



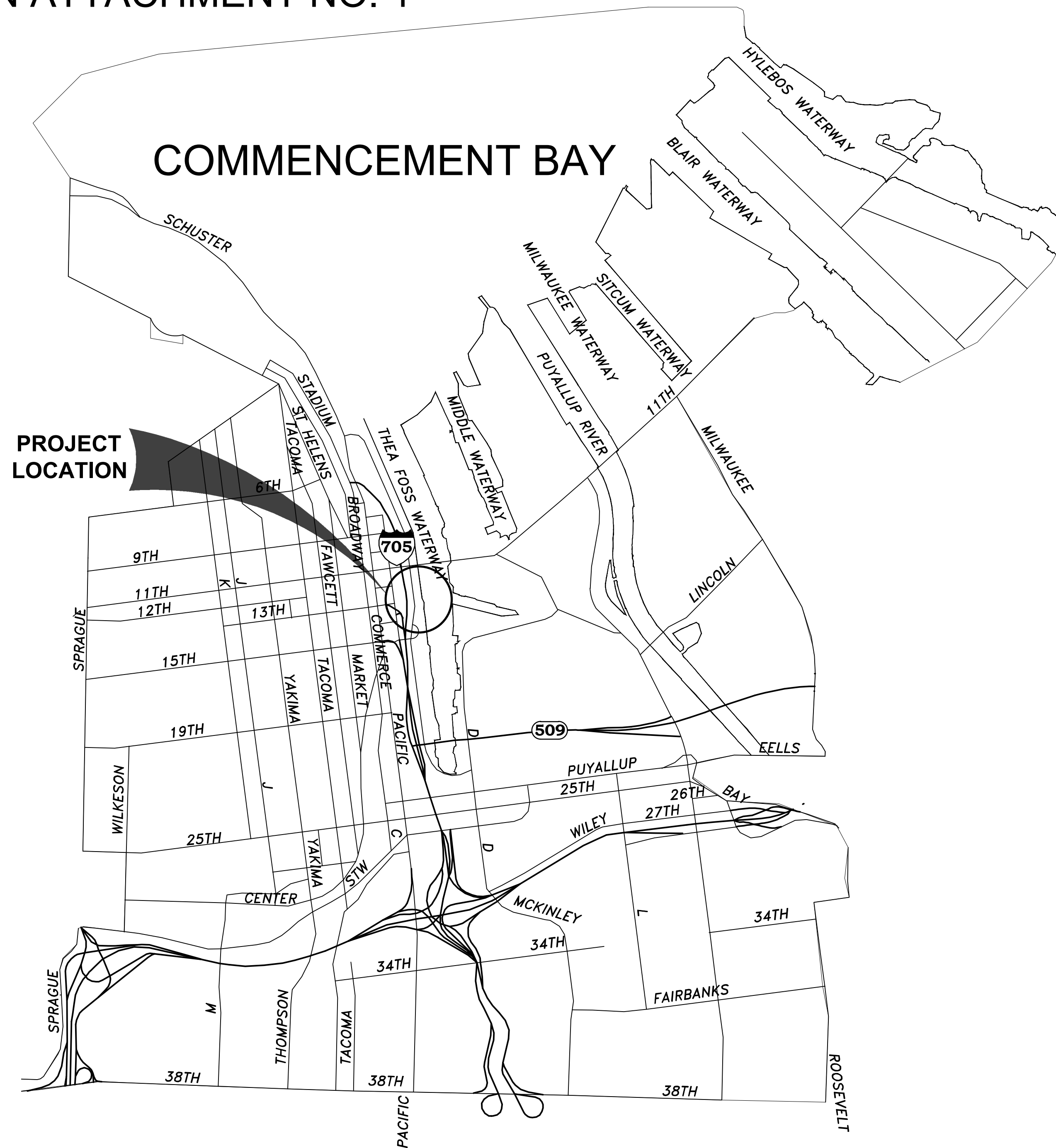
# FOSS SHORELINE RESTORATION - OUTFALL 230A REPAIR PROJECT

