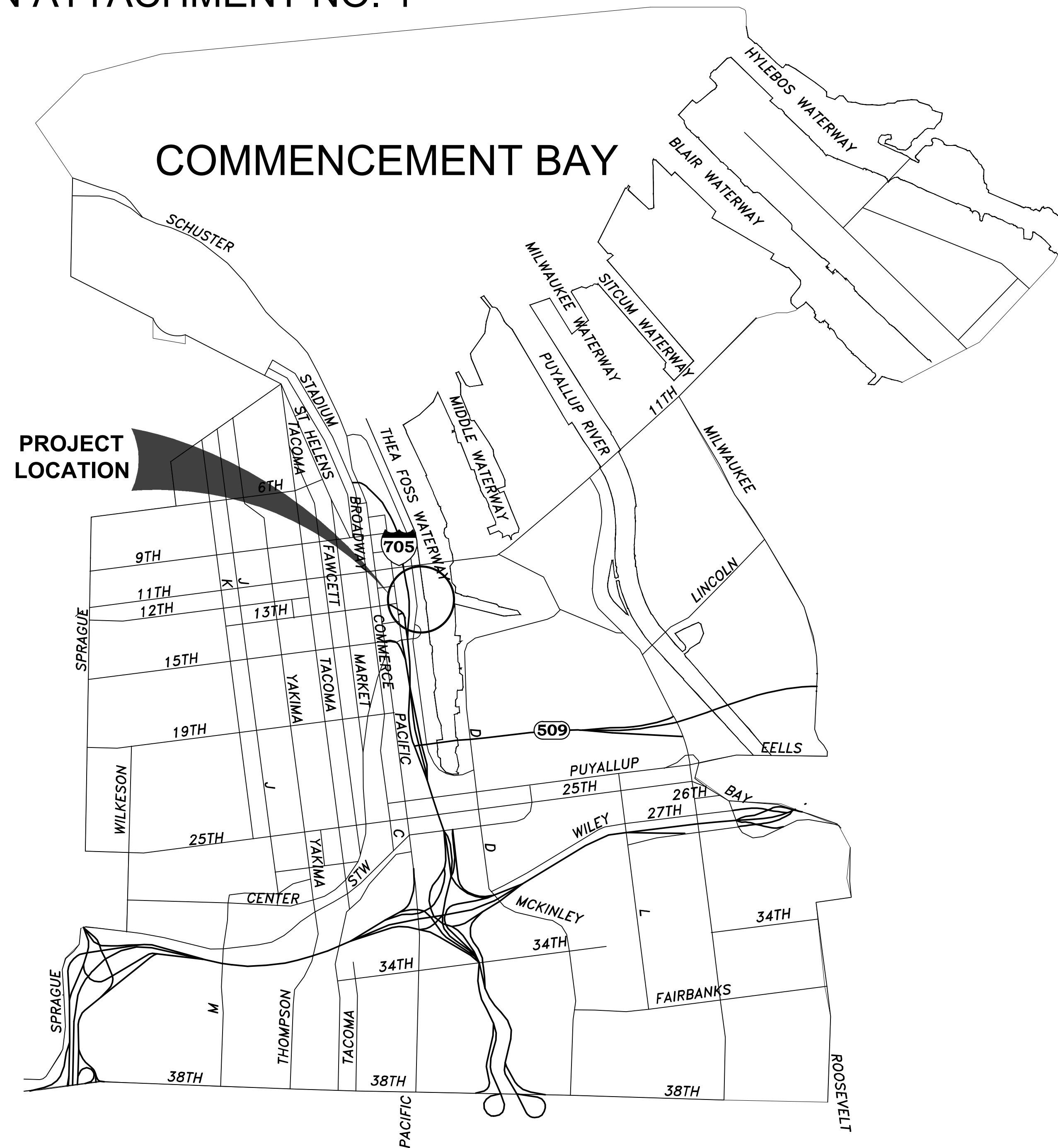
# FOSS SHORELINE RESTORATION - OUTFALL 230A REPAIR PROJECT

TACOMA, WASHINGTON  
PROJECT NO: 2400003  
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

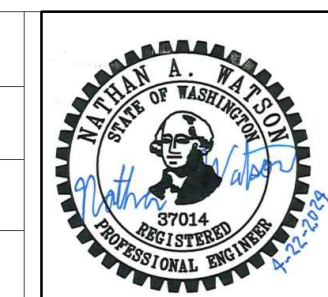


2407 North 31st Street, Suite 100  
Tacoma, Washington 98407  
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NO	BID SET - TITLE BLOCK	5/17/24	RT	FINAL CONSTRUCTION CHECKED	DATE 5/17/2024	SCALE NTS
	REVISION	DATE	APPD	BY RT	DESIGNED RT	CHECKED SS
				DATE RT	DRAWN RT	FIELD BOOK
				DRAWING NAME G1.00_TITLE SHEET.DWG		



