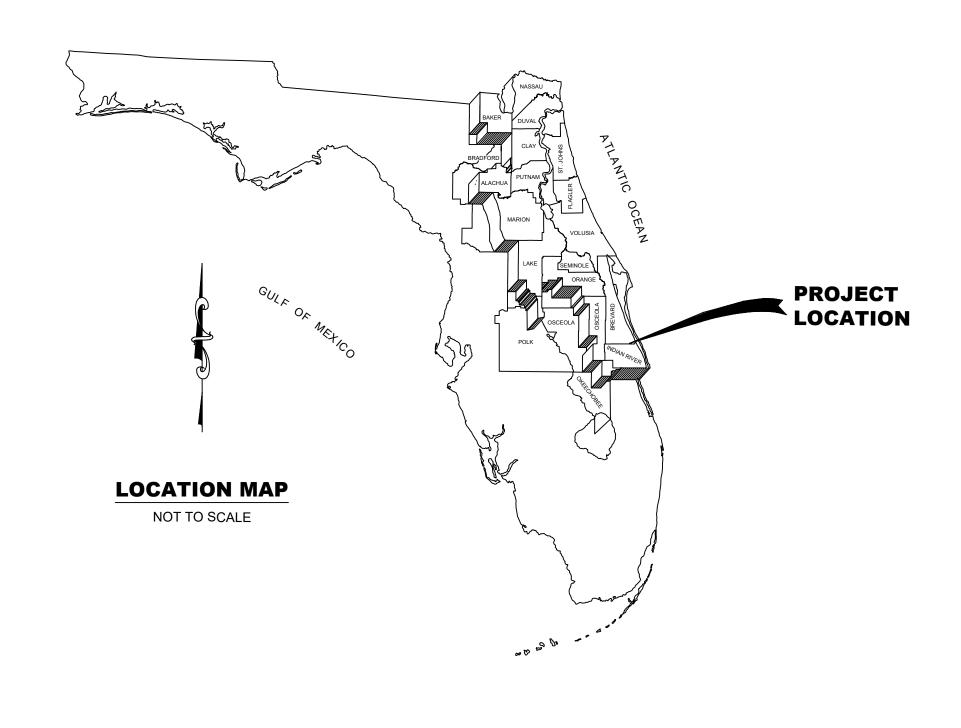
# **ST. JOHNS RIVER WATER MANAGEMENT DISTRICT UPPER ST. JOHNS RIVER BASIN STRUCTURE 157 REHABILITATION BREVARD COUNTY, FLORIDA**

## **NGVD 1929**

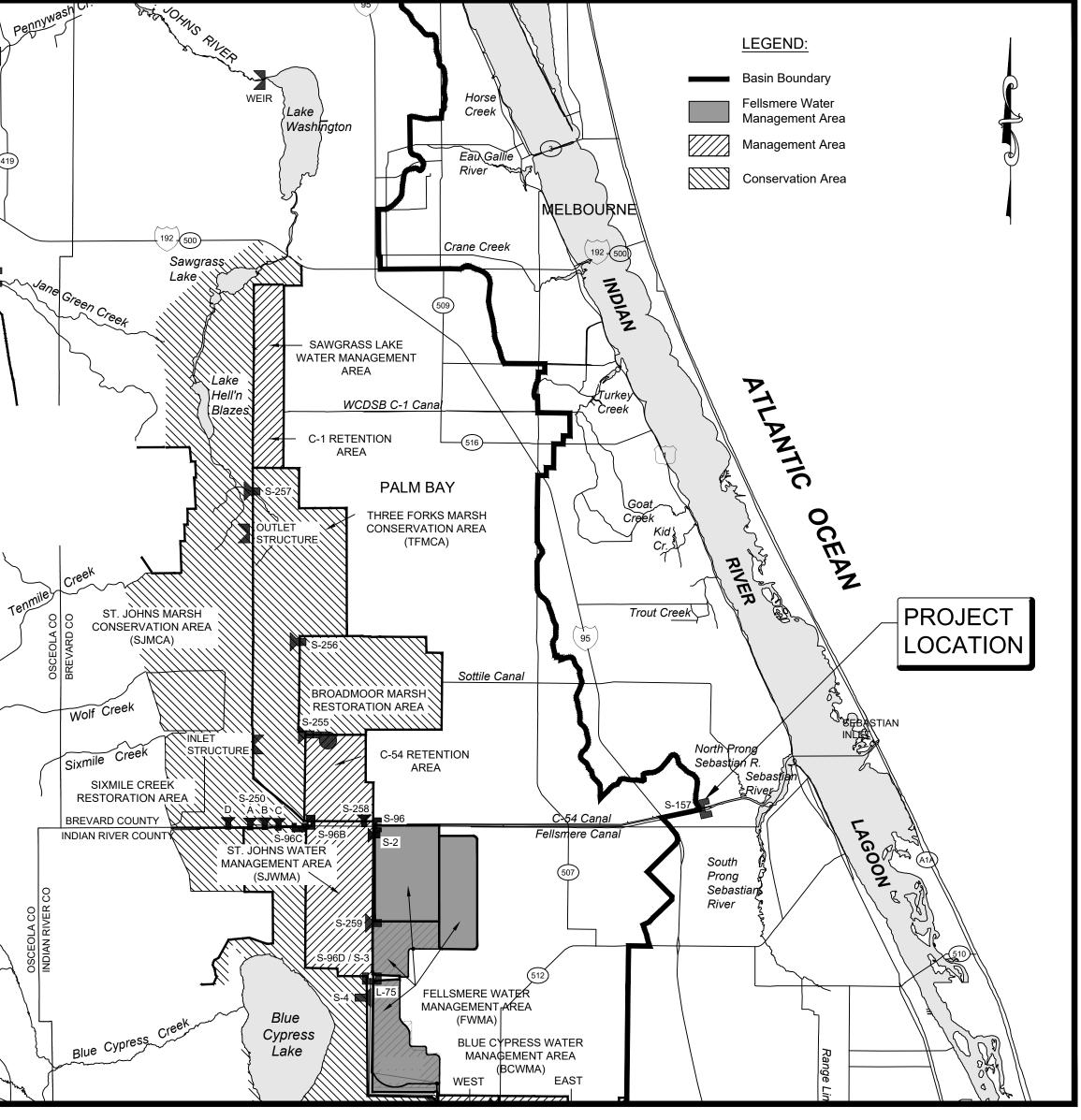
ALL ELEVATIONS DEPICTED HEREIN REFERENCE NGVD 1929 UNLESS OTHERWISE NOTED. THE CONVERSION FACTOR TO NAVD 1988 IS -1.47.



**ENGINEER'S NOTES** 

- 1. 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.'

$\triangle$	ISSUED FOR BID	N.J.G.	04/26/23	W.R.C.	04/26/23
NO.	REVISION	BY	DATE	APPROVED	DATE
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VICINITY MAP



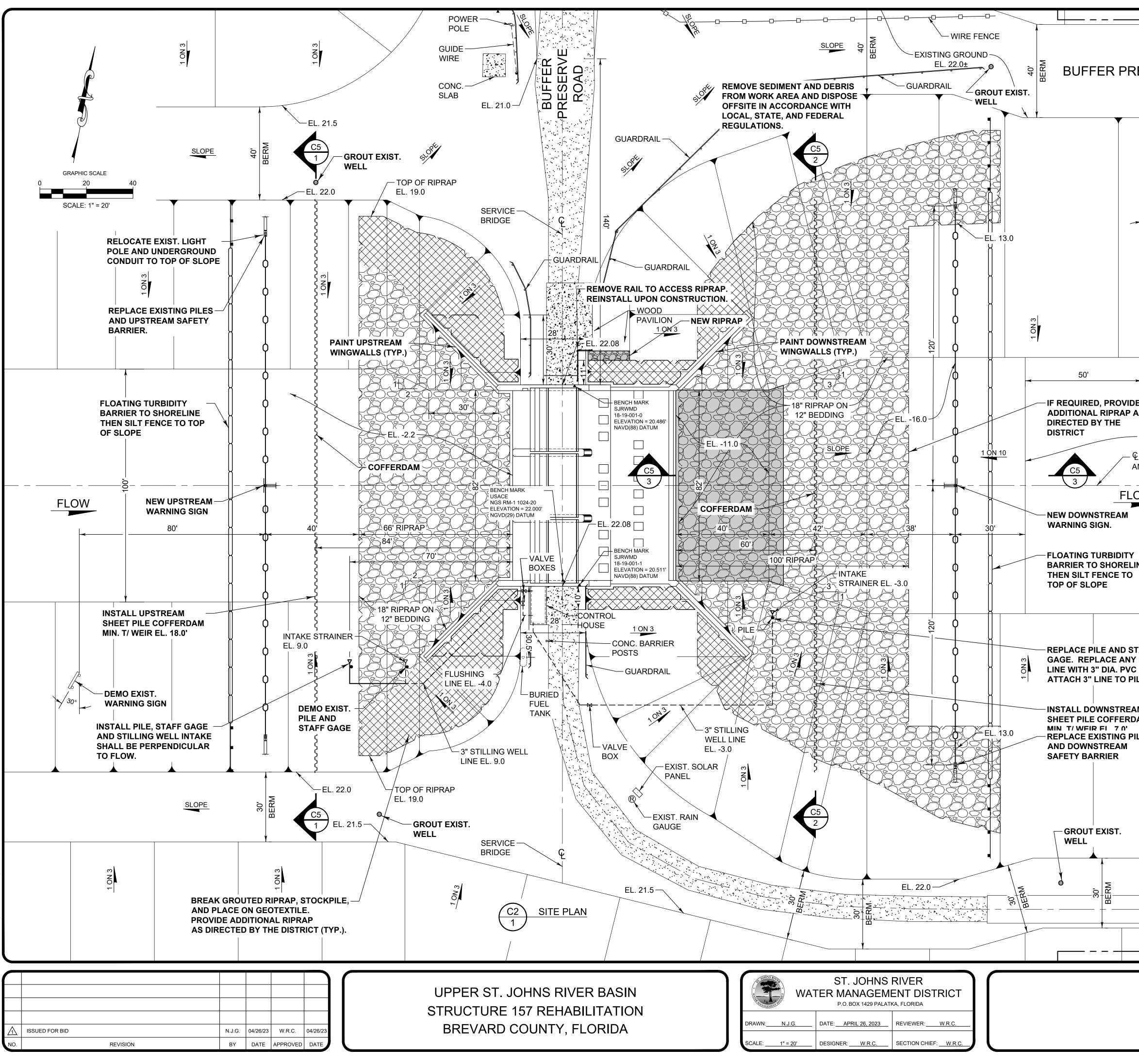
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S24	GATE REHABILITATION ELEVATION, SECTIONS, DETAILS & NOTES
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	ALWAYS CALL



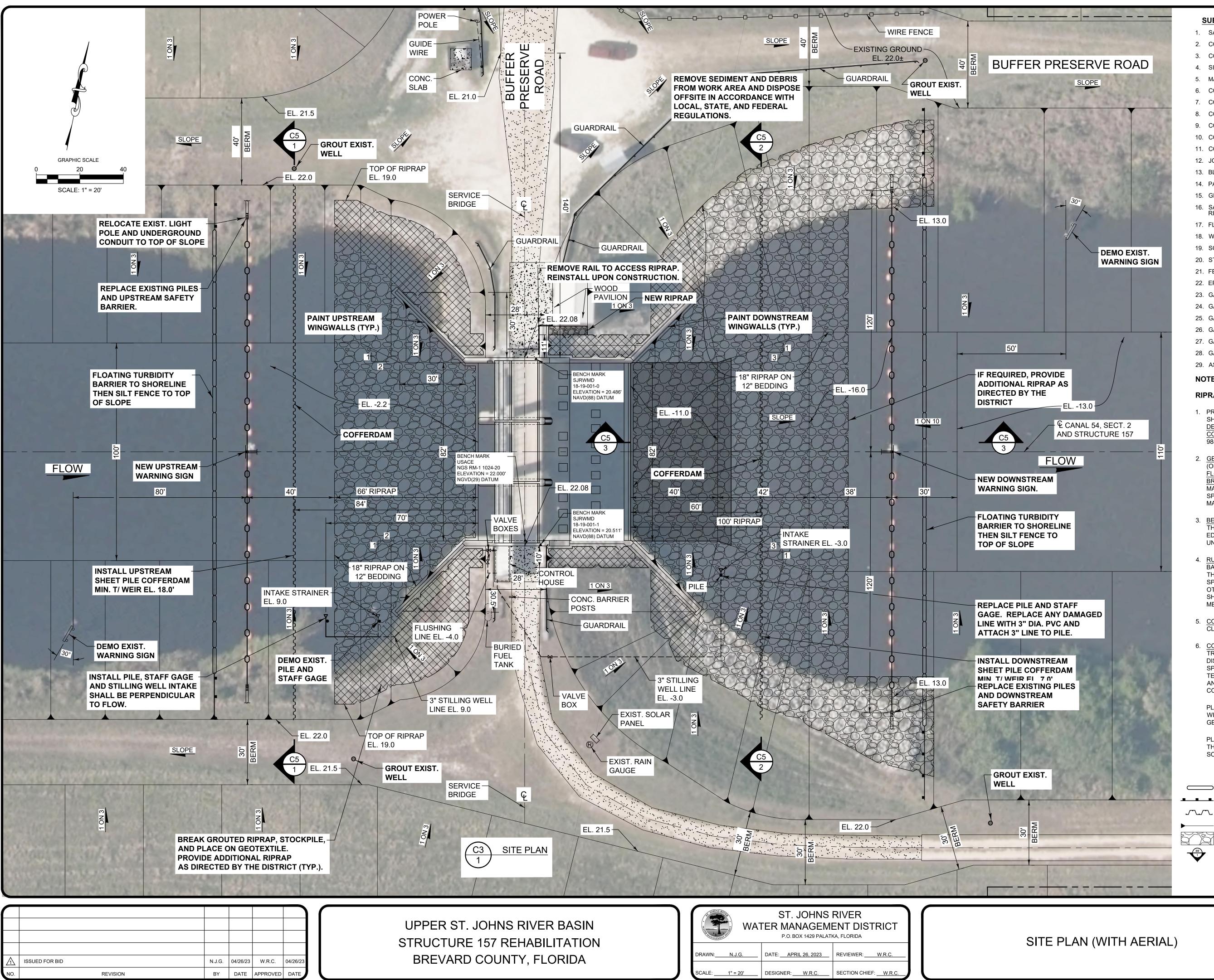
FOR BID PURPOSES ONLY **NOT FOR CONSTRUCTION** 

CERTIFICATION:	DRAWING FILENAME:	
	S-157 PLAN.dwg	
WILLIAM R. COTE	SHEET:	
P.E. NUMBER:53746		
DATE: APRIL 26, 2023	<u> </u>	



	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.
RESERVE ROAD	3. INSTALL COFFERDAMS UPSTREAM AND DOWNSTREAM OF STRUCTURE.
	4. PUMP WATER FROM THE WORK AREA AND PROVIDE CONTINUOUS PUMPING TO KEEP THE WORK AREA
SLOPE	DEWATERED. PUMPING SHALL BE IN A MANNER THAT WILL MINIMIZE SILTATION INTO THE WATERWAYS.
<b>v</b>	<ul> <li>6. THE DISTRICT AND CONTRACTOR SHALL PERFORM A JOINT INSPECTION TO DETERMINE THE FULL EXTENT</li> </ul>
	AND SCOPE OF THE REPAIR WORK. ERODED CONCRETE SURFACES SHALL BE HYDROBLASTED AND THE REMAINING SURFACES POWER WASHED.
	7. INSPECT AND REPAIR CONCRETE SURFACES AS NEEDED.
	<ol> <li>DISCONNECT POWER, REMOVE CABLE DRUM HOISTS AND STORE ON SITE. REFER TO ELECTRIC CABLE DRUM HOIST DRAWING.</li> </ol>
	9. REMOVE ROLLER GATES, PERFORM JOINT INSPECTION, REPAIR AS NEEDED, AND PAINT.
⊥ 30°	10. PREPARE SURFACE AND PAINT ALL EXPOSED SURFACES OF EMBEDDED STEEL COMPONENTS EXCEPT FOR STAINLESS STEEL ITEMS. STAINLESS STEEL SHALL BE POWERWASHED.
	11. REMOVE RAILS FROM THE CONCRETE WALLS AND SHEET PILE WINGWALLS.
	12. REPAIR AND PAINT ALL EXPOSED SURFACES OF EXISTING SHEET PILING.
	13. INSTALL NEW RAILS ON THE CONCRETE WALLS AND SHEET PILE WINGWALLS.
DEMO EXIST. WARNING SIGN	14. REPLACE UPSTREAM AND DOWNSTREAM SAFETY BARRIERS AND PILES.
	15. BREAK GROUTED RIPRAP AND REGRADE. 16. STRIP AREAS WHERE NEW RIPRAP IS REQUIRED. PROVIDE ADDITIONAL RIPRAP AND BEDDING STONE TO
	EXISTING RIPRAP AREAS AS DIRECTED BY THE DISTRICT.
	17. INSTALL NEW PILES, STAFF GAGES, AND SOLAR MARINE BEACONS. INSTALL NEW GATE POSITION GUIDES.
	<ol> <li>REPLACE UPSTREAM AND DOWNSTREAM WARNING SIGNS AND INSTALL SOLAR LIGHTS. INSTALL SOLAR MARINE BEACON ATOP CENTER PILE GROUPS.</li> </ol>
	- 19. INSTALL/REPLACE AND EXTEND STILLING WELL LINES AS SHOWN OR DIRECTED BY DISTRICT.
<b>→</b>	20. REINSTALL ROLLER GATES AND CABLE DRUM HOISTS. RECONNECT POWER.
	21. PERFORM DRY TEST OPERATION OF GATES AND OPERATORS. ADJUST AS NEEDED.
AS	22. ALLOW WORK AREA TO FILL WITH WATER AND TEST OPERATION OF GATES AND OPERATORS UNDER NORMAL OPERATING CONDITIONS. ADJUST AS NEEDED. REMOVE COFFERDAMS.
-EL13.0	23. REMOVE FENCING AND RAILS FROM THE CONCRETE STRUCTURE AND INSTALL NEW ALUMINUM FENCING AND RAILS.
€ CANAL 54, SECT. 2	24. GROUT EXISTING WELLS.
AND STRUCTURE 157	25. DEMOBILIZE INCLUDING SITE CLEAN UP, RESTORATION OF FINAL GRADE AND GRASSING TO ORIGINAL CONDITION, AND REMOVAL OF ALL EROSION AND SEDIMENT CONTROLS.
	- COFFERDAMS:
.OW	<ol> <li>THE CONTRACTOR SHALL DESIGN, SUPPLY, INSTALL, AND REMOVE ALL TEMPORARY COFFERDAMS AS NECESSARY TO PERFORM THE WORK. THE DESIGN SHALL BE SIGNED AND SEALED BY A FLORIDA LICENSED PROFESSIONAL ENGINEER AND SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF USACE ENGINEERING MANUAL 1110-2-2504 DESIGN OF SHEET PILE WALLS.</li> </ol>
(	2. COFFERDAMS SHALL BE DESIGNED FOR ADEQUATE DEPTHS AND HEIGHTS, SHALL BE SAFELY DESIGNED AND CONSTRUCTED, AND SHALL BE AS WATERTIGHT AS NECESSARY FOR THE PROPER PERFORMANCE OF THE WORK WHICH MUST BE DONE BEHIND THEM.
-INE	3. ANY FILL REQUIRED FOR CRANE ACCESS SHALL BE LIMITED TO AREAS ABOVE THE WATER LINE. OFF ROAD TRUCKS FOR HAULING FILL SHALL NOT BE PERMITTED. EXCAVATION OF THE EXISTING LEVEE SLOPES SHALL NOT BE PERMITTED AND THE SLOPES AND TOP OF ALL LEVEES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION UPON COMPLETION OF THE WORK.
	4. THE CONSTRUCTION AND MAINTENANCE OF ALL COFFERDAMS SHALL BE IN CONFORMANCE WITH ALL FEDERAL, STATE, AND LOCAL PERMITS AND REGULATIONS.
	5. FOLLOWING COMPLETION OF THE COFFERDAMS, THE CONTRACTOR SHALL PUMP OUT THE AREA BEHIND THE COFFERDAMS IN A MANNER THAT WILL MINIMIZE SILTATION INTO THE WATERWAYS.
STAFF Y DAMAGED	6. DURING INSTALLATION AND REMOVAL OF COFFERDAMS, CARE SHALL BE TAKEN NOT TO DISTURB OR OTHERWISE INJURE ANY ADJACENT STRUCTURES.
C AND PILE.	GENERAL:
· <b></b> ·	1. ALL PROPOSED WORK IS SHOWN IN BOLD.
AM DAM	2. ALL ELEVATIONS ARE NGVD1929 UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SURVEY CONTROL AS REQUIRED FOR COMPLETION OF THE WORK.
PILES	3. ACCESS TO THE PROJECT SITE SHALL BE VIA BABCOCK ROAD TO BUFFER PRESERVE ROAD WHICH IS BETWEEN THE SOUTH SIDE OF THE ST. SEBASTIAN RIVER STATE PARK AND THE NORTH SIDE OF THE C-54 CANAL.
	<ol> <li>THE CONTRACTOR SHALL PROVIDE ON SITE STORAGE AS NECESSARY TO HOUSE EQUIPMENT AND SUPPLIES. THE USE OF DISTRICT CONTROL BUILDINGS FOR STORAGE WILL NOT BE ALLOWED.</li> </ol>
	5. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL UTILITIES AND OTHER SITE IMPROVEMENTS FROM
	DAMAGE WHETHER OR NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR REPAIRS TO UTILITIES AND OTHER SITE IMPROVEMENTS DAMAGED DURING CONSTRUCTION.
	FLOATING TURBIDITY BARRIER     EXISTING RIPRAP WITH CONCRETE FILL
	SHEET PILE
	DIRECTION OF SLOPE
	EXISTING RIPRAP FENCING
	SECTION SHEET NUMBER
	FOR BID PURPOSES ONLY NOT FOR CONSTRUCTION

	CERTIFICATION:	FILE NAME: S-157 PLAN.dwg
SITE PLAN		PROJECT NO.:
	WILLIAM R. COTE P.E. NUMBER: <u>53746</u>	SHEET:
	DATE: APRIL 26, 2023	C2



ST. JOHNS RIVER WATER MANAGEMENT DISTRICT P.O. BOX 1429 PALATKA, FLORIDA			ENT DISTRICT
	DRAWN: N.J.G.	DATE: <u>APRIL 26, 2023</u>	REVIEWER: W.R.C.
Ĩ,	SCALE: <u>1" = 20'</u>	DESIGNER: W.R.C.	SECTION CHIEF: W.R.C.

### SUBMITTALS:

- 1. SAFETY PLAN FOR INFORMATION ONLY
- 2. CONSTRUCTION SCHEDULE
- 3. COFFERDAM DESIGN CALCULATIONS AND DRAWINGS
- 4. SILT FENCE AND TURBIDITY BARRIER DATA SHEETS
- 5. MANATEE PROTECTION SCREEN AT DISCHARGE PIPE CULVERT
- 6. CONCRETE MORTAR REPAIR DATA SHEETS
- 7. CONCRETE MORTAR EVAPORATION RETARDANT DATA SHEETS
- 8. CONCRETE TOPCOAT DATA SHEETS
- 9. CONCRETE AND REBAR BONDING AGENT DATA SHEETS
- 10. CONCRETE CRACK WITH FLOWING WATER REPAIR PRODUCT DATA SHEETS
- 11. CONCRETE MIX DESIGN (IF NECESSARY)
- 12. JOINT CAULK DATA SHEETS
- 13. BLAST MEDIA SOURCE AND DATA SHEETS
- 14. PAINT AND PROTECTIVE COATINGS DATA SHEETS
- 15. GEOTEXTILE PRODUCT DATA SHEETS
- 16. SAND BACKFILL, BEDDING STONE, DITCH LINING, AND BANK AND SHORE RIPRAP SOURCE, GRADATION, AND SPECIFIC GRAVITY
- 17. FLOATING SAFETY BARRIER DATA SHEETS AND SHOP DRAWINGS
- 18. WARNING SIGN SHOP DRAWINGS
- 19. SOLAR LIGHT AND SOLAR MARINE BEACON LIGHT DATA SHEETS
- 20. STAFF GAUGE AND GATE POSITION GUIDE SHOP DRAWINGS
- 21. FENCE AND HANDRAIL SHOP DRAWINGS. BUTYL RUBBER COATING.
- 22. EPOXY ANCHOR DATA SHEETS
- 23. GATE RAIL AND CLIPS DATA SHEETS
- 24. GATE WHEEL BEARINGS DATA SHEETS AND DETAILS
- 25. GATE ANODE DATA SHEETS
- 26. GATE SEAL DATA SHEETS
- 27. GATE STAINLESS STEEL BOLT DATA SHEETS
- 28. GATE BRONZE NUT DATA SHEETS
- 29. AS-BUILT DRAWINGS
- **NOTE SPECIFICATIONS:**

### **RIPRAP SYSTEM SPECIFICATIONS:**

- PROVIDE RUBBLE RIPRAP, BEDDING STONE, AND GEOTEXTILE FABRIC AT THE LOCATIONS SHOWN ON THE DRAWINGS. THE WORK SHALL BE IN ACCORDANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, (FDOT) LATEST EDITION, CONFORMING TO FDOT SECTIONS 514, 530, AND 985, UNLESS OTHERWISE NOTED HEREIN.
- GEOTEXTILE FABRIC WHERE REQUIRED SHALL BE MIRAFI FILTERWEAVE WOVEN NO. FW 404 (OR APPROVED EQUAL) AND SHALL COMPLY WITH THE REQUIREMENTS SECTION 514 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. ADDITIONALLY, THE GEOTEXTILE FABRIC MATERIAL SHALL CONFORM TO THE REQUIREMENTS FDOT TYPE D-2 OF THE FDOT SPECIFICATION SECTION 985. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
- BEDDING STONE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 530 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION, LATEST EDITION. THE FINAL BLANKET THICKNESS SHALL BE A MINIMUM OF 12 INCHES. THE MINIMUM UNIT WEIGHT OF STONE SHALL BE 145 PCF (SATURATED SURFACE DRY).
- RUBBLE RIPRAP SHALL COMPLY WITH THE REQUIREMENTS OF FDOT SECTION 530-2.1.3.1 BANK AND SHORE PROTECTION OR 530-2.1.3.2 DITCH LINING, AS DIRECTED BY THE DISTRICT. THE MATERIAL SHALL BE WELL-GRADED, SOUND AND DURABLE, AND SHALL HAVE A MINIMUM SPECIFIC GRAVITY OF 2.3. THE MATERIAL SHALL BE FREE OF CRACKS, SOFT SEAMS OR OTHER STRUCTURAL DEFECTS. THE PIECES SHALL BE ROUGHLY ANGULAR, AND THE LOT SHALL REASONABLY FREE OF THIN, FLAT OR ELONGATED PIECES. CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH FDOT SPECIFICATIONS SECTION 530.
- COMPACTED SAND BACKFILL WHERE REQUIRED SHALL CONSIST OF CLEAN SAND CLASSIFIED AS SW OR SP WITH LESS THAN 5% PASSING THE NO. 200 SIEVE.
- CONSTRUCTION REQUIREMENTS: ALL SLOPES TO BE TREATED WITH RIPRAP SHALL BE TRIMMED TO THE LINES AND GRADES INDICATED BY THE PLANS OR DIRECTED BY THE DISTRICT. THE SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH THE EARTHWORK SPECIFICATIONS. ALL OUTER EDGES AND THE TOP OF RIPRAP WHERE THE RIPRAP TERMINATES SHALL BE FORMED SO THAT THE SURFACE OF THE RIPRAP WILL BE EMBEDDED AND EVEN WITH THE SURFACE OF THE GROUND AND/OR SLOPE. ALL RIPRAP CONSTRUCTION SHALL BEGIN AT THE BOTTOM OF THE SLOPE AND PROGRESS UPWARD.

PLACE A MINIMUM 12-INCH THICK LAYER OF BEDDING STONE UNDER ALL RUBBLE RIPRAP WITHOUT PUNCTURING OR TEARING THE GEOSYNTHETIC MATERIAL. REMOVE AND REPLACE GEOTEXTILE FABRIC DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS.

PLACE RIPRAP FORMING A COMPACT LAYER CONFORMING TO THE NEAT LINES AND THICKNESS SPECIFIED ON THE DRAWINGS. ENSURE THAT RIPRAP DOES NOT SEGREGATE SO THAT SMALLER PIECES EVENLY FILL THE VOIDS BETWEEN THE LARGER PIECES.