TACOMA, WASHINGTON  
PROJECT NO: 2400003  
MAINTENANCE AND REPAIR PLAN ATTACHMENT NO. 1

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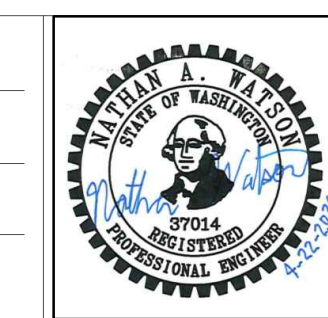
**VICINITY MAP**  
SCALE: NTS



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NO	REVISION	DATE	APPD	FINAL CONSTRUCTION CHECKED	DATE	SCALE
				BY	04/22/2024	NTS
				DATE		
				FIELD BOOKS		
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				DRAWING NAME		
				G1.00_TITLE SHEET.DWG		



CITY OF TACOMA  
PUBLIC WORKS 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

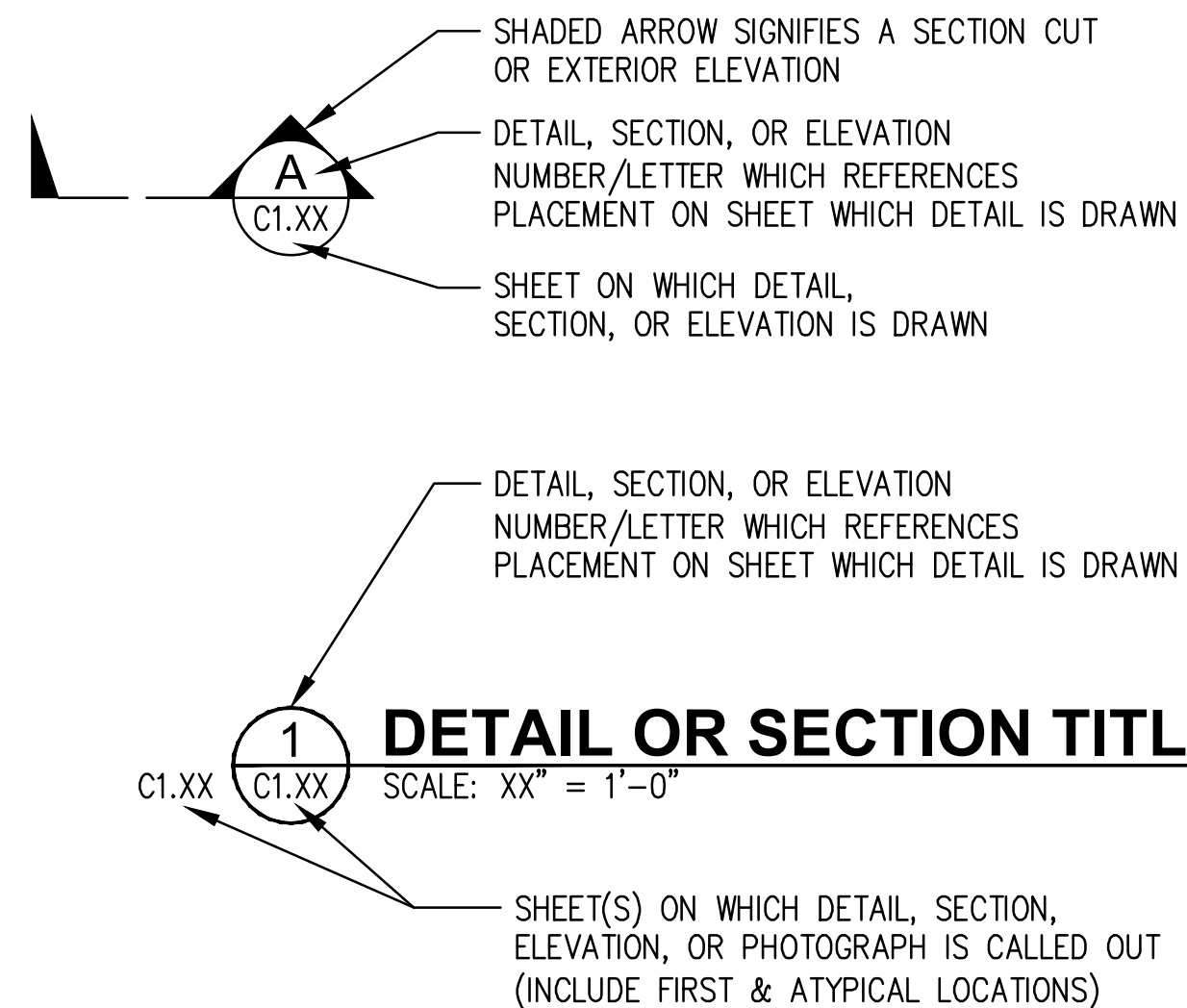
**ABBREVIATIONS:**

∅	DIA
&	AND
±	APPROXIMATELY
C	CENTERLINE
=	EQUALS
'	FOOT
#	NUMBER
%	PERCENT
APPROX	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
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.

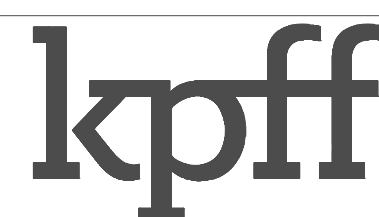


**LEGEND:**

	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

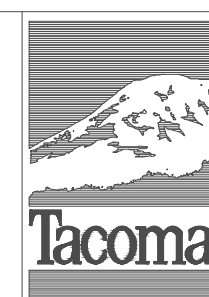
**LEGEND (CONTINUED):**

	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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NO

