

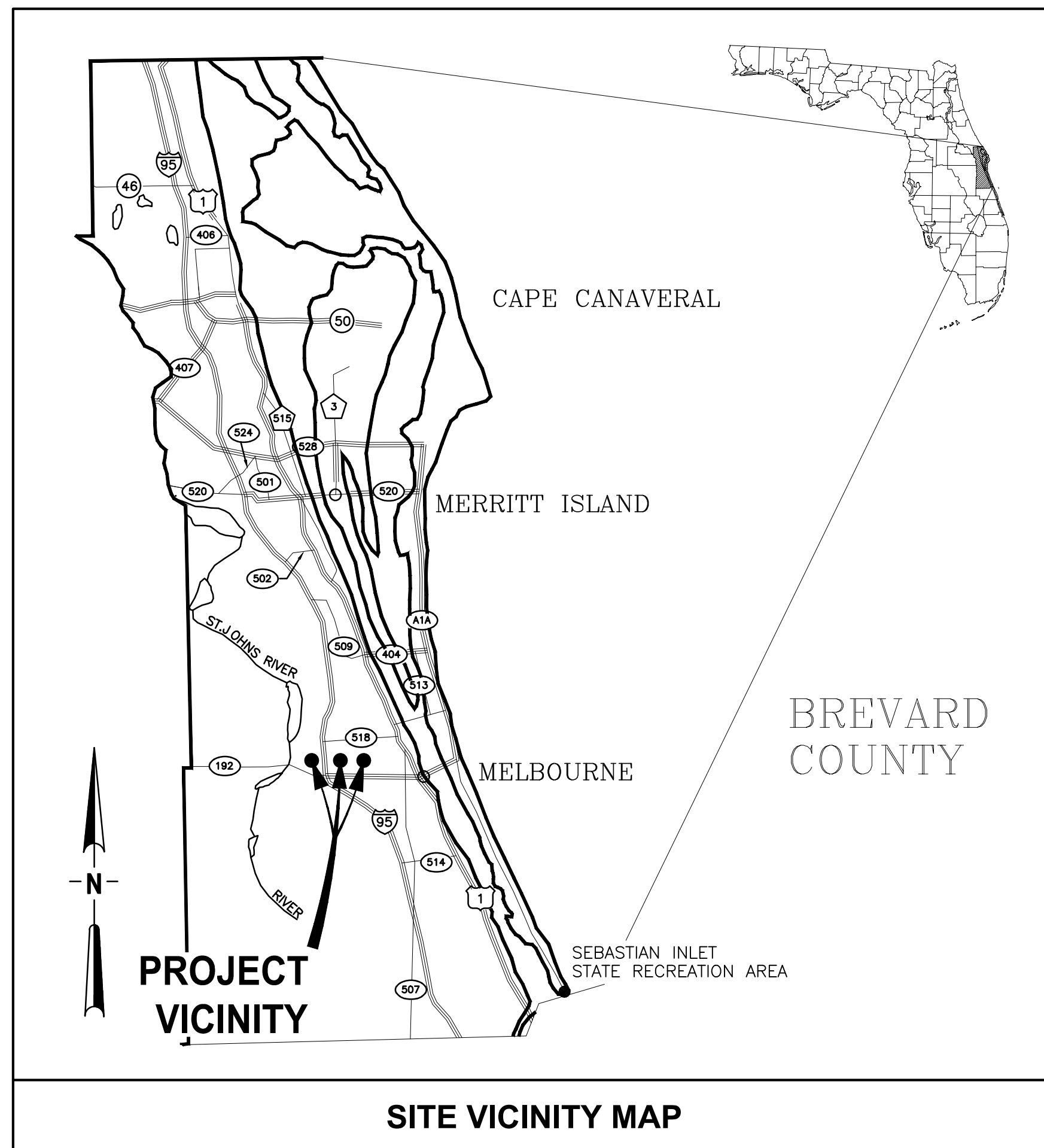
22x34

CRANE CREEK

M-1 CANAL FLOW RESTORATION

PREPARED FOR:
ST. JOHNS RIVER
WATER MANAGEMENT
DISTRICT

VOLUME 1

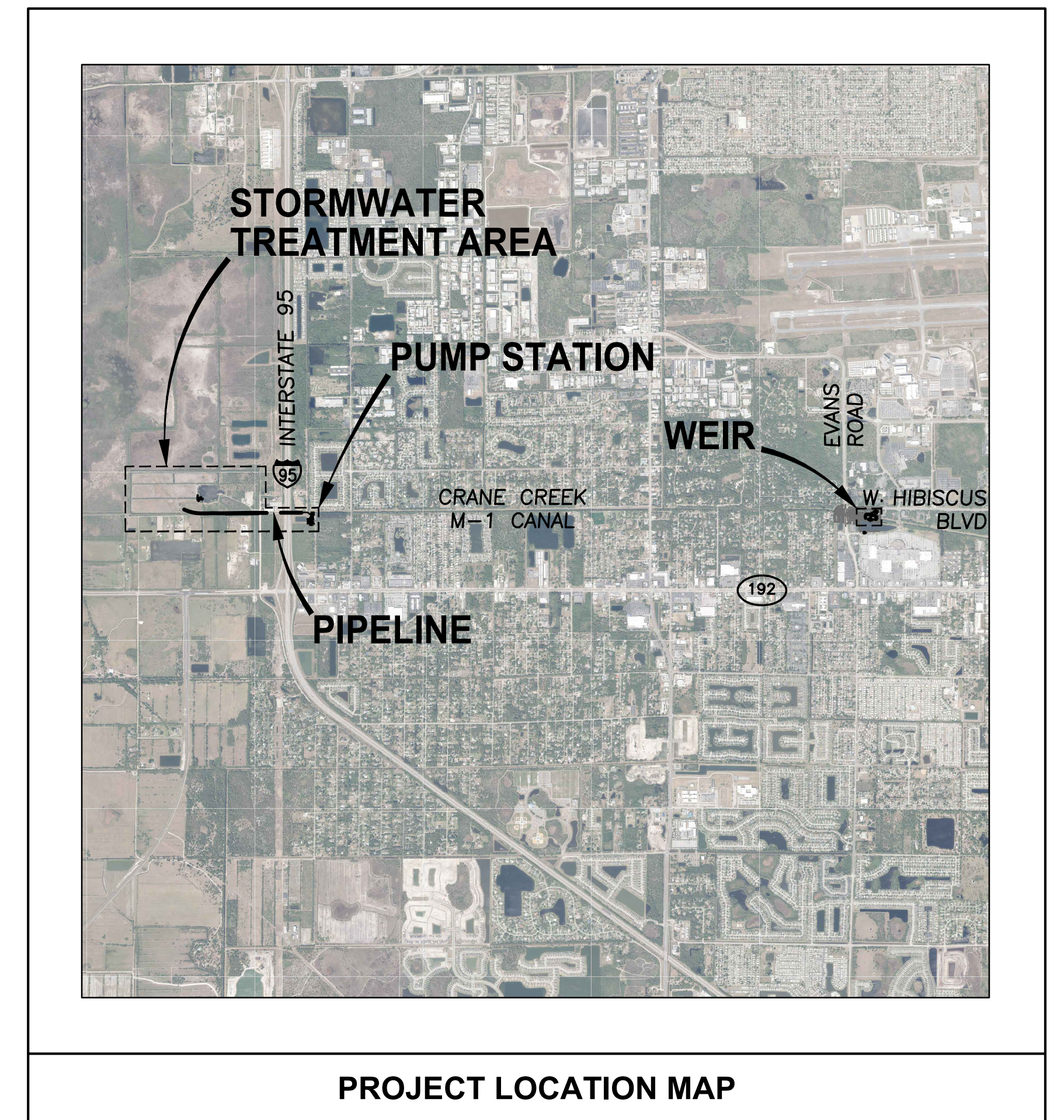


PREPARED BY:

JonesEdmunds

CERTIFICATE OF AUTHORIZATION #1841
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

Always call 811 two full business days before you dig to have underground utilities located and marked.



LTR.	DATE	REVISIONS	BY	APPRD.
A	12/20/19	REVISED PER COWM	RK	RK

CITY OF MELBOURNE PROJECT NUMBER: IF 20-01
BREVARD COUNTY ROW PERMIT NUMBER: 20RW00261

FOR CONSTRUCTION

LAST SAVED: 10/29/2020 8:45 PM BY: JALLEN PLOTTED: 10/30/2020 02:49 PM BY: JON ALLEN

CONTRACT NO: 32116

PROJECT NO: 19750-066-01

BREVARD COUNTY RIGHT-OF-WAY REVIEW AND APPROVAL DOES NOT CONSTITUTE COUNTY APPROVAL OR REVIEW OF ANY PRIVATE PARTY DEED RESTRICTIONS, COVENANTS, PRIVATE EASEMENTS, OR OTHER PRIVATE AGREEMENTS. ANY CHANGES TO THE APPROVED MUST BE COORDINATED THROUGH THE PUBLIC WORKS ENGINEERING PROGRAM. THE APPLICANT ASSUMES THE RISK THAT THE RIGHT-OF-WAY PERMIT MAY REQUIRE ADDITIONAL COUNTY REVIEW INCLUDING ENGINEERING REVISIONS OR OTHER APPLICABLE COUNTY REVIEW PROCESSES SHOULD ANY ACTION TO ENFORCE ANY SUCH RESTRICTIONS REQUIRE REDESIGN OF THE PROJECT.

OCTOBER 2020

Y:\19750-SURV\PROJECTS\066-01-CRANE CREEK M-1_FLOW RESTORATION_DESIGN\CAD\DWGS\GENERAL\19750-066-01-G02.DWG
 9/30/2020 2:12 PM JALLEN

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G2	DRAWING INDEX	A. GOODDEN
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G5	MECHANICAL LEGEND & PIPE SCHEDULE	R. KOLLER
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EXISTING CONDITIONS: LIDAR		
V1	STORMWATER TREATMENT AREA EXISTING CONDITIONS	N/A
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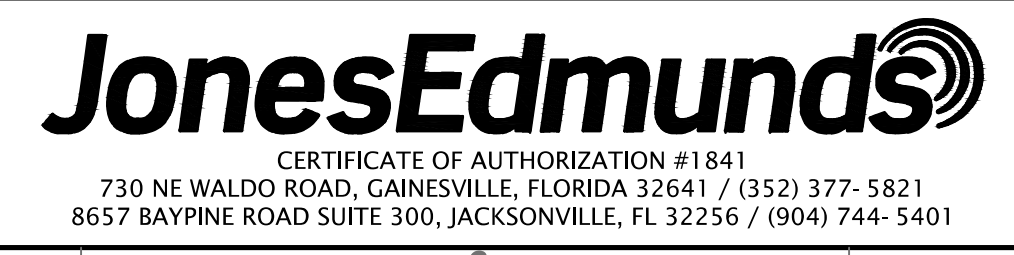
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C3-3	STORMWATER FORCE MAIN DETAILS	R. KOLLER
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EC5-2	WEIR STORMWATER POLLUTION PREVENTION NOTES	A. GOODDEN
EC5-3	WEIR EROSION CONTROL NOTES AND DETAILS	A. GOODDEN
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E5-2	WEIR STATION ONE LINE DIAGRAM	H. DIETRICK
E5-3	WEIR STATION ELECTRICAL DETAILS	H. DIETRICK

Amy Liane Goodden, State of Florida, Professional Engineer License No. 60097.
 This item has been digitally signed and sealed by Amy Liane Goodden on the date indicated here.
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Walter A. Nickel, State of Florida, Professional Engineer License No. 68638.
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DIGITALLY SIGNED AND SEALED PAGES FOR WALTER NICKEL, PE, , WHEN REQUIRED, WILL BE PROVIDED AS A SEPARATE FILE.

Richard Neal Koller, State of Florida, Professional Engineer License No. 49947.
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DESIGNED	A. GOODDEN
DRAWN	D. HAUBRICH
CHECKED	R. KOLLER
DATE	12/20/19



**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

DRAWING INDEX

PROJECT NO:	19750-066-01	DATE:	OCT 2020
INDEX NO:		DWG NO:	G2

FOR CONSTRUCTION

GENERAL NOTES

SUPERCEDED BY VOLUME 2, SHEET G3, GENERAL NOTE 20

ABBREVIATIONS

- TOPOGRAPHIC SURVEY INFORMATION FOR ALL AREAS EXCEPT THE STA SITE WAS PROVIDED BY SOUTHEASTERN SURVEYING AND MAPPING CORPORATION, A REGISTERED PROFESSIONAL LAND SURVEYOR, DATED NOVEMBER 21 2018. THE SURVEYOR'S DRAWINGS ARE INCLUDED IN THIS DRAWING SET. STA SITE TOPOGRAPHIC SURVEY INFORMATION IS LIDAR DATA PROVIDED BY BREVARD COUNTY.
- THE HORIZONTAL DATUM IS BASED ON FLORIDA STATE PLANE EAST, NORTH AMERICAN DATUM 1983 (NAD83), 2011 ADJUSTMENT. VERTICAL INFORMATION SHOWN REFERS TO NATIONAL GEODETIC SURVEY (NGS) POINT PID#DG8680 HAVING A RECORDED ELEVATION OF 22.98 FEET (NAVD 88).
- INFORMATION SHOWN HEREIN REPRESENTS CONDITIONS AS THEY EXISTED ON THE SURVEY DATE SHOWN AND CAN ONLY BE CONSIDERED INDICATIVE OF CONDITIONS AT THAT TIME.
- ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION INCLUDING BUT NOT LIMITED TO SOD, LANDSCAPING, ETC. NEW SOD SHALL MATCH ADJACENT SOD OR IF NONE IS PRESENT IT SHALL BE A BAHIA/ BERMUDA MIX.
- EXISTING DRAINAGE STRUCTURES WITHIN CONSTRUCTION LIMITS SHALL REMAIN, UNLESS OTHERWISE NOTED.
- EXISTING PAVEMENTS DAMAGED DUE TO CONSTRUCTION ARE TO BE REPLACED IN-KIND AT THE SAME LOCATION, WIDTH, AND GEOMETRY UNLESS OTHERWISE SHOWN IN THE PLANS. CONTRACTOR SHALL RECONSTRUCT ROADWAY AND DRIVEWAY PAVEMENT TO EXISTING GRADES UNLESS OTHERWISE SPECIFIED.
- CONTRACTOR WILL REMOVE BURIED OUT OF SERVICE UTILITY LINES WITHIN THE LIMITS OF ALL EXCAVATION. THE COST OF THIS WORK WILL BE INCIDENTAL TO AND INCLUDED IN THE COST OF THE WORK BEING PERFORMED WHEN THE LINES ARE ENCOUNTERED.
- ALL EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED. CONTRACTOR TO PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.
- THE CONTRACTOR SHALL NOTIFY UTILITY OWNERS THROUGH SUNSHINE ONE CALL OF FLORIDA, INC. (1-800-432-4770) TWO BUSINESS DAYS IN ADVANCE OF BEGINNING CONSTRUCTION ON THE JOB SITE.
- THE CONTRACTOR SHALL NOTIFY AND COORDINATE WITH FDOT TO LOCATE UTILITIES AND FDOT FACILITIES WITHIN THE I-95 CORRIDOR.
- CONTRACTOR SHALL NOTIFY SJRWMD IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR OMISSIONS IN CONSTRUCTION PLANS THAT WOULD AFFECT THE CONSTRUCTION OF THE PROJECT.
- DISPOSAL OF ALL EXCESS EARTHWORK MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR. DISPOSAL SITES SHALL BE AS DIRECTED BY SJRWMD, AS THE OWNER.
- CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THE FLORIDA STATE TRENCH SAFETY ACT.
- CONTRACTOR SHALL OBTAIN A TEMPORARY DEWATERING PERMIT PRIOR TO ANY DEWATERING ACTIVITIES. CONTRACTOR SHALL SUBMIT DEWATERING PLAN TO SJRWMD FOR APPROVAL. DURING DEWATERING OPERATIONS, CONTRACTOR SHALL NOT DISCHARGE DIRECTLY TO EXISTING WETLAND SYSTEMS, CANALS OR DITCHES.
- CONTRACTOR TO ESTABLISH ALL LINES, GRADES, AND REFERENCE POINTS AS REQUIRED FOR WORK UNDER THIS CONTRACT. ALL PROJECT LAYOUTS SHALL BE DONE USING A PROFESSIONAL SURVEYOR & MAPPER LICENSED IN THE STATE OF FLORIDA.
- CONTRACTOR TO PROVIDE ALL LABOR, INSTRUMENTS, STAKES AND OTHER MATERIALS NECESSARY FOR MARKING AND MAINTAINING ALL LINES AND GRADE.
- ALL EXISTING TREES OUTSIDE THE GRADING LIMITS ARE TO REMAIN.
- CONTRACTOR SHALL KEEP ALL SPOILS AND EQUIPMENT OUTSIDE OF THE TREE DRIPLINE FOR ALL TREES NOT DIRECTLY AFFECTED BY CONSTRUCTION.

- BURNING OF MATERIAL AND/OR DEBRIS IS PROHIBITED WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL CLEARED/GRUBBED MATERIAL OFFSITE.
- UNLESS OTHERWISE SPECIFIED ALL CONSTRUCTION SHALL ACCORDANCE TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2020), AND FDOT STANDARD PLANS (2020-21).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A STAGING AREA FOR MATERIAL AND EQUIPMENT STORAGE. THIS MAY INCLUDE LOCATING A SITE, OBTAINING PERMITS, AND MAKING THE SITE SUITABLE FOR USE. THE CONTRACTOR SHALL NOT USE RIGHT-OF-WAY FOR STAGING MATERIAL AND EQUIPMENT.
- THE CONTRACTOR SHALL PROVIDE MATERIAL AND CONSTRUCTION TESTING BY A FLORIDA QUALIFIED GEOTECHNICAL TESTING FIRM. ACCEPTANCE TESTING INCLUDES BUT IS NOT LIMITED TO CONCRETE, ROADWAY STABILIZATION AND BASE, ASPHALT DENSITY, AND LIMEROCK.
- AS-BUILT PLANS TO BE PROVIDED BY THE CONTRACTOR TO SJRWMD AND CERTIFIED BY A FLORIDA REGISTERED LAND SURVEYOR.
- ANY EXISTING FENCING THAT IS DAMAGED OR TEMPORARILY REMOVED DURING CONSTRUCTION MUST BE REPLACED IN-KIND. CONTRACTOR TO COORDINATE WITH PROPERTY OWNER REGARDING ANY FENCE REMOVAL OR REPLACEMENT.
- FENCE ADJACENT TO I-95 AND FENCE ADJACENT TO ST. JOHNS HERITAGE PARKWAY MUST BE IN PLACE AT ALL TIMES.
- CONTRACTOR TO COORDINATE REMOVAL OF SALVAGE EQUIPMENT. PROVIDE SJRWMD MINIMUM OF 30 DAYS NOTICE TO REMOVE/RELOCATE EQUIPMENT.
- THE CONTRACTOR WILL STABILIZE ALL EARTHWORK TO PREVENT EROSION.
- ALL FLAT BERM TOPS WILL BE STABILIZED WITH SEED.
- ALL SLOPES 4H:1V OR STEEPER SHALL BE STABILIZED WITH STAKED SOD.
- CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE DURING ALL PHASES OF CONSTRUCTION. THE EXISTING DRAINAGE SHALL NOT BE BLOCKED OF ADVERSELY AFFECTED BY CONSTRUCTION.



City Hall
2240 Minton Road
West Melbourne, FL 32904
Phone: (321) 727-7700
Fax: (321) 768-2390
www.westmelbourne.org

Development Closeout Checklist

- Complete all required construction inspections.
- Submit test results for compaction for pipe backfill, structure backfill (manholes and drainage structures) and for the road structural section (AC pavement and concrete).
- Submit materials tickets for concrete and AC pavement delivered to the project for public improvements.
- Provide As-builts for water, sewer, drainage, roads and site finish grades (note: city requirements exceed FDEP requirements). Please note that there are specific things the City requires for As-builts that are different than that required by other agencies. See the City's As-built drawing checklist.
- FDEP clearances for water and sewer improvements
- Schedule a final construction walk through (submit as-builts prior to scheduling walk through)
- Prepare bill(s) of sale for public improvements constructed by the developer that are being transferred to the city (include only the cost of portion transferred). Provide separate accounting for road improvements, drainage improvements, water improvements and wastewater improvements. Bill of sale shall be signed and sealed by the engineer of record.
- Using the cost(s) from above provide a 2 year maintenance bond for 20% of the value, for improvements transferred to the city
- Transfer easements for public improvements (min. 20' wide centered on improvements) to the city
- Coordinated submittal of performance bonds, maintenance bonds, and bills of sale with the City Clerk, City Planning Department and City Attorney's office.

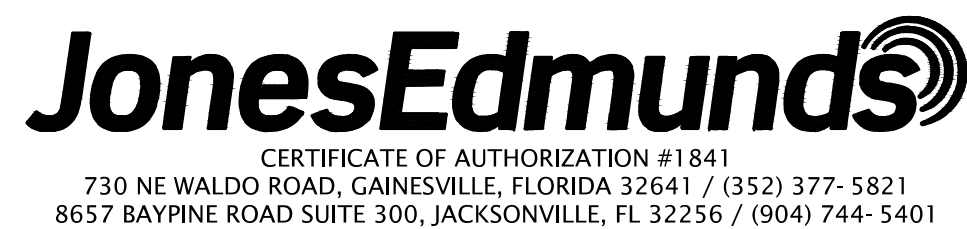
- AT AND AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
- ADJ ADJUSTABLE
- ALUM ALUMINUM
- ALT ALTERNATIVE
- AISI AMERICAN IRON STEEL INSTITUTE
- AMPS AMPERES
- ANSI AMERICAN NATIONAL STANDARDS INSTITUTE
- AR AIR RELEASE
- ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS
- AV AIR VACUUM
- AWWA AMERICAN WATER WORKS ASSOCIATION
- BLD BLIND
- BLDG BUILDING
- BF BLIND FLANGE
- BFP BACKFLOW PREVENTOR
- BFV BUTTERFLY VALVE
- BMP BEST MANAGEMENT PRACTICES
- BO BLOW-OFF
- BTM BOTTOM
- BTM/ BOTTOM OF
- BV BALL VALVE
- BW BLENDED WATER
- BYP BY-PASS
- CD CENTER OF DITCH/POND CENTER OF DITCH
- CEN CENTER
- CL, CENTERLINE
- CC CENTER TO CENTER
- CI CAST IRON
- CO CLEAN OUT
- CIP CAST IRON PIPE
- CISP CAST IRON SLIP PIECE
- CJ CONSTRUCTION JOINT
- CLR CLEAR
- CMF CONCRETE MONUMENT, FOUND
- CMP CORRUGATED METAL PIPE
- CONSTR CONSTRUCTION
- CONT CONTINUOUS
- CONC CONCRETE
- CON CONCENTRIC
- CORP CORPORATION
- CS CARBON STEEL
- CV CHECK VALVE
- DIA, DIAMETER
- DBI DITCH BOTTOM INLET
- DI DUCTILE IRON
- DIV DIVISION
- DWG DRAWING
- EA EACH
- ECC ECCENTRIC
- EF EACH FACE
- EG SUCH AS
- EL ELEVATION
- ELB ELBOW
- EOP EDGE OF PAVEMENT
- EOR ENGINEER OF RECORD
- E/R EDGE OF ROAD
- ERCP ELLIPTICAL REINFORCED CONCRETE PIPE
- EW EACH WAY
- FAB FABRICATED
- FAC FLORIDA ADMINISTRATIVE CODE
- FCA FLANGED COUPLING ADAPTER
- FCV FLOW CONTROL VALVE
- FDOT FLORIDA DEPARTMENT OF TRANSPORTATION
- F/F FINISHED FLOOR
- FG FIBERGLASS
- FIN FINISHED
- FJ FLANGE JOINT
- FL FLOOR
- FLEX FLEXIBLE
- FLG FLANGE(D)
- FM FORCE MAIN
- FND FOUNDATION
- FNPT FEMALE NATIONAL PIPE THREAD
- FRP FIBER REINFORCED PLASTIC
- FS FLORIDA STATUTES
- GALV GALVANIZED
- GPM GALLONS PER MINUTE
- GR GRADE
- GRU GAINESVILLE REGIONAL UTILITIES
- GS GALVANIZED STEEL
- GV GATE VALVE

- HDD HORIZONTAL DIRECTIONAL DRILL
- HDPE HIGH DENSITY POLYETHYLENE
- HORIZ HORIZONTAL
- HP HORSEPOWER
- HR HOUR
- HWL HIGH WATER LEVEL
- ID INSIDE DIAMETER
- IE INVERT ELEVATION
- IF INSULATED FLANGE
- IPS IRON PIPE SIZE
- JT JOINT
- LB POUNDS
- LBR LIMEROCK BEARING RATIO
- LF LINEAR FEET
- LIDAR LIGHT DETECTION AND RANGING
- LOC LIMITS OF CONSTRUCTION
- LR LONG RADIUS
- LWL LOW WATER LEVEL
- M/F MALE/FEMALE
- MAX MAXIMUM
- MES MITERED END SECTION
- MFR MANUFACTURER
- MH MANHOLE
- MIN MINIMUM
- MJ MECHANICAL JOINT
- MNPT MALE NATIONAL PIPE THREAD
- N NORTH
- NAD NORTH AMERICAN DATUM
- NAVD NORTH AMERICAN VERTICAL DATUM
- NC NORMALLY CLOSED
- NEC NATIONAL ELECTRIC CODE
- NHW NORMAL HIGH WATER
- NIC NOT IN CONTRACT
- NLW NORMAL LOW WATER
- No, # NUMBER
- NOM NOMINAL
- NPT NATIONAL PIPE THREAD
- NRS NONRISING STEM
- NTS NOT TO SCALE
- NSF NATIONAL SANITATION FOUNDATION
- NW NORTHWEST
- OC ON CENTER
- OD OUTSIDE DIAMETER
- OHE OVERHEAD ELECTRIC
- OS&Y OUTSIDE STEM & YOKE
- OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
- PE PLAIN END
- PI PRESSURE INDICATOR/GAUGE
- PL PLATE
- P/L PROPERTY LINE
- PP POWER POLE
- PRV PRESSURE REDUCING VALVE
- PSF POUNDS PER SQUARE FOOT
- PSI POUNDS PER SQUARE INCH
- PV PLUG VALVE
- PVC POLYVINYL CHLORIDE
- PVMT PAVEMENT
- R RADIUS
- RCP REINFORCED CONCRETE PIPE
- RED REDUCER
- REINF REINFORCED
- REQ, REQ'D REQUIRED
- RF REDUCING FLANGE
- RJ RESTRAINED JOINT
- RPM REVOLUTIONS PER MINUTE
- RPOJ RESTRAINED PUSH ON JOINT
- RST REGIONAL STORMWATER TREATMENT
- RTU REMOTE TELEMETRY UNIT
- RW RAW WATER
- ROW RIGHT-OF-WAY
- S SOUTH
- SAN SANITARY
- SCH SCHEDULE
- SE SOUTHEAST
- SEC SHOULDERED-END COUPLING
- SIM SIMILAR
- SJRWMD ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
- SP STANDARD PLANS (FDOT)
- SPI STANDARD PLANS INDEX (FDOT)
- SQ SQUARE
- SR SURGE RELIEF
- SRV SURGE RELIEF VALVE
- SS, SST STAINLESS STEEL
- STS STORMWATER GRAVITY PIPE
- STA STORMWATER TREATMENT AREA
- STD STANDARD
- STRUC STRUCTURE
- STL STEEL
- STS STORMWATER SYSTEM
- SY SQUARE YARD
- TBM TEMPORARY BENCHMARK
- TH TOTAL HEAD
- THD THREADED
- THK THICK
- TOB TOP OF BERM
- TOC TOP OF CONCRETE
- TOS TOE OF SLOPE
- TS THICKENED SLAB
- TYP TYPICAL
- UE UTILITY EASEMENT
- ULC ULTRASONIC LEVEL CONTROLLER
- VERT VERTICAL
- W WEST
- W/ WITH
- WM WATER MAIN
- WSE WATER SURFACE ELEVATION
- WT WEIGHT
- WWF WELDED WIRE FABRIC
- YR YEAR

SAVED: 8/5/2020 12:11 PM LHABERMAN Y:\19750-SJRWMD\PROJECTS\066-01-CRANE CREEK_M-1_FLOW_RESTORATION_DESIGN\CAD\DWGS\GENERAL\19750-066-01-603.DWG

FOR CONSTRUCTION

DESIGNED	A GOODDEN			
DRAWN	D HAUBRICH			
CHECKED	R KOLLER			
LTR.	DATE	REVISIONS	BY	APPRD.
A	12/20/19	REVISED PER COWM	RK	RK



**CRANE CREEK M-1 CANAL FLOW RESTORATION
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

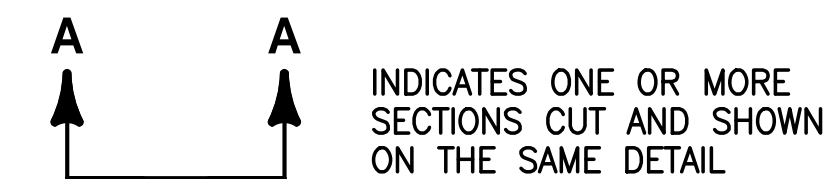
GENERAL NOTES & ABBREVIATIONS

AMY LIANE GOODDEN, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 60097
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY AMY LIANE GOODDEN ON THE DATE AT THE RIGHT.
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PROJECT NO:	DATE:
19750-066-01	OCT 2020
INDEX NO:	DWG NO:
	G3

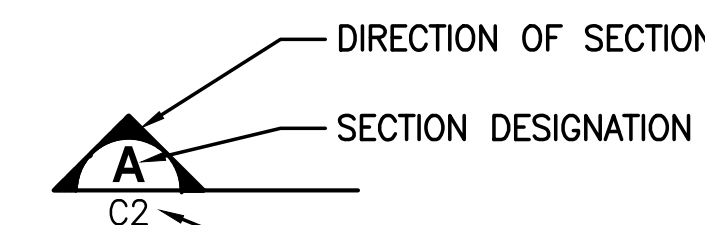
LEGEND

	MATCHLINE		DRAINAGE PIPE W/MITERED END SECTION
	UTILITY EASEMENT		STORM PIPE/CULVERT
	RIGHT-OF-WAY BOUNDARY		MANHOLE
	CENTERLINE		ELEVATION TAG
	LIMITS OF CONSTRUCTION		SOIL BORING
	SILT FENCE		WATER METER
	TURBIDITY CURTAIN		BENCHMARK
	LIMITS OF PLANTING		POWER POLE
	GRADE BREAK		WATER LEVEL
	WETLAND LINE		EXISTING CONCRETE MONUMENT, FOUND
	PROPOSED CONTOUR		SLOPE INDICATOR
	EXISTING CONTOUR		ALIGNMENT LINE DATA
	FENCE		ALIGNMENT CURVE DATA
	STORMWATER FORCE MAIN (HORIZONTAL DIRECTIONAL DRILL)		EXISTING SANITARY SEWER FORCE MAIN
	STORMWATER FORCE MAIN (OPEN CUT)		EXISTING POTABLE WATER MAIN
	GRAVITY STORM PIPING		
	REINFORCED CONCRETE PIPE (RCP)		
	DITCH BOTTOM INLET		
	MITERED END SECTION		
	STRUCTURE/PIPE DESIGNATION		
	STABILIZED DRIVE SURFACE		
	ASPHALT SURFACE		
	LIMITS OF MILLING AND RESURFACING		
	LIMEROCK		
	CROSS HATCHING INDICATES REMOVAL/DEMOLITION		
	CONCRETE		
	RIPRAP		
	HEDGE, BUSH, SHRUBS, WOODS		
	SPOT ELEVATION		
	PROPOSED SIGN		
	DRAWING DESIGNATION		
	COORDINATE POINT		
	DRAINAGE FLOW DIRECTION		



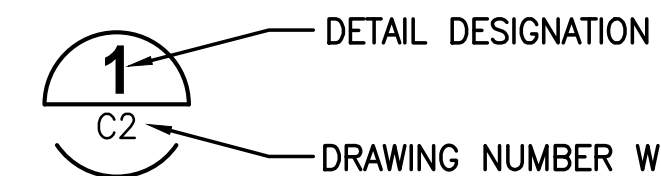
INDICATES ONE OR MORE SECTIONS CUT AND SHOWN ON THE SAME DETAIL

SECTION DESIGNATION



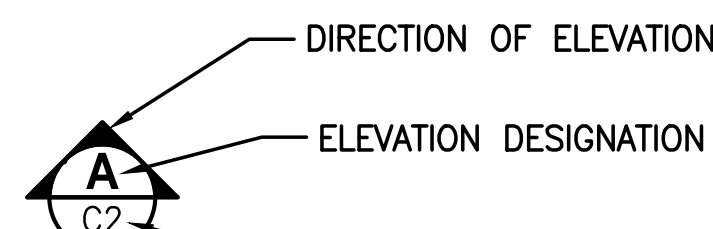
DIRECTION OF SECTION
SECTION DESIGNATION
DRAWING NUMBER WHERE SECTION APPEARS. DESIGNATIONS WITH "-" INDICATE SECTION APPEARS ON MULTIPLE SHEETS OR THE CURRENT SHEET.

SECTION DESIGNATION



DETAIL DESIGNATION
DRAWING NUMBER WHERE DETAIL APPEARS OR IS CUT. DESIGNATIONS WITH "-" INDICATE DETAIL APPEARS ON MULTIPLE SHEETS OR THE CURRENT SHEET.

DETAIL/SECTION DESIGNATION



DIRECTION OF ELEVATION
ELEVATION DESIGNATION
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ELEVATION DESIGNATION

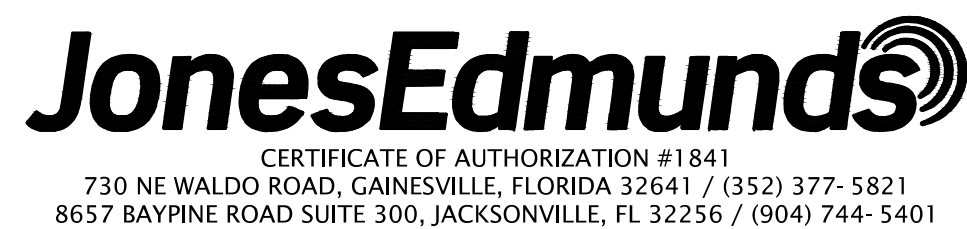
NOTES

- IN GENERAL, EXISTING FACILITIES AND UTILITIES ARE NOTED AS EXISTING AND/OR SHOWN IN LIGHT LINE WEIGHT (SCREENED). PROPOSED CONSTRUCTION IS SHOWN IN HEAVY LINE WEIGHT AND/OR IDENTIFIED AS PROPOSED. SCREENING IS ALSO USED IN ORDER TO CLARIFY DRAWINGS. FOR EXAMPLE, STRUCTURES ARE SCREENED ON MECHANICAL DRAWINGS TO HIGHLIGHT PIPING AND EQUIPMENT. THIS DRAFTING CONVENTION IS TYPICAL THROUGHOUT THE SET OF PLANS.
- THIS IS A STANDARD LEGEND DRAWING. SOME ITEMS MAY APPEAR IN LEGENDS AND NOT ON THE DRAWINGS.

FOR CONSTRUCTION

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CHECKED	R KOLLER	
LTR.	DATE	REVISIONS
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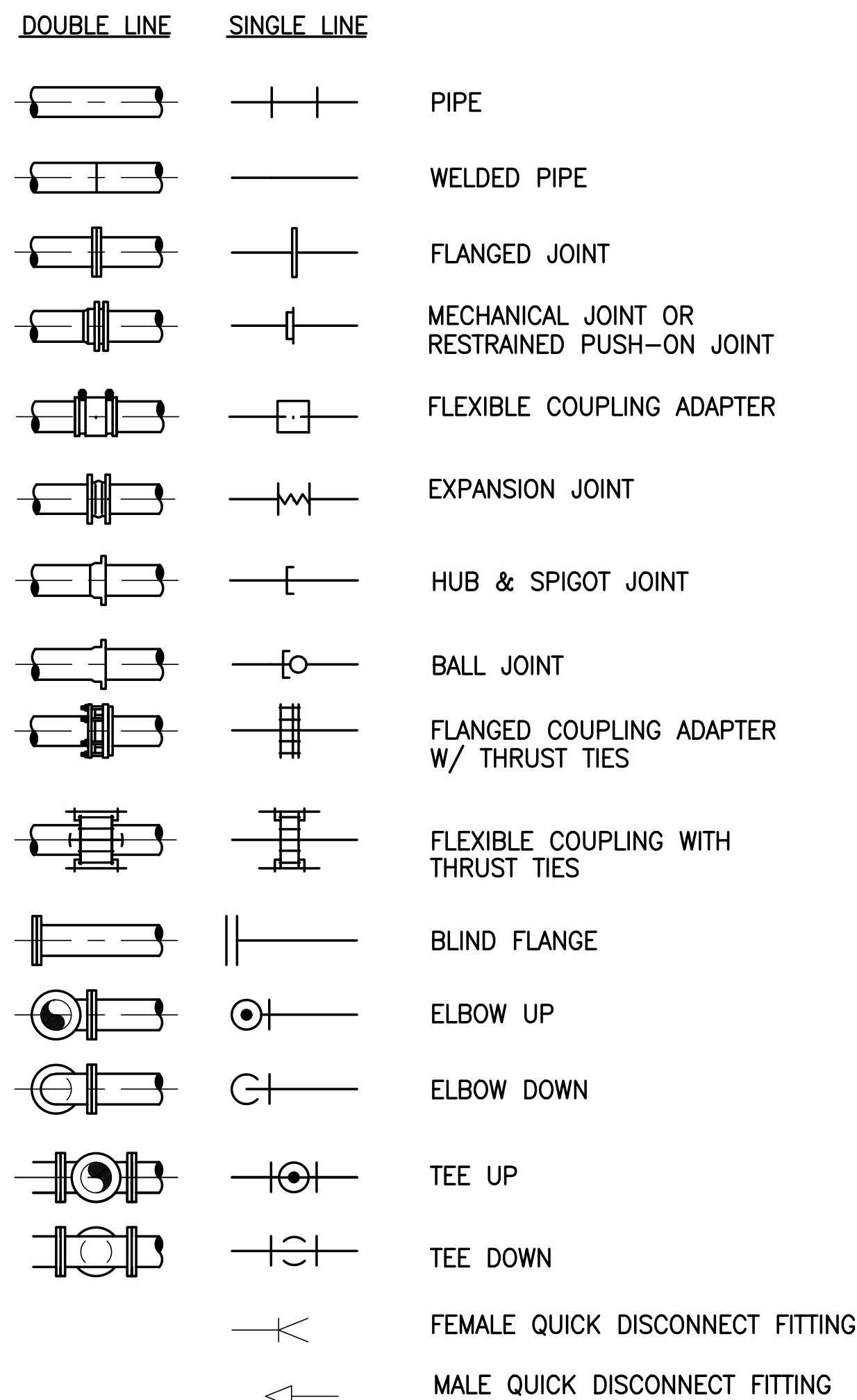


CRANE CREEK M-1 CANAL FLOW RESTORATION
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT

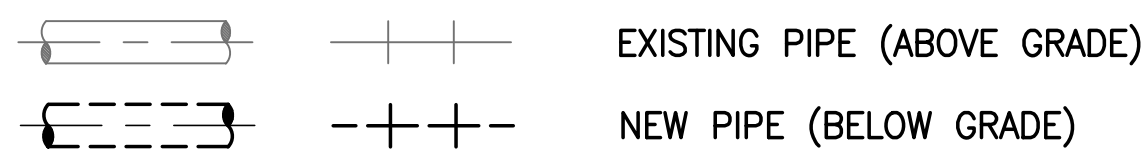
CIVIL LEGEND

AMY LIANE GOODDEN, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 60097	PROJECT NO:	DATE:
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY AMY LIANE GOODDEN ON THE DATE AT THE RIGHT.	19750-066-01	OCT 2020
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		G4

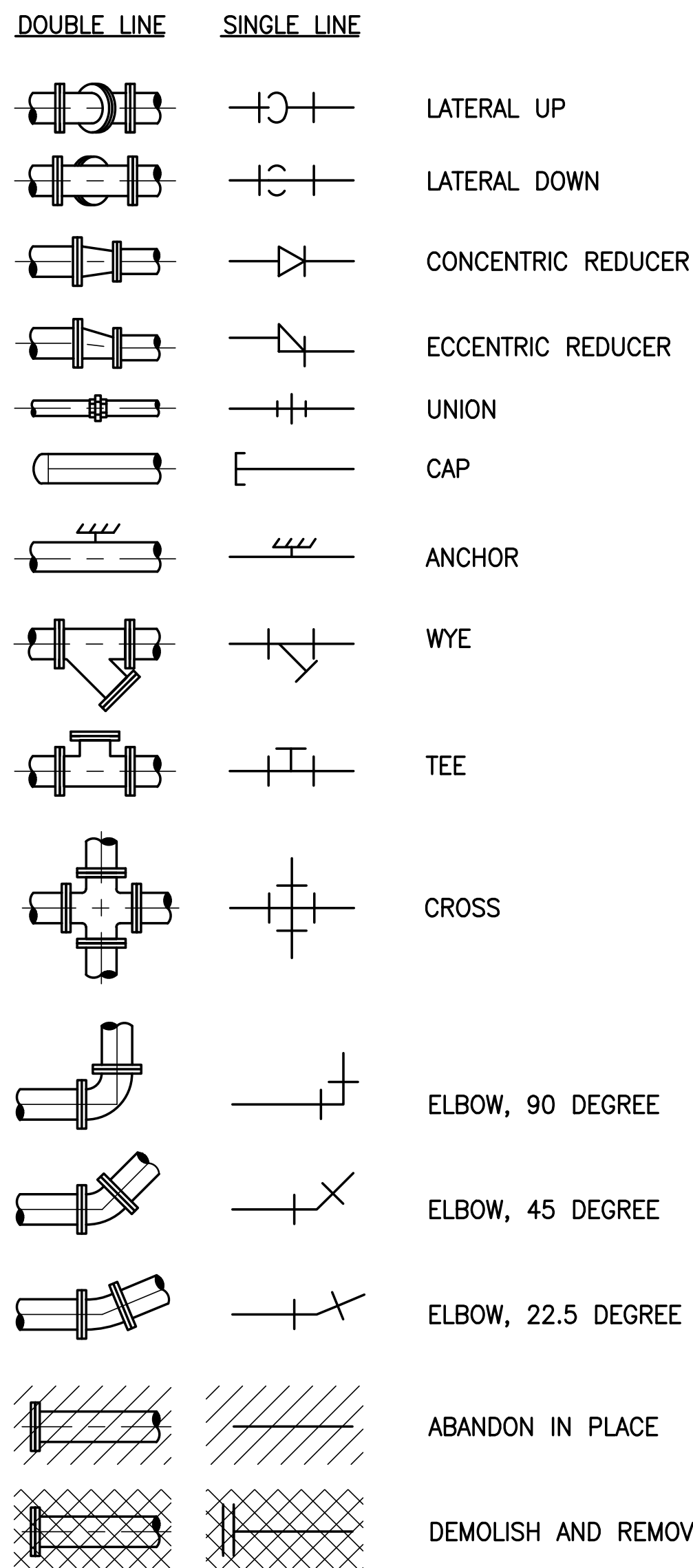
PIPING SYMBOLS



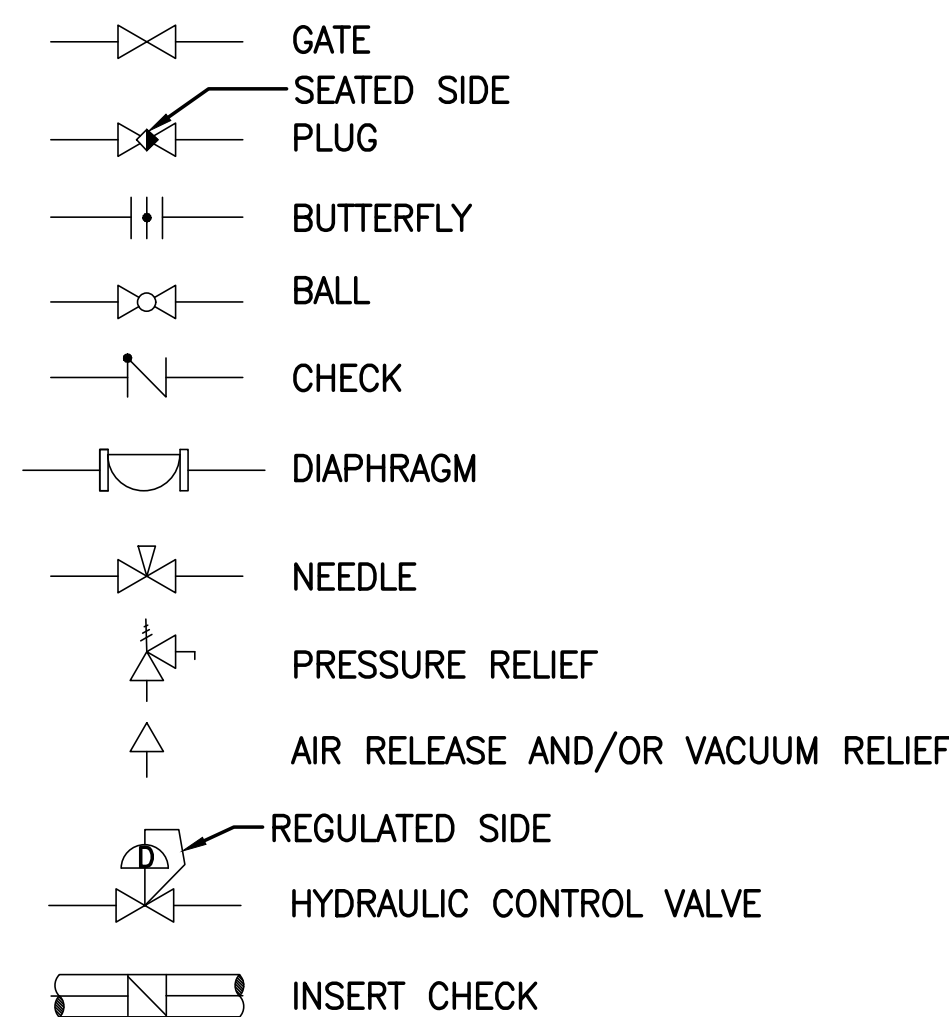
NOTE:
EXISTING PIPE AND EQUIPMENT ARE SHOWN IN THE DRAWINGS AS LIGHT-LINED AND/OR SCREENED. PROPOSED PIPE AND EQUIPMENT ARE SHOWN IN THE DRAWINGS AS HEAVY-LINED. ABOVE GRADE PIPE AND EQUIPMENT ARE SHOWN IN DRAWINGS AS SOLID-LINED EXCEPT FOR PIPELINE PLANS AND PROFILES. BELOW GRADE PIPE AND EQUIPMENT ARE SHOWN IN DRAWINGS AS DASHED-LINED. SEE BELOW EXAMPLES:



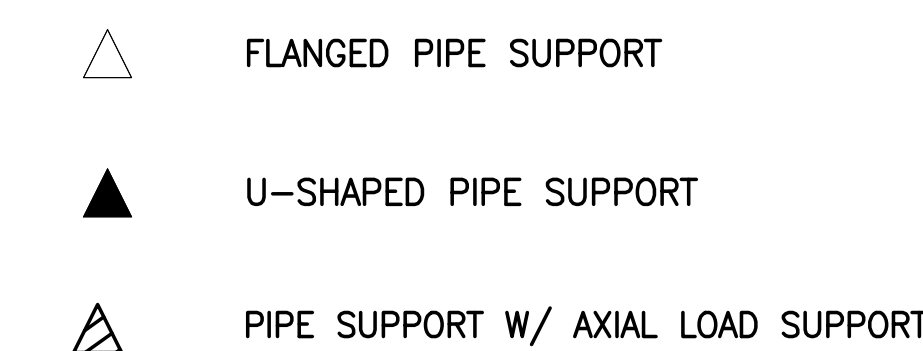
MECHANICAL LEGEND



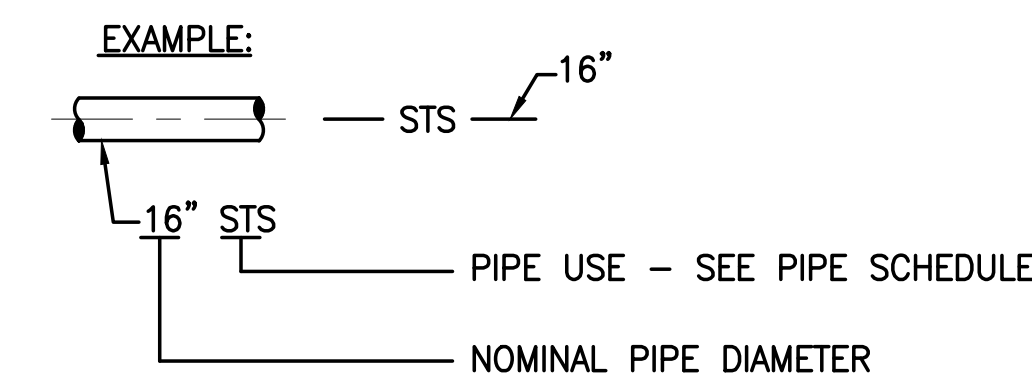
VALVE SYMBOLS



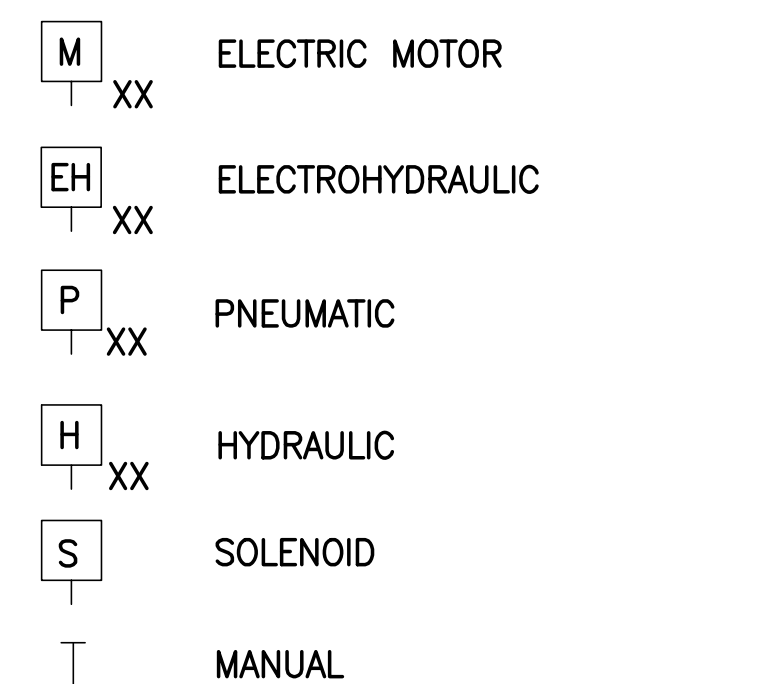
PIPE SUPPORT SYMBOLS



PIPING DESIGNATION



ACTUATOR SYMBOLS



NOTE:
ON LOSS OF PRIMARY POWER (PNEUMATIC, ELECTRICAL OR HYDRAULIC)
XX: FO = FAIL OPEN
FC = FAIL CLOSED
FLP = FAIL TO LAST POSITION

NOTE

1. THIS IS A STANDARD LEGEND DRAWING. SOME ITEMS MAY APPEAR IN LEGENDS AND NOT ON THE DRAWINGS.

PIPE SCHEDULE

FLOW STREAM IDENTIFICATION	PIPE/DUCT MATERIAL	PIPE MATERIAL ABBREV	SPECIFICATION NUMBER	PIPE LINING	NORMAL MAX OPERATING PRESSURE (PSIG)	FIELD TEST PRESSURE (PSIG)	EXPOSED PIPE PAINT SYSTEM	COLOR CODE	SPECIFIC NOTES	RESTRAINT SYSTEM NOTES
FM-1	DUCTILE IRON	DI	15155	CERAMIC EPOXY	25	100	12	BROWN STRIPE	(A)	(1)
FM-2	HIGH DENSITY POLYETHYLENE (DI PIPE SIZE)	HDPE, DR11	15146	N/A	25	100	N/A	BROWN STRIPE	N/A	(2)
FM-3	POLYVINYL CHLORIDE	PVC, DR18	15291	N/A	25	100	N/A	BROWN STRIPE	N/A	(1)
STS-1	REINFORCED CONCRETE	RCP		N/A	5	N/A	N/A	N/A	N/A	N/A
STS-2	POLYVINYL CHLORIDE	PVC, SDR 35		N/A	5	N/A	N/A	GREEN W/ "STORMWATER" STENCIL	N/A	N/A

GENERAL NOTES:

- COAT BURIED AND SUBMERGED PIPE PER PIPE SPECIFICATIONS.
- TEST LINES PER SECTION 15144 UNLESS NOTED OTHERWISE.

RESTRAINT SYSTEM NOTES:

- RESTRAIN EVERYTHING (FITTINGS, VALVES, ETC.) INCLUDING NEW TO EXISTING.
- RESTRAIN AT FITTINGS AND VALVES.

SPECIFIC NOTES:

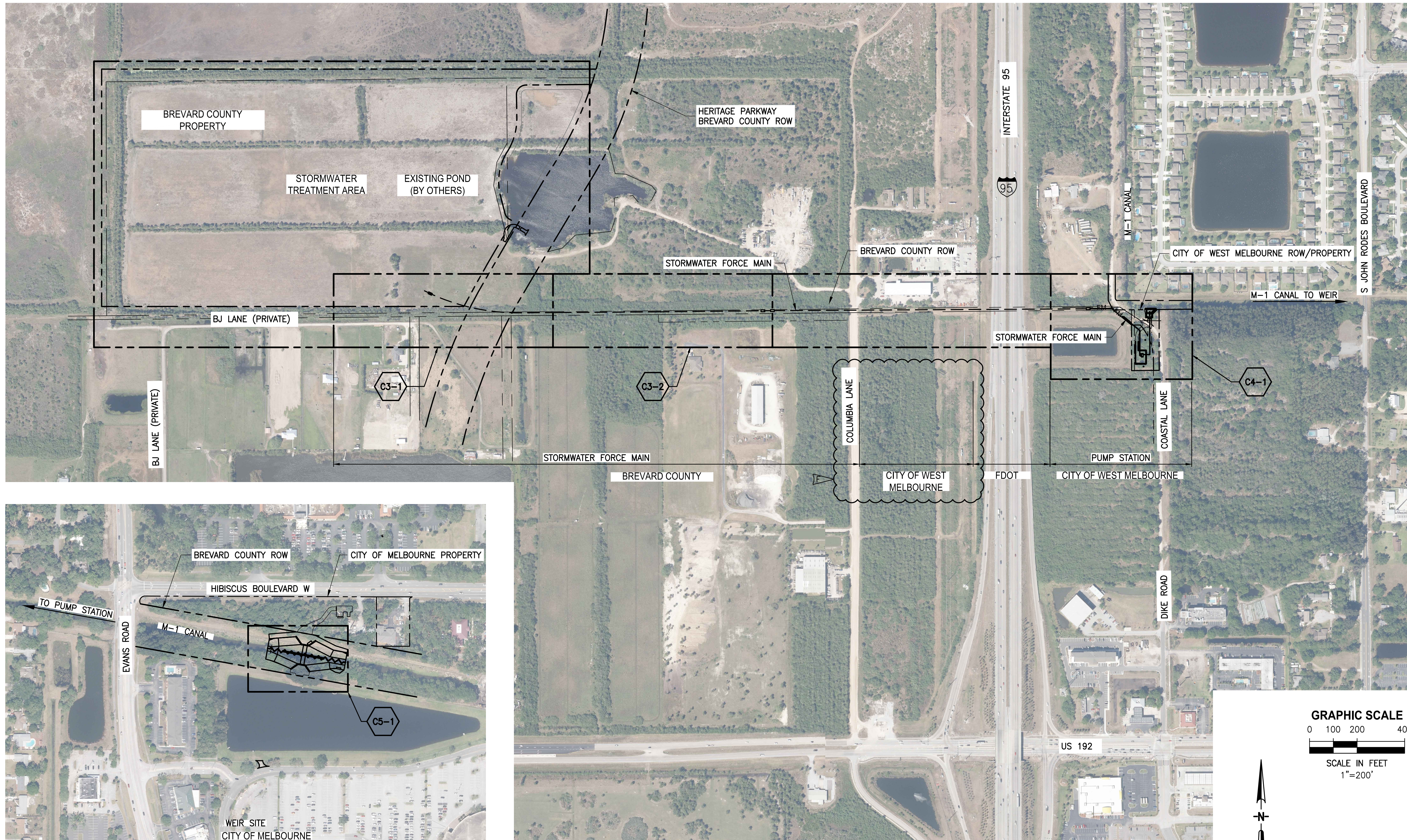
- APPLY ABOVE GRADE PAINT SYSTEM ONLY TO PIPING EXPOSED TO SUNLIGHT. PIPING UNDER FACILITY CANOPY STRUCTURE SHALL BE CLASSIFIED AS EXPOSED TO SUNLIGHT.

DESIGNED D YOUNG	<p>CERTIFICATE OF AUTHORIZATION #1841 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821 8657 BAYPINE ROAD SUITE 300, JACKSONVILLE, FL 32256 / (904) 744-5401</p>	CRANE CREEK M-1 CANAL FLOW RESTORATION ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT	MECHANICAL LEGEND & PIPE SCHEDULE	RICHARD NEAL KOLLER, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 49947	PROJECT NO: 19750-066-01	DATE: OCT 2020
DRAWN D HAUBRICH				THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY RICHARD NEAL KOLLER ON THE DATE AT THE RIGHT.	INDEX NO:	DWG NO: G5
CHECKED R KOLLER				PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.		

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FOR CONSTRUCTION

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FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.
F	10/30/20	BREVARD COUNTY RESPONSE	JA	RK
A	12/20/19	REVISED PER COWM	RK	RK

DESIGNED	A GOODDEN
DRAWN	D HAUBRICH
CHECKED	R KOLLER

JonesEdmunds
 CERTIFICATE OF AUTHORIZATION #1841
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
 8657 BAYPINE ROAD SUITE 300, JACKSONVILLE, FL 32256 / (904) 744-5401

**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

KEY MAP

AMY LIANE GOODDEN, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 60097 THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY AMY LIANE GOODDEN ON THE DATE AT THE RIGHT. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.	PROJECT NO: 19750-066-01	DATE: OCT 2020
	INDEX NO:	DWG NO: G8

THE FOLLOWING NOTES ARE APPLICABLE TO WORK AREAS IN BREVARD COUNTY RIGHT-OF-WAY.