**LEGEND** 

- C FLOATING TURBIDITY BARRIER
- SILT FENCE
- SHEET PILE
- DIRECTION OF SLOPE
- EXISTING RIPRAP SECTION SHEET NUMBER SECTION LABEL

### FOR BID PURPOSES ONLY **NOT FOR CONSTRUCTION**

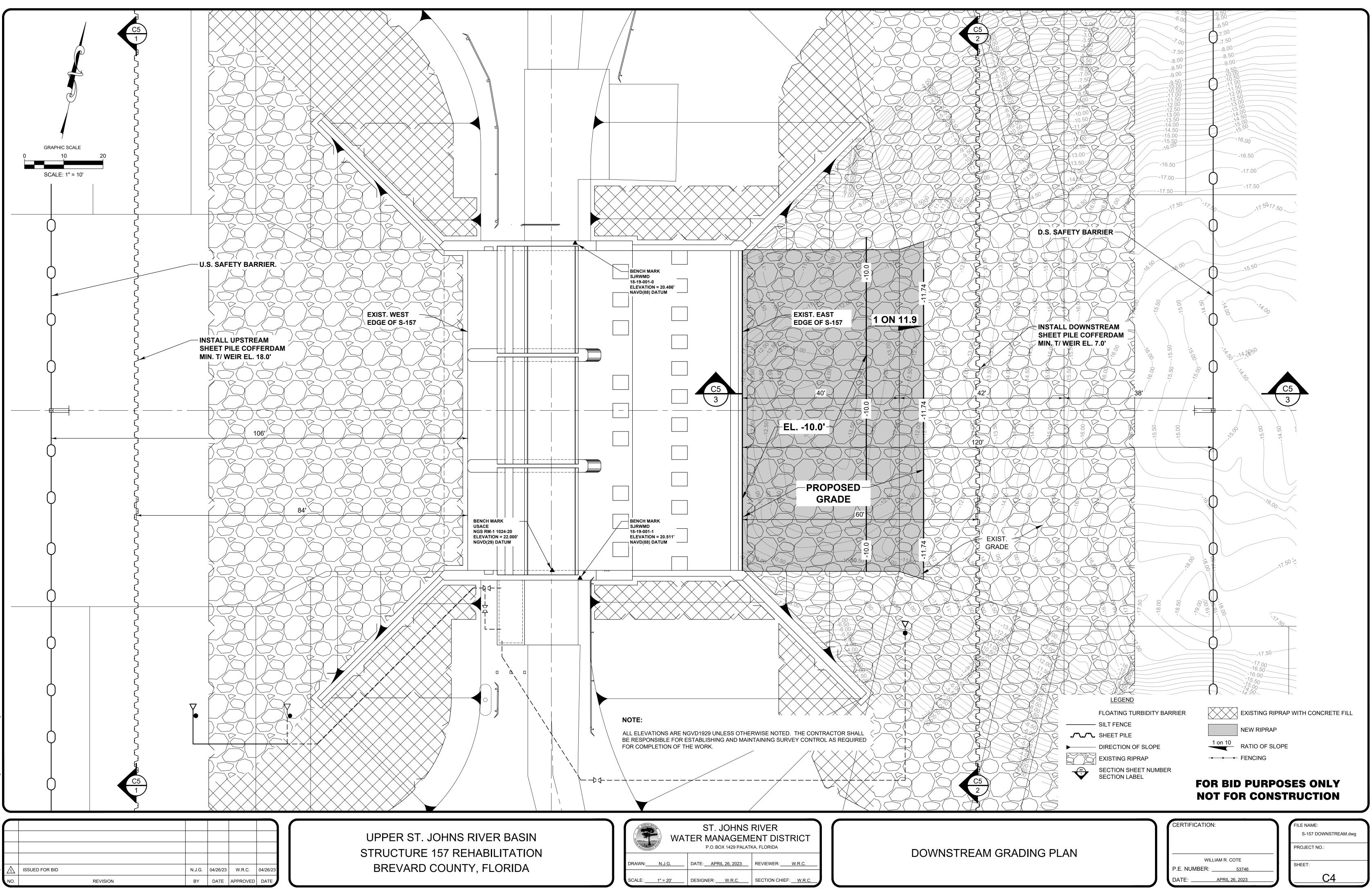
NEW RIPRAP

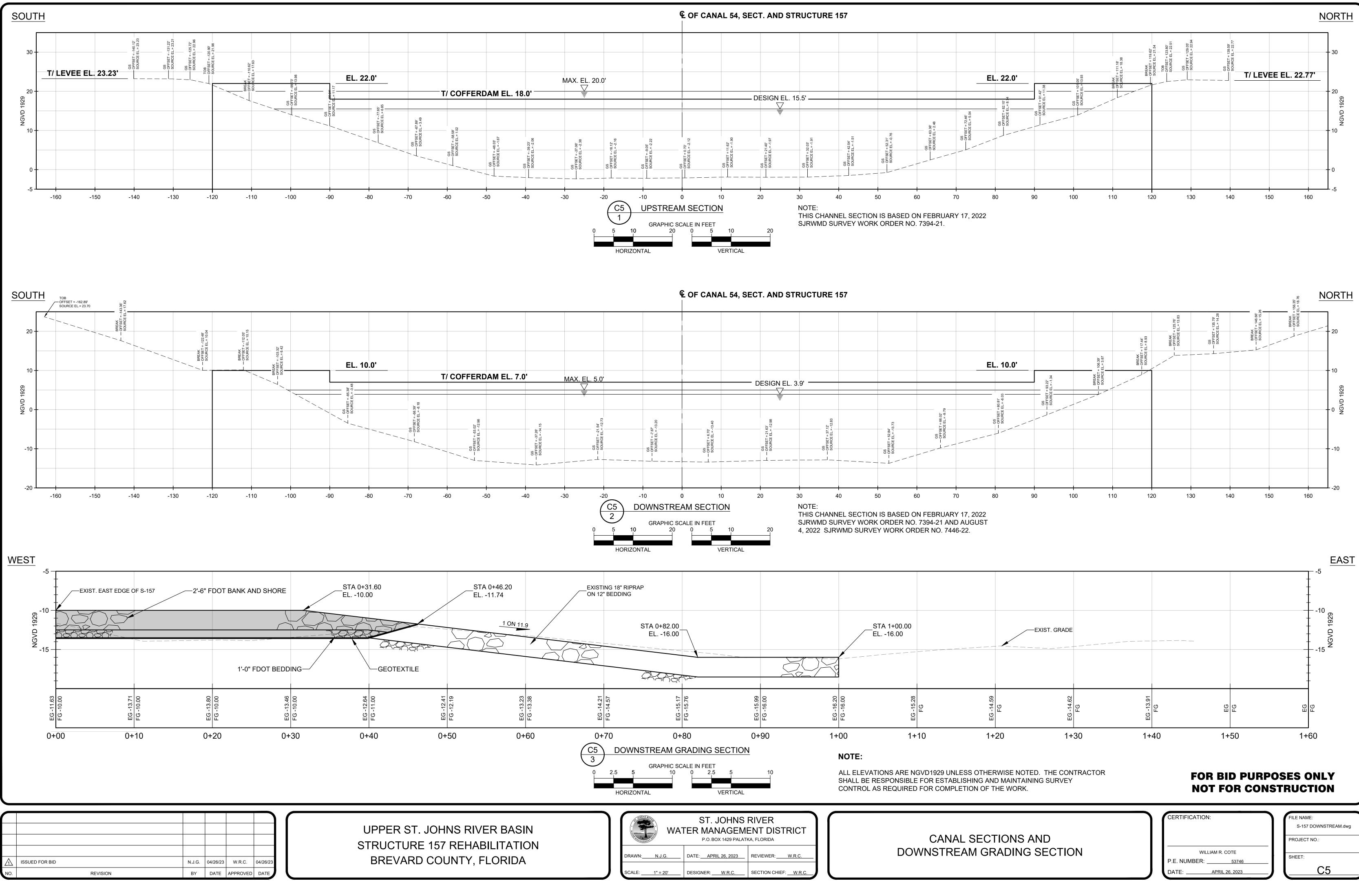
1 on 10 RATIO OF SLOPE

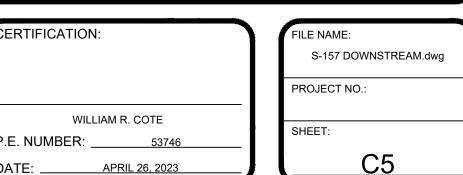
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EXISTING RIPRAP WITH CONCRETE FILL

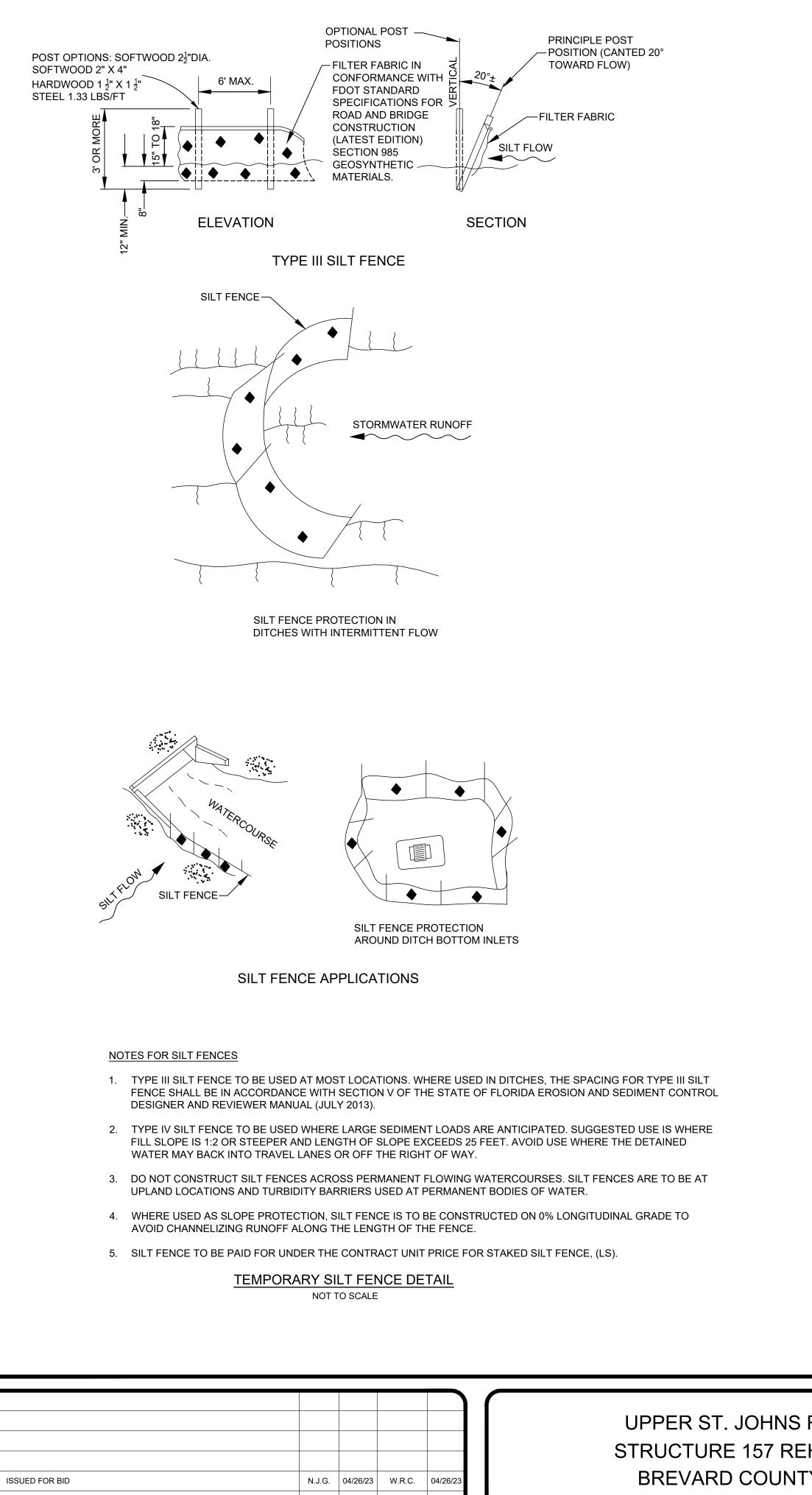
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WILLIAM R. COTE	SHEET:
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DATE: APRIL 26, 2023	





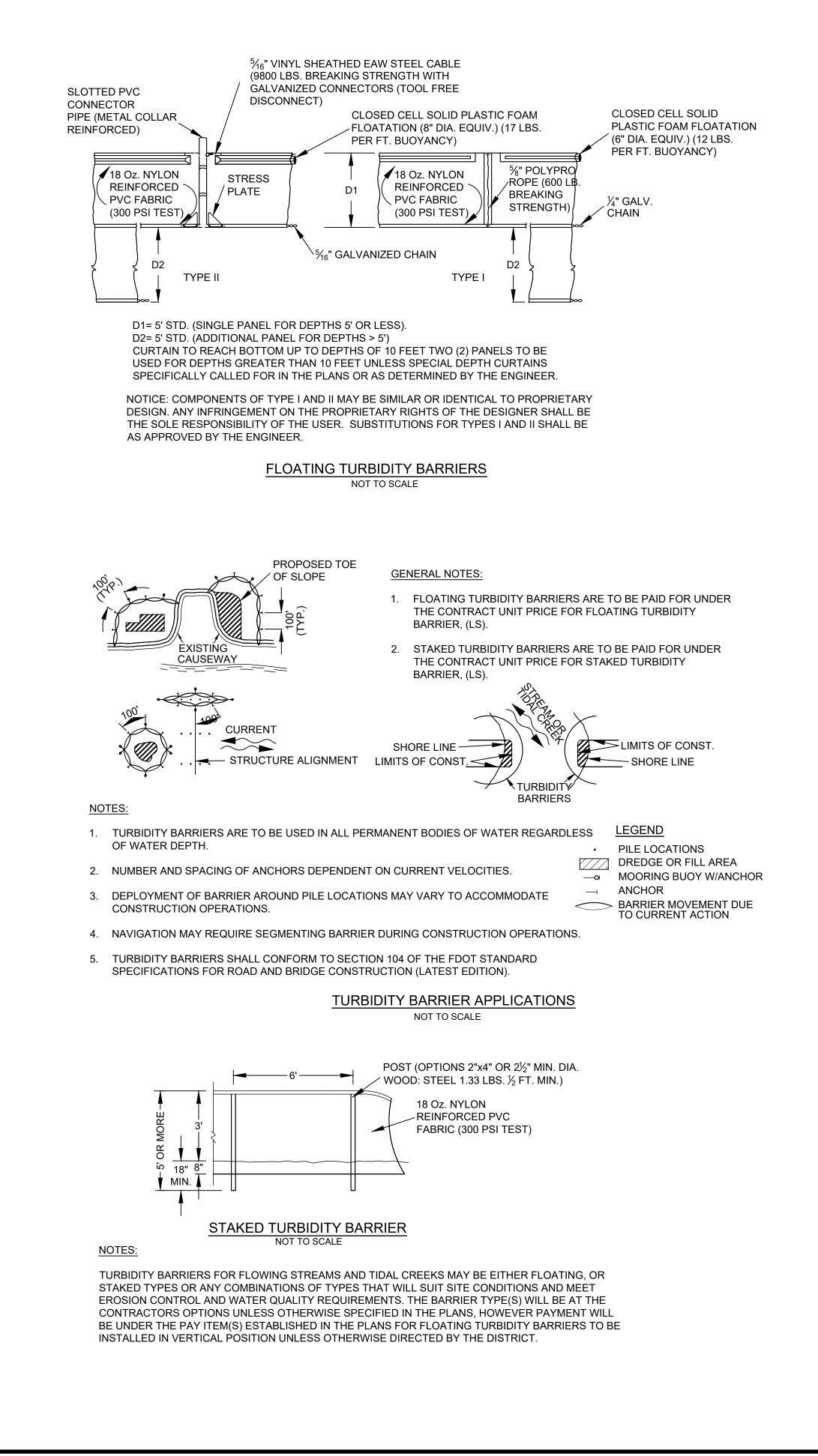






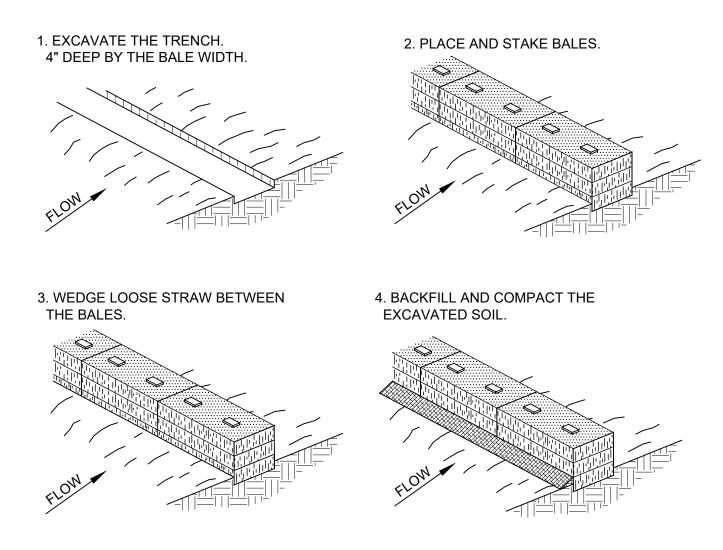
BY DATE APPROVED DATE

REVISION



RIVER BASIN
HABILITATION
Y, FLORIDA

WAT	ST. JOHNS FER MANAGEMI P.O.BOX 1429 PALATI	ENT DISTRICT	
DRAWN: N.J.G.	DATE: <u>APRIL 26, 2023</u>	REVIEWER: <u>W.R.C.</u>	
SCALE: AS NOTED	DESIGNER: W.R.C.	SECTION CHIEF: W.R.C.	



NOTES:

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

### HAY BALE BARRIER NOT TO SCALE

PERMIT CONDITIONS FOR MANATEE PROTECTION:

- 1. MANATEES ARE EXPECTED TO BE PRESENT AT THIS SITE DURING CONSTRUCTION. THE CONTRACTOR SHALL COMPLY WITH ALL STANDARD MANATEE CONDITIONS IN THE PERMIT.
- 2. 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.
- 3. CONTRACTOR SHALL PROVIDE MANATEE PROTECTION SCREENS WITH A MAXIMUM 8-INCH OPENING FOR ANY AND ALL DEWATERING OUTLET PIPES.

EROSION AND SEDIMENT CONTROL NOTES:

- 1. 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.
- 2. 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.
- 3. 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.
- 4. 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.
- 5. 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.
- 6. 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.
- 7. 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.
- 8. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL (LATEST EDITION).
- 9. 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.

### FOR BID PURPOSES ONLY **NOT FOR CONSTRUCTION**

CERTIFICATION

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P.E. NUMBER:	53746
	APRIL 26, 2023

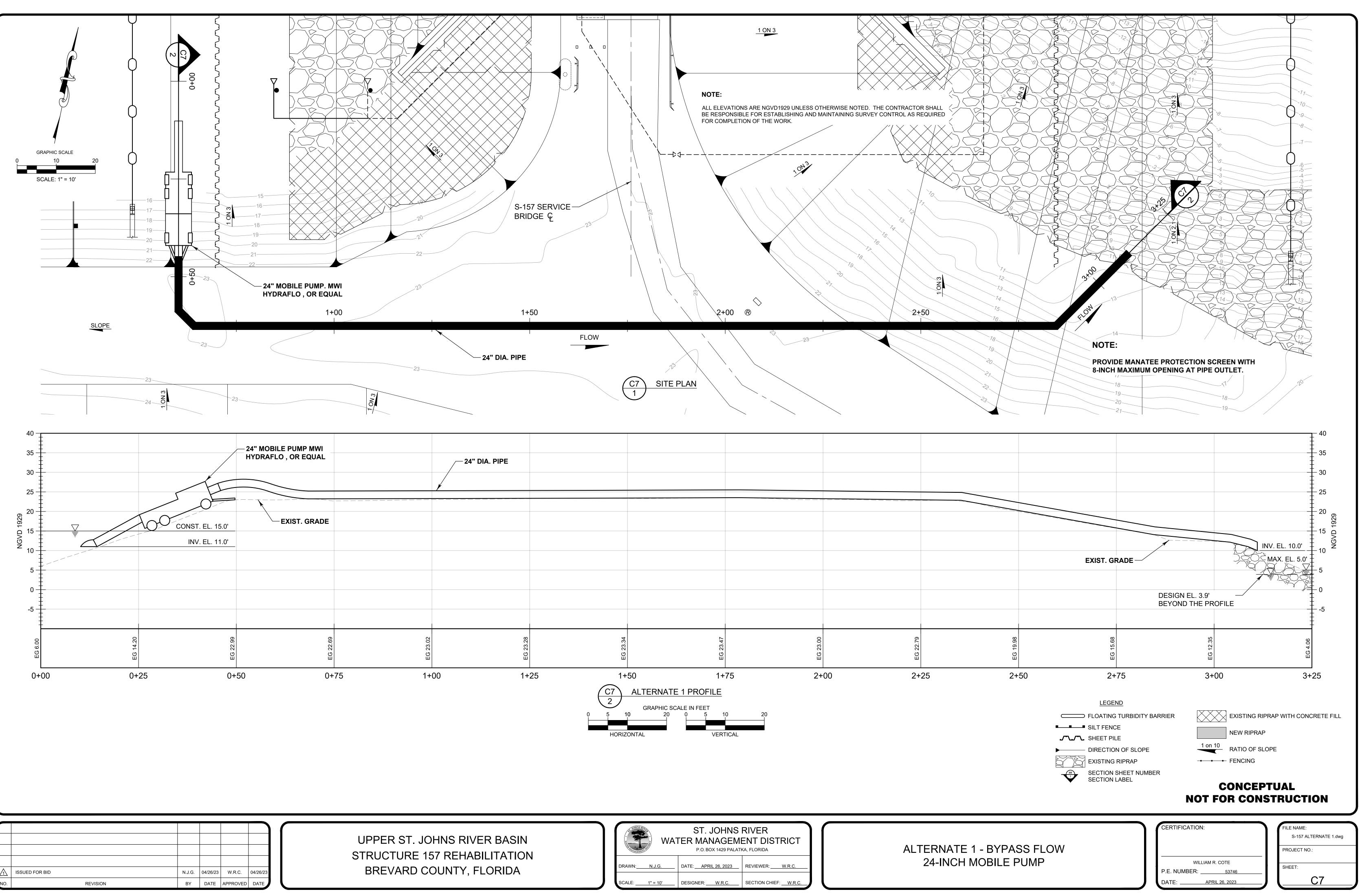
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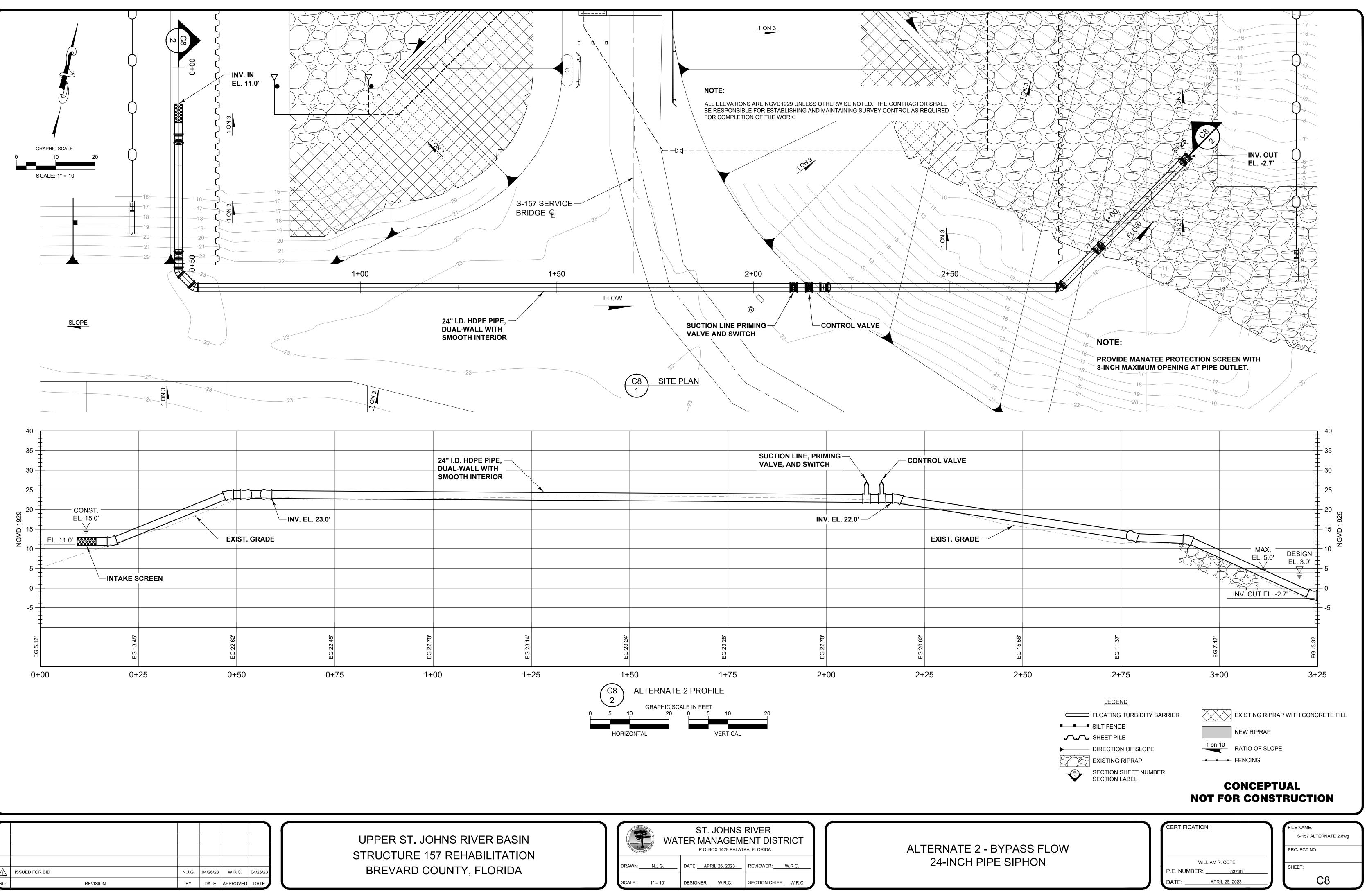
**EROSION AND SEDIMENT CONTROL** 

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$\overline{\mathbb{A}}$	ISSUED FOR BID	N.J.G.	04/26/23	W.R.C.	04/26/23
NO.	REVISION	BY	DATE	APPROVED	DATE

RIVER BASIN	SLIOHNS RICHARD	ST. JOHNS TER MANAGEMI P.O. BOX 1429 PALATI	ENT DISTRICT
HABILITATION Y. FLORIDA	DRAWN: N.J.G.	DATE:	REVIEWER: W.R.C.
	SCALE:1" = 10'	DESIGNER: W.R.C.	SECTION CHIEF: W.R.C.



	ISSUED FOR BID	N.J.G.	04/26/23	W.R.C.	04/26/23
10.	REVISION	BY	DATE	APPROVED	DATE

VER BASIN ABILITATION	ST. JOHNS RIV WATER MANAGEMENT P.O. BOX 1429 PALATKA, FLO	T DISTRICT
. FLORIDA	DRAWN: N.J.G. DATE: APRIL 26, 2023 REVI	/IEWER: W.R.C.
	SCALE:1" = 10' DESIGNER:W.R.C SEC	CTION CHIEF: <u>W.R.C.</u>

### **NOTE SPECIFICATIONS:**

### **REFERENCE DOCUMENTS:**

- AS-BUILT DRAWINGS PREPARED BY THE US ARMY CORPS OF ENGINEERS, "CANAL 54, SECTION 2, STRUCTURE 157", DATED SEPTEMBER 1970. THE BORING LOGS AND GRADATION CURVES ARE INCLUDED IN THESE DRAWINGS.
- 2. REPORT PREPARED BY ARDAMAN & ASSOCIATES, INC., "ENGINEERING EVALUATION OF CONCRETE DEGRADATION AND STEEL SHEET PILE WING WALL THICKNESS, C-54 WATER CONTROL STRUCTURE S-157", DATED MAY 28, 2013.

### **GENERAL**:

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE TO FAMILIARIZE HIMSELF WITH THE NATURE AND EXTENT OF THE CONTRACT DOCUMENTS, SCOPE OF WORK, LOCAL CONDITIONS, ALL FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS THAT MAY AFFECT THE WORK. THE CONTRACTOR SHALL PROVIDE A GANTT CHART SCHEDULE FOR ALL THE PROPOSED WORK PRIOR TO THE START OF CONSTRUCTION.
- 2. THE EXISTING CONDITIONS REPRESENTED IN THESE DRAWINGS AND THE REFERENCED DRAWINGS ARE BELIEVED TO BE ACCURATE ACCORDING TO ALL EXPOSED AND REPLACEMENT REBAR SHALL BE COATED WITH DURALPREP AC AS MANUFACTURED BY THE EUCLID CHEMICAL COMPANY, OR THE INFORMATION AVAILABLE TO THE DISTRICT. HOWEVER, IT IS THE SOLE RESPONSIBILITY OF THE BIDDER (CONTRACTOR) TO VERIFY ALL EXISTING APPROVED EQUAL, PRIOR TO PATCHING WITH THE REPAIR MORTAR. CONDITIONS AND REPORT ANY DISCREPANCIES TO THE DISTRICT PRIOR TO SUBMITTAL OF THE BID.
- 3. PERMITS:
- THE CONTRACTOR SHALL COMPLY WITH THE CONDITIONS CONTAINED IN THE FOLLOWING PERMITS WHICH HAVE BEEN OBTAINED BY THE DISTRICT:
- USACE NATIONWIDE PERMIT.
- FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, NOTICED GENERAL PERMIT

THE CONTRACTOR SHALL OBTAIN ANY AND ALL REMAINING PERMITS AS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT. THE CONTRACTOR SHALL OBTAIN AN NPDES PERMIT IF HIS CONSTRUCTION ACTIVITIES WILL DISTURB AN ACRE OR MORE OF LAND.

