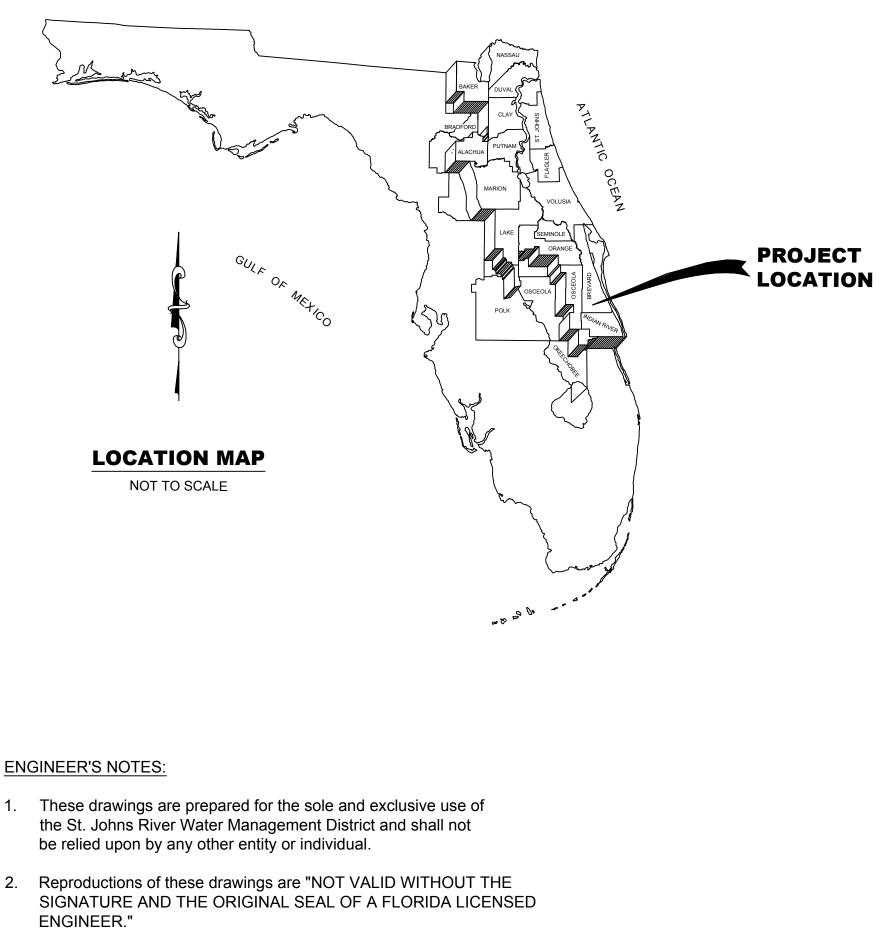
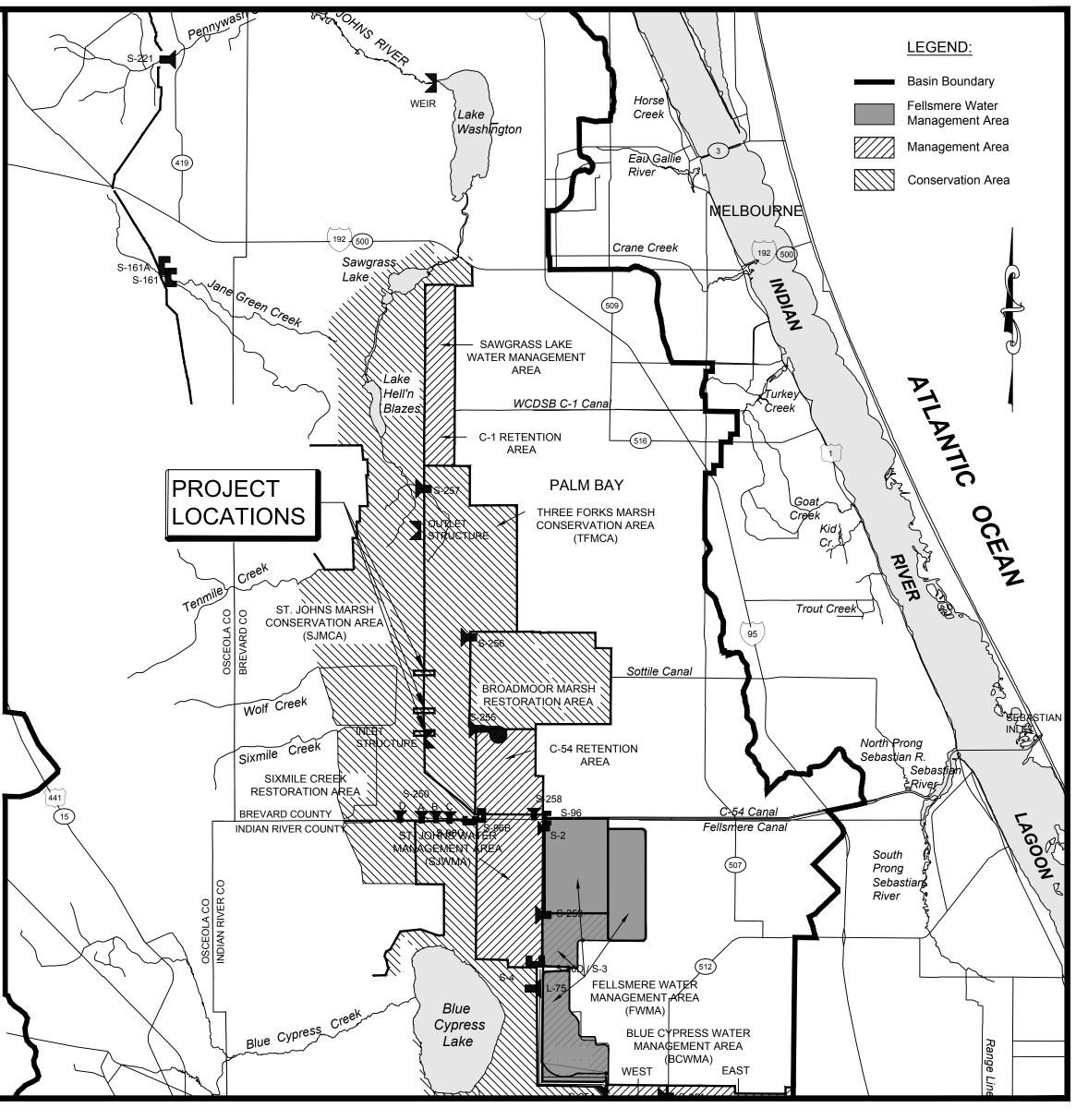
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT UPPER ST. JOHNS RIVER BASIN S.J.M.C.A. - C-40 CANAL PLUG ENHANCEMENTS BREVARD COUNTY, FLORIDA

NAVD 1988

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



\triangle	ISSUED FOR BID.	N.J.G.	01/22/19	A.P.W.	01/22/19
NO.	REVISION	BY	DATE	APPROVED	DATE



VICINITY MAP



INDEX OF PLANS

SHEET NO.	SHEET TITLE
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C2	STANDARD ABBREVIATIONS
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C4	OVERALL SITE PLAN
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S2	WALKWAY DETAILS
S3	CULVERT AND SLIDE GATE DETAILS



FOR BID PURPOSES ONLY NOT FOR CONSTRUCTION

AMY POGUE WRIGHT
P.E. NUMBER: ______54851
DATE: ______JANUARY 22, 2019

CERTIFICATION:

<u>C1</u>

APPROX.	ACRE AMERICAN CONCRETE INSTITUTE AMERICAN INSTITUTE OF STEEL CONSTRUCTION AMERICAN IRON AND STEEL INSTITUTE ALTERNATE ALUMINUM APPROXIMATE ASPHALT
BW C C & G CAP CATV CB CBC CBS CF or C.F. CFS CI CIP CL, C/L or C CLF CM CMP CMP CMPA CMP CMPA CMU CO CONC. CPE CY or C.Y.	BARBED WIRE
D (D) (DB) D, DIA. or Ø DBI DCBP DEG. DHW DHWE DI DIWE DI DIM. DIP DIST. DT DWG.	DEED DEED BOOK DIAMETER DITCH BOTTOM INLET DOUBLE CHECK BACKFLOW PREVENTER DEGREES DESIGN HIGH WATER DESIGN HIGH WATER ELEVATION DUCTILE IRON DIMENSION DUCTILE IRON PIPE DISTANCE DITCH DRAWING
E E EP. or EOP EA or EA. EJ EL. or ELEV. ELEC. ELLIP. ERCP ESMT. EWR EW EXIST.	EAST EDGE OF PAVEMENT EACH EXPANSION JOINT ELEVATION ELECTRIC ELLIPTICAL ELLIPTICAL REINFORCED CONCRETE PIPE EASEMENT EDGE OF WATER ENDWALL EXISTING
F.L. FL or FE FBC FD FDEP FDOT FES FH FIN FLR FIN FLR FIN GR FL, FL. or FLA. FM FND FOC	