BREVARD COUNTY PUBLIC WORKS ENGINEERING STANDARD DEVELOPMENT NOTES

GENERAL

- ALL CONSTRUCTION SHALL CONFORM TO FDOT DESIGN STANDARDS (LATEST EDITION), FDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION (LATEST EDITION), BREVARD COUNTY UTILITY SERVICES CRITERIA FOR WATER AND SANITARY SEWER SYSTEMS, AND BREVARD COUNTY CODE OF ORDINANCES.
- ISSUANCE OF CERTIFICATE OF COMPLETION: UPON COMPLETION OF CONSTRUCTION OF THE PROJECT AND PRIOR TO SCHEDULING OF THE FINAL INSPECTION, THE APPLICANT OR THEIR AUTHORIZED REPRESENTATIVE, SHALL PROVIDE THE FOLLOWING DOCUMENTATION TO BREVARD COUNTY PUBLIC WORKS ENGINEERING:
 - A CERTIFICATE OF COMPLETION - REQUEST FOR FINAL INSPECTION FORM. THE FORM MUST BE FROM A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA WITH THEIR SEAL AFFIXED. THE FORM CERTIFIES THAT THE IMPROVEMENTS HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS.
 - A COMPLETE SET OF TESTING REPORTS FOR ALL TESTS PERFORMED ON THE PROJECT WITHIN THE COUNTY RIGHT-OF-WAY AND/OR FOR ALL SUBDIVISION CONSTRUCTION REGARDLESS OF PUBLIC OR PRIVATE.
 - THREE SETS OF AS-BUILT DRAWINGS MEETING THE REQUIREMENTS OF SECTION 61G17, F.A.C., AND SIGNED AND SEALED BY A SURVEYOR LICENSED IN THE STATE OF FLORIDA. AT A MINIMUM, ALL AS-BUILT DRAWINGS MUST INCLUDE:
 - ROAD/PAVEMENT ELEVATIONS; ROADWAY CROSS SLOPES; PAVEMENT WIDTH; PAVEMENT SPOT ELEVATIONS NECESSARY TO CONFIRM STORMWATER DRAINAGE PATTERNS AT INTERSECTIONS AND SIDEWALKS; CURB SLOPES;
 - STORMWATER PIPE SIZES AND INVERT ELEVATIONS; LOCATION OF OUTFALL STRUCTURE(S) WITH AS-BUILT ELEVATIONS FOR ALL CONTROL STRUCTURE & SKIMMER ELEVATIONS SHOWN ON THE APPROVED PLANS; TOP OF BANK, GRADE BREAKS, BOTTOM ELEVATIONS FOR ALL STORMWATER PONDS OR BERM AREAS;
 - ANY OTHER ADDITIONAL AS-BUILT DATA THAT IS APPLICABLE TO THE PROJECT TO ENSURE COMPLETION IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLANS.
 - PIPE INSPECTION VIDEO PER FDOT REQUIREMENTS. (IF APPLICABLE PER NOTE 4 OF DRAINAGE NOTES)
 - IF A MUNICIPALITY IS ACCEPTING A PUBLIC WATER AND/OR SEWER SYSTEM, THERE MUST BE DOCUMENTATION INDICATING MUNICIPAL ACCEPTANCE OF THE CONSTRUCTION OF THE WATER AND/OR SEWER SYSTEM.
 - PUBLIC WORKS ENGINEERING WILL NOT SIGN OFF ON A TEMPORARY CERTIFICATE OF OCCUPANCY (TCO) FROM THE BREVARD COUNTY BUILDING DEPARTMENT UNTIL THE AS-BUILT DRAWINGS AND OTHER DOCUMENTATION LISTED ABOVE HAVE BEEN SUBMITTED AND REVIEWED BY PUBLIC WORKS ENGINEERING.
 - PROJECTS CONNECTED TO THE BREVARD COUNTY WATER, SANITARY SEWER, AND/OR RECLAIMED WATER SYSTEMS MUST OBTAIN FINAL APPROVAL FOR THE PROJECT DIRECTLY FROM BREVARD COUNTY UTILITY SERVICES AS OUTLINED IN THE BREVARD COUNTY CRITERIA FOR WATER AND SANITARY SEWERAGE SYSTEMS.
- UPON APPROVAL OF FINAL INSPECTION, AN ENGINEER'S CERTIFIED COST ESTIMATE WILL BE REQUIRED ALONG WITH A 2-YEAR MAINTENANCE BOND FOR ALL IMPROVEMENTS WITHIN THE COUNTY RIGHT-OF-WAY AS REQUIRED BY CHAPTER 88 OF THE BREVARD COUNTY CODE OF ORDINANCES. THE MAINTENANCE BOND SHALL BE 25% OF THE ENGINEER'S CERTIFIED COST ESTIMATE.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO THE COUNTY INFRASTRUCTURE DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE STRUCTURAL INTEGRITY OF THE ROADWAY ASPHALT, BASE, AND STABILIZED SUB-BASE, SIDEWALKS, STORMWATER DRAINAGE SYSTEM, DRAINAGE STRUCTURES, CURBS, GROUND COVER, WATER SYSTEMS, SANITARY SEWER SYSTEMS, AND RECLAIMED WATER SYSTEMS. ALL REPAIRS SHALL BE COMPLETED IN ACCORDANCE WITH FDOT AND BREVARD COUNTY STANDARDS. ALL REPAIRS SHALL BE COMPLETED PRIOR TO THE FINAL INSPECTION OF THE PROJECT. SIDEWALK PATCHING WILL NOT BE ACCEPTABLE.
- A VISUAL OR MECHANICAL INTERIOR INSPECTION OF EXISTING CULVERTS WILL BE REQUIRED PRIOR TO THE FINAL INSPECTION.
- ALL DISTURBED AREAS WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE SODDED. SEED & MULCH IS NOT ACCEPTABLE. SOD SHALL MATCH EXISTING SOD TYPE. BAHIA SOD SHALL BE USED IN AREAS ADJACENT TO VACANT PROPERTY. DISTURBED AREAS OUTSIDE THE CONSTRUCTION LIMITS WILL BE SODDED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL SURVEY MONUMENTATION. ANY SURVEY MONUMENTATION DISTURBED OR DESTROYED DURING CONSTRUCTION SHALL BE REPLACED BY A FLORIDA LICENSED SURVEYOR PRIOR TO ISSUANCE OF A CERTIFICATE OF COMPLETION FOR THE PROJECT.
- REGARDLESS OF PRIVATE OR PUBLIC DEDICATION, THERE SHALL BE NO UTILITY CONNECTIONS OR METER BOXES WITHIN PROPOSED OR EXISTING SIDEWALKS OR DRIVEWAY AREAS.
- ALL DIRECTIONAL BORES SHALL BE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 555, DIRECTIONAL BORES AND THE FDOT UTILITIES ACCOMMODATION MANUAL.
- ALL DIRECTIONAL BORES MUST EXTEND A MINIMUM OF EIGHT(8) FEET PAST THE EDGE OF PAVEMENT OF ANY ROADWAY OR COMMERCIAL DRIVEWAY. FOR RESIDENTIAL DRIVEWAYS AND SIDEWALKS, THE BORE MUST EXTEND THREE (3) FEET PAST THE EDGE ON EITHER SIDE.
- THE CONTRACTOR SHALL CONTROL DUST GENERATED BY THIS PROJECT AT ALL TIMES, SHALL PROVIDE STREET SWEEPING AS REQUIRED, AND PREVENT SEDIMENT FROM ENTERING INTO THE EXISTING DRAINAGE SYSTEM AT ALL TIMES.
- THE CONTRACTOR SHALL NOT EXCEED NOISE LEVELS AS SPECIFIED IN BREVARD COUNTY CODE OF ORDINANCES SECTION 62-2271.
- ALL STRIPING AND PAVEMENT MARKINGS IN THE COUNTY RIGHT-OF-WAY SHALL BE THERMOPLASTIC AND SHALL NOT BE APPLIED UNTIL A MINIMUM OF 30 DAYS AFTER THE PLACEMENT OF THE FINAL ASPHALT SURFACE. IN THE INTERIM, STRIPING SHALL BE PAINT AND ANY REQUIRED RPM'S INSTALLED PER THE PLANS. DO NOT STRIPE ACROSS MAN-HOLE LIDS OR DRAINAGE GRATES.
- REFLECTIVE PAVEMENT MARKINGS (RPM'S) SHALL BE INSTALLED IN ALL LOCATIONS AS REQUIRED BY FDOT DESIGN STANDARD, (LATEST EDITION)
- ANY PAVEMENT MARKINGS AND RPM'S THAT ARE DESTROYED, DAMAGED, OR DIMINISHED BY CONSTRUCTION ACTIVITIES FOR UP TO 500 FEET IN EITHER DIRECTION BEYOND THE LIMITS OF CONSTRUCTION SHALL BE REPLACED OR REFURBISHED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE COUNTY RIGHT-OF-WAY FOR THE DURATION OF CONSTRUCTION. AT A MINIMUM, THE CONTRACTOR SHALL MOW THE RIGHT-OF-WAY ON AN AS NEEDED BASIS AND MAINTAIN THE DRAINAGE CONVEYANCE SYSTEM. ADDITIONAL MAINTENANCE MAY BE REQUIRED ON A CASE BY CASE BASIS.

TRAFFIC CONTROL

- MOT PLAN REVIEW:** A PROJECT-SPECIFIC MAINTENANCE OF TRAFFIC (MOT) PLAN OR ROADWAY CLOSURE MOT/DETOUR PLAN MUST BE SUBMITTED TO BREVARD COUNTY TRAFFIC OPERATIONS (321-633-2077) FOR APPROVAL A MINIMUM OF TWO (2) WEEKS PRIOR TO START OF CONSTRUCTION. THE MOT PLAN SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND FDOT STANDARD INDEX 600 SERIES, (LATEST EDITIONS). PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS OR VMS) MAY BE REQUIRED TO SUPPLEMENT THE STANDARD MOT SIGNAGE.
- ROAD CLOSURES:** THE CONTRACTOR SHALL NOTIFY BREVARD COUNTY TRAFFIC OPERATIONS (321-633-2077) A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF THE PROPOSED START DATE OF CONSTRUCTION WITHIN THE RIGHT-OF-WAY. FOR EACH PHASE OF CONSTRUCTION, IF APPLICABLE, CONSTRUCTION SHALL NOT BEGIN UNTIL THE MOT PLAN IS APPROVED AND NOTIFICATIONS HAVE BEEN SENT TO AFFECTED AGENCIES. CERTAIN LOCATIONS MAY REQUIRE WORK IN THE RIGHT-OF-WAY TO BE PERFORMED AT NIGHT ONLY.

- LANE CLOSURES:** THE CONTRACTOR SHALL NOTIFY BREVARD COUNTY TRAFFIC OPERATIONS (321-633-2077) A MINIMUM OF ONE (1) WEEK IN ADVANCE OF THE PROPOSED START DATE OF CONSTRUCTION WITHIN THE RIGHT-OF-WAY. CONSTRUCTION SHALL NOT BEGIN UNTIL THE MOT PLAN IS APPROVED AND NOTIFICATIONS HAVE BEEN SENT TO AFFECTED AGENCIES. NO LANE CLOSURES WILL BE PERMITTED DURING PEAK HOUR TRAFFIC VOLUMES.
- ALL TRAFFIC CONTROL DEVICES SHALL MEET THE REQUIREMENTS OF THE MUTCD FOR STREETS AND HIGHWAYS, FDOT STANDARDS (LATEST EDITIONS), AND BREVARD COUNTY LAND DEVELOPMENT EXHIBIT #26.

DRAINAGE - ROADWAYS

- ALL DRAINAGE SYSTEM CONSTRUCTION SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS AND FDOT DESIGN STANDARDS, (LATEST EDITIONS).
- ALL RETICULINE STEEL GRATES SHALL BE HOT DIPPED GALVANIZED AND HAVE A TRAFFIC BEARING H-20 LOAD RATING.
- ALL GRATES UTILIZED WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE TRAFFIC BEARING H-20 LOADING.
- ALL STORMWATER PIPING WITHIN THE ROAD RIGHT-OF-WAY, REGARDLESS OF PUBLIC OR PRIVATE, OR STORMWATER PIPING THAT CONVEYS STORMWATER UNDER THE ROADWAY BETWEEN STORMWATER TREATMENT PONDS, SHALL BE INSPECTED PER SECTIONS 430-4.8, 430-4.8.1, AND 430-4.8.2 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, (LATEST EDITION). A COPY OF THE PIPE VIDEO SHALL BE PROVIDED TO THE COUNTY AS PART OF THE SUBMITTAL OF THE CERTIFICATION OF COMPLETION REQUEST FOR FINAL INSPECTION. THE COUNTY SHALL BE NOTIFIED ONE WEEK PRIOR TO THE START OF THE PIPE VIDEO INSPECTION PROCESS.
- ALL OPEN CUTS SHALL CONFORM TO LAND DEVELOPMENT EXHIBIT #25. FOR ALL OPEN CUTS, THE FLOWABLE FILL AND TEMPORARY ASPHALT SHALL BE INSTALLED WITHIN TWO (2) DAYS OF THE EXCAVATION (UNLESS OTHERWISE APPROVED IN WRITING BY BREVARD COUNTY PUBLIC WORKS ENGINEERING). PERMANENT ASPHALT INCLUDING MILLING AND RESURFACING, IF NEEDED, SHALL BE COMPLETED WITHIN THIRTY (30) DAYS OF EXCAVATION.
- THE CONTRACTOR SHALL REMOVE THE SHOULDER OF THE ROADWAY TO A POINT WHERE THE BASE MATERIAL OF THE EXISTING ROADWAY MEETS THE MINIMUM THICKNESS OF THE PROPOSED ROADWAY/COMMERCIAL DRIVEWAY CONNECTION.

CONCRETE PAVING AND SIDEWALK

- ALL DRIVEWAYS SHALL BE CONSTRUCTED PER FDOT INDEX 515 AND/OR BREVARD COUNTY STANDARD EXHIBITS UNLESS OTHERWISE NOTED.
- ALL CONCRETE SHALL MEET FDOT DESIGN MIX AND SPECIFICATIONS. CURING METHOD SHALL BE IN ACCORDANCE WITH THE FDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, (LATEST EDITION).
- ALL SIDEWALKS WITHIN THE COUNTY RIGHT-OF-WAY OR WITHIN A PUBLIC SIDEWALK EASEMENT SHALL BE CONSTRUCTED OF 6-INCH THICK, 3000-PSI CONCRETE WITH FIBER MESH REINFORCEMENT. CONCRETE SIDEWALKS (OR PEDWAYS) AND CONCRETE DRIVEWAY APRONS SHALL BE CONSTRUCTED OVER SOILS COMPACTED TO 98% DENSITY, OF AASHTO T-180. SHOULD EXISTING SOILS BE FOUND UNSUITABLE FOR COMPACTION, ADDITIONAL COMPATIBLE MATERIALS SHALL BE BROUGHT TO THE SITE FOR USE AS SUBGRADE. ALTERNATE METHODS OF COMPACTION MAY BE REQUIRED TO AVOID DAMAGE TO SURROUNDING PROPERTIES.
- CONSTRUCT SIDEWALK JOINTS PURSUANT TO FDOT INDEX 310 (LATEST EDITION). EXPANSION JOINTS SHALL BE EVERY 50 FEET, AND BETWEEN NEW AND OLD CONCRETE.
- TWO BY FOUR FORM BOARDS SHALL NOT BE USED FOR SIDEWALK/DRIVEWAY CONSTRUCTION. FORM BOARDS SHALL MATCH PROPOSED CONCRETE THICKNESS. SLIP FORMS SHALL NOT BE USED FOR SIDEWALK CONSTRUCTION. FIXED FORMWORK SHALL BE REQUIRED PER FDOT INDEX 300.
- THE CONTRACTOR SHALL PROVIDE A 3-FOOT CURB TRANSITION AT ALL CURB TERMINATIONS.
- ALL SIDEWALK AND ACCESS RAMP CONSTRUCTION SHALL COMPLY WITH THE DEPARTMENT OF JUSTICE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, FDOT DESIGN STANDARDS (LATEST EDITION), AND BREVARD COUNTY DEVELOPMENT REQUIREMENTS.

ASPHALT PAVING AND TESTING

THE FOLLOWING TESTING REQUIREMENTS APPLY TO:

- ALL PUBLIC AND PRIVATE SUBDIVISION PROJECTS PERMITTED THROUGH BREVARD COUNTY PLANNING AND DEVELOPMENT;
 - ALL SITE PLAN PROJECTS PERMITTED THROUGH BREVARD COUNTY PLANNING AND DEVELOPMENT REQUIRING WORK IN THE COUNTY RIGHT-OF-WAY;
 - ALL PROJECTS PERMITTED THROUGH BREVARD COUNTY PUBLIC WORKS FOR WORK WITHIN THE COUNTY RIGHT-OF-WAY.
- SECTIONS WITHIN THE FDOT STANDARD SPECIFICATIONS LIMITING TESTING REQUIREMENTS BASED ON LOT SIZE, SUB-LOT SIZE, TONNAGE, MINIMUM THICKNESS, OR SPREAD RATE WILL NOT APPLY TO THE PROJECTS LISTED ABOVE. AT A MINIMUM, ONE SET OF TESTS WILL BE REQUIRED FOR ALL PAVING PROJECTS LARGER THAN 50 TONS TOTAL AND ADDITIONAL TESTING MAY BE REQUIRED ON A CASE BY CASE EVALUATION OF THE PROJECT. TESTING REQUIREMENTS AT THE ASPHALT PLANT WILL NOT APPLY.

FOR S-TYPE ASPHALT AS SPECIFIED IN THE 2000-2004 FDOT STANDARD SPECIFICATION :

- THE CONTRACTOR SHALL PROVIDE A DESIGN MIX SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA AND APPROVED BY THE ENGINEER OF RECORD FOR THE PROJECT TO PUBLIC WORKS ENGINEERING FIVE BUSINESS DAYS PRIOR TO PAVING. THE MIX DESIGN SHALL MEET FDOT MINIMUM REQUIREMENTS AS OUTLINED IN SECTION 331-4 (2000). DESIGN MIXES BY FDOT CERTIFIED MIX DESIGNERS WILL NOT BE ACCEPTED.
- THE CONTRACTOR SHALL PROVIDE EXTRACTION/GRADATION TESTS IN ACCORDANCE WITH SECTION 331-4.4.2 (2000).
- THE CONTRACTOR SHALL PROVIDE MARSHALL STABILITY TESTING IN ACCORDANCE WITH SECTION 331-5.5.1 (2000).
- PAVEMENT SURFACE SHALL MEET ALL REQUIREMENTS SPECIFIED IN SECTION 330-13 (2000).
- THE CONTRACTOR SHALL PROVIDE SURFACE TOLERANCE TESTING FOR ROADWAYS WITH DESIGN SPEEDS OF 35 MPH OR GREATER IN ACCORDANCE WITH SECTION 330-13.3 (2000).
- QUALITY CONTROL CORE BORINGS SHALL BE OBTAINED FOR THICKNESS PER SECTION 330-2.2 ROADWAY, (2004) AND DENSITY PER SECTION 330-11, TABLE 330-3 (2000).
- ASPHALT TEST RESULTS FOR EACH CORE TAKEN ARE REVIEWED ON AN INDIVIDUAL BASIS FOR THICKNESS AND DENSITY. THICKNESS AND DENSITY AVERAGES WILL NOT BE ACCEPTED. NO UNDER TOLERANCE FOR THE THICKNESS OF EACH ASPHALT CORE WILL BE ALLOWED.

FOR SUPERPAVE (SP) ASPHALT AS SPECIFIED IN THE 2010 FDOT STANDARD SPECIFICATION :

- THE CONTRACTOR SHALL PROVIDE AN FDOT APPROVED DESIGN MIX, APPROVED BY THE ENGINEER OF RECORD FOR THE PROJECT, TO PUBLIC WORKS ENGINEERING FIVE BUSINESS DAYS PRIOR TO PAVING. THE MIX DESIGN SHALL MEET FDOT MINIMUM REQUIREMENTS AS OUTLINED IN SECTION 334-2 & 334-3 (2010). DESIGN MIXES BY FDOT CERTIFIED MIX DESIGNERS THAT ARE NOT FDOT APPROVED WILL NOT BE ACCEPTED.
- THE CONTRACTOR SHALL PROVIDE GRADATION AND BINDER CONTENT TESTING IN ACCORDANCE WITH SECTION 334-5. (2010) HOWEVER, THE SAMPLE(S) MAY BE TAKEN AT THE PROJECT LOCATION IN LIEU OF AT THE ASPHALT PLANT AS SPECIFIED. RESULTS MUST BE PROVIDED TO THE COUNTY WITHIN ONE WEEK AFTER THE COMPLETION OF PAVING.
- THE CONTRACTOR SHALL PROVIDE QUALITY CONTROL, DENSITY, AND THICKNESS TESTING IN ACCORDANCE WITH SECTIONS 334-3, 334-4, 334-5, AND 334-5.2.3 (2010).
- ASPHALT TESTING RESULTS FOR EACH CORE TAKEN ARE REVIEWED ON AN INDIVIDUAL BASIS FOR THICKNESS AND DENSITY. THICKNESS AND DENSITY AVERAGES, AS NOTED IN TABLE 334-5, NOTE 2, OF SECTION 334-5 (2010) WILL NOT BE ACCEPTED. NO UNDER TOLERANCE FOR THE THICKNESS OF EACH ASPHALT CORE WILL BE ALLOWED.
- PAVEMENT SURFACE SHALL MEET ALL REQUIREMENTS SPECIFIED IN SECTION 330-12 (2010).
- THE CONTRACTOR SHALL PROVIDE QUALITY CONTROL SURFACE TOLERANCE TESTING FOR ROADWAYS WITH DESIGN SPEEDS OF 35 MPH OR GREATER IN ACCORDANCE WITH 330-12 (2010).

FOR FRICTION COURSE FC-5 AS SPECIFIED IN THE 2010 FDOT STANDARD SPECIFICATION :

- THE CONTRACTOR SHALL PROVIDE AN FDOT APPROVED DESIGN MIX, APPROVED BY THE ENGINEER OF RECORD FOR THE PROJECT, TO PUBLIC WORKS ENGINEERING FIVE BUSINESS DAYS PRIOR TO PAVING. THE MIX DESIGN SHALL MEET FDOT MINIMUM REQUIREMENTS AS OUTLINED IN SECTION 337-4 (2010). DESIGN MIXES BY FDOT CERTIFIED MIX DESIGNERS THAT ARE NOT FDOT APPROVED WILL NOT BE ACCEPTED.
- THE CONTRACTOR SHALL PROVIDE GRADATION AND BINDER CONTENT TESTING IN ACCORDANCE WITH SECTION 337-5 & 337-6 (2010). THE SAMPLE(S) MAY BE TAKEN AT THE PROJECT LOCATION IN LIEU OF AT THE ASPHALT PLANT AS SPECIFIED. RESULTS MUST BE PROVIDED TO THE COUNTY WITHIN ONE WEEK AFTER THE COMPLETION OF PAVING.
- PAVEMENT SURFACE SHALL MEET ALL REQUIREMENTS SPECIFIED IN SECTION 330-12 (2010).
- QUALITY CONTROL CORE BORINGS SHALL BE OBTAINED FOR THICKNESS TESTING USING SECTION 334-5.2.3 (2010).
- THE CONTRACTOR SHALL PROVIDE QUALITY CONTROL SURFACE TOLERANCE TESTING FOR ROADWAYS WITH DESIGN SPEEDS OF 35 MPH OR GREATER IN ACCORDANCE WITH SECTION 330-12 (2010).

FOR SUPERPAVE FRICTION COURSES FC-9.5 & FC-12.5 AS SPECIFIED IN THE 2010 FDOT STANDARD SPECIFICATIONS:

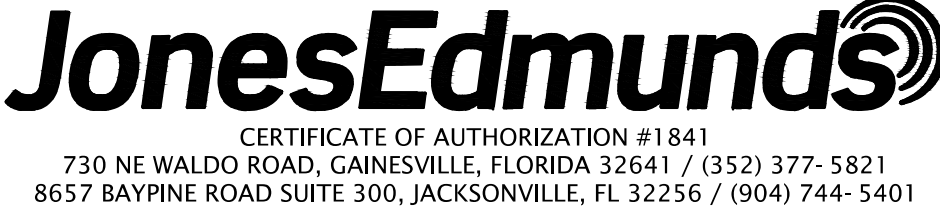
- THE CONTRACTOR SHALL PROVIDE AN FDOT APPROVED DESIGN MIX, APPROVED BY THE ENGINEER OF RECORD FOR THE PROJECT, TO PUBLIC WORKS ENGINEERING FIVE BUSINESS DAYS PRIOR TO PAVING. THE MIX DESIGN SHALL MEET FDOT MINIMUM REQUIREMENTS AS OUTLINED IN SECTION 337-4 (2010). DESIGN MIXES BY FDOT CERTIFIED MIX DESIGNERS THAT ARE NOT FDOT APPROVED WILL NOT BE ACCEPTED.
- THE CONTRACTOR SHALL PROVIDE GRADATION AND BINDER CONTENT TESTING IN ACCORDANCE WITH SECTION 337-5 & 337-6 (2010). THE SAMPLE(S) MAY BE TAKEN AT THE PROJECT LOCATION IN LIEU OF AT THE ASPHALT PLANT, AS SPECIFIED. RESULTS MUST BE PROVIDED TO THE COUNTY WITHIN ONE WEEK AFTER THE COMPLETION OF PAVING.
- THE CONTRACTOR SHALL PROVIDE QUALITY CONTROL, DENSITY, AND THICKNESS TESTING IN ACCORDANCE WITH SECTIONS 337-1, 337-3, 337-4, 337-6, 337-8, AND 334-5.2.3 (2010).
- ASPHALT TESTING RESULTS FOR EACH CORE TAKEN ARE REVIEWED ON AN INDIVIDUAL BASIS FOR THICKNESS AND DENSITY. THICKNESS AND DENSITY AVERAGES, AS NOTED IN TABLE 334-5, NOTE 2, OF SECTION 334-5 (2010) WILL NOT BE ACCEPTED. NO UNDER TOLERANCE FOR THE THICKNESS OF EACH ASPHALT CORE WILL BE ALLOWED.
- PAVEMENT SURFACE SHALL MEET ALL REQUIREMENTS SPECIFIED IN SECTION 330-12 (2010).
- THE CONTRACTOR SHALL PROVIDE QUALITY CONTROL SURFACE TOLERANCE TESTING FOR ROADWAYS WITH DESIGN SPEEDS OF 35 MPH OR GREATER IN ACCORDANCE WITH 330-12 (2010).

CONCRETE BOX CULVERT NOTES

- ALL CONSTRUCTION SHALL COMPLY WITH FDOT DESIGN STANDARDS (LATEST EDITION), FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), AND BREVARD COUNTY STANDARDS.
- PRIOR TO START OF CONSTRUCTION, THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING STRUCTURAL ENGINEERING DRAWINGS (SIGNED & SEALED BY A PROFESSIONAL ENGINEER LICENSED & REGISTERED IN THE STATE OF FLORIDA) FOR ALL COMPONENTS OF THE CONCRETE BOX CULVERTS, INCLUDING WINGWALLS, TOE SLAB & CUTOFF WALLS, AND HEADWALLS. THE DRAWINGS SHALL INCLUDE QUANTITIES TABULATIONS FOR CLASS IV CONCRETE (CUBIC YARDS), AND REINFORCING STEEL (POUNDS). THE DESIGN MUST BE BASED ON FDOT'S LOAD & RESISTANCE FACTOR DESIGN (LRFD) PROGRAM. SEPARATE DRAWINGS ARE REQUIRED FOR ALL WINGWALLS, TOE SLABS & CUTOFF WALLS, AND HEADWALLS, WHICH MUST BE CAST-IN-PLACE PER FDOT SPECIFICATIONS.
- ALL BOX CULVERT MATERIALS THAT ARE TO BE INSTALLED UNDER ROADWAYS AND/OR DRIVEWAYS ARE TO BE DELIVERED TO SITE (AND PASS INITIAL INSPECTIONS) PRIOR TO START OF DEMOLITION OF EXISTING SYSTEM.
- CONCRETE (PRECAST OR CAST-IN-PLACE) REQUIREMENTS: CLASS IV (6500 PSI).
- REINFORCING STEEL REQUIREMENTS: ASTM A615 GRADE 60 DEFORMED BAR UNLESS OTHERWISE NOTED, WITH A MINIMUM CLEARANCE OF 3" (THREE INCHES), UNLESS OTHERWISE SHOWN. EQUAL AREA SUBSTITUTION OF WELDED WIRE (WWW) REINFORCEMENT IS PERMITTED.
- REFER TO FDOT INDEX 292 FOR PRECAST CONCRETE BOX CULVERT SLAB & WALL THICKNESSES, REINFORCEMENT AREAS, GENERAL NOTES (SHEET 2 OF 14), AND WELDED WIRE REINFORCEMENT BENDING DIAGRAMS (SHEET 14 OF 14).
- REFER TO FDOT INDEX 289 FOR CONCRETE BOX CULVERT DETAILS RELATED TO LRFD.
- REFER TO FDOT INDEX 291 FOR SUPPLEMENTAL DETAILS FOR PRECAST CONCRETE BOX CULVERTS.
- IF REQUIRED, BY-PASS PUMPING AND/OR PIPING SHALL BE APPROVED BY BREVARD COUNTY PUBLIC WORKS PRIOR TO THE START OF CONSTRUCTION.

Y:\19750-SJRWMD\PROJECTS\066-01_CRANE CREEK M-1_FLOW RESTORATION DESIGN\CAD\DWGS\GENERAL\19750-066-01-G09.DWG
SAVED: 6/24/2020 6:47 PM MHOFFMAN

PROJECT NAME: DWG DESIGNED/DRAWN BY: JB CHECKED BY: RBS		DATE: 10-10-12	REVISION: 1. FOR DISTRIBUTION	BY:	PREPARED BY: PUBLIC WORKS DEPARTMENT ENGINEERING PROGRAM BREVARD COUNTY BOARD OF COUNTY COMMISSIONERS 2725 JUDGE FRAN JAMESON WAY, RM. 204, BLDG. A, VIERA, FL 32940 Ph. (321) 637-5437, Fx. (321) 633-2083	DATE: OCTOBER 2012	APPROVED BY: RICHARD B. SZPYRKA, P.E. ENGINEERING PROGRAM MANAGER	BREVARD COUNTY PUBLIC WORKS ENGINEERING STANDARD DEVELOPMENT NOTES		SHEET 1 OF 1
DESIGNED	A GOODDEN									
DRAWN	D HAUBRICH									
CHECKED	R KOLLER									
LTR.	DATE	REVISIONS	BY	APPRD.						



CRANE CREEK M-1 CANAL FLOW RESTORATION ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT

BREVARD COUNTY PUBLIC WORKS ENGINEERING STD DEVELOPMENT NOTES

ANY LIANE GOODDEN, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 60097

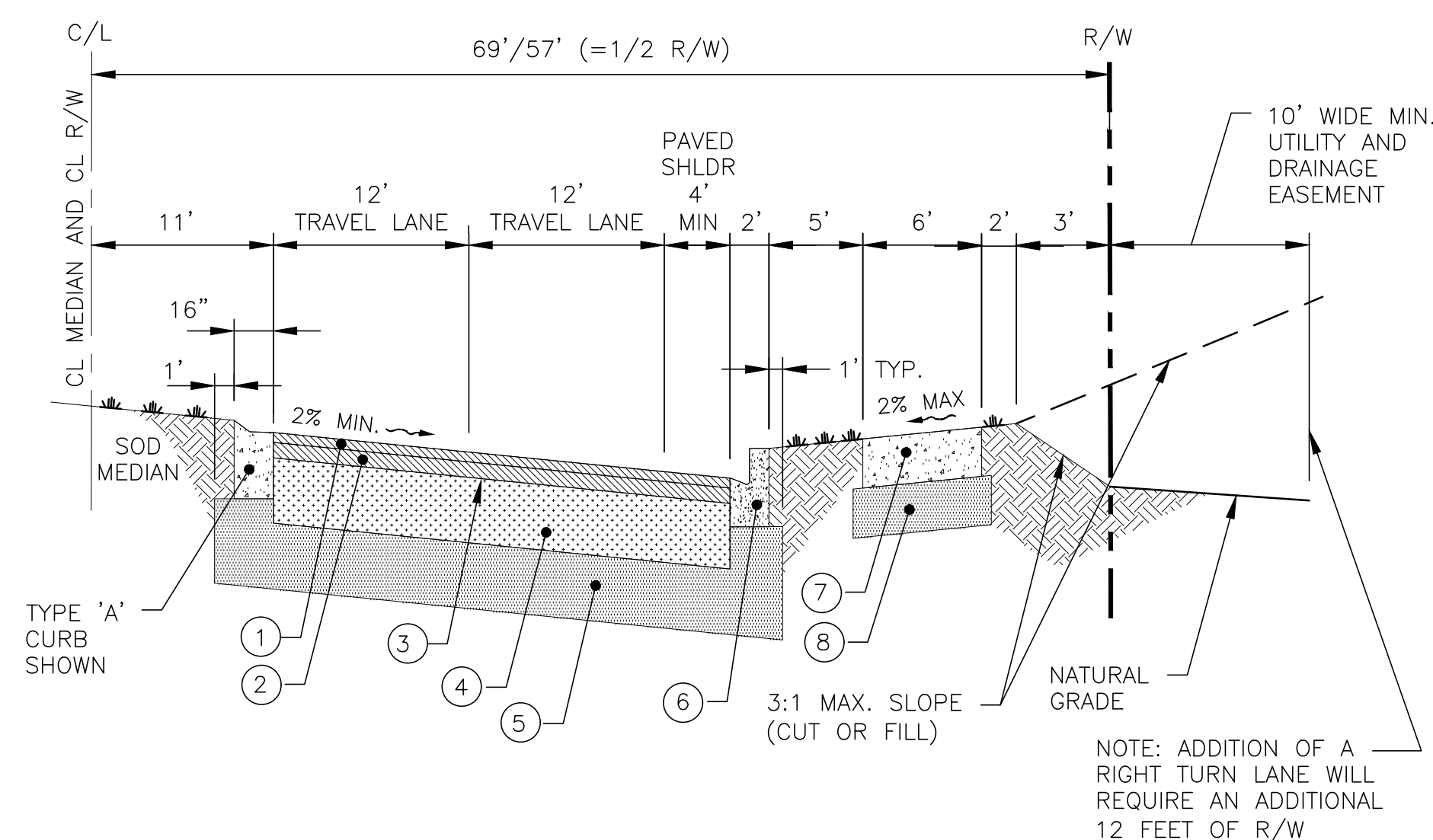
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PROJECT NO: 19750-066-01 DATE: OCT 2020

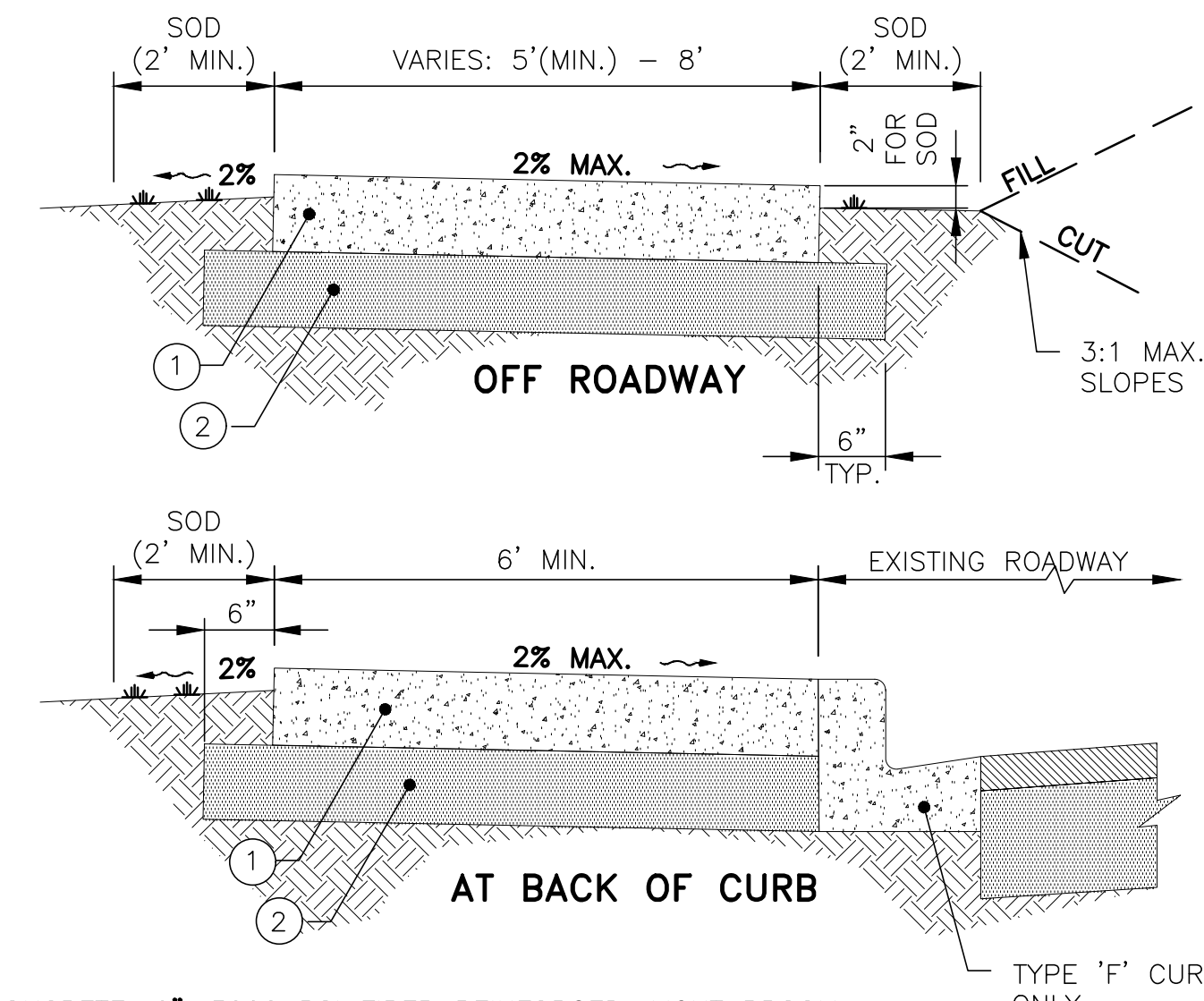
INDEX NO: DWG NO: G9

FOR CONSTRUCTION



- ① FRICTION COURSE: 1-1/2" TYPE FC-12.5 OPEN GRADED FRICTION
- ② STRUCTURAL COURSE: 2" TYPE S-1 ASPHALTIC CONCRETE, OR SP-12.5 SUPERPAVE MIX, TESTED PER FDOT AND/OR BREVARD COUNTY STANDARD REQUIREMENTS
- ③ PRIME COAT: FDOT APPROVED PRIME COAT PER STANDARD SPECIFICATION SECTION 300
- ④ BASE COURSE: 10" LIMEROCK OR CEMENTED COQUINA, MIN. LBR OF 100, COMPACTED TO 98% DENSITY PER AASHTO T-180
- ⑤ SUBGRADE: 12" TYPE "B" STABILIZED TO A MIN. LBR OF 40, COMPACTED TO 98% DENSITY PER AASHTO T-180
- ⑥ CURB AND GUTTER: FDOT TYPE "F" CURB AND GUTTER SHALL BE 3000 PSI MIN. AND CONSTRUCTED IN ACCORDANCE WITH FDOT INDEX 300
- ⑦ PEDWAY: 6" THICK FDOT CLASS 1, 3000 PSI FIBER REINFORCED CONCRETE WITH LIGHT BROOM FINISH. CROSS SLOPE SHALL BE BETWEEN 1.0% MIN. AND 2.0% MAX.
- ⑧ PEDWAY SUBGRADE: 6" TYPE "B" STABILIZED TO A MIN. LBR OF 40, COMPACTED TO 98% DENSITY PER AASHTO T-180

ARTERIAL (MAJOR AND MINOR) URBAN - HALF CROSS SECTION



- ① CONCRETE: 6", 3000 PSI FIBER REINFORCED. LIGHT BROOM FINISH, CURED WITH A WHITE CURING COMPOUND AS PER FDOT STANDARD SPECIFICATION SECTION 925-2.1.
- ② SUBGRADE: 6", COMPACTED TO A MINIMUM OF 98% MAX. DENSITY - AASHTO T-180

PEDWAY CONSTRUCTION REQUIREMENTS

1. PEDESTRIAN WAY SHALL BE CONSTRUCTED OF FDOT CLASS 1, 3000 PSI FIBER REINFORCED CONCRETE. NO UNDER TOLERANCE WILL BE ACCEPTED. IF 28 DAY BREAKS FALL BELOW STRENGTH, CONTRACTOR SHALL REMOVE AND RECONSTRUCT PEDWAY.
2. SIDEWALKS CONSTRUCTED ACROSS DRIVEWAYS SHALL MEET THE REQUIREMENTS OF FDOT DESIGN STANDARDS, LATEST EDITION, INDEX 515 "TURNOUTS".
3. SIDEWALK SLOPES AND RAMPS SHALL MEET ADA REQUIREMENTS AND THOSE OF FDOT INDEX 304.
4. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SODDED TO MATCH PREVIOUS CONDITION OR BETTER, BY CONTRACTOR.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF ANY ITEMS DAMAGED DURING CONSTRUCTION PROCESS, TO ORIGINAL CONDITION OR BETTER.
6. CONTRACTION JOINTS SHALL BE SAW CUT 1 1/2" DEEP (MIN.) ON 5-FOOT CENTERS; EXPANSION JOINTS SHALL BE AT MAX. 50-FOOT CENTERS, AT THE PC AND PT OF CURVES, JUNCTIONS WITH EXISTING AND NEW SIDEWALKS, AND WHERE NEW SIDEWALKS ABUT CURBS, DRIVEWAYS, AND SIMILAR STRUCTURES.
7. AN EIGHT (8) FOOT WIDE PEDWAY MAY BE CONSTRUCTED ON ONE SIDE OF THE STREET, VERSUS CONSTRUCTING A 5' WIDE SIDEWALK ON BOTH SIDES, ONLY UPON APPROVAL FROM LAND DEVELOPMENT.

PEDWAY CONSTRUCTION DETAILS

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FOR CONSTRUCTION

DESIGNED	A GOODDEN	
DRAWN	D HAUBRICH	
CHECKED	R KOLLER	
LTR.	DATE	REVISIONS

BY	APPRD.

JonesEdmunds
CERTIFICATE OF AUTHORIZATION #1841
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
 8657 BAYPINE ROAD SUITE 300, JACKSONVILLE, FL 32256 / (904) 744-5401

CRANE CREEK M-1 CANAL FLOW RESTORATION
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT

BREVARD COUNTY LAND
DEVELOPMENT EXHIBITS

AMY LIANE GOODDEN, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 60097
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PROJECT NO:	19750-066-01	DATE:	OCT 2020
INDEX NO:		DWG NO:	G10

PROPERTY LINE (TYP)
(BREVARD COUNTY
OR 8184, PG 1303)

CURRENT LIDAR SURVEY DATA

CURRENT LIDAR SURVEY DATA

FUTURE PROPOSED ST.
JOHNS HERITAGE PARKWAY
GRADING (BY OTHERS)

24" RCP
FL = 11.3'

ST. JOHNS HERITAGE PARKWAY
FLOODPLAIN COMPENSATION
EL = 15.0'

OF-11: CONC ENDWALL

24" RCP
N IE = 9.2'
S IE = 9.5'

OF-1: DBI TYPE-C
BOTTOM EL = 9.2'
WEIR EL = 15.7'

POND I

**SEE VOLUME 2 FOR
REVISED DRAWING**

FP-13: CONC ENDWALL
FL = 8.9'

OF-HW: CONC ENDWALL

POND H

24" RCP
N IE = 10.0'
S IE = 10.0'

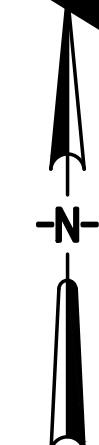
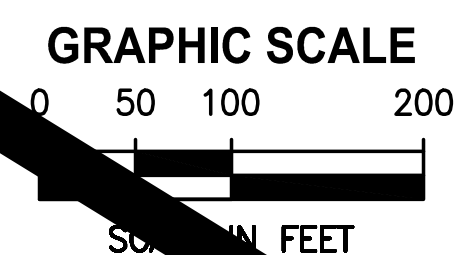
OF-H: DBI TYPE-C
BOTTOM EL = 9.7'
WEIR EL = 15.7'

GENERAL NOTES

- JONES EDMUNDS DOES NOT HAVE A COMPLETE SURVEY OF THE PROPERTY FOR THE STORMWATER TREATMENT AREA. THE DATA PRESENTED HEREIN ARE AN APPROXIMATION OF THE GRADES THAT WILL EXIST AFTER THE ST. HERITAGE PARKWAY IS CONSTRUCTED AND AFTER THE CRANE CREEK M-1 CANAL RESTORATION PROJECT IS COMPLETED. V1 IS A COMPOSITE CREATED FROM THE REFERENCED DATA LISTED HERE.
- THE FOLLOWING DATA WERE USED TO PREPARE THE EXISTING CONDITIONS:
 - 2007 BREVARD COUNTY LIDAR DATA. SOURCE DATA PROVIDES ELEVATIONS BASED ON NAVD88.
 - ST. JOHNS HERITAGE PARKWAY FROM JR. DAVIS AS-BUILT, 4/13/2020 CAD FILES FOR THE ST. JOHNS HERITAGE PARKWAY.

- BORROW AREA SURVEYS PREPARED BY JR DAVIS CONSTRUCTION COMPANY FOR THE PURPOSE OF PROVIDING INTERMEDIATE CONSTRUCTION DATA TO BREVARD COUNTY DURING THE ST. JOHNS HERITAGE PARKWAY CONSTRUCTION PROJECT. THE SURVEYS ARE DATED 3/13/2020. SOURCE DATA PROVIDES ELEVATIONS BASED ON NAVD88.
- THE ST. JOHNS HERITAGE PARKWAY ROW LINE WAS DRAWN BY JONES EDMUNDS USING DATA PRESENTED IN THE PRELIMINARY (06/25/2011) ST JOHNS HERITAGE PARKWAY RIGHT-OF-WAY MAP. THE FINAL ROW WILL BE FILED AND PLATTED AT THE COMPLETION OF THE ST JOHNS HERITAGE PARKWAY PROJECT.
- THE PROPERTY BOUNDARY IS BASED ON THE PROPERTY

- PRIOR TO CONSTRUCTION, THE CONTRACTOR WILL SURVEY THE PROPERTY BOUNDARY AND RIGHTS-OF-WAY AND ENSURE ALL PROPOSED WORK IS WITHIN THE PROPERTY LIMITS. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND THE ENGINEER IMMEDIATELY OF ANY CONFLICTS.
- WETLAND LINES ARE APPROXIMATE AND BASED ON DRMP'S ENVIRONMENTAL ASSESSMENT FOR ST. JOHNS HERITAGE PARKWAY, 2016.



FOR CONSTRUCTION

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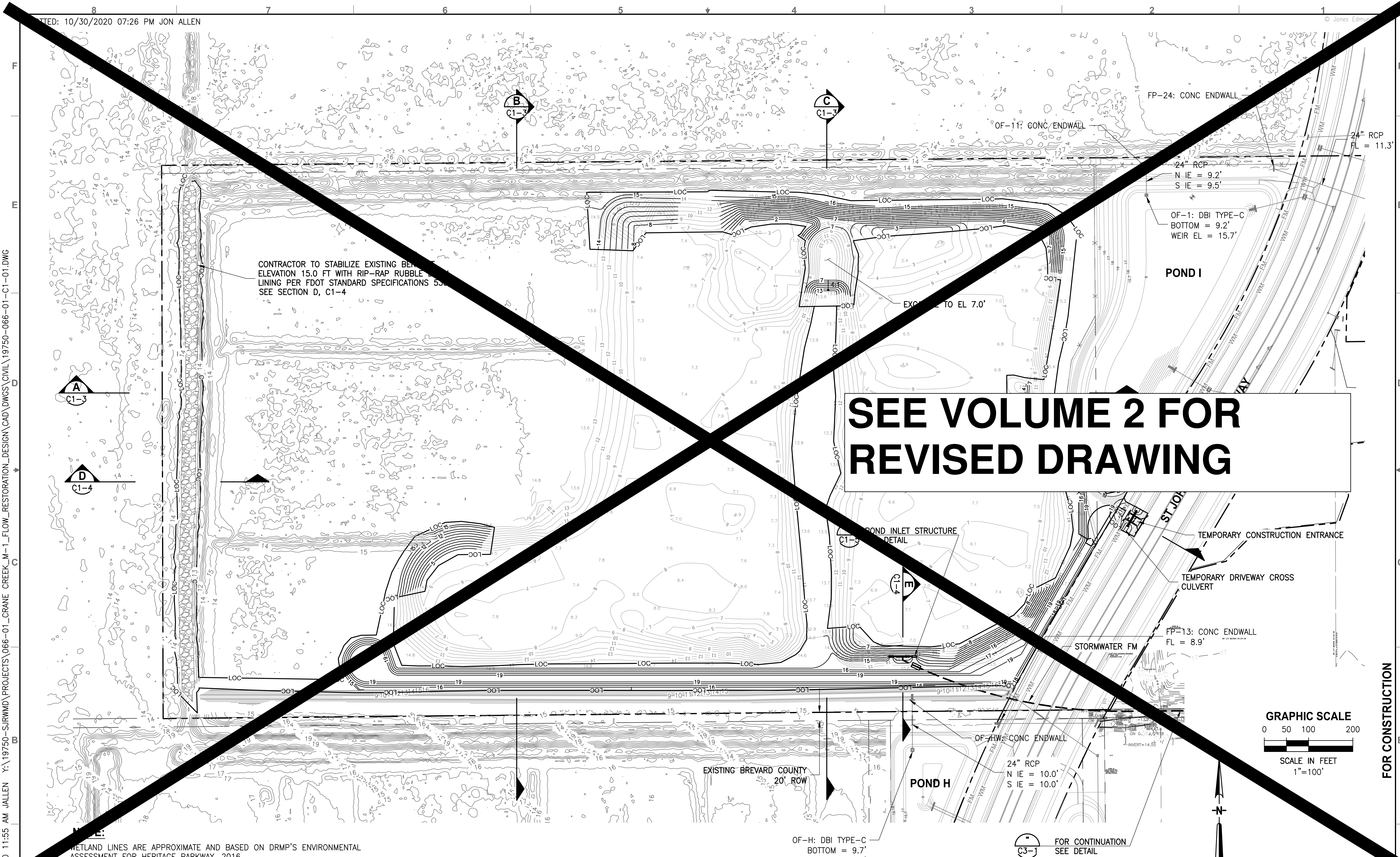
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CHECKED	_____			
LTR.	DATE	REVISIONS	BY	APPRD.
G	3/7/22	REVISED STA	AG	AG
C	9/16/20	ADDRESS BREVARD CO COMMENTS	LH	RK

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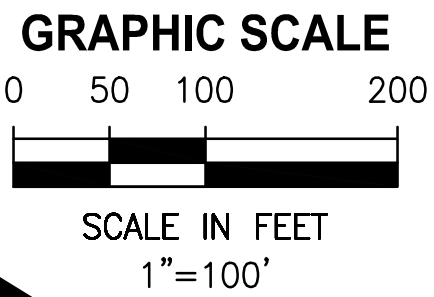
**CRANE CREEK M-1 CANAL FLOW RESTORATION
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

**STORMWATER TREATMENT AREA
EXISTING CONDITIONS**

PROJECT NO:	19750-066-01	DATE:	OCT 2020
INDEX NO:		DWG NO:	V1



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FOR CONSTRUCTION

WETLAND LINES ARE APPROXIMATE AND BASED ON DRMP'S ENVIRONMENTAL ASSESSMENT FOR HERITAGE PARKWAY, 2016.