- 10. CRACKS WITH FLOWING WATER SHALL BE REPAIRED WITH CHEMICAL GROUT AS DETAILED ON THE DRAWINGS PRIOR TO CONCRETE SURFACE 4. THE CONTRACTOR SHALL CARRY OUT ALL CONSTRUCTION OPERATIONS IN A MANNER WHICH DOES NOT CAUSE VIOLATIONS OF STATE WATER REPAIR. CUT AND REMOVE EXCESS CHEMICAL GROUT PRIOR TO CONCRETE REPAIR. WHEN SEALING VERTICAL CRACKS, BEGIN AT THE BOTTOM QUALITY STANDARDS. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCE, HAY BALES, AND WORK UP. WHERE WATER FLOW IS PRESENT, BEGIN INJECTING CRACK AT THE POINT OF LEAST FLOW AND WORK TOWARDS AREA OF HEAVIEST TURBIDITY BARRIER, ETC.) AS REQUIRED FOR COMPLIANCE WITH FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS. FLOW. CHEMICAL GROUT SHALL BE HYDRO ACTIVE FLEX AS MANUFACTURED BY DE NEEF CONSTRUCTION CHEMICALS, INC., OR APPROVED EQUAL.
- 5. DURING CONSTRUCTION, ALL ERODIBLE GROUND AREAS AND SLOPES WHICH ARE DISTURBED SHALL BE REVEGETATED WITH SOD, SEED AND MULCH, OR OTHERWISE APPROPRIATELY STABILIZED WITHIN 72 HOURS AFTER COMPLETION OF THE CONSTRUCTION ACTIVITY AND AT ANY OTHER TIME AS NECESSARY TO PREVENT VIOLATIONS OF STATE WATER QUALITY STANDARDS.

UPON COMPLETION OF CONSTRUCTION, ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED, HYDROSEEDED, OR SODDED IN ACCORDANCE WITH FDOT SECTIONS 981, 982, AND 983, GRASS SEED SHALL BE AS FOLLOWS:

SEED TYPE	PERCENTAGE
BAHIAGRASS (SCARIFIED) (PASPALUM NOTATUM) WEED SEED, NOT TO EXCEED 1% BY WEIGHT *	80.0 1 0
MATERIAL OTHER THAN GRASS SEED (MAXIMUM) *	<u>19.0</u> 100.0

SEED APPLICATION RATE SHALL BE A MINIMUM OF 50 POUNDS PER ACRE.

- ANY DISTURBED SLOPES STEEPER THAN 4:1 SHALL BE SODDED. TOP OF RIPRAP SLOPES SHALL BE SODDED WITH A MINIMUM 2-FT. WIDE STRIP OF SOD ALONG THE PERIMETER OF THE RIPRAP. SOD SHALL ALSO BE BAHIA GRASS
- 6. THE CONTRACTOR SHALL PROVIDE THE NECESSARY WATER CONTROL SUCH THAT ALL CONSTRUCTION IS PERFORMED IN THE DRY. FOR THE PURPOSES OF THIS WORK, THE TERM "DRY" SHALL BE DEFINED AS SURFACES FREE OF MOISTURE, STANDING WATER, FLOWING WATER, RAIN, OR GROUNDWATER SEEPAGE EXCEPT AS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS OR AS OTHERWISE APPROVED BY THE DISTRICT. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO CONTROL THE FLOW OF WATER.
- 7. THE CONTRACTOR SHALL PROTECT ALL UTILITIES AND OTHER SITE IMPROVEMENTS FROM DAMAGE WHETHER OR NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR REPAIRS TO UTILITIES AND OTHER SITE IMPROVEMENTS DAMAGED DURING CONSTRUCTION. ADDITIONALLY, THE WORK WILL BE CONSIDERED COMPLETE ONLY AFTER ALL RUBBISH AND UNUSED MATERIAL DUE TO OR CONNECTED WITH THE WORK HAS BEEN REMOVED AND THE PREMISES LEFT IN A CONDITION SATISFACTORY TO THE DISTRICT.
- 8. THE CONTRACTOR SHALL REPAIR ALL AREAS DISTURBED DURING CONSTRUCTION TO ITS ORIGINAL OR BETTER CONDITION.
- 9. THE CONTRACTOR SHALL PROVIDE ALL SAFETY AND TRAFFIC CONTROL NECESSARY FOR ACCESS TO THE SITE AND WORK WITHIN THE PROJECT LIMITS.
- 10. THE CONTRACTOR SHALL COORDINATE ACTIVITIES AND COOPERATE WITH OTHER CONTRACTORS AND DISTRICT PERSONNEL PERFORMING WORK WITHIN THE PROJECT LIMITS.
- 2. TEST SCHEDULING: CONTRACTOR SHALL ADVISE THE LABORATORY WITH TWENTY-FOUR (24) HOURS ADVANCE NOTICE OF THE TIME AND LOCATION OF ALL REPAIR MORTAR AND CONCRETE PLACEMENT OR OTHERWISE MAKE ARRANGEMENTS WITH THE LABORATORY SO THAT 11. CONSTRUCTION INSPECTION WILL BE PERFORMED BY THE DISTRICT. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AT LEAST 48 HOURS PRIOR TO SAMPLES MAY BE OBTAINED. THE REQUIRED TIME OF INSPECTION FOR EACH AND EVERY PHASE OF WORK.
- REPAIR MORTAR CUBE TESTS: CUBE SAMPLES (2" MORTAR CUBES) SHALL BE TAKEN AND TESTED IN ACCORDANCE WITH ASTM C109 "STANDARD 12. THE CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF CONTRACT DOCUMENTS INCLUDING DRAWINGS AND SPECIFICATIONS AT THE JOB SITE TEST METHOD FOR COMPRESSIVE STRENGTH OF HYDRAULIC CEMENT MORTARS." CUBE TESTING SHALL INCLUDE ONE (1) AT 7-DAYS AND THREE CLEARLY MARKED TO REFLECT ALL AS-BUILT CONDITIONS. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT THESE ANNOTATED DRAWINGS AND SPECIFICATIONS TO THE DISTRICT. CONTRACTOR SHALL ALSO SUBMIT AN AS-BUILT SITE SURVEY SIGNED AND SEALED (3) AT 28-DAYS. TWO (2) ADDITIONAL SAMPLES SHALL BE TESTED AT 56 DAYS IF DEEMED NECESSARY. SAMPLING FREQUENCY FOR CUBES SHALL BE ONE PER DAY OR A MINIMUM OF ONE PER WORK AREA, WHICHEVER IS GREATER. THE WORK AREAS ARE DEFINED AS EACH SEPARATE WALL BY A FLORIDA LICENSED LAND SURVEYOR. AND FLOOR AREA.

### **CONCRETE REPAIR:**

- REPAIR MORTAR COMPRESSIVE STRENGTH: THE REPAIR MATERIAL SHALL ATTAIN A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 7000 PSI. COMPRESSION STRENGTH OF A SAMPLE SHALL BE DETERMINED BY THE AVERAGE OF THE THREE (3) SAMPLES TESTED AT TWENTY-EIGHT (28) 1. THE SCOPE AND EXTENT OF ALL CONCRETE REPAIR WORK SHALL BE FIELD DETERMINED DURING THE JOINT INSPECTION BY THE DISTRICT AND THE DAYS. COMPLIANCE WITH THE STRENGTH REQUIREMENTS OF THESE SPECIFICATIONS SHALL BE VERIFIED IF THE AVERAGE COMPRESSIVE CONTRACTOR. THE CONTRACTOR SHALL ARRANGE FOR, AND PROVIDE, THE SERVICES OF THE PRODUCT MANUFACTURER'S TECHNICAL STRENGTH OF THREE (3) CONSECUTIVE SAMPLES IS NOT LESS THAN THE SPECIFIED STRENGTH FOR THE CLASS OF CONCRETE, PROVIDED NO REPRESENTATIVE FOR THIS MEETING TO REVIEW AND DISCUSS THE REPAIR SCOPE OF WORK, TECHNIQUES, AND PROCEDURES. THE PRODUCT INDIVIDUAL SAMPLE SHALL HAVE A STRENGTH TEST RESULT THAT FALLS BELOW THE SPECIFIED STRENGTH BY MORE THAN SEVEN-HUNDRED REPRESENTATIVE SHALL ALSO BE PRESENT FOR AN INITIAL CONCRETE REPAIR OPERATION SITE VISIT FOR THE PURPOSE OF CONFIRMING THAT THE (700) PSI. CONCRETE WHICH FAILS TO MEET STRENGTH REQUIREMENTS SHALL BE FURTHER TESTED AS PROVIDED IN ACI 318 AT THE EXPENSE CONTRACTOR'S PERSONNEL ARE PROPERLY APPLYING THE REPAIR MATERIAL AND TO WITNESS THE FIRST APPLICATION OF EACH TYPE OF REPAIR OF CONTRACTOR OR SHALL BE REMOVED AS DETERMINED BY THE DISTRICT. MATERIAL INSTALLED.
- CONCRETE CYLINDER TESTS: CONCRETE CYLINDERS SHALL BE TAKEN AND TESTED IN ACCORDANCE WITH ASTM C39 "STANDARD TEST METHOD 2. THE CONTRACTOR SHALL INSPECT AND PROBE CONCRETE SURFACES TO IDENTIFY AND LOCATE ALL AREAS OF DETERIORATION. REPAIR AREAS SHALL INCLUDE CONCRETE FOUND TO BE CRACKED, SPALLED, OR OTHERWISE SHOWING EVIDENCE OF DISINTEGRATION OR STRUCTURAL FAILURE. FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS." SAMPLING FREQUENCY FOR CONCRETE SHALL BE FOR EACH FIFTY (50) CUBIC YARDS OR PORTION THEREOF OF CONCRETE PLACED EACH DAY. THE LABORATORY SHALL TAKE A SAMPLE FROM A BATCH OF ITS 3. SURFACE PREPARATION: ALL ERODED, DAMAGED, DETERIORATED, LOOSENED, OR UNBONDED PORTIONS OF EXISTING CONCRETE SHALL BE SELECTION AS THE CONCRETE IS BEING PLACED. NO WATER SHALL BE ADDED OR OTHER CHANGE MADE IN ANY BATCH AFTER IT HAS BEEN REMOVED BY HIGH PRESSURE HYDROBLASTING (8000-15000 PSI) TO ACHIEVE A SOUND EXPOSED AGGREGATE SURFACE WITH A MINIMUM SURFACE SAMPLED. IN ADDITION TO OTHER TESTS, THE LABORATORY WILL MAKE A SET OF FIVE (5) STANDARD COMPRESSION CYLINDERS FROM EACH PROFILE EQUAL TO CSP 6 - 9 IN ACCORDANCE WITH ICRI GUIDELINE 310.2. THE PRODUCT REPRESENTATIVE SHALL INSPECT AND APPROVE IN SAMPLE, ONE (1) OF WHICH WILL BE TESTED AT SEVEN (7) DAYS, THREE (3) TESTED AT TWENTY-EIGHT (28) DAYS, AND AN ADDITIONAL SAMPLE WRITING THAT THE SURFACE PREPARATION IS ACCEPTABLE FOR THE APPLICATION OF THE REPAIR PRODUCTS. GENERALLY, THE CONCRETE AREAS SHALL BE TESTED AT 56 DAYS IF DEEMED NECESSARY.
- TO BE HYDROBLASTED WILL BE TO A DEPTH OF LESS THAN 1 INCH. THE FINAL EXTENT OF THE HYDRODEMOLITION AREA WILL BE DETERMINED DURING CONSTRUCTION AS DICTATED BY THE EXISTING CONDITIONS ENCOUNTERED.

REMOVAL OF DETERIORATED CONCRETE BY MECHANICAL MEANS SUCH AS BUSH HAMMERING, JACK HAMMERING, SCABBLER, OR OTHER APPROPRIATE MEANS MAY BE USED SUBJECT TO DISTRICT APPROVAL. IF MECHANICAL METHODS ARE USED, THE SURFACES SHALL BE FINISHED BY HYDROBLASTING, SHOTBLASTING, OR WET SANDBLASTING WITH NON-METALLIC ABRASIVES TO REMOVE ANY MICROFRACTURED SURFACES RESULTING FROM THE INITIAL REMOVAL PROCESS.

THE BOUNDARIES BETWEEN THE ERODED AND SOUND CONCRETE SURFACES SHALL BE SAWCUT AS SHOWN ON THE DRAWINGS IN ORDER TO PROVIDE A SMOOTH TRANSITION FOR THE MORTAR REPAIR AREAS.

ALL REPAIR SURFACES SHALL BE THOROUGHLY CLEANED WITH WATER UNDER PRESSURE. THE SURFACE MUST BE CLEAN AND FREE OF LOOSE CONCRETE, LAITANCE, DIRT, GREASE, FORM OIL, EFFLORESCENCE, PAINT, AND ANY OTHER FOREIGN MATERIAL.

- 4. CONCRETE SURFACE REPAIRS MAY GENERALLY CONSIST OF EITHER HAND-APPLIED OR MACHINE APPLIED METHODS.
- 5. ALL SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER SPECIFICATIONS. CONTRACTOR SHALL STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION CONSULT IN THE FIELD WITH MANUFACTURER AND DISTRICT PRIOR TO SURFACE PREPARATION AND REPAIR. FOR SPECIFIC SURFACE PREPARATION (AISC) "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST EDITION. REQUIREMENTS, REFER TO INTERNATIONAL CONCRETE REPAIR INSTITUTE (ICRI) GUIDELINE NO. 03732.

$\triangle$	ISSUED FOR BID	N.J.G.	04/26/23	W.R.C.	04/26/23
NO.	REVISION	BY	DATE	APPROVED	DATE

UPPER ST. JOHNS RIVER BASIN STRUCTURE 157 REHABILITATION		WA	ST. JOHNS TER MANAGEM P.O. BOX 1429 PALAT	ENT DISTRICT	NOT
BREVARD COUNTY, FLORIDA		DRAWN: N.J.G.	DATE: <u>APRIL 26, 2023</u>	REVIEWER: W.R.C.	NOT
	J	SCALE: NONE	DESIGNER: W.R.C.	SECTION CHIEF: W.R.C.	

6. ALL LOOSE SCALE, RUST, CORROSION BY PRODUCTS, OR CONCRETE SHALL BE REMOVED FROM EXPOSED REINFORCING STEEL (REBAR) BY MECHANICAL CLEANING METHODS. REBAR EXPOSED FOR MORE THAN ONE-THIRD OF ITS CIRCUMFERENCE SHALL BE COMPLETELY EXPOSED TO PROVIDE 1-INCH MINIMUM CLEARANCE BETWEEN THE REBAR AND THE CONCRETE. DAMAGED OR DETERIORATED REBAR SHALL BE REMOVED AND REPLACED. REPLACEMENT REBAR SHALL BE GRADE 60 DEFORMED BILLET STEEL BARS CONFORMING TO ASTM A-615. REINFORCEMENT SPLICES SHALL BE AS FOLLOWS:

BAR SIZE	SPLICE LENGTH (IN)
#3	12
#4	12
#5	15
#6	18
#7	24
#8	30

ALTERNATIVELY, MECHANICAL SPLICES MAY BE USED SUBJECT TO DISTRICT APPROVAL.

- 8. ISOLATED SPALLS SHALL BE HAND PATCHED WITH TAMMS STRUCTURAL MORTAR AS MANUFACTURED BY THE EUCLID CHEMICAL COMPANY, OR APPROVED EQUAL. EDGES OF SPALLS SHALL BE SAWCUT DURING SURFACE PREPARATION TO A MINIMUM DEPTH OF 1/2 INCH. THE REPAIR AREA SHALL NOT BE LESS THAN 1/8" IN DEPTH. SUBSTRATE SHALL BE SATURATED SURFACE DRY (SSD) WITH NO STANDING WATER DURING APPLICATION. THE PREPARED CONCRETE SUBSTRATE SHALL BE PRIMED WITH A BRUSH OR SPRAY APPLIED COAT OF DURALPREP AC. THE PRIMER COAT OF DURALPREP AC MUST BE ALLOWED TO THOROUGHLY DRY BEFORE APPLICATION OF THE TAMMS STRUCTURAL MORTAR. ALTERNATIVELY, AN SSD CONCRETE SURFACE CAN BE PRIMED WITH A SCRUB COAT OF TAMMS STRUCTURAL MORTAR FOR HAND APPLICATIONS. THE REPAIR MUST BE MADE BEFORE THE SCRUB COAT DRIES OUT.
- 9. OPEN CRACKS IN CONCRETE SHALL BE SAWCUT 1/4-INCH WIDE X 1/4-INCH DEEP AND REPAIRED WITH TAMMS STRUCTURAL MORTAR. APPLY A PRIMER COAT OF DURALPREP AC OR A SCRUB COAT OF TAMMS STRUCTURAL MORTAR TO THE CONCRETE SUBSTRATE PRIOR TO PATCHING.
- 11. ERODED CONCRETE SURFACES SHALL BE REPAIRED WITH TAMMS STRUCTURAL MORTAR. APPLICATION MAY BE BY TROWEL OR LOW PRESSURE WET SPRAY PROCESS. AN EVAPORATION RETARDANT, SUCH AS EUCOBAR AS MANUFACTURED BY THE EUCLID CHEMICAL COMPANY, OR APPROVED EQUAL, SHALL BE USED IF REQUIRED BY WEATHER CONDITIONS. SURFACE PREPARATION, APPLICATION, AND CURING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER SPECIFICATIONS. THE REPAIR AREA SHALL NOT BE LESS THAN 1/8" IN DEPTH. SUBSTRATE SHALL BE SSD WITH NO STANDING WATER DURING APPLICATION. FOR HAND APPLICATION, THE PREPARED CONCRETE SUBSTRATE SHALL BE PRIMED WITH A BRUSH OR SPRAY APPLIED COAT OF DURALPREP AC. THE PRIMER COAT OF DURALPREP AC MUST BE ALLOWED TO THOROUGHLY DRY BEFORE APPLICATION OF THE TAMMS STRUCTURAL MORTAR. ALTERNATIVELY, AN SSD CONCRETE SURFACE CAN BE PRIMED WITH A SCRUB COAT OF TAMMS STRUCTURAL MORTAR FOR HAND APPLICATIONS. THE REPAIR MUST BE MADE BEFORE THE SCRUB COAT DRIES OUT. AT NO TIME SHALL THE REPAIR MORTAR MIX BE ALLOWED TO EXCEED 90 DEGREES FAHRENHEIT. COLD WATER SHALL BE USED IN THE MIX AS REQUIRED TO MAINTAIN THE PROPER TEMPERATURE.
- 12. CURING: ALL MORTAR REPAIRS SHALL BE WATER CURED FOR 7 DAYS FOLLOWING APPLICATION. MOIST CURE IMMEDIATELY AFTER FINISHING WITH WET BURLAP AND POLYETHYLENE OR A FINE MIST OF WATER. IF NECESSARY, PROTECT NEWLY APPLIED MATERIAL FROM DIRECT SUNLIGHT, WIND, RAIN, AND FROST. AT NO TIME DURING THIS INITIAL CURING PERIOD SHALL THE MORTAR BE ALLOWED TO DRY. FOLLOWING THE 7-DAY CURING PERIOD AND WHILE THE REPAIR IS STILL SATURATED, THE SURFACE OF THE REPAIR SHALL RECEIVE TWO COATS OF THE SPECIFIED PROTECTIVE COATING.
- 13. FOLLOWING COMPLETION OF MORTAR REPAIRS, ALL CONCRETE SURFACES SHALL BE COATED WITH SIKATOP 144 (CEMENT-GRAY COLOR), AS MANUFACTURED BY SIKA CORPORATION, OR APPROVED EQUAL, TO PROVIDE A UNIFORM APPEARANCE AND ALL POCK MARKS ARE FILLED. APPLICATION SHALL BE WITH BRUSHES, ROLLERS, OR HOPPER-TYPE SPRAY EQUIPMENT. SURFACE SHALL BE SSD BEFORE APPLICATION. APPLY A MINIMUM OF TWO COATS, 8-16 MILS DFT PER COAT, SUCH THAT THE SURFACE HAS A UNIFORM APPEARANCE. MOIST CURE WITH WET BURLAP AND POLYETHYLENE OR A FINE MIST OF WATER FOR A MINIMUM OF 3 DAYS IN AREAS THAT WILL BE SUBJECT TO IMMERSION.
- 14. SUBMITTALS: BEFORE BEGINNING ANY REPAIR WORK, THE CONTRACTOR SHALL SUBMIT A DETAILED LIST OF THE EQUIPMENT, PROCEDURES, AND MATERIALS PROPOSED FOR USE IN CONCRETE REPAIR TO THE DISTRICT FOR APPROVAL.
- 15. POTABLE WATER SHALL BE USED FOR THE FINAL CLEANING OF CONCRETE SURFACES, FOR MIXING WITH REPAIR PRODUCTS, AND FOR CURING REPAIRED SURFACES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROCURING POTABLE WATER AS REQUIRED FOR COMPLETION OF THE PROJECT.

### **CONCRETE TESTING SERVICES:**

1. TESTING LABORATORY: THE CONTRACTOR SHALL RETAIN AN INDEPENDENT TESTING LABORATORY, APPROVED BY THE DISTRICT, FOR THE SAMPLING AND TESTING OF THE REPAIR MORTAR AND CAST IN PLACE CONCRETE. THE LABORATORY'S INSPECTORS SHALL HAVE FREE ACCESS TO ALL POINTS WHERE CONCRETE MATERIALS ARE STORED, PROPORTIONED, MIXED AND PLACED.

- 6. CONCRETE COMPRESSIVE STRENGTH: CAST-IN-PLACE CONCRETE SHALL ATTAIN A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5500 PSI. COMPRESSION STRENGTH OF A SAMPLE SHALL BE DETERMINED BY THE AVERAGE OF THE THREE (3) CYLINDERS TESTED AT TWENTY-EIGHT (28) DAYS. COMPLIANCE WITH THE STRENGTH REQUIREMENTS OF THESE SPECIFICATIONS SHALL BE VERIFIED IF THE AVERAGE COMPRESSIVE STRENGTH OF THREE (3) CONSECUTIVE SAMPLES IS NOT LESS THAN THE SPECIFIED STRENGTH FOR THE CLASS OF CONCRETE, PROVIDED NO INDIVIDUAL SAMPLE SHALL HAVE A STRENGTH TEST RESULT THAT FALLS BELOW THE SPECIFIED STRENGTH BY MORE THAN FIVE HUNDRED (500) PSI. CONCRETE WHICH FAILS TO MEET STRENGTH REQUIREMENTS MAY BE FURTHER TESTED AS PROVIDED IN ACI 318 AT THE EXPENSE OF CONTRACTOR OR SHALL BE REMOVED AS DETERMINED BY DISTRICT'S PROJECT MANAGER.
- REPORTS: THE TESTING LABORATORY SHALL SUBMIT A REPORT OF EACH TEST MADE, SIGNED AND SEALED BY A FLORIDA LICENSED PROFESSIONAL ENGINEER. INDIVIDUAL TEST REPORTS SHALL BE SUBMITTED TO THE DISTRICT AS SOON AS THEY ARE AVAILABLE. A FINAL REPORT THAT SUMMARIZES THE TESTING AND SAMPLING PROCEDURES AND COMPILES ALL THE INDIVIDUAL TESTS SHALL ALSO BE SUBMITTED TO THE DISTRICT UPON CONCLUSION OF THE WORK.

### STEEL:

- DISTRICT.

### **REPAIR OF EXISTING STEEL SHEET PILING WING WALLS:**

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- SEC THI

### **BRIDGE EXPANSION JOINT CAULK:**

1. THE CAULK FOR THE BRIDGE EXPANSION JOINT SHALL BE SIKAFLEX-2C SL AS MANUFACTURED BY SIKA CORPORATION, OR EQUAL.

## DUST CONTROL:

2. WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS) "STRUCTURAL WELDING CODE" AWS D1.1.

3. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE NEW AND CONFORM TO THE REQUIREMENTS OF THE AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM) STANDARD A36 UNLESS NOTED OTHERWISE.

4. ALL BOLTS SHALL BE STAINLESS STEEL CONFORMING TO ASTM A276, TYPE 304. THE SIZE AND LOCATION OF REPLACEMENT BOLTS SHALL MATCH EXISTING UNLESS NOTED OTHERWISE.

5. ALL WELDING SHALL UTILIZE E70XX LOW-HYDROGEN ELECTRODES UNLESS NOTED OTHERWISE.

6. FIELD CORRECTING OF FABRICATED STEEL SHALL NOT BE PERMITTED ON MAJOR STRUCTURAL MEMBERS WITHOUT PRIOR APPROVAL OF THE

1. EXCAVATE EXISTING RIPRAP AND BEDDING STONE ADJACENT TO THE SHEET PILING WALLS DOWN TO THE SUBGRADE.

2. INSPECT AND REPAIR STEEL SHEET PILING AS NEEDED.

3. PREPARE AND PAINT ALL EXPOSED SHEET PILING SURFACES. REFER TO NOTES FOR PAINTS AND PROTECTIVE COATINGS.

4. AFTER PAINTING, REPLACE THE RIPRAP. SUPPLEMENT WITH ADDITIONAL RIPRAP AND BEDDING STONE AS DIRECTED BY THE DISTRICT.

### PAINTS AND PROTECTIVE COATINGS:

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

PREPARE SURFACES AND PAINT ALL EXPOSED STEEL COMPONENTS. ITEMS TO BE PAINTED INCLUDE STRUCTURAL STEEL, SHEET PILING WING WALLS, AND ALL EMBEDDED STEEL (EXCLUDING STAINLESS STEEL AND ALUMINUM ITEMS). ALL STAINLESS STEEL AND ALUMINUM ITEMS SHALL BE THOROUGHLY CLEANED.

3. STEEL SURFACE PREPARATION SHALL BE AS FOLLOWS:

STRUCTURAL STEEL, SHEET PILING, AND EMBEDDED STEEL: SSPC-10 NEAR WHITE BLAST CLEANING

THE USE OF 100% SILICA BLAST MEDIA SHALL NOT BE ALLOWED ON THE CONSTRUCTION SITE. BLAST MEDIA IF USED ON SITE WILL BE SUBJECT TO APPROVAL BY THE DISTRICT.

DURING SURFACE PREPARATION, CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO CAPTURE PAINT PARTICLES AND BLAST MEDIA AND DISPOSE OFFSITE AT A MUNICIPAL OR COMMERCIAL LANDFILL.

4. PROTECTIVE COATING FOR STRUCTURAL STEEL AND SHEET PILING SHALL BE AS MANUFACTURED BY SHERWIN-WILLIAMS, OR EQUAL, AS FOLLOWS:

RST COAT (PRIMER):	DURA-PLATE 235	4-8 MILS DFT
COND COAT:	DURA-PLATE 235	4-8 MILS DFT
IRD (FINAL) COAT:	DURA-PLATE 235	4-8 MILS DFT

COLOR SHALL BE LIGHT GRAY. CONTRACTOR SHALL SUBMIT COLOR SAMPLES FOR DISTRICT APPROVAL. SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH THE PAINT MANUFACTURER SPECIFICATIONS.

5. PROTECTIVE COATING FOR ALL EMBEDDED GALVANIZED ITEMS SHALL BE AS FOLLOWS:

RST COAT (PRIMER):	WASSER MC-ZINC	3-5 MILS DFT
COND COAT:	S-W DURA-PLATE 235	4-8 MILS DFT
IRD (FINAL) COAT:	S-W DURA-PLATE 235	4-8 MILS DFT

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

WHERE SEEPAGE IS PRESENT AT THE SHEET PILING JOINTS, THE PROTECTIVE COATING AT THE JOINTS SHALL BE SOMAY HICOTE 151 AS MANUFACTURED BY SOMAY PRODUCTS, INC. SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER SPECIFICATIONS. APPLY ONE COAT AT 10 MILS DFT.

7. PROTECTIVE COATINGS FOR WATER CONTROL GATES ARE SPECIFIED ON SHEET S24.

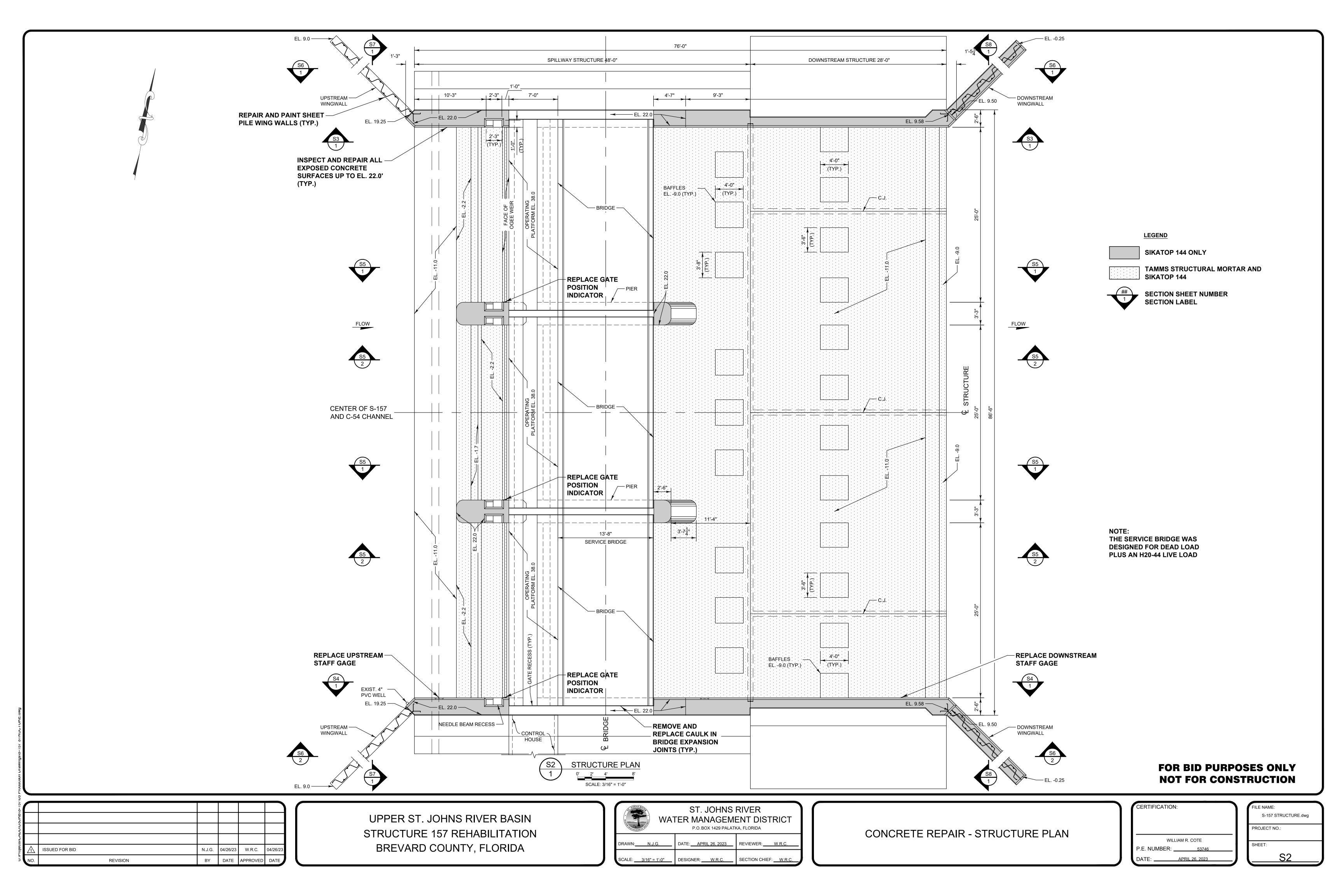
1. CONTRACTOR SHALL CONTROL DUST DURING THE STORAGE AND HANDLING OF DUSTY MATERIALS BY WETTING, COVERING, OR OTHER MEANS AS APPROVED BY THE ENGINEER.

