

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

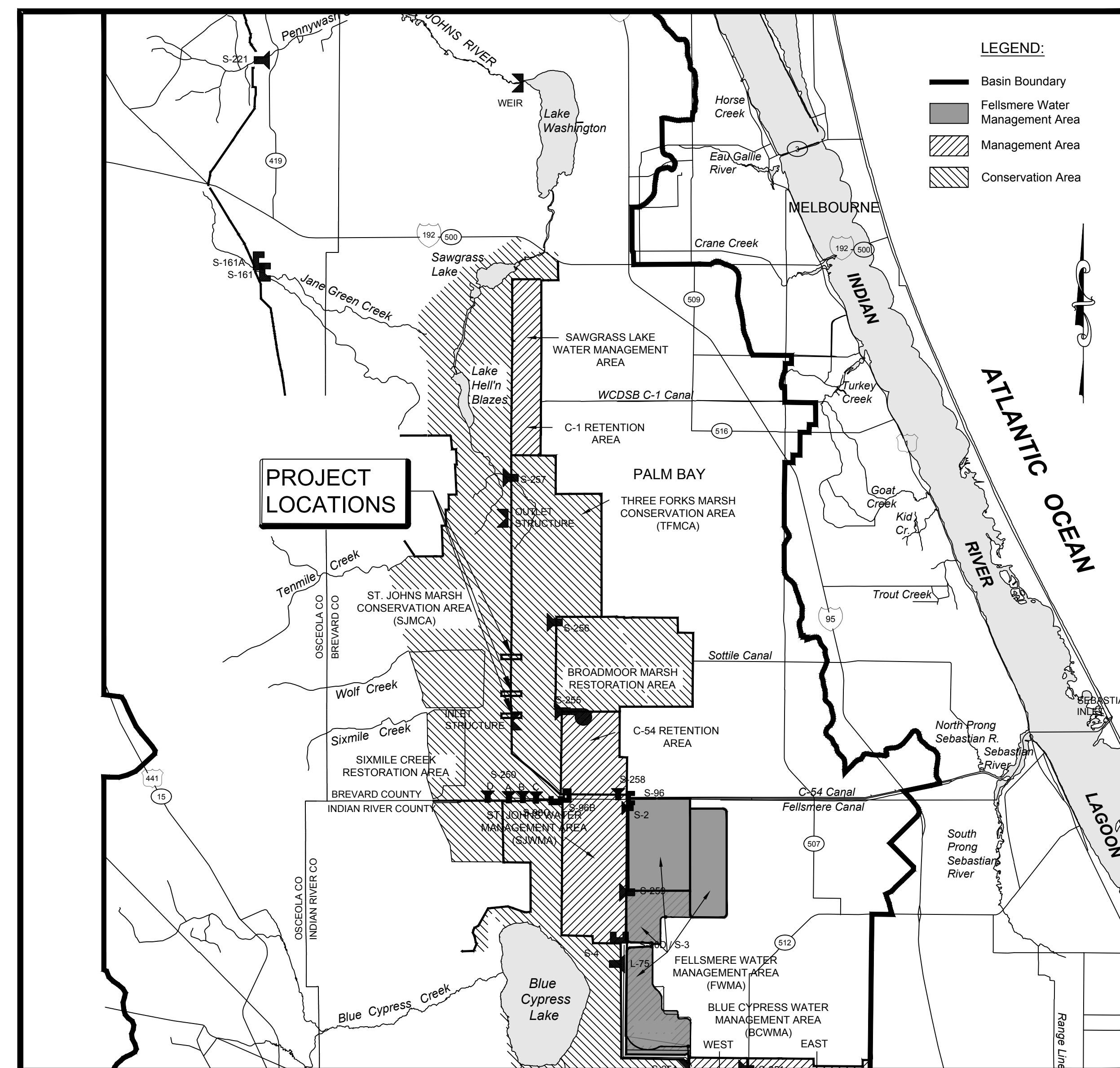
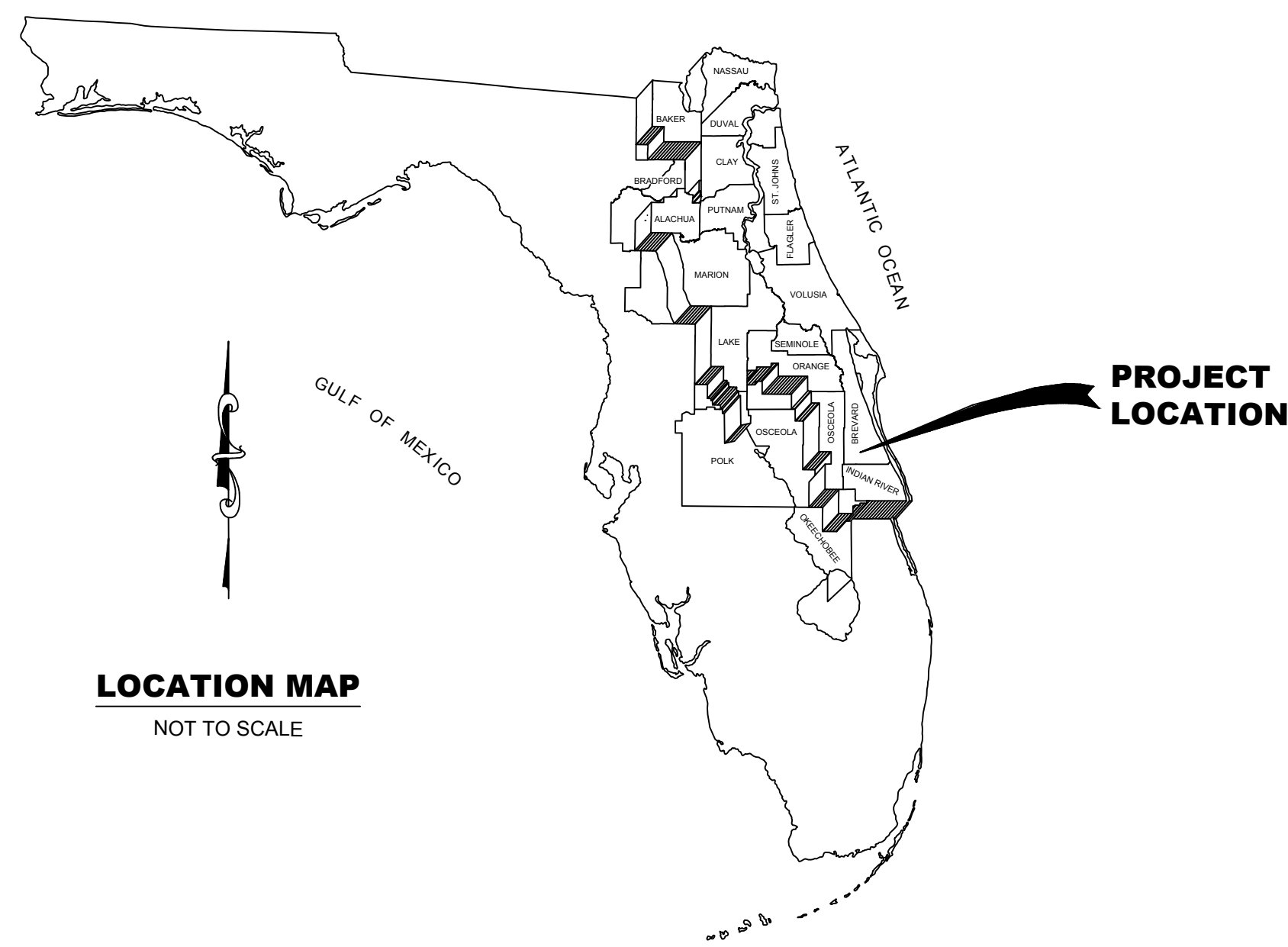
UPPER ST. JOHNS RIVER BASIN

S.J.M.C.A. - C-40 CANAL PLUG ENHANCEMENTS

BREVARD COUNTY, FLORIDA

NAVD 1988

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



VICINITY MAP



SHEET NO.	SHEET TITLE
C1	COVER SHEET & VICINITY MAP
C2	STANDARD ABBREVIATIONS
C3	NOTES AND SPECIFICATIONS
C4	OVERALL SITE PLAN
C5	CANAL PLUG E-3 SITE PLAN
C6	CANAL PLUG E-3 SECTION & PROFILE
C7	CANAL PLUG E-4 SITE PLAN
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C11	EROSION AND SEDIMENT CONTROL
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S1	WALKWAK PLAN AND SECTION
S2	WALKWAK DETAILS
S3	CULVERT AND SLIDE GATE DETAILS

ENGINEER'S NOTES:

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NO.	REVISION	BY	DATE	APPROVED	DATE



FOR BID PURPOSES ONLY NOT FOR CONSTRUCTION

CERTIFICATION:	DRAWING FILENAME:
AMY POGUE WRIGHT	C1 C-40 PLUG COVER.dwg
P.E. NUMBER: 54851	SHEET:
DATE: JANUARY 17, 2018	C1

ABBREVIATION	MEANING
AC or Ac.	ACRE
ACI	AMERICAN CONCRETE INSTITUTE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
ALT.	ALTERNATE
ALUM. or AL.	ALUMINUM
APPROX.	APPROXIMATE
ASPH.	ASPHALT
-----B-----	
B/C or B.C.	BACK OF CURB
BCCMP	BITUMINOUS COATED CORRUGATED METAL PIPE
BE	BURIED ELECTRIC
BL	BASELINE
BLDG.	BUILDING
BM	BENCH MARK
BOT.	BOTTOM
BP	BORROW PIT
BRG.	BEARING
BT	BURIED TELEPHONE CABLE or DUCT
BW	BARBED WIRE
-----C-----	
C & G	CURB & GUTTER
CAP	CORRUGATED ALUMINUM PIPE
CATV	CABLE TELEVISION
CB	CATCH BASIN
CBC	CONCRETE BOX CULVERT
CBS	CONCRETE BOX STRUCTURE
CF or C.F.	CUBIC FEET
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CIP	CAST IRON PIPE
CL, C/L or C	CENTER LINE
CLF	CHAIN LINK FENCE
CM	CONCRETE MONUMENT
CMP	CORRUGATED METAL PIPE
CMPA	CORRUGATED METAL PIPE ARCH
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
CONC.	CONCRETE
CPE	CORRUGATED POLYETHYLENE PIPE
CY or C.Y.	CUBIC YARDS
-----D-----	
(D)	DEED
(DB)	DEED BOOK
D, DIA. or Ø	DIAMETER
DBI	DITCH BOTTOM INLET
DCBP	DOUBLE CHECK BACKFLOW PREVENTER
DEG.	DEGREES
DHW	DESIGN HIGH WATER
DHWE	DESIGN HIGH WATER ELEVATION
DI	DUCTILE IRON
DIM.	DIMENSION
DIP	DUCTILE IRON PIPE
DIST.	DISTANCE
DT	DITCH
DWG.	DRAWING
-----E-----	
E	EAST
EP. or EOP	EDGE OF PAVEMENT
EA or EA.	EACH
EJ	EXPANSION JOINT
EL. or ELEV.	ELEVATION
ELEC.	ELECTRIC
ELLIP.	ELLIPTICAL
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
ESMT.	EASEMENT
EWR	EDGE OF WATER
EW	ENDWALL
EXIST.	EXISTING
-----F-----	
F.L. FL or F	FLOW LINE
FBC	FLORIDA BUILDING CODE
FD	FRENCH DRAIN
FDEP	FLORIDA DEPARTMENT ON ENVIRONMENTAL PROTECTION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FES	FLARED END SECTION
FH	FIRE HYDRANT
FIN FLR	FINISHED FLOOR
FIN GR	FINISHED GRADE
FL, FL. or FLA.	FLORIDA
FM	FORCE MAIN
FND	FOUND
FOC	FIBER OPTIC CABLE

ABBREVIATION	MEANING
FP	FLOOD PLAIN
FT.	FOOT OR FEET
FTB	FLOATING TURBIDITY BARRIER
FUT	FUTURE
-----G-----	
GA.	GAUGE or GAGE
GALV.	GALVANIZED
GM	GAS MAIN
GRD.	GROUND
GS	GALVANIZED STEEL
GV	GATE VALVE
-----H-----	
HB	HAY BALES
HC	HANDICAP
HDD	HORIZONTAL DIRECTIONAL DRILLING
HDPE	HIGH DENSITY POLYETHYLENE
HDWL.	HEADWALL
HNDRL.	HANDRAIL
HORZ. or HOR.	HORIZONTAL
HT.	HEIGHT
HWY.	HIGHWAY
-----I-----	
ID or I.D.	INSIDE DIAMETER or IDENTIFICATION
IN.	INCH(ES)
INV.	INVERT
IP	IRON PIPE
IR	IRON ROD
-----J-----	
JB	JUNCTION BOX
JCT.	JUNCTION
JT.	JOINT
-----L-----	
LAT.	LATERAL or LATITUDE
LF	LINEAR FOOT (FEET)
LMRK.	LIME ROCK
LONG.	LONGITUDE
LP	LOW POINT
LS	LUMP SUM
LT.	LEFT
-----M-----	
MAINT.	MAINTENANCE
MAX.	MAXIMUM
MES	MITERED END SECTION
MFR.	MANUFACTURED or MANUFACTURER
MH or M.H.	MANHOLE or MOUNTING HEIGHT
MHW	MEAN HIGH WATER
MIN.	MINIMUM or MINUTE
MISC.	MISCELLANEOUS
MLW	MEAN LOW WATER
MON.	MONUMENT
MOT	MAINTENANCE OF TRAFFIC
MSL	MEAN SEA LEVEL
-----N-----	
N	NORTH
N & C	NAIL AND CAP
N & D	NAIL AND DISK
NA or N/A	NOT AVAILABLE or NOT APPLICABLE
NAVD	NATIONAL VERTICAL DATUM
NE	NORTH EAST
NG	NATURAL GRADE
NGS	NATIONAL GEODETIC SURVEY
NGVD	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NHW	NORMAL HIGH WATER
NIC	NOT IN CONTRACT
NO.	NUMBER
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
NTS	NOT TO SCALE
NW	NORTH WEST
-----O-----	
OC or O.C.	ON CENTER
OD or O.D.	OUTSIDE DIAMETER
OE	OVERHEAD ELECTRIC
OR	OFFICIAL RECORD
OT	OVERHEAD TELEPHONE
-----P-----	
P.E. or PE	PROFESSIONAL ENGINEER
P.S.I. or P.S.I.	POUNDS PER SQUARE INCH
PAVT.	PAVEMENT
PC	POINT OF CURVATURE
PCBC	PRECAST CONCRETE BOX CULVERT
PCC	POINT OF COMPOUND CURVE
PCE	PERMANENT CONSTRUCTION EASEMENT
PCPE	PERFORATED CORRUGATED POLYETHYLENE PIPE

ABBREVIATION	MEANING
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PL or P	PROPERTY LINE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PP	POWER POLE
PRC	POINT OF REVERSE CURVE
PRCST.	PRECAST
PRM	PERMANENT REFERENCE MONUMENT
PROP.	PROPOSED
PT	POINT OF TANGENCY or PRESSURE TREATED
PVC	POLYVINYL CHLORIDE
-----Q-----	
QTY.	QUANTITY
-----R-----	
R or RAD.	RADIUS
R or RNG.	RANGE
R or RT.	RIGHT
R/W or ROW	RIGHT OF WAY
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD.	ROAD or ROUND
RM	REFERENCE MONUMENT
RPBFP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	RAISED REFLECTIVE PAVEMENT MARKERS
RR	RAILROAD
-----S-----	
S	SOUTH
SE	SOUTHEAST
SECT.	SECTION
SF	SILT FENCE
SG or SUBGR.	SUBGRADE
SJRWMD	ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
SPA., SPCG. or SP.	SPACE(ING)(S)
Sq. Ft., SF or S.F.	SQUARE FEET
Sq. Yd., SY or S.Y.	SQUARE YARDS
SS	SANITARY SEWER or STAINLESS STEEL
ST	STORM SEWER
STA	STATION
STB	STACKED TURBIDITY BARRIER
STD.	STANDARD
STL.	STEEL
STR.	STRUCTURE
SUB. or SUBS.	SUBSOIL
SW	SOUTHWEST
SW or SWK.	SIDEWALK
-----T-----	
T, TWP or Twp.	TOWNSHIP
TBM	TEMPORARY BENCH MARK
TCE	TEMPORARY CONSTRUCTION EASEMENT
TCZ	TRAFFIC CONTROL ZONE
TEL.	TELEPHONE
TFMR	TRANSFORMER
TOB	TOP OF BANK
TOG	TOP OF GRADE
TOS	TOP OF SLOPE
TRANS.	TRANSITION, TRANSVERSE or TRANSPORTATION
TTC	TEMPORARY TRAFFIC CONTROL
TW	TOP OF WALL
TYP.	TYPICAL
-----U-----	
UG	UNDERGROUND
UNDDR.	UNDERDRAIN(S)
USC & GS	US COAST and GEODETIC SURVEY (now NATIONAL GEODETIC SURVEY)
USGS	US GEOLOGICAL SURVEY
UTIL.	UTILITIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT.	VERTICAL
VOL.	VOLUME
VV	VERIFIED VERTICAL ELEVATION
VVH	VERIFIED VERTICAL ELEVATION & HORIZONTAL LOCATION
-----W-----	
W	WIDTH, WIDE, WEST or WATT
WM	WATER MAIN or WATER METER
WT	WATER TABLE or WEIGHT
WTR	WATER
WW	WASTEWATER
WWF	WELDED WIRE FABRIC
WWR	WELDED WIRE REINFORCING
-----X-----	
X-SEC.	CROSS SECTION
-----Y-----	
YD.	YARD

**FOR BID PURPOSES
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CONSTRUCTION**

ISSUED FOR BID.	N.J.G.	01/17/19	A.P.W.	01/17/19
NO.	REVISION	BY	DATE	APPROVED

UPPER ST. JOHNS RIVER BASIN
S.J.M.C.A. - C-40 CANAL PLUG ENHANCEMENTS
BREVARD COUNTY, FLORIDA

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

DRAWN: N.J.G. DATE: JANUARY 17, 2019 REVIEWER: W.R.C.
SCALE: NONE DESIGNER: A.P.W. SECTION CHIEF: W.R.C.

STANDARD ABBREVIATIONS

CERTIFICATION:
AMY POGUE WRIGHT
P.E. NUMBER: 54851
DATE: JANUARY 17, 2019

FILE NAME:
C2 C-40 PLUG ABBREV.dwg
PROJECT NO.:
SHEET:
C2

GENERAL NOTES:

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.
2. THE EXISTING CONDITIONS REPRESENTED IN THESE DRAWINGS AND THE PROJECT TOPOGRAPHIC SURVEY ARE BELIEVED TO BE ACCURATE ACCORDING TO THE INFORMATION AVAILABLE TO THE DISTRICT. HOWEVER, IT IS THE SOLE RESPONSIBILITY OF THE BIDDER (CONTRACTOR) TO VERIFY ALL EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES TO THE DISTRICT PRIOR TO SUBMITTAL OF THE BID.
3. ALL LABOR, MATERIALS, AND METHODS OF CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE MINIMUM ENGINEERING AND CONSTRUCTION STANDARDS ADOPTED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION AND THE PLANS AND CONSTRUCTION SPECIFICATIONS. WHERE CONFLICTS OR OMISSIONS EXIST, THE PLANS AND SPECIFICATIONS SHALL DICATE. SUBSTITUTIONS AND DEVIATIONS FROM PLANS AND SPECIFICATIONS SHALL BE PERMITTED ONLY WHEN WRITTEN APPROVAL HAS BEEN ISSUED BY THE DISTRICT PROJECT MANAGER.
4. PERMITS: THE CONTRACTOR SHALL COMPLY WITH THE CONDITIONS CONTAINED IN ALL PERMITS WHICH HAVE BEEN OBTAINED FOR THE PROJECT.
 - a. DISTRICT OBTAINED PERMITS INCLUDE:
 - (1) US ARMY CORPS OF ENGINEERS 404 CLEAN WATER ACT PERMIT;
 - (2) FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION NOTICED GENERAL PERMIT FOR THE SJRWMD'S UPPER BASIN PROJECT (RULE 62-330.405 F.A.C.).
 - b. THE CONTRACTOR SHALL OBTAIN ANY AND ALL REMAINING PERMITS AS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT PRIOR TO BEGINNING CONSTRUCTION INCLUDING, BUT NOT LIMITED TO:
 - (1) SUBMITTAL OF THE NOTICE OF INTENT (NOI) TO USE THE US EPA NPDES CONSTRUCTION GENERAL PERMIT AND COMPLETION OF ANY SUPPORTING DOCUMENTS REQUIRED FOR THE PERMIT.
5. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, LEVEES, ROADS, UTILITIES, AND OTHER IMPROVEMENTS FROM DAMAGE WHETHER OR NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR PROTECTION METHODS, COORDINATION WITH OWNERS AND REPAIRS TO UTILITIES AND OTHER SITE IMPROVEMENTS DAMAGED DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL NOTIFY THE DISTRICT PROJECT MANAGER (HECTOR HERRERA, CELL: 386-405-2586) A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
7. CONSTRUCTION INSPECTION WILL BE PERFORMED BY THE DISTRICT. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AT LEAST 48 HOURS PRIOR TO THE REQUIRED TIME OF INSPECTION FOR EACH AND EVERY PHASE OF WORK.

