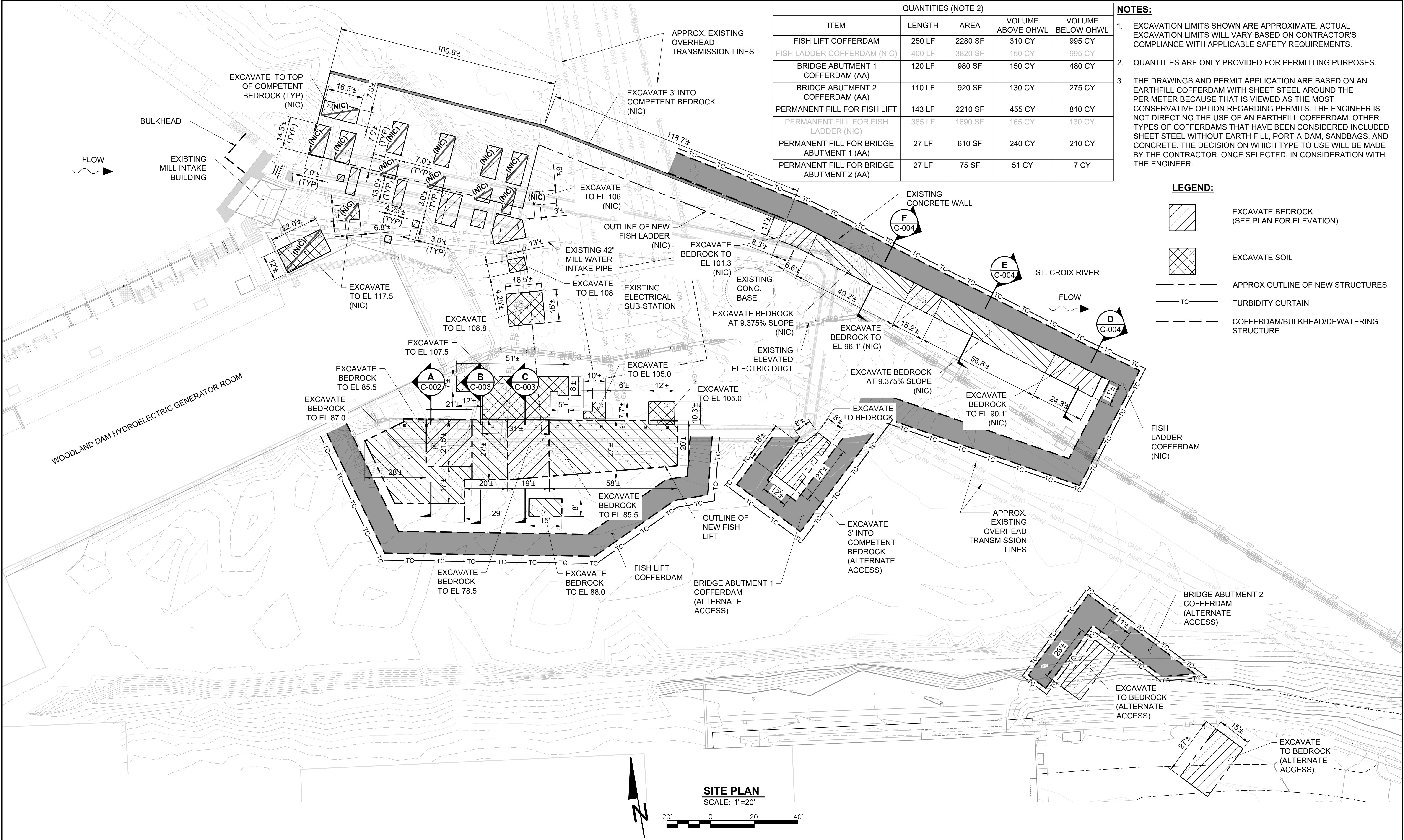
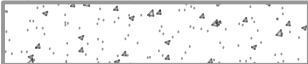


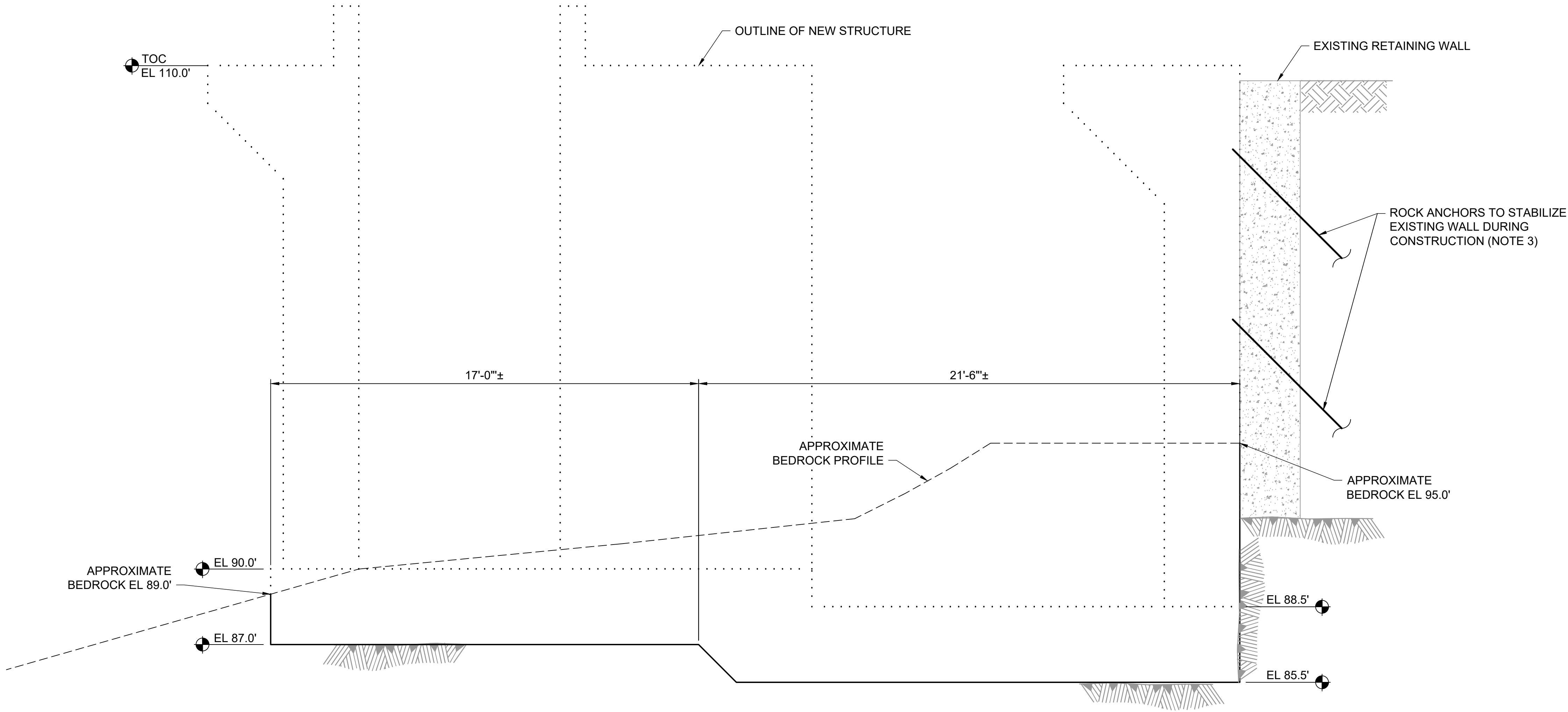


- NOTES:**
- 1. EXCAVATION LIMITS SHOWN ARE APPROXIMATE. ACTUAL EXCAVATION LIMITS WILL VARY BASED ON CONTRACTOR'S COMPLIANCE WITH APPLICABLE SAFETY REQUIREMENTS.
 - 2. BOTTOM OF EXISTING WALL IS UNKNOWN. INSTALL ROCK ANCHORS FOR STABILITY OF EXISTING RETAINING WALL DURING CONSTRUCTION.
 - 3. CONTRACTOR SHALL DESIGN POST-TENSION ROCK ANCHORS OR OTHER MEASURES TO KEEP EXISTING RETAINING WALL IN PLACE DURING ROCK EXCAVATION FOR THE NEW FISH LIFT FLUME.

LEGEND:

 EXISTING CONCRETE

 BEDROCK



A
C-001 **EXCAVATION SECTION AT FISH LIFT**
SCALE: 3/8"=1'-0"
0 2' 4'

LEGEND:

EXISTING CONCRETE

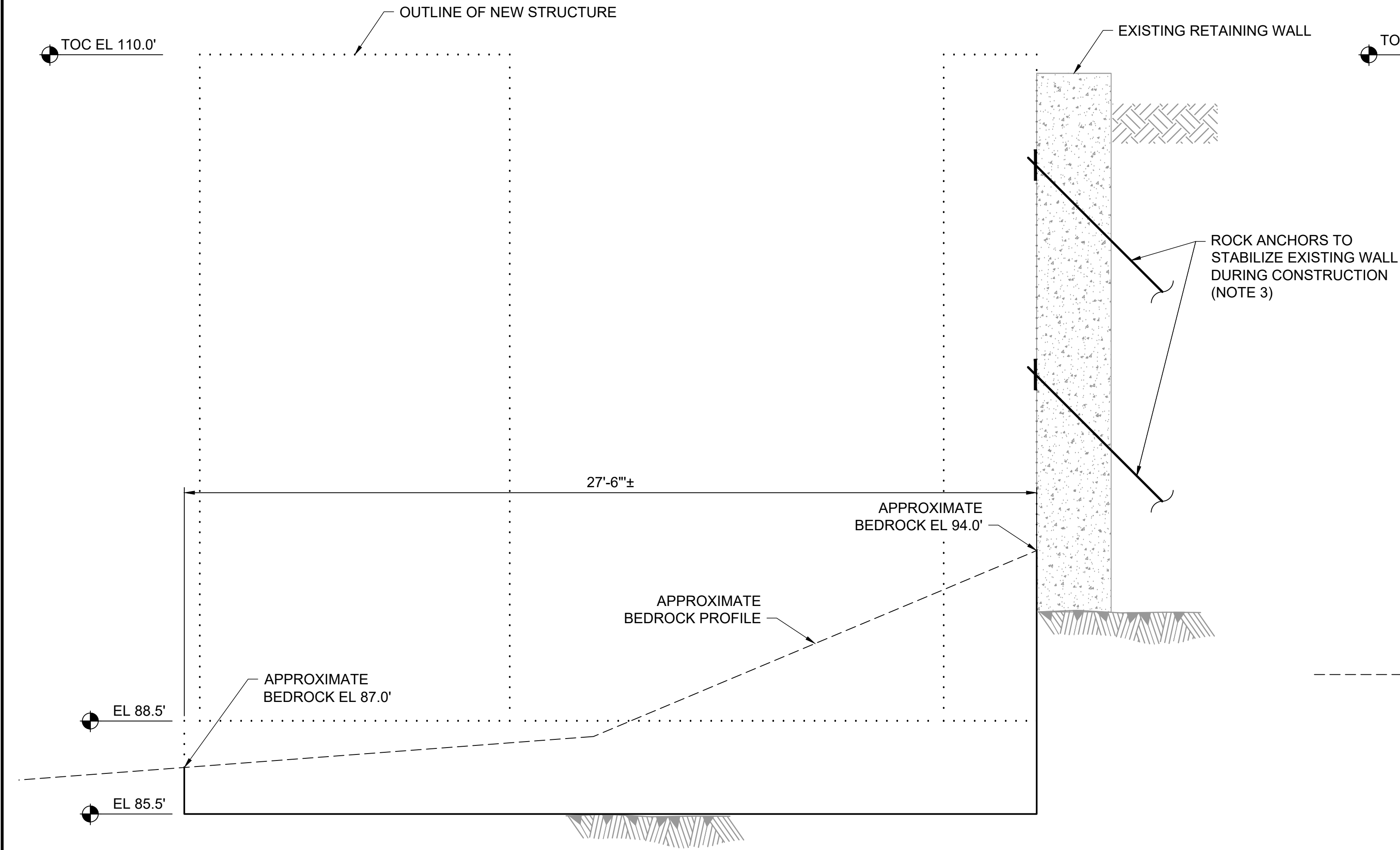
BEDROCK

- NOTES:**
1.

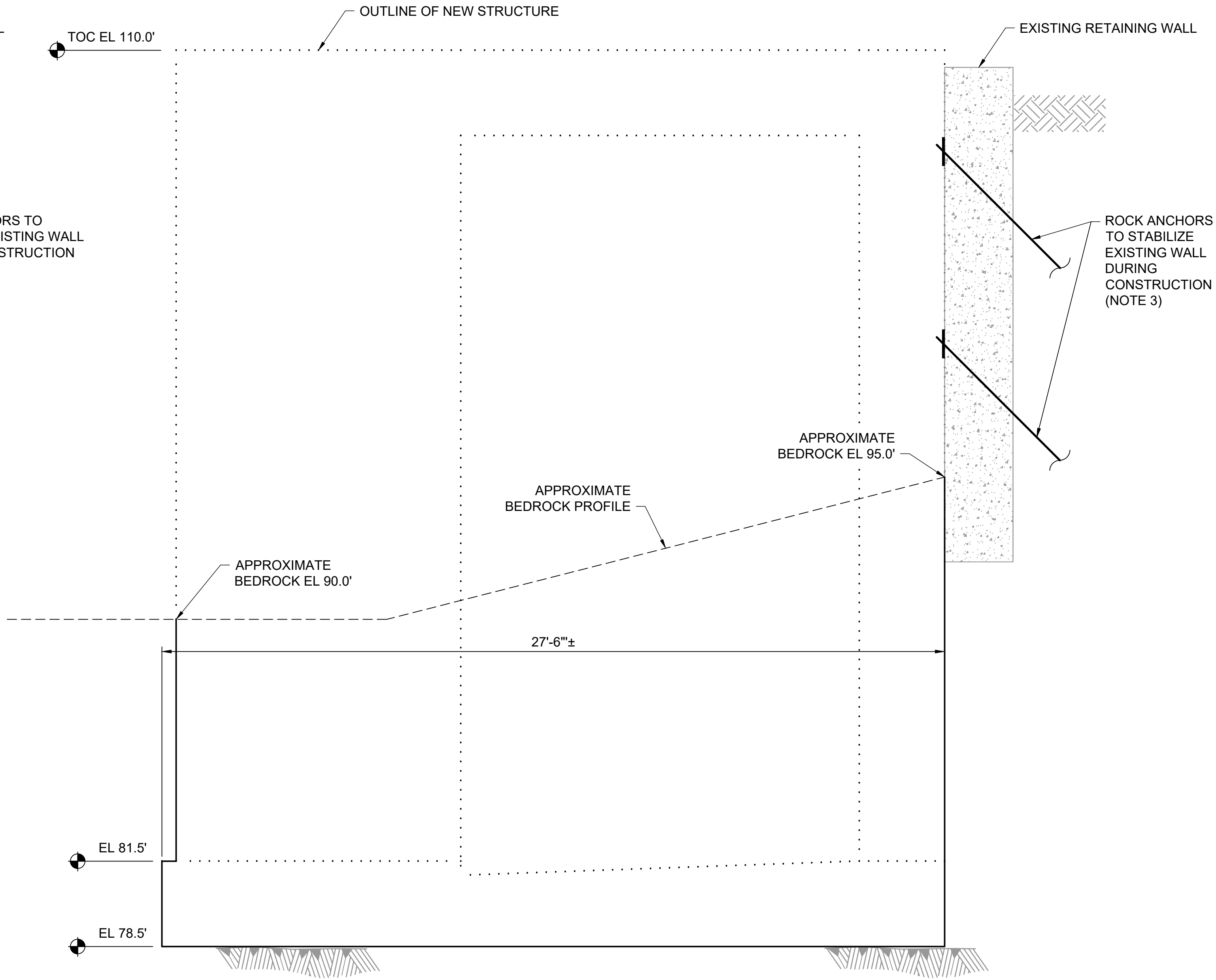
EXCAVATION LIMITS SHOWN ARE APPROXIMATE. ACTUAL EXCAVATION LIMITS WILL VARY BASED ON CONTRACTOR'S COMPLIANCE WITH APPLICABLE SAFETY REQUIREMENTS.
2.

BOTTOM OF EXISTING WALL IS UNKNOWN. INSTALL ROCK ANCHORS FOR STABILITY OF EXISTING RETAINING WALL DURING CONSTRUCTION.
3.

CONTRACTOR SHALL DESIGN POST-TENSION ROCK ANCHORS OR OTHER MEASURES TO KEEP EXISTING RETAINING WALL IN PLACE DURING ROCK EXCAVATION FOR THE NEW FISH LIFT FLUME.



B EXCAVATION SECTION AT FISH LIFT
C-001 SCALE: 3/8"=1'-0"
0 2' 4'

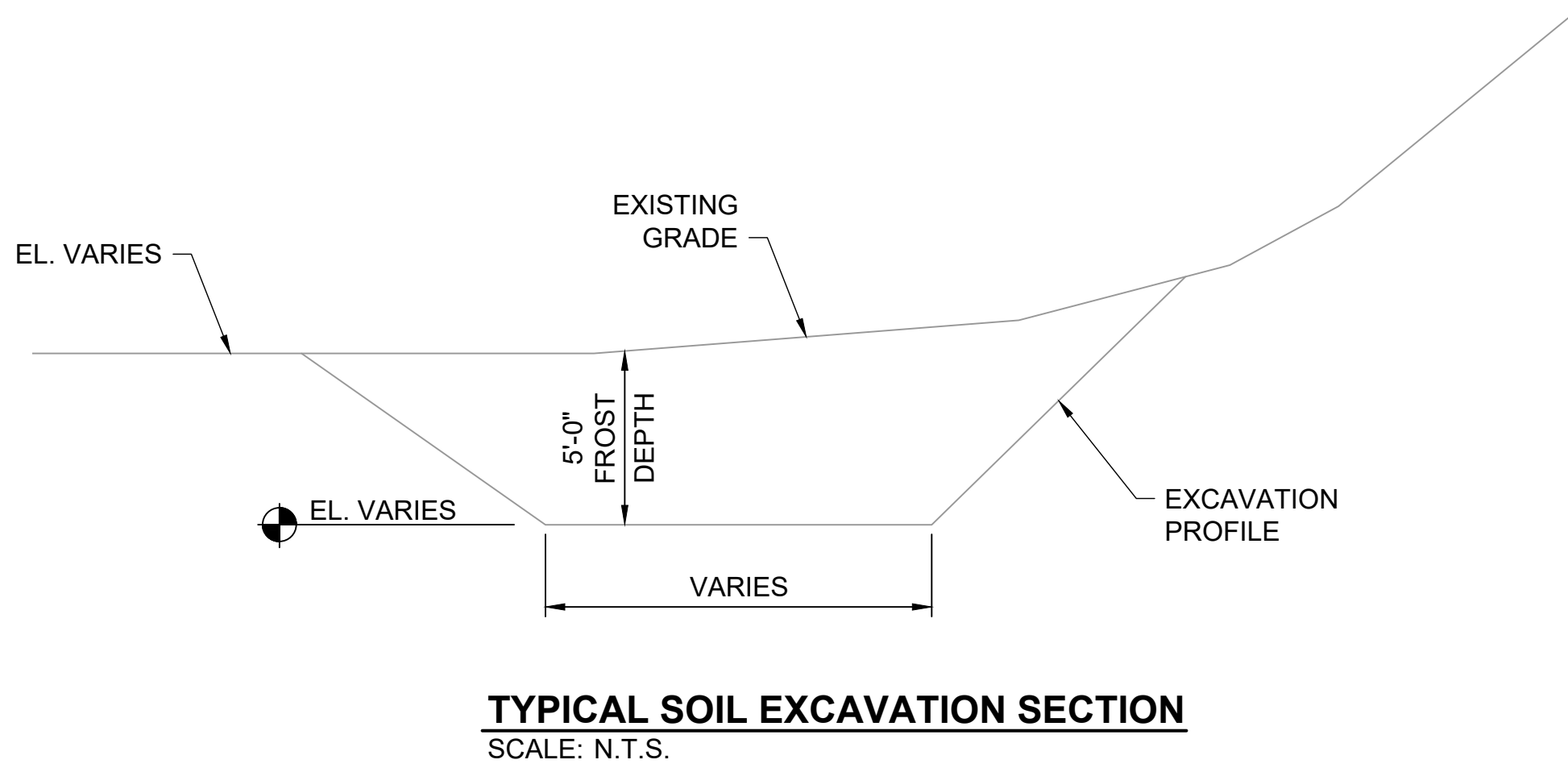
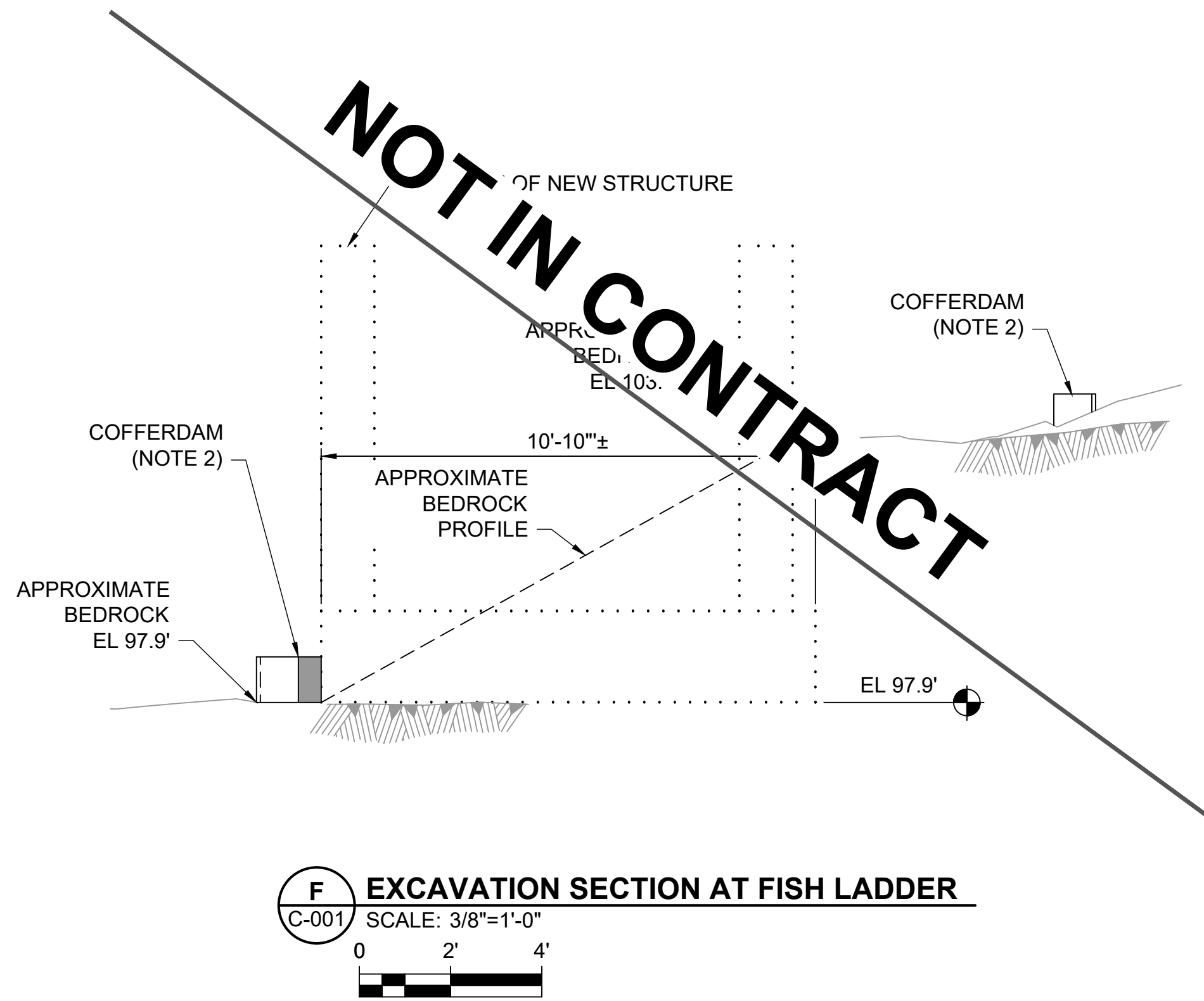
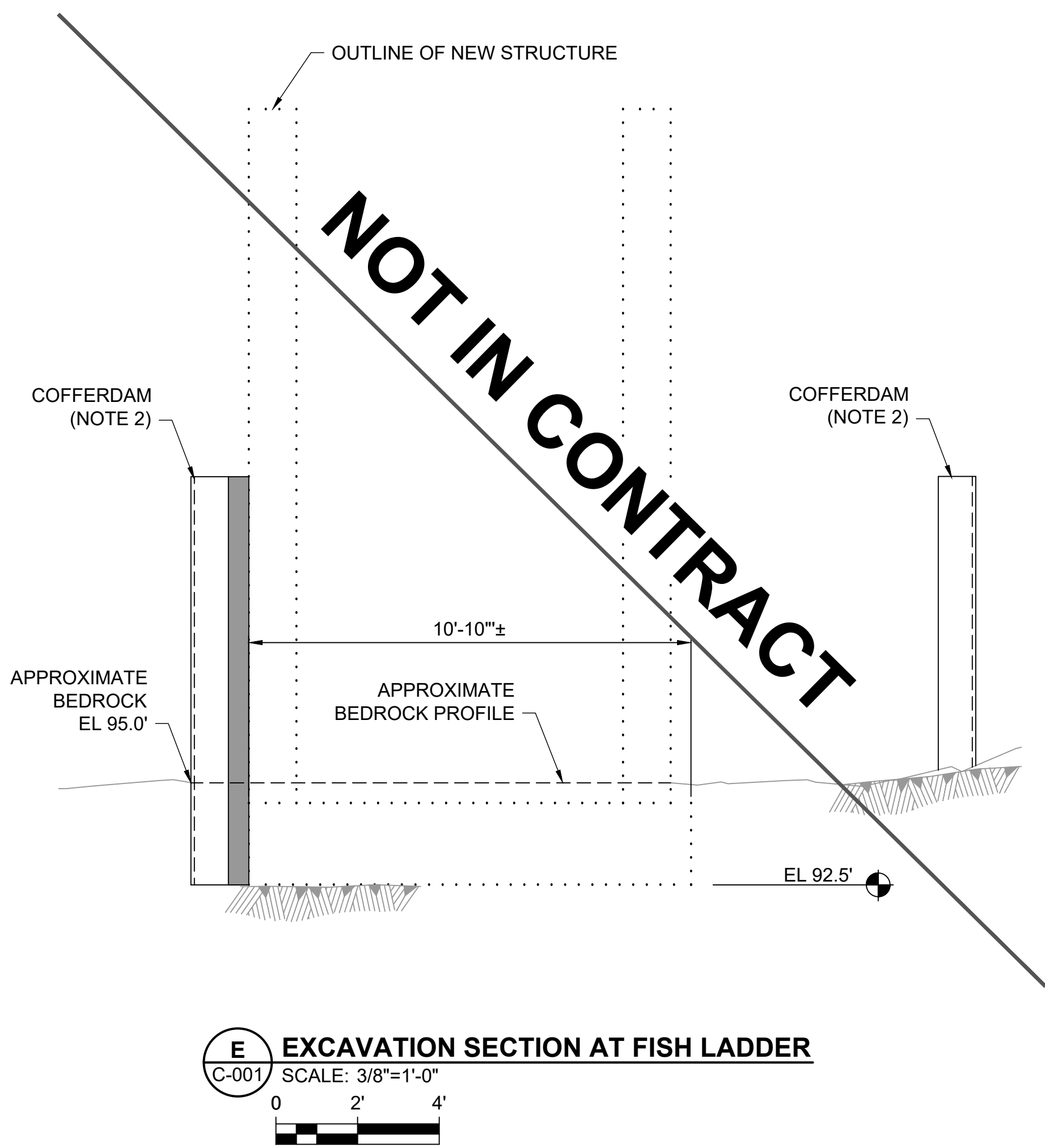
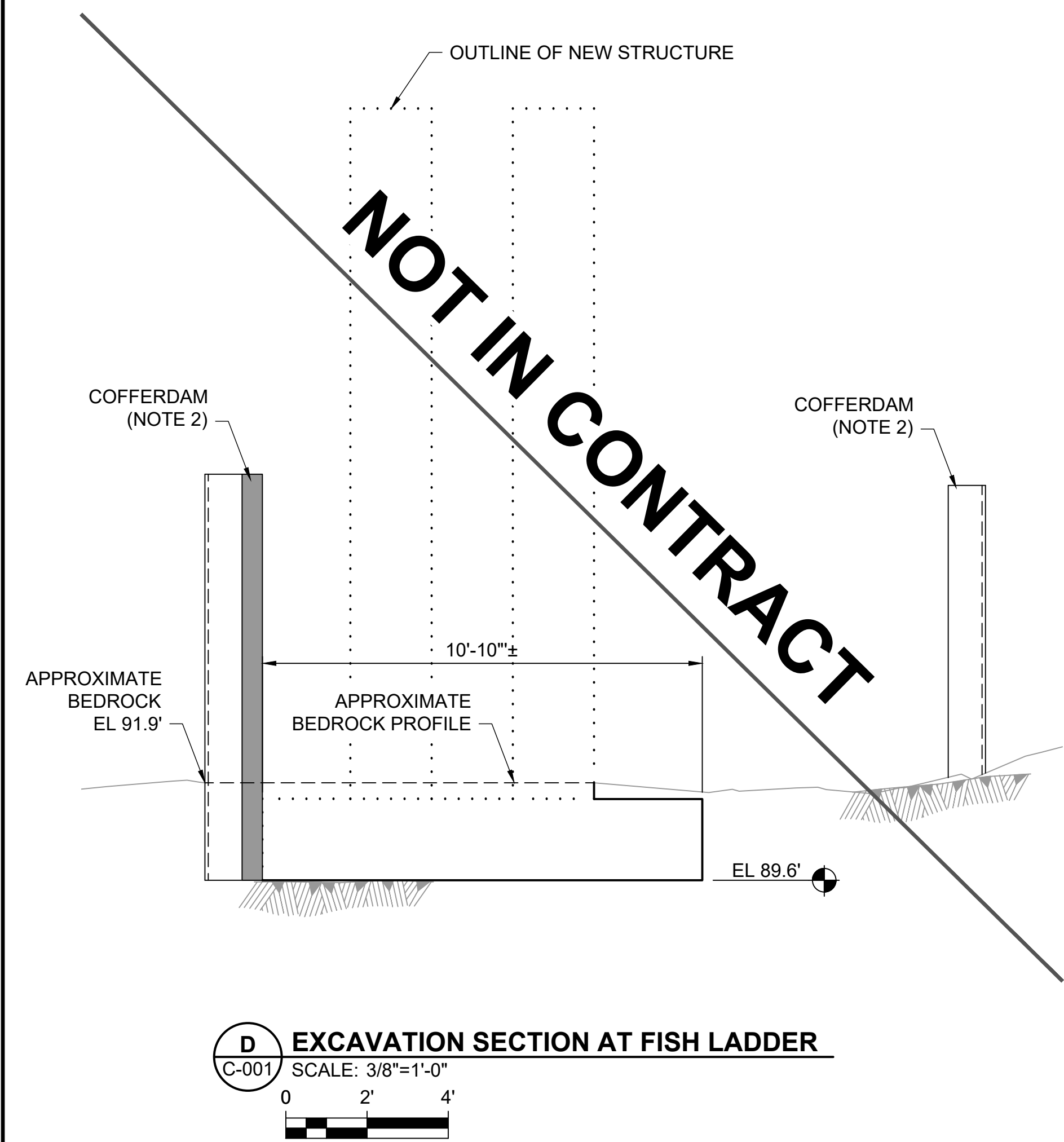


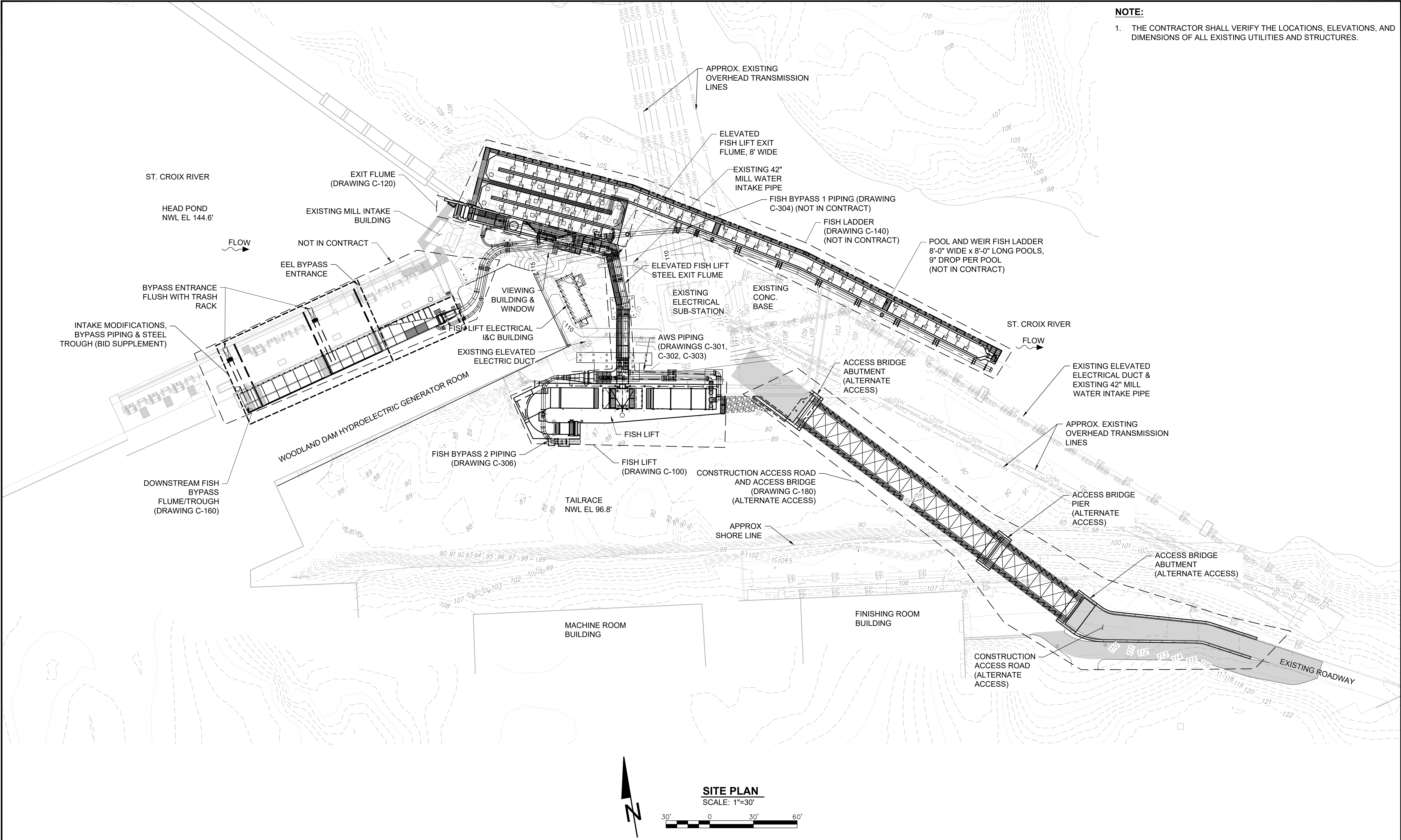
C EXCAVATION SECTION AT FISH LIFT
C-001 SCALE: 3/8"=1'-0"
0 2' 4'

- NOTES:**
- EXCAVATION LIMITS SHOWN ARE APPROXIMATE. ACTUAL EXCAVATION LIMITS WILL VARY BASED ON CONTRACTOR'S COMPLIANCE WITH APPLICABLE SAFETY REQUIREMENTS.
 - COFFERDAMS PLACEMENT AND DESIGN ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

LEGEND:

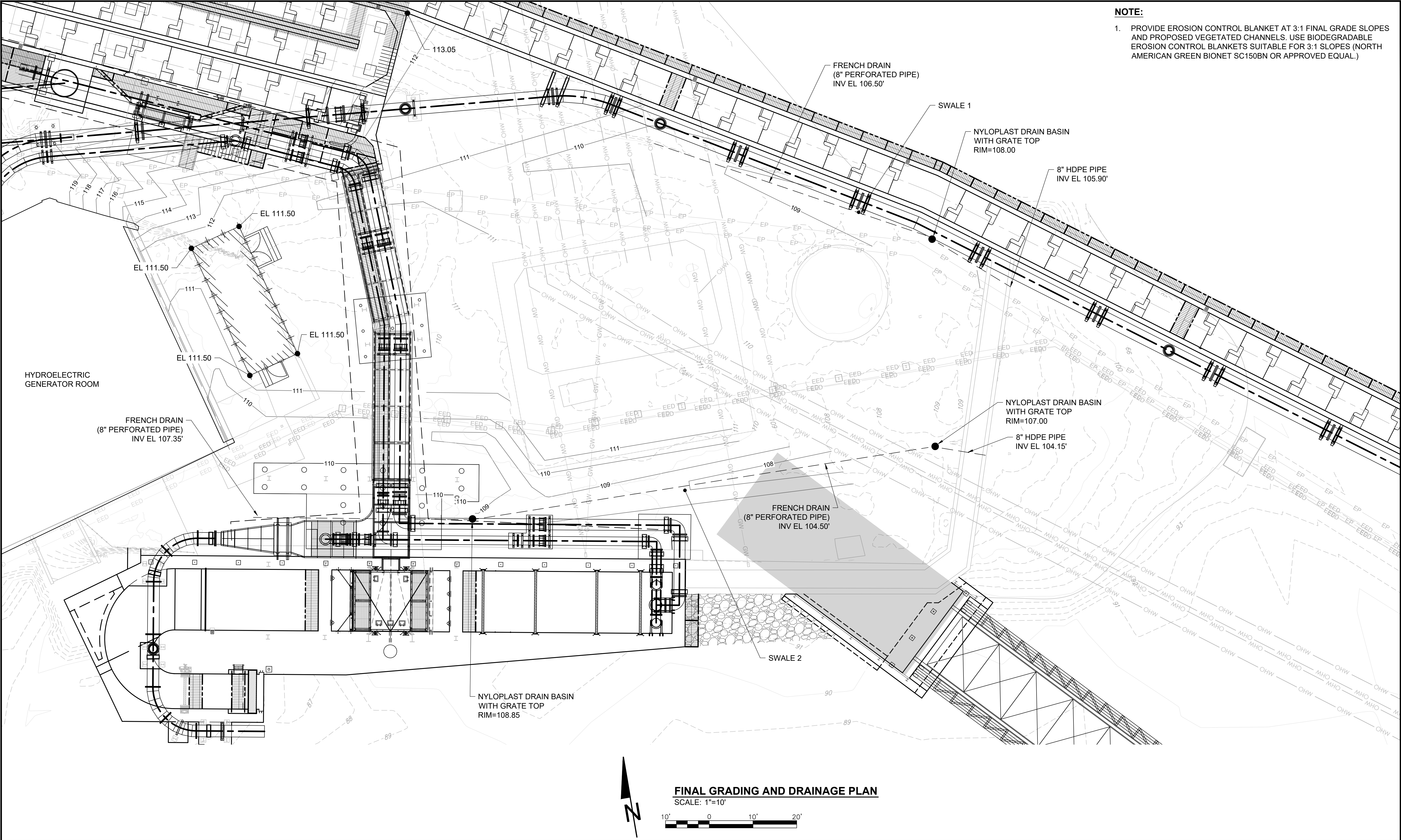
 BEDROCK



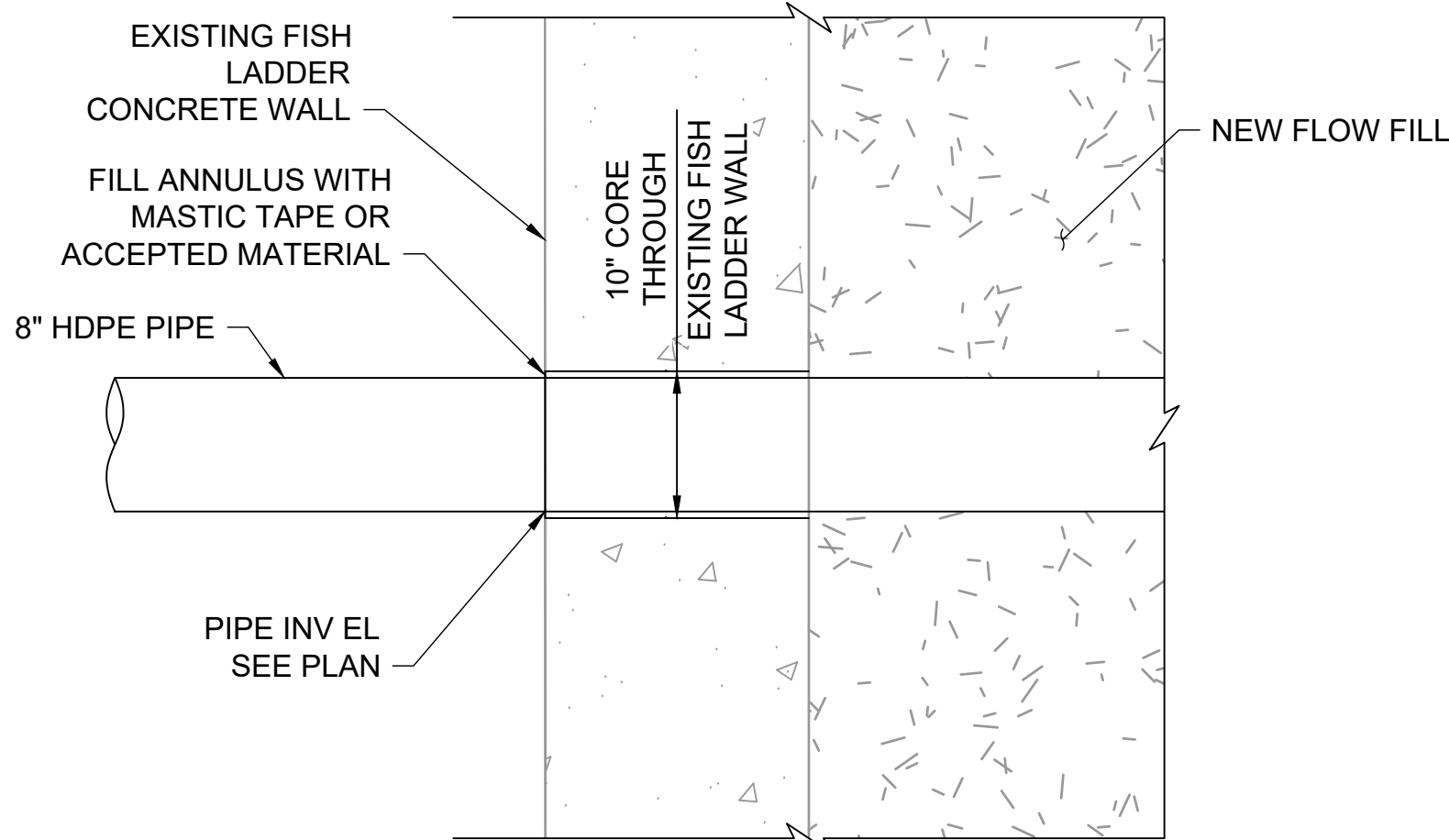


NOTE:

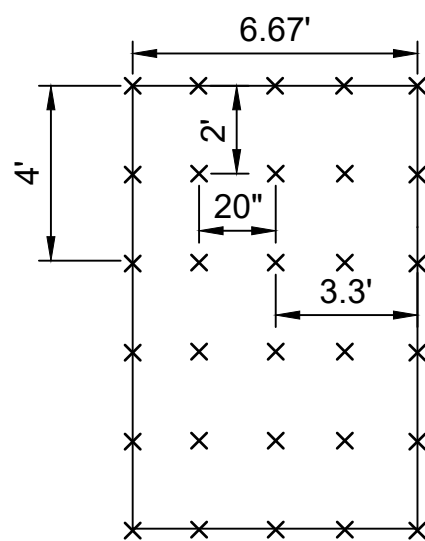
1. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES AND STRUCTURES.



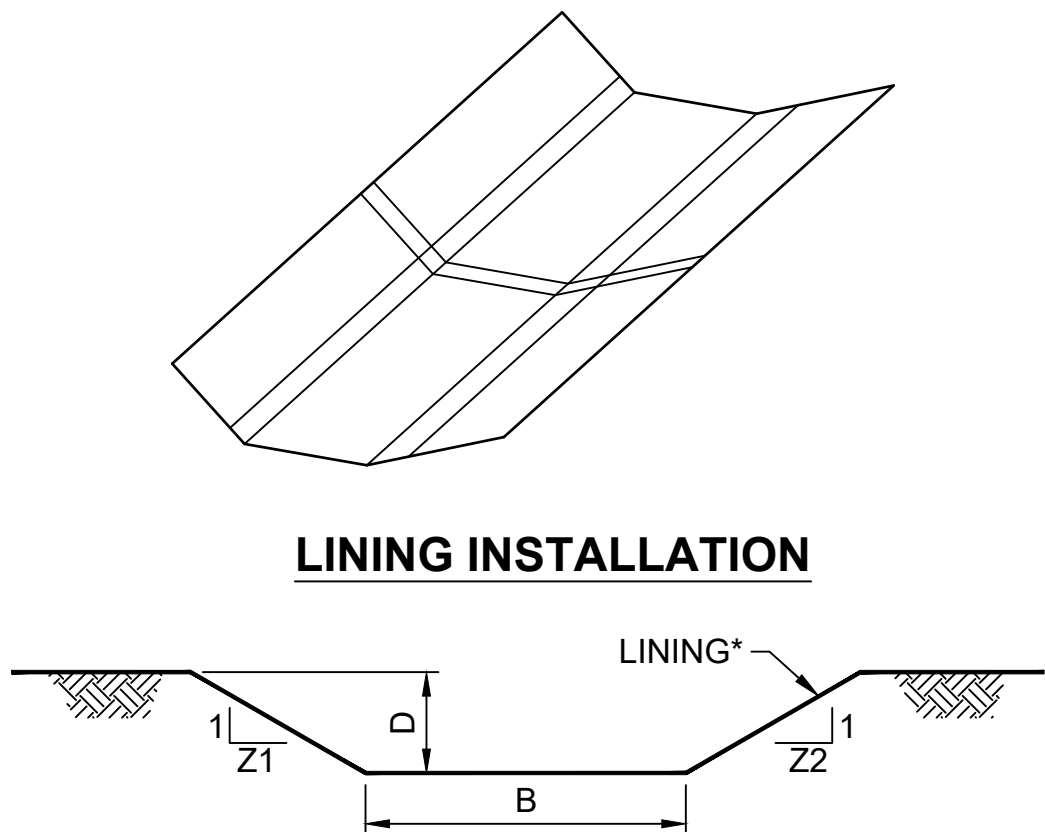
- NOTE:**
1. PROVIDE EROSION CONTROL BLANKET AT 3:1 FINAL GRADE SLOPES AND PROPOSED VEGETATED CHANNELS. USE BIODEGRADABLE EROSION CONTROL BLANKETS SUITABLE FOR 3:1 SLOPES (NORTH AMERICAN GREEN BIONET SC150BN OR APPROVED EQUAL.)



PIPE PENETRATION THROUGH EXISTING FISH LADDER
NOT TO SCALE



STAPLE PATTERN D
3.4 STAPLES PER SQ. YD.



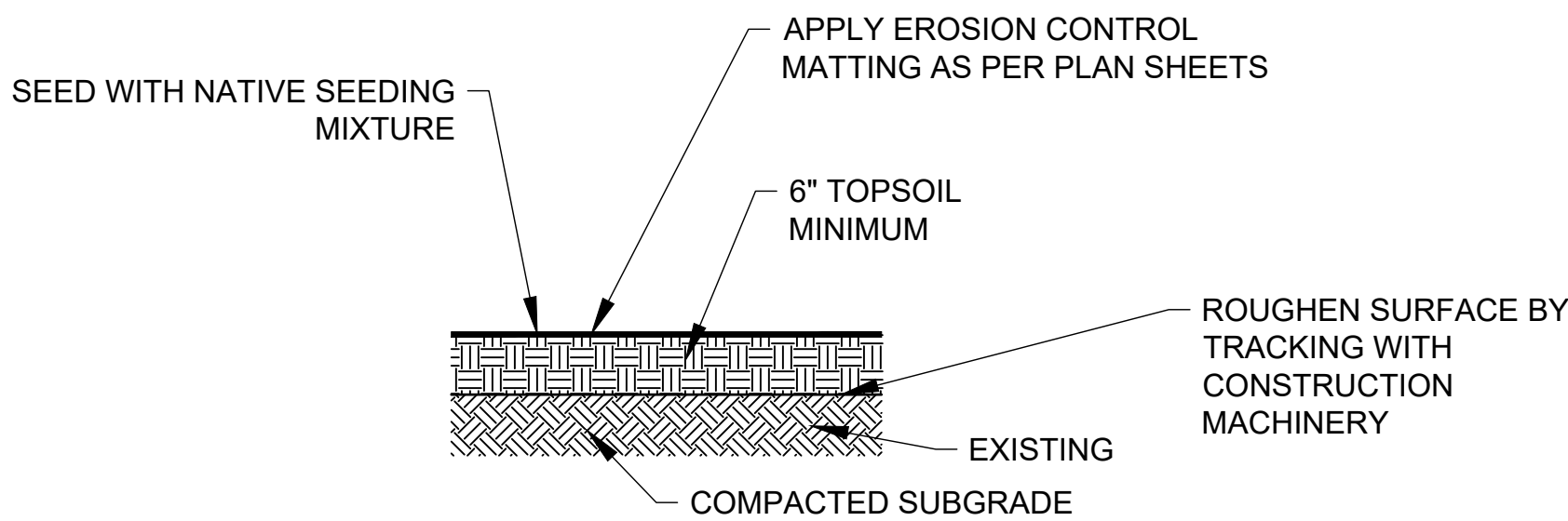
LINING INSTALLATION

CHANNEL CROSS-SECTION

SWALE SCHEDULE						
SWALE NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	Z1 (FT)	Z2 (FT)	LINING*
SWALE 1	ALL	2	0.5	5	5	NAG SC150BN STAPLE 'D' GRASS
SWALE 2	ALL	2	1	3	3	NAG SC150BN STAPLE 'D' GRASS

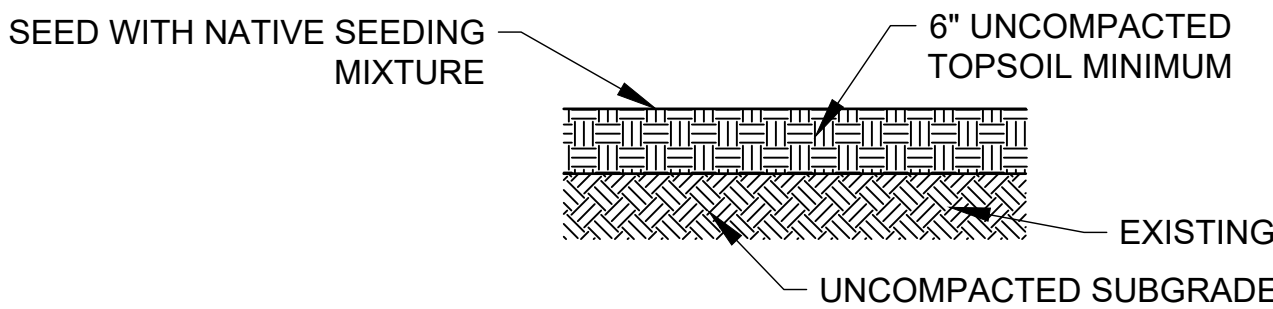
*SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, AND VEGETATION STABILIZATION SPECIFICATIONS FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION.

VEGETATIVE SWALE
NOT TO SCALE



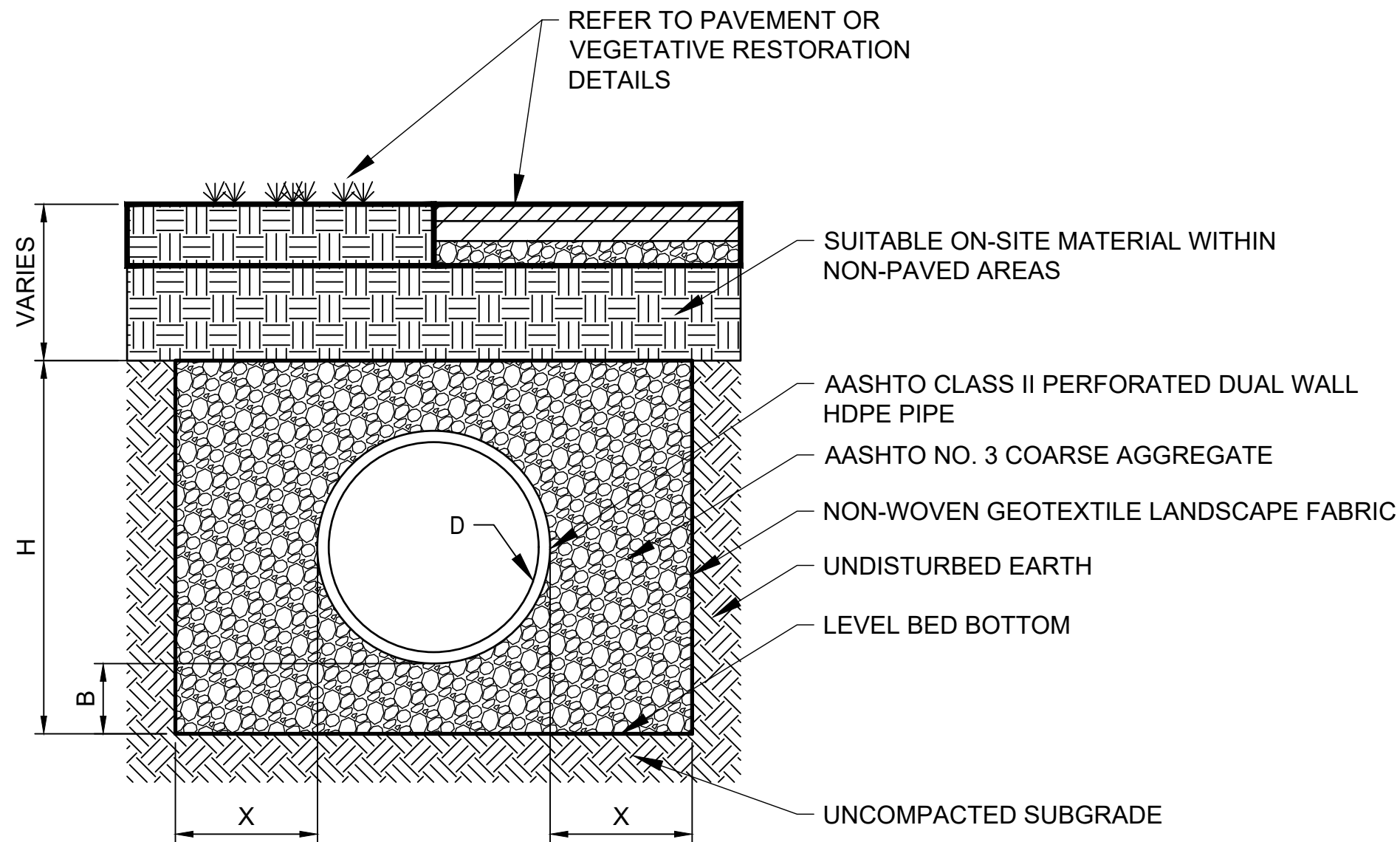
NOTES:
1. FILL SLOPES SHOULD BE SEEDED AND MULCHED AT REGULAR VERTICAL INCREMENTS, 15 TO 25 FEET MAXIMUM, AS THE FILL IS BEING CONSTRUCTED.

VEGETATIVE STABILIZATION - STEEP SLOPES
NOT TO SCALE



NOTES:
1. AS DISTURBED AREAS WITHIN A PROJECT APPROACH FINAL GRADE, PREPARATIONS SHOULD BE MADE FOR SEEDING AND MULCHING TO BEGIN. IN NO CASE SHOULD AN AREA EXCEEDING 15,000 SQUARE FEET, WHICH IS TO BE STABILIZED BY VEGETATION, REACH FINAL GRADE WITHOUT BEING SEEDED AND MULCHED

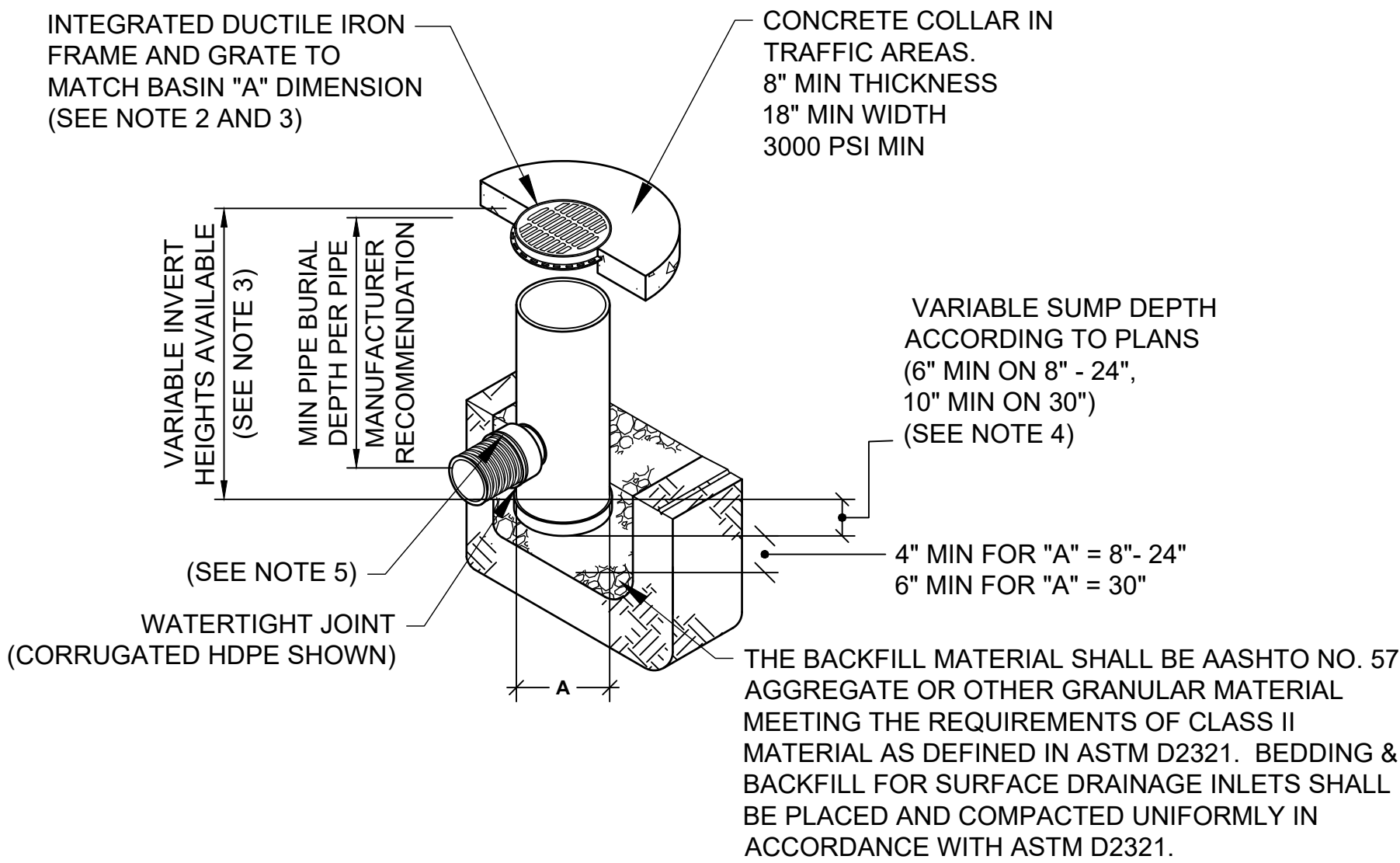
VEGETATIVE STABILIZATION - GENERAL
NOT TO SCALE



SECTION

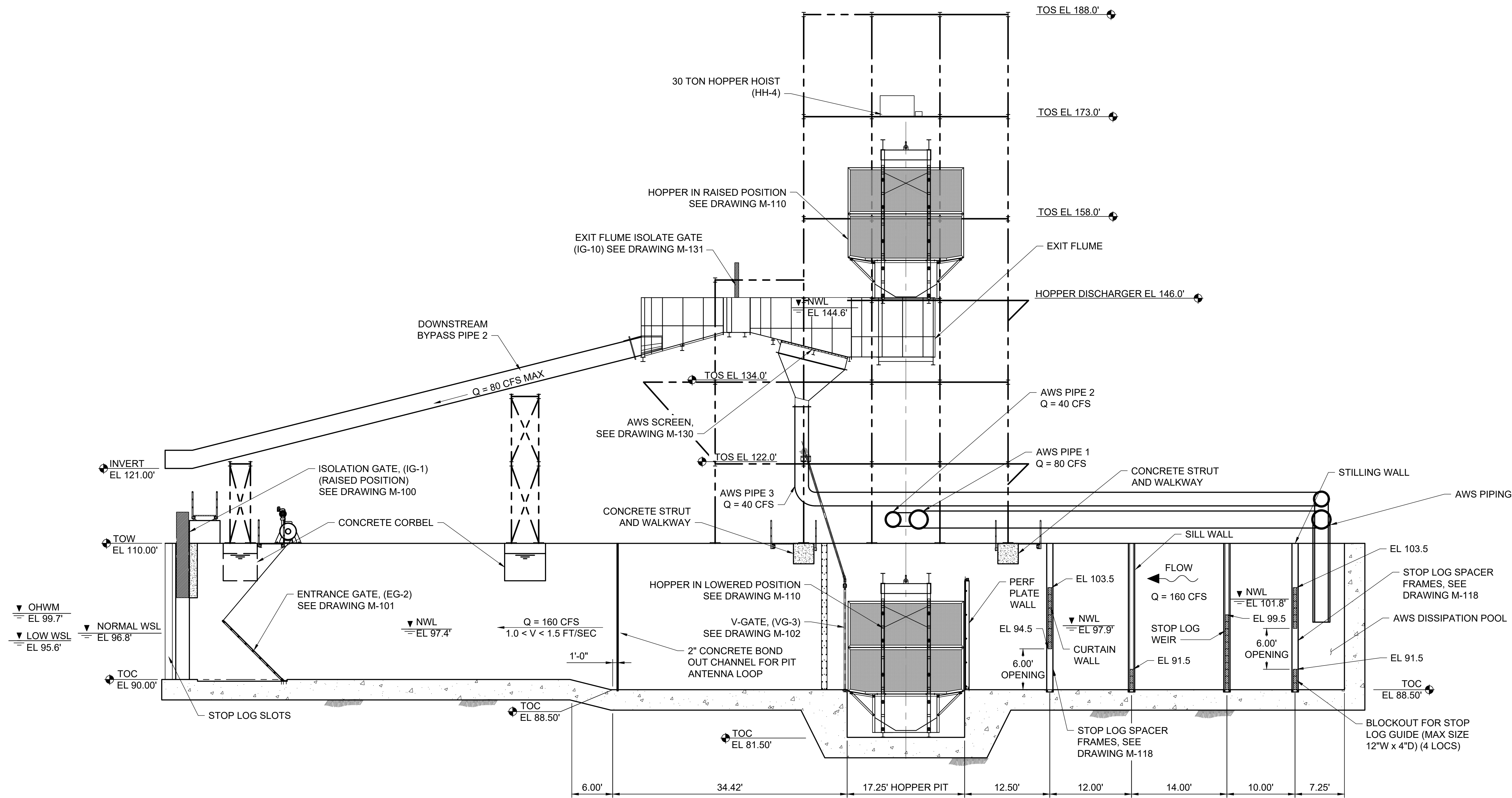
INFILTRATION TRENCH				
NOMINAL DIAMETER "D"	NOMINAL O.D.	TYPICAL WALL "X"	BEDDING DEPTH "B"	SYSTEM DEPTH "H"
8"	9.1"	6"	6"	20"

FRENCH DRAIN
NOT TO SCALE



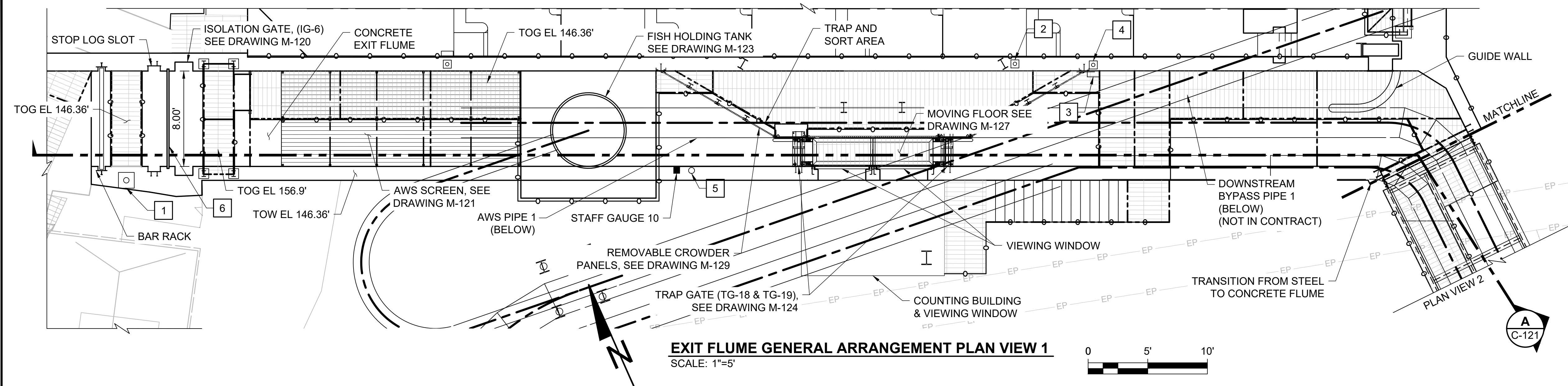
NOTES:
1. DRAIN SHOWN IS BASED UPON NYLOPLAST DRAIN BASIN AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS OR APPROVED EQUAL.
2. GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3. FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
4. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS.
5. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE AND SDR 35 PVC.
6. GRATES SHALL MEET H-10 LOAD RATING FOR PEDESTRIAN APPLICATIONS.
7. GRATES SHALL MEET H-20 LOAD RATING FOR VEHICLE LOADING APPLICATIONS.

NYLOPLAST DRAIN BASIN
NOT TO SCALE

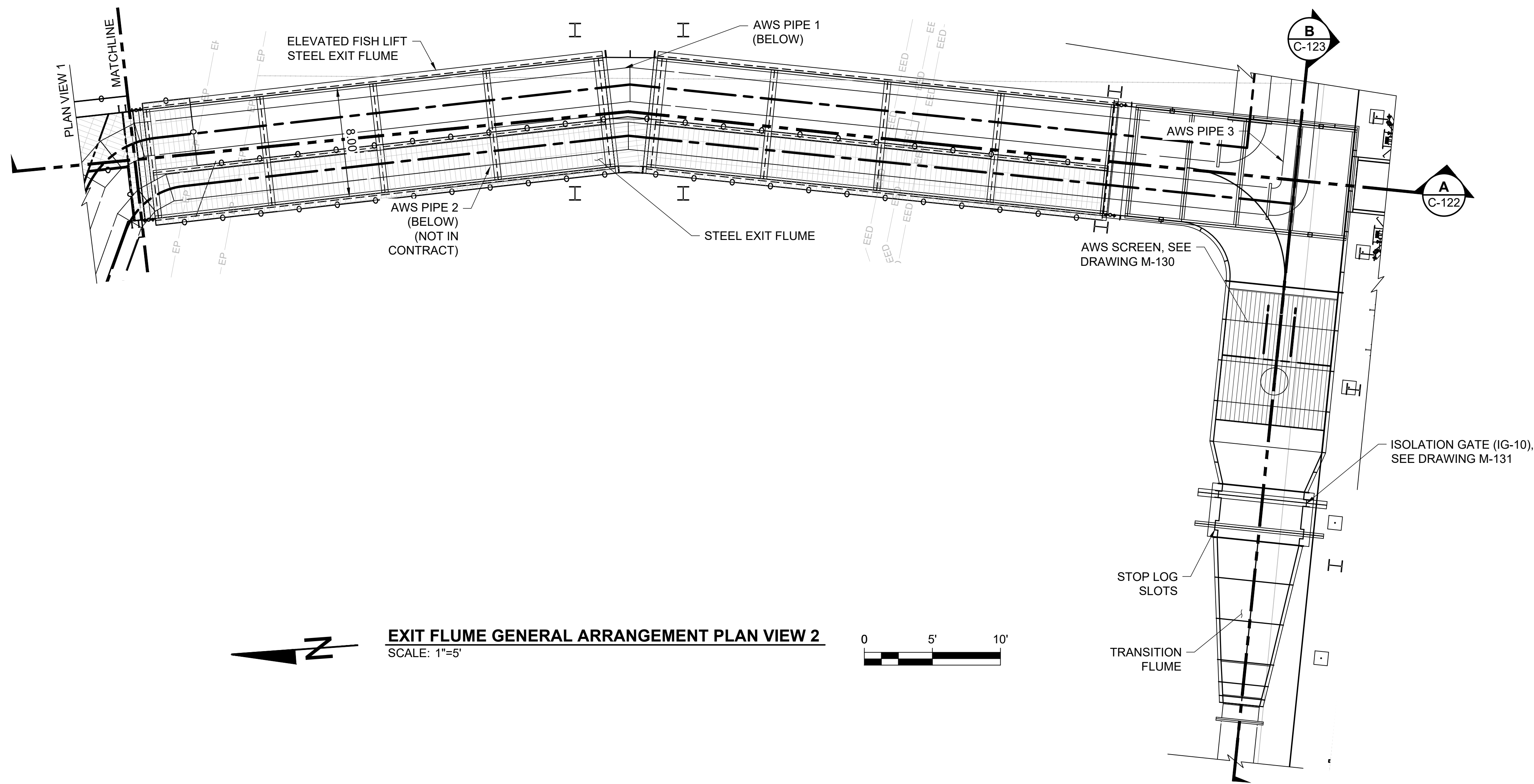


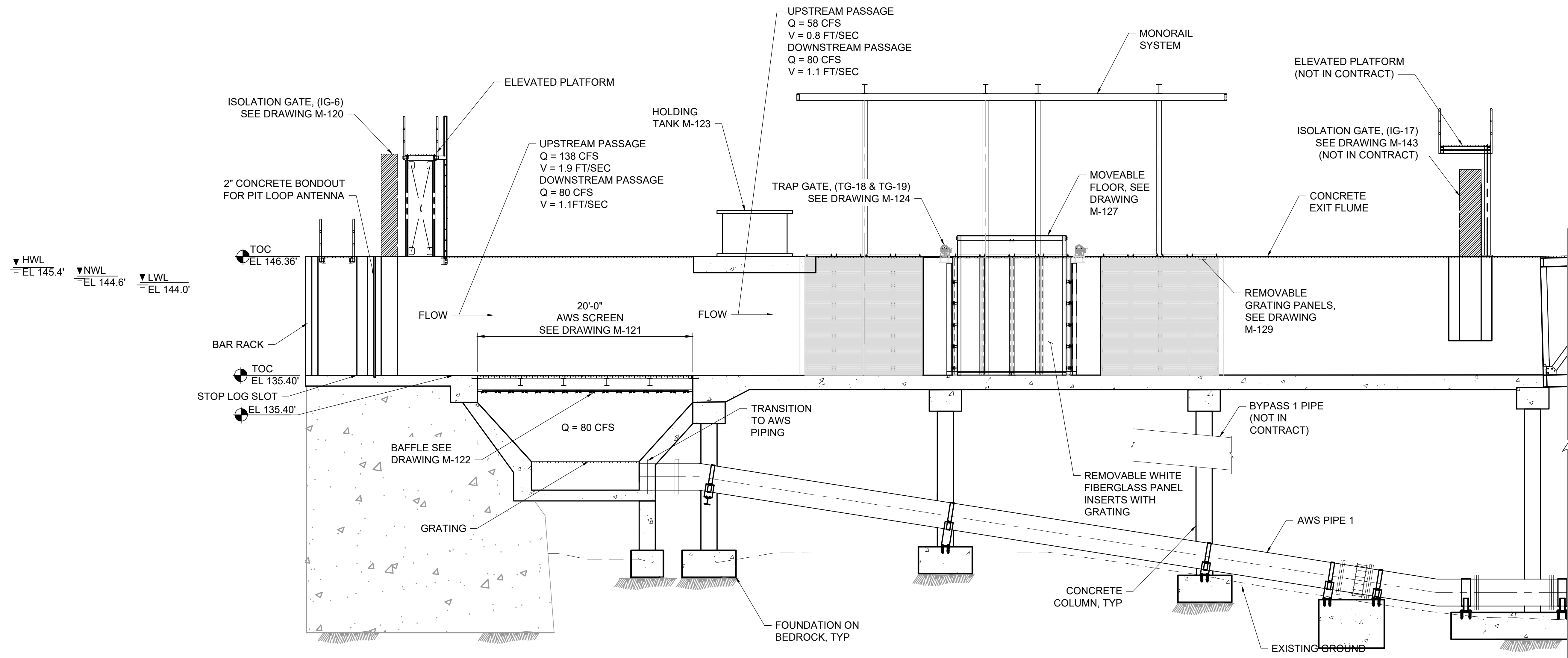
A FISH LIFT SECTION
 C-100 SCALE: 1"=8'
 8' 0 8' 16'

STOP LOG TABLE			
NAME	BOTTOM ELEVATION	TOP ELEVATION	DESIGN DIFFERENTIAL HEAD
STILLING WALL 1	88.5	91.5	3'-0"
STILLING WALL 2	97.5	103.5	3'-0"
STOP LOG WEIR	88.5	99.5	3'-0"
SILL WALL	88.5	91.5	3'-0"
CURTAIN WALL	94.5	103.5	3'-0"

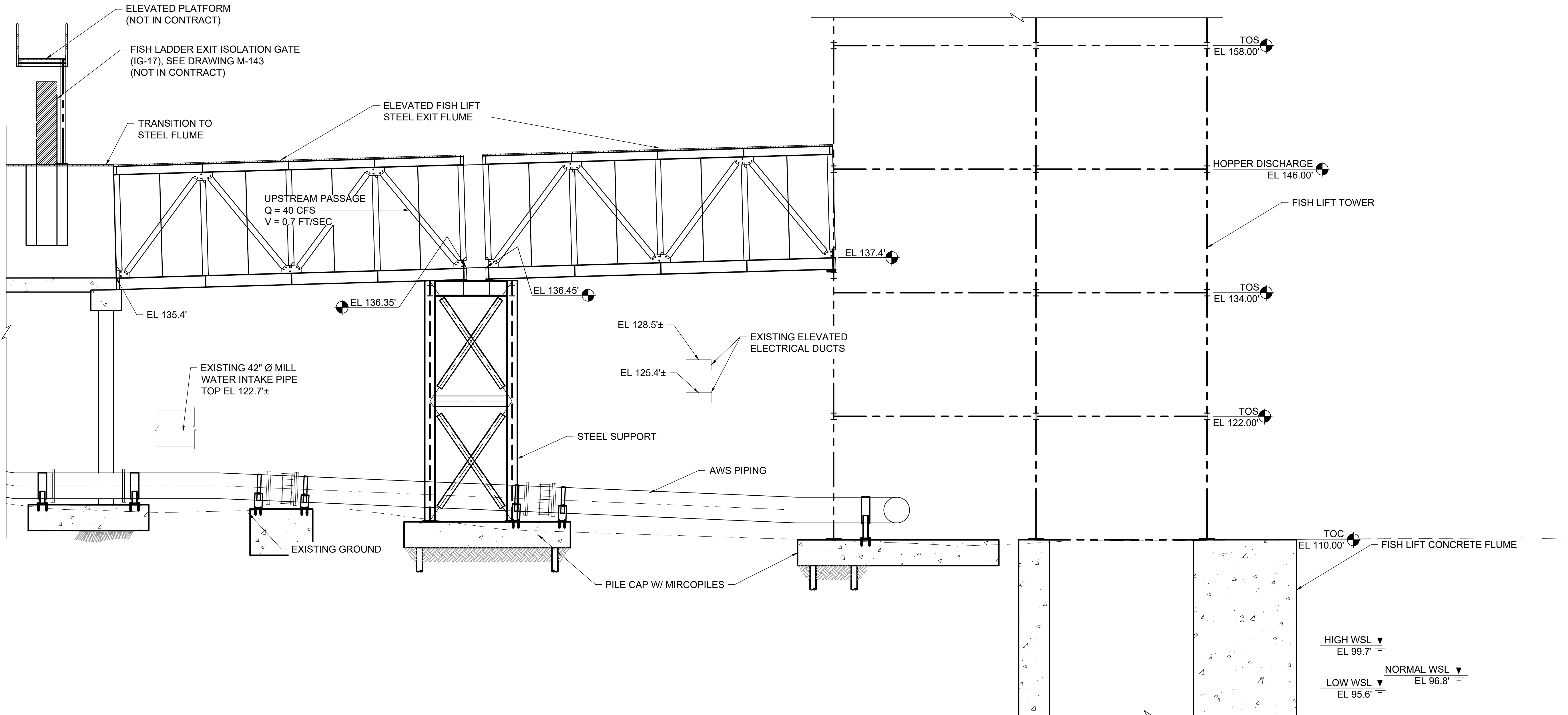


- KEYED NOTES:**
- 1 5PT20 FLUSH MOUNTED CRANE BASE.
 - 2 314FC-1000-10-10 CRANE BASE.
 - 3 POLYPROPYLENE (PP) MANHOLE RUNGS (LANE INTERNATIONAL P-14938).
 - 4 5PA5 FLUSH MOUNTED CRANE BASE.
 - 5 EMBEDDED STILLING WELL (4" SCHED. 40 SS PIPE WITH ELBOW)
 - 6 2" CONCRETE BONDOUT CHANNEL FOR PIT ANTENNA LOOP.