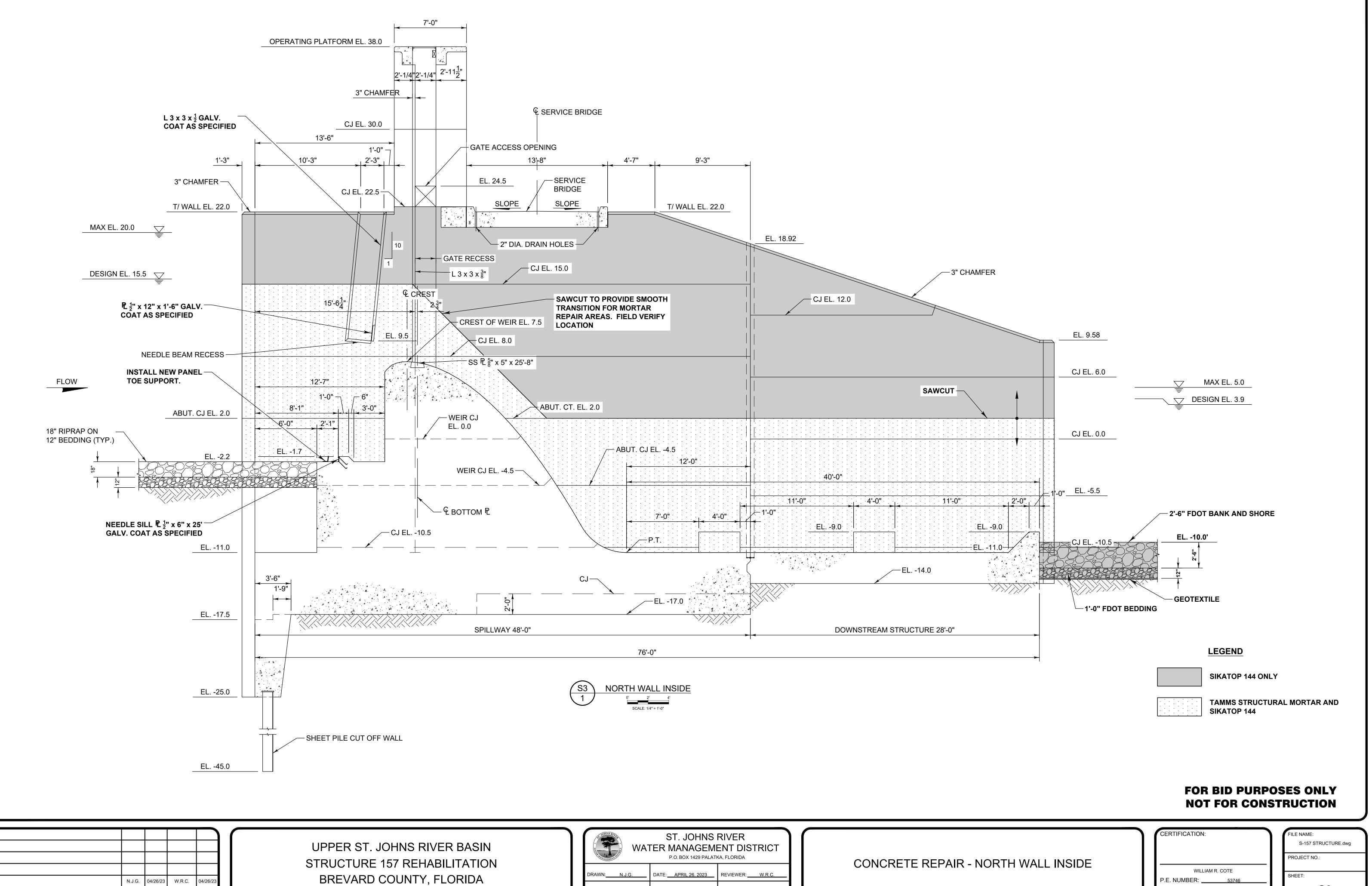
2. CONTRACTOR SHALL MINIMIZE THE DISPERSION OF DUST FROM ACCESS ROADS AND FROM ACTIVITIES DURING CONSTRUCTION AND MAINTENANCE OPERATIONS BY APPLYING WATER OR OTHER DUST CONTROL MATERIALS.

### FOR BID PURPOSES ONLY **NOT FOR CONSTRUCTION**

	CERTIFICATION:	FILE NAME: S-157 STRUCTURE.dw
CATIONS	WILLIAM R. COTE	PROJECT NO.:
	P.E. NUMBER:	

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N.J.G. 04/26/23

BY

REVISION

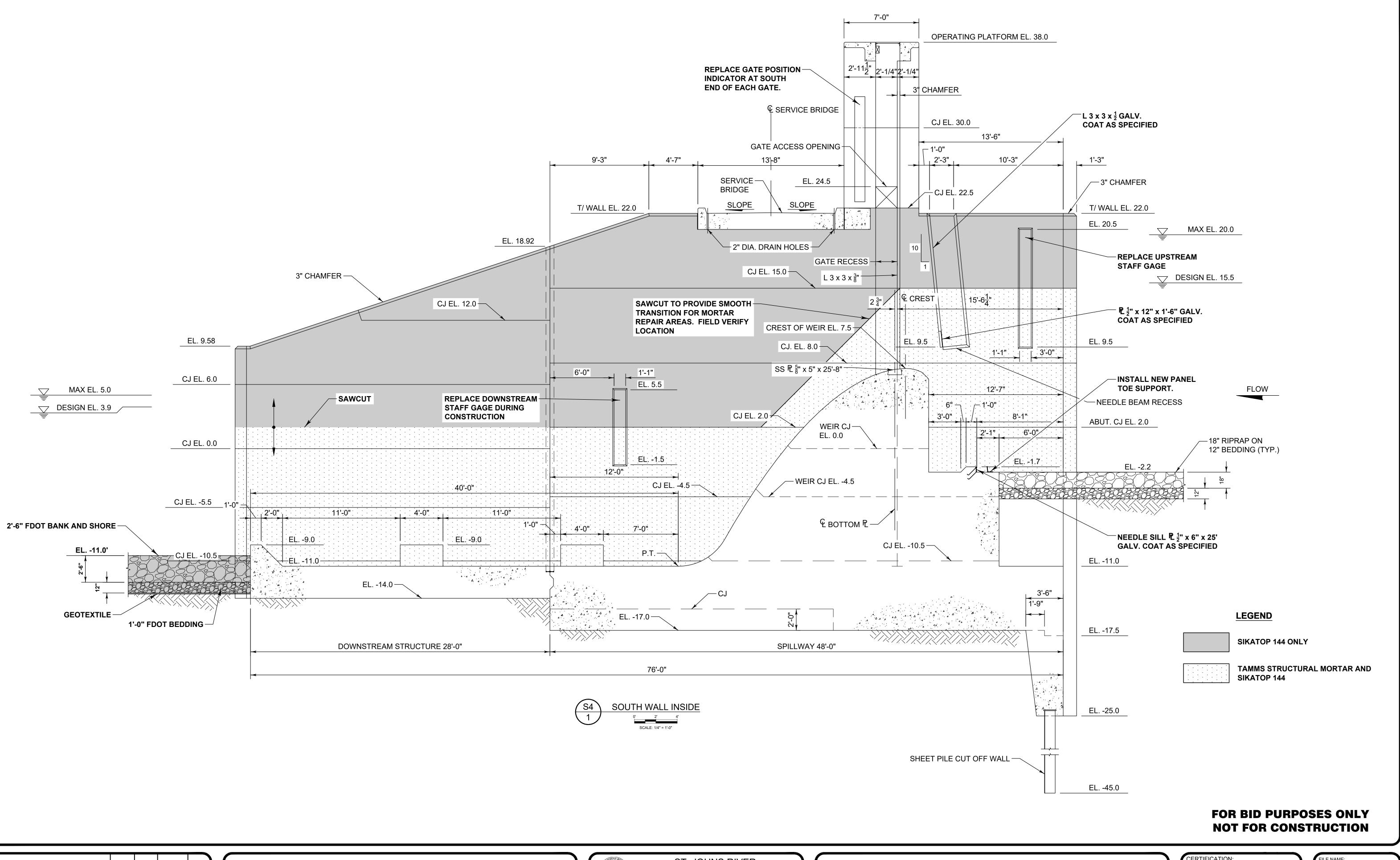
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DATE APPROVED DATE

04/26/23

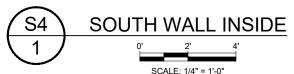
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TY, FLORIDA	

	CERTIFICATION:	FILE NAME: S-157 STRUCTURE.dwg
PAIR - NORTH WALL INSIDE	WILLIAM R. COTE	PROJECT NO.:
	P.E. NUMBER:	SHEET:
	DATE:	



$\triangle$	ISSUED FOR BID	N.J.G.	04/26/23	W.R.C.	04/26/23
NO.	REVISION	BY	DATE	APPROVED	DATE

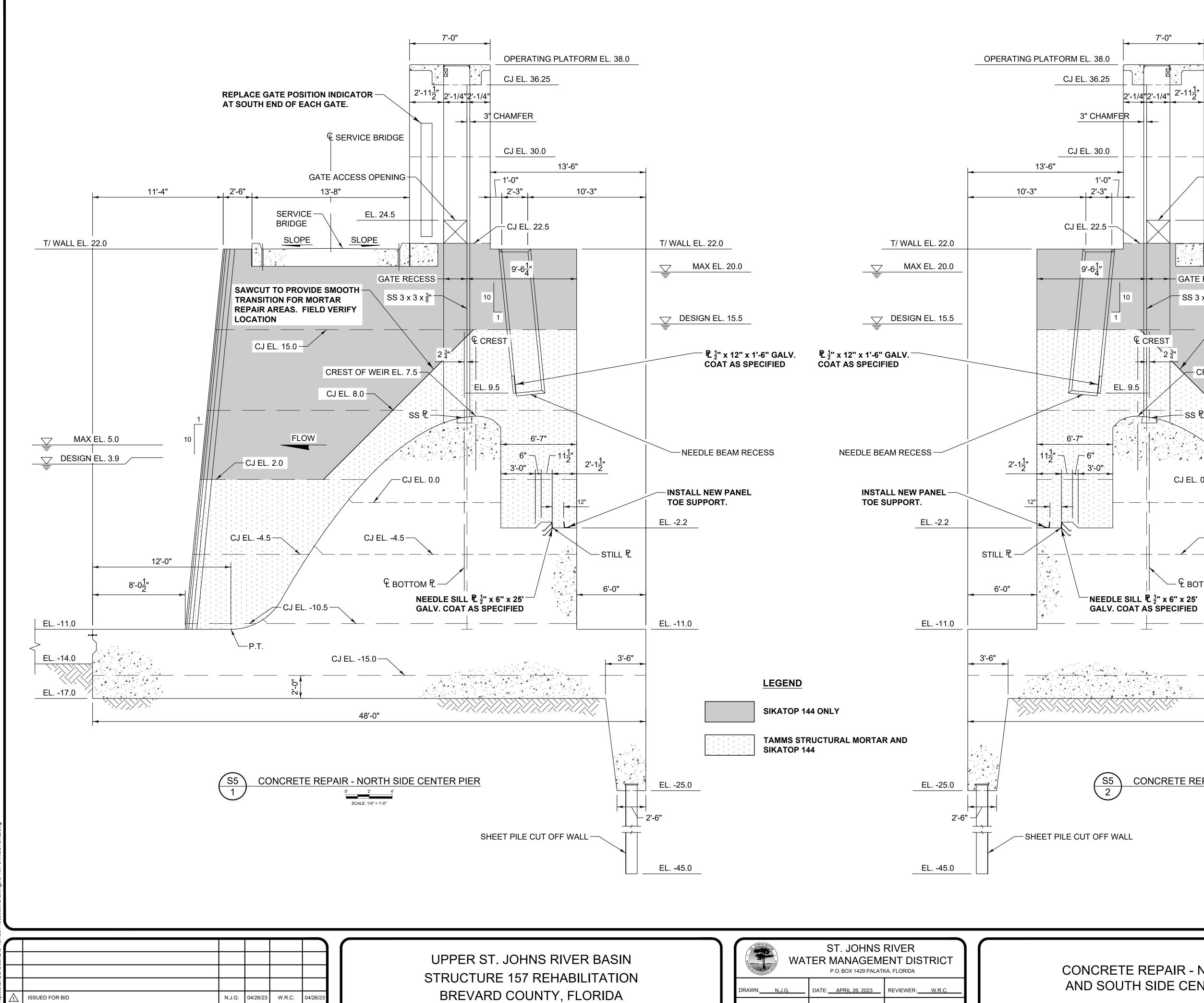
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RIVER BASIN HABILITATION	ST. JOHNS RIVER WATER MANAGEMENT DISTRICT P.O. BOX 1429 PALATKA, FLORIDA				
TY, FLORIDA	DRAWN: <u>N.J.G.</u> SCALE: <u>1/4" = 1'-0"</u>	DATE: <u>APRIL 26, 2023</u> DESIGNER: <u>W.R.C.</u>	REVIEWER: W.R.C. SECTION CHIEF: W.R.C.		CONCRETE RE

REPAIR - SOUTH WALL INSIDE

CERTIFICATION:	FILE NAME:
	S-157 STRUCTURE.dwg
	PROJECT NO.:
WILLIAM R. COTE	
P.E. NUMBER:53746	SHEET:
DATE:	S4



REVISION

DATE APPROVED DATE

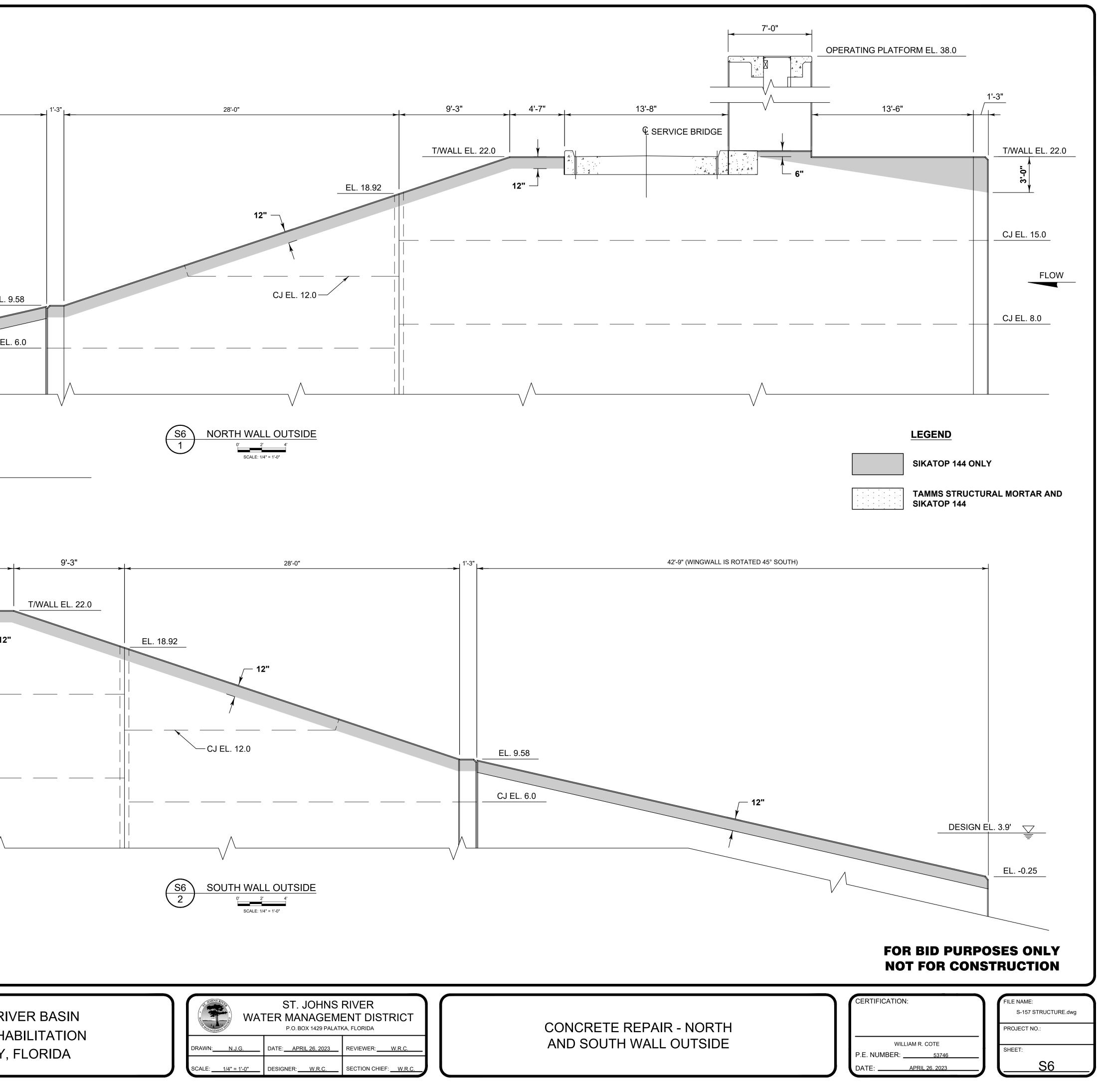
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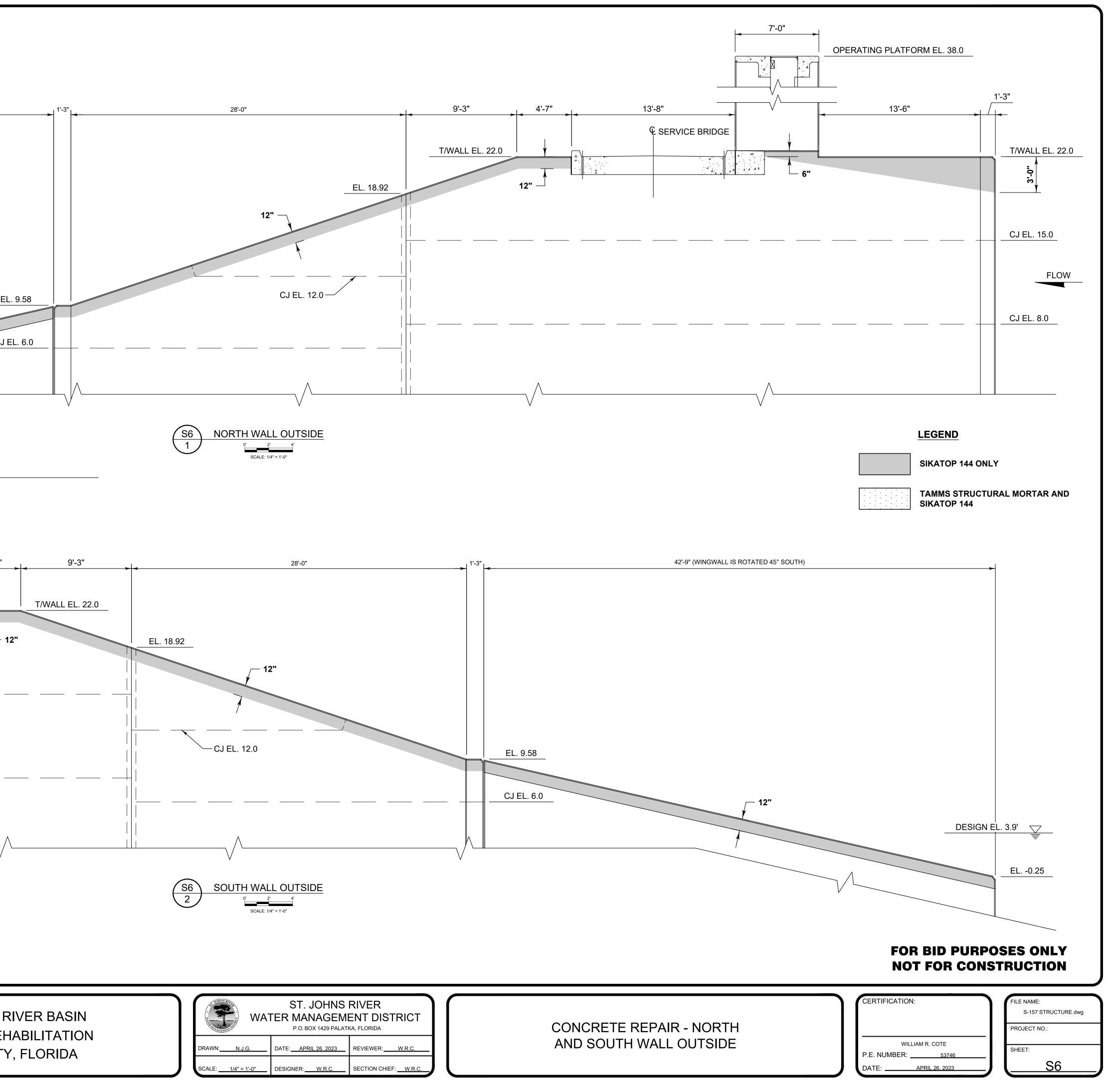
RIVER BASIN HABILITATION	WAT	ST. JOHNS RIVER TER MANAGEMENT DISTRICT P.O. BOX 1429 PALATKA, FLORIDA		
Y, FLORIDA	DRAWN: N.J.G.	DATE: <u>APRIL 26, 2023</u>	REVIEWER: W.R.C.	
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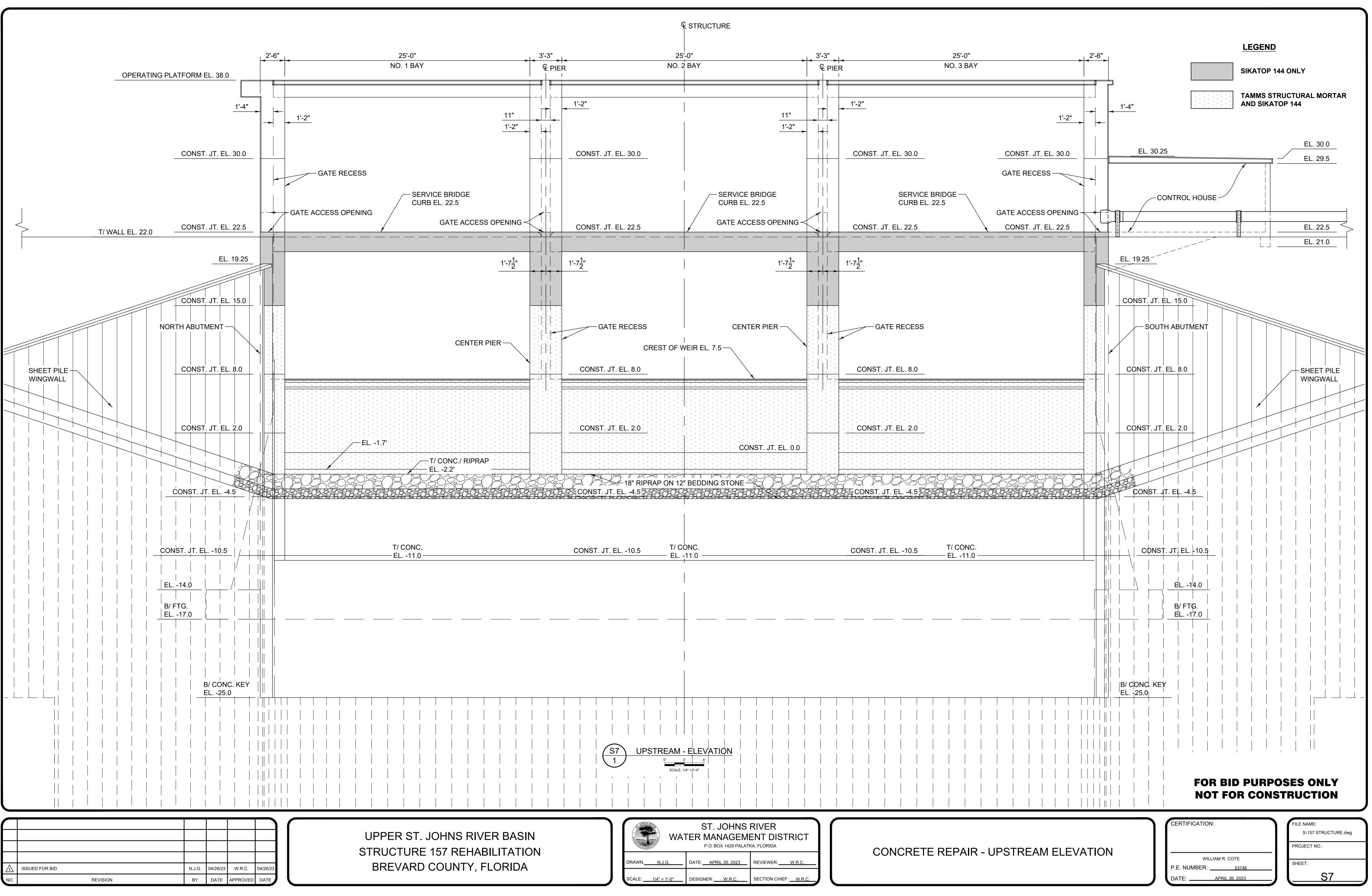
GATE ACCESS OPENING	<mark>→ &lt; 2'-6" 11'-4" →</mark>
EL. 24.5 BRIDGE SLOPE SLOPE	T/ WALL EL. 22.0
GATE RECESS	· · · · · · · · · · · · · · · · · · ·
SS 3 x 3 x <sup>3</sup> / <sub>8</sub> SS 3 x 3 x <sup>3</sup> / <sub>8</sub> SS 3 x 3 x <sup>3</sup> / <sub>8</sub>	R
© CREST - CJ EL. 15.0	
CREST OF WEIR EL. 7.5 9.5 CJ EL. 8.0	
SS PL	$\begin{array}{c c} & 1 \\ 1 \\ 10 \end{array}$ MAX EL. 5.0 $\bigtriangledown$
CJ EL.	
CJ EL. 0.0	
CJ EL4.5	EL4.5
	12'-0"
GILL $\mathbb{R}$ $\frac{1}{2}$ " x 6" x 25'AT AS SPECIFIEDCJ EL10.5	EL11.0
P. — CJ EL15.0	T
	EL17.0
48'-0"	
CONCRETE REPAIR - SOUTH SIDE CENTER PIER	
0' 2' 4' SCALE: 1/4" = 1'-0"	
L	
	FOR BID PURPOSES ONLY
	NOT FOR CONSTRUCTION
E REPAIR - NORTH SIDE	CERTIFICATION: S-157 STRUCTURE.dwg PROJECT NO.:
TH SIDE CENTER PIERS	WILLIAM R. COTE P.E. NUMBER:53746SHEET: DATE:APRIL 26, 2023S5