SUMMARY OF WORK / CONSTRUCTION SEQUENCE

1. MOBILIZE PERSONNEL AND EQUIPMENT TO THE SITE. ESTABLISH ON-SITE OFFICE AND STORAGE SPACES.
2. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES.
3. INSTALL COFFERDAMS UPSTREAM AND DOWNSTREAM OF STRUCTURE.
4. PUMP WATER FROM THE WORK AREA AND PROVIDE CONTINUOUS PUMPING TO KEEP WORK AREA DEWATERED.
5. EXCAVATE AREA WHERE CULVERT WILL BE PLACED.
6. CONSTRUCT CULVERT AND SLIDE GATES.
7. BACKFILL THE STRUCTURE, REGRADE PLUG, AND INSTALL RIPRAP.
8. INSTALL NEW WALKWAY.
9. PERFORM DRY TEST OPERATION OF GATE AND OPERATOR.
10. ALLOW WORK AREA TO FILL WITH WATER AND REMOVE COFFERDAMS.
11. TEST OPERATION OF GATE AND OPERATOR UNDER NORMAL OPERATING CONDITIONS.
12. REPEAT ITEMS 2 THROUGH 11 ON REMAINING TWO PLUG LOCATIONS.
13. DEMOBILIZING, INCLUDING SITE CLEAN UP, RESTORATION OF FINAL GRADE, GRASSING AND REMOVAL OF ALL EROSION AND SEDIMENT CONTROLS.

SPECIFICATIONS:

MOBILIZATION / DEMOBILIZATION

1. TASKS RELATED TO MOBILIZATION SHALL ADHERE TO THE CURRENT REQUIREMENTS OF SECTION 101 (MOBILIZATION) OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. 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.
3. ALL PROPERTY DISTURBED OR DAMAGED DURING PROSECUTION OF THE WORK SHALL BE RESTORED TO ITS FORMER CONDITION OR BETTER AT NO ADDITIONAL EXPENSE TO THE DISTRICT. FINAL PAYMENT WILL BE WITHHELD UNTIL SUCH CLEANUP IS COMPLETED AND APPROVED BY THE DISTRICT.

EROSION AND SEDIMENTATION CONTROL

1. THE CONTRACTOR SHALL CARRY OUT ALL CONSTRUCTION OPERATIONS IN A MANNER WHICH DOES NOT CAUSE VIOLATIONS OF STATE WATER QUALITY STANDARDS. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCE, HAY BALES, TURBIDITY BARRIER, ETC.) AS REQUIRED FOR COMPLIANCE WITH FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS.
2. SHEET C11 PROVIDES THE EROSION CONTROL PLAN AND NOTES FOR THE PROJECT SITE. LOCATION OF SILT FENCE IS DEPICTED ON SHEETS C5, C7, AND C9 SITE PLANS. CONTRACTOR IS RESPONSIBLE FOR DEVELOPING THE STORMWATER POLLUTION PREVENTION PLAN WHICH WILL BE REQUIRED AS PART OF THE US EPA NPDES CONSTRUCTION GENERAL PERMIT.
3. ALL ERODIBLE GROUND AREAS AND SLOPES DISTURBED DURING CONSTRUCTION SHALL BE REVEGETATED WITH SOD, MULCH, SEED, WETLAND SPECIES, DISTRICT APPROVED ALTERNATE METHODS 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.
4. EROSION CONTROL SHALL FURTHER COMPLY WITH THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL (LATEST EDITION).

COFFERDAMS

1. THE CONTRACTOR SHALL DESIGN, SUPPLY, INSTALL, AND REMOVAL ALL TEMPORARY COFFERDAMS AS NECESSARY TO PERFORM THE WORK. THE DESIGN SHALL BE SIGNED AND SEALED BY A FLORIDA LICENSED PROFESSIONAL ENGINEER AND SUBMITTED TO THE DISTRICT FOR APPROVAL.
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.
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. THE SLOPES AND TOP OF ALL LEVEES AND PLUGS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, OR BETTER, 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 WATER BODIES.
6. DURING INSTALLATION AND REMOVAL OF COFFERDAMS, CARE SHALL BE TAKEN TO NOT DISTURB OR OTHERWISE INJURE ANY ADJACENT STRUCTURES.

EARTHWORK - EXCAVATION AND EMBANKMENT (FILL)

1. FOUNDATION SOIL CONDITIONS: THE GEOTECHNICAL REPORT(S) INDICATE EXISTING SOILS CONSIST OF A RANGE OF CLAYS, SANDS WITH SILT, AND SANDS WITH CLAY OF VARYING FINES CONTENT AND THICKNESS. GROUNDWATER WAS PRESENT AT VARYING DEPTHS BASED ON THE BORING LOCATION. SEEPAGE INTO EXCAVATIONS MAY VARY DEPENDING ON DEPTH OF EXCAVATION AND LOCALIZED PERMEABILITY OF THE SOILS.
2. SURFACE WATER RUNOFF CONTROL: SURFACE WATER RUNOFF CONTROL WILL BE REQUIRED DURING SITE PREPARATION, FILL PLACEMENT AND COMPACTION, ETC. PONDING WATER SHALL BE CONTROLLED BY PROPER GRADING OF THE AREA AND THE USE OF TEMPORARY DRAINAGE DITCHES, DIVERSION BERMS AND/OR PUMPING FROM DRAINAGE CONTROLLED COLLECTION POINTS, AS NECESSARY, TO PREVENT INSTABILITY, PUMPING OR DISTURBED SUBGRADE CONDITIONS, OR GENERALLY UNACCEPTABLE SUBGRADE CONDITIONS.
3. GROUNDWATER CONTROL: SELECTION OF EQUIPMENT, MATERIALS AND METHODS SHALL BE CONTRACTOR'S RESPONSIBILITY. ALL DEWATERING OPERATIONS AND DISPOSAL SHALL BE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE GOVERNMENT, AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY OF DESIGN, INSTALLATION, OPERATIONS, AND MAINTENANCE OF DEWATERING SYSTEMS USED FOR THE CONTROL OF WATER LEVELS IN THE PROTECTED WORK AREA. CONTRACTOR SHALL MODIFY HIS METHOD OF DEWATERING OR AUGMENT HIS DEWATERING FACILITIES AS NECESSARY TO ASSURE STABILITY FOR CUT SLOPES, ALLOW COMPACTION OF SUBGRADE AND TO EFFECTIVELY MAINTAIN THE AREA IN THE DRY. WATER FROM PUMPING OPERATIONS SHALL BE CONTROLLED TO PREVENT ANY INTERFERENCE WITH OTHER WORK OR DAMAGE TO SURROUNDING AREAS.

GROUNDWATER DRAWDOWN AND SEEPAGE CONTROL COULD BE ACCOMPLISHED IN SHALLOW DEMUCKING OPERATIONS OR EXCAVATIONS USING GRADING, SUMP AREAS, AND PUMPING. EXCAVATIONS INTO CLEAN FINE SANDS BELOW THE GROUNDWATER LEVEL MAY BE DIFFICULT TO CONTROL WITH SUMPS AND PUMPS. GROUNDWATER LEVELS SHALL BE MAINTAINED 2 FEET BELOW PREVAILING GRADE IN AREAS RECEIVING GENERAL FILL.

4. EXCAVATION AND FILL SHALL BE IN ACCORDANCE WITH SECTION 125 - EXCAVATION FOR STRUCTURES AND PIPE OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION).

CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING OF FILL MATERIALS PRIOR TO INITIATING COMPACTION OPERATIONS. REPRESENTATIVE SAMPLES OF THE FILL MATERIAL SHALL BE COLLECTED AND TESTED TO DETERMINE THEIR CLASSIFICATION AND COMPACTION CHARACTERISTICS. THE MAXIMUM DRY DENSITY, OPTIMUM MOISTURE CONTENT, GRADATION AND PLASTICITY CHARACTERISTICS SHALL BE TESTED TO DETERMINE COMPLIANCE WITH THE SOIL CLASSIFICATIONS.

INUNDATED OR DISTURBED SOIL CONDITIONS: SHOULD THE SUBGRADE EXPERIENCE "PUMPING" AND SUBSEQUENT SOIL STRENGTH LOSS DURING EXCAVATION AND COMPACTION OPERATIONS, COMPACTION WORK SHALL BE TERMINATED. EITHER THE DISTURBED SOILS SHALL BE REMOVED AND BACKFILLED WITH "DRY" FINE SAND (SP) TO SLIGHTLY SILTY FINE SAND (SP-SM) AND COMPACTED, OR THE EXCESS MOISTURE CONTENT WITHIN THE DISTURBED SOILS BE ALLOWED TO DISSIPATE BEFORE RE-COMPACTION. THE GROUNDWATER LEVEL SHALL BE CHECKED AND CONTROLLED AS PRACTICAL, TO ENSURE PROPER DRAWDOWN OF ANY HIGH GROUNDWATER CONDITIONS THAT MAY BE CAUSING THE "PUMPING" CONDITIONS DURING COMPACTION OR CONSTRUCTION ACTIVITY UPON THESE SOILS.

AT THE DIRECTION OF THE DISTRICT PROJECT MANAGER, LIFT THICKNESS AND COMPACTION OPERATIONS CAN BE SUSPENDED UNTIL SUFFICIENT FILL HAS BEEN PLACED TO BRIDGE THE DISTURBED SUBGRADE. AFTER SUFFICIENT FILL HAS BEEN PLACED, COMPACTION OPERATIONS SHALL BE RESUMED TO COMPACT THE INCREASED LIFT THICKNESS.

BORROW SOILS: THE GEOTECHNICAL ANALYSES INDICATE THAT, WITH PROPER SITE PREPARATION AS RECOMMENDED IN THE GEOTECHNICAL REPORTS, THE EXISTING SOILS ARE SUITABLE FOR SUPPORTING THE PROPOSED CANAL PLUG CULVERT PIPES, WITH THE EXCEPTION OF DELETERIOUS ORGANIC MUCK/PEAT THAT MAY BE ENCOUNTERED.

HOWEVER, SOILS MAY HAVE EXCESS MOISTURE AND REQUIRE DRYING PRIOR TO PLACEMENT. THE DIFFICULTY OF DRYING HIGH MOISTURE CONTENT SOILS TO BE REUSED AS ENGINEERED FILL DEPENDS ON THE AMOUNT OF FINES PRESENT. THE MEANS AND METHODS OF DRYING AND COMPACTION SATURATED SOILS SHALL BE IMPLEMENTED BEFORE ANY FINAL PLACEMENT AND COMPACTION OF THESE SOILS IS ATTEMPTED. UNTIL THE SOIL MOISTURE IS REDUCED AT OR BELOW THE PLASTIC LIMIT OBTAINED FROM LABORATORY COMPACTION TESTS, THE REQUIRED COMPACTION OF FILL MATERIAL WILL NOT BE ACHIEVED, AND THE FILL WILL BECOME "DISTURBED OR PUMPING".

OVER-EXCAVATION AND BACKFILL: MUCK/PEAT (PT) AND/OR SOFT SEDIMENTS PRESENT AT SUBGRADE LEVELS SHALL BE COMPLETELY REMOVED AS DIRECTED BY THE DISTRICT PROJECT MANAGER. ADDITIONAL OVER-EXCAVATION SHALL BE PERFORMED TO IMPROVE BEARING CONDITIONS AS DIRECTED BY THE DISTRICT PROJECT MANAGER TO ACHIEVE THE COMPACTION REQUIREMENTS. IT MAY BE NECESSARY TO OVER-EXCAVATE LOOSE, DISTURBED, OR PUMPING SANDS AND BACKFILL WITH MOISTURE CONDITIONED SOILS MEETING THE CLASSIFICATION REQUIREMENTS. REFER TO INUNDATED OR DISTURBED CONDITIONS ABOVE.

PROTECTION OF EARTHWORK: PRIOR TO RAIN EVENTS, THE CONTRACTOR SHALL PROTECT THE SOIL THAT HAS BEEN PLACED DURING CONSTRUCTION FROM TRAPPING RAINWATER AND BECOMING OVERLY UNSTABLE BY GRADING AND SMOOTH-ROLLING THE SURFACE TO POSITIVELY DRAIN AWAY WATER, AND TO PROMOTE RUNOFF. ALL SMOOTH-ROLLED SURFACES SHALL BE SCARIFIED PRIOR TO PLACING THE NEXT LIFT OF SOIL.

5. UNSUITABLE MATERIAL: ORGANIC SOILS, MUCK/PEAT (PT), AND CLAY (CL OR CH) WHICH ARE DEEMED UNSUITABLE FOR FILL CAN BE PLACED IN UPLAND DISPOSAL AREAS AS DESIGNATED BY SJRWMD AND SPREAD TO A UNIFORM DEPTH. THE DISPOSAL AREAS SHALL BE LEFT IN A SATISFACTORY CONDITION, SMOOTHLY AND EVENLY DRESSED AND SLOPED TO DRAIN FREELY WITHOUT ANY TRENCHES OR DEPRESSIONS. DRAINAGE OF AREAS ADJACENT TO DISPOSAL AREAS SHALL NOT BE BLOCKED OR IMPAIRED BY CONTRACTOR'S OPERATION.
6. QUALITY CONTROL (QC) TESTING: THE CONTRACTOR SHALL BE RESPONSIBLE FOR QC TESTING IN ACCORDANCE WITH THE CURRENT SECTION 120-10 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED INDEPENDENT GEOTECHNICAL ENGINEERING TESTING AGENCY TO PERFORM REQUIRED TESTING INCLUDING (BUT NOT LIMITED TO) STANDARD AND MAXIMUM DENSITY DETERMINATION (SECTION 120-10.1.4.1), FIELD DENSITY TESTING (120-10.1.4.2), AND SOIL CLASSIFICATION (120-10.1.4.3) USING METHODOLOGIES SPECIFIED WITHIN EACH PERTINENT SECTION OF THE FDOT SPECIFICATION.

FOR THE PURPOSES OF TESTING, A STANDARD LOT SHALL BE DEFINED AS A SINGLE LIFT OF FINISHED EMBANKMENT (FILL) NOT TO EXCEED 500 FEET. THE STANDARD PROCTOR MAXIMUM DENSITY TEST AND SOIL CLASSIFICATION SHALL BE PERFORMED WHENEVER CHANGES IN SOIL COMPOSITION ARE OBSERVED, OR ON NEW MATERIAL FROM A DIFFERENT SOURCE. MOISTURE CONTENT AND PERCENT FINES (<200) TESTS SHALL BE PERFORMED ON EACH BAG SAMPLE RECOVERED FOR PROCTOR TESTING. LIQUID AND PLASTIC LIMITS SHALL BE PERFORMED AS NECESSARY WHEN PLASTIC FINES ARE PRESENT. THE NECESSITY AND FREQUENCY OF THE SOIL TESTS OUTLINED HEREIN MAY BE ADJUSTED BY THE DISTRICT PROJECT MANAGER. FURTHERMORE, FIELD DENSITY QC TESTS SHALL BE PERFORMED AT A FREQUENCY OF AT LEAST ONE PER LOT, WITH VERIFICATION AT ONE PER FOUR LOTS AND FOR WET CONDITIONS, THE FIRST LIFT NOT AFFECTED BY WATER. WHEN QUESTIONS REGARDING QC TESTING ARISE, THE DISTRICT PROJECT MANAGER SHALL PROVIDE FINAL DIRECTION ON ACCEPTABLE TESTS AND/OR RESULTS.

ENGINEER SHALL VERBALLY REPORT FIELD DENSITY TEST RESULTS TO DISTRICT PROJECT MANAGER ON THE JOB SITE AS SOON AS PRACTICAL, FOLLOWED BY A WRITTEN TEST REPORT. WRITTEN TEST REPORTS SHALL BE SUBMITTED BY THE ENGINEER TO DISTRICT'S PROJECT MANAGERS OFFICE AND A COPY TO THE DISTRICT'S ENGINEER WITHIN ONE (1) WEEK FOLLOWING THE FIELD TEST. ANY FAILING TEST RESULTS SHALL BE ACCOMPANIED BY RETESTS SHOWING PASSING RESULTS.

CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING THE TESTING BY GIVING ADVANCE NOTICE (MINIMUM 24 HOURS) TO THE DESIGNATED CONTACT OF THE QC TESTING ENGINEER AND THE DISTRICT PROJECT MANAGER WHEN SERVICES ARE REQUIRED. ALL FIELD AND LABORATORY TESTING SHALL BE PERFORMED UNDER THE DIRECTION OF THE QC TESTING ENGINEER. THE RESPONSIBILITY OF THE QC TESTING ENGINEER SHALL BE TO ASSIST THE DISTRICT IN QUALITY ASSURANCE OF ALL SITE WORK.

7. ALL CLEARING MATERIAL (I.E.: TREES, SHRUBS, ROOTS, STRIPPINGS, ETC) SHALL BE DISPOSED OF BY BURNING OR BURYING ON-SITE (AS DESIGNATED BY THE DISTRICT.)
8. ALL EARTHWORK SHALL COMPLY WITH THE REQUIREMENTS OF FLORIDA STATUTES CHAPTER 553, PART III, TRENCH SAFETY ACT. ALL TRENCH EXCAVATIONS, SHALL COMPLY WITH THE FLORIDA TRENCH SAFETY ACT (SECTIONS 553.60-553.64, FLORIDA STATUTES) AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) TRENCH EXCAVATION SAFETY STANDARDS, 29 C.F.R S. 1926.650, SUBPART P, INCLUDING ALL SUBSEQUENT PROVISIONS OR UPDATES TO STANDARDS AS ADOPTED BY THE FLORIDA DEPARTMENT OF LABOR AND EMPLOYMENT SECURITY (DOLES).

GRASSING

1. GRASSING SHALL COMPLY WITH THE CURRENT REQUIREMENTS OF SECTION 570 (PERFORMANCE TURF) OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. PER FDOT BASIS OF ESTIMATES MANUAL (CURRENT EDITION), GRASSING CONSISTS OF ESTABLISHING A STAND OF GRASS BY SEEDING (WHICH INCLUDES SEEDING, SEEDING & MULCHING, HYDROSEEDING, BONDED FIBER MATRIX, OR ANY COMBINATION). CONTRACTOR MAY SELECT ANY OF THE ABOVE METHODS, PROVIDING THAT THE REQUIREMENTS OF SECTION 570 AND THE EROSION AND SEDIMENTATION PLAN ARE MET.
2. PERFORM ALL WORK NECESSARY, INCLUDING WATERING AND FERTILIZING, TO SUSTAIN AN ESTABLISHED TURF UNTIL FINAL ACCEPTANCE, AT NO ADDITIONAL EXPENSE TO THE DISTRICT. PROVIDE THE FILLING, LEVELING, AND REPAIRING OF ANY WASHED OR ERODED AREAS, AS MAY BE NECESSARY. ESTABLISHED TURF IS DEFINED AS FOLLOWS:
 - a. AN ESTABLISHED ROOT SYSTEM (LEAF BLADES BREAK BEFORE SEEDLINGS OR SOD CAN BE PULLED FROM THE SOIL BY HAND).
 - b. NO BARE SPOTS LARGER THAN ONE SQUARE FOOT.
 - c. NO CONTINUOUS STREAKS RUNNING PERPENDICULAR TO THE FACE OF THE SLOPE.
 - d. NO BARE AREAS COMPRISING MORE THAN 1% OF ANY GIVEN 1,000 SQUARE FOOT AREA.
 - e. NO DEFORMATION OF THE TURF AREAS CAUSED BY MOWING OR OTHER CONTRACTOR EQUIPMENT.
 - f. NO EXPOSED SOD NETTING.
 - g. NO PESTS OR NOXIOUS WEEDS.
3. IF AT THE TIME THAT ALL OTHER WORK ON THE PROJECT IS COMPLETED, BUT ALL TURF AREAS HAVE NOT MET THE REQUIREMENTS FOR ESTABLISHED TURF SET FORTH IN ITEM 2 (ABOVE), CONTINUOUSLY MAINTAIN ALL TURF AREAS UNTIL THE REQUIREMENTS HAVE BEEN MET.

