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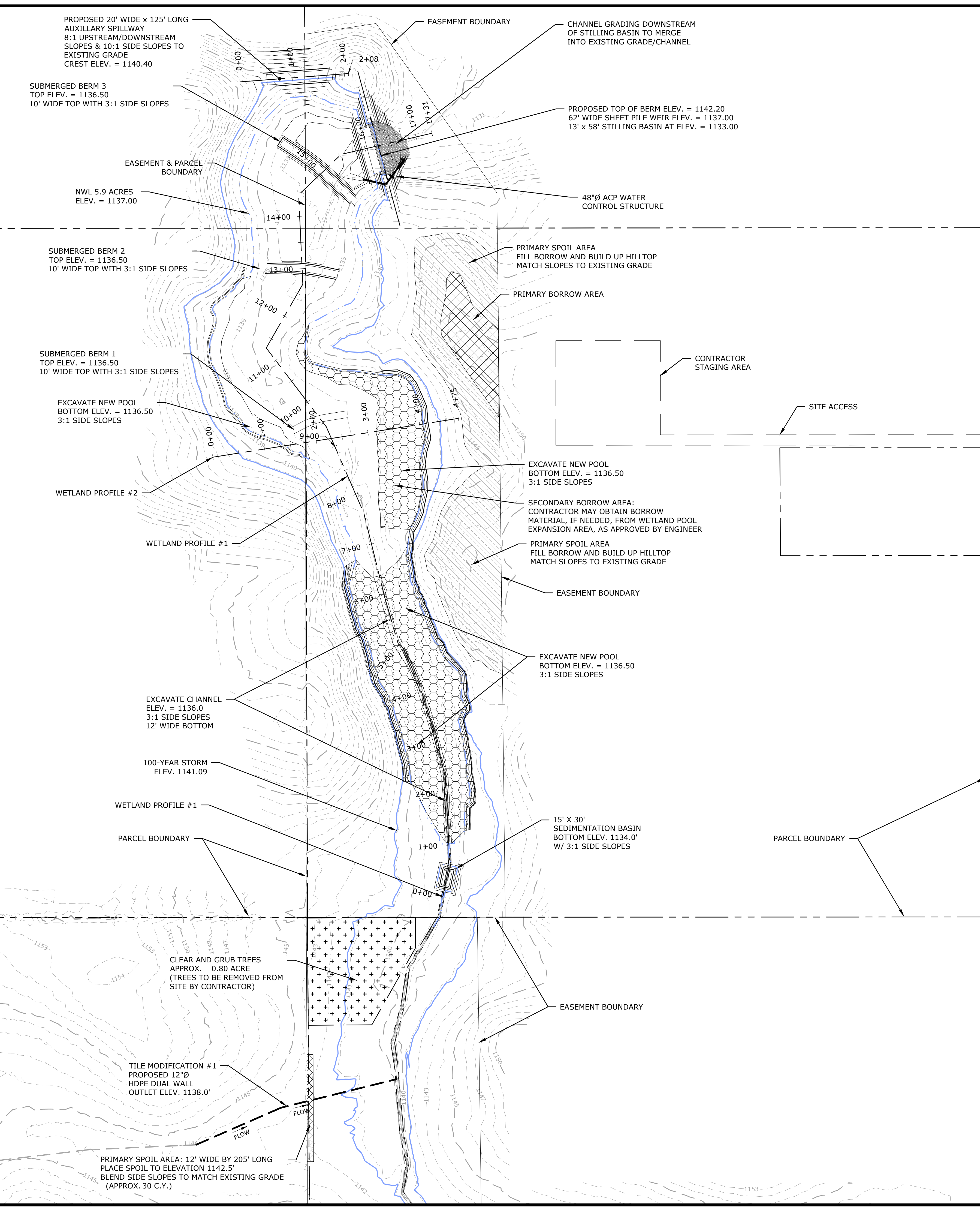
C:\Users\vaschippers\Documents\Iowa_02_C3D_Projects\Iowa_340-2_CREP_Projects\KOS972821A_MANSKE 340-15\C3D_DRAWING\IA-340-15 SITE PLAN.dwg, 10/30/2025 11:30 AM, Andrew Schippers, SITE PLAN, None

DESIGN CRITERIA			
DESIGN CRITERIA	VALUE	UNIT	REQUIREMENT/NOTES
CONTRIBUTING SURFACE WATERSHED AREA	1152.99	ACRES	
CONTRIBUTING SUBSURFACE WATERSHED AREA	1152.99	ACRES	
POOL NORMAL WATER LEVEL (NWL) ELEVATION	1137.0	FT.	
DESIGNED WETLAND POOL AREA (@ NWL)	5.9	ACRES	
PERCENT POOL AREA TO WATERSHED AREA	0.51	%	>=0.50%
MAX. POOL DEPTH	5.0	FT.	
AVG. POOL DEPTH	1.33	FT.	
DEEP WATER AREA (DEPTH >3 FT)	0.807	ACRES	<25%
PERCENT DEEP WATER TO POOL AREA	13.7	%	
POOL STORAGE VOLUME AT NWL	7.87	ACRE-FT	
BERM ELEVATION	1142.2	FT.	
POOL STORAGE VOLUME AT TOP OF BERM	51.431	ACRE-FT	
MAX BERM HEIGHT	11.2	FT.	
AVG. BERM HEIGHT	4.1	FT.	TO E.G.
BERM LENGTH	254	FT.	
PRINCIPLE WEIR ELEVATION	1137.0	FT.	
PRINCIPLE WEIR LENGTH	62	FT.	
AUXILIARY SPILLWAY ELEVATION	1140.4	FT.	
AREA OF BUFFER	14.41	ACRES	
RATIO BUFFER AREA TO NWL POOL AREA	2.4 : 1	RATIO	
10-YEAR STORM HWL IN POOL	1139.72	FT.	
10-YEAR PEAK INFLOW	992.04	CFS	
10-YEAR PEAK OUTFLOW	974.94	CFS	
25-YEAR STORM HWL IN POOL	1140.34	FT.	
25-YEAR PEAK INFLOW	1367.37	CFS	
25-YEAR PEAK OUTFLOW	1343.37	CFS	
100-YEAR STORM HWL IN POOL	1141.09	FT.	
100-YEAR PEAK INFLOW	2075.29	CFS	
100-YEAR PEAK OUTFLOW	2055.65	CFS	
FEMA 100-YEAR FLOOD ELEVATION (NAVD88)	1141.14	FT.	VARIABLES