R E V I S I O N

DATE

APPD

FINAL CONSTRUCTION CHECKED

DATE 04/22/2024

SCALE NTS

BY

DESIGNED RT

CHECKED SS

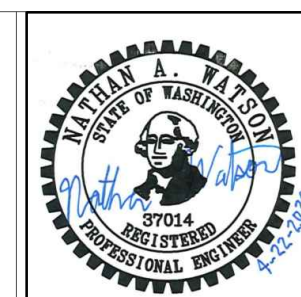
DATE

DRAWN RT

FIELD BOOKS

DRAWING NAME

G1.01 LEGEND, ABBREVIATIONS, AND GENERAL NOTES.DWG



CITY OF TACOMA  
PUBLIC WORKS DEPARTMENT

FOSS SHORELINE RESTORATION - OUTFALL 230A REPAIR PROJECT

LEGEND, ABBREVIATIONS,  
AND GENERAL NOTES

SPEC. NO. ES24-0056F

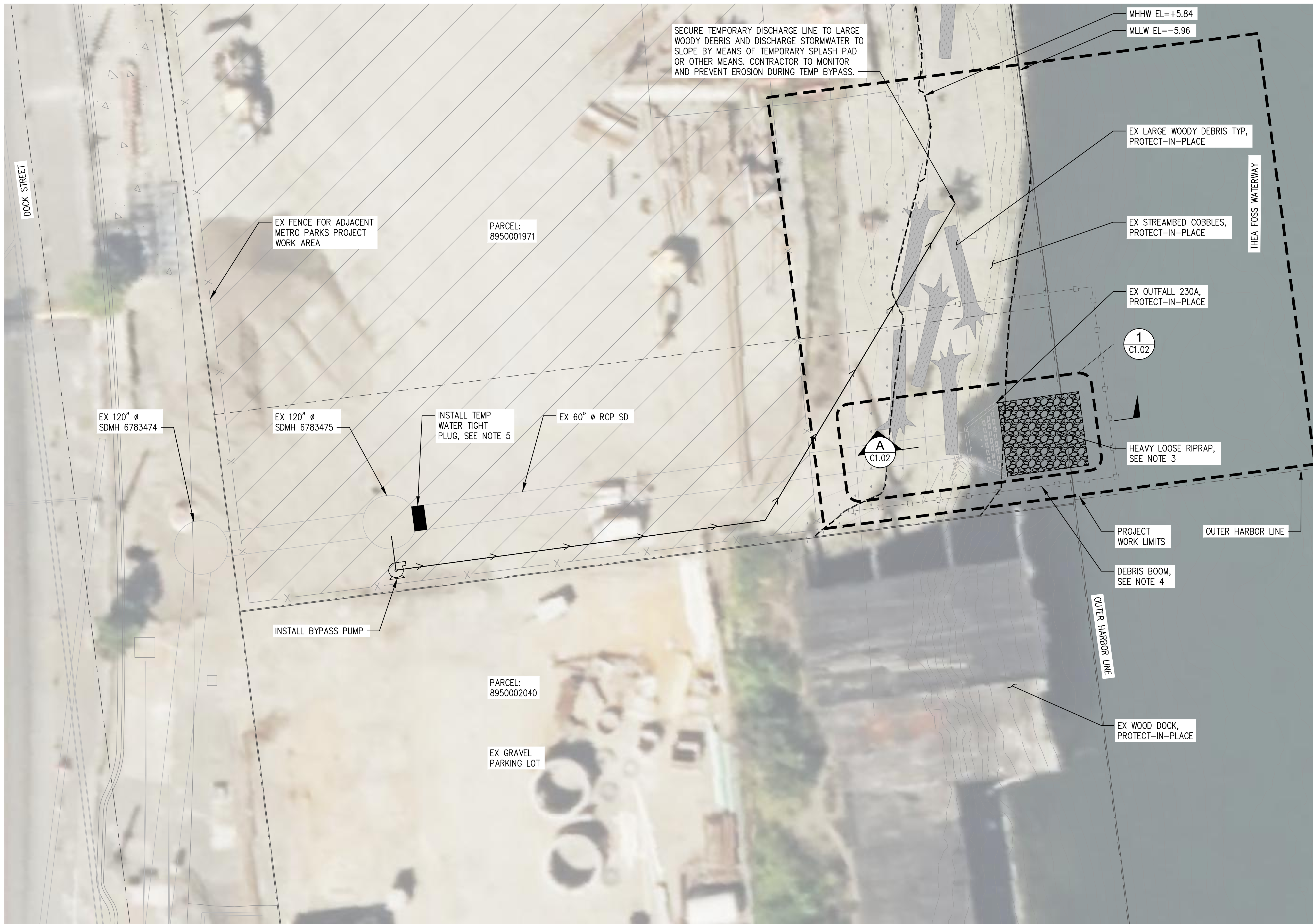
WBS NO.

ENV-03027-21

SHEET NO. G1.01

SHEET 2 OF 4

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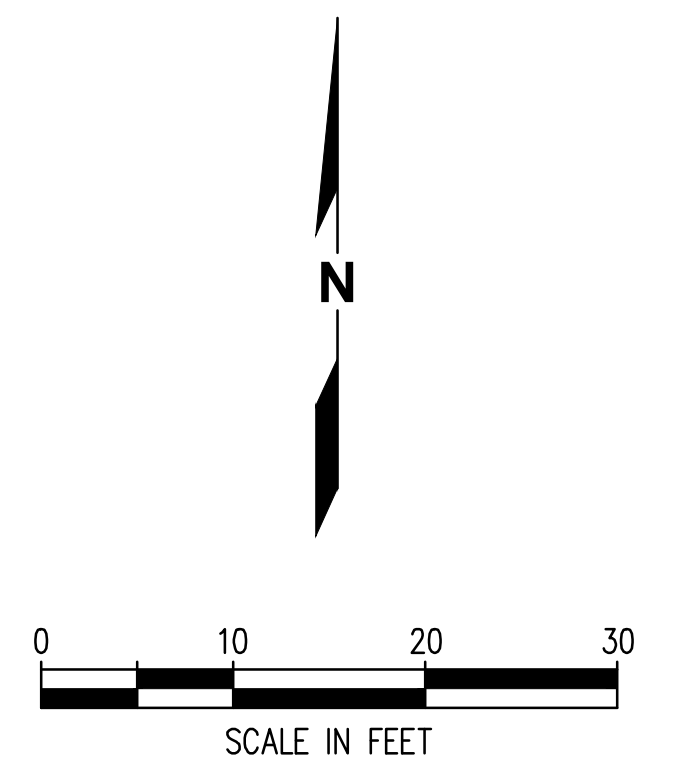