CITY OF TACOMA  
ENVIRONMENTAL SERVICES DEPARTMENT  
**FOSS SHORELINE RESTORATION - OUTFALL 230A REPAIR PROJECT**  
TITLE SHEET

SPEC. NO.	ES24-0056F
WBS NO.	ENV-03027-21
SHEET NO.	G1.00
SHEET	1 OF 4

BID SET

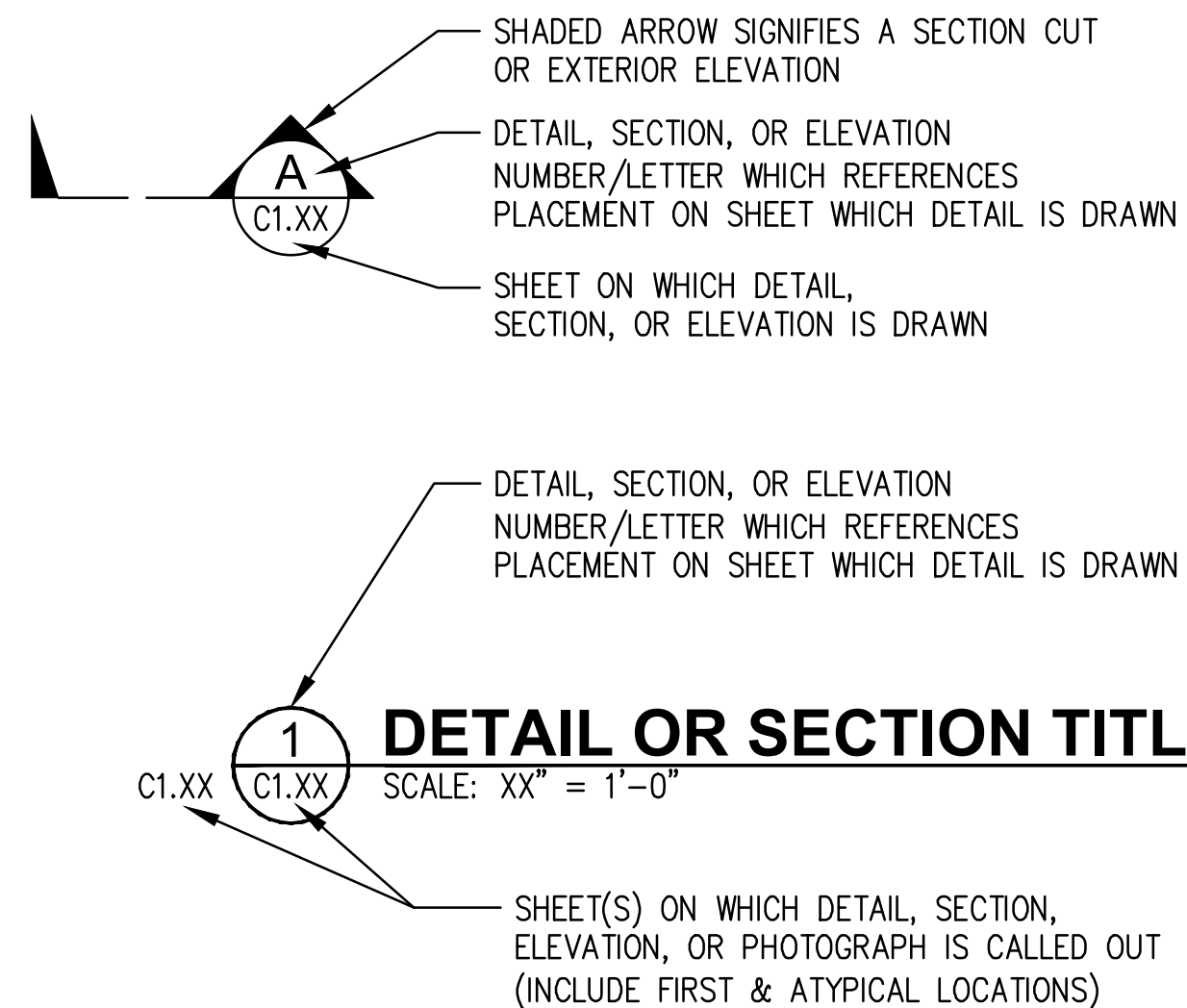
**ABBREVIATIONS:**

∅	DIA
&	AND
±	APPROXIMATELY
C	CENTERLINE
=	EQUALS
'	FOOT
#	NUMBER
%	PERCENT
APPROX	APPROXIMATE (-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
EG	EXISTING GRADE
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 EXCEPT FOR STORMWATER TEMPORARY BYPASS. 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 MHHW ELEVATIONS DRAWN FROM A "TACOMA PUBLIC WORKS VERTICAL DATUM" CONVERSION SHEET, USING THE NGS TIDAL ELEVATION DATA FOR BENCHMARK "TIDAL 22 1933", PID:SY0536.  
MHHW = +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):**