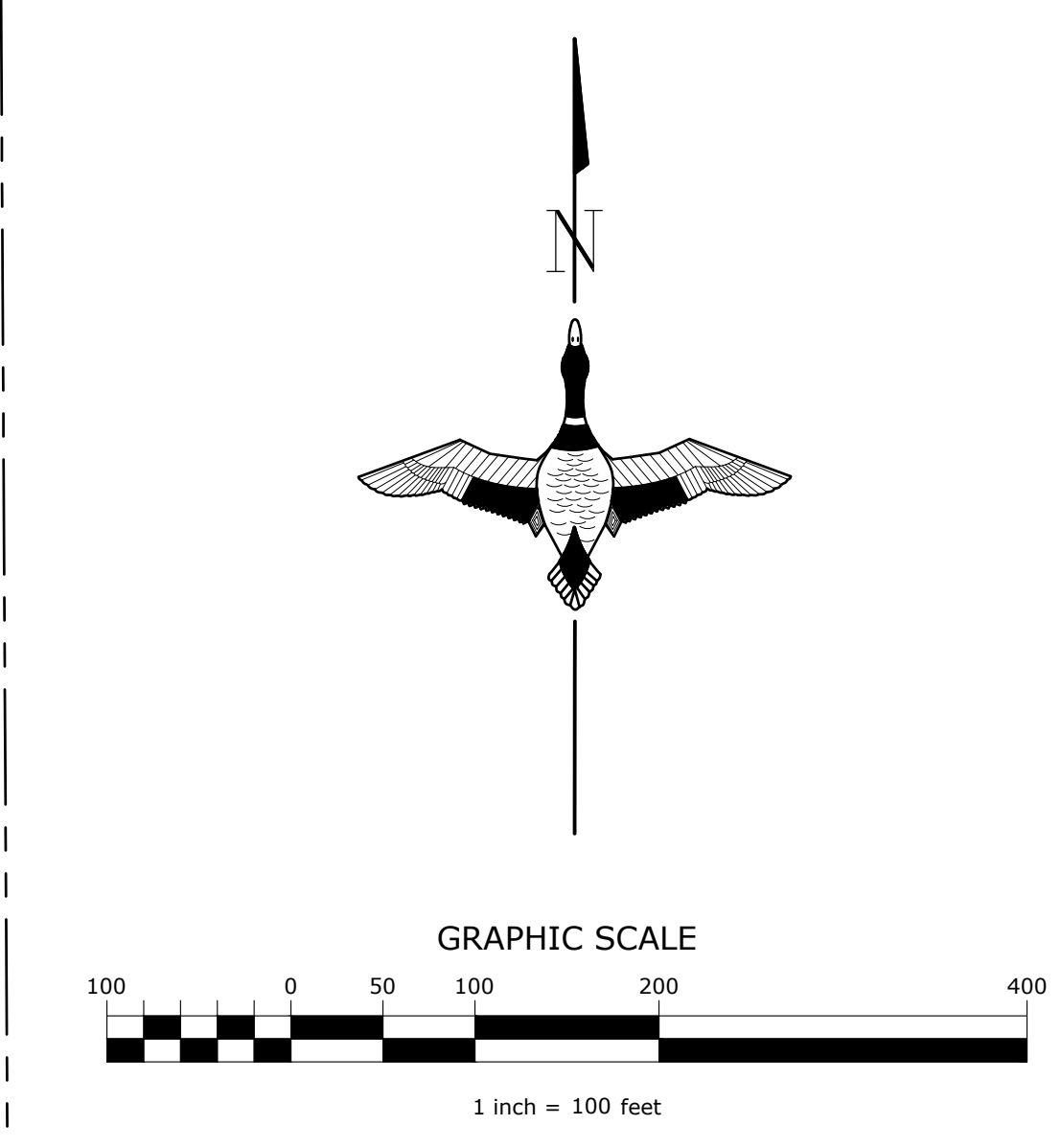
WETLAND POOL CHARACTERISTICS			
WETLAND POOL DEPTH	ELEV.	INCREMENTAL AREA (AC)	CUMULATIVE VOLUME (ACRE-FT)
0.0	1131.0	0.000	0.000
1.0	1132.0	0.044	0.022
2.0	1133.0	0.218	0.153
3.0	1134.0	0.807	0.665
4.0	1135.0	1.409	1.774
5.0	1136.0	2.426	3.691
6.0	1137.0	5.934	7.871
7.0	1138.0	6.266	13.971
8.0	1139.0	6.732	20.470
9.0	1140.0	8.007	27.839
10.0	1141.0	10.393	37.039
11.0	1142.0	13.068	48.770
11.2	1142.2	13.546	51.431

EXCAVATION NOTE:
IF SANDY MATERIAL IS FOUND DURING EXCAVATION, THE ENGINEER MUST BE NOTIFIED IMMEDIATELY TO DETERMINE NECESSARY REMEDIATION ACTIONS. WORK IN THE AREA WHERE SAND IS IDENTIFIED SHALL BE POSTPONED UNTIL A COURSE OF ACTION CAN BE DETERMINED.

NOTE:
STRIP 12"-36" TOPSOIL BEFORE OBTAINING BORROW MATERIAL, BORROW AREA TO BE EXCAVATED TO APPROX. 5' DEPTH AFTER TOPSOIL REMOVAL. TOPSOIL TO BE PLACED BACK INTO EXCAVATED AREA, SPREAD OUT AT COMPLETION, AND BROUGHT BACK TO EXISTING GRADES.



LEGEND	
—	ROW
- - -	APPROXIMATE PROPERTY LINE
- - - - -	PROPOSED DIKE
- · - · - · -	PROPOSED CHANNEL/DITCH
(000)	PROPOSED MAJOR CONTOUR
(000)	PROPOSED MINOR CONTOUR
—	PROPOSED PIPE
□	PROPOSED WATER CONTROL STRUCTURE
⊕	PROPOSED TEST PIT
x	PROPOSED SPOT ELEVATION
—	PROPOSED FULL SERVICE LEVEL (FSL)
▨	PROPOSED RIPRAP
▧	PROPOSED SPOIL AREA
▩	PROPOSED BORROW AREA
▫	PROPOSED EXCAVATION AREA



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DUCKS UNLIMITED

AFFIX SEAL: DUCKS UNLIMITED, INC.
ON:

SITE PLAN
KOS972821A
KOSSUTH COUNTY
IOWA

Revision	Sheet	Revisions	Date	By
0	1	PRELIMINARY SITE PLAN	6-25-24	A.S.
1	1	REVISED SITE PLAN	6-16-25	A.S.
2	1	FINAL PLANS	10-27-25	A.S.

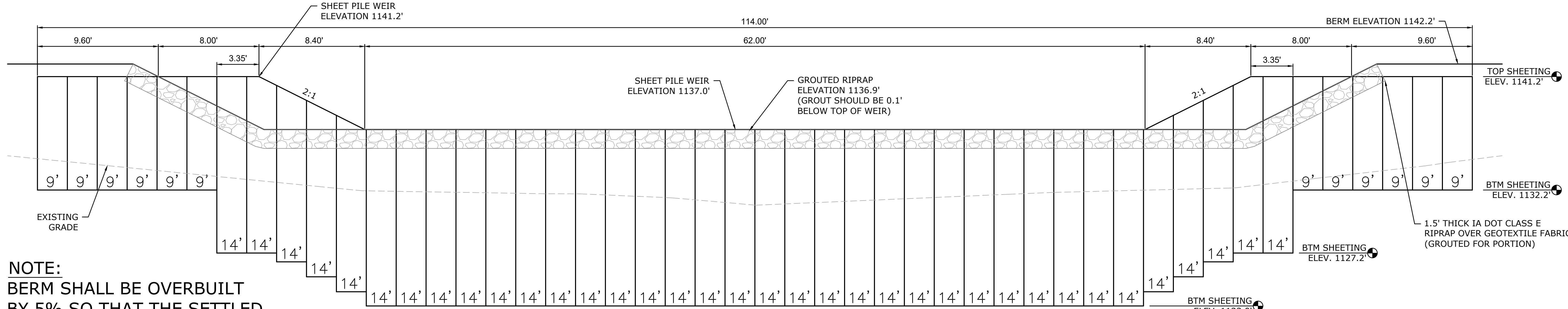
CAD FILE:
IA-340-15 SITE PLAN
DESIGNED BY: A.S.
DRAWN BY: A.S., W.J., C.K.
SURVEYED BY: A.S., A.B.
REVIEWER: T.P.