- NOTES:**
1. TOWER BRACING NOT SHOWN FOR CLARITY.



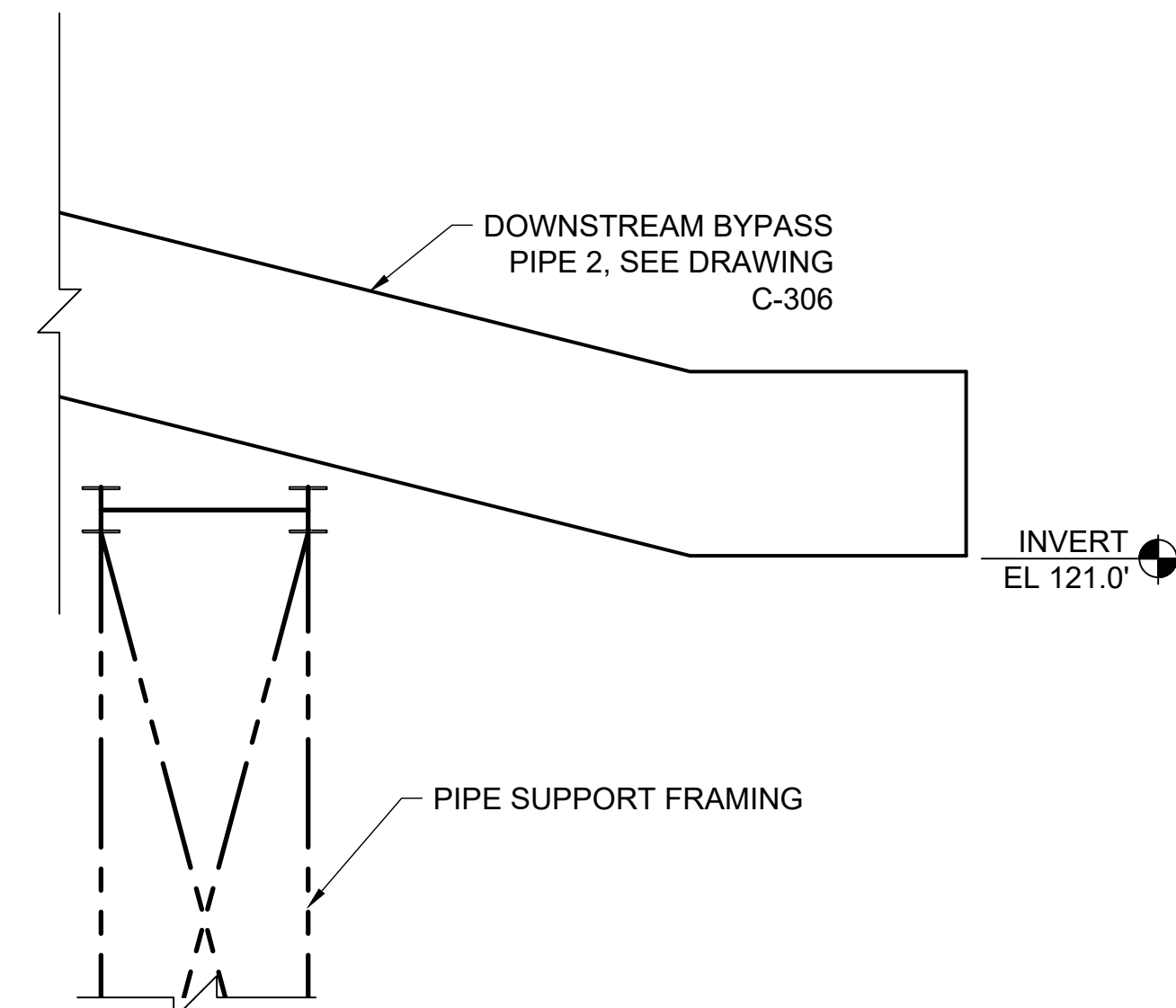
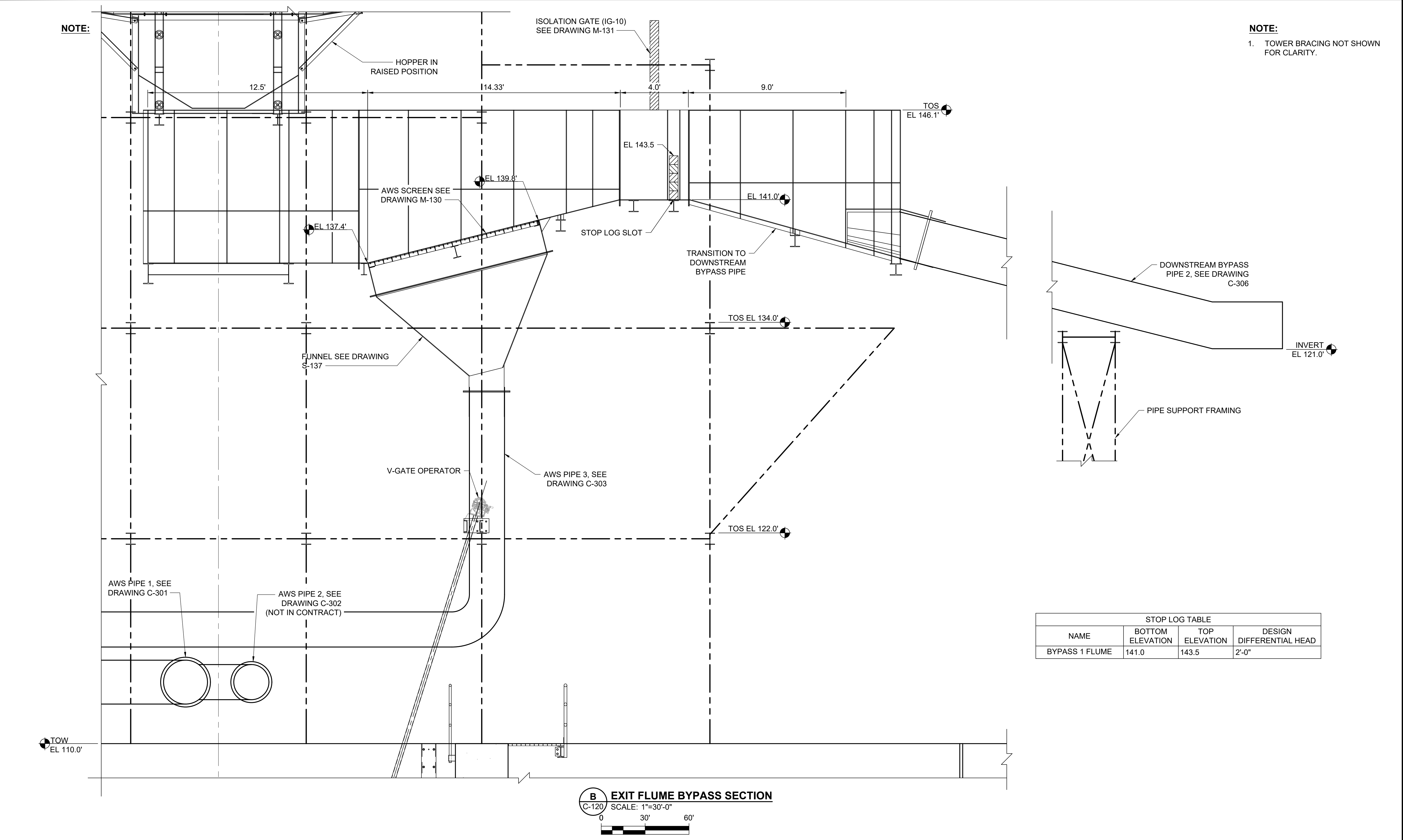
A EXIT FLUME SECTION
C-120 SCALE: 3/16"=1'-0"



NOTE:

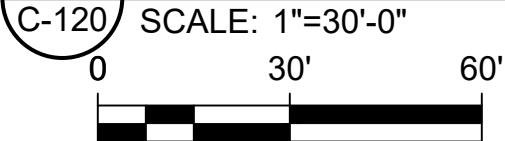
NOTE:

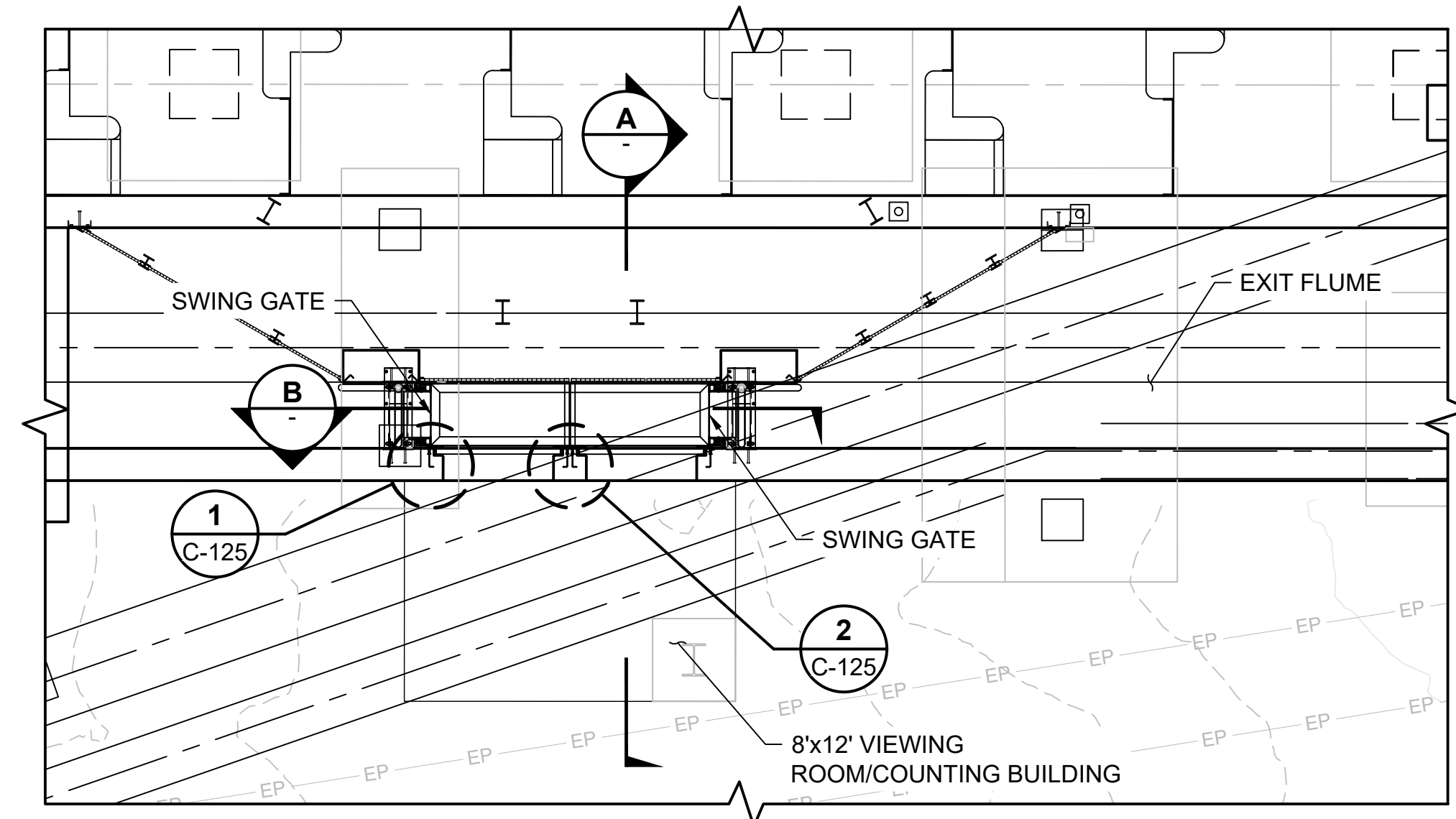
1. TOWER BRACING NOT SHOWN FOR CLARITY.



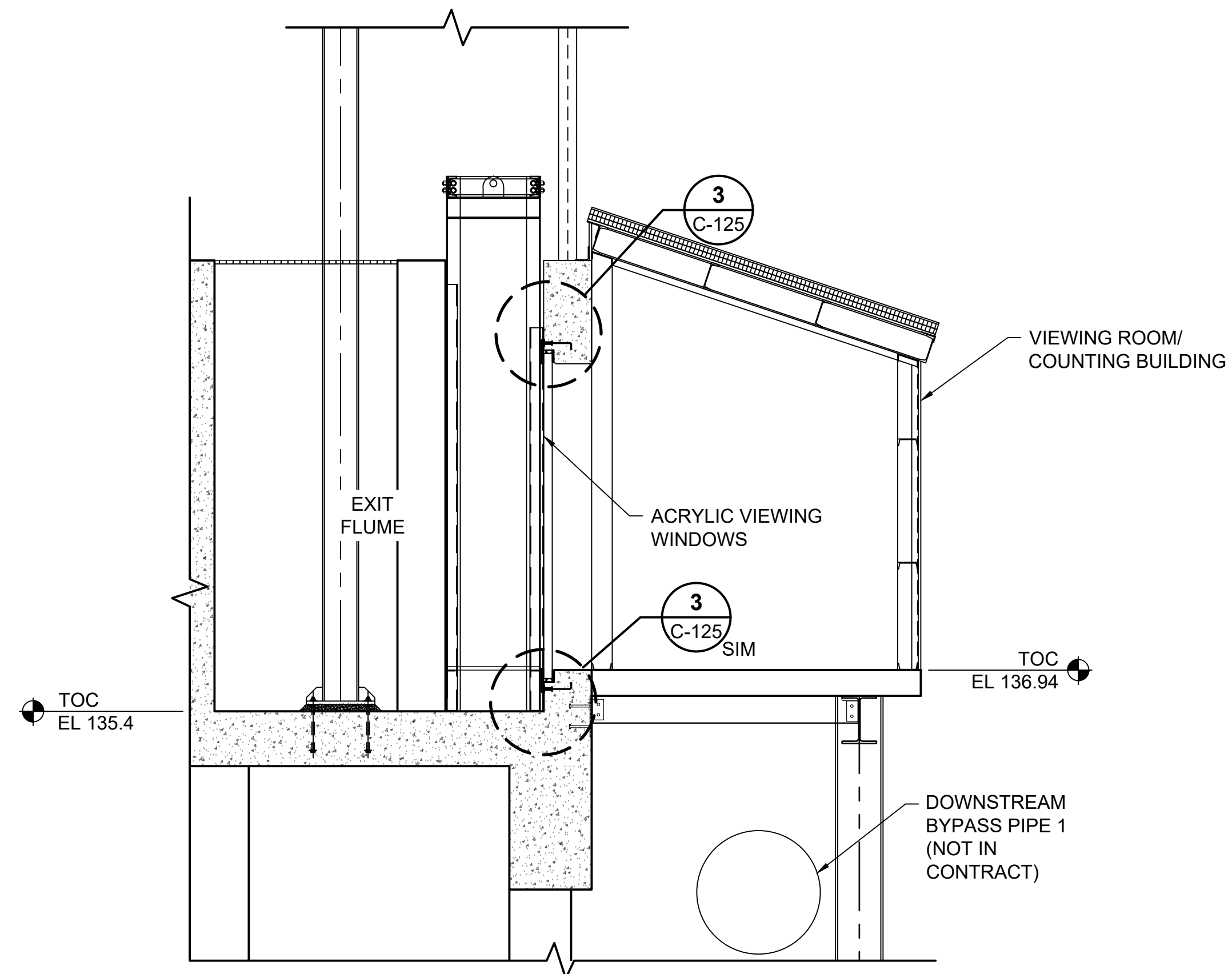
STOP LOG TABLE			
NAME	BOTTOM ELEVATION	TOP ELEVATION	DESIGN DIFFERENTIAL HEAD
BYPASS 1 FLUME	141.0	143.5	2'-0"

B EXIT FLUME BYPASS SECTION

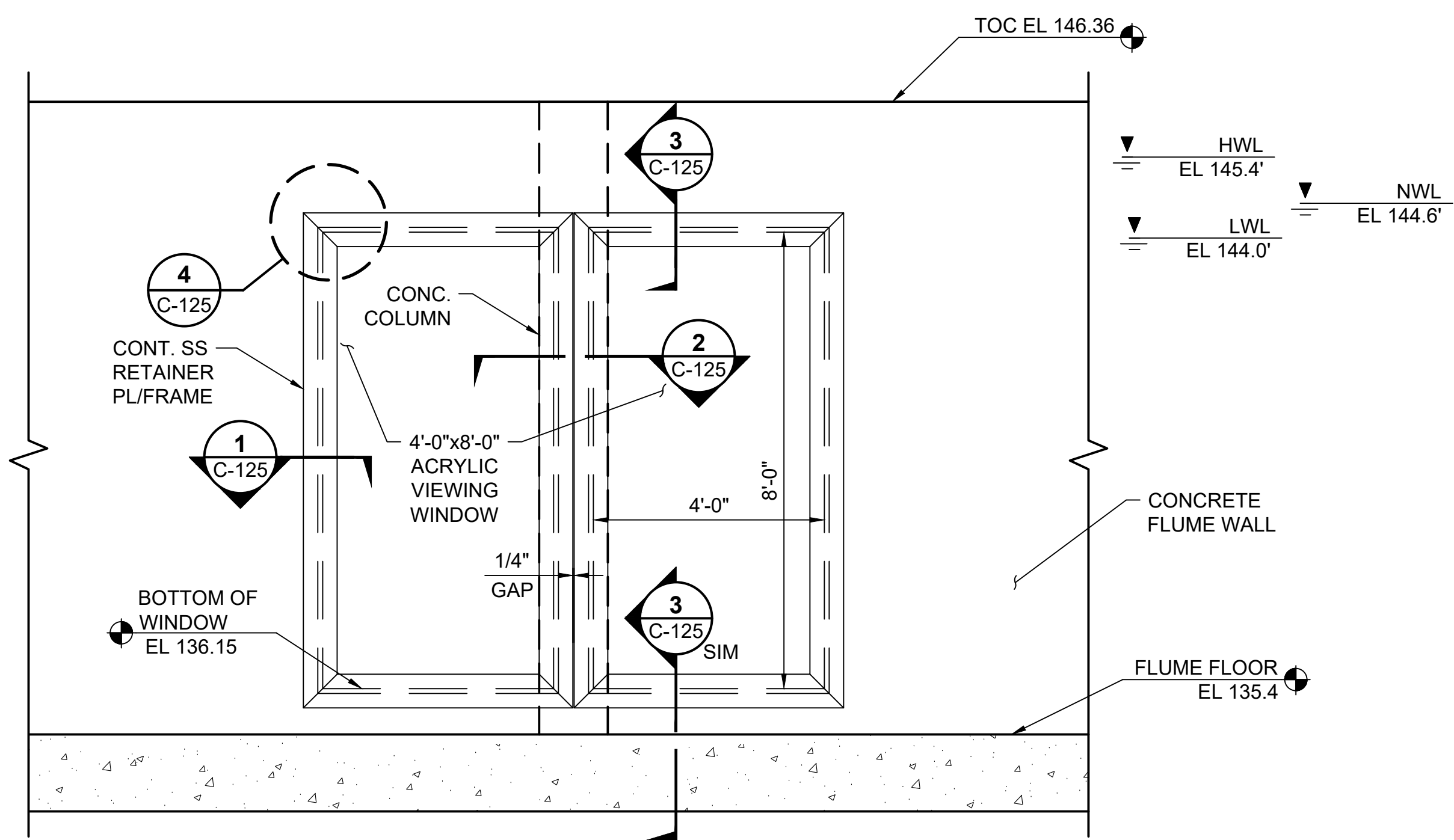




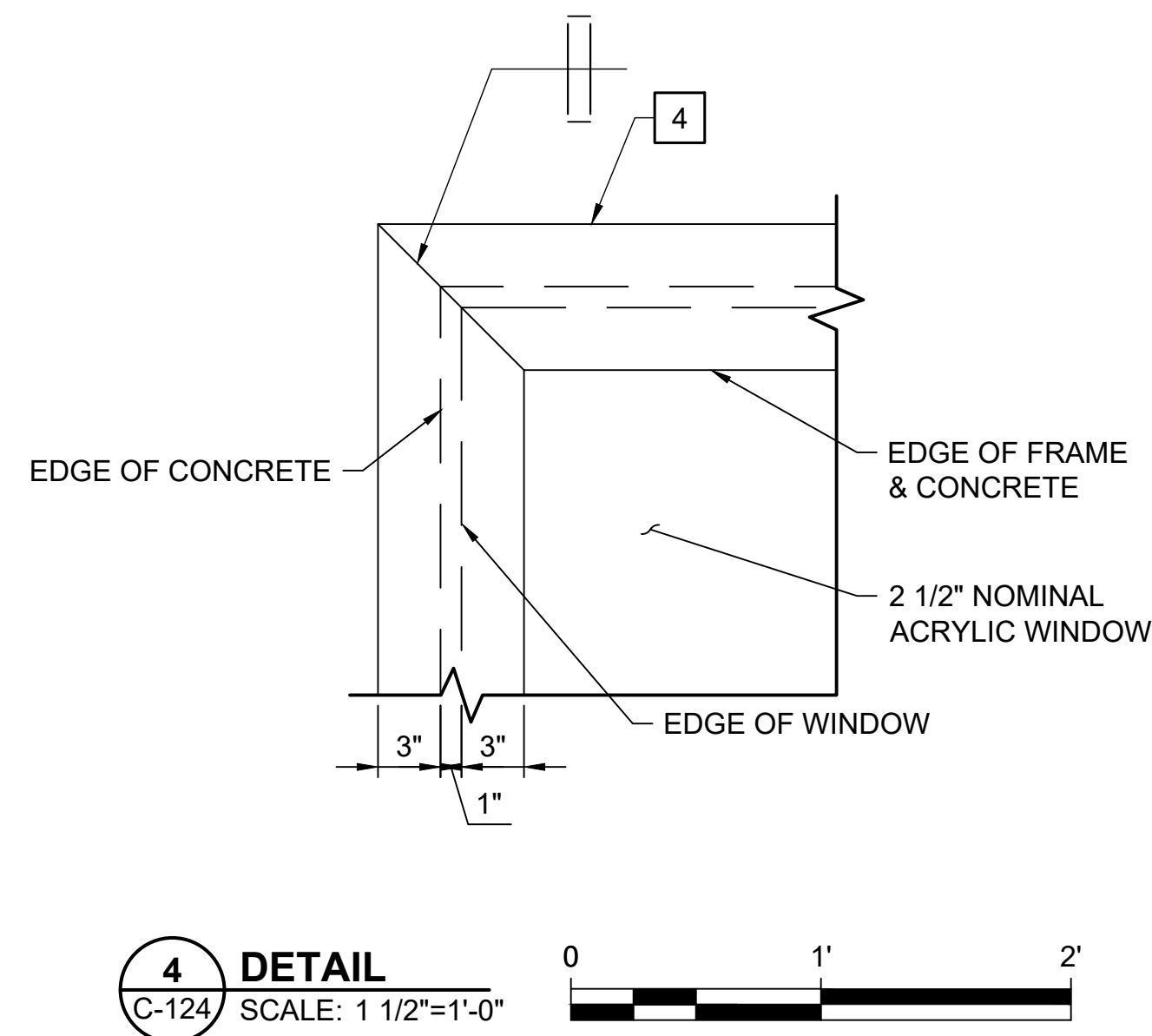
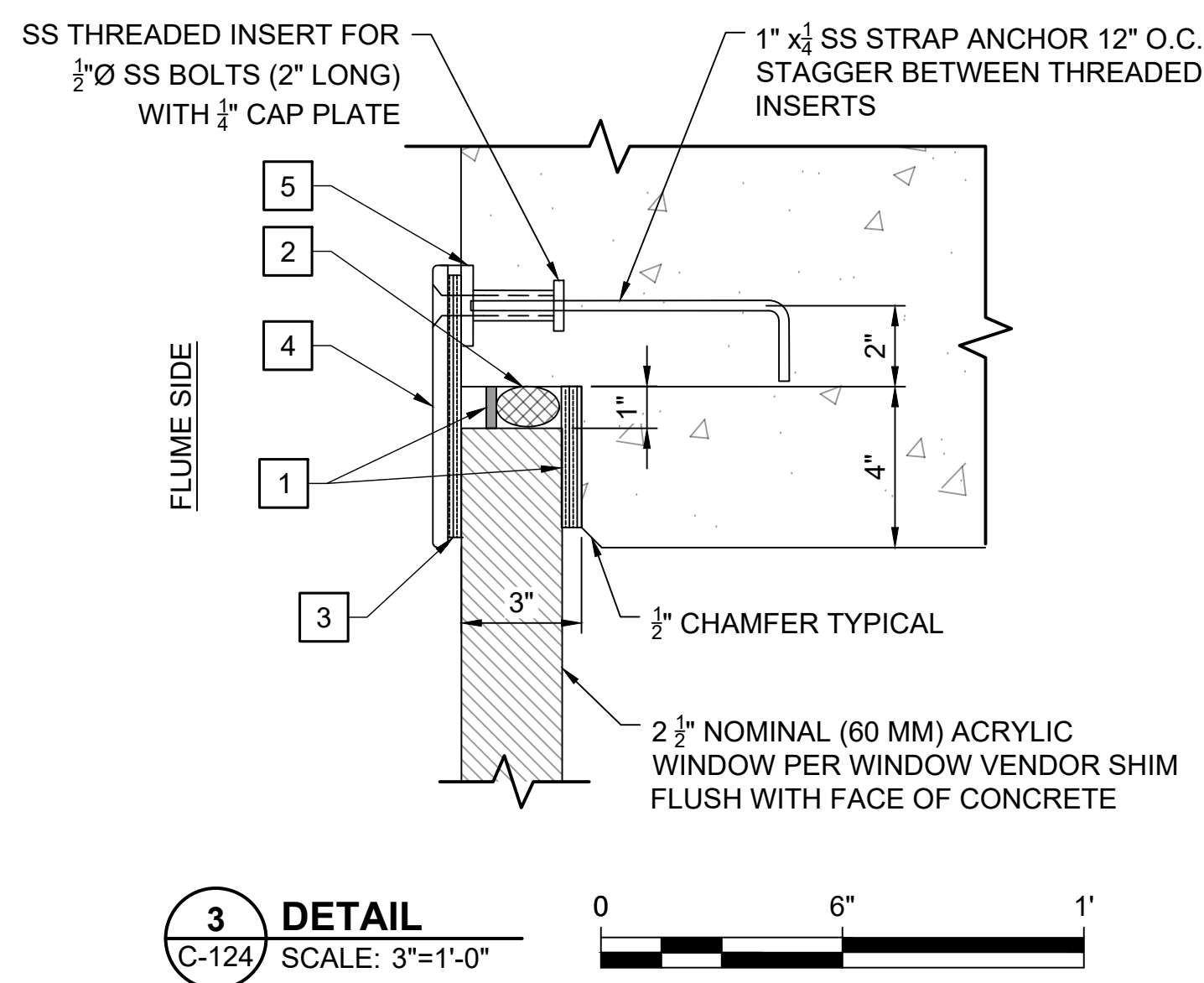
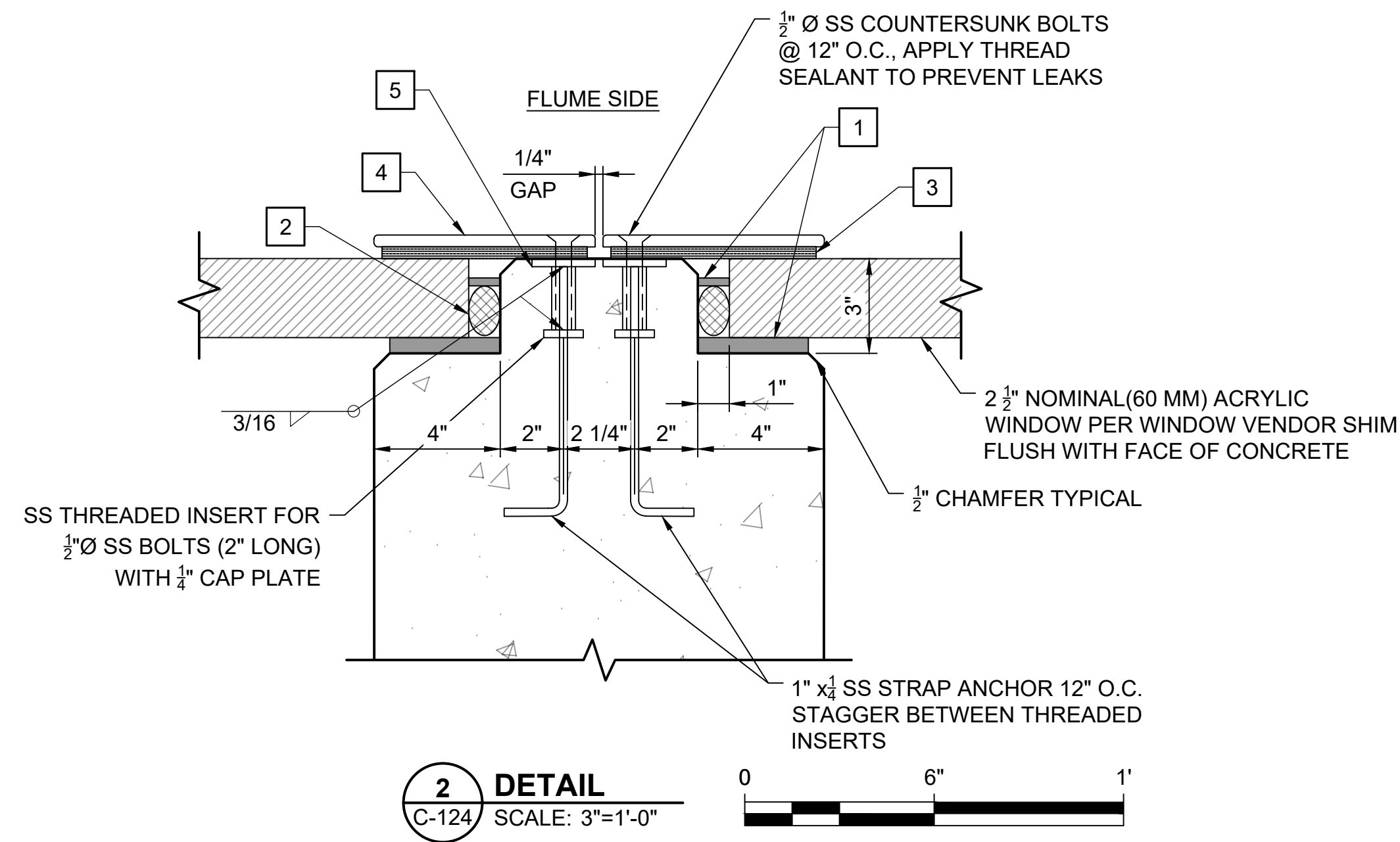
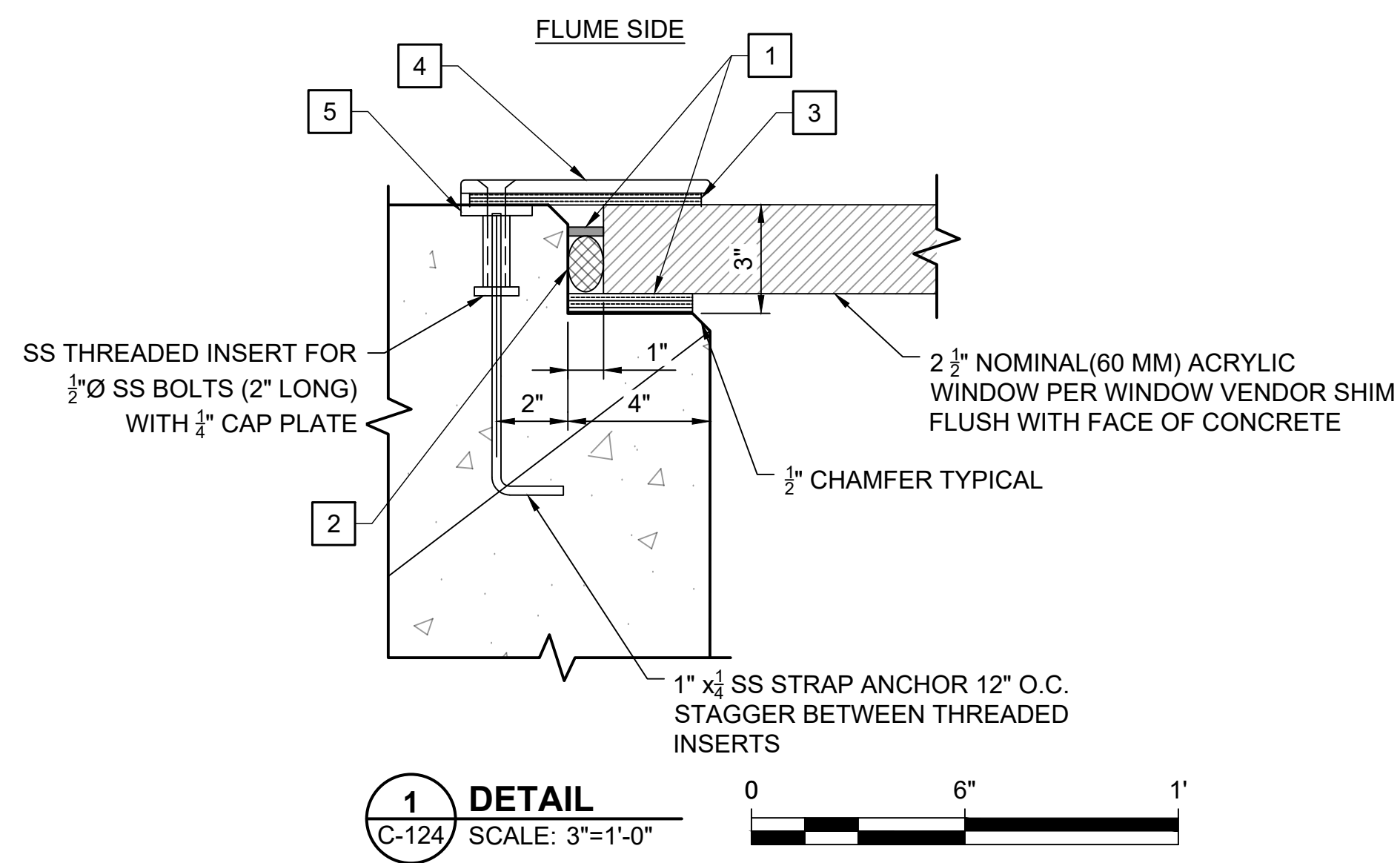
COUNTING BUILDING ENLARGED PLAN
SCALE: 1"=5'
0 5' 10'



SECTION A
SCALE: 3/8"=1'-0"
0 2' 4'



ELEVATION - VIEWING WINDOW
SCALE: 1/2"=1'-0"

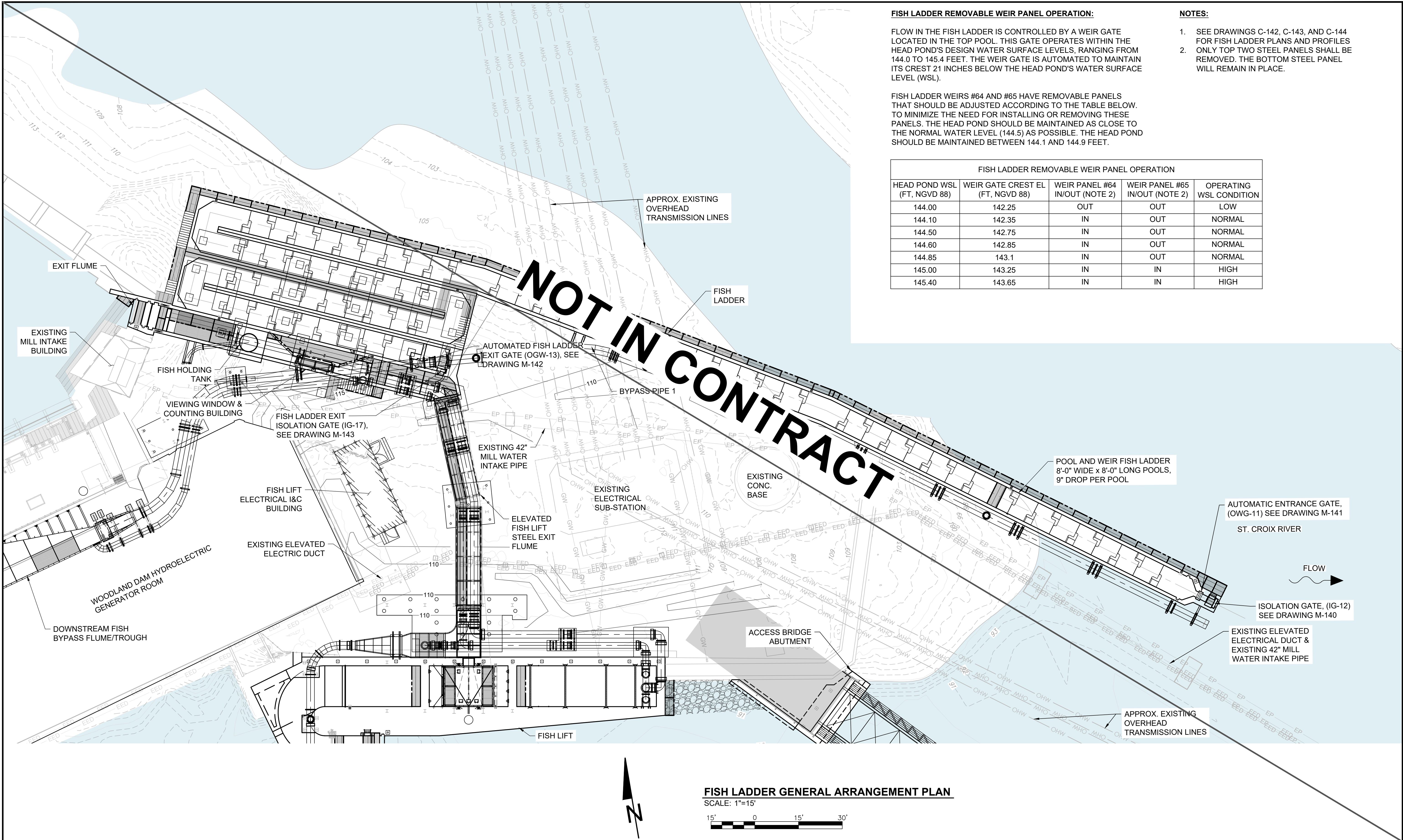


NOTES:

1. CONCRETE BEARING SURFACES SHALL BE REVIEWED BY AN ENGINEER PRIOR TO WINDOW INSTALLATION.
2. PATCH CONCRETE SURFACES AT WINDOW BEARING SURFACES AS REQUIRED.