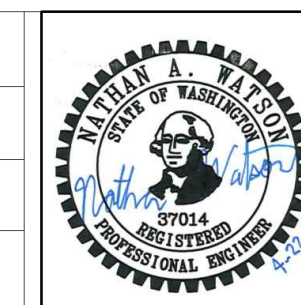
	DEBRIS BOOM
	FENCE
	LIMITS OF WORK
	SILT FENCE, CONSTRUCTION FENCE, HIGH VISIBILITY FENCE
	SLOPE
	SPOT ELEVATION
	CONTOUR LINE
	FLOW DIRECTION
	CENTERLINE
	STORM DRAIN LINE
	SD - CATCH BASIN
	MANHOLE
	LIGHT POLE
	INLET PROTECTION
	CONSTRUCTION ACCESS GATE



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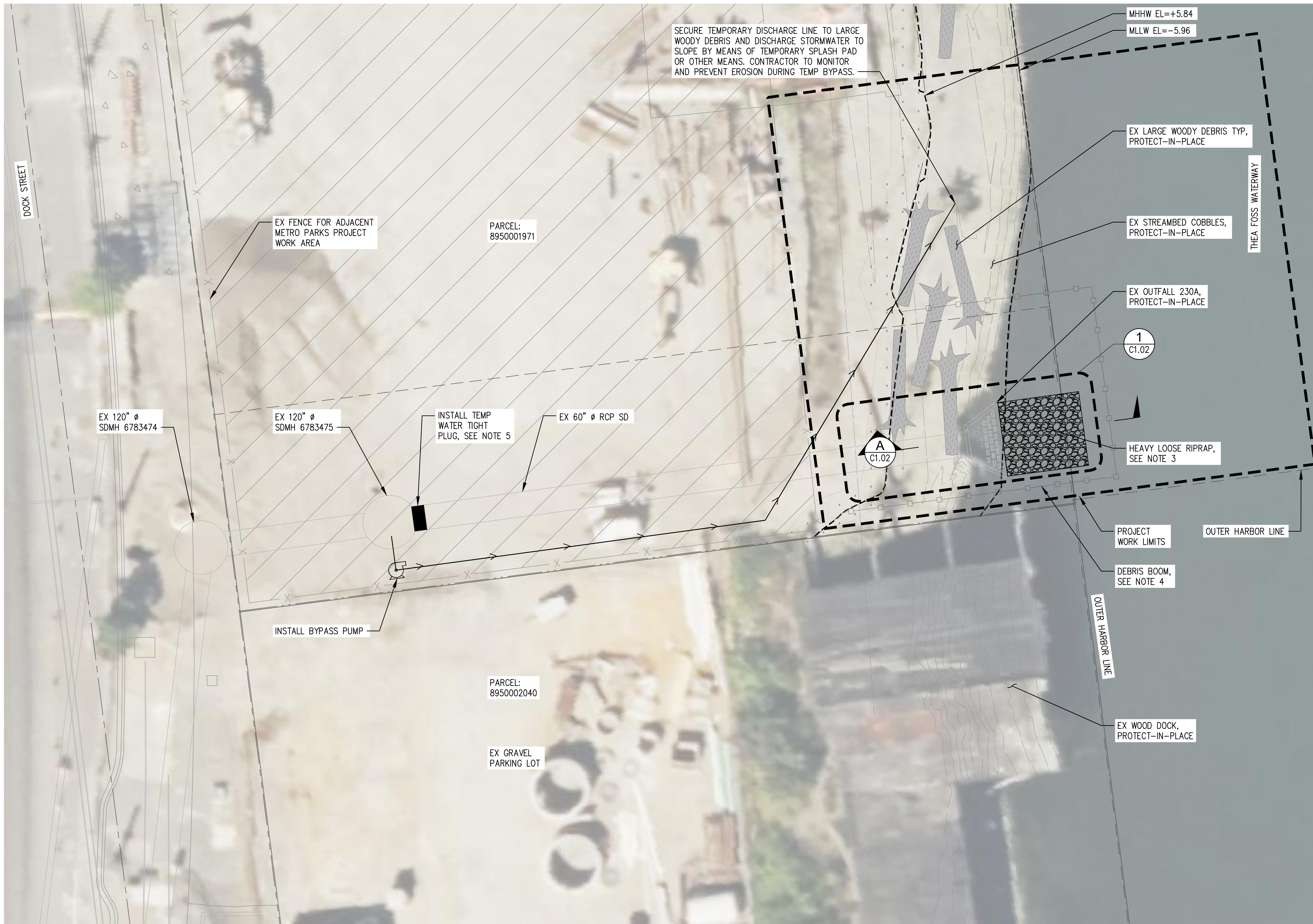
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				BY	RT	SS
				DATE	RT	FIELD BOOK
				DRAWING NAME	G1.01_LEGEND, ABBREVIATIONS, AND GENERAL NOTES.DWG	
NO	REVISION	DATE	APPD			



CITY OF TACOMA  
ENVIRONMENTAL SERVICES DEPARTMENT  
**FOSS SHORELINE RESTORATION - OUTFALL 230A REPAIR PROJECT**  
LEGEND, ABBREVIATIONS,  
AND GENERAL NOTES