1	ISSUED FOR BID.	N.J.G.	01/22/19	A.P.W.	01/22/19
0.	REVISION	BY	DATE	APPROVED	DATE

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

	MEANING	ABBREVIATION	MEANING
FP	FLOOD PLAIN	PG	PROFILE GRADE
FT.	FOOT OR FEET	PI	POINT OF INTERSECTION
FTB	FLOATING TURBIDITY BARRIER	PL or P	PROPERTY LINE
FUT	FUTURE	POC	POINT ON CURVE
(GA.	GAUGE or GAGE	POT PP	POINT ON TANGENT POWER POLE
GALV.	GALVANIZED	PRC	POWER FOLE POINT OF REVERSE CURVE
GM	GAS MAIN	PRCST.	PRECAST
GRD.	GROUND	PRM	PERMANENT REFERENCE MC
GS	GALVANIZED STEEL	PROP.	PROPOSED
GV	GATE VALVE	PT	POINT OF TANGENCY or PRES
ł	-1	PVC	POLYVINYL CHLORIDE
HB	HAY BALES	(2
HC	HANDICAP	QTY.	QUANTITY
HDD	HORIZONTAL DIRECTIONAL DRILLING		₹
HDPE	HIGH DENSITY POLYETHYLENE	R or RAD.	RADIUS
HDWL.	HEADWALL	R or RNG.	RANGE
HNDRL.	HANDRAIL	R or RT.	RIGHT
HORZ. or HOR. HT.	HORIZONTAL HEIGHT	R/W or ROW RCP	RIGHT OF WAY REINFORCED CONCRETE PIP
HWY.	HIGHWAY	RCP	REINFORCED CONCRETE PIP
		RD.	ROAD or ROUND
ID or I.D.	INSIDE DIAMETER or IDENTIFICATION	RM	REFERENCE MONUMENT
IN.	INCH(ES)	RPBFP	REDUCED PRESSURE BACKF
INV.	INVERT	RPM	RAISED REFLECTIVE PAVEME
IP	IRON PIPE	RR	RAILROAD
IR	IRON ROD		5
,	J	S	SOUTH
JB	JUNCTION BOX	SE	SOUTHEAST
JCT.	JUNCTION	SECT.	SECTION
JT.	JOINT	SF	SILT FENCE
[SG or SUBGR.	SUBGRADE
LAT. LF	LATERAL or LATITUDE LINEAR FOOT (FEET)	SJRWMD	ST. JOHNS RIVER WATER MA
LMRK.	LIME ROCK	SPA., SPCG. or SP. Sq. Ft., SF or S.F.	SPACE(ING)(S) SQUARE FEET
LONG.	LONGITUDE	Sq. Yd., SY or S.Y.	SQUARE YARDS
LP	LOW POINT	SS	SANITARY SEWER or STAINLE
LS	LUMP SUM	ST	STORM SEWER
LT.	LEFT	STA.	STATION
	M	STB	STACKED TURBIDITY BARRIE
MAINT.	MAINTENANCE	STD.	STANDARD
MAX.	MAXIMUM	STL.	STEEL
MES	MITERED END SECTION	STR.	STRUCTURE
MFR.	MANUFACTURED or MANUFACTURER	SUB. or SUBS.	SUBSOIL
MH or M.H.	MANHOLE or MOUNTING HEIGHT	SW	SOUTHWEST
MHW		SW or SWK.	SIDEWALK
MIN. MISC.	MINIMUM or MINUTE MISCELLANEOUS	 T. TM/D. ex True	
MLW	MISCELLANEOUS MEAN LOW WATER	T, TWP or Twp. TBM	TOWNSHIP TEMPORARY BENCH MARK
MON.	MONUMENT	TCE	TEMPORARY CONSTRUCTION
MOT	MAINTENANCE OF TRAFFIC	TCZ	TRAFFIC CONTROL ZONE
MSL	MEAN SEA LEVEL	TEL.	TELEPHONE
	N		
		TFMR	TRANSFORMER
N	NORTH	ТОВ	TRANSFORMER TOP OF BANK
	NORTH NAIL AND CAP		
N & C	NAIL AND CAP NAIL AND DISK	ТОВ	TOP OF BANK
N & C N & D NA or N/A	NAIL AND CAP NAIL AND DISK NOT AVAILABLE or NOT APPLICABLE	TOB TOG	TOP OF BANK TOP OF GRADE TOP OF SLOPE
N & C N & D NA or N/A NAVD	NAIL AND CAP NAIL AND DISK NOT AVAILABLE or NOT APPLICABLE NATIONAL VERTICAL DATUM	TOB TOG TOS TRANS. TTC	TOP OF BANK TOP OF GRADE TOP OF SLOPE TRANSITION, TRANSVERSE o TEMPORARY TRAFFIC CONTE
N & C N & D NA or N/A NAVD NE	NAIL AND CAP NAIL AND DISK NOT AVAILABLE or NOT APPLICABLE NATIONAL VERTICAL DATUM NORTH EAST	TOB TOG TOS TRANS. TTC TW	TOP OF BANK TOP OF GRADE TOP OF SLOPE TRANSITION, TRANSVERSE o TEMPORARY TRAFFIC CONTE TOP OF WALL
N & C N & D NA or N/A NAVD NE NG	NAIL AND CAP NAIL AND DISK NOT AVAILABLE or NOT APPLICABLE NATIONAL VERTICAL DATUM NORTH EAST NATURAL GRADE	TOB TOG TOS TRANS. TTC	TOP OF BANK TOP OF GRADE TOP OF SLOPE TRANSITION, TRANSVERSE o TEMPORARY TRAFFIC CONTE
N N & C N & D NA or N/A NAVD NE NG NGS	NAIL AND CAP NAIL AND DISK NOT AVAILABLE or NOT APPLICABLE NATIONAL VERTICAL DATUM NORTH EAST NATURAL GRADE NATIONAL GEODETIC SURVEY	TOB TOG TOS TRANS. TTC TW TYP.	TOP OF BANK TOP OF GRADE TOP OF SLOPE TRANSITION, TRANSVERSE o TEMPORARY TRAFFIC CONTE TOP OF WALL TYPICAL
N & C N & D NA or N/A NAVD NE NG NGS NGVD	NAIL AND CAP NAIL AND DISK NOT AVAILABLE or NOT APPLICABLE NATIONAL VERTICAL DATUM NORTH EAST NATURAL GRADE NATIONAL GEODETIC SURVEY NATIONAL GEODETIC VERTICAL DATUM OF 1929	TOB TOG TOS TRANS. TTC TW TYP. 	TOP OF BANK TOP OF GRADE TOP OF SLOPE TRANSITION, TRANSVERSE o TEMPORARY TRAFFIC CONTE TOP OF WALL TYPICAL J
N & C N & D NA or N/A NAVD NE NG NGS NGVD NHW	NAIL AND CAP NAIL AND DISK NOT AVAILABLE or NOT APPLICABLE NATIONAL VERTICAL DATUM NORTH EAST NATURAL GRADE NATIONAL GEODETIC SURVEY NATIONAL GEODETIC VERTICAL DATUM OF 1929 NORMAL HIGH WATER	TOB TOG TOS TRANS. TTC TW TYP. U UG UNDDR.	TOP OF BANK TOP OF GRADE TOP OF SLOPE TRANSITION, TRANSVERSE o TEMPORARY TRAFFIC CONTE TOP OF WALL TYPICAL J UNDERGROUND UNDERDRAIN(S)
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N & C N & D NA or N/A NAVD NE NG NGS NGVD NHW NIC NO. NPDES	NAIL AND CAP NAIL AND DISK NOT AVAILABLE OF NOT APPLICABLE NATIONAL VERTICAL DATUM NORTH EAST NATURAL GRADE NATIONAL GEODETIC SURVEY NATIONAL GEODETIC VERTICAL DATUM OF 1929 NORMAL HIGH WATER NOT IN CONTRACT	TOB TOG TOS TRANS. TTC TW TYP. U UG UNDDR. USC & GS USGS UTIL.	TOP OF BANK TOP OF GRADE TOP OF SLOPE TRANSITION, TRANSVERSE o TEMPORARY TRAFFIC CONTE TOP OF WALL TYPICAL J UNDERGROUND UNDERDRAIN(S) US COAST and GEODETIC SU US GEOLOGICAL SURVEY UTILITIES
N & C N & D NA or N/A NAVD NE NG	 NAIL AND CAP NAIL AND DISK NOT AVAILABLE or NOT APPLICABLE NATIONAL VERTICAL DATUM NORTH EAST NATURAL GRADE NATIONAL GEODETIC SURVEY NATIONAL GEODETIC VERTICAL DATUM OF 1929 NORMAL HIGH WATER NOT IN CONTRACT NUMBER NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM 	TOB TOG TOS TRANS. TTC TW TYP. U UG UNDDR. USC & GS USGS	TOP OF BANK TOP OF GRADE TOP OF SLOPE TRANSITION, TRANSVERSE o TEMPORARY TRAFFIC CONTE TOP OF WALL TYPICAL J UNDERGROUND UNDERDRAIN(S) US COAST and GEODETIC SU US GEOLOGICAL SURVEY
N & C N & D NA or N/A NAVD NE NG NGS NGVD NHW NIC NO. NPDES NTS	 NAIL AND CAP NAIL AND DISK NOT AVAILABLE or NOT APPLICABLE NATIONAL VERTICAL DATUM NORTH EAST NATURAL GRADE NATIONAL GEODETIC SURVEY NATIONAL GEODETIC VERTICAL DATUM OF 1929 NORMAL HIGH WATER NOT IN CONTRACT NUMBER NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM NOT TO SCALE 	TOB TOG TOS TRANS. TTC TW TYP. U UG UNDDR. USC & GS USGS UTIL. VC	TOP OF BANK TOP OF GRADE TOP OF SLOPE TRANSITION, TRANSVERSE o TEMPORARY TRAFFIC CONTE TOP OF WALL TYPICAL J UNDERGROUND UNDERDRAIN(S) US COAST and GEODETIC SU US GEOLOGICAL SURVEY UTILITIES VERTICAL CURVE
N & C N & D NA or N/A NAVD NE NG NGS NGVD NHW NIC NO. NPDES NTS	 NAIL AND CAP NAIL AND DISK NOT AVAILABLE or NOT APPLICABLE NATIONAL VERTICAL DATUM NORTH EAST NATURAL GRADE NATIONAL GEODETIC SURVEY NATIONAL GEODETIC VERTICAL DATUM OF 1929 NORMAL HIGH WATER NOT IN CONTRACT NUMBER NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM NOT TO SCALE 	TOB TOG TOS TRANS. TTC TW TYP. U UG UNDDR. USC & GS USGS UTIL. VC VCP	TOP OF BANK TOP OF GRADE TOP OF SLOPE TRANSITION, TRANSVERSE o TEMPORARY TRAFFIC CONTE TOP OF WALL TYPICAL J UNDERGROUND UNDERDRAIN(S) US COAST and GEODETIC SU US GEOLOGICAL SURVEY UTILITIES VERTICAL CURVE VITRIFIED CLAY PIPE
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N & C N & D NA or N/A NAVD NE NG NGS NGVD NHW NIC NO. NPDES NTS NW (OC or O.C OD or O.D. OE OR	NAIL AND CAP NAIL AND DISK NOT AVAILABLE OF NOT APPLICABLE NATIONAL VERTICAL DATUM NORTH EAST NATURAL GRADE NATIONAL GEODETIC SURVEY NATIONAL GEODETIC VERTICAL DATUM OF 1929 NORMAL HIGH WATER NOT IN CONTRACT NUMBER NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM NOT TO SCALE NORTH WEST O	TOB TOG TOS TRANS. TTC TW TYP. U UG UNDDR. USC & GS USGS UTIL. VC VCP VERT. VOL. VV VVH W	TOP OF BANK TOP OF GRADE TOP OF SLOPE TRANSITION, TRANSVERSE o TEMPORARY TRAFFIC CONTE TOP OF WALL TYPICAL J UNDERGROUND UNDERDRAIN(S) US COAST and GEODETIC SU US GEOLOGICAL SURVEY UTILITIES VERTICAL CURVE VITRIFIED CLAY PIPE VERTICAL VOLUME VERIFIED VERTICAL ELEVATI VERIFIED VERTICAL ELEVATI
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N & C N & D NA or N/A NAVD NE NG NGS NGVD NHW NIC NO. NPDES NTS NW 	NAIL AND CAP NAIL AND DISK NOT AVAILABLE or NOT APPLICABLE NATIONAL VERTICAL DATUM NORTH EAST NATURAL GRADE NATIONAL GEODETIC SURVEY NATIONAL GEODETIC VERTICAL DATUM OF 1929 NORMAL HIGH WATER NOT IN CONTRACT NUMBER NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM NOT TO SCALE NORTH WEST O ON CENTER OUTSIDE DIAMETER OVERHEAD ELECTRIC OFFICIAL RECORD OVERHEAD TELEPHONE P P PROFESSIONAL ENGINEER POUNDS PER SQUARE INCH	TOB TOG TOS TRANS. TTC TW TYP. 	TOP OF BANK TOP OF GRADE TOP OF SLOPE TRANSITION, TRANSVERSE o TEMPORARY TRAFFIC CONTE TOP OF WALL TYPICAL J UNDERGROUND UNDERDRAIN(S) US COAST and GEODETIC SU US GEOLOGICAL SURVEY UTILITIES VERTICAL CURVE VITRIFIED CLAY PIPE VERTICAL VOLUME VERIFIED VERTICAL ELEVATI VERIFIED VERTICAL ELEVATI VATER MAIN OF WATER METE WATER TABLE OF WEIGHT WATER
N & C N & D NA or N/A NAVD NE NG NGS NGVD NHW NIC NO. NPDES NTS NW 	NAIL AND CAP NAIL AND DISK NOT AVAILABLE or NOT APPLICABLE NATIONAL VERTICAL DATUM NORTH EAST NATURAL GRADE NATUONAL GEODETIC SURVEY NATIONAL GEODETIC VERTICAL DATUM OF 1929 NORMAL HIGH WATER NOT IN CONTRACT NUMBER NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM NOT TO SCALE NORTH WEST O	TOB TOG TOS TRANS. TTC TW TYP. 	TOP OF BANK TOP OF GRADE TOP OF SLOPE TRANSITION, TRANSVERSE o TEMPORARY TRAFFIC CONTE TOP OF WALL TYPICAL J UNDERGROUND UNDERDRAIN(S) US COAST and GEODETIC SU US GEOLOGICAL SURVEY UTILITIES VERTICAL CURVE VITRIFIED CLAY PIPE VERTICAL VOLUME VERIFIED VERTICAL ELEVATI VERIFIED VERTICAL ELEVATI VERIFIED VERTICAL ELEVATI VERIFIED VERTICAL ELEVATI WIDTH, WIDE, WEST or WATT WATER MAIN or WATER METE WATER TABLE or WEIGHT WATER WASTEWATER
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N & C N & D NA or N/A NAVD NE NG NGS NGVD NHW NIC NO. NPDES NTS NW 	NAIL AND CAP NAIL AND DISK NOT AVAILABLE or NOT APPLICABLE NATIONAL VERTICAL DATUM NORTH EAST NATURAL GRADE NATIONAL GEODETIC SURVEY NATIONAL GEODETIC VERTICAL DATUM OF 1929 NORMAL HIGH WATER NOT IN CONTRACT NUMBER NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM NOT TO SCALE NORTH WEST O	TOB TOG TOS TRANS. TTC TW TYP. 	TOP OF BANK TOP OF GRADE TOP OF SLOPE TRANSITION, TRANSVERSE of TEMPORARY TRAFFIC CONTE TOP OF WALL TYPICAL J
N & C N & D NA or N/A NAVD NE NG NGS NGVD NHW NIC NO. NPDES NTS NW 	NAIL AND CAP NAIL AND DISK NOT AVAILABLE OF NOT APPLICABLE NATIONAL VERTICAL DATUM NORTH EAST NATURAL GRADE NATIONAL GEODETIC SURVEY NATIONAL GEODETIC VERTICAL DATUM OF 1929 NORMAL HIGH WATER NOT IN CONTRACT NUMBER NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM NOT TO SCALE NORTH WEST O	TOB TOG TOS TRANS. TTC TW TYP. 	TOP OF BANK TOP OF GRADE TOP OF SLOPE TRANSITION, TRANSVERSE of TEMPORARY TRAFFIC CONTE TOP OF WALL TYPICAL J UNDERGROUND UNDERDRAIN(S) US COAST and GEODETIC SUI US GEOLOGICAL SURVEY UTILITIES VERTICAL CURVE VITRIFIED CLAY PIPE VERTICAL VOLUME VERIFIED VERTICAL ELEVATION VERIFIED VERTICAL ELEVATION VERIFIED VERTICAL ELEVATION VERIFIED VERTICAL ELEVATION VATER MAIN OF WATER METE WATER TABLE OF WEIGHT WATER WASTEWATER WELDED WIRE FABRIC WELDED WIRE FABRIC WELDED WIRE REINFORCING
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	ST. JOHNS RIVE MANAGEMENT P.O. BOX 1429 PALATKA, FLOR	DISTRICT (SEC)
DRAWN: N.J.G.	DATE: <u>JANUARY 22, 2019</u>	REVIEWER: <u>W.R.C.</u>
SCALE: NONE	DESIGNER: <u>A.P.W.</u>	SECTION CHIEF:

ABBREVIATION PG PI PL or P POC POT PP PRC PRCST. DDM	PROFILE GRADE POINT OF INTERSECTION PROPERTY LINE POINT ON CURVE POINT ON TANGENT POWER POLE POINT OF REVERSE CURVE PRECAST		
PRM PROP. PT	PERMANENT REFERENCE MONUMENT PROPOSED POINT OF TANGENCY or PRESSURE TREAT	ΈD	
PVC	POLYVINYL CHLORIDE	ED	
QTY.	QUANTITY R		
R or RAD. R or RNG.	RADIUS RANGE		
R or RT. R/W or ROW	RIGHT RIGHT OF WAY		
RCP	REINFORCED CONCRETE PIPE		
RCPA RD.	REINFORCED CONCRETE PIPE ARCH ROAD or ROUND		
RM	REFERENCE MONUMENT		
RPBFP RPM	REDUCED PRESSURE BACKFLOW PREVEN RAISED REFLECTIVE PAVEMENT MARKERS		
RR	RAILROAD		
 S	SOUTH		
SE SECT.	SOUTHEAST SECTION		
SF	SILT FENCE		
SG or SUBGR. SJRWMD	SUBGRADE ST. JOHNS RIVER WATER MANAGEMENT D	ISTRICT	
SPA., SPCG. or SP.		ISTRICT	
Sq. Ft., SF or S.F.			
Sq. Yd., SY or S.Y. SS	SQUARE YARDS SANITARY SEWER or STAINLESS STEEL		
ST	STORM SEWER		
STA. STB	STATION STACKED TURBIDITY BARRIER		
STD.	STANDARD		
STL. STR.	STEEL STRUCTURE		
SUB. or SUBS.	SUBSOIL		
SW SW or SWK.	SOUTHWEST SIDEWALK		
	T		
T, TWP or Twp. TBM	TOWNSHIP TEMPORARY BENCH MARK		
TCE	TEMPORARY CONSTRUCTION EASEMENT		
TCZ TEL.	TRAFFIC CONTROL ZONE TELEPHONE		
TFMR	TRANSFORMER		
TOB TOG	TOP OF BANK TOP OF GRADE		
TOS	TOP OF SLOPE		
TRANS. TTC	TRANSITION, TRANSVERSE or TRANSPORT TEMPORARY TRAFFIC CONTROL	ATION	
TW	TOP OF WALL		
ТҮР.	TYPICAL U		
UG			
UNDDR. USC & GS	UNDERDRAIN(S) US COAST and GEODETIC SURVEY (now NA	TIONAL GEODETIC SURVEY)	
USGS	US GEOLOGICAL SURVEY		
UTIL. VC	UTILITIES VERTICAL CURVE		
VCP	VITRIFIED CLAY PIPE		
VERT. VOL.	VERTICAL VOLUME		
VV	VERIFIED VERTICAL ELEVATION		
VVH 	VERIFIED VERTICAL ELEVATION & HORIZO	NTAL LOCATION	
W NAMA	WIDTH, WIDE, WEST or WATT		
WM WT	WATER MAIN or WATER METER WATER TABLE or WEIGHT		
WTR	WATER		
WW WWF	WASTEWATER WELDED WIRE FABRIC		
WWR	WELDED WIRE REINFORCING		
X-SEC.	CROSS SECTION		PURPOSES
 YD.	YYARD		IOT FOR
		CONSTR	RUCTION
		CERTIFICATION:	FILE NAME:
			C2 C-40 PLUG ABBREV.dwg
STANDARD A	BBREVIATIONS		PROJECT NO.:
		AMY POGUE WRIGHT P.E. NUMBER: 54851	SHEET:
l		DATE:	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 DICTATE. 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.
- INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES.
 INSTALL COFFERDAMS UPSTREAM AND DOWNSTREAM OF STRUCTURE.
- PUMP WATER FROM THE WORK AREA AND PROVIDE CONTINUOUS PUMPING TO KEEP WORK AREA DEWATERED.
- 5. EXCAVATE AREA WHERE CULVERT WILL BE PLACED.
- CONSTRUCT CULVERT AND SLIDE GATES.
 BACKFILL THE STRUCTURE, REGRADE PLUG, AND INSTALL RIPRAP.
- 8. INSTALL NEW WALKWAY.
- 9. PERFORM DRY TEST OPERATION OF GATE AND OPERATOR.
- ALLOW WORK AREA TO FILL WITH WATER AND REMOVE COFFERDAMS.
 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

- . 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.

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).

Λ	ISSUED FOR BID.	N.J.G.	01/22/19	A.P.W.	01/22/19
NO.	REVISION	BY	DATE	APPROVED	DATE

UPPER ST. JOHNS F S.J.M.C.A. - C-40 CANAL PLU BREVARD COUNT

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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 COMPACTING 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.

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 PROCTOR 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 PROCTER 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

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.

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.

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

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.

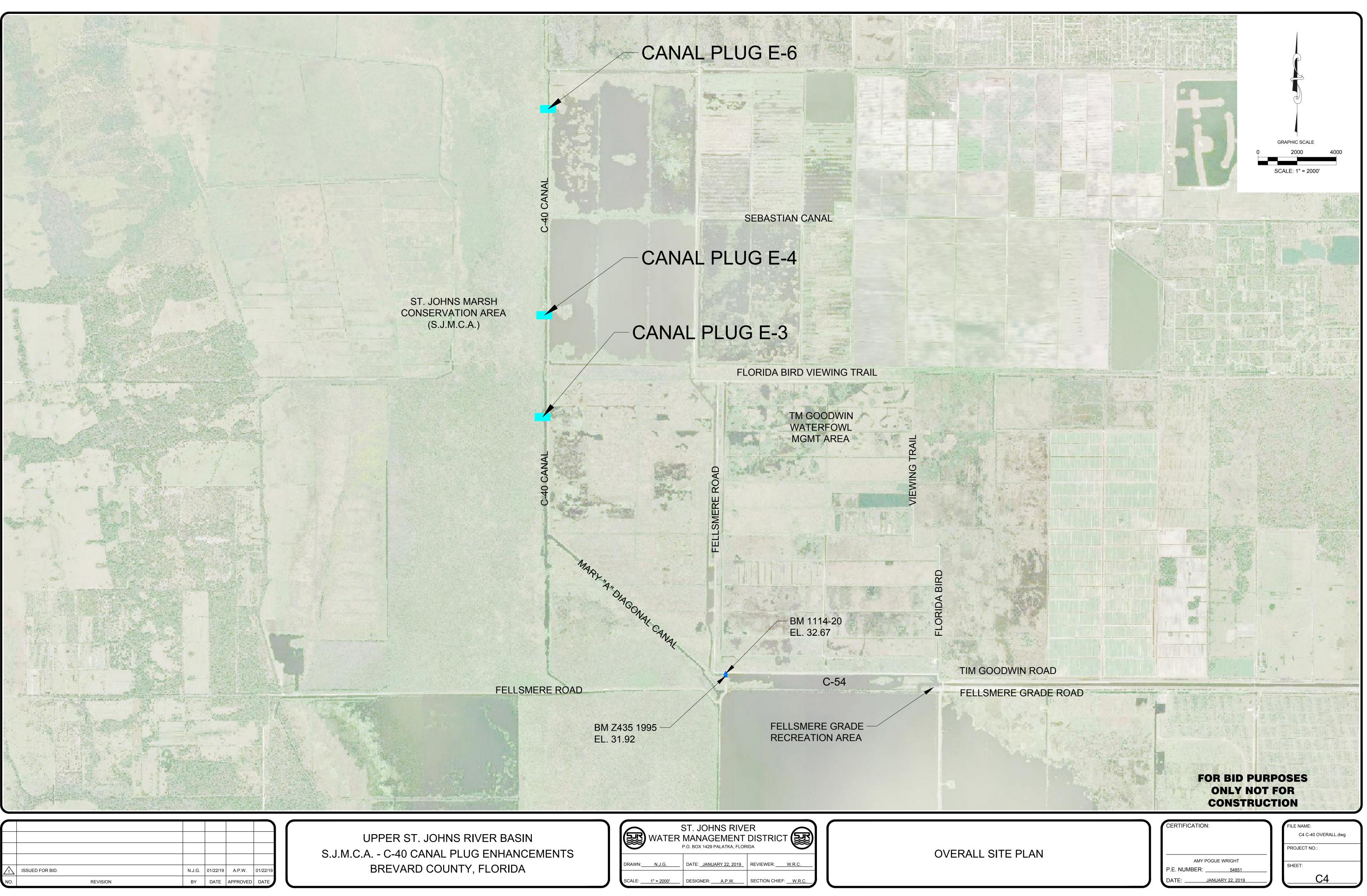
RIVER BASIN
JG ENHANCEMENTS
Y, FLORIDA

	ST. JOHNS RIVE MANAGEMENT P.O. BOX 1429 PALATKA, FLOR	DISTRICT (SEC)
DRAWN: N.J.G.	DATE: JANUARY 22, 2019	REVIEWER: W.R.C.
SCALE: NONE	DESIGNER: <u>A.P.W.</u>	SECTION CHIEF: <u>W.R.C.</u>

FOR BID PURPOSES ONLY NOT FOR CONSTRUCTION

CERTIFICATION:

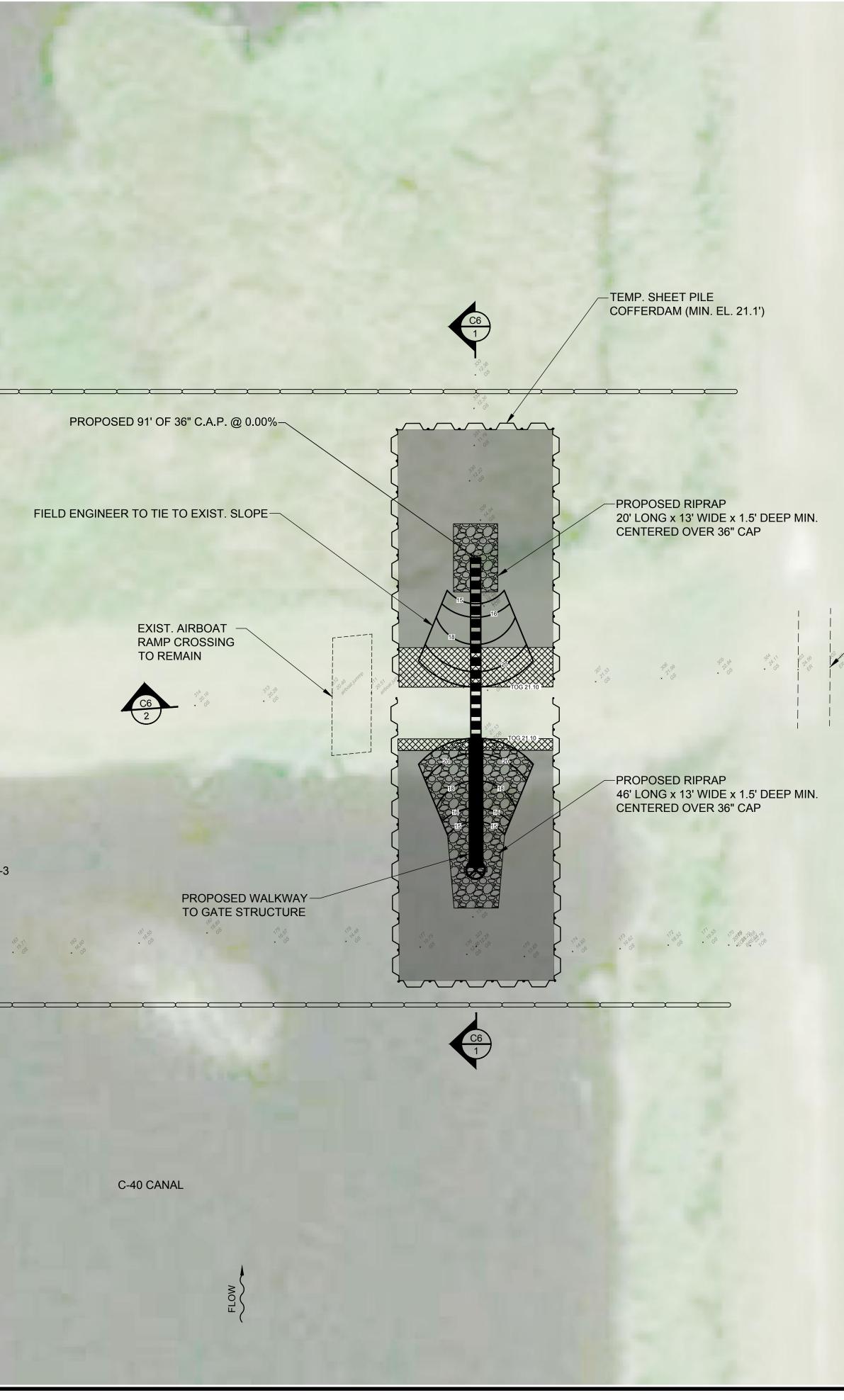
FILE NAME:
C3 C-40 PLUG NOTES&SPECS.dwg
PROJECT NO.:
SHEET:
C3



OR BID.	N.J.G.	01/22/19	A.P.W.	01/22/
REVISION	BY	DATE	APPROVED	DATE

WATER	P.O. BOX 1429 PALATKA, FLOR	DISTRICT (STR
DRAWN: N.J.G.	DATE: <u>JANUARY 22, 2019</u>	REVIEWER: W.R.C.
SCALE: <u>1" = 2000'</u>	DESIGNER: <u>A.P.W.</u>	SECTION CHIEF: W.R.C.

		FLOW
		C-40 CANAL -FLOATING TURBIDITY BARRIER
	ette itte	Canal Plug Ext
ISSUED FOR BID. NO. REVISION	N.J.G. 01/22/19 A.P.W. 01/22/19 BY DATE APPROVED DATE	UPPER ST. JOHNS R J.M.C.A C-40 CANAL PLU BREVARD COUNTY



RIVER BASIN JG ENHANCEMENTS Y, FLORIDA

	ST. JOHNS RIVE MANAGEMENT P.O. BOX 1429 PALATKA, FLOR	DISTRICT
DRAWN: N.J.G.	DATE: <u>JANUARY 22, 2019</u>	REVIEWER: W.R.C.
SCALE:1" = 20'	DESIGNER: <u>A.P.W.</u>	SECTION CHIEF: W.R.C.

CANAL PLUG E-3 SITE PLAN

CERTIFICATION:	
CERTIFICATION.	
AMY POGUE WRIGHT	
P.E. NUMBER:54851	
DATE:	

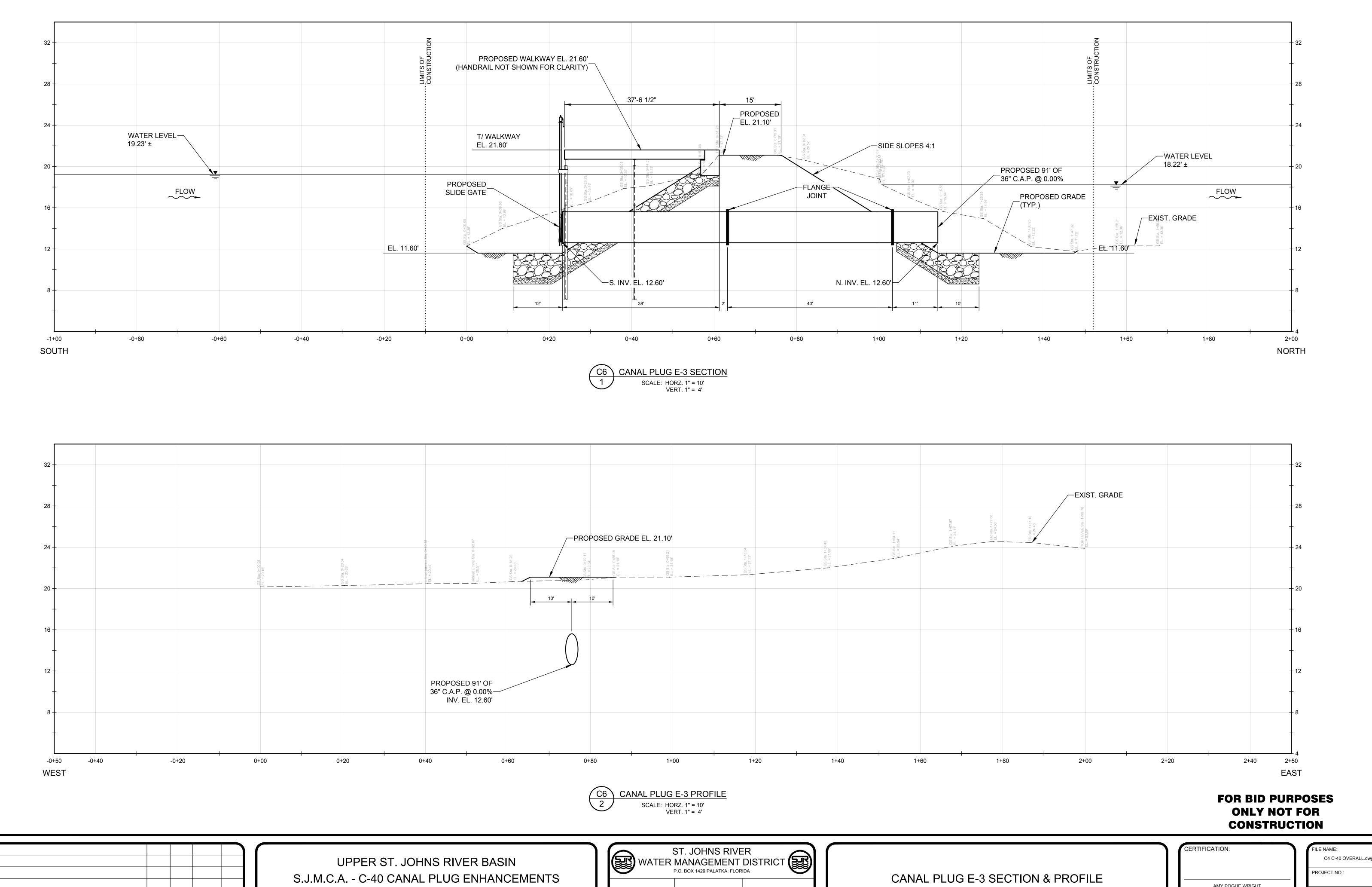
FILE NAME:
C4 C-40 OVERALL.dwg
PROJECT NO.:
SHEET:
C5

FOR BID PURPOSES **ONLY NOT FOR** CONSTRUCTION



-EXIST. EDGE OF DRIVE

GRAPHIC SCALE SCALE: 1" = 20' LEGEND LEVEE CUT = 0.02 ACRES SURFACE WATER CUT = 0.14 ACRES PROPOSED RIPRAP



REVISION

N.J.G. 01/22/19 A.P.W. 01/22/19 BY DATE APPROVED DATE

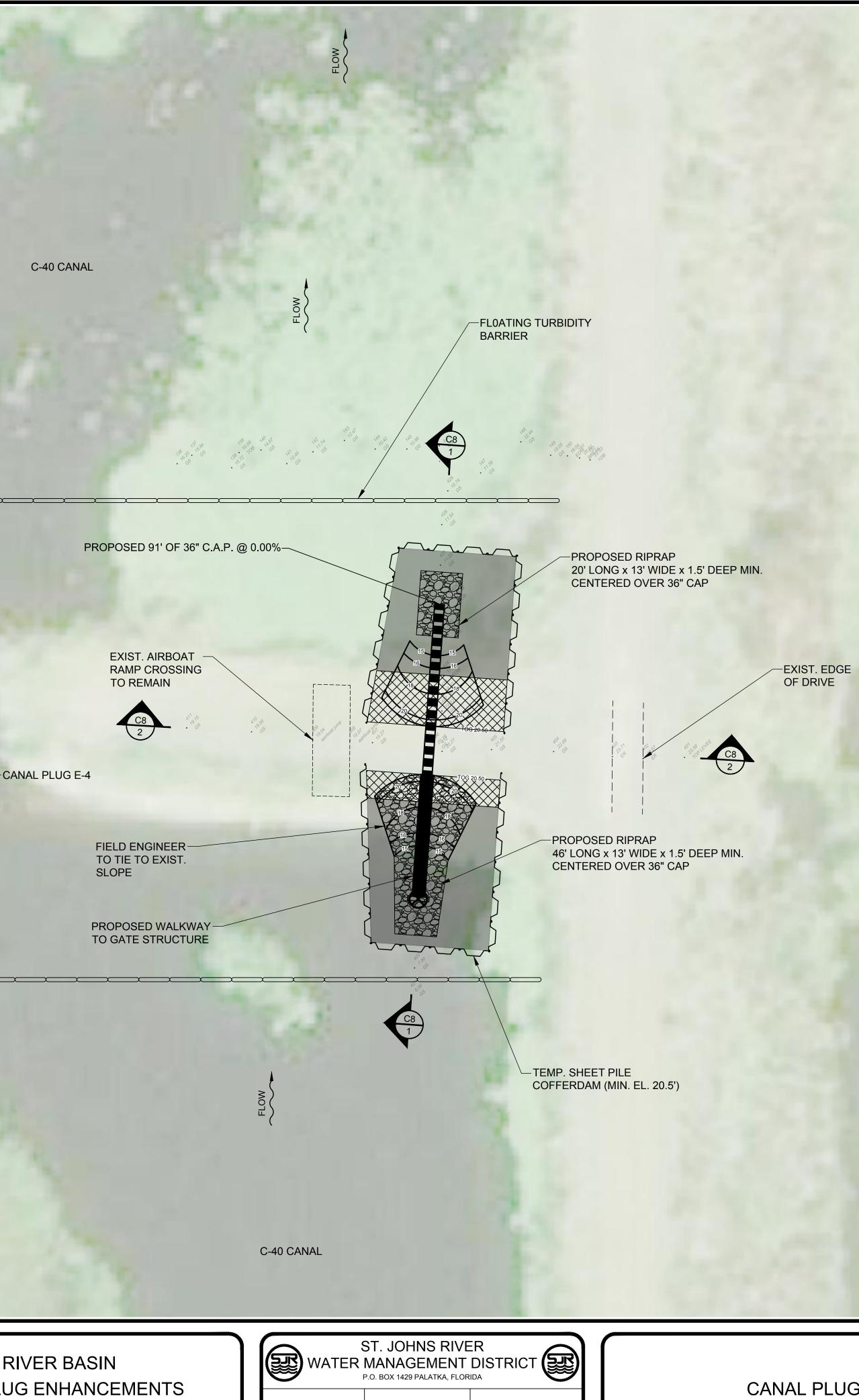
BREVARD COUNTY, FLORIDA

WATER	MANAGEMENT P.O. BOX 1429 PALATKA, FLOR	DISTRICT (SEE)
DRAWN: N.J.G.	DATE: <u>JANUARY 22, 2019</u>	REVIEWER: W.R.C.
SCALE: AS NOTED	DESIGNER: <u>A.P.W.</u>	SECTION CHIEF: W.R.C.