DURING THE ENTIRE ESTABLISHMENT PERIOD AND UNTIL TURF IS ESTABLISHED IN ACCORDANCE WITH THIS SPECIFICATION, CONTINUE INSPECTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL ITEMS.

NOTIFY THE ENGINEER, WITH A MINIMUM OF SEVEN CALENDAR DAYS ADVANCE NOTICE, TO CONDUCT INSPECTIONS OF THE TURF AT APPROXIMATE 90-DAY INTERVALS DURING THE ESTABLISHMENT PERIOD TO DETERMINE ESTABLISHMENT. DETERMINATION OF AN ESTABLISHED TURF WILL BE BASED ON THE ENTIRE PROJECT AND NOT IN SECTIONS.

4. ALL MATERIALS USED FOR GRASSING SHALL COMPLY WITH THE CURRENT REQUIREMENTS OF SECTION 981 (TURF MATERIALS) OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
5. GRASSING MATERIALS SHALL ALSO MEET THE REQUIREMENTS OF THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES AND ALL STATE LAWS. ALL LANDSCAPING SHALL CONSIST OF NATIVE FLORIDA VEGETATION.

RIP RAP

1. RIP RAP SPECIFICATIONS ARE PROVIDED ON SHEET C12 OF THIS CONSTRUCTION DRAWINGS SET.

AS-BUILT DRAWINGS

1. THROUGHOUT THE CONSTRUCTION PHASE, CONTRACTOR SHALL MAINTAIN ONE (1) COMPLETE SET OF THE SIGNED AND SEALED CONTRACT PLANS ON FULL-SIZED PLAN SHEETS AS THE AS-BUILT DRAWINGS FOR THE PROJECT. THE AS-BUILT DRAWINGS SHALL INCLUDE ALL CHANGES, BOTH DESIGN AND CONSTRUCTION, WITH ALL SHOP DRAWINGS, INCLUDING ADEQUATE SKETCHES, DIMENSIONS, AND NOTES. ALL REVISIONS, INCLUDING THOSE OCCURRING DURING CONSTRUCTION, WILL BE INCLUDED IN THE AS-BUILT DRAWINGS SET.
2. UPON CONSTRUCTION COMPLETION, CONTRACTOR WILL INCORPORATE ALL CHANGES AND REVISIONS MADE TO THE PROJECT AND RECORDED ON THE ON-SITE AS-BUILT PLANS INTO A FINAL AS-BUILT PLAN. SEE CONTRACT DOCUMENTS FOR SPECIFIC AS-BUILT DRAWING SUBMITTAL REQUIREMENTS.

**FOR BID PURPOSES
ONLY NOT FOR
CONSTRUCTION**

NO.	REVISION	BY	DATE	APPROVED	DATE

UPPER ST. JOHNS RIVER BASIN
S.J.M.C.A. - C-40 CANAL PLUG ENHANCEMENTS
BREVARD COUNTY, FLORIDA

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

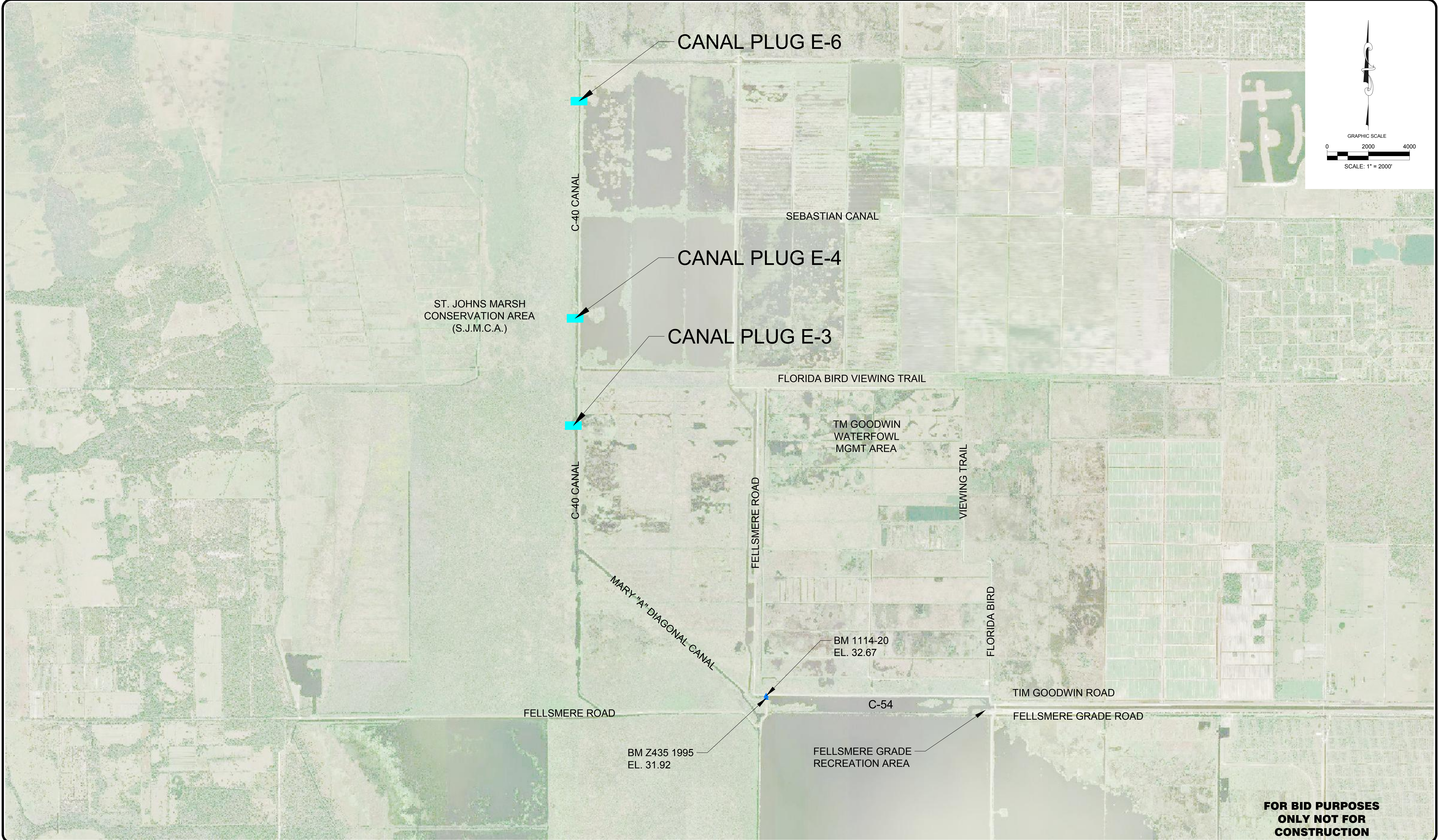
DRAWN: N.J.G.	DATE: JANUARY 17, 2018	REVIEWER: W.R.C.
SCALE: NONE	DESIGNER: A.P.W.	SECTION CHIEF: W.R.C.

NOTES AND SPECIFICATIONS

CERTIFICATION: _____
 AMY POGUE WRIGHT
 P.E. NUMBER: 54851
 DATE: JANUARY 17, 2018

FILE NAME: C3 C-40 PLUG NOTES&SPECS.dwg
 PROJECT NO.: _____
 SHEET: _____
C3

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**FOR BID PURPOSES
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UPPER ST. JOHNS RIVER BASIN
S.J.M.C.A. - C-40 CANAL PLUG ENHANCEMENTS
BREVARD COUNTY, FLORIDA

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

DRAWN: N.J.G. DATE: JANUARY 17, 2018 REVIEWER: W.R.C.
SCALE: 1" = 2000' DESIGNER: A.P.W. SECTION CHIEF: W.R.C.

OVERALL SITE PLAN

CERTIFICATION:
AMY POGUE WRIGHT
P.E. NUMBER: 54851
DATE: JANUARY 17, 2018

FILE NAME:
C4 C-40 OVERALL.dwg
PROJECT NO.:
SHEET:
C4

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GRAPHIC SCALE
0 20 40
SCALE: 1" = 20'

LEGEND

- TURBIDITY BARRIER
- LEVEE CUT = 0.02 ACRES
- SURFACE WATER CUT = 0.14 ACRES
- PROPOSED CONTOURS
- PROPOSED RIPRAP

**FOR BID PURPOSES
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CONSTRUCTION**

NO.	REVISION	BY	DATE	APPROVED	DATE

UPPER ST. JOHNS RIVER BASIN
S.J.M.C.A. - C-40 CANAL PLUG ENHANCEMENTS
BREVARD COUNTY, FLORIDA

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

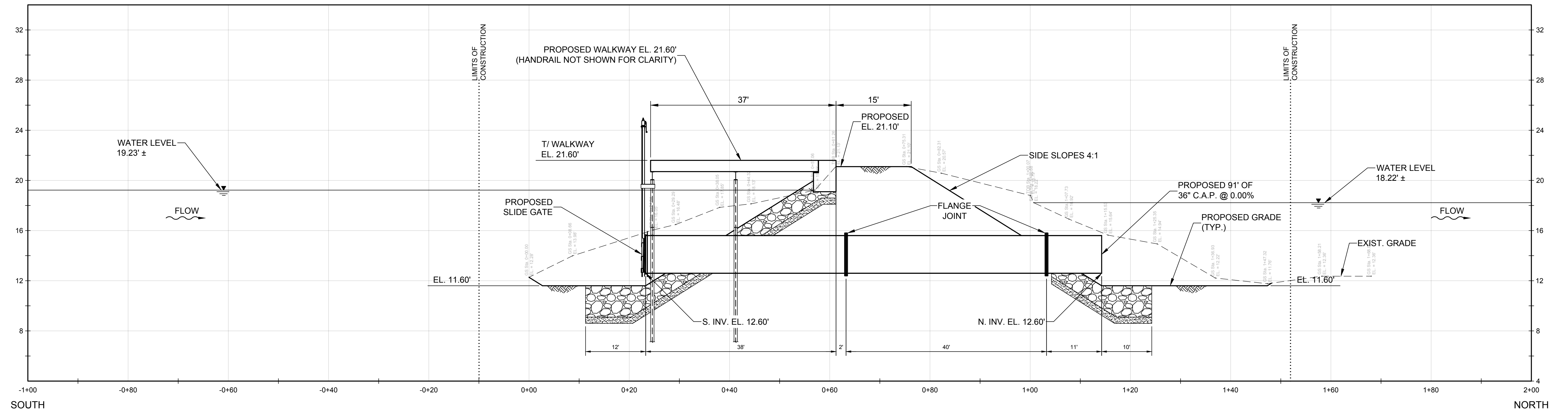
DRAWN: N.J.G. DATE: JANUARY 17, 2018 REVIEWER: W.R.C.
SCALE: 1" = 20' DESIGNER: A.P.W. SECTION CHIEF: W.R.C.

CANAL PLUG E-3 SITE PLAN

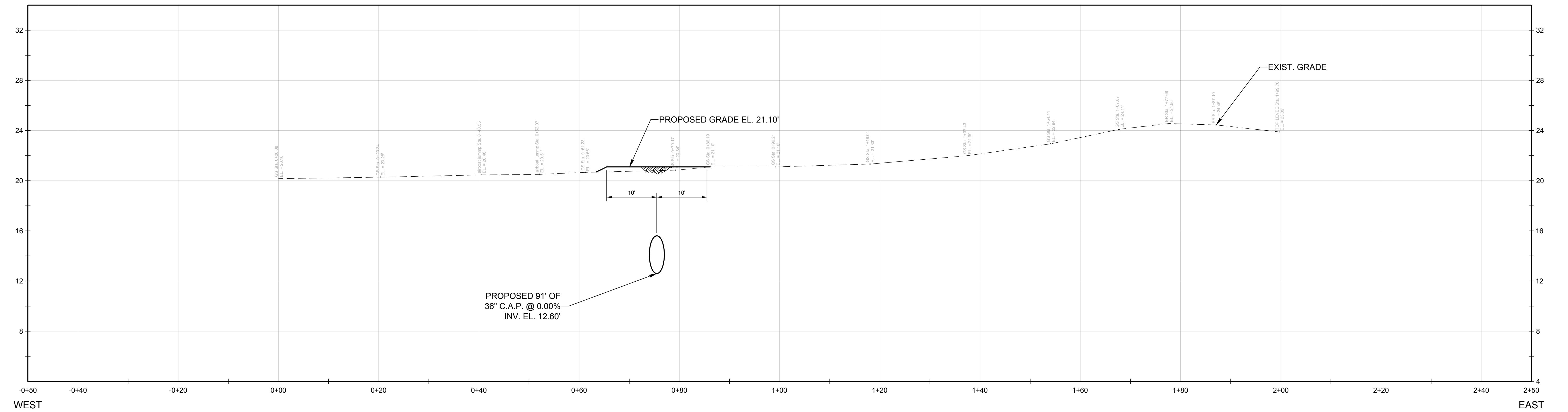
CERTIFICATION:
AMY POGUE WRIGHT
P.E. NUMBER: 54851
DATE: JANUARY 17, 2018

FILE NAME:
C4 C-40 OVERALL.dwg
PROJECT NO.:
SHEET:
C5

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C6 CANAL PLUG E-3 SECTION
 1 SCALE: HORZ. 1" = 10'
 VERT. 1" = 4'



C6 CANAL PLUG E-3 PROFILE
 2 SCALE: HORZ. 1" = 10'
 VERT. 1" = 4'

**FOR BID PURPOSES
 ONLY NOT FOR
 CONSTRUCTION**

NO.	REVISION	BY	DATE	APPROVED	DATE
1	ISSUED FOR BID.	N.J.G.	01/17/19	A.P.W.	01/17/19

UPPER ST. JOHNS RIVER BASIN
 S.J.M.C.A. - C-40 CANAL PLUG ENHANCEMENTS
 BREVARD COUNTY, FLORIDA

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

DRAWN: N.J.G. DATE: JANUARY 17, 2018 REVIEWER: W.R.C.
 SCALE: AS NOTED DESIGNER: A.P.W. SECTION CHIEF: W.R.C.

CANAL PLUG E-3 SECTION & PROFILE

CERTIFICATION:
 AMY POGUE WRIGHT
 P.E. NUMBER: 54851
 DATE: JANUARY 17, 2018

FILE NAME:
 C4 C-40 OVERALL.dwg
 PROJECT NO.:
 SHEET:
C6

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GRAPHIC SCALE
0 20 40
SCALE: 1" = 20'

LEGEND

- TURBIDITY BARRIER
- LEVEE CUT = 0.02 ACRES
- SURFACE WATER CUT = 0.14 ACRES
- PROPOSED CONTOURS
- PROPOSED RIPRAP

**FOR BID PURPOSES
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CONSTRUCTION**

NO.	REVISION	BY	DATE	APPROVED	DATE

UPPER ST. JOHNS RIVER BASIN
S.J.M.C.A. - C-40 CANAL PLUG ENHANCEMENTS
BREVARD COUNTY, FLORIDA

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

DRAWN: N.J.G. DATE: JANUARY 17, 2018 REVIEWER: W.R.C.

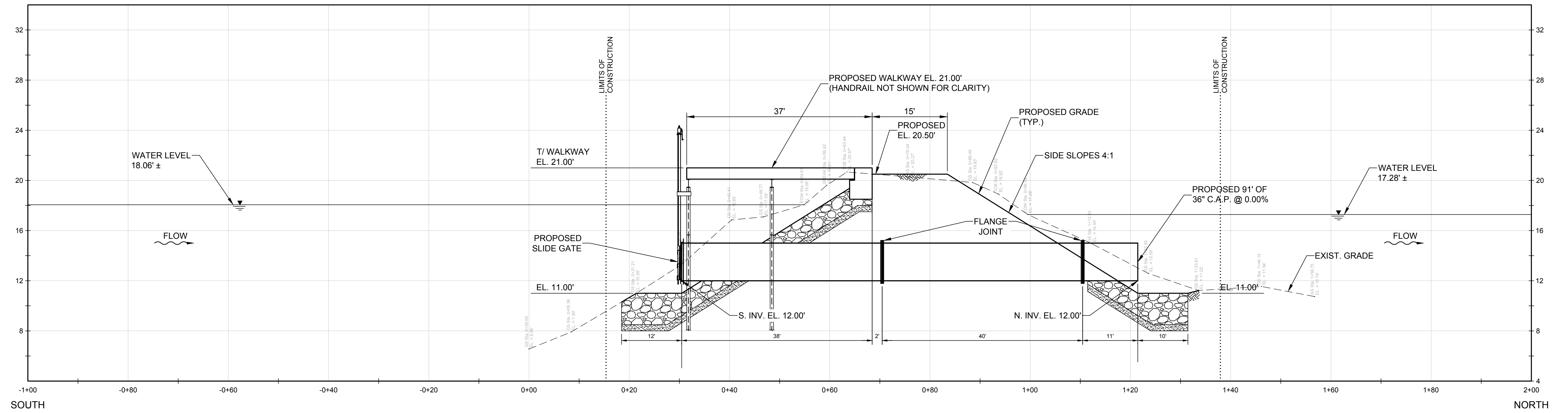
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CANAL PLUG E-4 SITE PLAN

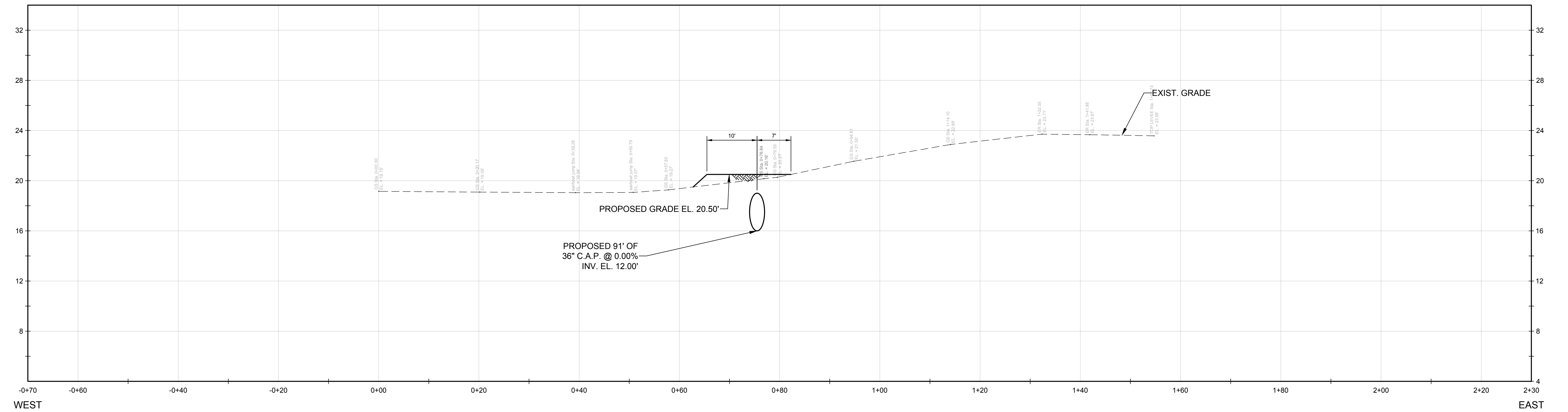
CERTIFICATION:
AMY POGUE WRIGHT
P.E. NUMBER: 54851
DATE: JANUARY 17, 2018

FILE NAME:
C4 C-40 OVERALL.dwg
PROJECT NO.:
SHEET:
C7

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C8 CANAL PLUG E-4 SECTION
 1 SCALE: HORZ. 1" = 10'
 VERT. 1" = 4'



C8 CANAL PLUG E-4 PROFILE
 2 SCALE: HORZ. 1" = 10'
 VERT. 1" = 4'

**FOR BID PURPOSES
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 CONSTRUCTION**

NO.	REVISION	BY	DATE	APPROVED	DATE
1	ISSUED FOR BID.	N.J.G.	01/17/19	A.P.W.	01/17/19

UPPER ST. JOHNS RIVER BASIN
 S.J.M.C.A. - C-40 CANAL PLUG ENHANCEMENTS
 BREVARD COUNTY, FLORIDA

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

DRAWN: N.J.G. DATE: JANUARY 17, 2018 REVIEWER: W.R.C.
 SCALE: AS NOTED DESIGNER: A.P.W. SECTION CHIEF: W.R.C.