SPEC. NO.	ES24-0056F
WBS NO.	
SHEET NO.	G1.01
SHEET	2 OF 4

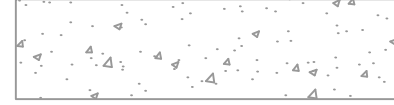




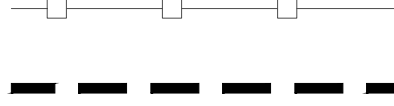
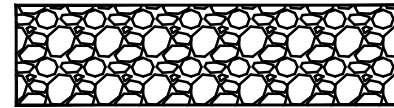


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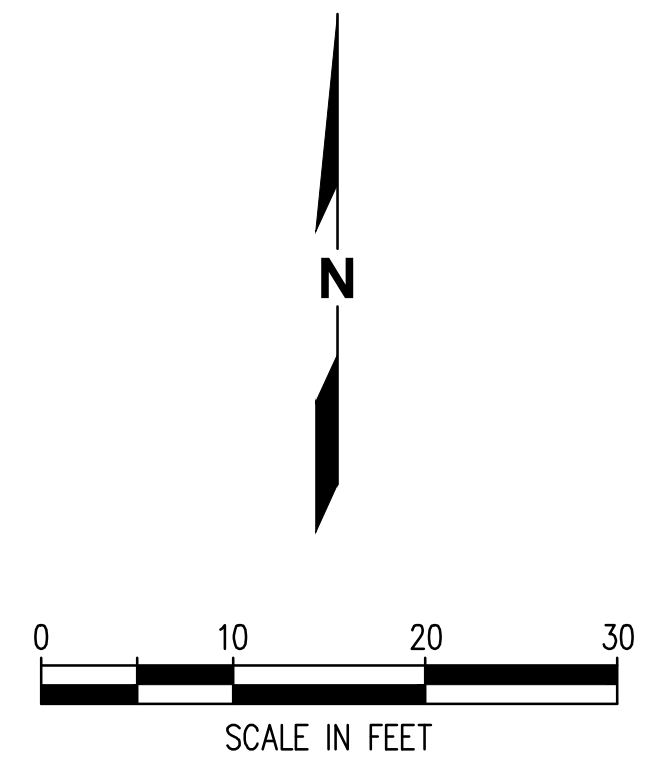


**NOTES**

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. 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 WHICH INCLUDES SLOPE WITHIN ENTIRE WORK 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

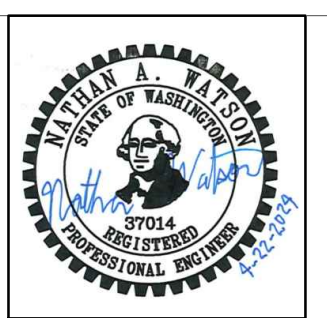


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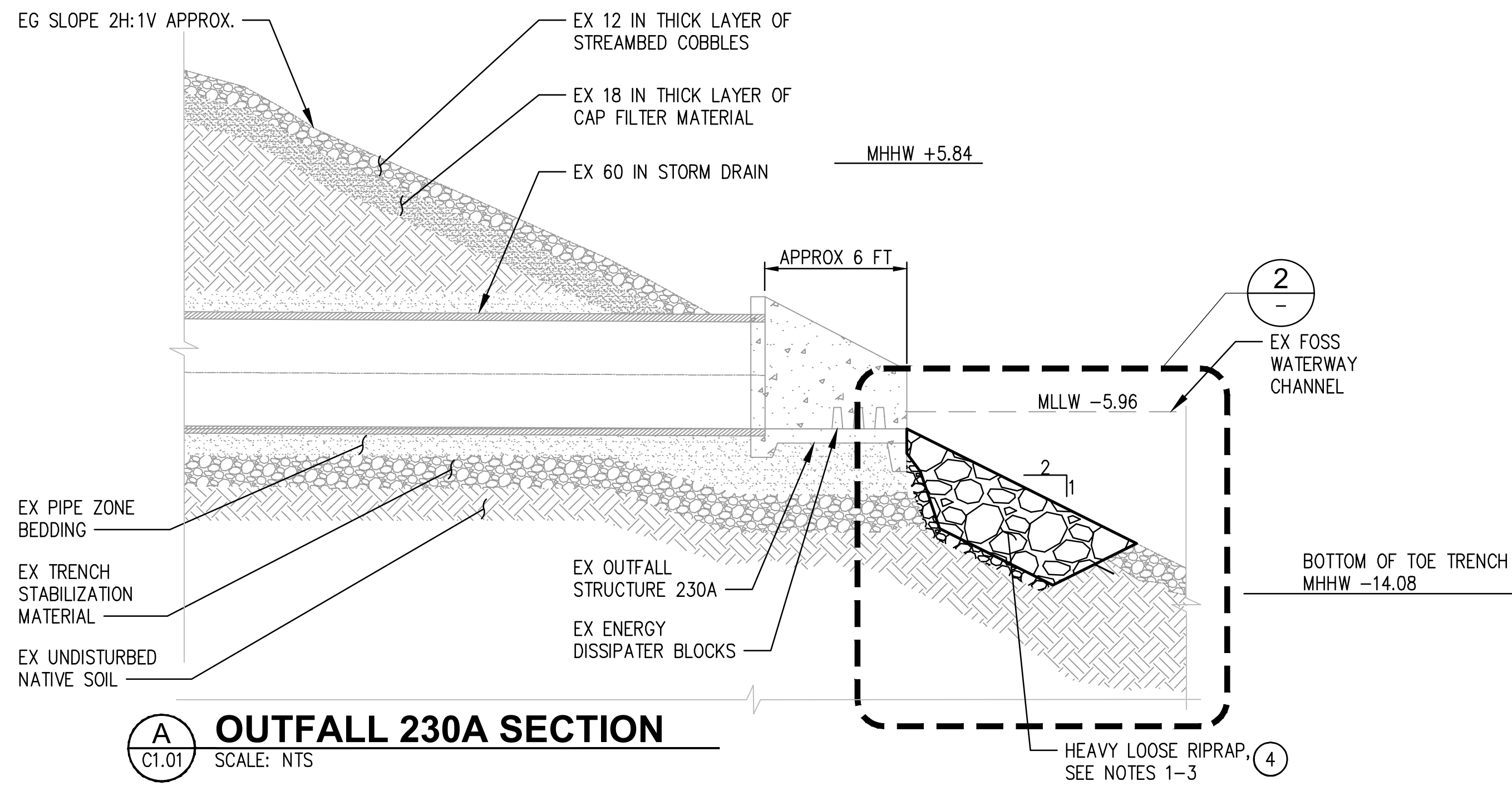
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DRAWN	RT	FIELD BOOK
DRAWING NAME		
C1.01_FOSS SHORELINE RESTORATION PLAN.DWG		