CERTIFICATION	J:
AMY F	POGUE WRIGHT
P.E. NUMBER:	54851
DATE:	JANUARY 22, 2019

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			UPPER ST. JC	
NO. REVISION	N.J.G. 01/22/ BY DATE	19 A.P.W. 01/22/19 E APPROVED DATE	S.J.M.C.A C-40 CAN BREVARD C	



Y, FLORIDA

	MANAGEMENT P.O. BOX 1429 PALATKA, FLOR	
DRAWN: N.J.G.	DATE: <u>JANUARY 22, 2019</u>	REVIEWER: W.R.C.
SCALE: <u>1" = 20'</u>	DESIGNER: <u>A.P.W.</u>	SECTION CHIEF: W.R.C.

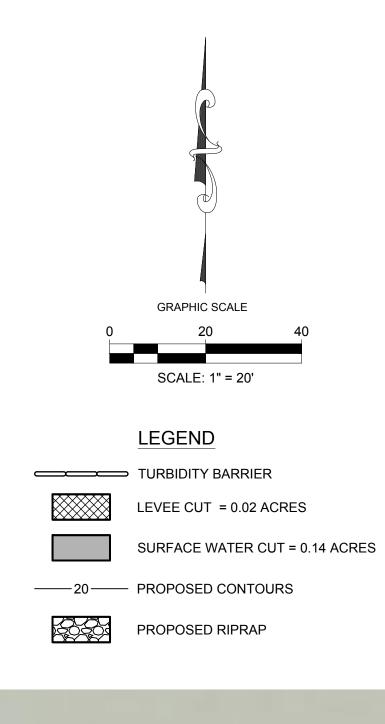
CANAL PLUG E-4 SITE PLAN

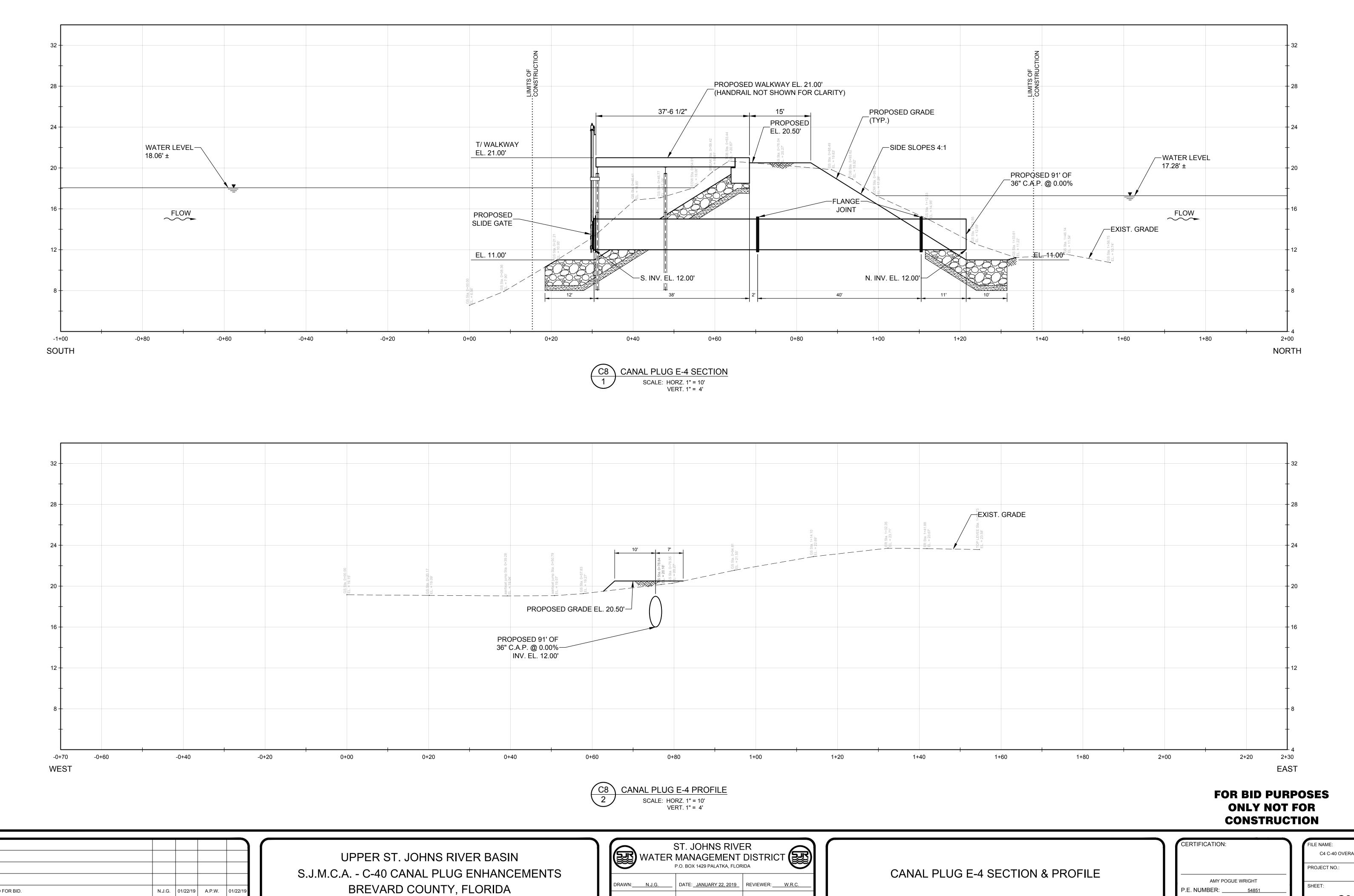
CERTIFICATIO	N:
AMY	POGUE WRIGHT
P.E. NUMBER:	54851
DATE:	JANUARY 22, 2019
DATE:	JANUARY 22, 2019

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

CONSTRUCTION

FOR BID PURPOSES **ONLY NOT FOR**





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

REVISION

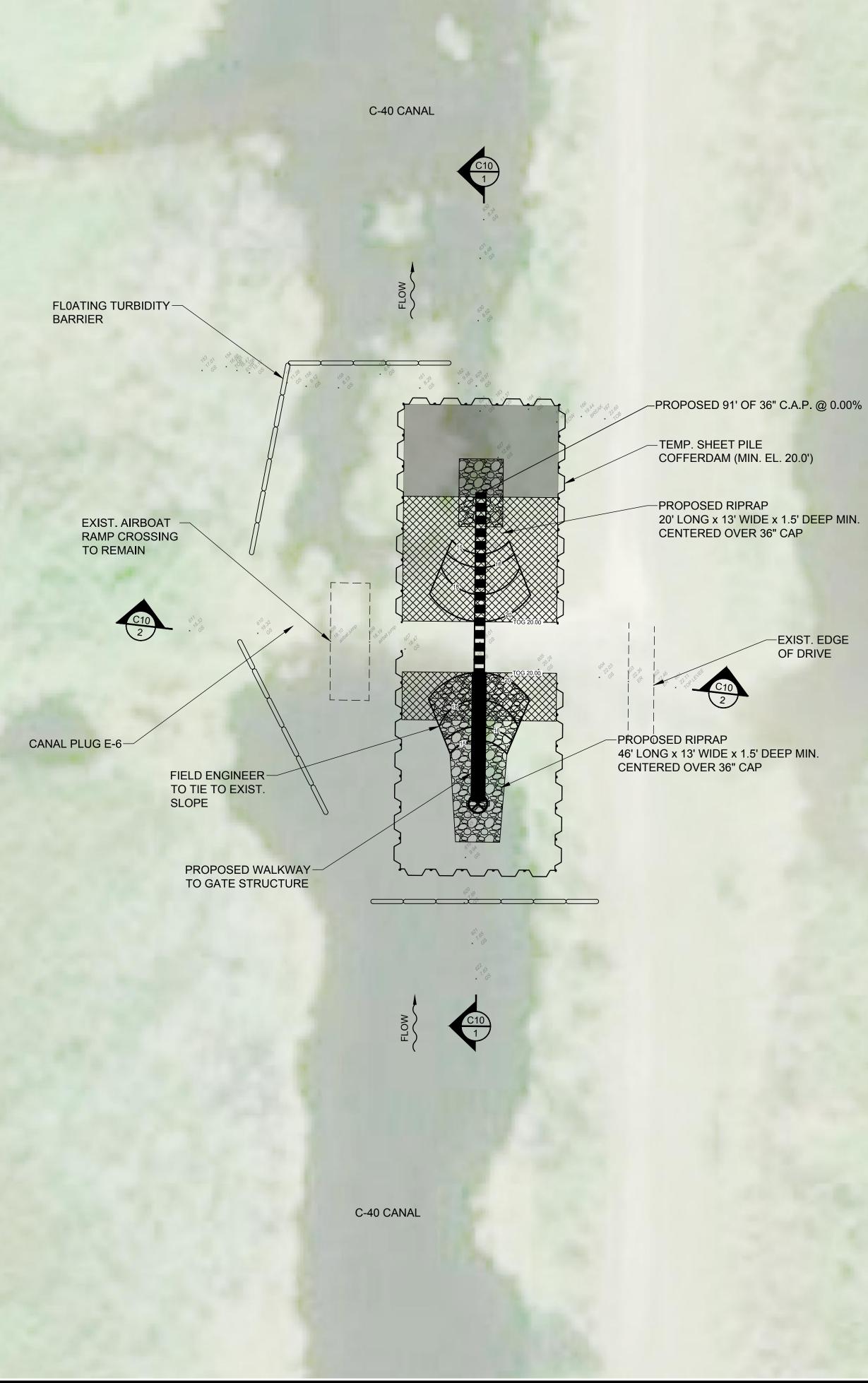
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CERTIFICATION:	
	GUE WRIGHT
P.E. NUMBER:	54851
DATE:	NUARY 22, 2019

		UPPER ST.	JOHNS
	S.J.M.	C.A C-40 CA	NAL PL

ISSUED FOR BID.	N.J.G.	01/22/19	A.P.W.	01/22/19
REVISION	BY	DATE	APPROVED	DATE

RIVER BASIN UG ENHANCEMENTS BREVARD COUNTY, FLORIDA



	ST. JOHNS RIVE MANAGEMENT P.O. BOX 1429 PALATKA, FLOR	DISTRICT (SER)
DRAWN: N.J.G.	DATE: <u>JANUARY 22, 2019</u>	REVIEWER: W.R.C.
SCALE:1" = 20'	DESIGNER: <u>A.P.W.</u>	SECTION CHIEF: W.R.C.