LTR.	DATE	REVISIONS	BY	APPRD.
G	3/7/22	REVISED STA	AG	AG
C	9/16/20	ADDRESS BREVARD CO COMMENTS	LH	RK

DESIGNED	A GOODDEN
DRAWN	D HAUBRICH
CHECKED	R KOLLER

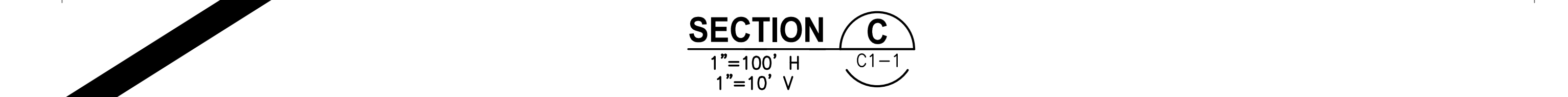
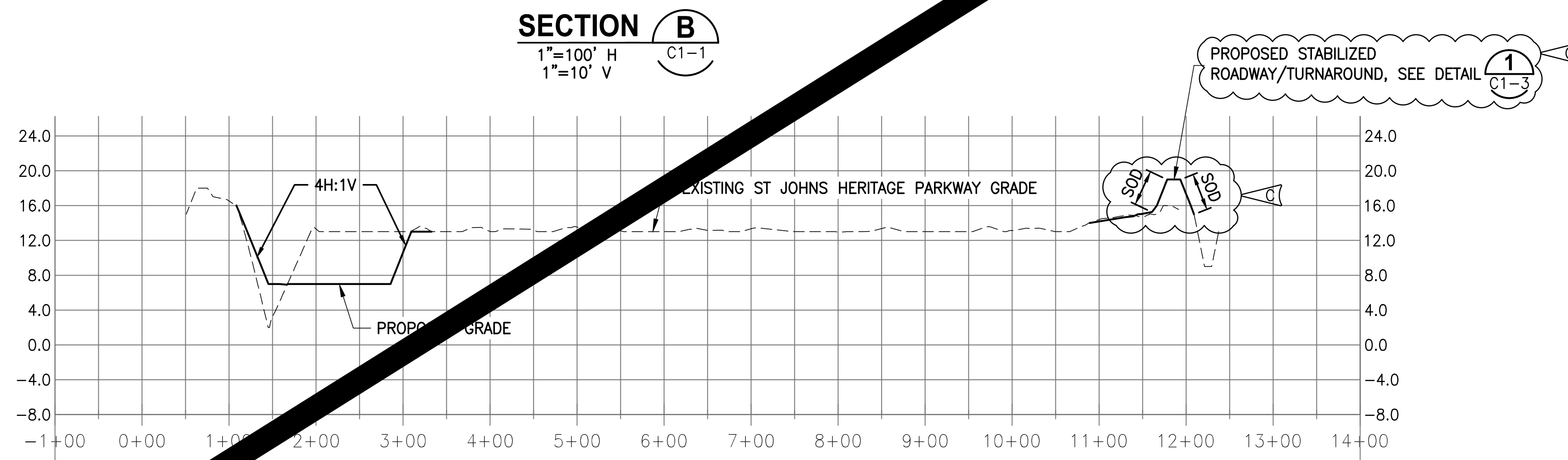
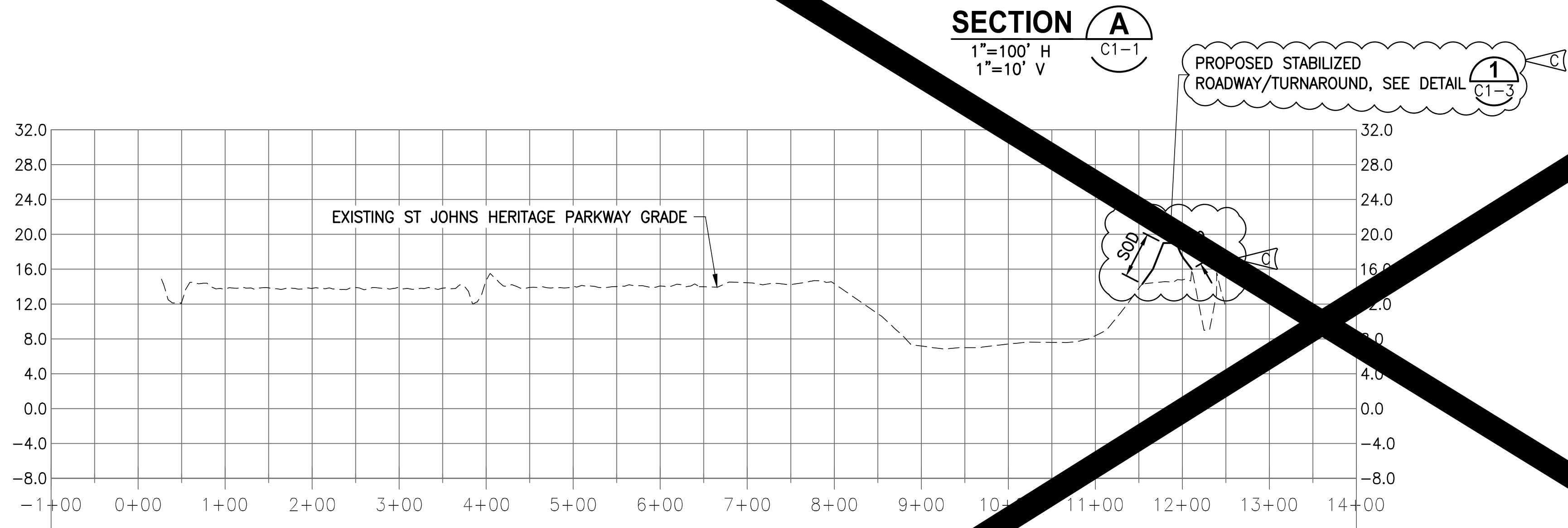
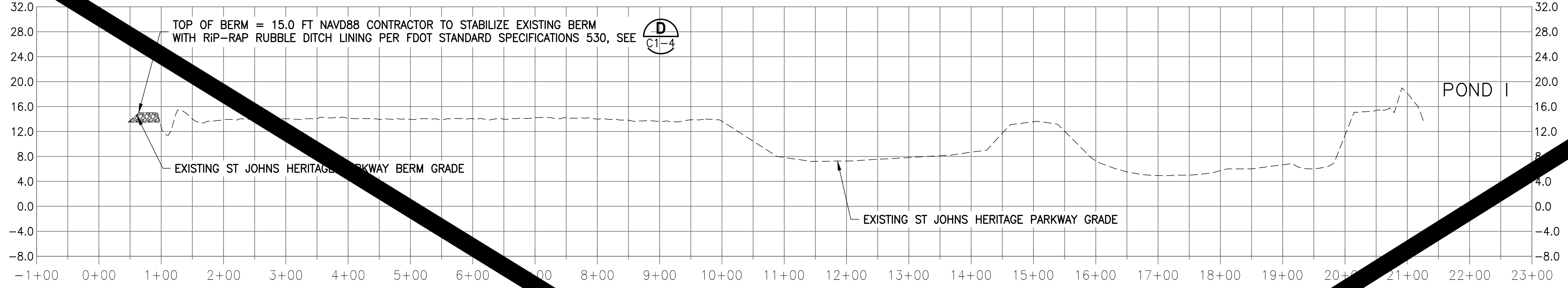
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**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

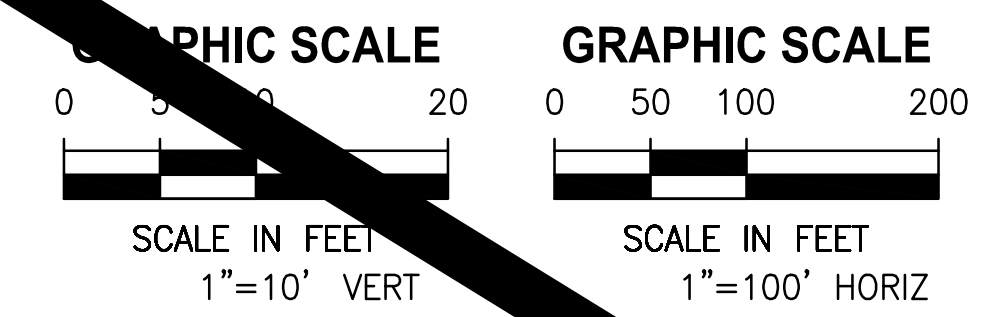
**STORMWATER TREATMENT AREA
 OVERALL GRADING PLAN**

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C	9/16/20	ADDRESS BREVARD CO COMMENTS	LH	RK

DESIGNED	A GOODDEN
DRAWN	D HAUBRICH
CHECKED	R KOLLER

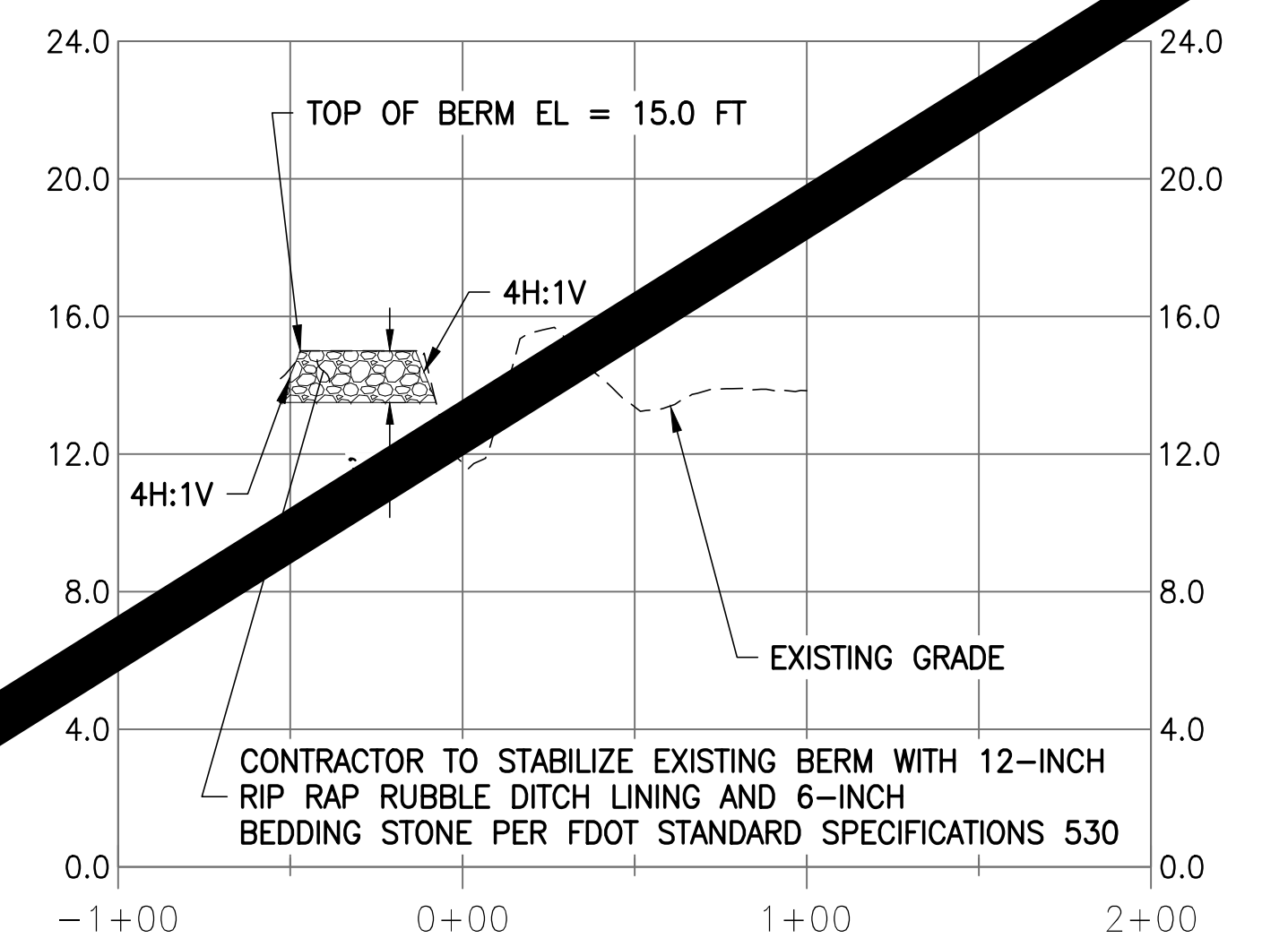
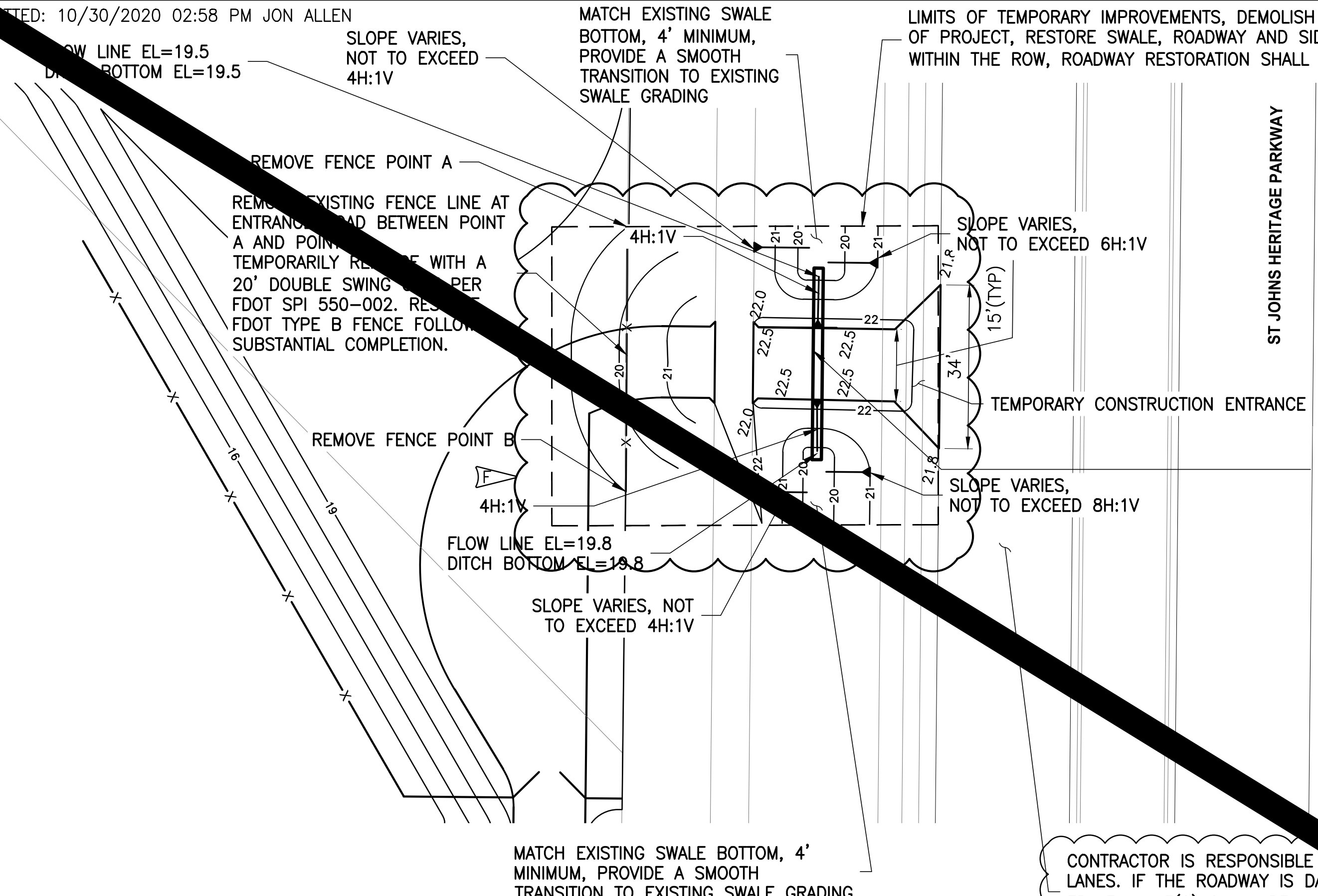
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**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

**STORMWATER TREATMENT AREA
 SECTIONS**

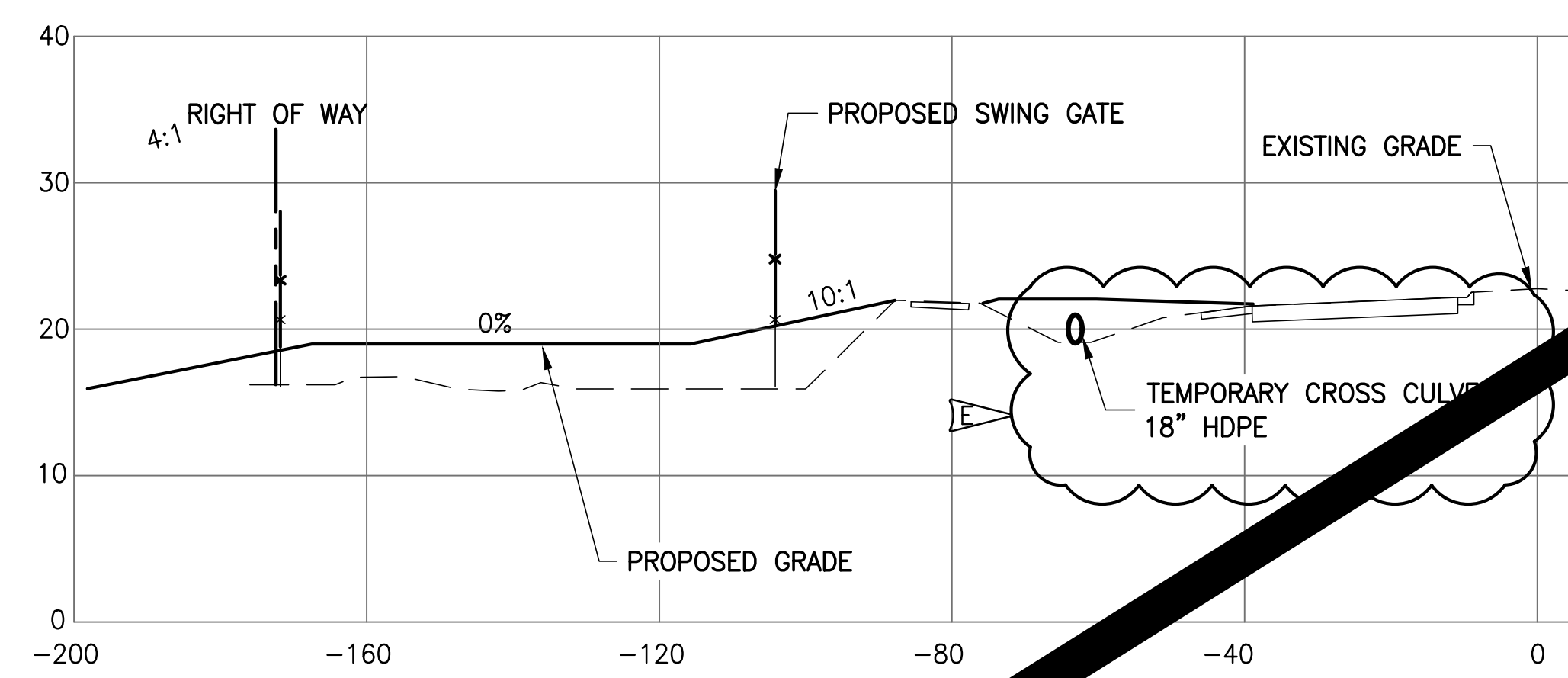
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		C1-3

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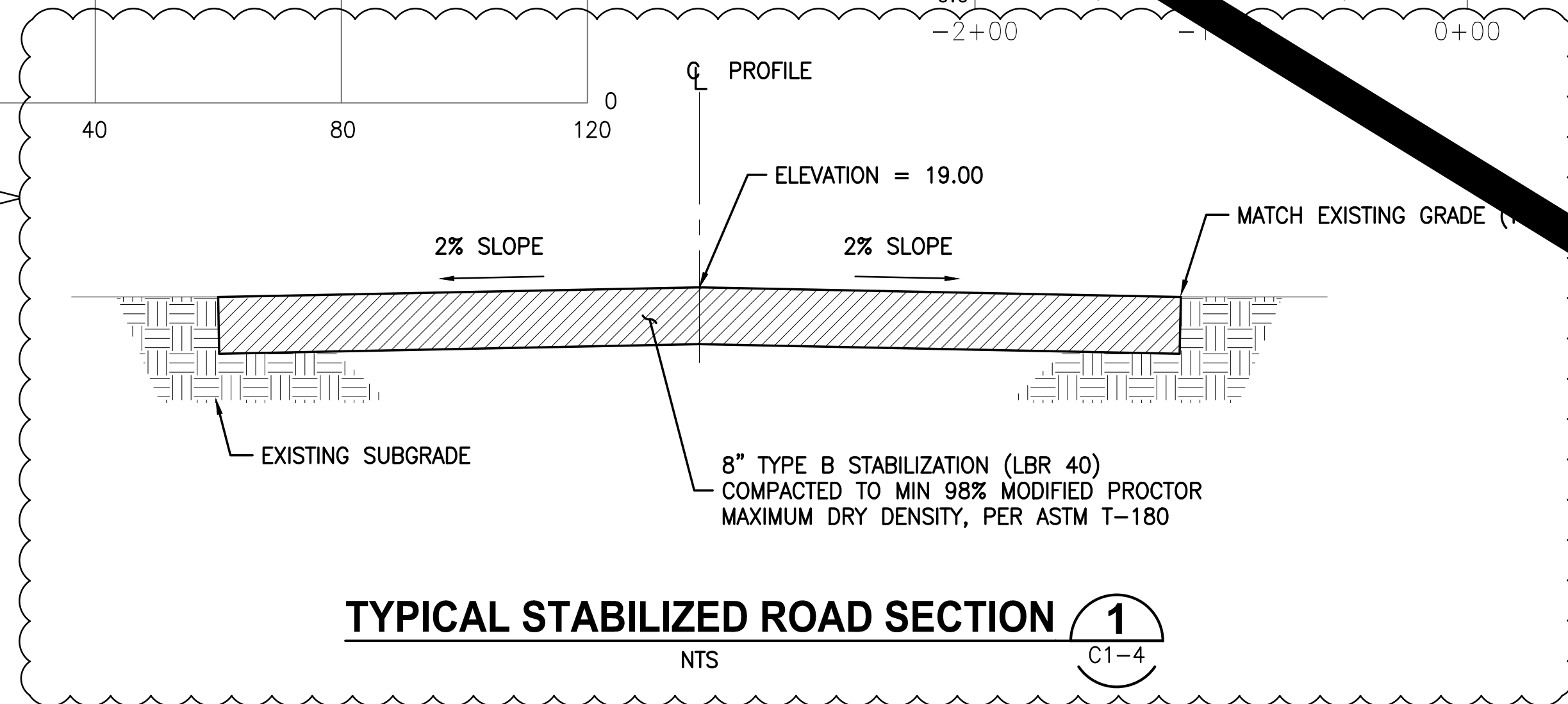


SECTION D
 1"=100' H C1-1, C1-3
 1"=10' V

SEE VOLUME 2 FOR REVISED DRAWING



SECTION F
 1"=20' H C1-4
 1"=10' V



SECTION E
 1"=100' H C1-1, C1-3
 1"=10' V

LTR.	DATE	REVISIONS	BY	APPRD.
G	3/7/22	REVISED STA	AG	AG
F	10/30/20	BREVARD COUNTY RESPONSE	JA	RK
C	9/16/20	ADDRESS BREVARD CO COMMENTS	LH	RK

DESIGNED	A GOODDEN
DRAWN	D HAUBRICH
CHECKED	R KOLLER

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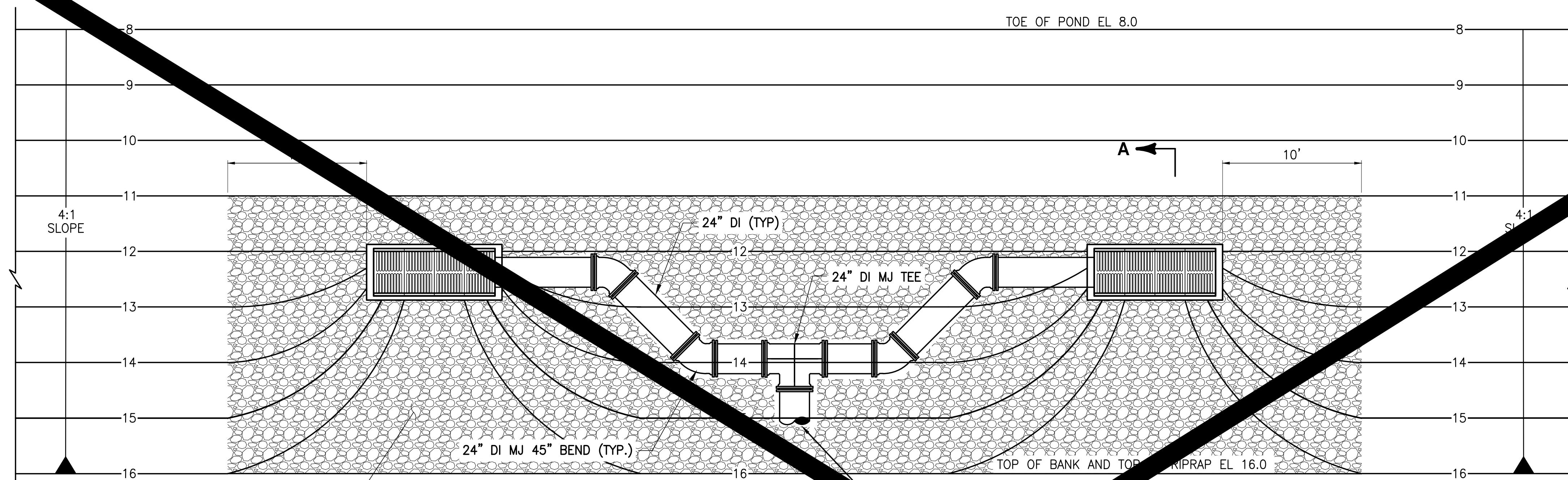
**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

**STORMWATER TREATMENT
 AREA SECTIONS**

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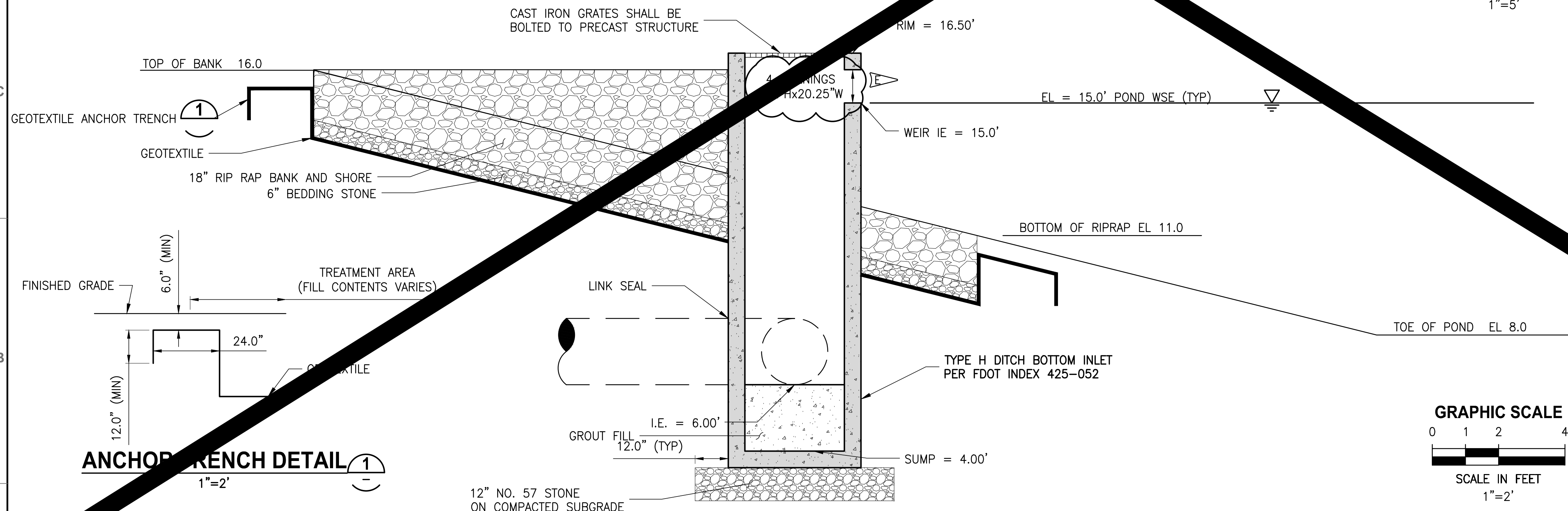
18" (MIN) RIP RAP (BANK AND SHORE)
 OVER 6" (MIN) BEDDING STONE PER
 FDOT SPECIFICATION 530 AND GEOTEXTILE
 TYPE D-2 PER FDOT SPECIFICATION 985

PLAN VIEW
 1"=5'

FOR CONTINUATION
 SEE DWG C3-1

**SEE VOLUME 2 FOR
 REVISED DRAWING**

1"=5'



CAST IRON GRATES SHALL BE
 BOLTED TO PRECAST STRUCTURE

RIM = 16.50'

EL. = 15.0' POND WSE (TYP)

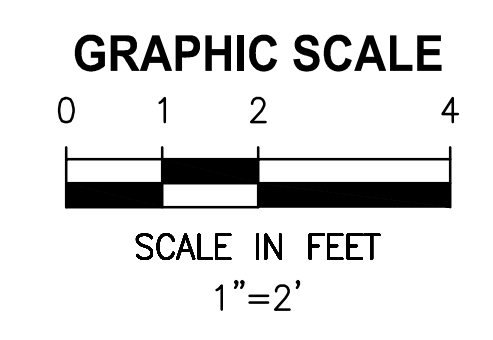
WEIR IE = 15.0'

BOTTOM OF RIPRAP EL. 11.0

TOE OF POND EL. 8.0

ANCHOR TRENCH DETAIL
 1"=2'

SECTION A-A
 1"=2'



Y:\19750-SURWMD\PROJECTS\066-01_CRANE CREEK_M-1_FLOW RESTORATION_DESIGN\CAD\DWGS\CIVIL\19750-066-01-C1-05.DWG
 10/30/2020 2:07 PM JALLEN

FOR CONSTRUCTION

DESIGNED	A GOODDEN	AG	AG
DRAWN	D HAUBRICH	JA	RK
CHECKED	R KOLLER		
LTR.	DATE	REVISIONS	BY

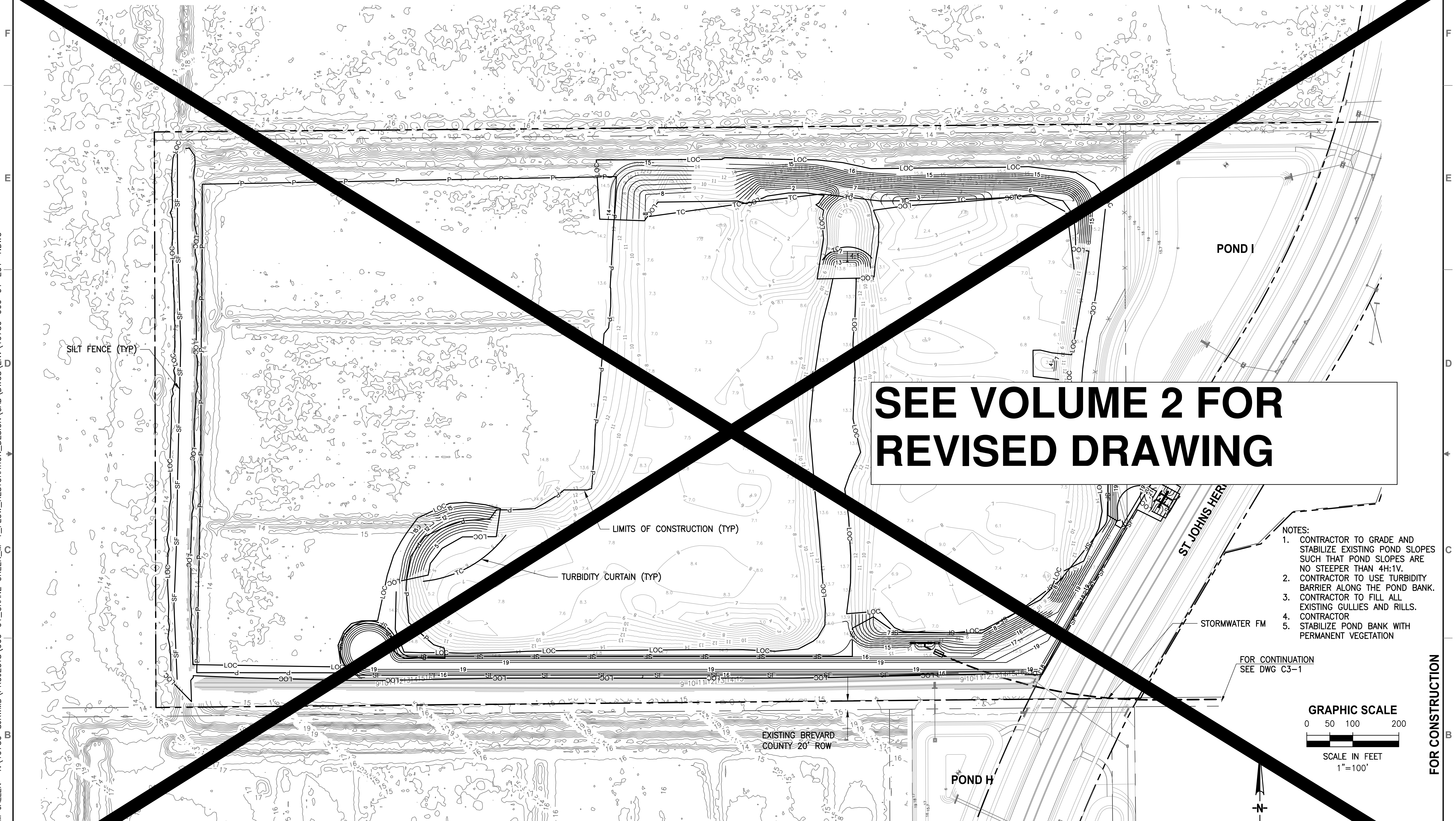
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**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

**STORMWATER TREATMENT AREA
 INLET DETAILS**

AMY LIANE GOODDEN, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 60097	PROJECT NO:	DATE:
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY AMY LIANE GOODDEN ON THE DATE AT THE RIGHT.	19750-066-01	OCT 2020
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		C1-5

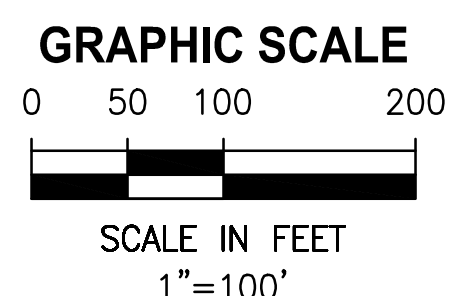
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2:59 PM JALLEN



SEE VOLUME 2 FOR REVISED DRAWING

- NOTES:
1. CONTRACTOR TO GRADE AND STABILIZE EXISTING POND SLOPES SUCH THAT POND SLOPES ARE NO STEEPER THAN 4H:1V.
 2. CONTRACTOR TO USE TURBIDITY BARRIER ALONG THE POND BANK.
 3. CONTRACTOR TO FILL ALL EXISTING GULLIES AND RILLS.
 4. CONTRACTOR
 5. STABILIZE POND BANK WITH PERMANENT VEGETATION

FOR CONTINUATION
SEE DWG C3-1



NOTE:
WETLINE LINES ARE APPROXIMATE AND BASED ON DRMP'S ENVIRONMENTAL ASSESSMENT FOR HERITAGE PARKWAY, 2016.

LTR.	DATE	REVISIONS	BY	APPRD.
G	3/7/22	REVISED STA	AG	AG
C	9/16/20	ADDRESS BREVARD CO COMMENTS	LH	RK

DESIGNED	A GOODDEN
DRAWN	D HAUBRICH
CHECKED	R KOLLER

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**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

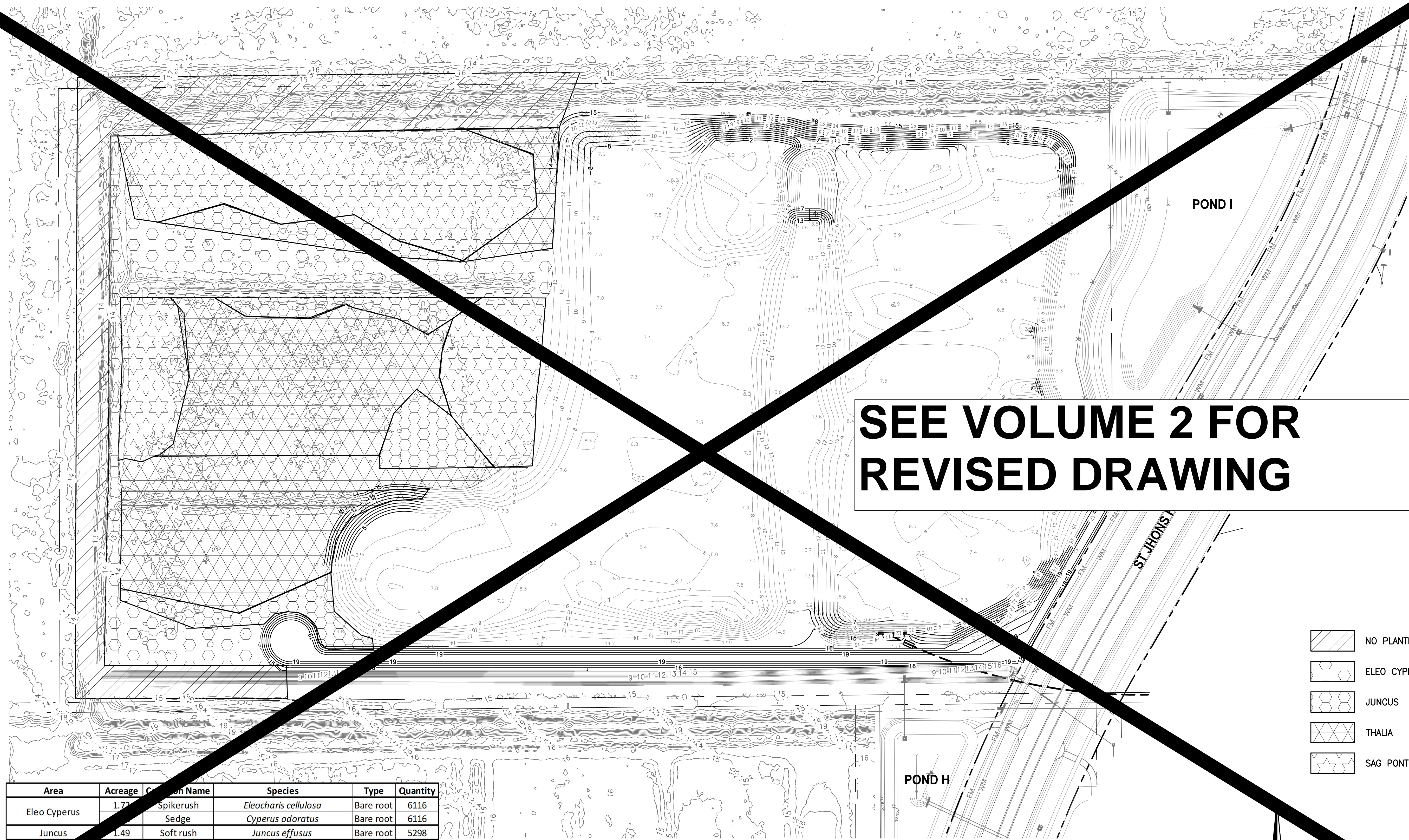
**STORMWATER TREATMENT AREA
 EROSION CONTROL PLAN**

AMY LIANE GOODDEN, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 60097
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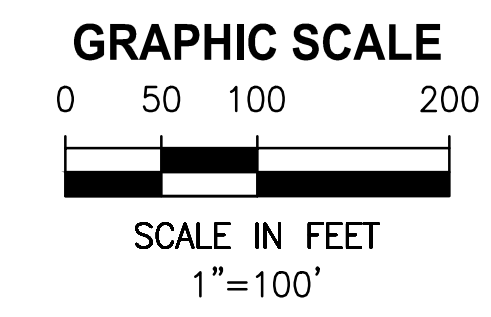
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 9/28/2020 3:00 PM JALLEN



SEE VOLUME 2 FOR REVISED DRAWING

Area	Acreage	Common Name	Species	Type	Quantity
Eleo Cyperus	1.72	Spikerush	<i>Eleocharis cellulosa</i>	Bare root	6116
		Sedge	<i>Cyperus odoratus</i>	Bare root	6116
Juncus	1.49	Soft rush	<i>Juncus effusus</i>	Bare root	5298
Thalia	6.92	Fireflag	<i>Thalia geniculata</i>	Bare root	24607
Sag Pont Schoeno	1.89	Pickerelweed	<i>Pontedaria cordata</i>	Bare root	6733
		Duck Potato	<i>Sagittaria lancifolia</i>	Bare root	6733
		Bullrush	<i>Schoenoplectus californicus</i>	Bare root	6733
Total	17.53				62335

- NO PLANTING
- ELEO CYPERUS
- JUNCUS
- THALIA
- SAG PONT SCHOENO



FOR CONSTRUCTION

DESIGNED	A GOODDEN		
DRAWN	D HAUBRICH		
CHECKED	R KOLLER		
DATE	REVISIONS	BY	APPRD.
G 3/7/22	REVISED STA	AG	AG
C 9/16/20	ADDRESS BREVARD CO COMMENTS	LH	RK

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CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT

STORMWATER TREATMENT AREA
 WETLAND PLANTING PLAN

AMY LIANE GOODDEN, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 60097 THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY AMY LIANE GOODDEN ON THE DATE AT THE RIGHT. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.	PROJECT NO: 19750-066-01	DATE: OCT 2020
	INDEX NO:	DWG NO: W1-1

CONTRACTOR REQUIREMENTS

Table with columns: SITE DESCRIPTION, GENERAL, SEQUENCE OF MAJOR ACTIVITIES, CONTROLS, EROSION AND SEDIMENT CONTROLS, SPILL CONTROL PROCEDURES, SPILL PREVENTION, MAINTENANCE/INSPECTION PROCEDURES. Includes detailed project information, activity lists, and regulatory requirements.

SEE VOLUME 2 FOR REVISED DRAWING

SAVED: 8/6/2020 10:32 AM AGOODDEN Y:\19750-SURV\PROJECTS\066-01_FLOW RESTORATION DESIGN\CAD\DWG\ENV\19750-066-01-EC1-2.DWG

FOR CONSTRUCTION

Revision table with columns: LTR., DATE, REVISIONS, BY, APPRD.

Design and Check table with columns: DESIGNED, DRAWN, CHECKED, and names: A GOODDEN, D HAUBRICH, R KOLLER.

JonesEdmunds logo and contact information: 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

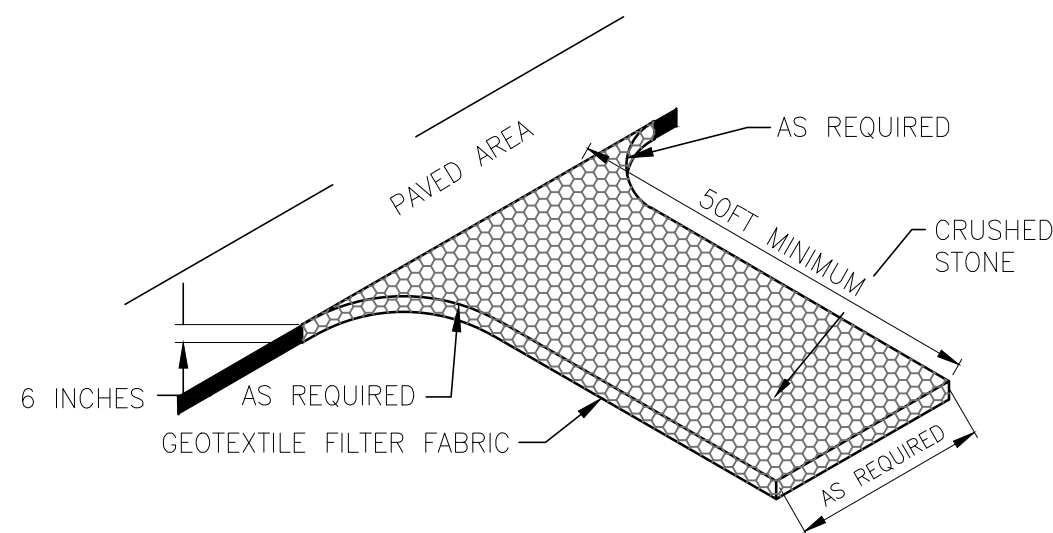
CRANE CREEK M-1 CANAL FLOW RESTORATION ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT

STORMWATER TREATMENT AREA STORMWATER POLLUTION PREVENTION NOTES

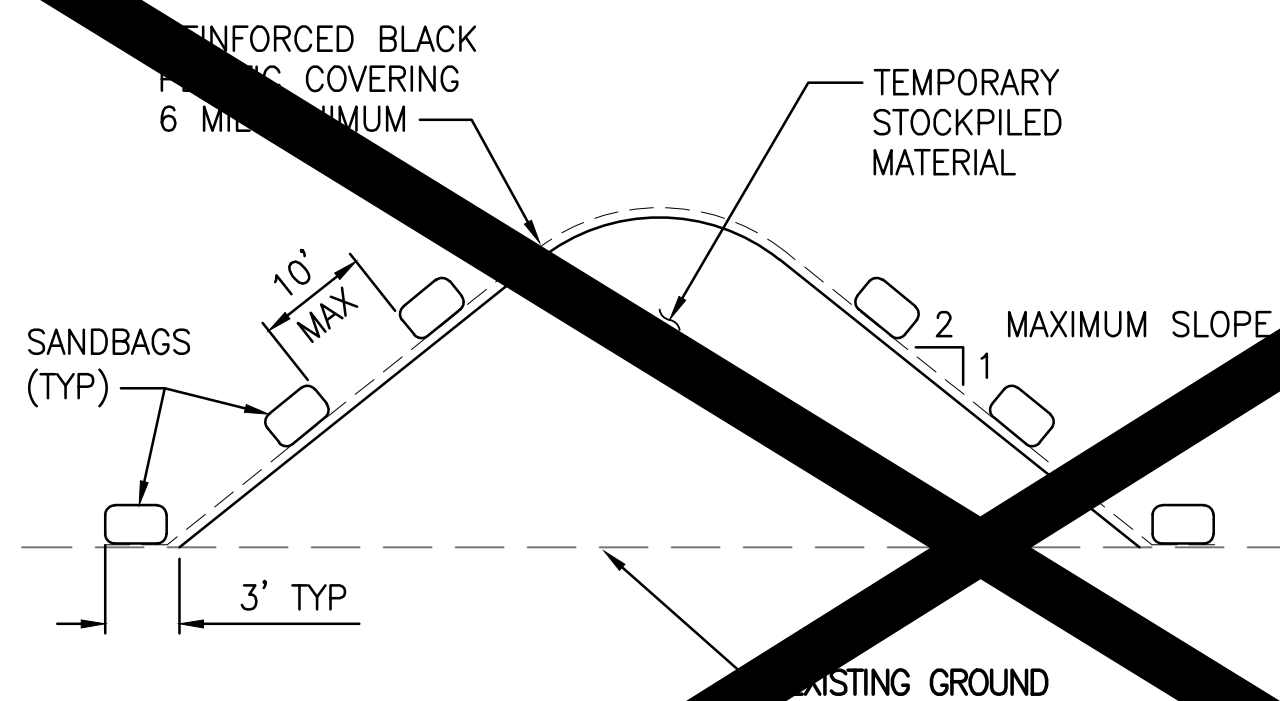
Project and Date information table with columns: PROJECT NO., DATE, INDEX NO., DWG NO.

SEDIMENT AND EROSION CONTROL NOTES

1. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
2. BEST MANAGEMENT PRACTICES IN ADDITION TO THE ONES SHOWN ON THE PLAN SHEETS MUST BE PROVIDED IN ORDER TO PREVENT SILT FROM LEAVING THE PROJECT SITE DUE TO UNSEEN CONDITIONS AND ACCIDENTS.
3. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
4. NECESSARY REPAIRS TO BARRIERS SHALL BE ACCOMPLISHED PROMPTLY.
5. ANY SEDIMENT DEPOSITS REMAINING IN PLACE, AFTER THE BARRIERS, AND OR SILT FENCES ARE NO LONGER REQUIRED, SHALL BE DRESSED TO CONFORM TO THE FINISHING GRADE, PREPARED AND SEEDED.
6. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE, IT SHOULD BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER SHALL BE REPLACED IMMEDIATELY.
7. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NECESSARY.
8. THE CONTRACTOR SHALL MAINTAIN A CLEAR PATH FOR ALL SURFACE WATER DRAINAGE STRUCTURES AND SWALES AS WELL AS PROVIDE MEASURES TO PREVENT SILTATION OF STORMWATER TREATMENT SYSTEMS AND CONTROL STRUCTURES DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL UTILIZE WHATEVER CONTROL STRUCTURES NECESSARY TO MANAGE STORMWATER SUCH THAT IMPACT TO CONSTRUCTION IS MINIMIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, INCLUDING PROVIDING EQUIPMENT, LABOR, FILL, ETC. NECESSARY TO REMEDIATE AND/OR RESTORE ALL AREAS IMPACTED BY EROSION, RUNOFF, AND STORMWATER.
9. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL" AVAILABLE AT [HTTP://WWW.FDOT.GOV/ROADWAY/DRAINAGE/FILES/EROSION-SEDIMENT-CONTROL.PDF](http://www.fdot.gov/roadway/drainage/files/erosion-sediment-control.pdf) AND "FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL" AVAILABLE AT [HTTPS://WWW.DEP.STATE.FL.US/WATER/NONPOINT/DOCS/EROSION/EROSION-INSPECTORS-MANUAL.PDF](https://www.dep.state.fl.us/water/nonpoint/docs/erosion/erosion-inspectors-manual.pdf).
10. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL DOWNSTREAM AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. SEE DETAILS (THIS SHEET) FOR TYPICAL CONSTRUCTION.
11. SOD SHALL BE PLACED IN AREAS WHICH REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITIES ARE MAINTAINED.
12. ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE OUTFALL IN A MANNER WHICH PREVENTS EROSION AND TRANSPORTATION OF SUSPENDED SOLIDS TO THE RECEIVING OUTFALLS.
13. ALL DEWATERING, EROSION, AND SEDIMENT CONTROL SHALL REMAIN IN PLACE UNTIL AFTER COMPLETION OF CONSTRUCTION, AND REMOVED ONLY WHEN AREAS HAVE BEEN STABILIZED.
14. THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.
15. THE CONTRACTOR SHALL BE REQUIRED TO RESPOND TO ALL WATER MANAGEMENT DISTRICT INQUIRES, RELATIVE TO COMPLIANCE OF NFWMD AND FDEP FOR EROSION AND SEDIMENTATION CONTROL. THE COST OF THIS COMPLIANCE SHALL BE PART OF THE CONTRACT.
16. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS AND SPECIFICATIONS AND THE NFWMD AND FDEP RULES AND REGULATIONS.
17. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS AND PRESERVATION EASEMENTS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION.
18. THESE PLANS INCLUDING THE POLLUTION PREVENTION PLAN INDICATE THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES REQUIRED FOR THIS PROJECT. CONTRACTOR AS REQUIRED TO INSURE CONFORMANCE TO STATE AND FEDERAL WATER QUALITY STANDARDS AND MAY NEED TO INSTALL ADDITIONAL CONTROLS TO CONFORM TO AGENCIES REQUIREMENTS. IF A WATER QUALITY VIOLATION OCCURS, THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ALL DAMAGE AND ALL COSTS WHICH MAY RESULT INCLUDING LEGAL FEES, CONSULTANT FEES, CONSTRUCTION COSTS, AND FINES.



STABILIZED CONSTRUCTION ENTRANCE (Co) NTS



NOTES:

1. ALL SEAMS SHALL BE TAPED OR WEIGHTED DOWN FULL LENGTH. ALL SEAMS SHALL HAVE A MINIMUM 12" OVERLAP.
2. SEAMS PARALLEL TO THE SLOPE CONTOUR SHALL HAVE THE UPHILL SHEET OVERLAP THE DOWN HILL SHEET.
3. NO SURFACE RUN-OFF SHALL BE ALLOWED TO RUN UNDER THE PLASTIC COVERING.
4. DRAINAGE FROM AREAS COVER BY REINFORCED PLASTIC SHEETING SHALL BE CONTROLLED SUCH THAT NO DISCHARGE OCCURS DIRECTLY ONTO UNCONTROLLED DISTURBED AREAS OF THE CONSTRUCTION SITE.

TEMPORARY STOCKPILE COVERING NTS

STORMWATER POLLUTION PREVENTION PLAN

INSPECTIONS MUST OCCUR AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM EVENT THAT IS 0.50 INCHES OF RAIN OR GREATER

INSPECTOR: _____ FDEP NPDES STORMWATER IDENTIFICATION NUMBER: _____

LOCATION	RAIN DATA	TYPE OF CONTROL (SEE BELOW)	DATE INSTALLED / MODIFIED	CURRENT CONDITION (SEE BELOW)	CORRECTIVE ACTION / OTHER REMARKS

CONDITION CODE:
 G = GOOD M = MARGINAL, NEEDS MAINTENANCE OR REPLACEMENT SOON P = POOR, NEEDS IMMEDIATE MAINTENANCE OR REPLACEMENT
 C = NEEDS TO BE CLEARED O = OTHER

CONTROL TYPE CODES

1. SILT FENCE	10. STORM DRAIN INLET PROTECTION	19. REINFORCED SOIL RETAINING SYSTEM	28. TREE PROTECTION
2. EARTH DIKES	11. VEGETATIVE BUFFER STRIP	20. GABION	29. DETENTION POND
3. STRUCTURAL DIVISION	12. VEGETATIVE STABILIZATION AREA	21. SEDIMENT BASIN	30. RETENTION POND
4. SWALE	13. RETENTION POND	22. TEMPORARY SEED / SOD	31. WASTE DISPOSAL / HOUSEKEEPING
5. SEDIMENT TRAP	14. CONSTRUCTION ENTRANCE STABILIZATION	23. PERMANENT SEED / SOD	32. DAM
6. CHECK DAM	15. PERIMETER DITCH	24. MULCH	33. SAND BAG
8. PIPE SLOPE DRAIN	16. CURB AND GUTTER	25. HAY BALES	34. OTHER
9. LEVEL SPREADER	17. PAVED ROAD SURFACE	26. GEOTEXTILE	
	18. ROCK OUTLET PROTECTION	27. RIP-RAP	

INSPECTOR INFORMATION:
 NAME: _____ QUALIFICATION: _____ DATE: _____
 THE ABOVE SIGNATURE ALSO SHALL CERTIFY THAT THIS FACILITY IS IN COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN AND THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES IF THERE ARE NOT ANY INCIDENTS OF NON-COMPLIANCE IDENTIFIED ABOVE.

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR

SEE VOLUME 2 FOR REVISED DRAWING

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FOR CONSTRUCTION

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DRAWN	D HAUBRICH			
CHECKED	R KOLLER			
LTR.	DATE	REVISIONS	BY	APPRD.
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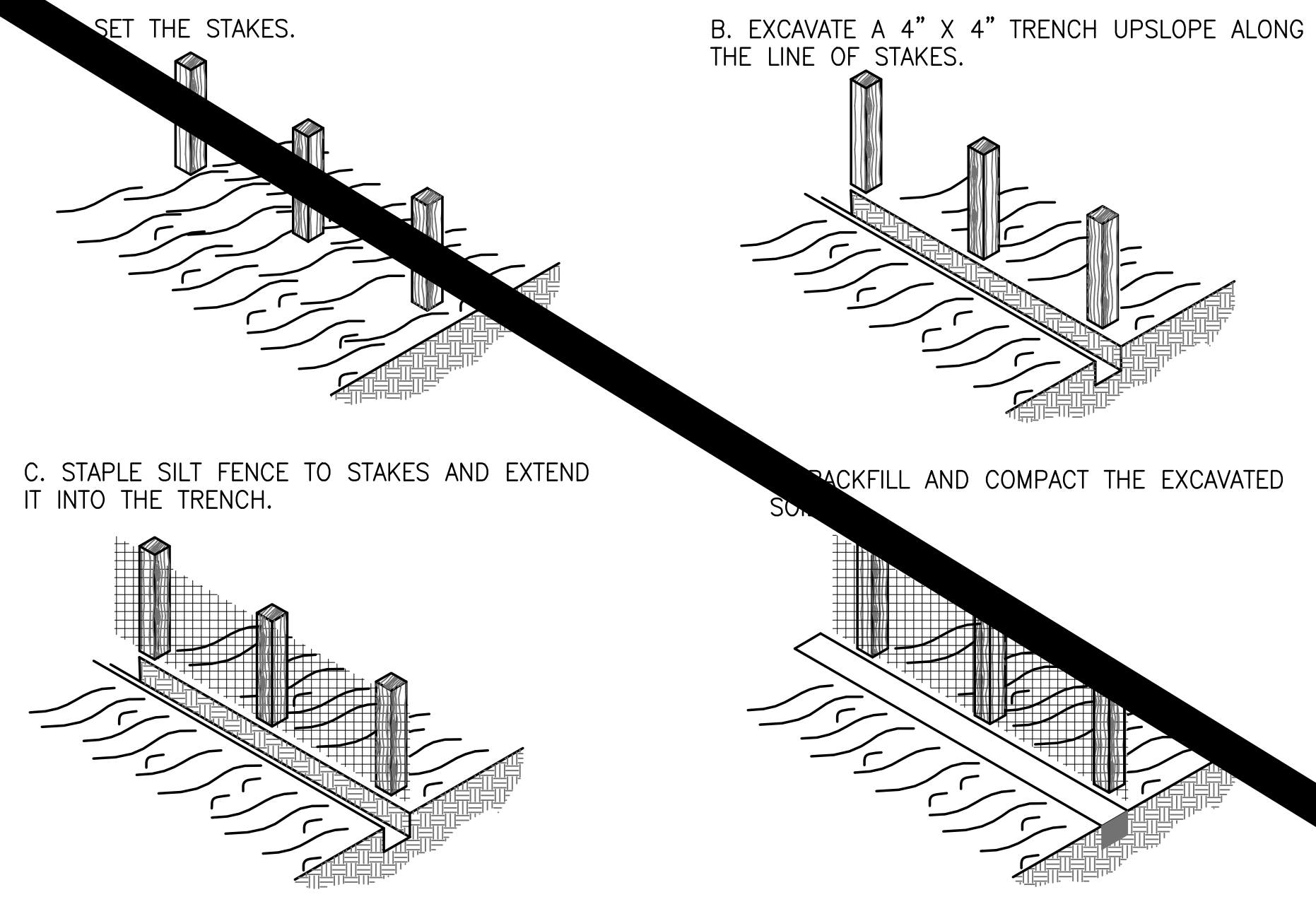
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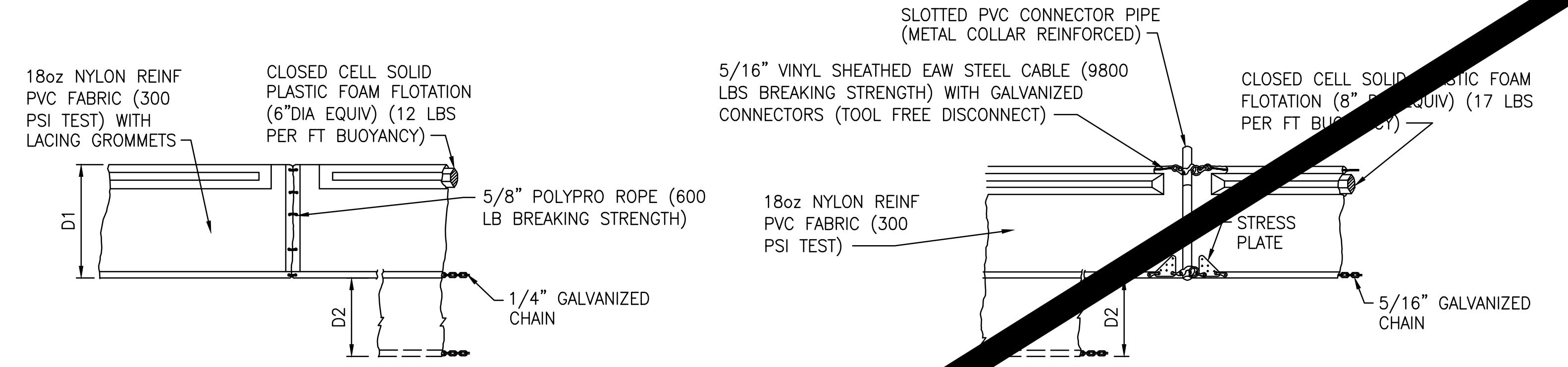
**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

EROSION CONTROL DETAILS

ANY LIANE GOODDEN, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 60097	PROJECT NO:	DATE:
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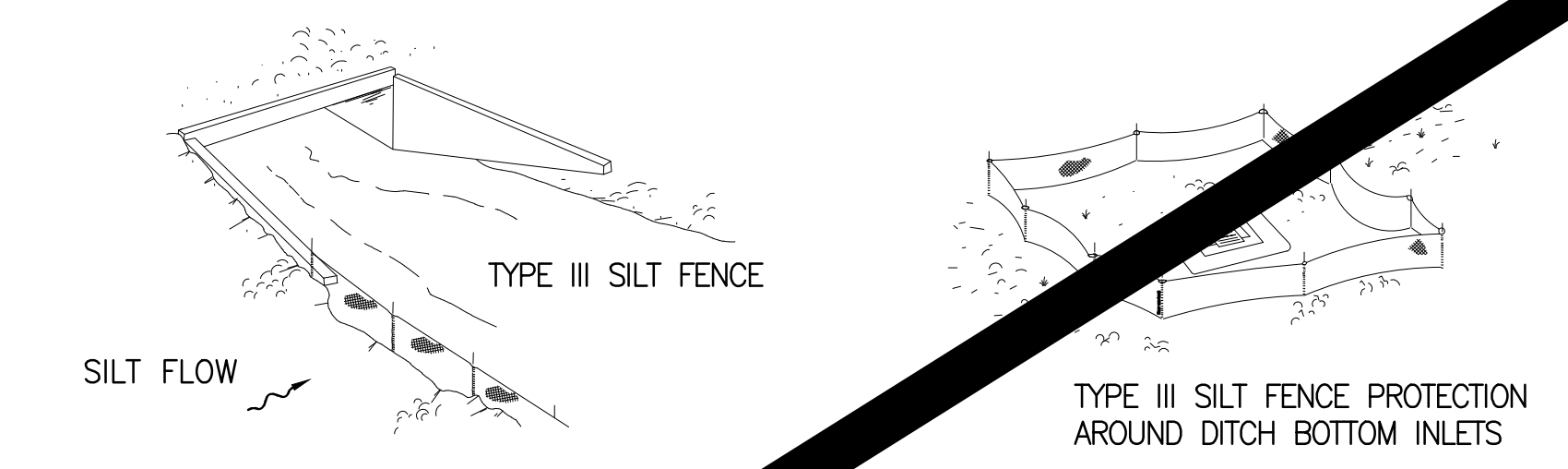
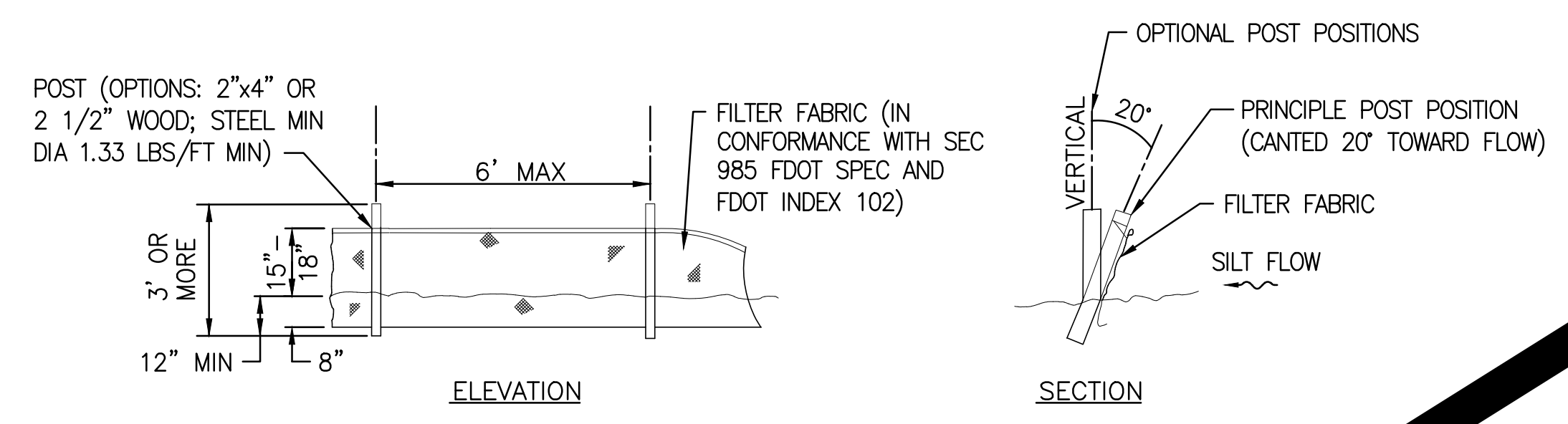
CONSTRUCTION OF A SILT FENCE DETAIL 1
NTS



TYPICAL FLOATING TURBIDITY BARRIER DETAIL
D1 = 5' STD (SINGLE PANEL FOR DEPTHS 5' OR LESS)
D2 = 5' STD (ADDITIONAL PANEL FOR DEPTHS GREATER THAN 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 CALL FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

NOTICE: COMPONENTS OF TYPES 1 AND 2 MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES 1 AND 2 SHALL BE AS APPROVED BY THE ENGINEER.