CANAL PLUG E-4 SECTION & PROFILE

CERTIFICATION:
 AMY POGUE WRIGHT
 P.E. NUMBER: 54851
 DATE: JANUARY 17, 2018

FILE NAME:
 C4 C-40 OVERALL.dwg
 PROJECT NO.:
 SHEET:
C8



GRAPHIC SCALE
0 20 40
SCALE: 1" = 20'

LEGEND

- TURBIDITY BARRIER
- LEVEE CUT = 0.02 ACRES
- SURFACE WATER CUT = 0.14 ACRES
- PROPOSED CONTOURS
- PROPOSED RIPRAP

**FOR BID PURPOSES
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CONSTRUCTION**

NO.	REVISION	BY	DATE	APPROVED	DATE

UPPER ST. JOHNS RIVER BASIN
S.J.M.C.A. - C-40 CANAL PLUG ENHANCEMENTS
BREVARD COUNTY, FLORIDA

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

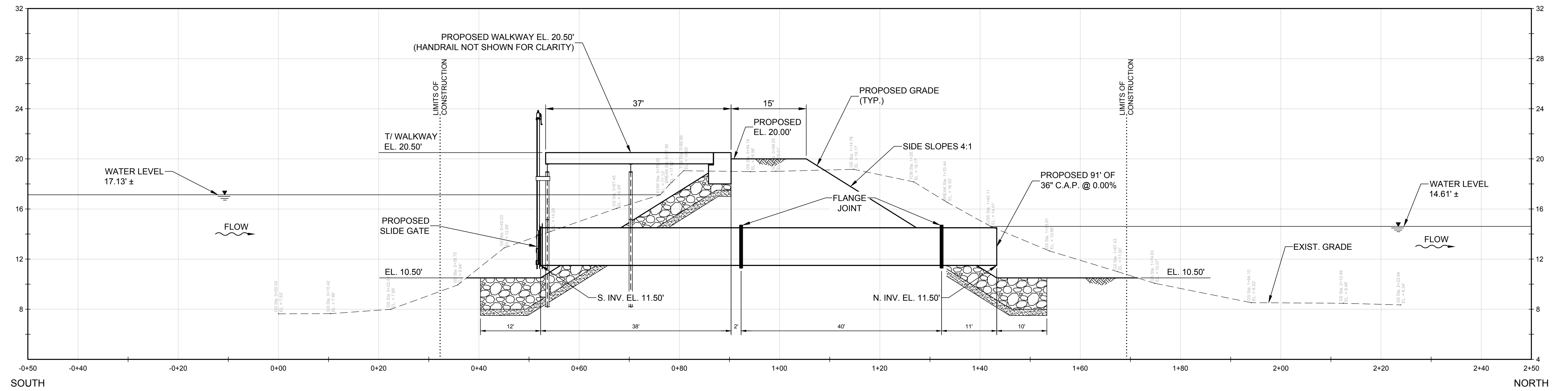
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SCALE: 1" = 20' DESIGNER: A.P.W. SECTION CHIEF: W.R.C.

CANAL PLUG E-6 SITE PLAN

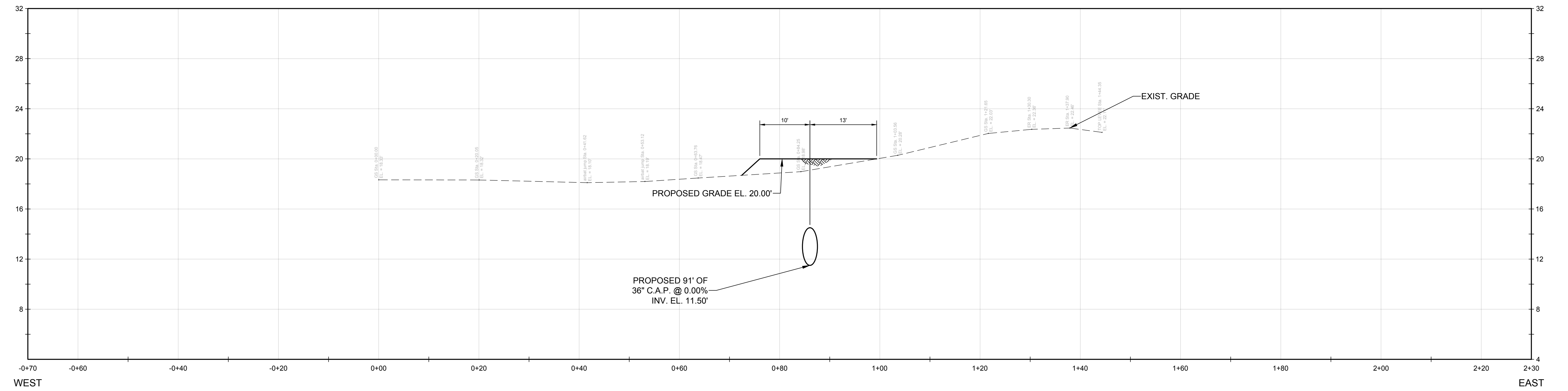
CERTIFICATION:
AMY POGUE WRIGHT
P.E. NUMBER: 54851
DATE: JANUARY 17, 2018

FILE NAME:
C4 C-40 OVERALL.dwg
PROJECT NO.:
SHEET:
C8

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C10 CANAL PLUG E-6 SECTION
 1
 SCALE: HORZ. 1" = 10'
 VERT. 1" = 4'



C10 CANAL PLUG E-6 PROFILE
 2
 SCALE: HORZ. 1" = 10'
 VERT. 1" = 4'

**FOR BID PURPOSES
 ONLY NOT FOR
 CONSTRUCTION**

ISSUED FOR BID.	N.J.G.	01/17/19	A.P.W.	01/17/19
NO.	REVISION	BY	DATE	APPROVED DATE

UPPER ST. JOHNS RIVER BASIN
 S.J.M.C.A. - C-40 CANAL PLUG ENHANCEMENTS
 BREVARD COUNTY, FLORIDA

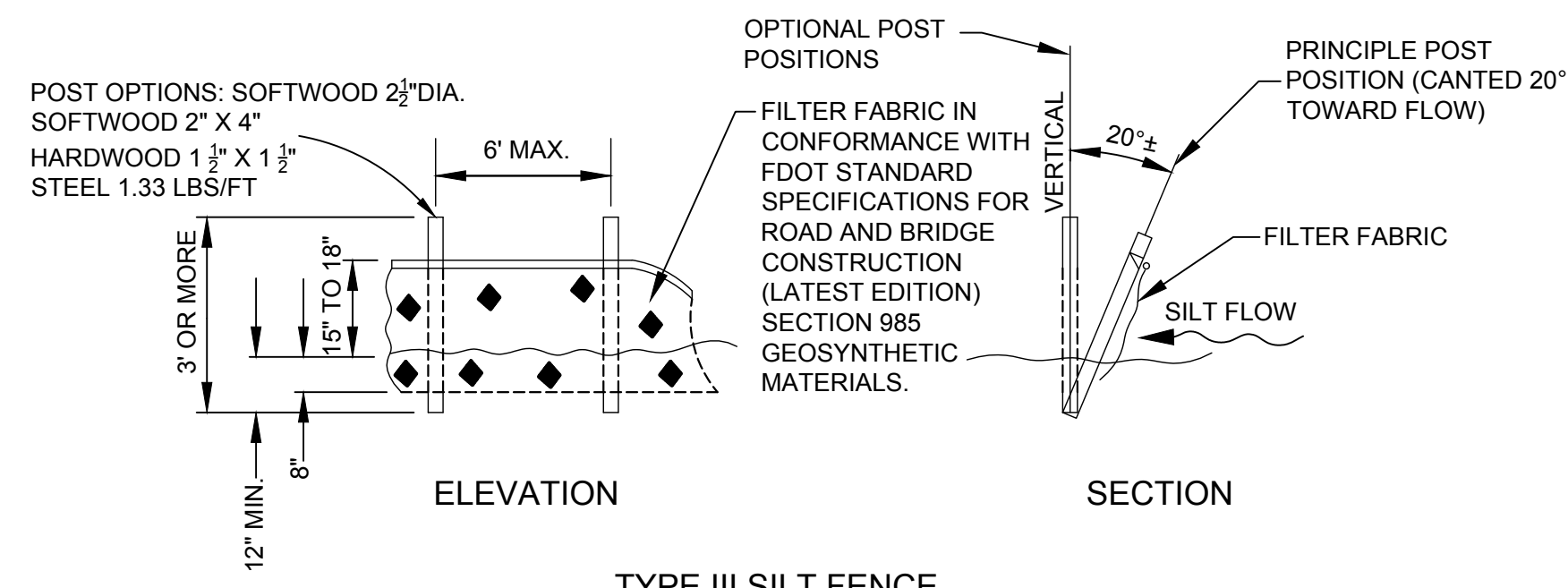
ST. JOHNS RIVER
 WATER MANAGEMENT DISTRICT
 P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G. DATE: JANUARY 17, 2018 REVIEWER: W.R.C.
 SCALE: AS NOTED DESIGNER: A.P.W. SECTION CHIEF: W.R.C.

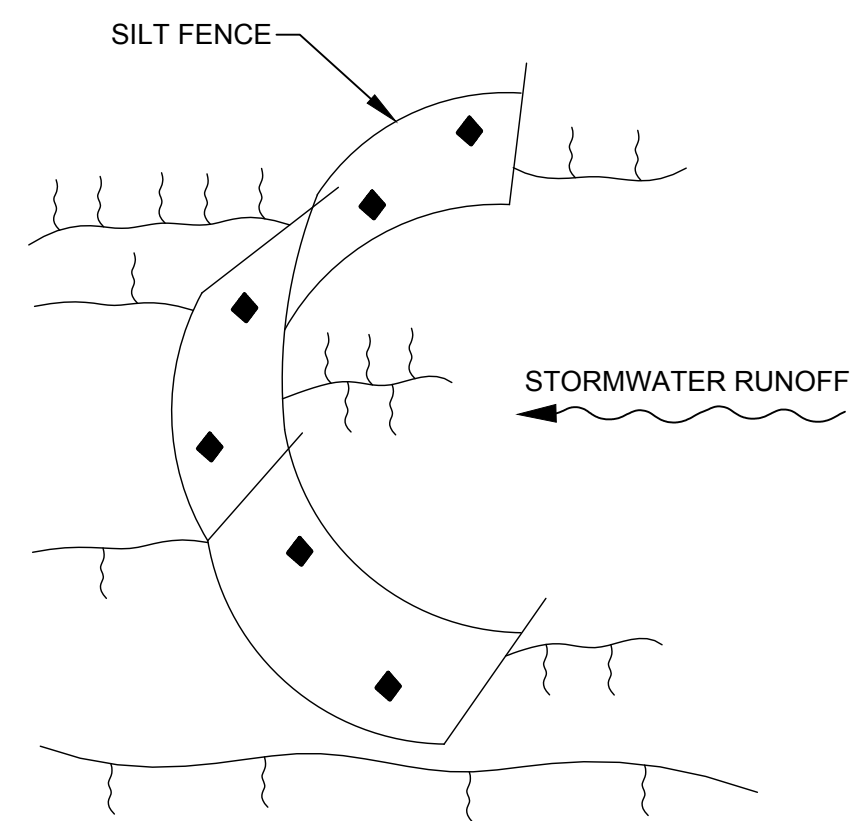
CANAL PLUG E-6 SECTION & PROFILE

CERTIFICATION:
 AMY POGUE WRIGHT
 P.E. NUMBER: 54851
 DATE: JANUARY 17, 2018

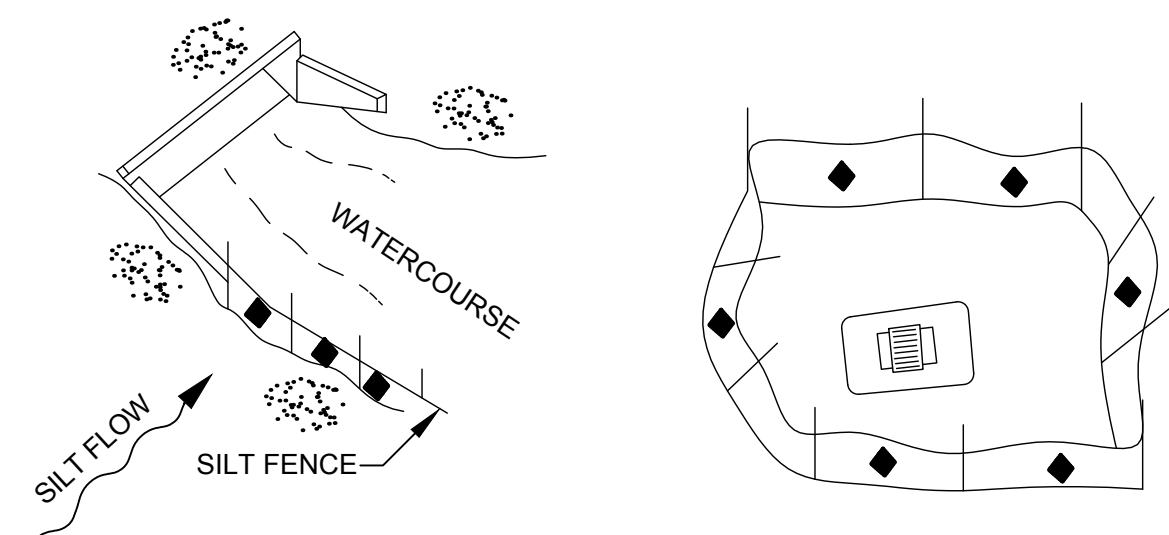
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 PROJECT NO.:
 SHEET:
C10



TYPE III SILT FENCE



SILT FENCE PROTECTION IN DITCHES WITH INTERMITTENT FLOW

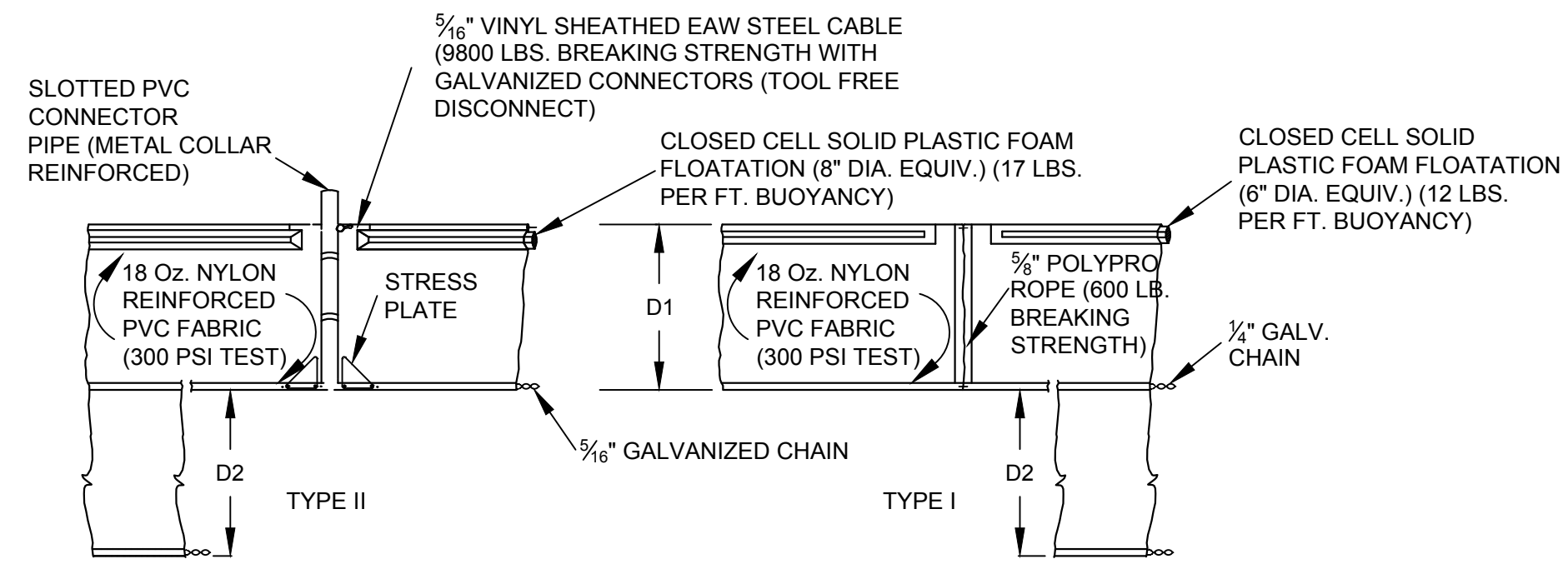


SILT FENCE APPLICATIONS

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).

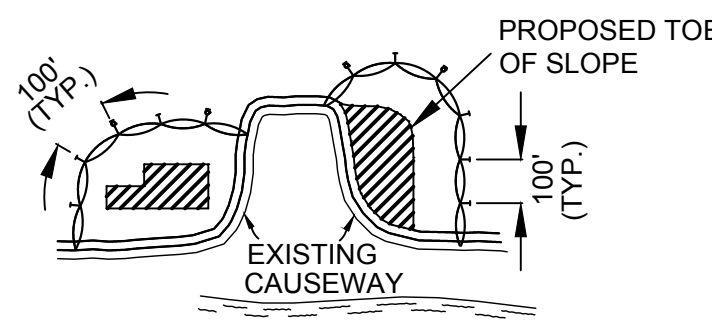
TEMPORARY SILT FENCE DETAIL
NOT TO SCALE



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

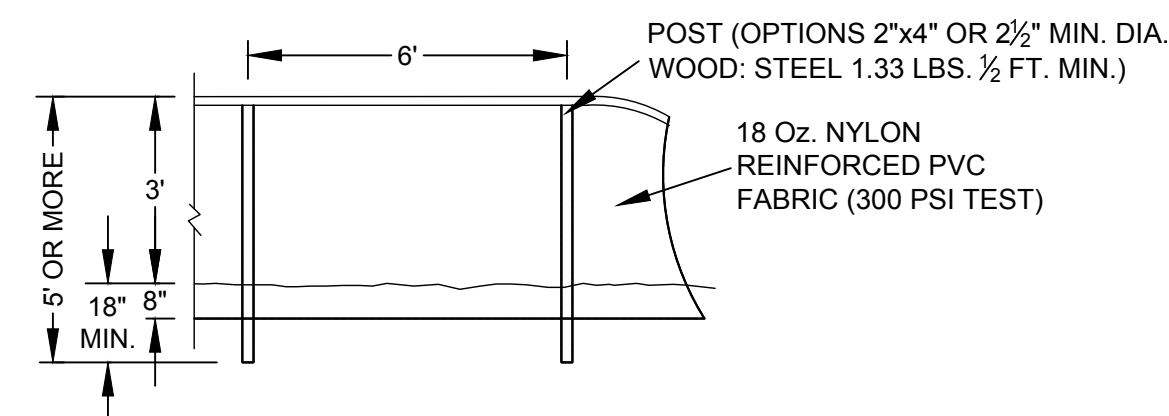
NOTES:

- 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/WANCHOR
- ANCHOR
- BARRIER MOVEMENT DUE TO CURRENT ACTION

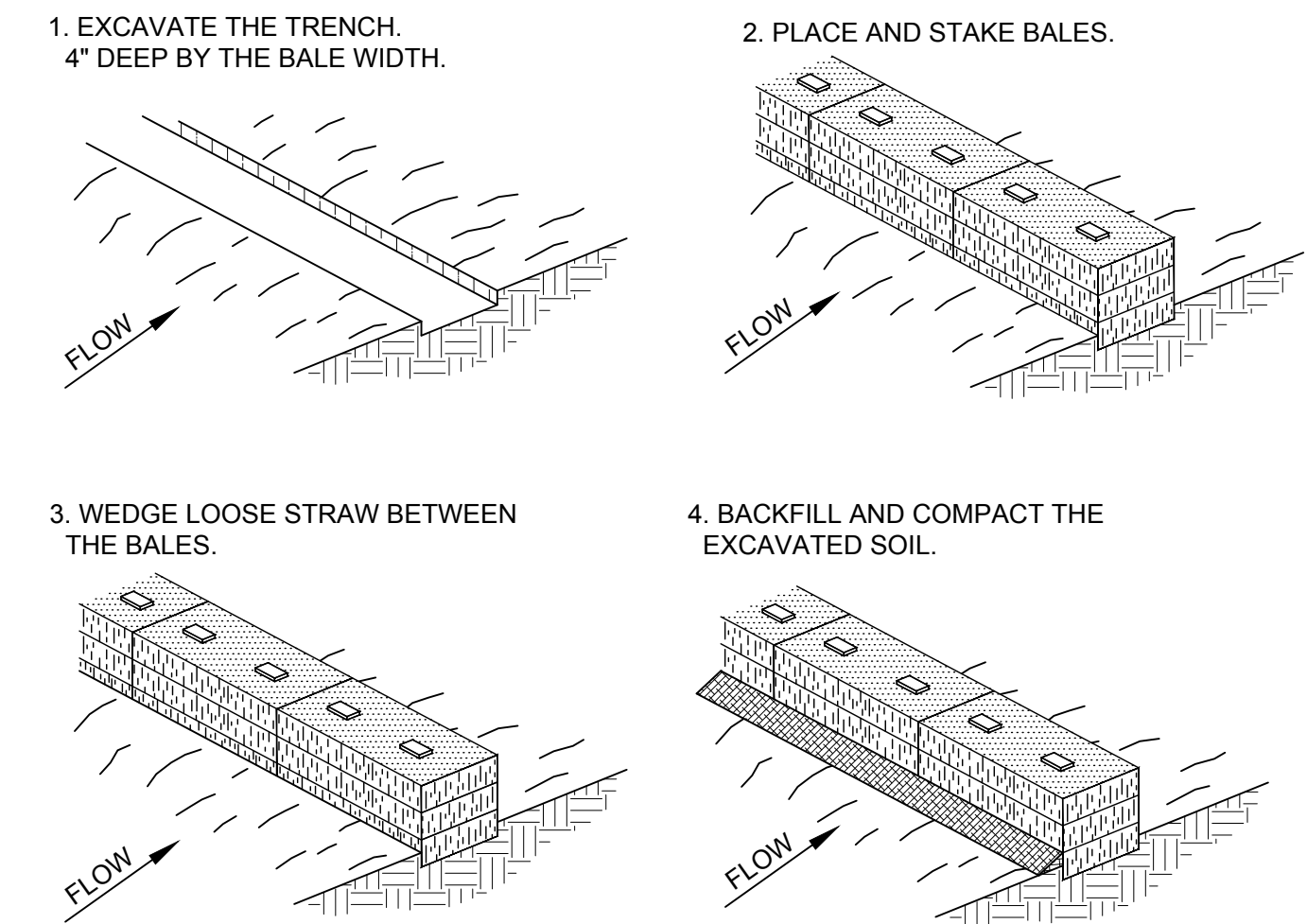
TURBIDITY BARRIER APPLICATIONS
NOT TO SCALE



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 CONTRACTOR'S OPTION 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.