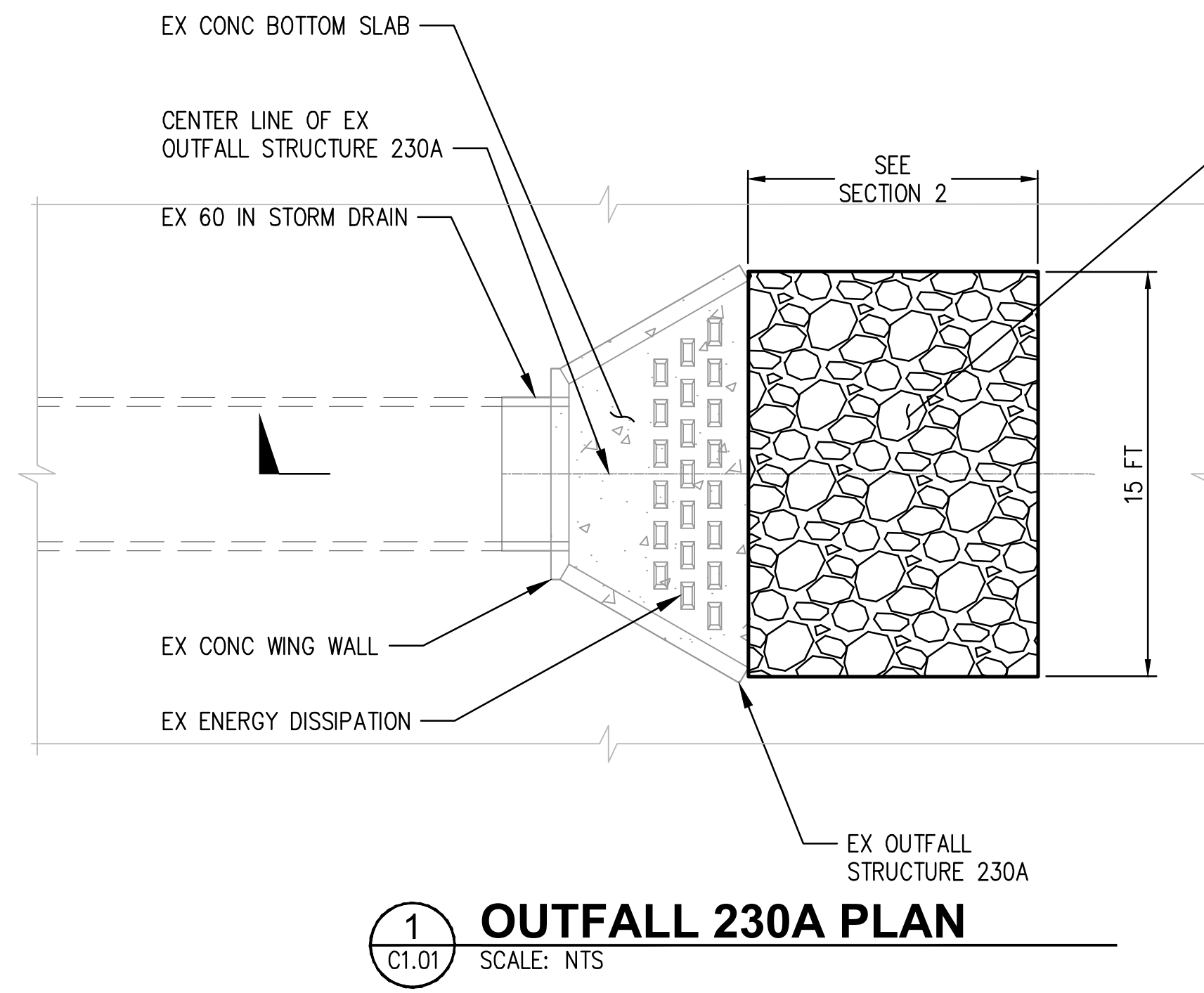
CITY OF TACOMA  
ENVIRONMENTAL SERVICES DEPARTMENT  
**FOSS SHORELINE RESTORATION - OUTFALL 230A REPAIR PROJECT**  
FOSS SHORELINE RESTORATION PLAN

