

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

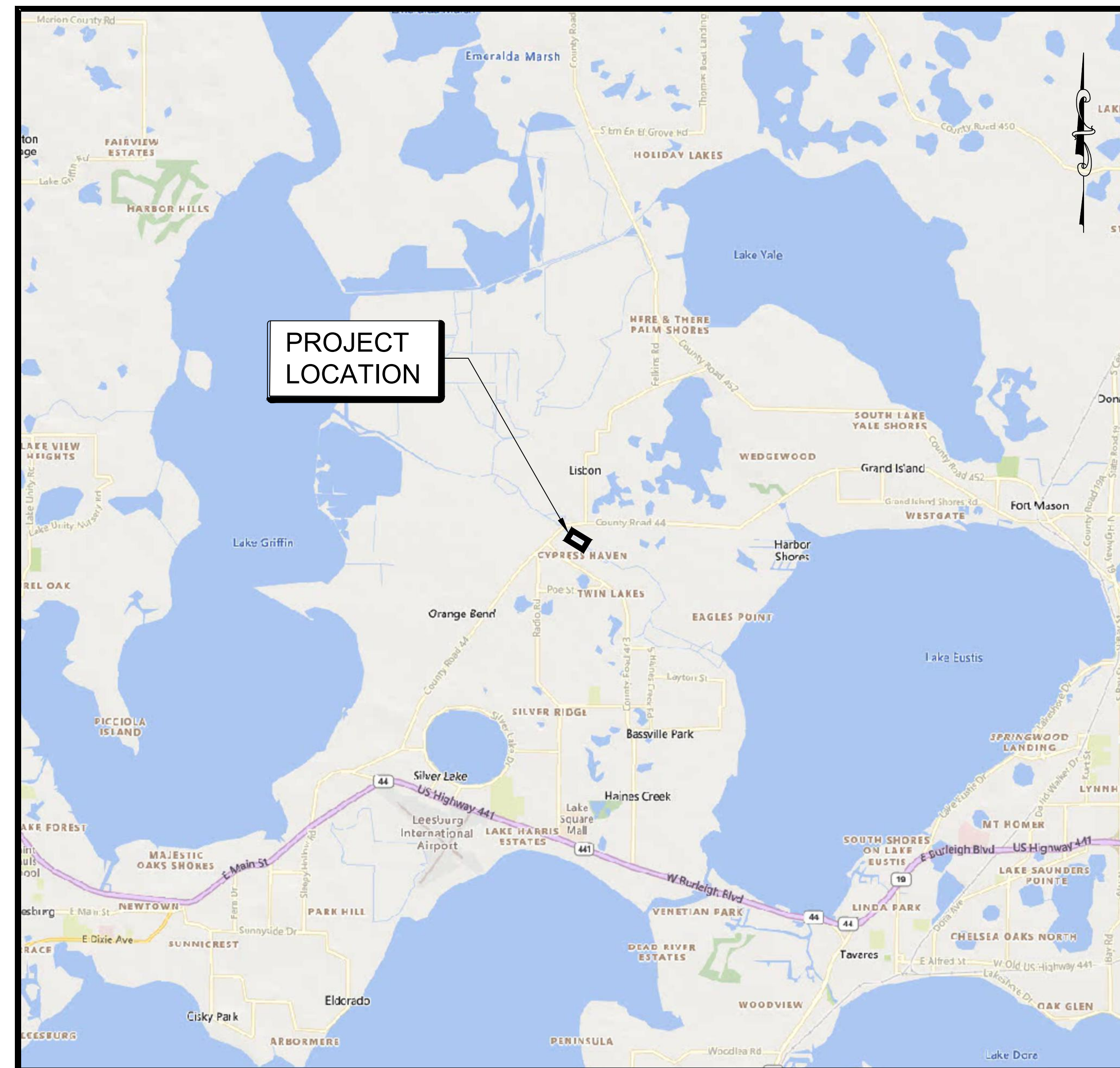
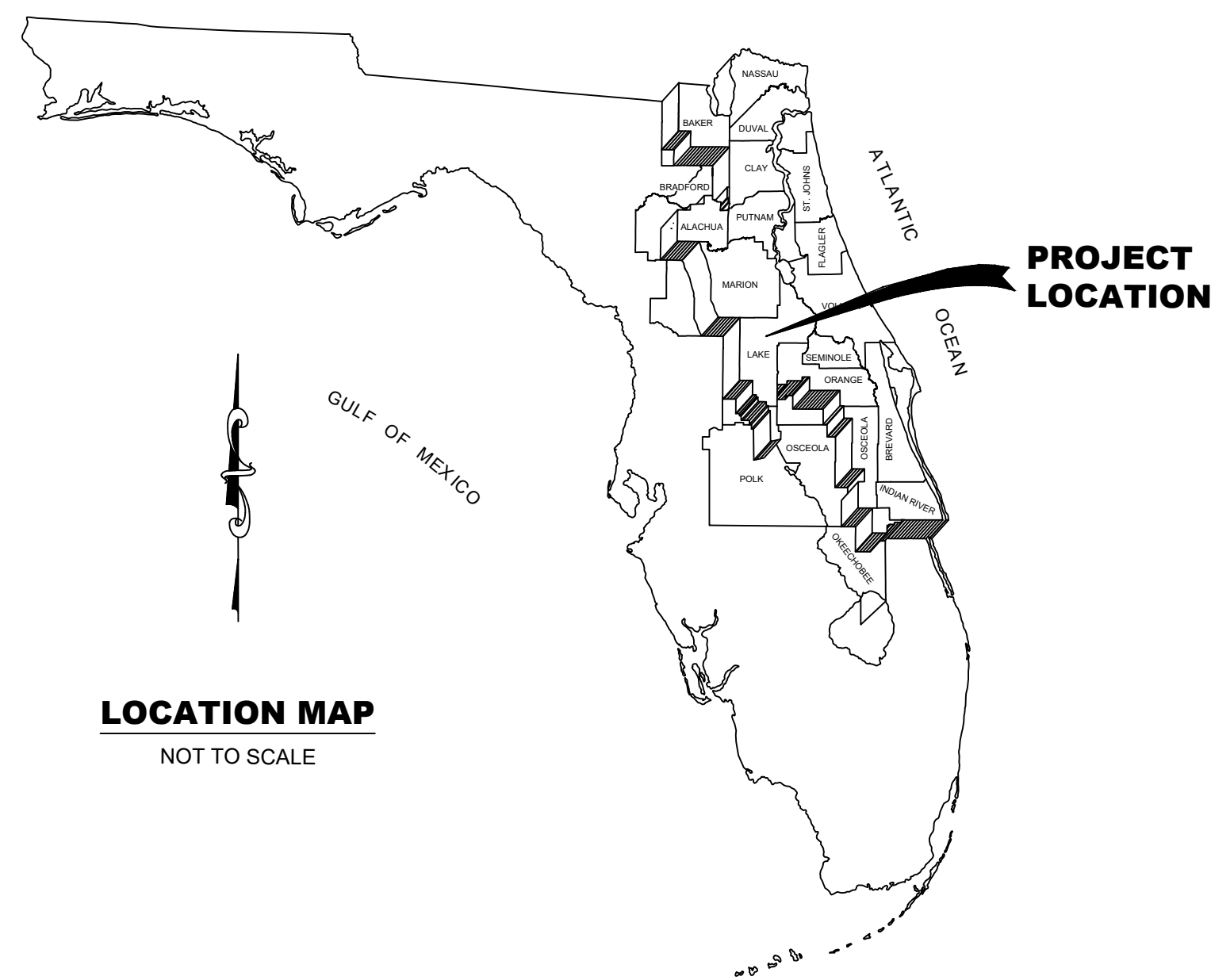
UPPER OCKLAWAHA RIVER BASIN

BURRELL LOCK REHABILITATION

LAKE COUNTY, FLORIDA

NGVD 1929

ALL ELEVATIONS DEPICTED HEREIN
REFERENCE NGVD 1929 UNLESS
OTHERWISE NOTED. THE CONVERSION
FACTOR TO NAVD 1988 IS -1.05'.



VICINITY MAP



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ENGINEER'S NOTES:

- These drawings are prepared for the sole and exclusive use of the St. Johns River Water Management District and shall not be relied upon by any other entity or individual.
- Reproductions of these drawings are "NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL SEAL OF A FLORIDA LICENSED ENGINEER."

ALWAYS CALL
BEFORE YOU
DIG

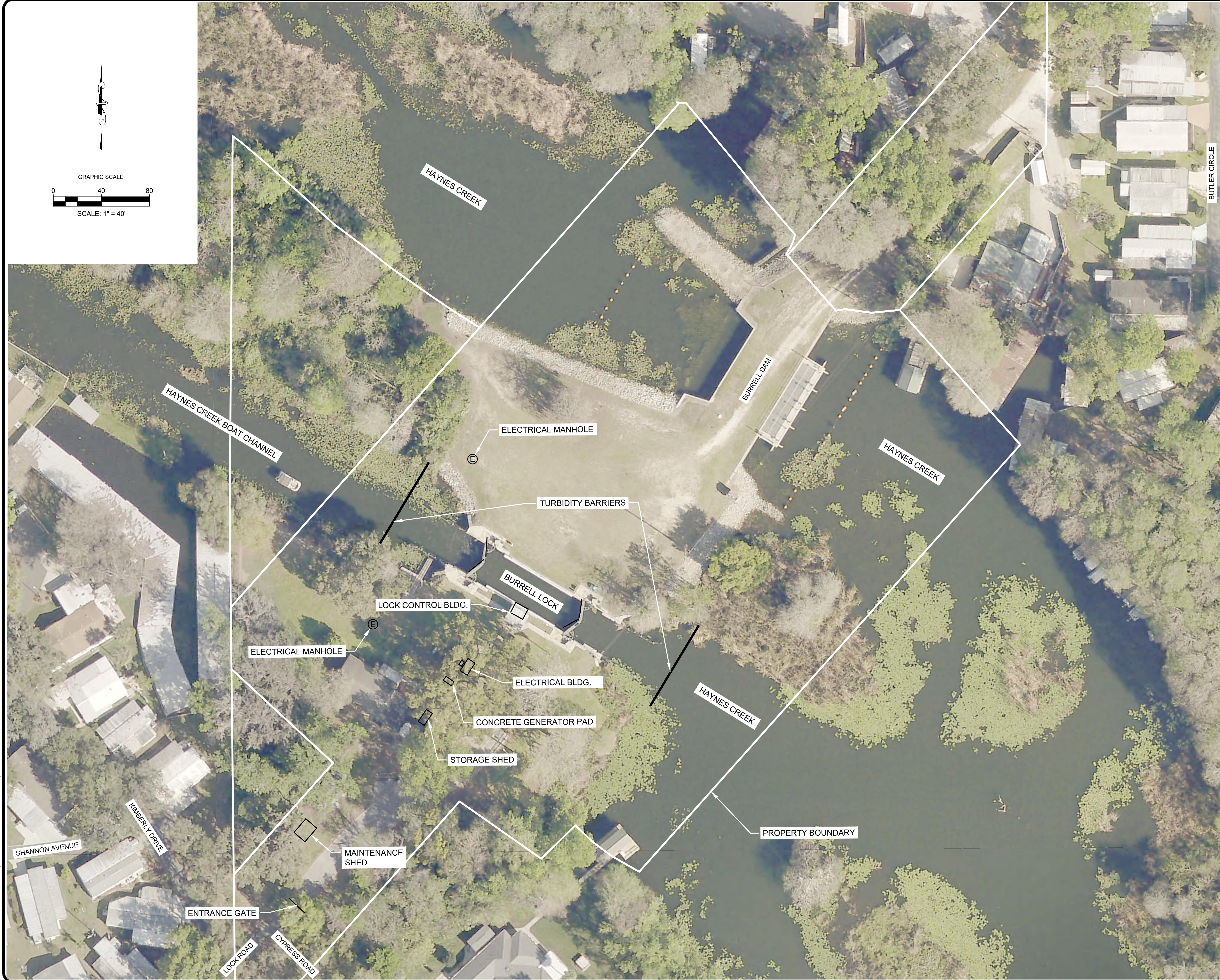


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NO.	REVISION	BY	DATE	APPROVED	DATE
1	ISSUED FOR BID	N.J.G.	02/19/24	W.R.C.	02/19/24

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NOT FOR CONSTRUCTION

CERTIFICATION:	DRAWING FILENAME:
WILLIAM R. COTE	COVER SHEET.dwg
P.E. NUMBER: 53746	SHEET:
DATE: FEBRUARY 19, 2024	C1



NOTE SPECIFICATIONS:

SUMMARY OF WORK / CONSTRUCTION SEQUENCE:

1. MOBILIZE LABOR AND EQUIPMENT TO THE SITE. ESTABLISH ON-SITE OFFICE AND STORAGE SPACES.
2. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES.
3. INSTALL DEWATERING BULKHEADS AND SUPPORT FRAMING AT THE UPSTREAM AND DOWNSTREAM ENDS OF THE LOCK STRUCTURE.
4. PUMP WATER FROM THE WORK AREA AND PROVIDE CONTINUOUS PUMPING TO KEEP THE WORK AREA DEWATERED. PUMPING SHALL BE IN A MANNER THAT WILL MINIMIZE SILTATION INTO THE WATERWAYS.
5. REMOVE MANATEE SONAR DETECTION SYSTEM. CAREFULLY STORE UNDER CLIMATE CONTROL FOR LATER REINSTALLATION.
6. REMOVE SEDIMENT AND DEBRIS FROM THE STRUCTURE WORK AREA AND DISPOSE AT AN APPROVED OFFSITE LOCATION.
7. PRESSURE WASH ALL CONCRETE AND STEEL SURFACES. AFTER WASHING THE DISTRICT CONTRACTOR SHALL PERFORM A JOINT INSPECTION TO DETERMINE THE FULL EXTENT AND SCOPE OF THE REPAIR WORK.
8. DISCONNECT POWER. DEMO AND DISPOSE OF THE FOUR LOCK MITRE GATE OPERATORS AND CONTROLS. REMOVE THE LOCK MITRE GATES.
9. DEMO AND DISPOSE FOUR SLIDE GATES AND OPERATORS. KEEP THE EXISTING CONCRETE ANCHORS FOR ATTACHING THE NEW GATES.
10. DEMO AND DISPOSE FOUR ABANDONED ELECTRICAL BOXES AND CONDUITS.
11. DEMO UPSTREAM AND DOWNSTREAM FENDERS. REPLACE WITH 3.5X7 PT WOOD. PROVIDE NEW GALVANIZED BOLTS, NUTS, AND WASHERS SIZED ACCORDING TO THE EXISTING FASTENERS TO BOLT ON TIMBER PILES.
12. DEMO INTERNAL LOCK FENDERS. UPON COMPLETION OF CONCRETE REPAIR, REPLACE WITH 2X6 COMPOSITE LUMBER. ANCHOR TO CONCRETE WALLS WITH NEW STAINLESS STEEL DRILLED ANCHORS, NUTS, AND WASHERS SIZED ACCORDING TO THE EXISTING FASTENERS.
13. DEMO REPLACE NAVIGATION LIGHTS ON TOP OF PILES. TWO AT UPSTREAM AND TWO AT DOWNSTREAM ENDS OF THE LOCK APPROACHES. REPLACE WITH NEW SOLAR MARINE LIGHTS AS SPECIFIED.
14. DEMO AND REPLACE TWO DISTRICT STAFF GAGES AS SPECIFIED.
REMOVE AND DISPOSE TWO DISTRICT STAFF GAGES AND REPLACE AS SPECIFIED.
15. DEMO AND DISPOSE FOUR FIRE EXTINGUISHER CABINETS AFFIXED TO THE LOCK RAILING. REPLACE WITH FOUR UNITS OF JONESCO MODEL JBXE83, OR EQUAL.
16. DEMO AND DISPOSE FOUR THROWABLE FLOATATION RINGS WITH CABINET AFFIXED TO THE LOCK RAILING. REPLACE WITH FOUR UNITS OF JIM BUOY SAFETY STATION MODEL 5070A WITH CABINET, 30-INCH RING, AND 60-FT. HEAVY LINE, OR EQUAL.
17. REMOVE AND DISPOSE 26 SIGNS AND REPLACE 23 SIGNS AS SPECIFIED. REMOVE AND SALVAGE 7 SIGNS AND REPLACE UPON COMPLETION OF LOCK REPAIRS.
18. LOCK MITRE GATE REHABILITATION:
REMOVE THE LOCK GATES. PERFORM JOINT INSPECTION, BLAST AND PAINT AS SPECIFIED. PREPARE SURFACES AND PAINT ALL MITRE GATE HANDRAILS. REPLACE GATE GREASE LINES, SEALS AND HARDWARE.
 - 18.1 LOCK GATE STEEL REPAIRS (IF REQUIRED)
PATCH GATE STEEL AND HINGE SUPPORT BRACKETS AS NEEDED.
 - 18.2 LOCK GATE HINGE PINS (IF REQUIRED)
INSPECT AND REPLACE THE HINGE PINS AS NEEDED.
 - 18.3 LOCK GATE HINGE BEARINGS (IF REQUIRED)
INSPECT AND REPLACE THE HINGE BEARINGS AS NEEDED.
 - 18.4 LOCK GATE LUMBER COMPONENTS (IF REQUIRED)
INSPECT AND REPLACE LUMBER COMPONENTS AS NEEDED.
19. CONCRETE HYDRODEMOLITION, IF NEEDED, SHALL BE AS SPECIFIED.
20. CONCRETE ISOLATED PATCHING, IF NEEDED, SHALL BE AS SPECIFIED.
21. CONCRETE REBAR REPAIR, IF NEEDED, SHALL BE AS SPECIFIED.
22. CONCRETE CRACK REPAIR, IF NEEDED, SHALL BE AS SPECIFIED.
23. CONCRETE SAWCUTTING, IF NEEDED, SHALL BE AS SPECIFIED.
24. CONCRETE ERODED SURFACE REPAIR, IF NEEDED, SHALL BE AS SPECIFIED.
25. CONCRETE TESTING SERVICES, IF NEEDED, SHALL BE AS SPECIFIED.
26. CONCRETE SURFACE SHALL BE AS SPECIFIED.
27. CONCRETE HYDRAULIC CYLINDER PITS SHALL BE AS SPECIFIED.
28. INSPECT, REPAIR LEAKS, AND PAINT THE 42-INCH DIAMETER LOCK FILL AND DISCHARGE PIPES AS SPECIFIED.
29. PAINT ALL EMBEDDED STEEL COMPONENTS WITH SHERWIN-WILLIAMS DURA-PLATE 235, 2 COATS 6 MILS DFT EACH COAT, OR EQUAL. SURFACE PREPARATION SHALL BE FOR IMMERSION SERVICE AND APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER SPECIFICATIONS.
STAINLESS STEEL SHALL BE POWERWASHED ONLY.
GALVANIZED STEEL SHALL BE COATED WITH ZRC GALVANIZING COMPOUND, TWO COATS, 3 MILS DFT EACH COAT, OR EQUAL. SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER SPECIFICATIONS.
30. FABRICATE AND INSTALL NEW HANDRAIL AT CYLINDER PITS, NEW LOCK ACCESS GATE AND REPLACE LADDER LOCATED NEAR THE LOCK CONTROL BUILDING.
31. INSTALL A NEW 3/4" DIAMETER STAINLESS STEEL WATER LINE AND WATER BIB IN THE NORTHEAST LOCK CORNER CONNECTED TO AND MIRRORING THE EXISTING WATER LINE AND BIB NEAR THE NORTHEAST LOCK CORNER. THE ANCHORED LINE SHALL EXTEND DOWN THE NORTHWEST WALL, ACROSS THE CONCRETE FLOOR, AND UP THE NORTHEAST WALL.
32. UPON COMPLETION OF LOCK REPAIRS, INSTALL THE FOUR LOCK MITRE GATES AND THE FOUR NEW HYDRAULIC OPERATORS.
33. INSTALL FOUR NEW SLIDE GATES AND FOUR NEW HYDRAULIC OPERATORS.
34. IN THE LOCK CONTROL BUILDING, INSTALL NEW CONTROL PANELS FOR THE MITRE GATE OPERATORS AND THE SLIDE GATE OPERATORS. INSTALL NEW CONDUITS AND WIRING TO CONNECT TO THE FOUR MITRE GATES AND THE FOUR SLIDE GATE OPERATORS. CONNECT POWER AND PERFORM DRY TEST OPERATION OF ALL GATES AND OPERATORS AND ADJUST AS NEEDED. AFTER LOCK IS FLOODED, TEST OPERATION OF ALL GATES AND OPERATORS UNDER NORMAL OPERATING CONDITIONS AND ADJUST AS NEEDED.
35. INSTALL THE DISTRICT SUPPLIED NEW MANATEE PROTECTION SCREENS IN FRONT OF THE FOUR SLIDE GATES. ALSO INSTALL SCREENS AT THE TWO UPSTREAM PIPE INLETS AND AT THE TWO DOWNSTREAM PIPE OUTLETS.
36. REINSTALL THE MANATEE SONAR DETECTION SYSTEM. RECALIBRATE THE SYSTEM WITH DIVERS AFTER THE LOCK IS FLOODED.
37. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT ANNOTATED DRAWINGS AND SPECIFICATIONS DOCUMENTING ANY CHANGES TO REFLECT THE AS-BUILT CONDITIONS. CONTRACTOR SHALL ALSO SUBMIT AN AS-BUILT SITE SURVEY SIGNED AND SEALED BY A FLORIDA LICENSED PROFESSIONAL LAND SURVEYOR. ELECTRONIC FILES (DWG AND PDF) AND TWO HARD COPIES ARE REQUIRED.
38. DEMOBILIZE INCLUDING SITE CLEAN UP, RESTORATION OF FINAL GRADE AND GRASSING TO ORIGINAL CONDITION, AND REMOVAL OF ALL EROSION AND SEDIMENT CONTROLS.

**FOR BID PURPOSES ONLY
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**UPPER OCKLAWAHA RIVER BASIN
BURRELL LOCK REHABILITATION
LAKE COUNTY, FLORIDA**

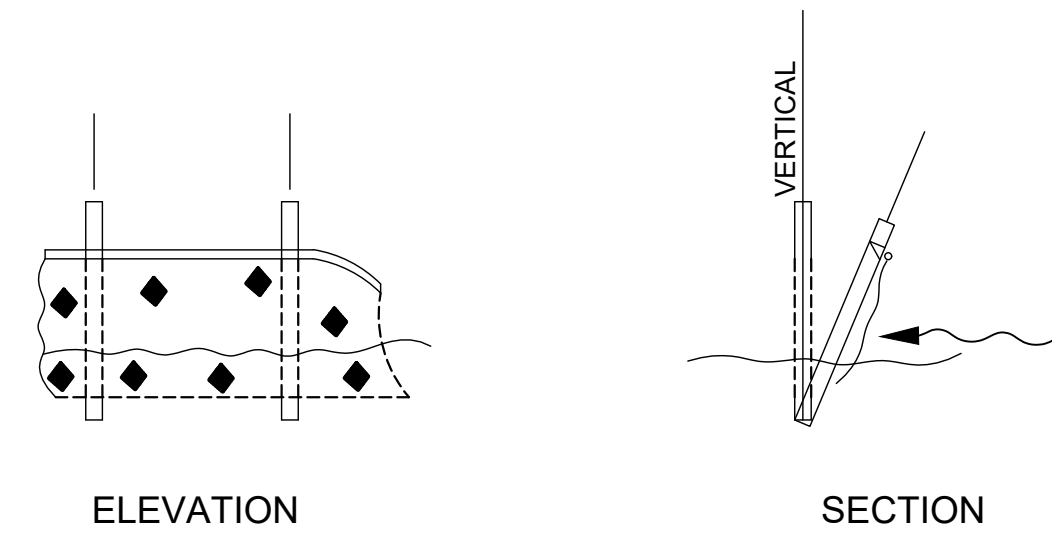
**ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT**
P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G.	DATE: FEBRUARY 19, 2024	REVIEWER: W.R.C.
SCALE: 1" = 40'	DESIGNER: W.R.C.	SECTION CHIEF: W.R.C.

KEY MAP WITH AERIAL

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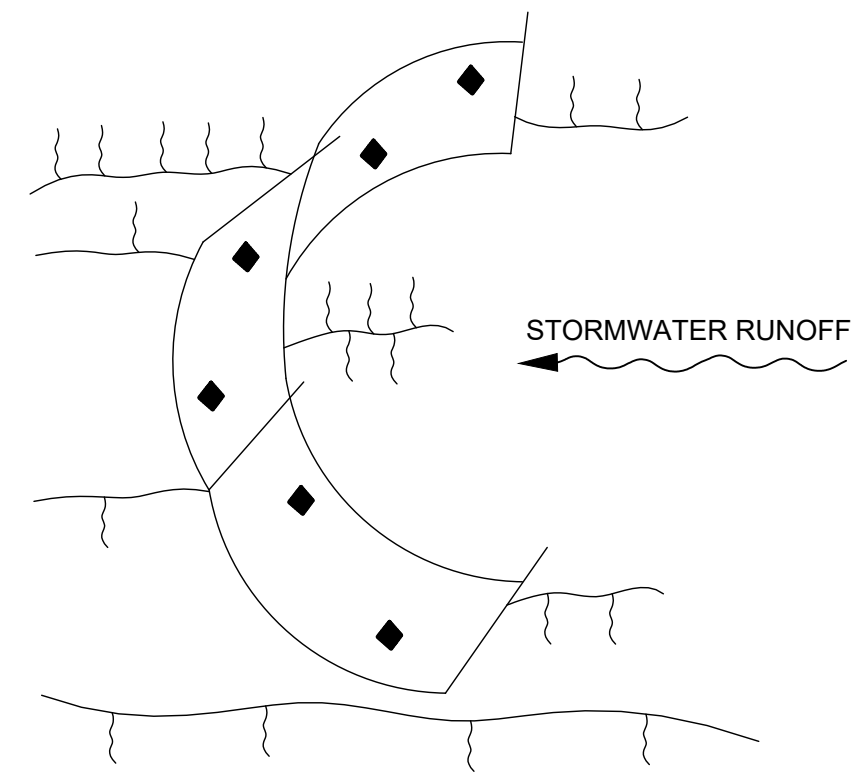
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SHEET:
C2



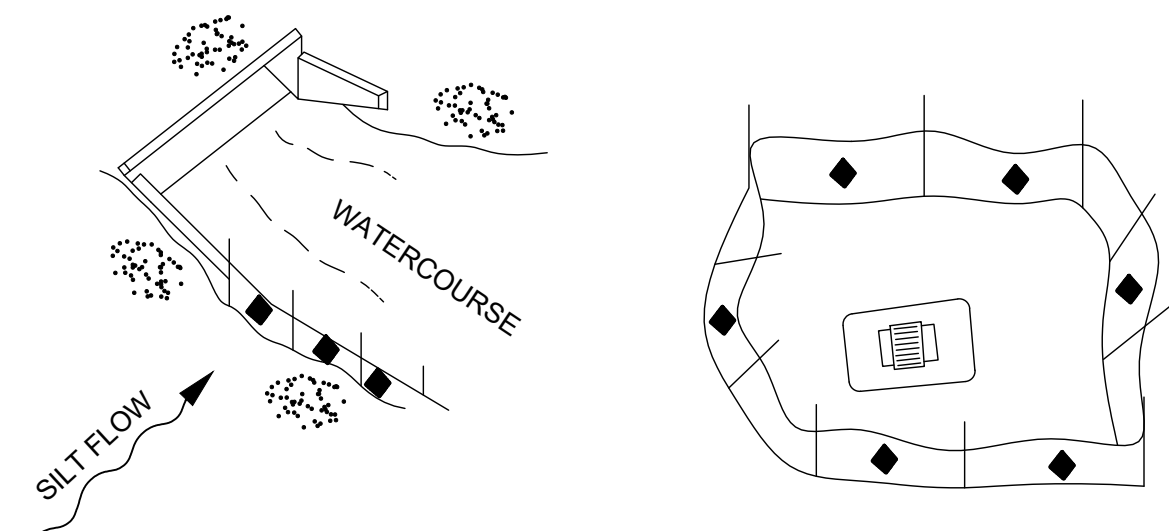
ELEVATION

SECTION

TYPE III SILT FENCE



SILT FENCE PROTECTION IN DITCHES WITH INTERMITTENT FLOW



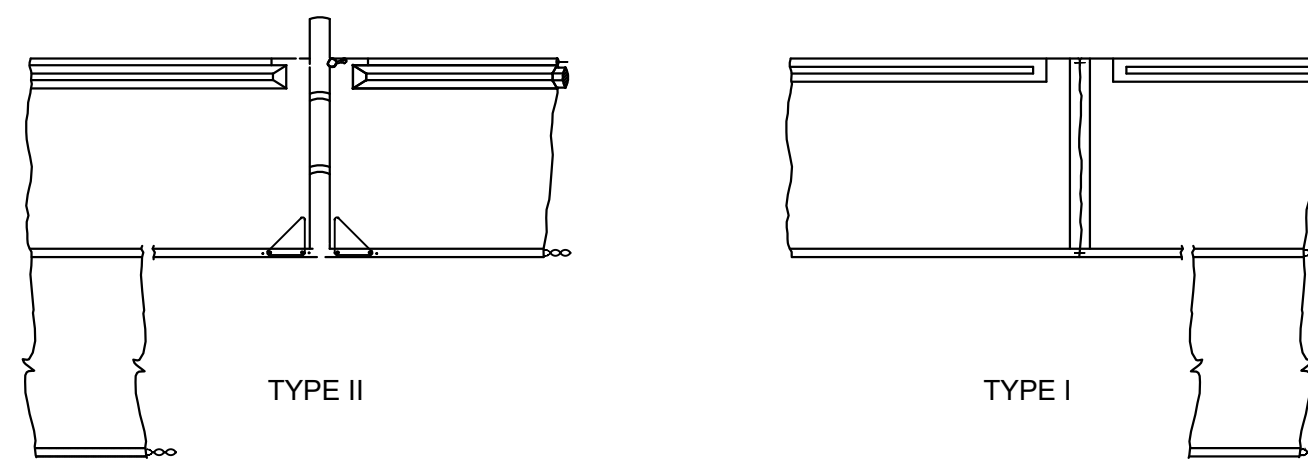
SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS

SILT FENCE APPLICATIONS

NOTES FOR SILT FENCES

- TYPE III SILT FENCE TO BE USED AT MOST LOCATIONS. WHERE USED IN DITCHES, THE SPACING FOR TYPE III SILT FENCE SHALL BE IN ACCORDANCE WITH SECTION V OF THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL (JULY 2013).
- TYPE IV SILT FENCE TO BE USED WHERE LARGE SEDIMENT LOADS ARE ANTICIPATED. SUGGESTED USE IS WHERE FILL SLOPE IS 1:2 OR STEEPER AND LENGTH OF SLOPE EXCEEDS 25 FEET. AVOID USE WHERE THE DETAINED WATER MAY BACK INTO TRAVEL LANES OR OFF THE RIGHT OF WAY.
- DO NOT CONSTRUCT SILT FENCES ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.
- WHERE USED AS SLOPE PROTECTION, SILT FENCE IS TO BE CONSTRUCTED ON 0% LONGITUDINAL GRADE TO AVOID CHANNELIZING RUNOFF ALONG THE LENGTH OF THE FENCE.
- SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE, (L.F).

TEMPORARY SILT FENCE DETAIL
NOT TO SCALE



TYPE II

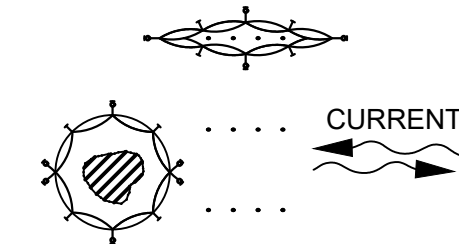
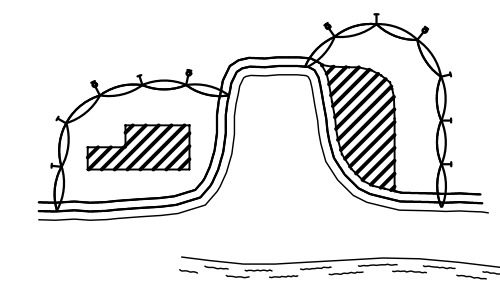
TYPE I

D1= 5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS).
D2= 5' STD. (ADDITIONAL PANEL FOR DEPTHS > 5')
CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

NOTICE: COMPONENTS OF TYPE I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGN. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

FLOATING TURBIDITY BARRIERS

NOT TO SCALE



GENERAL NOTES:

- FLOATING TURBIDITY BARRIERS ARE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR FLOATING TURBIDITY BARRIER, LF.
- STAKED TURBIDITY BARRIERS ARE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED TURBIDITY BARRIER, LF.

NOTES:

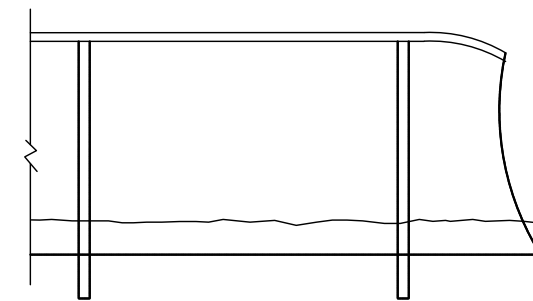
- TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
- NUMBER AND SPACING OF ANCHORS DEPENDENT ON CURRENT VELOCITIES.
- DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
- NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.
- TURBIDITY BARRIERS SHALL CONFORM TO SECTION 104 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION).

LEGEND

- PILE LOCATIONS
- DREDGE OR FILL AREA
- MOORING BUOY W/ANCHOR
- ANCHOR
- BARRIER MOVEMENT DUE TO CURRENT ACTION

TURBIDITY BARRIER APPLICATIONS

NOT TO SCALE



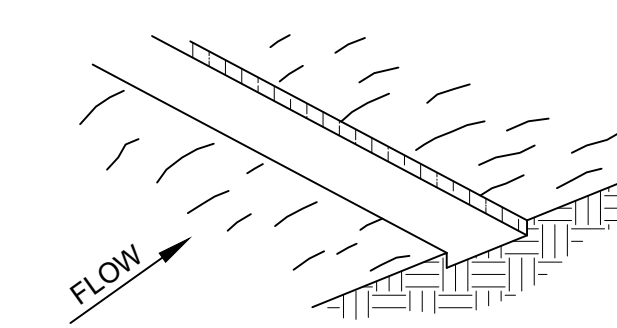
STAKED TURBIDITY BARRIER

NOT TO SCALE

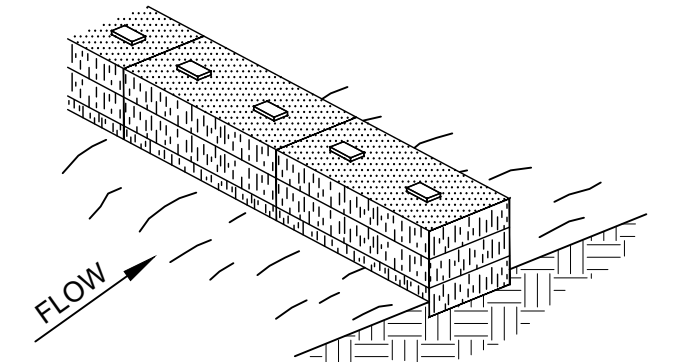
NOTES:

TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATIONS OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIER TYPE(S) WILL BE AT THE CONTRACTORS OPTIONS UNLESS OTHERWISE SPECIFIED IN THE PLANS. HOWEVER PAYMENT WILL BE UNDER THE PAY ITEM(S) ESTABLISHED IN THE PLANS FOR FLOATING TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE DISTRICT.

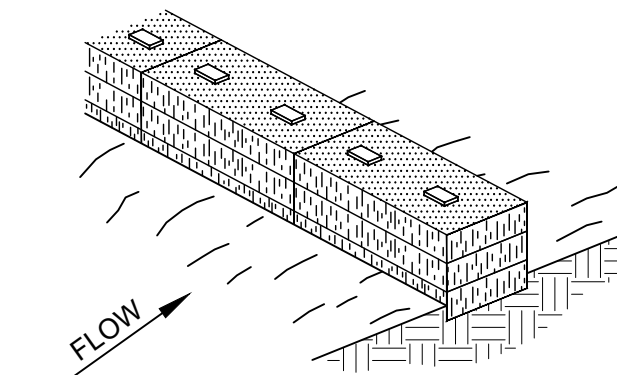
1. EXCAVATE THE TRENCH 4" DEEP BY THE BALE WIDTH.