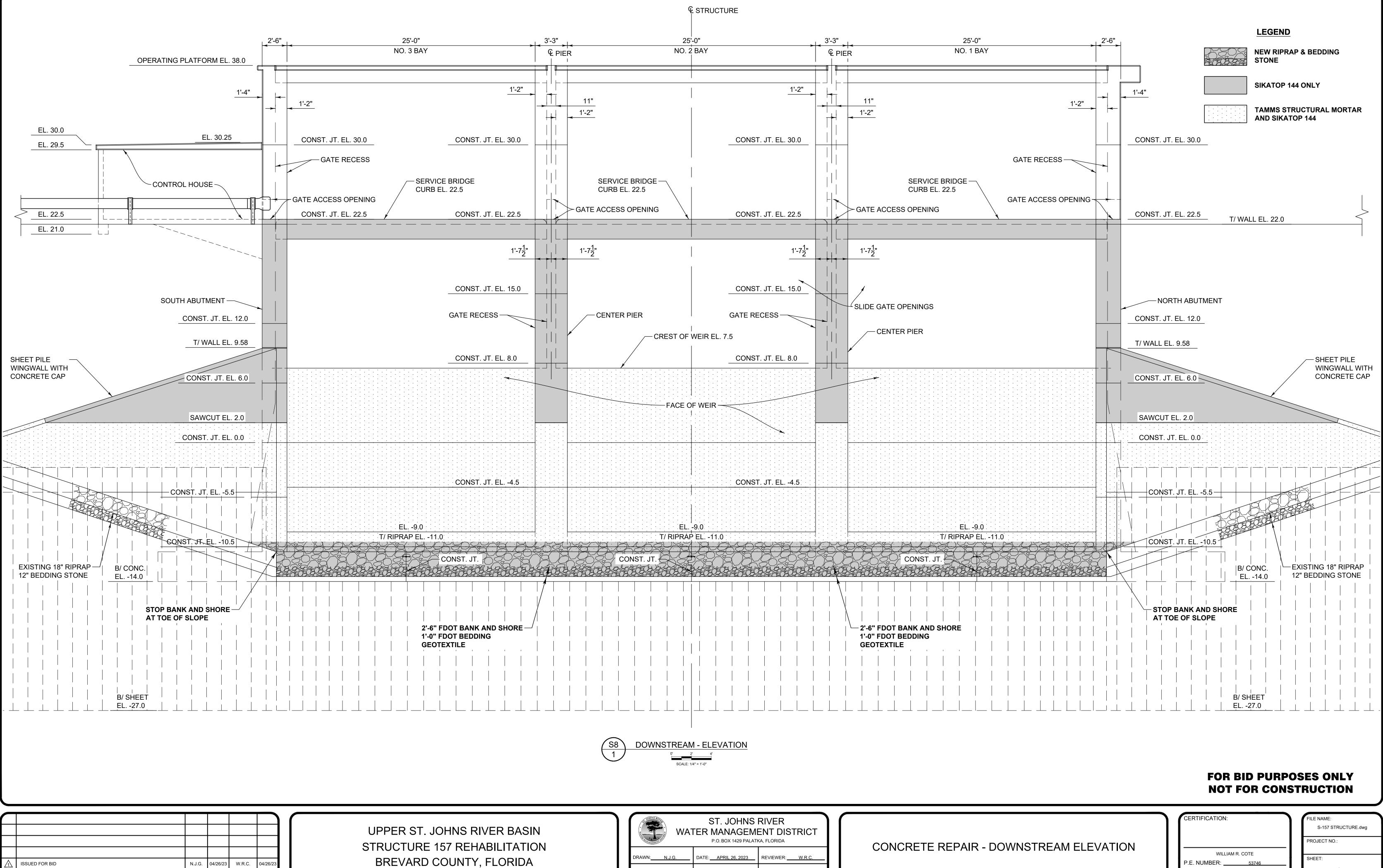
	42'-9" (WINGWALL IS ROTATED 45° NORTH	-1)
DESIGN EL. 3.9'	12"	EL CJ I
EL0.25 OPERATING PLAT		13'-8" 4'-7" © SERVICE BRIDGE
 ISSUED FOR BID REVISION	Image: Constraint of the second se	UPPER ST. JOHNS F STRUCTURE 157 REF BREVARD COUNTY





RIVER BASIN HABILITATION	SLIDHINS RITER	ST. JOHNS TER MANAGEM P.O. BOX 1429 PALAT	CONCR	
Y, FLORIDA	DRAWN: <u>N.J.G.</u> SCALE: <u>1/4" = 1'-0"</u>	DATE: <u>APRIL 26, 2023</u> DESIGNER: <u>W.R.C.</u>	REVIEWER: W.R.C. SECTION CHIEF: W.R.C.	AND SO





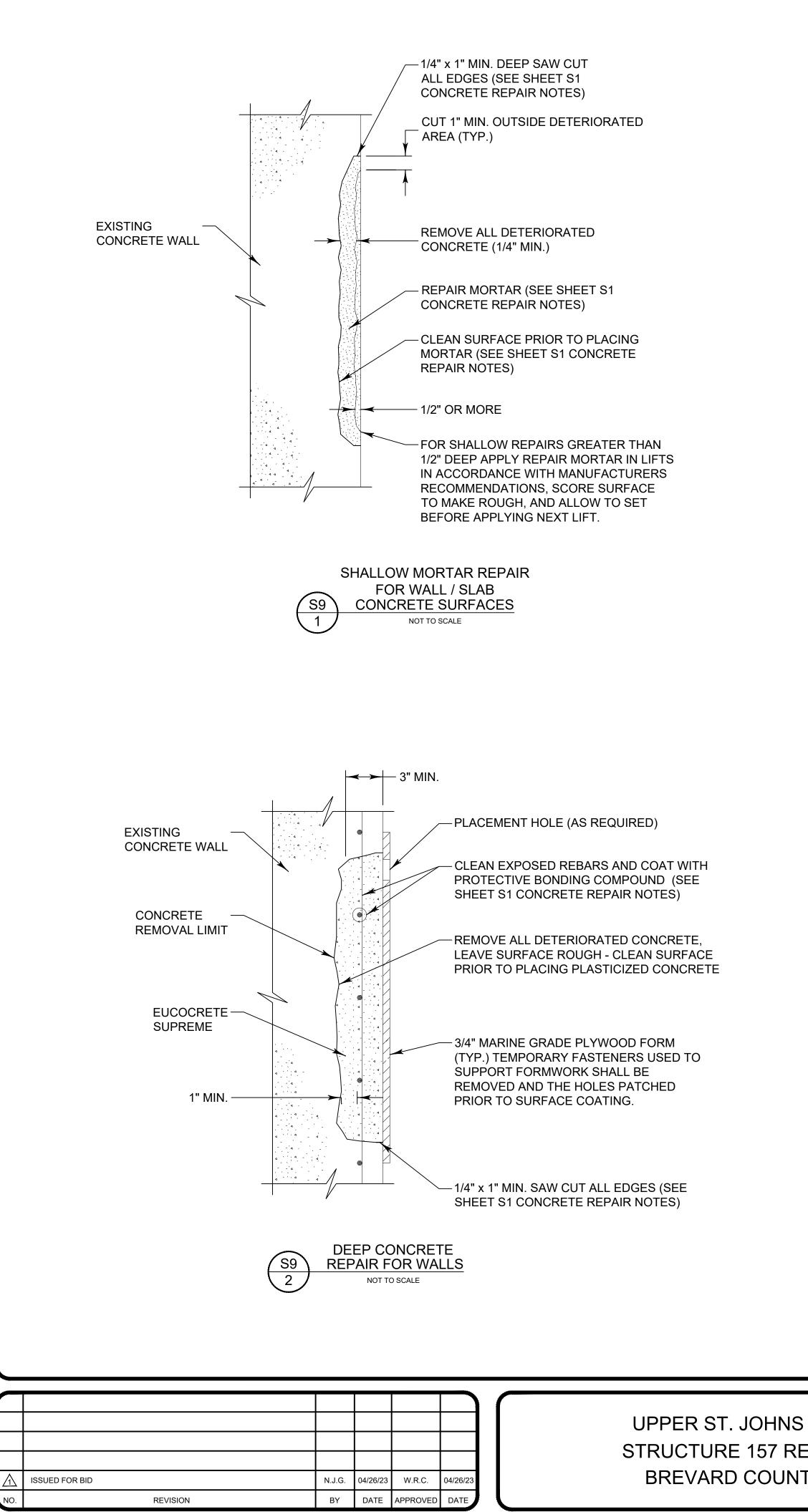
REVISION

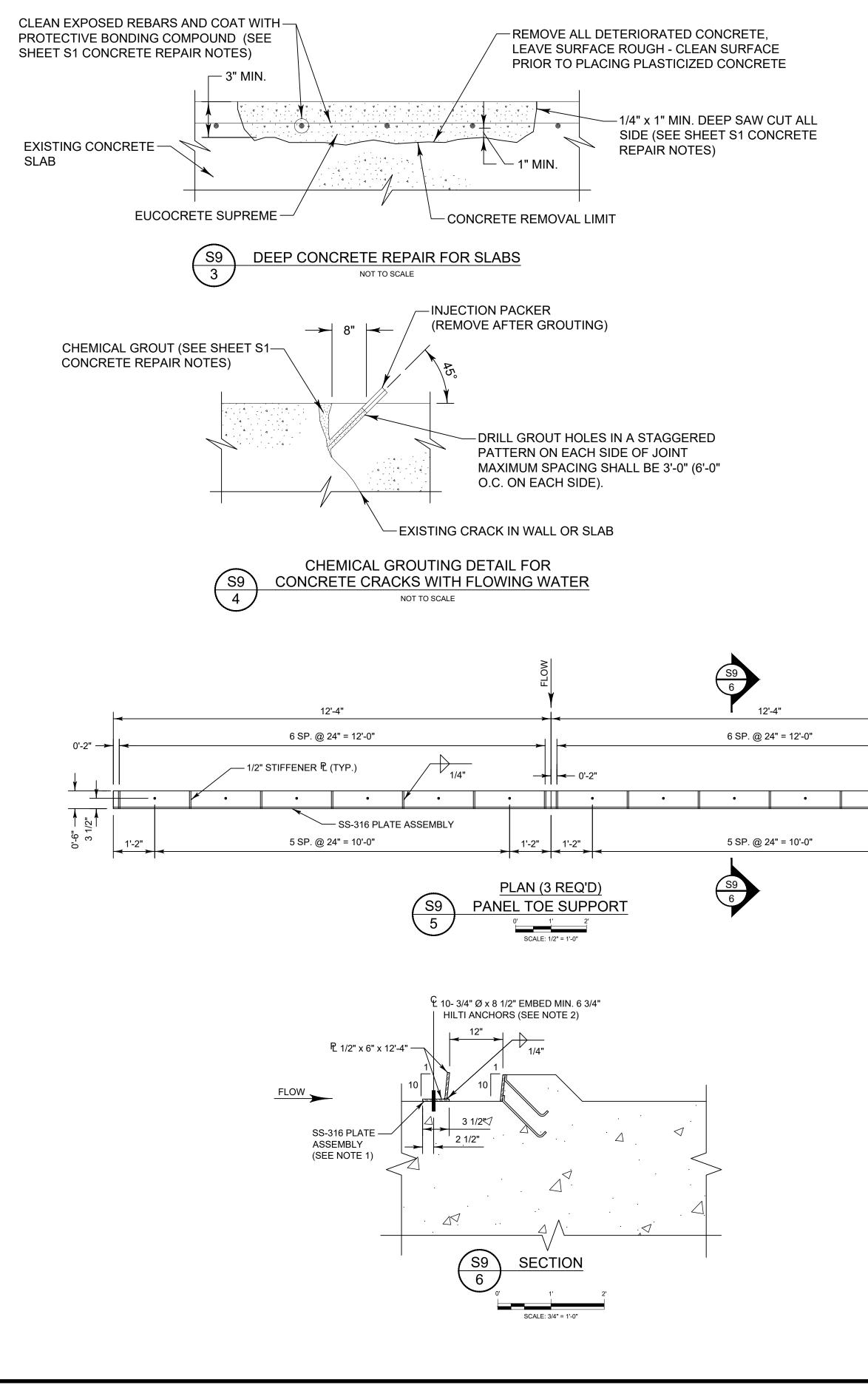
DATE APPROVED DATE

BY

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT P.O. BOX 1429 PALATKA, FLORIDA				
DRAWN: <u>N.J.G.</u>	DATE: <u>APRIL 26, 2023</u>	REVIEWER: W.R.C.		
SCALE: <u>1/4" = 1'-0"</u>	DESIGNER: W.R.C.	SECTION CHIEF: W.R.C.		

CERTIFICATION:	FILE NAME:
	S-157 STRUCTURE.dwg
	PROJECT NO.:
WILLIAM R. COTE	
P.E. NUMBER:53746	SHEET:
DATE:	S8





S RIVER BASIN REHABILITATION	ST. JOHNS RIVER WATER MANAGEMENT DISTRICT P.O. BOX 1429 PALATKA, FLORIDA			
NTY, FLORIDA	DRAWN: N.J.G.	DATE: <u>APRIL 26, 2023</u>	REVIEWER: W.R.C.	
	SCALE: AS NOTED	DESIGNER: W.R.C.	SECTION CHIEF: W.R.C.	

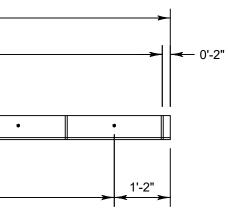
MISCELLANEOUS DETAILS

### CONCRETE:

- 1. 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.
- 2. 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 ENTRAINED 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.
- 3. REINFORCING STEEL SHALL BE GRADE 60 DEFORMED BILLET STEEL BARS CONFORMING TO ASTM A-615.
- 4. THE MINIMUM CLEAR CONCRETE COVER FOR REINFORCEMENT SHALL BE 3 INCHES FOR FORMED SURFACES AND 4.5 INCHES FOR CONCRETE CAST AGAINST EARTH.
- 5. 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 DENEEF CONSTRUCTION CHEMICALS, INC., OR APPROVED EQUAL.

### STEEL:

- 1. THE PANEL TOE SUPPORT ASSEMBLY SHALL BE STAINLESS STEEL TYPE 316 CONFORMING TO ASTM A479.
- 2. ANCHORS SHALL UTILIZE THE HILTI HIT-RE 500-V3 EPOXY ADHESIVE ANCHORING SYSTEM, OR EQUAL. THREADED ANCHOR RODS SHALL BE 3/4" DIA. X 8-1/2" LONG HAS-R 316 STAINLESS STEEL WITH A MINIMUM EMBEDMENT DEPTH OF 6-3/4". NUTS AND WASHERS SHALL ALSO BE SS-316.



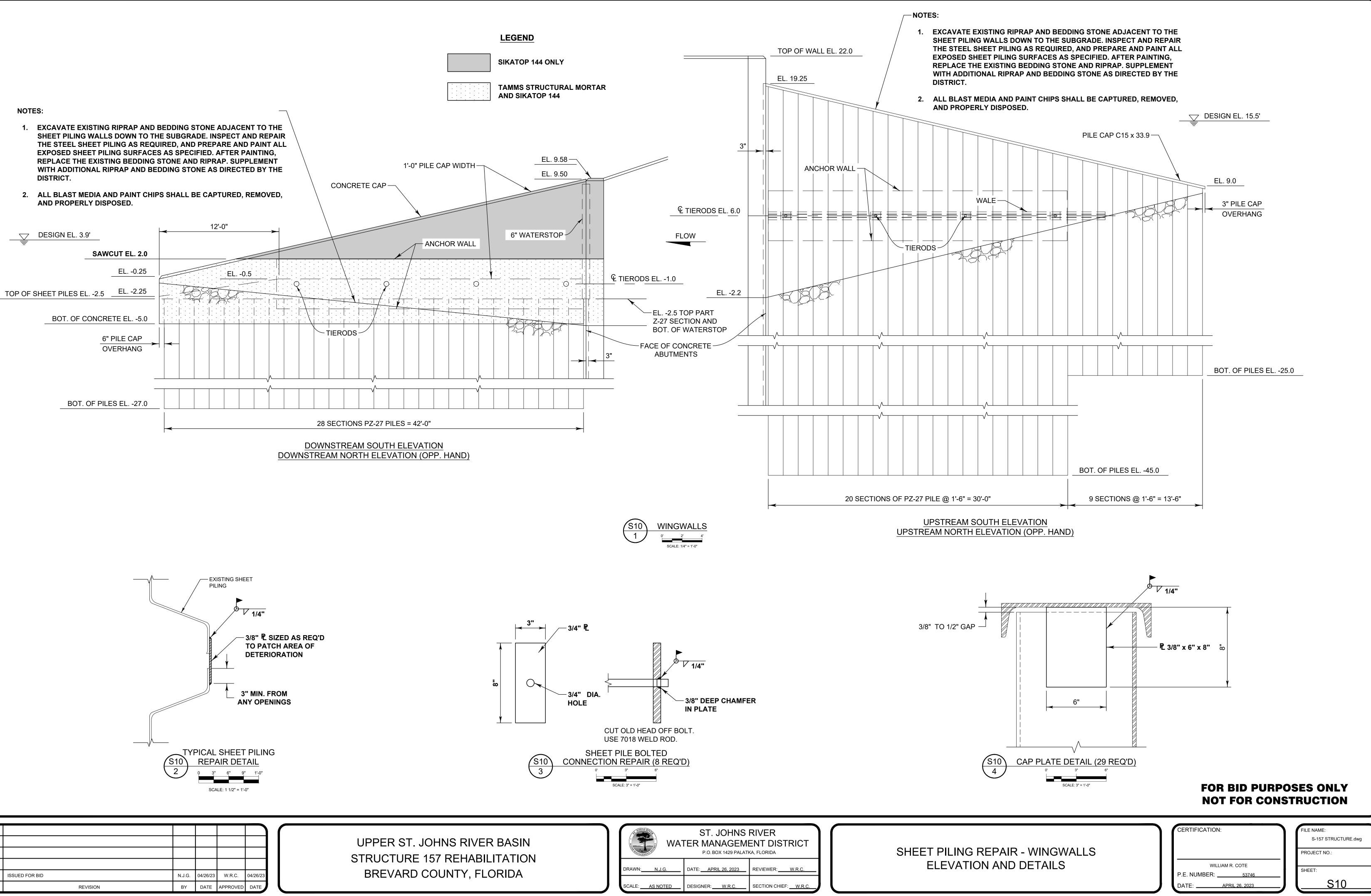
LEGEND

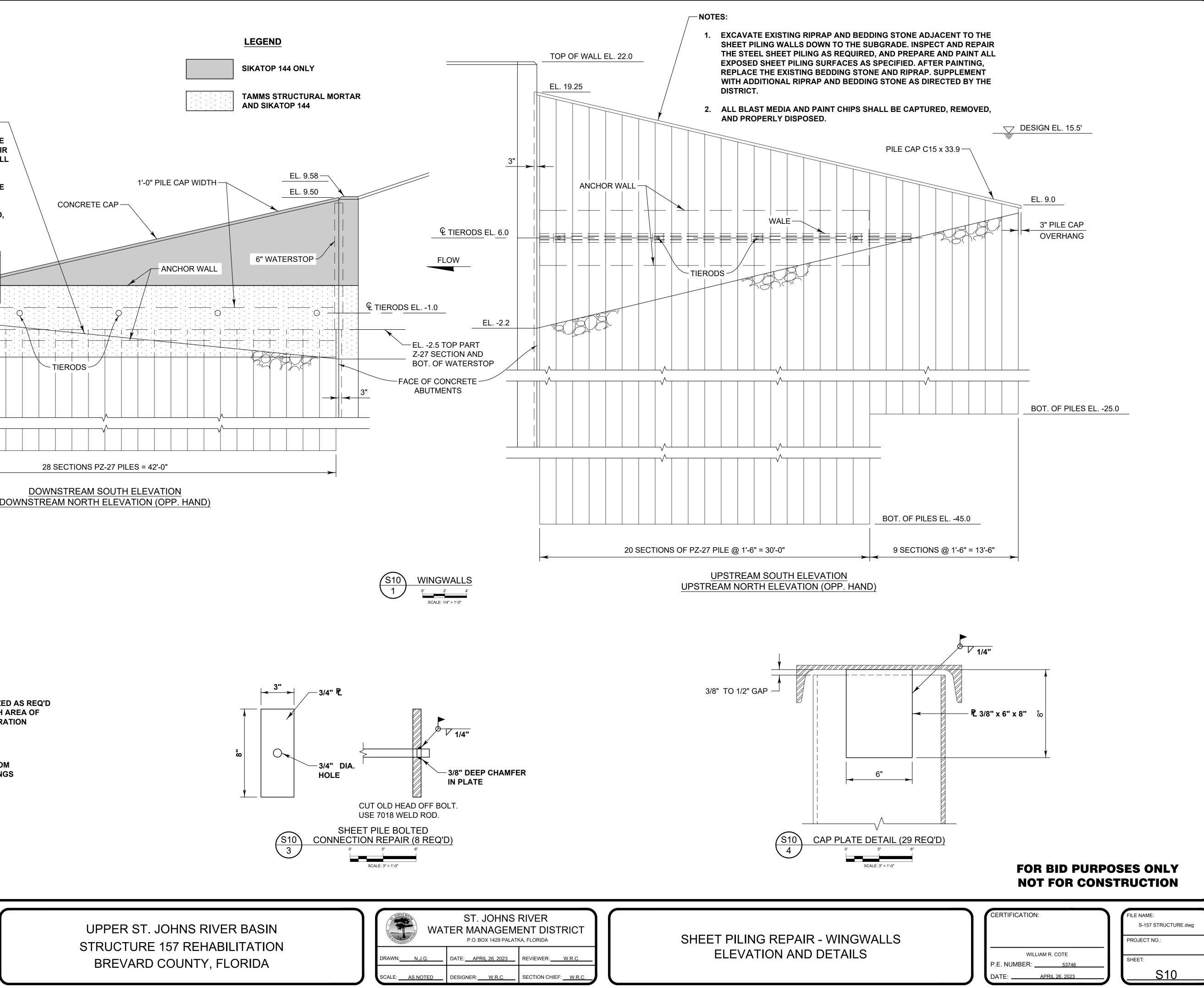


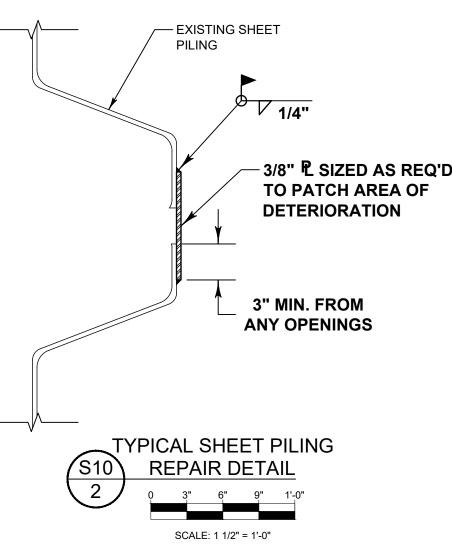
### FOR BID PURPOSES ONLY NOT FOR CONSTRUCTION

CERTIFICATION:	FILE NAME: S-157 STRUCTURE.dwg
	PROJECT NO.:
WILLIAM R. COTE P.E. NUMBER: <u>53746</u>	SHEET:
DATE:	

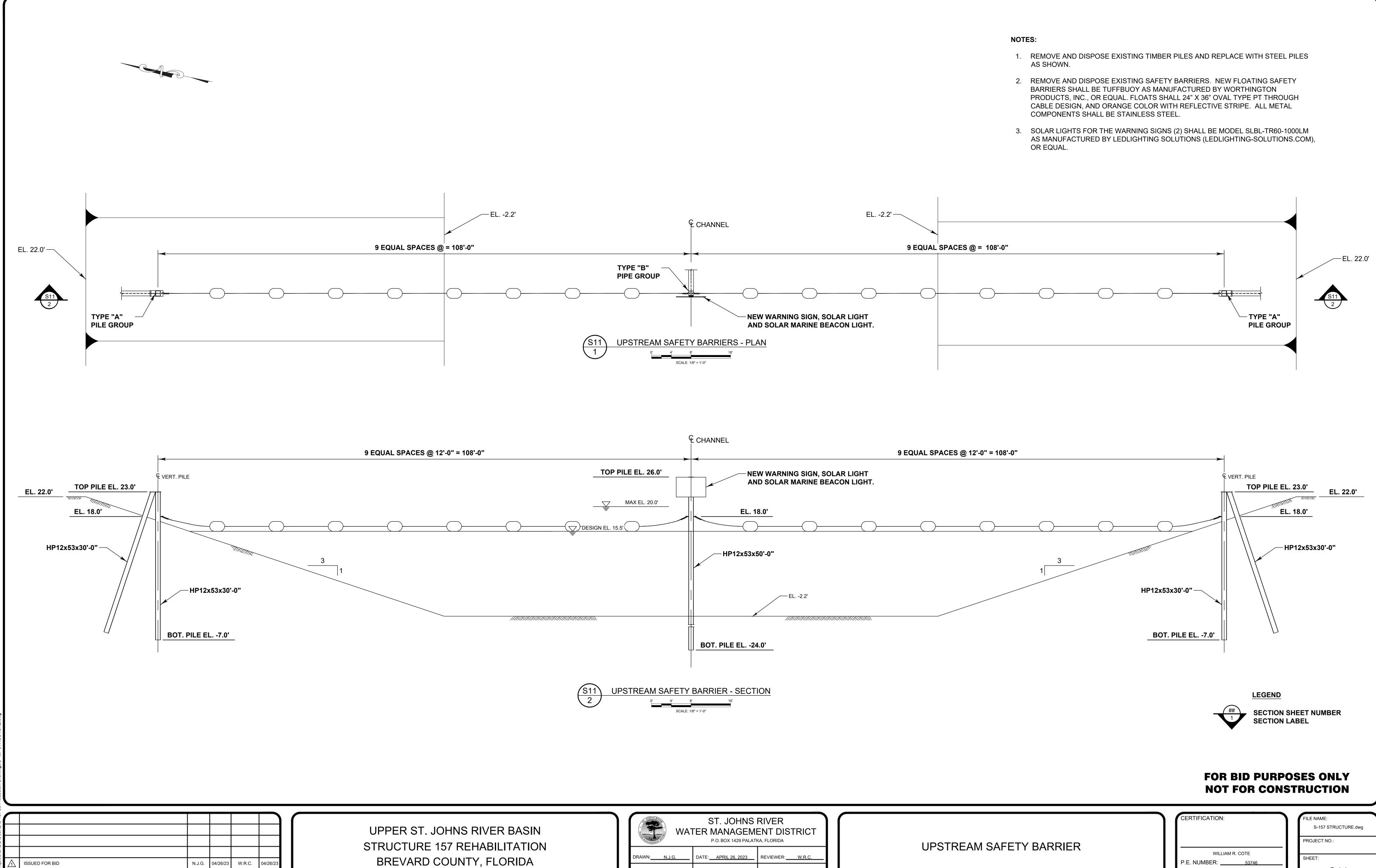
- SHEET PILING WALLS DOWN TO THE SUBGRADE. INSPECT AND REPAIR THE STEEL SHEET PILING AS REQUIRED, AND PREPARE AND PAINT ALL **EXPOSED SHEET PILING SURFACES AS SPECIFIED. AFTER PAINTING,** REPLACE THE EXISTING BEDDING STONE AND RIPRAP. SUPPLEMENT WITH ADDITIONAL RIPRAP AND BEDDING STONE AS DIRECTED BY THE DISTRICT.
- AND PROPERLY DISPOSED.