KEYED NOTES:

- 1 POLYURETHANE SEALANT.
- 2 CLOSED CELL BACKING ROD (1/4" Ø)
- 3 3/8"x6 1/2" CONTINUOUS RUBBER SEAL
- 4 3/8"x7" CONTINUOUS SS RETAINER PLATE/FRAME WITH 1/8" MINIMUM RADIUS AT EXPOSED EDGES.
- 5 3/8"x2" CONTINUOUS SS EMBEDDED PLATE.



FISH LADDER REMOVABLE WEIR PANEL OPERATION:

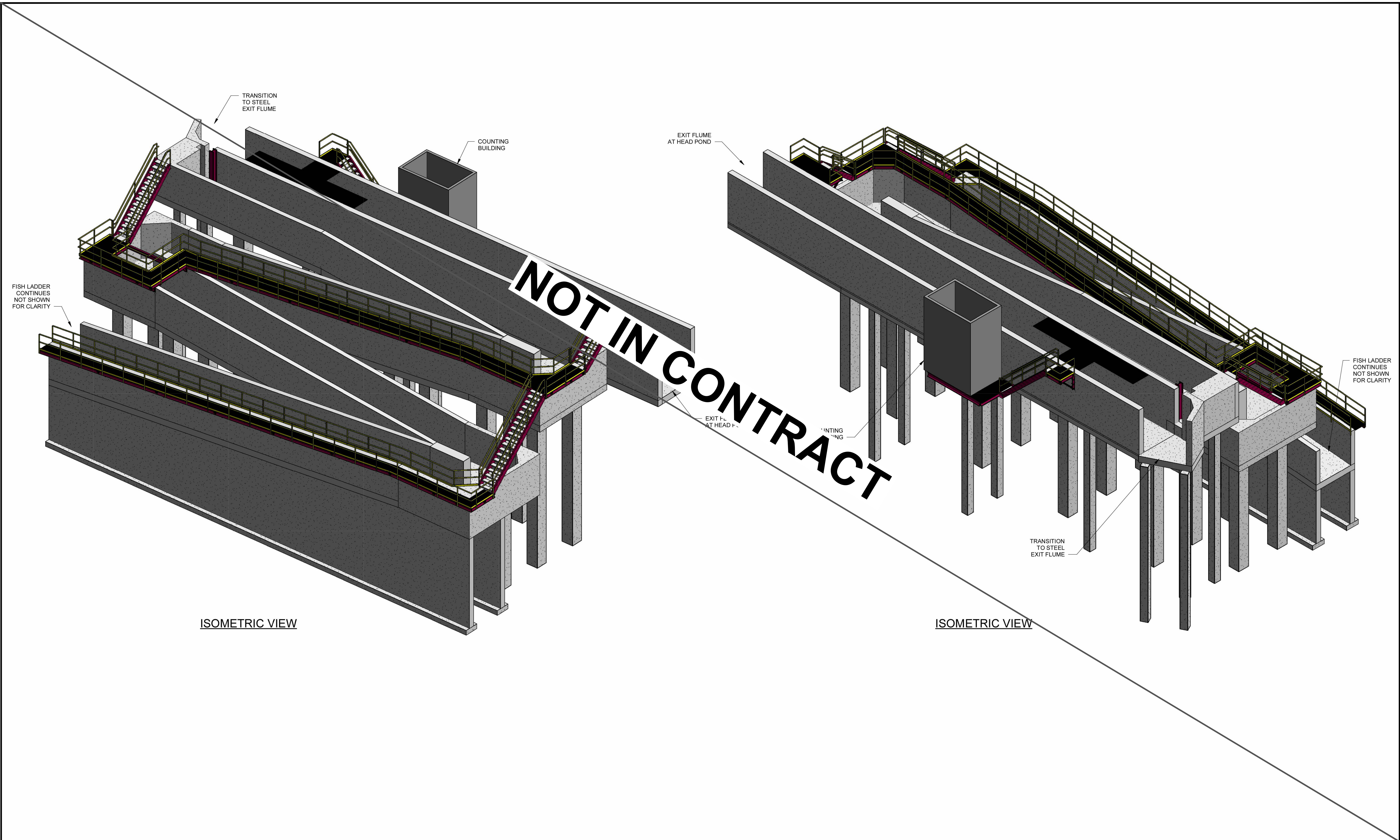
FLOW IN THE FISH LADDER IS CONTROLLED BY A WEIR GATE LOCATED IN THE TOP POOL. THIS GATE OPERATES WITHIN THE HEAD POND'S DESIGN WATER SURFACE LEVELS, RANGING FROM 144.0 TO 145.4 FEET. THE WEIR GATE IS AUTOMATED TO MAINTAIN ITS CREST 21 INCHES BELOW THE HEAD POND'S WATER SURFACE LEVEL (WSL).

FISH LADDER WEIRS #64 AND #65 HAVE REMOVABLE PANELS THAT SHOULD BE ADJUSTED ACCORDING TO THE TABLE BELOW. TO MINIMIZE THE NEED FOR INSTALLING OR REMOVING THESE PANELS. THE HEAD POND SHOULD BE MAINTAINED AS CLOSE TO THE NORMAL WATER LEVEL (144.5) AS POSSIBLE. THE HEAD POND SHOULD BE MAINTAINED BETWEEN 144.1 AND 144.9 FEET.

FISH LADDER REMOVABLE WEIR PANEL OPERATION				
HEAD POND WSL (FT, NGVD 88)	WEIR GATE CREST EL (FT, NGVD 88)	WEIR PANEL #64 IN/OUT (NOTE 2)	WEIR PANEL #65 IN/OUT (NOTE 2)	OPERATING WSL CONDITION
144.00	142.25	OUT	OUT	LOW
144.10	142.35	IN	OUT	NORMAL
144.50	142.75	IN	OUT	NORMAL
144.60	142.85	IN	OUT	NORMAL
144.85	143.1	IN	OUT	NORMAL
145.00	143.25	IN	IN	HIGH
145.40	143.65	IN	IN	HIGH

NOTES:

- SEE DRAWINGS C-142, C-143, AND C-144 FOR FISH LADDER PLANS AND PROFILES
- ONLY TOP TWO STEEL PANELS SHALL BE REMOVED. THE BOTTOM STEEL PANEL WILL REMAIN IN PLACE.

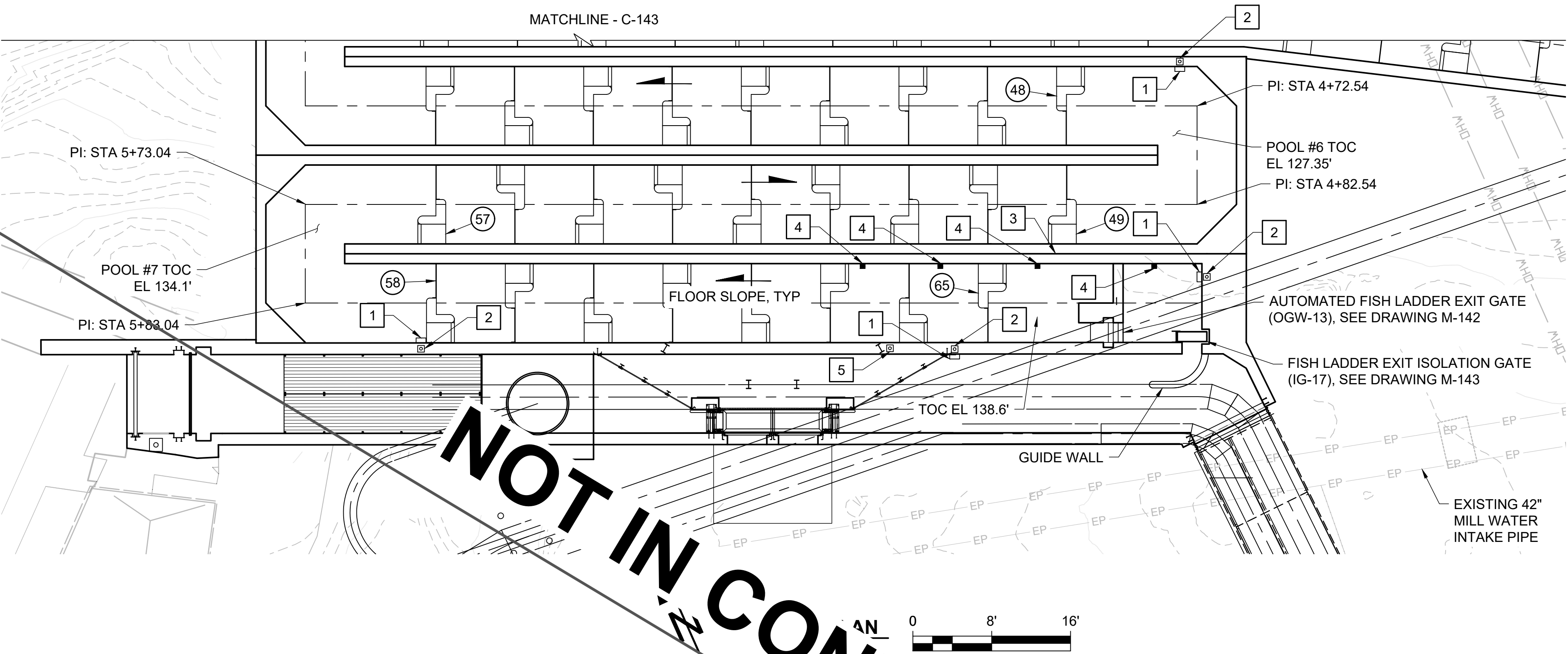


ISOMETRIC VIEW

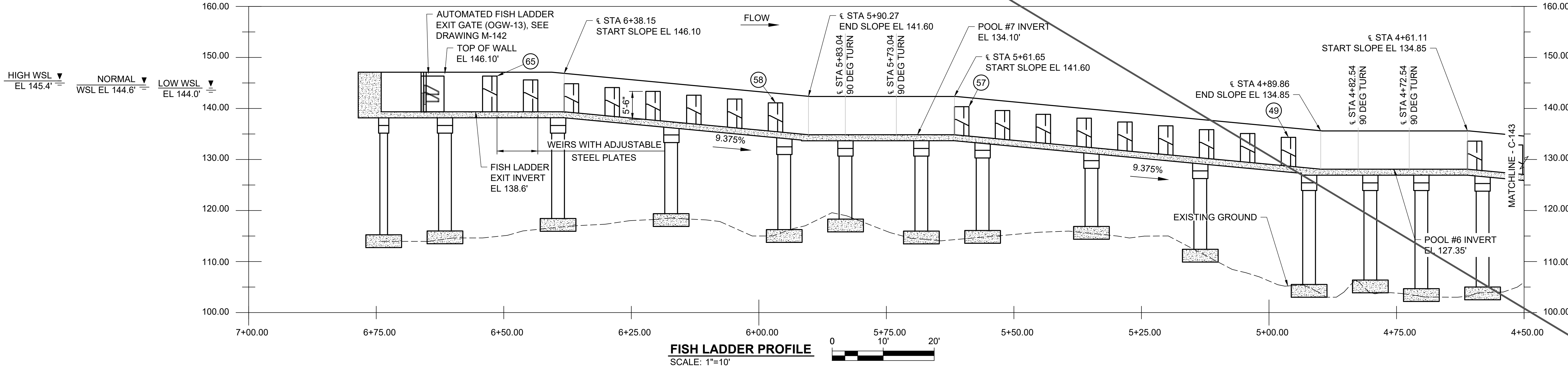
ISOMETRIC VIEW

- NOTES:**
1. GRATING NOT SHOWN FOR CLARITY.
 2. FLOOR AND WALL SLOPE CHANGE AT THE SAME LOCATION UNLESS NOTED OTHERWISE.
 3. PROVIDE TOP STABILIZATION PER MANUFACTURE FOR MAST TYPE JIB CRANE TO MONORAIL COLUMN.

- KEYED NOTES:**
- 1 POLYPROPYLENE (PP) MANHOLE RUNGS (LANE INTERNATIONAL P-14938.)
 - 2 5PA5 FLUSH MOUNTED CRANE BASE.
 - 3 EMBEDDED STILLING WELL (4" SCHED 40 SS PIPE WITH ELBOW)
 - 4 STAFF GAUGE
 - 5 MAST TYPE 1/2-TON JIB CRANE (JH3) (NOTE 3)

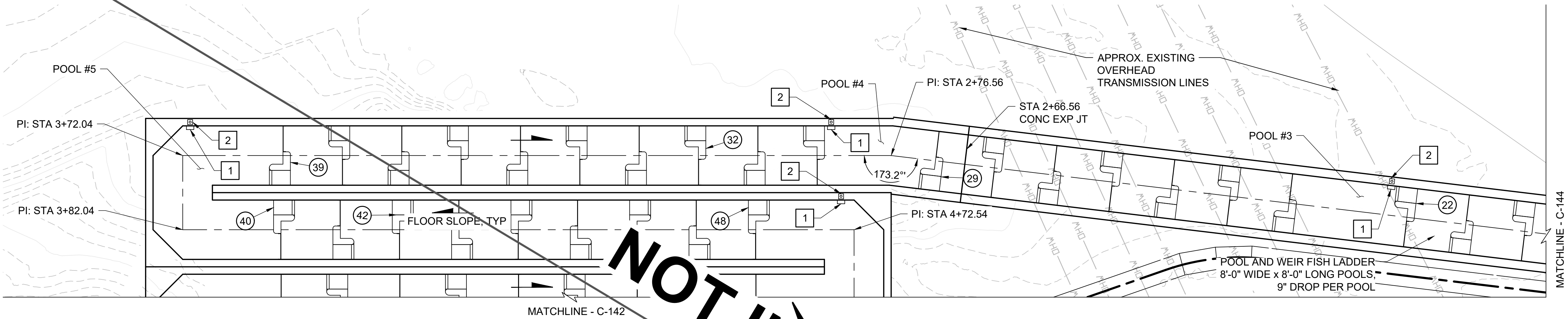


WEIR NUMBER	WEIR CREST ELEVATION				
65	143.10 (ADJUSTABLE)	60	139.35	54	134.35
64	142.35 (ADJUSTABLE)	59	138.80	53	134.10
63	141.60	58	137.85	52	133.35
62	140.85	57	137.10		132.60
61	140.10	56	136.35		131.35
		55	135.60		131.10



- KEYED NOTES:**
- 1 POLYPROPYLENE (PP) MANHOLE RUNGS (LANE INTERNATIONAL P-14938.)
 - 2 SPA5 FLUSH MOUNTED CRANE BASE.

- NOTES:**
- 1. GRATING NOT SHOWN FOR CLARITY.
 - 2. FLOOR AND WALL SLOPE CHANGE AT THE SAME LOCATION UNLESS NOTED OTHERWISE.

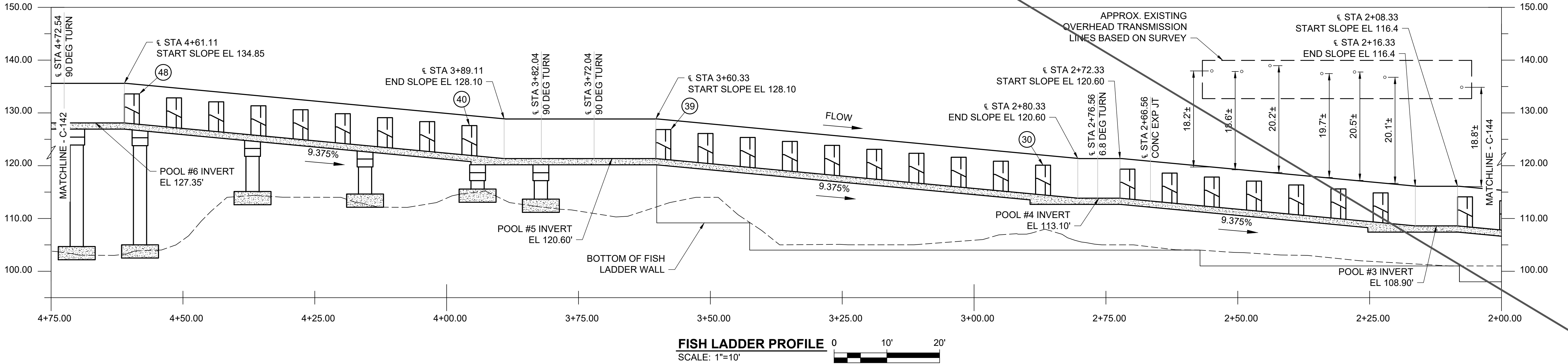


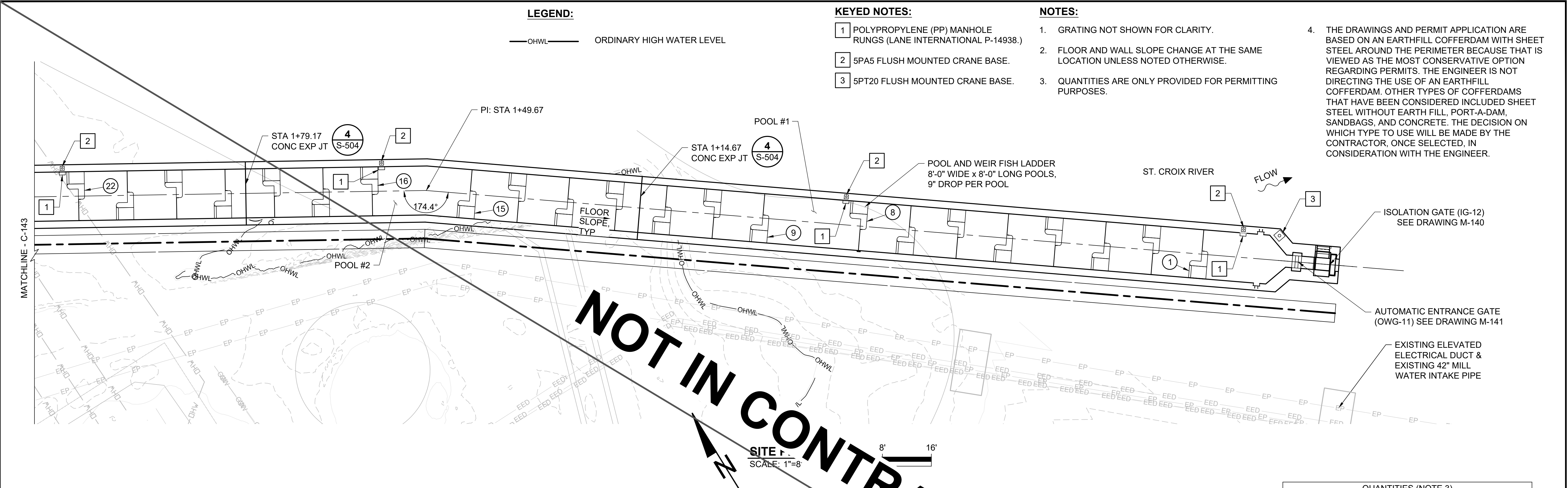
WEIR NUMBER	WEIR CREST ELEVATION
48	130.35
47	129.60
46	128.85
45	128.10
44	127.35
43	126.60

42	125.85
41	125.10
40	124.35
39	123.60
38	122.85
37	122.10
36	121.35

35	120.60
	119.85
	119.10
	118.35
	117.60
30	116.85
29	

28	115.35
27	114.60
26	113.85
25	113.10
24	112.35
23	111.60



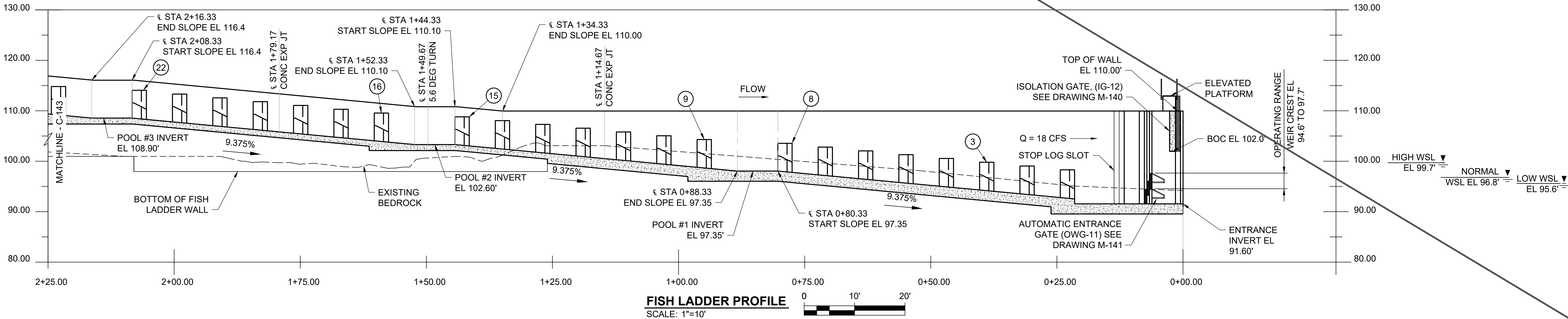


WEIR NUMBER	WEIR CREST ELEVATION
22	110.85
21	110.10
20	109.35
19	108.60
18	107.85
17	107.10
16	106.35

15	105.60
14	104.85
13	104.10
12	103.35
11	102.60
10	101.85
9	101.10
8	100.35

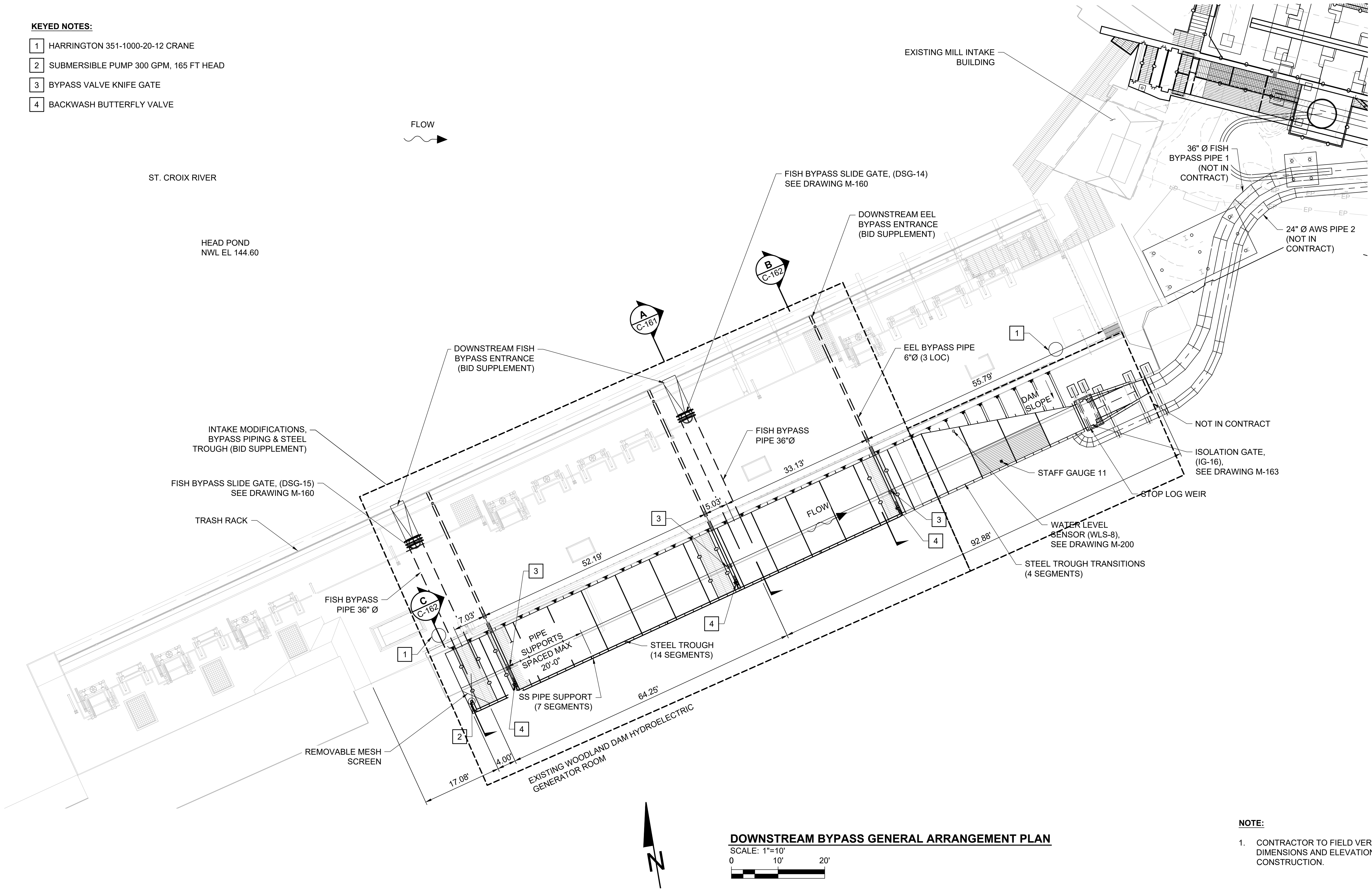
7	99.60
	98.85
	98.10
	97.35
	96.60
2	95.85
1	95.10

QUANTITIES (NOTE 3)		
ITEM	UNIT	QUANTITY
TEMPORARY FILL FOR COFFERDAM	SF	7700
PERMANENT FILL FOR FISHLIFT	SF	2210
PERMANENT FILL FOR FISH LADDER	SF	1690
PERMANENT FILL FOR BRIDGE	SF	360



KEYED NOTES:

- 1 HARRINGTON 351-1000-20-12 CRANE
- 2 SUBMERSIBLE PUMP 300 GPM, 165 FT HEAD
- 3 BYPASS VALVE KNIFE GATE
- 4 BACKWASH BUTTERFLY VALVE



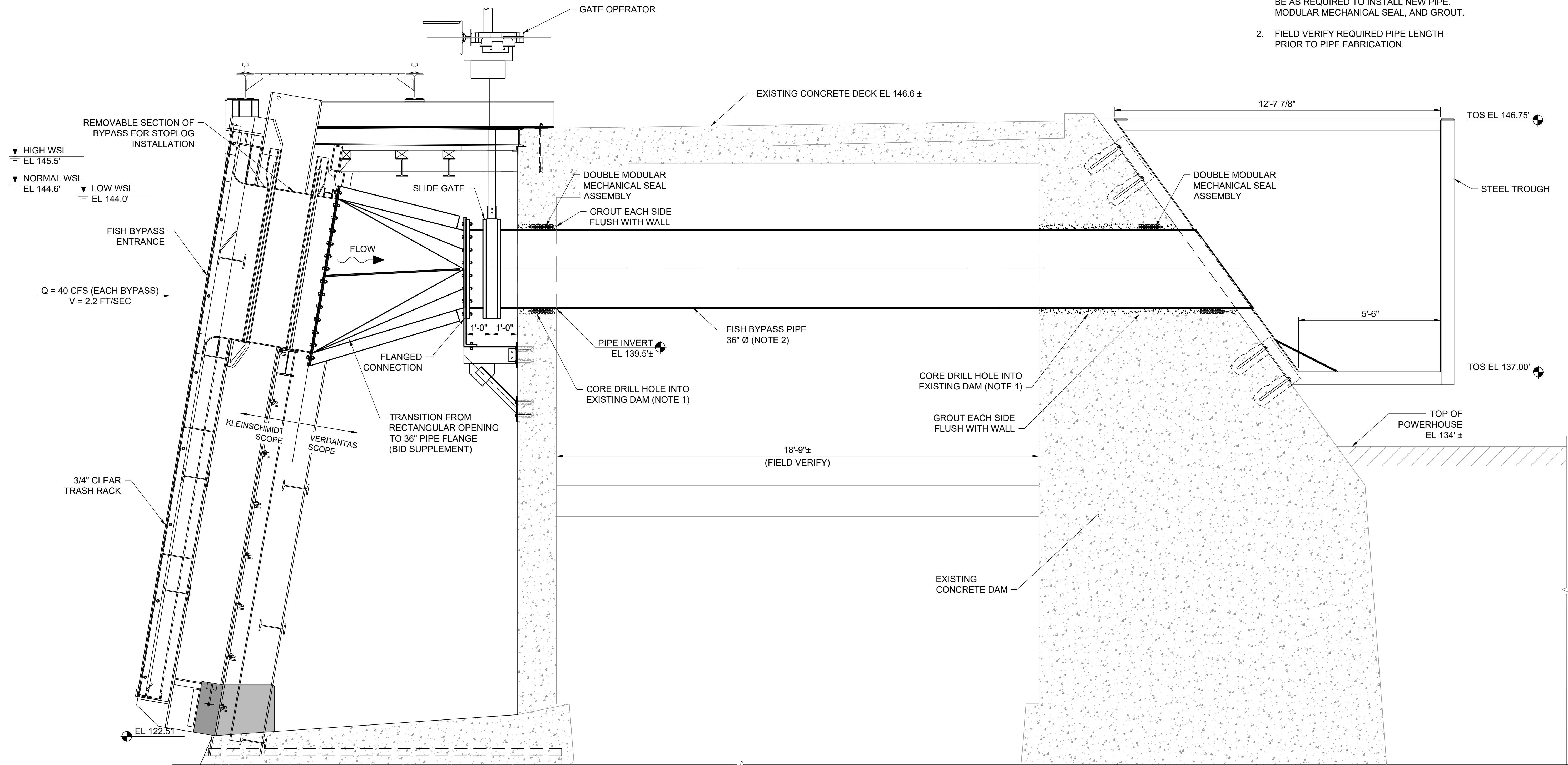
DOWNSTREAM BYPASS GENERAL ARRANGEMENT PLAN

SCALE: 1"=10'
0 10' 20'

NOTE:

1. CONTRACTOR TO FIELD VERIFY EXISTING DIMENSIONS AND ELEVATIONS PRIOR TO NEW CONSTRUCTION.

- NOTE:**
1. CONCRETE CORE/REMOVAL SIZE SHOWN IS APPROXIMATE. CONCRETE REMOVAL SHALL BE AS REQUIRED TO INSTALL NEW PIPE, MODULAR MECHANICAL SEAL, AND GROUT.
 2. FIELD VERIFY REQUIRED PIPE LENGTH PRIOR TO PIPE FABRICATION.



A
C-160
DOWNSTREAM FISH PASSAGE SECTION
SCALE: 1/2"=1'-0"
1' 0 1' 2'



ISSUED FOR BID
NOT FOR CONSTRUCTION
SEPTEMBER 3, 2025

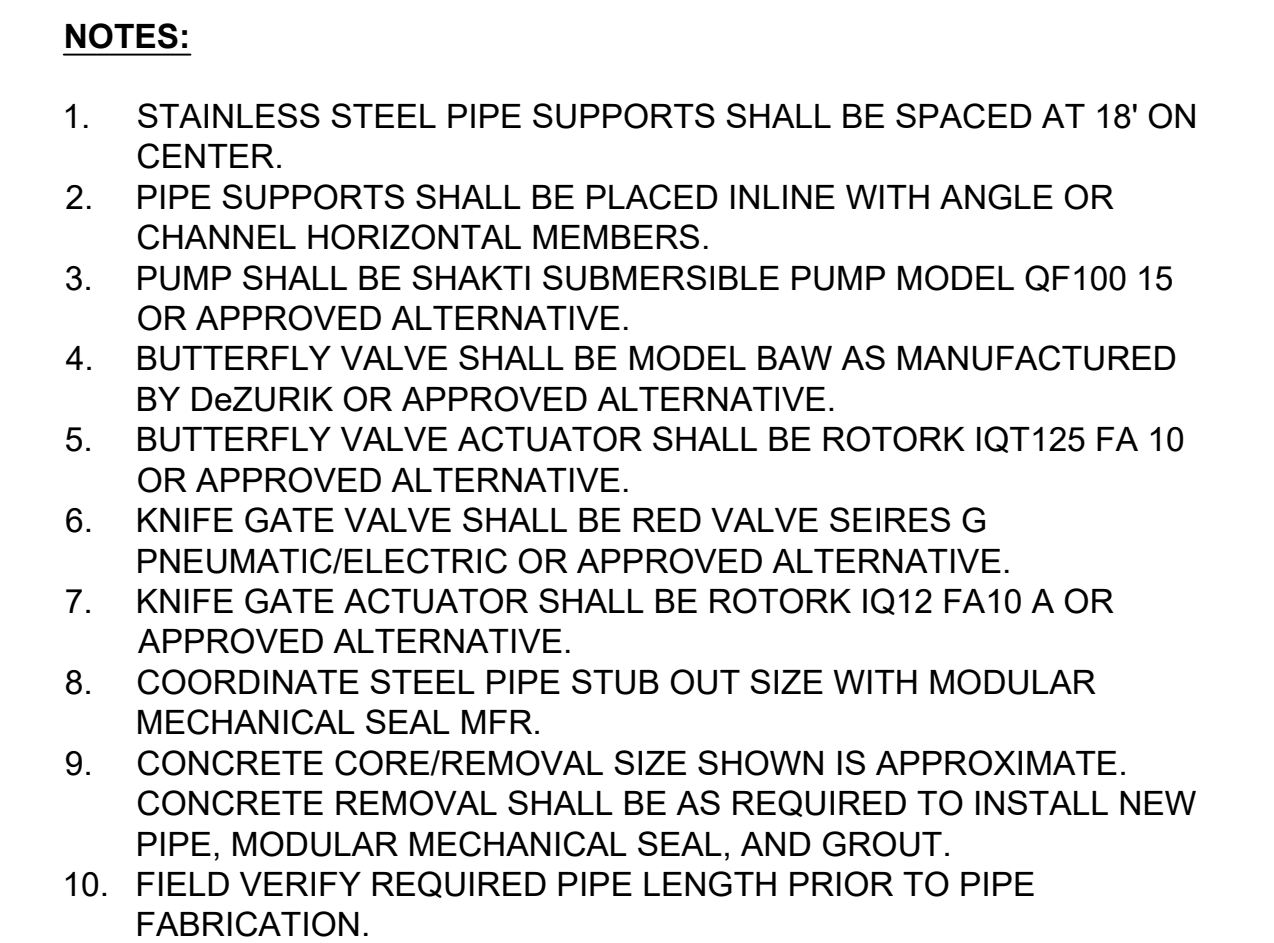
9/3/2025	ISSUED FOR BID	M. GRAESER
REVISION	DESCRIPTION OF ISSUE / REVISION	REVISED BY

VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING
IF NOT ONE INCH ON THIS
SHEET, ADJUST SCALES
ACCORDINGLY

WOODLAND FISH LIFT PASSAGE DESIGN
MAINE DEPARTMENT OF MARINE
RESOURCES

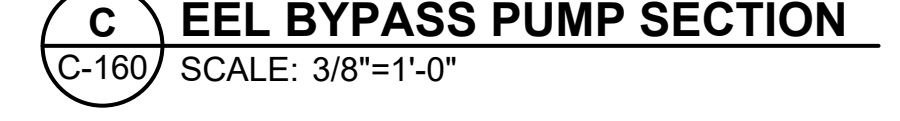
DOWNSTREAM BYPASS SECTION
(BID SUPPLEMENT)

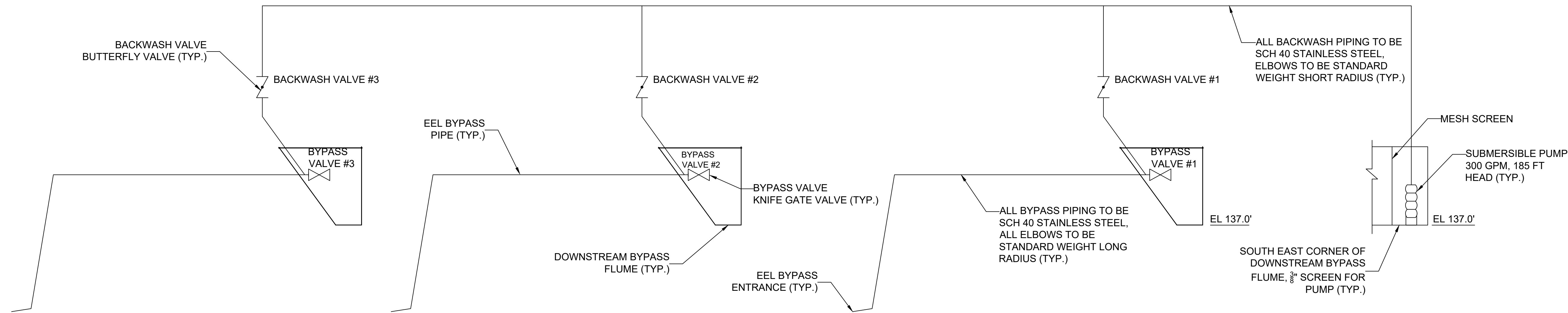
PROJECT:	16667
DRAWN BY:	C. HAGLER
DESIGNER:	A. MENGERT
APPROVED BY:	M. GRAESER
SHEET:	43 OF 240
DRAWING:	C-161



C-160 SCALE: 3/8"=1'-0"

0 2'

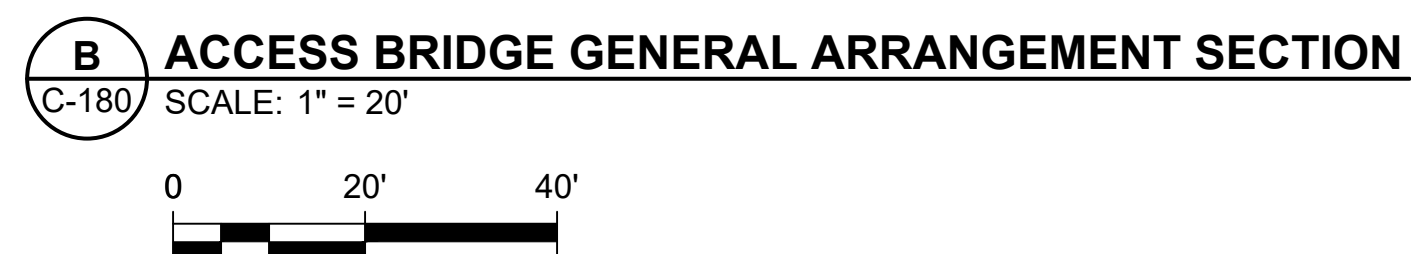
A horizontal scale bar with alternating black and white segments. The first segment is black, followed by a white segment, then a black segment, and finally a white segment. The total length represents 2 feet. The bar is labeled '0' at the left end and '2'' at the right end.