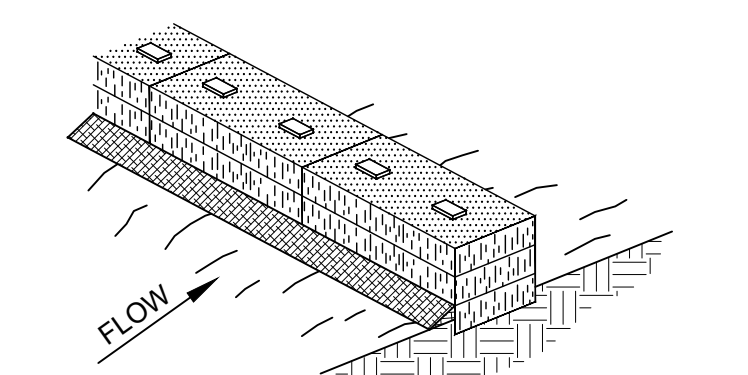
2. PLACE AND STAKE BALES.



3. WEDGE LOOSE STRAW BETWEEN THE BALES.



4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



NOTES:

- INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

STRAW BALE BARRIER

NOT TO SCALE

EROSION AND SEDIMENT CONTROL NOTES:

- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL WORK AT COMPLETION OF CONSTRUCTION.
- ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNSEEN CONDITIONS OR ACCIDENTS.
- THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 8 INCHES. THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER.
- SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND GRASSED.
- THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS, SPECIFICATIONS, PERMITS, AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT CRITERIA.
- FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL (LATEST EDITION).
- ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED, WATERED AND MAINTAINED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED. GRASSING SHALL CONFORM TO THE REQUIREMENTS OF SECTIONS 570 AND 981 THRU 983 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITIONS). NOTE THAT OTHER GRASSING ALTERNATIVES MAY BE USED WITH PRIOR DISTRICT APPROVAL.

PERMIT CONDITIONS FOR MANATEE PROTECTION:

- MANATEES ARE EXPECTED TO BE PRESENT AT THIS SITE DURING CONSTRUCTION. THE CONTRACTOR SHALL COMPLY WITH ALL STANDARD MANATEE CONDITIONS IN THE PERMIT.
- SILTATION OR TURBIDITY BARRIERS SHALL BE MADE OF MATERIAL IN WHICH MANATEES CANNOT BECOME ENTANGLED, SHALL BE PROPERLY SECURED, AND SHALL BE REGULARLY MONITORED TO AVOID MANATEE ENTANGLEMENT OR ENTRAPMENT. BARRIERS MUST NOT IMPEDE MANATEE MOVEMENT.
- CONTRACTOR SHALL PROVIDE MANATEE PROTECTION SCREENS WITH A MAXIMUM 8-INCH OPENING FOR ANY AND ALL DEWATERING OUTLET PIPES.

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ISSUED FOR BID	N.J.G.	02/19/24	W.R.C.	02/19/24
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UPPER OCKLAWAHA RIVER BASIN
BURRELL LOCK REHABILITATION
LAKE COUNTY, FLORIDA

ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT
P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G. DATE: FEBRUARY 19, 2024 REVIEWER: W.R.C.

SCALE: AS NOTED DESIGNER: W.R.C. SECTION CHIEF: W.R.C.

EROSION AND SEDIMENT CONTROL

CERTIFICATION:

WILLIAM R. COTE

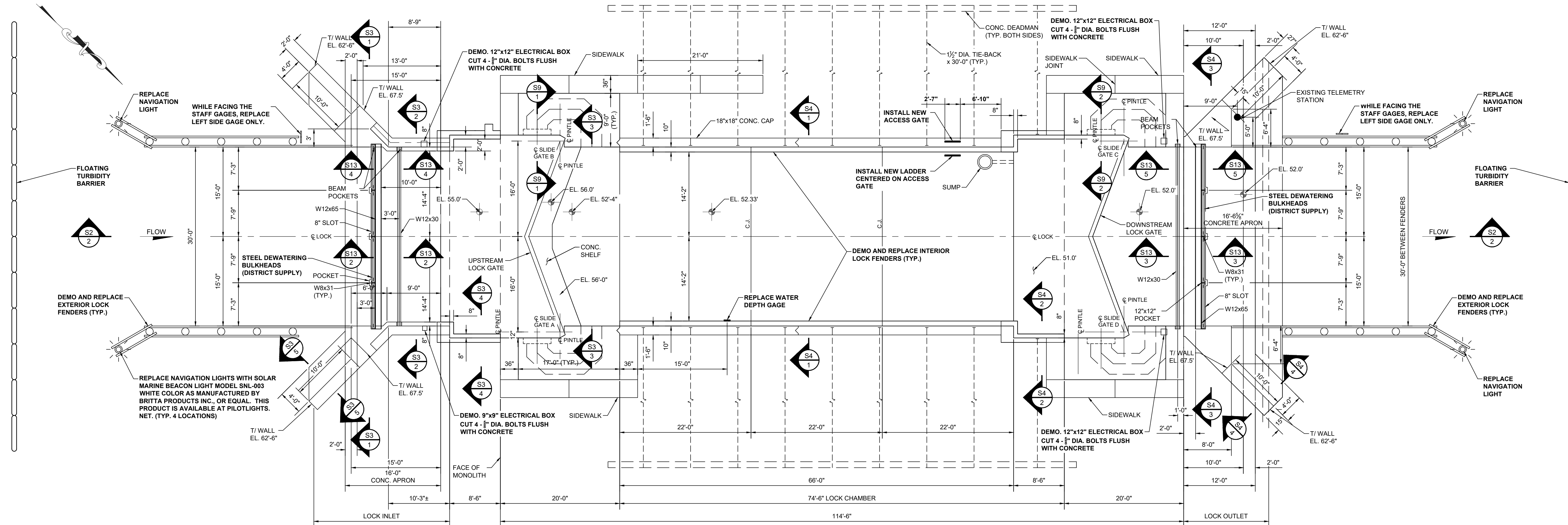
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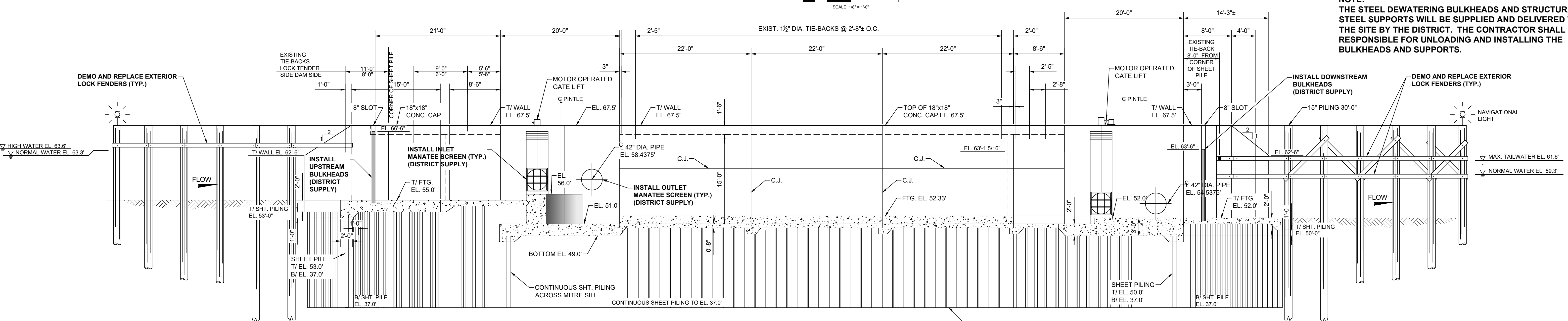
FILE NAME:
EROSION AND SEDIMENT.dwg

PROJECT NO.:

SHEET:
C3



S2
1
LOCK PLAN
SCALE: 1/8" = 1'-0"



S2
2
LOCK SECTION
SCALE: 1/8" = 1'-0"

NOTE:
THE STEEL DEWATERING BULKHEADS AND STRUCTURAL STEEL SUPPORTS WILL BE SUPPLIED AND DELIVERED TO THE SITE BY THE DISTRICT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UNLOADING AND INSTALLING THE BULKHEADS AND SUPPORTS.

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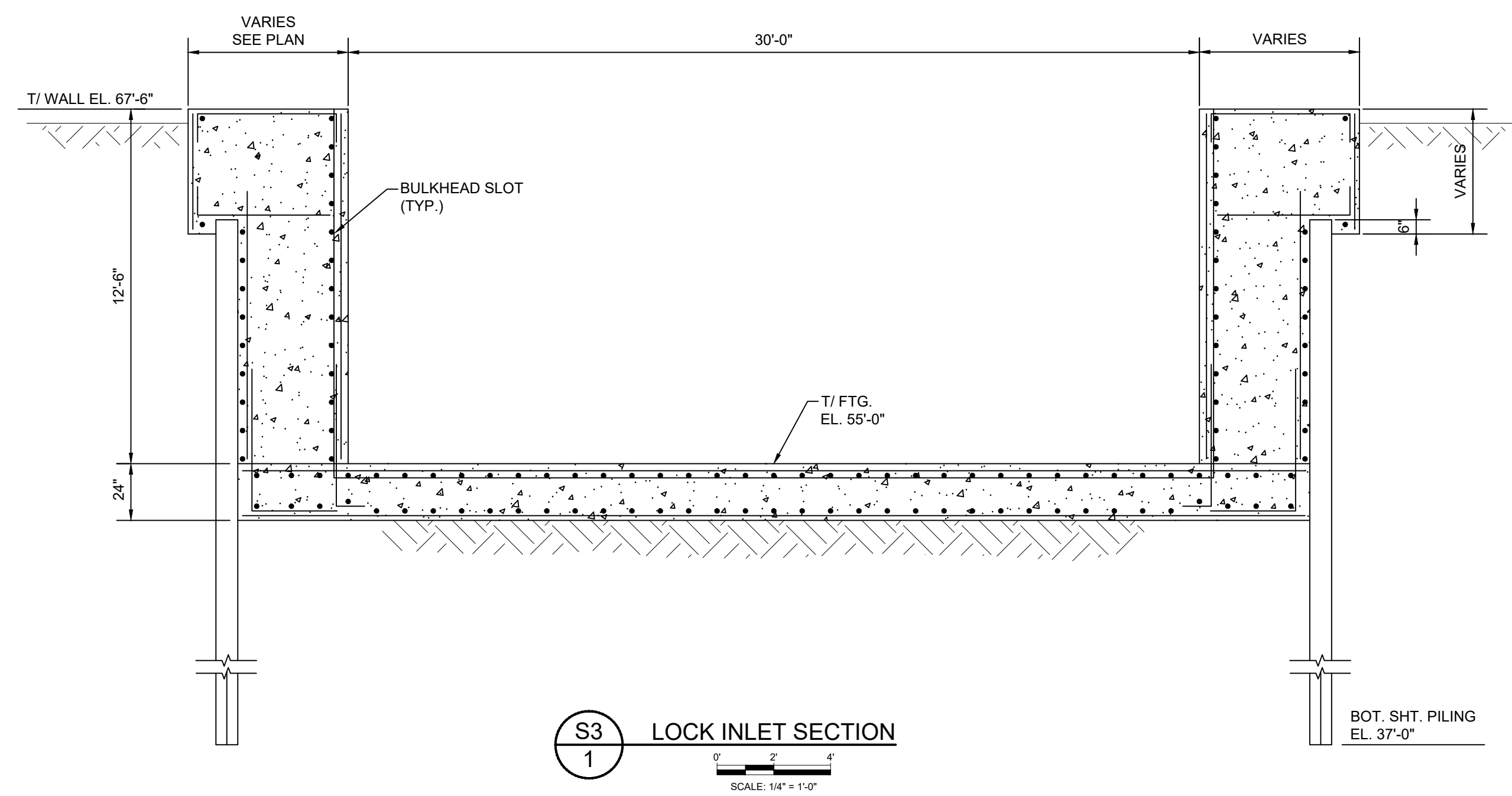
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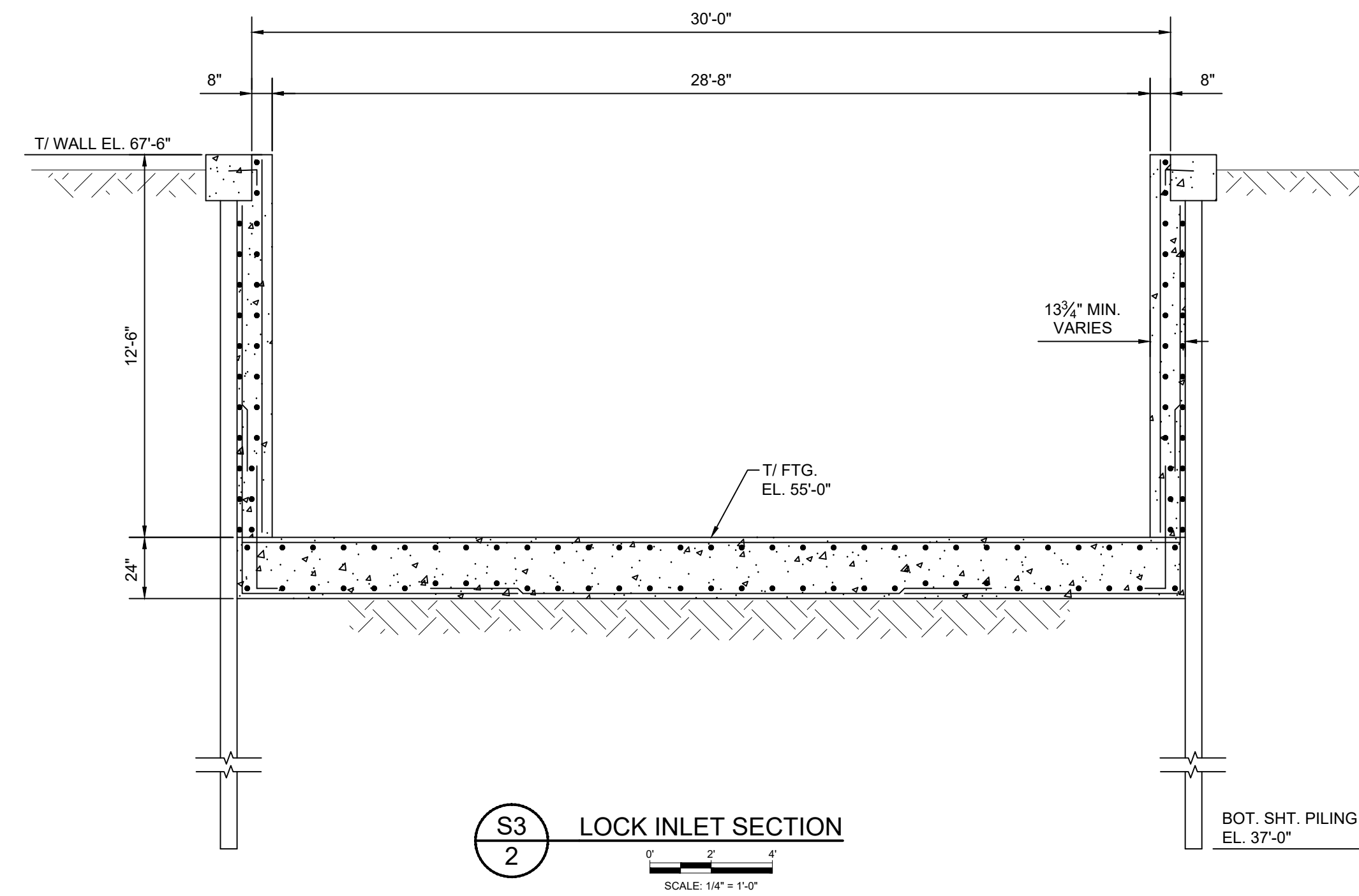
LOCK PLAN AND SECTION

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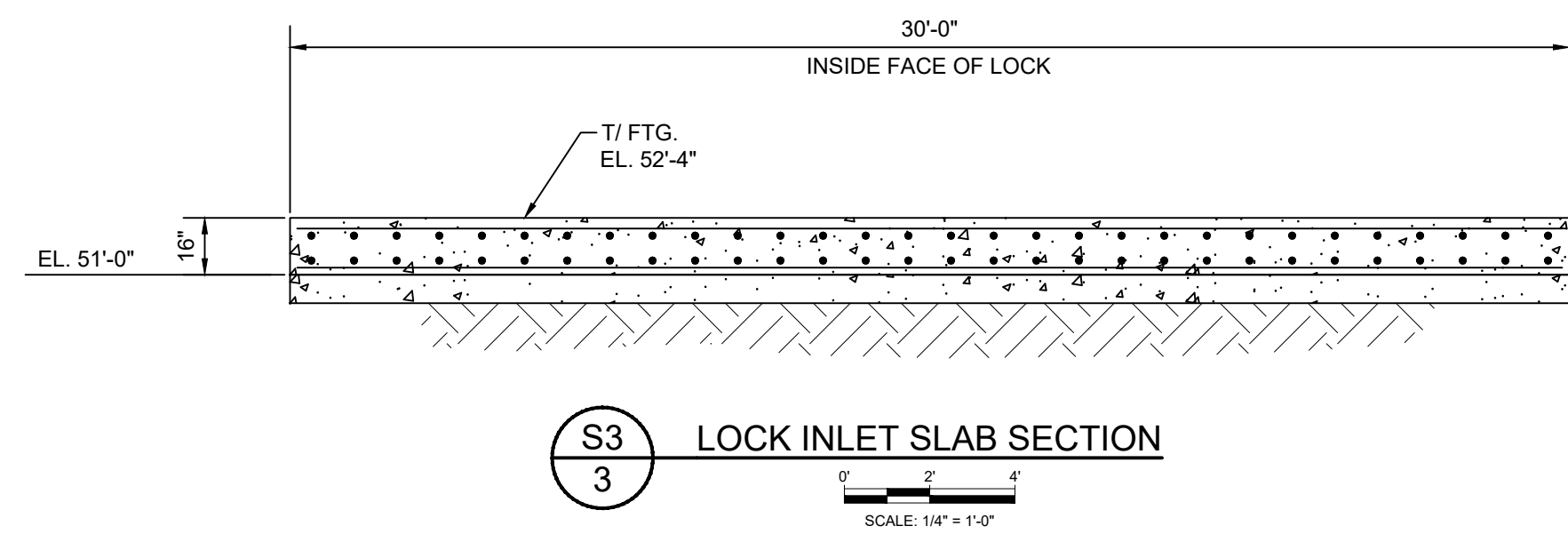
FILE NAME:
LOCK PLAN.dwg
PROJECT NO.:
SHEET:
S2



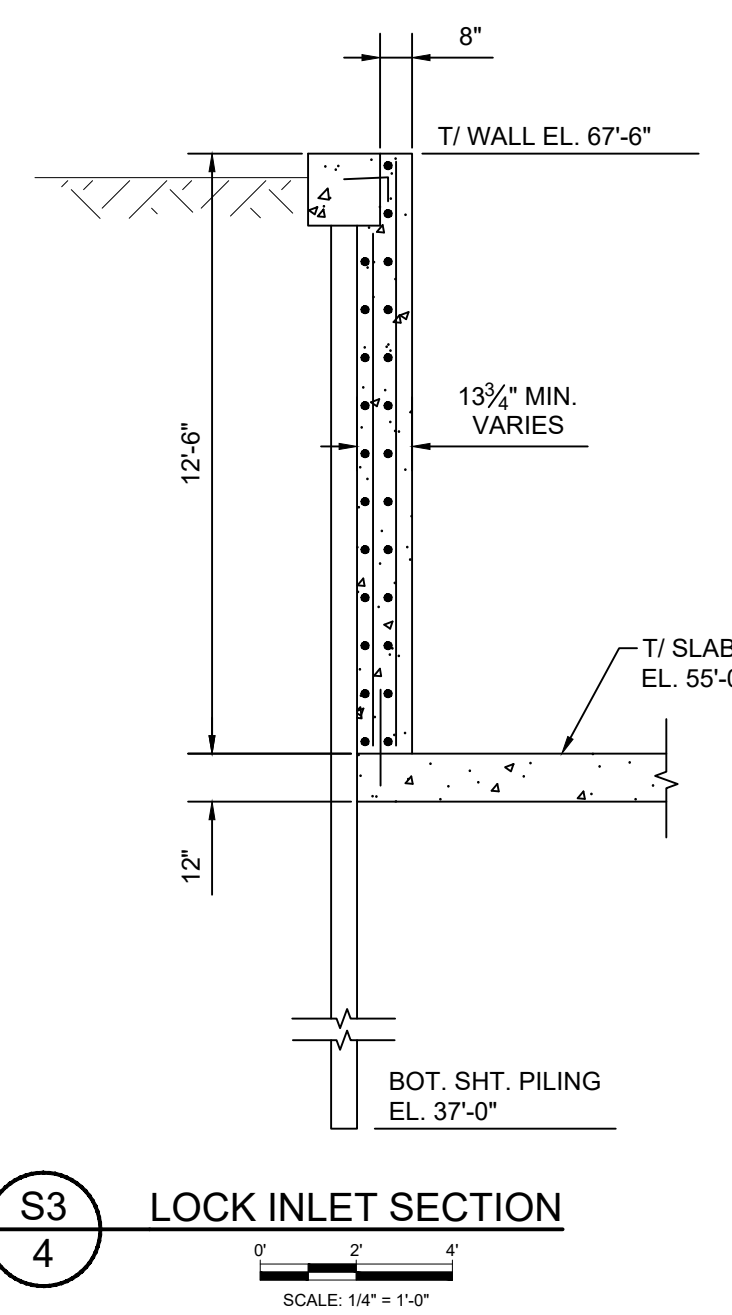
S3
1
LOCK INLET SECTION
SCALE: 1/4" = 1'-0"



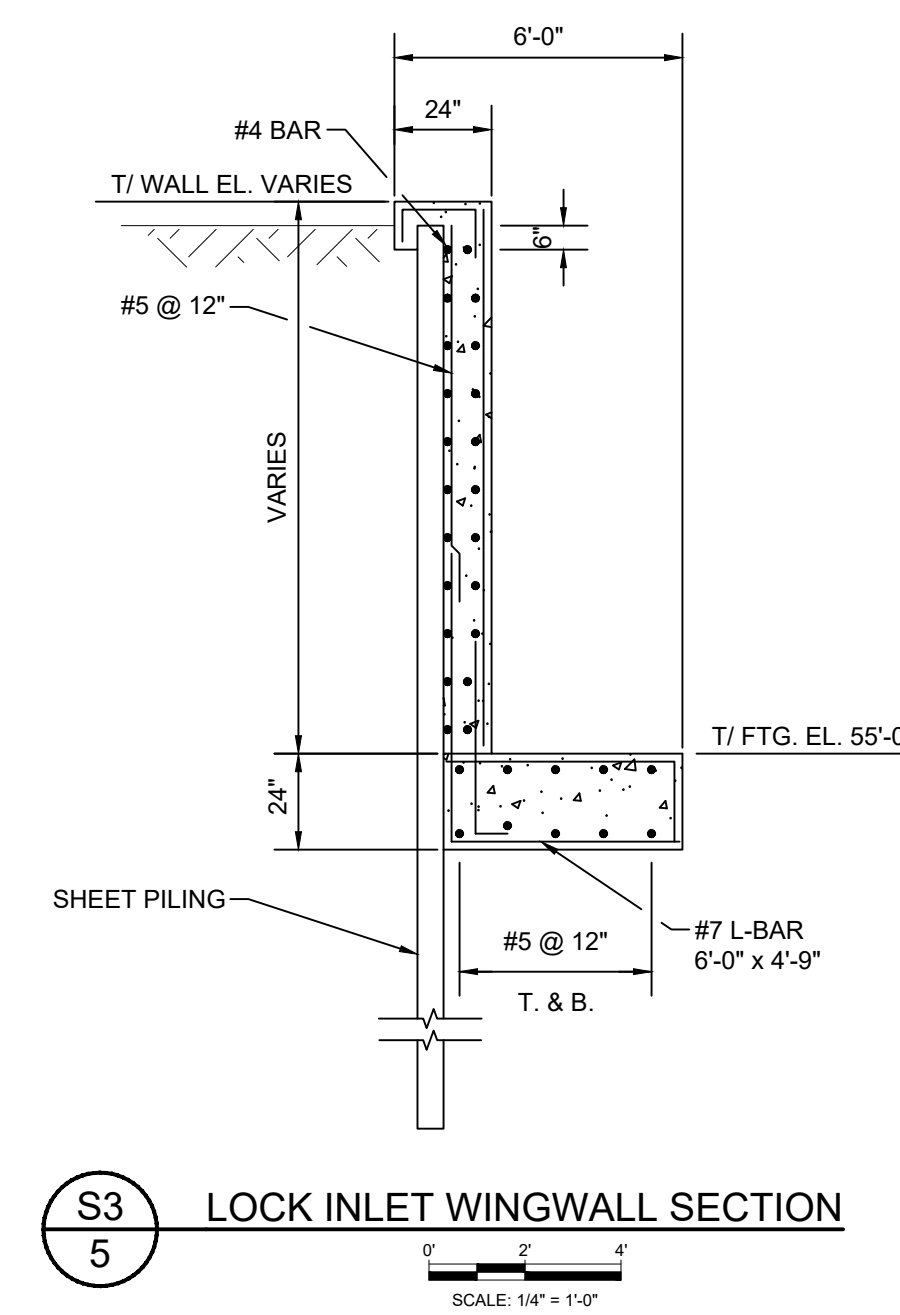
S3
2
LOCK INLET SECTION
SCALE: 1/4" = 1'-0"



S3
3
LOCK INLET SLAB SECTION
SCALE: 1/4" = 1'-0"



S3
4
LOCK INLET SECTION
SCALE: 1/4" = 1'-0"



S3
5
LOCK INLET WINGWALL SECTION
SCALE: 1/4" = 1'-0"

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U:\projects\2024\UPPER OCKLAWAHA RIVER BASIN\BURRELL LOCK REHABILITATION\DRAWINGS\LOCK INLET SECTIONS.dwg

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**UPPER OCKLAWAHA RIVER BASIN
BURRELL LOCK REHABILITATION
LAKE COUNTY, FLORIDA**

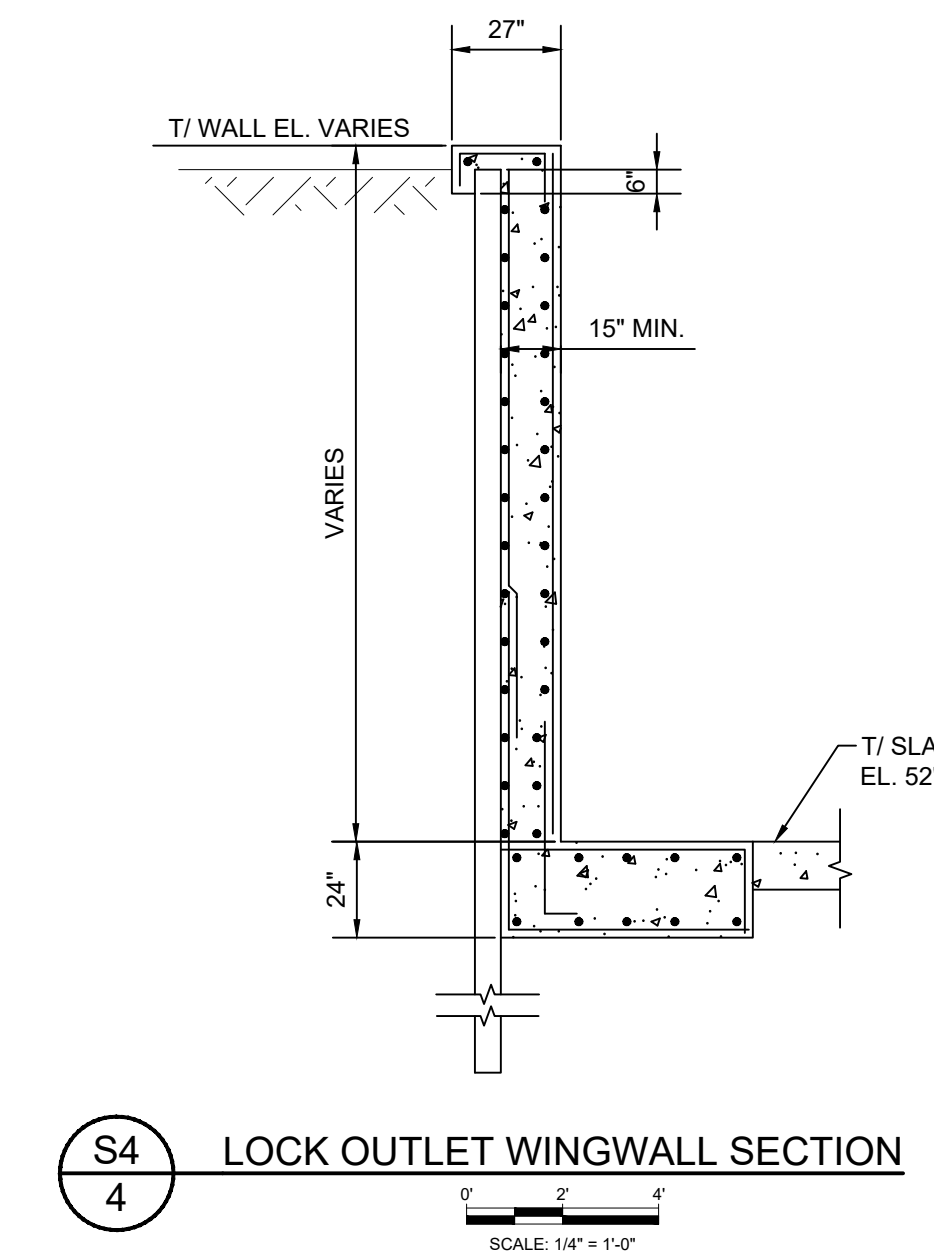
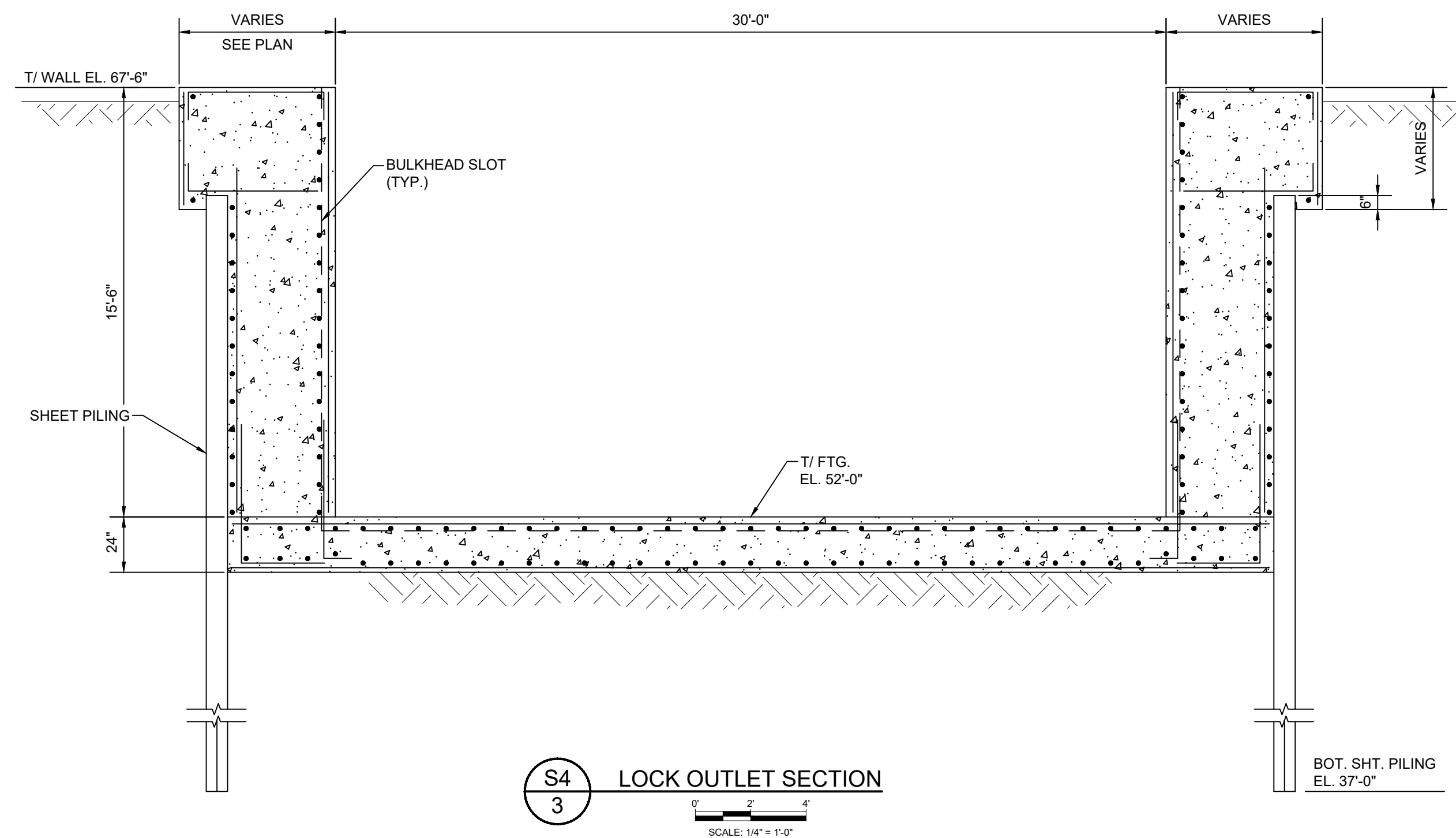
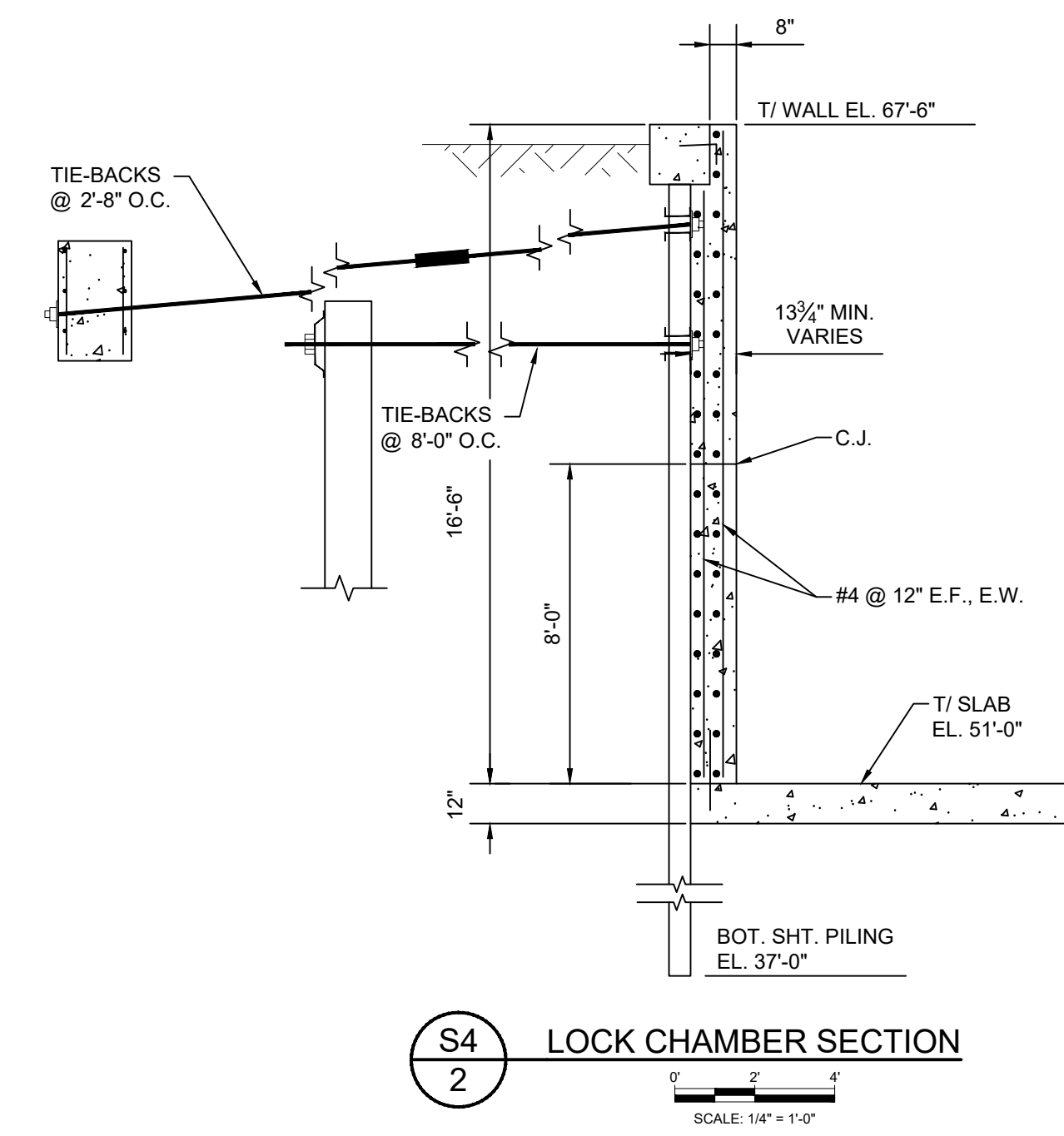
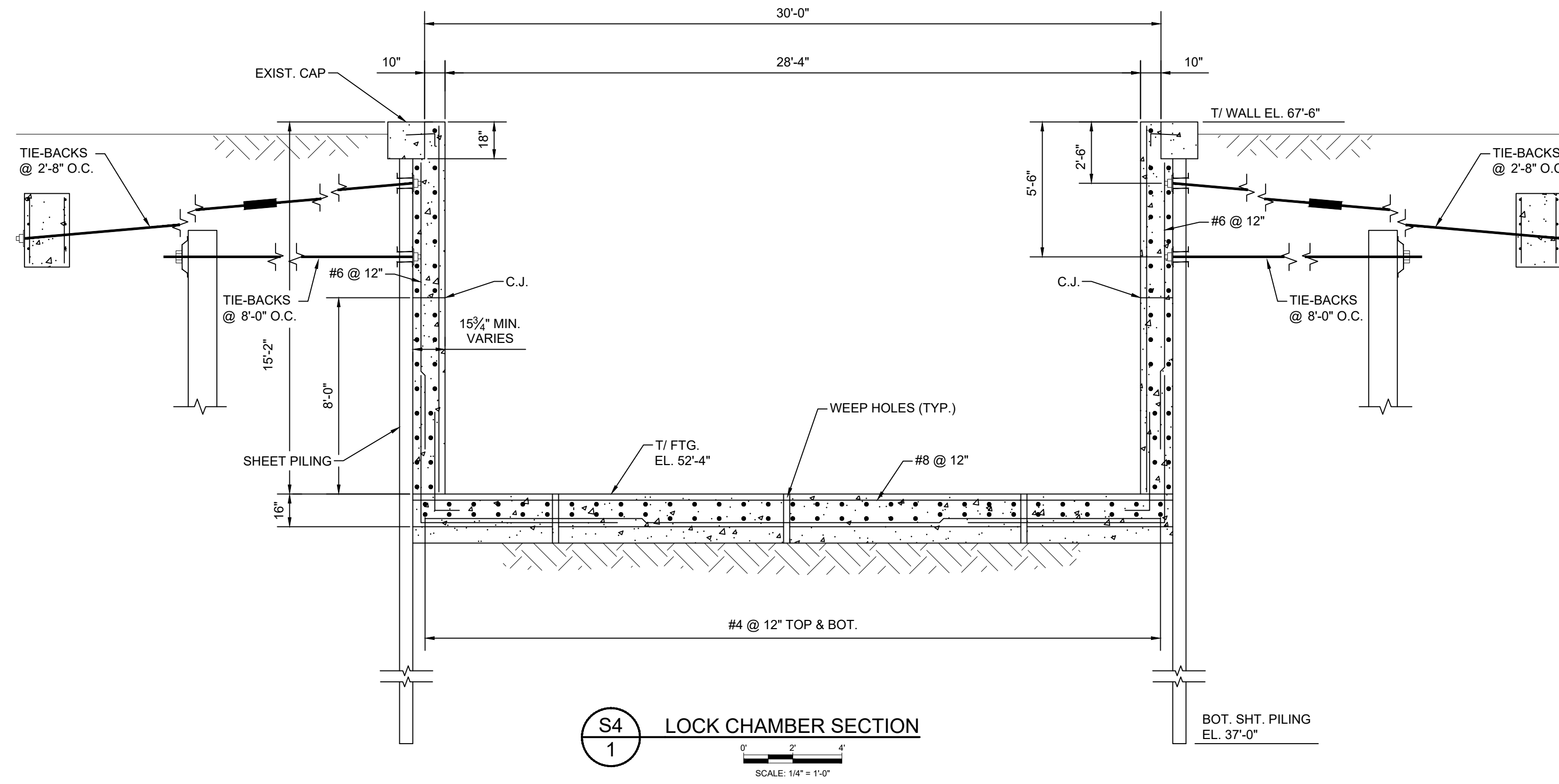
**ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT**
P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G. DATE: FEBRUARY 19, 2024 REVIEWER: W.R.C.
SCALE: 1/4" = 1'-0" DESIGNER: W.R.C. SECTION CHIEF: W.R.C.