SEE VOLUME 2 FOR REVISED DRAWING



FDOT INDEX NUMBER 102 SILT FENCE DETAIL 3
NTS

NOTES:
A. DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS. TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.
B. WHEN JOINING BUTT ENDS OF SILT FENCE FABRIC; JOIN FABRIC ENDS, WRAP AROUND A POST 360-DEGREES, AND SET POST.

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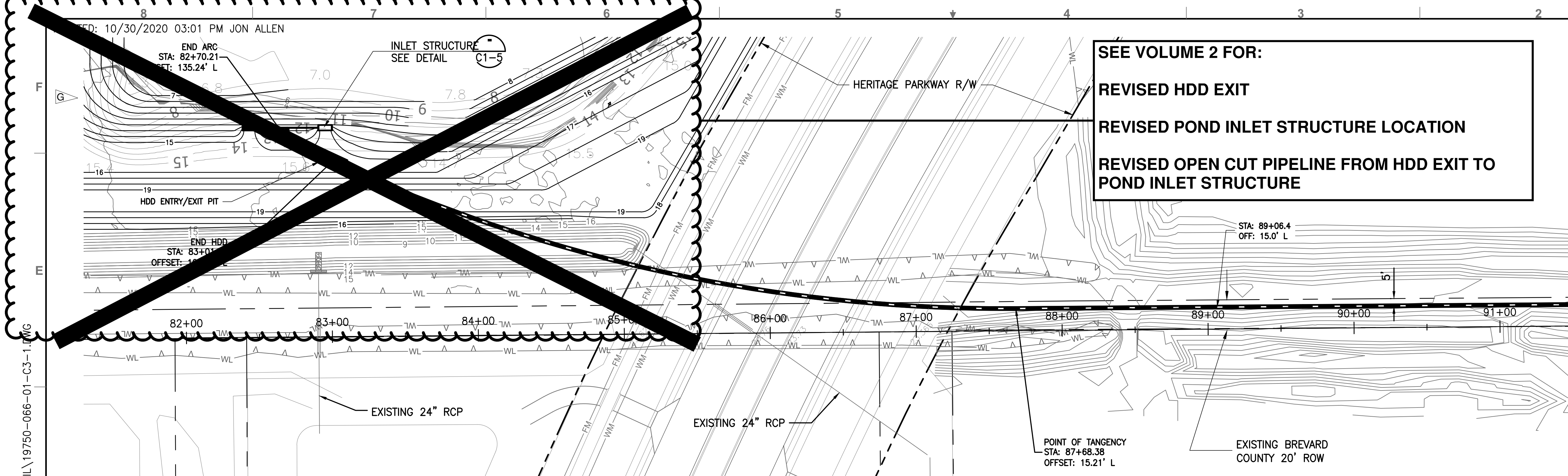
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DRAWN	D HAUBRICH			
CHECKED	R KOLLER			
LTR.	DATE	REVISIONS	BY	APPRD.
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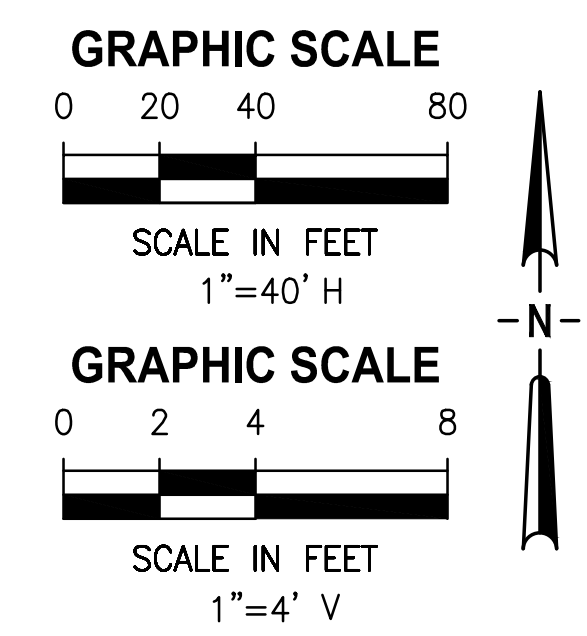
**CRANE CREEK M-1 CANAL FLOW RESTORATION
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

EROSION CONTROL DETAILS

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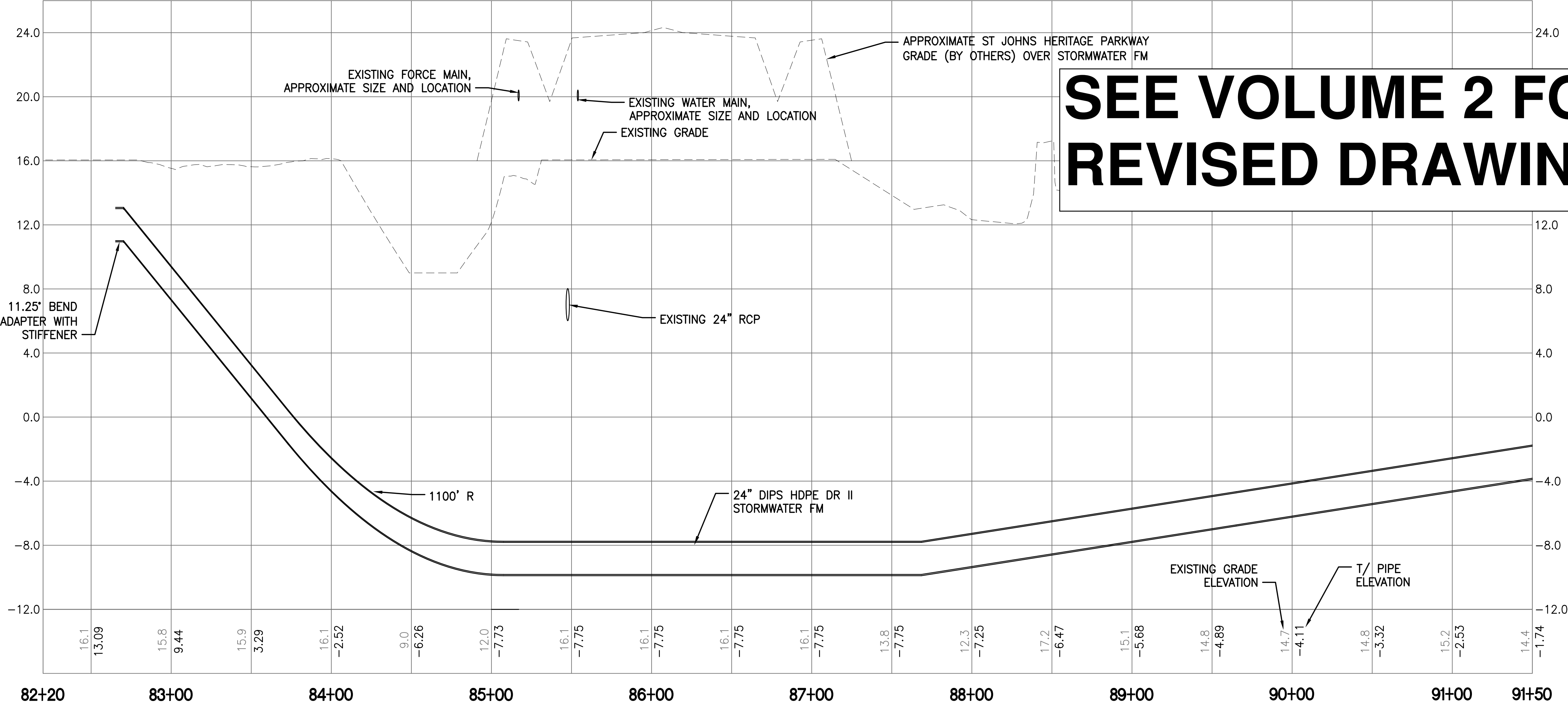


SEE VOLUME 2 FOR:
 REVISED HDD EXIT
 REVISED POND INLET STRUCTURE LOCATION
 REVISED OPEN CUT PIPELINE FROM HDD EXIT TO POND INLET STRUCTURE



- NOTES:**
- HDD ENTRY/EXIT PIT LOCATIONS ARE APPROXIMATE. ACTUAL LOCATIONS TO BE DETERMINED BY THE CONTRACTOR.
 - RESTRAIN ALL JOINTS

MATCH LINE - SEE DRAWING C3-2



SEE VOLUME 2 FOR REVISED DRAWING

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DRAWN	D HAUBRICH			
CHECKED	R KOLLER			
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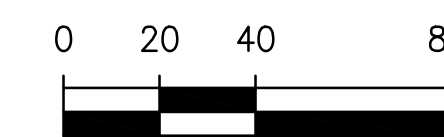
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**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

**STORMWATER FORCE MAIN
 PLAN & PROFILE**

RICHARD NEAL KOLLER, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 49947	PROJECT NO: 19750-066-01	DATE: OCT 2020
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GRAPHIC SCALE



SCALE IN FEET
1"=40' H

GRAPHIC SCALE

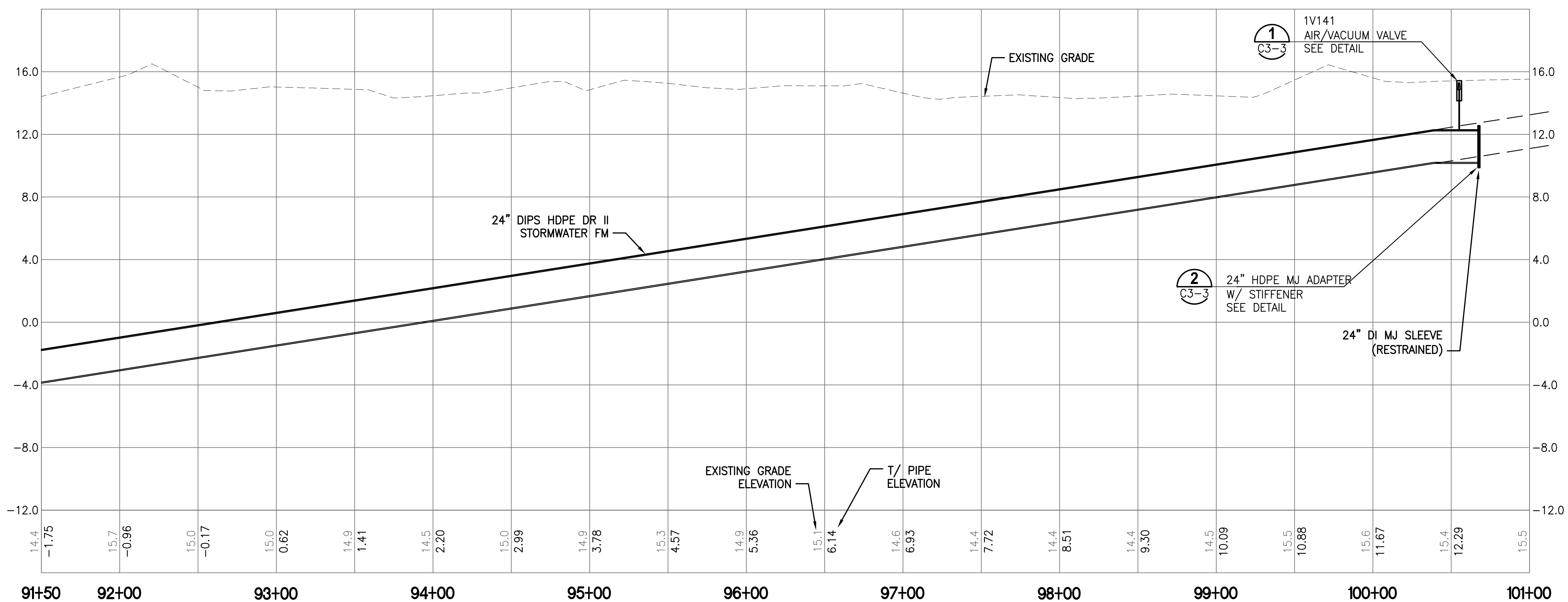
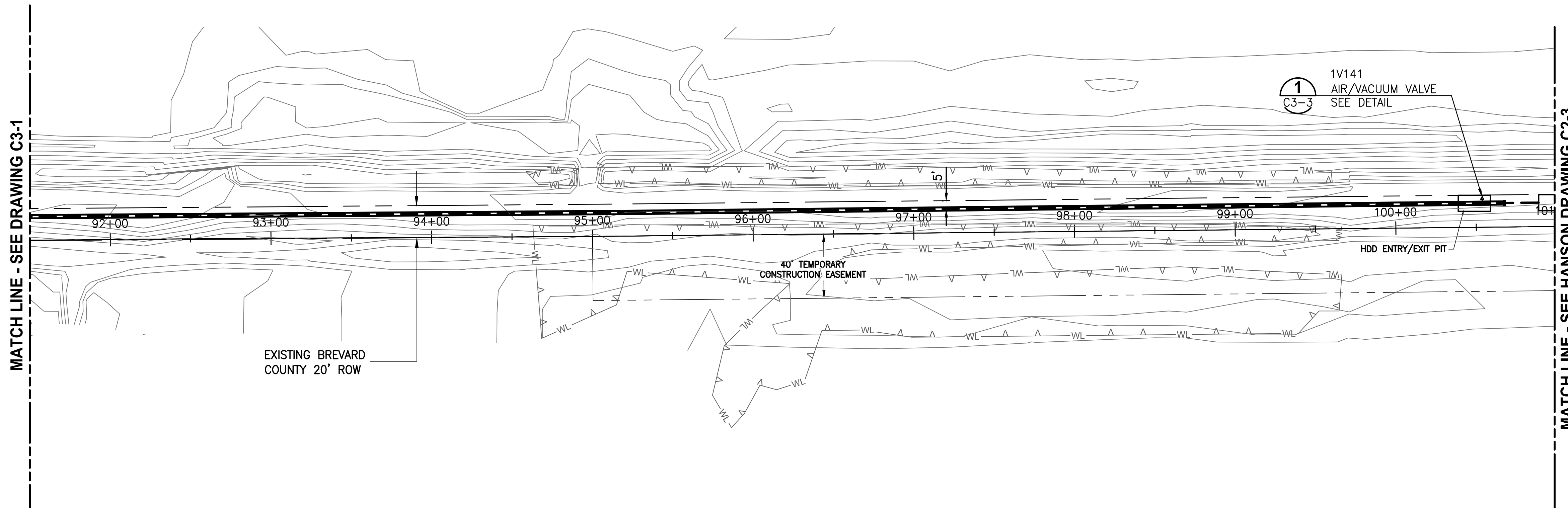


SCALE IN FEET
1"=4' V



NOTES:

1. HDD ENTRY/EXIT PIT LOCATIONS ARE APPROXIMATE. ACTUAL LOCATIONS TO BE DETERMINED BY THE CONTRACTOR.
2. RESTRAIN ALL JOINTS



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DRAWN	D HAUBRICH
CHECKED	R KOLLER

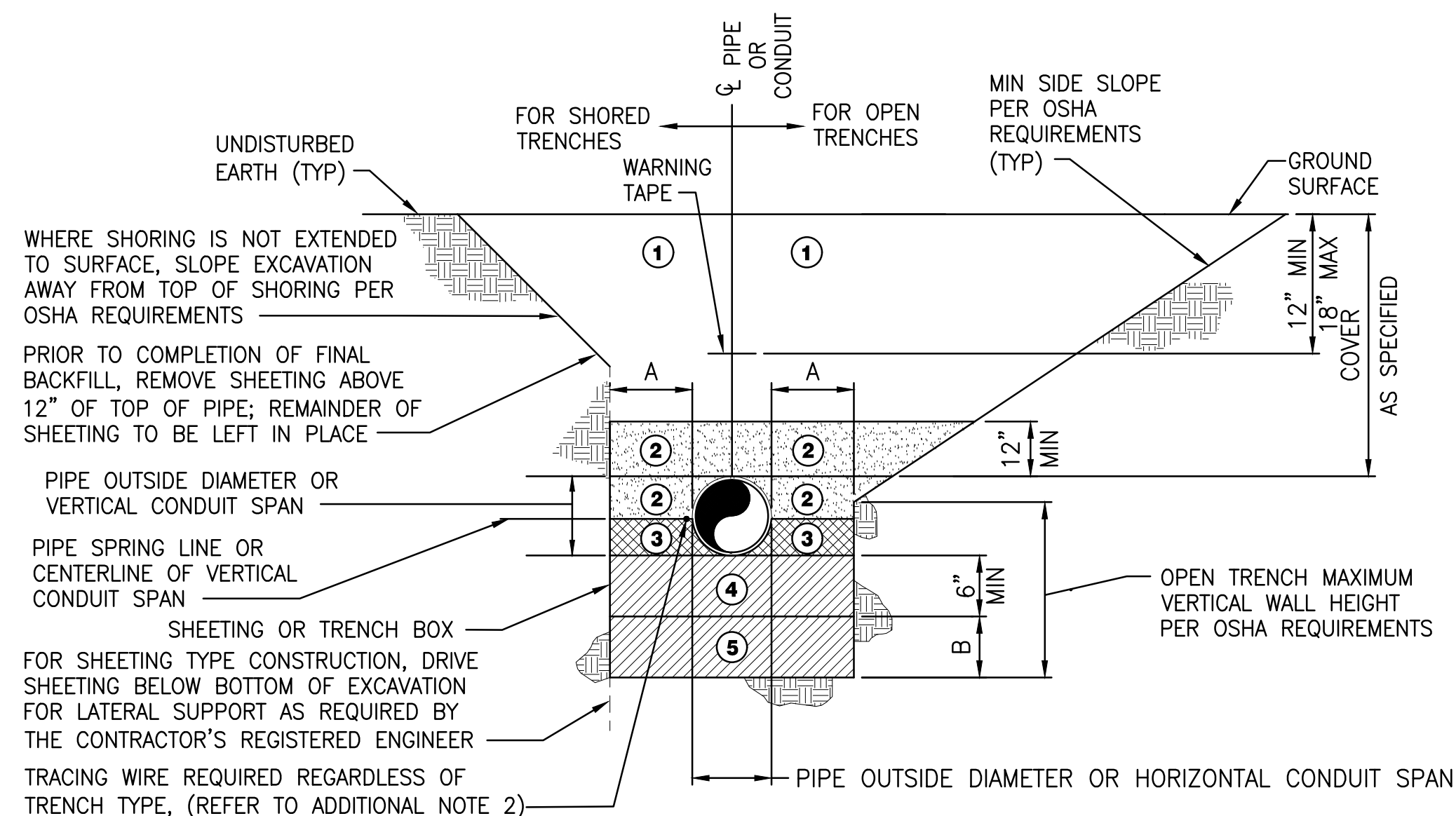
JonesEdmunds
CERTIFICATE OF AUTHORIZATION #1841
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
 8657 BAYPINE ROAD SUITE 300, JACKSONVILLE, FL 32256 / (904) 744-5401

**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

**STORMWATER FORCE MAIN PLAN &
 PROFILE**

<small>RICHARD NEAL KOLLER, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 49947</small>		PROJECT NO:	DATE:
<small>THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY RICHARD NEAL KOLLER ON THE DATE AT THE RIGHT.</small>		19750-066-01	OCT 2020
<small>PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.</small>		INDEX NO:	DWG NO:
			C3-2

FOR CONSTRUCTION



NOMINAL PIPE DIAMETER OR HORIZONTAL CONDUIT SPAN (INCHES)	MINIMUM SIDEWALL CLEARANCE A (INCHES)	ADDITIONAL EXCAVATION DEPTH (1) B (INCHES)
LESS THAN 24	12	12
24 AND GREATER	18	18

ZONE NO.	ZONE NAME	MATERIAL	COMPACTION
1	FINAL BACKFILL	AS SPECIFIED	AT LEAST 95% MODIFIED PROCTOR MAXIMUM DRY DENSITY ASTM D-1557 (98% WHEN UNDER PAVEMENT)
2	INITIAL BACKFILL		
3	HAUNCHING		
4	BEDDING		
5	FOUNDATION		

(1) REQUIRED WHERE UNSUITABLE MATERIAL IS ENCOUNTERED.

TRENCH ZONE NOTES:

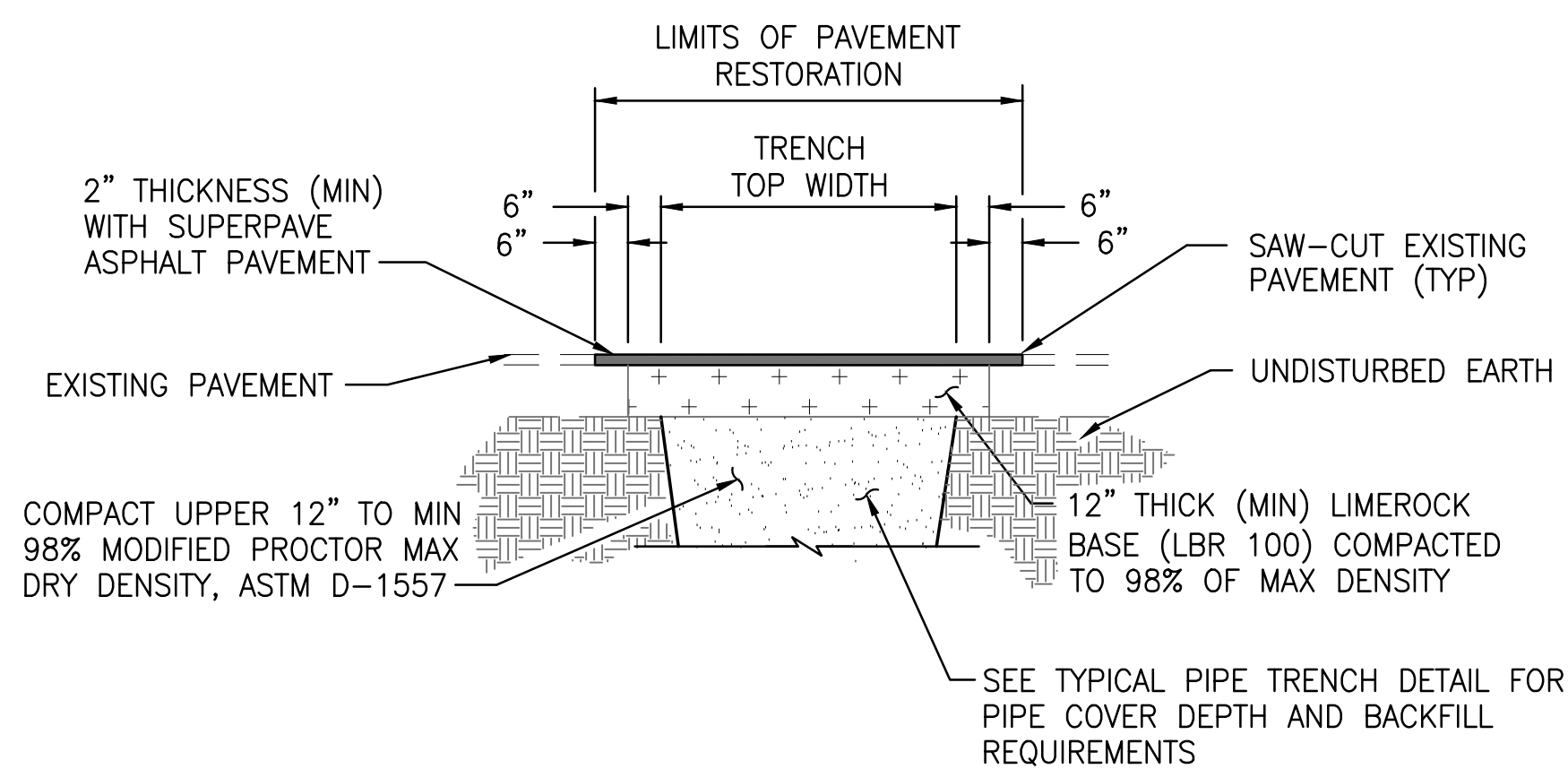
- FINAL BACKFILL SHALL BE INSTALLED IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT. REFER TO ADDITIONAL NOTE 3.
 - INITIAL BACKFILL SHALL BE INSTALLED IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT. ALL LIFTS SHALL BE COMPACTED BY HAND TAMPING OR AN APPROVED METHOD OF MECHANICAL TAMPING. REFER TO ADDITIONAL NOTE 3.
 - HAUNCHING SHALL BE IN COMPLETELY DEWATERED TRENCHES IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT. ALL LIFTS SHALL BE COMPACTED BY HAND TAMPING. HAUNCHING SHALL BE BROUGHT UP EQUALLY ON BOTH SIDES OF THE PIPE.
 - BEDDING SHALL BE INSTALLED IN COMPLETELY DEWATERED TRENCHES IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT, AND SHALL BE COMPACTED BY HAND OR MECHANICAL TAMPING. PROPERLY SHAPED BELL HOLES SHALL BE EXCAVATED IN THE BEDDING TO PERMIT ASSEMBLY OF THE PIPE. REFER TO ADDITIONAL NOTE 3.
- NATIVE, UNDISTURBED MATERIAL IN COMPLETELY DEWATERED TRENCHES MEETING THE COMPACTION AND MATERIAL REQUIREMENTS FOR COMPACTED BEDDING MATERIAL NEED NOT BE REPLACED OR REWORKED, EXCEPT FOR SHAPING OF THE BELL HOLES, AND WHERE REFILL IS REQUIRED.
- FOUNDATION SHALL BE REQUIRED WHERE UNSUITABLE MATERIAL IS ENCOUNTERED. FOUNDATION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS FOR BEDDING. REFER TO ADDITIONAL NOTE 3.

ADDITIONAL NOTES:

- FOR TRENCHES IN VEHICULAR TRAFFIC AREAS OR BENEATH SURFACE IMPROVEMENTS (EG, SLABS, ASPHALT, ETC.) SEE CONTRACT SPECIFICATIONS FOR ADDITIONAL COMPACTION REQUIREMENTS. SEE DRAWINGS FOR SURFACE IMPROVEMENT AND /OR RESTORATION DETAILS WHERE APPLICABLE.
- TRACING WIRE SHALL BE INSTALLED ON THE SIDE OF THE PIPE AND ATTACHED TO THE PIPE EVERY 10' W/ A NYLON WIRE TIE. IF THE WIRE IS DAMAGED OR NEEDS TO BE EXTENDED A 3M WATERPROOF TYPE UF SPLICE SHALL BE INSTALLED TO REPAIR THE WIRE. THE ENDS OF THE TRACING WIRE SHALL BE BROUGHT UP IN EVERY VALVE BOX ON THE LINE AND AT THE HYDRANT VALVES. THERE SHALL BE A MINIMUM COIL OF 3' LEFT UNDER THE VALVE BOX COVER. THE WIRE SHALL BE TESTED TO VERIFY CONDUCTIVITY.
- ALTERNATIVE LIFT THICKNESSES, NOT EXCEEDING 12 INCHES LOOSE MEASUREMENT, ARE ACCEPTABLE IN TRENCH ZONES 1, 2, 4, AND 5 PROVIDED 1) THE LIFT THICKNESS DOES NOT EXCEED THE MAXIMUM VALUE RECOMMENDED IN WRITING BY THE APPLICABLE PIPE MANUFACTURER AND 2) FIELD TEST RESULTS CONFIRM THAT THE SPECIFIED COMPACTION REQUIREMENTS ARE BEING MET.

TYPICAL UTILITY TRENCH DETAIL

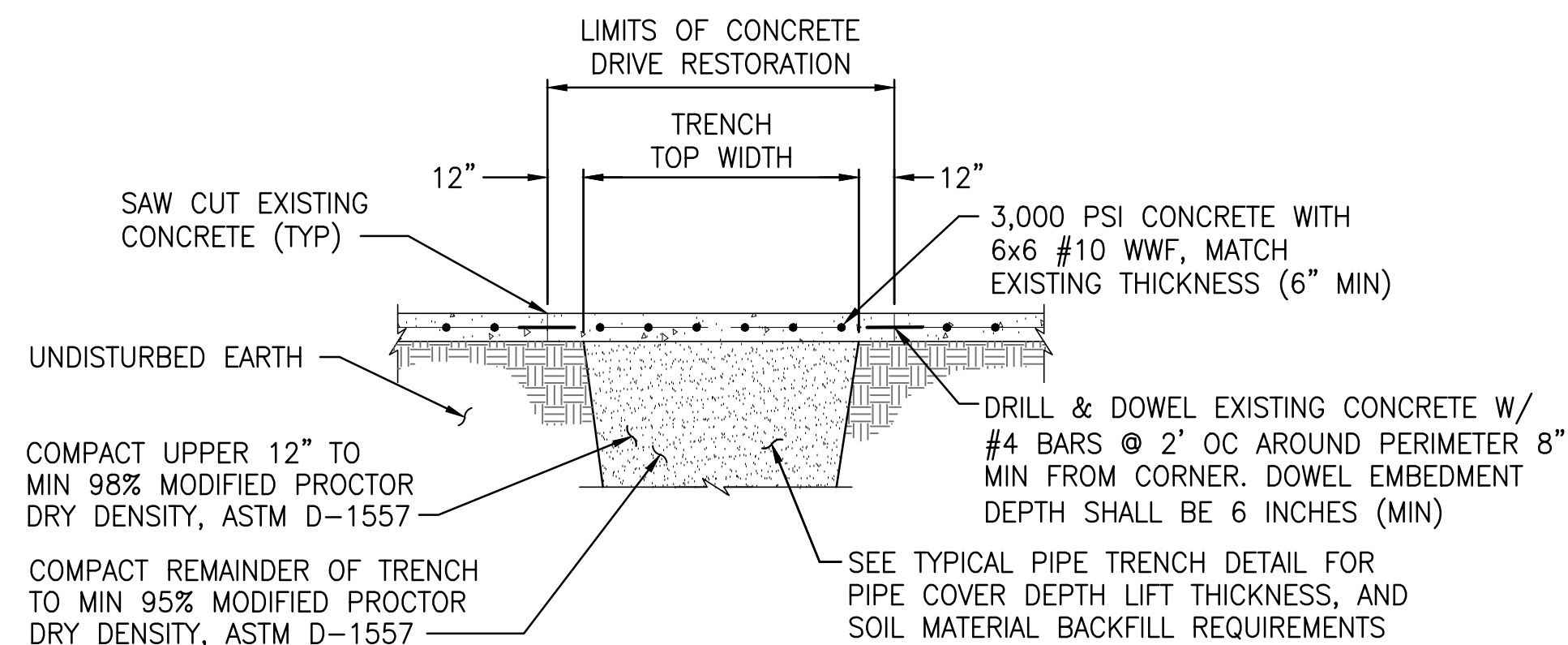
NTS



NOTE:
ASPHALT PAVEMENT RESTORATION DETAIL APPLIES TO ROADS, DRIVEWAYS, PRIVATE ROADS, DRIVES, MISCELLANEOUS PATCHES, AND SIMILAR RESTORATION. WORK IN THE BREVARD COUNTY RIGHT-OF-WAY SHALL BE RESTORED IN ACCORDANCE WITH THE BREVARD COUNTY STANDARDS AND DETAILS.

TYPICAL ASPHALT PAVEMENT RESTORATION DETAIL

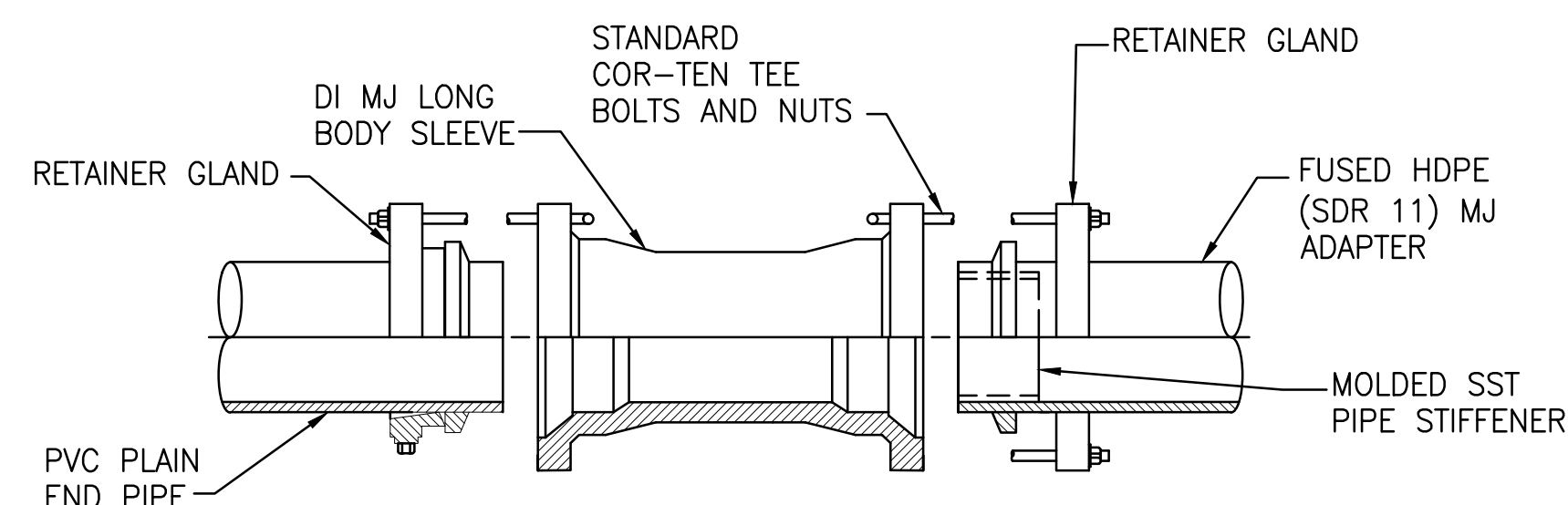
NTS



- NOTES:**
- DRILL AND DOWEL 1 LOCATION EACH SIDE FOR CURB REPAIR.
 - MATCH EXISTING GRADE AND FINISH.

TYPICAL CONCRETE DRIVEWAY RESTORATION DETAIL

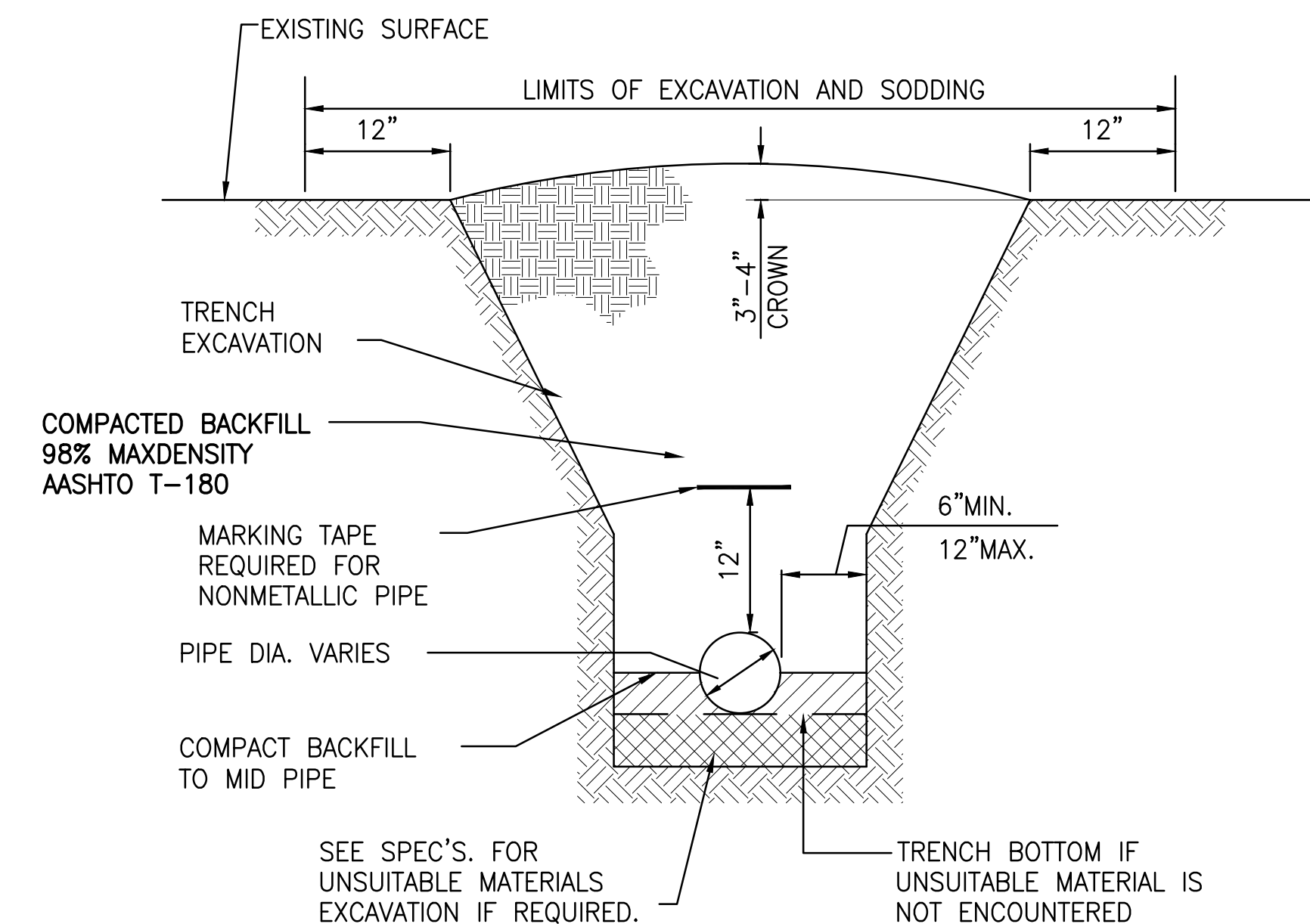
NTS



HDPE MJ ADAPTER W/ STIFFENER

PIPE MATERIAL TRANSITION FITTING DETAIL

NTS

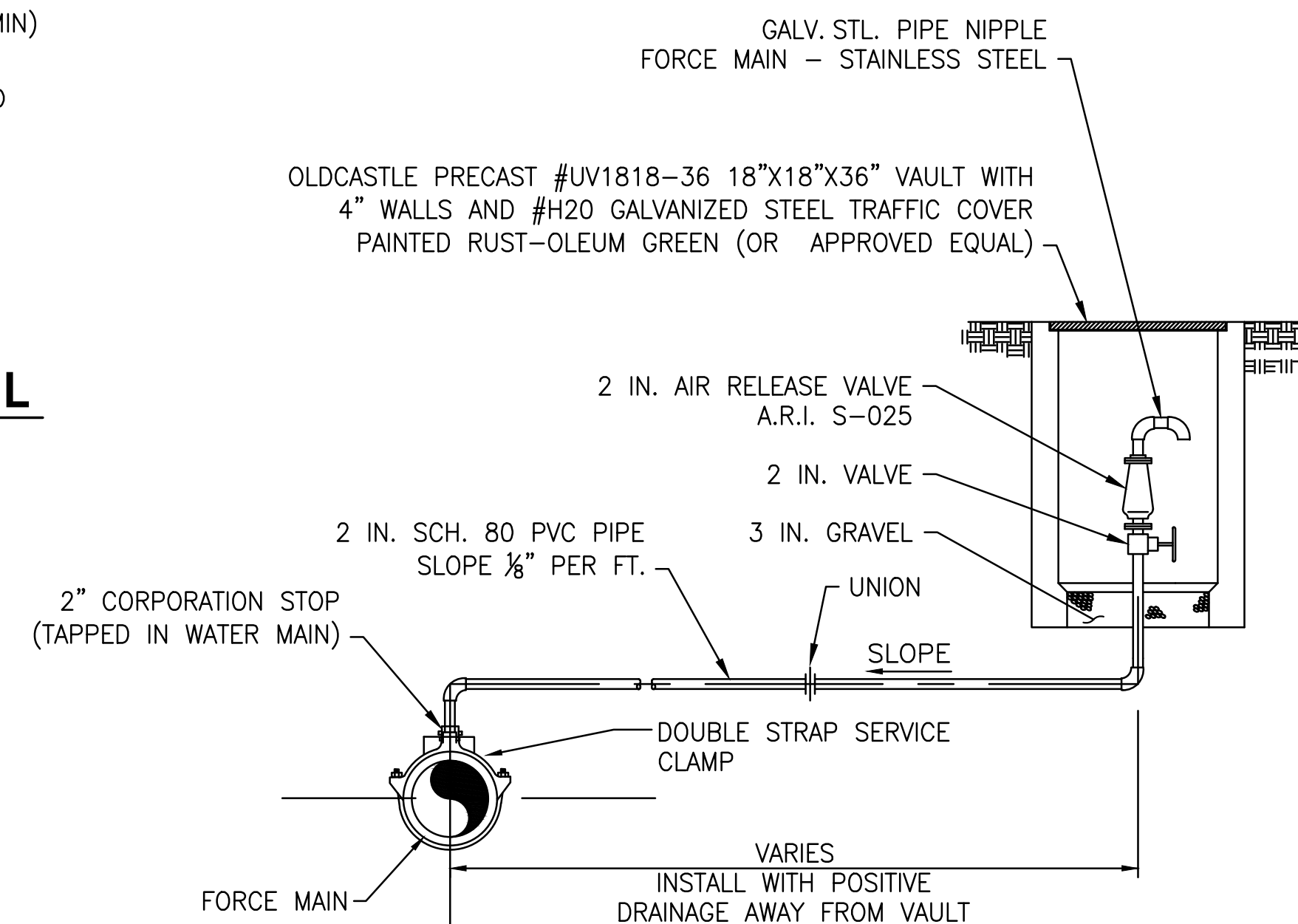


NOTES :

- DEWATERING SHALL CONTINUE UNTIL BACKFILL IS COMPACTED AT LEAST 2 FEET ABOVE PIPE.
- SURFACE TREATED PAVEMENT JOINTS SHALL BE LAPPED AND FEATHERED.
- CONTRACTOR SHALL SLOPE TRENCH IN ACCORDANCE WITH OSHA STANDARDS SHOW IN ABOVE TABLE B-1.

TYPICAL TRENCH IN UNPAVED AREAS DETAIL

NTS



OFFSET AIR RELEASE VALVE DETAIL

NTS

LTR.	DATE	REVISIONS	BY	APPRD.
C	9/16/20	ADDRESS BREVARD CO COMMENTS	LH	RK

DESIGNED	D YOUNG
DRAWN	D HAUBRICH
CHECKED	R KOLLER

JonesEdmunds
CERTIFICATE OF AUTHORIZATION #1841
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
 8657 BAYPINE ROAD SUITE 300, JACKSONVILLE, FL 32256 / (904) 744-5401

**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

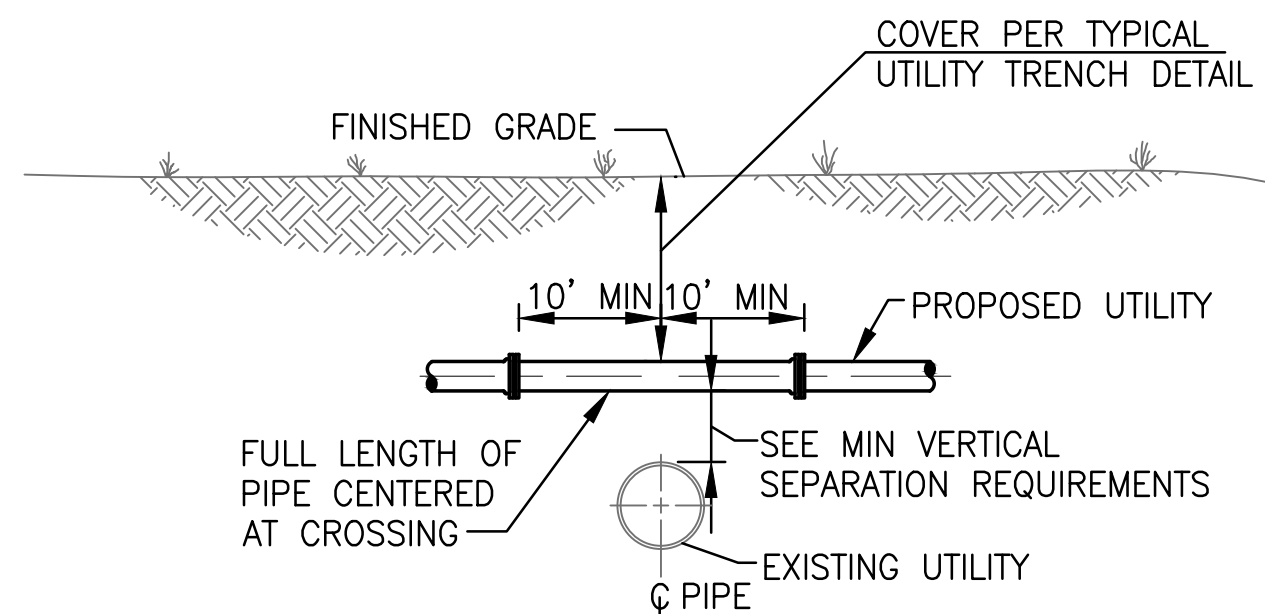
STORMWATER FORCE MAIN DETAILS

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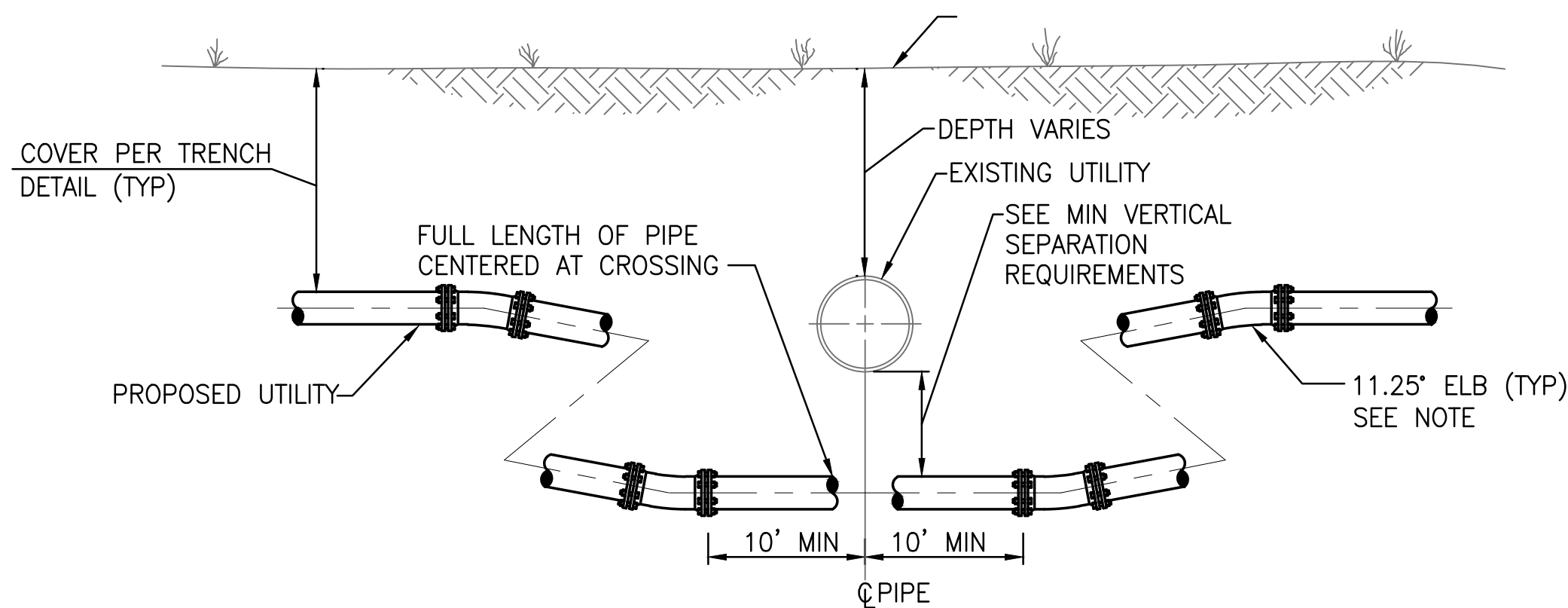
PROJECT NO:	19750-066-01	DATE:	OCT 2020
INDEX NO:		DWG NO:	C3-3

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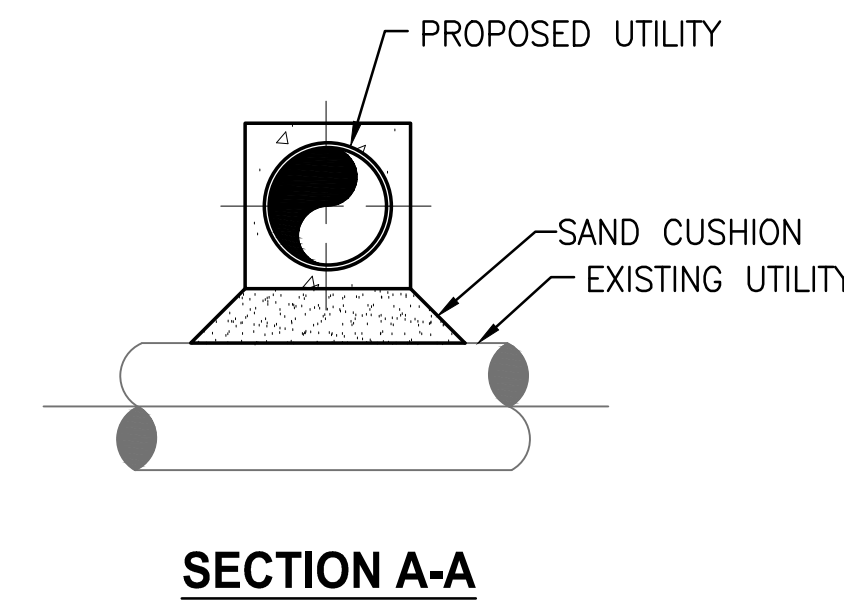
FOR CONSTRUCTION



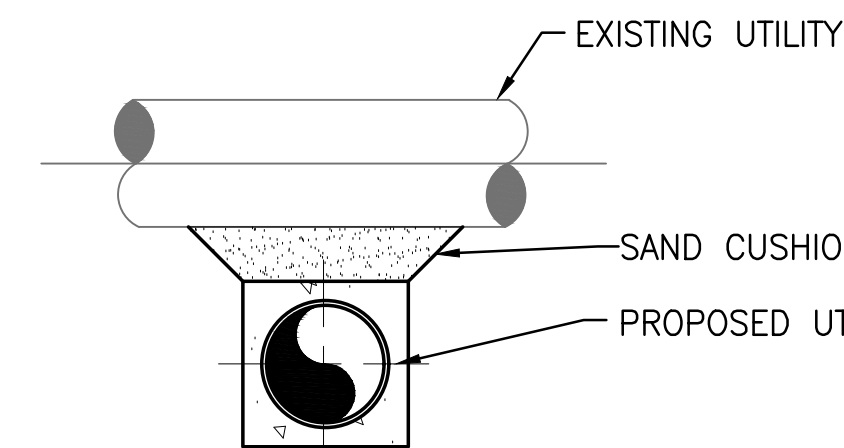
OPTION 1 (SUFFICIENT COVER AND SEPARATION AVAILABLE)



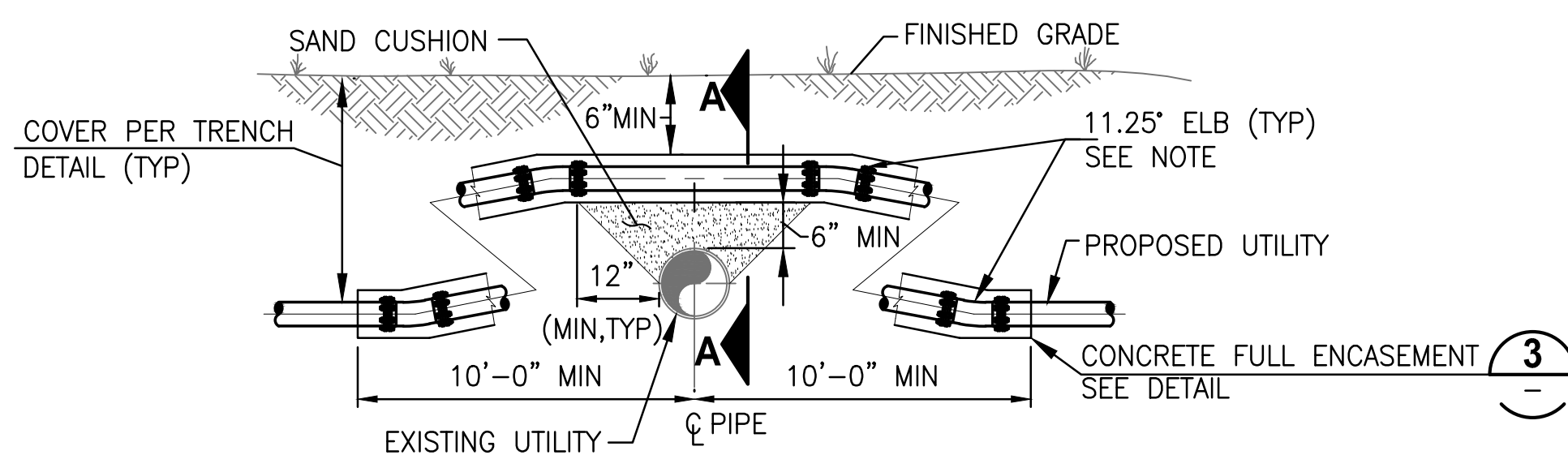
OPTION 2 (SUFFICIENT SEPARATION AVAILABLE)



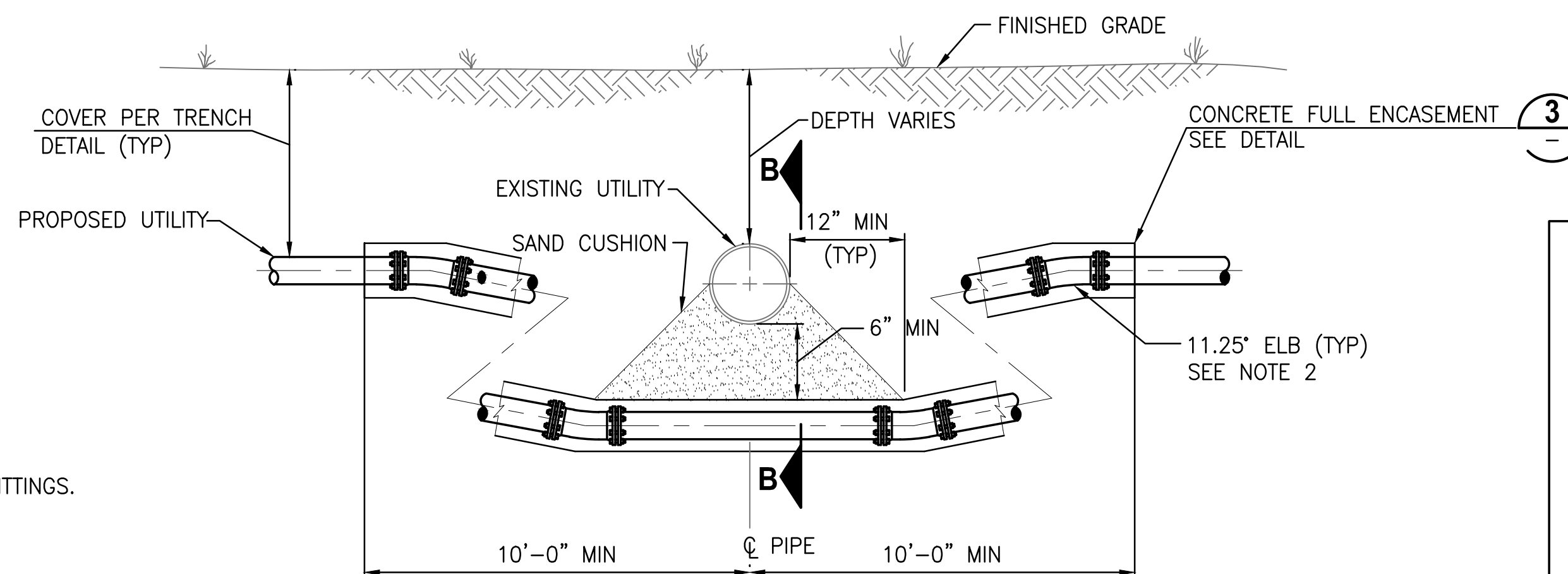
SECTION A-A



SECTION B-B

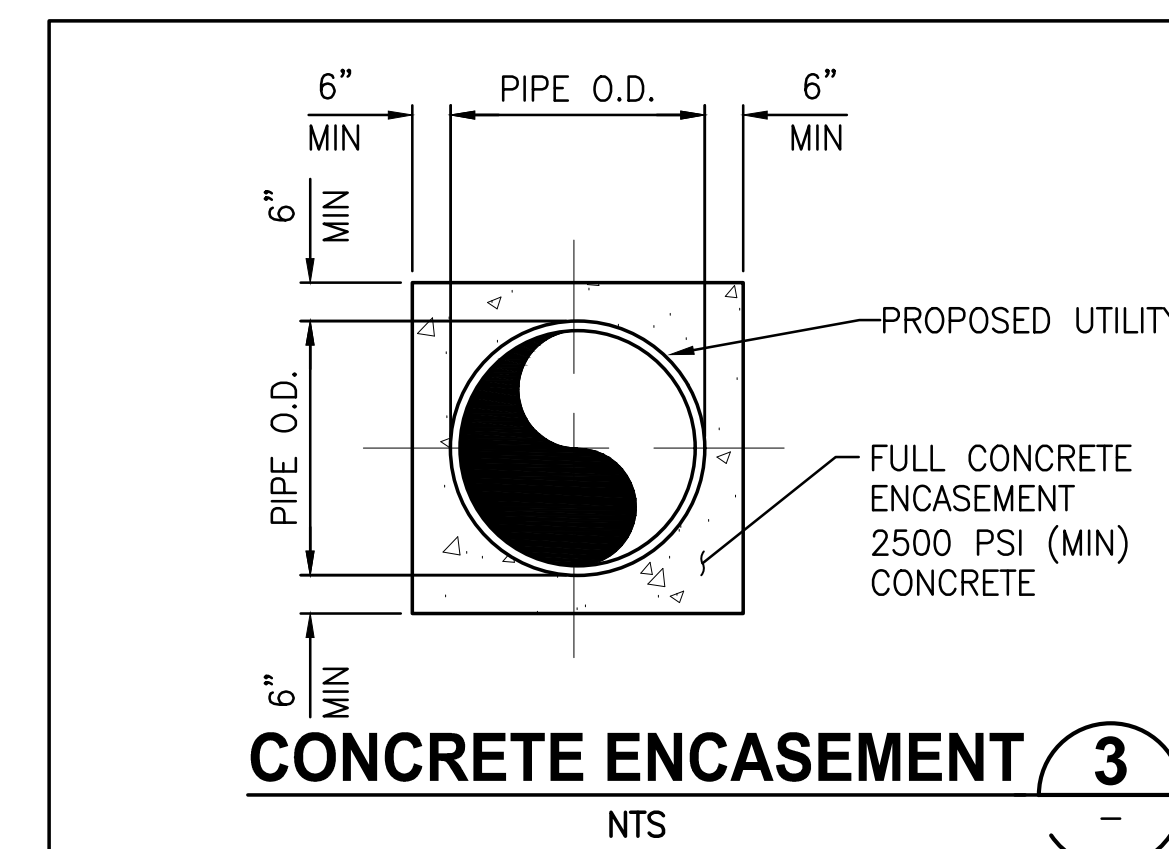


ALTERNATE OPTION 1 (SUFFICIENT COVER OR SEPARATION NOT AVAILABLE)



- NOTES:**
- FOR PROPOSED WATER MAINS, THIS OPTION IS ONLY ALLOWED WITH APPROVAL OF THE ENGINEER AND FDEP ON A CASE BY CASE BASIS.
 - WITH APPROVAL OF ENGINEER, CONTRACTOR MAY DEFLECT PIPE AS SPECIFIED INSTEAD OF USING FITTINGS.