EEL PACKAGE BACKWASH SYSTEM
SCALE: NTS

- BACKWASH CYCLE:
1. OPEN BACKWASH VALVE 1
 2. START PUMP
 3. CLOSE BYPASS VALVE 1
 4. FLUSH FOR 10 MIN.
 5. OPEN BYPASS VALVE 1
 6. CLOSE BYPASS VALVE 2
 7. CLOSE BACKWASH VALVE 1
 8. OPEN BYPASS VALVE 1
 9. FLUSH FOR 10 MIN.
 10. REPEAT STEPS 5 THROUGH 9 FOR REMAINING BYPASS.
 11. SHUT OFF PUMP
 12. OPEN BYPASS VALVE
 13. CLOSE BACKWASH VALVE.

1. CONTRACTOR TO FIELD VERIFY TOP OF PIPE ELEVATION PRIOR TO BRIDGE ABUTMENT CONSTRUCTION.
2. PROTECT EXISTING PIPE DURING CONSTRUCTION.
3. QUANTITIES ARE ONLY PROVIDED FOR PERMITTING PURPOSES.
4. THE DRAWINGS AND PERMIT APPLICATION ARE BASED ON AN EARTHFILL COFFERDAM WITH SHEET STEEL AROUND THE PERIMETER BECAUSE THAT IS VIEWED AS THE MOST CONSERVATIVE OPTION REGARDING PERMITS. THE ENGINEER IS NOT DIRECTING THE USE OF AN EARTHFILL COFFERDAM. OTHER TYPES OF COFFERDAMS THAT HAVE BEEN CONSIDERED INCLUDED SHEET STEEL WITHOUT EARTH FILL, PORT-A-DAM, SANDBAGS, AND CONCRETE. THE DECISION ON WHICH TYPE TO USE WILL BE MADE BY THE CONTRACTOR, ONCE SELECTED, IN CONSIDERATION WITH THE ENGINEER.



QUANTITIES (NOTE 3)				
ITEM	LENGTH	AREA	VOLUME ABOVE OHWL	VOLUME BELOW OHWL
FISH LIFT COFFERDAM	250 LF	2280 SF	310 CY	995 CY
FISH LADDER COFFERDAM (NIC)	400 LF	2830 SF	150 CY	995 CY
BRIDGE ABUTMENT 1 COFFERDAM (AA)	120 LF	980 SF	150 CY	480 CY
BRIDGE ABUTMENT 2 COFFERDAM (AA)	110 LF	920 SF	130 CY	275 CY
PERMANENT FILL FOR FISH LIFT	143 LF	2210 SF	455 CY	810 CY
PERMANENT FILL FOR FISH LADDER (NIC)	385 LF	1690 SF	165 CY	130 CY
PERMANENT FILL FOR BRIDGE ABUTMENT 1 (AA)	27 LF	610 SF	240 CY	210 CY
PERMANENT FILL FOR BRIDGE ABUTMENT 2 (AA)	27 LF	75 SF	51 CY	7 CY

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SEPTEMBER 3, 2025

9/3/2025	ISSUED FOR BID	M. GRAESER
REVISION	DESCRIPTION OF ISSUE / REVISION	REVISED BY

VERIFY SCALE
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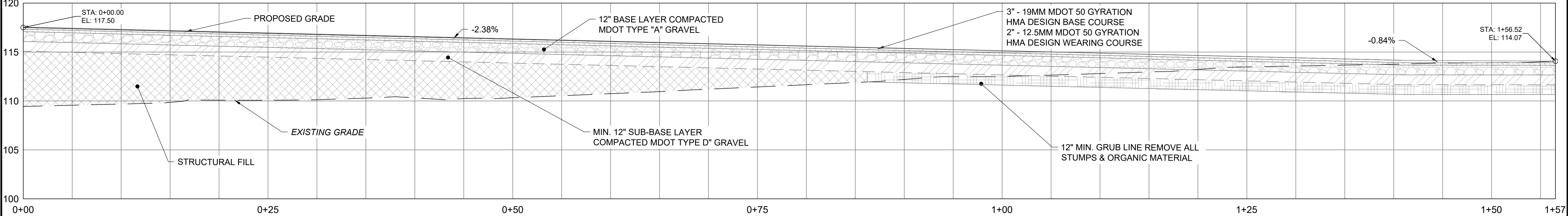
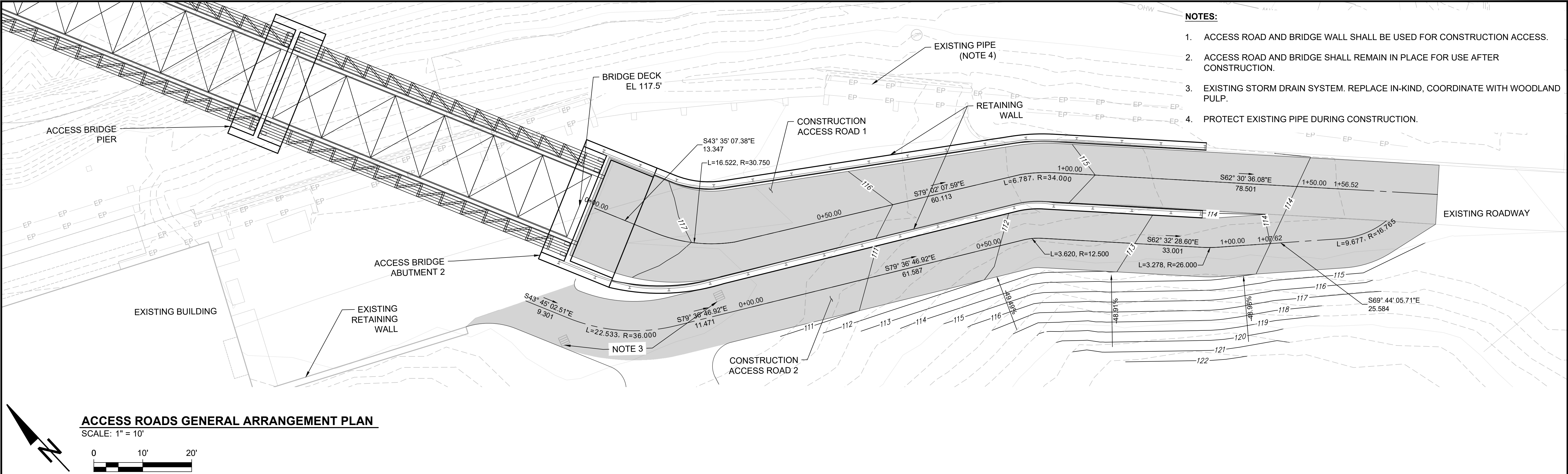
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ACCORDINGLY

WOODLAND FISH LIFT PASSAGE DESIGN

MAINE DEPARTMENT OF MARINE
RESOURCES

ACCESS BRIDGE GENERAL ARRANGEMENT SECTIONS (ALTERNATE ACCESS)

PROJECT:	16667
DRAWN BY:	C. HAGLER
DESIGNER:	A. MENGERT
APPROVED BY:	M. GRAESER
SHEET:	47 OF 240
DRAWING: C-181	



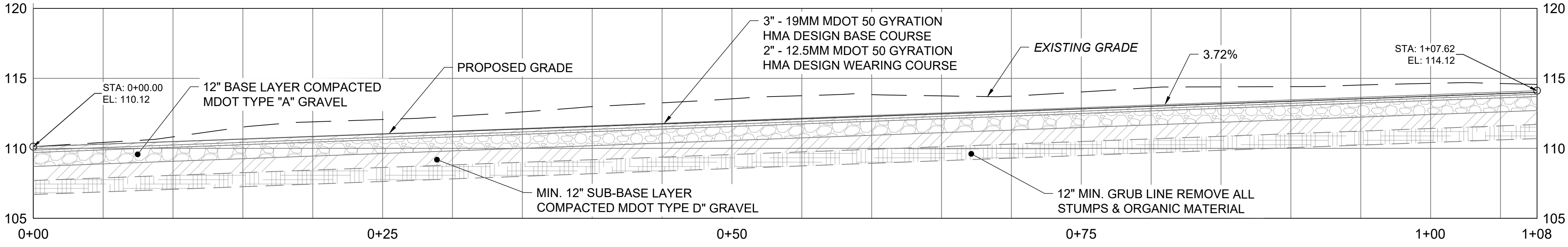
ACCESS ROAD 1 PROFILE

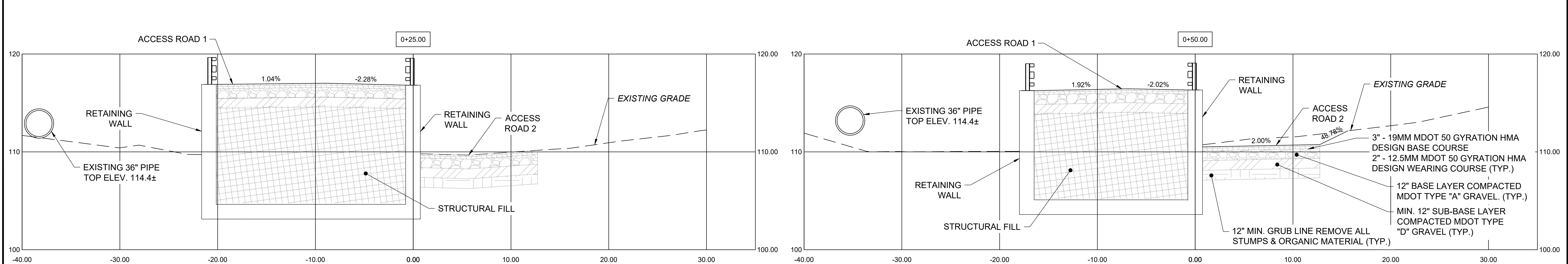
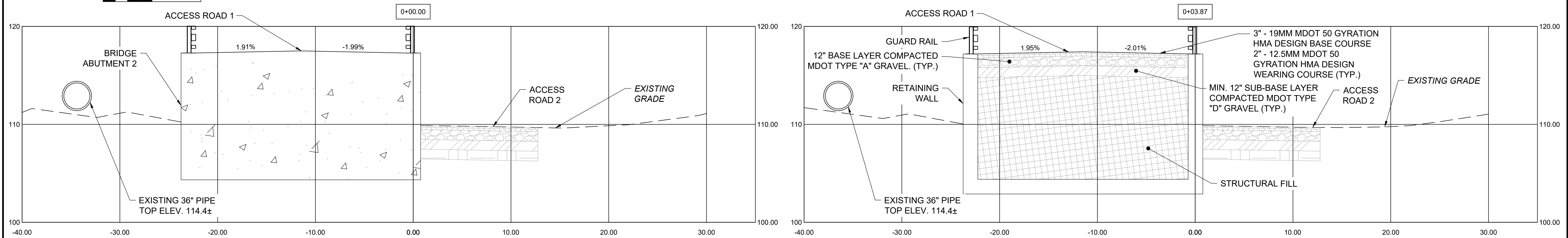
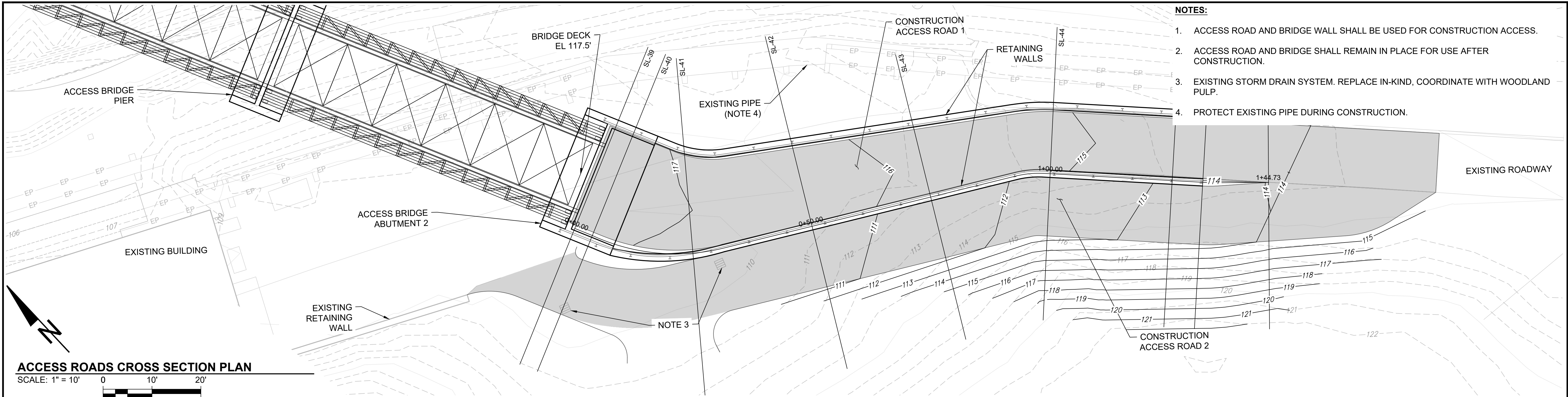
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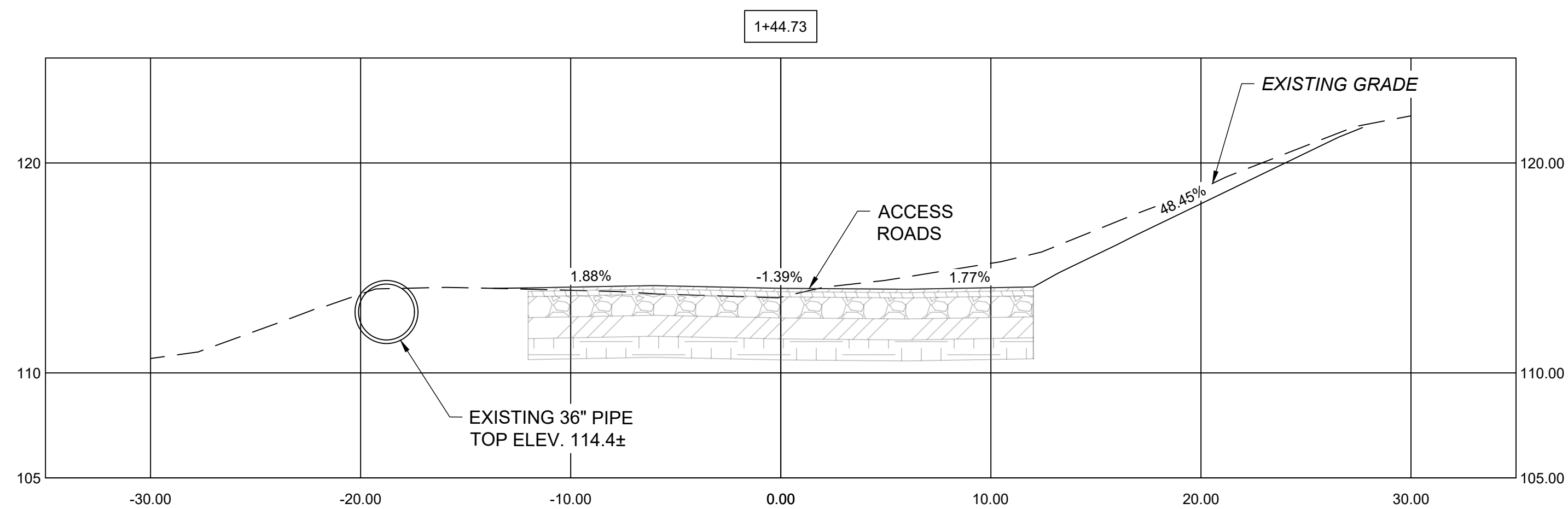
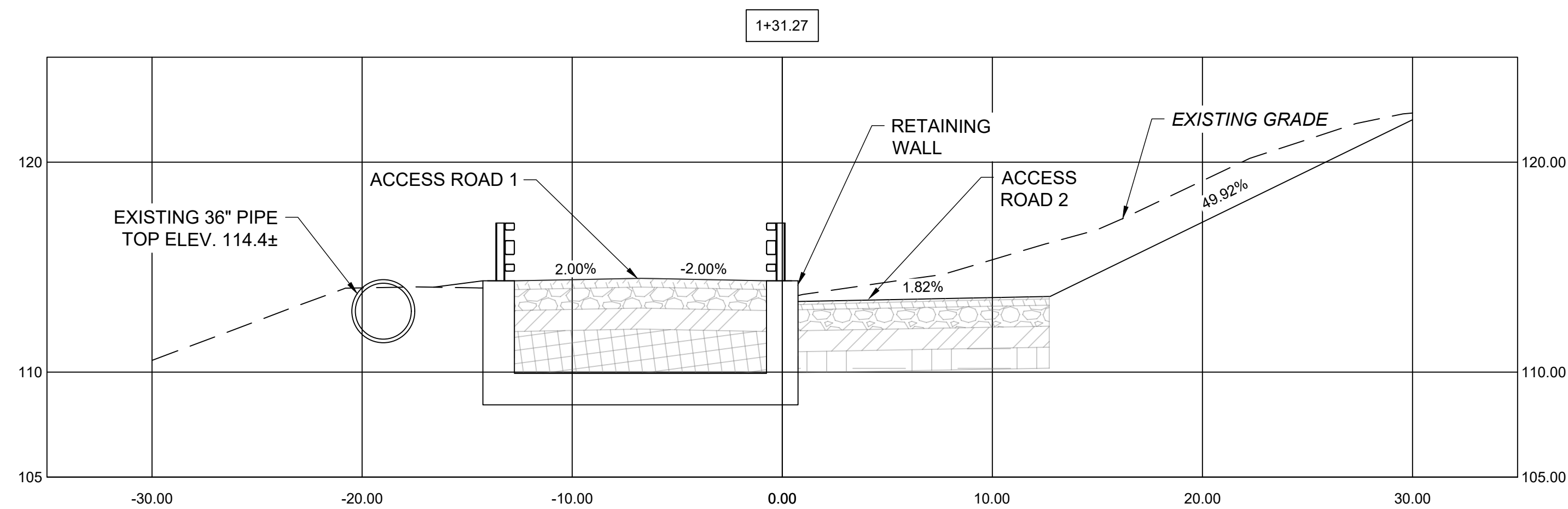
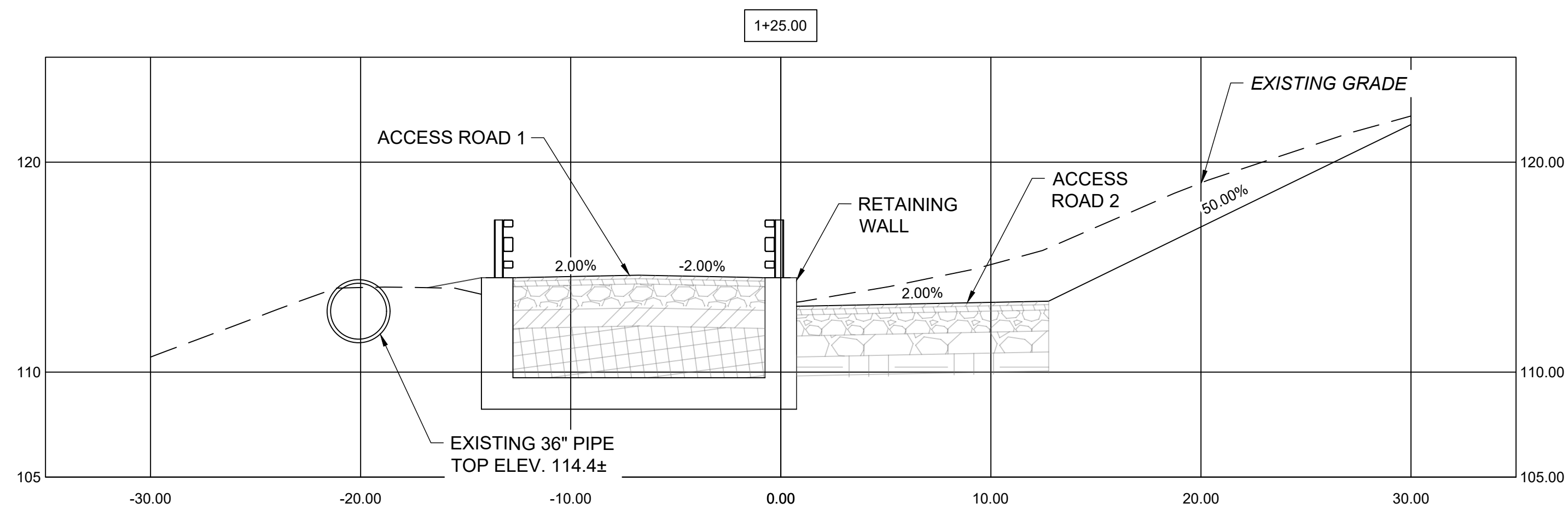
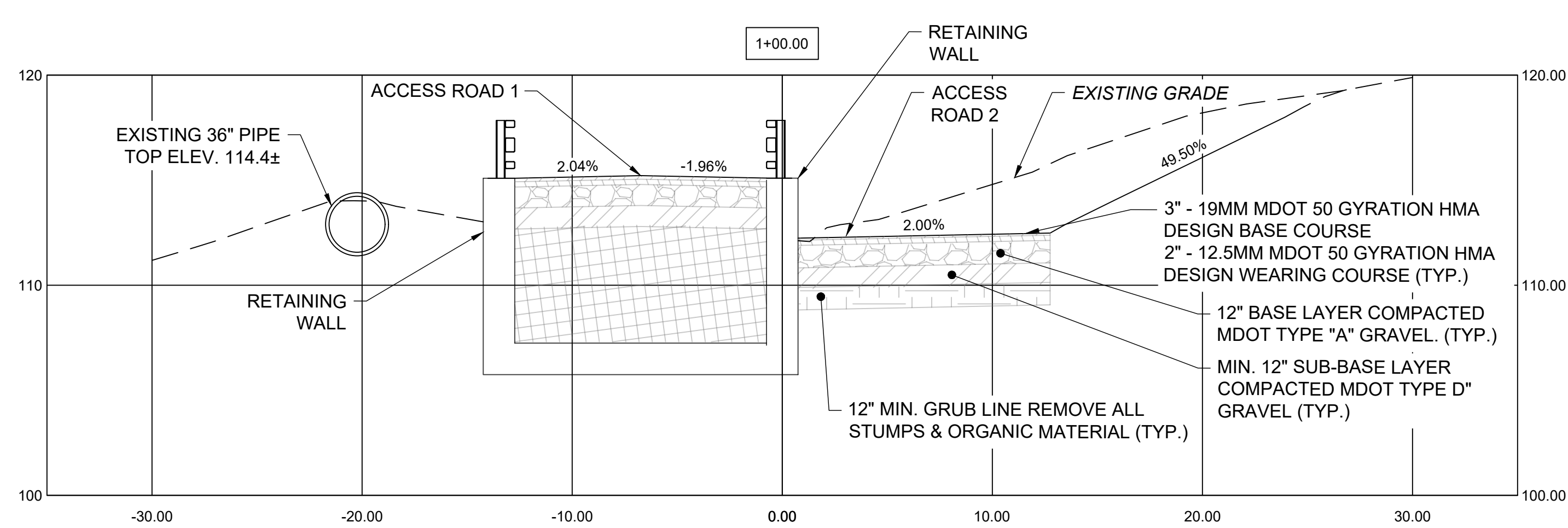
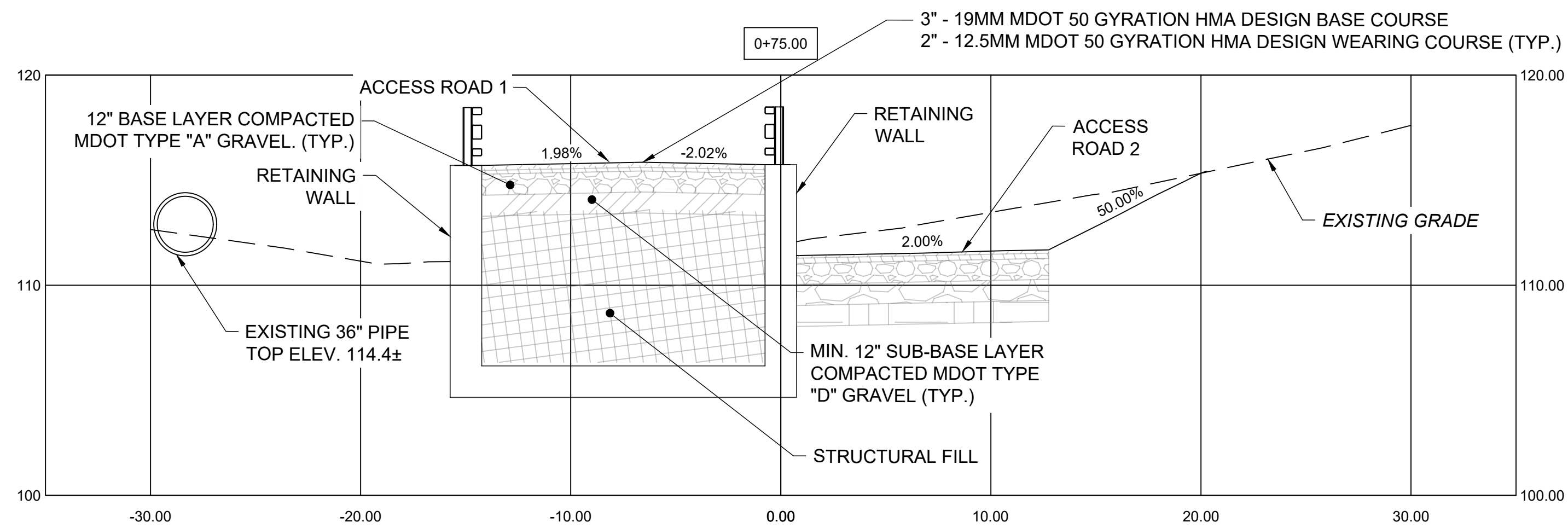


ACCESS ROAD 2 PROFILE

SCALE: 1" = 5'







ACCESS ROAD SECTIONS
SCALE: 1" = 5'



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NOT FOR CONSTRUCTION
SEPTEMBER 3, 2025

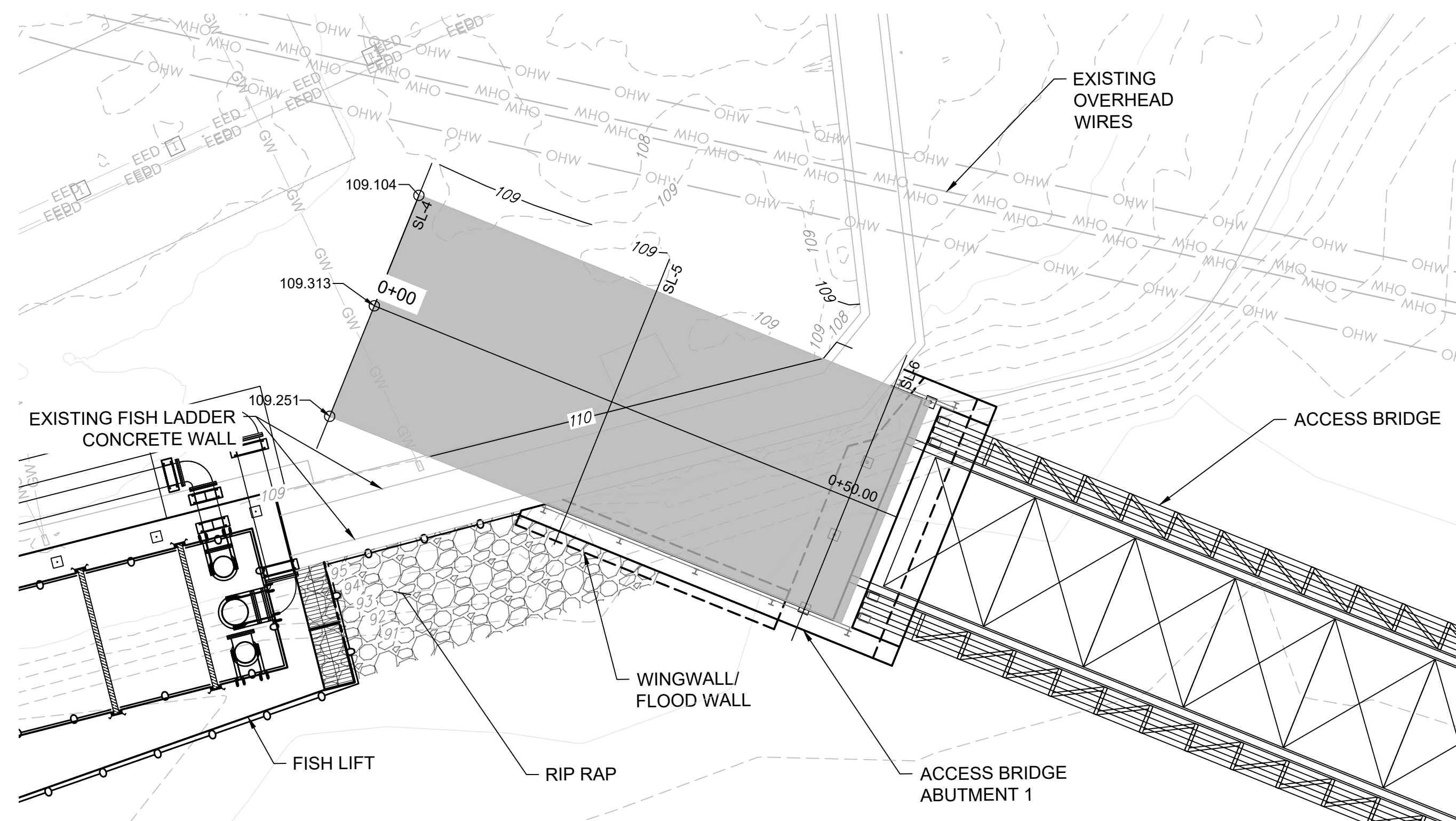
9/3/2025	ISSUED FOR BID	M. GRAESER
REVISION	DESCRIPTION OF ISSUE / REVISION	REVISED BY

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WOODLAND FISH LIFT PASSAGE DESIGN
MAINE DEPARTMENT OF MARINE
RESOURCES

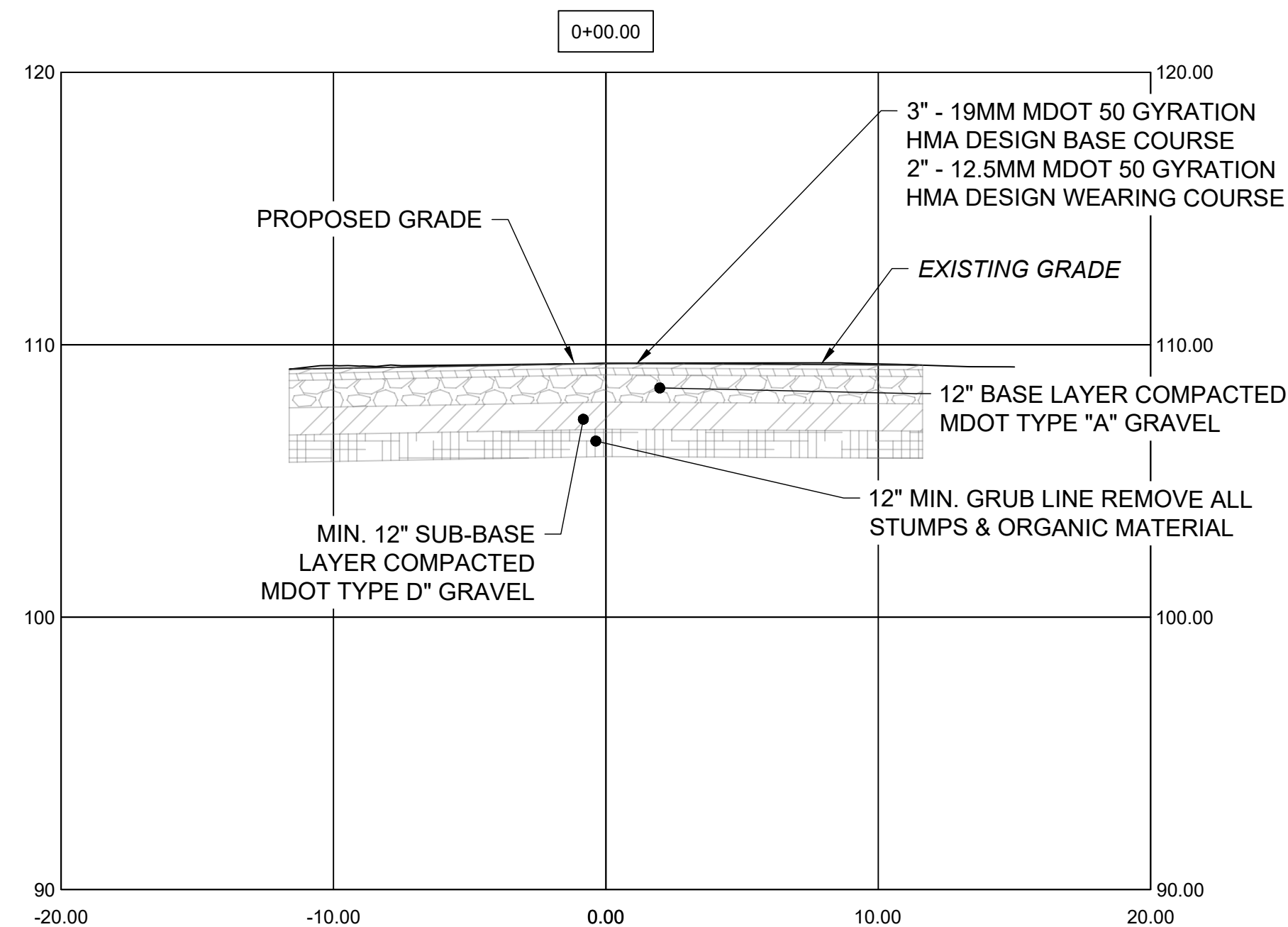
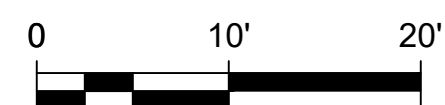
ACCESS ROAD SECTIONS
(ALTERNATE ACCESS)

PROJECT:	16667
DRAWN BY:	C. HAGLER
DESIGNER:	A. MENGERT
APPROVED BY:	M. GRAESER
SHEET:	50 OF 240
DRAWING:	C-184



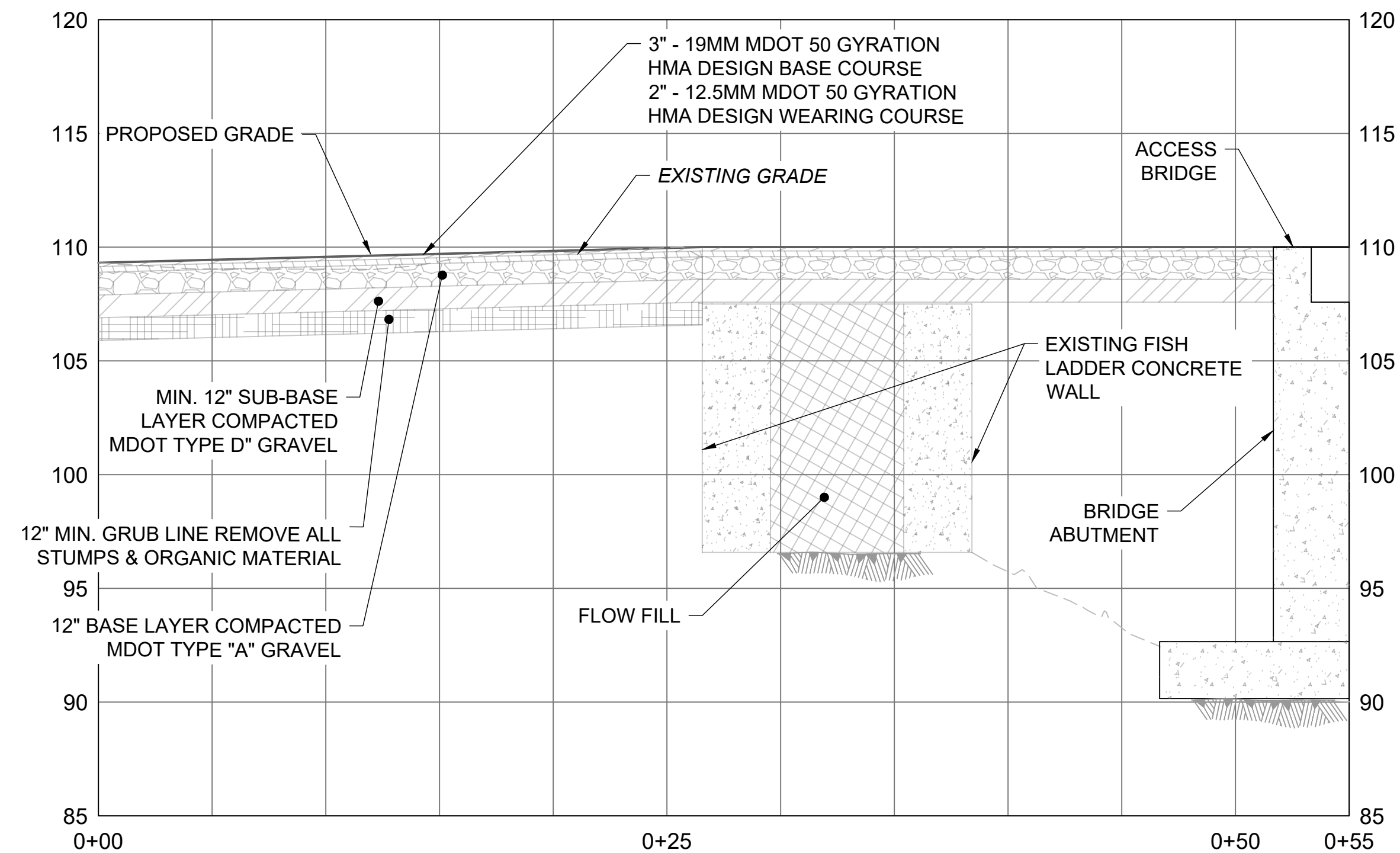
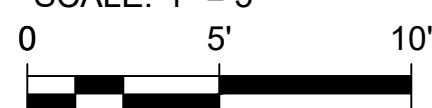
ACCESS ROAD 3 GENERAL ARRANGEMENT PLAN