EXISTING LOCK INLET SECTIONS

CERTIFICATION:
WILLIAM R. COTE
P.E. NUMBER: 53746
DATE: FEBRUARY 19, 2024

FILE NAME:
LOCK INLET SECTIONS.dwg
PROJECT NO.:
SHEET:
S3




**FOR BID PURPOSES ONLY
NOT FOR CONSTRUCTION**

L:\projects\2024\BURRELL LOCK REHABILITATION\DRAWINGS\OT SECT.dwg

NO.	REVISION	BY	DATE	APPROVED	DATE
1	ISSUED FOR BID	N.J.G.	02/19/24	W.R.C.	02/19/24

**UPPER OCKLAWAHA RIVER BASIN
BURRELL LOCK REHABILITATION
LAKE COUNTY, FLORIDA**

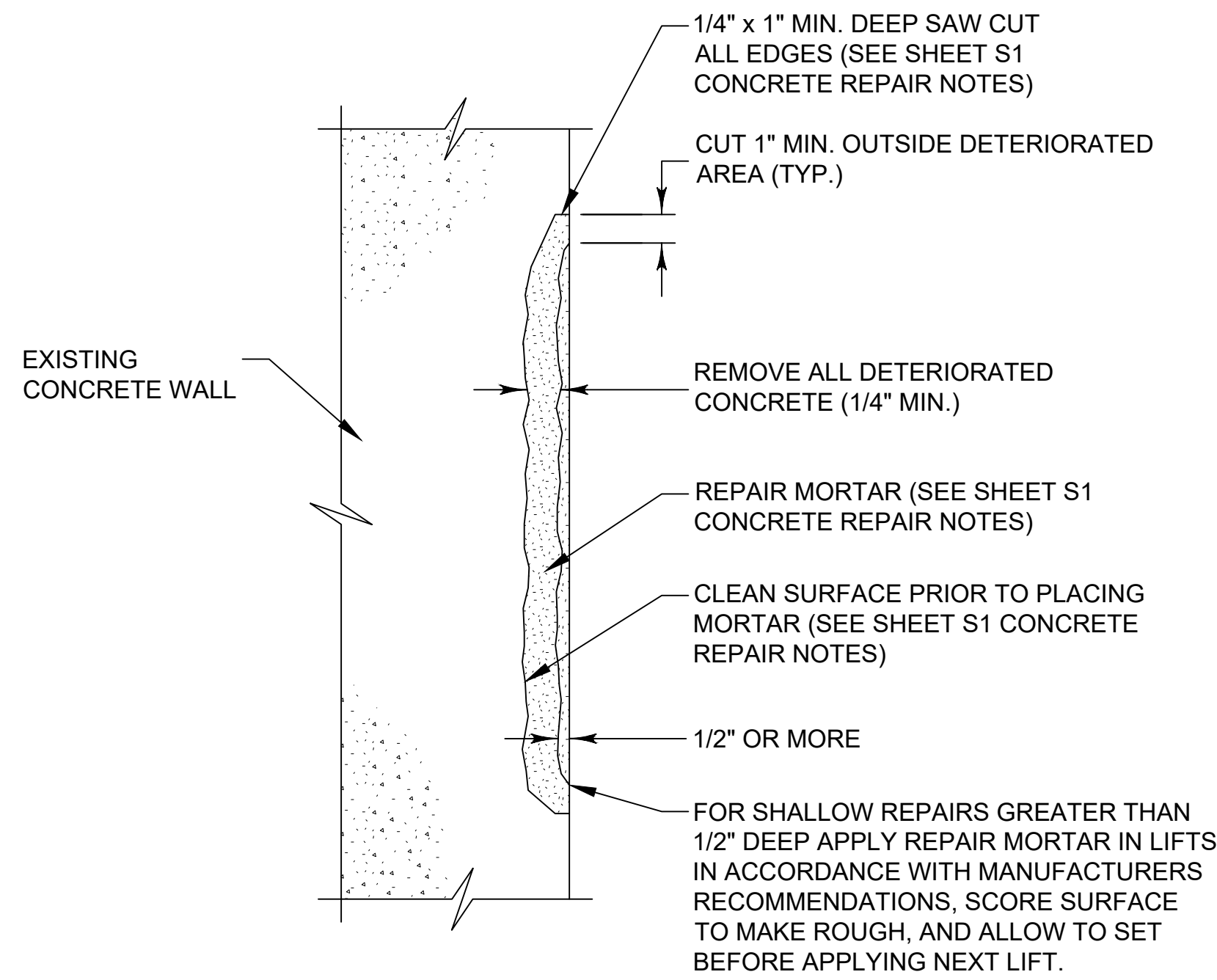

**ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT**
 P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G. DATE: FEBRUARY 19, 2024 REVIEWER: W.R.C.
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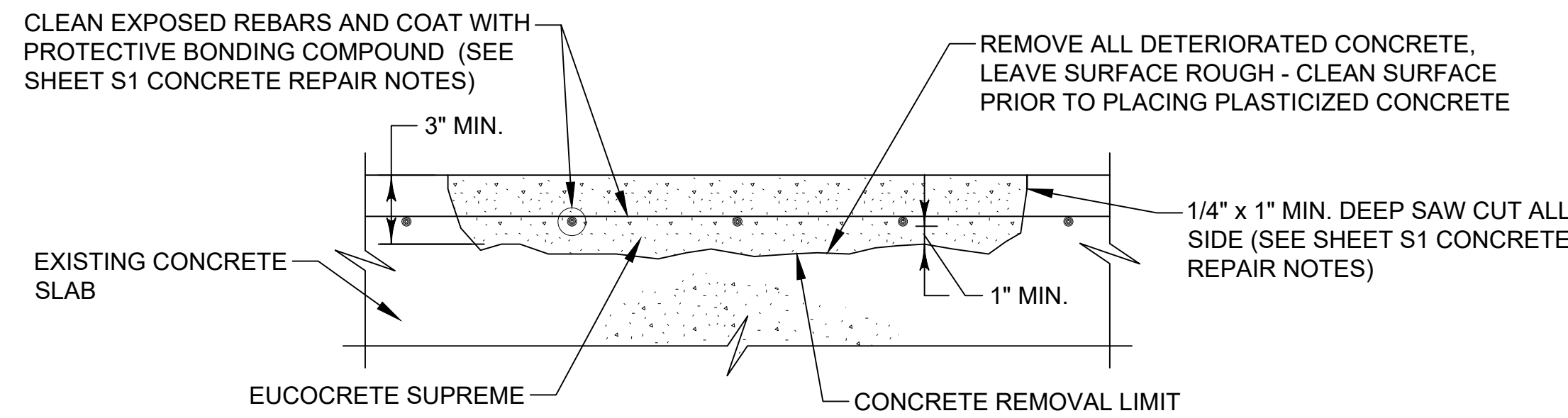
EXISTING LOCK CHAMBER AND OUTLET SECTIONS

CERTIFICATION:
 WILLIAM R. COTE
 P.E. NUMBER: 53746
 DATE: FEBRUARY 19, 2024

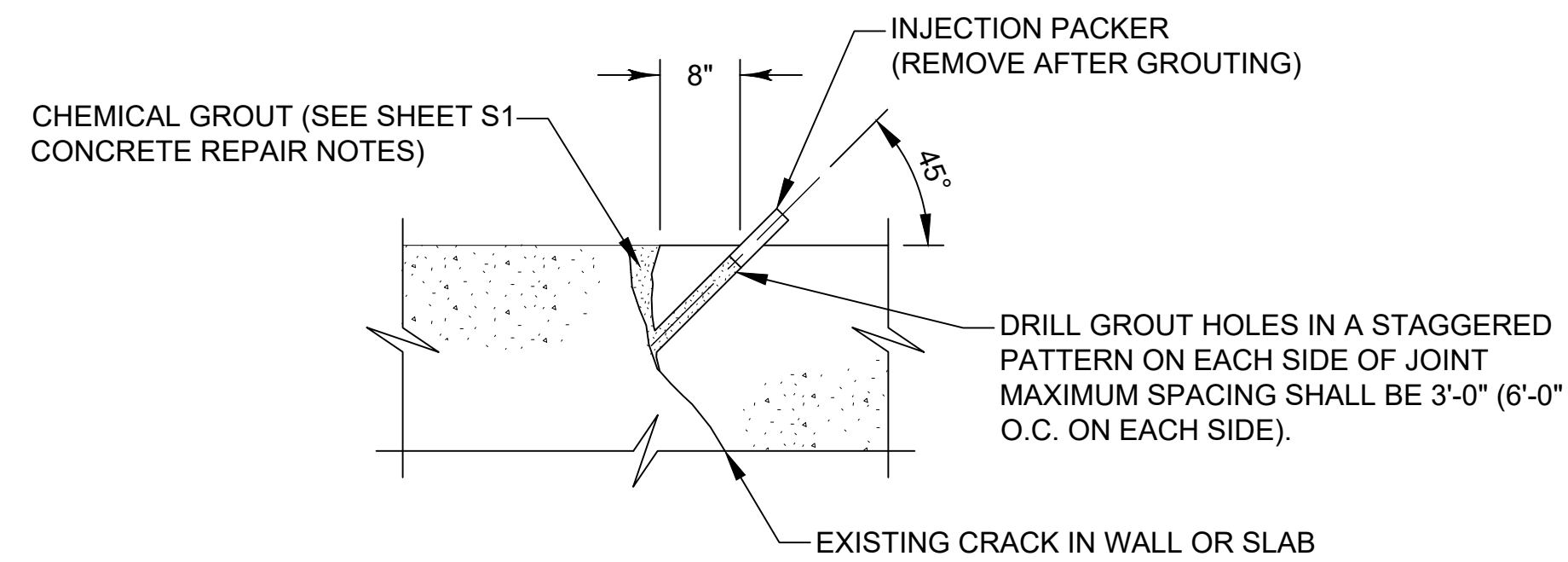
FILE NAME:
LOCK CR & OT SECT.dwg
 PROJECT NO.:
 SHEET:
S4



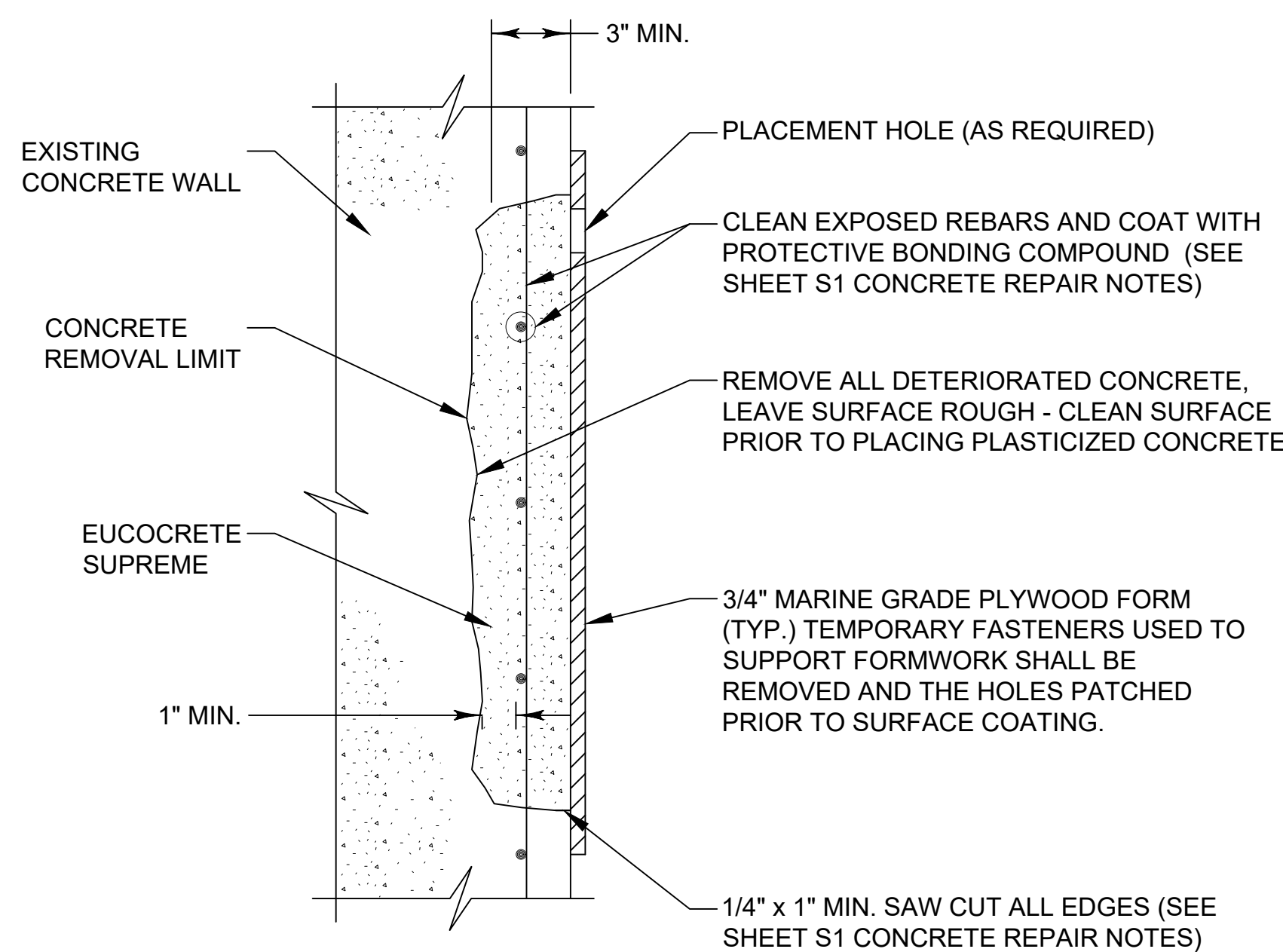
S5-1
SHALLOW MORTAR REPAIR FOR WALL / SLAB CONCRETE SURFACES
NOT TO SCALE



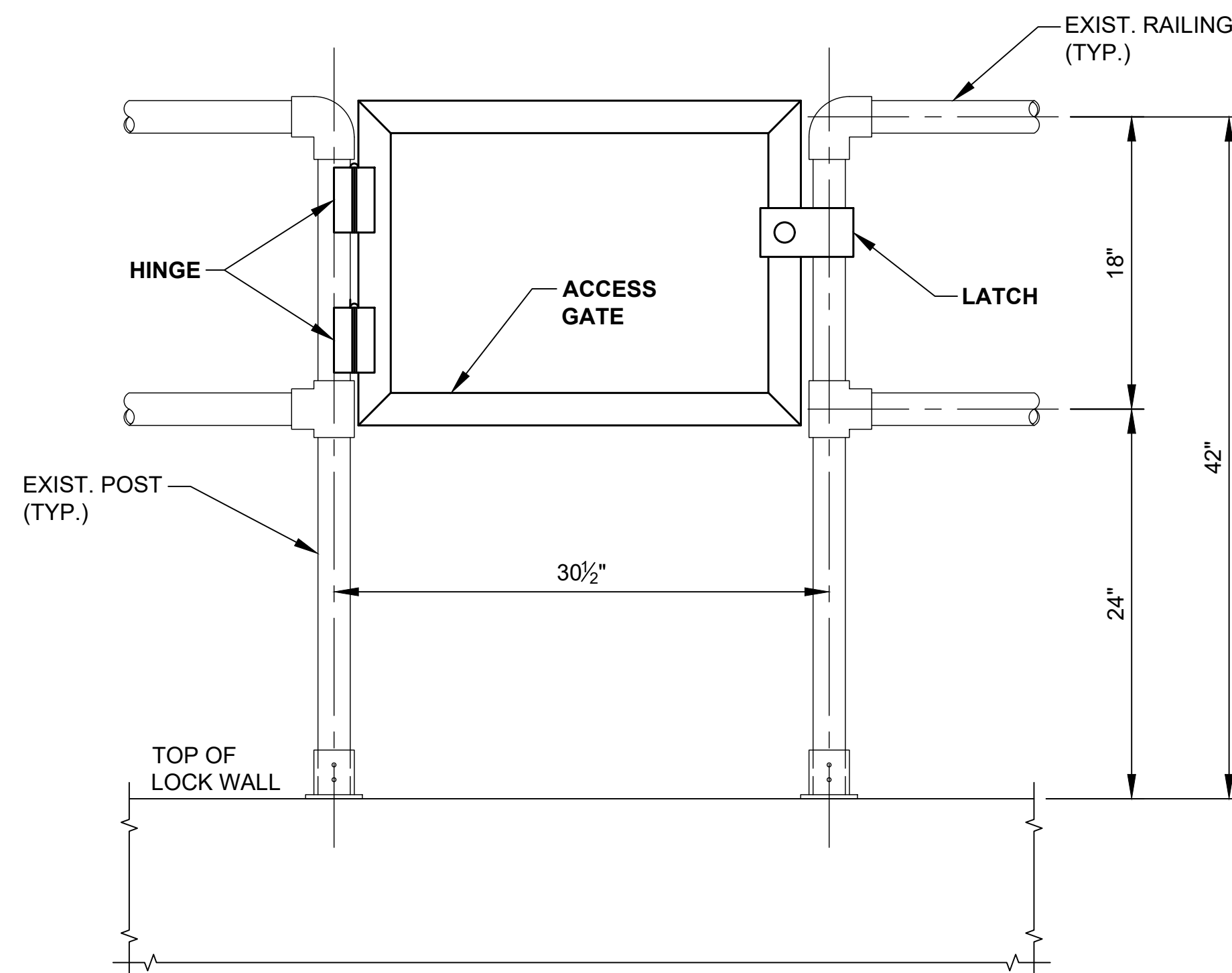
S5-3
DEEP CONCRETE REPAIR FOR SLABS
NOT TO SCALE



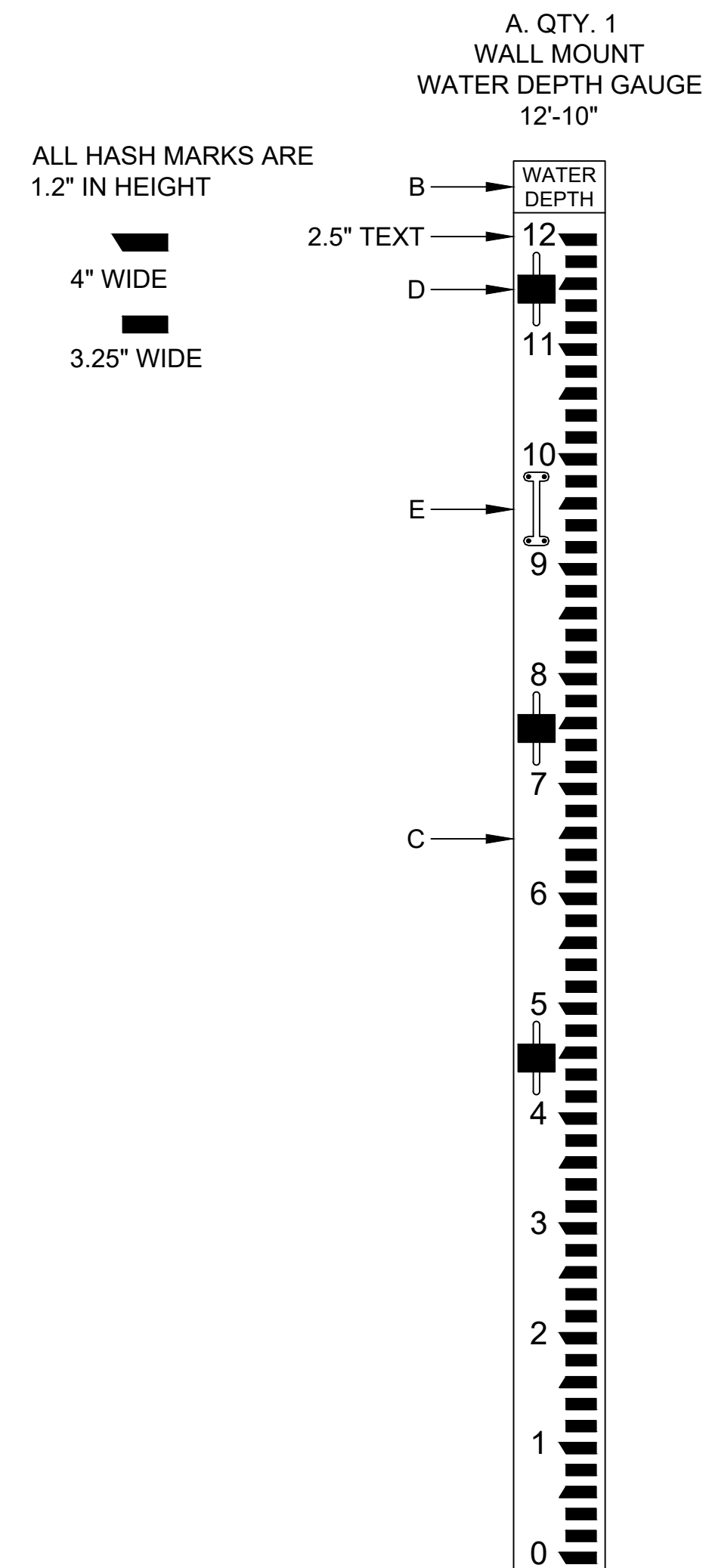
S5-4
CHEMICAL GROUTING DETAIL FOR CONCRETE CRACKS WITH FLOWING WATER
NOT TO SCALE



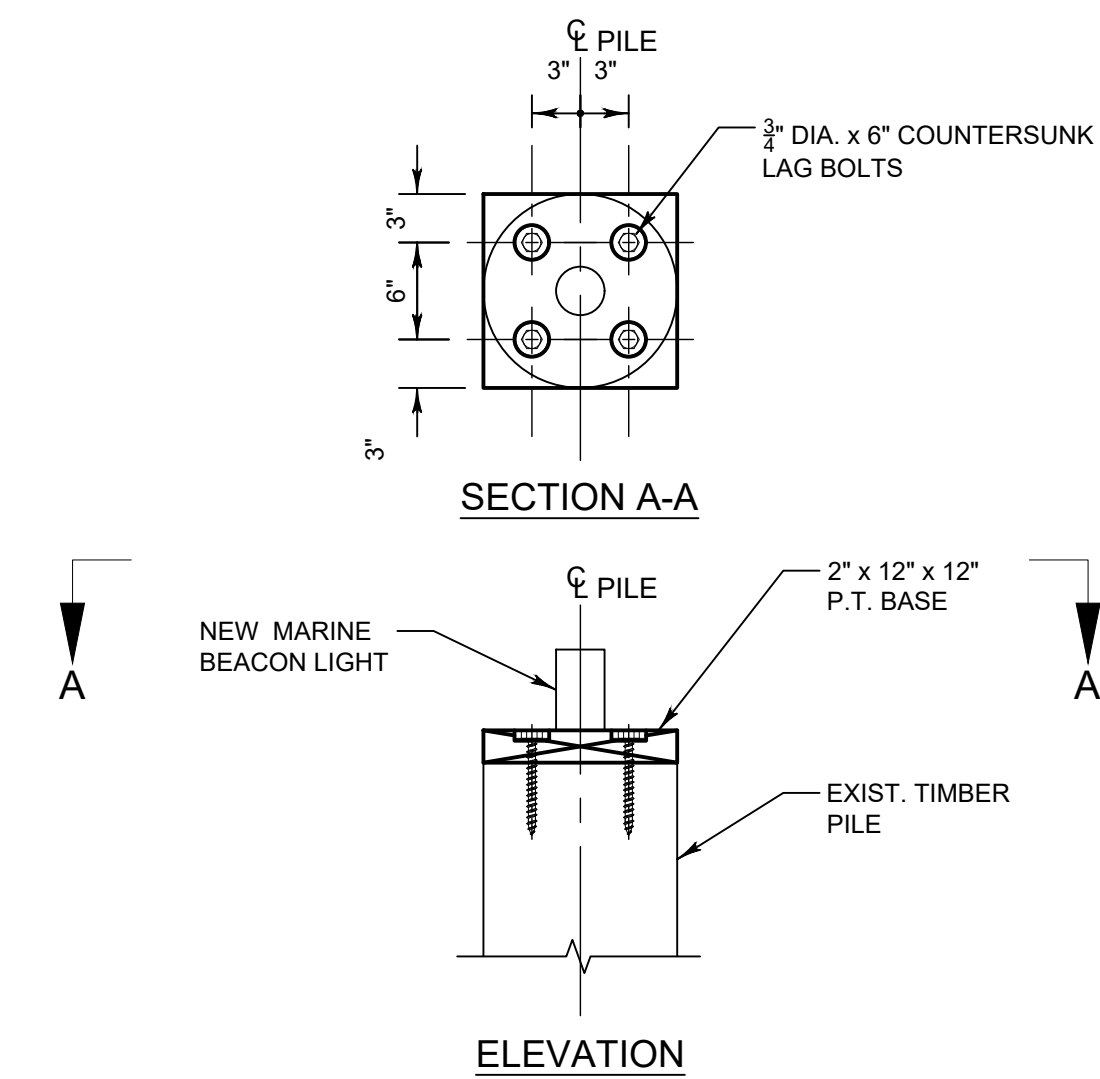
S5-2
DEEP CONCRETE REPAIR FOR WALLS
NOT TO SCALE



S5-5
ACCESS GATE DETAIL
SCALE: 1 1/2\"/>



S5-6
WATER DEPTH GAGE (1 REQ'D)
SCALE: 3/4\"/>



S5-7
BEACON LIGHT ATTACHMENT (4 REQ'D)
SCALE: 1\"/>

- CONCRETE:**
- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, SECTION 400 WITH SUPPLEMENTS AND ALL PERTINENT SPECIFICATIONS CONTAINED THEREIN.
 - ALL CONCRETE SHALL ATTAIN A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5,500 PSI. PORTLAND CEMENT SHALL BE TYPE II IN ACCORDANCE WITH ASTM C-150. CONCRETE SHALL BE AIR ENTRAINING WITH TOTAL AIR AS PERCENT BY VOLUME OF CONCRETE EQUAL TO 4%. THE AIR ENTRAINING ADMIXTURE SHALL BE MICRO AIR, AS MANUFACTURED BY MASTER BUILDERS, OR EQUAL, CONFORMING TO ASTM C-260. THE AGGREGATES SHALL CONFORM TO ASTM C-33 AND SHALL HAVE A 3/4-INCH MAXIMUM SIZE.
 - REINFORCING STEEL SHALL BE GRADE 60 DEFORMED BILLET STEEL BARS CONFORMING TO ASTM A-615.
 - THE MINIMUM CLEAR CONCRETE COVER FOR REINFORCEMENT SHALL BE 3 INCHES FOR FORMED SURFACES AND 4.5 INCHES FOR CONCRETE CAST AGAINST EARTH.
 - CRACKS WITH FLOWING WATER SHALL BE REPAIRED WITH CHEMICAL GROUT AS DETAILED PRIOR TO CONCRETE SURFACE REPAIR. CUT AND REMOVE EXCESS CHEMICAL GROUT PRIOR TO CONCRETE REPAIR. WHEN SEALING VERTICAL CRACKS, BEGIN AT THE BOTTOM AND WORK UP WHERE WATER FLOW IS PRESENT. BEGIN INJECTING CRACK AT THE POINT OF LEAST FLOW AND WORK TOWARDS AREA OF HEAVIEST FLOW. CHEMICAL GROUT SHALL BE HYDRO ACTIVE FLEX AS MANUFACTURED BY DENEFF CONSTRUCTION CHEMICALS, INC., OR APPROVED EQUAL.
- STAFF GAGE NOTES:**
- THERE ARE TWO STAFF GAGES AT BOTH THE UPSTREAM AND DOWNSTREAM LOCATIONS. ONLY THE LEFT-HAND STAFF GAGES SHALL BE REPLACED. THE RIGHT-HAND STAFF GAGES OWNED BY USGS SHALL REMAIN.
 - STAFF GAGES SHALL BE AS MANUFACTURED BY PERFORMANCE RESULTS PLUS INC. THE WEB ADDRESS IS PRPH2O.COM.
 - THE LEFT-HAND UPSTREAM STAFF GAGE SHALL CONSIST OF ITEMS NOS. 801-017, 801-018, AND 801-019. THE VERTICAL DATUM SHALL BE SET TO NAVD88.
 - THE LEFT-HAND DOWNSTREAM STAFF GAGE SHALL CONSIST OF ITEMS NOS. 801-016, 801-017, AND 801-018. THE VERTICAL DATUM SHALL BE SET TO NAVD88.
 - THE MOUNTING BOARDS SHALL BE REPLACED WITH 1\"/>

- WATER DEPTH GAGE NOTES:**
- MATERIALS KEY:**
- 2\"/>
 - TITLE PLAQUE INSERT: WHITE WITH RED LETTERING AS FOLLOWS: "WATER DEPTH."
 - GAGE SPLICE LINES (IF REQUIRED).
 - WALL MOUNTED GAGE: ALL SLOTS ARE 0.6875\"/>
 - 8\"/>
- HARDWARE:**
- ALL HARDWARE SHALL BE STAINLESS STEEL.