$\triangle$	ISSUED FOR BID	N.J.G.	04/26/23	W.R.C.	04/26/23
NO.	REVISION	BY	DATE	APPROVED	DATE



RIVER BASIN		WAT	ST. JOHNS ER MANAGEME P.O. BOX 1429 PALATH	ENT DISTRICT	UPSTREA
HABILITATION TY, FLORIDA		DRAWN: <u>N.J.G.</u> SCALE: <u>1/8" = 1'-0"</u>	DATE: <u>APRIL 26, 2023</u> DESIGNER: <u>W.R.C.</u>	REVIEWER: W.R.C.	UPSIKE

DATE APPROVED DATE

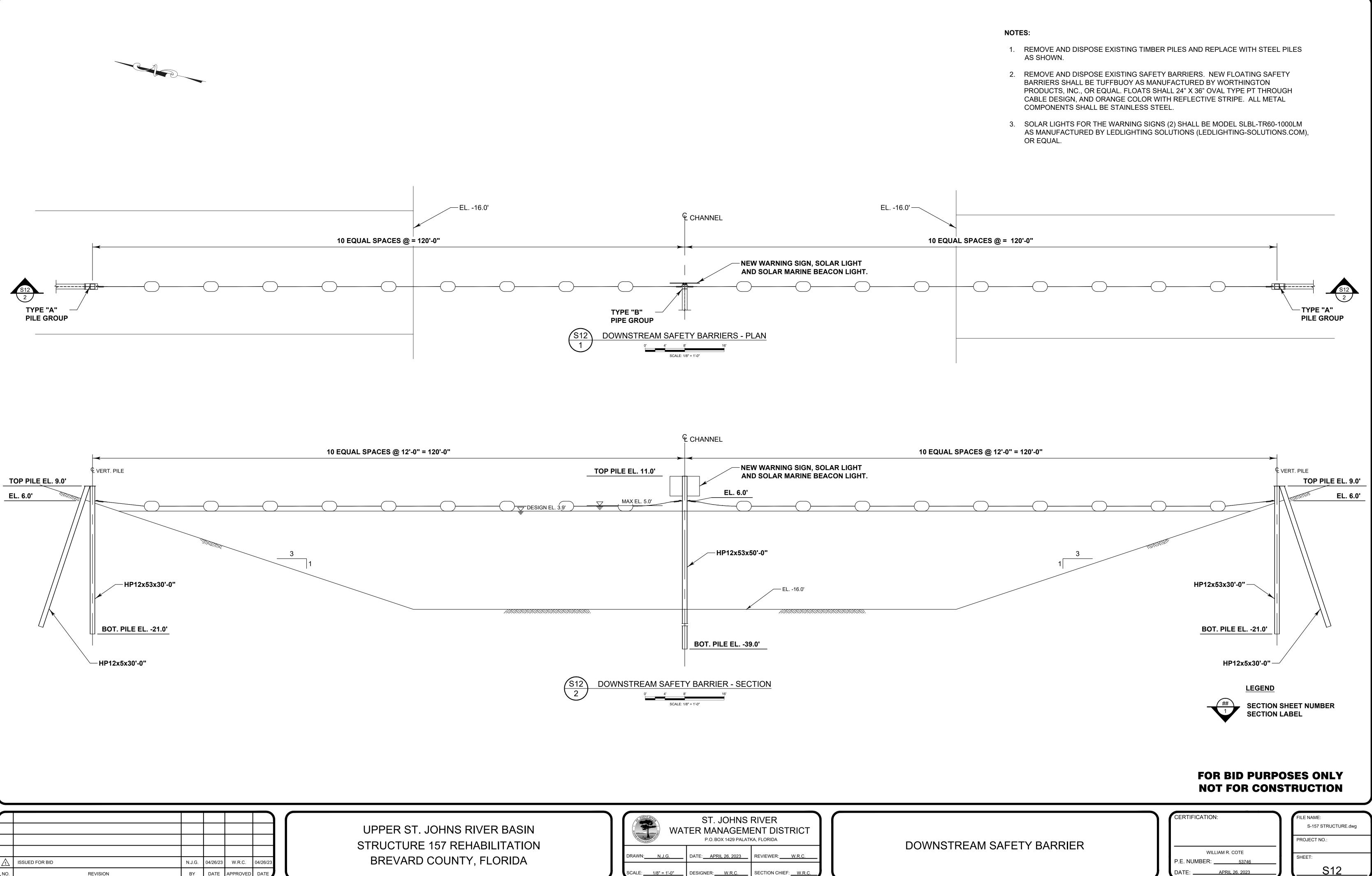
BY

REVISION

<u>S11</u>

DATE: \_\_\_\_

APRIL 26, 2023

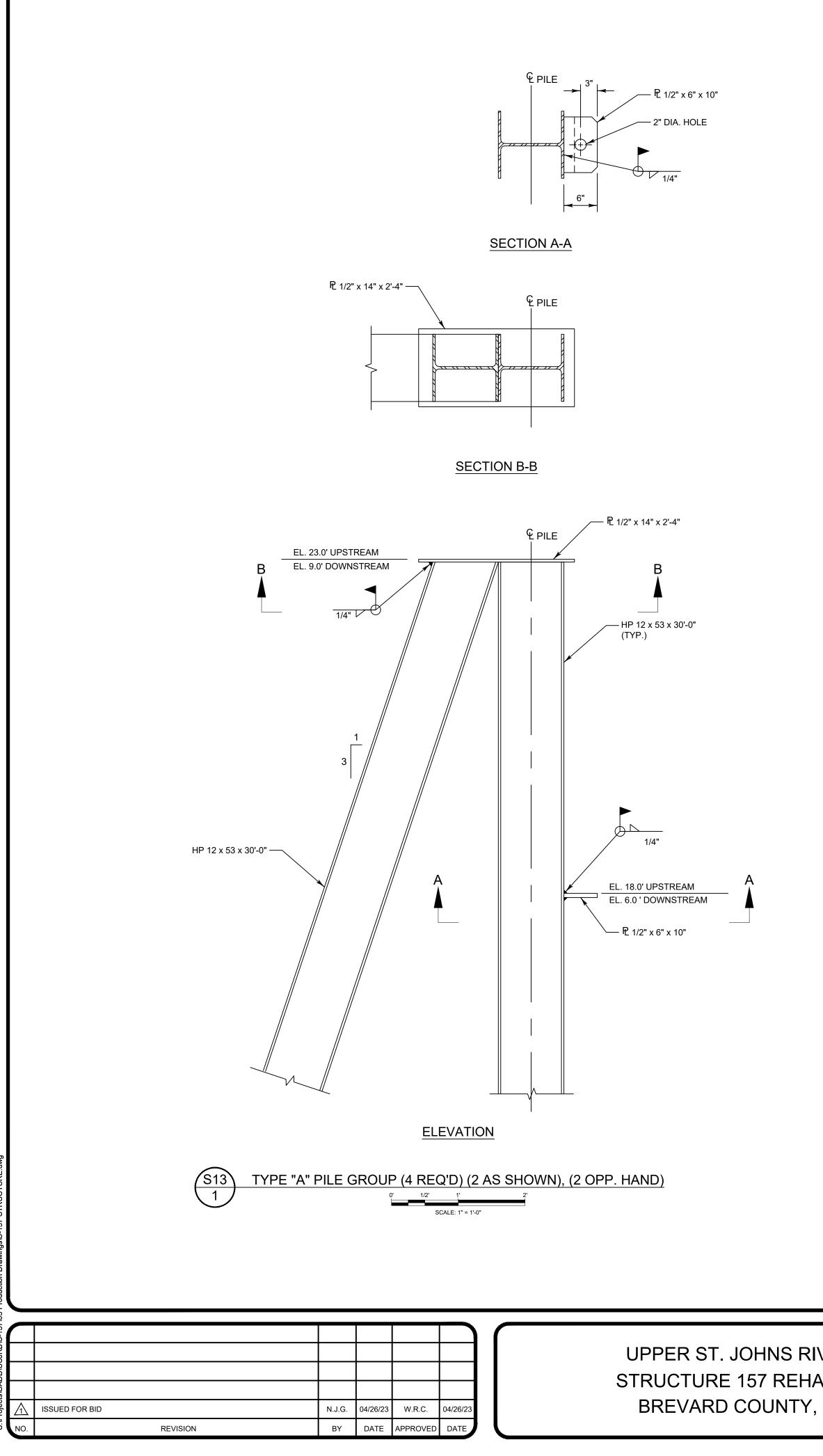


$\triangle$	ISSUED FOR BID	N.J.G.	04/26/23	W.R.C.	04/26/23
NO.	REVISION	BY	DATE	APPROVED	DATE

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TY, FLORIDA	DATE: <u>APRIL 26, 2023</u> DESIGNER: W.R.C.	REVIEWER:       W.R.C.         SECTION CHIEF:       W.R.C.	DOWNS	/

APRIL 26, 2023

DATE: \_\_\_\_



1/4" C PILE	
SECTION C-C	
PILE 3/4" DIA. COUNTERSUNK BOLTS 2" x 12" x 14" P.T. BASE FOR MOUNTING SOLAR LIGHT AND SOLAR MARINE BEACON LIGHT	
₽ 1/2" x 14" x 2'-4"	
EL 18.0° UPSTREAM HP 12 x 53 x 50°-0° (TYP.) SEE SHEET S14 FOR SIGN DETAILS SEE S14.3 FOR TYP. SIGN EL 18.0° UPSTREAM R 12° R 12° HP 12 x 53 x 50°-0° HP 12 x 53 x 50°-	
ELEVATION	
$\underbrace{S13}_{2} \underbrace{TYPE "B" PILE GROUP (2 REQ'D)}_{\underbrace{0^{-1/2^{-1}}_{-1/2^{-2}}}_{SCALE: 1^{+} = 1^{+}0^{+}}}$	
RIVER BASIN ABILITATION Y, FLORIDA NJG. DATE: APRIL 26, 2023 REVIEWER: W.R.C. SCALE: ? DESIGNER: W.R.C. SECTION CHIEF: W.R.C.	TYPE G

### NOTE SPECIFICATIONS:

### STRUCTURAL STEEL:

- 1. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST EDITION.
- ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE NEW AND CONFORM TO THE REQUIREMENTS OF THE AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM) STANDARD A36 UNLESS NOTED OTHERWISE.
- WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS) "STRUCTURAL WELDING CODE" AWS D1.1. ALL WELDING SHALL UTILIZE E70XX ELECTRODES UNLESS NOTED OTHERWISE.

### PAINTS AND PROTECTIVE COATINGS:

- 1. ALL STEEL SHALL BE PRIMED AND PAINTED IN ACCORDANCE WITH THE STEEL STRUCTURES PAINTING COUNCIL (SSPC) "STEEL STRUCTURES PAINTING MANUAL". STEEL SURFACE PREPARATION SHALL BE SSPC-10 NEAR WHITE BLAST CLEANING
- 2. PROTECTIVE COATING FOR STRUCTURAL STEEL SHALL BE AS MANUFACTURED BY SHERWIN-WILLIAMS, OR EQUAL, AS FOLLOWS:

FIRST COAT (PRIMER): DURA-PLATE 235, 4-8 MILS DFT SECOND COAT: DURA-PLATE 235, 4-8 MILS DFT THIRD (FINAL) COAT: DURA-PLATE 235, 4-8 MILS DFT COLOR: LIGHT GRAY

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

### FOR BID PURPOSES ONLY NOT FOR CONSTRUCTION

CERTIFICATION:	FILE
	PRO
WILLIAM R. COTE	
P.E. NUMBER:53746	SHEE
DATE: APRIL 26. 2023	

FILE NAME:
S-157 STRUCTURE.dwg
PROJECT NO.:
SHEET:
S13

PE A AND TYPE B PILE GROUP DETAILS

ISSUED FOR BID	N.J.G.	04/26/23	W.R.C.	04/26/23
REVISION	BY	DATE	APPROVED	DATE

RED BACKGROUND (TYP.)	T/ BACKBOARD				
THOMAS SICK L2 RECTON STRUCTURE S-157 STRUCTURE S-157			3" 3" 1	YPE B PILE GROUP	2" x 10" P.T.
TRADOURD TRADOU	<u> </u>		<b>— • •</b>	— 3/4" COUNTERSUNK BOLT (TYP.)	
TRADOURD TRADOU					
TRADOURD TRADOU					
THE ACCURATE AND					
VICTORING OF THE SIGN BACKBOARD (2 REQD)	3- -8			ja-	
VICTORING OF THE SIGN BACKBOARD (2 REQD)					
THE PERMETERS OPEN AUTOMATICALLY STRUCTURE S-157 STRUCTURE S-157 STRUCT					2" x 6" P.T. (TY
THE PERMETERS OPEN AUTOMATICALLY STRUCTURE S-157 STRUCTURE S-157 STRUCT					
TYP. SIGN BACKBOARD (2 REOD)					2 x 0 P.1.
TYP- SIGN BACKBOARD (2 REQD)	<u> </u>		● ●		
TRACKEDARD TO RECKEDARD TO RECKEDARD TO PERMIE LIGE (TYP) TO RECKEDARD TO RECKEDA		~	 6'-0"		
ANDLE WITH 55 1/2"					
ANDLEWITHSS 1/2"	T/ BACKBOARD		6'-0"		
A HOLE WITH SS 1/2" A HOLE WI	T/ BACKBOARD				(TYP.)
AHOLE WITH 55 1/2"			NG	ER	(TYP.) • • 8" WHITE TEXT
KEEP OUI       3" WHITE TEXT         F.A.C. 40C-9.320       2" WHITE TEXT         STRUCTURE S-157       SJRWMD         (1)       (1)         (2)       (2)         (3)       (2)         (3)       (2)         (3)       (2)         (3)       (2)         (3)       (2)         (3)       (2)         (3)       (2)         (3)       (2)         (3)       (2)         (3)       (2)         (3)       (2)         (4)       (2)         (4)       (2)         (5)       (2)         (4)       (2)         (5)       (2)         (4)       (2)         (5)       (2)         (4)       (2)         (5)       (2)         (4)       (2)         (5)       (2)         (4)       (2)         (5)       (2)         (4)       (2)         (5)       (2)         (4)       (2)         (5)       (2)         (4)       (2)         (5)       (2) </td <td>- ™ </td> <td></td> <td>NG</td> <td>ER</td> <td>(TYP.) • • • • • • • • • • • • • • • • • • •</td>	- ™ 		NG	ER	(TYP.) • • • • • • • • • • • • • • • • • • •
F.A.C. 40C-9.320	∞ 	• DA NO BOATS	BEYOND	ER THIS POIN	(TYP.) • • • • • • • • • • • • •
A HOLE WITH SS 1/2" A HOLE WITH SS 1/2" CREW & WASHER 4" 4" 4" 4" 4" 4" 4" 4" 4" 4"	€ 	• <b>NO BOATS</b> <b>GATES OPI</b>	NG BEYOND ENAUTO	ER THIS POIN MATICALL	(TYP.) • • • • • • • • • • • • •
A HOLE WITH SS 1/2"/ CREW & WASHER4" 4" 7" 7" 5" 7"		NO BOATS GATES OP	NG BEYOND EN AUTO (EEP OU	ER THIS POIN MATICALI	(TYP.) (TYP.) • • • • • • • • • • • • •
	7" 2" 6" 6" 8" 7-1-1"	NO BOATS GATES OP	A.C. 40C-9.3	THIS POINT THIS POINT DATACALLA T	(TYP.) (TYP.) 8" WHITE TEXT 3" WHITE TEXT 3" WHITE TEXT 2" WHITE TEXT 2" BLACK

RETROREFLECTIVE. 4. REFER TO SHEET S13 FOR PILE SUPPORTS.

UPPER ST. JOHNS RIVER BASIN STRUCTURE 157 REHABILITATION BREVARD COUNTY, FLORIDA

WAT	RIVER ENT DISTRICT KA, FLORIDA	
DRAWN: N.J.G.	DATE: <u>APRIL 26, 2023</u>	REVIEWER: W.R.C.
SCALE: AS NOTED	DESIGNER: <u>W.R.C.</u>	SECTION CHIEF: <u>W.R.C.</u>

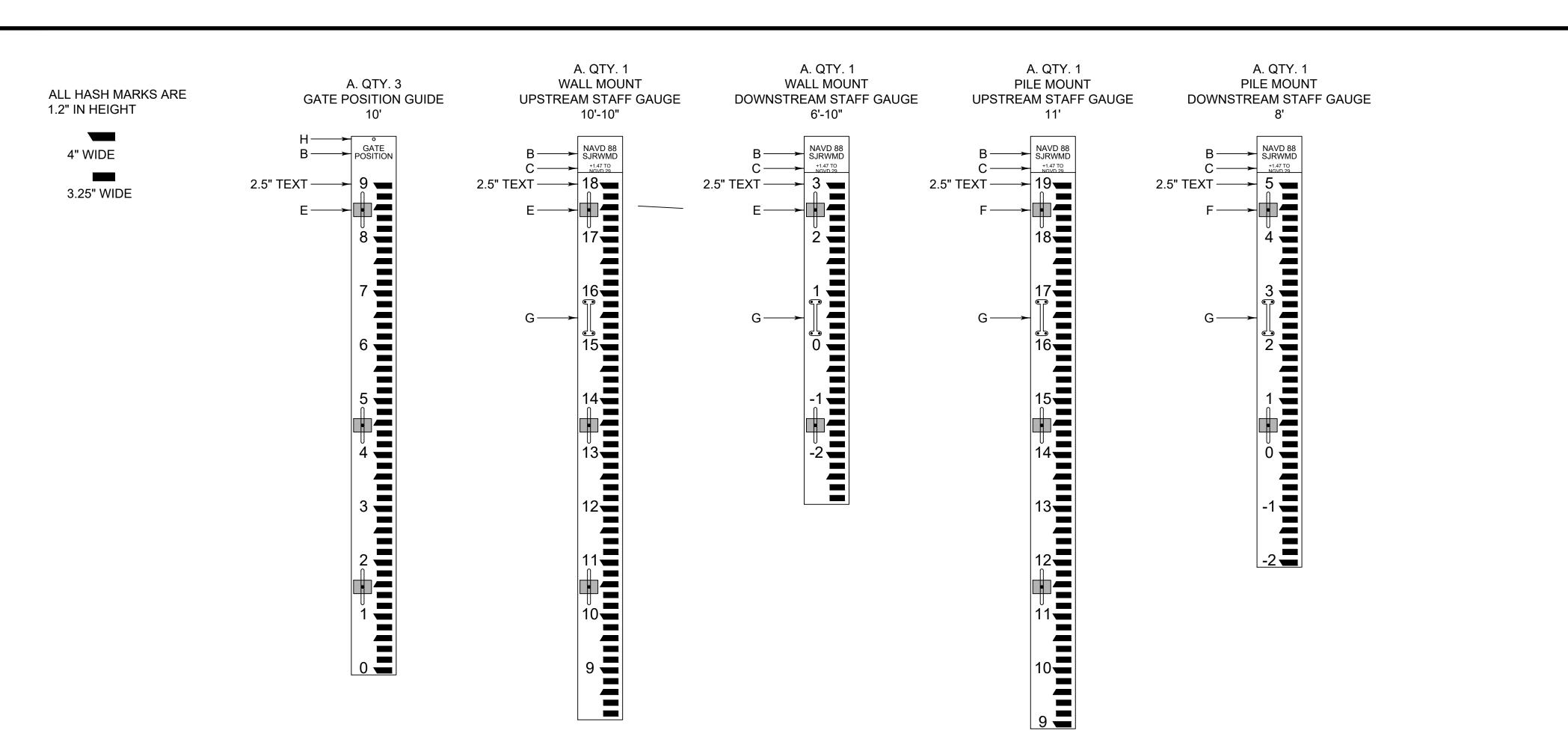
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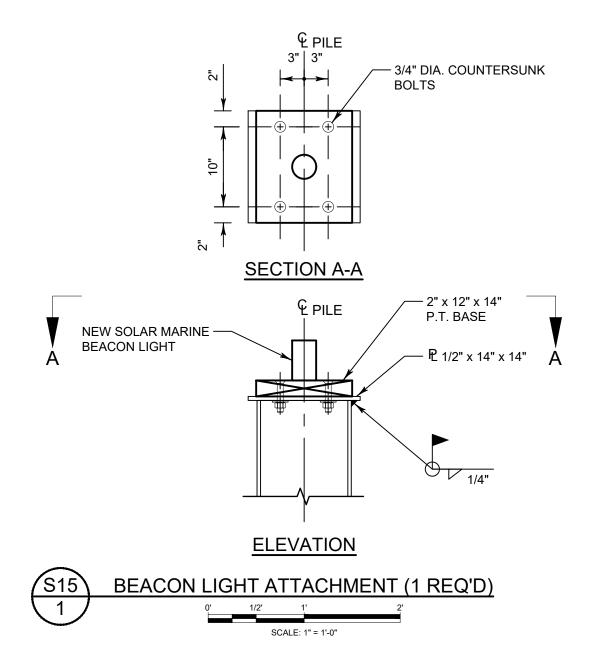
### FOR BID PURPOSES ONLY **NOT FOR CONSTRUCTION**

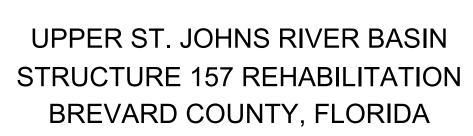
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CERTIFICATION	J:
WIL	LIAM R. COTE
P.E. NUMBER:	53746
DATE:	APRIL 26, 2023

FILE NAME:
S-157 FENCING.dwg
PROJECT NO.:
SHEET:
S14







[ →	ISSUED FOR BID	N.J.G.	04/26/23	W.R.C.	04/26/23
0.	REVISION	BY	DATE	APPROVED	DATE

WAT	ST. JOHNS RIVER FR MANAGEMENT DISTRIC P.O. BOX 1429 PALATKA, FLORIDA			
DRAWN: N.J.G.	DATE: <u>APRIL 26, 2023</u>	REVIEWER: W.R.C.		
SCALE: AS NOTED	DESIGNER: W.R.C.	SECTION CHIEF: W.R.C.		

NEW STAFF GAUGES &

### STAFF GAGE NOTES:

### MATERIALS KEY:

- A. STAFF GAUGES AND GATE POSITION GUIDES: 2"X10" (1.5"X9.5") MADE FROM TANGENT TECHNOLOGIES POLYFORCE RECYCLED PLASTIC LUMBER, WHITE OVER BLACK, OR EQUAL.
- B. TITLE PLAQUE INSERT: WHITE WITH RED LETTERING.
- C. NGVD29 OFFSET = +1.47
- D. STAFF GAUGE SPLICE LINES (IF REQUIRED).
- E. WALL MOUNTED STAFF GAUGES AND GATE POSITION GUIDES: ALL SLOTS ARE 0.6875"x7.3125". THRU HOLES ARE 5/8" DIAMETER. PROVIDE SS WASHERS 1/4"X3"X4" AND SS EPOXY ANCHORS.
- F. PILE MOUNTED STAFF GAUGES: ALL SLOTS ARE 0.6875"x7.3125". THRU HOLES ARE 5/8" DIAMETER. PROVIDE SS WASHERS 1/4"X3"X4" AND SS HEX HEAD THRU-BOLT 5/8"X4" FOR MOUNTING TO H-PILES.
- G. 8" SS HANDLE MOUNTED WITH THREADED INSERTS.
- H. 5/16" DIAMETER THRU HOLE WITH CONCRETE SCREW.

### HARDWARE:

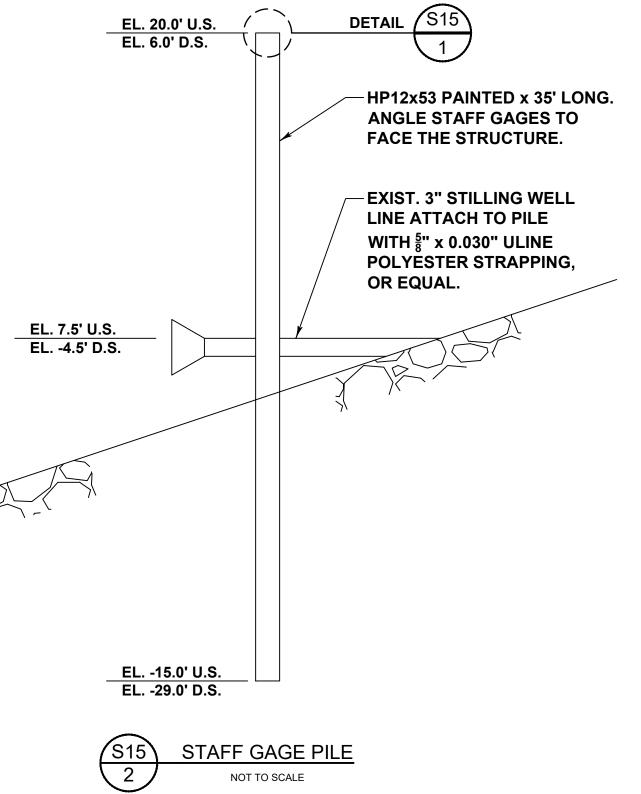
ALL HARDWARE SHALL BE STAINLESS STEEL

SOLAR LIGHTS:

SOLAR MARINE BEACON LIGHTS (2) FOR THE STAFF GAUGE PILES SHALL BE MODEL SNL-003 WHITE COLOR AS MANUFACTURED BY BRITTA PRODUCTS INC., OR EQUAL. THIS PRODUCT IS AVAILABLE AT PILOTLIGHT.NET.

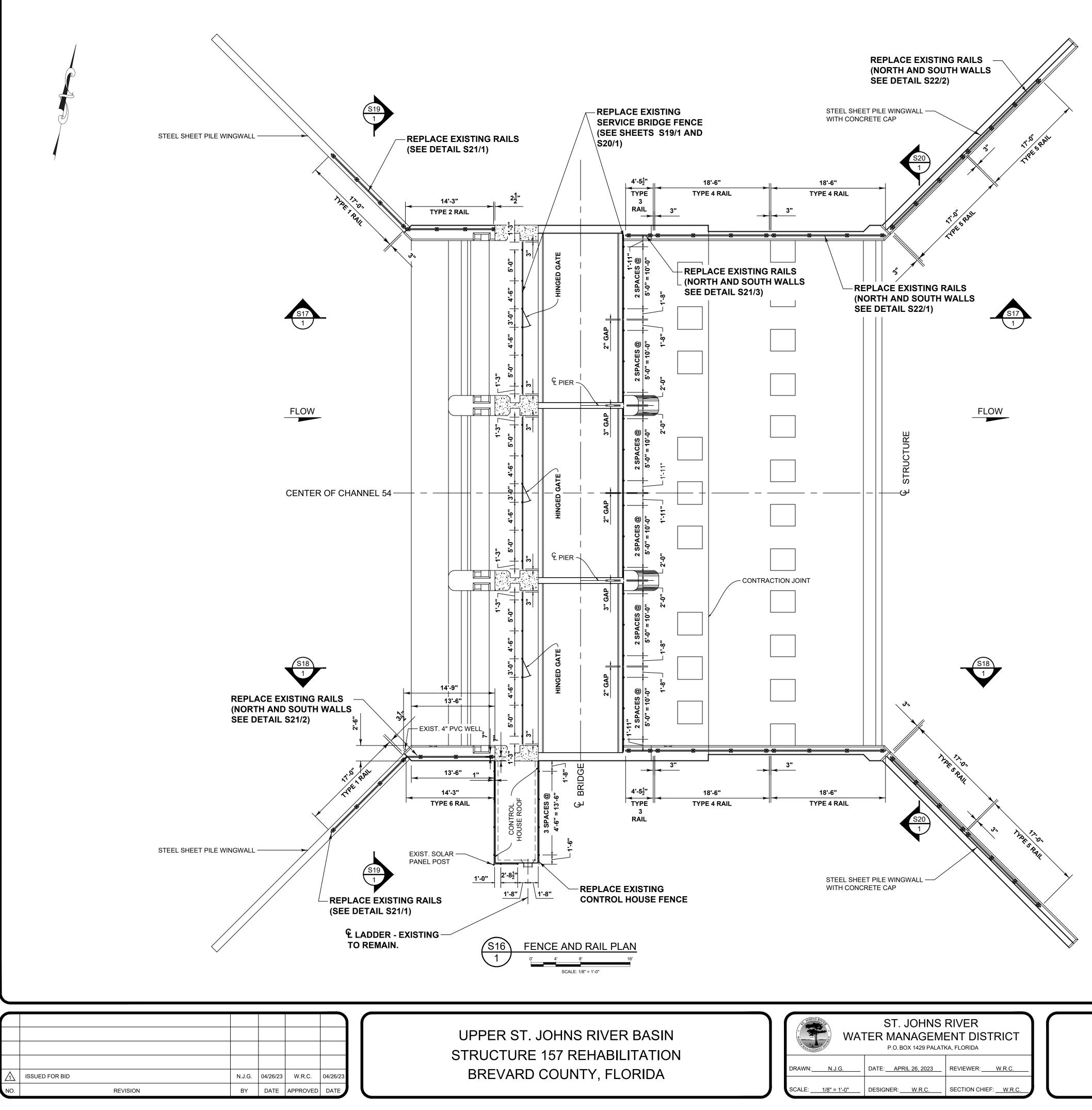
### DATUM:

### **ELEVATIONS ON THIS SHEET ARE IN NAVD88.** NAVD88 = NGVD29 -1.47 FEET.



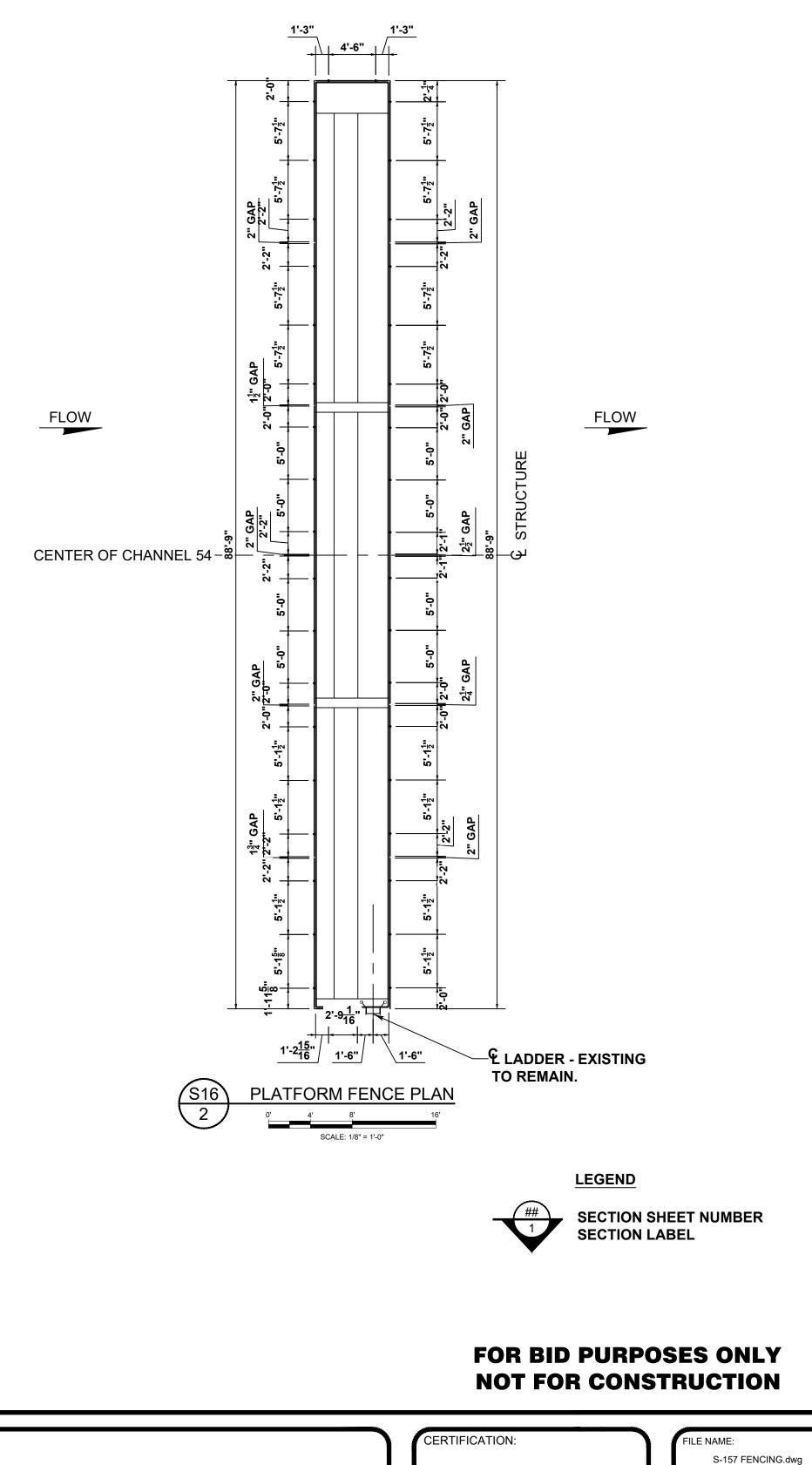
### FOR BID PURPOSES ONLY **NOT FOR CONSTRUCTION**

	CERTIFICATION:	FILE NAME: S-157 FENCING.dwg
& GATE POSITION GUIDES	WILLIAM R. COTE	PROJECT NO.:
	P.E. NUMBER:	SHEET: S15
		<u></u>



RIVER BASIN	WA	ST. JOHNS TER MANAGEM P.O. BOX 1429 PALAT	ENT DISTRICT	FENCE AND HANDRAIL
HABILITATION Y, FLORIDA	DRAWN: <u>N.J.G.</u> SCALE: <u>1/8" = 1'-0"</u>	DATE: <u>APRIL 26, 2023</u> DESIGNER: <u>W.R.C.</u>	REVIEWER: <u>W.R.C.</u> SECTION CHIEF: <u>W.R.C.</u>	REPLACEMENT PLAN

- NOTE: 1. SEE SHEET S21 FOR ALUMINUM PEDESTRIAN RAIL NOTE SPECIFICATIONS.
- 2. SEE SHEET S23 FOR FENCE NOTE SPECIFICATIONS.