DATE:
10-27-25
PROJECT NUMBER:
US-IA-340-15

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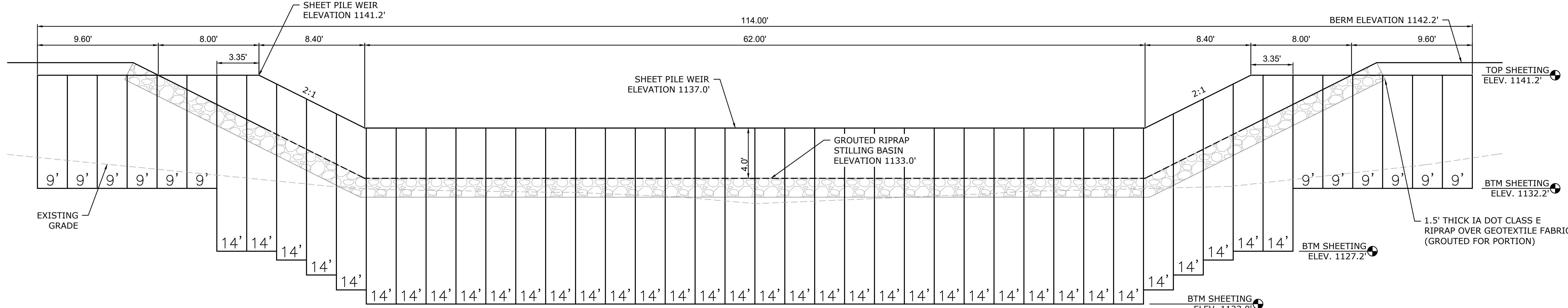
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NOTE:
 BERM SHALL BE OVERBUILT BY 5% SO THAT THE SETTLED TOP OF BERM WILL BE 1142.2'

ELEVATION - SHEET PILE WEIR (UPSTREAM)
 SCALE: 1" = 4'

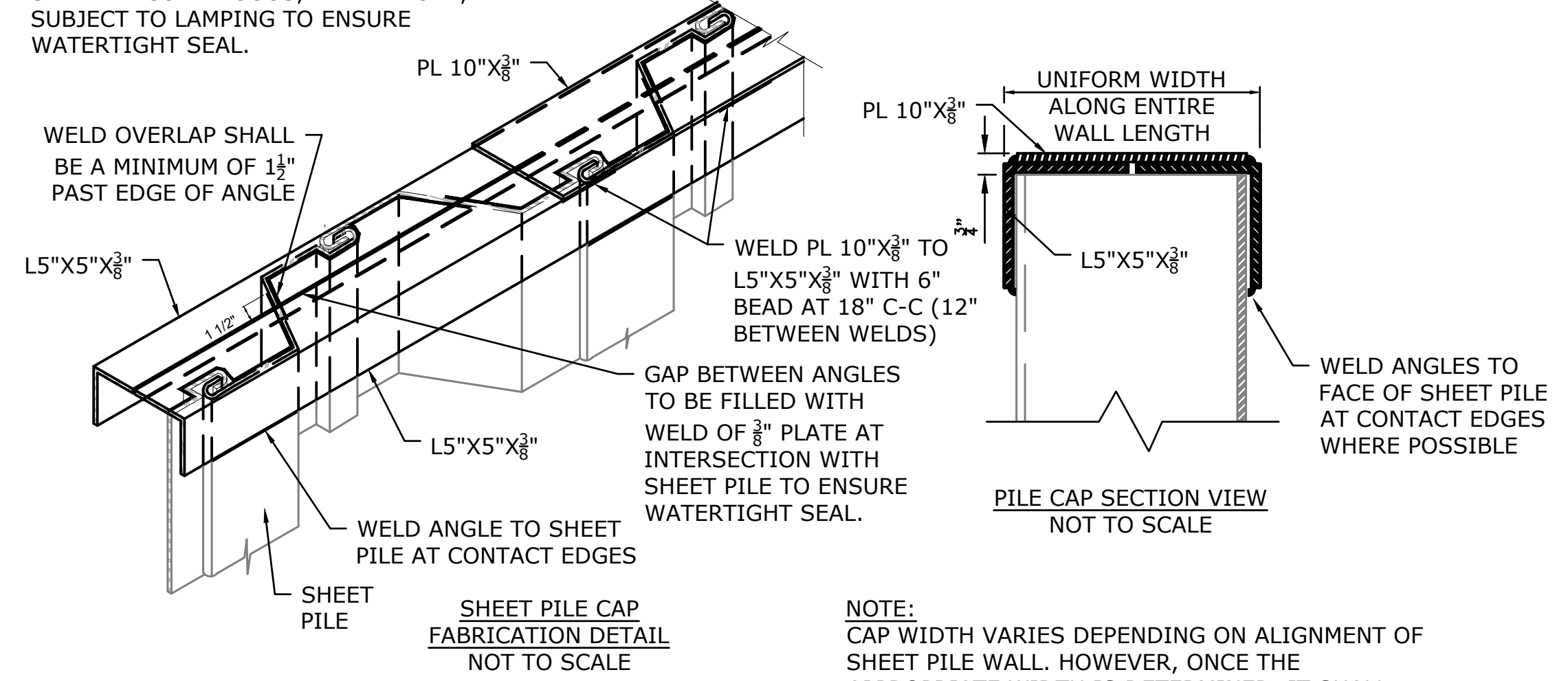


ELEVATION - SHEET PILE WEIR (DOWNSTREAM)
 SCALE: 1" = 4'