**NOTES**

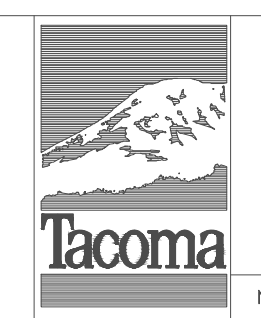
1. TO MAINTAIN MINIMUM PERFORMANCE STANDARDS, CONTRACTOR SHALL REMOVE ANY SEDIMENT FROM THE EXISTING OUTFALL STRUCTURE IF THE ACCUMULATED SEDIMENT EXCEEDS 10% OF THE DESIGN DEPTH.
2. CONTRACTOR SHALL COORDINATE WORK WITH OTHER ONGOING CONSTRUCTION NEAR OUTFALL 230A AND ADJACENT AREAS.
3. FOR ALL EARTHWORK 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 A  
C1.02

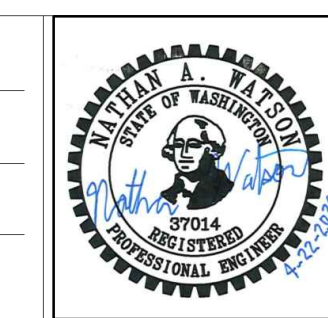


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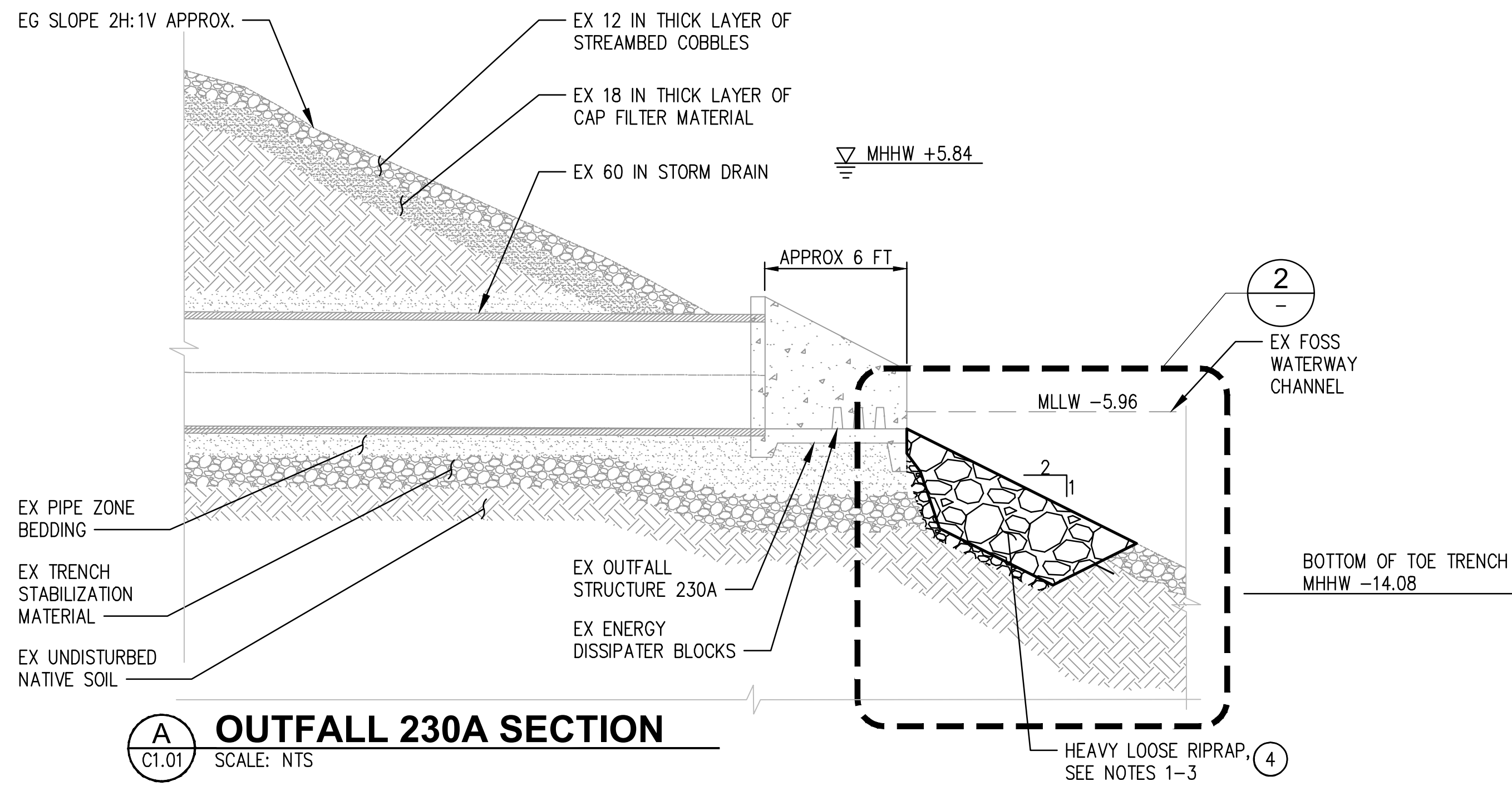
FINAL CONSTRUCTION CHECKED	DATE	SCALE
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FIELD BOOKS	DRAWN	
	RT	
	DRAWING NAME	
	C1.01_FOSS SHORELINE RESTORATION PLANDING	