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.

HAY 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.

**FOR BID PURPOSES
ONLY NOT FOR
CONSTRUCTION**

ISSUED FOR BID	N.J.G.	01/17/19	A.P.W.	01/17/19
NO.	REVISION	BY	DATE	APPROVED

UPPER ST. JOHNS RIVER BASIN
S.J.M.C.A. - C-40 CANAL PLUG ENHANCEMENTS
BREVARD COUNTY, FLORIDA

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

DRAWN: N.J.G. DATE: JANUARY 17, 2019 REVIEWER: W.R.C.
SCALE: NONE DESIGNER: A.P.W. SECTION CHIEF: W.R.C.

EROSION AND SEDIMENT CONTROL

CERTIFICATION:
AMY POGUE WRIGHT
P.E. NUMBER: 54851
DATE: JANUARY 17, 2019

FILE NAME: CSC-40 EROSION.dwg
PROJECT NO.:
SHEET: C11

CONSTRUCTION SPECIFICATIONS AND NOTES FOR RIPRAP SYSTEM:

- GENERAL: THIS SECTION SHALL COVER THE WORK OF FURNISHING AND CONSTRUCTING THE RIPRAP WHICH SHALL CONSIST OF A PROTECTIVE COURSE OF STONE OR OTHER APPROVED MATERIALS ON EMBANKMENT SLOPES, IN CHANNELS, OR OTHER WORK AS SHOWN ON THE PLANS OR DIRECTED, WITH A FILTER BLANKET, ALL IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN CONFORMITY WITH THE LINES AND GRADES NOTED IN THE PLAN DETAILS.
- RELATED DOCUMENTS:
 - DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND OTHER SPECIFICATION SECTIONS, APPLY TO WORK OF THIS SECTION.
 - FLORIDA DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (FDOT SPECS), SECTION 530, AND ROADWAY AND TRAFFIC DESIGN STANDARDS FOR CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM (FDOT STANDARD INDEX), LATEST EDITION. WORK SHALL COMPLY WITH THE REQUIREMENTS OF FDOT SPECS AND STANDARD INDEX AS MODIFIED HEREIN.
- UNLESS OTHERWISE NOTED, RUBBLE RIPRAP FOR CHANNEL PROTECTION ON DISTRICT LAND FOR THIS PROJECT SHALL CONSIST ENTIRELY OF BROKEN STONE OR CONCRETE AND SHALL COMPLY WITH THE REQUIREMENTS SECTION 530-2.1.3.2 (DITCH LINING) OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION, LATEST EDITION.
- BEDDING STONE SHALL COMPLY WITH THE REQUIREMENTS SECTION 530-2.1.4 (BEDDING STONE) OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION, LATEST EDITION.
- GEOTEXTILE FABRIC 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, LATEST EDITION. ADDITIONALLY, THE GEOTEXTILE FABRIC MATERIAL SHALL CONFORM TO THE REQUIREMENTS FOR TYPE D-2 OF THE FDOT STANDARD INDEX NO. 199, LATEST EDITION.
- CONSTRUCTION REQUIREMENTS: ALL SLOPES TO BE TREATED WITH RIPRAP SHALL BE TRIMMED TO THE LINES AND GRADES INDICATED BY THE PLANS OR DIRECTED. LOOSE MATERIAL SHALL BE COMPACTED BY METHODS APPROVED BY THE DISTRICT OR REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. SLOPES SHALL REQUIRE BEDDING STONE WITH FILTER BLANKET (GEOTEXTILE MATERIAL) UNDER THE RIPRAP SHALL, IN ADDITION TO THE ABOVE, BE PREPARED AS NOTED BELOW. PLACEMENT OF ANY RIPRAP ON A FILTER BLANKET SHALL BE BY SUCH MEANS THAT WILL NOT DAMAGE OR DESTROY THE BLANKET. ANY DAMAGE TO THE BLANKET SHALL BE REPAIRED OR REPLACED; TO THE DISTRICT'S APPROVAL, WITHOUT ADDITIONAL COMPENSATION. IF DIRECTED BY THE DISTRICT OR SHOWN BY PLAN DETAILS, 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.

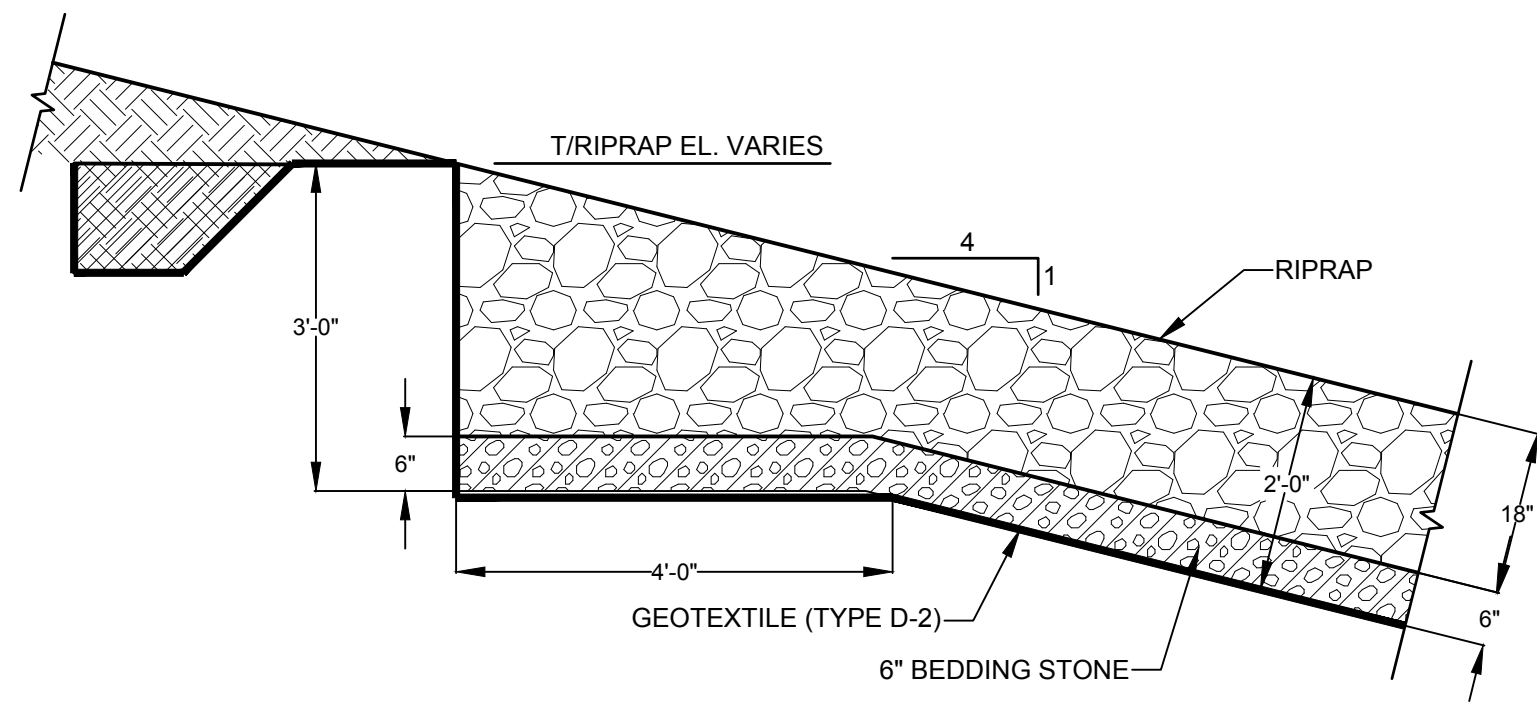
FOUNDATION PREPARATION: AREAS ON WHICH FILTER FABRICS ARE TO BE PLACED SHALL BE UNIFORMLY TRIMMED AND DRESSED TO CONFORM TO CROSS-SECTIONS SHOWN BY THE PLANS AND SHALL ALSO CONFORM TO THE REQUIREMENTS UNDER "EARTHWORK" AND ANY OTHER APPLICABLE SPECIFICATIONS ON SHEET C1 OF THE FWMA AREA 3-4-5 LEVEE RECORD DRAWINGS DATED 8/25/2011.

FILTER FABRIC (GEOTEXTILE MATERIAL): FILTER FABRIC SHALL BE PLACED IN THE MANNER AND AT THE LOCATIONS SHOWN IN THE PLANS OR AS DIRECTED BY THE DISTRICT. AT THE TIME OF INSTALLATION, FABRIC SHALL BE REJECTED IF IT HAS DEFECTS, RIPS, HOLES, FLAWS, DETERIORATION OR DAMAGE INCURRED DURING MANUFACTURE, TRANSPORTATION OR STORAGE. THE FABRIC SHALL BE PLACED WITH THE LONG DIMENSION PARALLEL TO THE CENTERLINE OF THE CHANNEL OR SHORELINE UNLESS OTHERWISE DIRECTED BY THE DISTRICT, AND SHALL BE LAID SMOOTH AND FREE OF TENSION, STRESS, FOLDS, WRINKLES OR CREASES. THE STRIPS SHALL BE PLACED TO PROVIDE A MINIMUM WIDTH OF 24 INCHES OF OVERLAP FOR EACH JOINT WITH THE UPSTREAM STRIP OF FABRIC OVERLAPPING THE DOWNSTREAM STRIP. OVERLAP JOINTS AND SEAMS SHALL BE MEASURED AS A SINGLE LAYER OF CLOTH. SECURING PINS WITH WASHERS SHALL BE INSERTED THROUGH BOTH STRIPS OF OVERLAPPED CLOTH AT NOT GREATER THAN THE FOLLOWING INTERVALS ALONG A LINE THROUGH THE MIDPOINT OF THE OVERLAP.

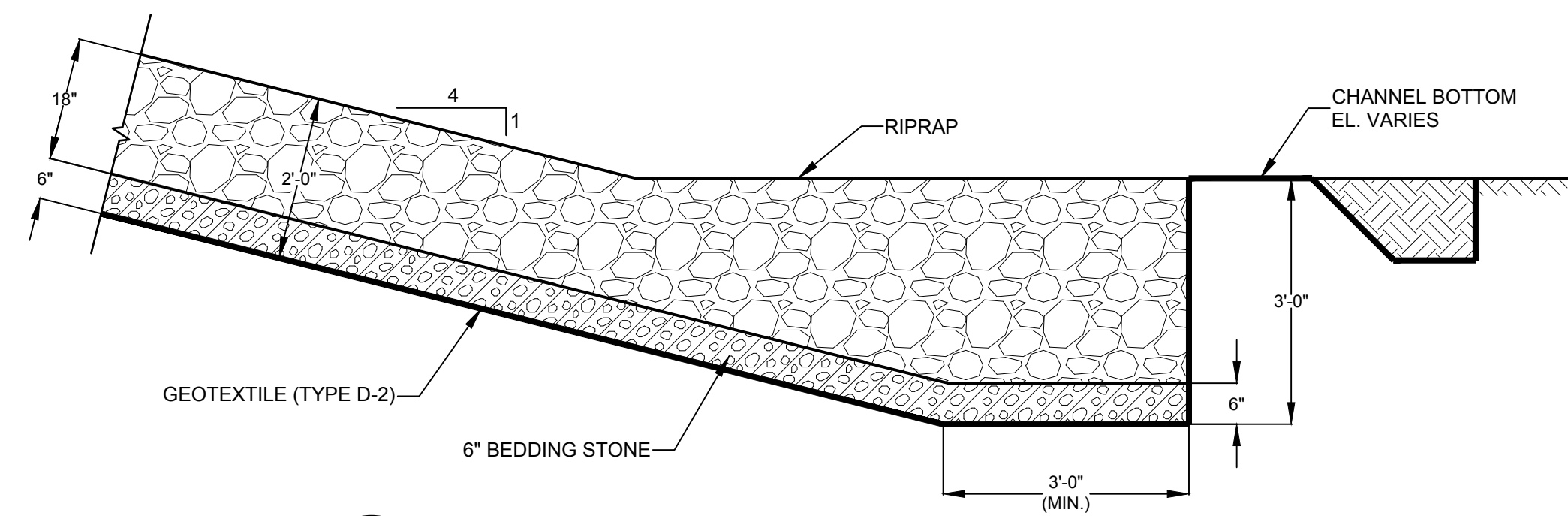
PIN SPACING	SLOPE
2 FT.	STEEPER THAN 3:1
3 FT.	3:1 TO 4:1
5 FT.	FLATTER THAN 4:1

THE FABRIC SHALL BE TURNED DOWN AND BURIED TWO FEET AT ALL EXTERIOR LIMITS EXCEPT WHERE A STONE-FILLED KEY IS PROVIDED BELOW NATURAL GROUND OR OTHERWISE SHOWN. ADDITIONAL PINS REGARDLESS OF LOCATION SHALL BE INSTALLED AS NECESSARY TO PREVENT ANY SLIPPAGE OF THE FILTER FABRIC. OVERLAPS IN THE FABRIC SHALL BE PLACED SO THAT ANY UPSTREAM STRIP OF FABRIC WILL OVERLAP THE DOWNSTREAM STRIP. SHOULD THE DISTRICT DIRECT THAT THE FABRIC BE PLACED WITH THE LONG DIMENSION PERPENDICULAR TO THE CENTERLINE OF THE CHANNEL OR SHORELINE, THE LOWER STRIP OF FABRIC SHALL UNDERLAP THE NEXT HIGHER STRIP. EACH SECURING PIN SHALL BE PUSHED THROUGH THE FABRIC UNTIL THE WASHER BEARS AGAINST THE FABRIC AND SECURES IT FIRMLY TO THE FOUNDATION. THE FABRIC SHALL BE PROTECTED AT ALL TIMES DURING CONSTRUCTION FROM CONTAMINATION BY SURFACE RUNOFF AND ANY FABRIC SO CONTAMINATED SHALL BE REMOVED AND REPLACED WITH UNCONTAMINATED FABRIC. ANY DAMAGE TO THE FABRIC DURING ITS INSTALLATION OR DURING PLACEMENT OF RIPRAP SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST. THE WORK SHALL BE SCHEDULED SO THAT 5 DAYS DOES NOT EXPIRE BETWEEN PLACEMENT OF THE FABRIC AND THE COVERING OF THE FABRIC WITH RIPRAP.

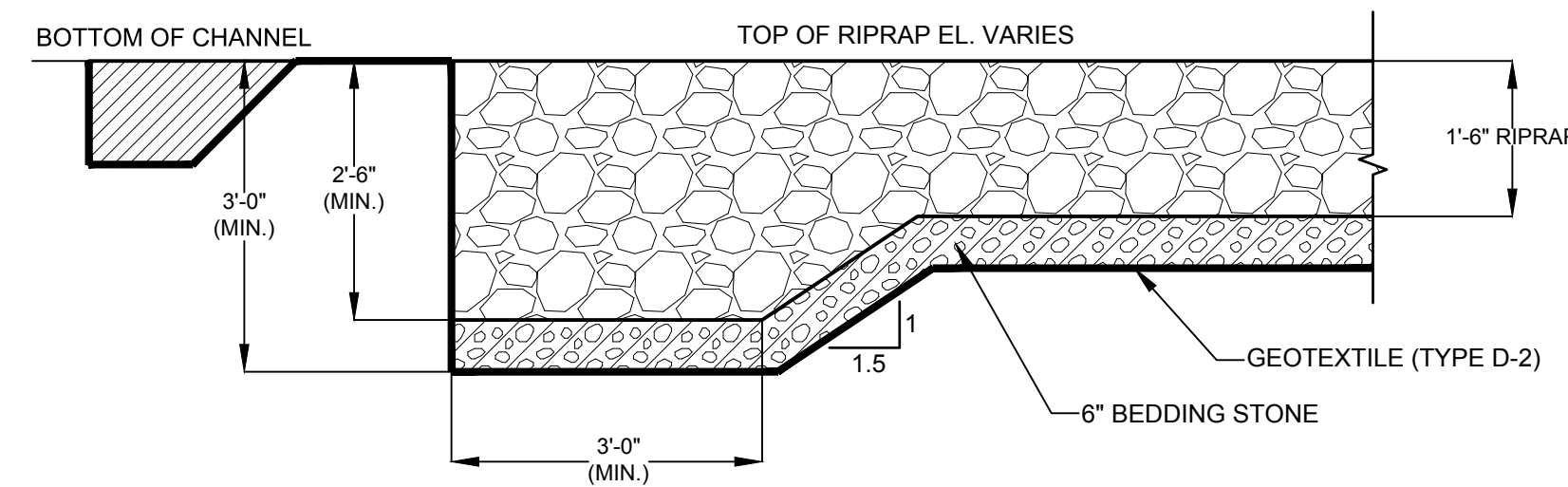
STONE AND CONCRETE RUBBLE RIPRAP: UNLESS OTHERWISE SHOWN BY PLAN DETAILS OR DIRECTED, STONE OR CONCRETE SHALL NOT BE PLACED ON SLOPES STEEPER THAN THE NATURAL ANGLE OR REPOSE OF THE RIPRAP MATERIAL. PLACEMENT OF STONE OR CONCRETE MAY, UNLESS OTHERWISE NOTED HEREINAFTER, BE PLACED BY METHODS AND EQUIPMENT APPROVED BY THE DISTRICT SUITABLE FOR THE PURPOSE OF PLACING THE RIPRAP IN ACCORDANCE WITH THE REQUIREMENTS FOR THE CLASS RIPRAP INVOLVED WITHOUT DAMAGING ANY EXISTING FACILITY OR CONSTRUCTION FEATURE. THE STONE OR CONCRETE SHALL BE PLACED IN SUCH A MANNER AS TO PRODUCE A REASONABLY WELL GRADED MASS OF ROCK WITH THE MINIMUM PRACTICAL PERCENTAGE OF VOIDS. STONE OR CONCRETE SHALL BE LAID WITH CLOSE BROKEN JOINTS AND RESTING ON THE EMBANKMENT SLOPE. THE RIPRAP SHALL BE CONSTRUCTED TO THE LINES, GRADES AND THICKNESS SHOWN BY THE PLANS OR AS DIRECTED. RIPRAP SHALL BE PLACED TO ITS FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACING OR DAMAGING THE FILTER BLANKET MATERIAL. THE LARGER STONE OR CONCRETES SHALL BE WELL DISTRIBUTED AND THE ENTIRE MASS OF STONE OR CONCRETES IN THEIR FINAL POSITION SHALL CONFORM TO A REASONABLE UNIFORM GRADATION. THE FINISHED RIPRAP SHALL BE FREE FROM OBJECTIONABLE POCKETS OF SMALL STONE OR CONCRETES AND CLUSTERS OF LARGER STONE OR CONCRETES. OPEN JOINTS SHALL BE FILLED WITH SPALLS, OR SMALL STONE OR CONCRETES IN SUCH MANNER THAT ALL STONE OR CONCRETES ARE TIGHTLY WEDGED OR KEYED. PLACING RIPRAP BY DUMPING INTO CHUTES OR BY OTHER METHODS LIKELY TO CAUSE SEGREGATION OF SIZES SHALL NOT BE PERMITTED. THE DESIRED DISTRIBUTION OF THE VARIOUS SIZES OF STONE OR CONCRETES THROUGHOUT THE MASS SHALL BE OBTAINED BY SELECTIVE LOADING OF THE MATERIAL AT THE SOURCE, BY CONTROLLED DUMPING OF SUCCESSIVE LOADS DURING FINAL PLACING, OR BY OTHER METHODS OF PLACEMENT WHICH WILL PRODUCE THE SPECIFIED RESULTS. THE INDIVIDUAL PIECES OF STONE OR CONCRETE IN EACH HORIZONTAL COURSE SHALL BE LAID SO THAT THEY WILL BREAK AWAY FROM EMBANKMENT. REARRANGING OF INDIVIDUAL STONE OR CONCRETES BY MECHANICAL EQUIPMENT, OR BY HAND, WILL BE REQUIRED TO THE EXTENT NECESSARY TO OBTAIN A REASONABLY WELL GRADED DISTRIBUTION OF STONE OR CONCRETE AS SPECIFIED HEREIN.