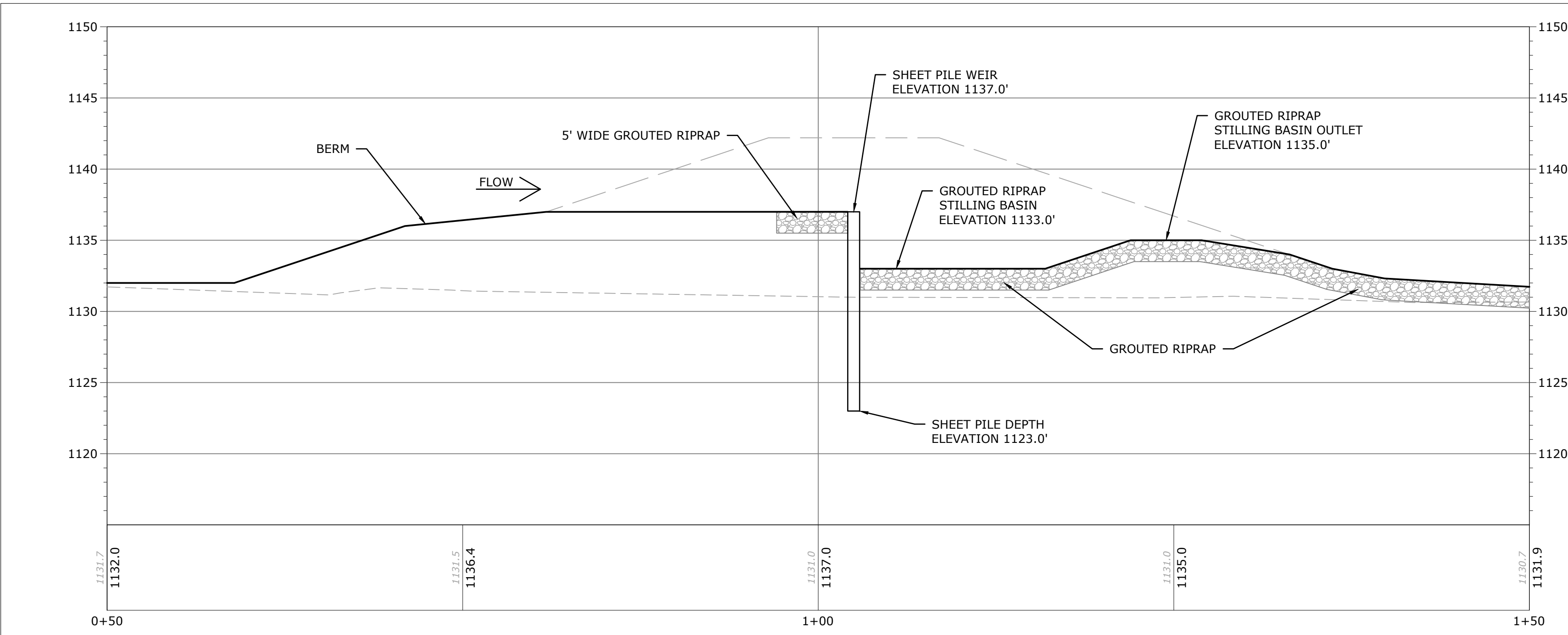
- RECOMMENDED SHEET PILE:**
1. TYPE: SCZ 21N (OR APPROVED EQUAL)
 2. SECTION MODULUS: 21.43 IN³/FT.
 3. THICKNESS: 0.375 IN
 4. STEEL GRADE: 50 KSI
 5. DETAILS BASED ON 28.5" WIDE SHEETS

- SHEET PILE MINIMUM DESIGN CRITERIA:**
1. TYPE: SCZ
 2. SECTION MODULUS: 2.0 IN³/FT.
 3. THICKNESS: 0.209 IN
 4. MOMENT OF INERTIA: 3.3 IN⁴/FT.
 5. STEEL GRADE: 50 KSI
- NOTE: SHOPS DRAWINGS ARE REQUIRED.

NOTE:
 ALL WELDS AT OR BELOW ELEV. 1137.0' SHALL BE CONTINUOUS, WATERTIGHT, AND SUBJECT TO LAMPING TO ENSURE WATERTIGHT SEAL.



NOTE:
 CAP WIDTH VARIES DEPENDING ON ALIGNMENT OF SHEET PILE WALL. HOWEVER, ONCE THE APPROPRIATE WIDTH IS DETERMINED, IT SHALL REMAIN UNIFORM ALONG ENTIRE LENGTH OF WALL



PROFILE - SHEET PILE CENTERLINE
 NOT TO SCALE

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DUCKS UNLIMITED

AFFIX SEAL: DUCKS UNLIMITED, INC.
 ON:

SHEET PILE DETAILS
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Revision	Date	By
0	6-25-24	A.S.
1	6-16-25	A.S.
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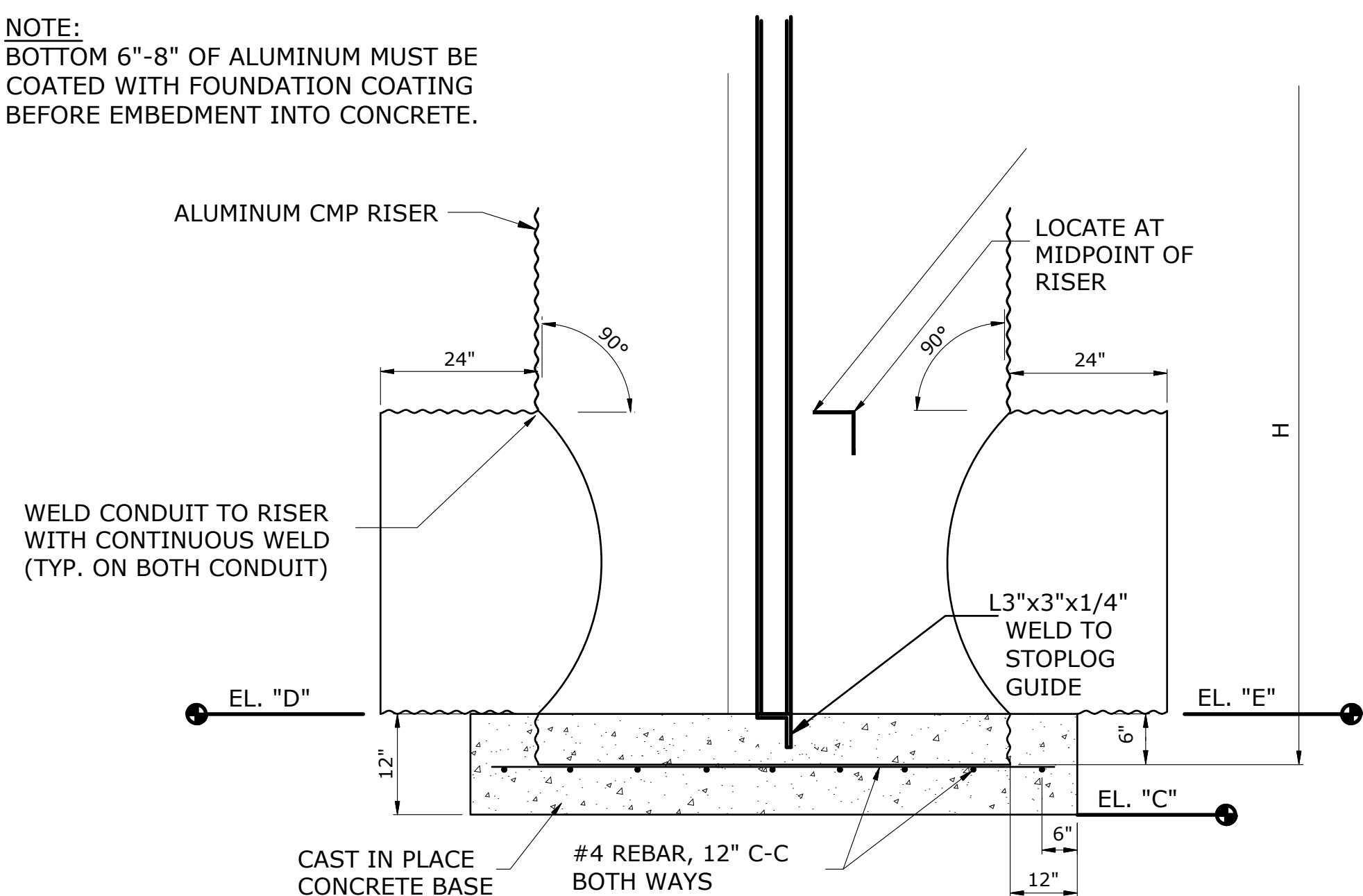
CAD FILE:
 IA-340-15 SITE PLAN
 DESIGNED BY: A.S.
 DRAWN BY: A.S., W.J., C.K.
 SURVEYED BY: A.S., A.B.
 REVIEWER: T.P.