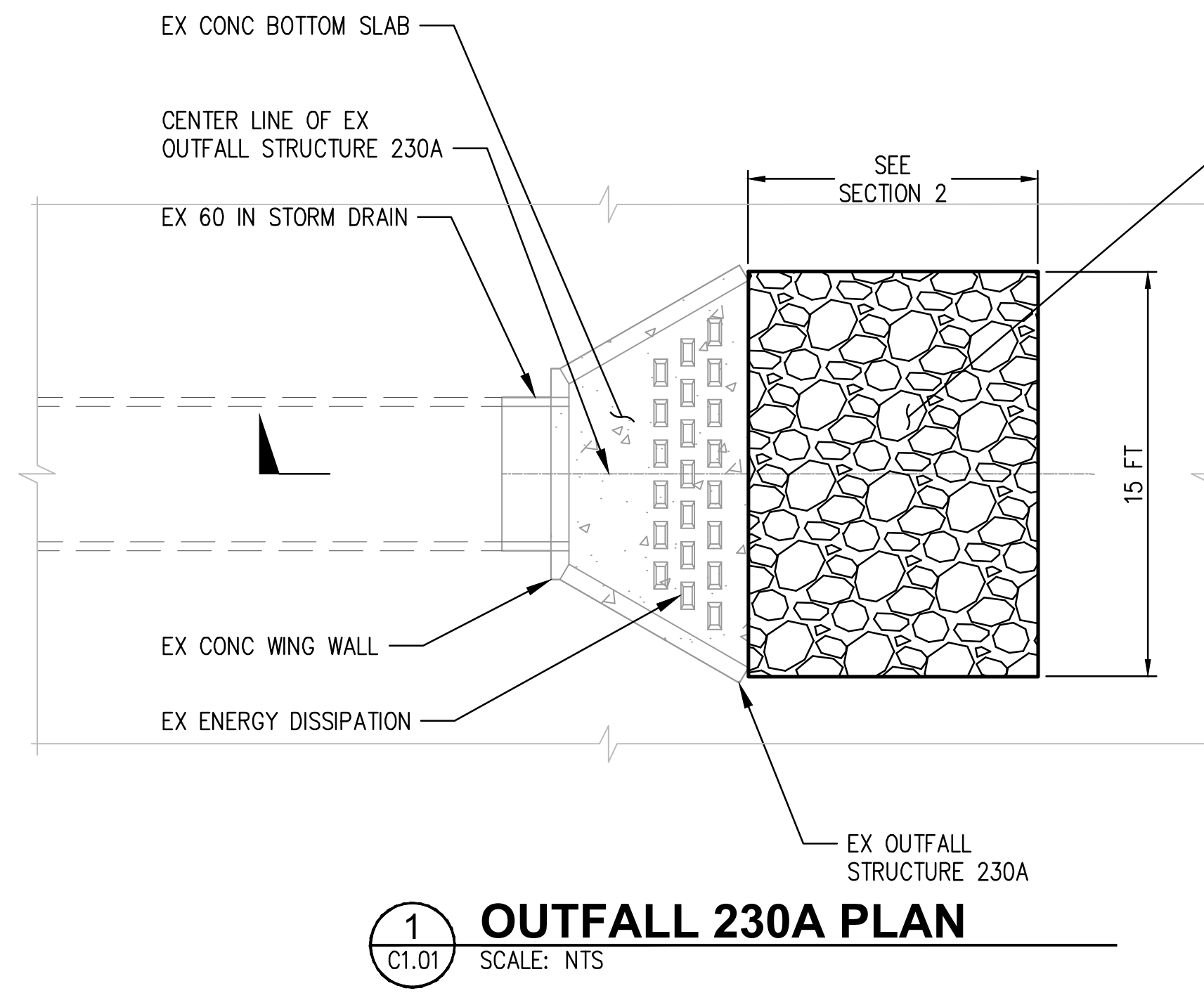
CITY OF TACOMA  
PUBLIC WORKS DEPARTMENT  
**FOSS SHORELINE RESTORATION - OUTFALL 230A REPAIR PROJECT**  
FOSS SHORELINE RESTORATION PLAN