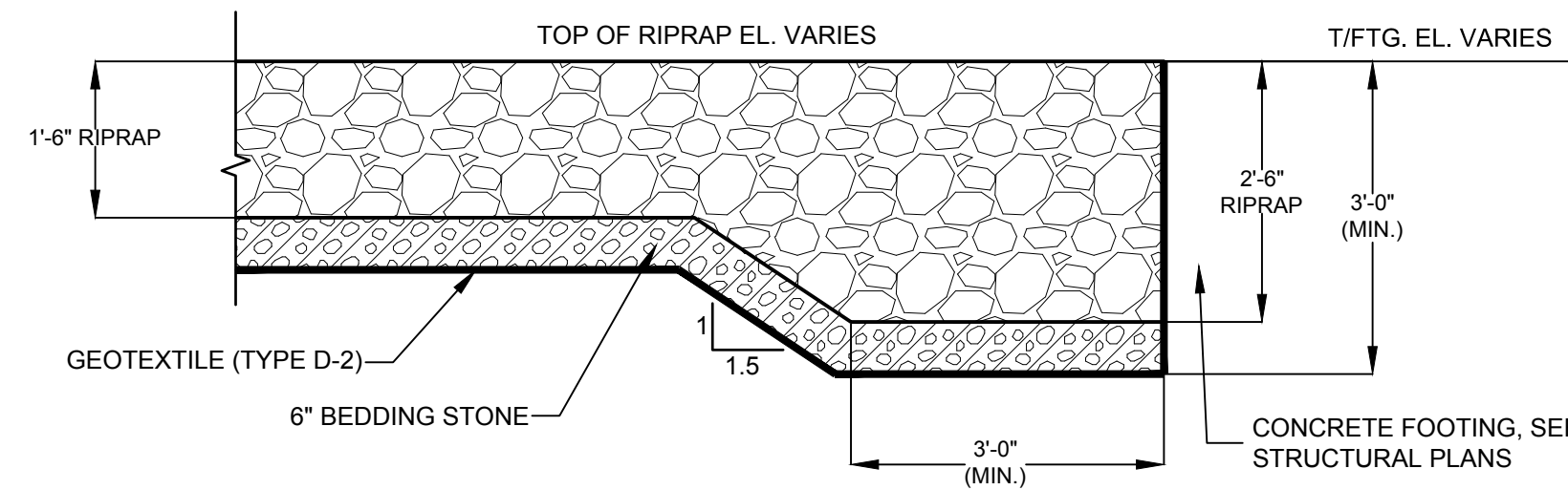
C12
1 RIPRAP KEY AT TOP OF SLOPE
NOT TO SCALE



C12
2 RIPRAP KEY AT TOE OF SLOPE
NOT TO SCALE



C12
3 RIPRAP KEY AT CHANNEL BOTTOM & EDGES
NOT TO SCALE



C12
4 RIPRAP KEY AT CONCRETE FOOTING
NOT TO SCALE

**FOR BID PURPOSES
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CONSTRUCTION**

NO.	REVISION	BY	DATE	APPROVED	DATE
1	ISSUED FOR BID.	N.J.G.	01/17/19	A.P.W.	01/17/19

UPPER ST. JOHNS RIVER BASIN
S.J.M.C.A. - C-40 CANAL PLUG ENHANCEMENTS
BREVARD COUNTY, FLORIDA

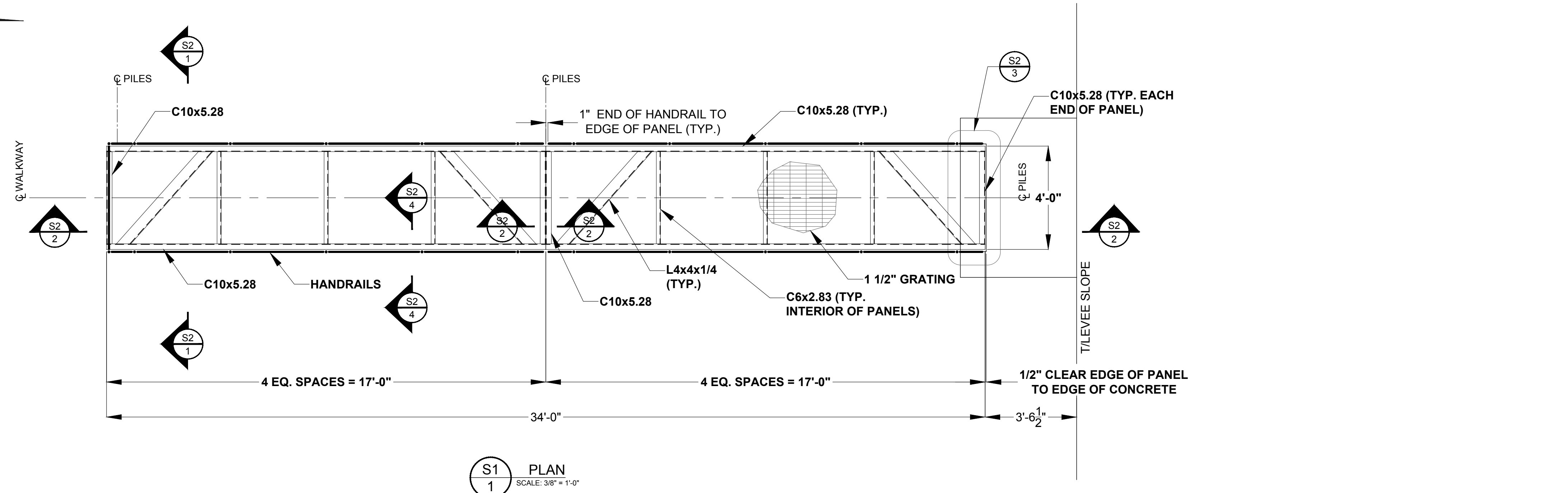
ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT
P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G. DATE: JANUARY 17, 2018 REVIEWER: W.R.C.
SCALE: NOT TO SCALE DESIGNER: A.P.W. SECTION CHIEF: W.R.C.

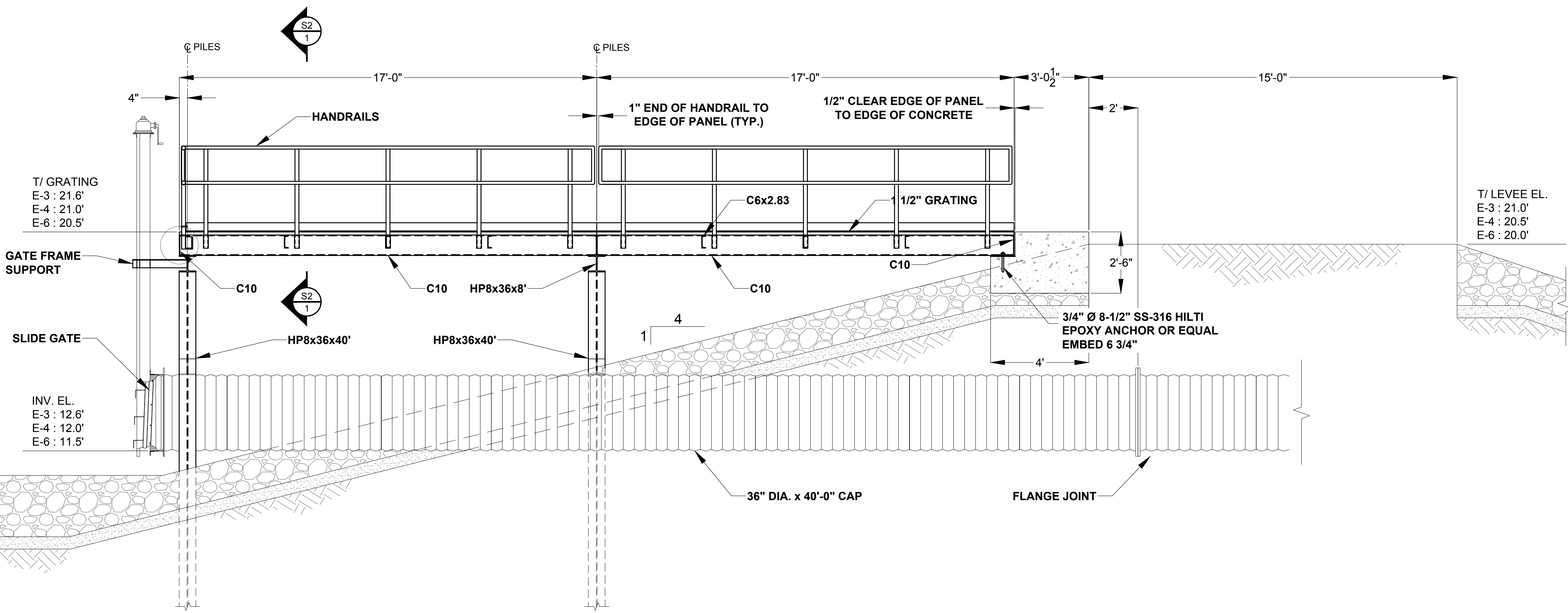
RIPRAP DETAILS

CERTIFICATION:
AMY POGUE WRIGHT
P.E. NUMBER: 54851
DATE: JANUARY 17, 2018

FILE NAME:
C6 C-40 RIPRAP.dwg
PROJECT NO.:
SHEET:
C12



S1 PLAN
SCALE: 3/8" = 1'-0"



S1 SECTION
SCALE: 3/8" = 1'-0"

NOTE SPECIFICATIONS:

- 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 BE FDOT CLASS I WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI. PORTLAND CEMENT SHALL BE TYPE II IN ACCORDANCE WITH ASTM C-150. 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 CONCRETE CAST AGAINST EARTH AND 2 INCHES ELSEWHERE, UNLESS OTHERWISE NOTED.
 - CONCRETE ANCHORS SHALL UTILIZE THE HILTI HIT-RE 500-SD 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.
- STRUCTURAL STEEL:**
- 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.
 - WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS) "STRUCTURAL WELDING CODE" AWS D1.1.
 - 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.
 - ALL BOLTS SHALL BE STAINLESS STEEL CONFORMING TO ASTM A276, TYPE 304.
 - ALL WELDING SHALL UTILIZE E70XX LOW-HYDROGEN ELECTRODES UNLESS NOTED OTHERWISE.
- STRUCTURAL ALUMINUM:**
- STRUCTURAL ALUMINUM DESIGN AND FABRICATION SHALL BE IN ACCORDANCE WITH THE ALUMINUM ASSOCIATION, INC. "SPECIFICATIONS FOR ALUMINUM STRUCTURES", LATEST EDITION.
 - WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS) "STRUCTURAL WELDING CODE - ALUMINUM" AWS D1.2.
 - 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.
 - ALUMINUM BARS, RODS, AND WIRE SHALL BE NEW AND CONSIST OF ALLOY 6061-T6 CONFORMING TO THE REQUIREMENTS OF ASTM STANDARD B211.
 - ALUMINUM PLATE SHALL BE NEW AND CONSIST OF ALLOY 5052-H32 CONFORMING TO THE REQUIREMENTS OF ASTM STANDARD B209.
 - ALL BOLTS, NUTS, AND WASHERS SHALL CONSIST OF SS316 STAINLESS STEEL CONFORMING TO THE REQUIREMENTS OF ASTM STANDARDS F593 AND F594. MINIMUM BOLT SIZE SHALL BE 3/4-INCH UNLESS OTHERWISE NOTED.
 - ALL WELDING SHALL UTILIZE ER4043 FILLER ALLOY AND SHALL BE SHOP WELDED TO THE GREATEST EXTENT POSSIBLE.
 - THE MINIMUM THICKNESS OF ALL CONNECTION ANGLES AND GUSSET PLATES SHALL BE 1/4-INCH UNLESS NOTED OTHERWISE.
 - FIELD CORRECTING OF FABRICATED COMPONENTS SHALL NOT BE PERMITTED ON STRUCTURAL MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
 - ALUMINUM GRATING SHALL BE RECTANGULAR BAR TYPE (SERRATED), SWAGE-LOCKED, AND CONSIST OF ALUMINUM ALLOY 6063-T6. THE BEARING BARS SHALL BE 1-1/2" X 3/16" AT 1-3/16" ON CENTER. RECTANGULAR CROSS BARS SHALL BE 4" ON CENTER. GRATING SHALL BE ATTACHED WITH GRATING CLIPS TYPE AND SPACING AS RECOMMENDED BY THE MANUFACTURER.
 - THE HANDRAIL POSTS AND RAILS SHALL BE 1-1/2 INCH DIAMETER SCHEDULE 40 PIPE FORMED FROM EXTRUDED 6063-T6 ALUMINUM EXCEPT THAT FORMED ELBOWS SHALL BE 6063-T4 ALUMINUM. THE MAXIMUM POST SPACING SHALL BE 6'-0" CENTER TO CENTER.
 - THE STRUCTURES ARE DESIGNED AS STABLE UNITS AFTER ALL COMPONENTS, INCLUDING BRACING, ARE IN PLACE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY BRACING AS REQUIRED TO ENSURE THE VERTICAL AND LATERAL STABILITY OF THE ENTIRE STRUCTURE OR ANY PORTION THEREOF DURING CONSTRUCTION.