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 PROJECT NUMBER:
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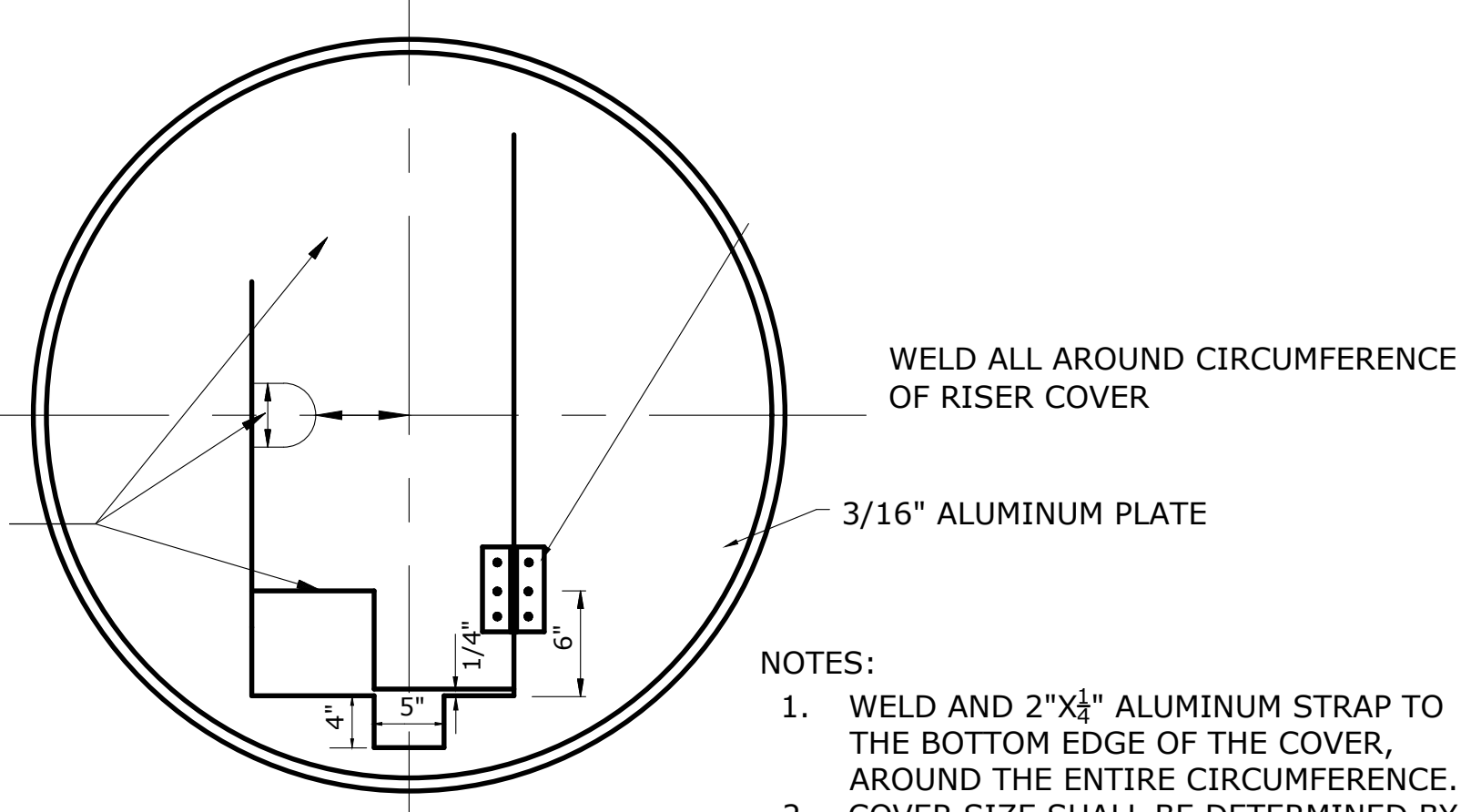
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NOTE:
BOTTOM 6"-8" OF ALUMINUM MUST BE COATED WITH FOUNDATION COATING BEFORE EMBEDMENT INTO CONCRETE.



* SEE TABLE
TYP GATE CMP CONTROL STRUCTURE
NOT TO SCALE

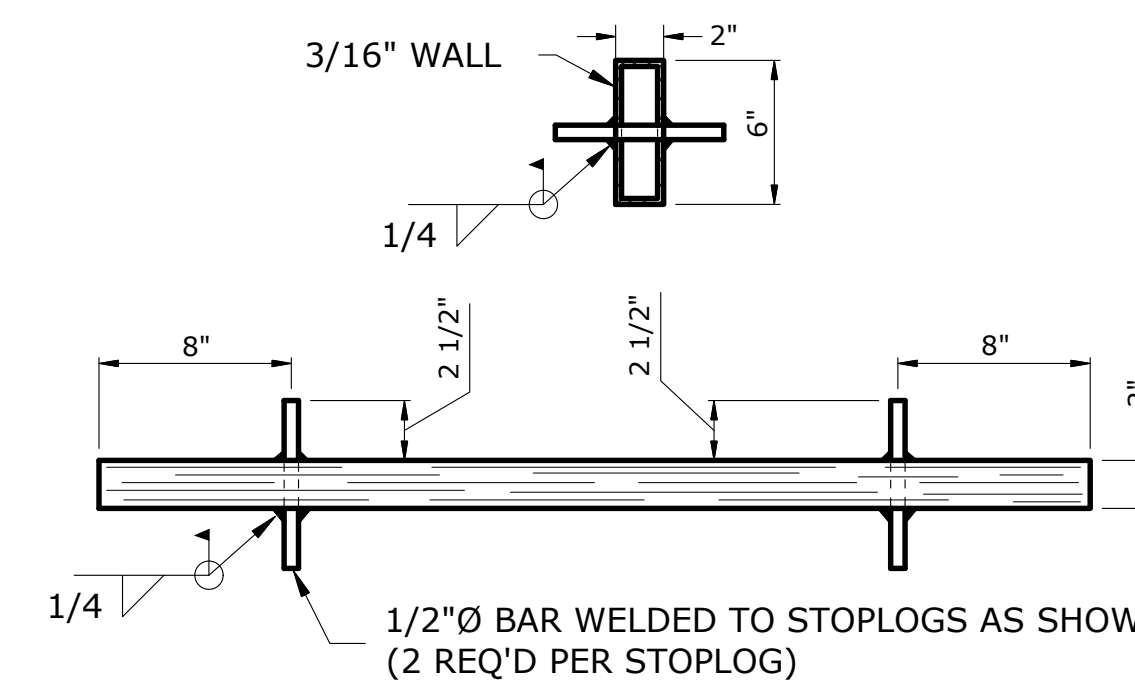
COVER SHALL BE TRIMMED TO FIT AROUND GATE APPURTENANCES SO THE NON-HINGED SIDE RESTS ON L 3"x 3"x 1/4" RISER BRACE.