PROJECT NO .:

SHEET:

WILLIAM R. COTE

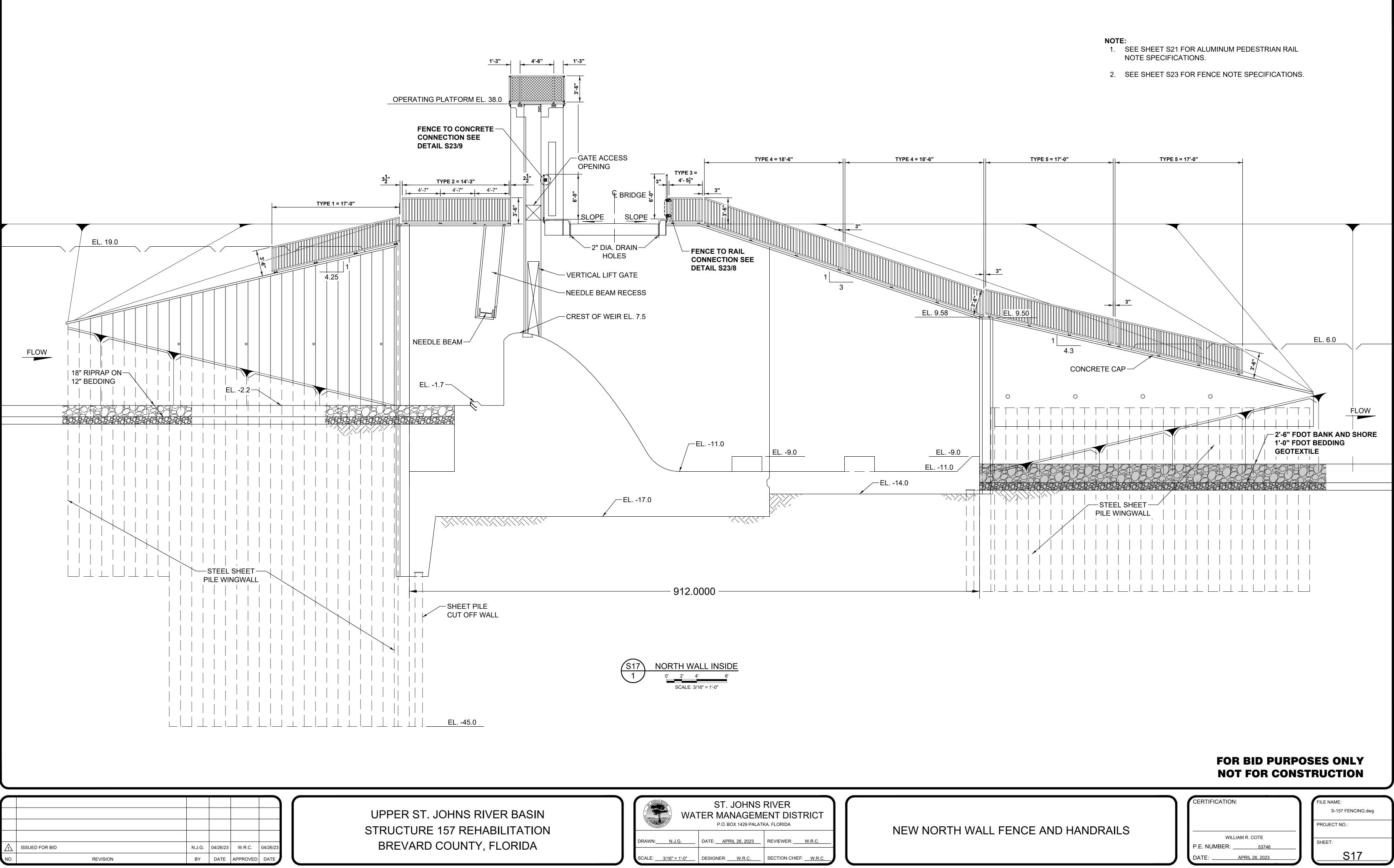
APRIL 26, 2023

53746

P.E. NUMBER:

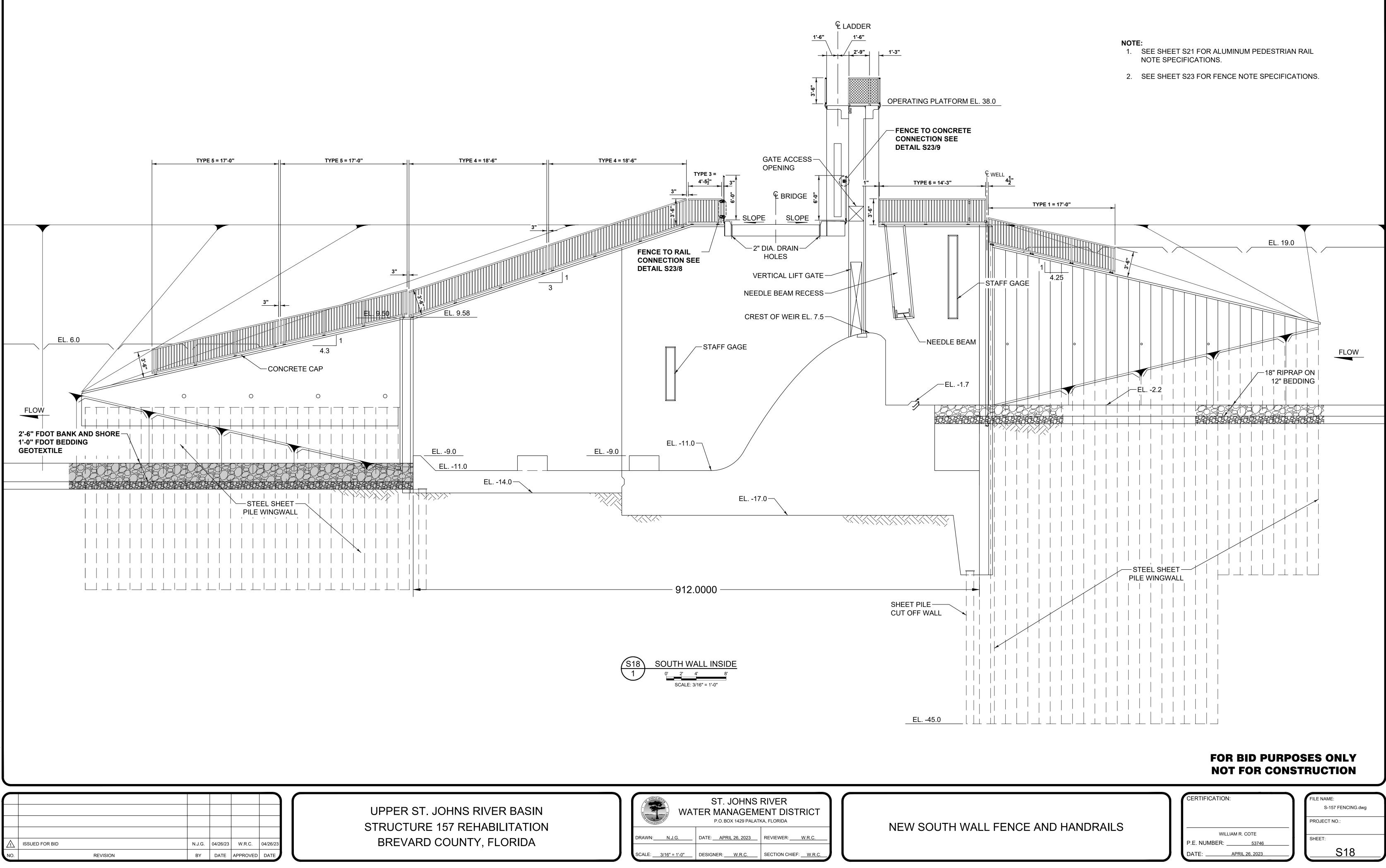
DATE: \_

S16



IVER BASIN ABILITATION		ENT DISTRICT	NEW NORTH W		
TY, FLORIDA	DRAW		DATE: <u>APRIL 26, 2023</u> DESIGNER: <u>W.R.C.</u>	REVIEWER: W.R.C.	

ERTIFICATION:	FILE NAME:
	S-157 FENCING.dwg
	PROJECT NO.:
WILLIAM R. COTE	
E. NUMBER:53746	SHEET:
ATE: APRIL 26, 2023	<u>S17</u>

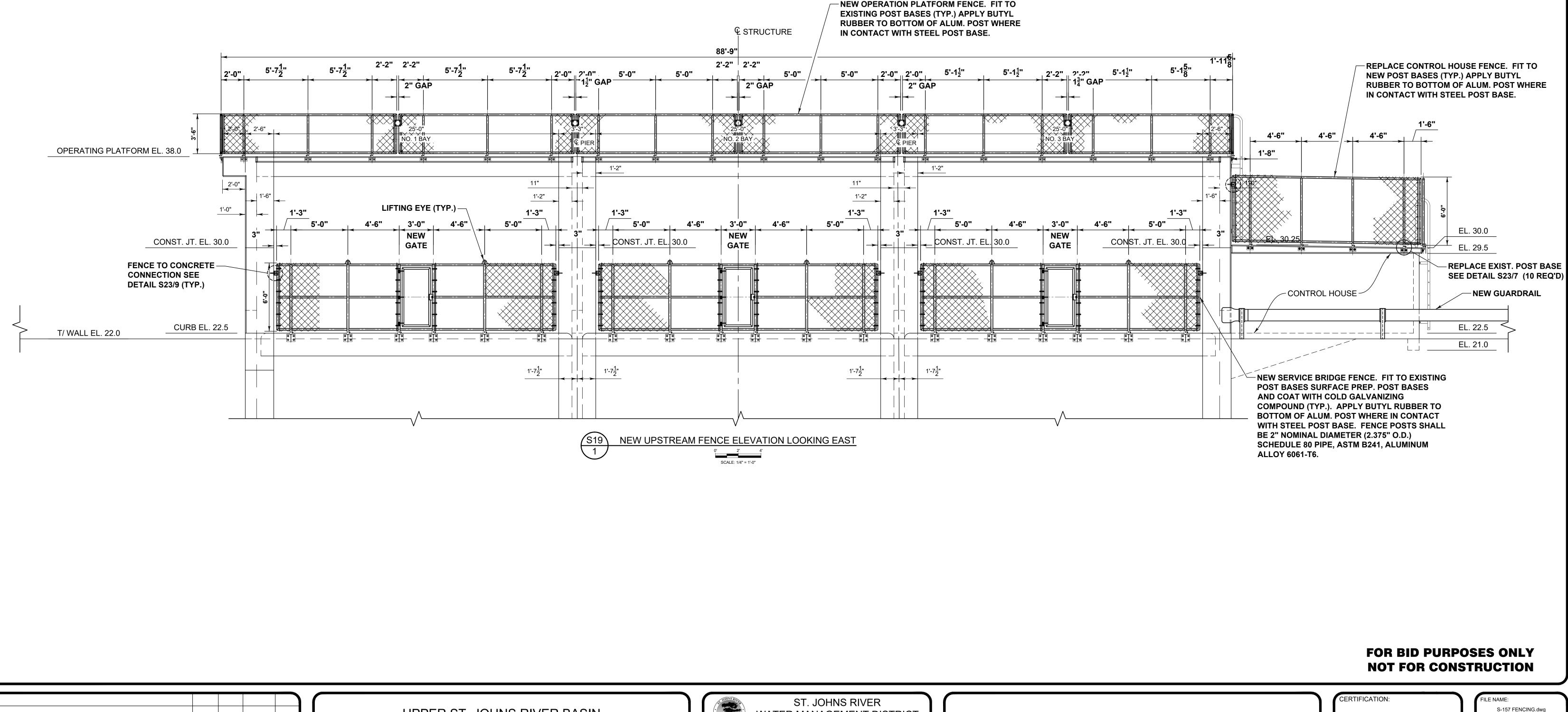


ΗA	BILITATIO
Ϋ́,	FLORIDA

WAT	ST. JOHNS FER MANAGEMI P.O. BOX 1429 PALATH	ENT DISTRICT
DRAWN: N.J.G.	DATE: <u>APRIL 26, 2023</u>	REVIEWER: W.R.C.
SCALE: <u>3/16" = 1'-0"</u>	DESIGNER: W.R.C.	SECTION CHIEF: <u>W.R.C.</u>

WILLIAM R. COTE		
P.E. NUMBER:	53746	
DATE: APRIL 26, 2023		

FILE NAME:
S-157 FENCING.dwg
PROJECT NO.:
SHEET:
S18



$\geq$	ISSUED FOR BID	N.J.G.	04/26/23	W.R.C.	04/26/23	
NO.	REVISION	BY	DATE	APPROVED	DATE	

## UPPER ST. JOHNS RIVER BASIN STRUCTURE 157 REHABILITATION BREVARD COUNTY, FLORIDA

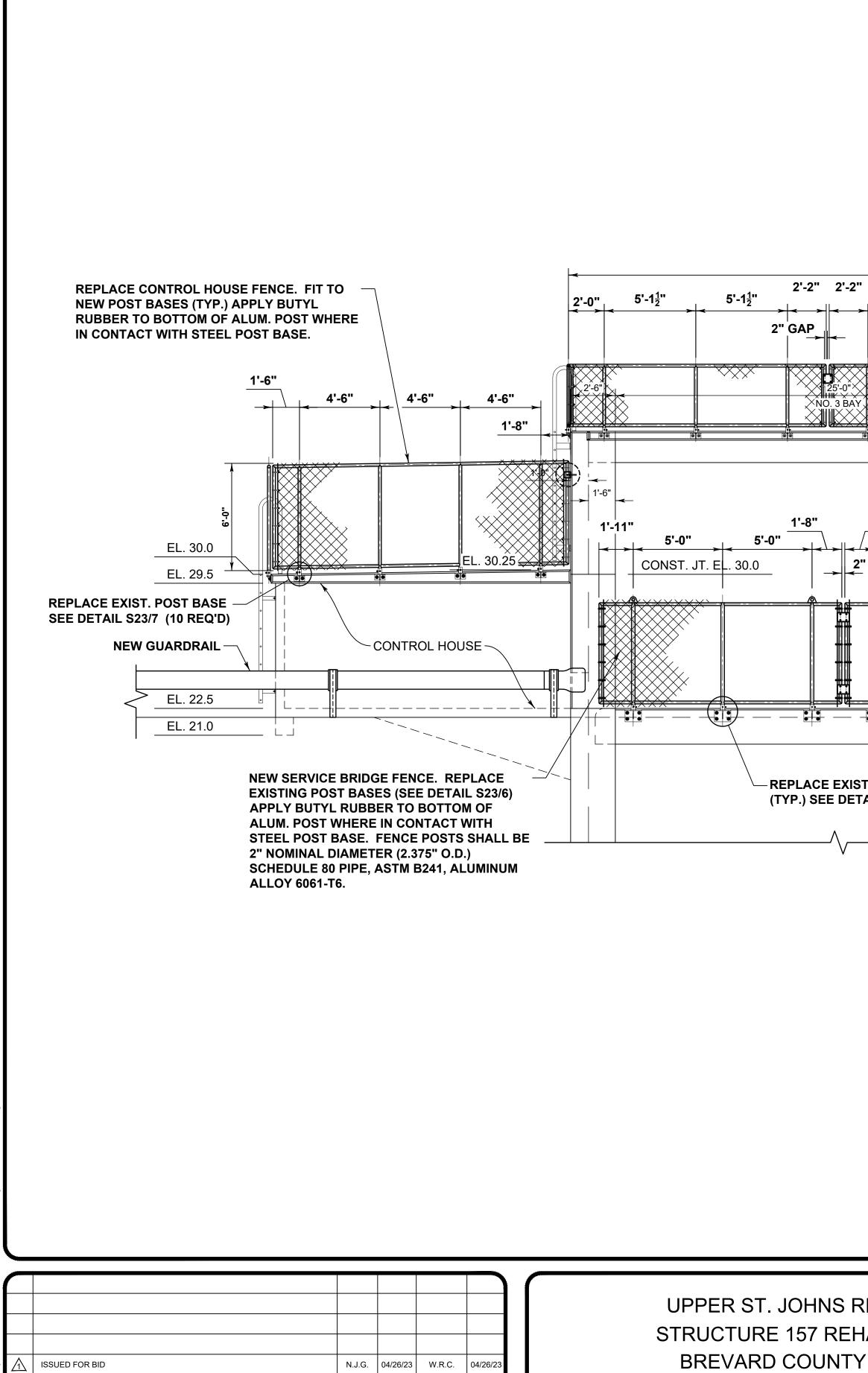
	WAT	ST. JOHNS RIVER FER MANAGEMENT DISTRI P.O. BOX 1429 PALATKA, FLORIDA				
	DRAWN: N.J.G.	DATE: <u>APRIL 26, 2023</u>	REVIEWER: W.R.C.			
J	SCALE: <u>3/16" = 1'-0"</u>	DESIGNER: W.R.C.	SECTION CHIEF: W.R.C.			

NEW UPSTREAM FENCE ELEVATION

### NOTE:

1. SEE SHEET S23 FOR FENCE NOTE SPECIFICATIONS.

ERTIFICATION:	FILE NAME:
	S-157 FENCING.dwg
	PROJECT NO.:
WILLIAM R. COTE	
E. NUMBER:53746	SHEET:
ATE: APRIL 26, 2023	<u> </u>



BY DATE APPROVED DATE

REVISION

STING POST BASE ETAIL S23/6	1'-7 <sup>1</sup> /2"	 1'-7 <u>1</u> "		<u>1'-7<sup>1</sup>"</u>	1'-7 <u>1</u> "
			ELEVATION LOOKING 2 4' /4" = 1'-0"	<u>WEST</u>	
RIVER BASIN HABILITATION Y, FLORIDA		WATER MANAG			NEW DOWNS

EXISTING I	POST BASES	6 (TYP.) AP		\								
	O BOTTOM C CT WITH STE		POST WHERE BASE.		ዊ 	STRUCT	URE					
				\	8	38'-9"						
5'-1 <u>1</u> "	5'-1 <u>1</u> "	2'-0" 2 → < →  <	'-0" <u>5</u> '-0"	5'-0"	2'-1"	2'-1" <del>&lt; ≻ &lt;</del>	5'-0"	<b>−</b> 5'-0"	2'-0" 2 	2'-0" ← ≻┼<	5'-7 <u>1</u> "	<u> </u>
	2	4 GAP	-		2 <sup>1</sup> 2" GAP	<		2'	'GAP	<b>-</b>		
					25'-( >NO. 2				3'-3"			
	<u>ه</u> ۱'-2'							<u>s</u>				
<b>1'-8''</b>			<u> </u>		'-11"		_			-	<u>11"</u> '-2" LIFTIN	NG E`
/ 5'-0"   GAP CONST	<b>5'-0''</b> JT. EL. 30.0		3" GAP	5'-0"		2" GAP	5'-0"	<b>5'-0''</b> JT. EL. 30.0 <b>3</b>			/	<b> </b>
				Ż								
TING POST BASE AIL S23/6	<u>1'-</u> 7 ≣		1'-7 <u>1</u> " ▶					1'-7 <u>1</u> "		>	1'-7 <u>1</u> "	
				WNSTREAM		' ELEVAT	ION LOOK	ING WEST				
			'ノ									

## **ISTREAM FENCE ELEVATION**

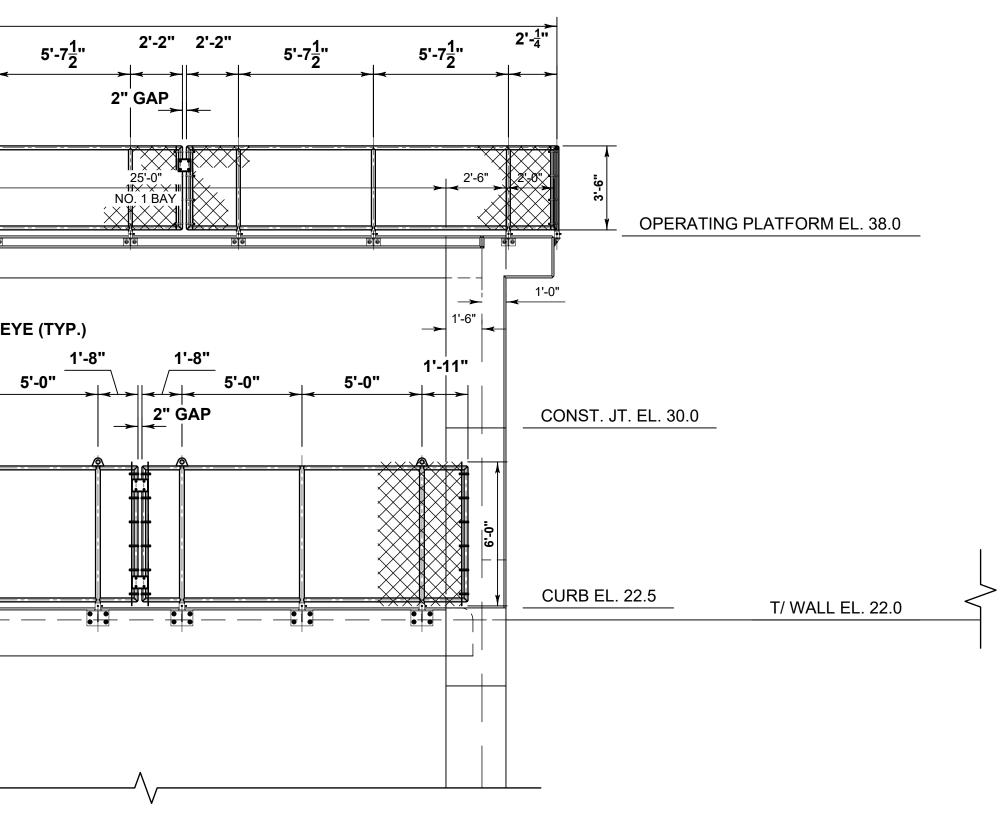
CERTIFICATION	4:
WIL	LIAM R. COTE
P.E. NUMBER:	53746
DATE:	APRIL 26, 2023

1	FILE NAME:
	S-157 FENCING.dwg
	PROJECT NO.:

S20

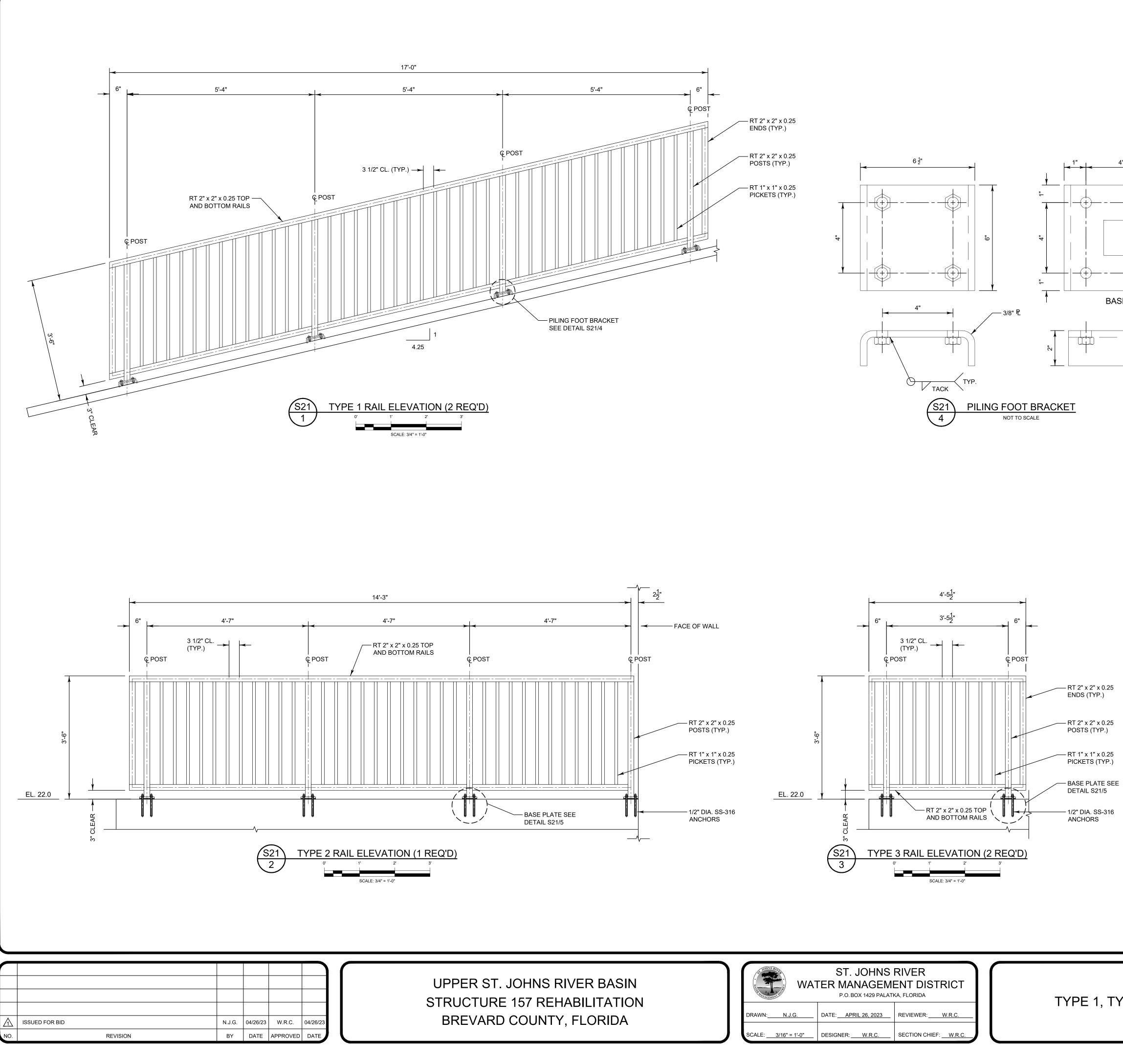
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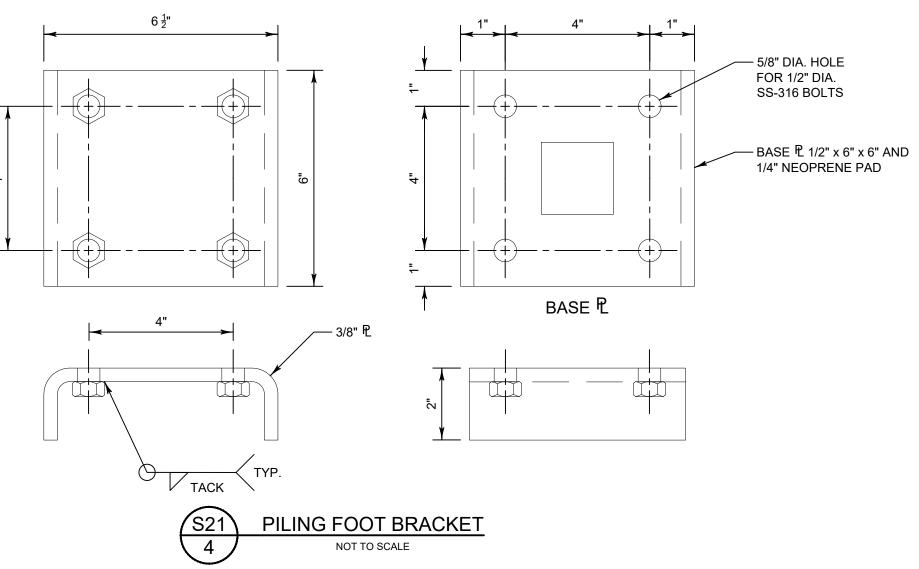
OR	<b>BID PURPOSES ONLY</b>
ΤΟΙ	FOR CONSTRUCTION



1. SEE SHEET S23 FOR FENCE NOTE SPECIFICATIONS.

NOTE:

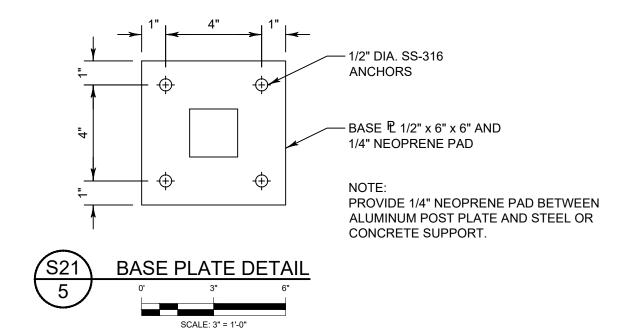




RIVER BASIN EHABILITATION	WAT	ST. JOHNS TER MANAGEM P.O. BOX 1429 PALAT	ENT DISTRICT	$\left  \right $	TYPE 1. TY
TY, FLORIDA	DRAWN: <u>N.J.G.</u> SCALE: <u>3/16" = 1'-0"</u>	DATE: <u>APRIL 26, 2023</u> DESIGNER: <u>W.R.C.</u>	REVIEWER: W.R.C.		