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UPPER OCKLAWAHA RIVER BASIN
BURRELL LOCK REHABILITATION
LAKE COUNTY, FLORIDA

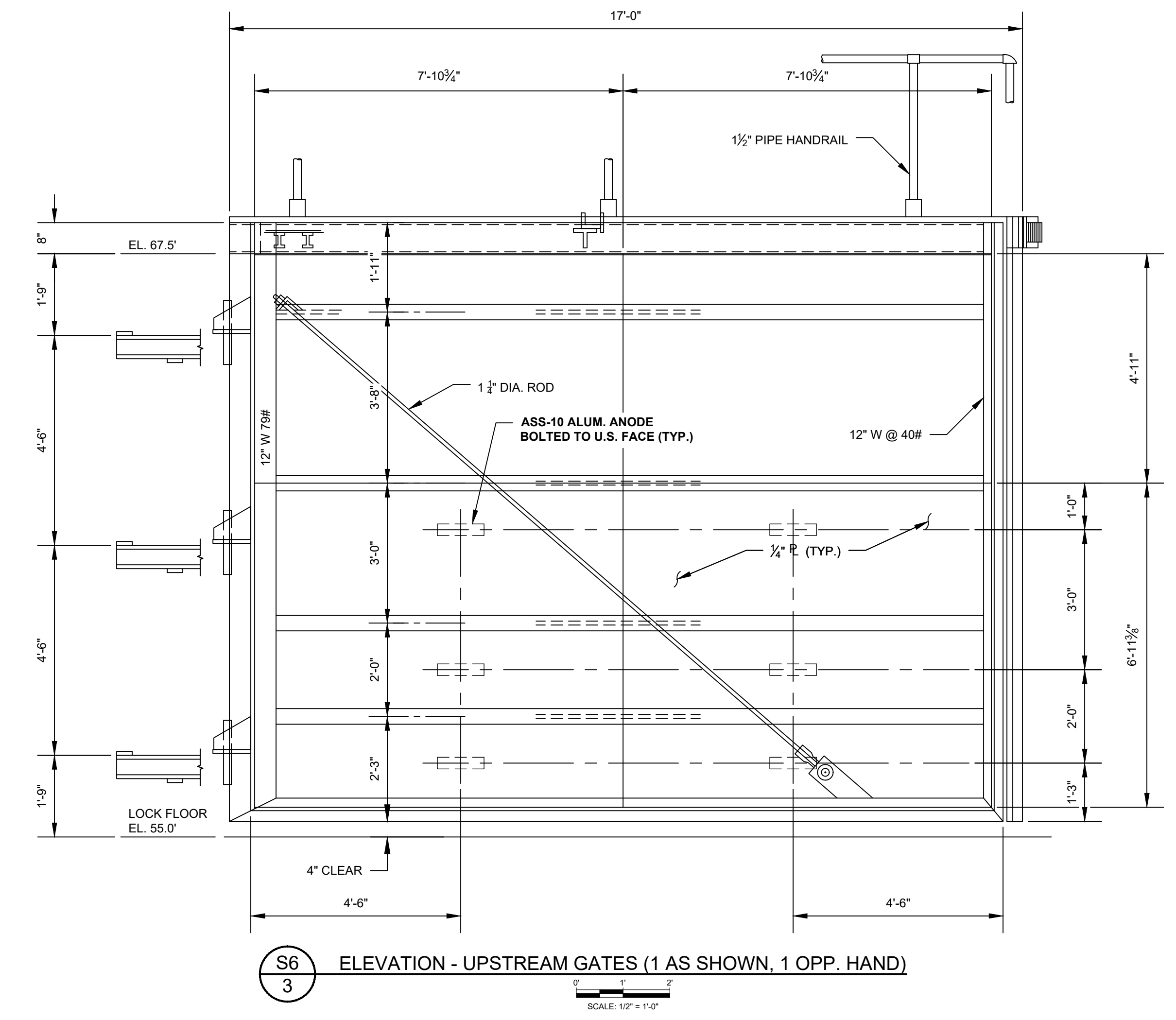
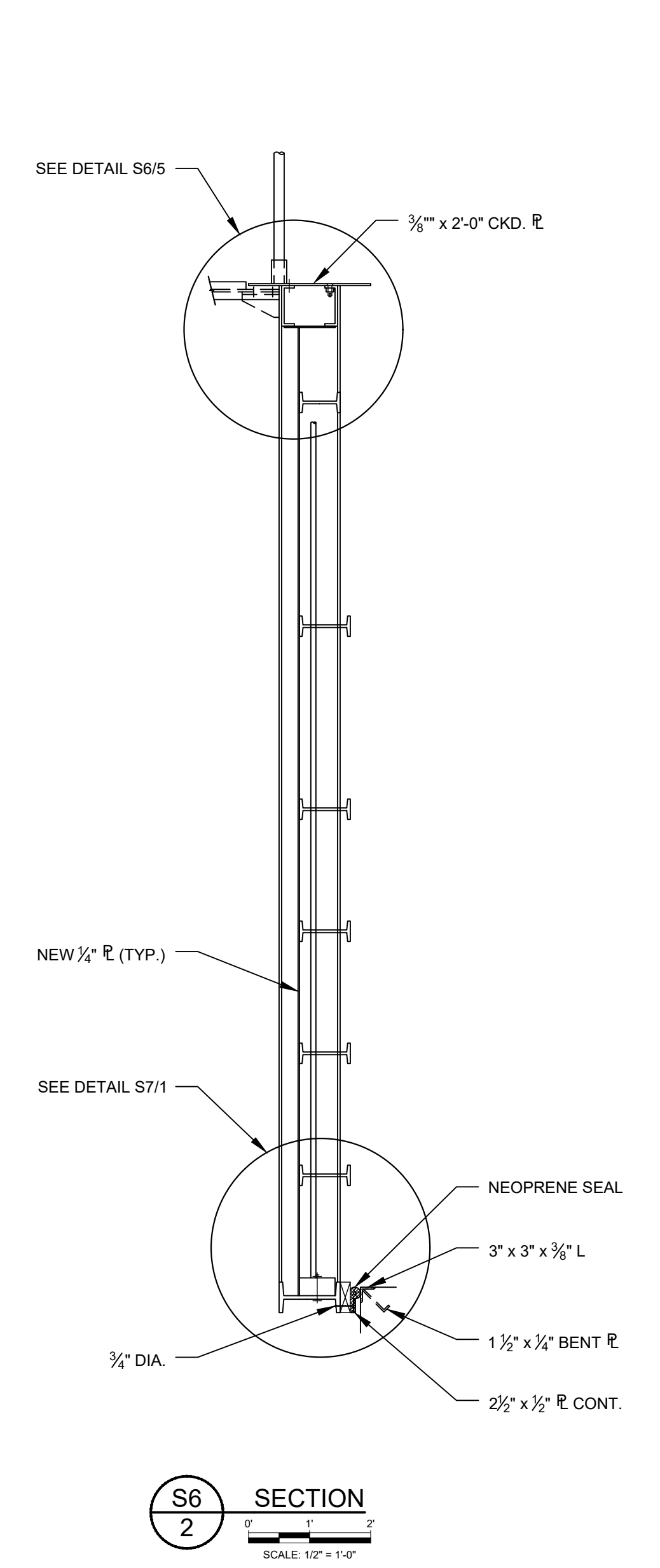
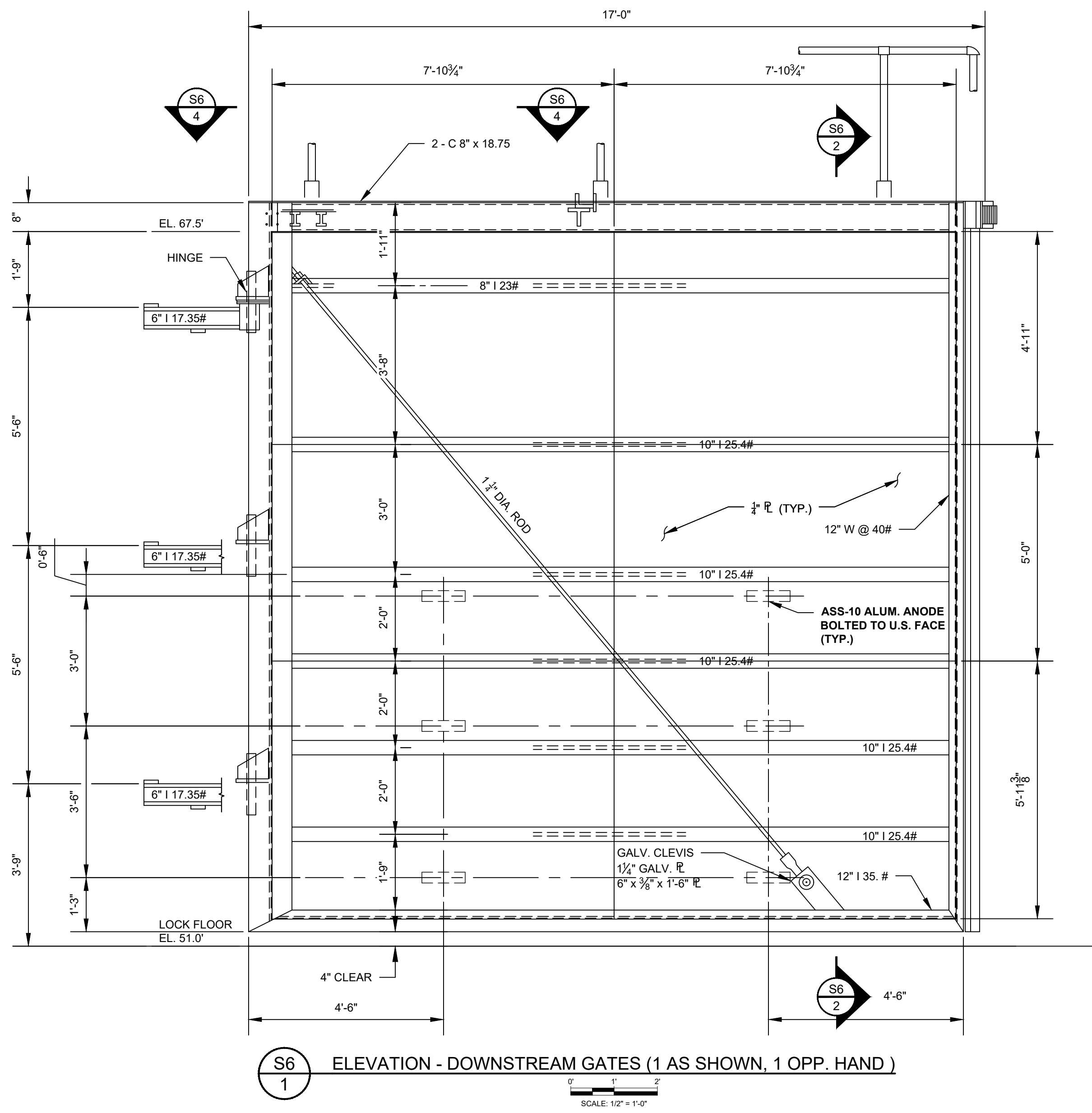
ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT
P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G. DATE: FEBRUARY 19, 2024 REVIEWER: W.R.C.
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MISCELLANEOUS DETAILS

CERTIFICATION:
WILLIAM R. COTE
P.E. NUMBER: 53746
DATE: FEBRUARY 19, 2024

FILE NAME: MISC DTLS.dwg
PROJECT NO.:
SHEET: S5



GATE REHABILITATION NOTES:

STRUCTURAL STEEL:

REFER TO NOTES ON SHEET S-1.

GATE OVERHAUL:

- INSTALL THE DEWATERING BULKHEADS AND PUMP WATER FROM THE LOCK.
- DISCONNECT POWER. PRESSURE WASH THE GATES TO REMOVE ALL ORGANIC GROWTH, LOOSE PARTICLES, AND OTHER EXTRANEEOUS MATERIALS.
- MARK ALL GATE COMPONENTS PRIOR TO REMOVAL FOR EASE OF REASSEMBLY.
- DEMO THE ELECTRIC GATE OPERATORS AND CONNECTION TO GATES.
- REMOVE GREASE LINES AND FITTINGS FROM THE GATE AND DISPOSE.
- REMOVE GATE HANDRAILS AND STORE FOR REINSTALLATION LATER.
- REMOVE THE GATES FROM THE STRUCTURE. IF GATES ARE BLASTED AND PAINTED ONSITE, CONTRACTOR SHALL PROVIDE AN APPROPRIATE CONTAINMENT ENCLOSURE TO CAPTURE BLAST MATERIAL AND PROTECT THE GATES FROM WEATHER.
- REMOVE ALL BOLTS, RETAINING PLATES, AND SEALS FROM THE GATES.

HINGES:

- INSPECT THE GATE HINGE PINS AND REPLACE IF NEEDED.
- REPLACE THE BRONZE BUSHINGS IF ALLOWABLE CLEARANCE OF 1/32 INCH IS EXCEEDED.
- ALIGNMENT OF GATES SHALL BE CHECKED USING A 1-1/2 INCH ROUND BAR THREADED THROUGH ALL THREE HINGE BRONZE BUSHINGS. REPAIR AS NEEDED.
- THE HINGE STEEL SUPPORTS SHALL BE INSPECTED AND REPAIRED IF NEEDED, BLASTED, AND PAINTED.

10. INSPECT ALL GATE COMPONENTS TO ENSURE THEY ARE CLEAN OF DEBRIS AND GREASE.

11. THE ESTIMATED WEIGHT OF THE GATES ARE 11,700# EACH FOR THE UPSTREAM GATES AND 14,700# EACH FOR THE DOWNSTREAM GATES. MARK THE ACTUAL WEIGHT OF THE GATES ON THE TOP CHANNEL USING A FILLET WELD.

12. ALL STEEL COMPONENTS (EXCEPT FOR STAINLESS STEEL ITEMS) SHALL BE BLASTED AND PAINTED. ITEMS TO BE PAINTED SHALL INCLUDE THE GATES, HINGE SUPPORTS, AND SEAL RETAINING PLATES.

13. INSPECT ALL WOOD COMPONENTS AND REPLACE AS NEEDED. ALL REPLACEMENT LUMBER SHALL MATCH THE EXISTING SIZES AND SHALL BE MARINE GRADE DENSE SELECT STRUCTURAL SOUTHERN PINE. PRESERVATIVE TREATMENT SHALL BE COPPER AZOLE TYPE B (CA-B) OR APPROVED EQUAL. RETENTION ASSAY OF TREATED WOOD SHALL BE 0.31 PCF. ALL END CUTS, NOTCHES, AND DRILLED HOLES SHALL BE FIELD TREATED WITH COPPER NAPHTHENATE, OR APPROVED EQUAL, IN ACCORDANCE WITH AWPA M4.

14. REASSEMBLE THE GATES, INCLUDING THE SEALS AND RETAINING PLATES WITH ALL NEW HARDWARE. BOLTS AND WASHERS SHALL BE SS-304 STAINLESS STEEL. ALL NUTS SHALL BE SILICON BRONZE CONFORMING TO ASTM F467.

15. PROVIDE AND INSTALL CATHODIC PROTECTION ANODES AT THE LOCATIONS SHOWN. ANODES SHALL BE ASS-10 CONFORMING TO MIL SPEC A-24779. THE ANODE MOUNTING STRAP SHALL HAVE 5/8" DRILLED HOLES AND SHALL BE BOLTED TO THE UPSTREAM FACE OF THE GATE WITH 1/2" DIAMETER SS-304 BOLTS. THE CONTACT SURFACES BETWEEN THE GATE AND THE ANODES SHALL BE BARE METAL. THE ANODES SHALL NOT BE PAINTED.

16. REINSTALL THE COMPLETED GATES AND HANDRAILS. INSTALL NEW GREASE LINES AND FITTINGS.

17. INSTALL THE NEW HYDRAULIC OPERATOR SYSTEMS. RECONNECT POWER.

18. PERFORM DRY TEST OPERATION OF GATES. ADJUST AS NEEDED.

19. REMOVE DEWATERING BULKHEADS AND STEEL SUPPORTS.

20. TEST OPERATION OF GATES UNDER NORMAL OPERATING CONDITIONS. LEAKAGE SHALL NOT EXCEED 0.1 GPM/FT OF WETTED PERIMETER. ADJUST AS NEEDED.

PAINTS AND PROTECTIVE COATINGS:

- ALL STEEL SHALL BE PRIMED AND PAINTED IN ACCORDANCE WITH THE STEEL STRUCTURES PAINTING COUNCIL (SSPC) "STEEL STRUCTURES PAINTING MANUAL".

2. STEEL SURFACE PREPARATION SHALL BE AS FOLLOWS:

SSPC-10 NEAR WHITE BLAST CLEANING. ALL BLAST MEDIA AND PAINT CHIPS SHALL BE CAPTURED, REMOVED, AND PROPERLY DISPOSED.

3. PAINT SHALL BE BY THE WASSER CORPORATION, OR EQUAL, AS FOLLOWS:

FIRST COAT:	MC-ZINC 100 GRAY	3-5 MILS DFT MINIMUM
SECOND COAT:	MC-TAR 100 RED	5-7 MILS DFT MINIMUM
THIRD COAT:	MC-TAR 100 BLACK	5-7 MILS DFT MINIMUM
FOURTH COAT:	MC-LUSTER 100 SILVER	2-4 MILS DFT MINIMUM

SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH THE PAINT MANUFACTURER SPECIFICATIONS.

RUBBER SEALS:


- THE J-SEALS SHALL BE REPLACED WITH SOLID BULB TYPE J-SEAL SIZED TO MATCH EXISTING, AS MANUFACTURED BY SEALS UNLIMITED, INC., OR EQUAL. DRILL HOLES TO CONFORM WITH THE SIZE AND SPACING ON THE GATE.
- REPLACE ALL SEAL FASTENERS. BOLTS AND WASHERS SHALL CONFORM TO ASTM A276, TYPE SS-304 AND SILICON BRONZE NUTS SHALL CONFORM TO ASTM F467.
- THE JOINT BETWEEN THE SIDE AND BOTTOM J-SEALS SHALL BE FUSED IN ACCORDANCE WITH THE MANUFACTURER SPECIFICATIONS.

**FOR BID PURPOSES ONLY
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L:\projects\2024\BURRELL LOCK REHABILITATION\DRAWINGS\REVISED\LOCK GATES AND NOTES.dwg

ISSUED FOR BID	N.J.G.	02/19/24	W.R.C.	02/19/24
NO.	REVISION	BY	DATE	APPROVED DATE

UPPER OCKLAWAHA RIVER BASIN
BURRELL LOCK REHABILITATION
LAKE COUNTY, FLORIDA



ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT
P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G.	DATE: FEBRUARY 19, 2024	REVIEWER: W.R.C.
SCALE: AS NOTED	DESIGNER: W.R.C.	SECTION CHIEF: W.R.C.

LOCK GATES AND NOTES

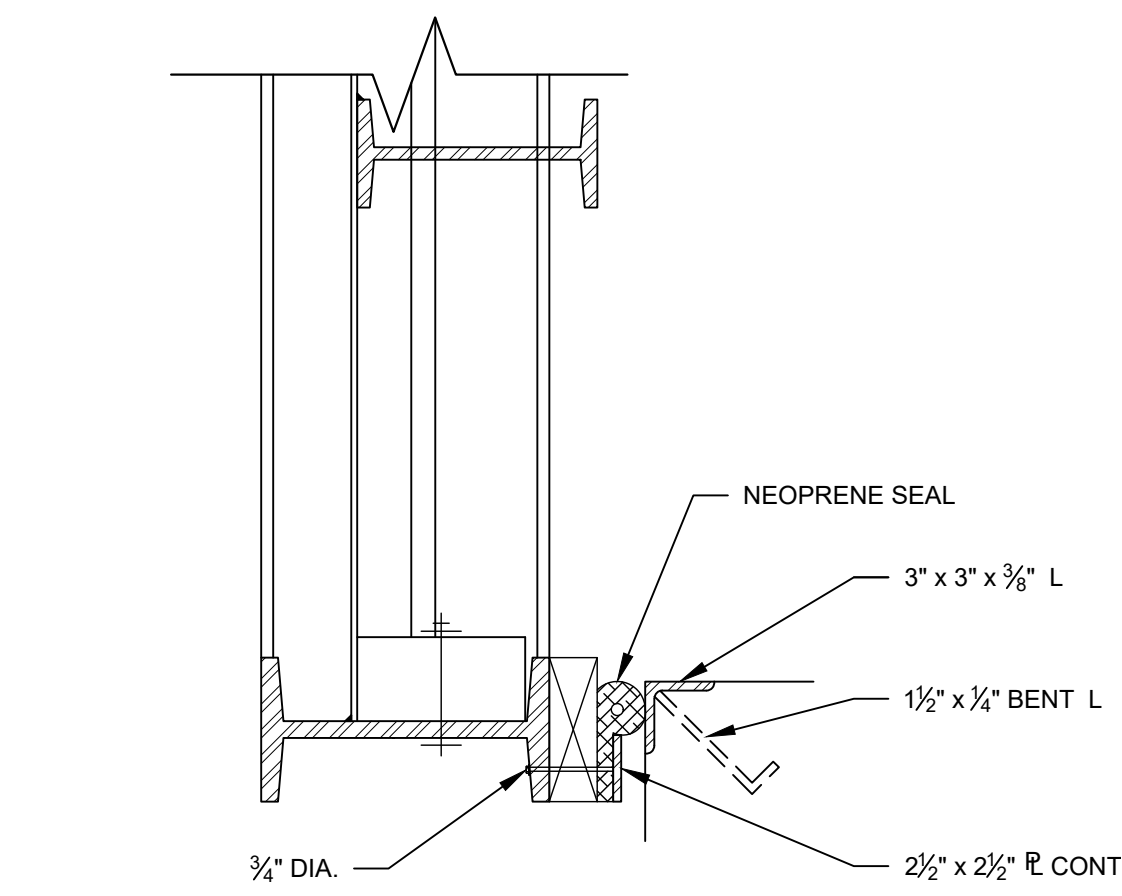
CERTIFICATION:

WILLIAM R. COTE
P.E. NUMBER: 53746
DATE: FEBRUARY 19, 2024

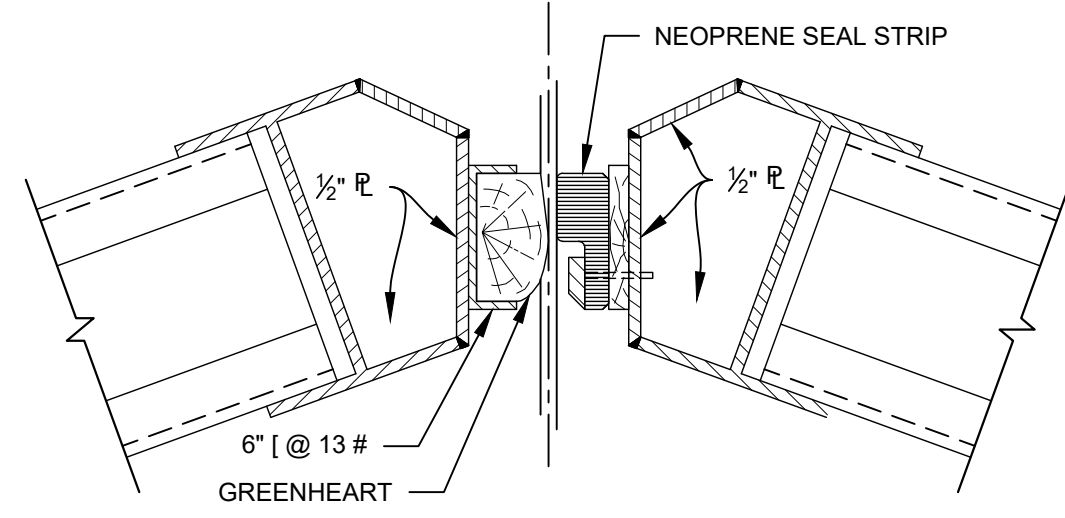
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LOCK GATE AND NOTES.dwg

PROJECT NO.:

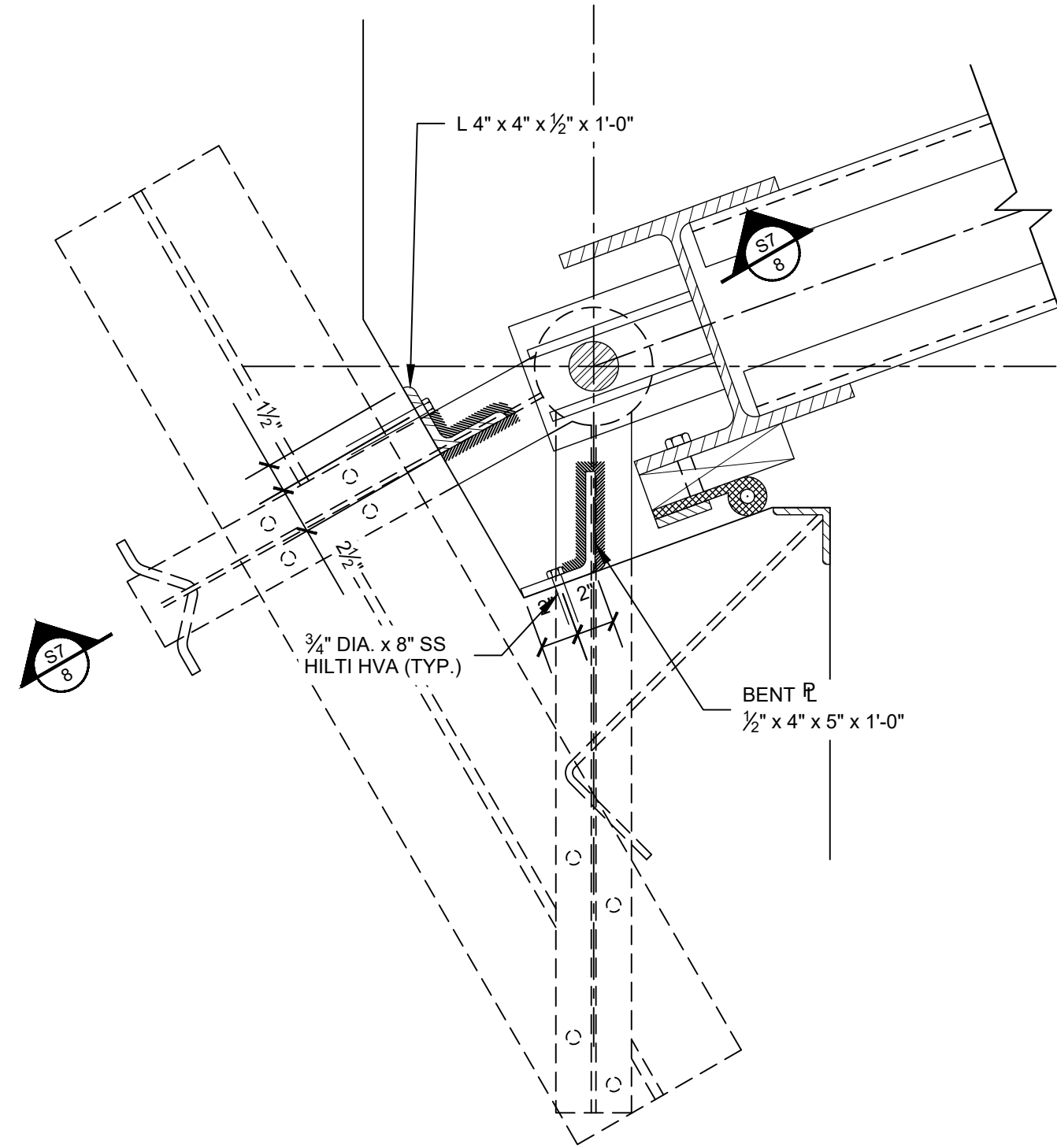
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S6



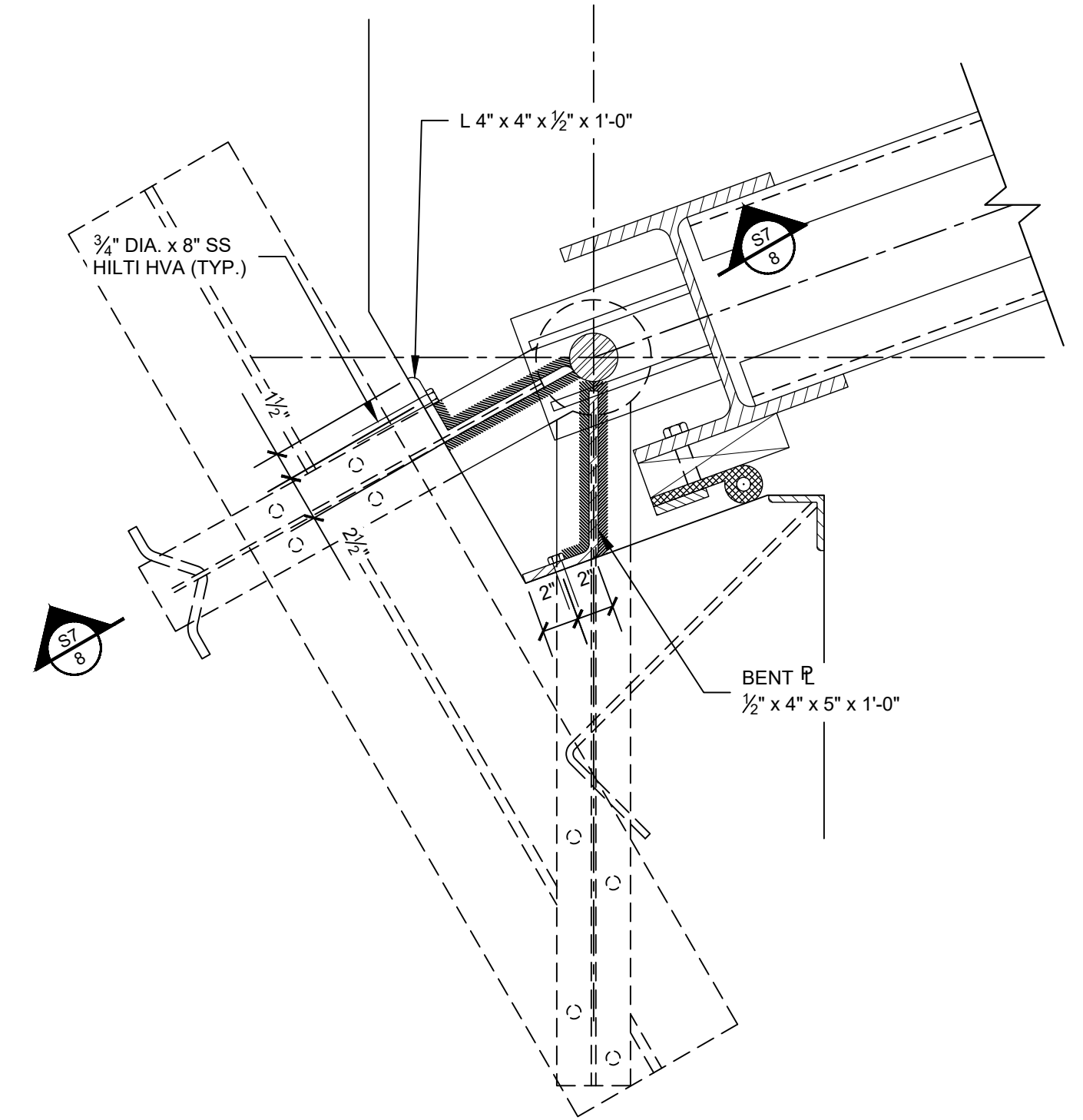
S7 1
BOTTOM SEAL DETAIL
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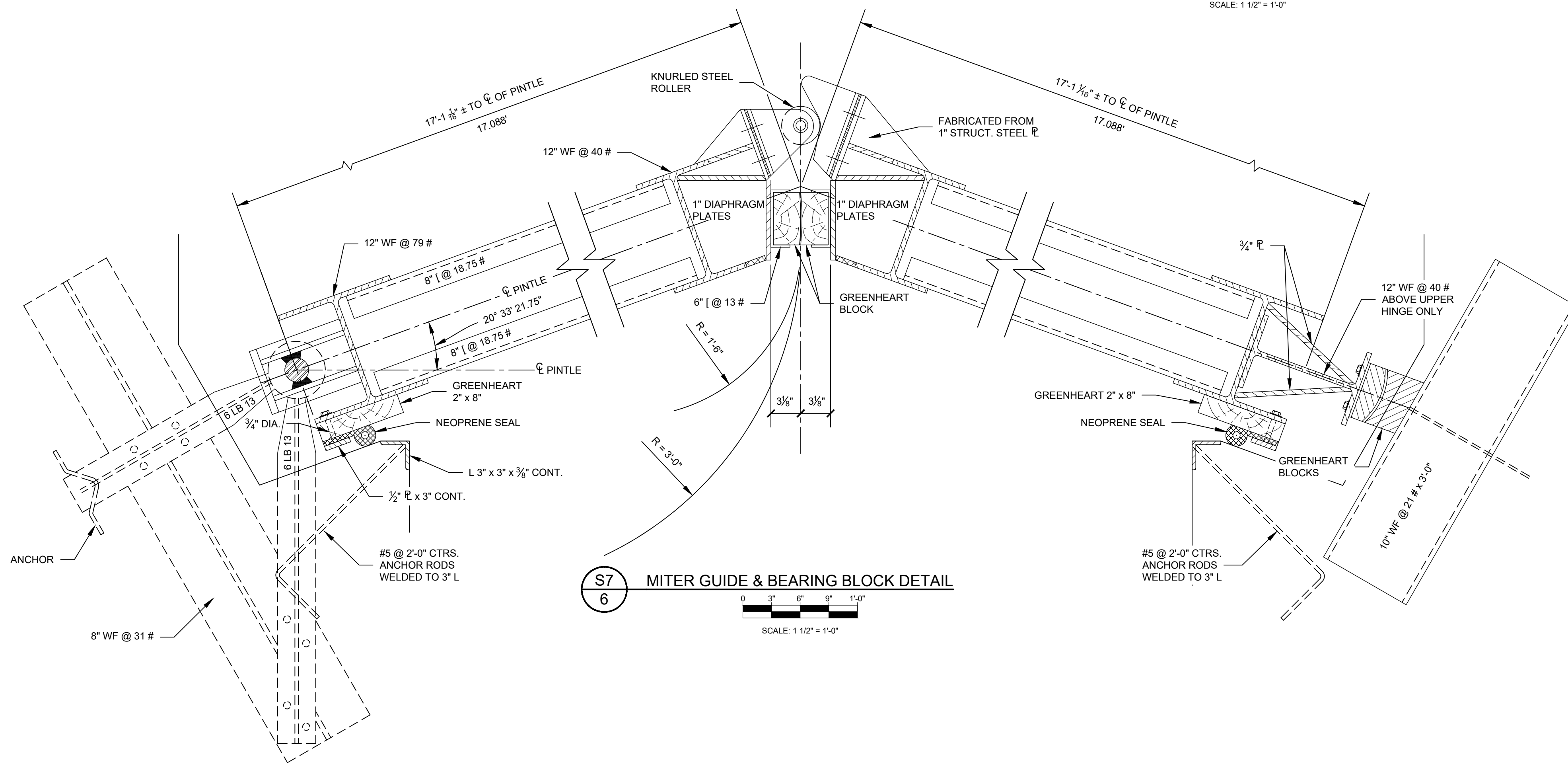
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MITER SEAL DETAIL
 SCALE: 1 1/2" = 1'-0"



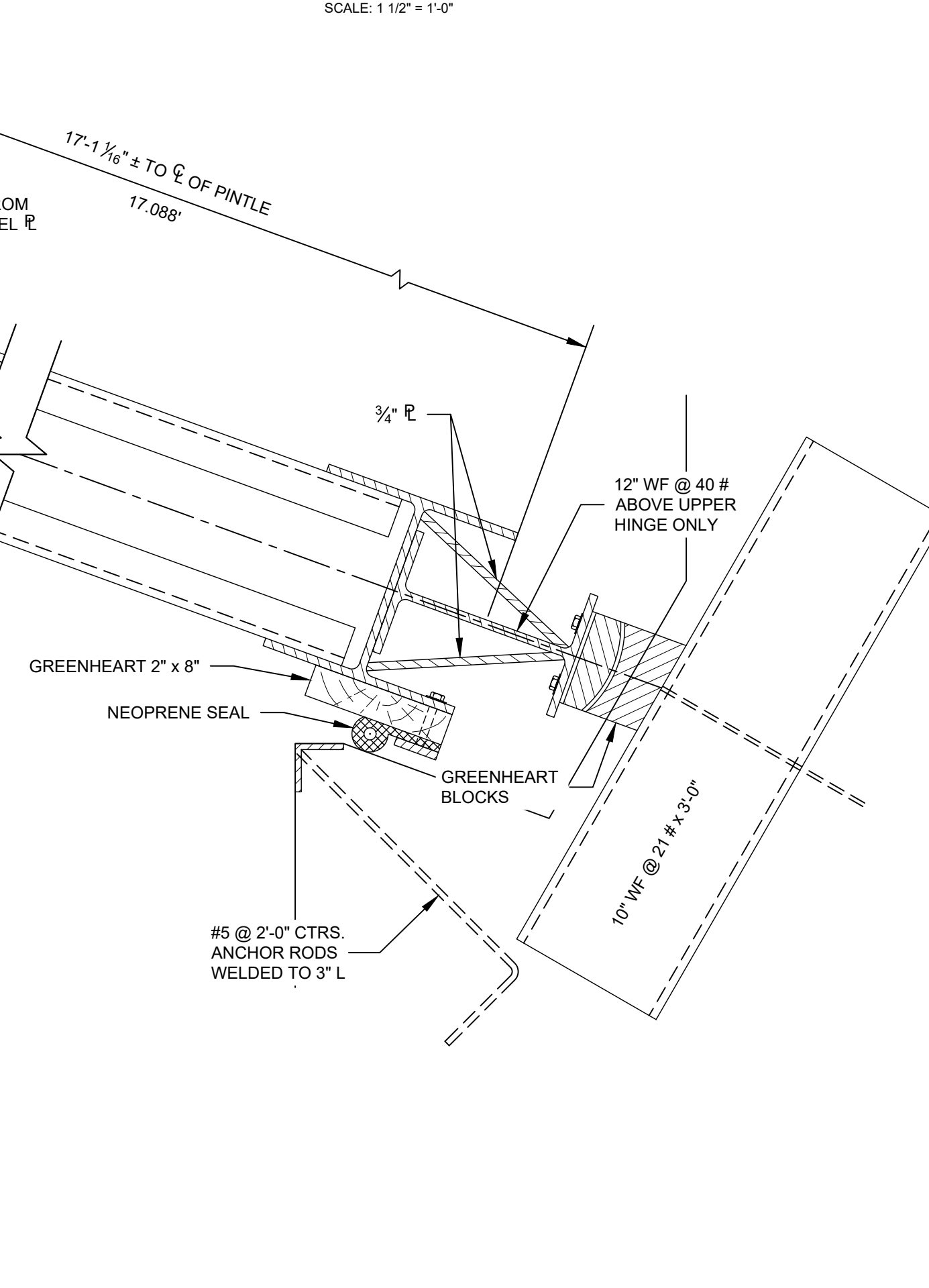
S7 3
TOP HINGE BRACKET DETAIL
 SCALE: 1 1/2" = 1'-0"