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

BID SET

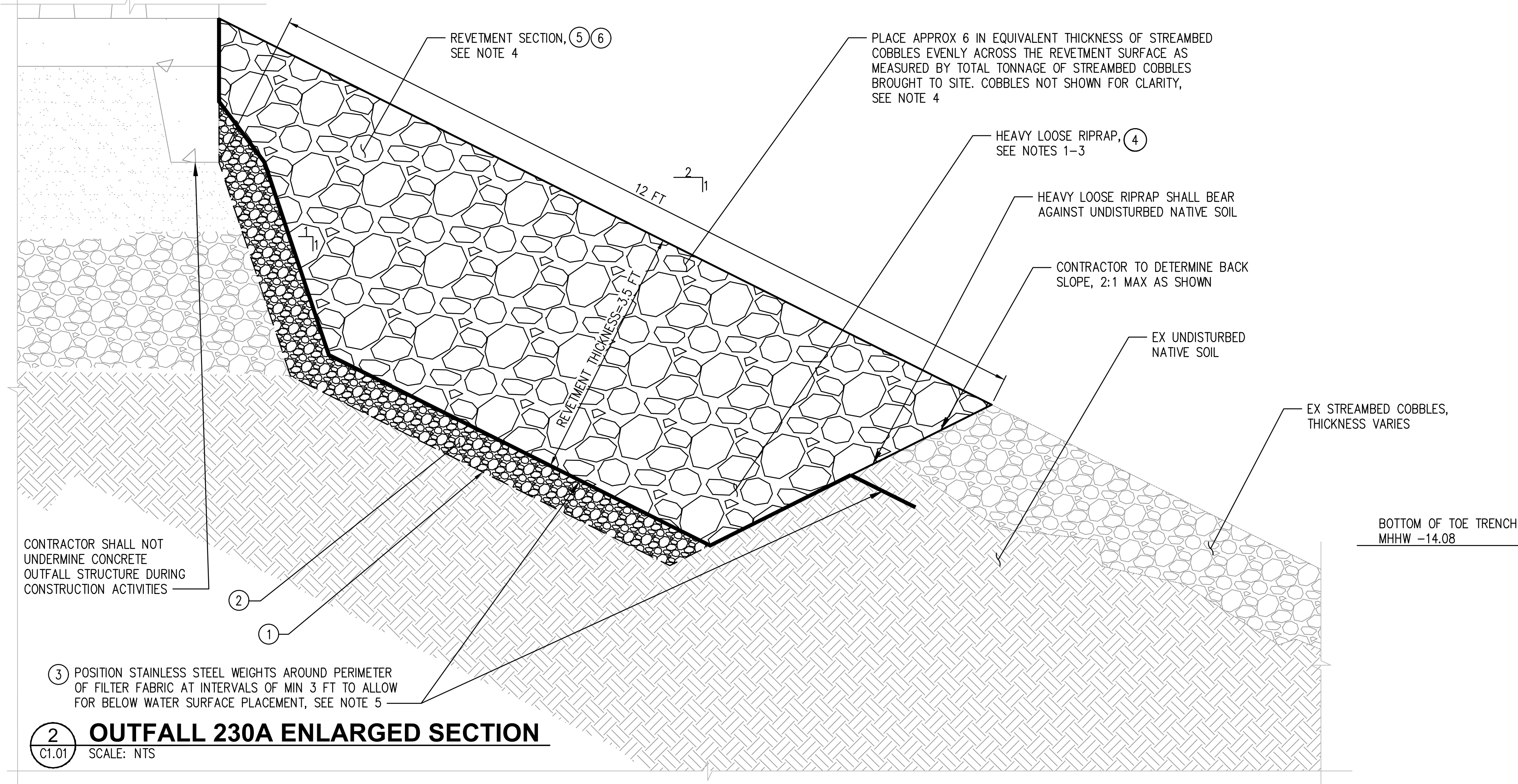


**A** **OUTFALL 230A SECTION**  
C1.01 SCALE: NTS



**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 WITH THE ENGINEER AND THE CITY OF TACOMA FOR FINAL VERIFICATION.
  5. CONTRACTOR SHALL UNROLL FILTER FABRIC DOWNSLOPE, OVERLAPPING ADJACENT ROLLS A MINIMUM OF 3 INCHES.



**2** **OUTFALL 230A ENLARGED SECTION**  
C1.01 SCALE: NTS

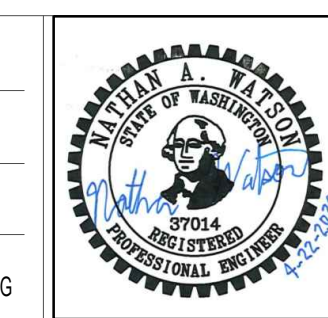
- CONSTRUCTION NOTES**
1. LIMITS OF EXCAVATION
  2. PLACE 6 IN MIN QUARRY SPALL FILTER LAYER, SEE SPECIFICATIONS.
  3. PLACE FILTER FABRIC BETWEEN HEAVY LOOSE RIPRAP AND QUARRY SPALL FILTER SURFACE. FILTER FABRIC SHALL BE KEYED IN AT BOTTOM OF BANK, MINIMUM 12 IN.
  4. START PLACEMENT OF HEAVY LOOSE 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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				SS		
				RT		
				RT		
				DRAWING NAME		
				C1.02_STORMWATER OUTFALL SECTION.DWG		



CITY OF TACOMA  
PUBLIC WORKS DEPARTMENT  
FOSS SHORELINE RESTORATION - OUTFALL 230A REPAIR PROJECT  
STORMWATER OUTFALL SECTION

SHEET NO.	C1.02
SHEET	4 OF 4
ENVIRONMENTAL CONTROL NO.	ENV-03027-21
SPEC. NO.	ES24-0056F

BID SET