SCALE: 1" = 10'



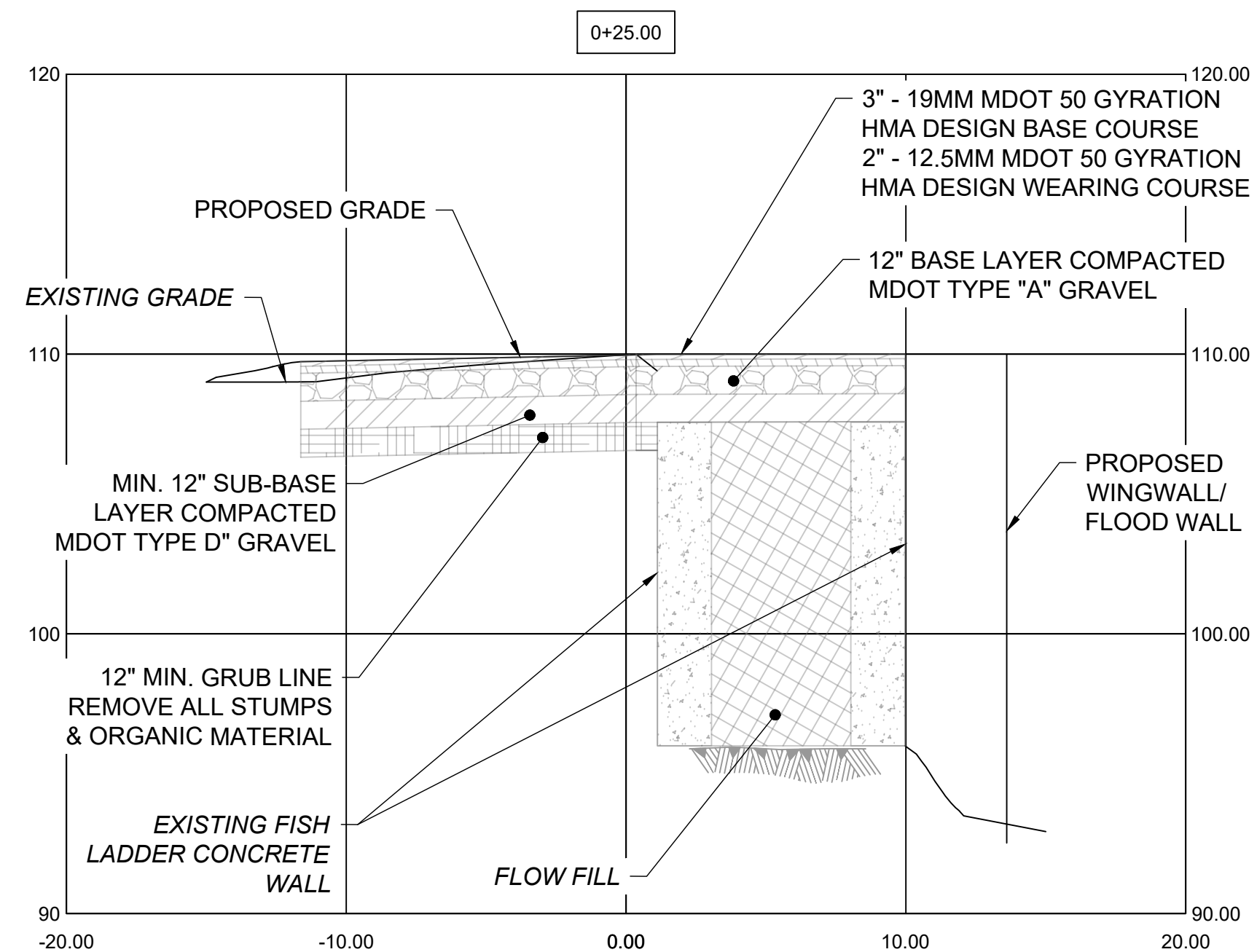
ACCESS ROAD 3 SECTION 0+00

SCALE: 1" = 5'



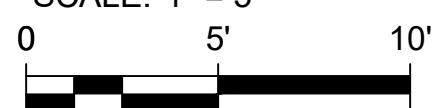
ACCESS ROAD 3 PROFILE VIEW

SCALE: 1" = 5'



ACCESS ROAD 3 SECTION 0+50

SCALE: 1" = 5'



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SEPTEMBER 3, 2025

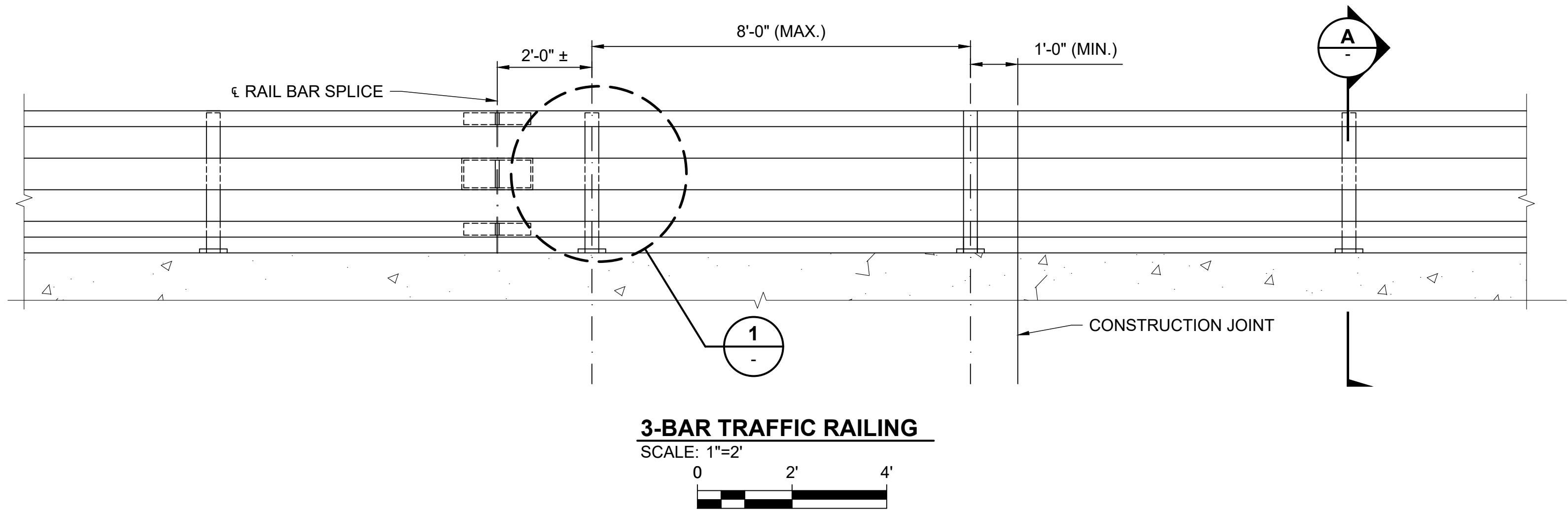
9/3/2025	ISSUED FOR BID	M. GRAESER
REVISION	DESCRIPTION OF ISSUE / REVISION	REVISED BY

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WOODLAND FISH LIFT PASSAGE DESIGN
MAINE DEPARTMENT OF MARINE
RESOURCES

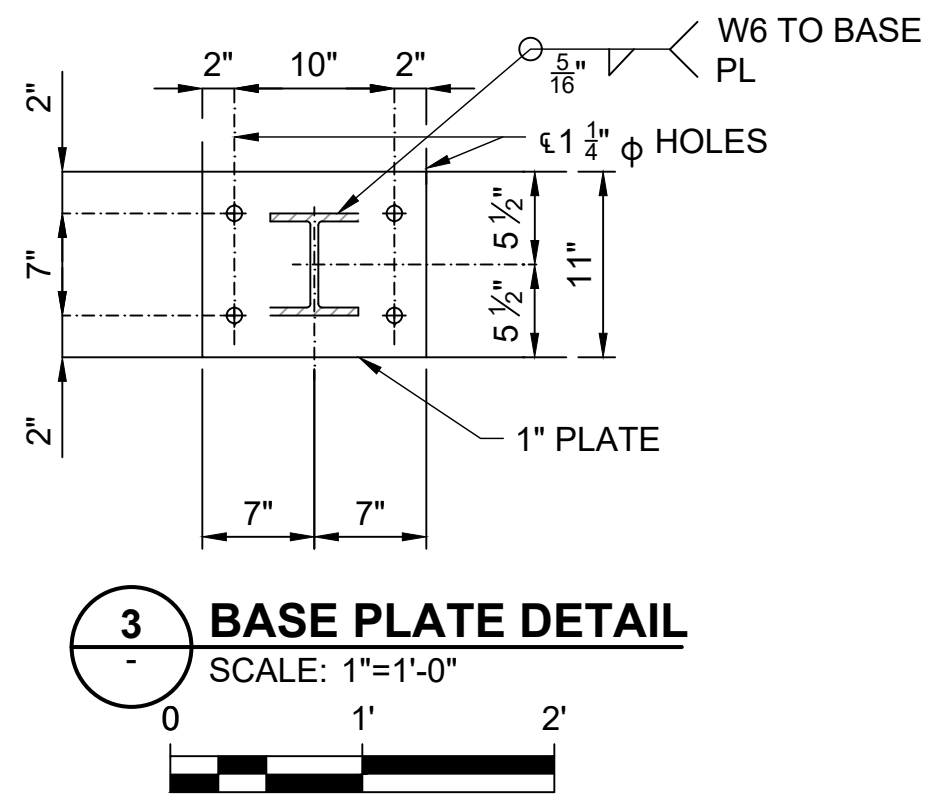
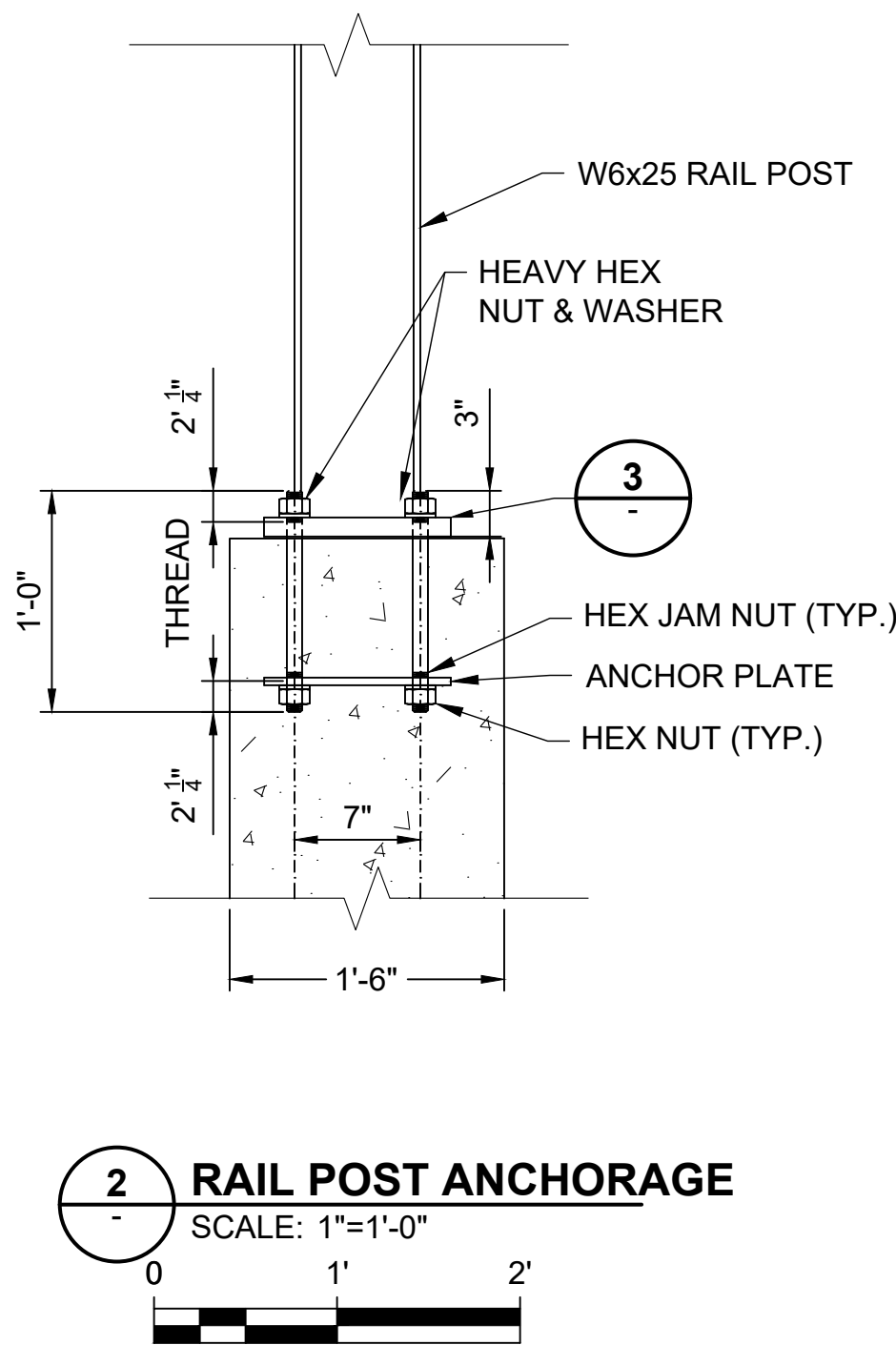
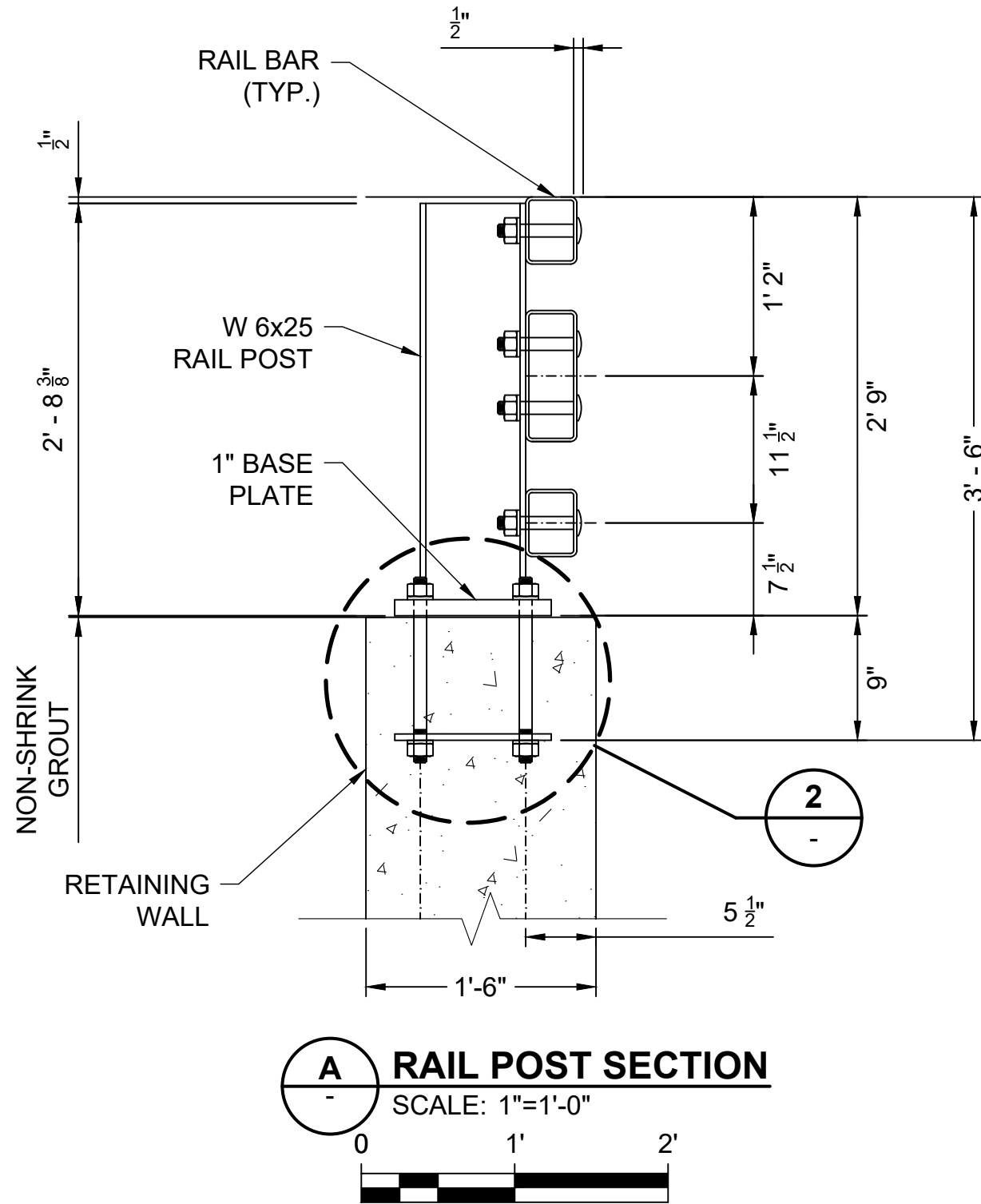
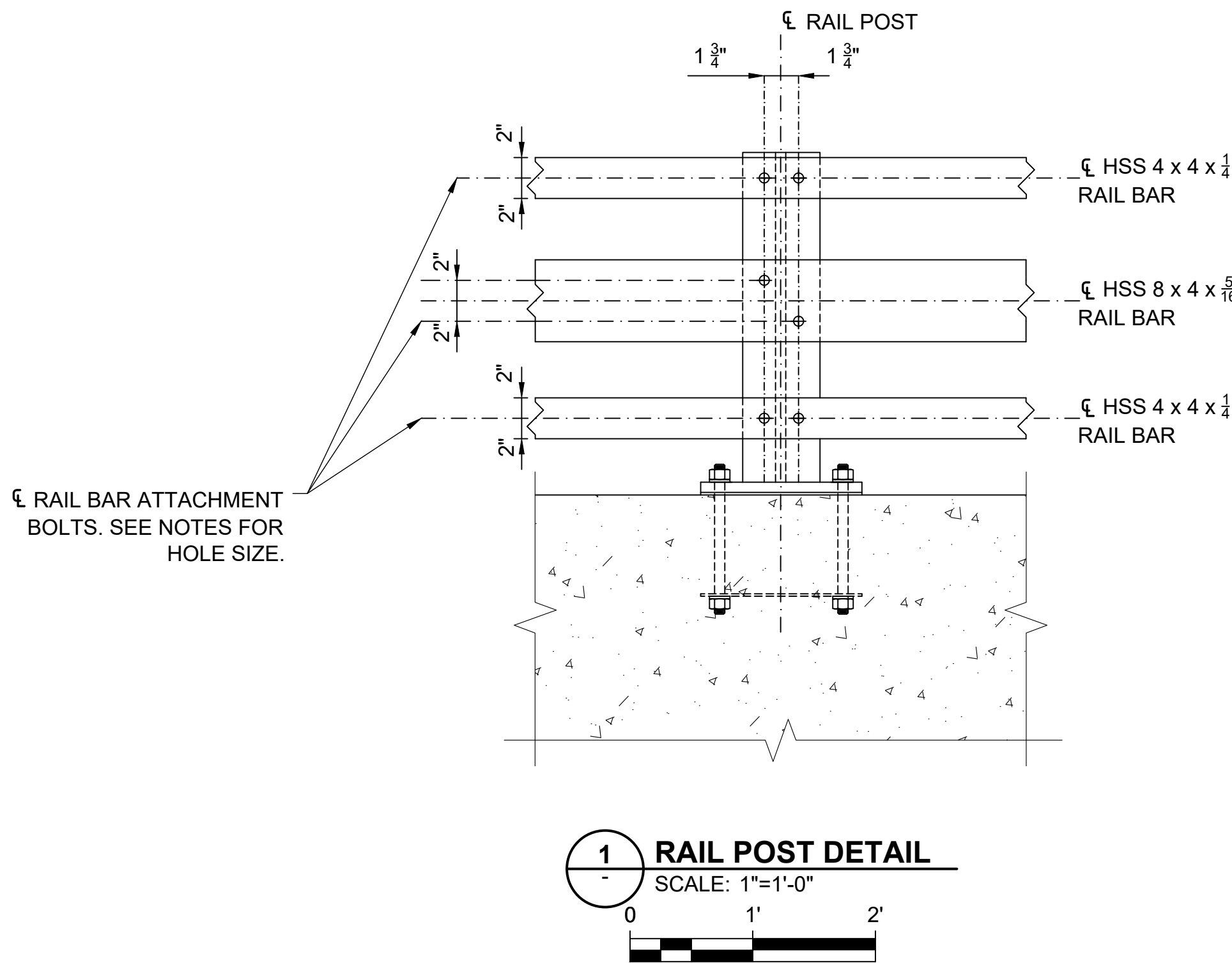
ACCESS ROAD 3 PLAN, PROFILE &
SECTIONS (ALTERNATE ACCESS)

PROJECT:	16667
DRAWN BY:	C. HAGLER
DESIGNER:	A. MENGERT
APPROVED BY:	M. GRAESER
SHEET:	51 OF 240
DRAWING:	C-185



NOTES:

- ALL EXPOSED CUT OF SHEARED EDGES SHALL BE BROKEN AND FREE OF BURRS. THE INSIDE WELD FLASH OF TUBING SHALL BE REMOVED AT SPLICES AND EXPANSION JOINTS.
- RAIL POSTS SHALL BE SET NORMAL TO GRADE UNLESS OTHERWISE SHOWN.
- LENGTHS OF RAIL BAR SHALL BE ATTACHED TO A MINIMUM OF 2 RAIL POSTS AND TO AT LEAST 4 POSTS WHENEVER POSSIBLE.
- RAIL BAR EXPANSION JOINTS SHALL BE PROVIDED IN ANY RAIL BAY SPANNING A SUPERSTRUCTURE EXPANSION JOINT.
- ALL PARTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A 123. EXCEPT THAT HARDWARE SHALL MEET THE REQUIREMENTS OF EITHER ASTM A 153 OR ASTM B 695, CLASS 50, TYPE 1. PARTS EXCEPT HARDWARE SHALL BE BLAST - CLEANED PRIOR TO GALVANIZING IN ACCORDANCE WITH SSPC - SP6.
- ANCHOR BOLTS SHALL BE SET WITH A TEMPLATE. NUTS SECURING THE POST BASE PLATE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL $\frac{1}{8}$ TURN.
- BOLTS FOR ATTACHING RAIL BARS TO POSTS SHALL BE ROUND OR DOME HEAD AND MAY BE RIB NECK, SLOTTED, WRENCH HEAD OR TENSION CONTROL (TC - TWIST - OFF). HOLES IN POSTS SHALL BE $\frac{1}{16}$ INCH LARGER THAN THE DIAMETER OF THE BOLT. HOLES IN RAIL BARS SHALL BE DRILLED TO SIZE AS FOLLOWS:
 - SLOTTED, WRENCH HEAD OR TC BOLTS: $\frac{1}{16}$ " LARGER THAN BOLT DIAMETER
 - RIB NECK BOLTS: SIZE APPROPRIATE TO ACCOMMODATE AN INTERFERENCE FIT
- HOLES IN RAIL BARS SHALL BE FIELD - DRILLED AND SHALL BE COATED WITH A APPROVED ZINC - RICH PAINT PRIOR TO ERECTION.
- BOLTS IN EXPANSION JOINTS SHALL BE TIGHTENED ONLY TO A POINT THAT WILL STILL ALLOW RAIL MOVEMENT.



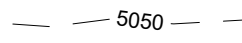
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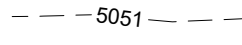
GENERAL

EXISTING SMALLER ITALIC TEXT DENOTES EXISTING EQUIPMENT, STRUCTURES, PIPING, ETC.

PROPOSED BOLD LINEWORK AND TEXT DENOTES PROPOSED EQUIPMENT, STRUCTURES, PIPING, ETC.

LINETYPES

 5050 EXISTING INDEX CONTOUR

 5051 EXISTING INTERMEDIATE CONTOUR

 EXISTING BUILDING/STRUCTURE

HATCH TYPES

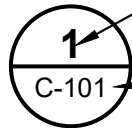
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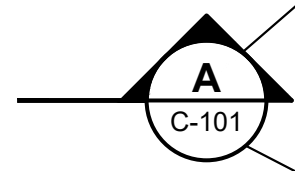
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 COMPACTED EARTH

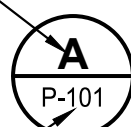
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 DETAIL NUMBER

 DWG NO ON WHICH SECTION IS SHOWN
A DASH - INDICATES SECTION IS SHOWN ON THE SAME SHEET

 SECTION LETTER

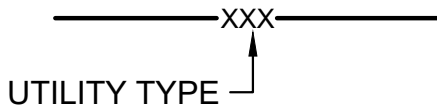
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A DASH - INDICATES SECTION IS SHOWN ON THE SAME SHEET

 DETAIL NUMBER **SECTION** DETAIL OR SECTION TITLE

 SCALENTS SCALE

DWG. NO. ON WHICH DETAIL IS SHOWN, A DASH - INDICATES DETAIL IS SHOWN ON THE SAME SHEET

UTILITY LINETYPES

 UTILITY TYPE

TYPE

GW = GUY WIRE

OHW = OVERHEAD WIRE

EED = ELEVATED ELECTRIC DUCTBANK

EP = EDGE OF PIPE

ABBREVIATIONS:

ABBREVIATIONS	
"	INCH
&	AND
ACS	ACCESS
ACT	ACTUATOR
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AWS	ATTRACTION WATER SYSTEM
BFV	BUTTERFLY VALVE
CL	CLASS
D	DIAMETER
DEFL	DEFLECTION
DEG	DEGREE
DJ	DISMANTLING JOINT
E	EASTING
EED	ELEVATED ELECTRIC DUCT BANK
EL	ELEVATION
ELEC	ELECTRIC
EP	EDGE OF PIPE
EXP	EXISTING
EXP	EXPANSION
FIK	FLANGE ISOLATION KIT
FLG	FLANGE
FLG'D	FLANGED
GW	GUY WIRE
HWL	HIGH WATER LEVEL
INV	INVERT
JNT	JOINT
LWL	LOW WATER LEVEL
MTD	MITERED
MW	MANWAY
N	NORTHING
NWL	NORMAL WATER LEVEL
OD	OUTSIDE DIAMETER
OHW	OVERHEAD WIRE
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PS	PIPE SUPPORT
PT	POINT OF TANGENCY
PVI	POINT OF VERTICAL INFLECTION
R	RADIUS
STA	STATION
STD	STANDARD
STL	STEEL
t	THICKNESS
TOP	TOP OF PIPE
TOS	TOP OF STRUCTURE
TOW	TOP OF WALL
W/	WITH
WTR	WATER

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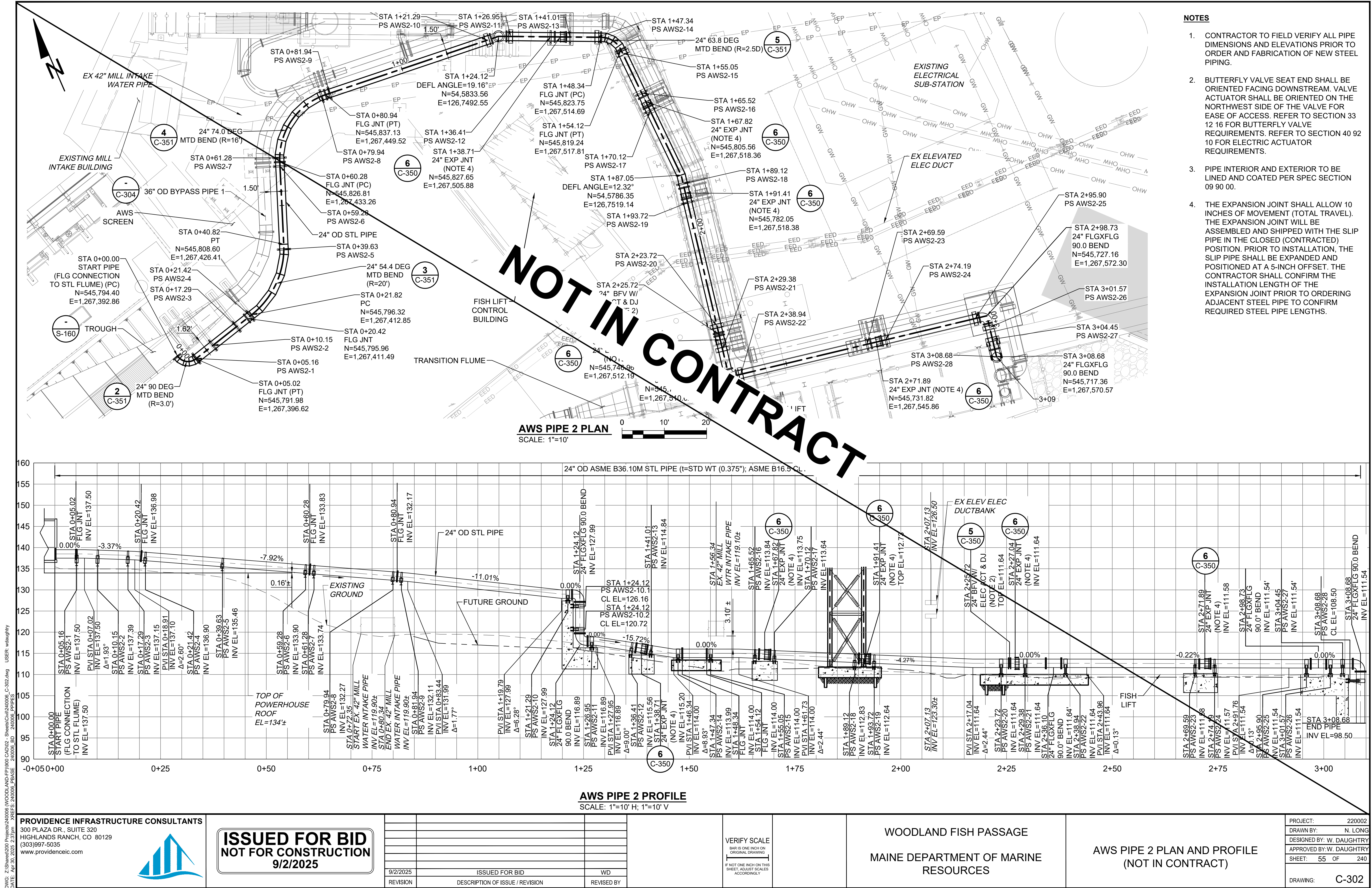
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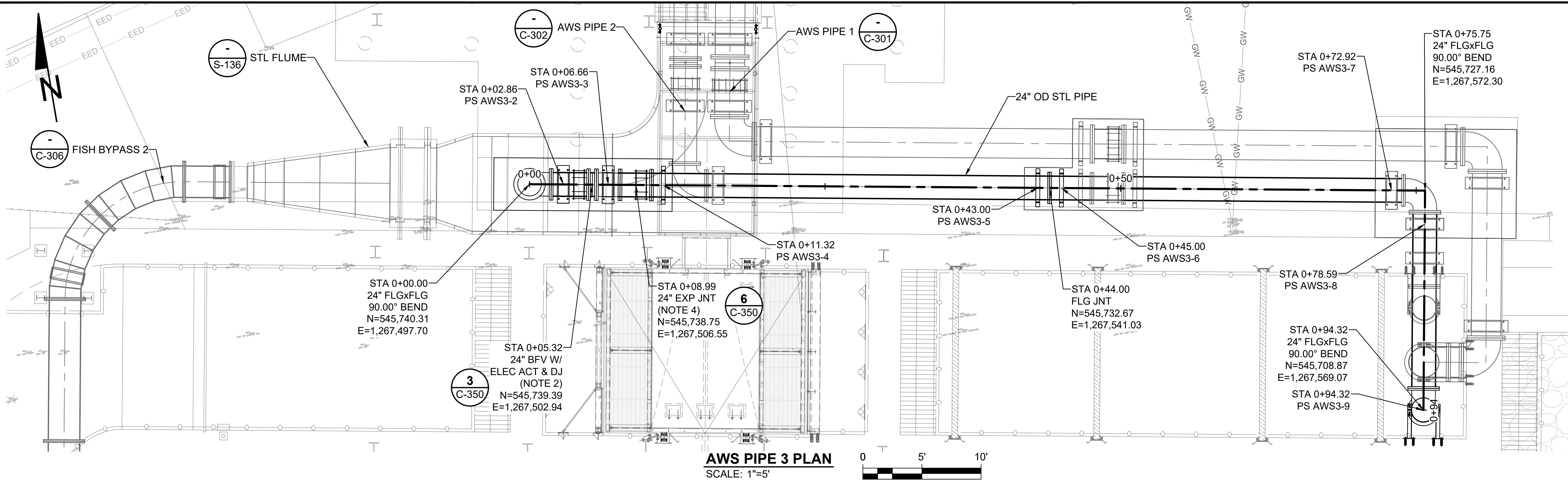
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WOODLAND FISH PASSAGE
MAINE DEPARTMENT OF MARINE RESOURCES

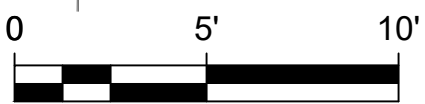
SYMBOLS AND ABBREVIATIONS

PROJECT:	220002
DRAWN BY:	N. LONG
DESIGNED BY:	W. DAUGHTRY
APPROVED BY:	W. DAUGHTRY
SHEET:	53 OF 240
DRAWING:	C-300



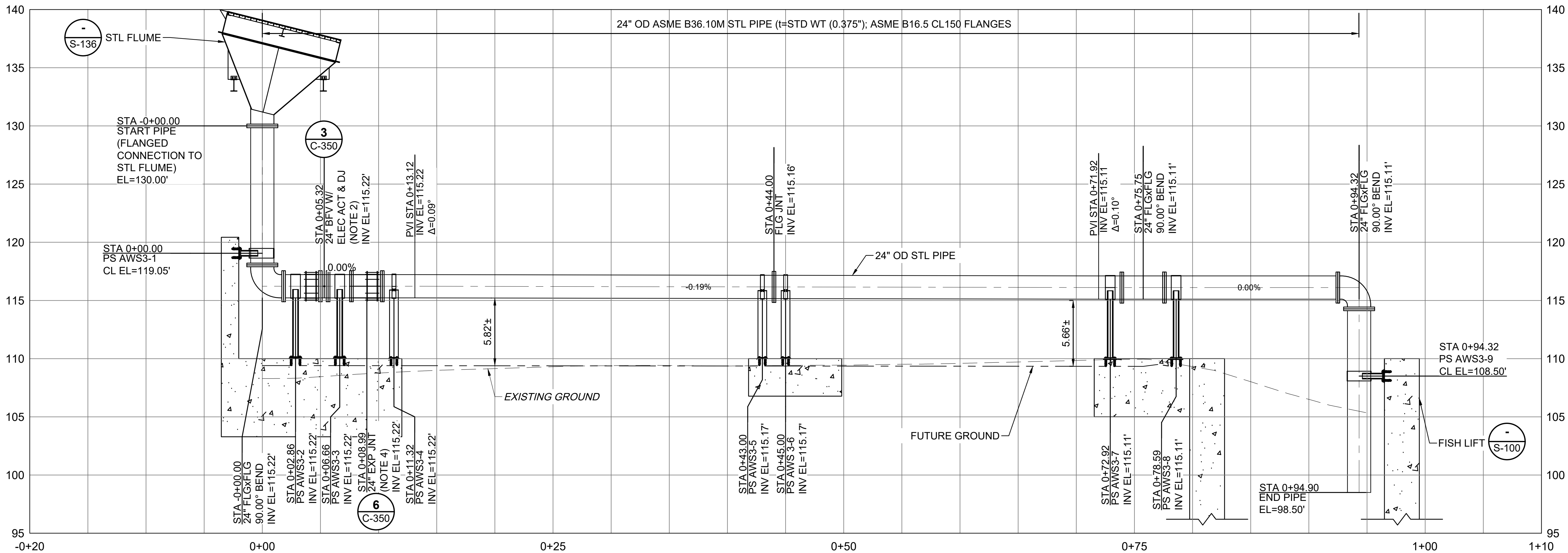


AWS PIPE 3 PLAN
SCALE: 1"=5'



NOTES

1. CONTRACTOR TO FIELD VERIFY ALL PIPE DIMENSIONS AND ELEVATIONS PRIOR TO ORDER AND FABRICATION OF NEW STEEL PIPING.
2. BUTTERFLY VALVE SEAT END SHALL BE ORIENTED FACING DOWNSTREAM. VALVE ACTUATOR SHALL BE ORIENTED ON THE NORTH SIDE OF THE VALVE FOR EASE OF ACCESS. REFER TO SECTION 33 12 16 FOR BUTTERFLY VALVE REQUIREMENTS. REFER TO SECTION 40 92 10 FOR ELECTRIC ACTUATOR REQUIREMENTS.
3. PIPE INTERIOR AND EXTERIOR TO BE LINED AND COATED PER SPEC SECTION 09 90 00.
4. THE EXPANSION JOINT SHALL ALLOW 10 INCHES OF MOVEMENT (TOTAL TRAVEL). THE EXPANSION JOINT WILL BE ASSEMBLED AND SHIPPED WITH THE SLIP PIPE IN THE CLOSED (CONTRACTED) POSITION. PRIOR TO INSTALLATION, THE SLIP PIPE SHALL BE EXPANDED AND POSITIONED AT A 5-INCH OFFSET. THE CONTRACTOR SHALL CONFIRM THE INSTALLATION LENGTH OF THE EXPANSION JOINT PRIOR TO ORDERING ADJACENT STEEL PIPE TO CONFIRM REQUIRED STEEL PIPE LENGTHS.