**FOR BID PURPOSES
ONLY NOT FOR
CONSTRUCTION**

NO.	REVISION	BY	DATE	APPROVED	DATE
	ISSUED FOR BID	N.J.G.	01/17/19	A.P.W.	01/17/19

UPPER ST. JOHNS RIVER BASIN
S.J.M.C.A. - C-40 CANAL PLUG ENHANCEMENTS
BREVARD COUNTY, FLORIDA

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

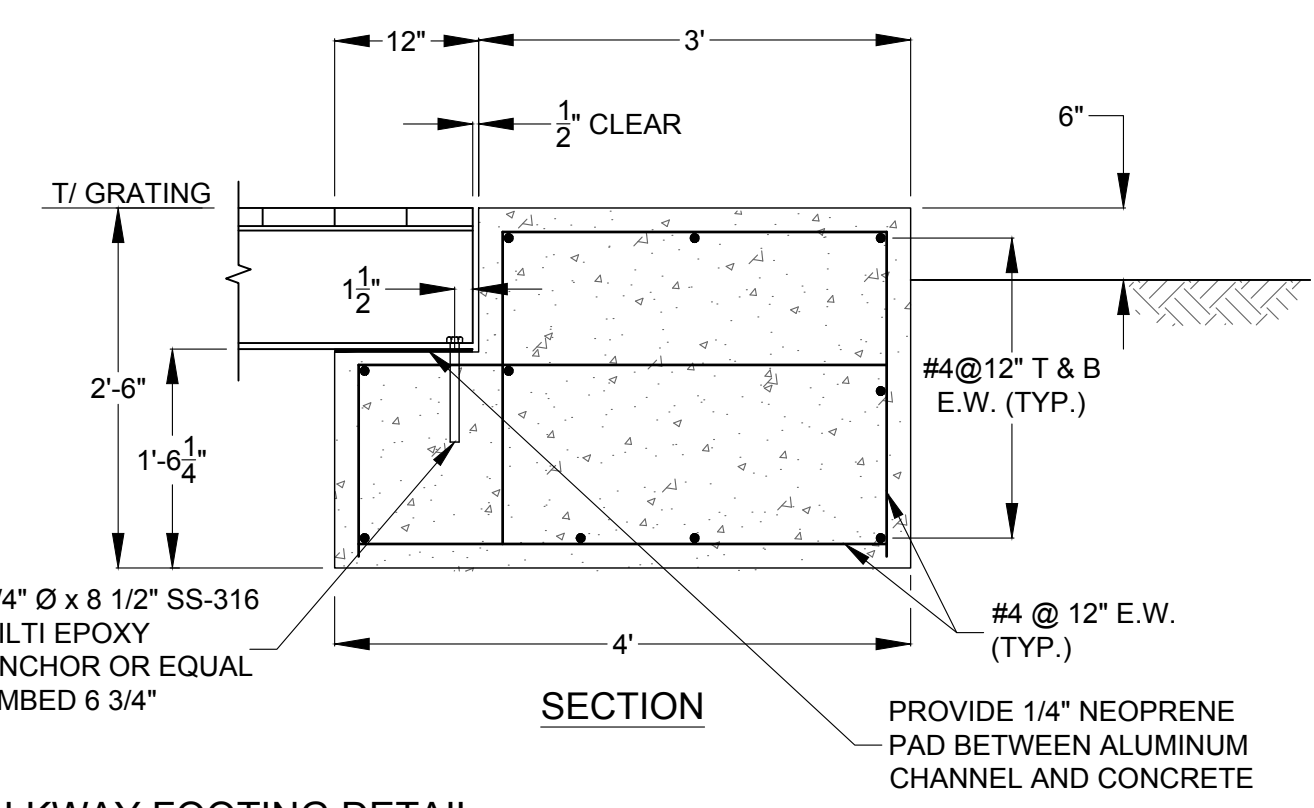
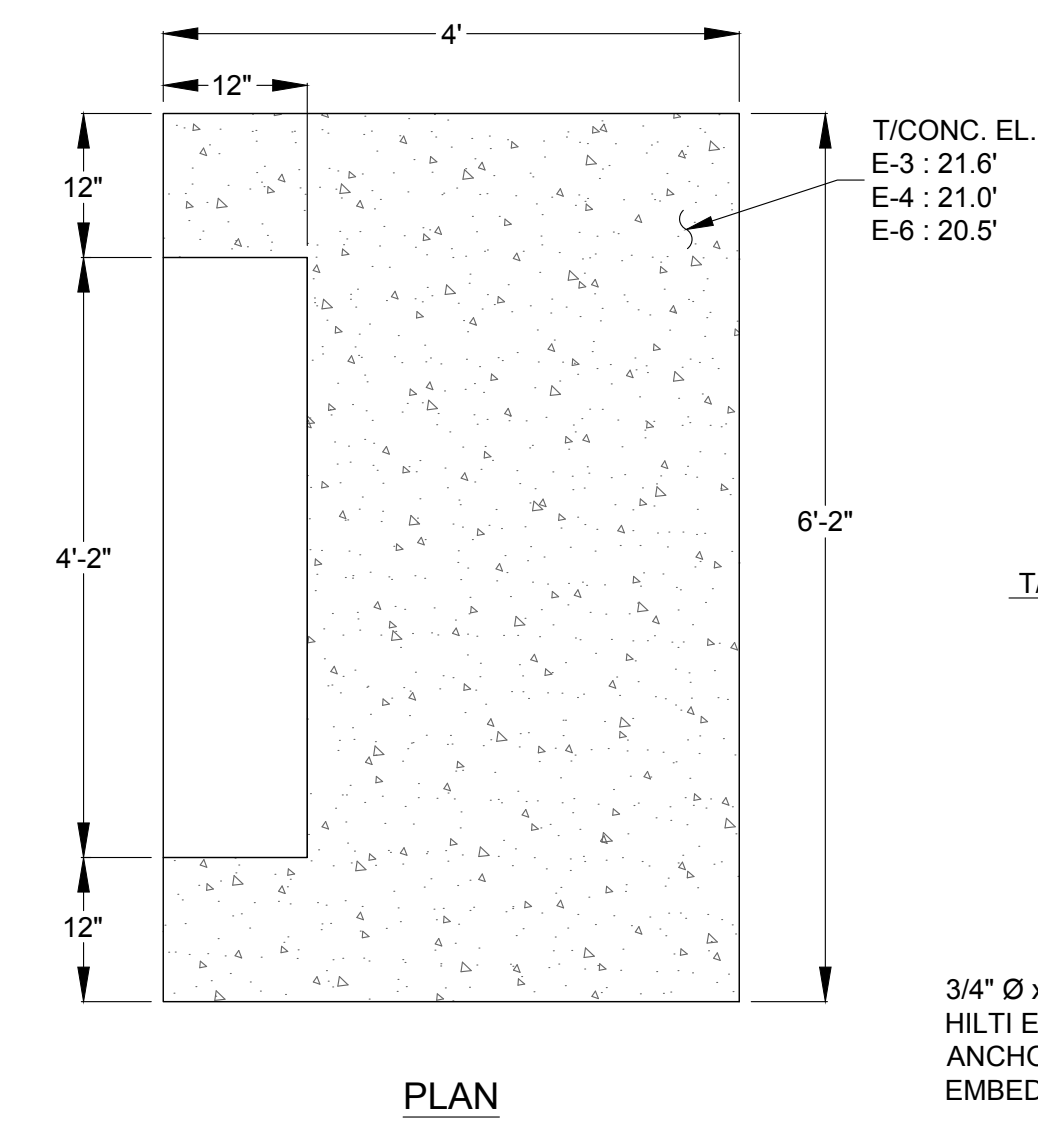
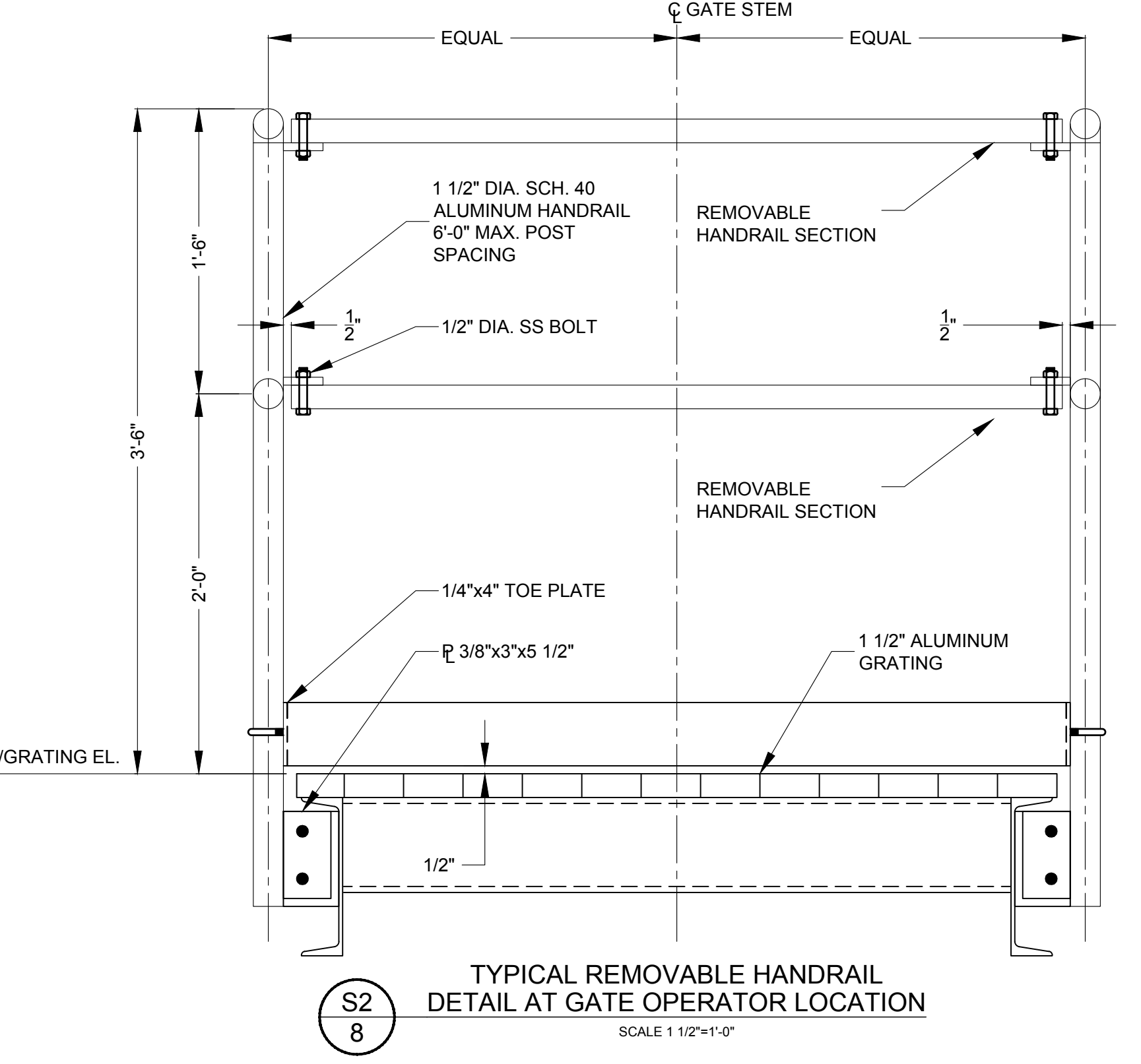
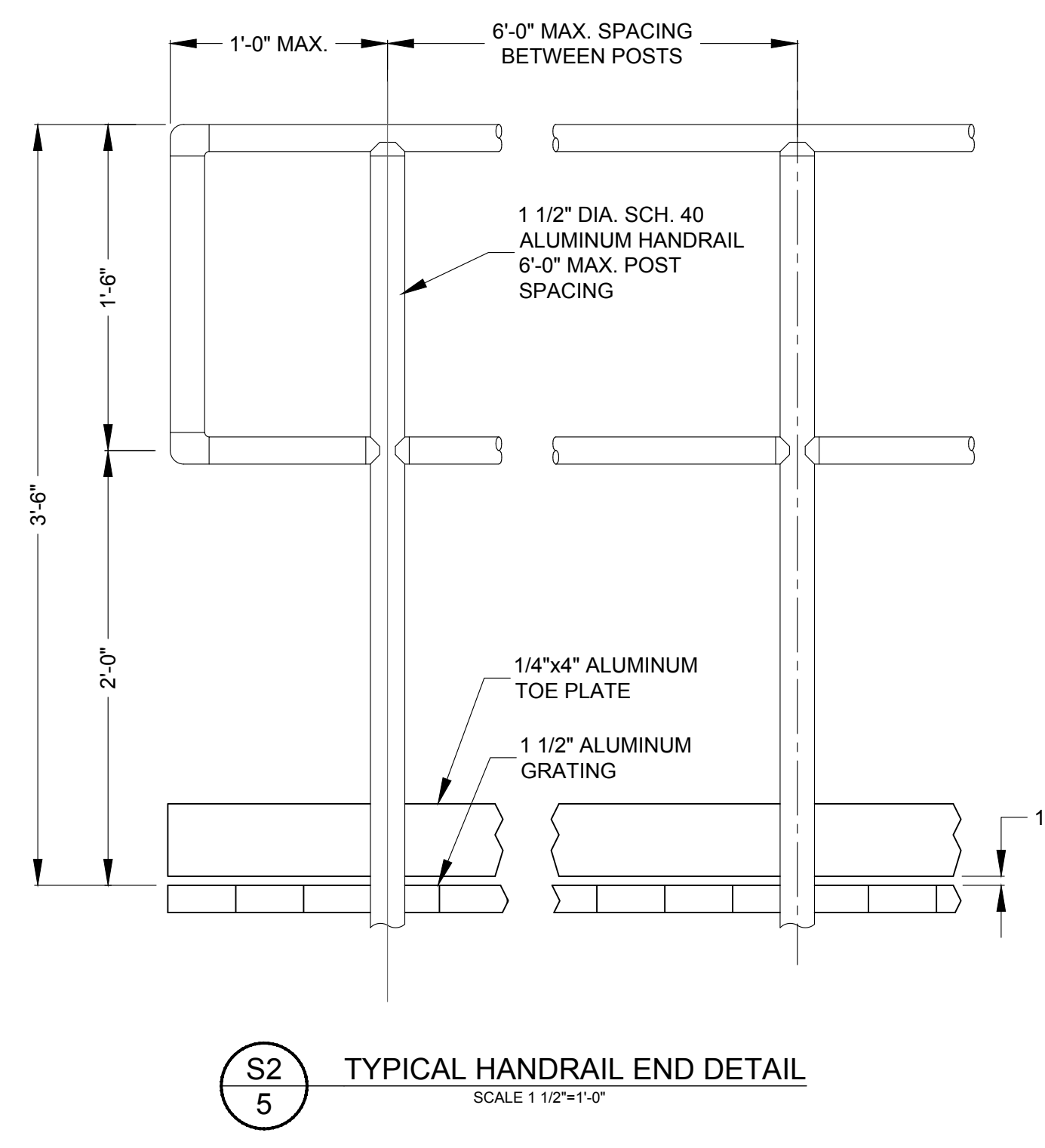
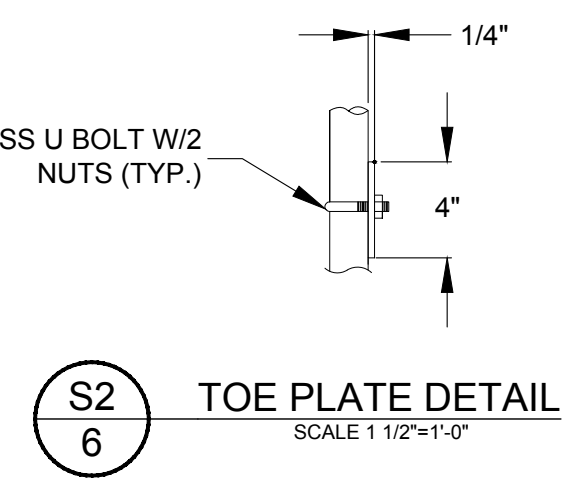
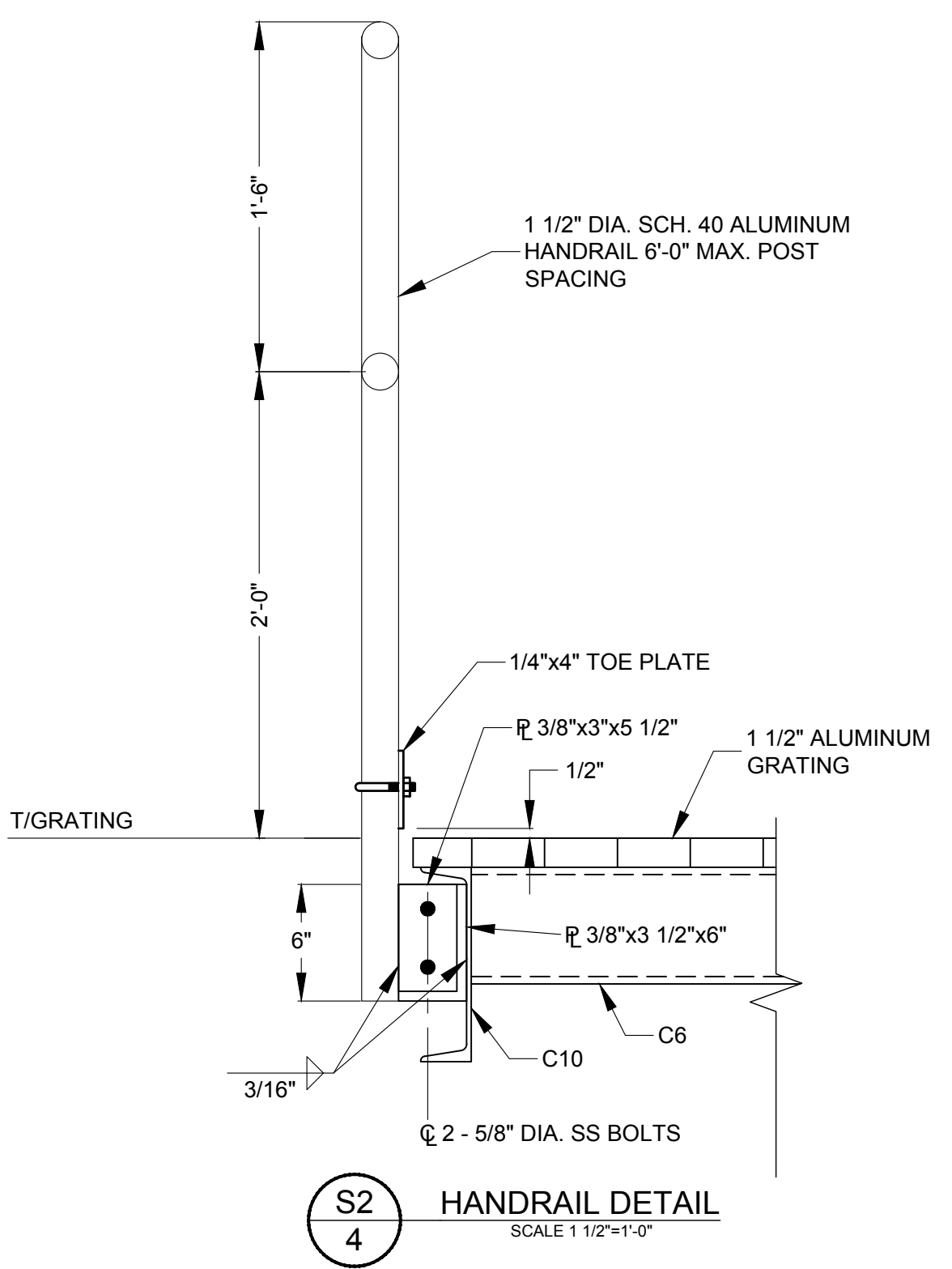
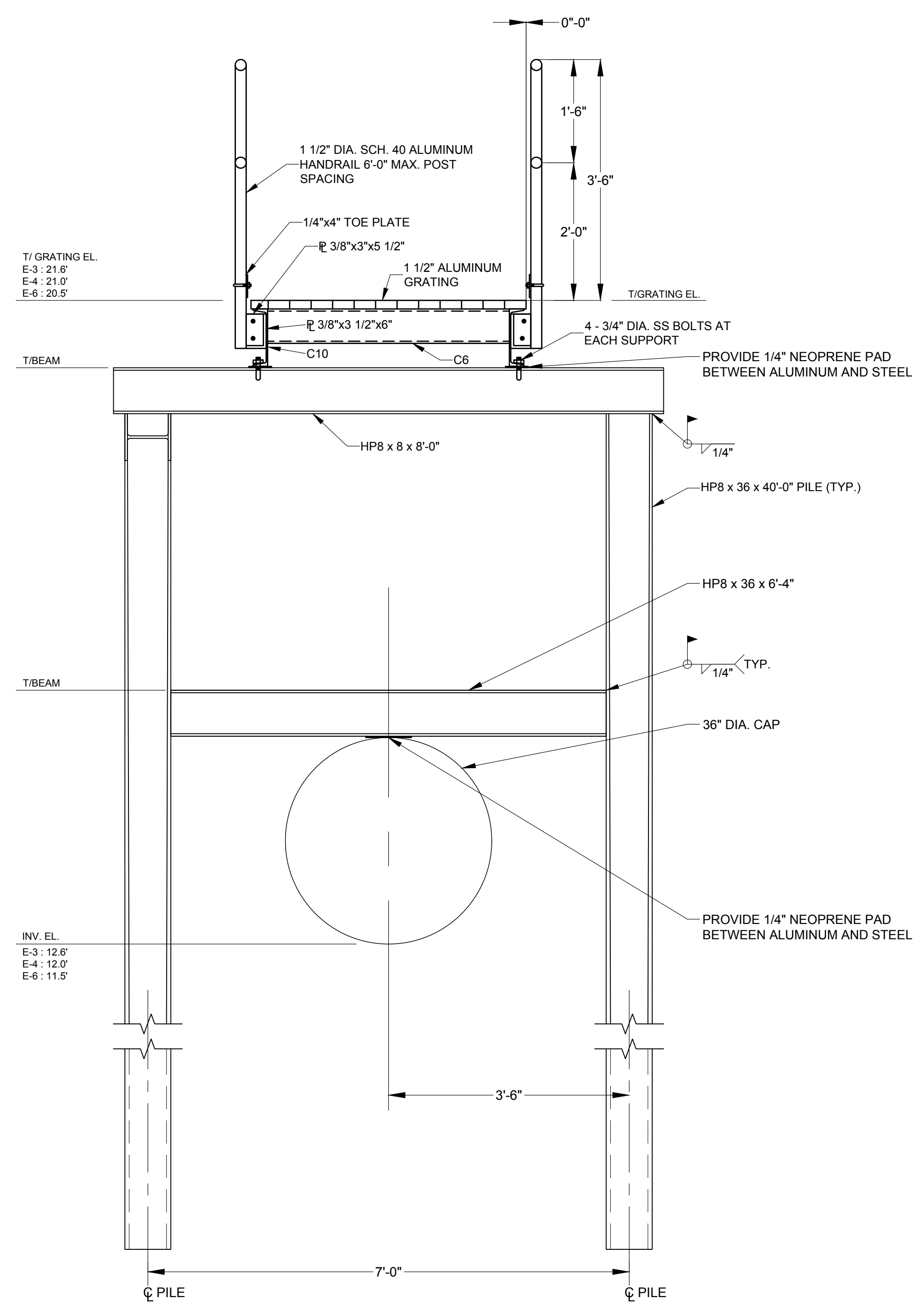
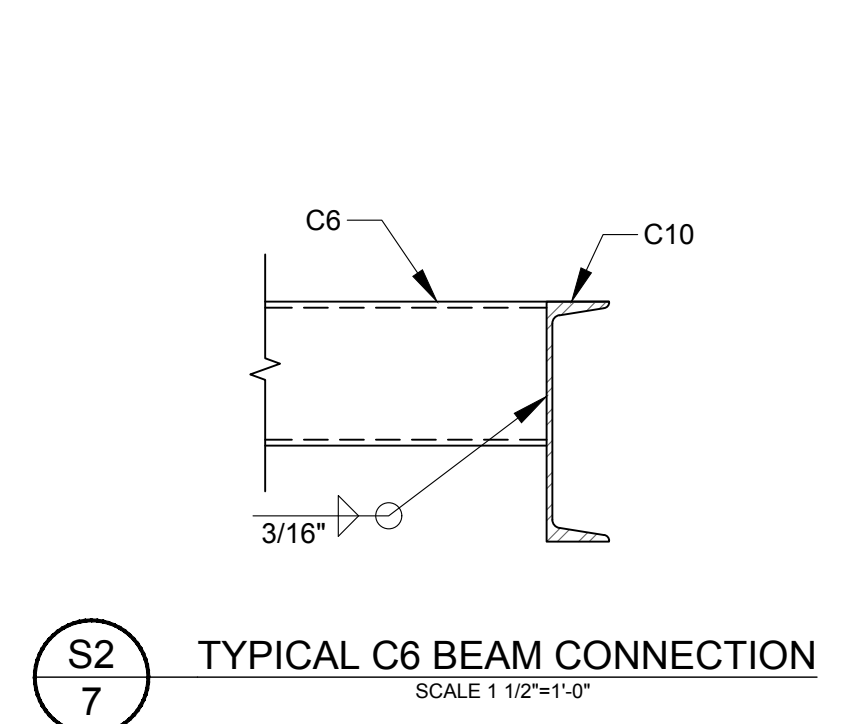
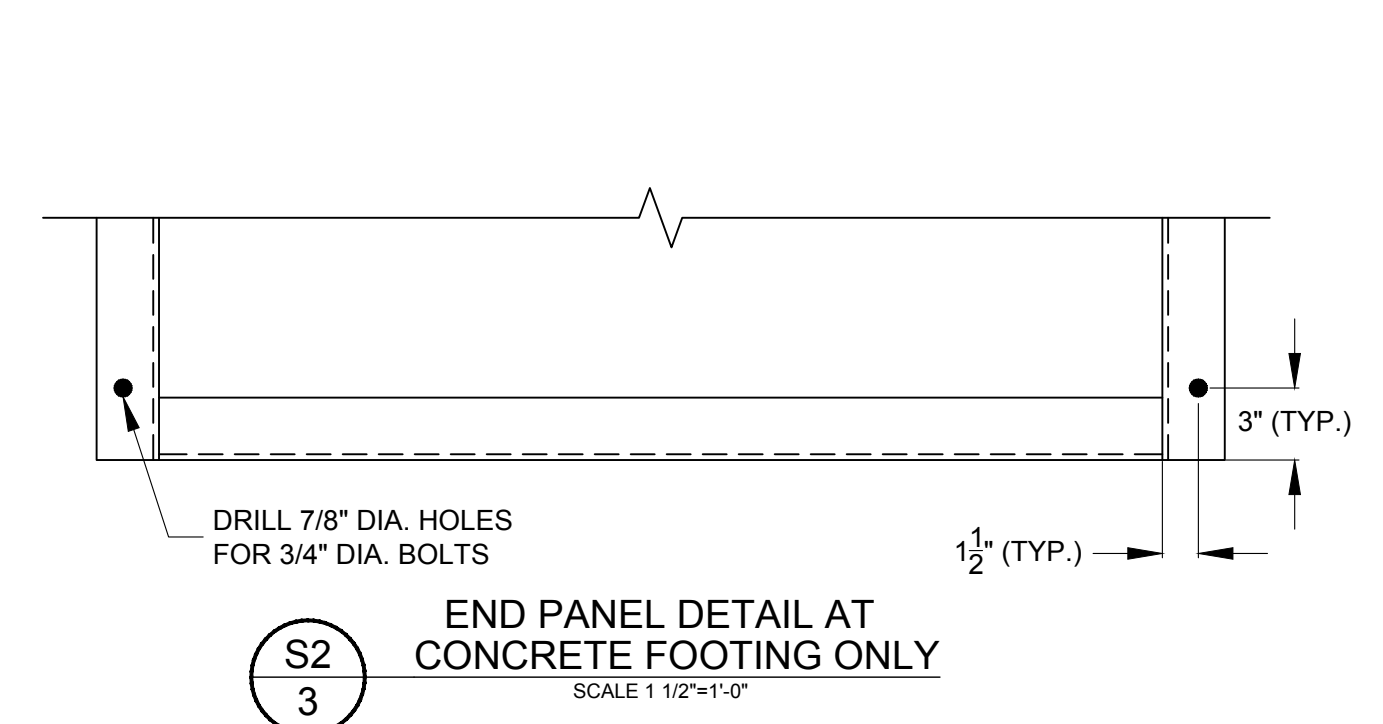
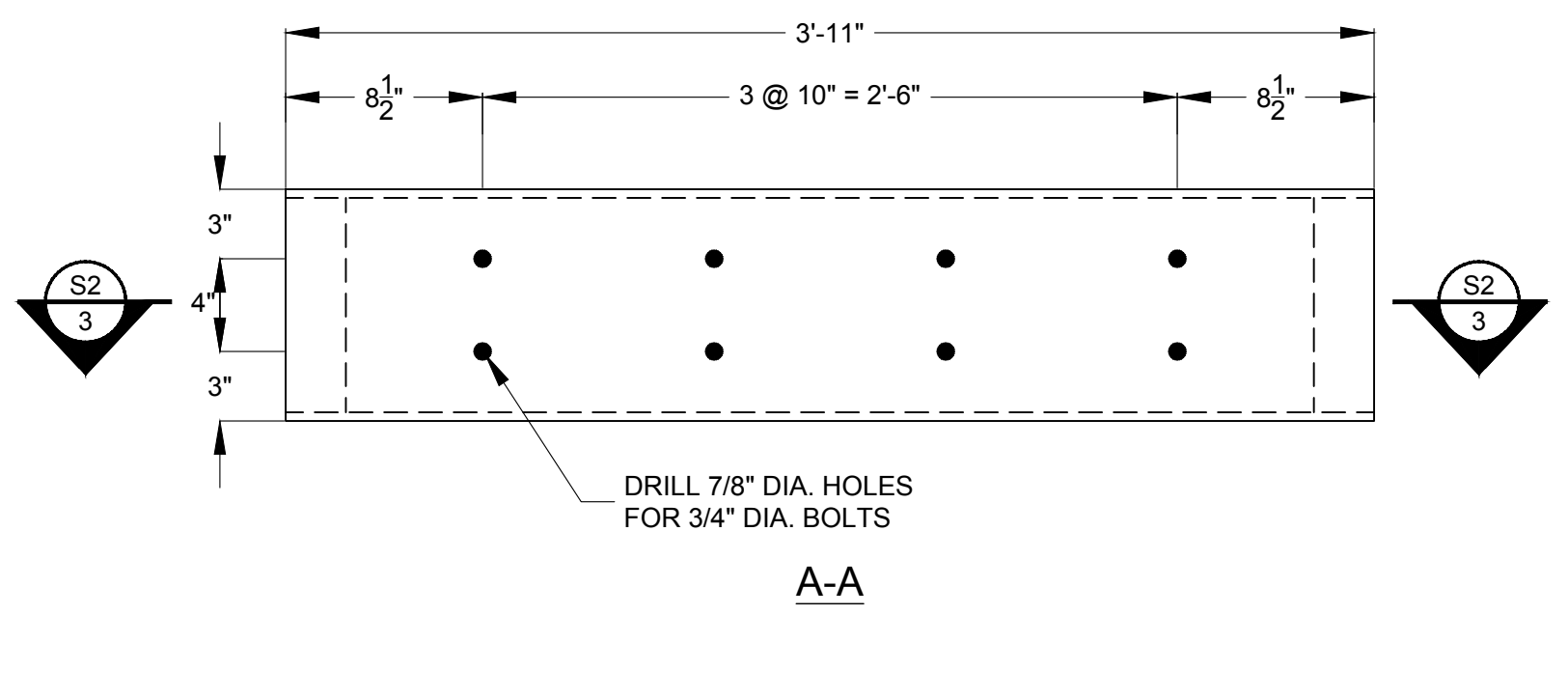
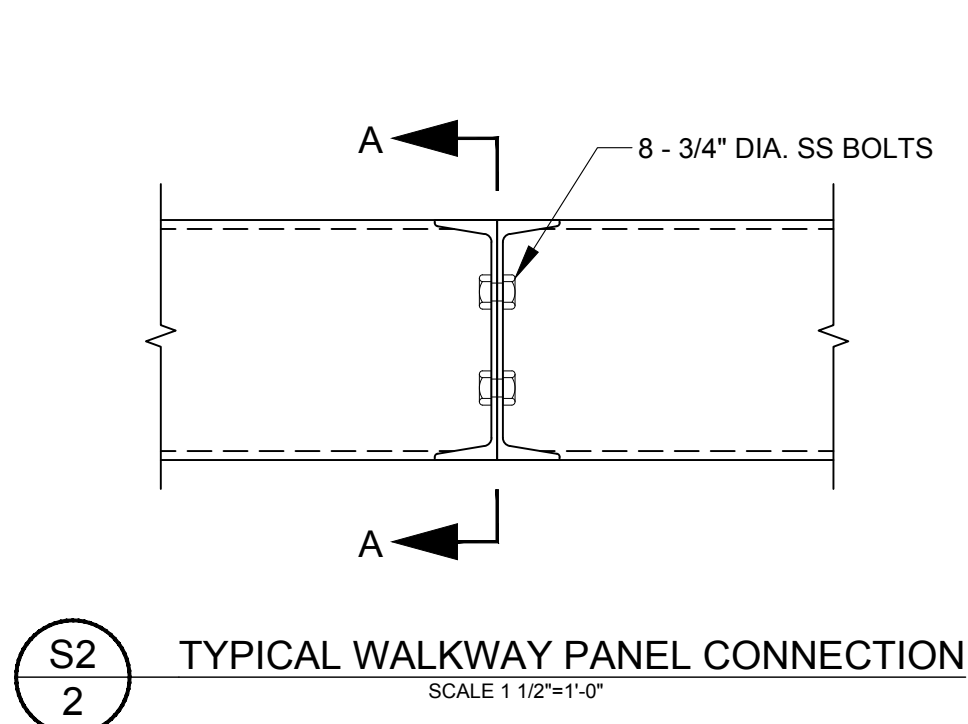
DRAWN: N.J.G. DATE: JANUARY 17, 2018. REVIEWER: W.R.C.
SCALE: 3/8" = 1'-0" DESIGNER: W.R.C. SECTION CHIEF: W.R.C.