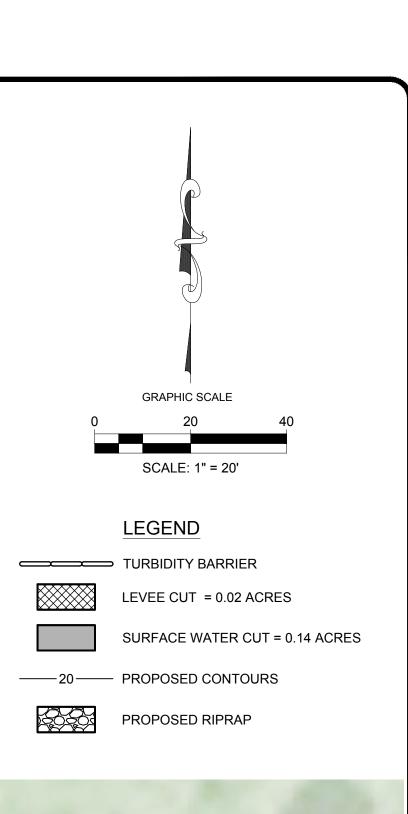
CANAL PLUG E-6 SITE PLAN

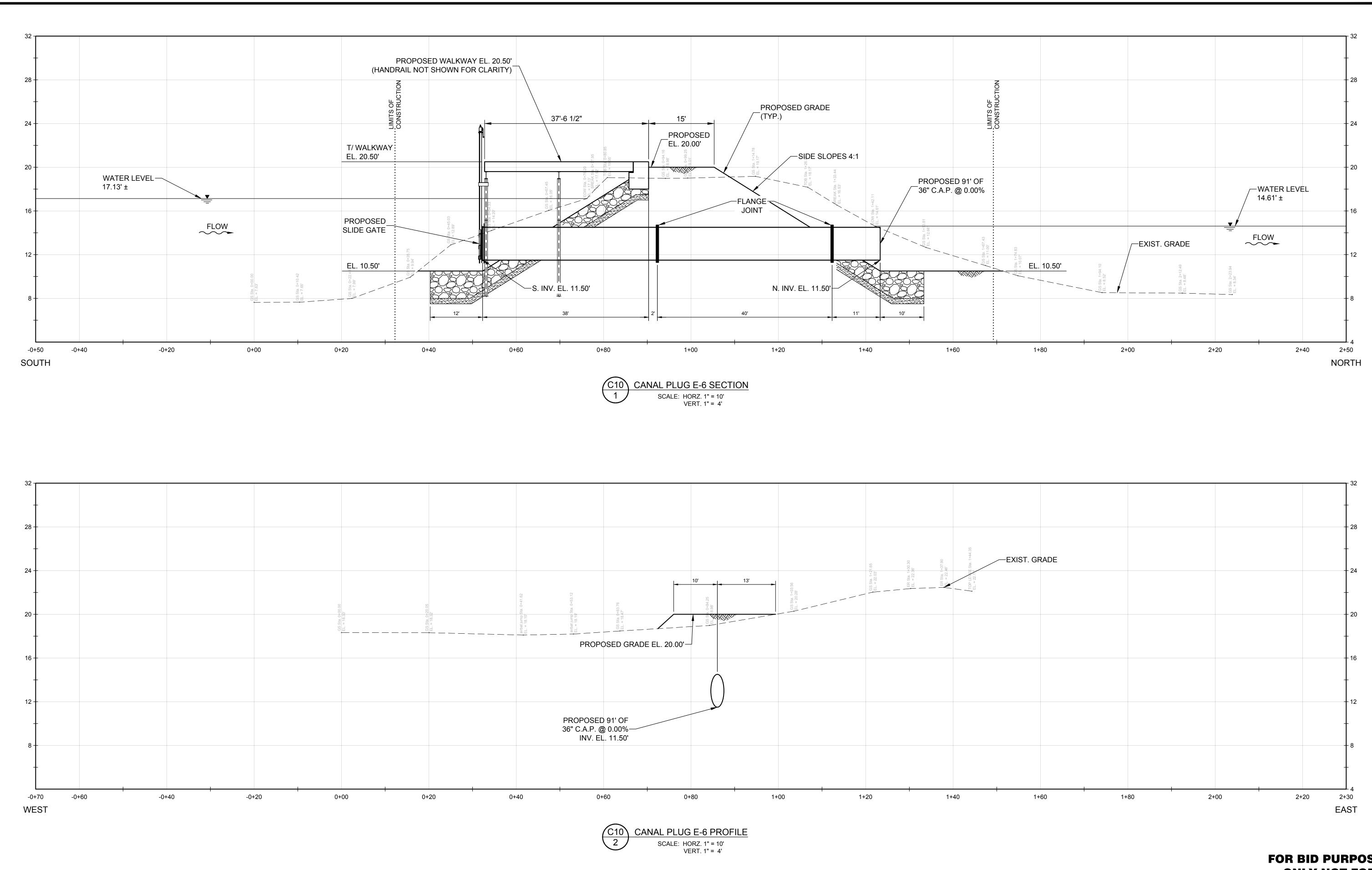
CERTIFICATION:	
AMY POGUE WRIGHT	
P.E. NUMBER:54851	
DATE:	

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

ONLY NOT FOR CONSTRUCTION

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7	ISSUED FOR BID.	N.J.G.	01/22/19	A.P.W.	01/22/19	
) <u>.</u>	REVISION	BY	DATE	APPROVED	DATE	

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

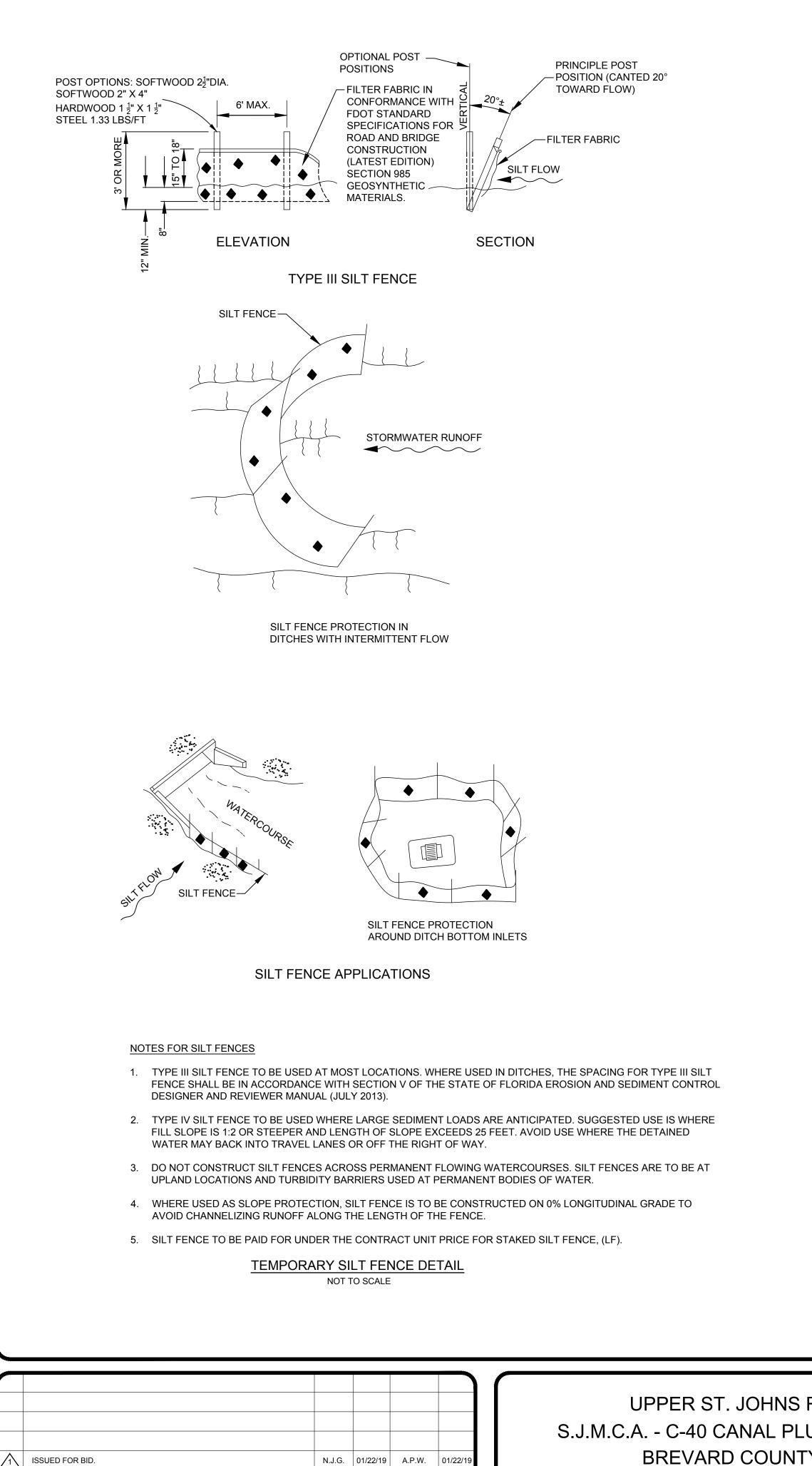
WATER	ST. JOHNS RIVE MANAGEMENT P.O. BOX 1429 PALATKA, FLOR	DISTRICT (SEC)
DRAWN: N.J.G.	DATE: <u>JANUARY 22, 2019</u>	REVIEWER: W.R.C.
SCALE: <u>AS NOTED</u>	DESIGNER: <u>A.P.W.</u>	SECTION CHIEF: W.R.C.

CANAL PLUG E-6 SECTION & PROFILE

CERTIFICATIO	N:
	POGUE WRIGHT
P.E. NUMBER:	54851
DATE:	JANUARY 22, 2019

FILE NAME:
C4 C-40 OVERALL.dwg
PROJECT NO.:
SHEET:
C10

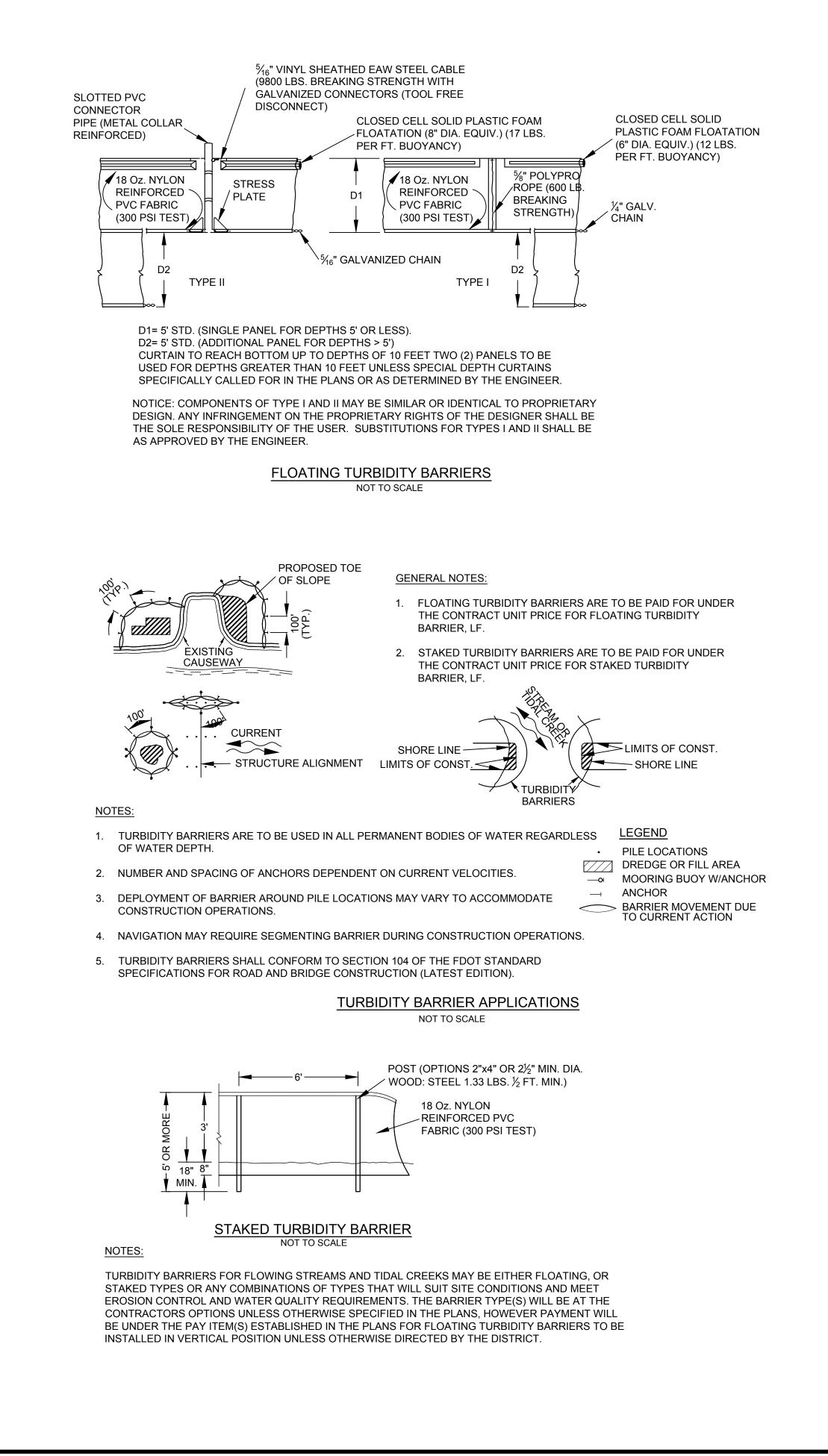
FOR BID PURPOSES **ONLY NOT FOR** CONSTRUCTION



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REVISION



RIVER BASIN
JG ENHANCEMENTS
Y, FLORIDA

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT				
DRAWN: N.J.G.	DATE: JANUARY 22, 2019	REVIEWER: W.R.C.		
SCALE: NONE	DESIGNER: <u>A.P.W.</u>	SECTION CHIEF:		

3. WEDGE LOOSE STRAW BETWEEN 4. BACKFILL AND COMPACT THE THE BALES. EXCAVATED SOIL.

2. PLACE AND STAKE BALES.

NOTES:

1. EXCAVATE THE TRENCH.

4" DEEP BY THE BALE WIDTH.