ALTERNATE OPTION 2 (SUFFICIENT SEPARATION NOT AVAILABLE)



PROPOSED UTILITY	EXISTING UTILITY						COMMENTS
	POTABLE WATER	GRAVITY SANITARY SEWER	SEWAGE FORCE MAIN	STORM	RECLAIMED WATER	ELECTRIC TELECOMMUNICATIONS	
POTABLE WATER	1'-0"	1'-6"	1'-6"	1'-0"	1'-0"	1'-0"	SEE NOTE 1
GRAVITY SANITARY SEWER	1'-6"	1'-0"	1'-0"	1'-6"	1'-6"	1'-0"	
SEWAGE FORCE MAIN	1'-6"	1'-0"	1'-0"	1'-0"	1'-6"	1'-0"	SEE NOTE 2
STORM	1'-0"	1'-6"	1'-0"	1'-0"	1'-0"	1'-0"	
RECLAIMED WATER	1'-0"	1'-6"	1'-6"	1'-0"	1'-0"	1'-0"	SEE NOTE 2
ELECTRIC TELECOMMUNICATIONS	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	

- NOTE:**
- ONLY OPTION 1 CONSTRUCTION IS ALLOWED WITHOUT APPROVAL OF ENGINEER.

MINIMUM VERTICAL SEPARATION REQUIREMENTS



PROPOSED UTILITY	MINIMUM HORIZONTAL SEPARATION EXISTING UTILITY					
	POTABLE WATER	GRAVITY SANITARY SEWER	SEWAGE FORCE MAIN	STORM	RECLAIMED WATER	ELECTRIC TELECOMMUNICATIONS
POTABLE WATER	1'-0"	10'-0"	10'-0"	3'-0"	3'-0"	3'-0"
GRAVITY SANITARY SEWER	10'-0"	1'-0"	1'-0"	3'-0"	3'-0"	3'-0"
SEWAGE FORCE MAIN	10'-0"	1'-0"	1'-0"	3'-0"	3'-0"	3'-0"
STORM	3'-0"	3'-0"	3'-0"	1'-0"	3'-0"	3'-0"
RECLAIMED WATER	3'-0"	3'-0"	3'-0"	3'-0"	1'-0"	3'-0"
ELECTRIC TELECOMMUNICATIONS	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	2'-0"

- NOTE:**
- UTILITIES SHALL NOT BE INSTALLED WITHIN THE DRIP LINE OF TREES WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER.



FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED D YOUNG
 DRAWN D HAUBRICH
 CHECKED R KOLLER

JonesEdmunds
CERTIFICATE OF AUTHORIZATION #1841
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
 8657 BAYPINE ROAD SUITE 300, JACKSONVILLE, FL 32256 / (904) 744-5401

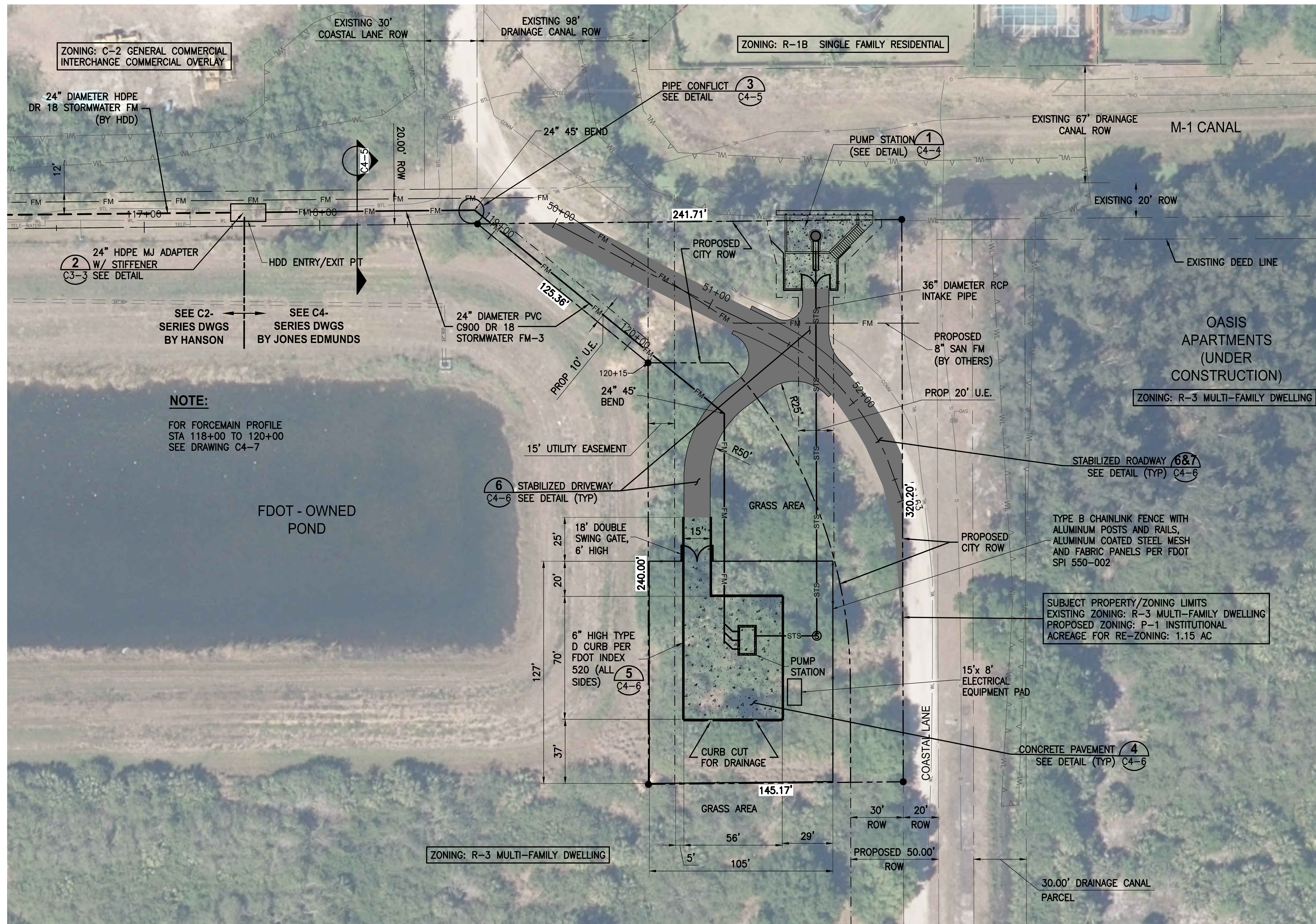
**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

STORMWATER FORCE MAIN DETAILS

RICHARD NEAL KOLLER, PROFESSIONAL ENGINEER,
 STATE OF FLORIDA, LICENSE NUMBER 48947
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PROJECT NO: 19750-066-01
 DATE: OCT 2020
 INDEX NO:
 DWG NO: C3-4

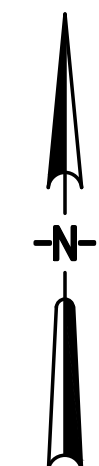
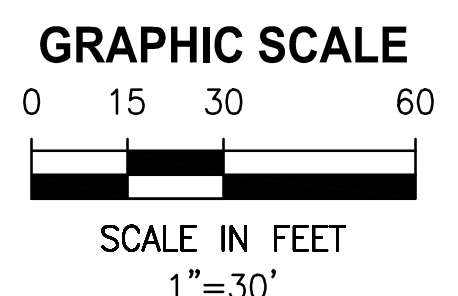
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NOTE:
FOR FORCEMAIN PROFILE
STA 118+00 TO 120+00
SEE DRAWING C4-7

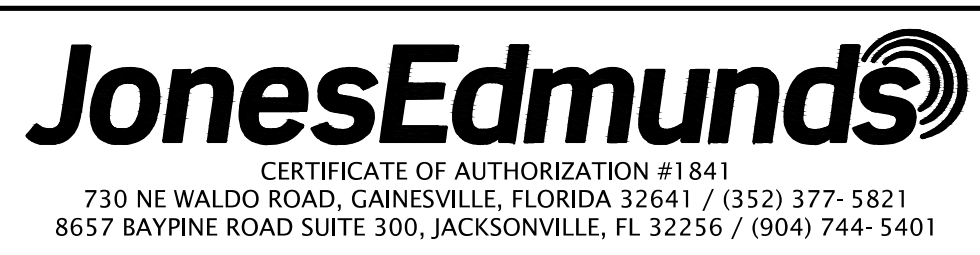
- PROJECT INFORMATION:**
- NO BUILDINGS
 - NO AUDIBLE ALARMS
 - EQUIPMENT PANELS UNDER 8 FEET OF HEIGHT
 - 6 FOOT FENCING, WITH FABRIC PANEL
 - EXISTING ROAD WITHIN SUBJECT PROPERTY TO BE STABILIZED AND COMPACTED

SUBJECT PROPERTY/ZONING LIMITS
EXISTING ZONING: R-3 MULTI-FAMILY DWELLING
PROPOSED ZONING: P-1 INSTITUTIONAL
ACREAGE FOR RE-ZONING: 1.15 AC



Y:\19750-SURWMD\PROJECTS\066-01_CRANE_CREEK_M-1_FLOW_RESTORATION_DESIGN\CAD\DWGS\CIVIL\19750-066-01-C4-1.DWG
 7/30/2020 8:39 AM MHOFFMAN

DESIGNED	W NICKEL			
DRAWN	D HAUBRICH			
CHECKED	R KOLLER			
LTR.	DATE	REVISIONS	BY	APPRD.
A	12/20/19	REVISED PER COWM	RK	RK



**CRANE CREEK M-1 CANAL FLOW RESTORATION
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

PUMP STATION SITE PLAN

PROJECT NO:	DATE:
19750-066-01	OCT 2020
INDEX NO:	DWG NO:
	C4-1

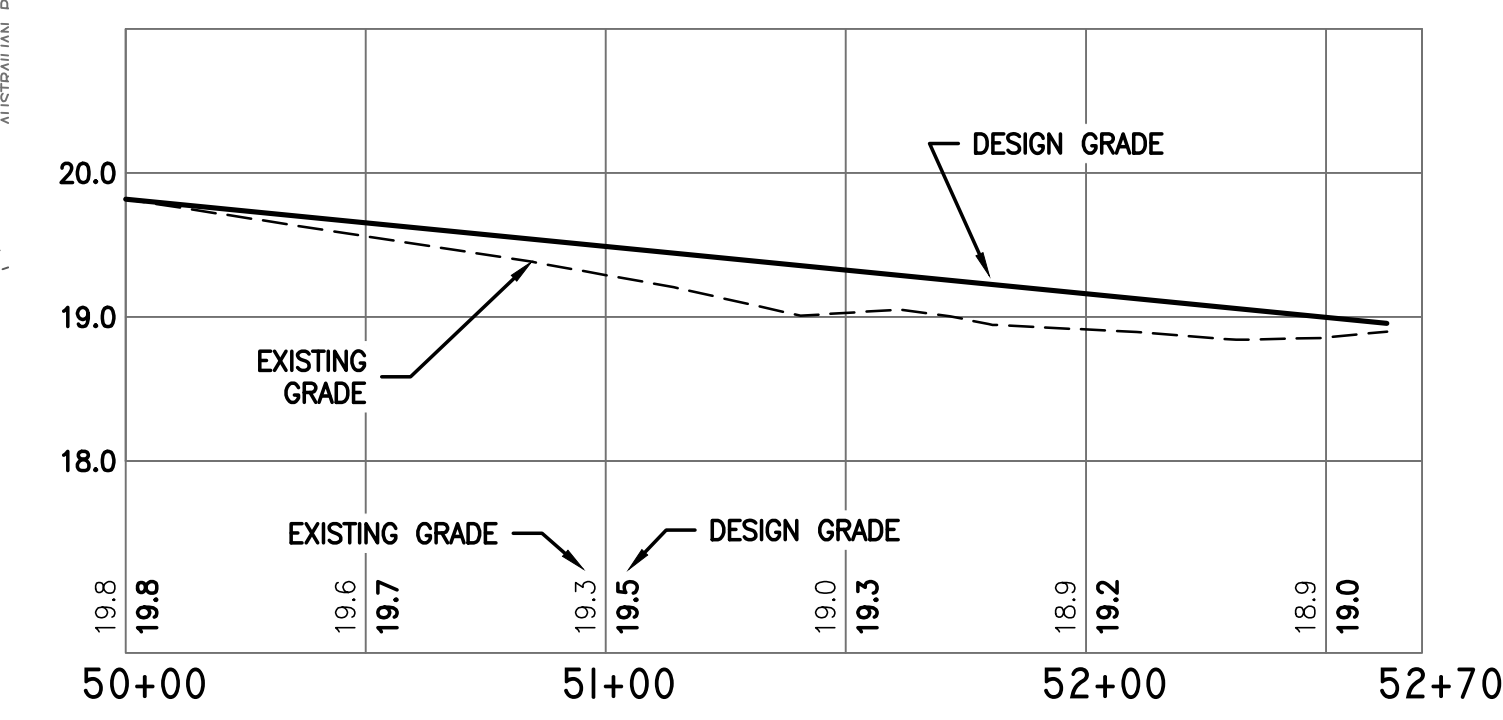
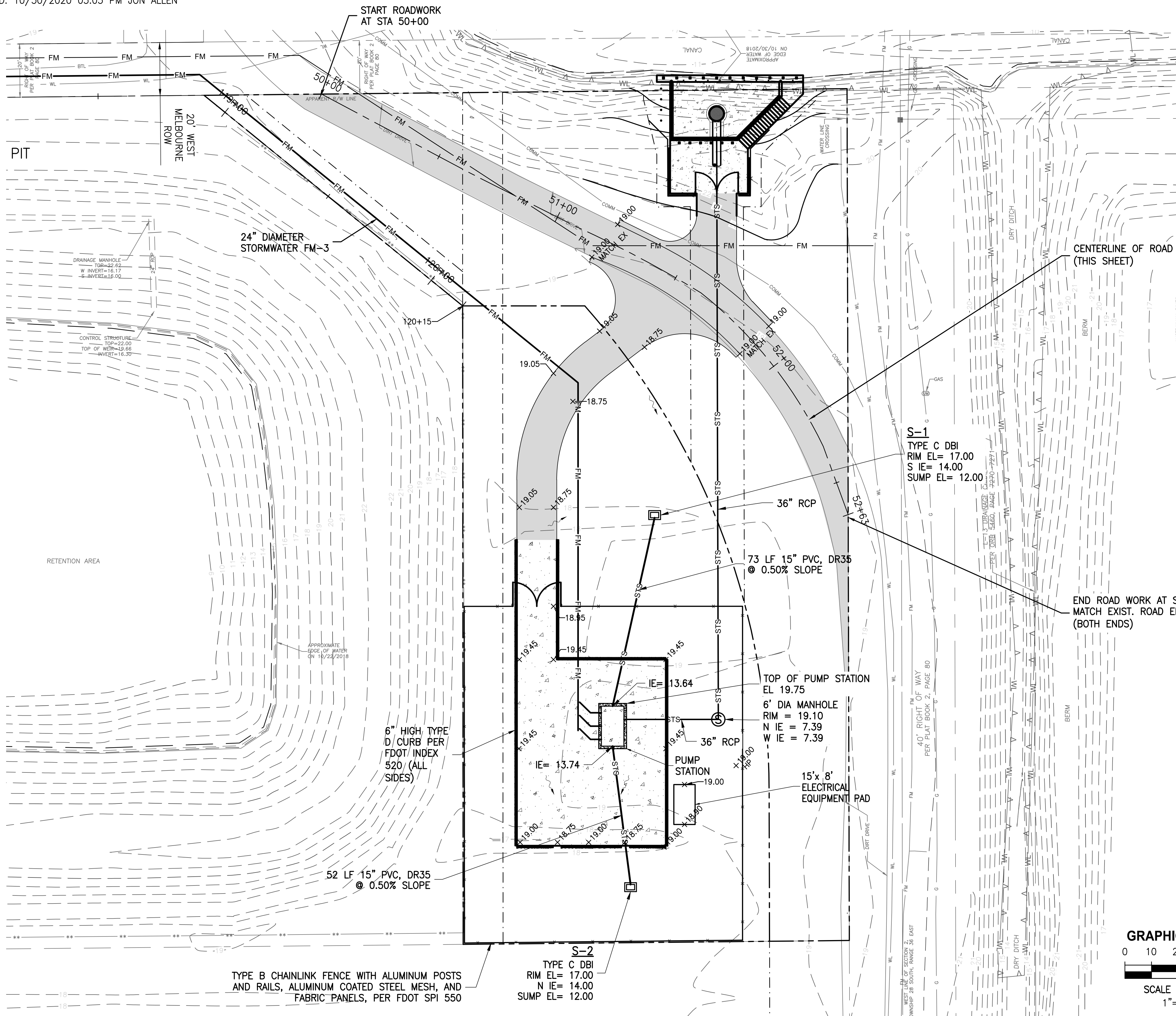
WALTER ALBERT NICKEL, PROFESSIONAL ENGINEER,
STATE OF FLORIDA, LICENSE NUMBER 68638

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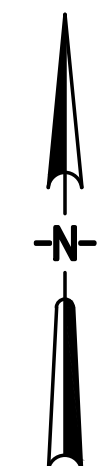
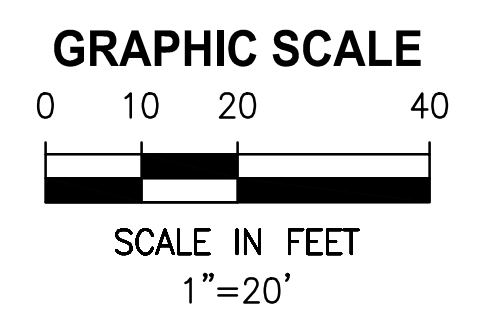
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 9/16/2020 6:52 PM LHABERMAN



ROAD PROFILE
 1"=40' HORIZ
 1"=1' VERT



LTR.	DATE	REVISIONS	BY	APPRD.
C	9/16/20	ADDRESS BREVARD CO COMMENTS	LH	RK
B	02/06/20	REVISED ROAD PROFILE PER COWM	RK	RK
A	12/20/19	REVISED PER COWM	RK	RK

DESIGNED	W NICKEL
DRAWN	D HAUBRICH
CHECKED	R KOLLER

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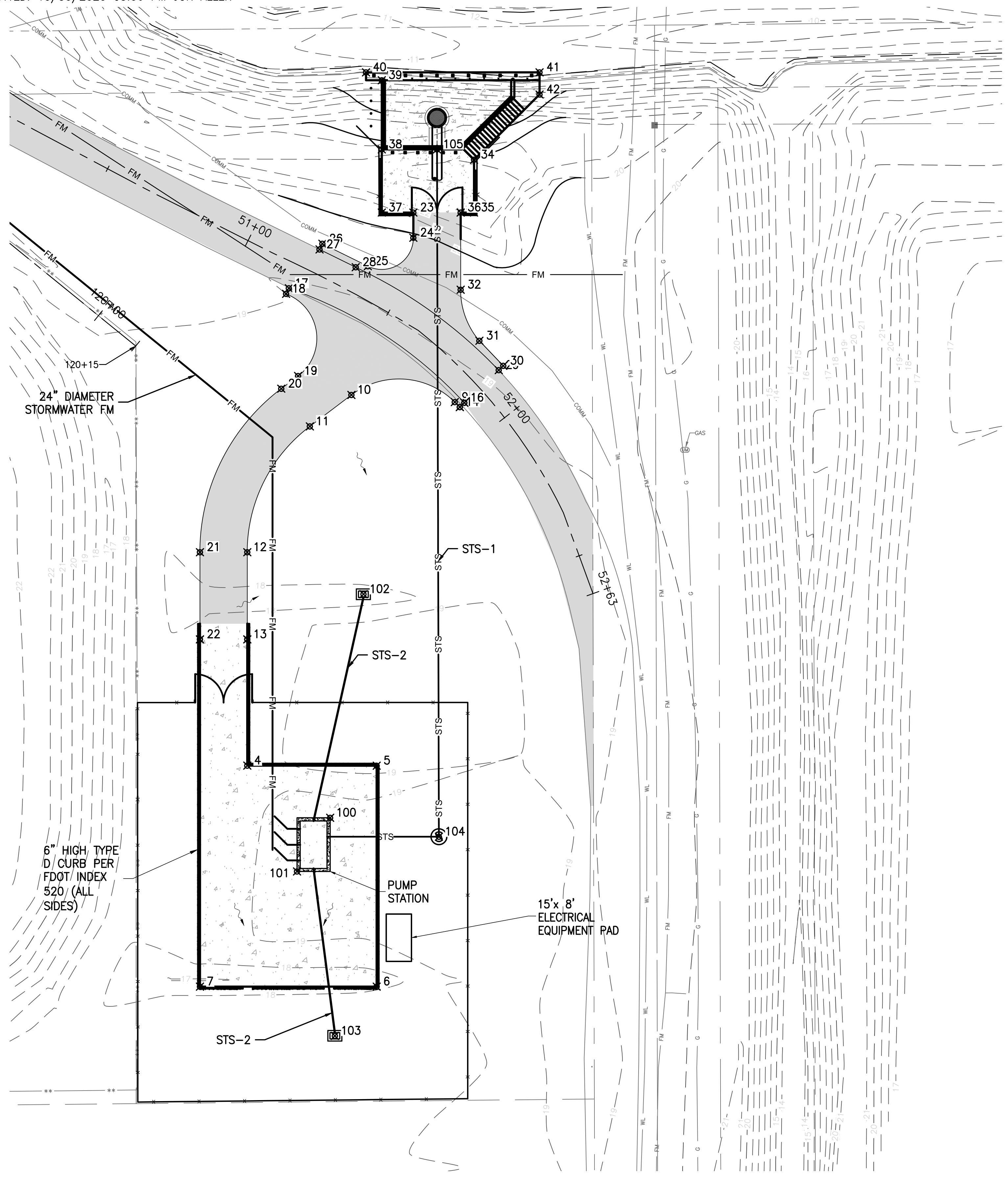
**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

PUMP STATION GRADING PLAN

DESIGNED BY	WALTER ALBERT NICKEL, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 68638	PROJECT NO:	19750-066-01	DATE:	OCT 2020
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 7/29/2020 3:26 PM MHOFFMAN



PAVING COORDINATE TABLE

POINT	NORTHING	EASTING
1	1363503.63	751685.93
2	1363613.63	751629.93
3	1363613.63	751644.93
4	1363573.64	751644.93
5	1363573.63	751685.93
6	1363503.63	751685.93
7	1363503.64	751629.93
8	1363687.22	751712.27
9	1363688.81	751710.69
10	1363691.06	751677.92
11	1363681.09	751664.74
12	1363641.22	751644.93
13	1363613.63	751644.93
14	1363687.22	751712.27
15	1363688.60	751713.72
16	1363688.60	751713.72
17	1363724.88	751658.09
18	1363723.08	751657.21
19	1363697.07	751661.01
20	1363693.05	751655.69

PAVING COORDINATE TABLE

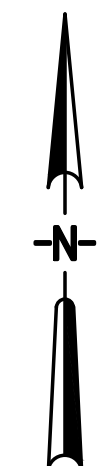
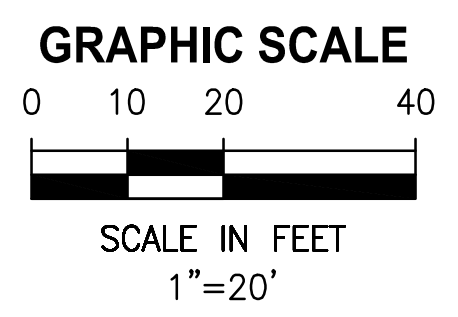
POINT	NORTHING	EASTING
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23	1363748.84	751697.53
24	1363740.85	751697.53
25	1363731.87	751683.12
26	1363738.97	751668.70
27	1363737.17	751667.82
28	1363731.54	751679.28
29	1363698.92	751724.60
30	1363700.30	751726.05
31	1363708.22	751718.47
32	1363724.40	751712.53
33	1363748.84	751712.53
34	1363765.59	751716.76
35	1363748.84	751716.76
36	1363748.84	751712.53
37	1363748.84	751687.53
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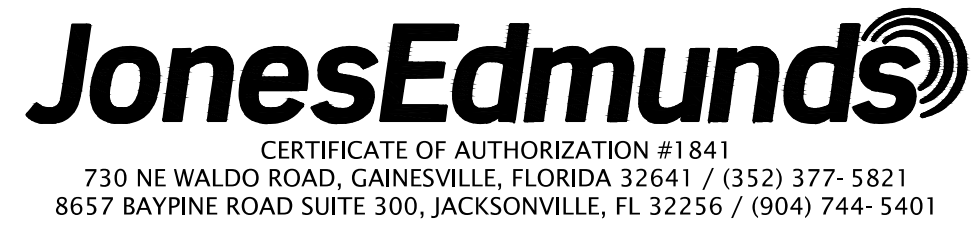
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41	1363793.25	751737.53
42	1363786.24	751737.53
100	1363557.11	751671.17

GRADING COORDINATE TABLE

POINT	NORTHING	EASTING
100	1363557.11	751671.17
101	1363540.13	751660.68
102	1363627.95	751681.74
103	1363488.02	751672.66
104	1363551.13	751705.64
105	1363768.84	751705.04



DESIGNED	W NICKEL		
DRAWN	D HAUBRICH		
CHECKED	R KOLLER		
LTR.	DATE	REVISIONS	BY APPRD.
A	12/20/19	REVISED PER COWM	RK RK



**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

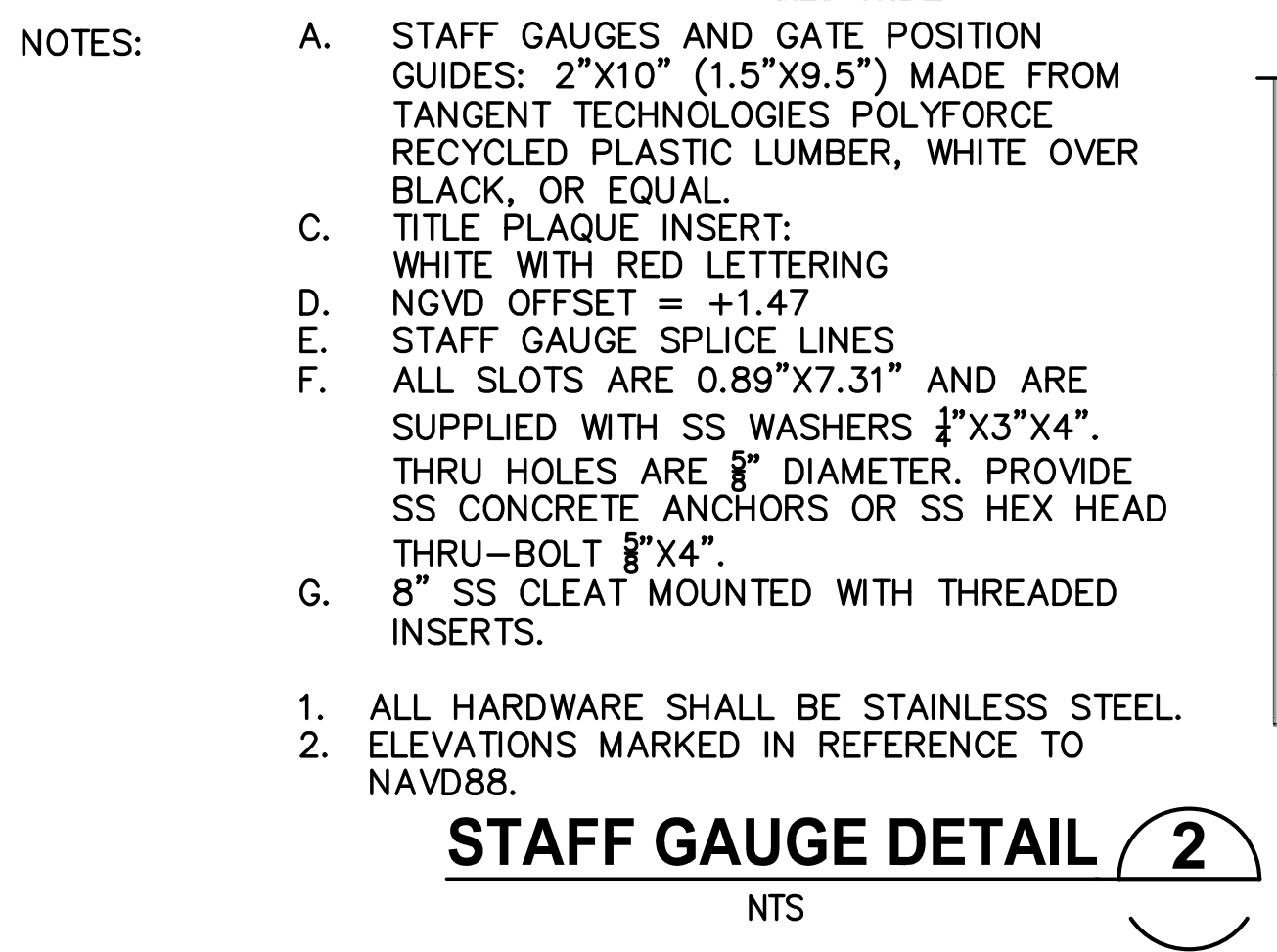
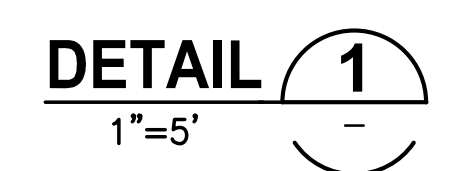
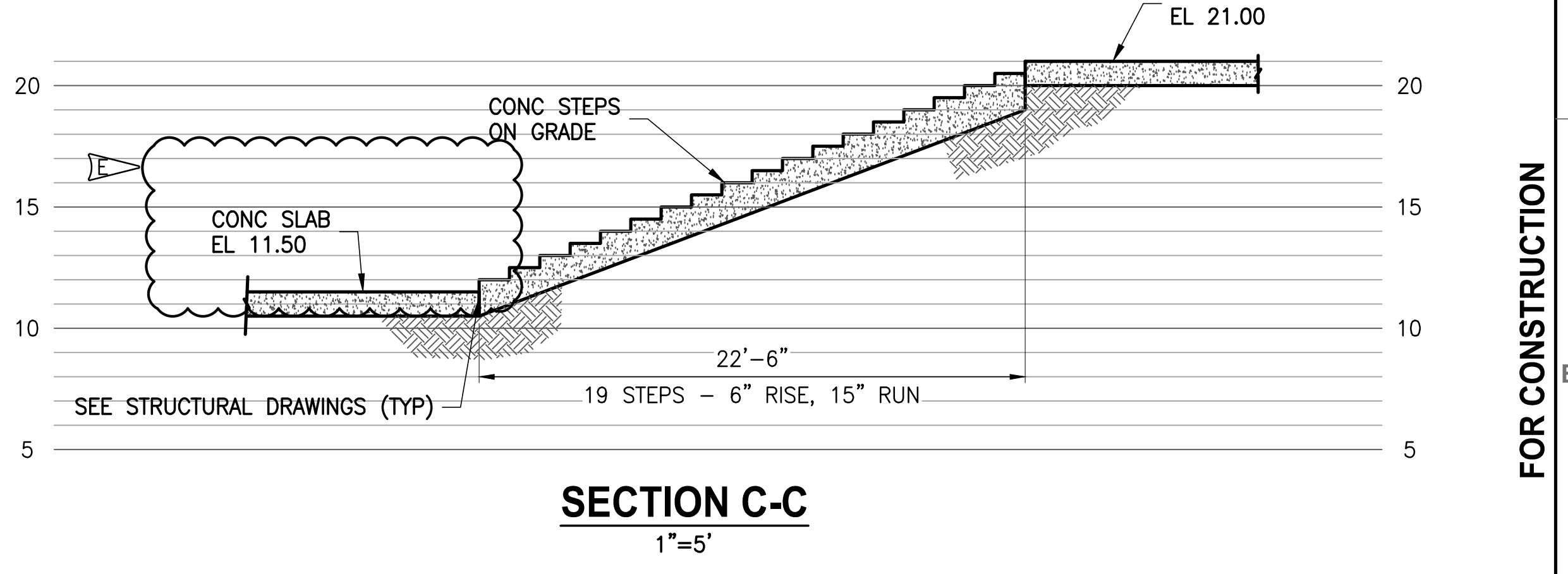
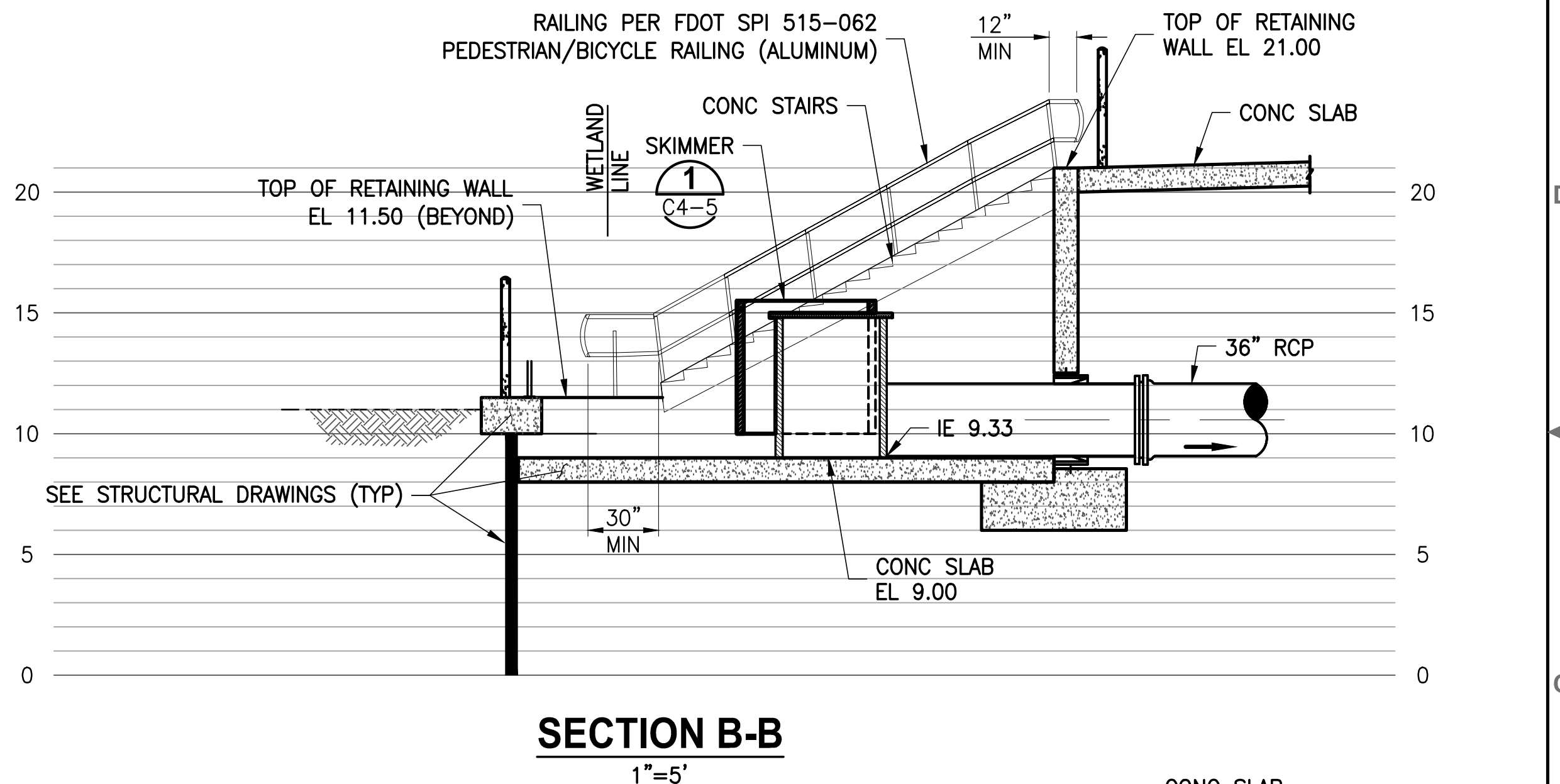
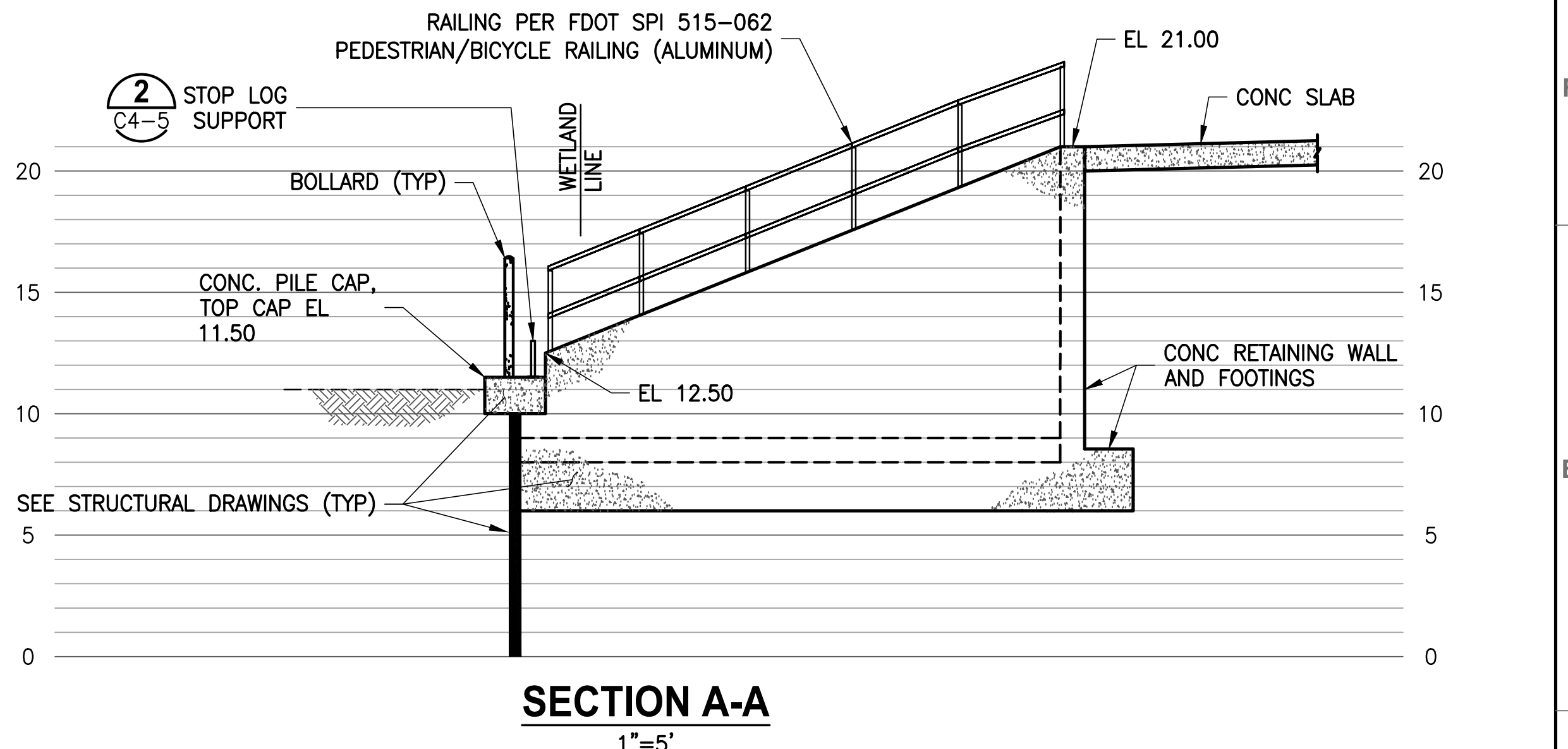
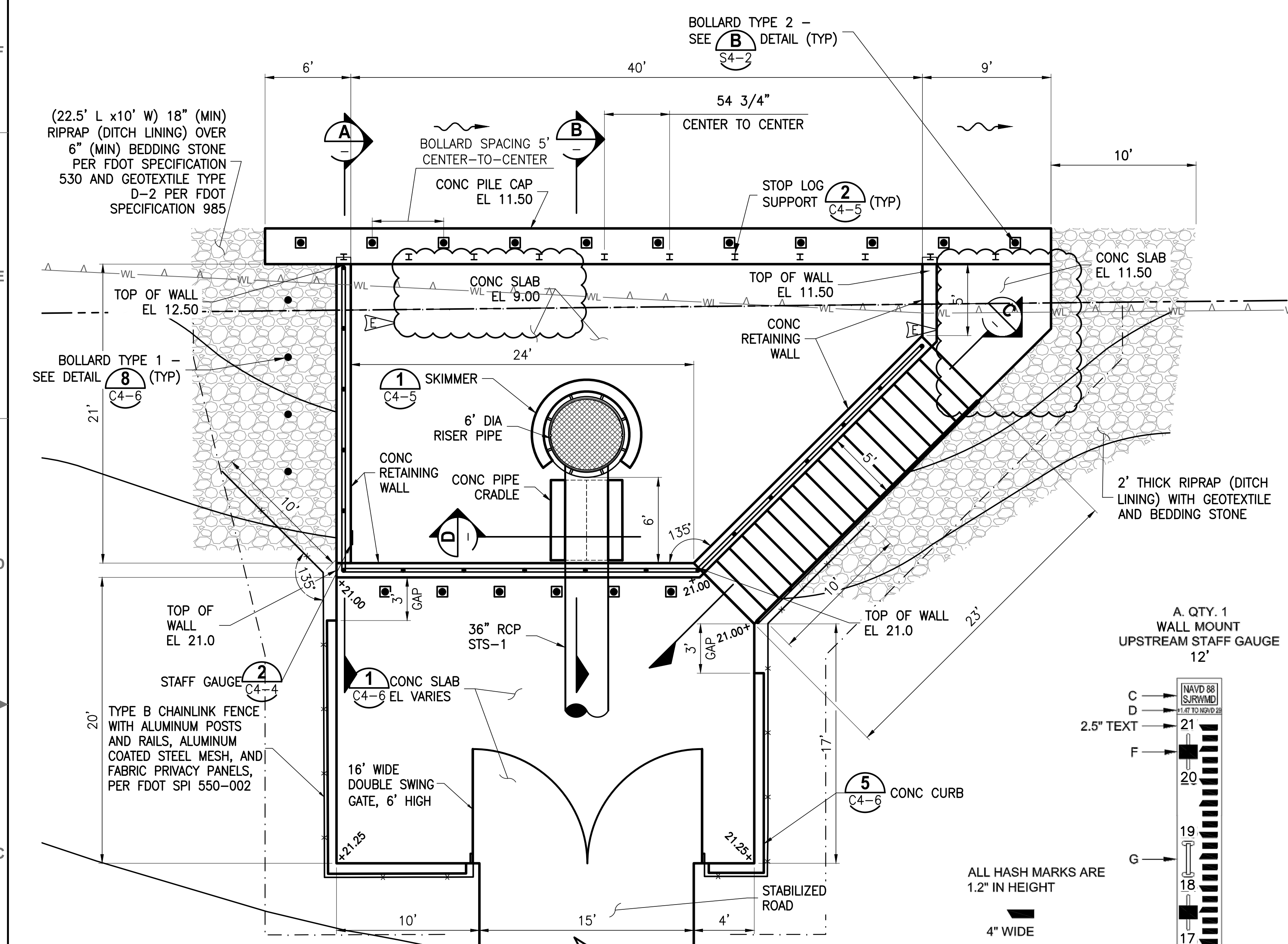
PUMP STATION GEOMETRIC CONTROL PLAN

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PROJECT NO:	DATE:
19750-066-01	OCT 2020
INDEX NO:	DWG NO:
	C4-3

FOR CONSTRUCTION

Y:\19750-SURWMD\PROJECTS\066-01_CRANE CREEK M-1_FLOW_RESTORATION_DESIGN\CAD\DWGS\CIVIL\19750-066-01-C4-4.DWG
 10/30/2020 2:37 PM JALLEN



NOTE:
SEE STRUCTURAL DRAWINGS FOR ADDITIONAL DIMENSIONS AND DETAILS.

- NOTES:**
- A. STAFF GAUGES AND GATE POSITION GUIDES: 2"x10" (1.5"x9.5") MADE FROM TANGENT TECHNOLOGIES POLYFORCE RECYCLED PLASTIC LUMBER, WHITE OVER BLACK, OR EQUAL.
 - C. TITLE PLAQUE INSERT: WHITE WITH RED LETTERING
 - D. NGVD OFFSET = +1.47
 - E. STAFF GAUGE SPLICE LINES ALL SLOTS ARE 0.89"x7.31" AND ARE SUPPLIED WITH SS WASHERS 1/4"x3"x4". THRU HOLES ARE 5/8" DIAMETER. PROVIDE SS CONCRETE ANCHORS OR SS HEX HEAD THRU-BOLT 3/4"x4".
 - F. 8" SS CLEAT MOUNTED WITH THREADED INSERTS.
 - G. 1. ALL HARDWARE SHALL BE STAINLESS STEEL.
2. ELEVATIONS MARKED IN REFERENCE TO NAVD88.

SECTION D-D
NTS

STAFF GAUGE DETAIL 2
NTS

LTR.	DATE	REVISIONS	BY	APPRD.
E	10/30/20	BID RESPONSE	JA	RK
A	12/20/19	REVISED PER COMM	RK	RK

DESIGNED	W NICKEL
DRAWN	D HAUBRICH
CHECKED	R KOLLER

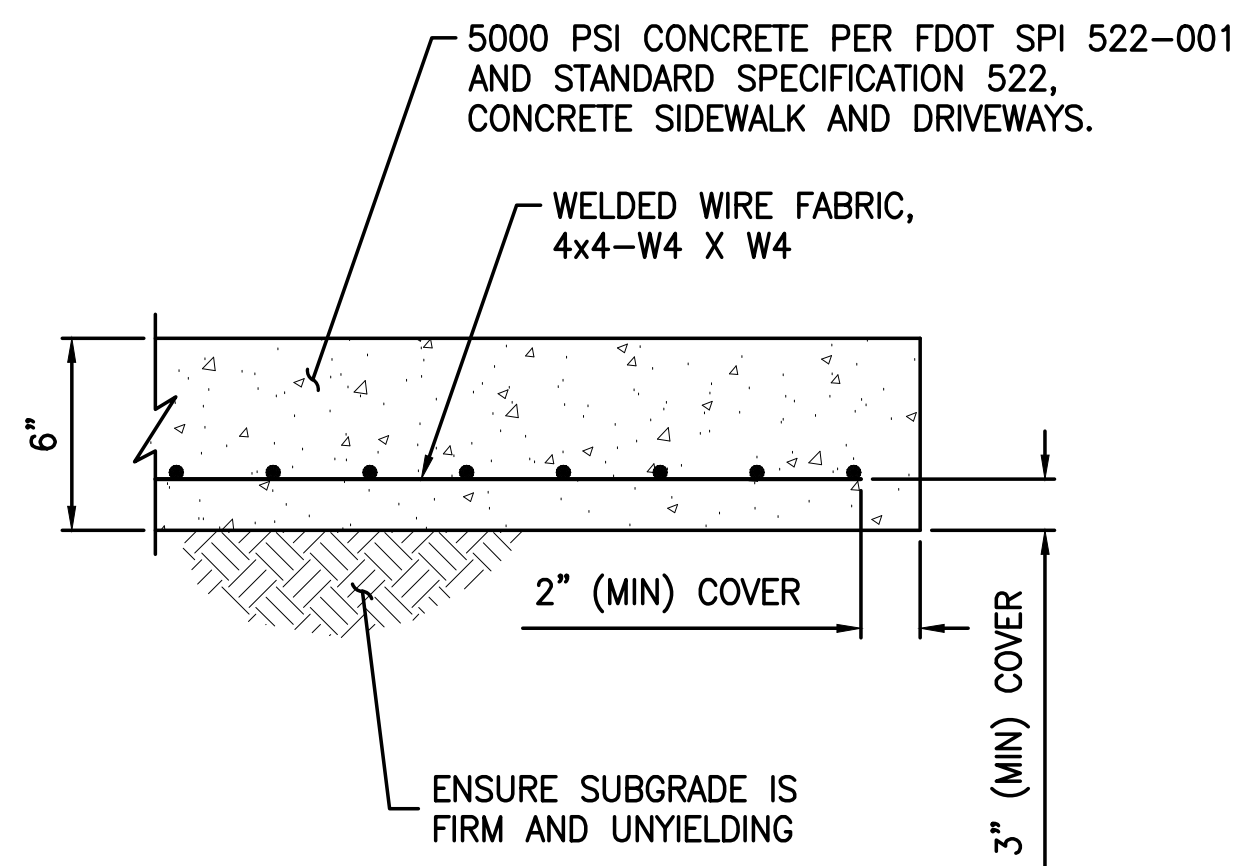
JonesEdmunds
CERTIFICATE OF AUTHORIZATION #1841
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
 8657 BAYPINE ROAD SUITE 300, JACKSONVILLE, FL 32256 / (904) 744-5401

**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

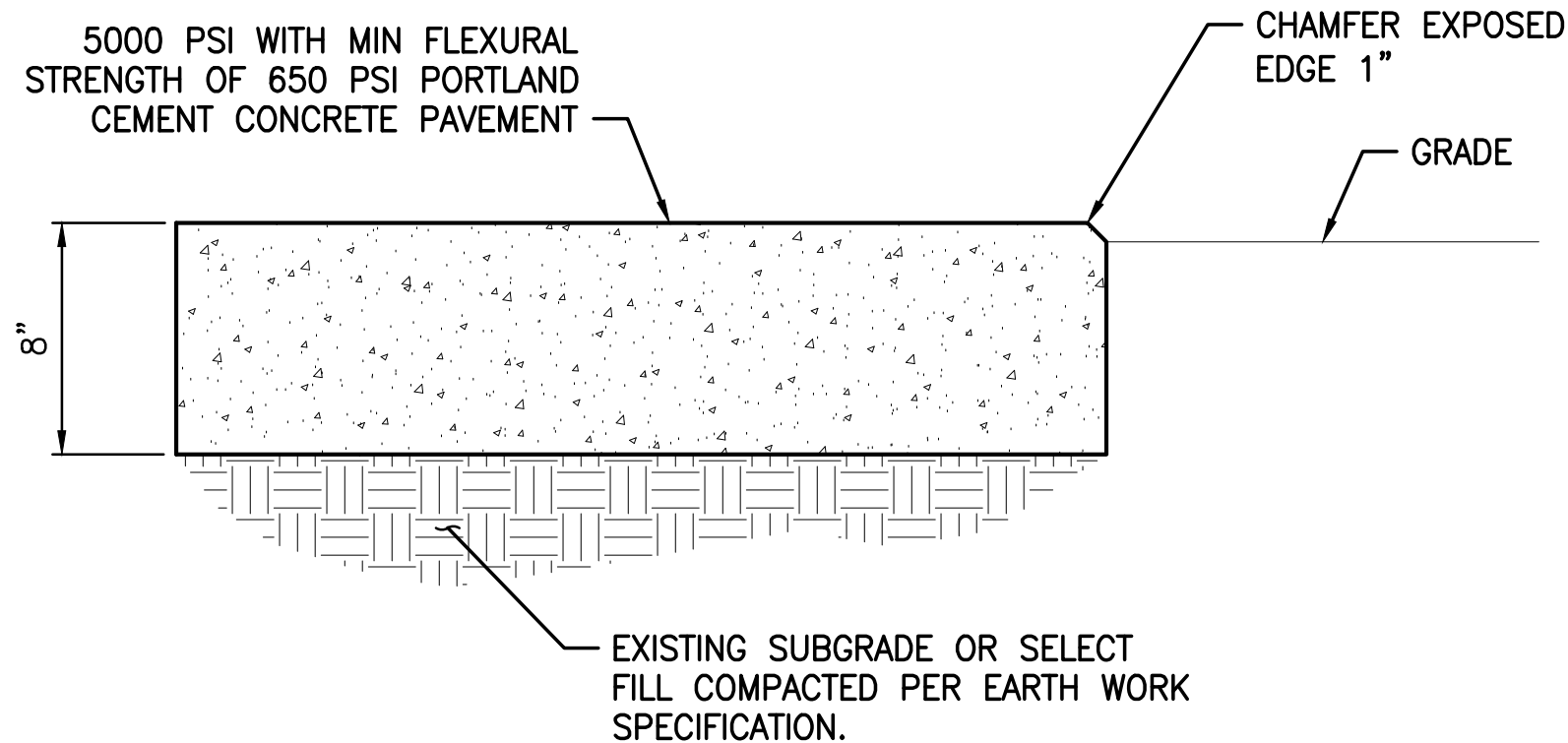
**PUMP STATION INTAKE PLAN
 & SECTIONS**

WALTER ALBERT NICKEL, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 68638 THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY WALTER ALBERT NICKEL ON THE DATE AT THE RIGHT. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.	PROJECT NO: 19750-066-01	DATE: OCT 2020
	INDEX NO: C4-4	DWG NO: C4-4

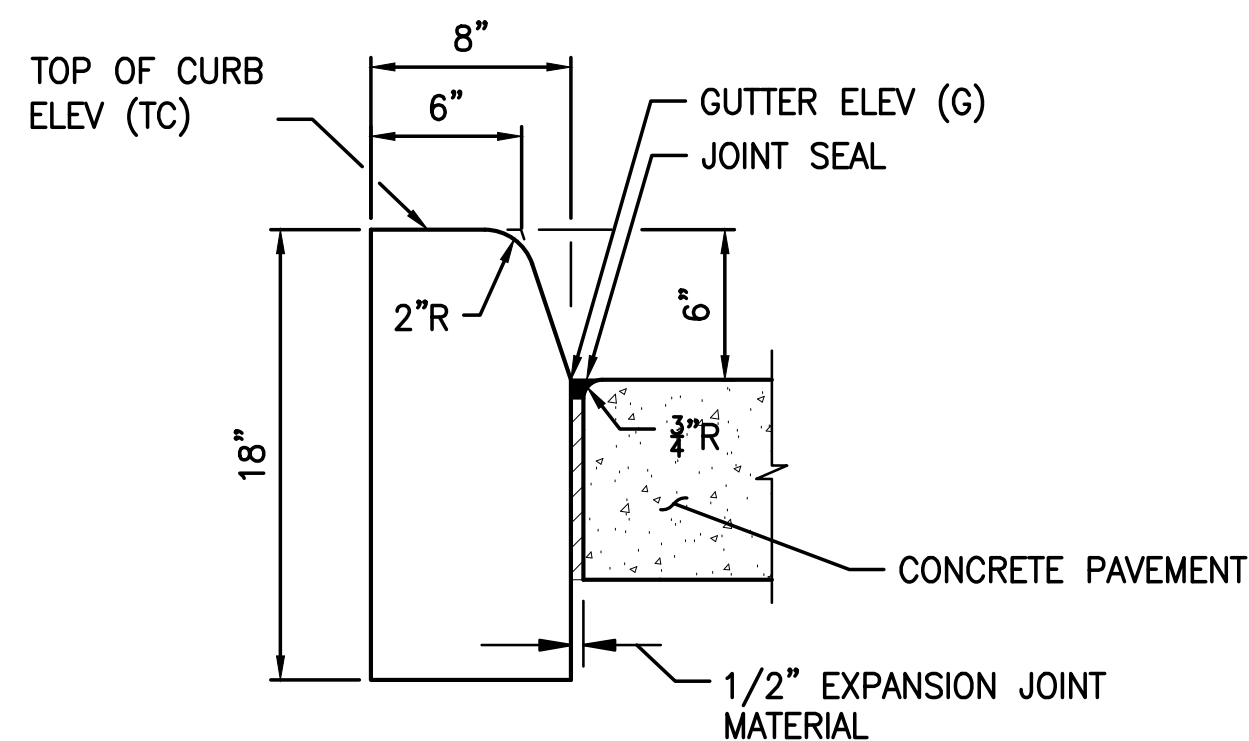
FOR CONSTRUCTION



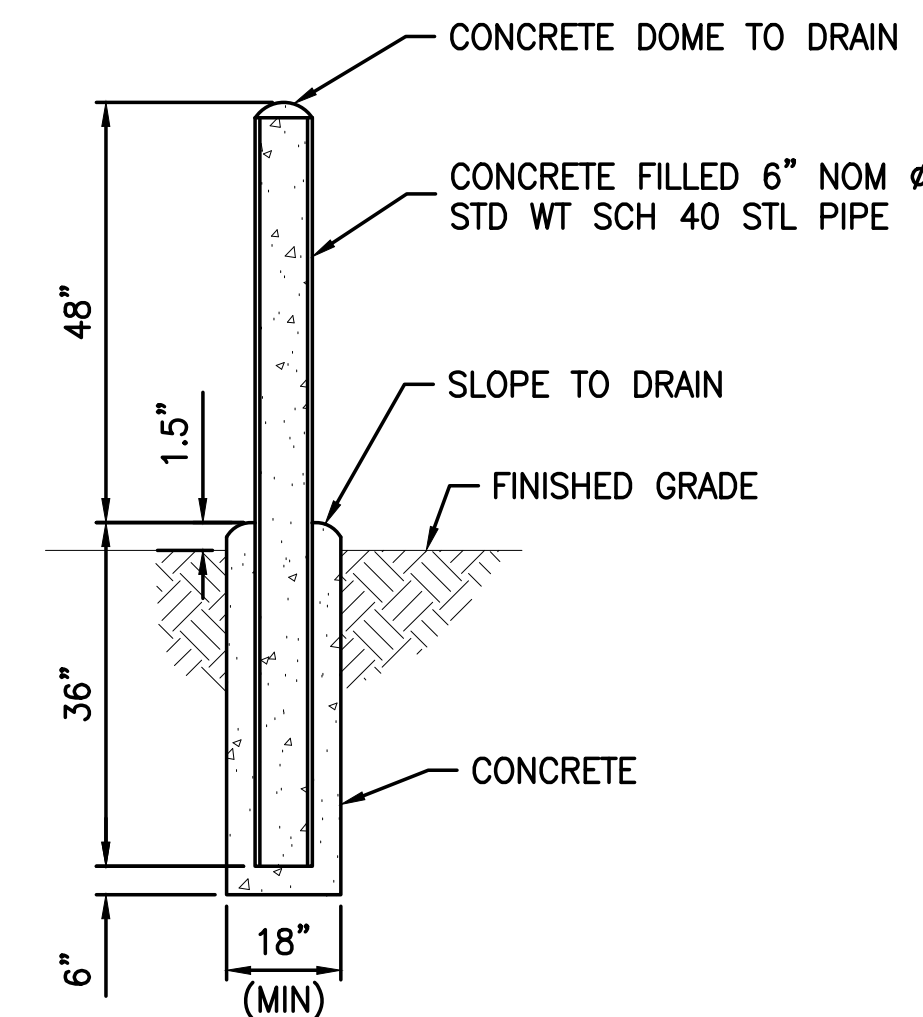
TYPICAL CONCRETE SLAB DETAIL (1)
NTS



CONCRETE PAVEMENT DETAIL (4)
NTS

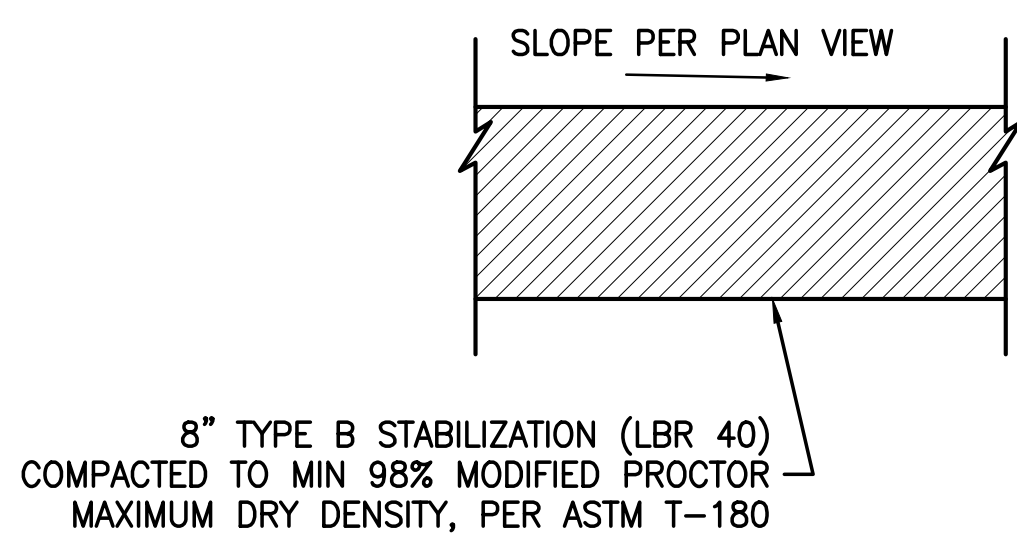


FDOT TYPE D CURB DETAIL (5)
NTS C4-1

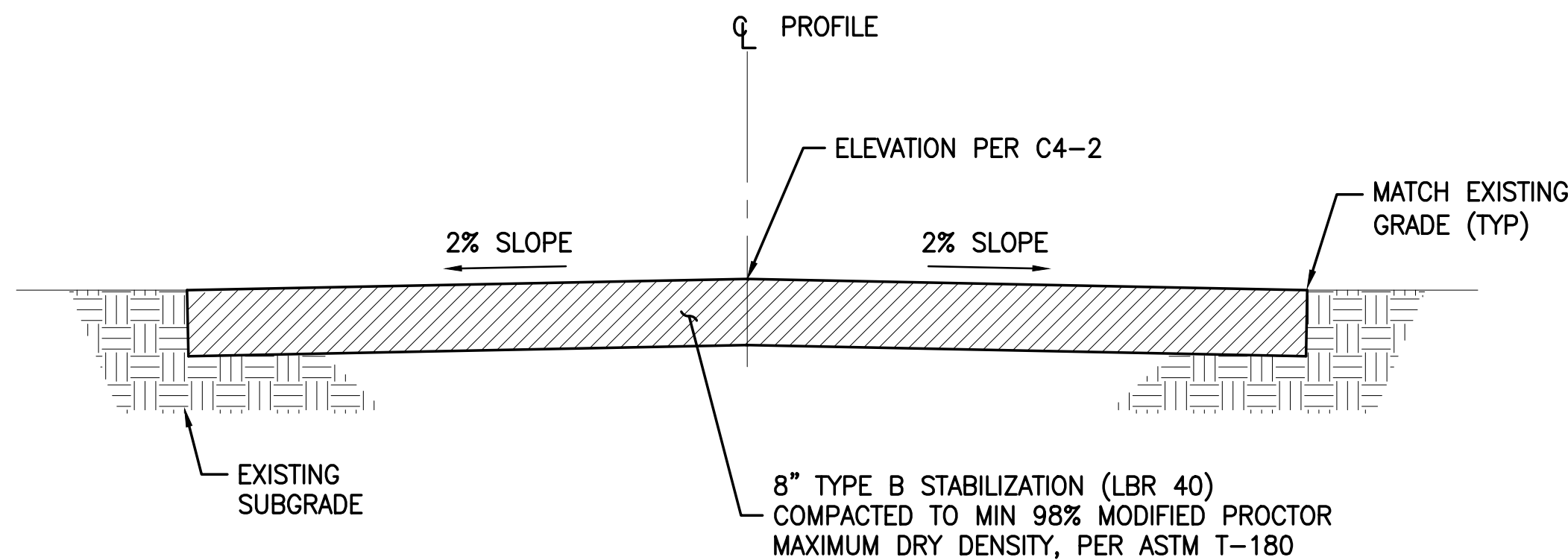


- NOTES:**
- A. ACTUAL INSTALLATION LOCATION OF EACH BOLLARD SHALL BE AS SHOWN ON THE DRAWINGS OR AS DIRECTED IN THE FIELD.
 - B. PAINT ALL PIPING MATERIALS OSHA SAFETY YELLOW.