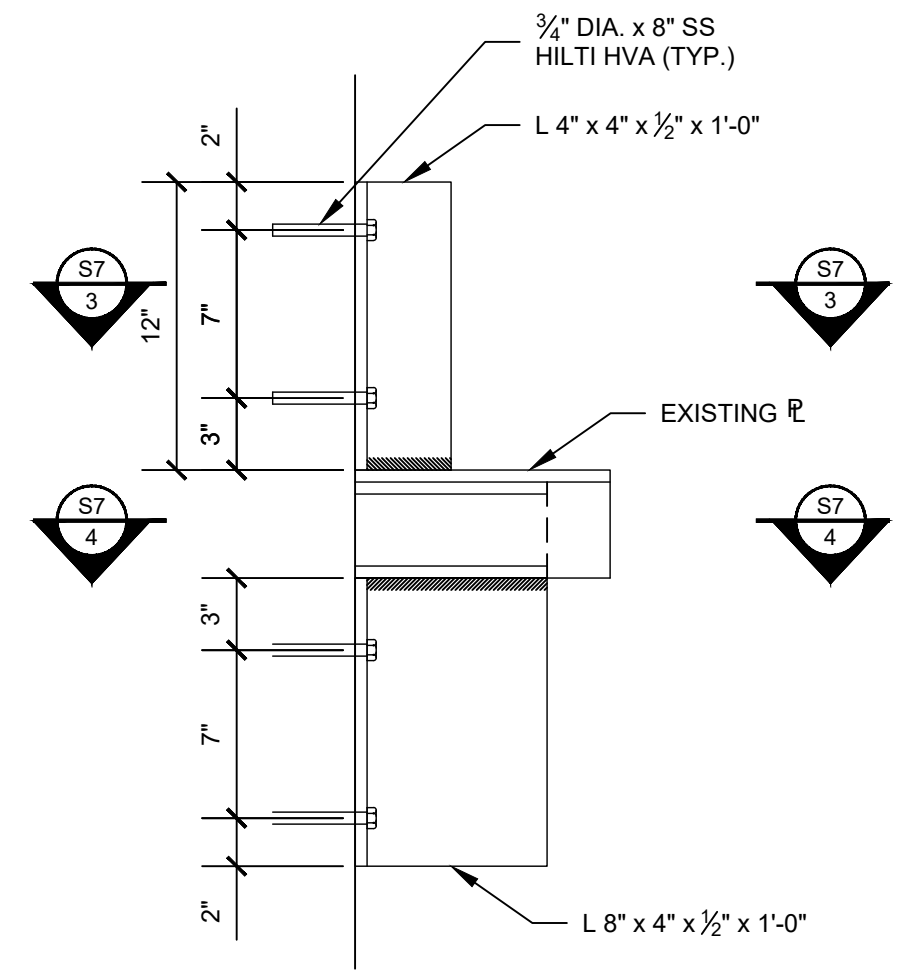
S7 4
BOTTOM HINGE BRACKET DETAIL
 SCALE: 1 1/2" = 1'-0"



S7 6
MITER GUIDE & BEARING BLOCK DETAIL
 SCALE: 1 1/2" = 1'-0"



S7 7
QUIN GIRDER, SEAL & CONTACT BLOCK DETAIL
 SCALE: 1 1/2" = 1'-0"



S7 8
SECTION
 SCALE: 1 1/2" = 1'-0"

S7 5
HINGE DETAIL
 SCALE: 1 1/2" = 1'-0"

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UPPER OCKLAWAHA RIVER BASIN
 BURRELL LOCK REHABILITATION
 LAKE COUNTY, FLORIDA

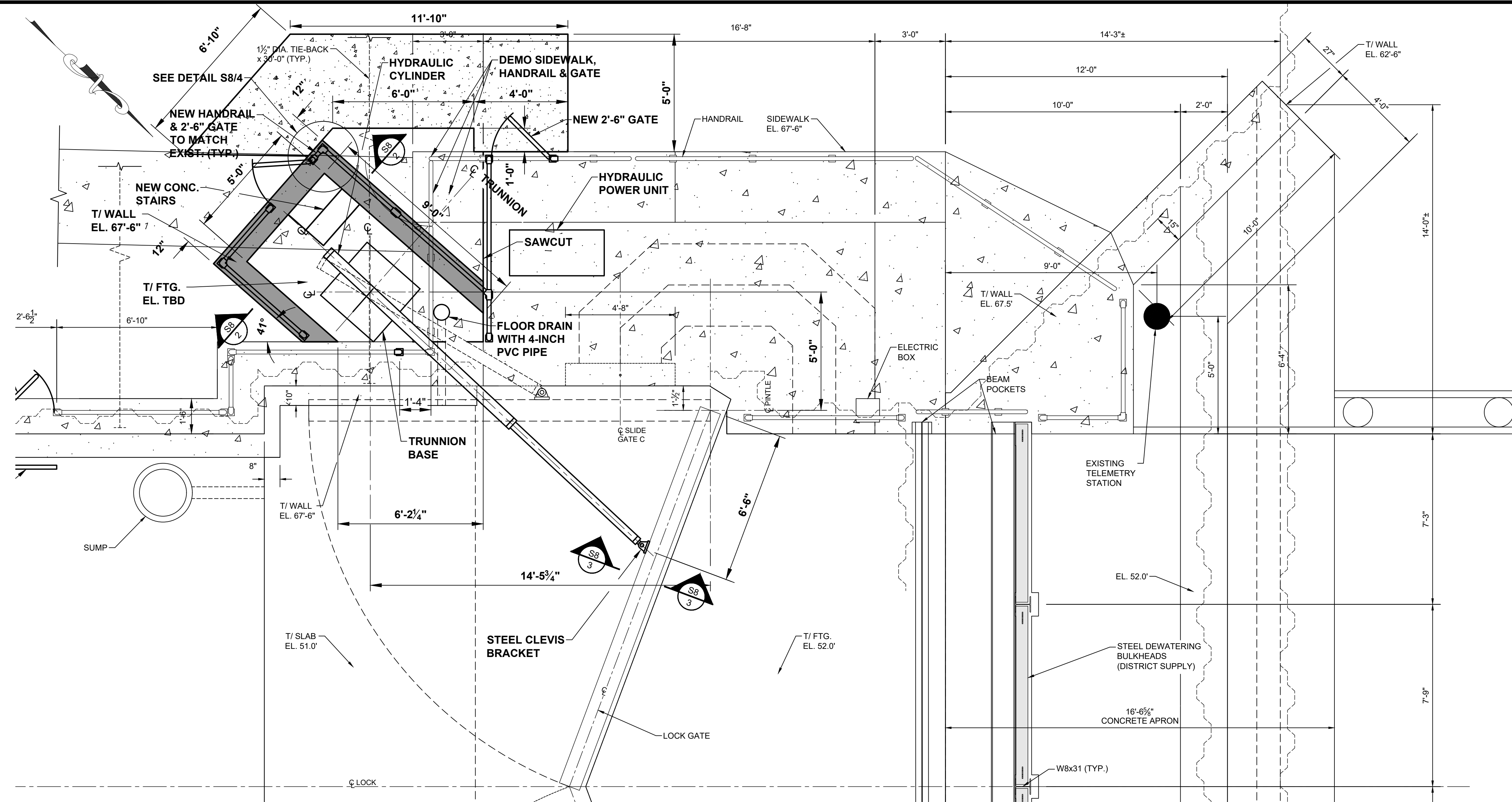
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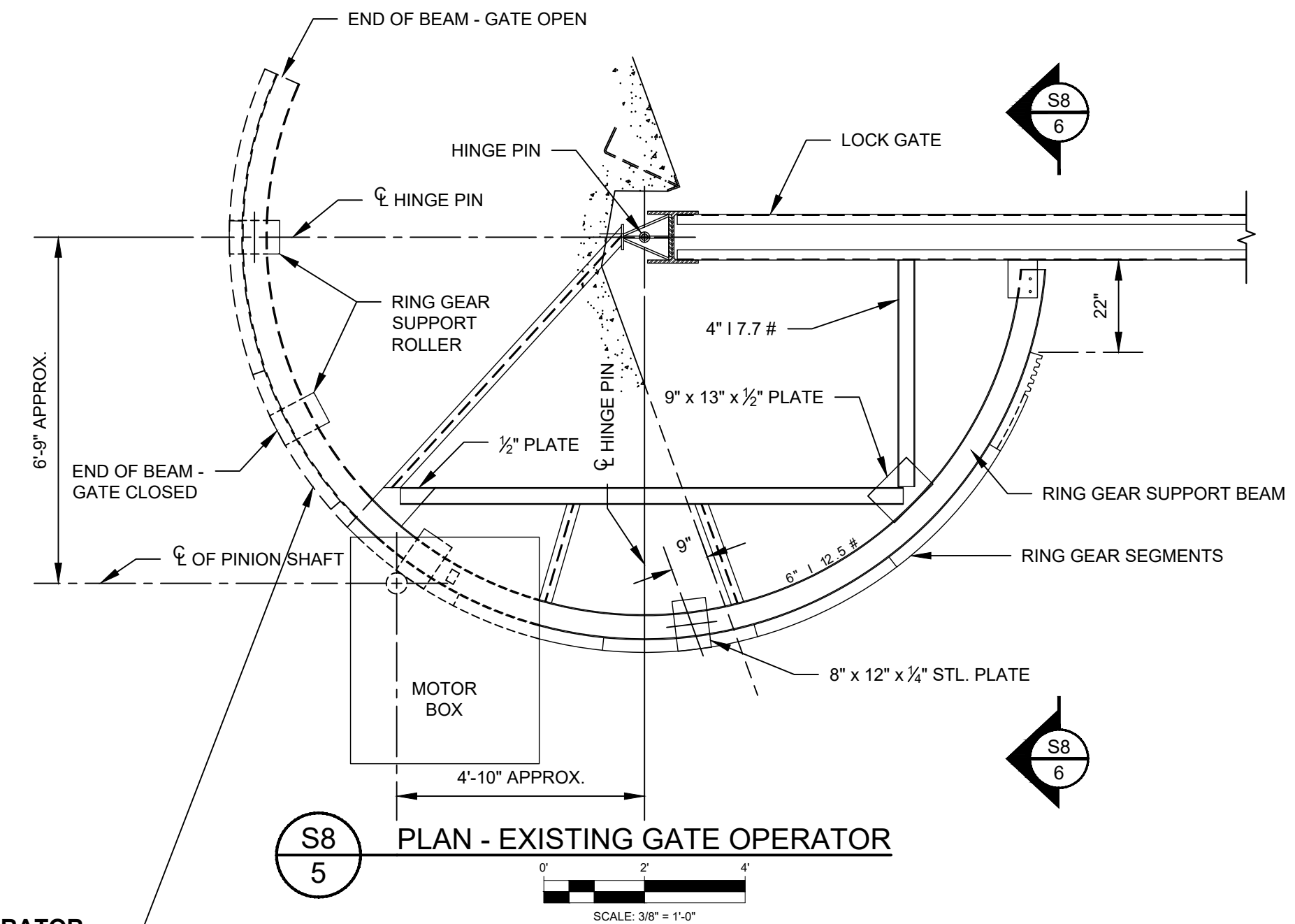
LOCK GATE DETAILS

CERTIFICATION:
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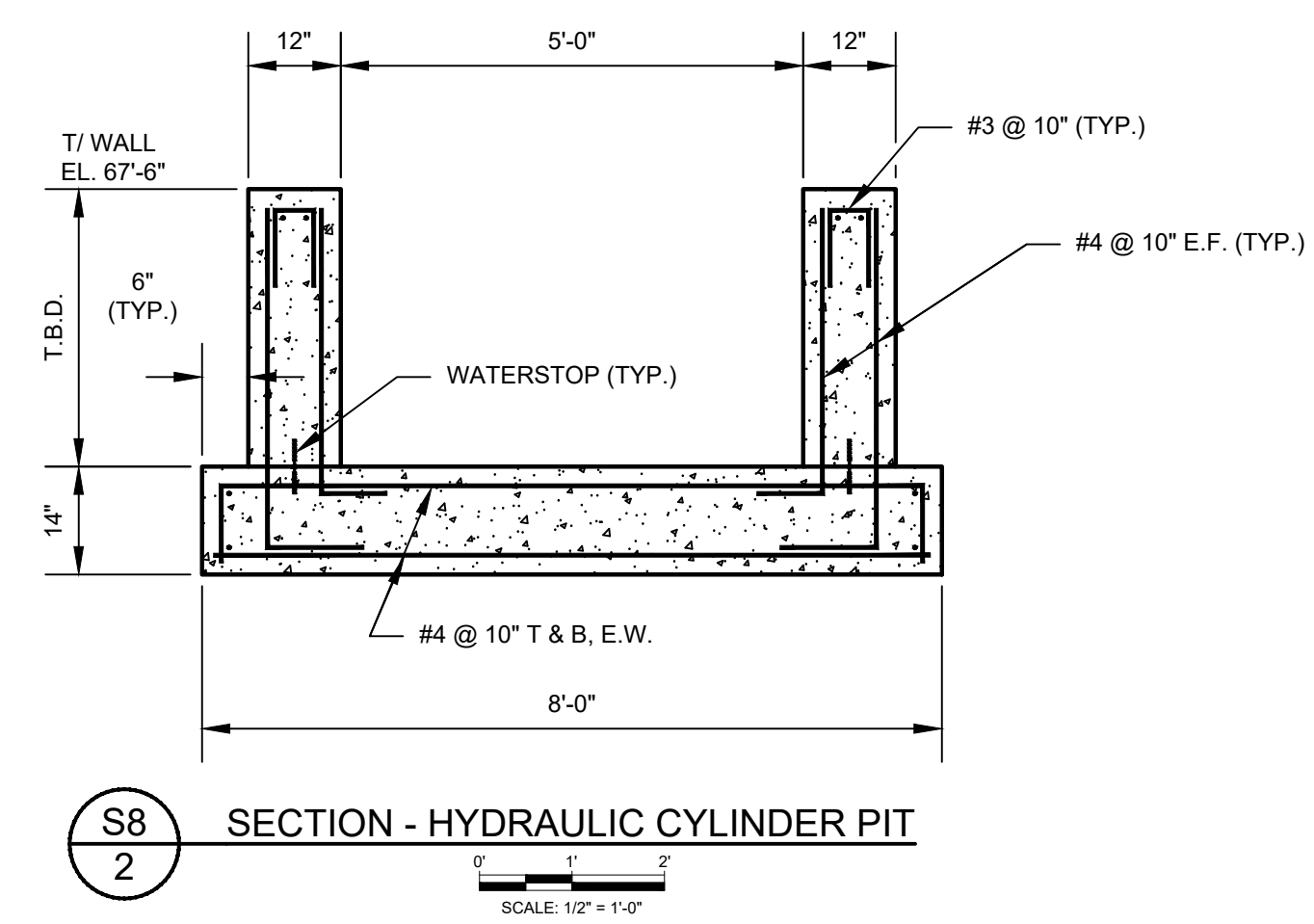
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 PROJECT NO.:
 SHEET:
S7



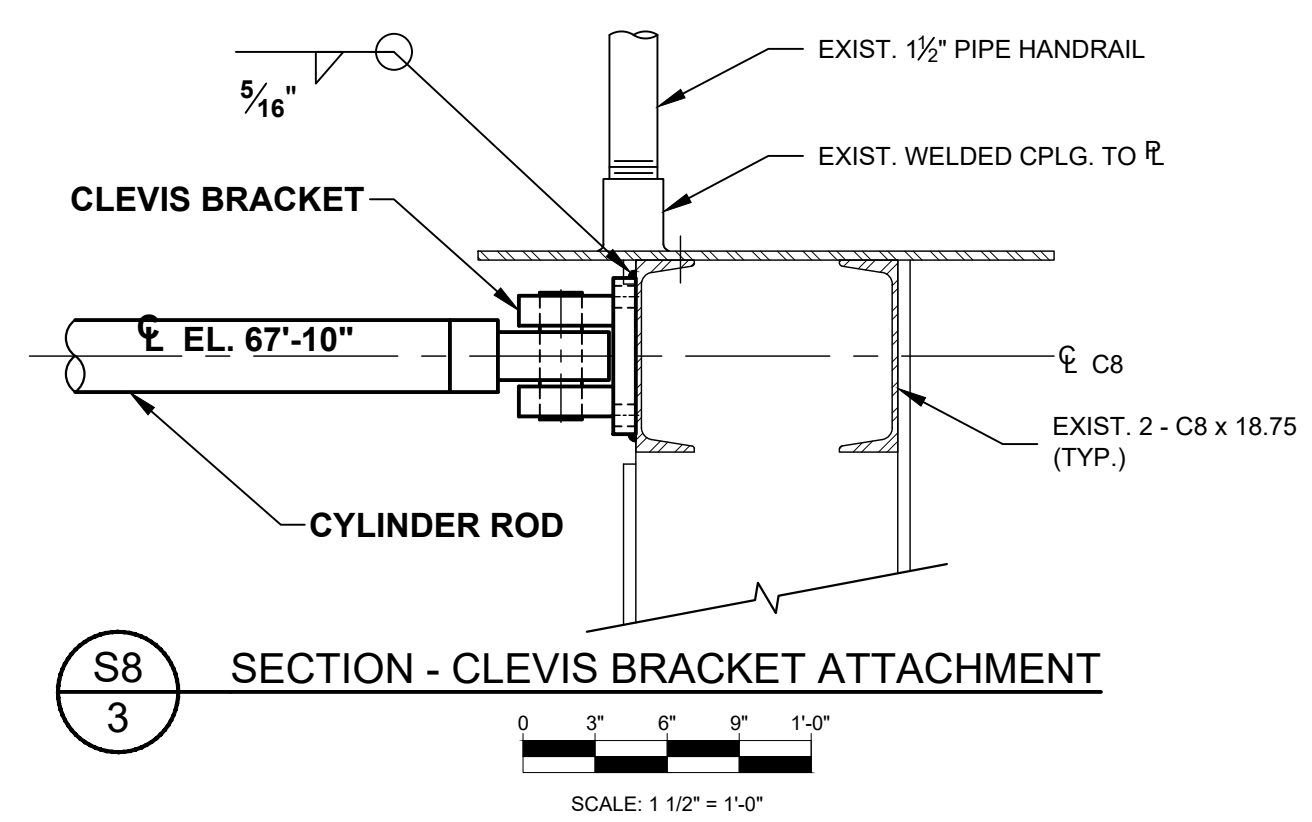
S8 1 PROPOSED HYDRAULIC OPERATOR ARRANGEMENT PLAN
 (2 AS SHOWN)
 (2 MIRRORED ABOUT CENTERLINE OF LOCK)
 SCALE: 3/8" = 1'-0"



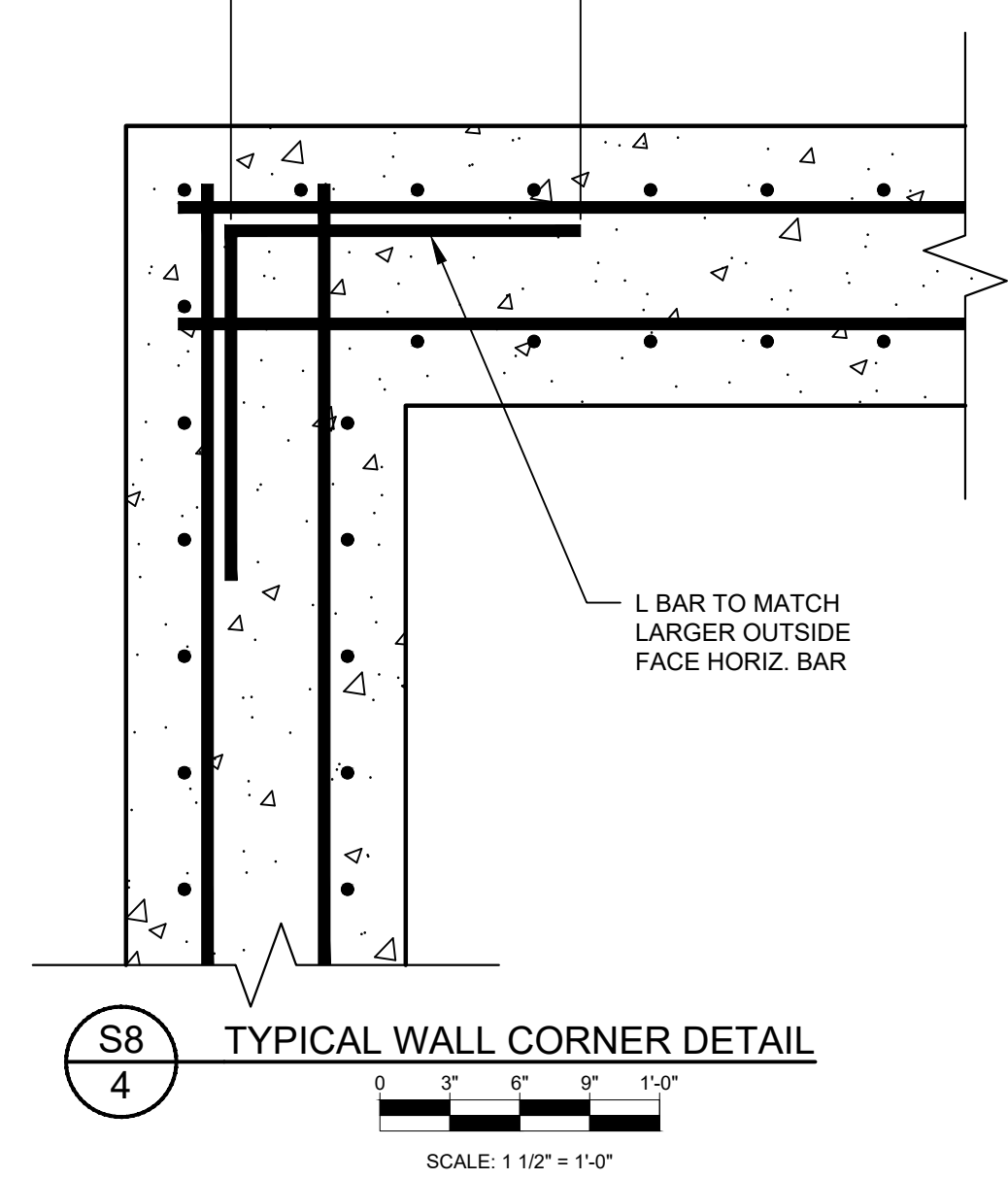
S8 5 PLAN - EXISTING GATE OPERATOR
 SCALE: 3/8" = 1'-0"



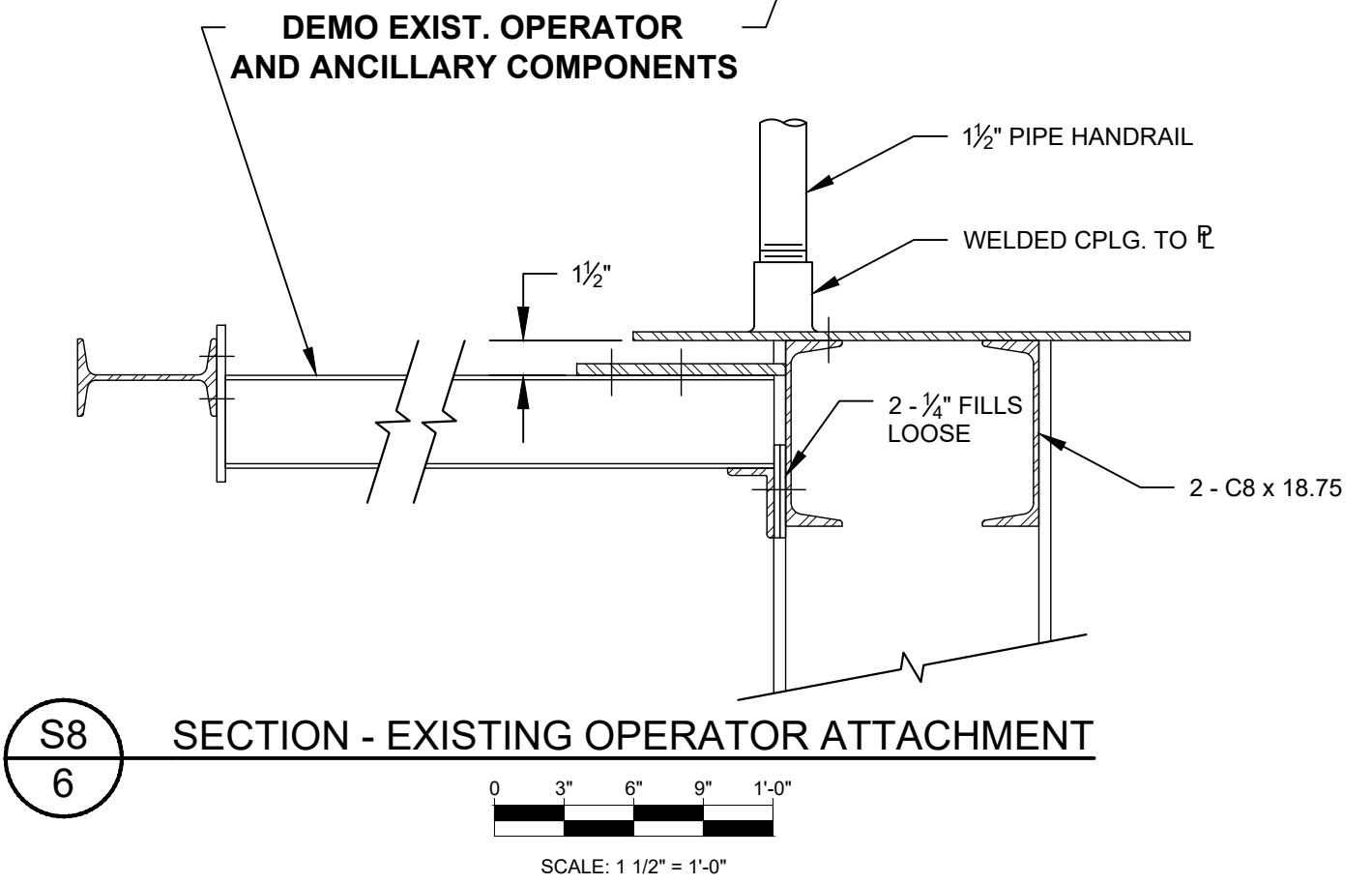
S8 2 SECTION - HYDRAULIC CYLINDER PIT
 SCALE: 1/2" = 1'-0"



S8 3 SECTION - CLEVIS BRACKET ATTACHMENT
 SCALE: 1 1/2" = 1'-0"



S8 4 TYPICAL WALL CORNER DETAIL
 SCALE: 1 1/2" = 1'-0"



S8 6 SECTION - EXISTING OPERATOR ATTACHMENT
 SCALE: 1 1/2" = 1'-0"

- CYLINDER PIT NOTES:**
- CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATION AND REROUTE AS REQUIRED. CONTRACTOR SHALL CAREFULLY EXCAVATE TO AVOID DAMAGE TO THE EXISTING WALL TIE-BACKS.
 - ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, SECTION 400 WITH SUPPLEMENTS AND ALL PERTINENT SPECIFICATIONS CONTAINED THEREIN.
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 - REINFORCING STEEL SHALL BE GRADE 60 DEFORMED BILLET STEEL BARS CONFORMING TO ASTM A-615.
 - THE MINIMUM CLEAR CONCRETE COVER FOR REINFORCEMENT SHALL BE 2 INCHES FOR FORMED SURFACES AND 3 INCHES FOR CONCRETE CAST AGAINST EARTH.
 - REINFORCEMENT SPLICES WHERE THE LENGTHS ARE NOT INDICATED SHALL BE AS FOLLOWS:

BAR SIZE	SPLICE LENGTH (IN)
#3	12
#4	24
#5	30
#6	36
 - THE CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN UNLESS OTHERWISE APPROVED BY THE DISTRICT. THE INTERFACE AT ALL CONSTRUCTION JOINTS SHALL BE CLEAN, FREE OF LAITANCE, AND INTENTIONALLY ROUGHENED TO A FULL AMPLITUDE OF APPROXIMATELY 1/4-INCH.
 - WATERSTOPS WHERE INDICATED ON THE DRAWINGS SHALL BE PVC RIBBED WITH CENTERBULB, 3/16"x4" GREENSTREAK NO. 781, OR EQUAL.
 - ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 1-INCH CHAMFER, UNLESS OTHERWISE NOTED.
 - THE FLOOR DRAIN SHALL BE ZURN MODEL NO. Z415-BZ1 WITH CAST IRON BODY, STAINLESS STEEL TOP, 8-INCH STRAINER DIAMETER, AND SIZED FOR 4-INCH DIAMETER PVC PIPE, OR APPROVED EQUAL. CONTRACTOR SHALL DRILL A HOLE THROUGH THE LOCK WALL TO FIT THE PVC DRAINPIPE OUTLET.

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 BURRELL LOCK REHABILITATION
 LAKE COUNTY, FLORIDA

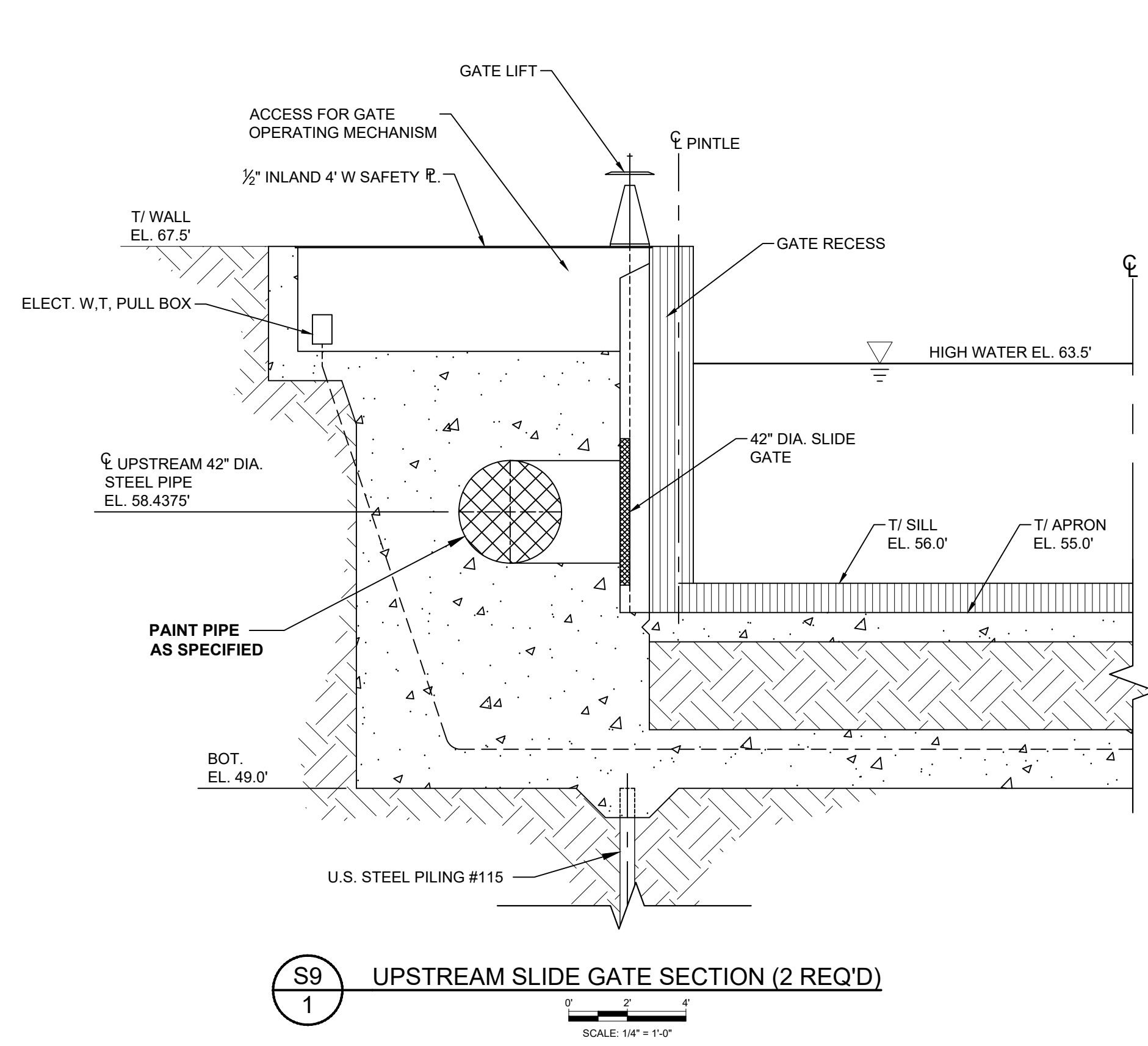
**ST. JOHNS RIVER
 WATER MANAGEMENT DISTRICT**
 P.O. BOX 1429 PALATKA, FLORIDA

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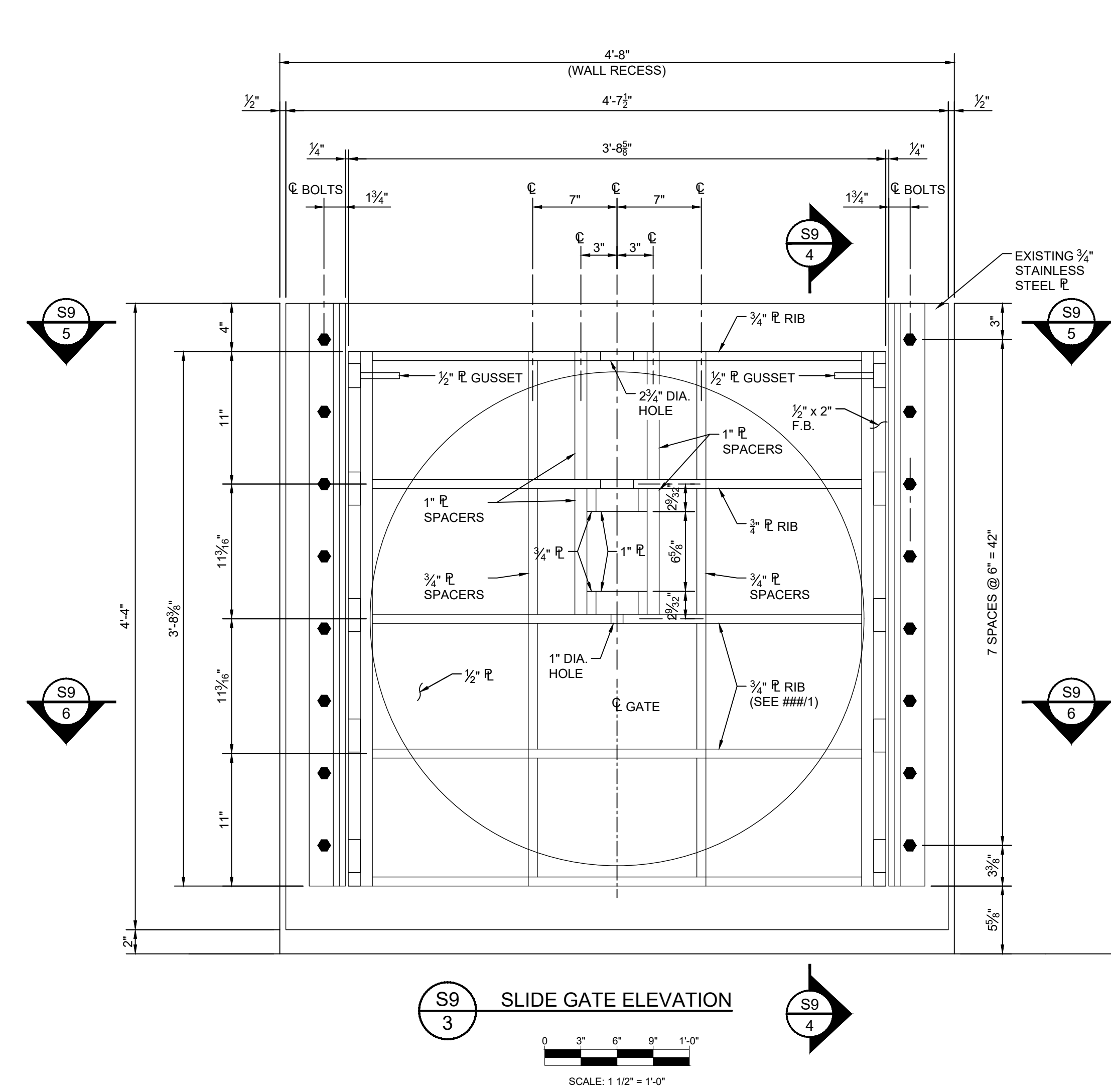
LOCK GATE OPERATORS

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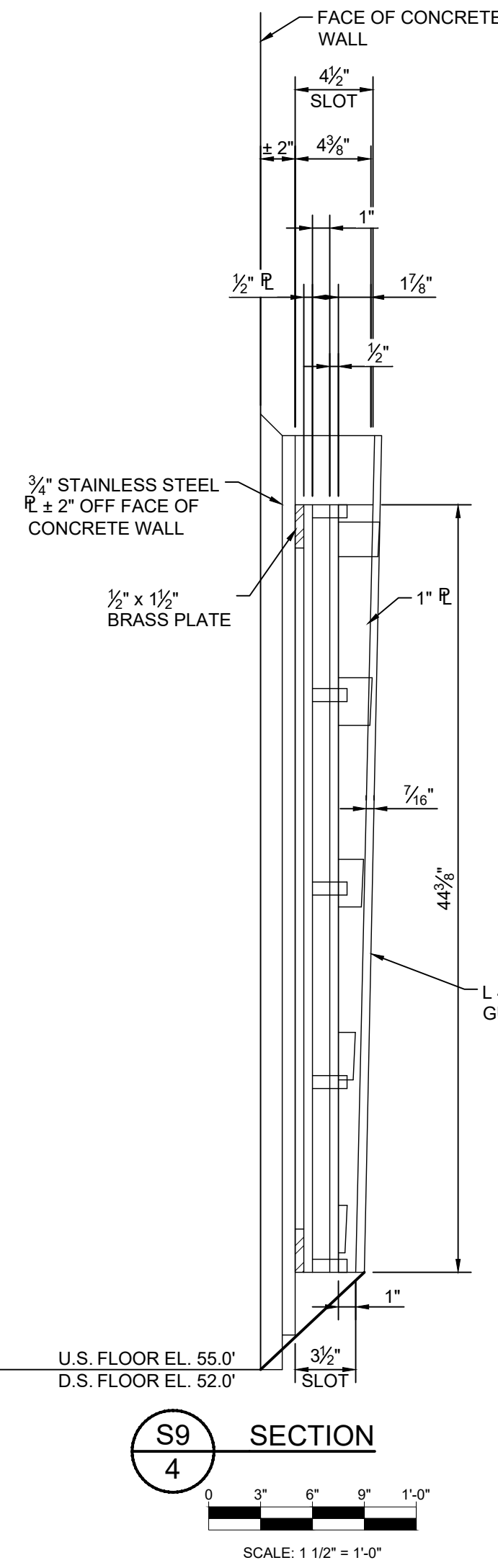
FILE NAME: LOCK GATE OPERATORS.dwg
 PROJECT NO.:
 SHEET: **S8**