- 1. 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

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.

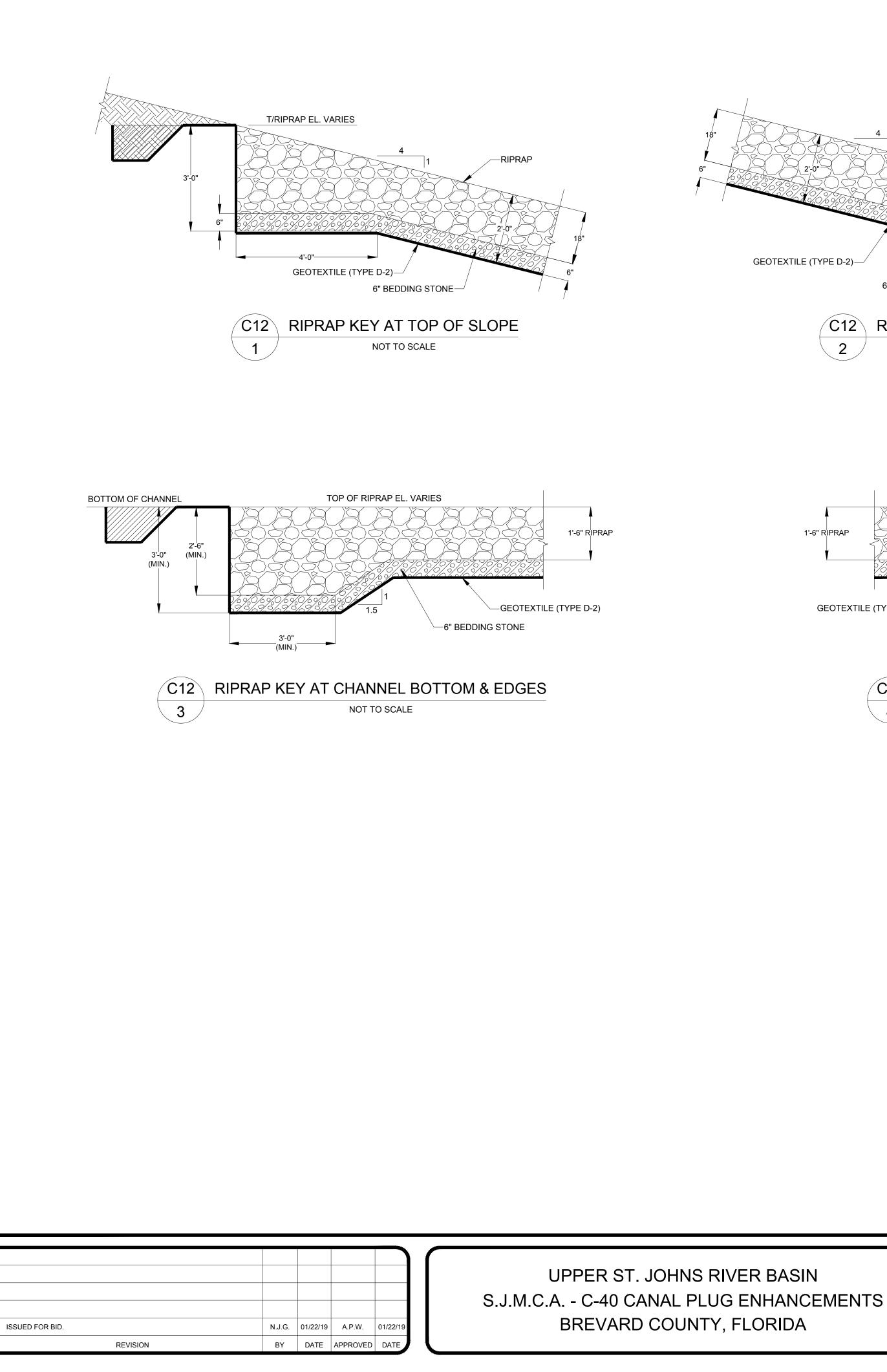
FOR BID PURPOSES **ONLY NOT FOR** CONSTRUCTION

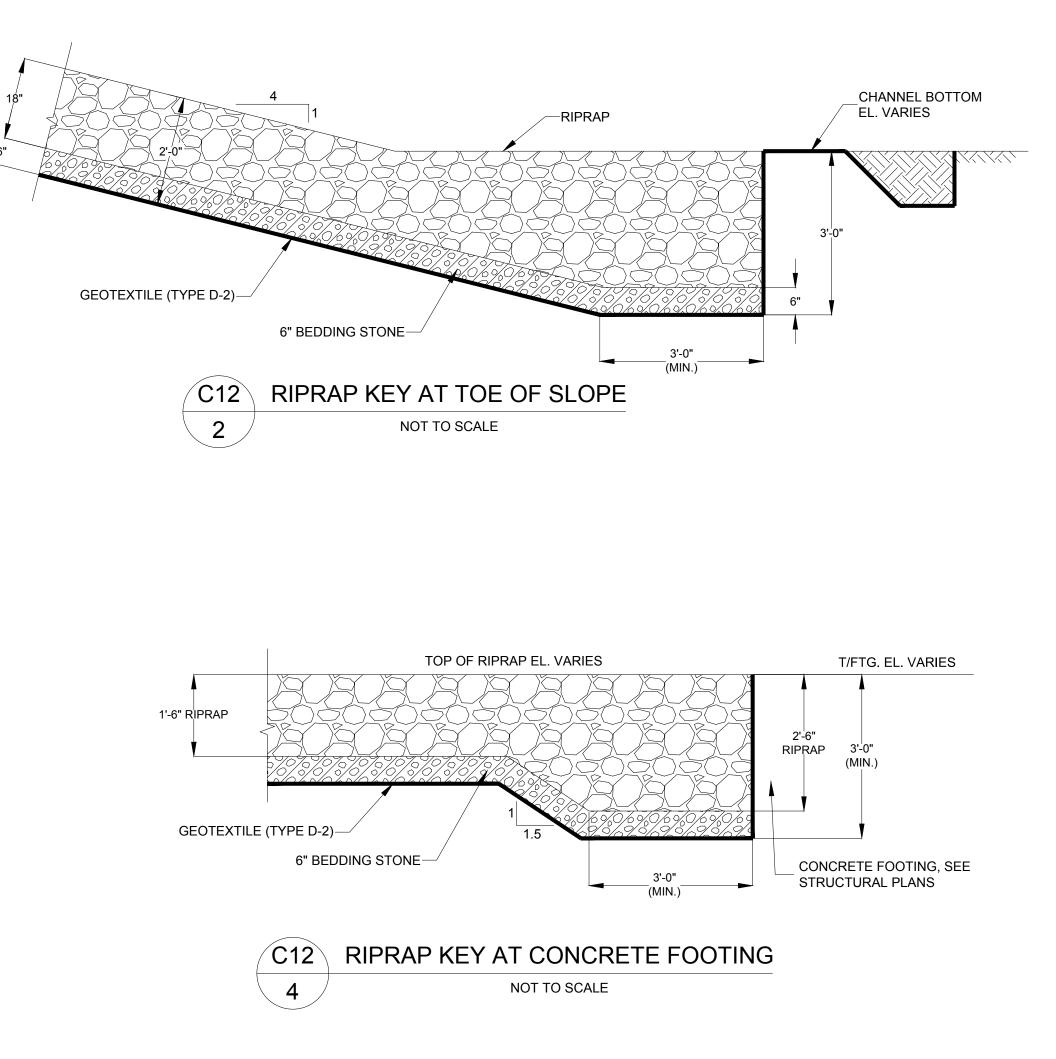
CERTIFICATION:

AMY POGUE WRIGHT P.E. NUMBER: _ 54851 JANUARY 22, 2019 DATE

FILE NAME:
C5C-40 EROSION.dwg
PROJECT NO.:
SHEET:
C11

EROSION AND SEDIMENT CONTROL







CONSTRUCTION SPECIFICATIONS AND NOTES FOR RIPRAP SYSTEM:

 <u>GENERAL</u>: 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.

2. <u>RELATED DOCUMENTS</u>:

- A) DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND OTHER SPECIFICATION SECTIONS, APPLY TO WORK OF THIS SECTION.
- B) FLORIDA DEPARTMENT OF TRANSPORTATION, <u>STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION</u> (FDOT SPECS), SECTION 530, AND <u>ROADWAY AND TRAFFIC DESIGN STANDARDS FOR CONSTRUCTION</u>, <u>MAINTENANCE AND UTILITY</u> <u>OPERATIONS ON THE STATE HIGHWAY SYSTEM</u> (FDOT STANDARD INDEX), LATEST EDITION. WORK SHALL COMPLY WITH THE REQUIREMENTS OF FDOT SPECS AND STANDARD INDEX AS MODIFIED HEREIN.

3. 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.

4. BEDDING STONE SHALL COMPLY WITH THE REQUIREMENTS SECTION 530-2.1.4 (BEDDING STONE) OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION, LATEST EDITION.

5. 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.

6. <u>CONSTRUCTION REQUIREMENTS:</u> 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 MANUFACTURER, 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.

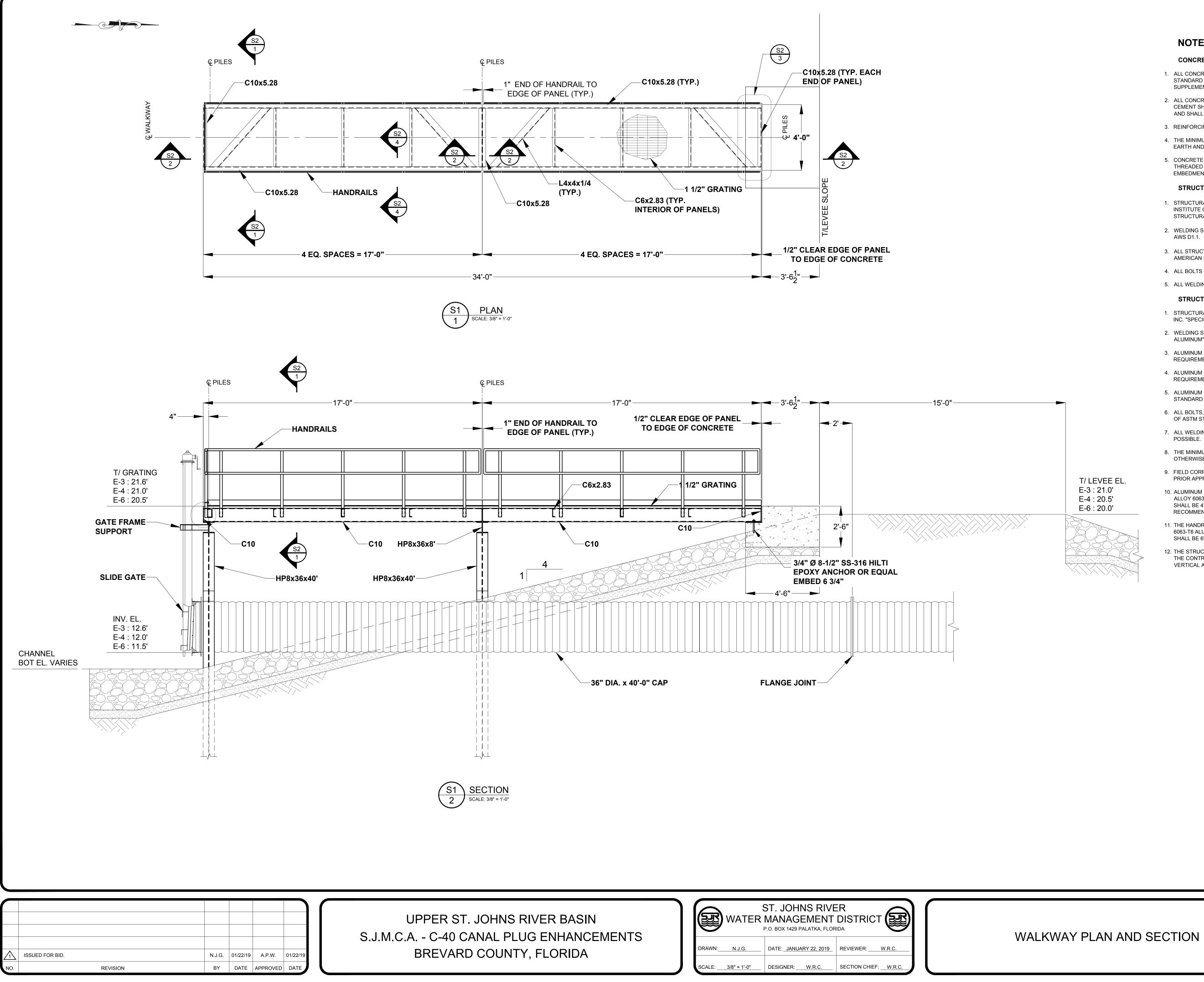
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C	ERTIFICATION:

AMY POGUE WRIGHT P.E. NUMBER: ______54851 DATE: ______JANUARY 22, 2019

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

RIPRAP DETAILS



ST. JOHNS RIVER WATER MANAGEMENT DISTRICT					
DRAWN: N.J.G.	DATE:	REVIEWER: W.R.C.			
SCALE: <u>3/8" = 1'-0"</u>	DESIGNER: W.R.C.	SECTION CHIEF: W.R.C.			