BOLLARD DETAIL (8)
NTS C4-4



STABILIZED ROAD DETAIL (6)
NTS



TYPICAL STABILIZED ROAD SECTION (7)
NTS

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E	10/30/20	BID RESPONSE	JA	RK
A	12/20/19	REVISED PER COWM	RK	RK

DESIGNED	W NICKEL
DRAWN	D HAUBRICH
CHECKED	R KOLLER

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**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

CIVIL DETAILS

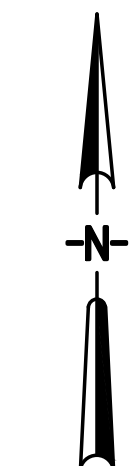
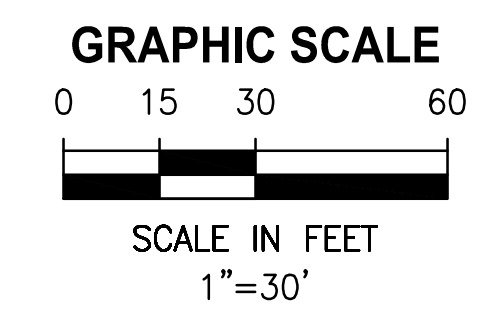
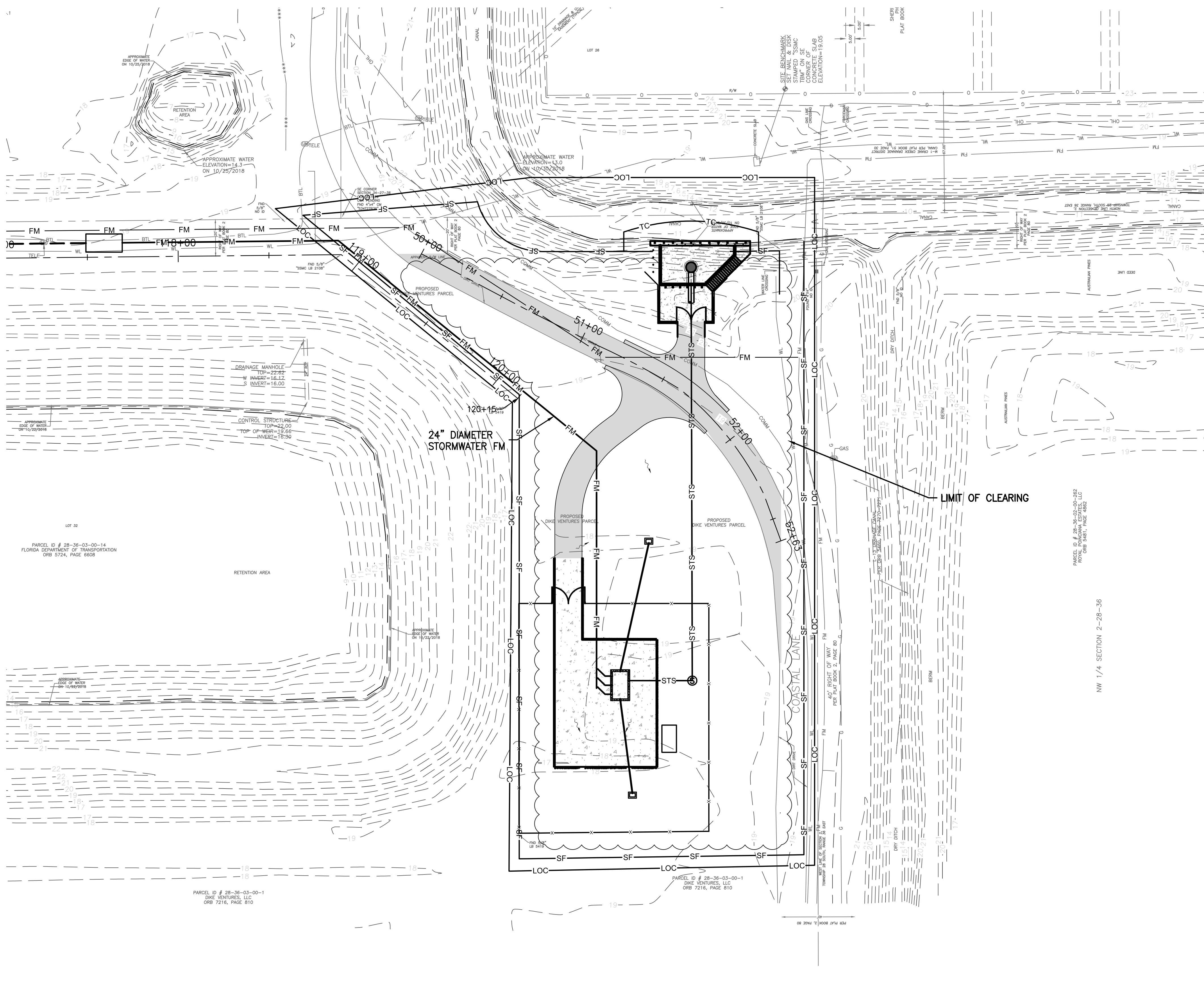
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 STATE OF FLORIDA, LICENSE NUMBER 68638
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PROJECT NO:	19750-066-01	DATE:	OCT 2020
INDEX NO:		DWG NO:	C4-6

GENERAL NOTES:

1. CONTRACTOR IS RESPONSIBLE TO RESTORE COASTAL LANE TO IT'S ORIGINAL CONDITION.

Y:\19750-SURWMD\PROJECTS\066-01_CRANE_CREEK_M-1_FLOW_RESTORATION_DESIGN\CAD\DWGS\ENV\19750-066-01-EC4-1.DWG
 7/30/2020 8:42 AM MHOFFMAN



FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.
A	12/20/19	REVISED PER COWM	RK	RK

DESIGNED	A GOODDEN
DRAWN	D HAUBRICH
CHECKED	R KOLLER

JonesEdmunds
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**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

**PUMP STATION EROSION CONTROL
 PLAN**

AMY LIANE GOODDEN, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 60097
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PROJECT NO:	19750-066-01	DATE:	OCT 2020
INDEX NO:		DWG NO:	EC4-1

CONTRACTOR REQUIREMENTS

Main table with columns: SITE DESCRIPTION, GENERAL, SEQUENCE OF MAJOR ACTIVITIES, CONTROLS, EROSION AND SEDIMENT CONTROLS, STABILIZATION PRACTICES, SPILL CONTROL PRACTICES, SPILL PREVENTION, MAINTENANCE/INSPECTION PROCEDURES. Includes detailed project information, activity lists, control measures, and inspection protocols.

SAVED: 7/30/2020 8:44 AM MHOFFMAN Y:\19750-SURVMD\PROJECTS\066-01-CRANE CREEK_M-1_FLOW RESTORATION DESIGN\CAD\DWG\ENV\19750-066-01-EC4-2.DWG

FOR CONSTRUCTION

Revision table with columns: LTR., DATE, REVISIONS, BY, APPRD. Includes entries for design, drawing, and revision.

Jones Edmunds logo and contact information: 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

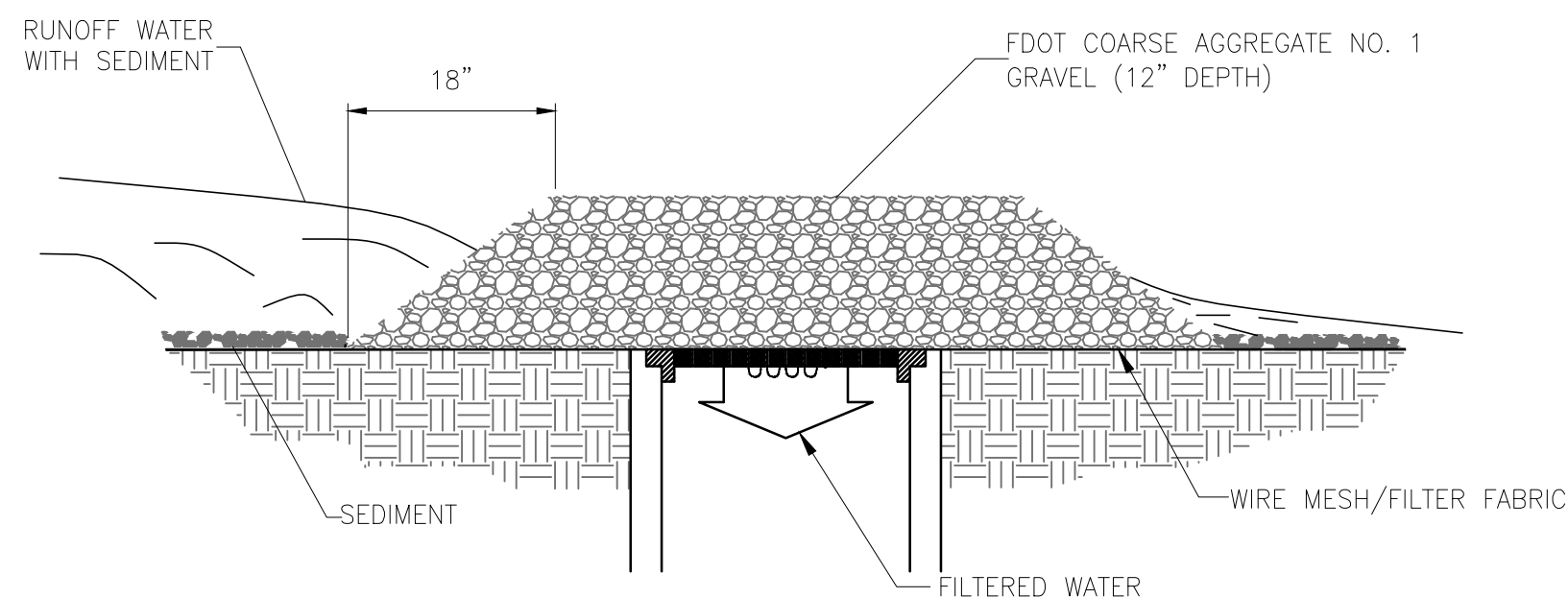
CRANE CREEK M-1 CANAL FLOW RESTORATION ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT

STORMWATER POLLUTION PREVENTION NOTES

Project summary table with columns: PROJECT NO., DATE, INDEX NO., DWG NO. Includes project number 19750-066-01 and drawing number EC4-2.

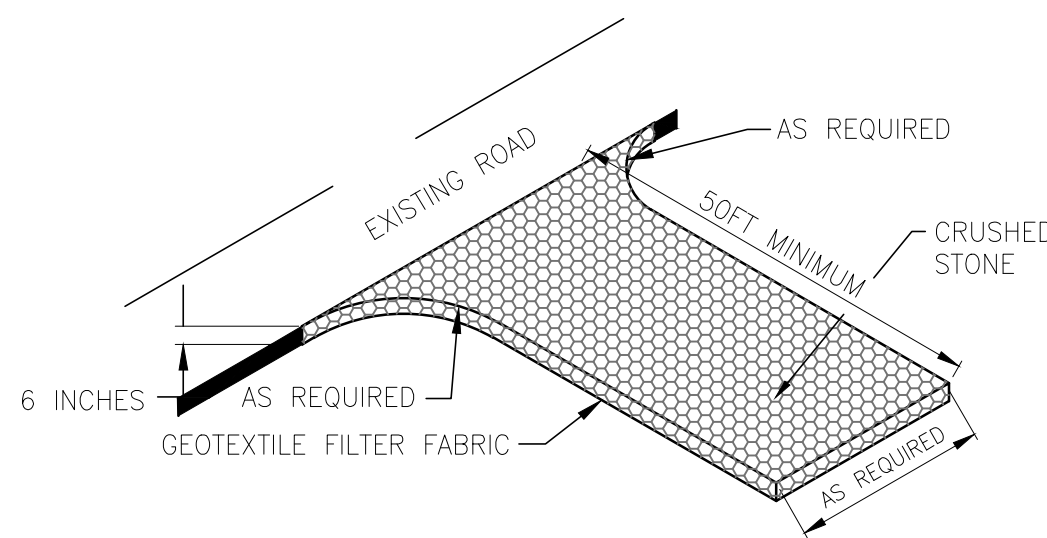
SEDIMENT AND EROSION CONTROL NOTES

1. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
2. BEST MANAGEMENT PRACTICES IN ADDITION TO THE ONES SHOWN ON THE PLAN SHEETS MUST BE PROVIDED IN ORDER TO PREVENT SILT FROM LEAVING THE PROJECT SITE DUE TO UNSEEN CONDITIONS AND ACCIDENTS.
3. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
4. WIRE MESH SHALL BE LAID OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM IF 12" BEYOND EACH SIDE OF THE INLET STRUCTURE. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 3/8" OPENINGS SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, THE STRIPS SHALL BE OVERLAPPED.
5. FDOT NO.1 COARSE AGGREGATE SHALL BE PLACED OVER THE WIRE MESH AS INDICATED ON SEDIMENT FILTER DETAIL (SEE DETAIL THIS SHEET). THE DEPTH OF STONE SHALL BE AT LEAST 12" OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18" ON ALL SIDES.
6. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.
7. THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 4". THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER.
8. NECESSARY REPAIRS TO BARRIERS SHALL BE ACCOMPLISHED PROMPTLY.
9. ANY SEDIMENT DEPOSITS REMAINING IN PLACE, AFTER THE FILTER BARRIERS, AND OR SILT FENCES ARE NO LONGER REQUIRED, SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
10. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR SHOULD BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
11. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
12. THE CONTRACTOR SHALL MAINTAIN A CLEAR PATH FOR ALL SURFACE WATER DRAINAGE STRUCTURES AND SWALES AS WELL AS PROVIDE MEASURES TO PREVENT SILTATION OF STORMWATER TREATMENT SYSTEMS AND CONTROL STRUCTURES DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL MANAGE STORMWATER SUCH THAT IMPACT TO CONSTRUCTION IS MINIMIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, INCLUDING PROVIDING EQUIPMENT, LABOR, FILL, ETC. NECESSARY TO REMEDIATE AND/OR RESTORE ALL AREAS IMPACTED BY EROSION, RUNOFF, AND STORMWATER.
13. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL" AVAILABLE AT [HTTP://WWW.FDOT.GOV/ROADWAY/DRAINAGE/FILES/EROSION-SEDIMENT-CONTROL.PDF](http://www.fdot.gov/roadway/drainage/files/erosion-sediment-control.pdf) AND "FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL" AVAILABLE AT [HTTPS://WWW.DEP.STATE.FL.US/WATER/NONPOINT/DOCS/EROSION/EROSION-INSPECTORS-MANUAL.PDF](https://www.dep.state.fl.us/water/nonpoint/docs/erosion/erosion-inspectors-manual.pdf).
14. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL DOWNSTREAM AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. SEE DETAILS (THIS SHEET) FOR TYPICAL CONSTRUCTION.
15. SOD SHALL BE PLACED IN AREAS WHICH REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITIES ARE MAINTAINED.
16. ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE M-1 CANAL IN A MANNER WHICH PREVENTS EROSION AND TRANSPORTATION OF SUSPENDED SOLIDS IN THE M-1 CANAL.
17. ALL DEWATERING, EROSION, AND SEDIMENT CONTROL SHALL REMAIN IN PLACE UNTIL AFTER COMPLETION OF CONSTRUCTION, AND REMOVED ONLY WHEN AREAS HAVE BEEN STABILIZED.
18. THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.
19. THE CONTRACTOR SHALL BE REQUIRED TO RESPOND TO ALL WATER MANAGEMENT DISTRICT INQUIRES, RELATIVE TO COMPLIANCE OF NWFWD AND FDEP FOR EROSION AND SEDIMENTATION CONTROL. THE COST OF THIS COMPLIANCE SHALL BE PART OF THE CONTRACT.
20. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS AND SPECIFICATIONS AND THE SJRWMD AND FDEP RULES AND REGULATIONS.



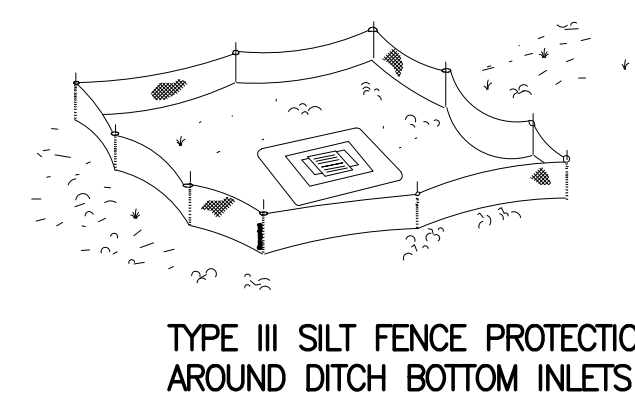
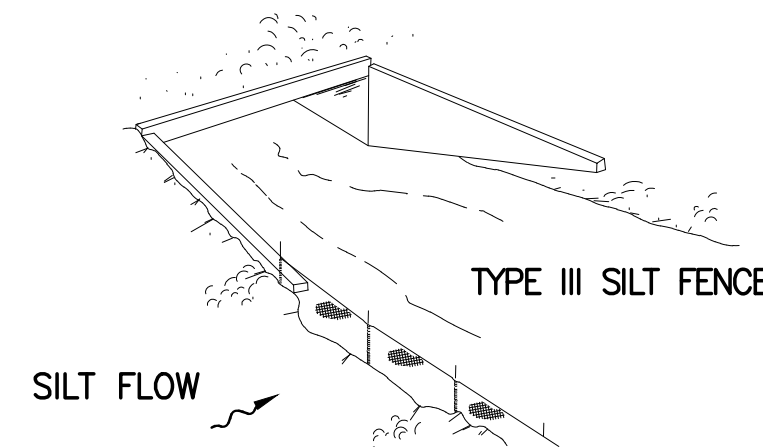
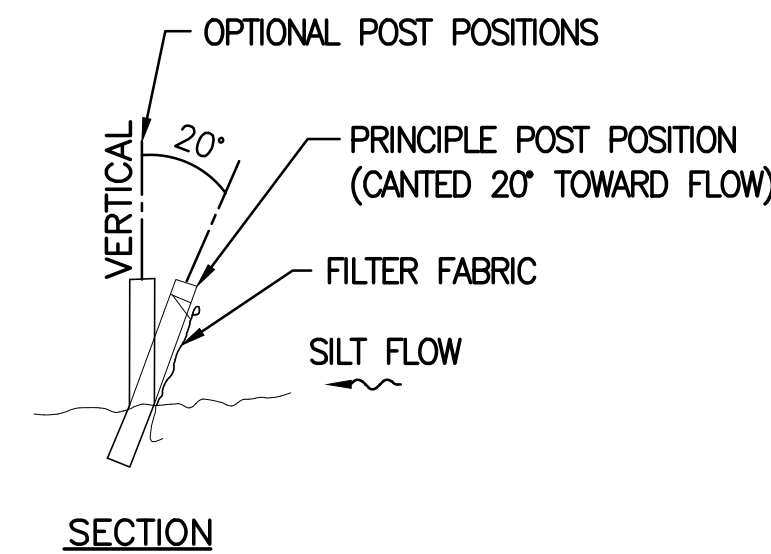
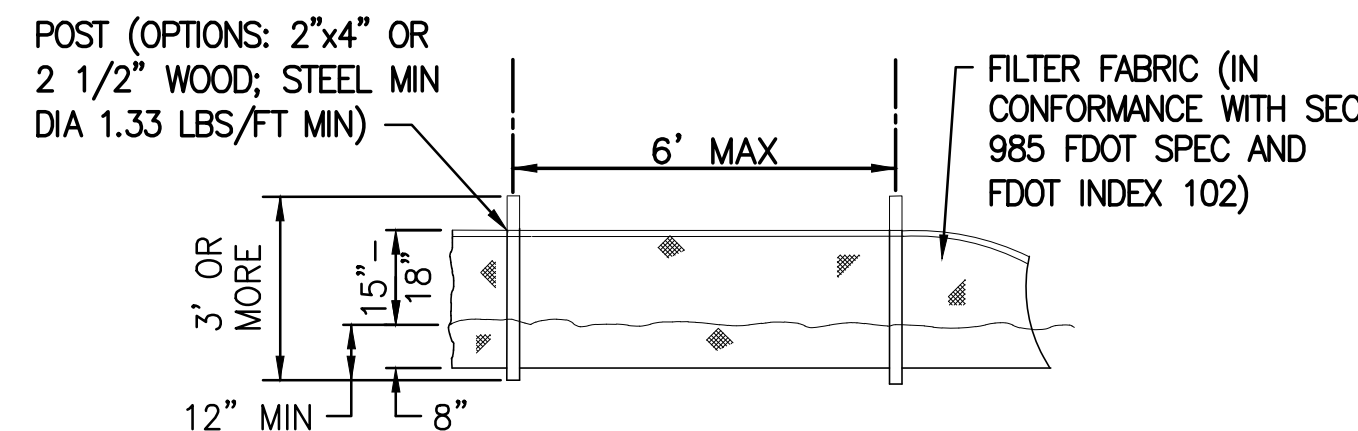
GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER DETAIL (Sd2)

NTS



STABILIZED CONSTRUCTION ENTRANCE (Co)

NTS



TYPE III SILT FENCE

NOTES:

- DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.
- WHEN JOINING BUTT ENDS OF SILT FENCE FABRIC; JOIN FABRIC ENDS, WRAP AROUND A POST 360-DEGREES, AND SET POST.

TYPICAL SILT FENCE (Sd1)

NTS

STORMWATER POLLUTION PREVENTION PLAN

INSPECTIONS MUST OCCUR AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM EVENT THAT IS 0.50 INCHES OR GREATER

INSPECTOR: _____ FDEP NPDES STORMWATER IDENTIFICATION NUMBER: _____

LOCATION	RAIN DATA	TYPE OF CONTROL (SEE BELOW)	DATE INSTALLED / MODIFIED	CURRENT CONDITION (SEE BELOW)	CORRECTIVE ACTION / OTHER REMARKS

CONDITION CODE:
 G = GOOD
 C = NEEDS TO BE CLEARED
 M = MARGINAL, NEEDS MAINTENANCE OR REPLACEMENT SOON
 P = POOR, NEEDS IMMEDIATE MAINTENANCE OR REPLACEMENT
 O = OTHER

CONTROL TYPE CODES

1. SILT FENCE	10. STORM DRAIN INLET PROTECTION	19. REINFORCED SOIL RETAINING SYSTEM	28. TREE PROTECTION
2. EARTH DIKES	11. VEGETATIVE BUFFER STRIP	20. GABION	29. DETENTION POND
3. STRUCTURAL DIVISION	12. VEGETATIVE PRESERVATION AREA	21. SEDIMENT BASIN	30. RETENTION POND
4. SWALE	13. RETENTION POND	22. TEMPORARY SEED / SOD	31. WASTE DISPOSAL / HOUSEKEEPING
5. SEDIMENT TRAP	14. CONSTRUCTION ENTRANCE STABILIZATION	23. PERMANENT SEED / SOD	32. DAM
6. CHECK DAM	15. PERIMETER DITCH	24. MULCH	33. SAND BAG
8. PIPE SLOPE DRAIN	16. CURB AND GUTTER	25. WATTLES	34. OTHER
9. LEVEL SPREADERS	17. PAVED ROAD SURFACE	26. GEOTEXTILE	
9. LEVEL SPREADERS	18. ROCK OUTLET PROTECTION	27. RIP-RAP	

INSPECTOR INFORMATION:

NAME: _____ QUALIFICATION: _____ DATE: _____

THE ABOVE SIGNATURE ALSO SHALL CERTIFY THAT THIS FACILITY IS IN COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN AND THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES IF THERE ARE NOT ANY INCIDENTS OF NON-COMPLIANCE IDENTIFIED ABOVE.

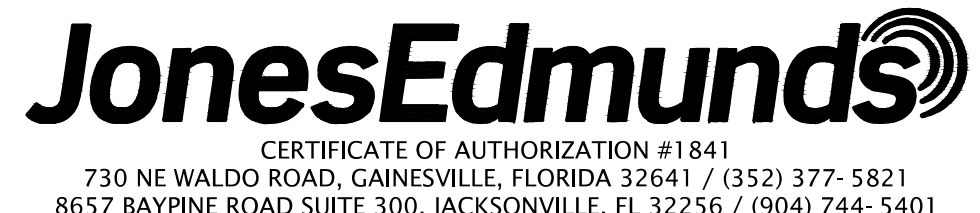
I, CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

NAME (RESPONSIBLE AUTHORITY) _____ DATE _____

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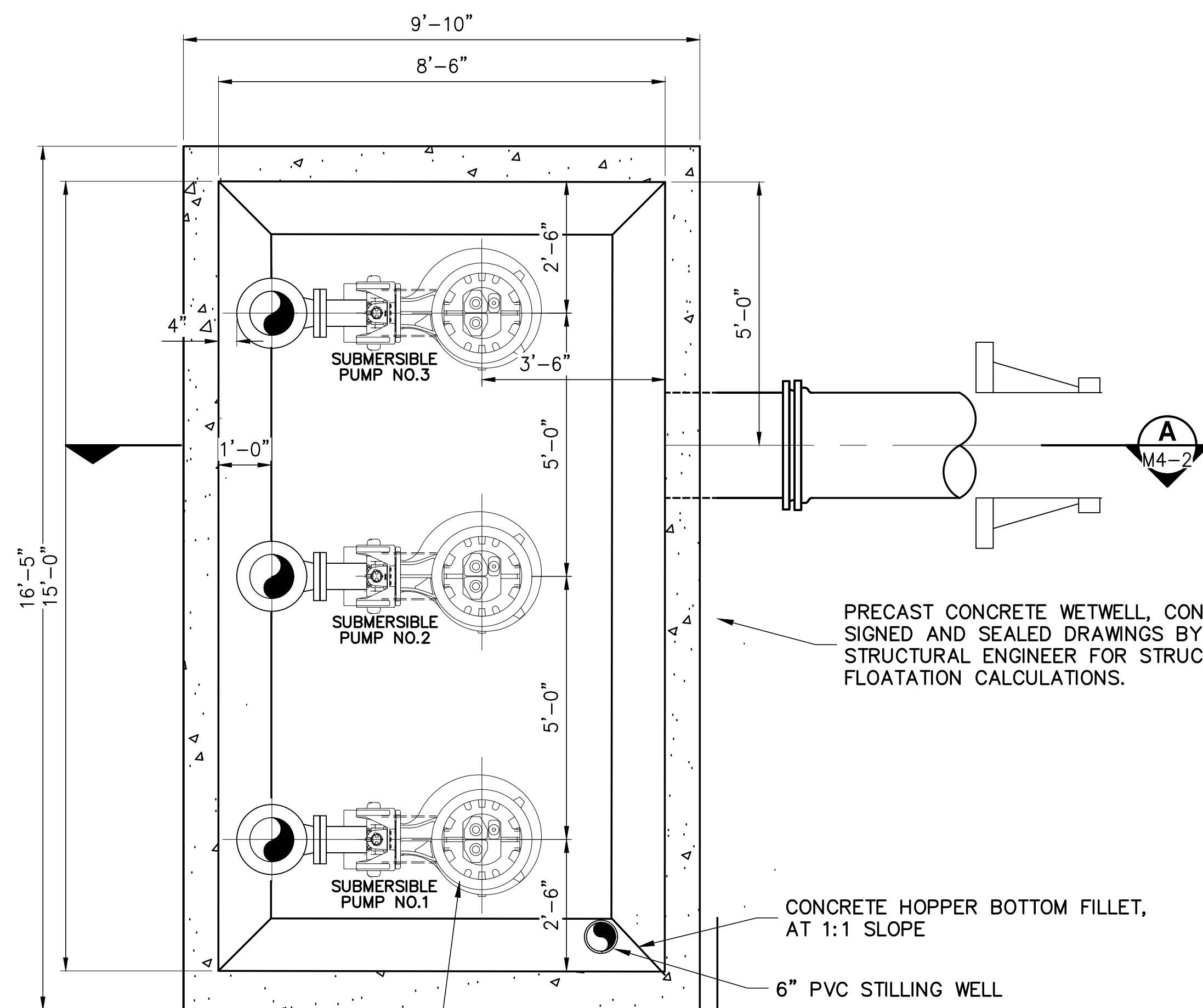
DESIGNED	A GOODDEN			
DRAWN	D HAUBRICH			
CHECKED	R KOLLER			
LTR.	DATE	REVISIONS	BY	APPRD.
A	12/20/19	REVISED PER COWM	RK	RK



**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

**EROSION CONTROL
 NOTES AND DETAILS**

ANY LIANE GOODDEN, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 60097	PROJECT NO:	DATE:
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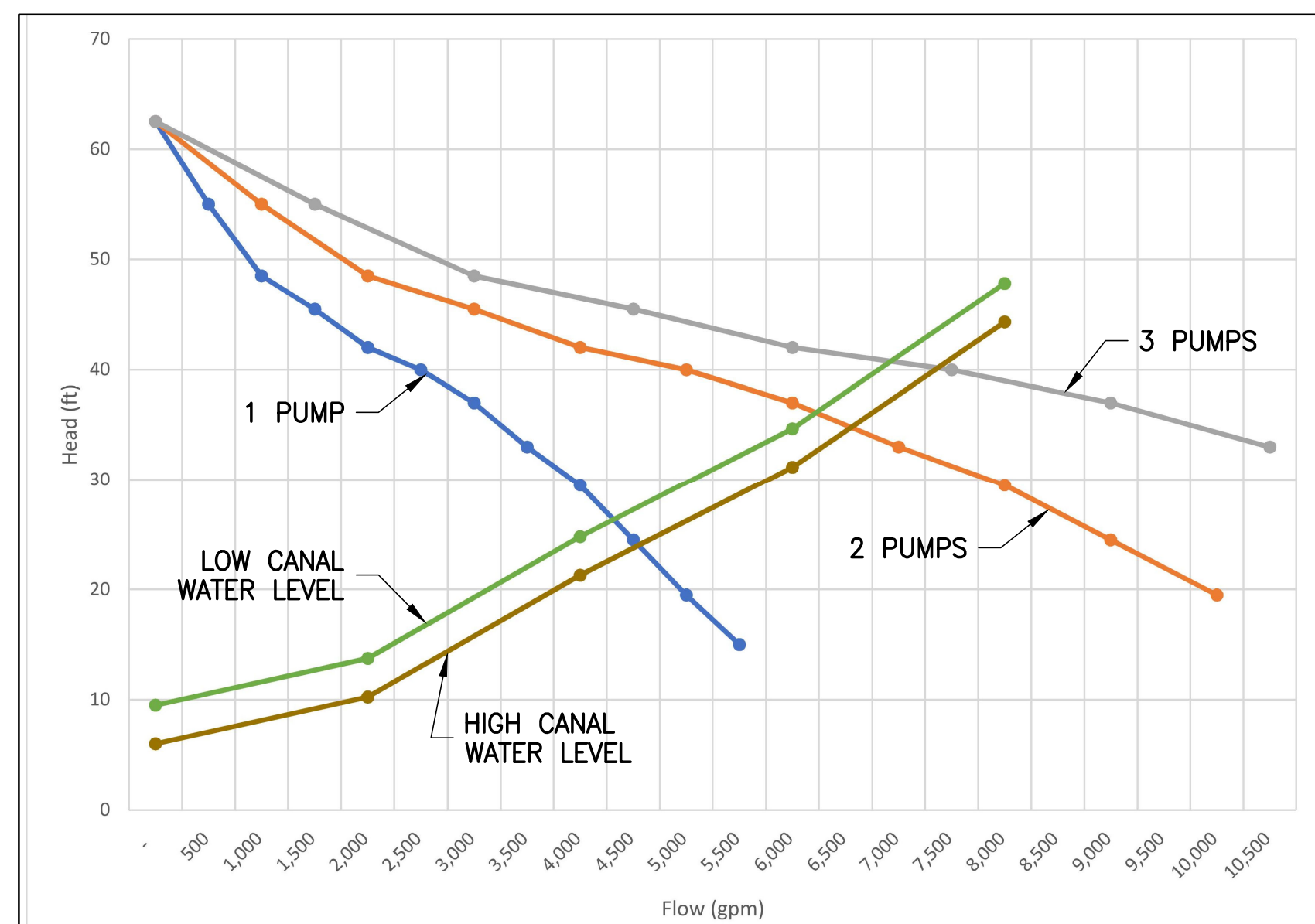
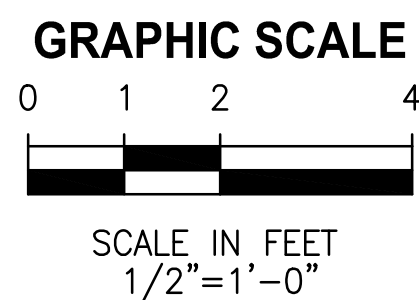
PRECAST CONCRETE WETWELL, CONTRACTOR TO SUBMIT SIGNED AND SEALED DRAWINGS BY A LICENSED STRUCTURAL ENGINEER FOR STRUCTURAL DESIGN AND FLOATATION CALCULATIONS.

CONCRETE HOPPER BOTTOM FILLET, AT 1:1 SLOPE

6" PVC STILLING WELL

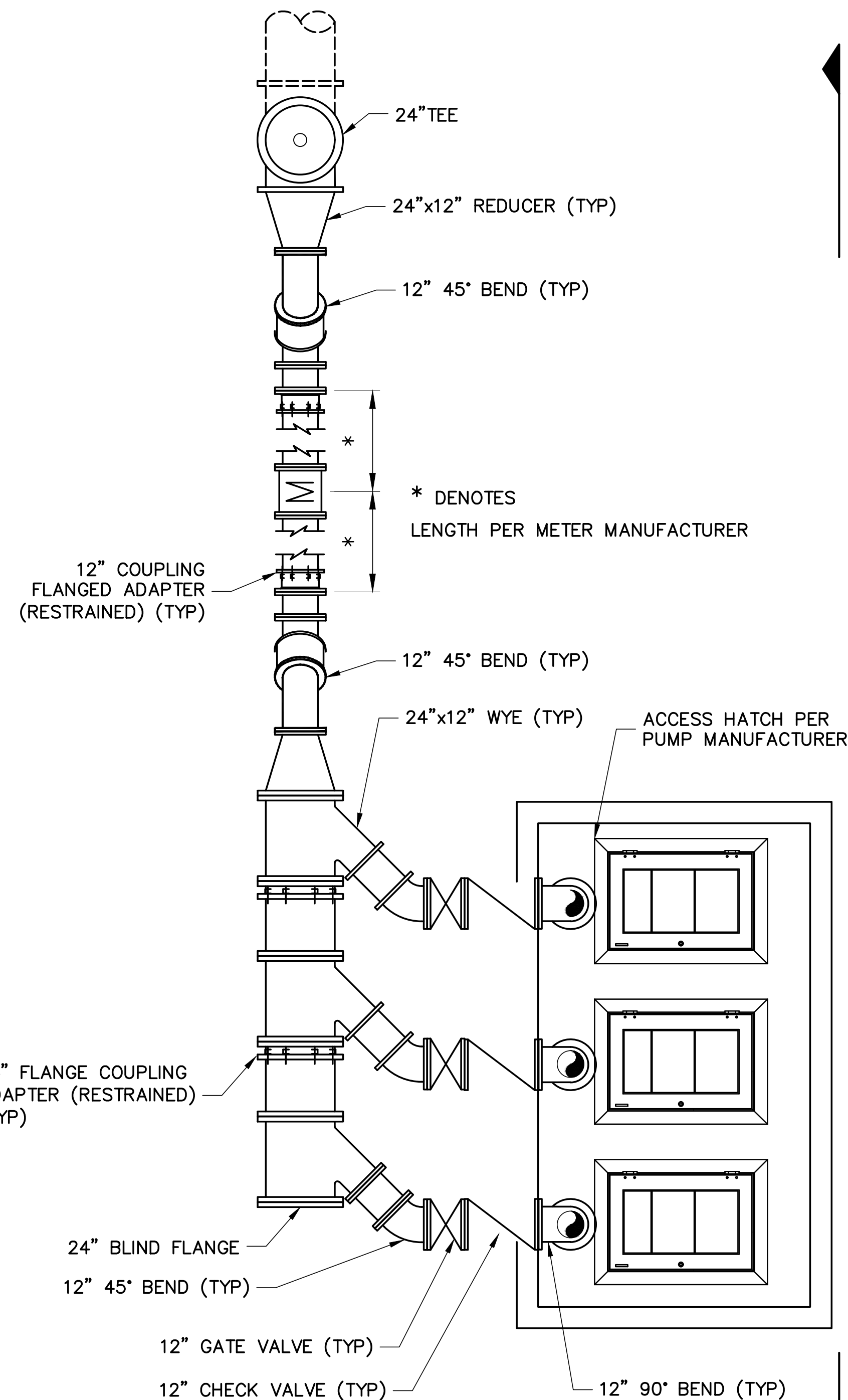
PUMP, SEE BELOW (3 TYP.)

LOWER PLAN 1



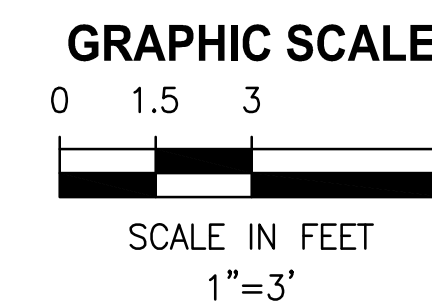
PUMP AND SYSTEM CURVES

BASIS OF DESIGN
HYDROMATIC S12LXP
12.38 IN. IMPELLER
40 HP



* DENOTES LENGTH PER METER MANUFACTURER

ACCESS HATCH PER PUMP MANUFACTURER



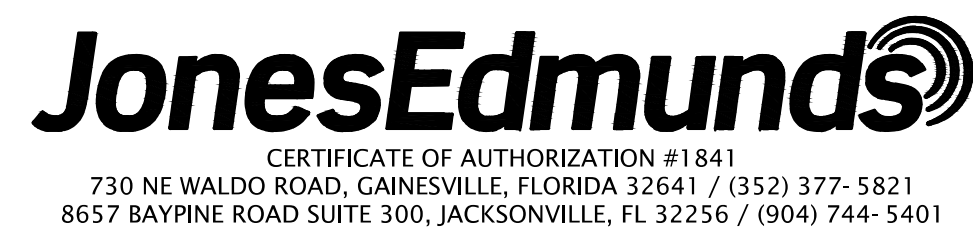
UPPER PLAN 1

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LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED D YOUNG
DRAWN D HAUBRICH
CHECKED R KOLLER



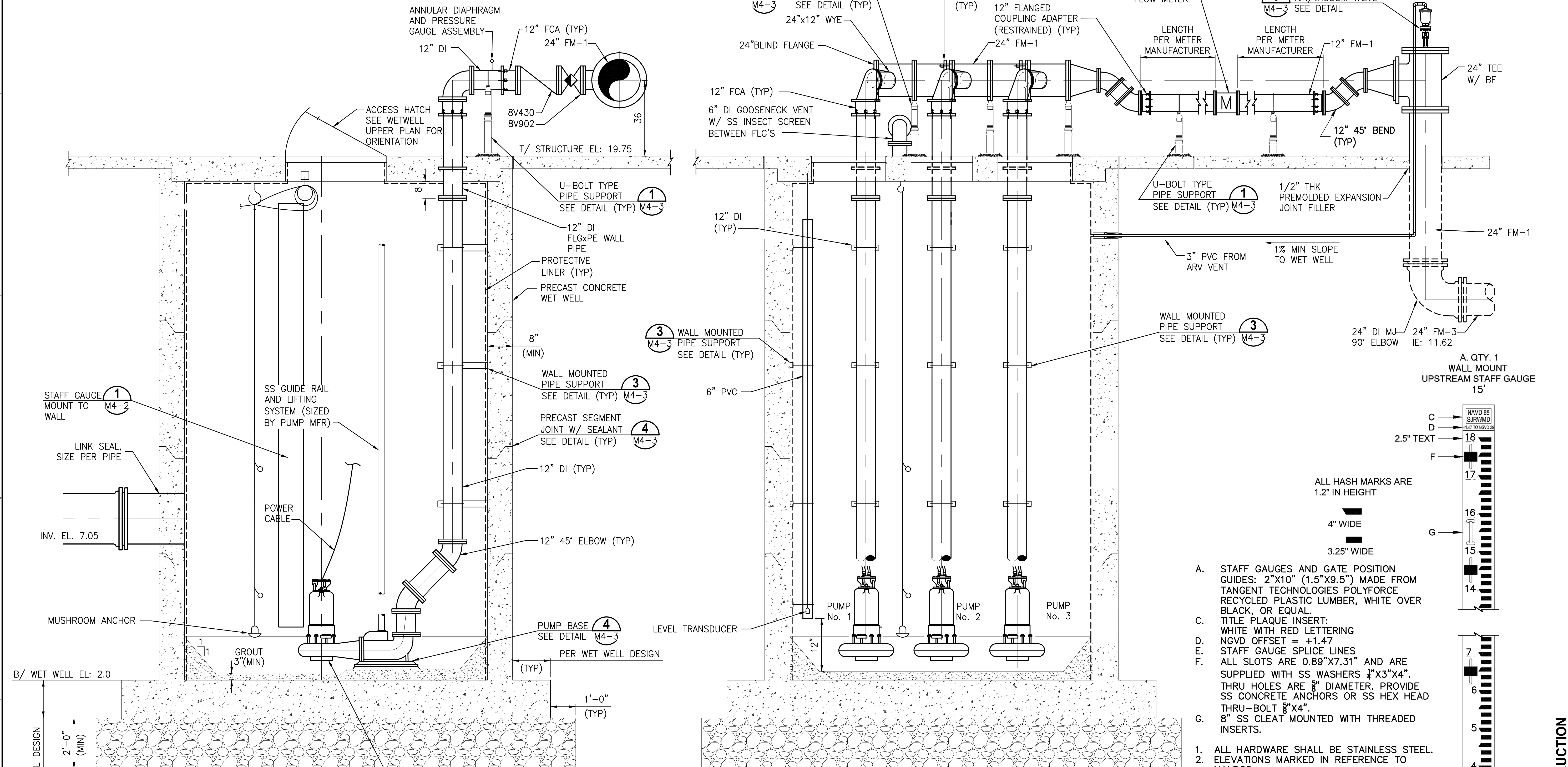
**CRANE CREEK M-1 CANAL FLOW RESTORATION
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

PUMP STATION PLAN

RICHARD NEAL KOLLER, PROFESSIONAL ENGINEER,
STATE OF FLORIDA, LICENSE NUMBER 48947
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PROJECT NO: 19750-066-01	DATE: OCT 2020
INDEX NO:	DWG NO: M4-1

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 9/25/2020 9:45 AM MHOFFMAN



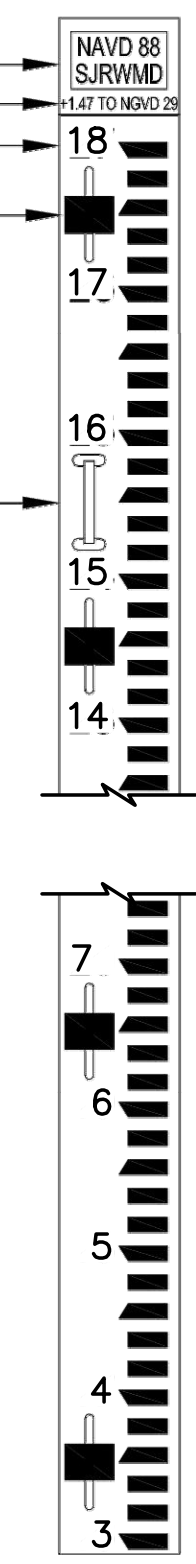
SECTION A
N.T.S.

SECTION B
N.T.S.

PUMP LEVEL CONTROL		
FUNCTION	CONTROLLED BY	ELEVATION
HIGH LEVEL ALARM - ALL PUMPS ON	FLOAT	14.25
LAG - LAG PUMP ON	TRANSDUCER	14.00
LAG PUMP ON	TRANSDUCER	13.25
LEAD PUMP ON	TRANSDUCER	11.50
ALL PUMPS OFF	TRANSDUCER	11.25
LOW LEVEL ALARM - ALL PUMPS OFF	FLOAT	11.00

- A. STAFF GAUGES AND GATE POSITION GUIDES: 2"x10" (1.5"x9.5") MADE FROM TANGENT TECHNOLOGIES POLYFORCE RECYCLED PLASTIC LUMBER, WHITE OVER BLACK, OR EQUAL.
 - C. TITLE PLAQUE INSERT: WHITE WITH RED LETTERING
 - D. NGVD OFFSET = +1.47
 - E. STAFF GAUGE SPLICE LINES
 - F. ALL SLOTS ARE 0.89"x7.31" AND ARE SUPPLIED WITH SS WASHERS 1/4"x3"x4". THRU HOLES ARE 5/8" DIAMETER. PROVIDE SS CONCRETE ANCHORS OR SS HEX HEAD THRU-BOLT 5/8"x4".
 - G. 8" SS CLEAT MOUNTED WITH THREADED INSERTS.
1. ALL HARDWARE SHALL BE STAINLESS STEEL.
 2. ELEVATIONS MARKED IN REFERENCE TO NAVD88.

STAFF GAUGE DETAIL 1
NTS



LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED D YOUNG
 DRAWN D HAUBRICH
 CHECKED R KOLLER

JonesEdmunds
CERTIFICATE OF AUTHORIZATION #1841
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
 8657 BAYPINE ROAD SUITE 300, JACKSONVILLE, FL 32256 / (904) 744-5401

**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

PUMP STATION SECTIONS

RICHARD NEAL KOLLER, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 49947 THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY RICHARD NEAL KOLLER ON THE DATE AT THE RIGHT. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.	PROJECT NO: 19750-066-01	DATE: OCT 2020
INDEX NO: M4-2	DWG NO: M4-2	DATE: OCT 2020

FOR CONSTRUCTION

**PIPE SUPPORT
DIMENSION TABLE**

PIPE SIZE	A	B	C		D
			MIN	MAX	
INCHES					
4	4	9	9 1/4	14	3
5	4	9	10	14 3/4	3
6	4	9	10 1/2	15 1/4	3
8	4	9	11 3/4	16 1/2	3
10	4	9	13 1/2	18 1/4	3
12	4	9	15	19 3/4	3
14	4	11	16 1/4	20 3/4	3
16	4	11	17 3/4	22 1/4	3
18	6	13 1/2	19 1/2	24	4
20	6	13 1/2	21	25 1/2	4
24	6	13 1/2	23 3/4	28 1/4	4

NOTES:

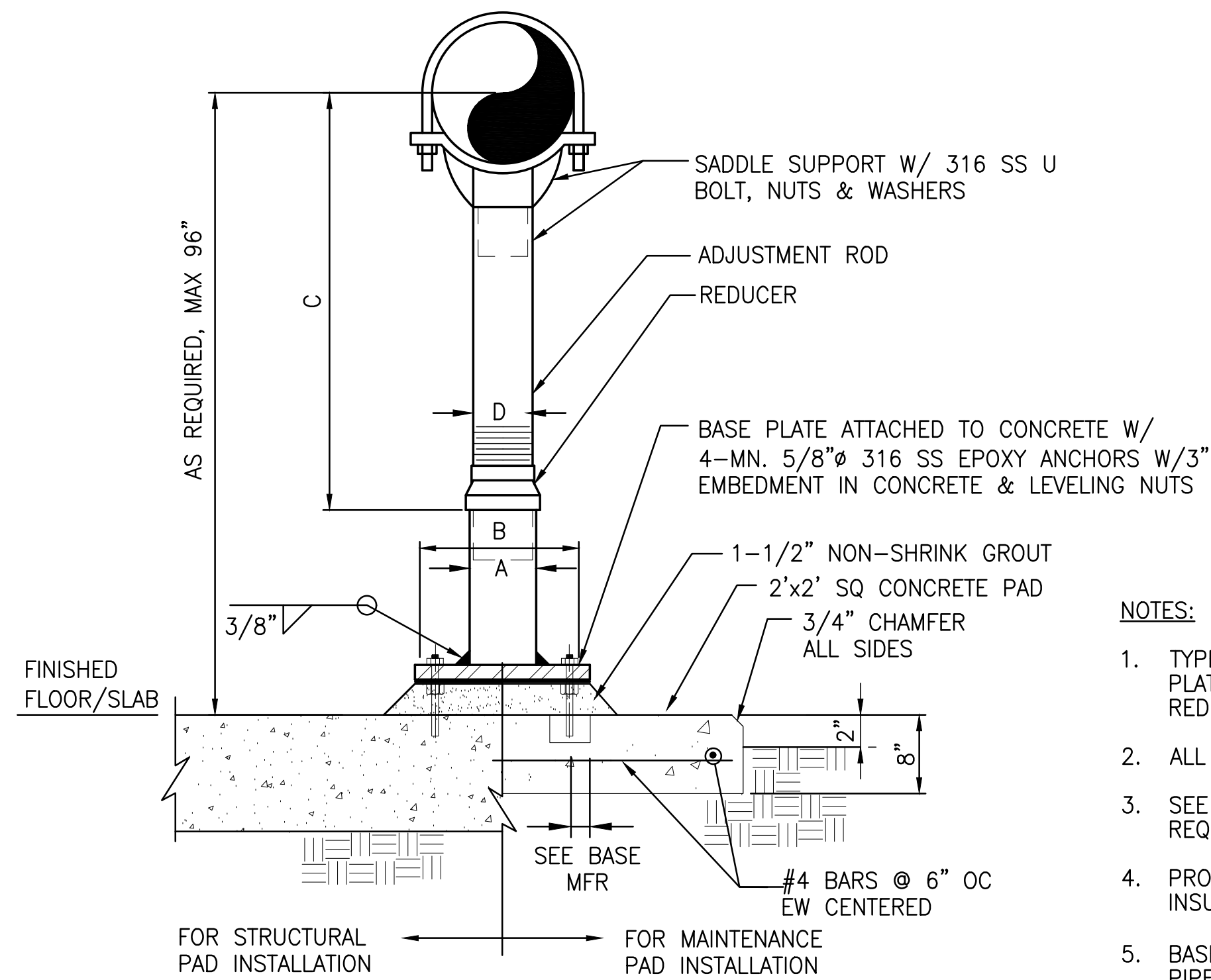
- TYPE 1 PIPE SUPPORT: PIPE SADDLE, ADJUSTMENT ROD, BASE PLATE, ETC. SHALL BE HOT DIP GALVANIZED CARBON STEEL. REDUCER SHALL BE CAST IRON.
- ALL HARDWARE SHALL BE 316 SS.
- SEE PLANS AND SECTIONS FOR PIPE CENTERLINE ELEVATION REQUIREMENTS.
- PROVIDE RIGID INSULATION PROTECTION SHIELD WHERE PIPING IS INSULATED.
- BASE PLATES SHALL BE SQUARE AND BE 3/8-INCH THICK FOR PIPE SIZES THROUGH 10-INCH. FOR ALL LARGER PIPES BEING SUPPORTED, THE BASE PLATES SHALL BE 1/2-INCH THICK.