S9 1 UPSTREAM SLIDE GATE SECTION (2 REQ'D)
SCALE: 1/4" = 1'-0"

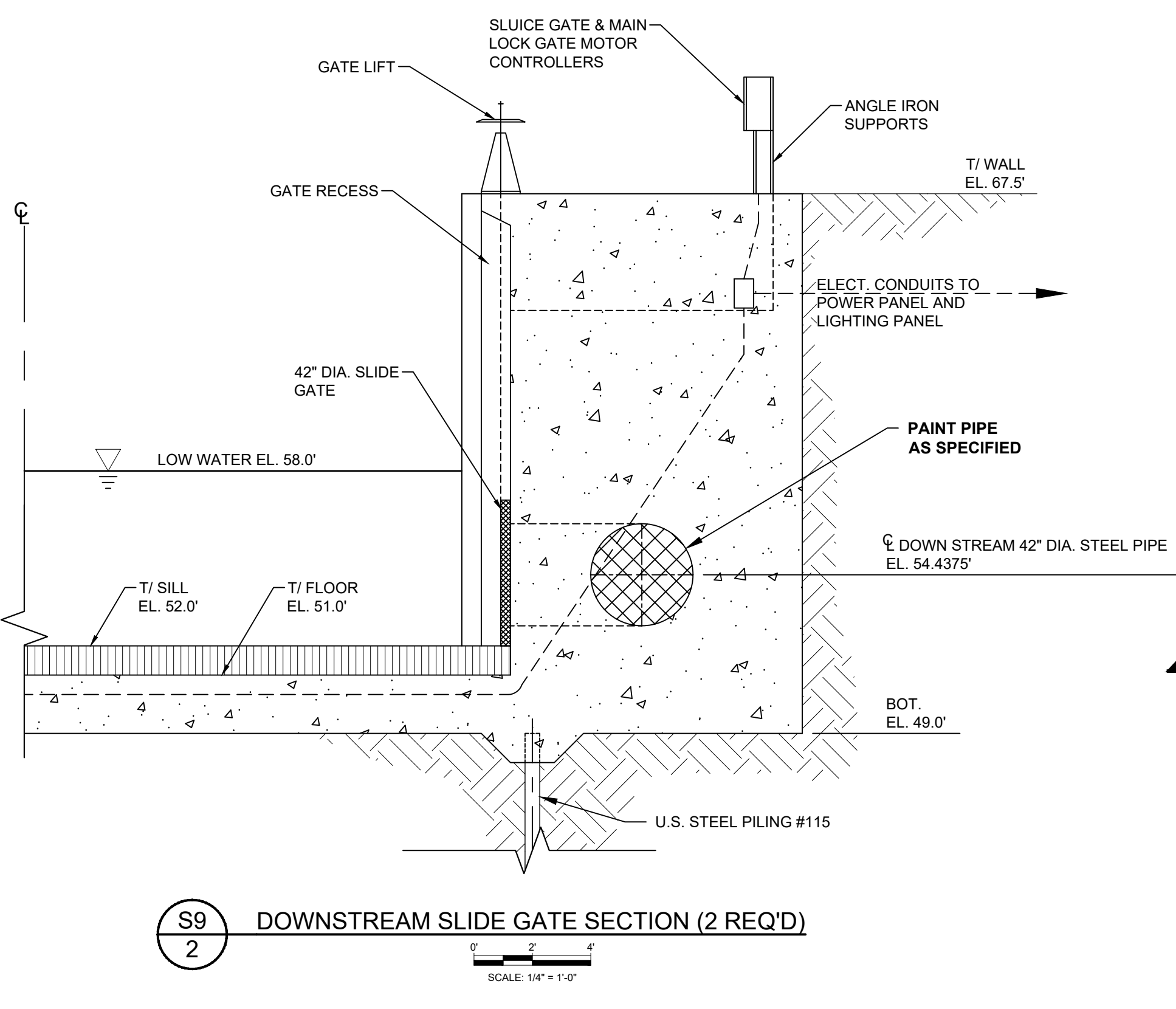


S9 3 SLIDE GATE ELEVATION
SCALE: 1 1/2" = 1'-0"

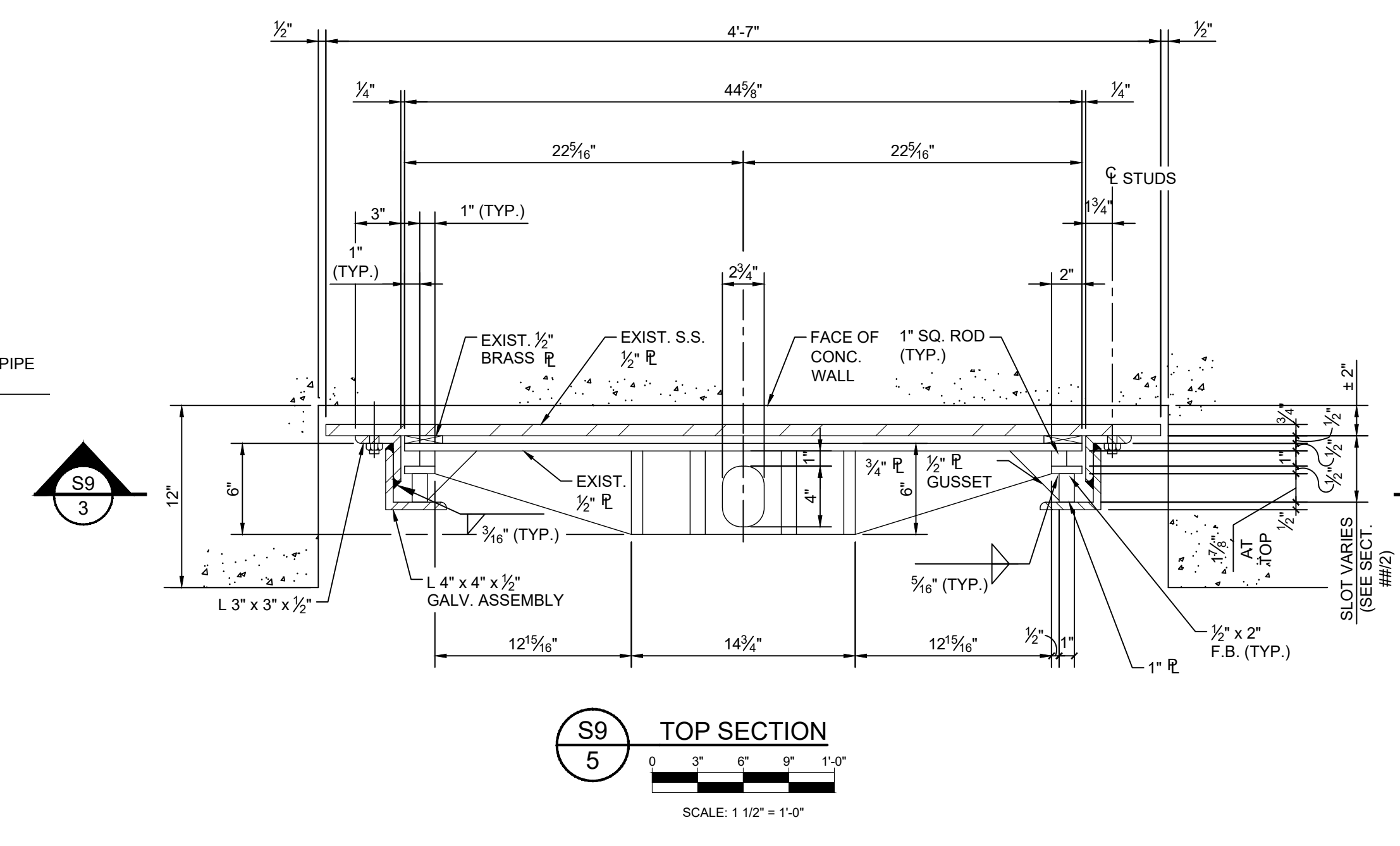


S9 4 SECTION
SCALE: 1 1/2" = 1'-0"

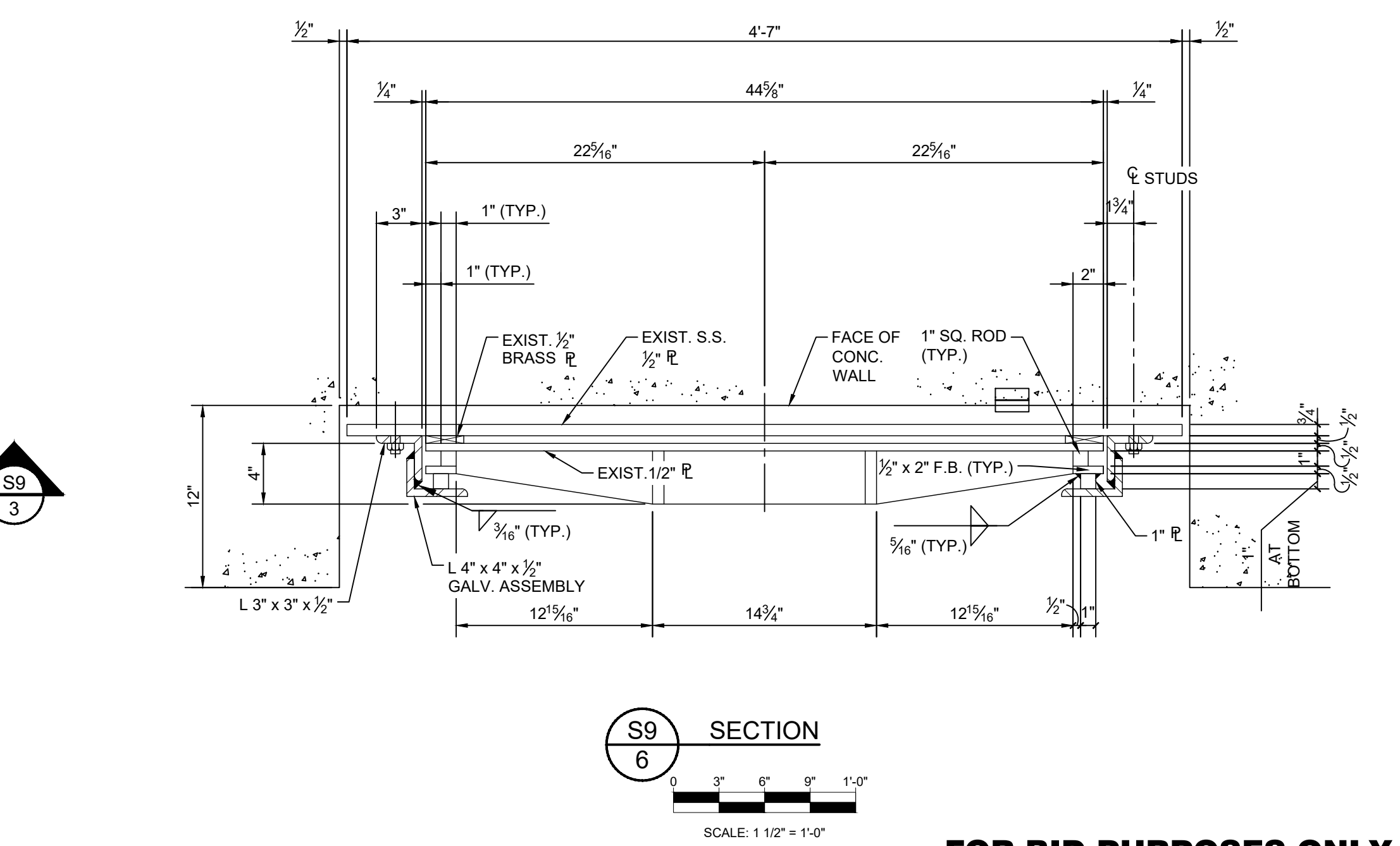
- SLIDE GATES:**
1. DEMO AND DISPOSE OF THE EXISTING SLIDE GATES, STEMS, AND OPERATORS. KEEP THE EXISTING CONCRETE ANCHORS FOR ATTACHING THE NEW GATES.
 2. NEW SLIDE GATES SHALL BE STAINLESS STEEL. THE MINIMUM GATE REQUIREMENTS SHALL BE AS FOLLOWS:
 MATERIAL: STAINLESS STEEL 304
 SIZE: RECTANGULAR 42"x42" OPENING
 HOIST: HYDRAULIC
 MOUNTING: MOUNT TO HEADWALL, CONTINUOUS GASKET ON 4 SIDES
 DESIGN: SELF CONTAINED WITH SEATING AND UNSEATING HEAD 15 FEET
 3. CONCRETE ANCHORS SHALL UTILIZE THE EXISTING EMBEDDED ANCHORS. REPLACE THE NUTS AND WASHERS WITH COMPATIBLE SS-304.
 4. GASKET SHALL BE 1/2-INCH NEOPRENE WITH IRHD HARDNESS BETWEEN 60-70, CONFORMING TO ASTM D1056, AND JOINTS HOT SPLICED BY VULCANIZING PROCESS.
- REFER TO BLACK & VEATCH MECHANICAL DRAWINGS FOR GATE AND HYDRAULIC OPERATOR SPECIFICATIONS.



S9 2 DOWNSTREAM SLIDE GATE SECTION (2 REQ'D)
SCALE: 1/4" = 1'-0"



S9 5 TOP SECTION
SCALE: 1 1/2" = 1'-0"



S9 6 SECTION
SCALE: 1 1/2" = 1'-0"

**FOR BID PURPOSES ONLY
NOT FOR CONSTRUCTION**

NO.	REVISION	BY	DATE	APPROVED	DATE

UPPER OCKLAWAHA RIVER BASIN
BURRELL LOCK REHABILITATION
LAKE COUNTY, FLORIDA

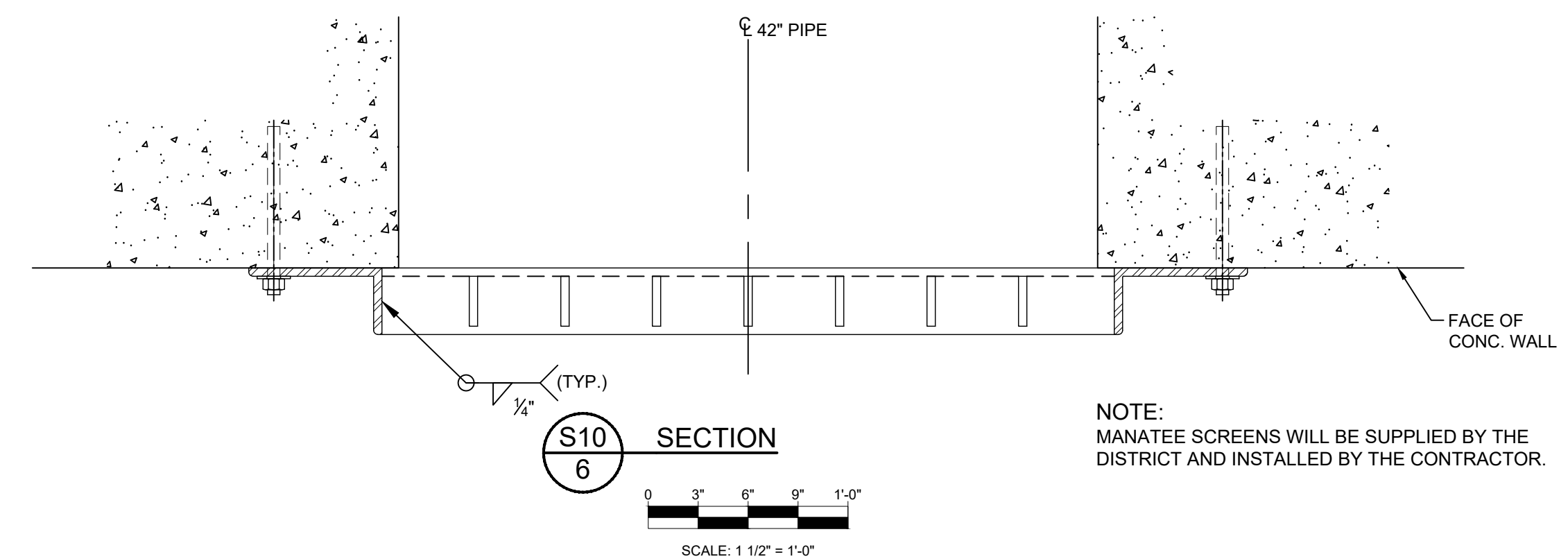
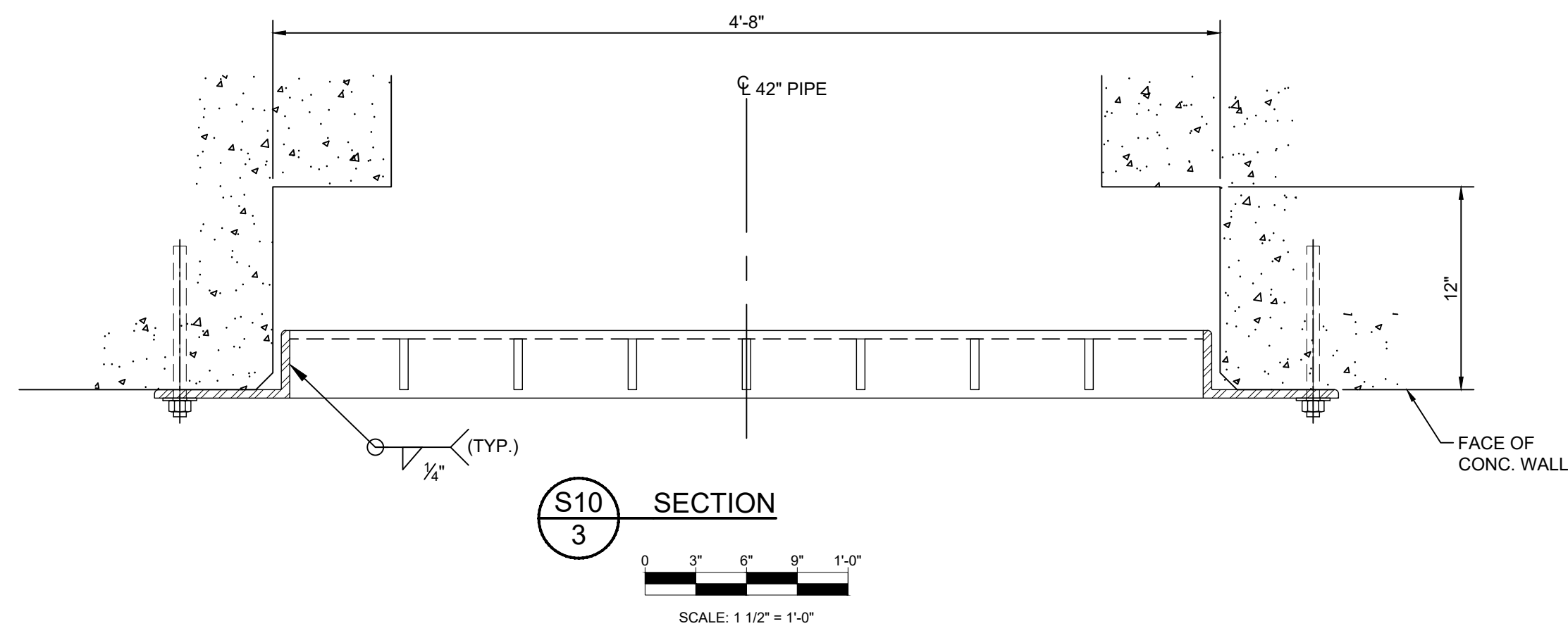
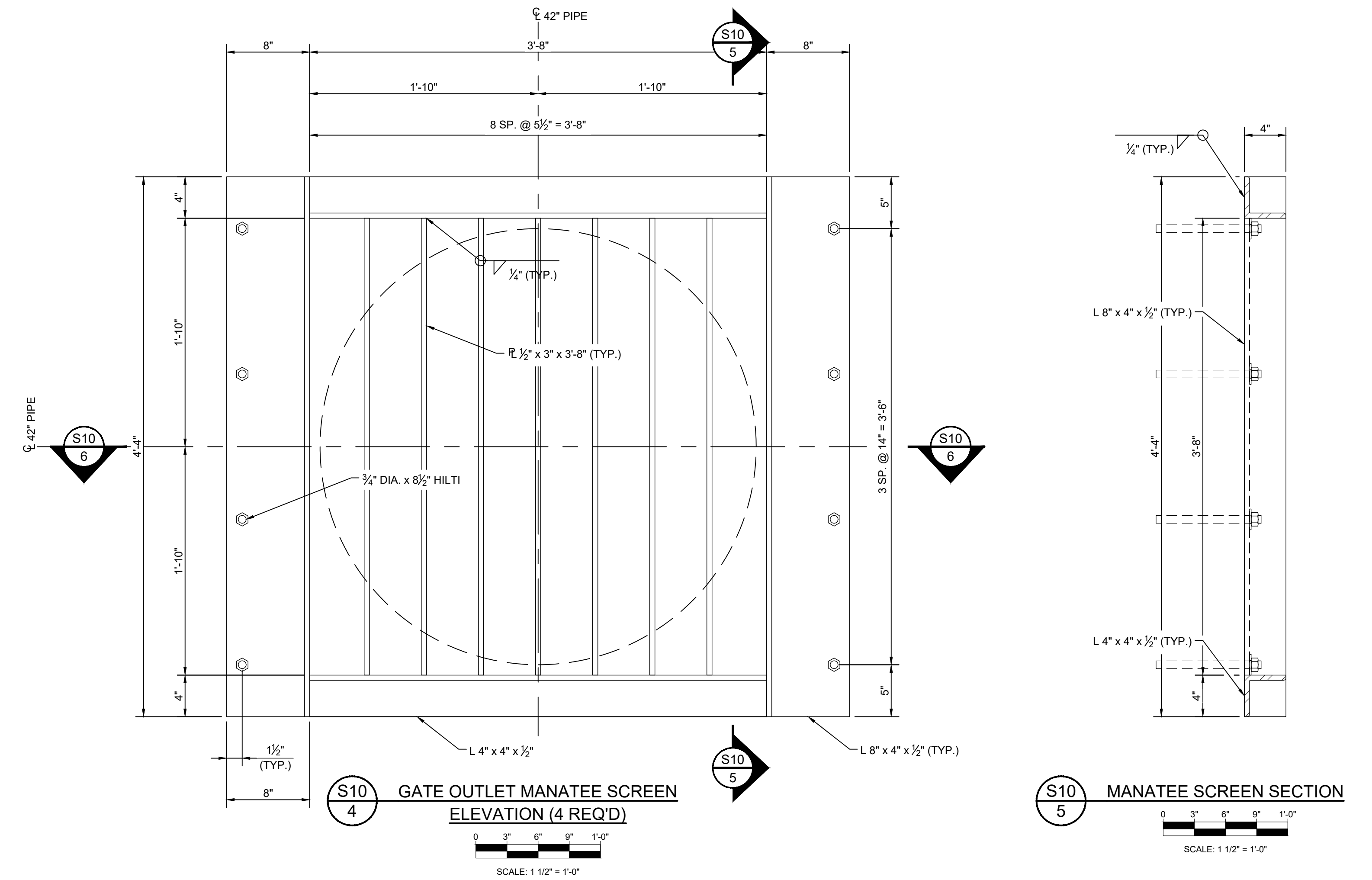
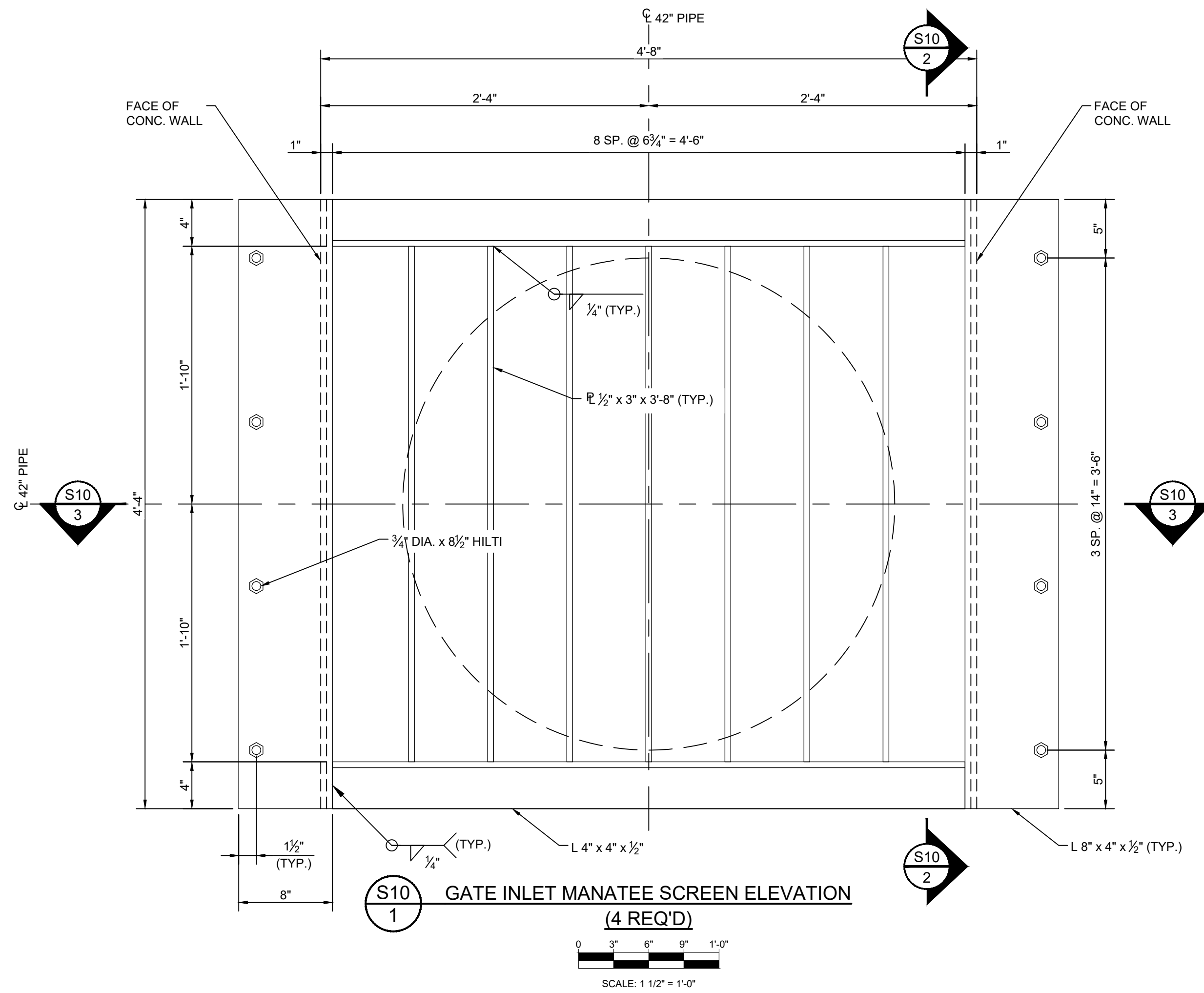
ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT
P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G. DATE: FEBRUARY 19, 2024 REVIEWER: W.R.C.
 SCALE: AS NOTED DESIGNER: W.R.C. SECTION CHIEF: W.R.C.

EXISTING SLIDE GATE ELEVATIONS AND SECTIONS

CERTIFICATION:
WILLIAM R. COTE
P.E. NUMBER: 53746
DATE: FEBRUARY 19, 2024

FILE NAME:
SLIDE GATES EL.dwg
PROJECT NO.:
SHEET:
S9



NOTE: MANATEE SCREENS WILL BE SUPPLIED BY THE DISTRICT AND INSTALLED BY THE CONTRACTOR.

**FOR BID PURPOSES ONLY
NOT FOR CONSTRUCTION**

NO.	REVISION	BY	DATE	APPROVED	DATE
1	ISSUED FOR BID	N.J.G.	02/19/24	W.R.C.	02/19/24

UPPER OCKLAWAHA RIVER BASIN
BURRELL LOCK REHABILITATION
LAKE COUNTY, FLORIDA

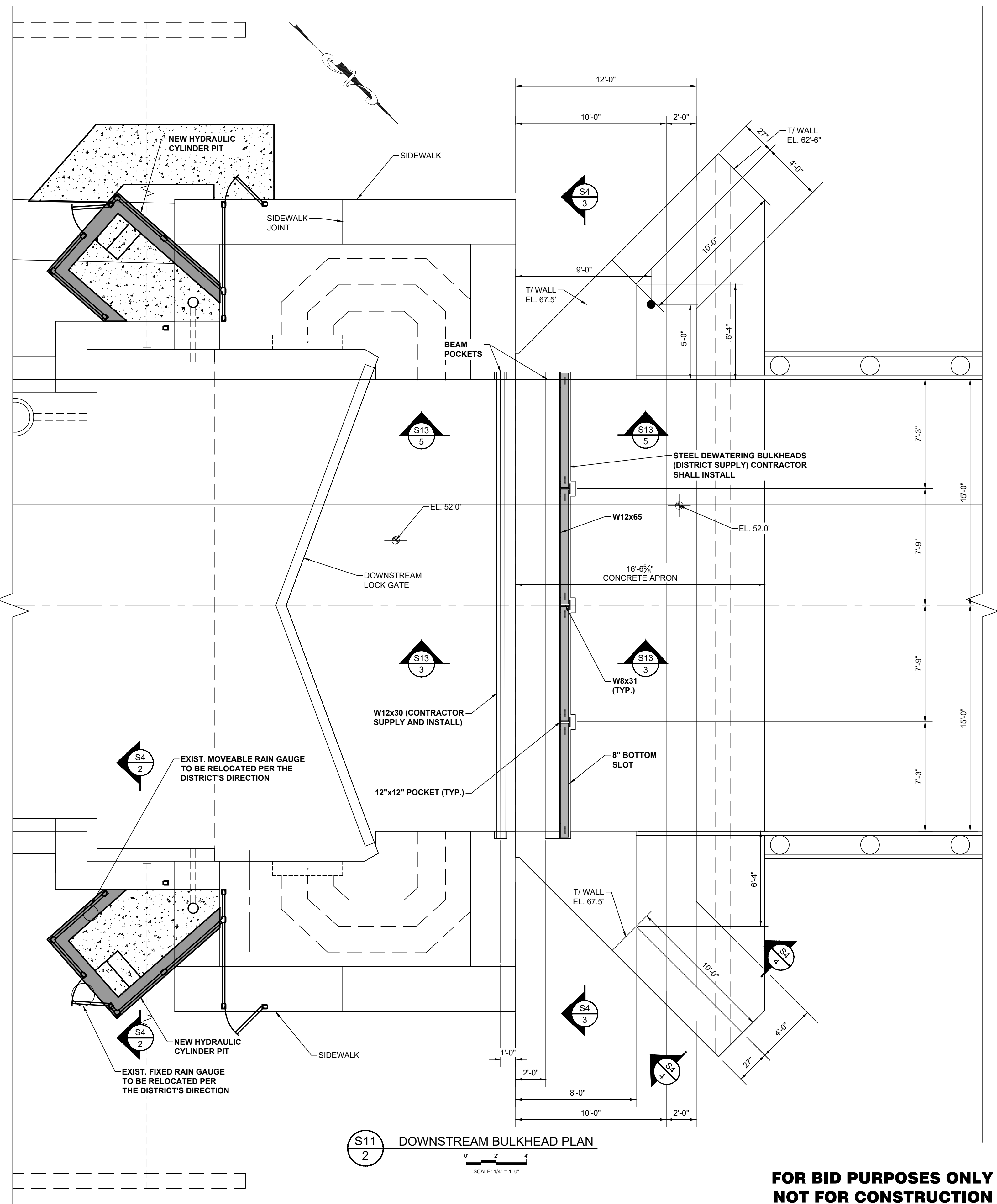
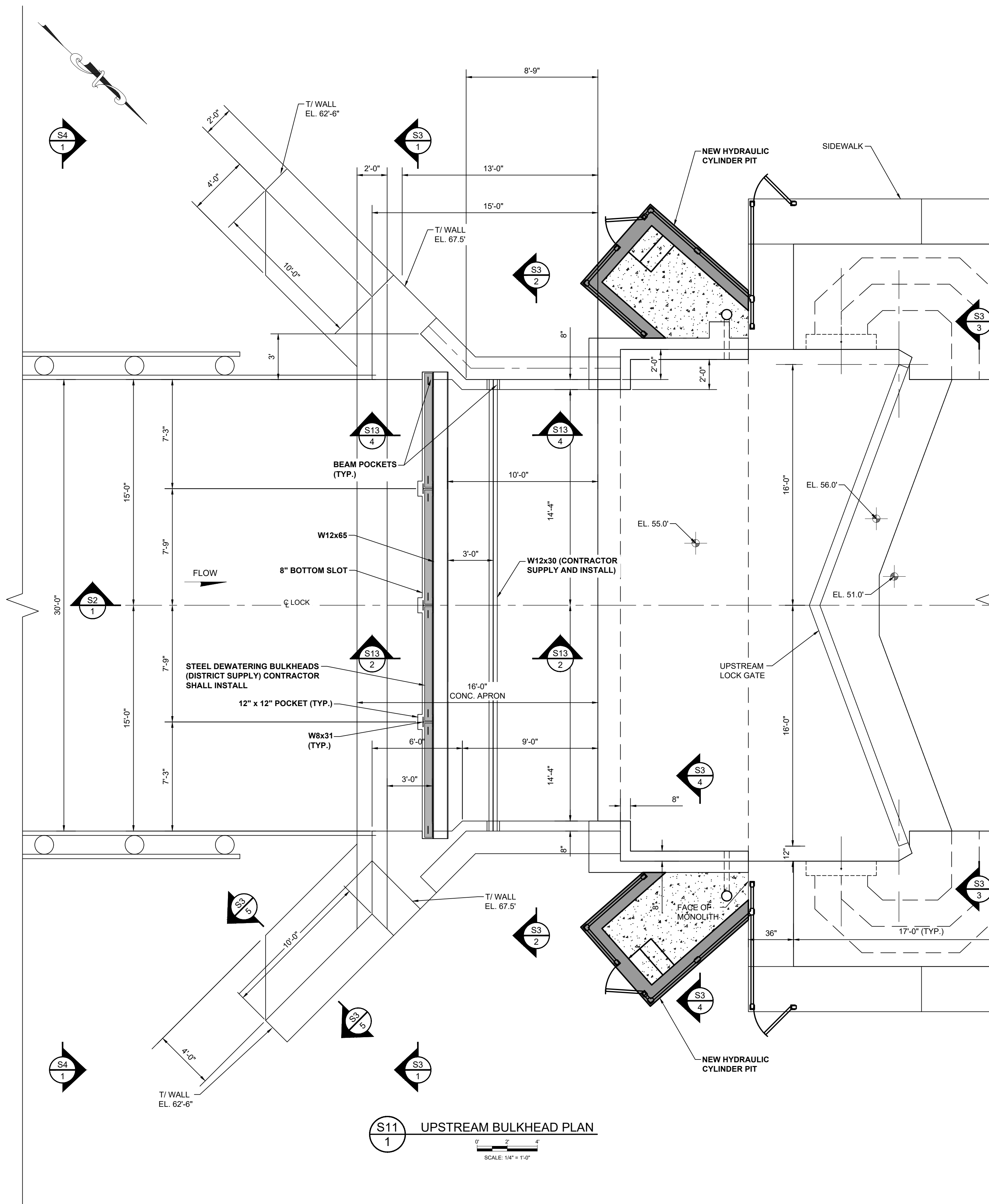
**ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT**
P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G. DATE: FEBRUARY 19, 2024 REVIEWER: W.R.C.
SCALE: 1 1/2" = 1'-0" DESIGNER: W.R.C. SECTION CHIEF: W.R.C.