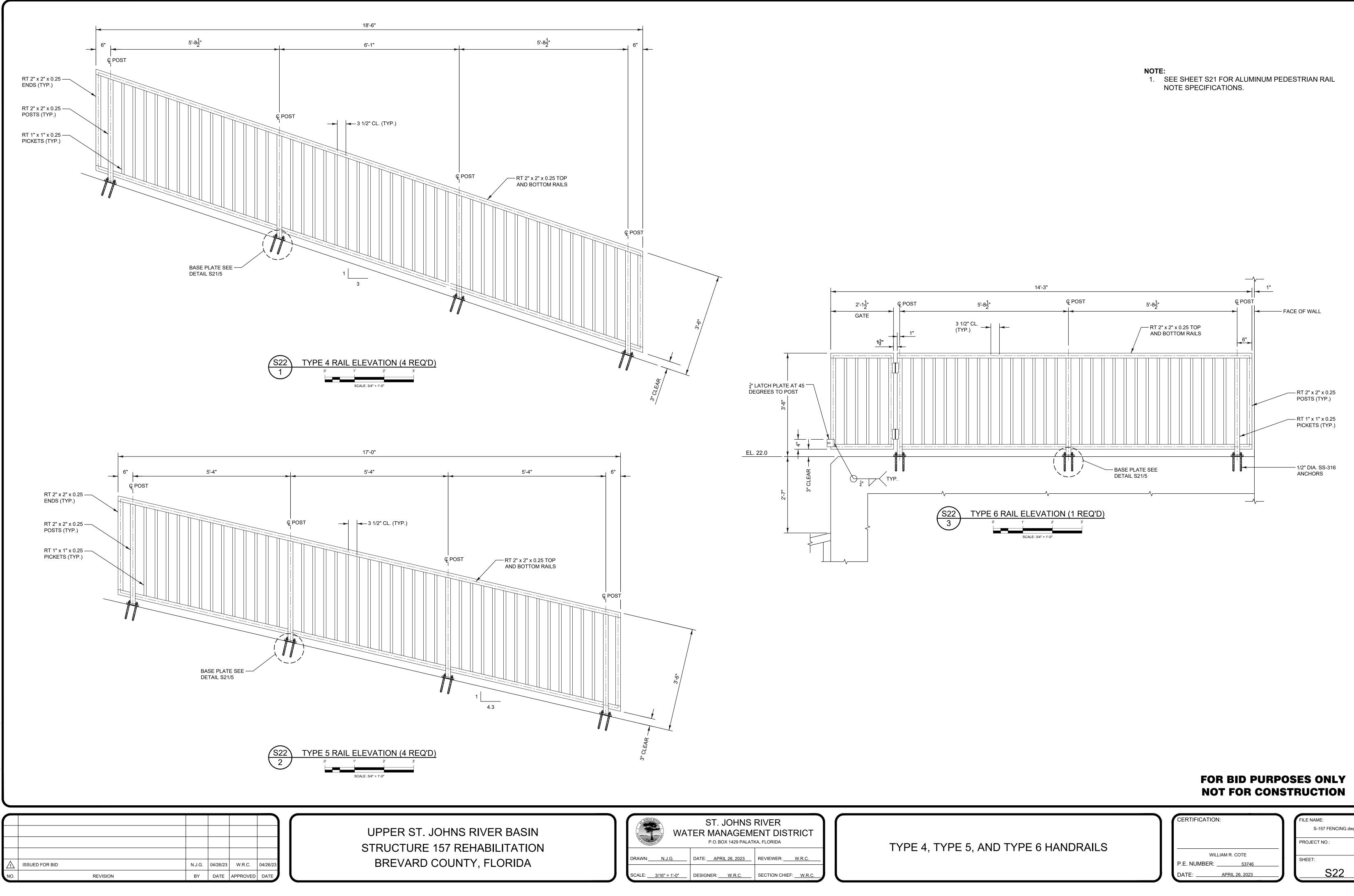
- 1. STRUCTURAL ALUMINUM DESIGN AND FABRICATION SHALL BE IN ACCORDANCE WITH THE ALUMINUM ASSOCIATION, INC. "SPECIFICATIONS FOR ALUMINUM STRUCTURES", LATEST EDITION.
- 2. WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS) "STRUCTURAL WELDING CODE - ALUMINUM" AWS D1.2.
- 3. ALUMINUM STRUCTURAL SHAPES SHALL BE NEW AND CONSIST OF ALLOY 6061-T6 CONFORMING TO THE REQUIREMENTS OF THE AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM) STANDARD B308.
- 4. ALUMINUM BARS, RODS, AND WIRE SHALL BE NEW AND CONSIST OF ALLOY 6061-T6 CONFORMING TO THE REQUIREMENTS OF ASTM STANDARD B211.
- 5. ALUMINUM PLATE SHALL BE NEW AND CONSIST OF ALLOY 5052-H32 CONFORMING TO THE REQUIREMENTS OF ASTM STANDARD B209.
- 6. ALL BOLTS, NUTS, AND WASHERS SHALL CONSIST OF SS316 STAINLESS STEEL CONFORMING TO THE REQUIREMENTS OF ASTM STANDARDS F593 AND F594.
- 7. ALL WELDING SHALL UTILIZE ER4043 FILLER ALLOY AND SHALL BE SHOP WELDED TO THE GREATEST EXTENT POSSIBLE.
- 8. ALL WELDED JOINTS SHALL BE GROUND SMOOTH.
- 9. THE ALUMINUM RAILING SHALL BE MILL FINISH.
- 10. PROVIDE <sup>1</sup>/<sub>4</sub>-INCH NEOPRENE PADS UNDER ALL RAIL POST BASE PLATES. NEOPRENE PADS SHALL BE IN ACCORDANCE WITH ASTM D2000 AND SHALL HAVE A DUROMETER HARDNESS BETWEEN 60 AND 80.
- 11. ALL RAILS SHALL BE CONNECTED TO THE EXISTING GROUNDING SYSTEM. ANY ADDITIONAL GROUNDING WIRES THAT ARE REQUIRED SHALL MATCH THE EXISTING.
- 12. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION OF THE RAILS.



### FOR BID PURPOSES ONLY **NOT FOR CONSTRUCTION**

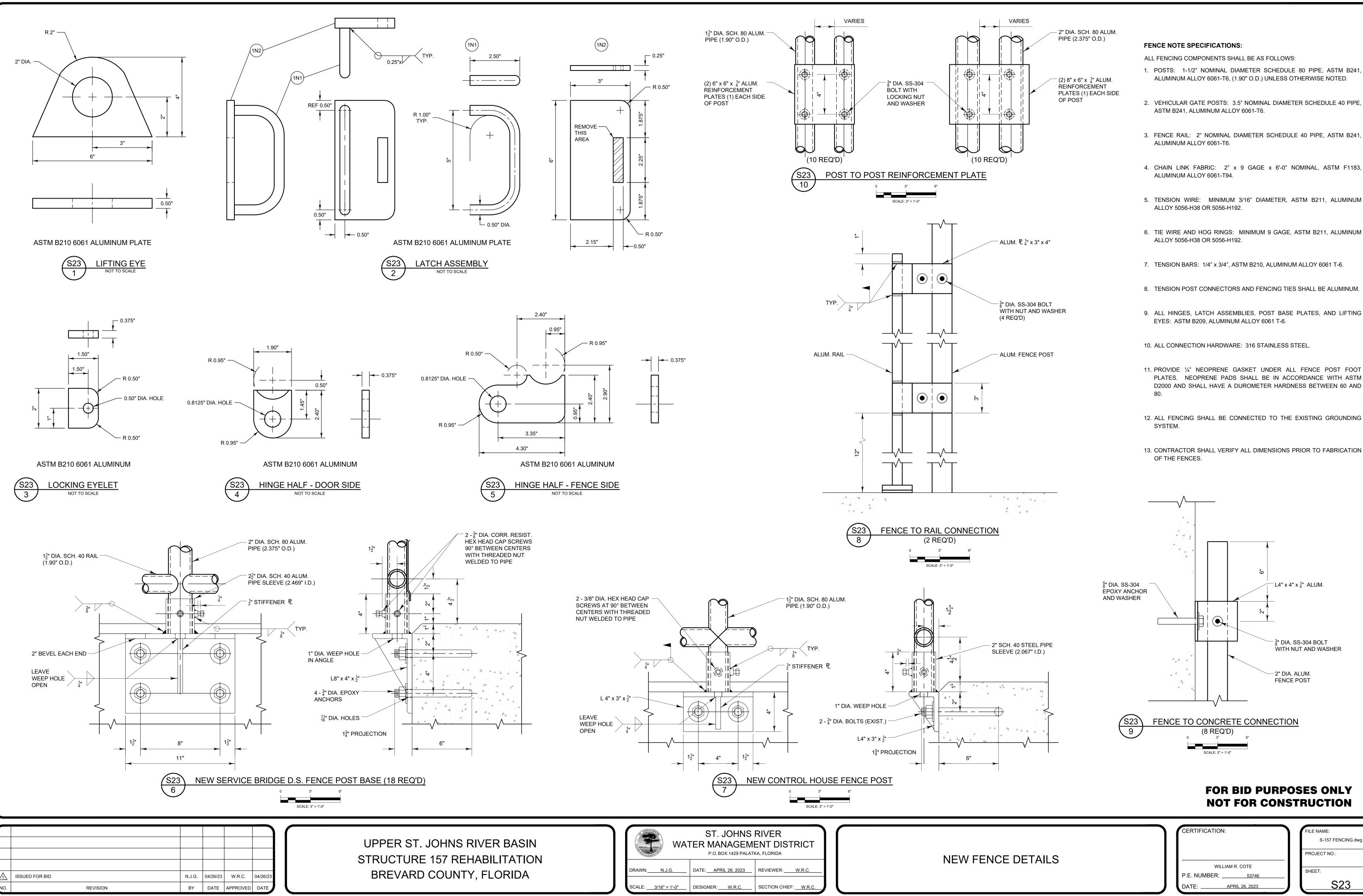
CERTIFICATION:	FILE NAME:
	S-157 FENCING.dv
	PROJECT NO.:
WILLIAM R. COTE	
P.E. NUMBER:53746	SHEET:
DATE: APRIL 26, 2023	_ <b>_</b> <u>S21</u>

YPE 2, AND TYPE 3 HANDRAILS



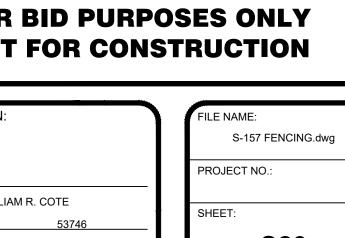
WAT	ST. JOHNS RIVER FR MANAGEMENT DISTRICT P.O. BOX 1429 PALATKA, FLORIDA		
DRAWN: N.J.G.	DATE: APRIL 26, 2023	REVIEWER: <u>W.R.C.</u>	
SCALE: <u>3/16" = 1'-0"</u>	DESIGNER: W.R.C.	SECTION CHIEF: <u>W.R.C.</u>	

	CERTIFICATION:	FILE NAME: S-157 FENCING.c
E 6 HANDRAILS	WILLIAM R. COTE	PROJECT NO.:
	P.E. NUMBER:53746	SHEET:
	DATE: APRIL 26, 2023	<u>S22</u>



WAT	ER MANAGEMENT DISTRICT P.O. BOX 1429 PALATKA, FLORIDA				
DRAWN: <u>N.J.G.</u>	DATE:APRIL 26, 2023	REVIEWER: <u>W.R.C.</u>			
SCALE: <u>3/16" = 1'-0"</u>	DESIGNER: W.R.C.	SECTION CHIEF: <u>W.R.C.</u>			

CERTIFICATION:	FILE NAME: S-157 FENO
	PROJECT NO .:
WILLIAM R. COTE	
P.E. NUMBER:53746	SHEET:
DATE:	S2



- 13. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION

- D2000 AND SHALL HAVE A DUROMETER HARDNESS BETWEEN 60 AND
- PLATES. NEOPRENE PADS SHALL BE IN ACCORDANCE WITH ASTM
- 9. ALL HINGES, LATCH ASSEMBLIES, POST BASE PLATES, AND LIFTING

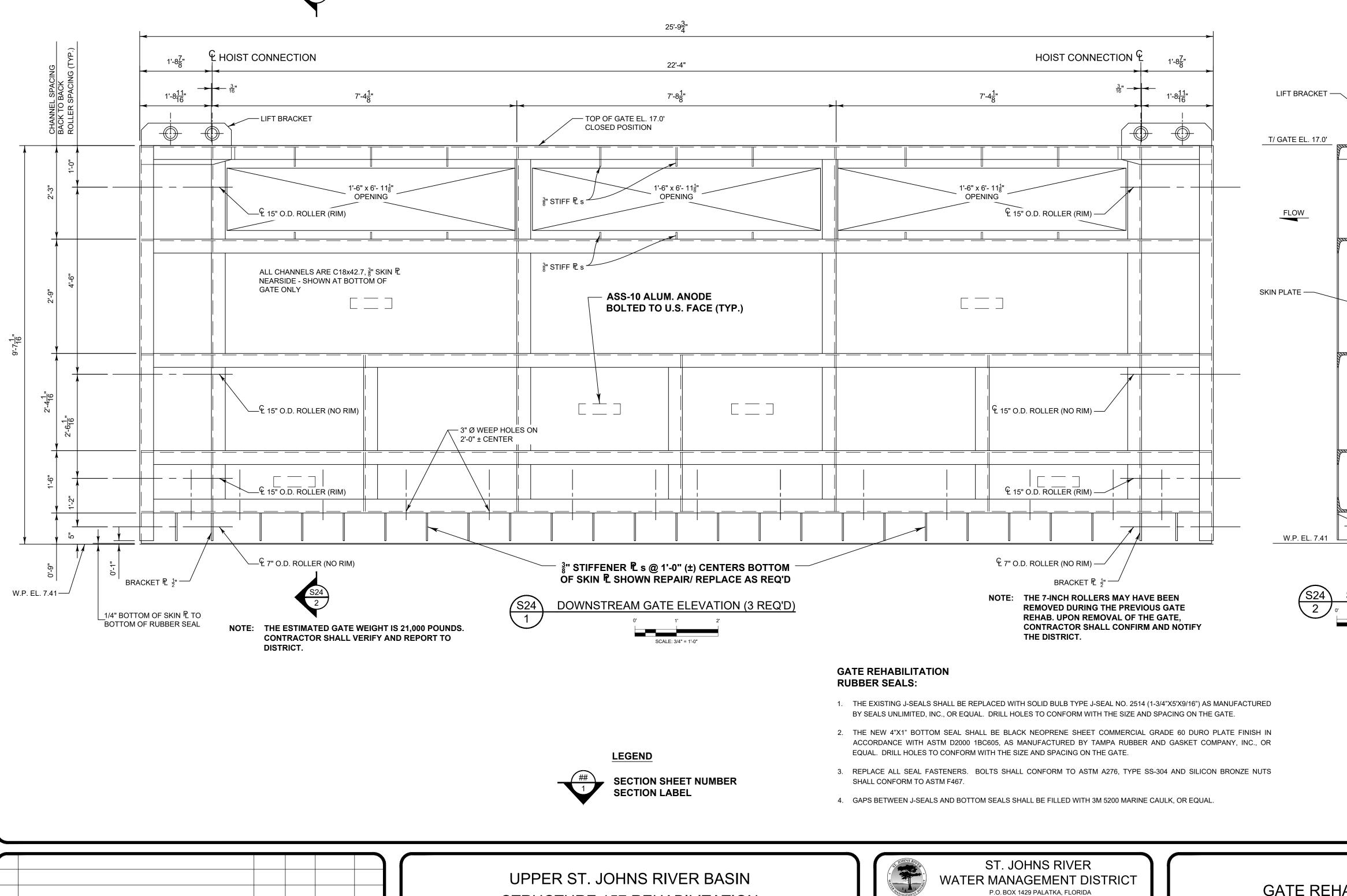
- 11. PROVIDE 1/4" NEOPRENE GASKET UNDER ALL FENCE POST FOOT

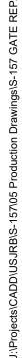
- 6. TIE WIRE AND HOG RINGS: MINIMUM 9 GAGE, ASTM B211, ALUMINUM

  - 8. TENSION POST CONNECTORS AND FENCING TIES SHALL BE ALUMINUM.

1. POSTS: 1-1/2" NOMINAL DIAMETER SCHEDULE 80 PIPE, ASTM B241,

## 2. VEHICULAR GATE POSTS: 3.5" NOMINAL DIAMETER SCHEDULE 40 PIPE,





ISSUED FOR BID	N.J.G.	04/26/23	W.R.C.	04/26/23
REVISION	BY	DATE	APPROVED	DATE

## UPPER ST. JOHNS RIVER BASIN STRUCTURE 157 REHABILITATION BREVARD COUNTY, FLORIDA

WA-	ST. JOHNS FER MANAGEMI P.O. BOX 1429 PALATI	ENT DISTRICT
DRAWN: N.J.G.	DATE: <u>APRIL 26, 2023</u>	REVIEWER: <u>W.R.C.</u>
SCALE: AS NOTED	DESIGNER: W.R.C.	SECTION CHIEF: W.R.C.

## GATE REHABILITATION STRUCTURAL STEEL:

- 1. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", NINTH EDITION.
- 2. WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS) "STRUCTURAL WELDING CODE" AWS D1.1.
- 3. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE NEW AND CONFORM TO THE REQUIREMENTS OF THE AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM) STANDARD A36 UNLESS NOTED OTHERWISE.
- 4. ALL BOLTS SHALL BE STAINLESS STEEL CONFORMING TO ASTM A276, TYPE 304. THE SIZE AND LOCATION OF REPLACEMENT BOLTS SHALL MATCH EXISTING UNLESS NOTED OTHERWISE.
- 5. ALL WELDING SHALL UTILIZE E70XX LOW-HYDROGEN ELECTRODES UNLESS NOTED OTHERWISE.
- 6. FIELD CORRECTING OF FABRICATED STEEL SHALL NOT BE PERMITTED ON MAJOR STRUCTURAL MEMBERS WITHOUT PRIOR APPROVAL OF THE DISTRICT.

### GATE OVERHAUL:

- 1. DISCONNECT POWER. PRESSURE WASH THE GATES AND GATE RAILS TO REMOVE ALL ORGANIC GROWTH, LOOSE PARTICLES, AND OTHER EXTRANEOUS MATERIALS.
- 2. MARK ALL GATE COMPONENTS PRIOR TO REMOVAL FOR EASE OF REASSEMBLY.
- 3. REMOVE ALL SHEAVE HANGERS, SHEAVES, AND SHEAVE PINS FROM HOIST COFFINS. DISASSEMBLE THE HOIST LIFT SYSTEMS.
- 4. REMOVE THE HOIST SYSTEMS AND ROLLER GATES FROM THE STRUCTURE. AT THE CONTRACTOR'S OPTION, THE DISTRICT'S REWORK SITE AND/OR GATE SUPPORT BRACING MAY BE USED FOR THE GATE REHABILITATION. THE REWORK SITE IS LOCATED AT 9555 BABCOCK STREET, FELLSMERE, FL, 32948. THE CONTRACTOR SHALL PROVIDE A PORTABLE TOILET IF THE REWORK SITE IS UTILIZED.
- 5. REMOVE RAILS AND SPLICE BARS AS REQUIRED. WHEN REMOVING RAILS, CARE SHALL BE TAKEN TO MEASURE AND DOCUMENT SHIM THICKNESS AT EACH LOCATION. CLEAN OR REPLACE WITH SS-304 SAME SIZE AND NUMBER OF SHIMS, AS NEEDED. REPLACE RAILS AND RAIL CLIPS USING ASCE 60# RAIL AND NO. 106 RAIL CLIPS, IF REQUIRED. REPLACE ALL NUTS WITH SILICON BRONZE NUTS CONFORMING TO ASTM F467. REPLACE ANCHOR BOLTS AS NEEDED.
- 6. REMOVE ALL BOLTS, RETAINING PLATES, AND SEALS FROM THE ROLLER GATES.
- 7. REMOVE WHEELS FROM THE ROLLER GATE.
- 8. PRESS OUT SHAFTS WITH PORTA POWER WHILE MAKING SURE NOT TO DAMAGE GATE STRUCTURE. IF SHAFTS ARE NOT MOVING, USE HEAT ON COLLARS WHILE PRESSING OUT.
- 9. INSPECT WHEELS, COLLARS, AXLES, AND BEARINGS AND REPAIR AS NEEDED.
- 10. ALL GATE COLLARS SHALL BE INSPECTED AND REPLACED IF NECESSARY. IF COLLARS NEED TO BE REPLACED, ABRASIVE BLASTING AROUND THE COLLAR IS REQUIRED TO PREPARE FOR INSTALLATION OF THE NEW COLLAR.
- 11. WHEELS SHALL BE BLASTED, INSPECTED, AND TURNED DOWN IF NECESSARY FOR BANDING. IF REQUIRED, THE BANDS SHALL BE SIZED AND THE WHEEL PLACED IN AN OVEN OVERNIGHT IN PREPARATION OF THE WELDING PROCESS. AFTER WELDING, THE WHEEL SHALL BE COOLED SLOWLY TO PREVENT FRACTURING OF THE WELDS AND THEN MACHINED TO THE REQUIRED DIAMETER.
- 12. AXLES AND WHEELS SHALL BE MEASURED FOR "THORDON THORPLAS" BEARING FABRICATION. THE "THORDON THORPLAS" BEARINGS SHALL BE INSERTED AND THE WHEELS BLASTED AND PAINTED. THE CONTRACTOR SHALL COORDINATE WITH THE BEARING MANUFACTURER IN DETERMINING THE PROPER SIZING OF THE BEARINGS.
- 13. AXLES SHALL BE ABRASIVE BLASTED (EXCEPT FOR STAINLESS STEEL) AND INSPECTED FOR SERVICEABILITY. IF NECESSARY, THE AXLES SHALL BE REPAIRED. UPON COMPLETION, AXLES SHALL BE BLASTED AND PAINTED.
- 14. INSPECT ALL COMPONENTS TO ENSURE THEY ARE CLEAN OF DEBRIS AND GREASE.
- 15. MARK THE WEIGHT OF THE GATE ON THE TOP CHANNEL USING A FILLET WELD.
- 16. ALL STEEL COMPONENTS (EXCEPT FOR STAINLESS STEEL ITEMS) SHALL BE BLASTED AND PAINTED. ITEMS TO BE PAINTED SHALL INCLUDE THE ROLLER GATES, WHEELS, SEAL RETAINING PLATES, AND RAILS.
- 17. REASSEMBLE THE ROLLER GATES, INCLUDING THE WHEELS, SEALS, RETAINING PLATES, AND ALL NEW HARDWARE.
- 18. 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.
- 19. REINSTALL RAILS. REPLACE SHIMS OF SAME SIZE WITH SS-304 PLATES AS REQUIRED. REPLACE ANCHOR BOLTS OF SAME SIZE WITH SS-304 BOLTS AS REQUIRED.
- 20. REINSTALL THE COMPLETED ROLLER GATES AND HOIST SYSTEMS. RECONNECT POWER.
- 21. PERFORM DRY TEST OPERATION OF GATES. ADJUST AS NEEDED.
- 22. TEST OPERATION OF GATES UNDER NORMAL OPERATING CONDITIONS. LEAKAGE SHALL NOT EXCEED 0.1 GPM/ FT OF WETTED SEAL PERIMETER. ADJUST AS NEEDED.

### PAINTS AND PROTECTIVE COATINGS:

- 1. 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.

### FOR BID PURPOSES ONLY NOT FOR CONSTRUCTION

CERTIFICATION:

WIL	LIAM R. COTE
P.E. NUMBER:	53746
DATE:	APRIL 26, 2023

FILE NAME: S-157 GATE REPAIR.dwg PROJECT NO.:

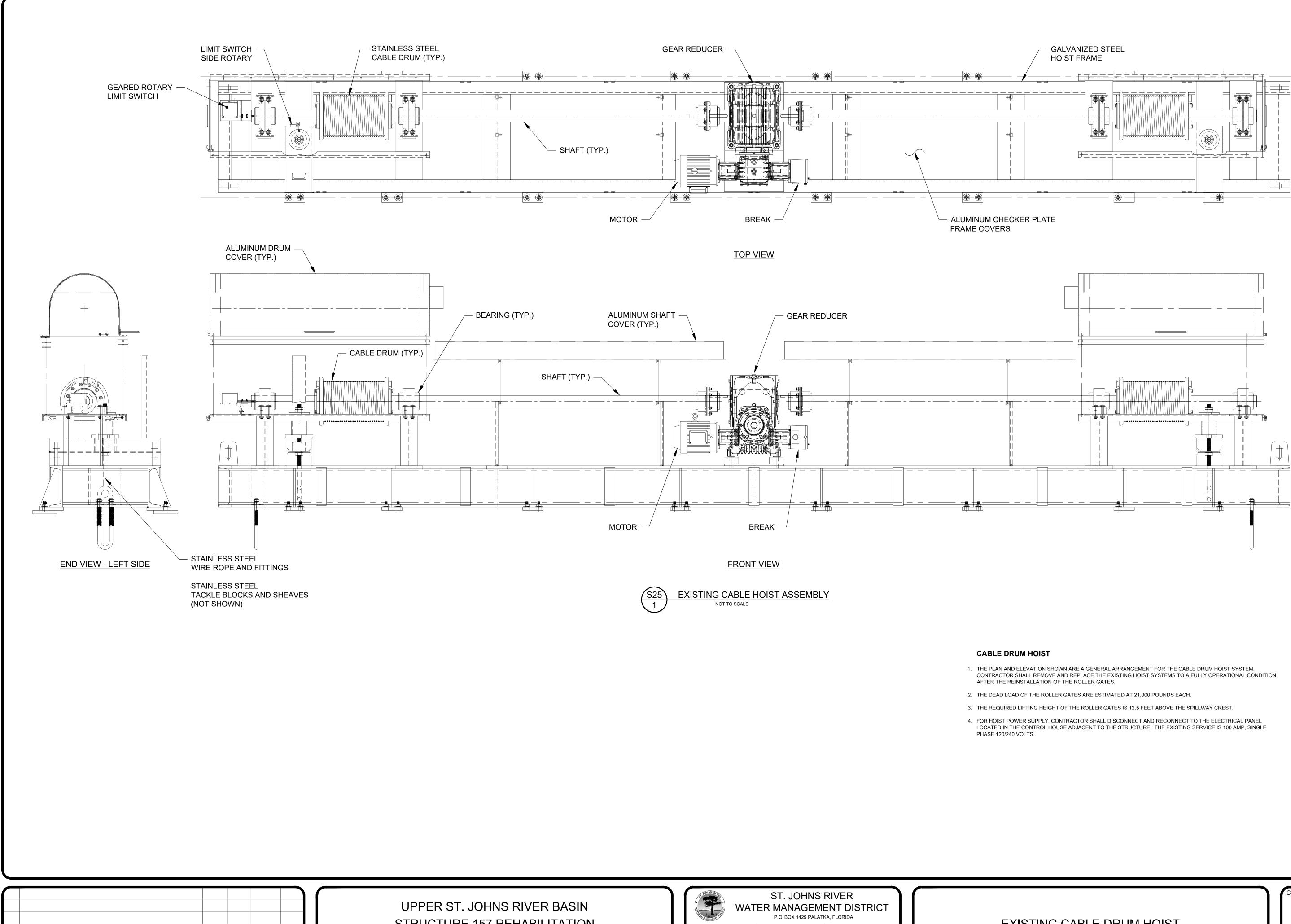
GATE REHABILITATION ELEVATION, SECTIONS, DETAILS & NOTES

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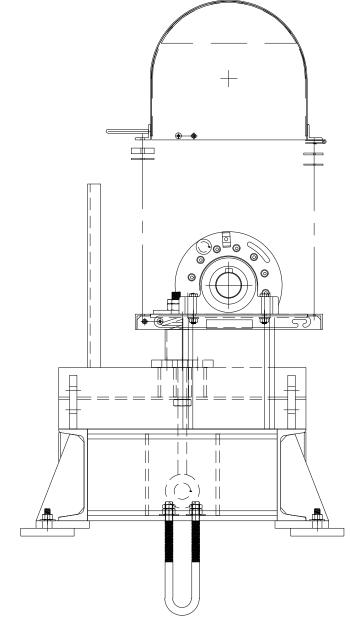


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R.C. 04/26/23
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## STRUCTURE 157 REF BREVARD COUNT

RIVER BASIN	ST. JOHNS RIVER WATER MANAGEMENT DISTRICT P.O. BOX 1429 PALATKA, FLORIDA			) [	EXISTIN	
HABILITATION Y, FLORIDA		J.G	DATE: <u>APRIL 26, 2023</u> DESIGNER: W.R.C.	REVIEWER: W.R.C.		EXISTIN



END VIEW - RIGHT SIDE

### FOR BID PURPOSES ONLY **NOT FOR CONSTRUCTION**

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DATE:

WILLIAM R. COTE P.E. NUMBER: 53746

APRIL 26, 2023

S-157 CABLE DRUM HOIST.dwg
PROJECT NO.:
SHEET:

FILE NAME:

IG CABLE DRUM HOIST

S25