**PIPE SUPPORT
DIMENSION TABLE**

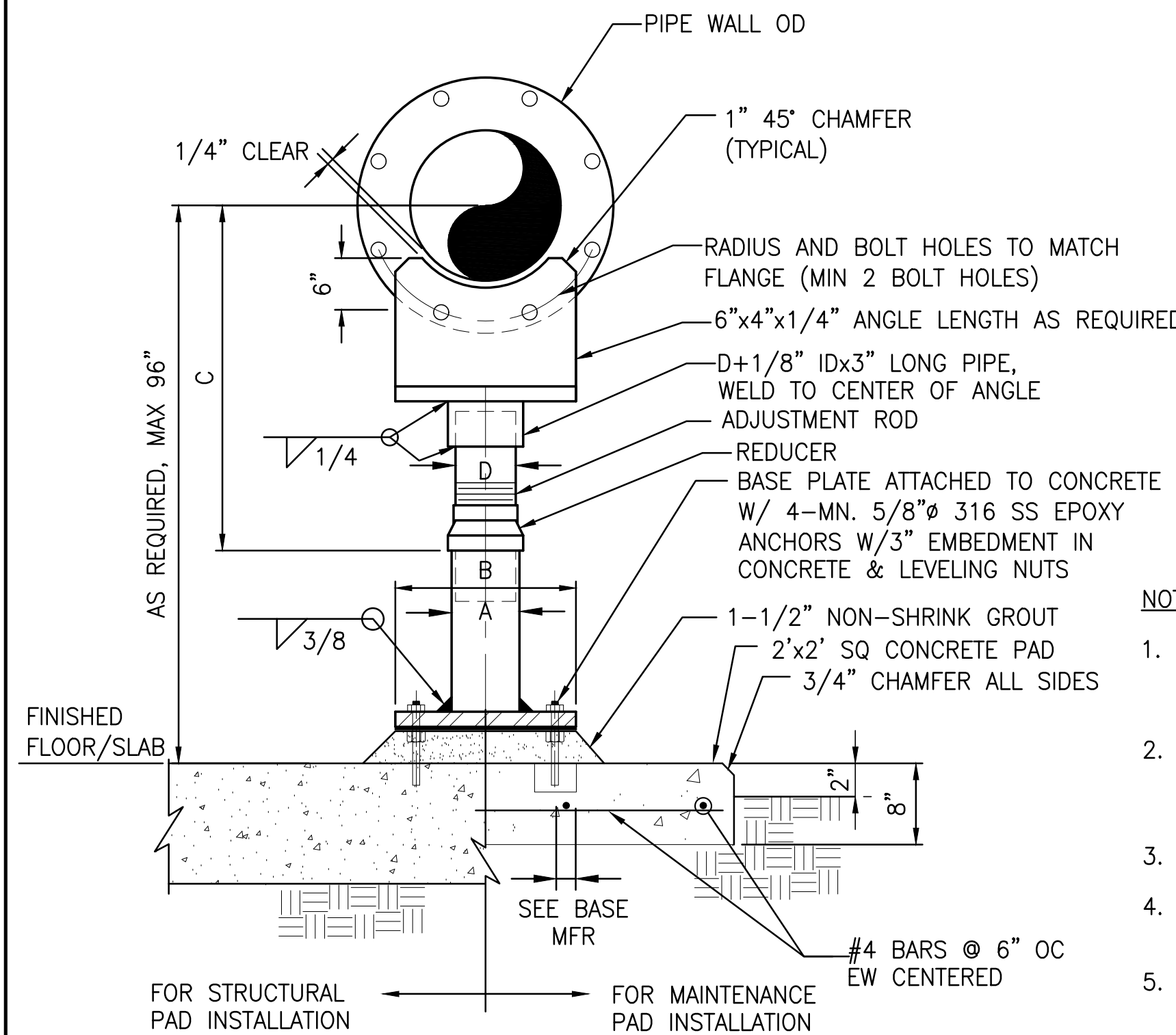
PIPE SIZE	A	B	C		D
			MIN	MAX	
INCHES					
4	4	9	9 1/4	14	3
5	4	9	10	14 3/4	3
6	4	9	10 1/2	15 1/4	3
8	4	9	11 3/4	16 1/2	3
10	4	9	13 1/2	18 1/4	3
12	4	9	15	19 3/4	3
14	4	11	16 1/4	20 3/4	3
16	4	11	17 3/4	22 1/4	3
18	6	13 1/2	19 1/2	24	4
20	6	13 1/2	21	25 1/2	4
24	6	13 1/2	23 3/4	28 1/4	4

NOTES:

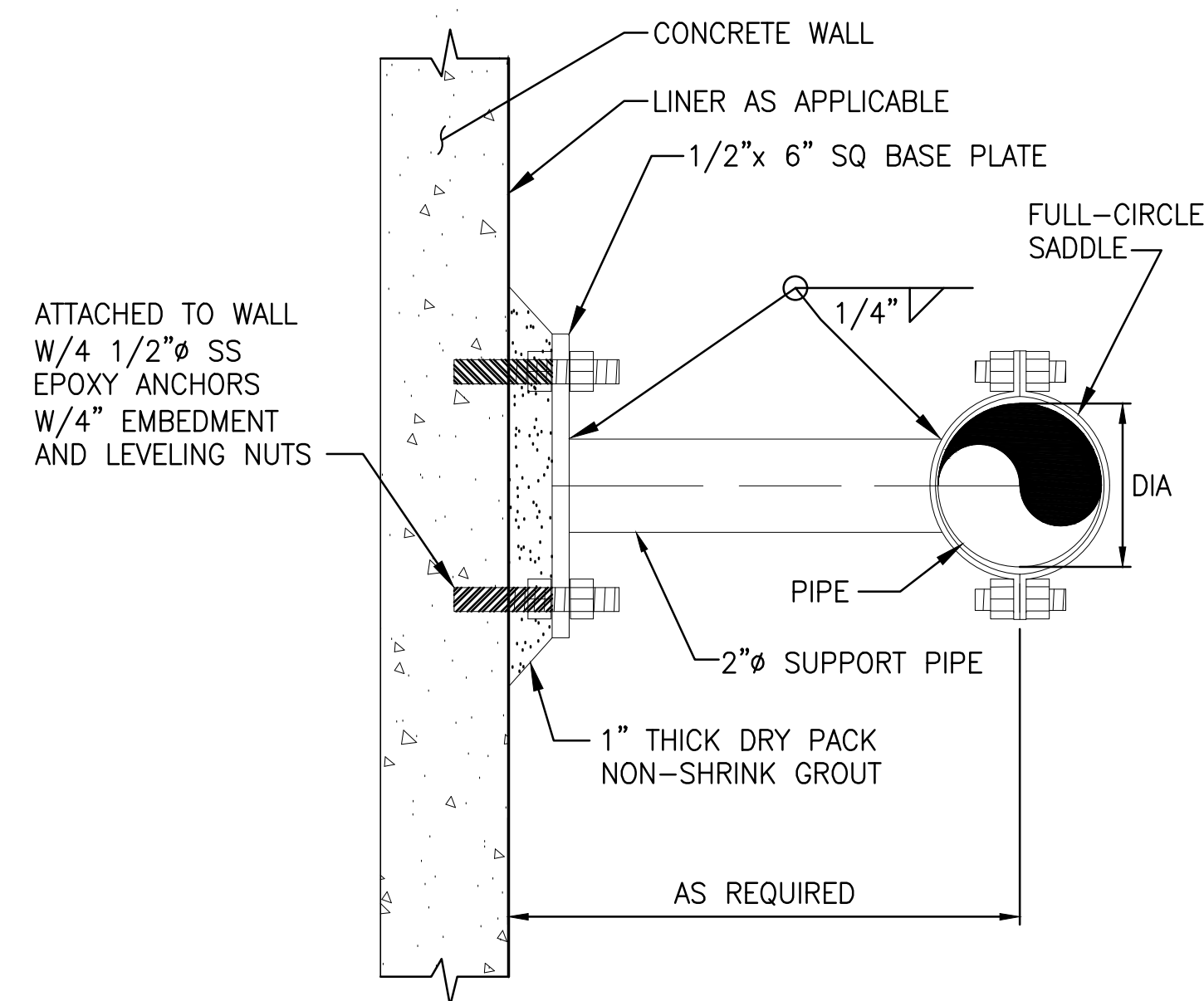
- TYPE 1 PIPE SUPPORT: PLATE, PIPE SADDLE, ADJUSTMENT ROD, BASE PLATE, ETC. SHALL BE HOT DIP GALVANIZED CARBON STEEL. REDUCER SHALL BE CAST IRON.
- HOT DIP GALVANIZE ENTIRE PIPE SUPPORT AND STEEL BASE PLATE AFTER FABRICATION (EXCEPT FOR STAINLESS STEEL FASTENING HARDWARE).
- ALL HARDWARE SHALL BE 316 SS.
- SEE PLANS AND SECTIONS FOR PIPE CENTERLINE ELEVATION REQUIREMENTS.
- PROVIDE RIGID INSULATION PROTECTION SHIELD WHERE PIPING IS INSULATED.
- BASE PLATES SHALL BE SQUARE AND BE 3/8-INCH THICK FOR PIPE SIZES THROUGH 10-INCH. FOR ALL LARGER PIPES BEING SUPPORTED, THE BASE PLATES SHALL BE 1/2-INCH THICK.



PIPE SUPPORT - U-BOLT TYPE 1
NTS

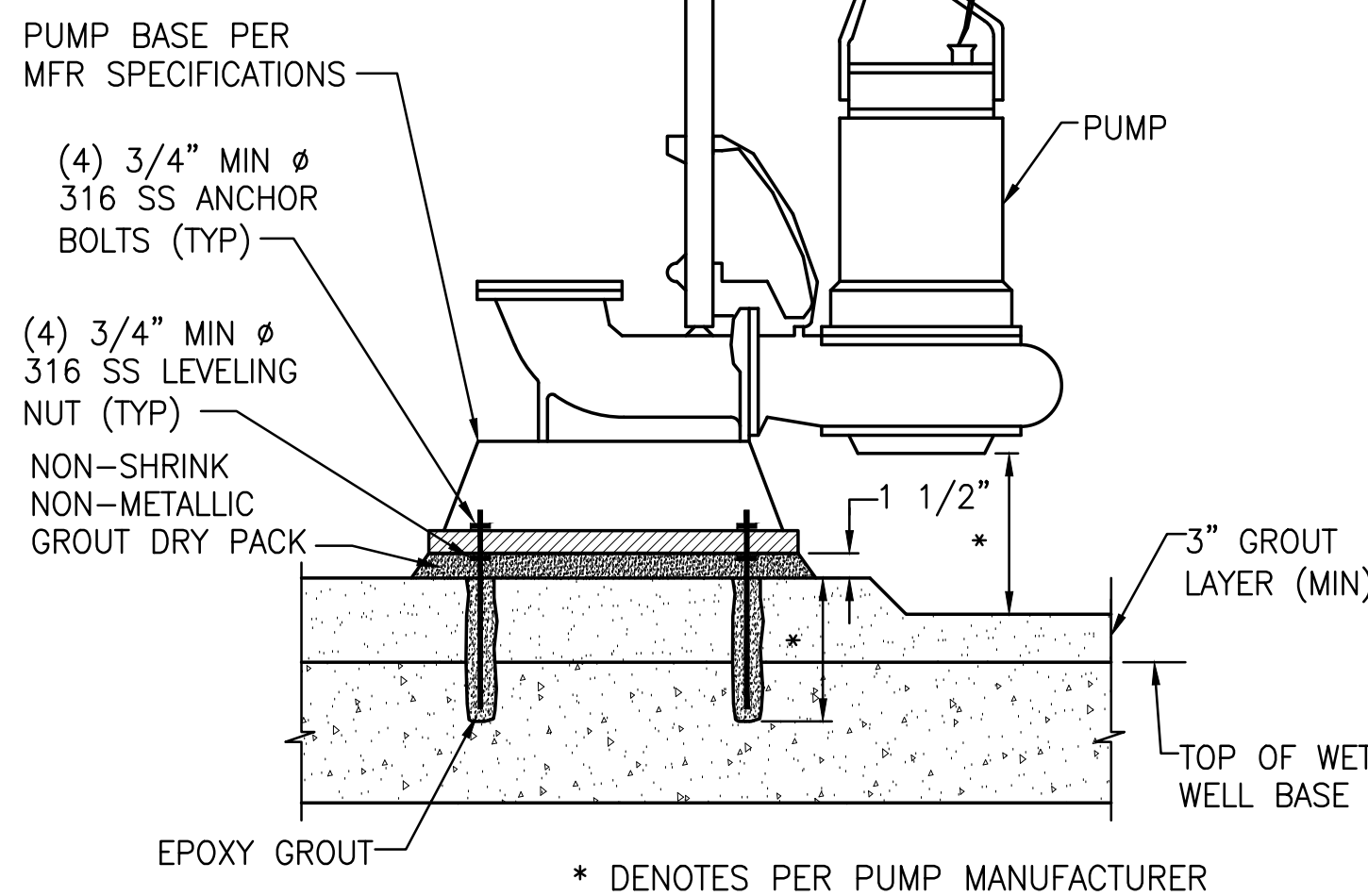


FLANGE TYPE PIPE SUPPORT DETAIL 2
NTS



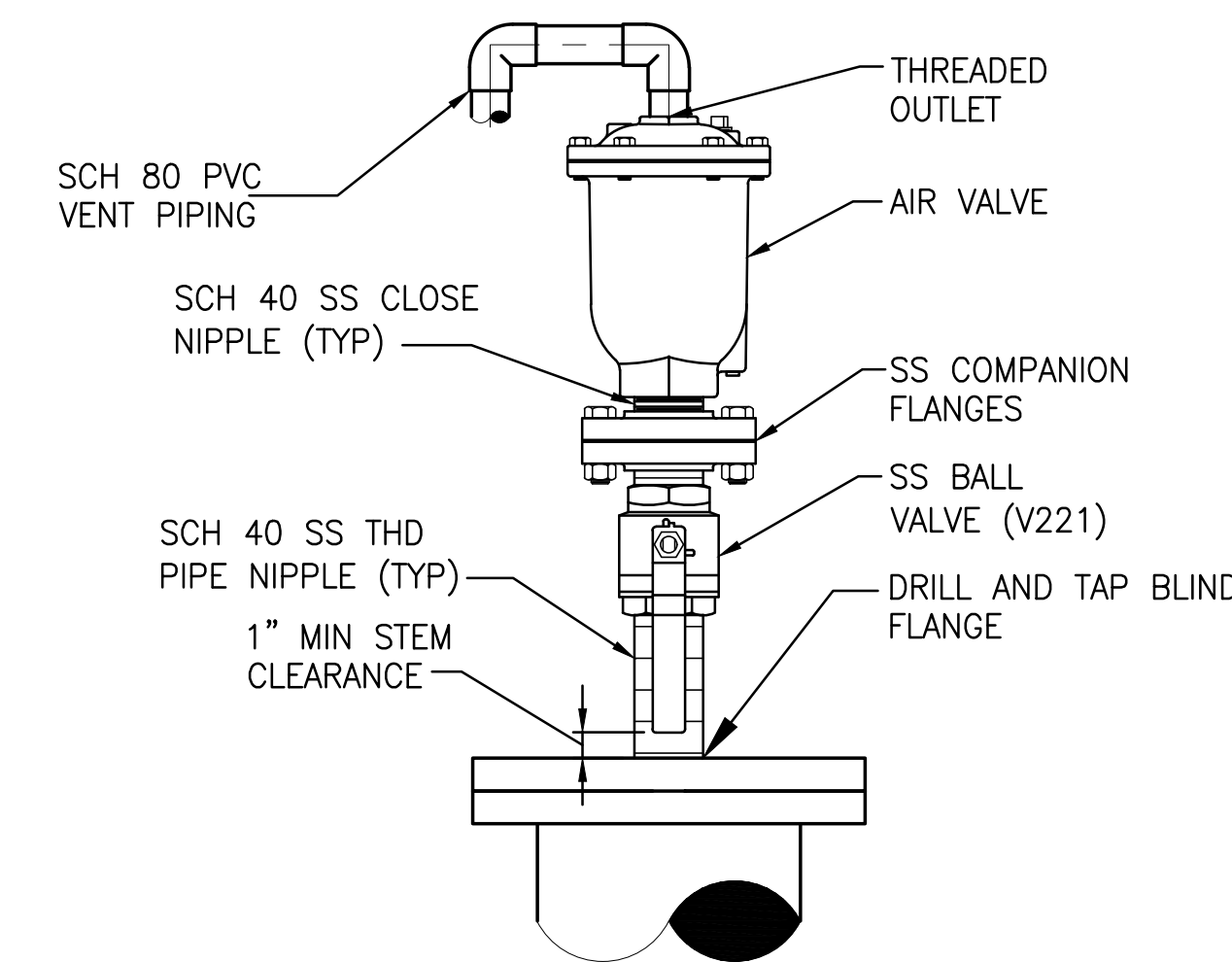
- NOTES:**
- ALL HARDWARE, PLATE, SADDLE, PIPE SUPPORT, ETC. SHALL BE 316 SERIES SS.
 - SUPPORT PIPE SHALL BE SCH 40.

PIPE SUPPORT - WALL MOUNTED 3
NTS



- NOTE:**
- FORM BENCH AS DIRECTED BY PUMP MANUFACTURER.

PUMP BASE DETAIL 4
NTS



- NOTES:**
- SEE DRAWINGS FOR AIR VALVE TYPE AND INLET DIAMETER.
 - BALL VALVE AND NIPPLES SHALL HAVE THE SAME DIAMETER AS THE AIR VALVE INLET.
 - VERIFY SIZE OF VALVE PRIOR TO ORDERING ANCILLARY PARTS, DRILLING OR TAPPING.
 - VENT PIPING SHALL BE DRAINED TO WET WELL AS SHOWN ON THE PLANS.

FLANGE MOUNTED AIR VALVE 5
NTS

Y:\19750-SURWMD\PROJECTS\066-01_CRANE CREEK_M-1_FLOW RESTORATION_DESIGN\CAD\DWGS\MECH\19750-066-01-M4-3.DWG
 9/25/2020 9:45 AM MHOFFMAN

DESIGNED	D YOUNG			
DRAWN	D HAUBRICH			
CHECKED	R KOLLER			
LTR.	DATE	REVISIONS	BY	APPRD.

JonesEdmunds
 CERTIFICATE OF AUTHORIZATION #1841
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
 8657 BAYPINE ROAD SUITE 300, JACKSONVILLE, FL 32256 / (904) 744-5401

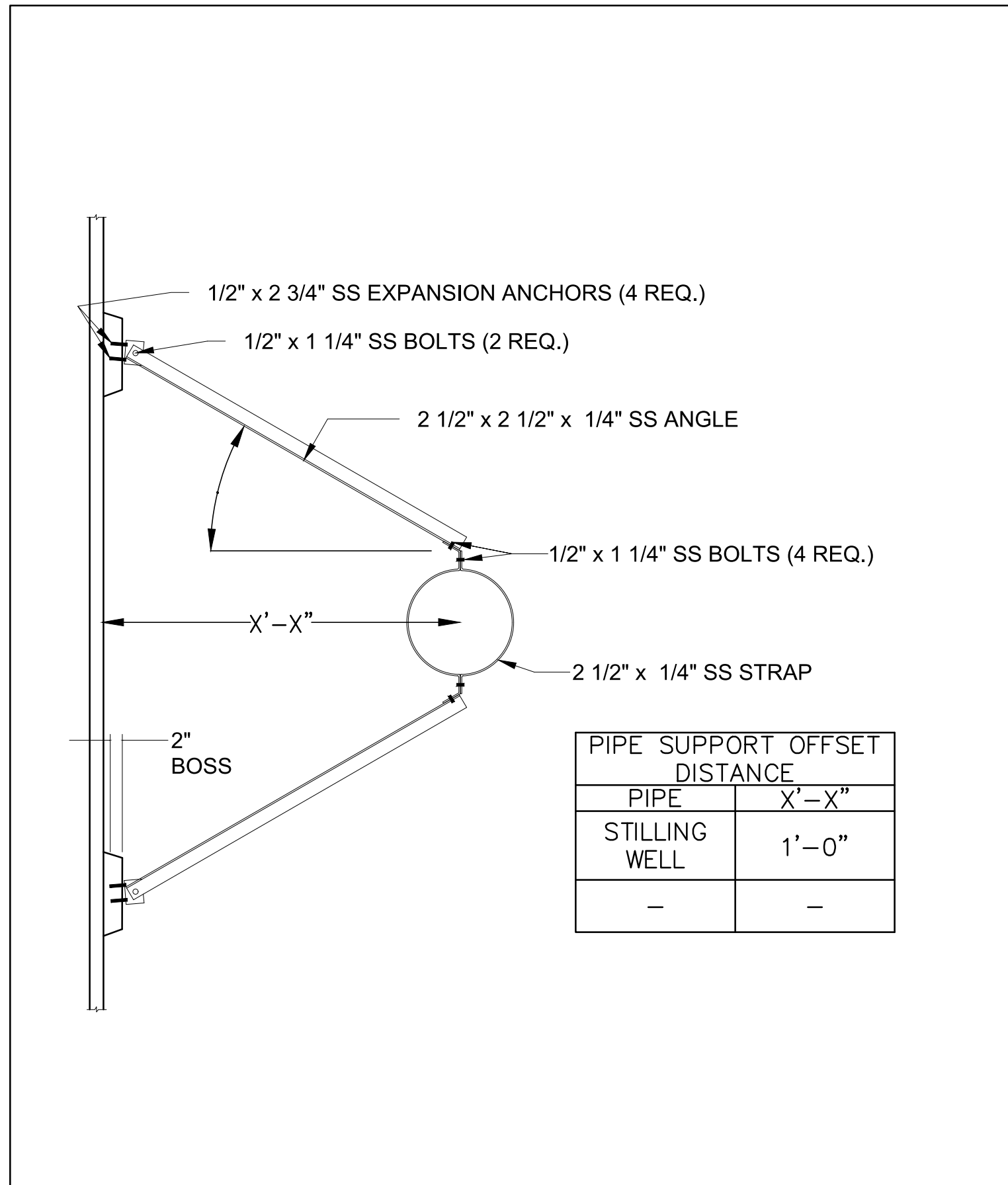
**CRANE CREEK M-1 CANAL FLOW RESTORATION
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

PUMP STATION DETAILS

RICHARD NEAL KOLLER, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 49947	PROJECT NO: 19750-066-01	DATE: OCT 2020
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FOR CONSTRUCTION

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 5/5/2020 1:40 PM LHABERMAN



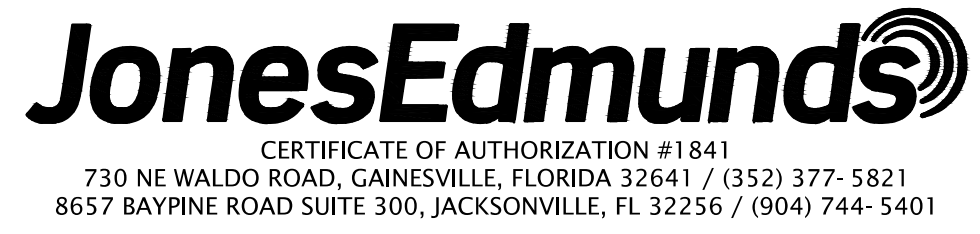
PIPE SUPPORT OFFSET DISTANCE	
PIPE	X'-X"
STILLING WELL	1'-0"
-	-

SS PIPE SUPPORT DETAIL 1
 NTS

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED D YOUNG
 DRAWN D HAUBRICH
 CHECKED R KOLLER



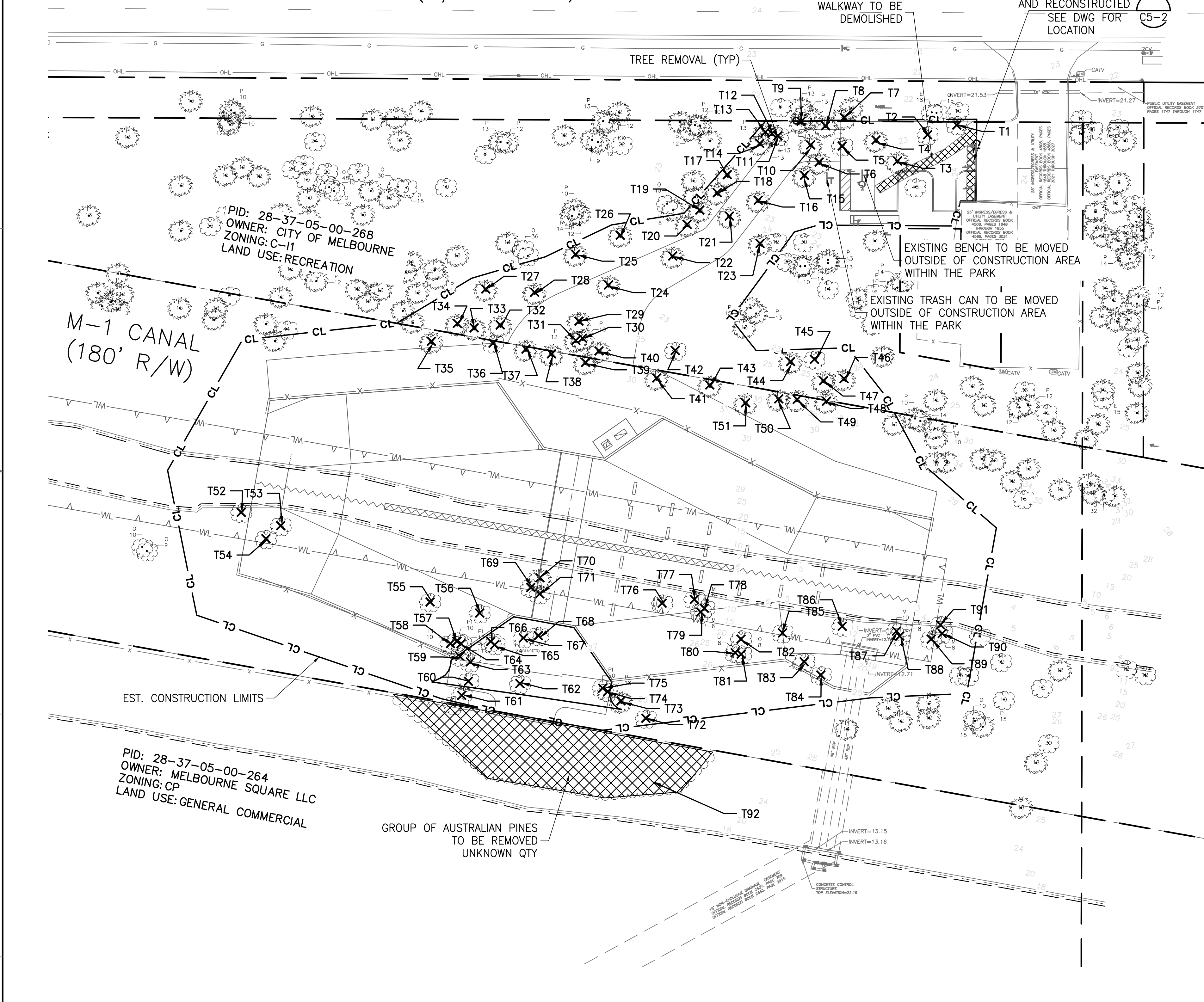
**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

PUMP STATION DETAILS

RICHARD NEAL KOLLER, PROFESSIONAL ENGINEER,
 STATE OF FLORIDA, LICENSE NUMBER 48947
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PROJECT NO: 19750-066-01	DATE: OCT 2020
INDEX NO:	DWG NO: M4-4

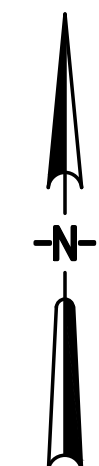
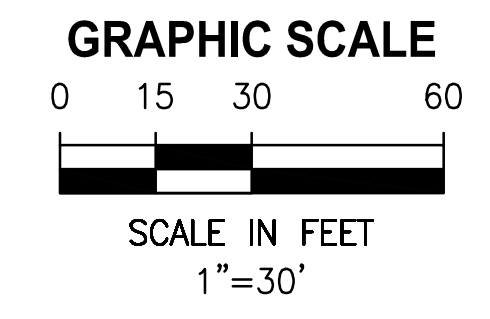
HIBISCUS BOULEVARD WEST (R/W VARIES)



TREE REMOVAL DATA			
NO.	SPECIES	DBH (IN)	JURISDICTION
T1	O	15	MELBOURNE
T2	O	13	MELBOURNE
T3	P	12	MELBOURNE
T4	P	14	MELBOURNE
T5	CA	12	MELBOURNE
T6	P	12	MELBOURNE
T7	P	12	MELBOURNE
T8	P	14	MELBOURNE
T9	P	13	MELBOURNE
T10	P	13	MELBOURNE
T11	O	13	MELBOURNE
T12	P	13	MELBOURNE
T13	P	13	MELBOURNE
T14	P	13	MELBOURNE
T15	P	13	MELBOURNE
T16	P	13	MELBOURNE
T17	P	12	MELBOURNE
T18	P	12	MELBOURNE
T19	P	12	MELBOURNE
T20	P	10	MELBOURNE
T21	P	12	MELBOURNE
T22	P	15	MELBOURNE
T23	P	13	MELBOURNE
T24	P	12	MELBOURNE
T25	P	12	MELBOURNE
T26	P	12	MELBOURNE
T27	P	12	MELBOURNE
T28	P	14	MELBOURNE
T29	P	10	MELBOURNE
T30	P	10	MELBOURNE
T31	P	12	MELBOURNE
T32	P	12	MELBOURNE
T33	P	11	MELBOURNE
T34	P	8	MELBOURNE
T35	P	12	BREVARD
T36	O	18	BREVARD
T37	P	10	BREVARD
T38	P	10	BREVARD
T39	P	10	BREVARD
T40	P	10	MELBOURNE
T41	P	10	BREVARD
T42	O	42	MELBOURNE
T43	P	12	BREVARD
T44	P	13	MELBOURNE
T45	CA	6	MELBOURNE
T46	P	13	MELBOURNE
T47	P	13	MELBOURNE
T48	P	10	BREVARD
T49	P	15	BREVARD
T50	P	10	BREVARD
T51	P	13	BREVARD

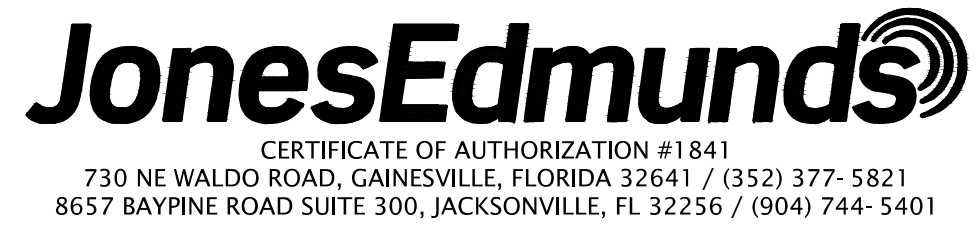
TREE REMOVAL DATA			
NO.	SPECIES	DBH (IN)	JURISDICTION
T52	M	12	BREVARD
T53	M	15	BREVARD
T54	O	12	BREVARD
T55	PI	28	BREVARD
T56	PI	10	BREVARD
T57	PI	10	BREVARD
T58	PI	10	BREVARD
T59	PI	11	BREVARD
T60	PI	6	BREVARD
T61	PI	10	BREVARD
T62	PI	28	BREVARD
T63	PI	9	BREVARD
T64	PI	13	BREVARD
T65	PI	24 (CLUSTER)	BREVARD
T66	PI	11	BREVARD
T67	PI	13	BREVARD
T68	PI	13	BREVARD
T69	M	10	BREVARD
T70	P	13	BREVARD
T71	PI	12	BREVARD
T72	PI	15	BREVARD
T73	P	12	BREVARD
T74	PI	18	BREVARD
T75	PI	20	BREVARD
T76	M	10	BREVARD
T77	M	6	BREVARD
T78	M	6	BREVARD
T79	M	6	BREVARD
T80	O	8	BREVARD
T81	O	8	BREVARD
T82	O	8	BREVARD
T83	O	10	BREVARD
T84	O	6	BREVARD
T85	M	6	BREVARD
T86	M	8	BREVARD
T87	M	10	BREVARD
T88	M	8	BREVARD
T89	M	8	BREVARD
T90	M	8	BREVARD
T91	M	9	BREVARD

TREE REMOVAL DBH (IN) / TREE QTY SUMMARY			
SPECIES	BREVARD	MELBOURNE	TOTAL
CA (CAMPHOR)	0 / 0	18 / 2	18 / 2
M (MANGROVE)	122 / 14	0 / 0	122 / 14
O (OAK)	70 / 7	83 / 4	153 / 11
P (PALM)	137 / 12	415 / 34	552 / 46
PI (PINE)	237 / 18	0 / 0	237 / 18



Y:\19750-SJRWMD\PROJECTS\066-01_CRANE CREEK M-1_FLOW RESTORATION DESIGN\CAD\DWGS\DEMO\19750-066-01-D5-1.DWG
 7/30/2020 2:02 PM MHOFFMAN

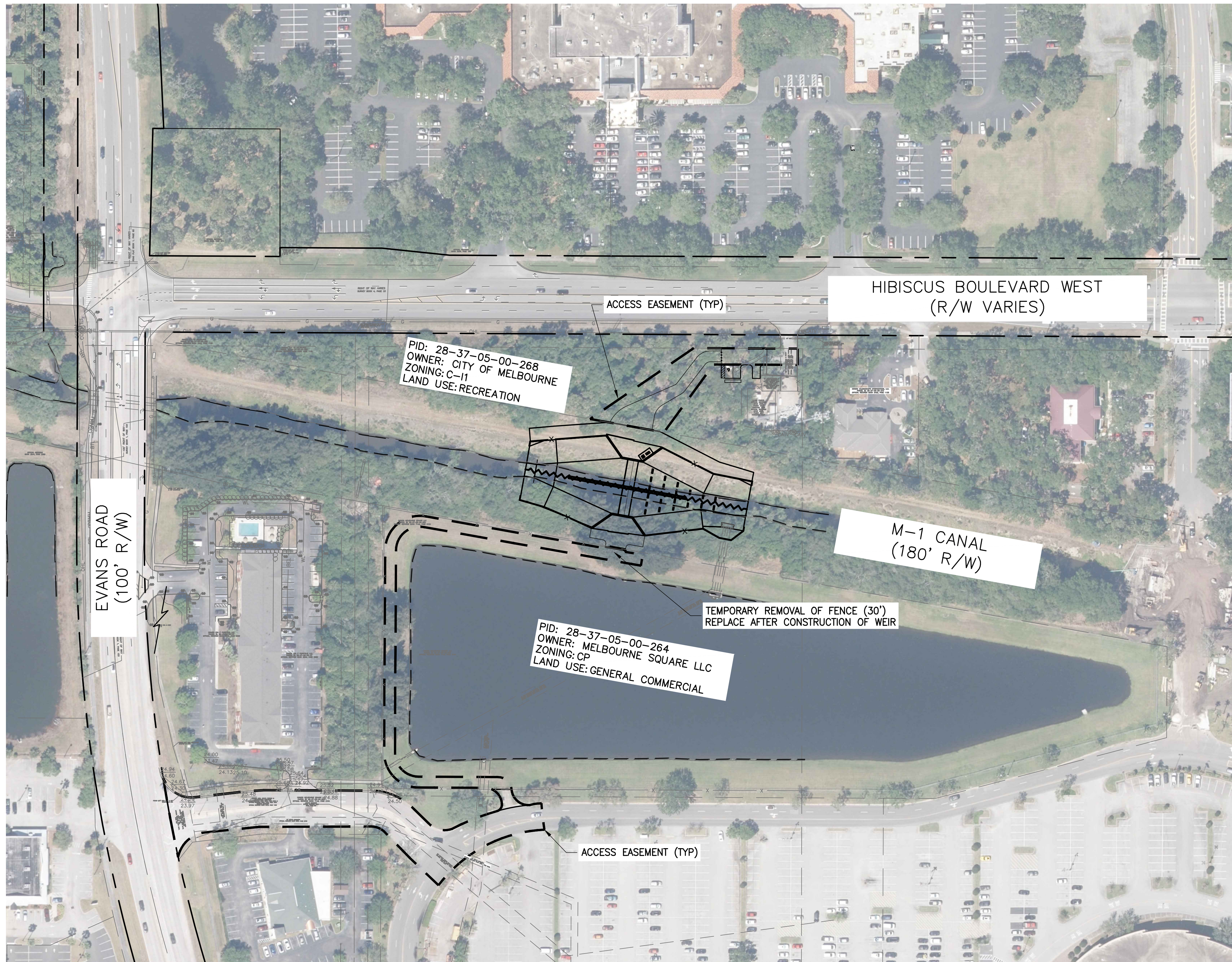
DESIGNED	W NICKEL
DRAWN	D HAUBRICH
CHECKED	R KOLLER



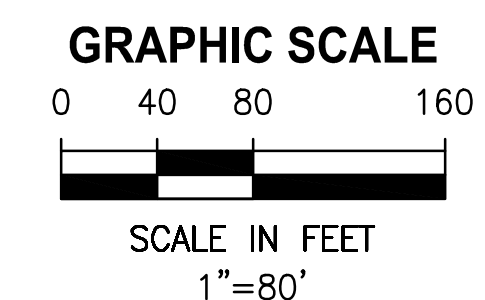
CRANE CREEK M-1 CANAL FLOW RESTORATION ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT

WEIR TREE REMOVAL AND DEMO PLAN

WALTER ALBERT NICKEL, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 68638	PROJECT NO: 19750-066-01	DATE: OCT 2020
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY WALTER ALBERT NICKEL ON THE DATE AT THE RIGHT.	INDEX NO:	DWG NO: D5-1
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NOTE:
 CONTRACTOR TO VIDEO CONDITION OF EXISTING ROADWAYS /
 FACILITIES PRIOR TO CONSTRUCTION AND PROVIDE A COPY OF THE
 VIDEO TO THE OWNER. CONTRACTOR SHALL RESTORE ANY AREAS
 DAMAGED TO THEIR PRE-CONSTRUCTION CONDITION.



FOR CONSTRUCTION

SAVED: 6/24/2020 1:27 PM MHOFFMAN Y:\19750-SJRMD\PROJECTS\066-01_CRANE_CREEK_M-1_FLOW_RESTORATION_DESIGN\CAD\DWGS\CIVIL\19750-066-01-C5-1.DWG

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED W NICKEL
 DRAWN D HAUBRICH
 CHECKED R KOLLER

JonesEdmunds
CERTIFICATE OF AUTHORIZATION #1841
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
 8657 BAYPINE ROAD SUITE 300, JACKSONVILLE, FL 32256 / (904) 744-5401

**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

WEIR ACCESS PLAN

WALTER ALBERT NICKEL, PROFESSIONAL ENGINEER,
 STATE OF FLORIDA, LICENSE NUMBER 68638
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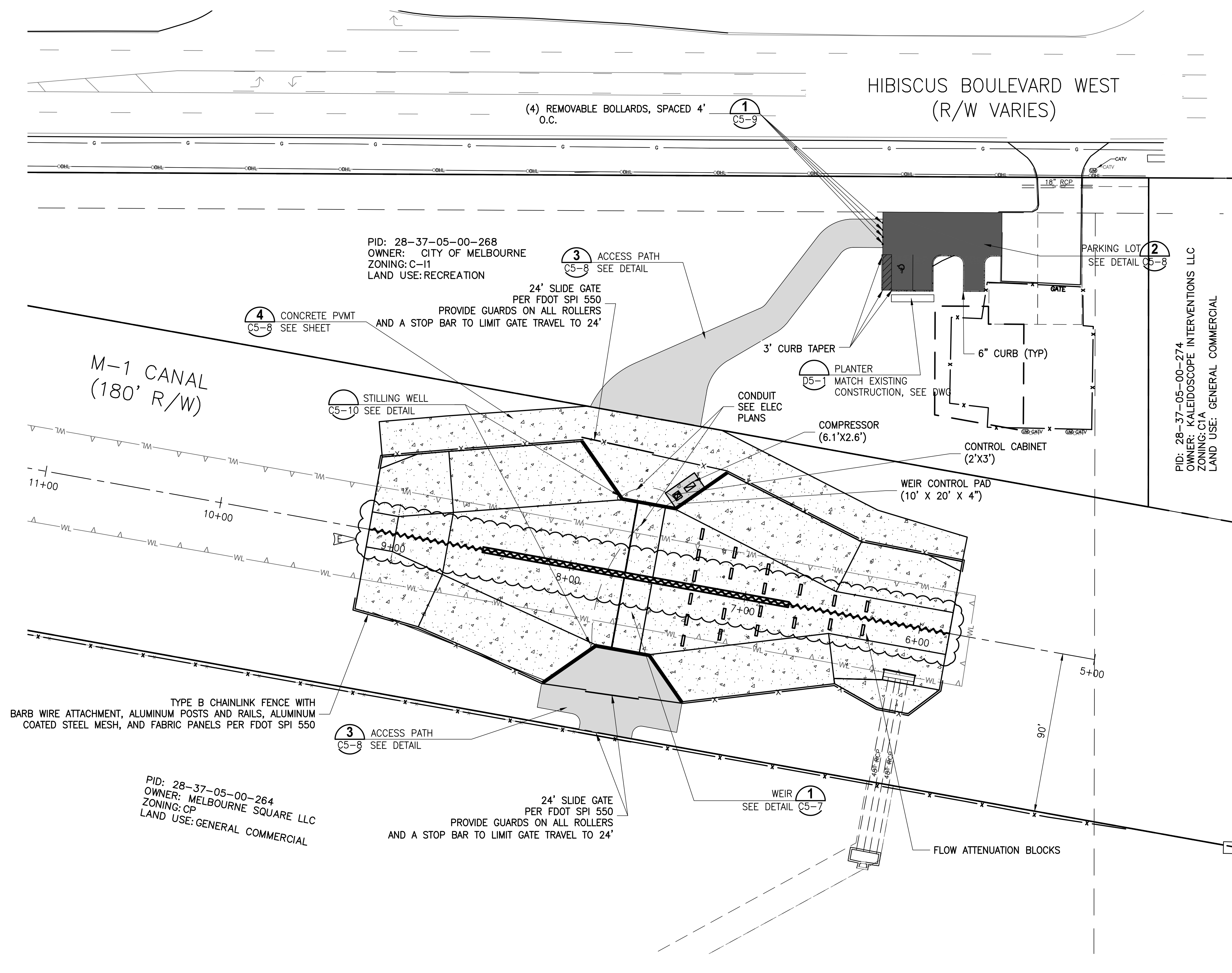
PROJECT NO: 19750-066-01	DATE: OCT 2020
INDEX NO:	DWG NO: C5-1

HIBISCUS BOULEVARD WEST
(R/W VARIES)

28-37-05-00-268 SITE DATA		
DESC	AREA	PERCENT OF SITE
PROPERTY AREA	2.24 AC	100%
NEW PAVEMENT/ CONCRETE	0.06 AC	3%
NEW GRASSPAVE (10% IMP)	0.10 AC	4%
TOTAL NEW IMPERVIOUS	0.07 AC	3%

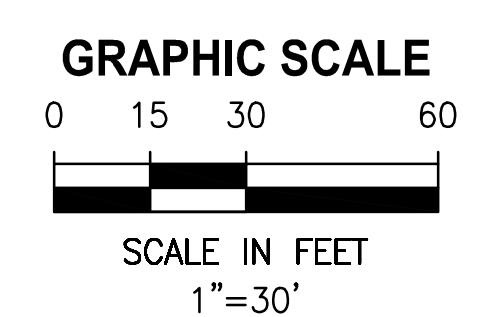
NOTES:

- ACCESSING PARKING STRIPES, ACCESSIBLE AISLE STRIPING, AND UNIVERSAL ACCESSIBLE SYMBOL PER FDOT SPI 711-001,
- ALL OTHER PARKING STRIPES TO BE 6" WHITE.
- HANDICAP PARKING SIGN PER FDOT INDEX 700-102, MOUNTED PER FDOT SPI 700-010
- THE CONTRACTOR SHALL RELOCATE THE PLANTERS, TRASH CANS, AND BENCHES NOTED ON DRAWING D5-1 TO A LOCATION OUTSIDE THE CONSTRUCTION AREA AS DIRECTED BY THE CITY OF MELBOURNE.
- THE CONTRACTOR SHALL INCLUDE IN THEIR BID CONSTRUCTION OF 50 LINEAR FEET OF NEW 5-FOOT WIDE CONCRETE SIDEWALK IN ACCORDANCE WITH FDOT INDEX 522-001, FROM THE NEW PARKING AREA ALONG A ROUTE AND LOCATION TO BE SPECIFIED BY THE CITY OF MELBOURNE. CONTRACTOR SHALL COORDINATE WITH THE CITY AND DOCUMENT THE AGREED UPON SIDEWALK ROUTING WITH THE CITY AND DISTRICT BEFORE CONSTRUCTION.
- CONTRACTOR SHALL ADD 10 TREES APPROXIMATELY 15-FEET TALL. TYPE AND LOCATION TO BE DETERMINED BY THE CITY. FOR THE PURPOSE OF BIDDING ASSUME FIVE (5) SABAL PALMS AND FIVE (5) LIVE OAKS.
- FOR THE PURPOSE OF BIDDING, ASSUME THE PLANTER PERIMETER WILL BE FORMED BY FDOT TYPE D CURB. THE PLANTER DIMENSIONS WILL BE 20-FOOT LONG BY 4-FOOT WIDE. INSTALL LANDSCAPE FABRIC AND TOP SOIL, READY FOR PLANTINGS TO BE PROVIDED BY OTHERS. CONTRACTOR TO CONFIRM THIS DESIGN WITH THE CITY BEFORE INSTALLATION.



PID: 28-37-05-00-274
OWNER: KALEIDOSCOPE INTERVENTIONS LLC
ZONING: C1A
LAND USE: GENERAL COMMERCIAL

PID: 28-37-05-00-264
OWNER: MELBOURNE SQUARE LLC
ZONING: CP
LAND USE: GENERAL COMMERCIAL



SAVED: 10/30/2020 7:59 PM JALLEN Y:\19750-SURWMD\PROJECTS\066-01_CRANE CREEK M-1_FLOW_RESTORATION_DESIGN\CAD\DWGS\CIVIL\19750-066-01-C5-2.DWG

DESIGNED	W NICKEL			
DRAWN	D HAUBRICH			
CHECKED	R KOLLER			
LTR.	DATE	REVISIONS	BY	APPRD.
E	10/30/20	BID RESPONSE	JA	RK

JonesEdmunds
 CERTIFICATE OF AUTHORIZATION #1841
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
 8657 BAYPINE ROAD SUITE 300, JACKSONVILLE, FL 32256 / (904) 744-5401

CRANE CREEK M-1 CANAL FLOW RESTORATION
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT

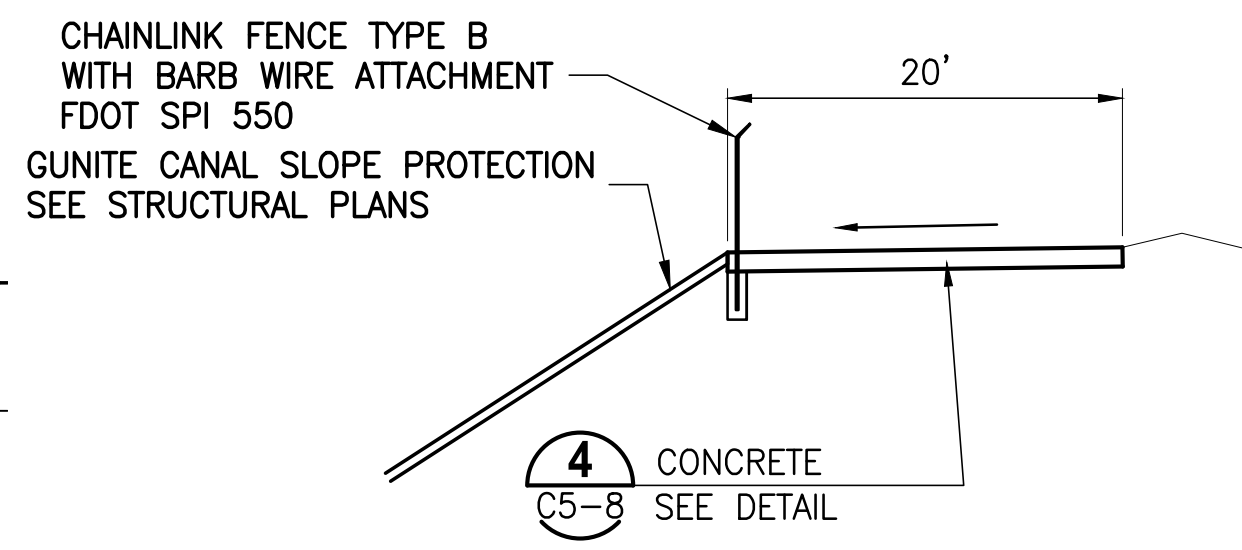
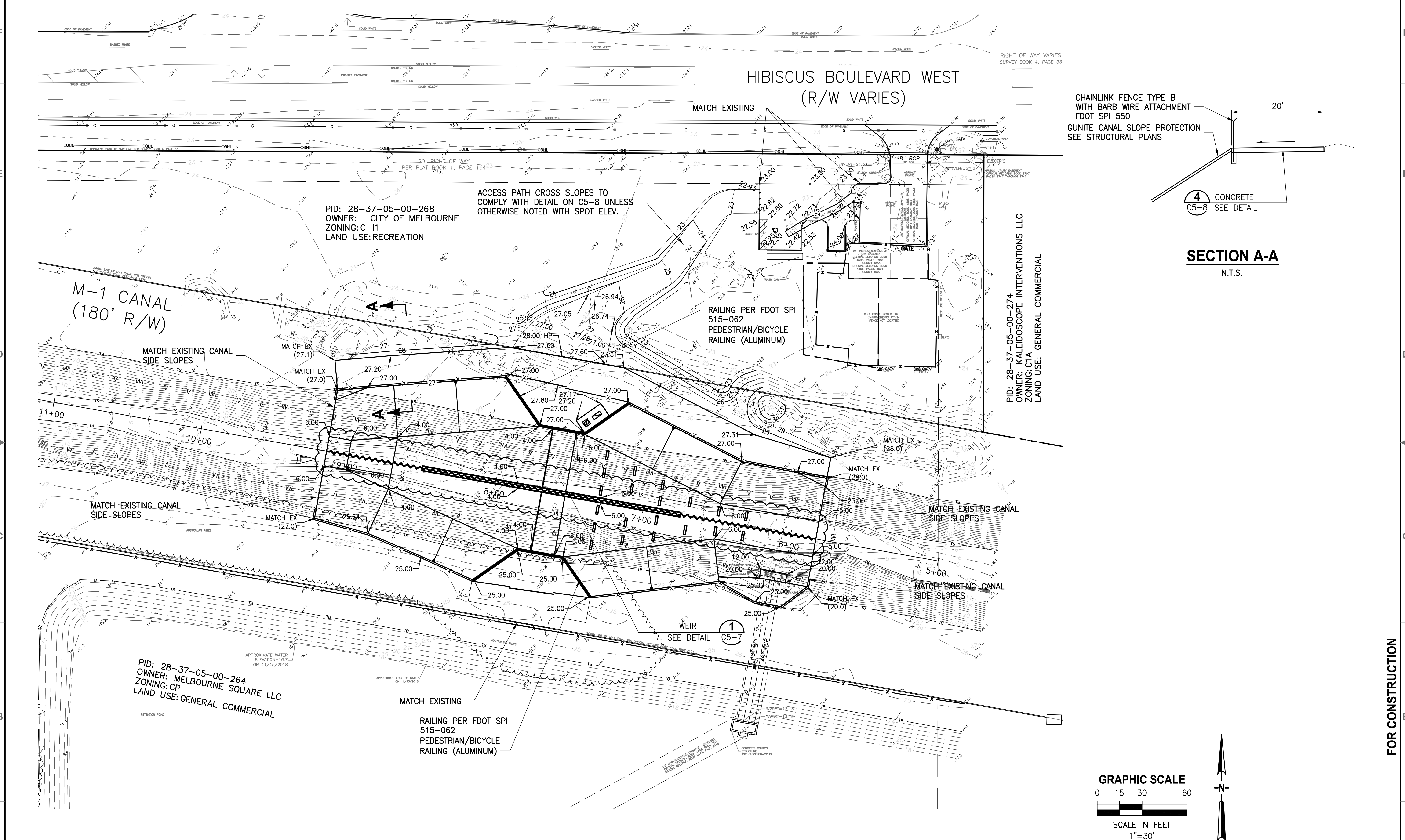
WEIR SITE PLAN

WALTER ALBERT NICKEL, PROFESSIONAL ENGINEER,
STATE OF FLORIDA, LICENSE NUMBER 68638
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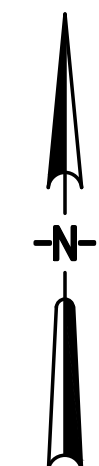
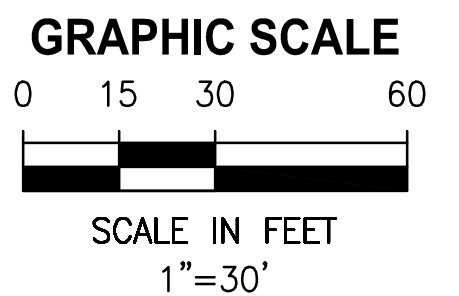
PROJECT NO:	19750-066-01	DATE:	OCT 2020
INDEX NO:		DWG NO:	C5-2

FOR CONSTRUCTION

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SECTION A-A
N.T.S.