MANATEE SCREENS

CERTIFICATION:
WILLIAM R. COTE
P.E. NUMBER: 53746
DATE: FEBRUARY 19, 2024

FILE NAME:
SLIDE GATES EL.dwg
PROJECT NO.:
SHEET:
S10




**FOR BID PURPOSES ONLY
NOT FOR CONSTRUCTION**

I:\Projects\CADD\BURRELL LOCK REHABILITATION\Drawings\STRUCTURAL\STEEL BULKHEADS.dwg

NO.	REVISION	BY	DATE	APPROVED	DATE

**UPPER OCKLAWAHA RIVER BASIN
BURRELL LOCK REHABILITATION
LAKE COUNTY, FLORIDA**

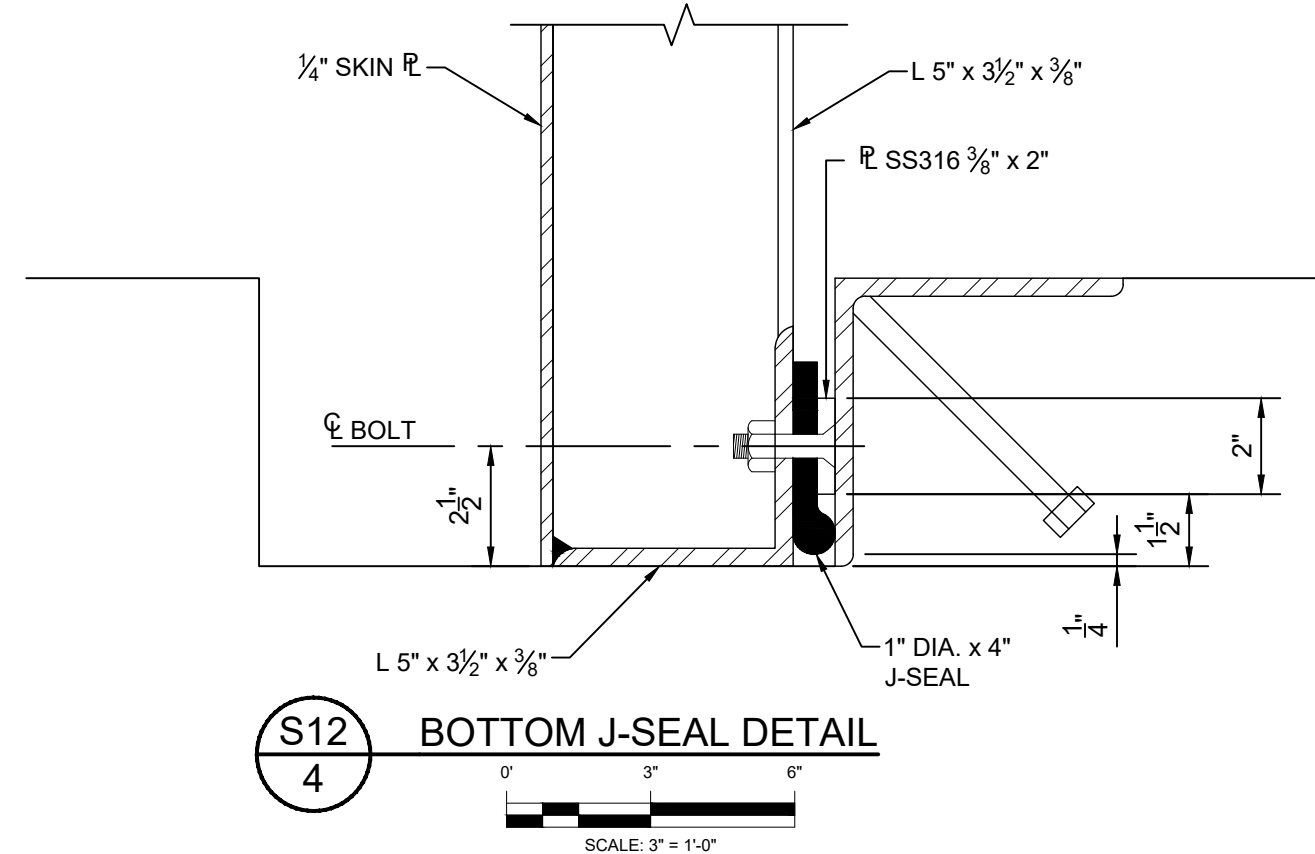
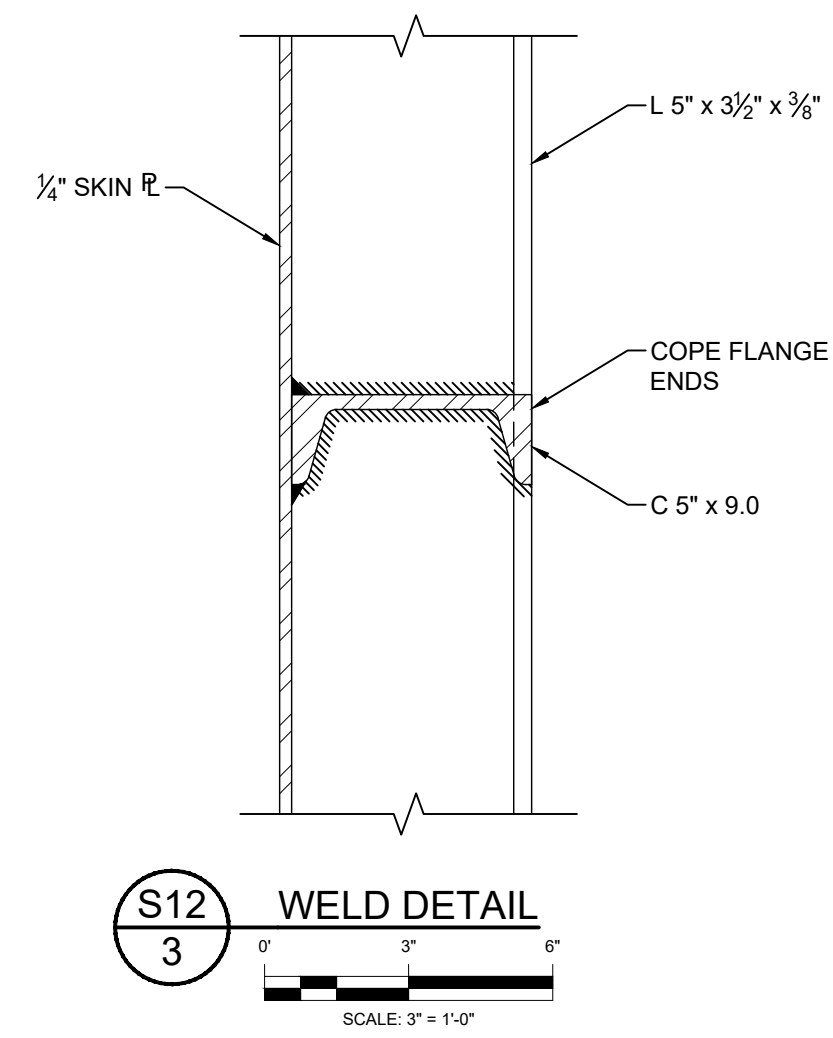
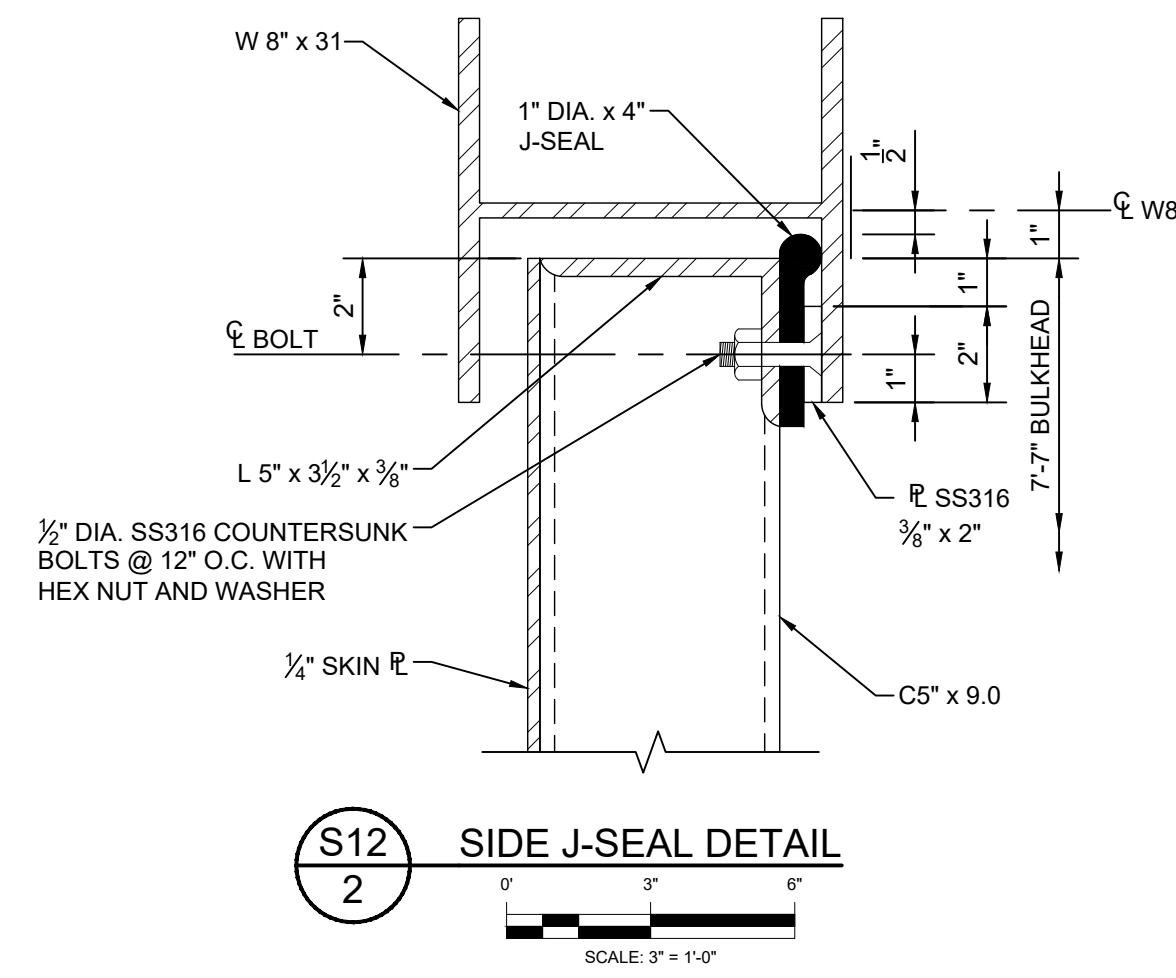
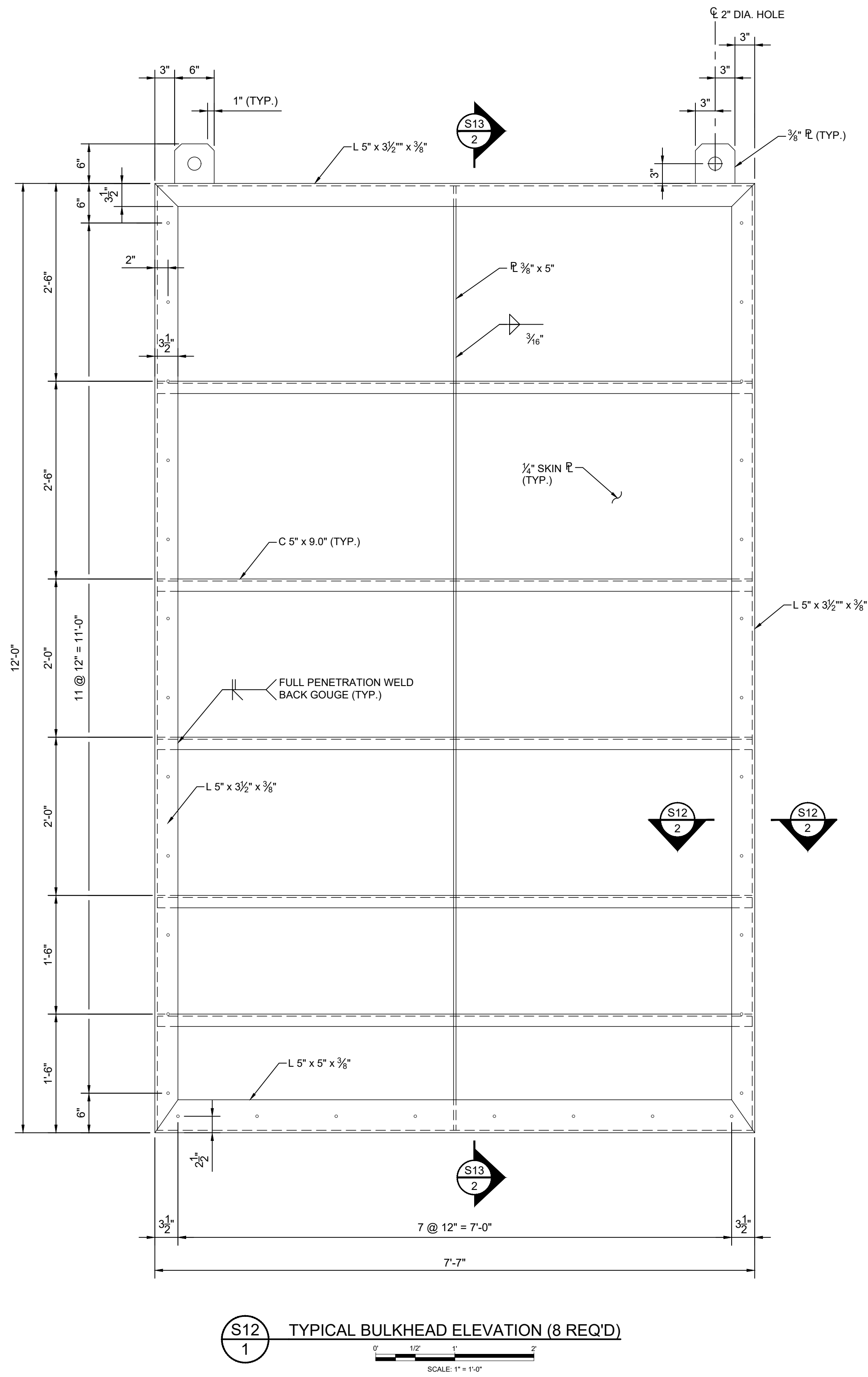

**ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT**
 P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G. DATE: FEBRUARY 19, 2024 REVIEWER: W.R.C.
 SCALE: 1/4" = 1'-0" DESIGNER: W.R.C. SECTION CHIEF: W.R.C.

STEEL BULKHEAD INSTALLATION PLAN

CERTIFICATION:
 WILLIAM R. COTE
 P.E. NUMBER: 53746
 DATE: FEBRUARY 19, 2024

FILE NAME:
 STEEL BULKHEADS.dwg
 PROJECT NO.:
 SHEET:
S11



- NOTES:**
1. THE DISTRICT WILL DELIVER EIGHT (8) STEEL BULKHEADS AND THE STRUCTURAL STEEL SUPPORTS TO THE PROJECT SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UNLOADING THE BULKHEADS AND STEEL SUPPORTS.
 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE STEEL BULKHEAD SYSTEM AND SEALING THE JOINTS FOR THE DEWATERING OF THE LOCK.
 3. THE CONTRACTOR IS ADVISED THAT DIVERS WILL BE REQUIRED FOR SEALING ALL LEAKING JOINTS.
 4. THE CONTRACTOR SHALL SUPPLY AND INSTALL THE TEMPORARY ACCESS WALKWAY DECKS AND RAILS.
 5. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE THE BULKHEAD SYSTEM AND LOAD ONTO THE DISTRICT PROVIDED TRANSPORT.

**FOR BID PURPOSES ONLY
NOT FOR CONSTRUCTION**

NO.	REVISION	BY	DATE	APPROVED	DATE

**UPPER OCKLAWAHA RIVER BASIN
BURRELL LOCK REHABILITATION
LAKE COUNTY, FLORIDA**

**ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT**
P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G. DATE: FEBRUARY 19, 2024 REVIEWER: W.R.C.

SCALE: AS NOTED DESIGNER: W.R.C. SECTION CHIEF: W.R.C.

EXISTING STEEL BULKHEADS

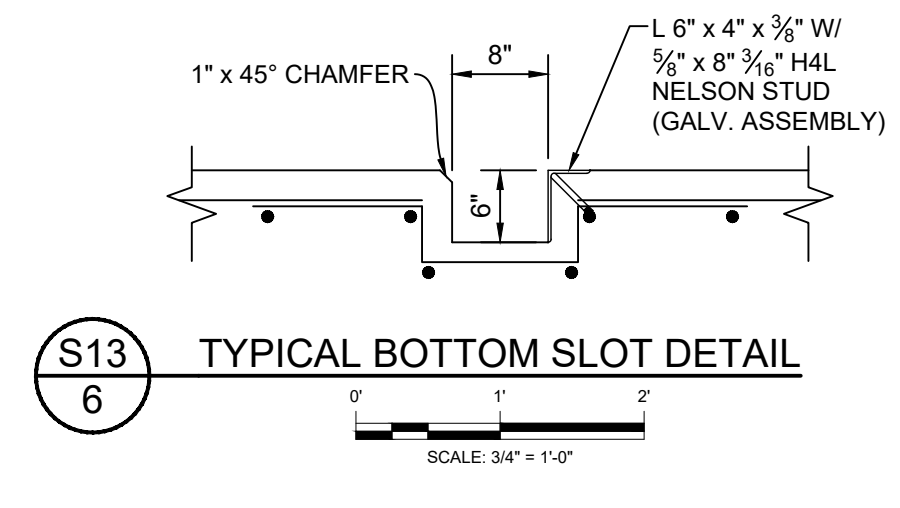
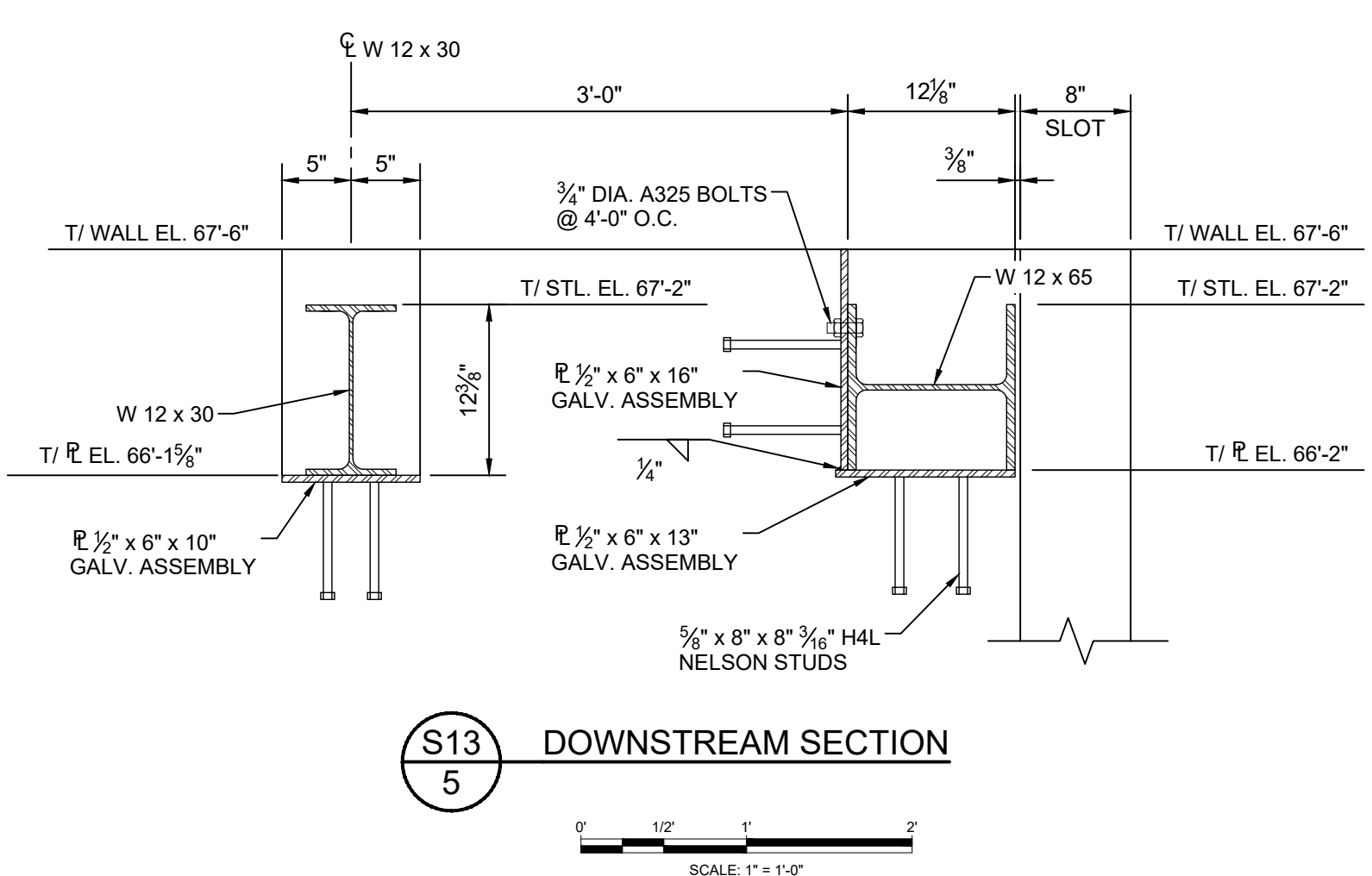
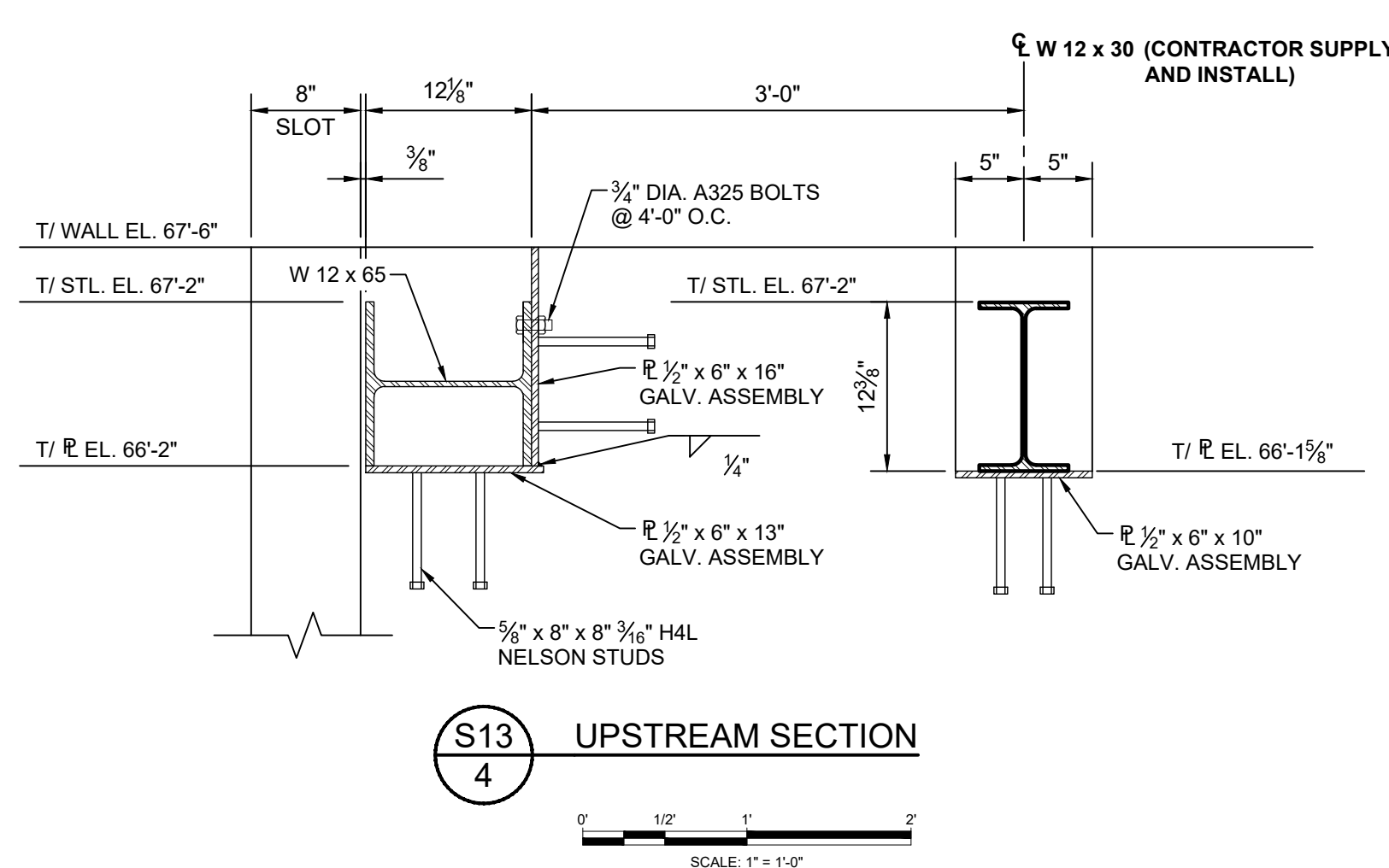
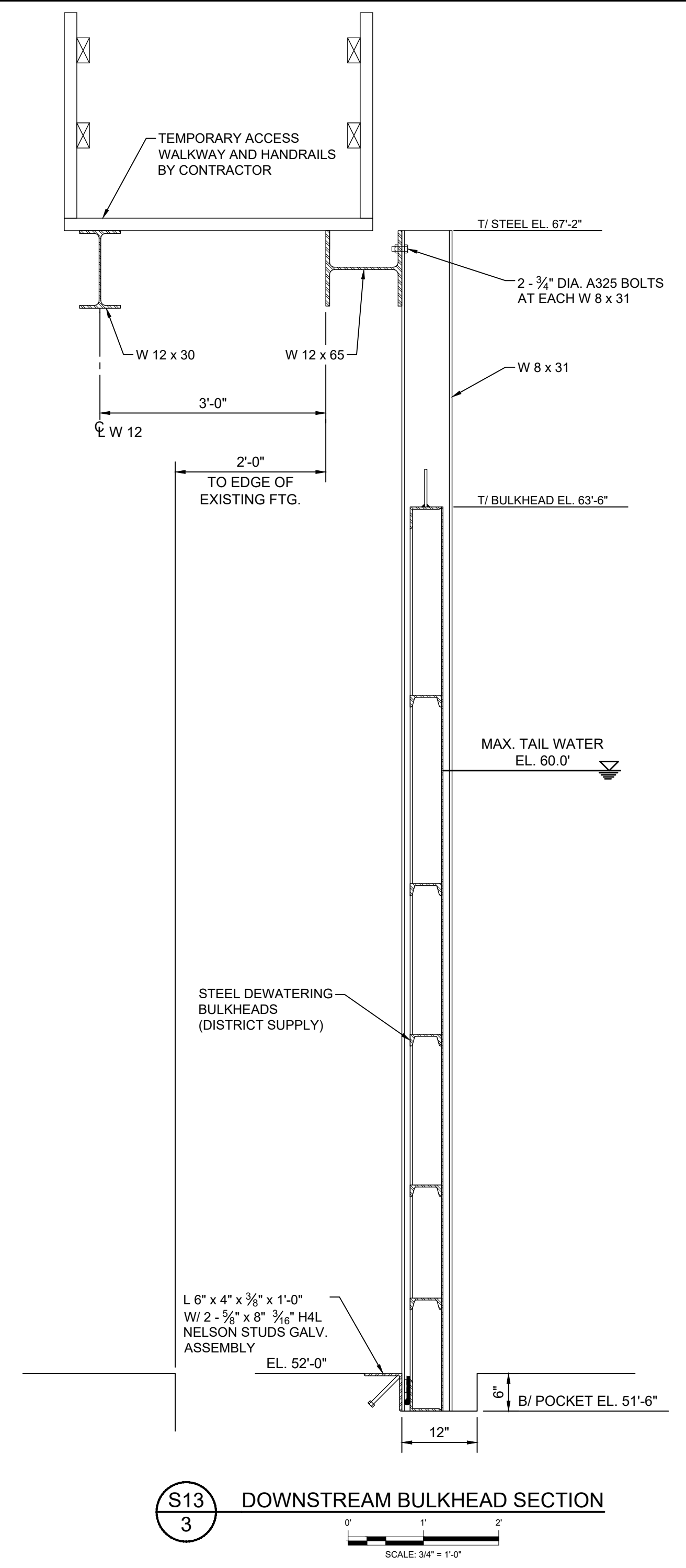
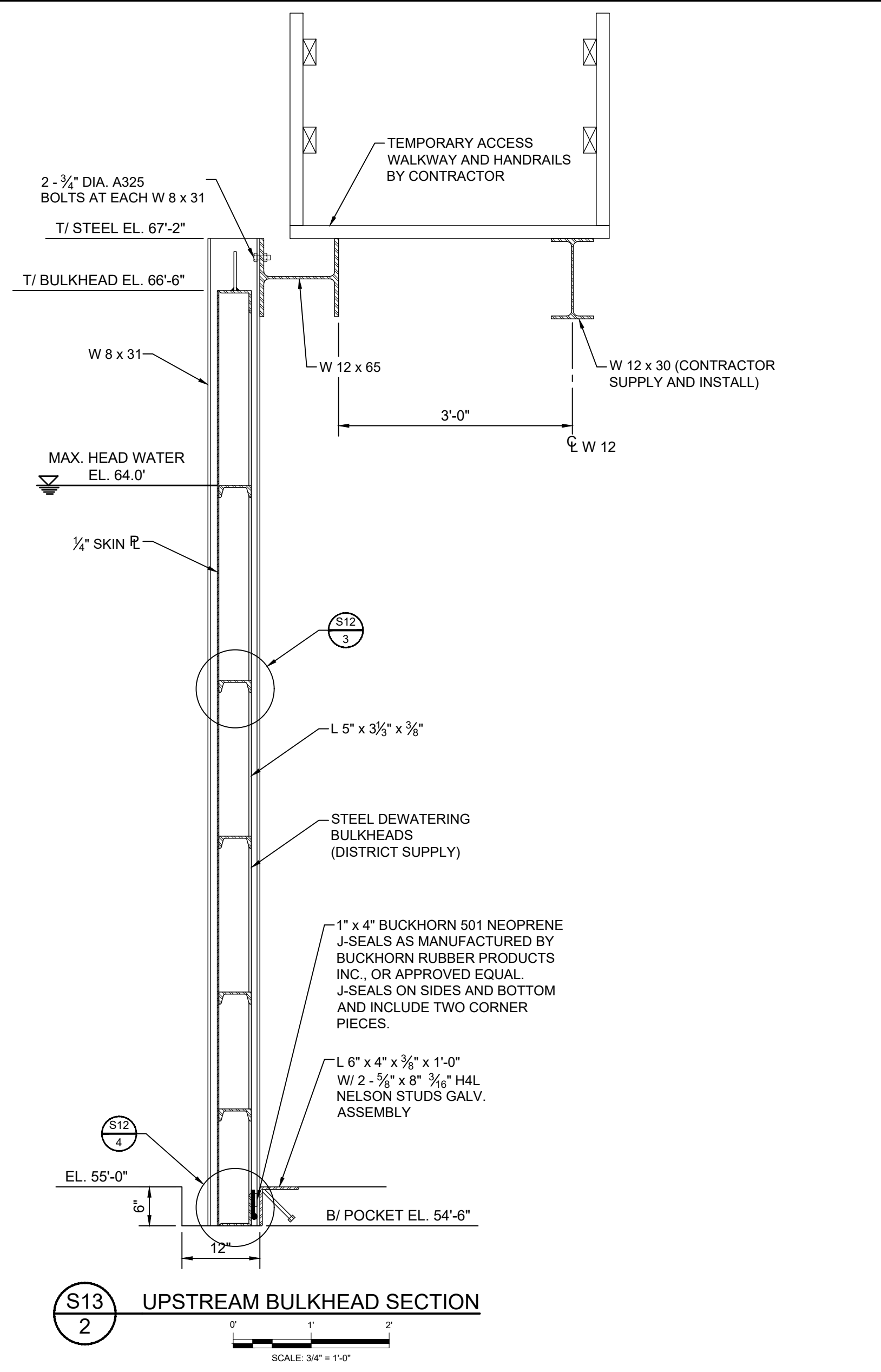
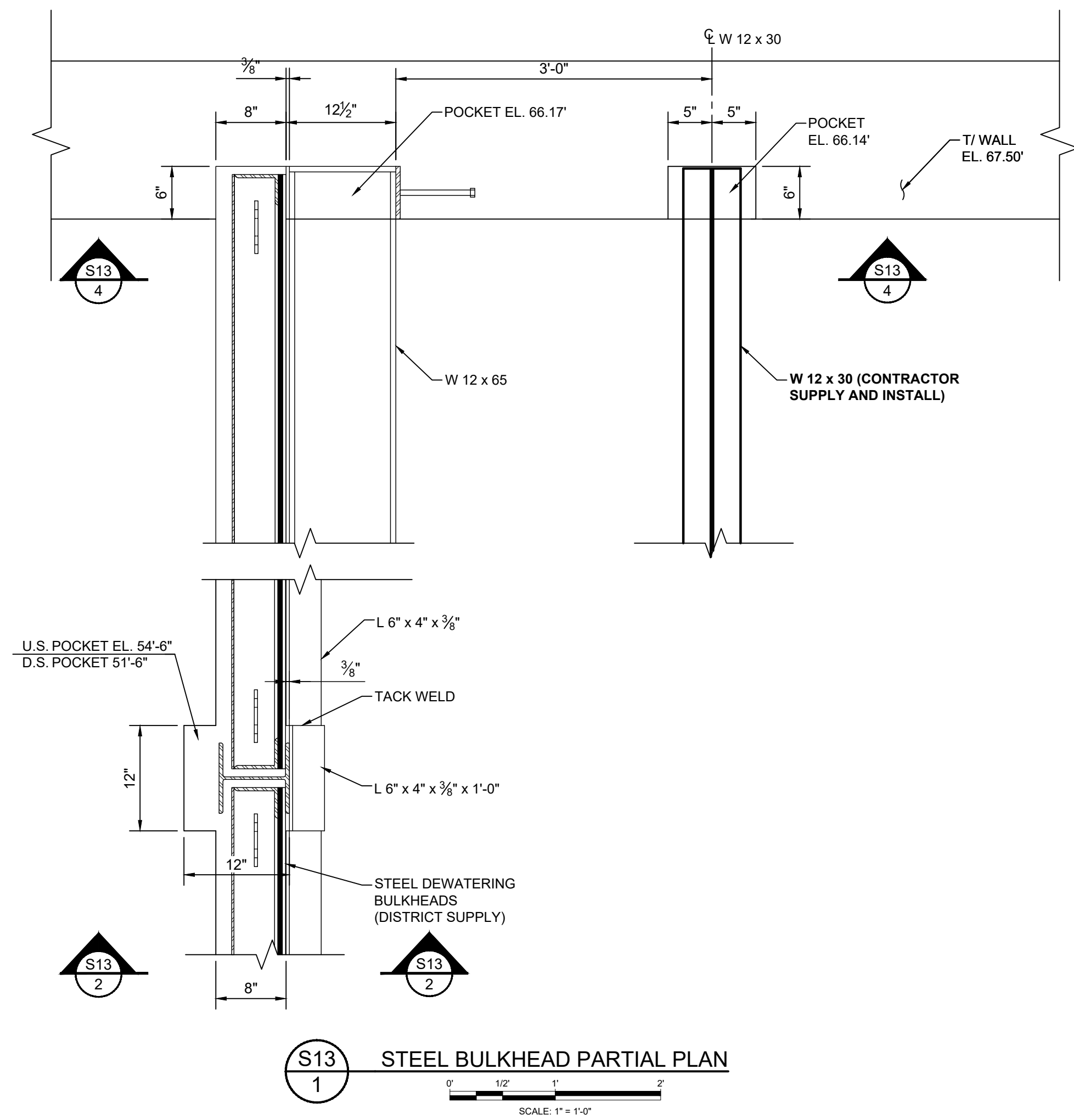
CERTIFICATION:

WILLIAM R. COTE
P.E. NUMBER: 53746
DATE: FEBRUARY 19, 2024

FILE NAME:
STEEL BULKHEADS.dwg

PROJECT NO.:

SHEET:
S12



**FOR BID PURPOSES ONLY
NOT FOR CONSTRUCTION**

ISSUED FOR BID	N.J.G.	02/19/24	W.R.C.	02/19/24
NO.	REVISION	BY	DATE	APPROVED

UPPER OCKLAWAHA RIVER BASIN
BURRELL LOCK REHABILITATION
LAKE COUNTY, FLORIDA

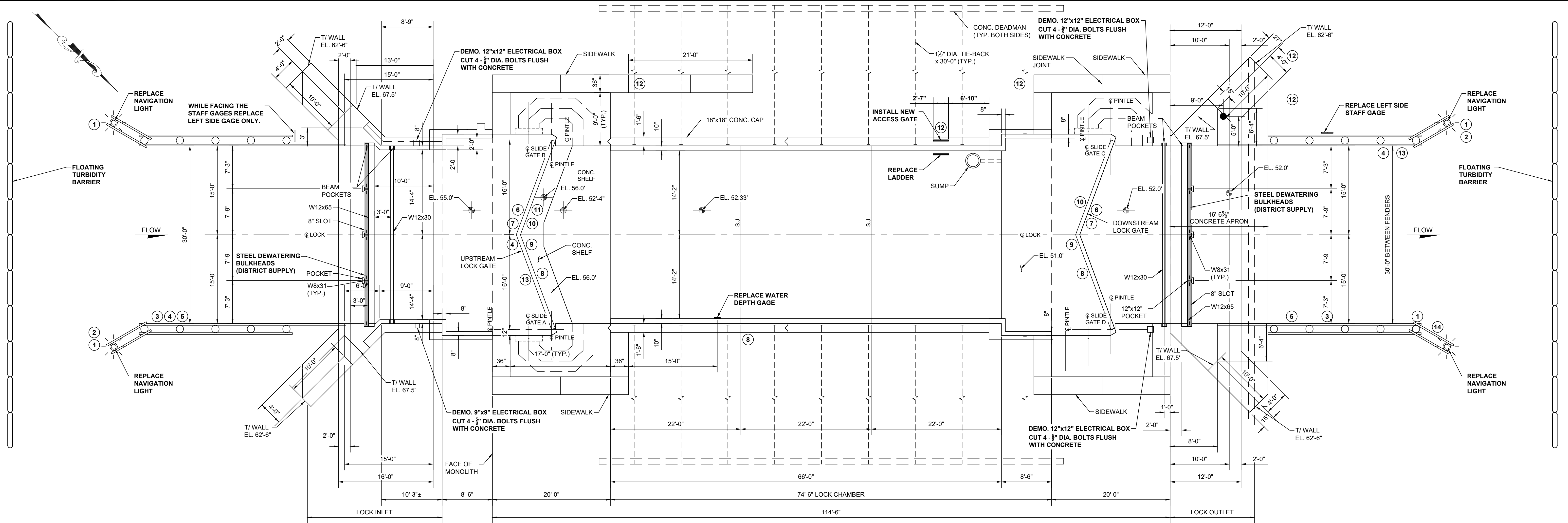
ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT
P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G. DATE: FEBRUARY 19, 2024 REVIEWER: W.R.C.
SCALE: AS NOTED DESIGNER: W.R.C. SECTION CHIEF: W.R.C.