SPEC. NO.	ES24-0056F
WBS NO.	ENV-03027-21
SHEET NO.	C1.01
SHEET	3 OF 4

BID SET

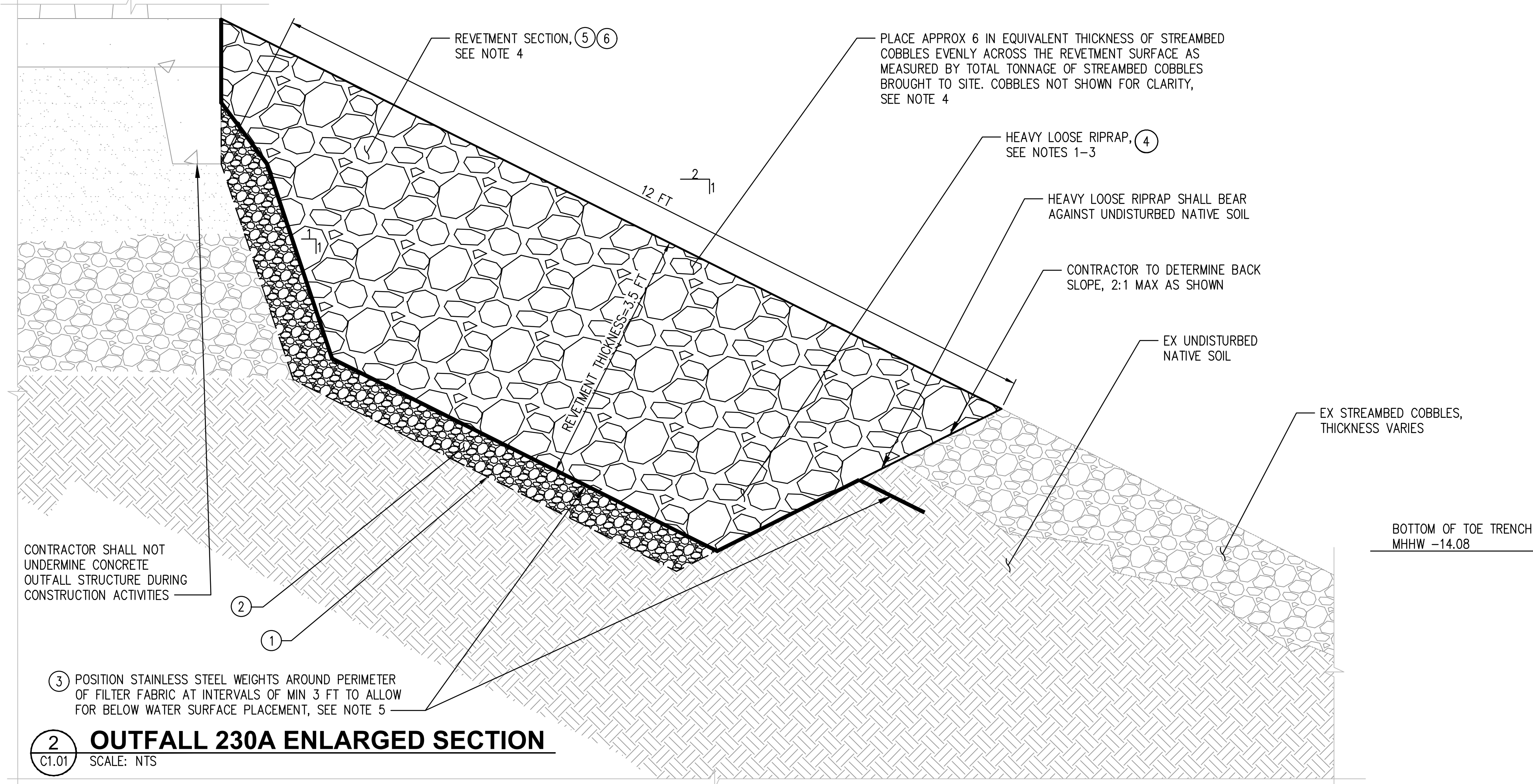


**A OUTFALL 230A SECTION**  
SCALE: NTS



**1 OUTFALL 230A PLAN**  
SCALE: NTS

- NOTES**
- 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.
  - 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.
  - THE USE OF RECYCLED MATERIALS IS NOT PERMITTED FOR THIS APPLICATION.
  - 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 WITH THE ENGINEER AND THE CITY OF TACOMA FOR FINAL VERIFICATION.
  - CONTRACTOR SHALL UNROLL FILTER FABRIC DOWNSLOPE, OVERLAPPING ADJACENT ROLLS A MINIMUM OF 3 INCHES.