NOTE SPECIFICATIONS:

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 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.
- 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 CONCRETE CAST AGAINST EARTH AND 2 INCHES ELSEWHERE, UNLESS OTHERWISE NOTED.
- 5. CONCRETE ANCHORS SHALL UTILIZE THE HILTI HIT-RE 500-SD EPOXY ADHESIVE ANCHORING SYSTEM, OR EQUAL. THREADED ANCHOR RODS, SHALL BE ¾" 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:

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

STRUCTURAL ALUMINUM:

- 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. MINIMUM BOLT SIZE SHALL BE 3/4-INCH UNLESS OTHERWISE NOTED.
- 7. ALL WELDING SHALL UTILIZE ER4043 FILLER ALLOY AND SHALL BE SHOP WELDED TO THE GREATEST EXTENT POSSIBLE.
- 8. THE MINIMUM THICKNESS OF ALL CONNECTION ANGLES AND GUSSET PLATES SHALL BE 1/4-INCH UNLESS NOTED OTHERWISE.
- 9. FIELD CORRECTING OF FABRICATED COMPONENTS SHALL NOT BE PERMITTED ON STRUCTURAL MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- 10. 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.
- 11. 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.
- 12. 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.

CERTIFICATION:

P.E. NUMBER: _

DATE:

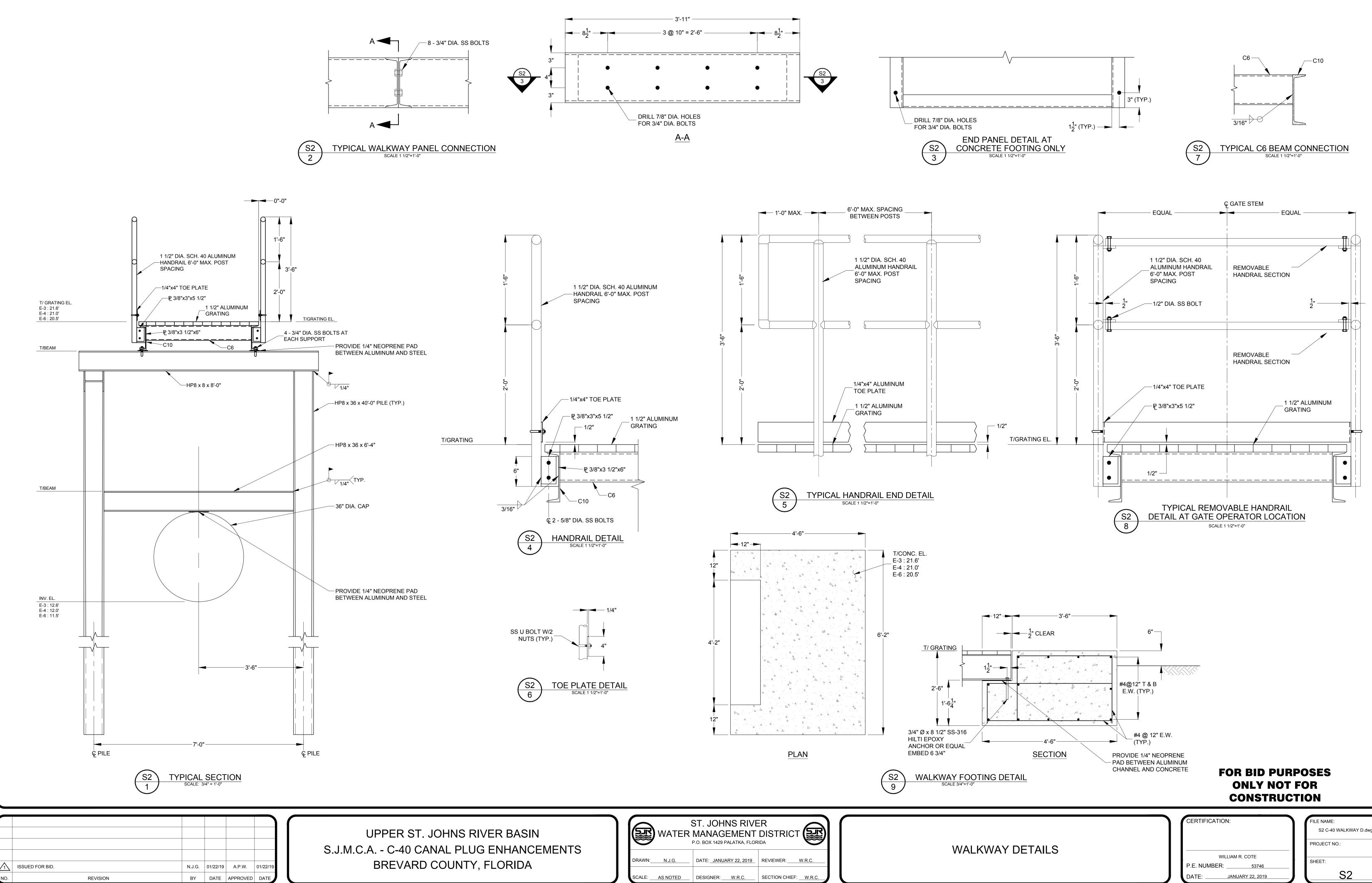
WILLIAM R. COTE

53746

JANUARY 22, 2019

FOR BID PURPOSES **ONLY NOT FOR** CONSTRUCTION

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

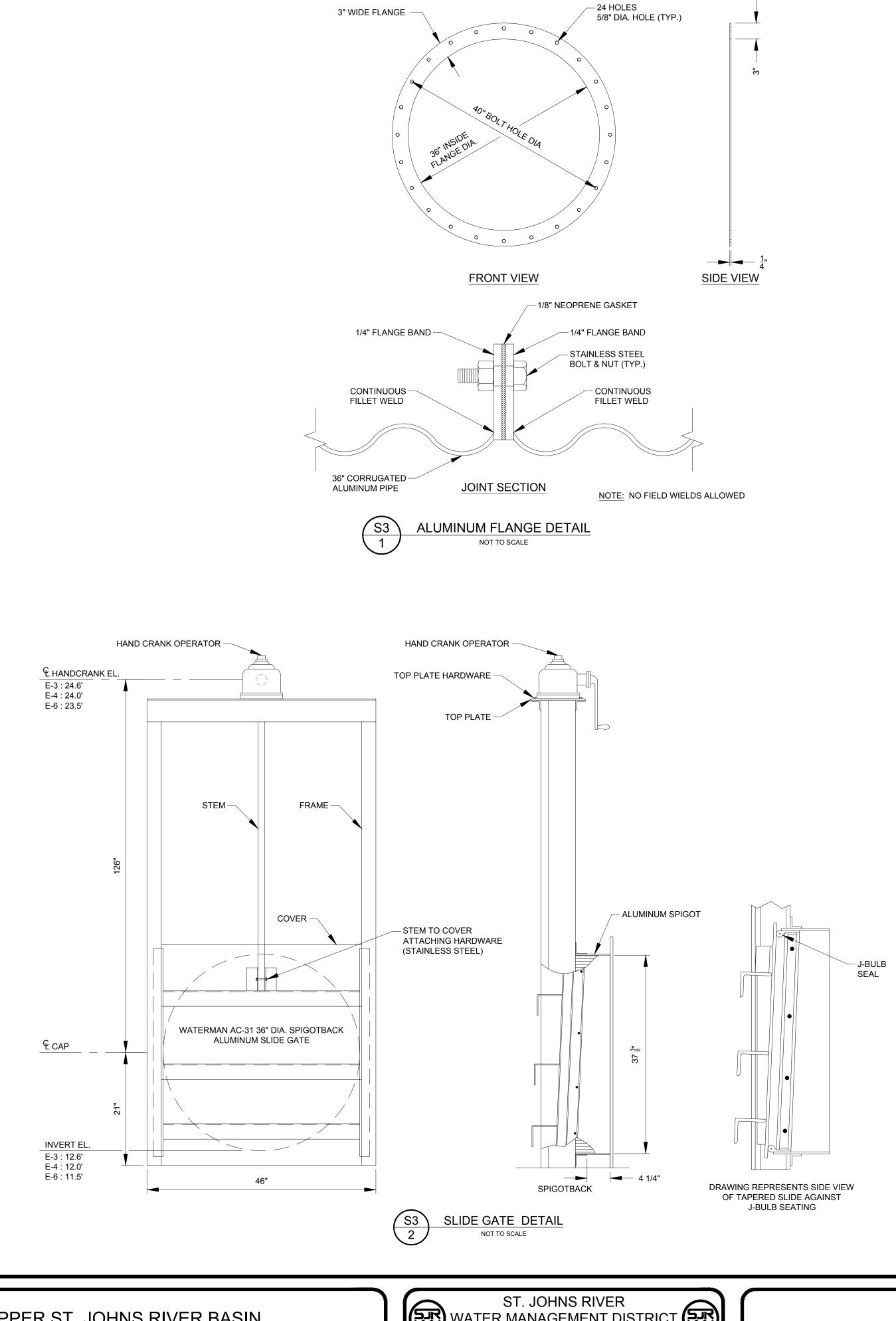


ST. JOHNS RIVER WATER MANAGEMENT DISTRICT P.O. BOX 1429 PALATKA, FLORIDA						
DRAWN: N.J.G.	DATE: _ JANUARY 22, 2019_	REVIEWER: W.R.C.				
SCALE: <u>AS NOTED</u>	DESIGNER: W.R.C.	SECTION CHIEF:				

CERTIFICATIO	N:
WIL	LIAM R. COTE
P.E. NUMBER:	53746
DATE:	JANUARY 22, 2019

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





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

7	ISSUED FOR BID.	N.J.G.	01/22/19	A.P.W.	01/22/19
Э.	REVISION	BY	DATE	APPROVED	DATE

WATER MANAGEMENT DISTRICT			
DRAWN: N.J.G.	DATE: <u>JANUARY 22, 2019</u>	REVIEWER: <u>W.R.C.</u>	
SCALE: AS NOTED	DESIGNER: W.R.C.	SECTION CHIEF:	

NOTE SPECIFICATIONS:

CULVERTS:

1. 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.

2. CULVERTS SHALL BE 36-INCH DIAMETER, 14 GAGE, WITH 3X1 HELICAL CORRUGATIONS. JOINTS SHALL UTILIZE FLANGE TYPE CONNECTIONS.

SLIDE GATES:

1. 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 :

FOR BID PURPOSES **ONLY NOT FOR** CONSTRUCTION

CERTIFICATIO	N:
WIL	LIAM R. COTE
P.E. NUMBER:	53746
DATE:	JANUARY 22, 2019

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

CULVERT AND SLIDE GATE DETAILS