BULKHEAD SECTIONS AND DETAILS

CERTIFICATION:
WILLIAM R. COTE
P.E. NUMBER: 53746
DATE: FEBRUARY 19, 2024

FILE NAME: STEEL BULKHEADS.dwg
PROJECT NO.:
SHEET: S13



S14
1
SIGN LOCATION PLAN
SCALE: 1/8" = 1'-0"

SIGN SCHEDULE					
SYMBOL	QUANTITY	MESSAGE	COLOR	SIZE W x H	COMMENTS
①	4	NO PARKING ANY TIME	RED LETTERS ON WHITE, RED BORDER	12" x 18"	NEW SIGNS, DISPOSE OF EXISTING
②	2	NOTICE BOATS EXITING THE LOCK HAVE THE RIGHT OF WAY. DO NOT ENTER THE LOCK UNTIL ALL BOATS HAVE EXITED.	TOP LINE WHITE ON BLUE, NEXT LINES BLACK ON WHITE, BLUE BORDER	14" x 10"	NEW SIGNS, DISPOSE OF EXISTING
③	2	STAY IN BOAT DO NOT CLIMB ON FENDERS	TOP LINE WHITE ON RED, NEXT LINES BLACK ON YELLOW, BLACK BORDER	36" x 24"	NEW SIGNS, DISPOSE OF EXISTING
④	2	SLOW PLEASE REPORT MANATEE INJURIES	N/A	N/A	SALVAGE EXISTING SIGNS AND REINSTALL
⑤	2	CAUTION (ALLIGATOR LOGO) DANGEROUS ALLIGATORS DO NOT APPROACH, FEED OR MOLEST	BLACK LETTERS AND BORDER ON YELLOW	30" x 24"	NEW SIGNS, DISPOSE OF EXISTING
⑥	2	NOTICE LAST LOCKAGE 15 MINUTES BEFORE CLOSING	N/A	N/A	DEMO AND DISPOSE
⑦	2	HOURS OF OPERATION	N/A	N/A	SALVAGE EXISTING SIGNS AND REINSTALL

SIGN SCHEDULE					
SYMBOL	QUANTITY	MESSAGE	COLOR	SIZE W x H	COMMENTS
⑧	2	NO SMOKING	RED LETTERS ON WHITE, RED BORDER	24" x 24"	NEW SIGNS, DISPOSE OF EXISTING
⑨	2	POSITIVELY NO REFUELING	TOP LINE WHITE LETTERS ON RED, NEXT LINES BLACK LETTERS ON WHITE, BLACK BORDER	24" x 24"	NEW SIGNS, DISPOSE OF EXISTING
⑩	2	SHUT OFF ENGINES DURING LOCK OPERATIONS	RED LETTERS ON WHITE, RED BORDER	36" x 24"	NEW SIGNS, DISPOSE OF EXISTING
⑪	1	FLORIDA FRIENDLY BOATING	N/A	N/A	SALVAGE EXISTING SIGNS AND REINSTALL
⑫	7	DANGER AUTHORIZED PERSONNEL ONLY	TOP LINE WHITE LETTERS ON RED, NEXT LINES BLACK ON WHITE, RED BORDER	22" x 19"	NEW SIGNS, DISPOSE OF EXISTING (ONE OF SIGNS IS ON ELECTRICAL BUILDING DOOR, AND IS NOT SHOWN LOCATION PLAN)
⑬	2	BURRELL LOCK	N/A	N/A	SALVAGE EXISTING SIGNS AND REINSTALL
⑭	1	BURRELL LOCK & DAM	BLACK LETTERS ON WHITE, BLACK BORDER	N/A	DEMO AND DISPOSE

**FOR BID PURPOSES ONLY
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NO.	REVISION	BY	DATE	APPROVED	DATE

UPPER OCKLAWAHA RIVER BASIN
BURRELL LOCK REHABILITATION
LAKE COUNTY, FLORIDA

ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT
P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G. DATE: FEBRUARY 19, 2024 REVIEWER: W.R.C.
SCALE: 1/8" = 1'-0" DESIGNER: W.R.C. SECTION CHIEF: W.R.C.

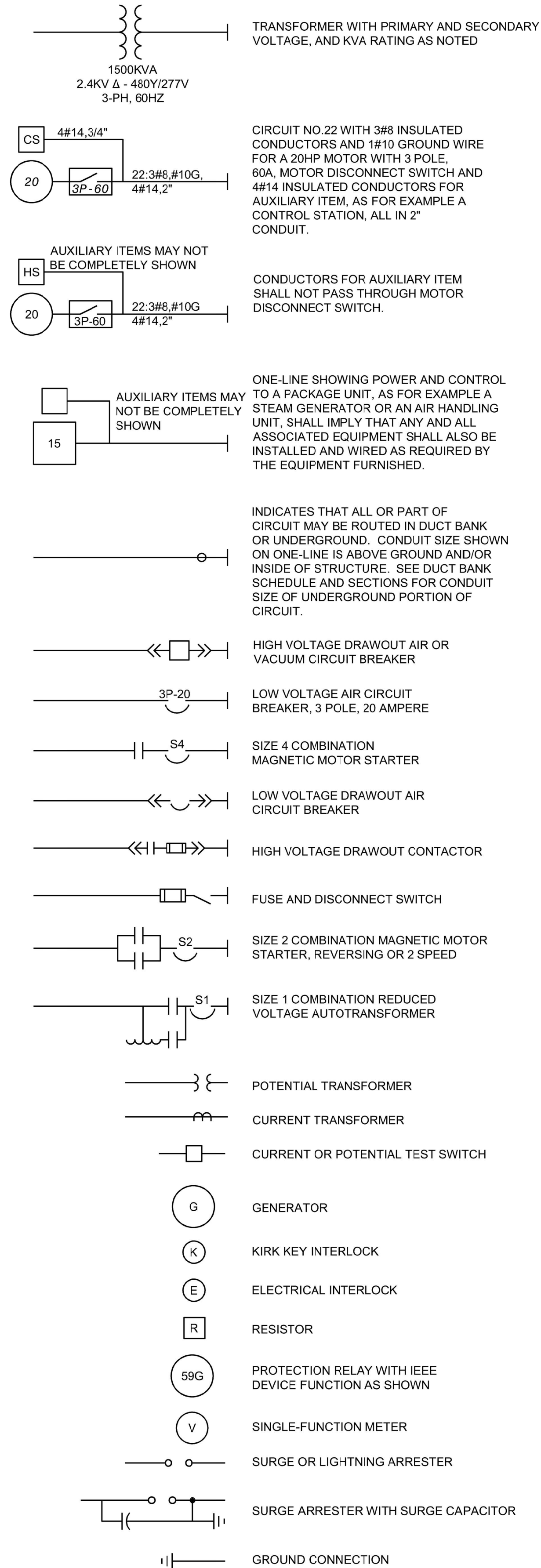
SIGN LOCATION PLAN AND SCHEDULE

CERTIFICATION:
WILLIAM R. COTE
P.E. NUMBER: 53746
DATE: FEBRUARY 19, 2024

FILE NAME:
SIGN LOCATION.dwg
PROJECT NO.:
SHEET:
S14

ELECTRICAL LEGENDS

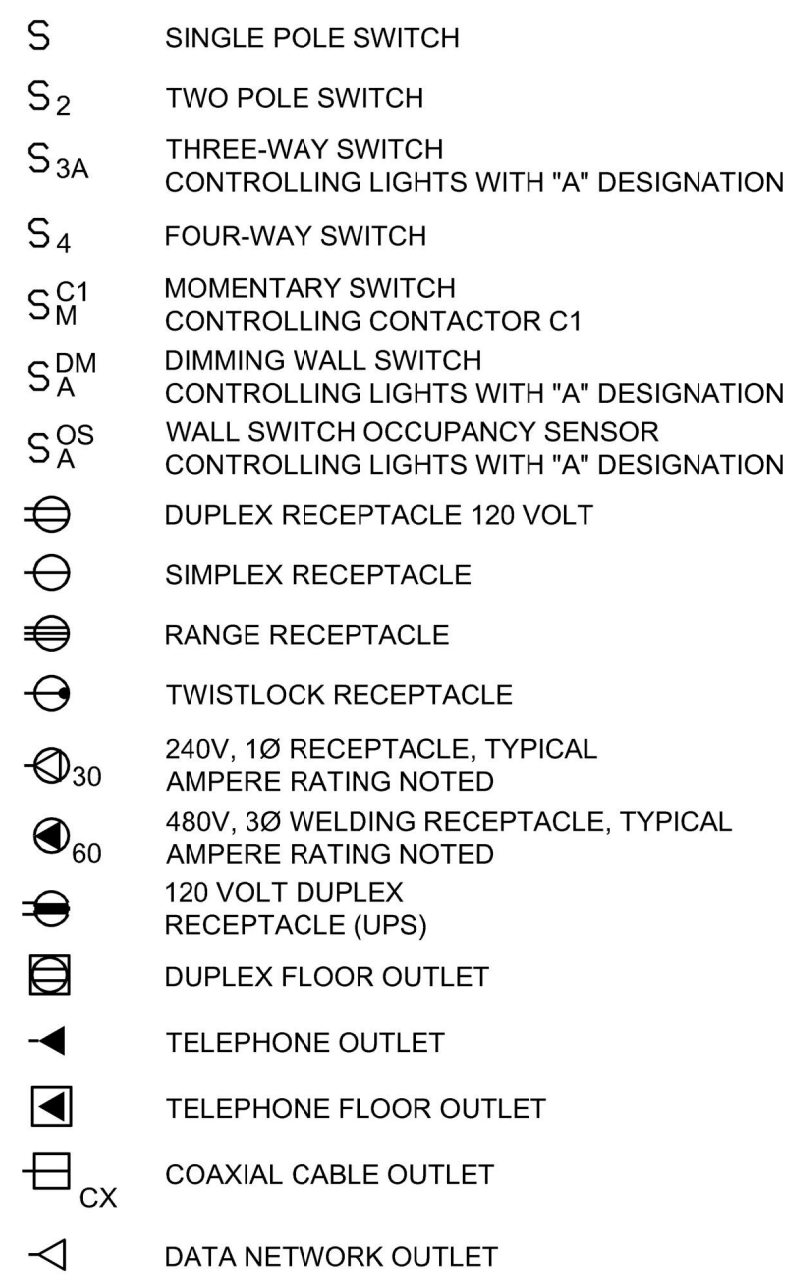
ONE-LINE DIAGRAM LEGEND



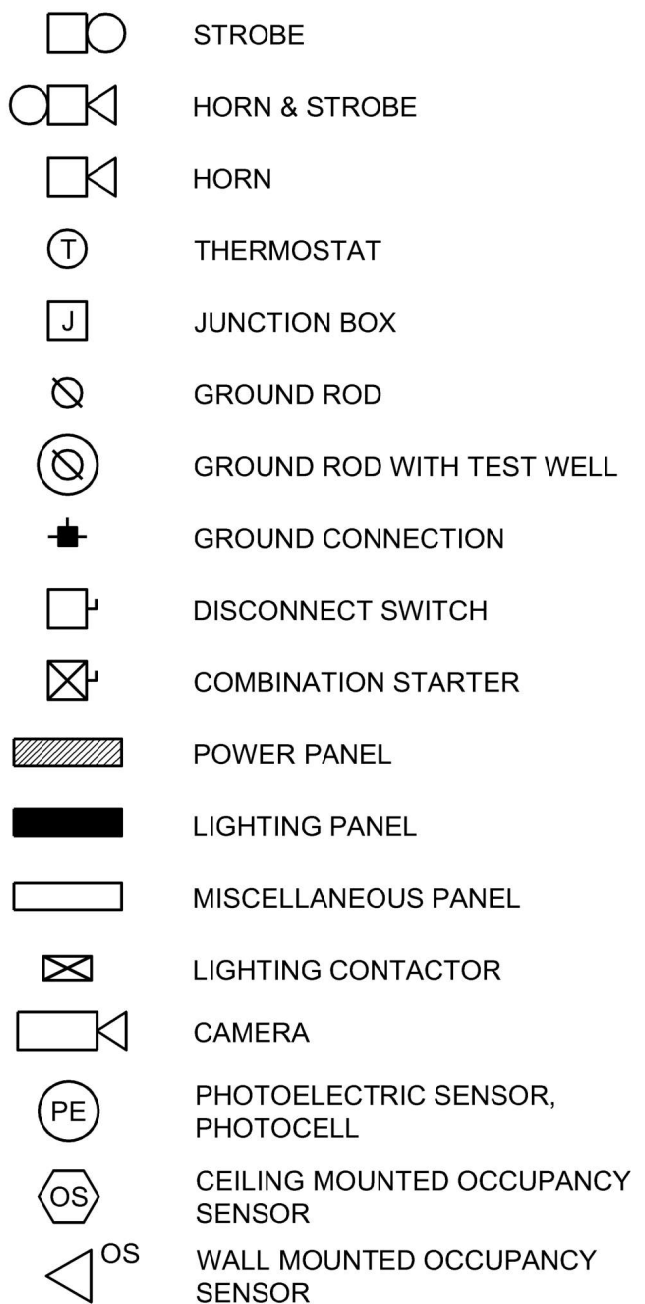
SCHEMATIC SYMBOLS



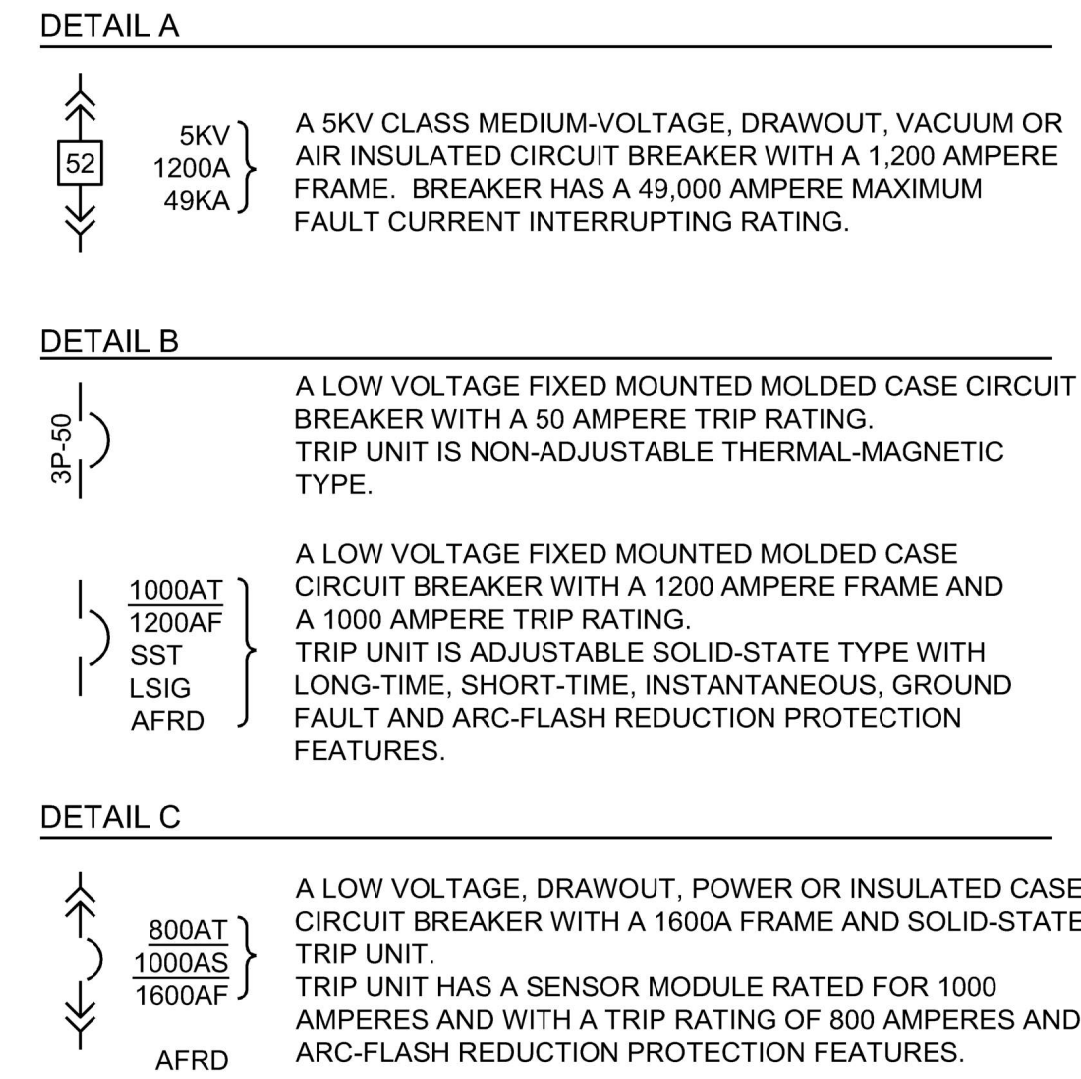
SWITCH & OUTLET SYMBOLS



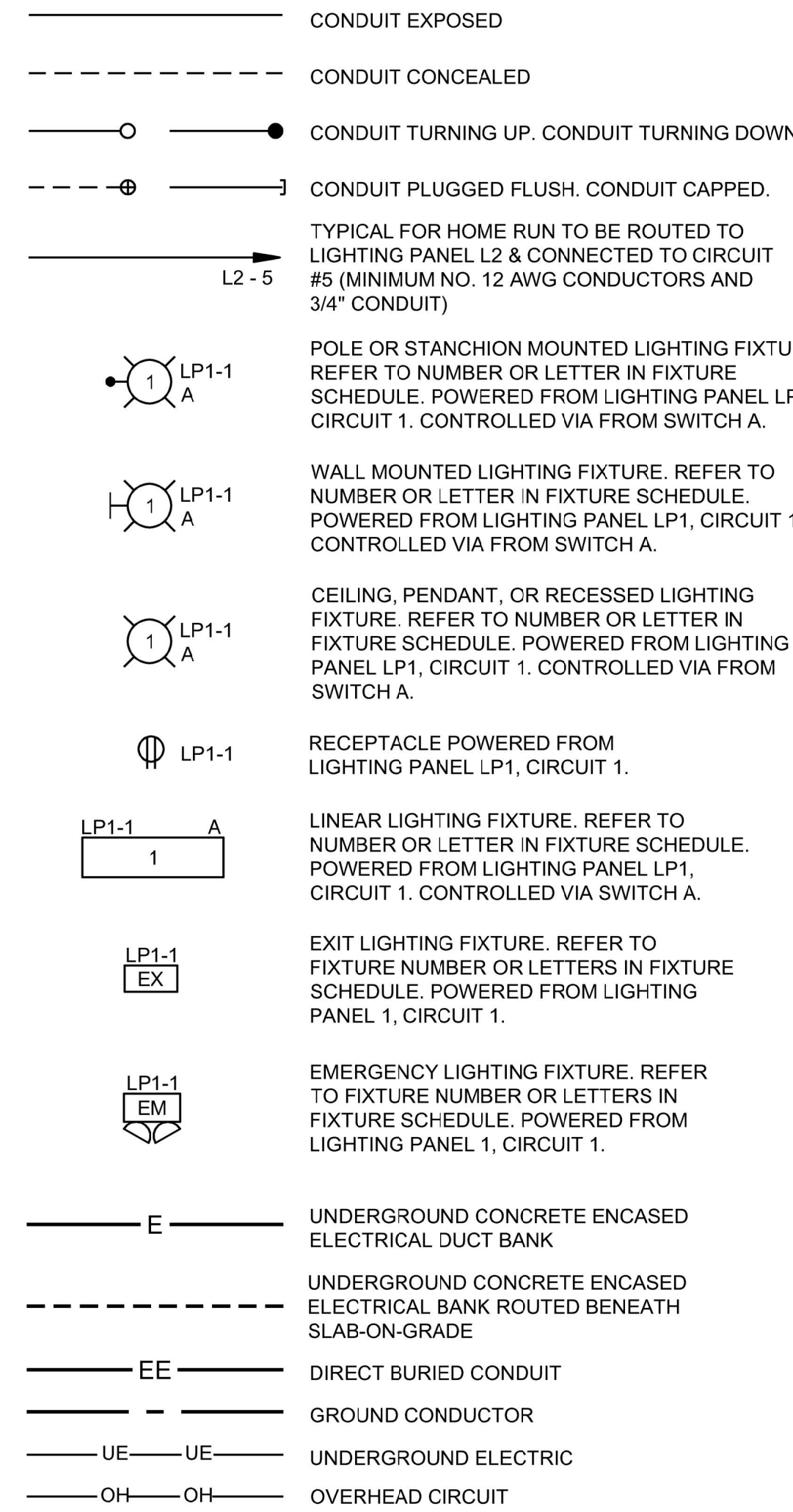
MISCELLANEOUS SYMBOLS



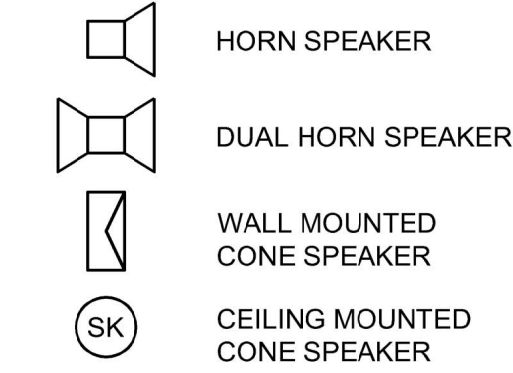
BREAKER DETAILS



CONDUIT & WIRING INSTALLATION LEGEND



COMMUNICATION SYMBOLS



PROTECTION/RELAY DEVICE NUMBERS

- 25 - SYNCHRONIZING OR SYNCHRONISM-CHECK DEVICE
- 27 - UNDERVOLTAGE RELAY
- 32 - DIRECTIONAL POWER RELAY
- 37 - UNDERCURRENT OR UNDERPOWER RELAY
- 46 - REV. PHASE OR PHASE-BAL. CURRENT RELAY
- 47 - PHASE SEQ. OR PHASE BAL. VOLTAGE RELAY
- 49 - MACHINE OR TRANSFORMER THERMAL RELAY
- 50 - INSTANTANEOUS OVERCURRENT
- 51 - AC TIME OVERCURRENT RELAY
- 52 - AC CIRCUIT BREAKER
- 59 - OVERVOLTAGE RELAY
- 63 - PRESSURE SWITCH
- 64 - GROUND DETECTOR RELAY
- 67 - AC DIRECTIONAL OVERCURRENT RELAY
- 71 - LIQUID OR GAS LEVEL RELAY
- 81 - FREQUENCY RELAY
- 83 - AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY
- 86 - LOCKOUT RELAY
- 87 - DIFFERENTIAL PROTECTIVE RELAY

**FOR BID PURPOSES ONLY
NOT FOR CONSTRUCTION**

UPPER OCKLAWAHA RIVER BASIN
BURRELL LOCK REHABILITATION
LAKE COUNTY, FLORIDA

ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT
P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: H.V.T. DATE: 2-19-2024 REVIEWER: -

SCALE: NTS DESIGNER: - SECTION CHIEF: -

ELECTRICAL
LEGEND

BLACK & VEATCH

Black & Veatch Corporation
Certificate No. 8132
1715 N. Westshore Blvd. Suite 725
Tampa, Florida 33607

CERTIFICATION:

DAVID MARTINS
P.E. NUMBER: 91865
DATE: FEBRUARY 19, 2024

FILE NAME: E-001.dwg
PROJECT NO.: 417482
SHEET: E-001

NO.	REVISION	BY	DATE	APPROVED	DATE
	ISSUED FOR BID	D.M.	2-19-24	J.D.	2-19-24

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OVERALL PROJECT SCOPE

THE MAIN SCOPE OF THIS PROJECT IS TO REMOVE THE ELECTRICALLY DRIVEN GATE SYSTEM AND SLIDE GATES AND REPLACE THEM WITH A HYDRAULIC SYSTEM THAT WILL OPERATE THE MITER GATES AND THE SLIDE GATES.

SHEET NOTES

1. EXISTING 4" UNDERGROUND CONDUIT (1). REMOVE AND DEMO EXISTING POWER AND CONTROL CONDUCTORS NOT IN USE. PROVIDE NEW DEDICATED 2#8, 1#8G FROM NEW PANEL PP2 (REFER TO SHEET E-602 FOR LOCATION) TO EACH NEW HPU.
2. EXISTING 4" CONDUIT INSTALLED UNDERGROUND UNDER THE CHANNEL. COMBINE POWER WITH CONTROLS AND INSTRUMENTATION ONLY ON THIS SECTION.
3. PROVIDE A NEW DEDICATED 2#10, 1#10G, IN A 2" C FROM NEW PANEL PP2 (REFER TO SHEET E-602) TO EACH HPU. FIELD LOCATE CONDUIT STUB UP LOCATIONS.
4. NEW 2" C FOR CONTROLS AND INSTRUMENTATION

**FOR BID PURPOSES ONLY
NOT FOR CONSTRUCTION**

NO.	REVISION	BY	DATE	APPROVED	DATE

UPPER OCKLAWAHA RIVER BASIN
BURRELL LOCK REHABILITATION
LAKE COUNTY, FLORIDA

ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT
P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: H.V.T. DATE: 2-19-2024 REVIEWER: _____

SCALE: NTS DESIGNER: _____ SECTION CHIEF: _____

OVERALL SITE PLAN

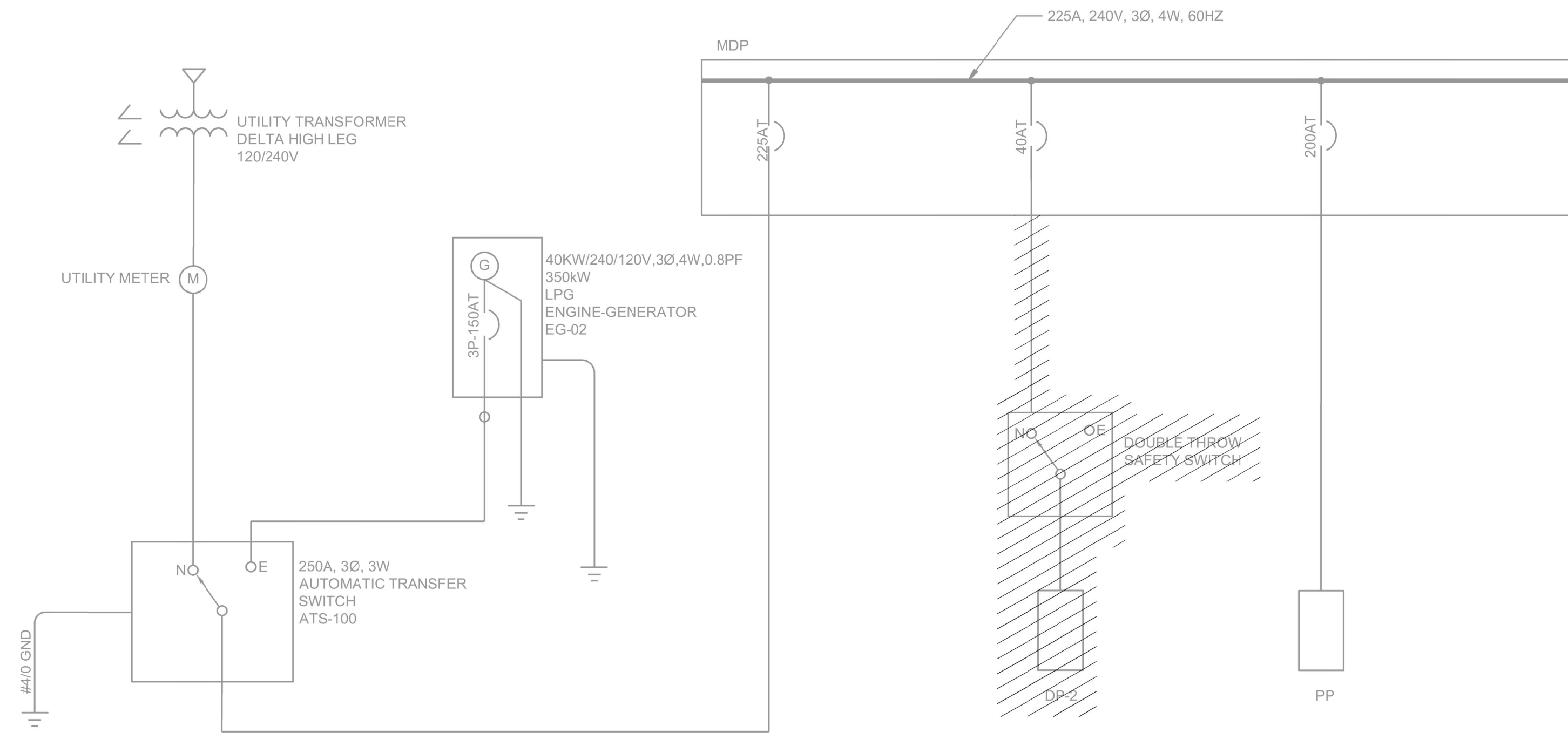
BLACK & VEATCH

Black & Veatch Corporation
Certificate No. 8132
1715 N. Westshore Blvd., Suite 725
Tampa, Florida 33607

CERTIFICATION:
DAVID MARTINS
P.E. NUMBER: 91866
DATE: FEBRUARY 19, 2024

FILE NAME: E-101.dwg
PROJECT NO.: 417482
SHEET: E-101

C:\w\working\bw_america\1743849\E-101.rvt



BOND TO GROUND RING

BOND TO GROUND RING

BOND TO GROUND RING

MAIN BREAKER

DISTRIBUTION PANEL #2

DISTRIBUTION PANEL #1

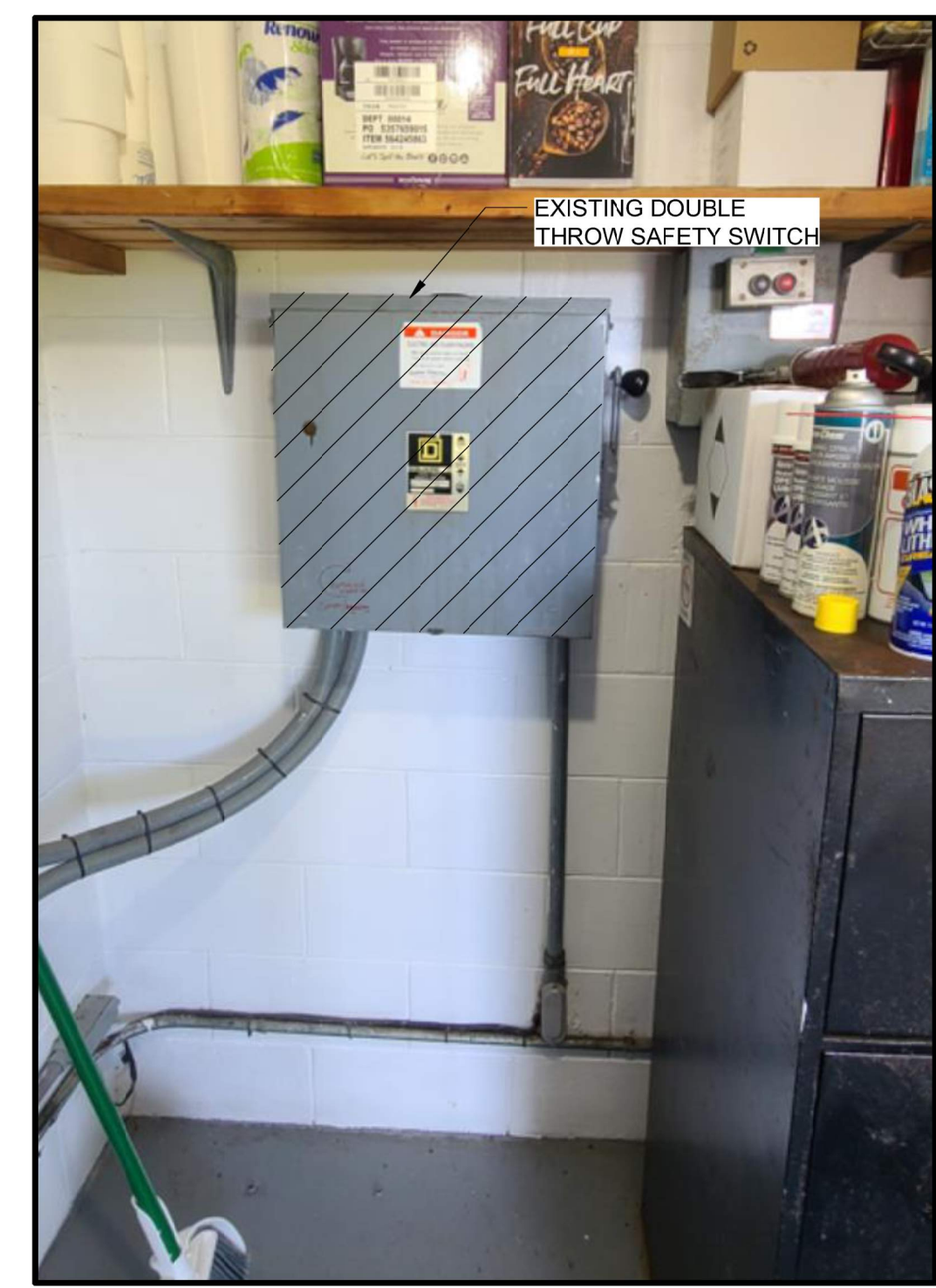
POWER DISTRIBUTION ONE-LINE DIAGRAM - DEMOLITION



EXISTING ELECTRICAL ROOM - SOUTH WALL ELEVATION



EXISTING ELECTRICAL ROOM - EAST WALL ELEVATION - DEMO



EXISTING ELECTRICAL ROOM - WEST WALL ELEVATION - DEMO

**FOR BID PURPOSES ONLY
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NO.	REVISION	BY	DATE	APPROVED	DATE

UPPER OCKLAWAHA RIVER BASIN
BURRELL LOCK REHABILITATION
LAKE COUNTY, FLORIDA

ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT
P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: H.V.T. DATE: 2-19-2024 REVIEWER:

SCALE: NTS DESIGNER: SECTION CHIEF:

ONE-LINE DIAGRAM
DEMOLITION

BLACK & VEATCH
Black & Veatch Corporation
Certificate No. 8132
1715 N. Westshore Blvd. Suite 725
Tampa, Florida 33607

CERTIFICATION:
DAVID MARTINS
P.E. NUMBER: 91665
DATE: FEBRUARY 19, 2024

FILE NAME:
E-601.dwg
PROJECT NO.:
417482
SHEET:
E-601