AWS PIPE 3 PROFILE
SCALE: 1"=5' H; 1"=5' V

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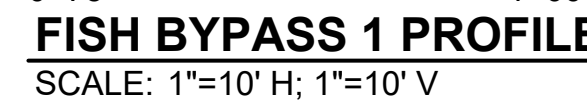
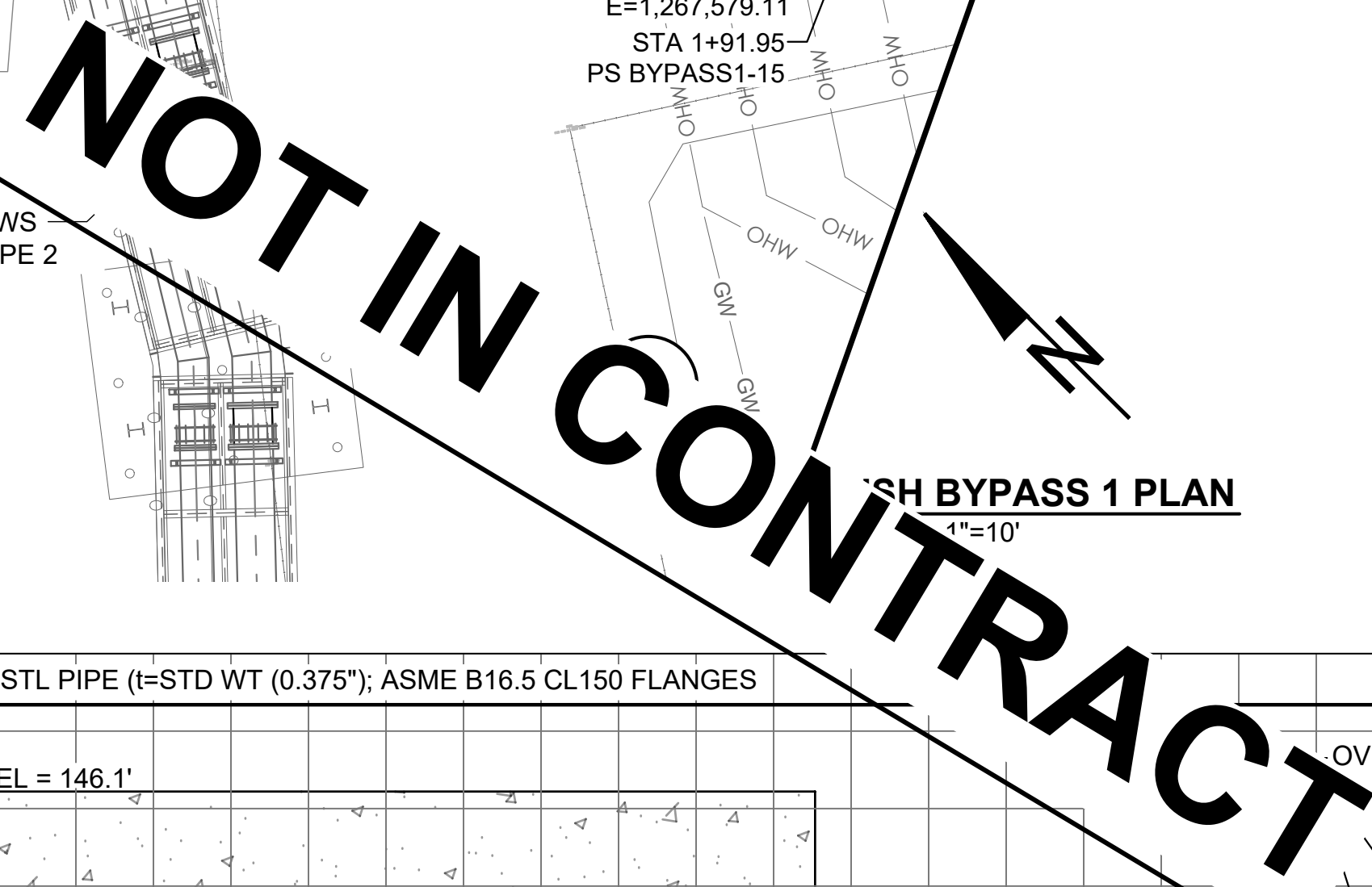
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WOODLAND FISH PASSAGE
MAINE DEPARTMENT OF MARINE
RESOURCES

AWS PIPE 3 PLAN AND PROFILE

PROJECT: 220002
DRAWN BY: N. LONG
DESIGNED BY: W. DAUGHTRY
APPROVED BY: W. DAUGHTRY
SHEET: 56 OF 240
DRAWING: C-303



- | | | |
|--|--------------|-------------|
| <p style="text-align: center;">FISH BYPASS 1 PLAN AND PROFILE
STA 0+00 TO STA 2+50
(NOT IN CONTRACT)</p> | PROJECT: | 220002 |
| | DRAWN BY: | N. LONG |
| | DESIGNED BY: | W. DAUGHTRY |
| | APPROVED BY: | W. DAUGHTRY |
| | SHEET: | 57 OF 240 |
| DRAWING: | | C-304 |



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WOODLAND FISH PASSAGE
MAINE DEPARTMENT OF MARINE
RESOURCES

FISH BYPASS 1 PLAN AND PROFILE
STA 0+00 TO STA 2+50
(NOT IN CONTRACT)

PROJECT:	220002
DRAWN BY:	N. LONG
DESIGNED BY:	W. DAUGHTRY
APPROVED BY:	W. DAUGHTRY
SHEET:	57 OF 240
DRAWING:	C-304

DWG: Z:\Shimadzu\Projects\240006 (WOODLAND FISH PASS) CAD\102 - Sheets\Civil\240006_C-305.dwg USER: wdaughtry
DATE: Apr 30, 2025 2:58pm APPCS: 240006_PIPES 240006_E0

MATCHLINE - STA 2+00

ST CROIX RIVER

NOTES

- CONTRACTOR TO FIELD VERIFY ALL PIPE DIMENSIONS AND ELEVATIONS PRIOR TO ORDER AND FABRICATION OF NEW STEEL PIPING.
- PIPE INTERIOR AND EXTERIOR LINED AND COATED PER SPEC SECTION 09 90 00.
- LOCATION AND ELEVATIONS OF OVERHEAD Wires ARE FROM THE SURVEY AND ARE APPROXIMATE. CONTRACTOR TO VERIFY WIRE LOCATIONS AND ELEVATIONS PRIOR TO CONSTRUCTION. CONTRACTOR TO USE EXTREME CAUTION WHEN WORKING IN THE VICINITY OF OVERHEAD Wires.

FISH BYPASS 1 PLAN

SCALE: 1"=10'

FISH BYPASS 1 PROFILE

SCALE: 1"=10' H; 1"=10' V

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9/2/2025

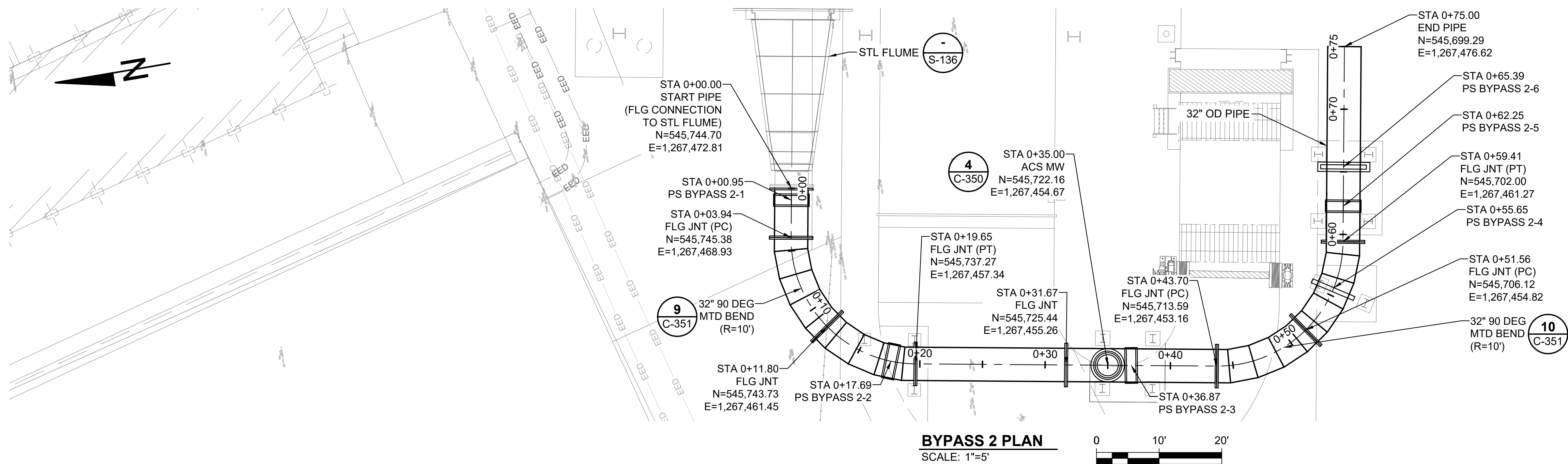
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9/2/2025	ISSUED FOR BID	WD

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ACCORDINGLY

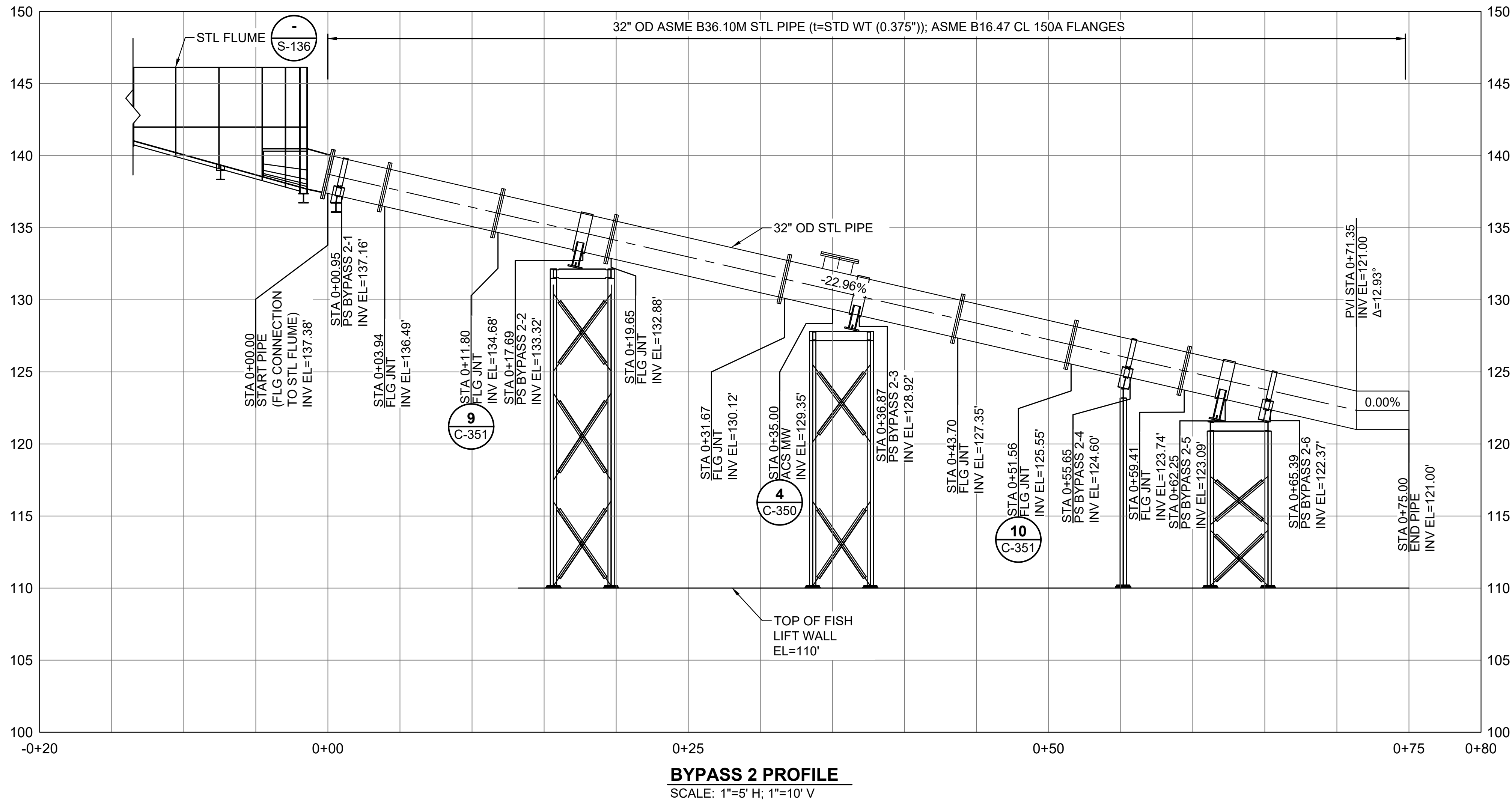
WOODLAND FISH PASSAGE
MAINE DEPARTMENT OF MARINE
RESOURCES

FISH BYPASS 1 PLAN AND PROFILE
STA 2+50 TO STA 4+14.55
(NOT IN CONTRACT)

PROJECT: 220002
DRAWN BY: N. LONG
DESIGNED BY: W. DAUGHTRY
APPROVED BY: W. DAUGHTRY
SHEET: 58 OF 240
DRAWING: C-305



- NOTES:**
- ALL PIPE FABRICATION WELDS TO BE GROUND SMOOTH ON THE INSIDE OF THE PIPE PRIOR TO LINING.
 - PIPE INTERIOR AND EXTERIOR TO BE LINED AND COATED PER SPEC SECTION 09 90 00.



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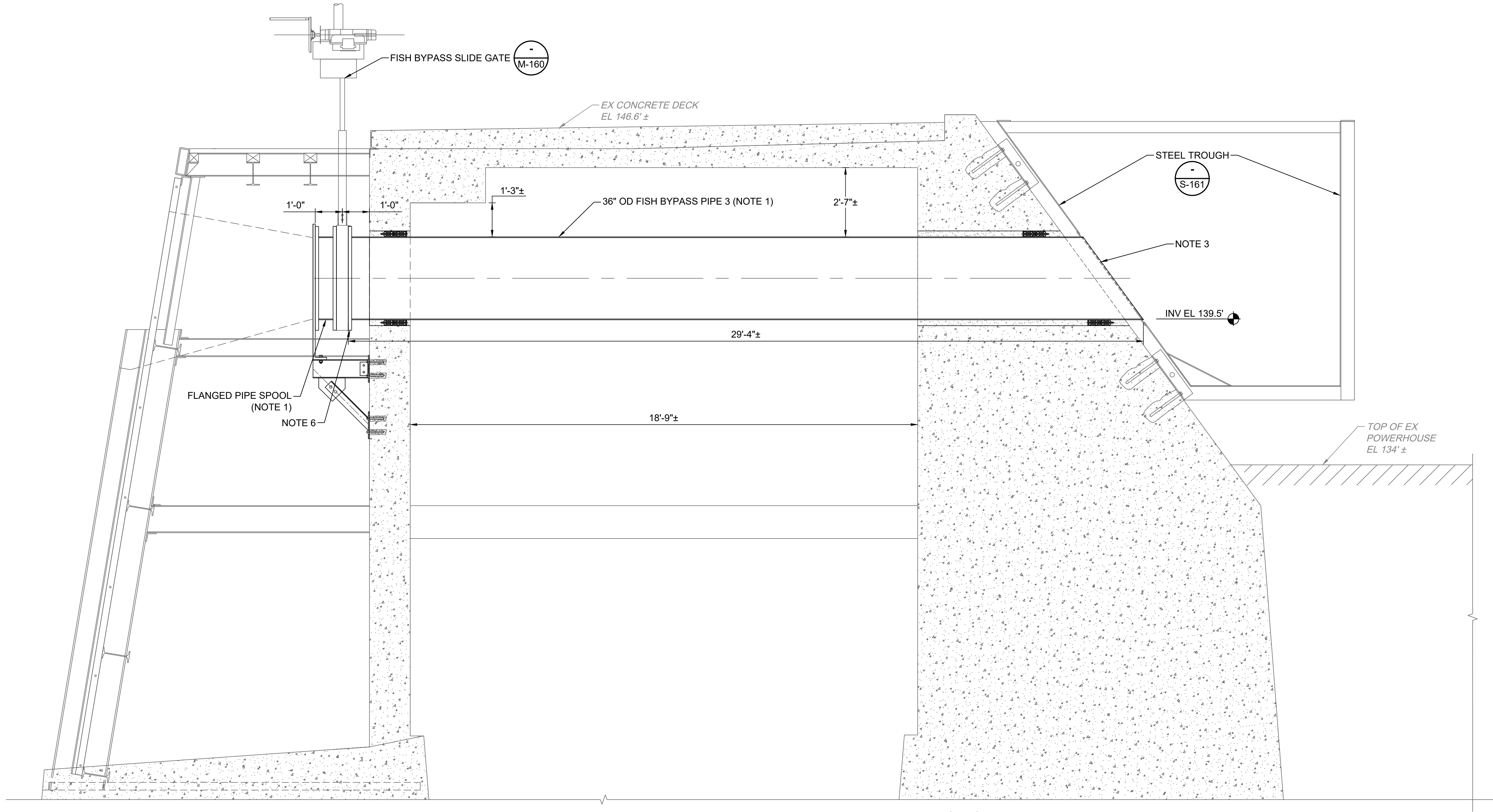
REVISION	DESCRIPTION OF ISSUE / REVISION	REVISED BY
9/2/2025	ISSUED FOR BID	WD

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SHEET, ADJUST SCALES
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WOODLAND FISH PASSAGE
MAINE DEPARTMENT OF MARINE
RESOURCES

FISH BYPASS 2 PLAN AND PROFILE

PROJECT: 220002
DRAWN BY: N. LONG
DESIGNED BY: W. DAUGHTRY
APPROVED BY: W. DAUGHTRY
SHEET: 59 OF 240
DRAWING: C-306



NOTES

- 36" OD ASME B36.10M STL PIPE (t=STD WT (0.375")); ASME B16.47 CL 150A FLANGES.
- PIPE INTERIOR AND EXTERIOR TO BE LINED AND COATED PER SPEC SECTION 09 90 00. ALL PIPE FABRICATION WELDS TO BE GROUND SMOOTH ON THE INSIDE OF PIPE PRIOR TO LINING.
- PIPE TO BE CUT-TO-FIT AT THE STEEL TROUGH. THE END OF PIPE SHALL EXTEND 1/2" PAST THE EDGE OF THE STEEL TROUGH WALL FOR WELDING. SEE STRUCTURAL FOR STEEL TROUGH SIDE SLOPE AND CONNECTION DETAILS.
- SEE S-161 FOR STRUCTURAL DETAILS.
- CONTRACTOR TO FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO ORDERING AND FABRICATING PIPE MATERIALS.
- FLANGE TO BE SHIPPED LOOSE AND WELDED ON IN THE FIELD AFTER THE FISH BYPASS PIPE HAS BEEN INSTALLED THROUGH THE DAM WALL.
- CONTRACTOR TO VERIFY REQUIRED WIDTH OF FLANGED PIPE SPOOL FOR CONNECTING THE TRANSITION FLUME TO THE SLIDE GATE PRIOR TO ORDER AND FABRICATION.

A FISH BYPASS 3 PROFILE
SCALE: 1/2"=1'-0"
1' 0 1' 2'

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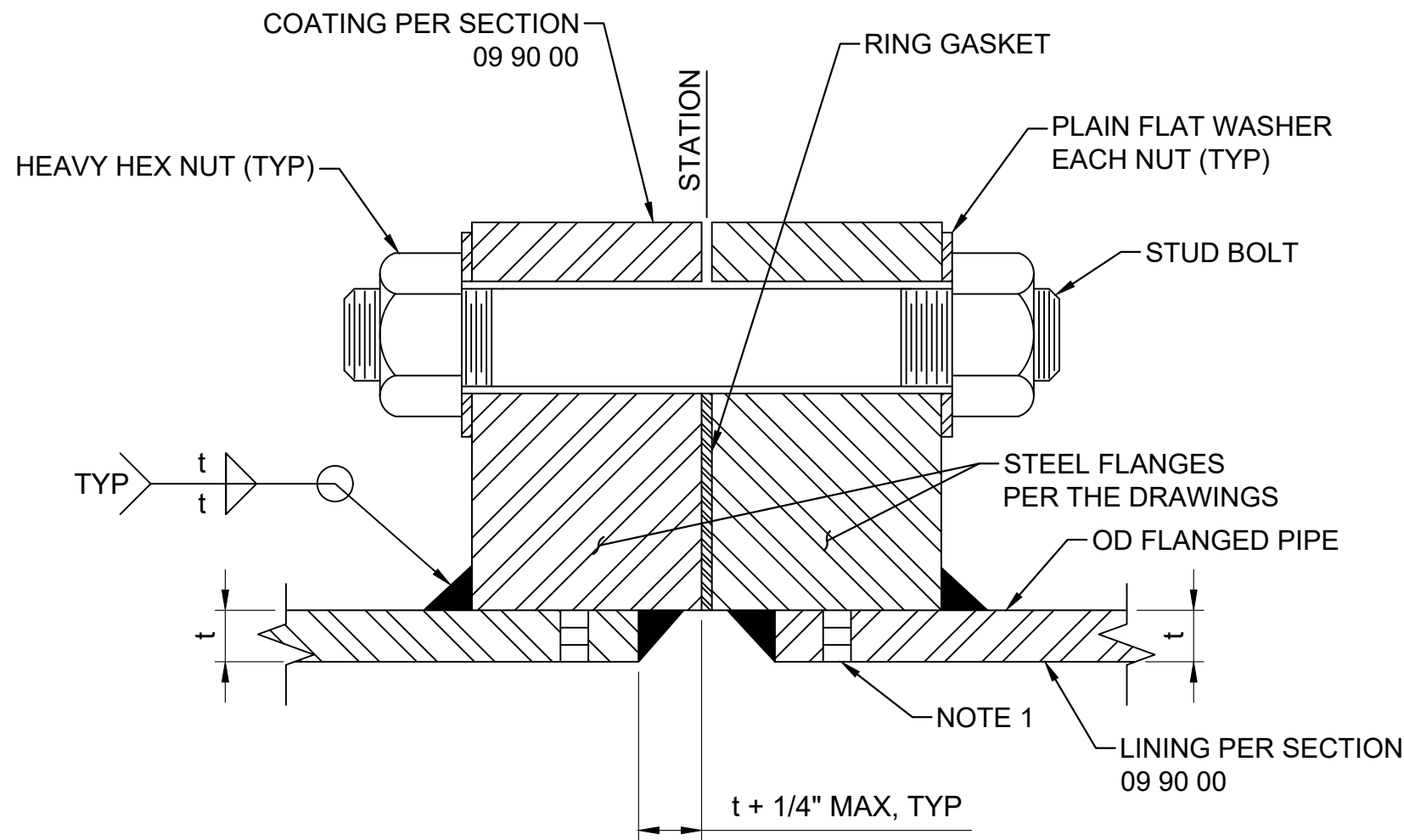
9/2/2025	ISSUED FOR BID	WD
REVISION	DESCRIPTION OF ISSUE / REVISION	REVISED BY

VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING
IF NOT ONE INCH ON THIS
SHEET, ADJUST SCALES
ACCORDINGLY

WOODLAND FISH PASSAGE
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FISH BYPASS 3 PROFILE
(BID SUPPLEMENT)

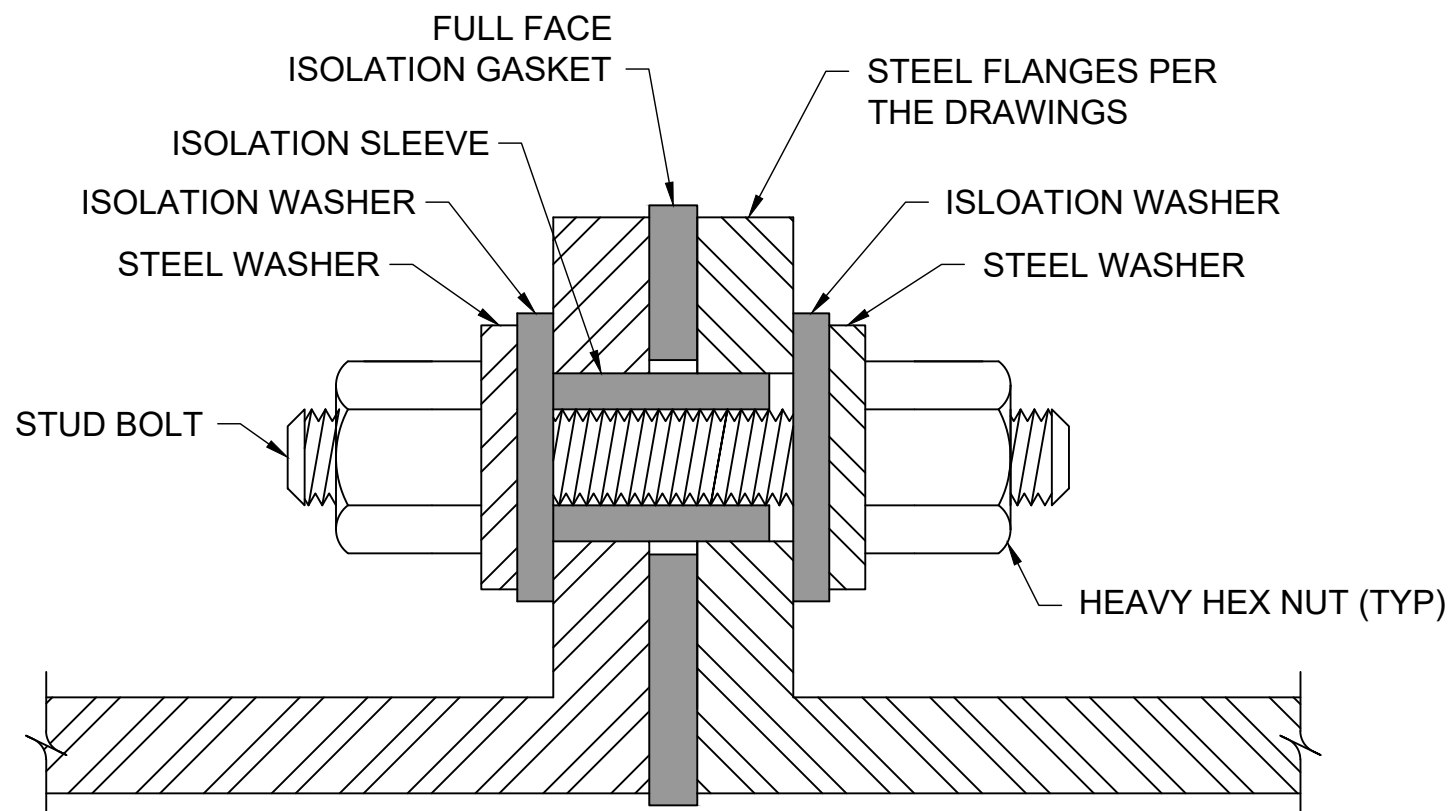
PROJECT:	220002
DRAWN BY:	N. LONG
DESIGNED BY:	W. DAUGHTRY
APPROVED BY:	W. DAUGHTRY
SHEET:	60 OF 240
DRAWING:	C-307



NOTES:

1. DRILL & TAP CYLINDER FOR 1/4" AIR TEST HOLE BEFORE WELDING FLANGE. CONTRACTOR SHALL AIR AND SOAP TEST AFTER WELDING IS COMPLETE. PLUG WELD HOLES AFTER SUCCESSFUL COMPLETION OF JOINT TEST. USE TWO HOLES 180° APART.
2. REFER TO SECTION 33 11 00 FOR REQUIREMENTS FOR BOLTS, NUTS, WASHERS, AND GASKETS.

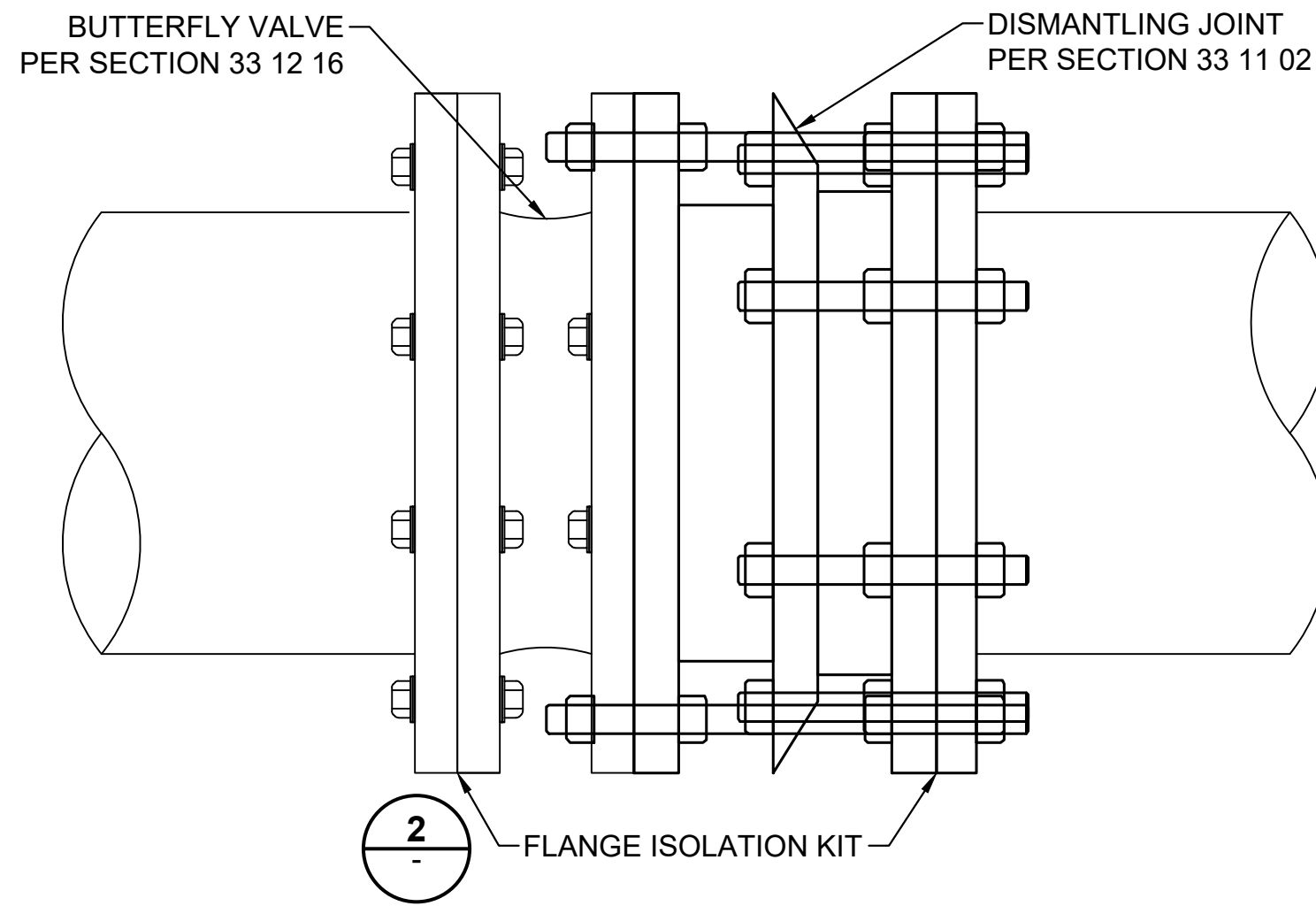
1 FLANGES FOR STEEL PIPE
SCALE: NTS



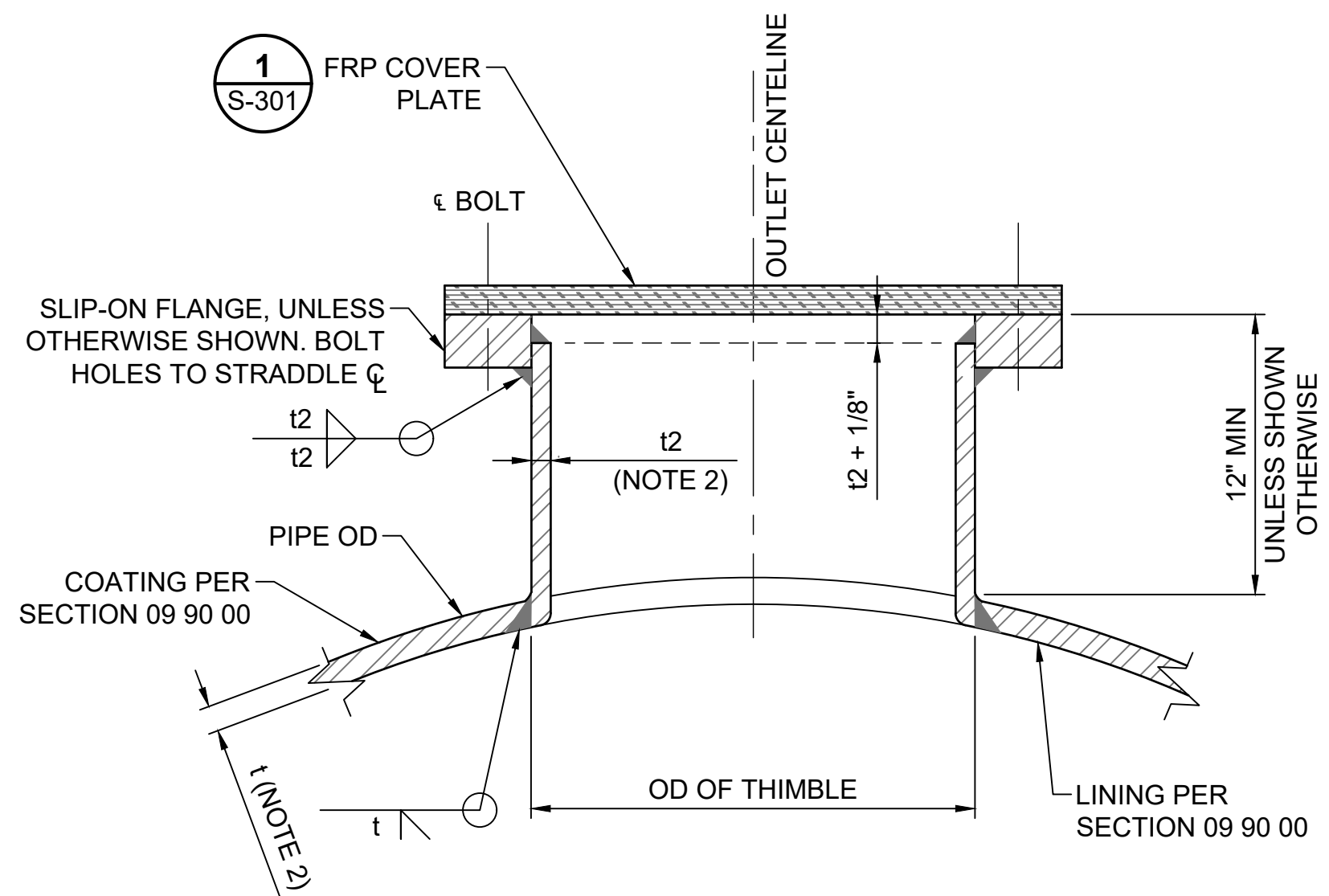
NOTES:

1. FLANGES WITH ISOLATION KITS SHALL HAVE BOLT HOLES OVERBORED 1/8".
2. REFER TO SECTION 33 11 00 FOR FLANGE ISOLATION KIT REQUIREMENTS.