WALKWAY PLAN AND SECTION

CERTIFICATION:
WILLIAM R. COTE
P.E. NUMBER: 53746
DATE: JANUARY 17, 2018

FILE NAME:
S1 C-40 WALKWAY.dwg
PROJECT NO.:
SHEET:
S1

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NO.	REVISION	BY	DATE	APPROVED	DATE

UPPER ST. JOHNS RIVER BASIN
S.J.M.C.A. - C-40 CANAL PLUG ENHANCEMENTS
BREVARD COUNTY, FLORIDA

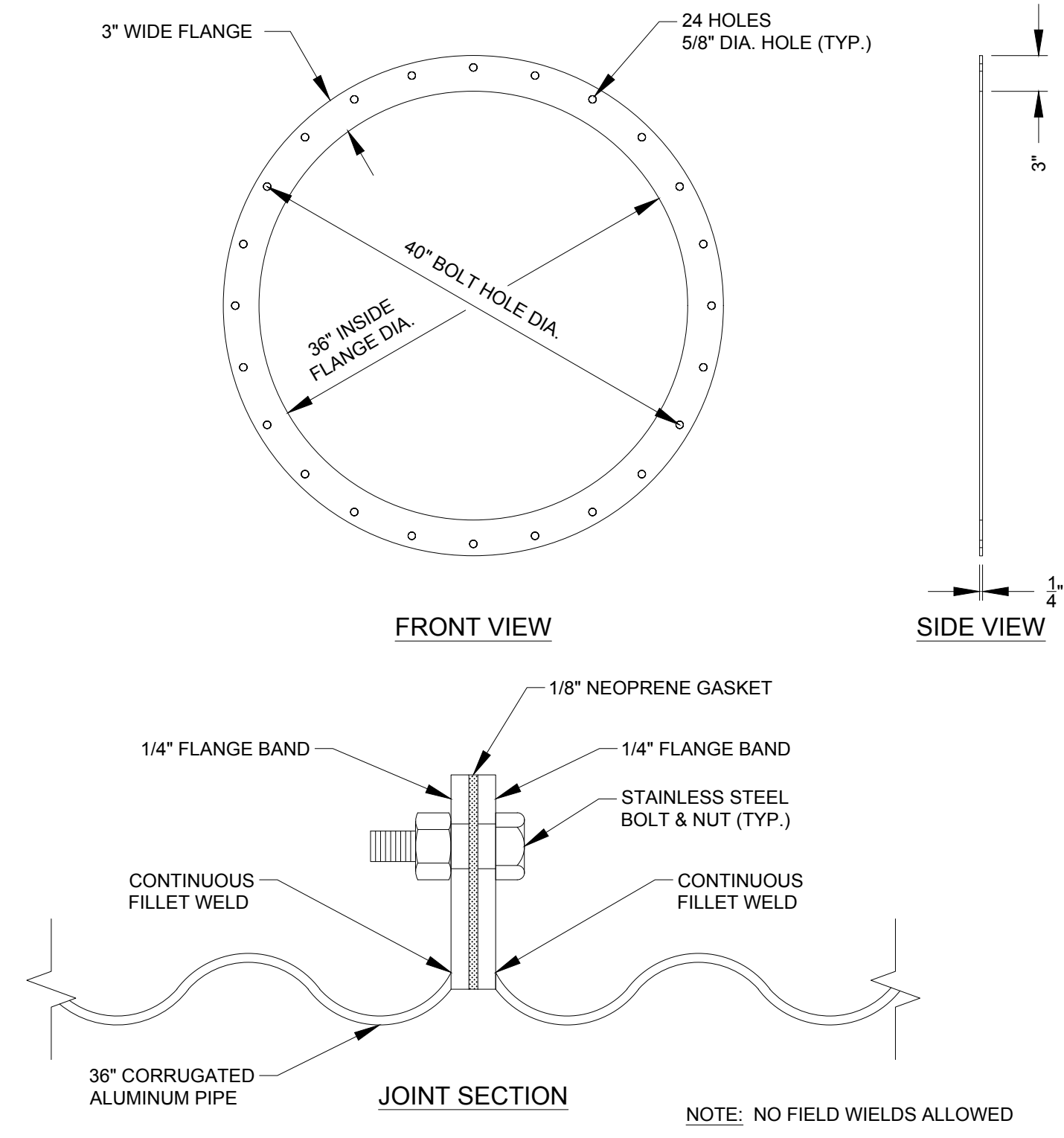
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G. DATE: JANUARY 17, 2018 REVIEWER: W.R.C.
SCALE: AS NOTED DESIGNER: W.R.C. SECTION CHIEF: W.R.C.

WALKWAY DETAILS

CERTIFICATION:
WILLIAM R. COTE
P.E. NUMBER: 53746
DATE: JANUARY 17, 2018

FILE NAME: S2 C-40 WALKWAY D.dwg
PROJECT NO.:
SHEET: S2



S3
1
ALUMINUM FLANGE DETAIL
NOT TO SCALE

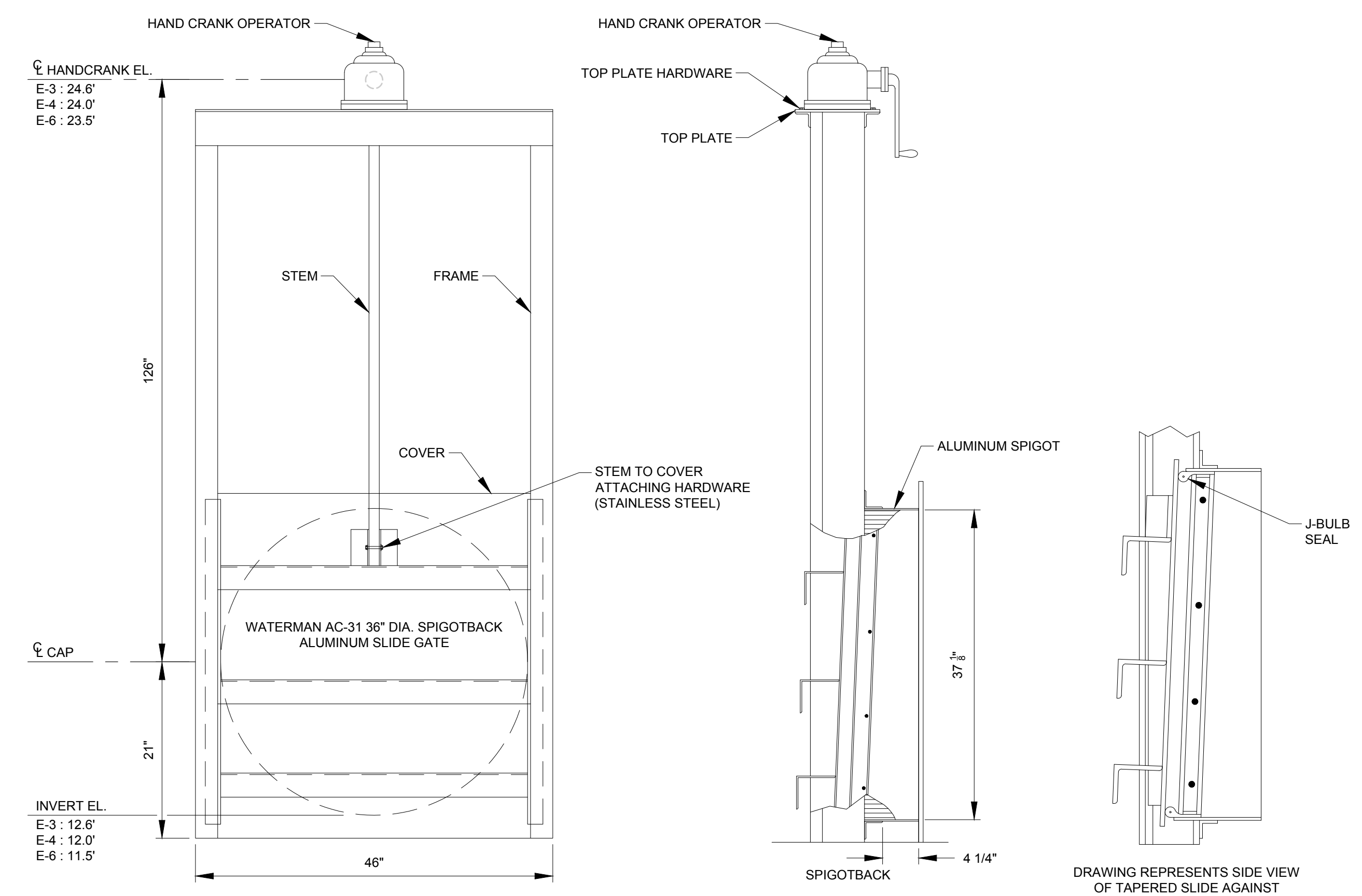
NOTE SPECIFICATIONS:

CULVERTS:

- CULVERTS SHALL BE CORRUGATED ALUMINUM PIPE CONFORMING TO THE REQUIREMENTS OF SECTION 945 OF THE DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
- CULVERTS SHALL BE 36-INCH DIAMETER, 14 GAGE, WITH 3X1 HELICAL CORRUGATIONS. JOINTS SHALL UTILIZE FLANGE TYPE CONNECTIONS.

SLIDE GATES:

- SLIDE GATES SHALL BE AC-41 SPIGOT BACK AS MANUFACTURED BY WATERMAN INDUSTRIES, OR APPROVED EQUAL. THE GATE REQUIREMENTS SHALL BE AS FOLLOWS:
 MATERIAL : ALUMINUM
 SIZE : 36-INCH DIAMETER
 HOIST : MANUAL HANDCRANK, RISING STEM WITH PLASTIC COVER
 MOUNTING : SPIGOT BACK MOUNT TO ALUMINUM CULVERT
 DESIGN : SELF CONTAINED WITH SEATING AND UNSEATING HEAD 15 FEET
- CONCRETE ANCHORS SHALL UTILIZE THE HILTI HIT-RE EPOXY ADHESIVE ANCHORING SYSTEM, OR APPROVED EQUAL. THREADED ANCHOR RODS SHALL BE 3/4" DIAMETER X 8-1/2" LONG HAS-R 304 STAINLESS STEEL WITH A MINIMUM EMBEDMENT DEPTH OF 6-3/4". NUTS AND WASHERS SHALL ALSO BE SS-304.



S3
2
SLIDE GATE DETAIL
NOT TO SCALE

**FOR BID PURPOSES
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CONSTRUCTION**

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NO.	REVISION	BY	DATE	APPROVED	DATE

UPPER ST. JOHNS RIVER BASIN
S.J.M.C.A. - C-40 CANAL PLUG ENHANCEMENTS
BREVARD COUNTY, FLORIDA

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

DRAWN: N.J.G. DATE: JANUARY 17, 2018 REVIEWER: W.R.C.
 SCALE: AS NOTED DESIGNER: W.R.C. SECTION CHIEF: W.R.C.

CULVERT AND SLIDE GATE DETAILS

CERTIFICATION:
WILLIAM R. COTE
P.E. NUMBER: 53746
DATE: JANUARY 17, 2018

FILE NAME:
S3 C-40 C&SGD.dwg
PROJECT NO.:
SHEET:
S3