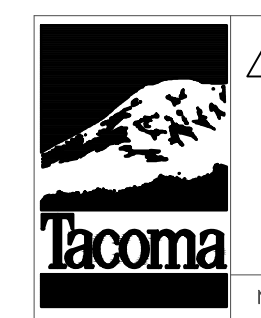


**2 OUTFALL 230A ENLARGED SECTION**  
SCALE: NTS

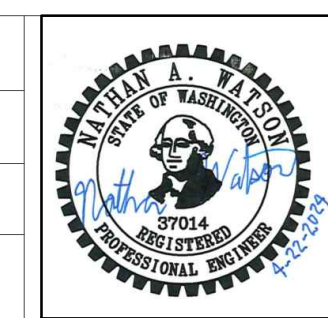
- CONSTRUCTION NOTES**
- LIMITS OF EXCAVATION
  - PLACE 6 IN MIN QUARRY SPALL FILTER LAYER, SEE SPECIFICATIONS.
  - PLACE FILTER FABRIC BETWEEN HEAVY LOOSE RIPRAP AND QUARRY SPALL FILTER SURFACE. FILTER FABRIC SHALL BE KEYED IN AT BOTTOM OF BANK, MINIMUM 12 IN.
  - START PLACEMENT OF HEAVY LOOSE RIPRAP FROM THE TOE WORKING UPWARDS TOWARDS TOP OF SLOPE.
  - REVETMENT FINAL GRADE SHALL MATCH EXISTING SIDE SLOPE OF 2:1.
  - REVETMENT THICKNESS SHALL BE 1.5 TIMES MEDIAN NOMINAL HEAVY LOOSE RIPRAP DIAMETER, SEE SPECIFICATIONS.



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BID SET - TITLE BLOCK		5/17/24	RT	FINAL CONSTRUCTION CHECKED	DATE	SCALE
BY	DESIGNED	5/17/2024	RT	SS	NTS	
DATE	DRAWN		RT	FIELD BOOK		
DRAWING NAME		C1.02_STORMWATER OUTFALL SECTION.DWG				



CITY OF TACOMA  
ENVIRONMENTAL SERVICES DEPARTMENT  
**FOSS SHORELINE RESTORATION - OUTFALL 230A REPAIR PROJECT**  
STORMWATER OUTFALL SECTION

SPEC. NO.	ES24-0056F
WBS NO.	
ENVIRONMENTAL SERVICES DEPARTMENT	
SHEET NO.	C1.02
SHEET	4 OF 4

BID SET



**REGION 10**  
SEATTLE, WA 98101

May 17, 2024

**CLEAN WATER ACT SECTION 404 ARAR MEMO: SUBSTANTIVE WATER QUALITY REQUIREMENTS FOR THE  
OUTFALL 230A SLOPE CAP REPAIR PROJECT**

**Introduction**

This Clean Water Act Section 404 Applicable or Relevant and Appropriate Requirements Memorandum (CWA 404 ARAR Memo) documents the United States Environmental Protection Agency's (EPA) determination that the in-water activities of the Outfall 230A Slope Cap Repair project meets the substantive requirements of the Clean Water Act Section 404 (CWA 404). A copy of this CWA 404 ARAR Memo and any future amendments will be placed in the Commencement Bay Nearshore/Tideflats Superfund Site files. In addition, copies of this original and any future amendments shall be kept on the job site and made readily available for reference by EPA, the contractor, and any other appropriate federal, tribal, state, and local inspectors.

The Outfall 230A Slope Cap Repair project will address erosion and repair the slope cap off the Outfall 230A apron. Outfall 230A is located in Thea Foss Waterway and within Remedial Area (RA) 8 of the Commencement Bay Nearshore and Tidal Flats Superfund Site. Outfall 230A and the surrounding outfall apron were constructed by the City of Tacoma in 2022 under Nationwide Permit 27 (NWP-2017-595-WRD).

Per the Thea Foss and Wheeler-Osgood Waterways Long-Term Monitoring Plan, regular low tide inspections of capped shoreline areas are performed to verify the physical integrity of slope caps, and to ensure underlying contaminated sediments remain isolated. During the most recent June 2023 low tide slope cap inspections, erosion of some of the cap material off the mouth of Outfall 230A was documented. It was observed that the 12-inch-thick layer of cobbles (2 to 6 inches in diameter) placed off the outfall apron installed in 2022 were no longer present, and geotextile on the northern side of the slope just below the outfall apron was exposed. A slope cap repair action is required as part of the long-term monitoring and maintenance program for the Thea Foss and Wheeler-Osgood Waterways.