2 FLANGE ISOLATION KIT (FIK)
SCALE: NTS



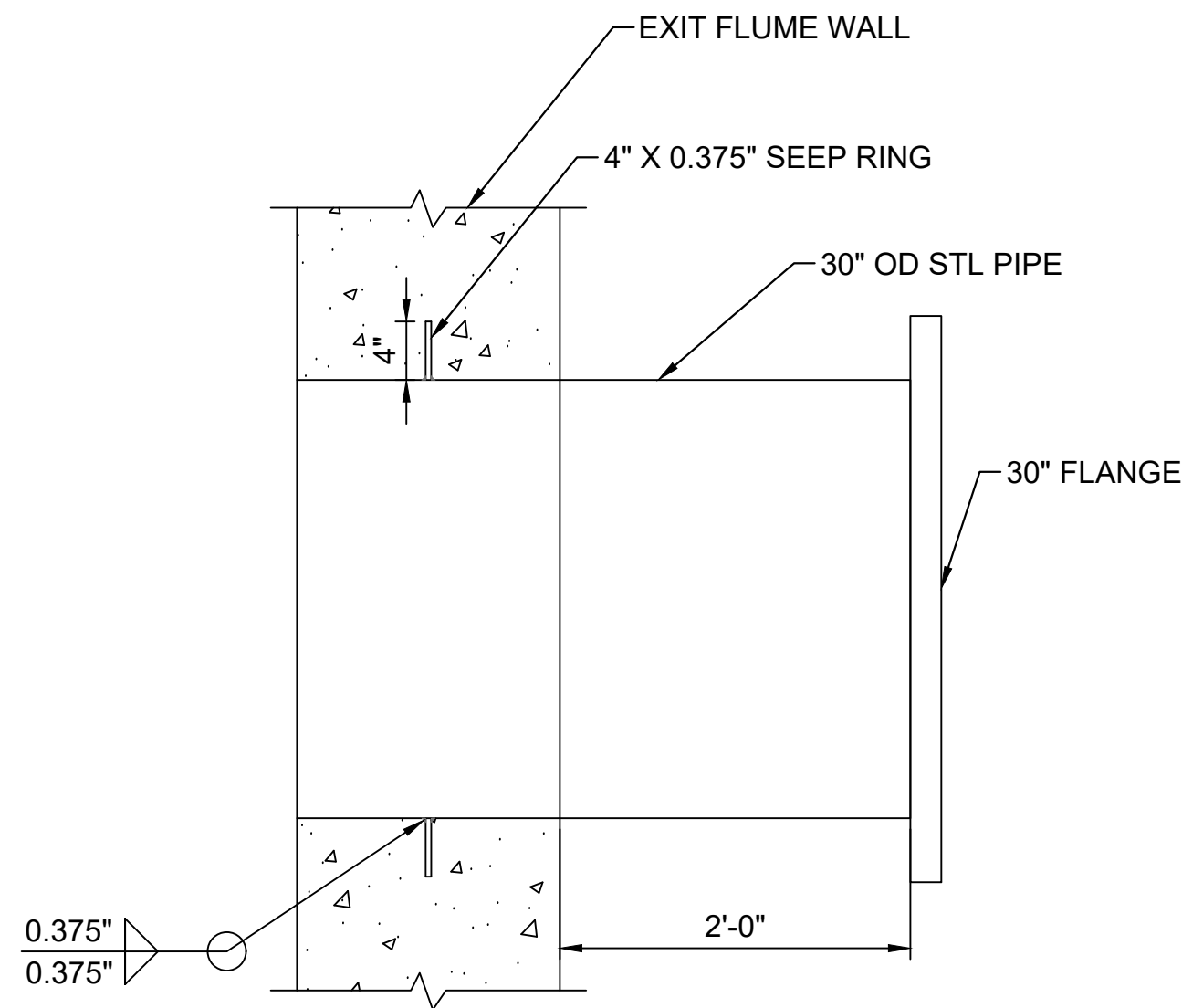
3 BUTTERFLY VALVE WITH DISMANTLING JOINT DETAIL
SCALE: NTS



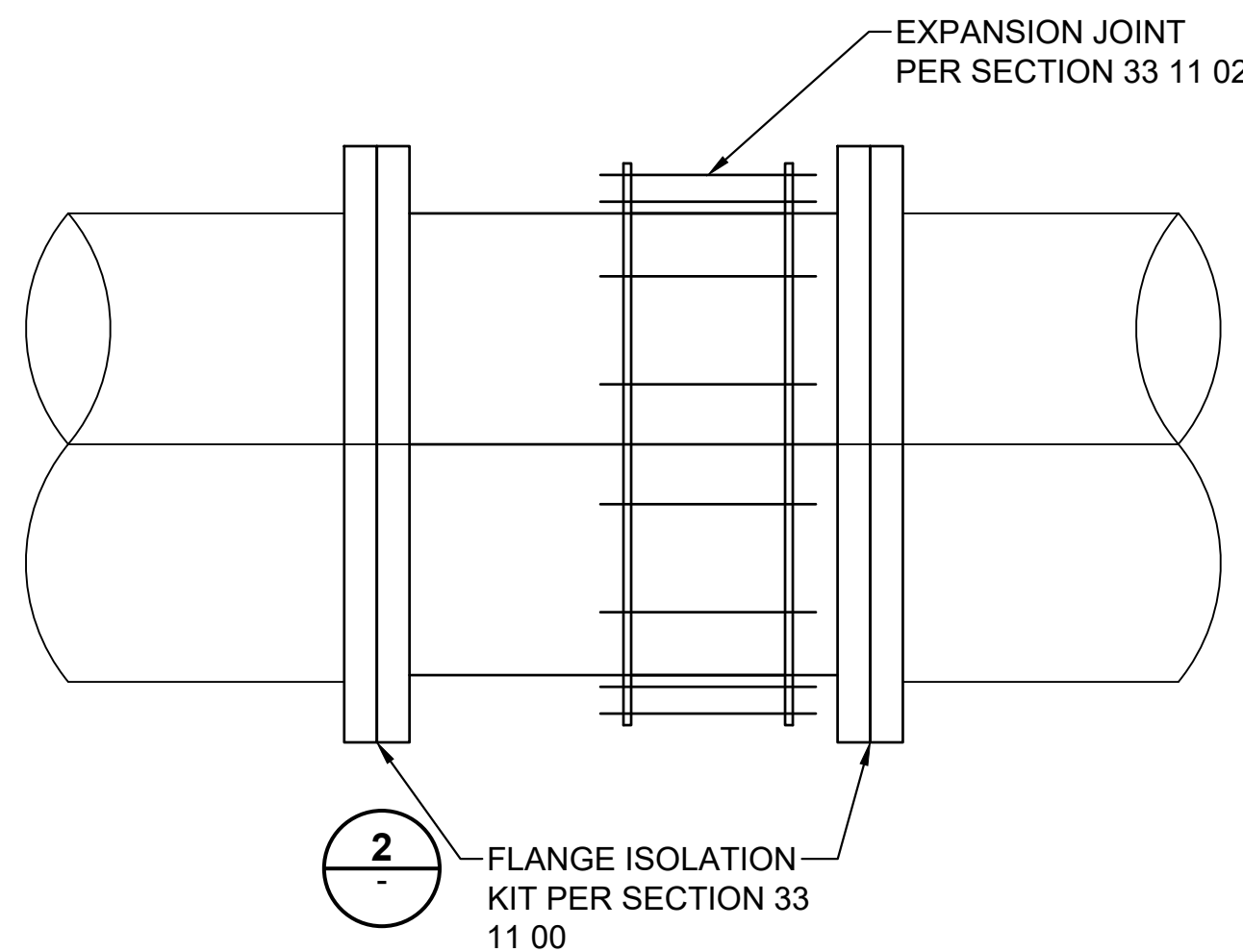
NOTES:

1. SEE DRAWINGS FOR PIPE THICKNESS.
2. OUTLET THICKNESS (t2) TO BE THE SAME THICKNESS AS THE PIPE (t).

4 ACCESS MANWAY DETAIL
SCALE: NTS



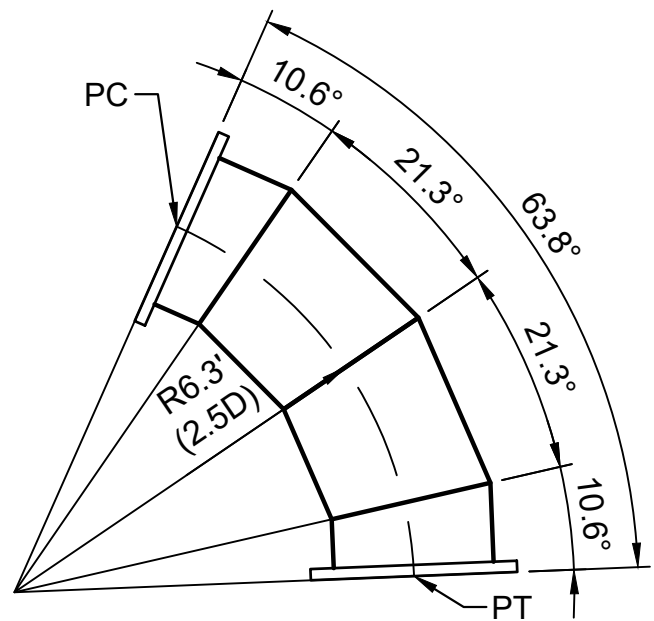
5 AWS 1 EXIT FLUME PIPE CONNECTION DETAIL
SCALE: NTS



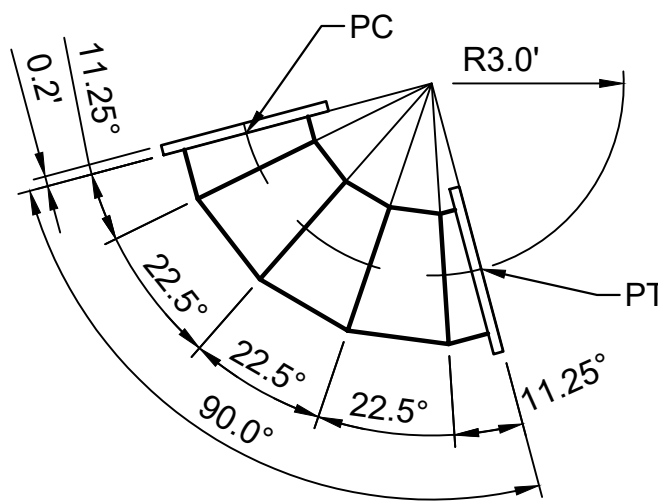
6 EXPANSION JOINT DETAIL
SCALE: NTS



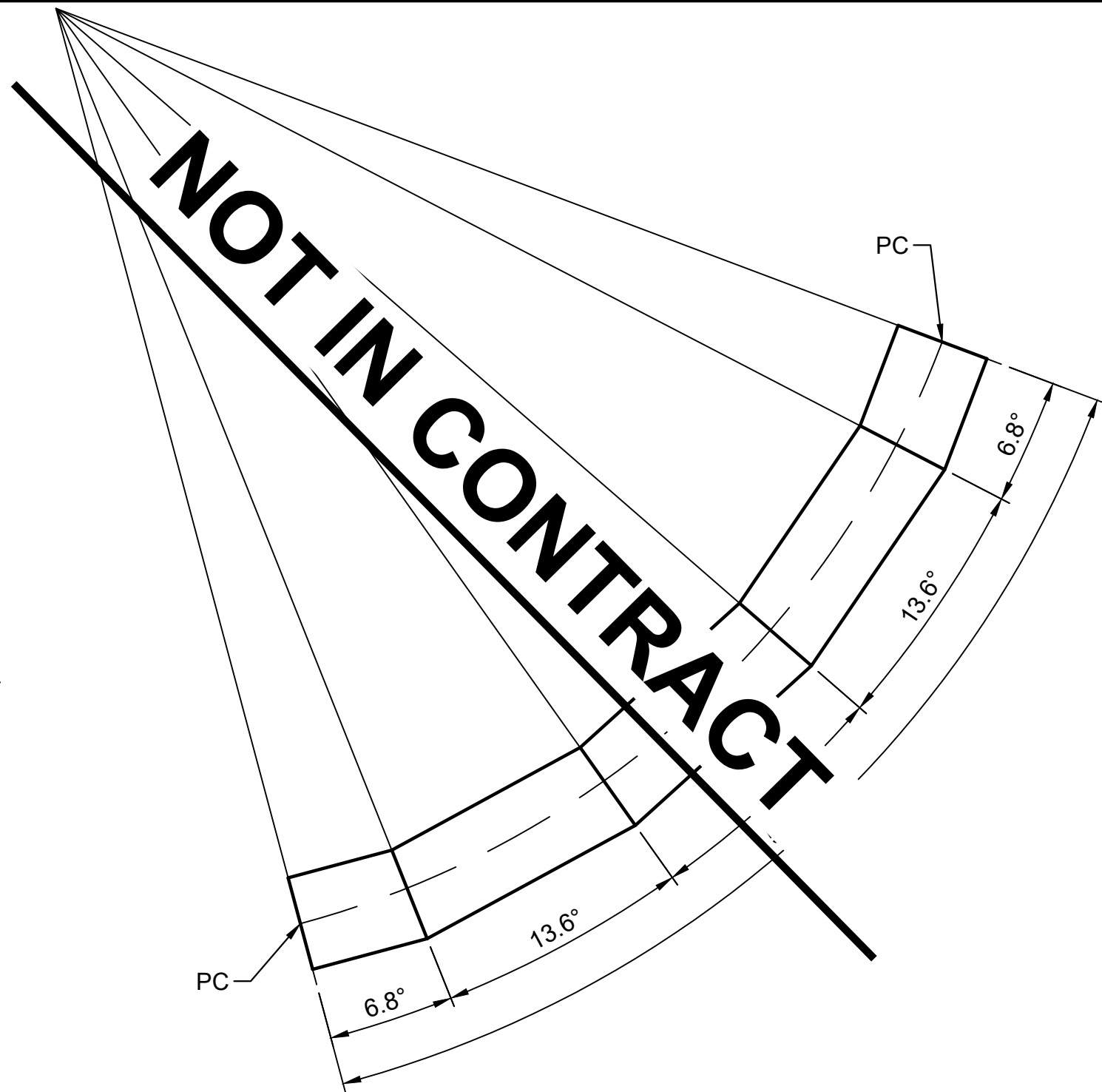
9/2/2025	ISSUED FOR BID	WD
REVISION	DESCRIPTION OF ISSUE / REVISION	REVISED BY



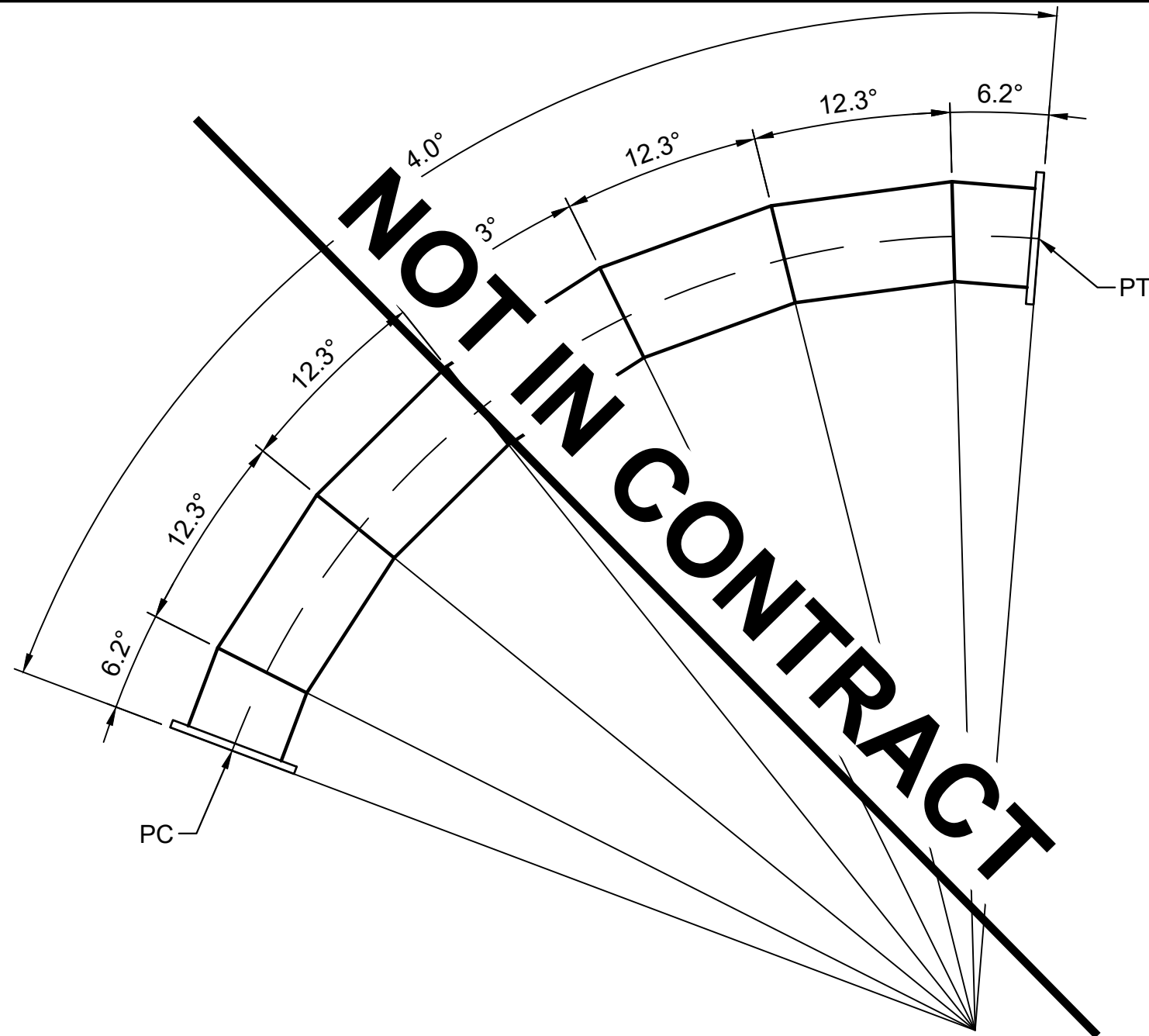
1 AWS PIPE 1 - 30" MITERED BEND #1
SCALE: 1" = 3'-0"



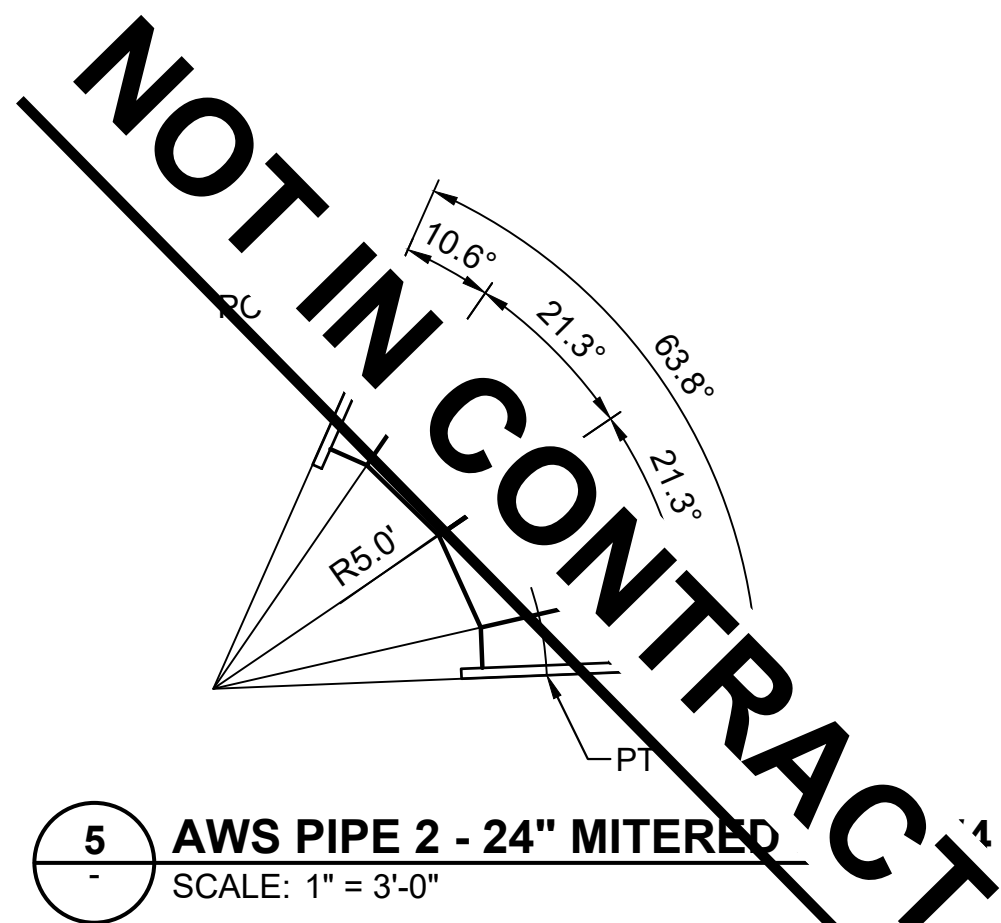
2 AWS PIPE 2 - 24" MITERED BEND #1
SCALE: 1" = 3'-0"



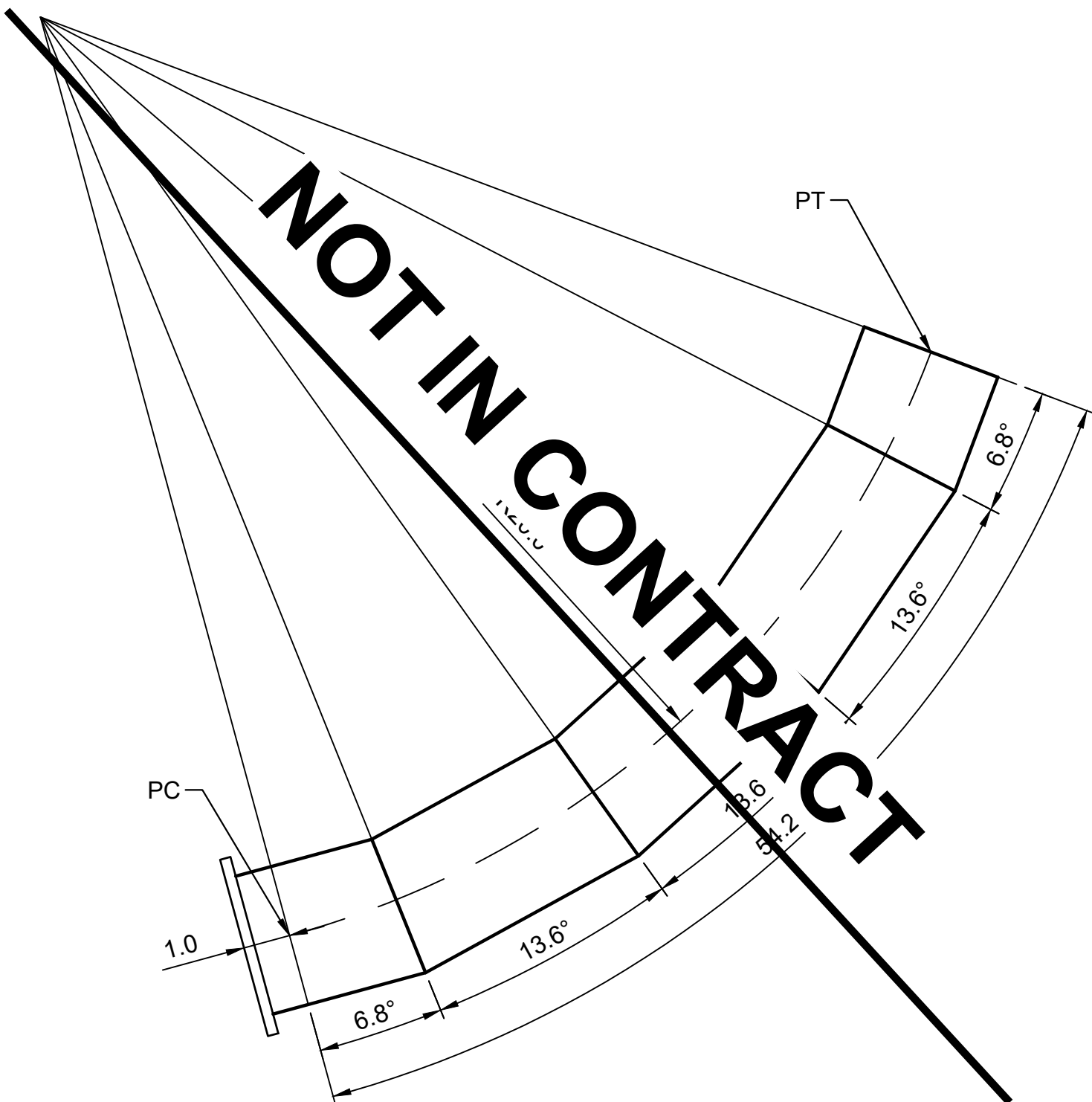
3 AWS PIPE 2 - 24" MITERED BEND #2
SCALE: 1" = 3'-0"



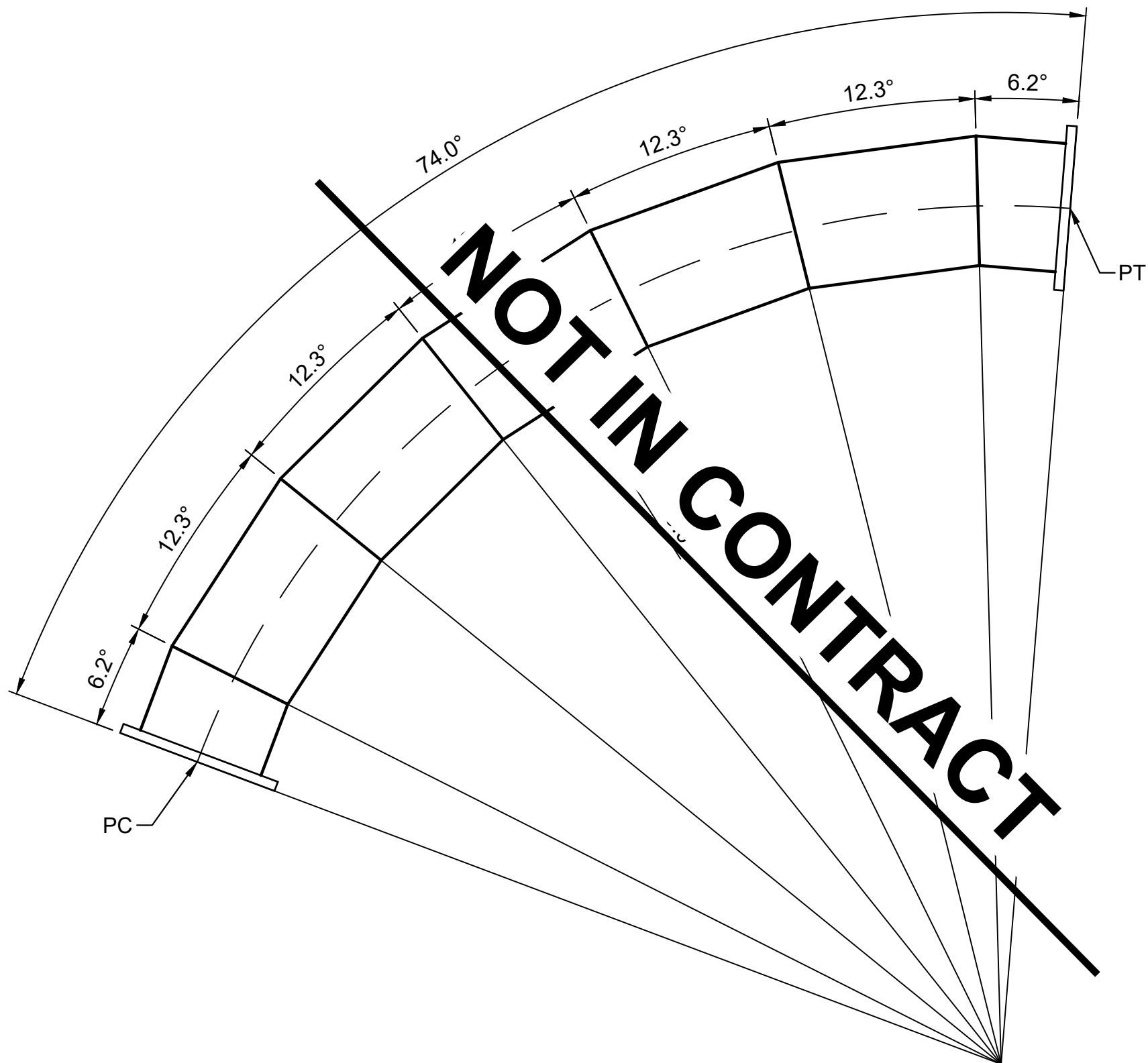
4 AWS PIPE 2 - 24" MITERED BEND #3
SCALE: 1" = 3'-0"



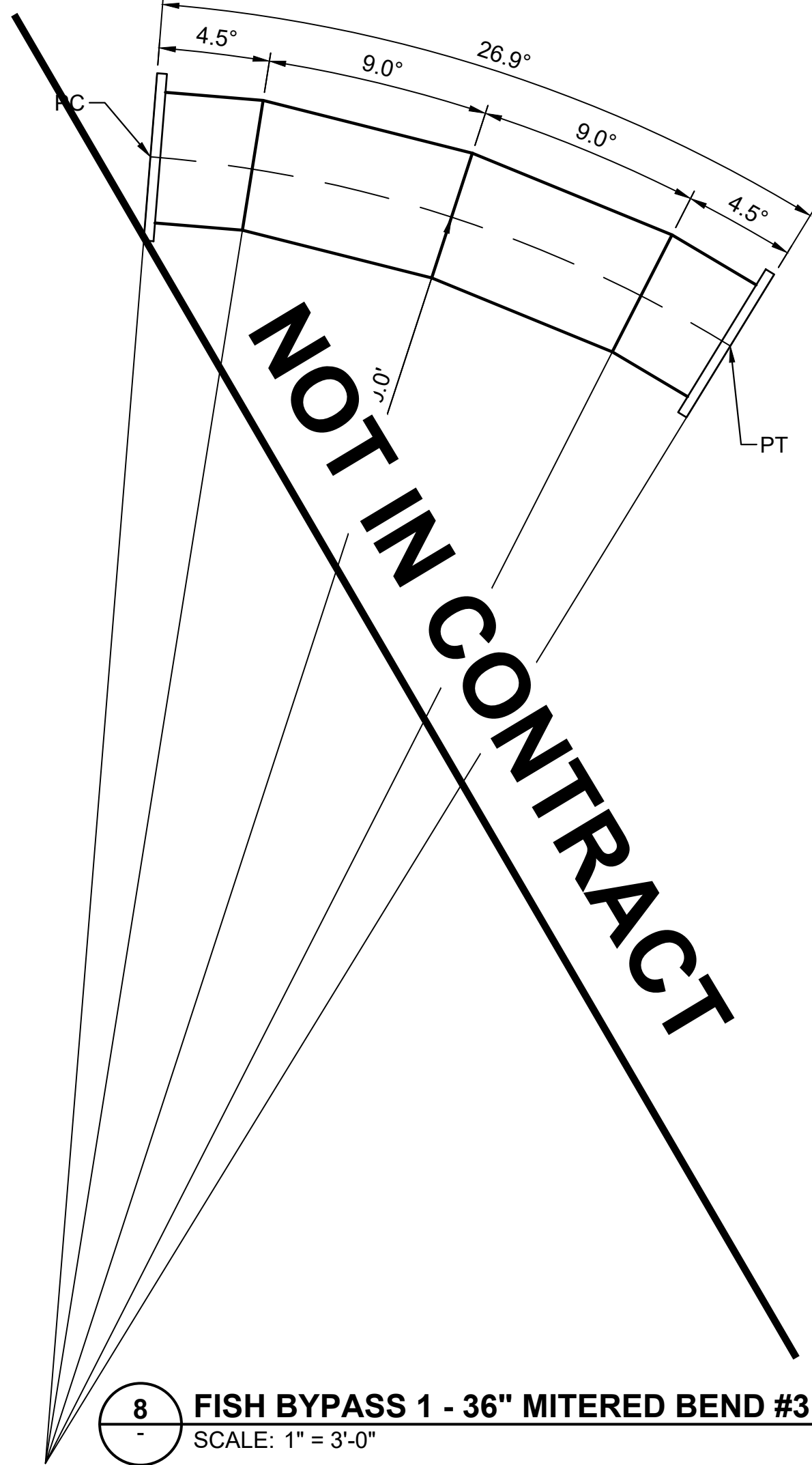
5 AWS PIPE 2 - 24" MITERED BEND #4
SCALE: 1" = 3'-0"



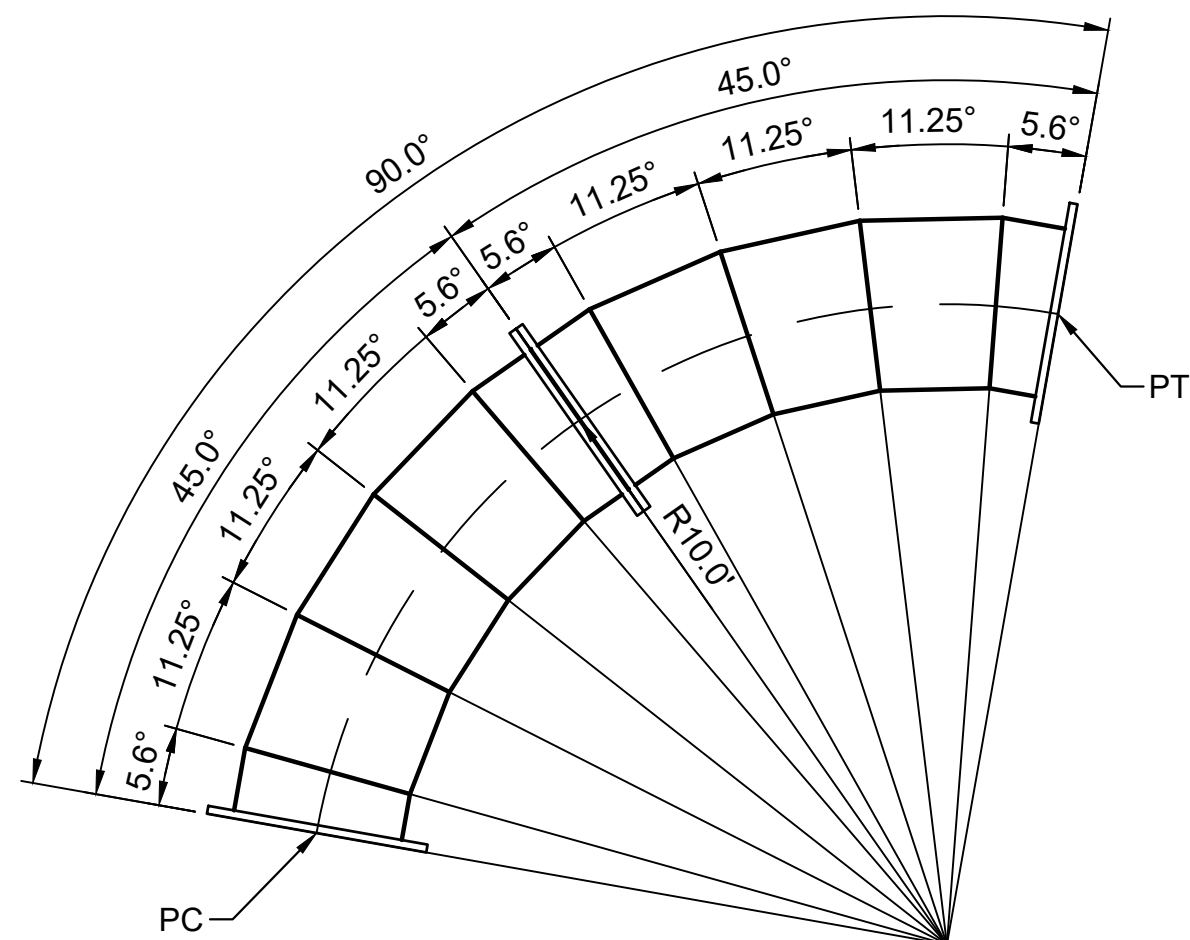
6 FISH BYPASS 1 - 36" MITERED BEND #1
SCALE: 1" = 3'-0"



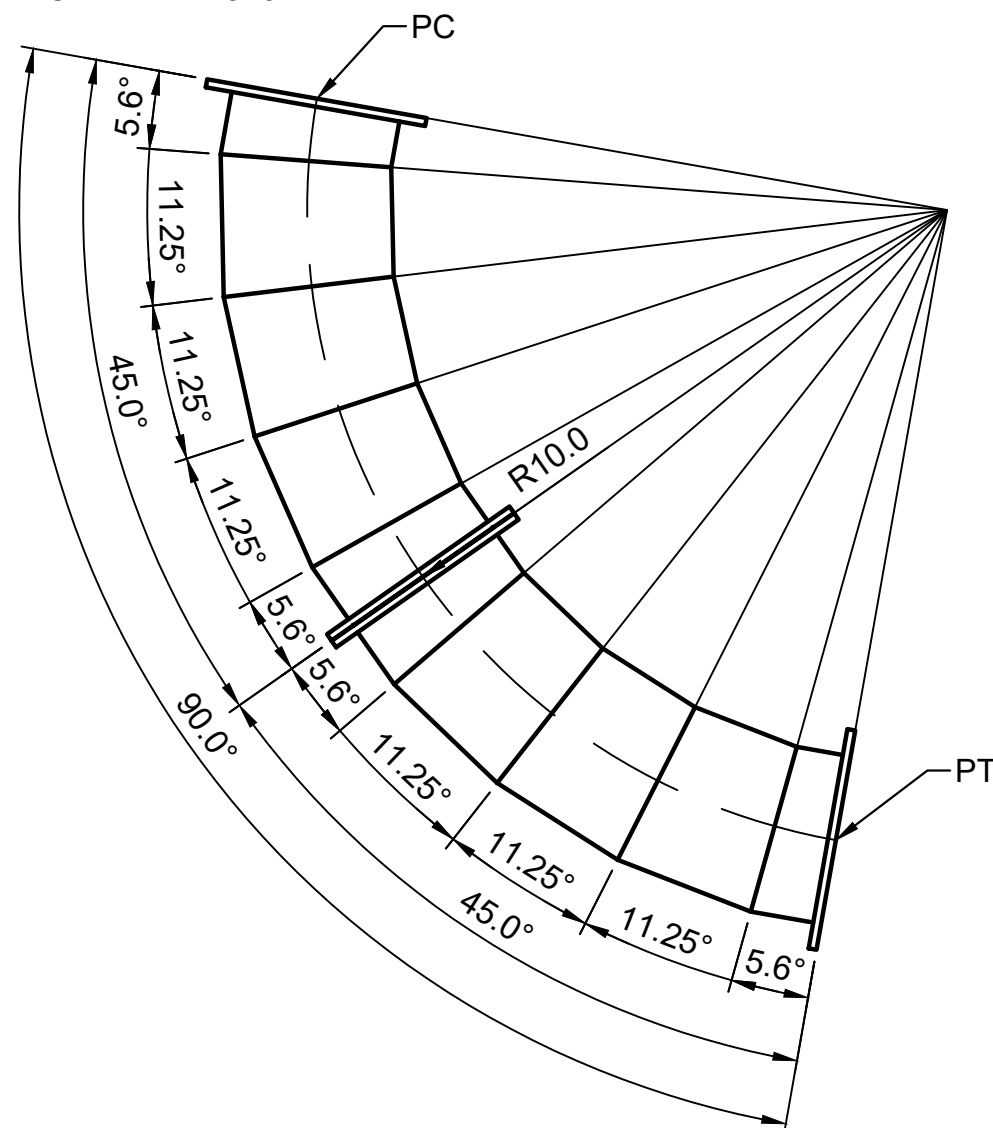
7 FISH BYPASS 1 - 36" MITERED BEND #2
SCALE: 1" = 3'-0"



8 FISH BYPASS 1 - 36" MITERED BEND #3
SCALE: 1" = 3'-0"



9 FISH BYPASS 2 - 32" MITERED BEND #1
SCALE: 1" = 3'-0"



10 FISH BYPASS 2 - 32" MITERED BEND #2
SCALE: 1" = 3'-0"

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WOODLAND FISH PASSAGE
MAINE DEPARTMENT OF MARINE
RESOURCES

PIPE DETAILS

PROJECT: 220002
DRAWN BY: N. LONG
DESIGNED BY: W. DAUGHTRY
APPROVED BY: W. DAUGHTRY
SHEET: 62 OF 240
DRAWING: C-351

DWG: Z:\Shore2020\Projects\240002\WOODLAND-FISH-PASS\Drawings\C-351.dwg
DATE: Apr 30, 2025 2:44pm
XREFS: 240002_BD_240002_PIPES
USER: wdaughtry