ALUMINUM GATE RISER COVER DETAIL
NOT TO SCALE

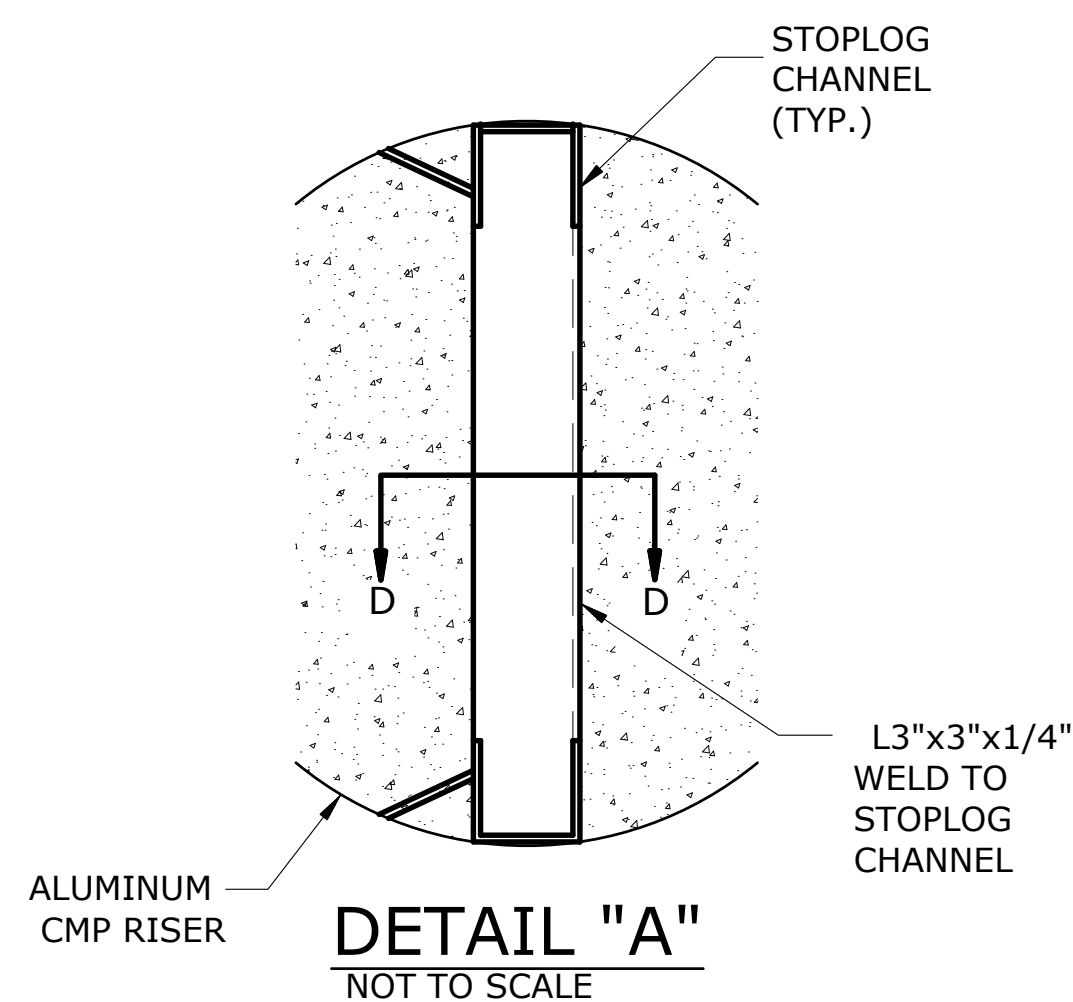
NOTES:

1. WELD AND 2"x 1/4" ALUMINUM STRAP TO THE BOTTOM EDGE OF THE COVER, AROUND THE ENTIRE CIRCUMFERENCE. COVER SIZE SHALL BE DETERMINED BY THE RISER DIAMETER PLUS 4".
2. HINGED DOOR LENGTH SHALL BE DETERMINED BY THE RISER DIAMETER MINUS 5" EITHER SIDE OF RISER.

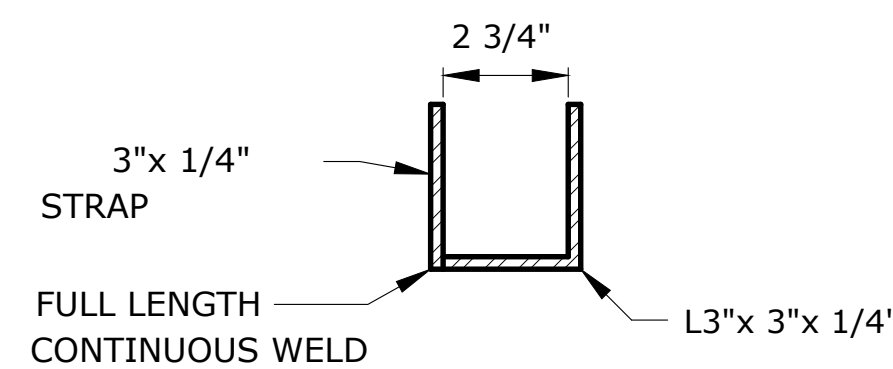


- NOTE: 1. WELD 1/2" Ø BAR IN STOPLOGS.
2. STOPLOGS SHALL BE 1" SHORTER THAN WIDTH BETWEEN STOPLOG GUIDES.
3. FABRICATOR TO PROVIDE 1-2" & 1-3" STOPLOG IN ADDITION TO STOPLOGS SPECIFIED.