**Project Description**

The repair at RA 8 consists of excavation and disposal of the existing cap material and underlying sediments, followed by placement of a quarry spall filter, geotextile, and heavy loose rip rap with round stream cobbles poured to fill the voids. The extent of the repair area is approximately 180 square feet at or just below 0 feet mean lower low water (MLLW). Work will be performed in low tide conditions but nearly all work will be below the water line. All staging of construction materials and access to the site will be performed on a barge. Details of the maintenance activities to be performed, as well as a design plan sheet, figures and photographs, and material specifications may be found in the Outfall 230A Slope Cap Repair Plan Memorandum ("Repair Plan Memo") (Floyd Snider 2024), which is incorporated here by reference. All maintenance activities have been coordinated with EPA RPM Carolyn Huynh, who also reviewed and approved the Repair Plan Memo.

### **Substantive Compliance with CWA Section 404(b)(1)**

The CWA Section 404(b)(1) Guidelines require that no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge, that meets the project purpose, which has less adverse impacts on the aquatic ecosystem. In this case, a no-action alternative would cause continued of the RA 8 slope cap and potential exposure of contaminated sediments and support the continued loss of habitat function caused by the erosion of the rounded stream cobbles placed for habitat enhancement. A repair in-kind action that follows the design of the originally installed outfall apron would address the acute erosion of the slope cap and the loss of habitat function but would not include an armor layer and therefore be subject to the same mode of failure need for repair. The Outfall 230A Slope Cap Repair project is the least environmentally damaging practicable alternative as it will repair the eroded slope cap to contain the underlying contaminated sediments, include an armor layer that will protect the slope cap from future erosion, and incorporate fish habitat enhancement features to maintain habitat functions.

The 1990 Memorandum of Agreement regarding Mitigation under CWA Section 404(b)(1) Guidelines between the EPA and the Department of Army established a three-part process, known as the mitigation sequence (avoid, minimize, and compensate), to help guide mitigation decisions and determine the type and level of mitigation required. The design of the Outfall 230A Slope Cap Repair project meets this substantive requirement of the CWA by having avoided and minimized impacts to the aquatic environment to the maximum extent practicable. Repairs at RA 8 are necessary to prevent further exposure of shoreline contaminated soil and slag materials sequestered on-site, and to prevent additional erosion of the adjacent shoreline cap by Outfall 230A. The original design of the outfall apron did not include an armoring layer which led to erosion of the slope cap and the need for a repair action. The Outfall 230A Slope Cap Repair project design includes an armor layer that will protect the slope cap while maintaining the habitat enhancement requirements of the original permit. Since the project design avoids and minimizes impacts without unavoidable deleterious impacts to aquatic resources, no mitigation is required for this action.

Subpart G of the CWA Section 404(b)(1) Guidelines addresses the evaluation and testing of dredged or fill material that may be discharged into a water of the United States. Excavation of the existing cap material and underlying sediment are necessary to facilitate the placement of heavy loose riprap and streambed cobbles. The excavated materials will be segregated from new fill material and disposed of at an upland waste facility approved by the City of Tacoma and EPA. Characterization of the excavated materials is not required for compliance with CWA Section 404, however samples of the eroded slope cap surface have been collected and are being analyzed for Thea Foss sediment contaminants of concern (City of Tacoma 2006, 2020) and additional analytes used for waste profiling in order to identify an appropriate upland disposal option. All fill material to be placed in-water as part of the slope cap repair will be clean of contaminants.

The Outfall 230A Slope Cap Repair project incorporates a list of best management practices to protect water quality (Repair Plan Memo), will observe the bull trout and chinook salmon in-water work window (July 15 – February 15), and will follow all other requirements of the Water Quality Monitoring and Protection Plan (Floyd Snider 2024). Given the project's short duration and nature, the small extent of the project footprint, as well as performance of intertidal work during low tide to the extent possible, no effects are anticipated to ESA-listed species, including southern-resident killer whales, bull trout and juvenile chinook salmon. The proposed project is the least environmentally damaging, practicable alternative for accomplishing the required repairs, while protecting adjacent shoreline capped areas.



In summary, the Outfall 230A Slope Cap Repair project substantively complies with the 404 ARAR. Discharges will not cause or contribute to violations of water quality standards or toxic effluent standards, jeopardize an endangered or threatened species, destroy or adversely modify critical habitat, or impact a protected marine sanctuary. There will be no discharges resulting in significant degradation to waters of the United States. The maintenance work will be accomplished during low tide to the maximum extent possible and entirely within the existing armored shoreline footprint. The work will prevent further exposure of contaminated soil and slag materials and prevent further top of bank erosion while maintaining fish habitat features.