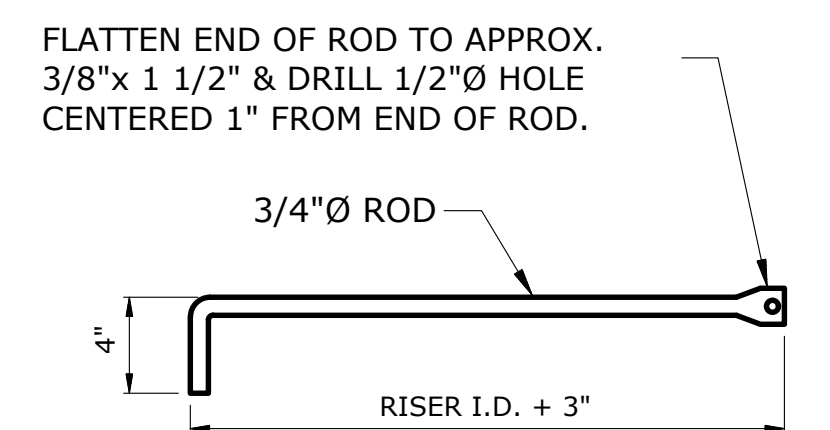
ALUMINUM STOPLOG DETAIL
NOT TO SCALE



DETAIL "A"
NOT TO SCALE

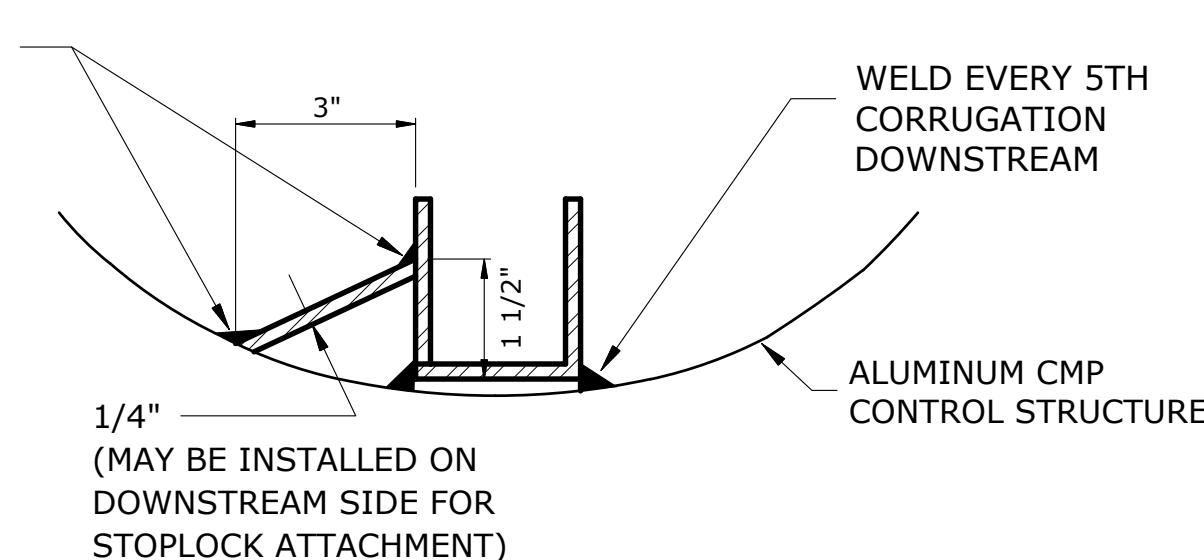


ALUMINUM STOPLOG CHANNEL DETAIL
NOT TO SCALE

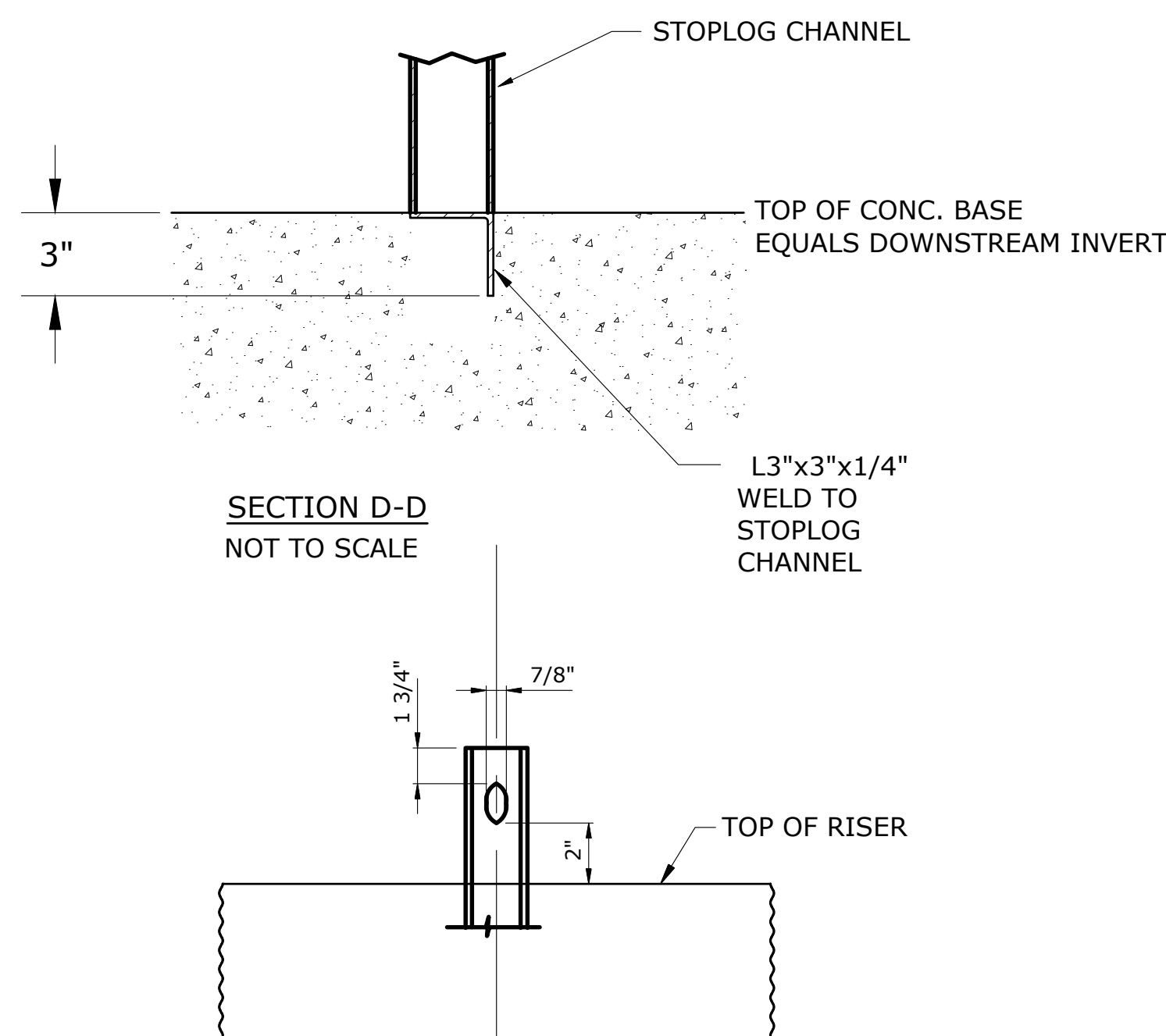


LOCKING ROD DETAIL
NOT TO SCALE

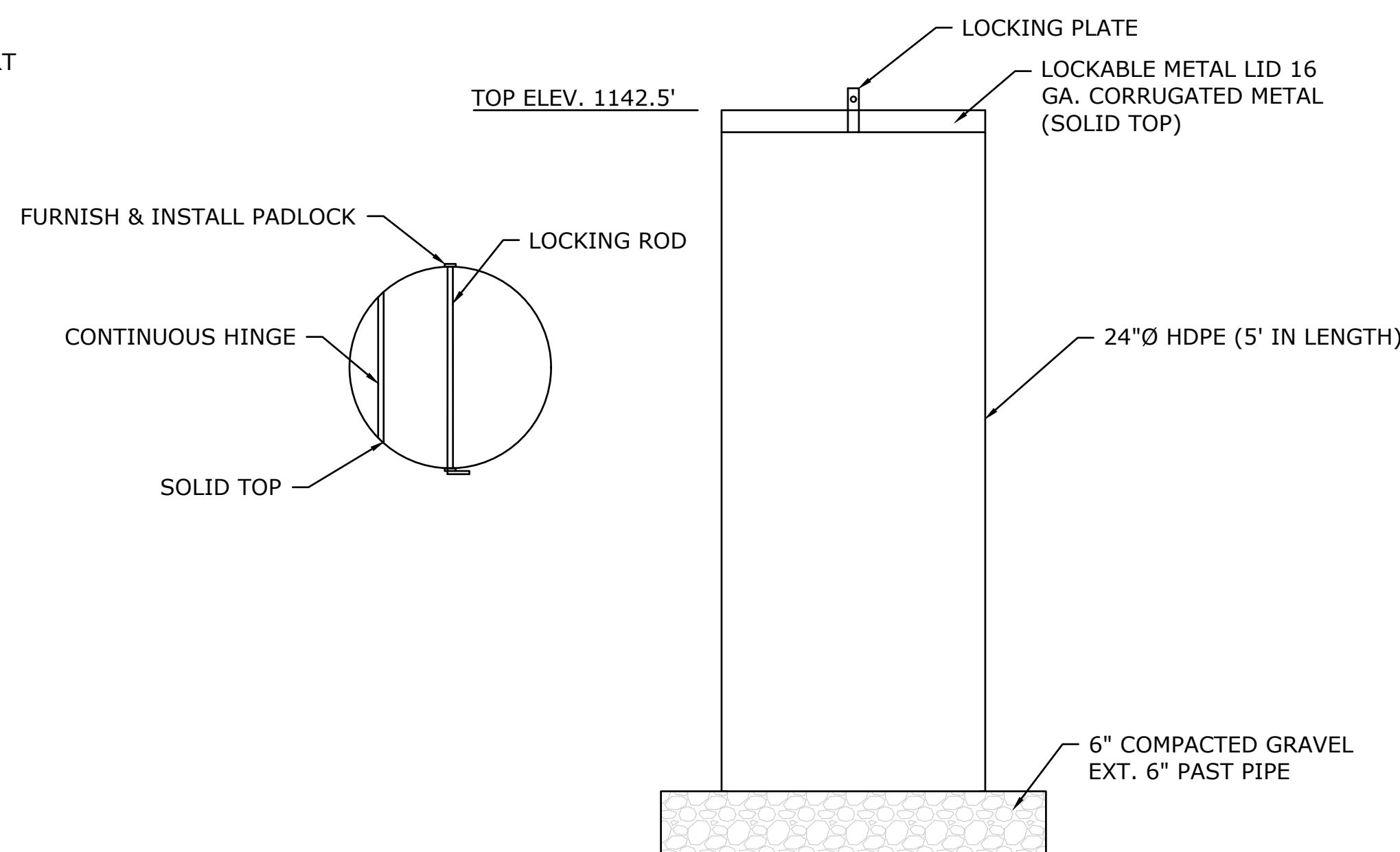
CONTINUOUS FILLET BETWEEN CORRUGATED ALUM. CONTROL STRUCTURE & STOPLOG GUIDE UPSTREAM



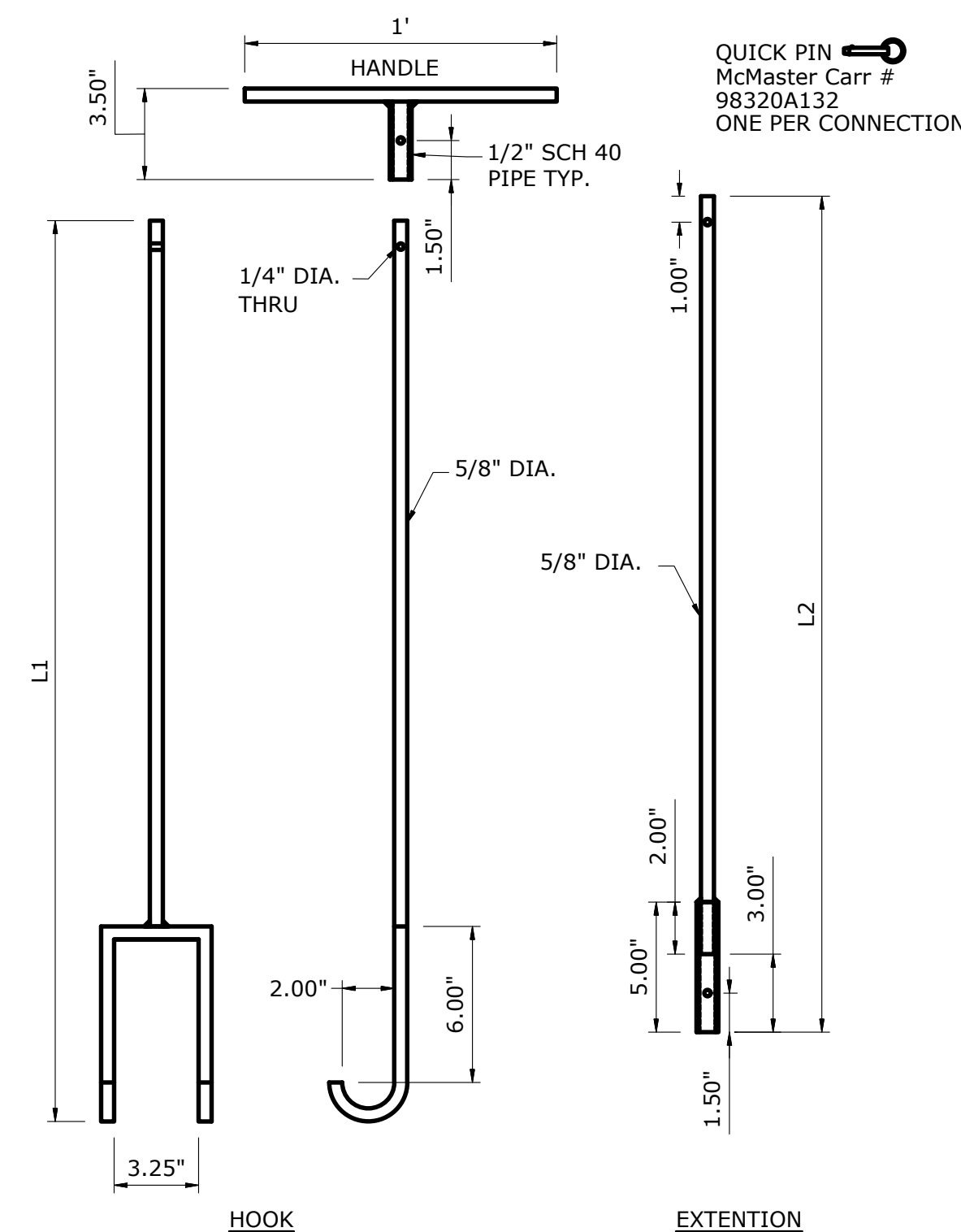
STOPLOG GUIDE DETAIL
NOT TO SCALE



LOCKING ROD SLOT DETAIL
NOT TO SCALE



STOPLOG STORAGE BOX DETAIL
NOT TO SCALE



STOPLOG LIFTING HOOK DETAIL
NOT TO SCALE

NOTE: L1 AND L2 EQUAL HEIGHT OF RISER PLUS 1" MAX LENGTH FOR EACH 5'. AFTER ADD A SECOND EXTENSION L3 2 PER STRUCTURE

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0	PRELIMINARY SITE PLAN	A.S.	6-25-24	A.S.
1	REVISED SITE PLAN	A.S.	6-16-25	A.S.
2	FINAL PLANS	A.S.	9-4-25	A.S.

CAD FILE:
IA-340-15 WCS Details
DESIGNED BY: A.S.
DRAWN BY: A.S., W.J., C.K.
SURVEYED BY: A.S., A.B.
BIOLOGIST: T.P.
DATE:
9-4-2025
PROJECT NUMBER:
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 C:\Users\vaschippers\Documents\Iowa\02_C3D Projects\IA-340-2 CRIP PROJECTS\KOS972821A\340-15\CD\DRAWING\IA-340-15 WCS Details.dwg, 10/30/2025 11:31 AM, Andrew Schippers, WCS DETAIL SHEET 2, None