LTR.	DATE	REVISIONS	BY	APPRD.
E	10/30/20	BID RESPONSE	JA	RK

DESIGNED	W NICKEL
DRAWN	D HAUBRICH
CHECKED	R KOLLER

JonesEdmunds
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**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

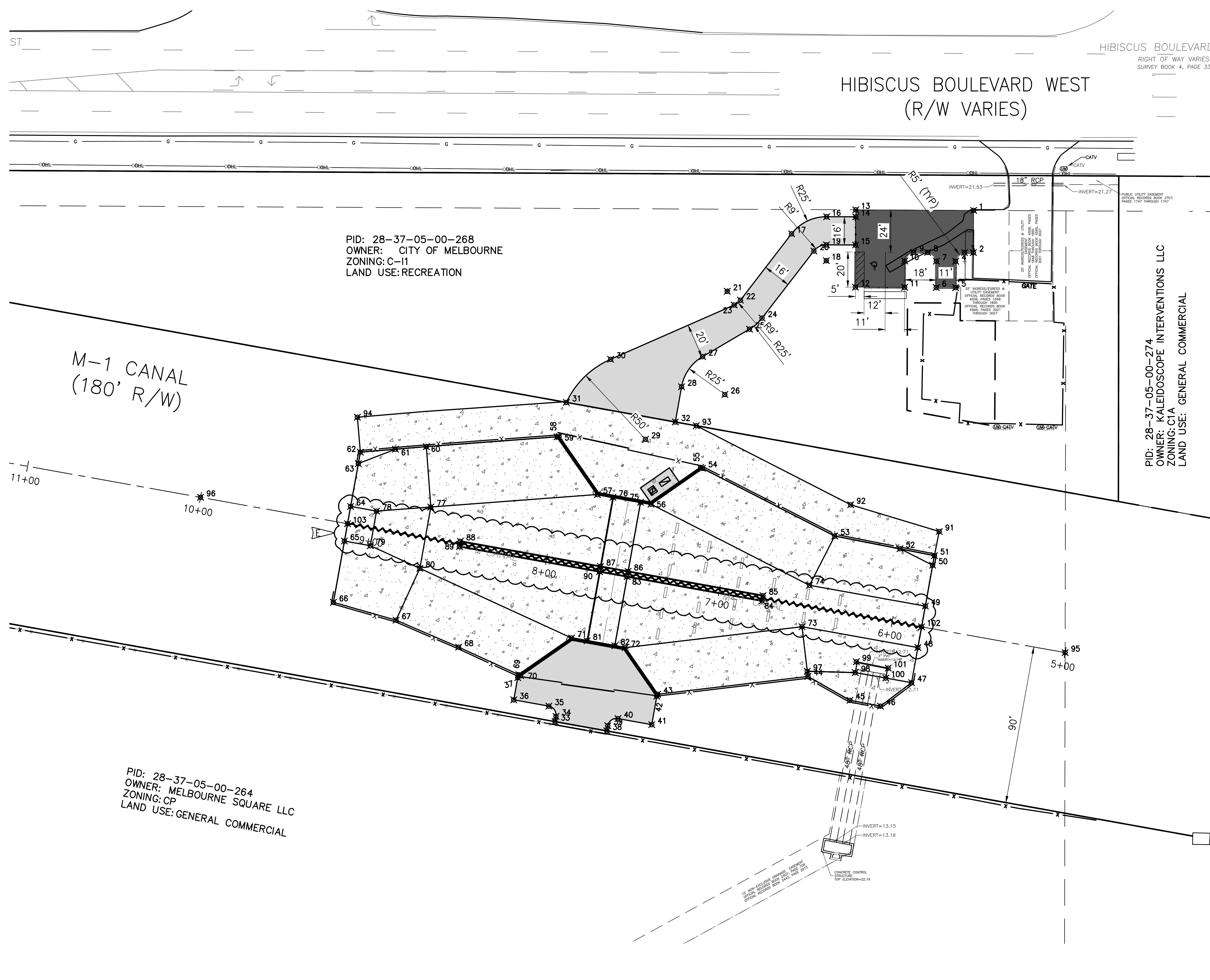
WEIR GRADING PLAN

WALTER ALBERT NICKEL, PROFESSIONAL ENGINEER,
 STATE OF FLORIDA, LICENSE NUMBER 68638
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PROJECT NO:	19750-066-01	DATE:	OCT 2020
INDEX NO:		DWG NO:	C5-3

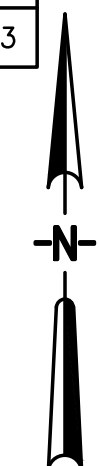
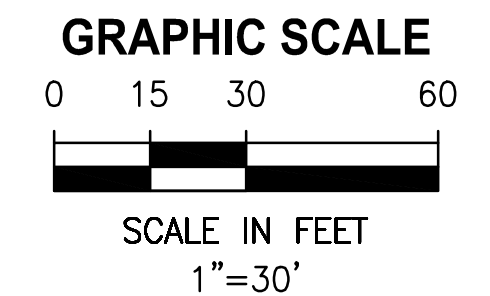
FOR CONSTRUCTION

Y:\19750-SURWMD\PROJECTS\066-01_CRANE CREEK M-1_FLOW RESTORATION_DESIGN\CAD\DWGS\CIVIL\19750-066-01-C5-4.DWG
 SAVER: 10/30/2020 2:05 PM JALLEN



COORDINATE TABLE		
POINT	NORTHING	EASTING
1	1363864.94	768501.07
2	1363840.94	768500.96
3	1363840.96	768495.87
4	1363835.99	768490.85
5	1363820.99	768490.77
6	1363821.04	768479.77
7	1363836.04	768479.85
8	1363841.07	768474.87
9	1363841.10	768466.87
10	1363836.13	768461.85
11	1363821.13	768461.77
12	1363821.27	768433.77
13	1363865.27	768433.99
14	1363861.27	768433.97
15	1363845.27	768433.89
16	1363861.35	768417.38
17	1363851.62	768397.46
18	1363836.35	768417.26
19	1363845.35	768417.30
20	1363841.85	768410.13
21	1363818.91	768360.86
22	1363813.84	768368.32
23	1363811.10	768364.81
24	1363803.64	768380.65
25	1363797.34	768373.50
26	1363760.13	768359.47
27	1363781.70	768346.82
28	1363764.55	768334.86
29	1363734.67	768314.30
30	1363780.21	768294.44
31	1363755.63	768269.26
32	1363744.50	768331.26
33	1363573.91	768262.80
34	1363576.92	768263.33
35	1363582.72	768259.29
36	1363586.31	768239.29
37	1363598.98	768241.57
38	1363568.61	768292.32
39	1363571.61	768292.86
40	1363575.65	768298.66
41	1363572.21	768317.83
42	1363588.36	768320.73
43	1363589.50	768321.15
44	1363599.61	768406.73
45	1363586.05	768430.67
46	1363582.75	768448.04
47	1363596.06	768465.73
48	1363616.07	768469.34
49	1363639.69	768473.58
50	1363662.95	768477.76
51	1363668.42	768478.74
52	1363672.35	768459.13

COORDINATE TABLE		
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53	1363679.58	768421.98
54	1363718.10	768346.69
55	1363718.62	768345.68
56	1363697.72	768317.38
57	1363703.20	768286.86
58	1363736.08	768264.00
59	1363736.16	768265.15
60	1363730.48	768189.53
61	1363728.98	768171.93
62	1363727.29	768152.00
63	1363720.80	768150.83
64	1363696.41	768146.45
65	1363676.72	768142.92
66	1363641.82	768136.65
67	1363631.65	768172.30
68	1363616.33	768207.96
69	1363600.62	768242.17
70	1363600.14	768243.23
71	1363621.50	768272.19
72	1363616.02	768302.71
73	1363627.91	768403.39
74	1363651.54	768407.63
75	1363698.78	768311.47
76	1363701.61	768295.72
77	1363696.08	768192.11
78	1363693.76	768161.22
79	1363674.07	768157.68
80	1363661.15	768185.84
81	1363619.91	768281.05
82	1363617.08	768296.80
83	1363656.45	768303.87
84	1363642.67	768380.64
85	1363645.62	768381.17
86	1363659.41	768304.40
87	1363662.24	768288.65
88	1363676.55	768208.93
89	1363673.60	768208.40
90	1363659.28	768288.12
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92	1363697.38	768431.09
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100	1363598.73	768451.07
101	1363604.37	768452.46
102	1363627.88	768471.46
103	1363686.57	768144.69



DESIGNED	W NICKEL			
DRAWN	D HAUBRICH			
CHECKED	R KOLLER			
LTR.	DATE	REVISIONS	BY	APPRD.
E	10/30/20	BID RESPONSE	JA	RK

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 8657 BAYPINE ROAD SUITE 300, JACKSONVILLE, FL 32256 / (904) 744-5401

**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

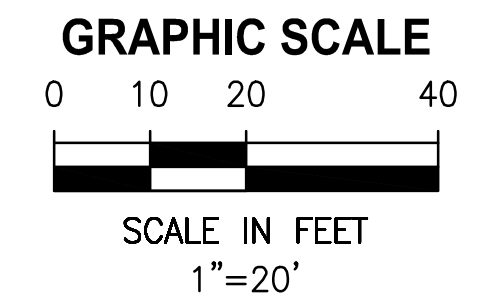
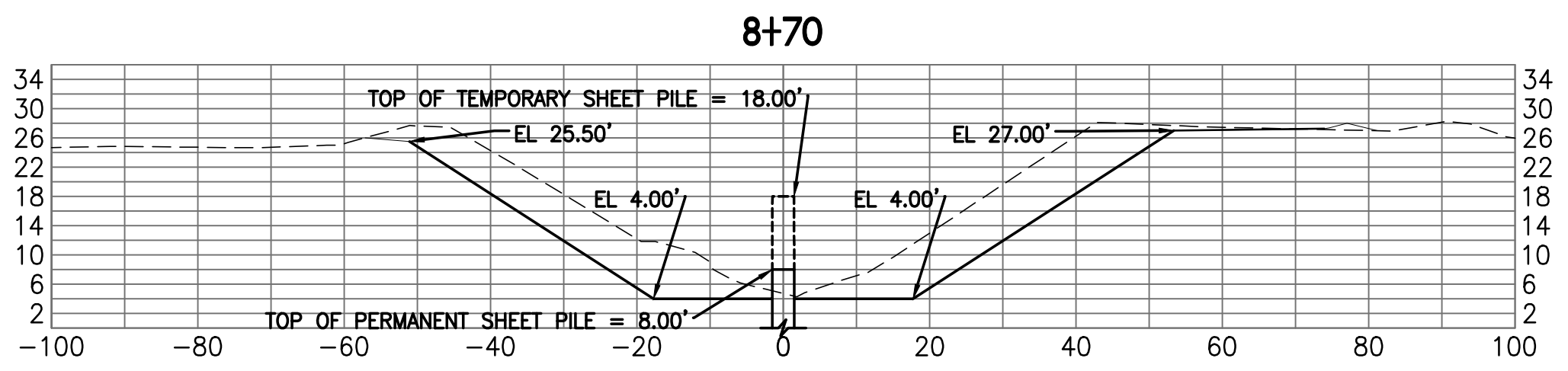
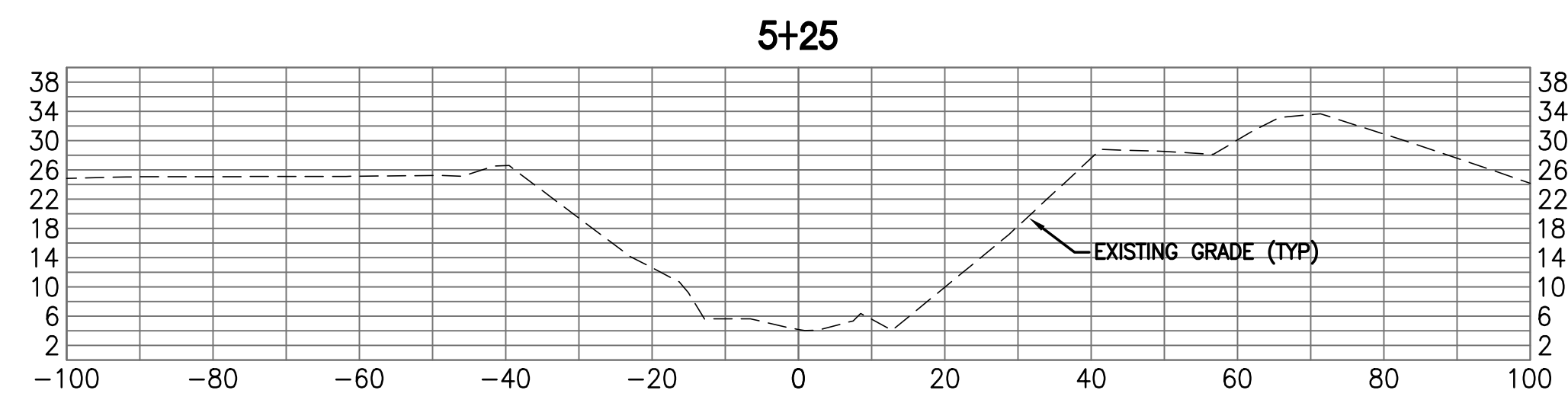
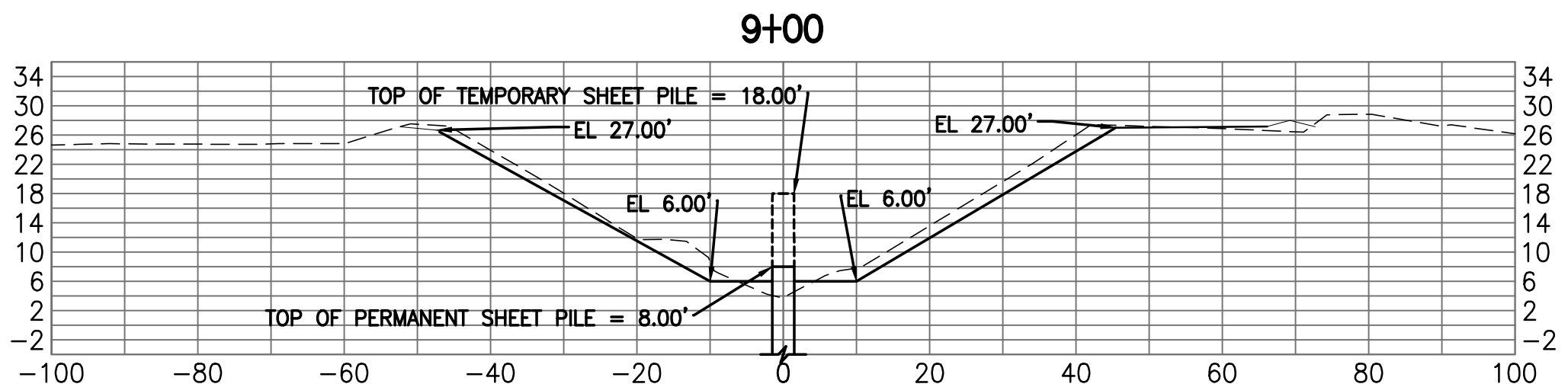
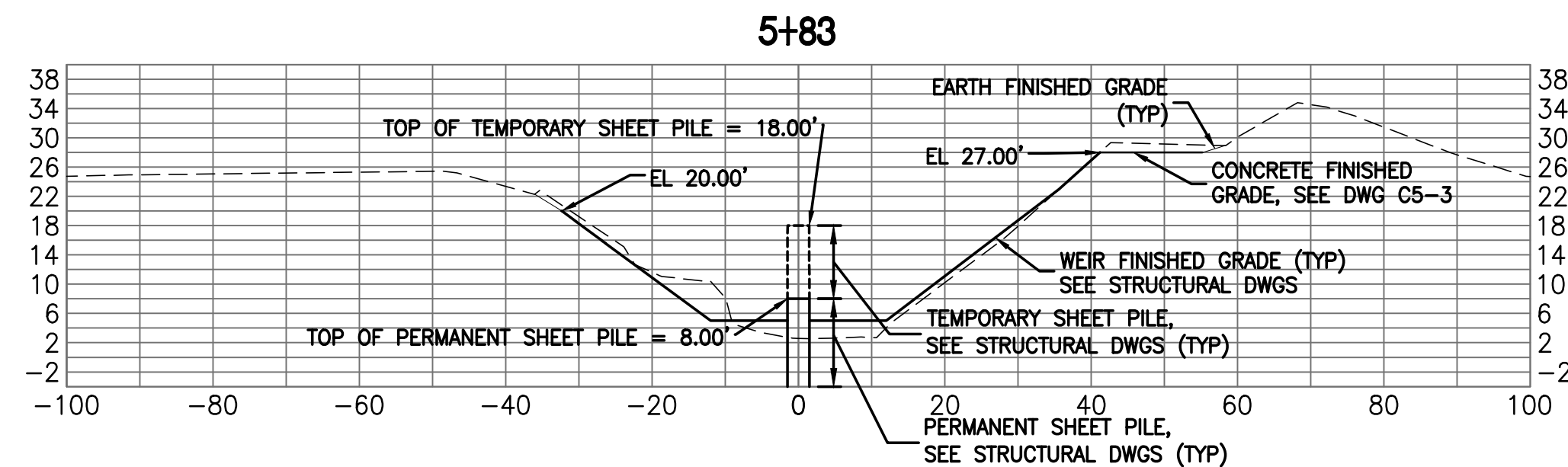
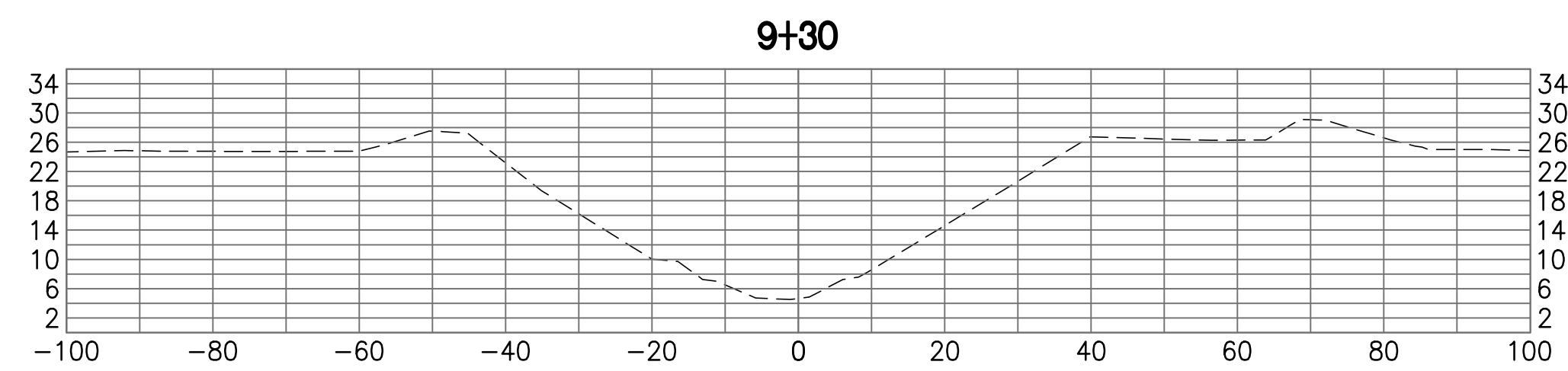
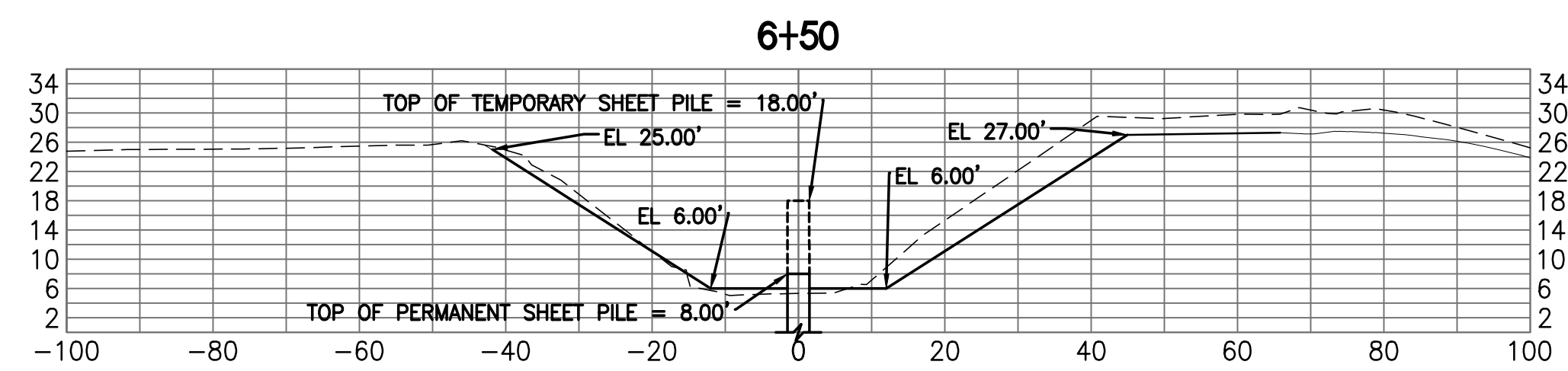
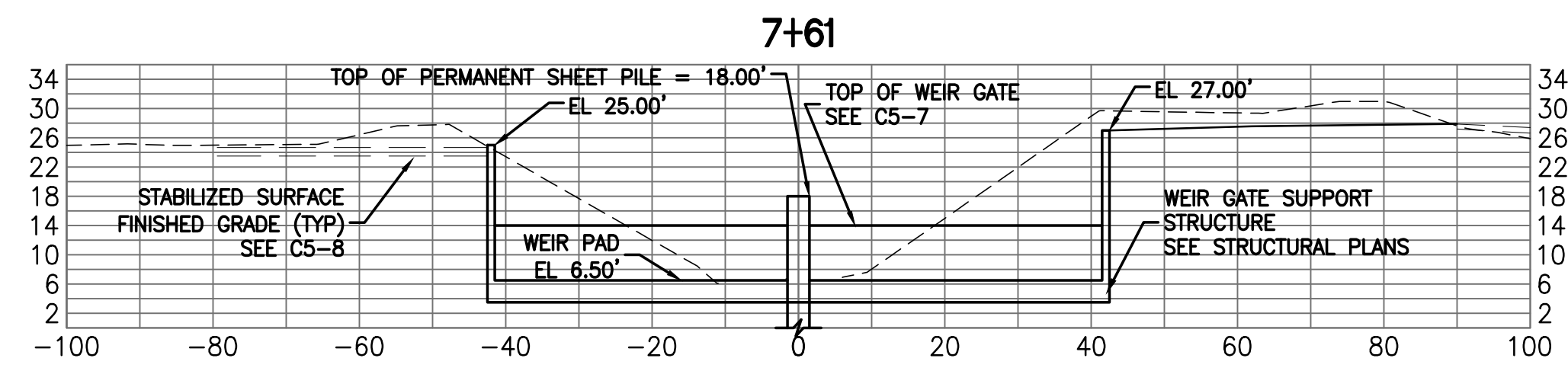
WEIR GEOMETRIC CONTROL TABLE

PROJECT NO:	19750-066-01	DATE:	OCT 2020
INDEX NO:		DWG NO:	C5-4
WALTER ALBERT NICKEL, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 68639 THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY WALTER ALBERT NICKEL ON THE DATE AT THE RIGHT. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.			

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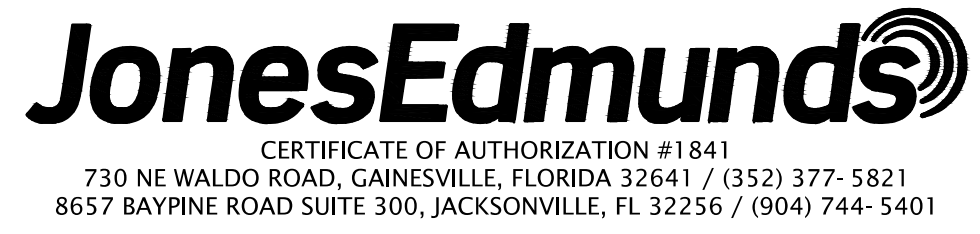
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 CHECKED R KOLLER

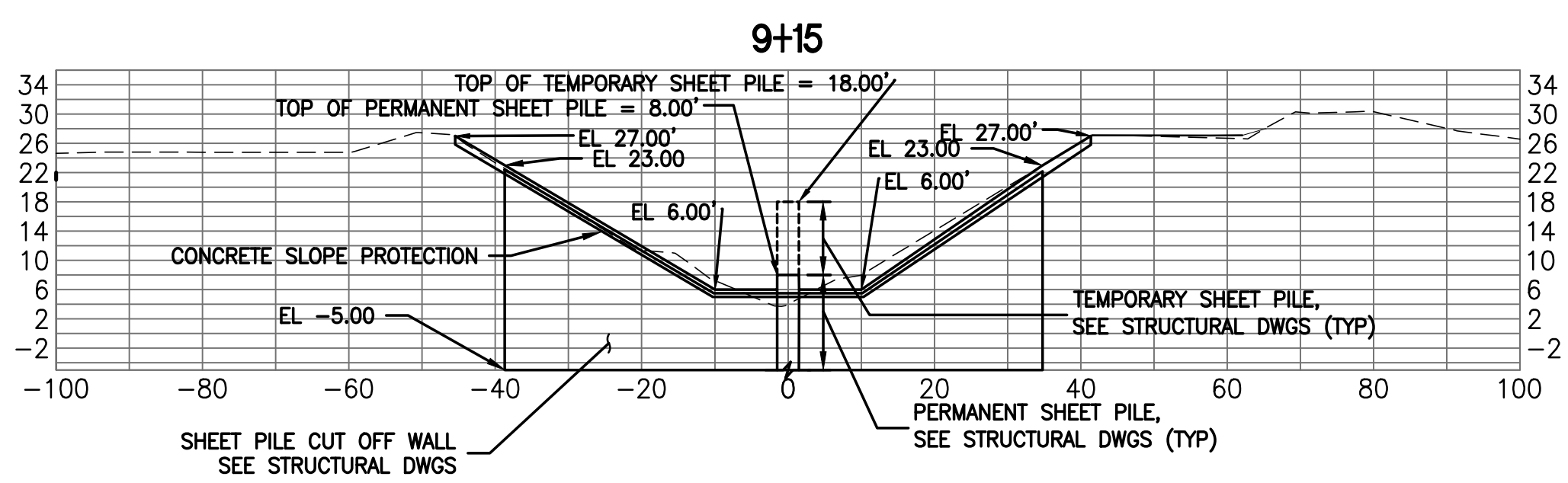
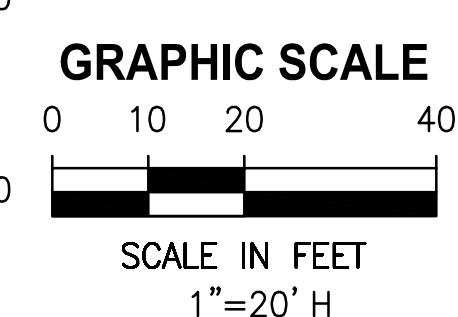
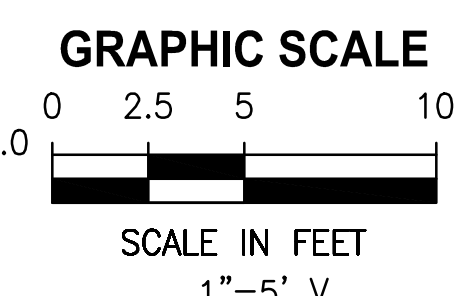
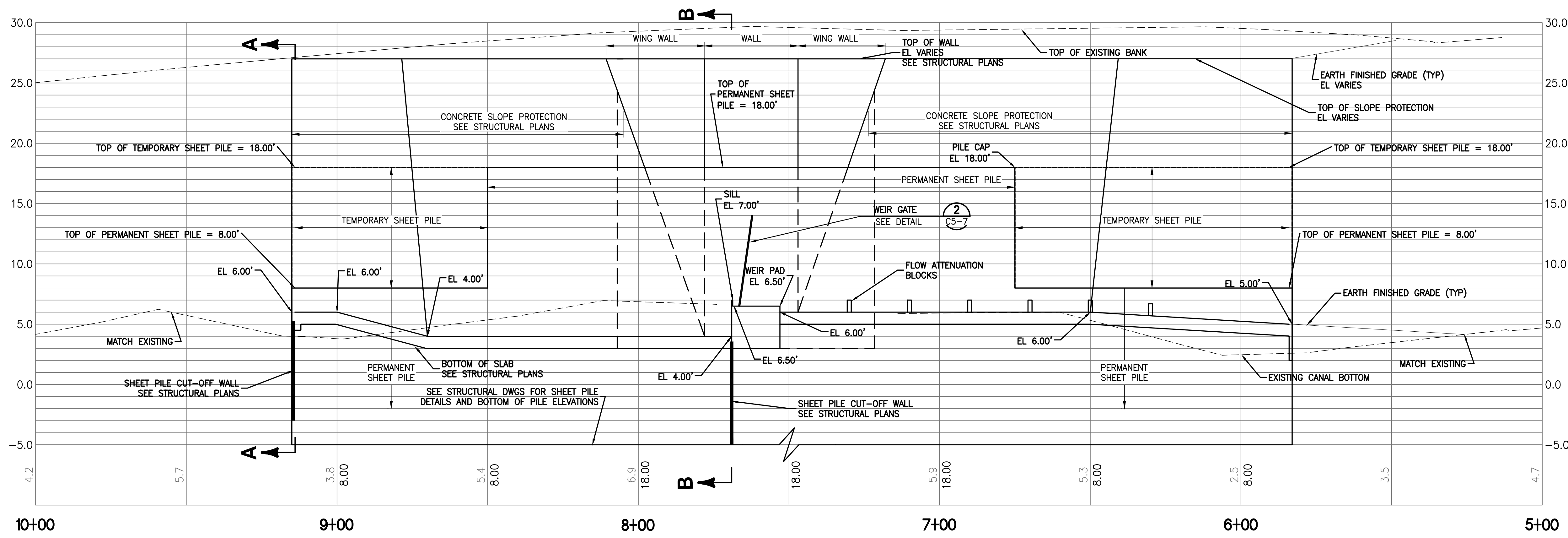


**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

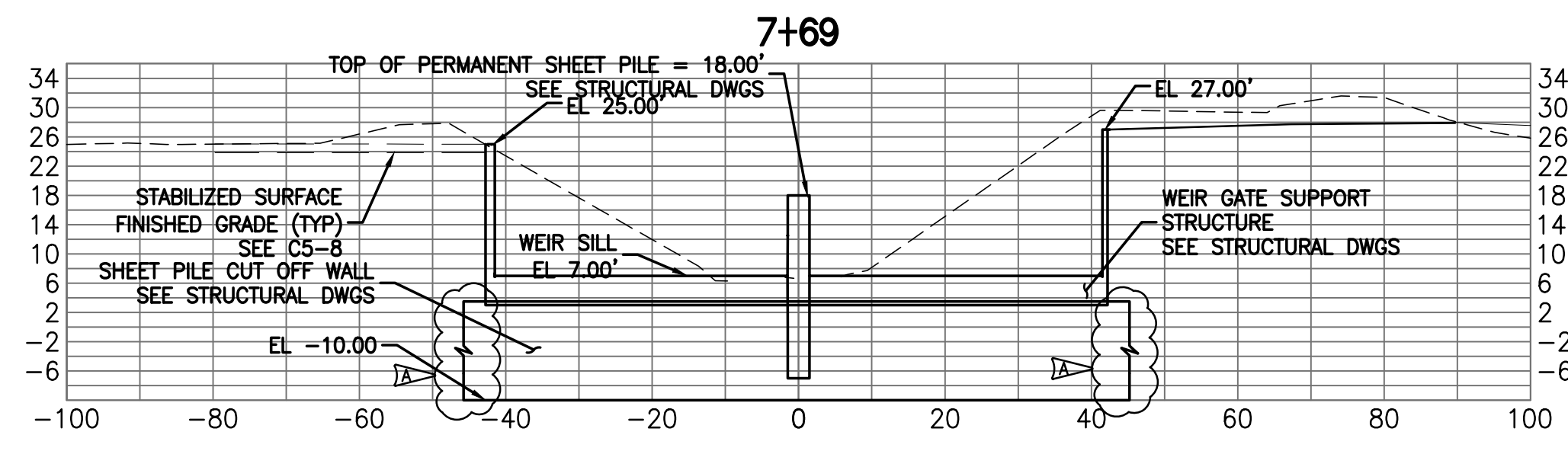
WEIR CROSS SECTIONS

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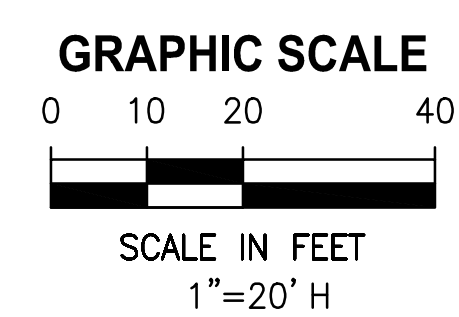
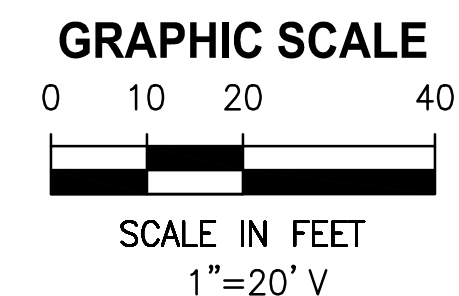
PROJECT NO: 19750-066-01	DATE: OCT 2020
INDEX NO:	DWG NO: C5-5



SECTION A-A



SECTION B-B



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 8/31/2020 11:17 AM MHOFFMAN

LTR.	DATE	REVISIONS	BY	APPRD.
	8/2020	REVISION A	MKH	WAN

DESIGNED W NICKEL
 DRAWN D HAUBRICH
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CRANE CREEK M-1 CANAL FLOW RESTORATION
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT

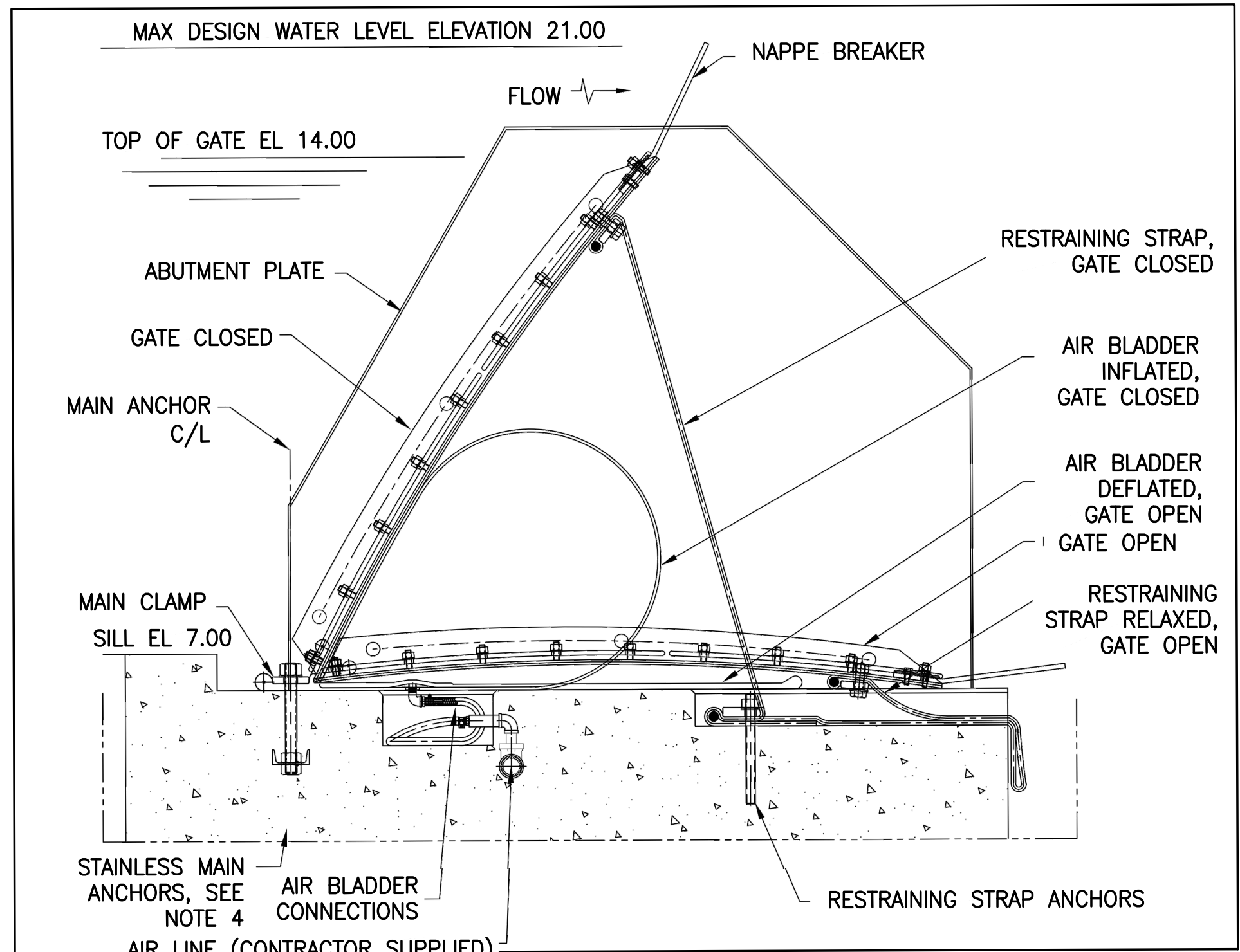
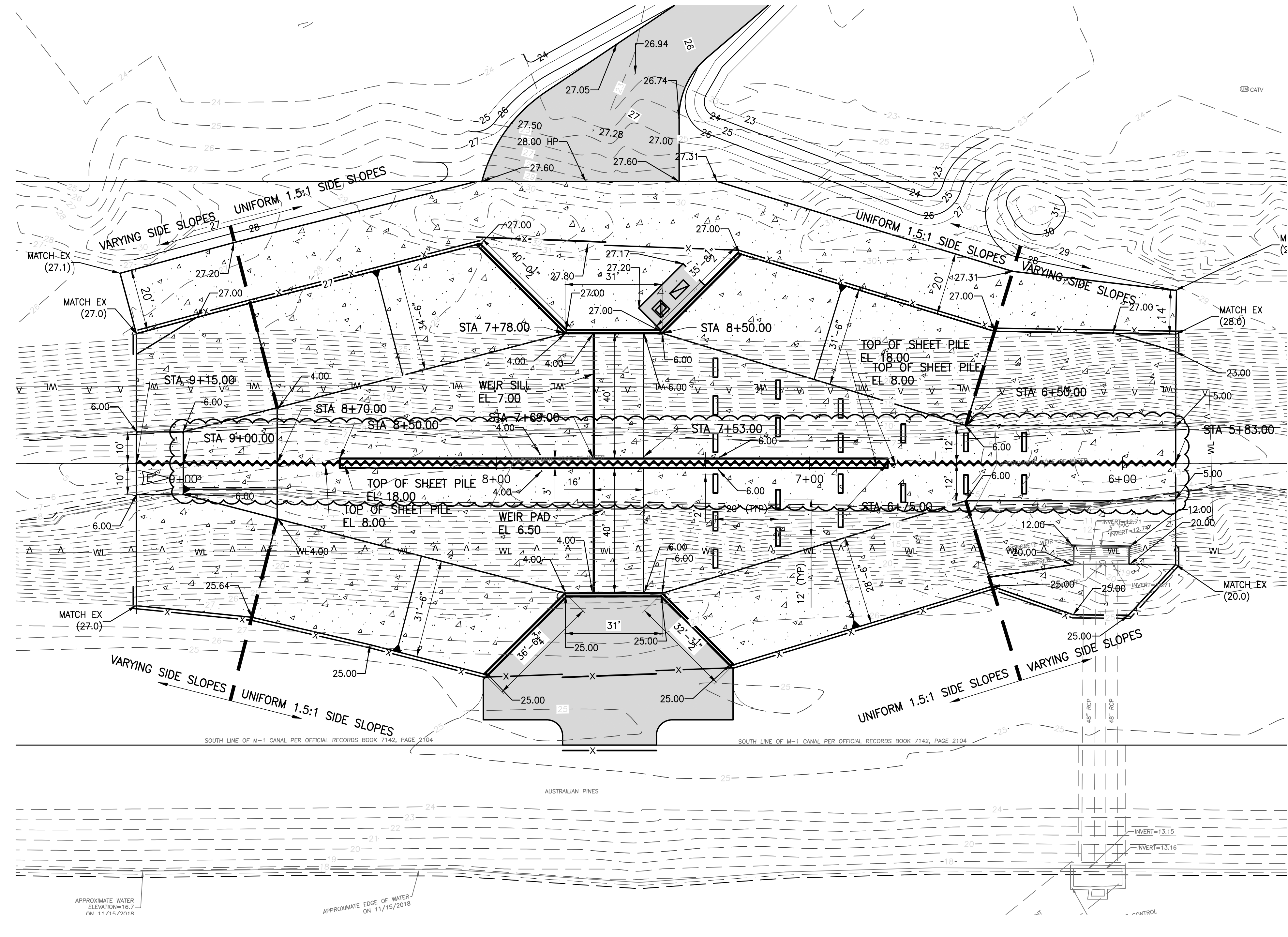
WEIR PROFILE

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PROJECT NO:	19750-066-01	DATE:	OCT 2020
INDEX NO:		DWG NO:	C5-6

FOR CONSTRUCTION

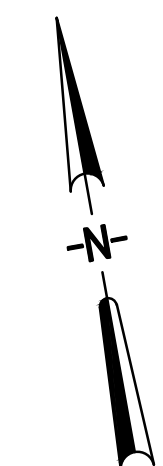
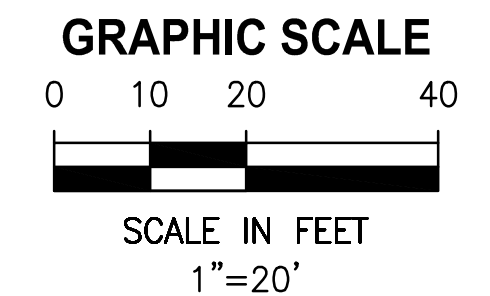
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 2:37 PM JALLEN



DETAIL 2
N.T.S. C5-7

NOTE:
 ABUTMENT PLATES ARE CAST INTO THE CONCRETE ON EACH WEIR SECTION, TOTALING FOUR PLATES, AND SHALL BE STAINLESS STEEL PER MANUFACTURER SPECIFICATIONS.

DETAIL 1
1"=20' C5-7



LTR.	DATE	REVISIONS	BY	APPRD.
E	10/30/20	BID RESPONSE	JA	RK

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DRAWN	D HAUBRICH
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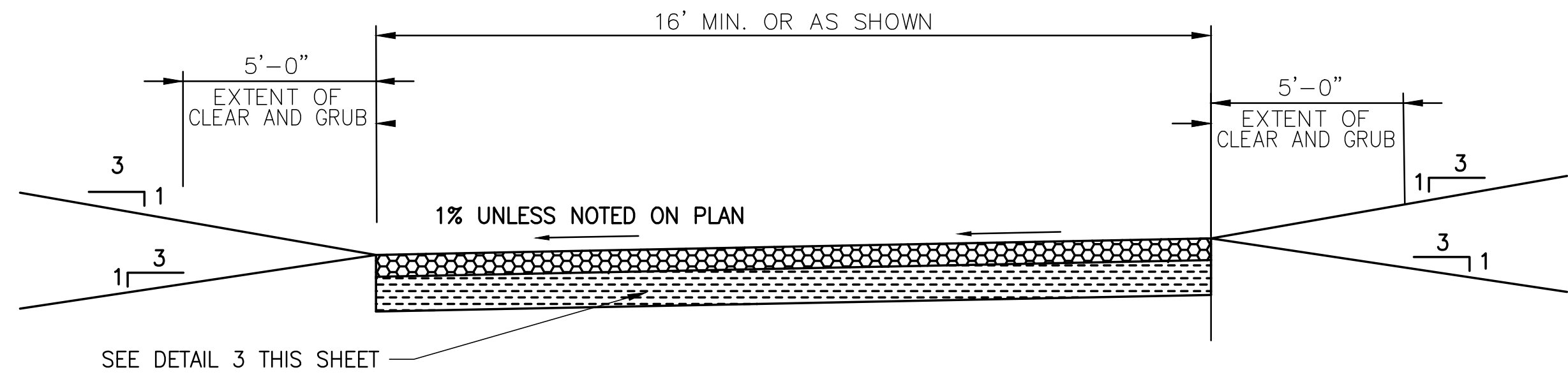
**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

WEIR DETAILS

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INDEX NO:		DWG NO:	C5-7

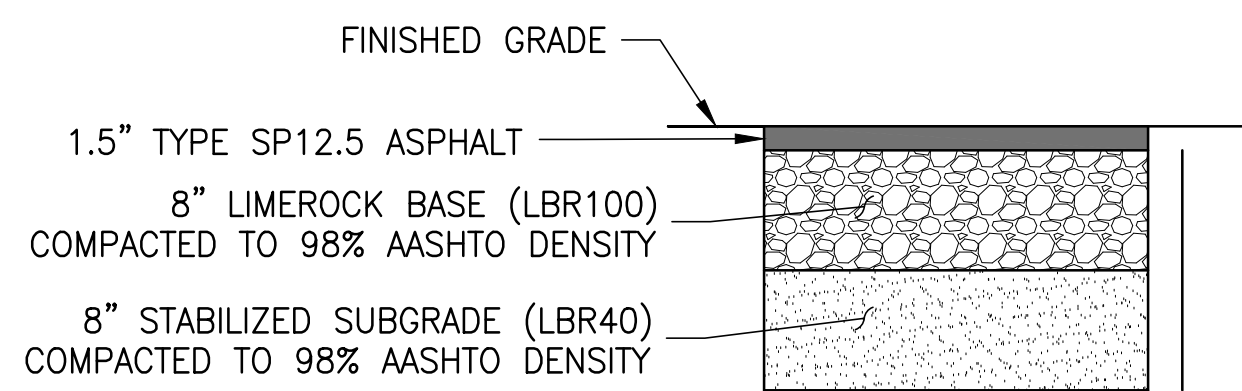
FOR CONSTRUCTION



TYPICAL ACCESS PATH SECTION

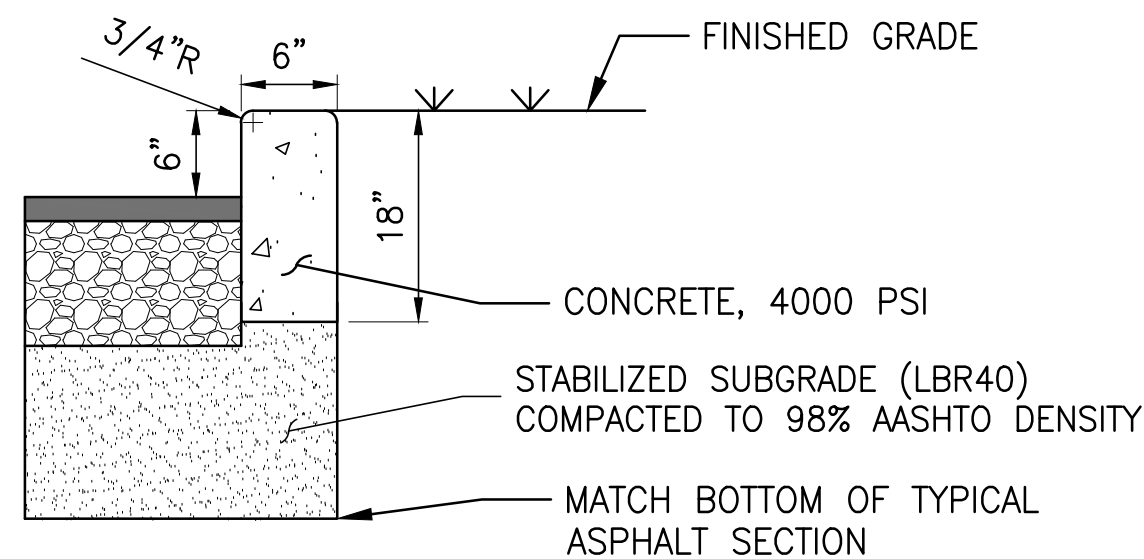
N.T.S.

DETAIL 1
C5-2



TYPICAL ASPHALT SECTION

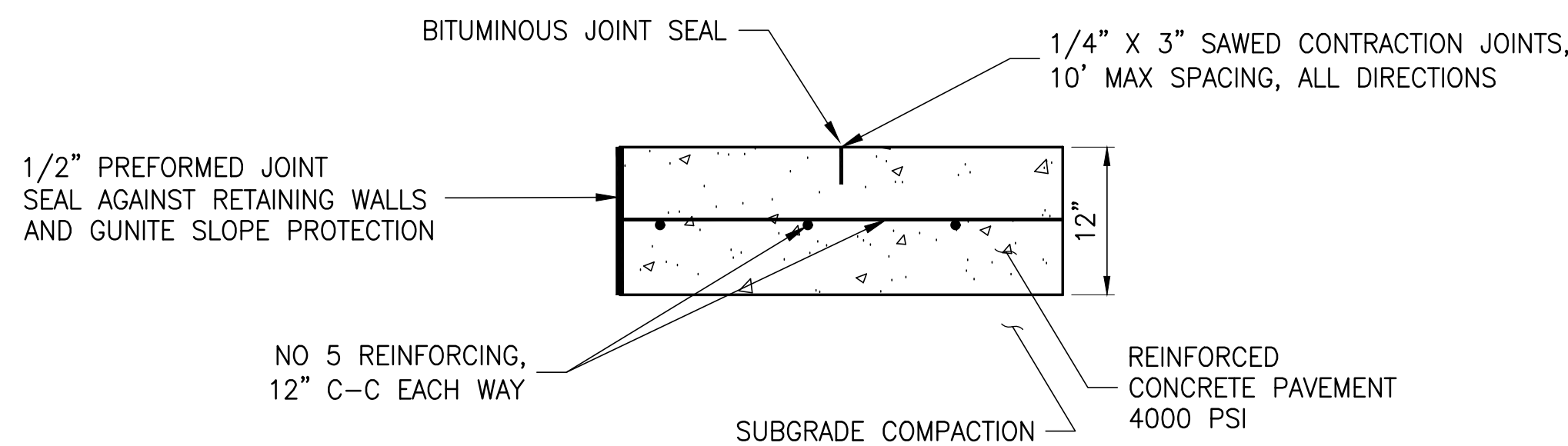
N.T.S.



TYPICAL CURB SECTION

N.T.S.

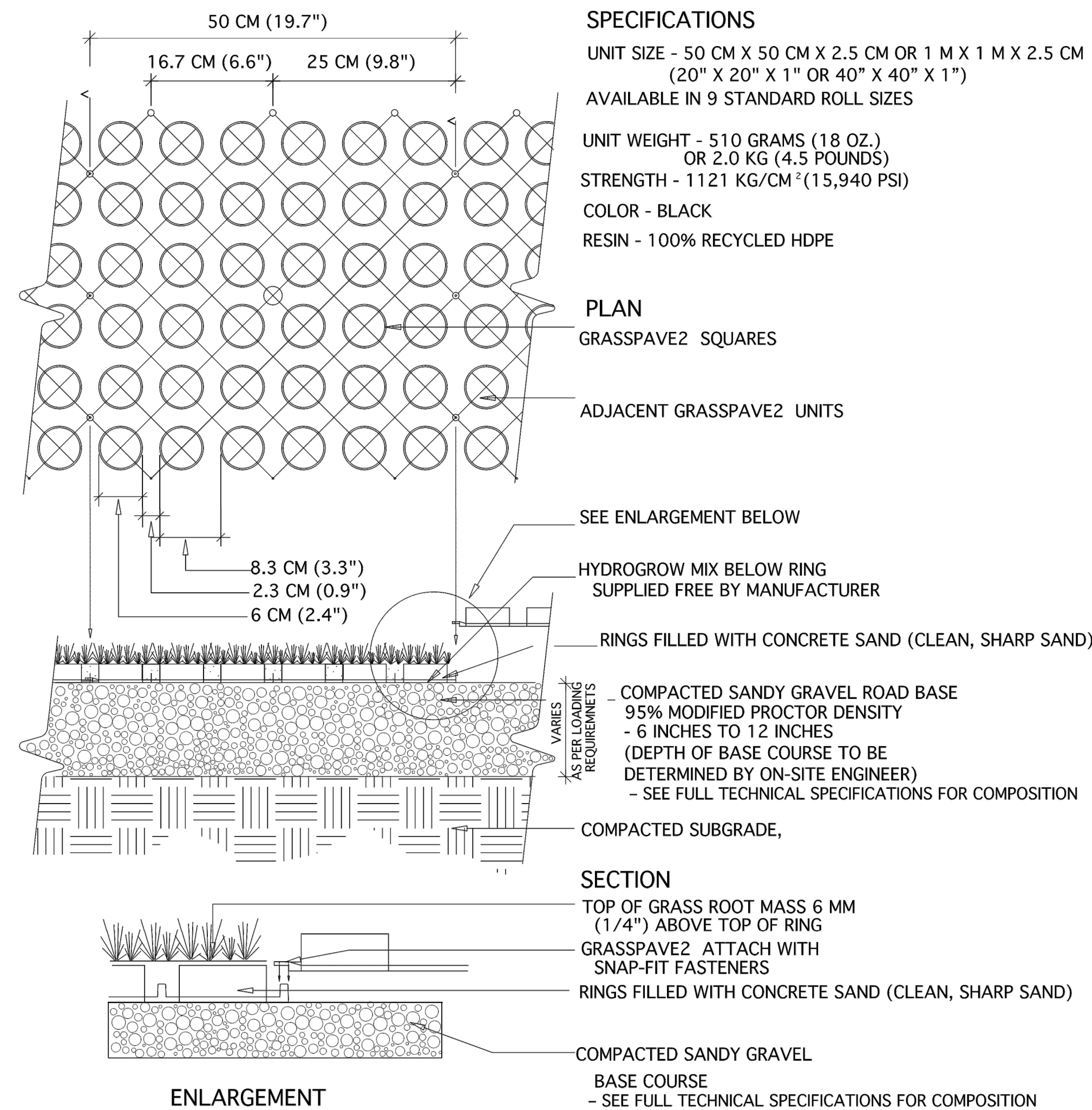
DETAIL 2
C5-2



TYPICAL REINFORCED CONCRETE

N.T.S.

DETAIL 4
C5-2



SPECIFICATIONS

UNIT SIZE - 50 CM X 50 CM X 2.5 CM OR 1 M X 1 M X 2.5 CM (20" X 20" X 1" OR 40" X 40" X 1")
 AVAILABLE IN 9 STANDARD ROLL SIZES
 UNIT WEIGHT - 510 GRAMS (18 OZ.) OR 2.0 KG (4.5 POUNDS)
 STRENGTH - 1121 KG/CM² (15,940 PSI)
 COLOR - BLACK
 RESIN - 100% RECYCLED HDPE

PLAN

GRASSPAVE2 SQUARES

ADJACENT GRASSPAVE2 UNITS

SEE ENLARGEMENT BELOW

HYDROGROW MIX BELOW RING SUPPLIED FREE BY MANUFACTURER

RINGS FILLED WITH CONCRETE SAND (CLEAN, SHARP SAND)

VARIES AS PER LOADING REQUIREMENTS
 - COMPACTED SANDY GRAVEL ROAD BASE 95% MODIFIED PROCTOR DENSITY - 6 INCHES TO 12 INCHES (DEPTH OF BASE COURSE TO BE DETERMINED BY ON-SITE ENGINEER) - SEE FULL TECHNICAL SPECIFICATIONS FOR COMPOSITION

COMPACTED SUBGRADE,

SECTION

TOP OF GRASS ROOT MASS 6 MM (1/4") ABOVE TOP OF RING
 GRASSPAVE2 ATTACH WITH SNAP-FIT FASTENERS
 RINGS FILLED WITH CONCRETE SAND (CLEAN, SHARP SAND)

COMPACTED SANDY GRAVEL BASE COURSE - SEE FULL TECHNICAL SPECIFICATIONS FOR COMPOSITION

ENLARGEMENT

NOTE: GRASS/PLANT TYPES SHALL BE SPECIFIED BY A LANDSCAPE ARCHITECT OR LANDSCAPE DESIGNER.

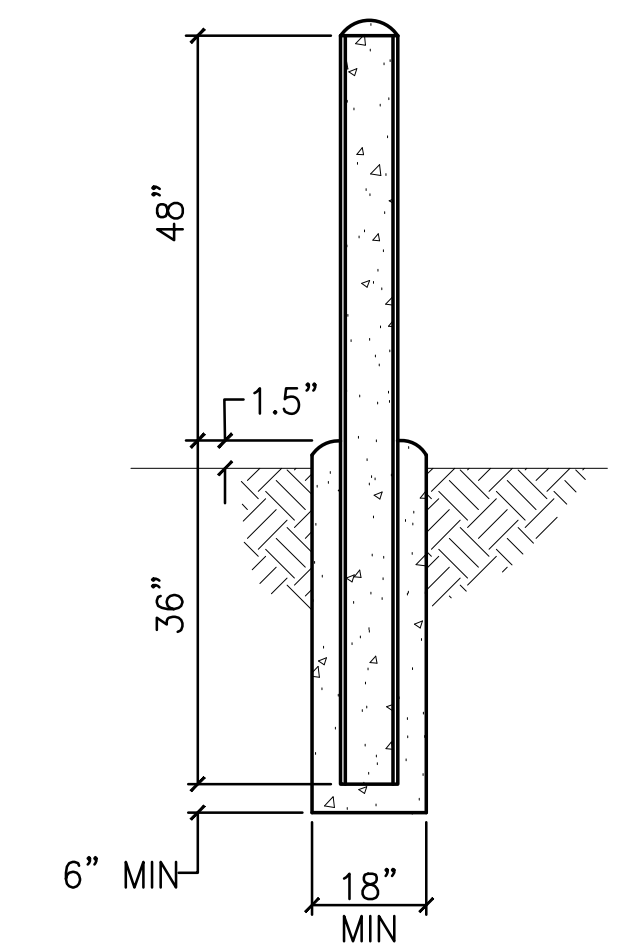
TYPICAL GRASSPAVE2 DETAIL



GRASSPAVE PRODUCT IS THE BASIS OF THE DESIGN. CONTRACTOR MAY USE THIS OR APPROVED EQUAL THROUGH FORMAL SUBMITTAL AND APPROVAL PROCESS

16265 E. 33RD DR., SUITE 20
 AURORA, COLORADO 80011
 800-233-1510 OR 303-233-8383
 FAX: 300-233-1522 OR
 303-233-8282
 www.invisiblestructures.com
 rev. 1/18

DETAIL 3
C5-2



NOTES:

- A. ACTUAL INSTALLATION LOCATION OF EACH BOLLARD SHALL BE AS SHOWN ON THE DRAWINGS OR AS DIRECTED IN THE FIELD.
- B. PAINT ALL PIPING MATERIALS OSHA SAFETY YELLOW.
- C. FOR CHAIN GATE, PROVIDE 3/4" HIGH-TEST CHAIN FOR GATE - 1,500 LBS WORKING LOAD LIMIT.

TYPE I BOLLARD DETAIL

NTS

DETAIL 5
C5-3

1
1 OF 1

SAVED: 6/24/2020 4:08 PM MHOFFMAN Y:\19750-SJR\PROJECTS\066-01-CRANE CREEK M-1_FLOW RESTORATION DESIGN\CAD\DWGS\CIVIL\19750-066-01-C5-8.DWG

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LTR.	DATE	REVISIONS	BY	APPRD.

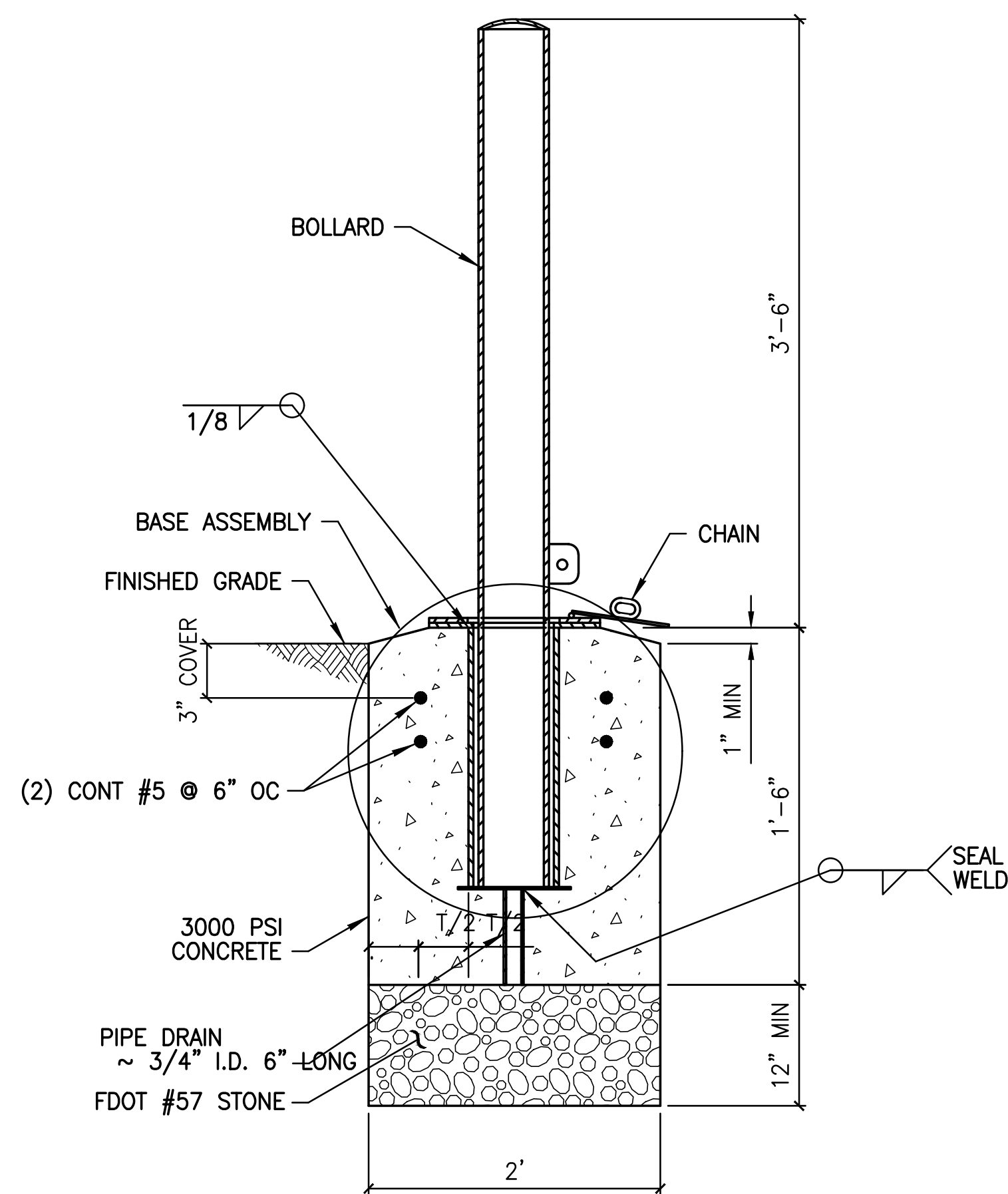
DESIGNED	W NICKEL
DRAWN	D HAUBRICH
CHECKED	R KOLLER

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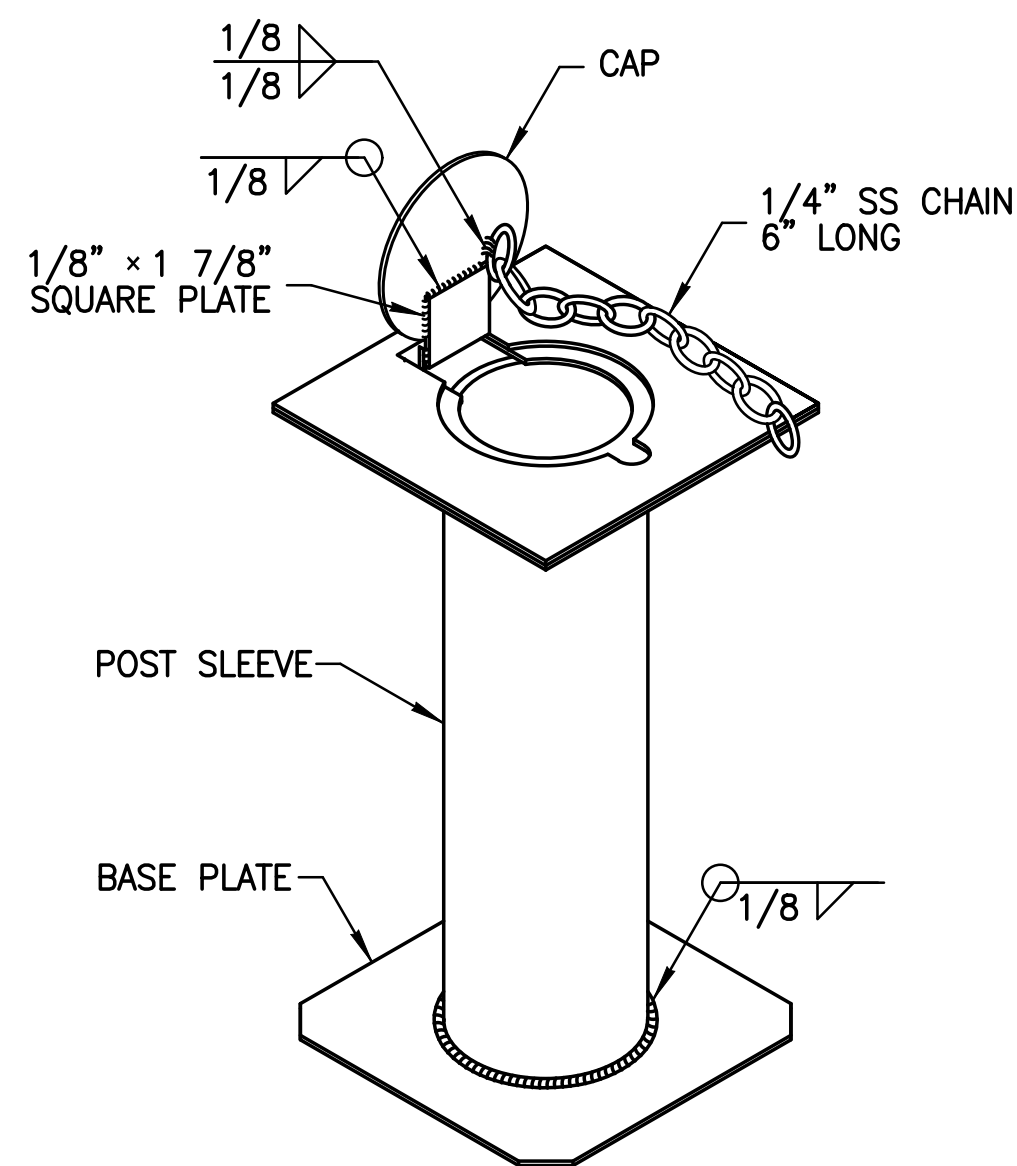
**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

ACCESS DETAILS

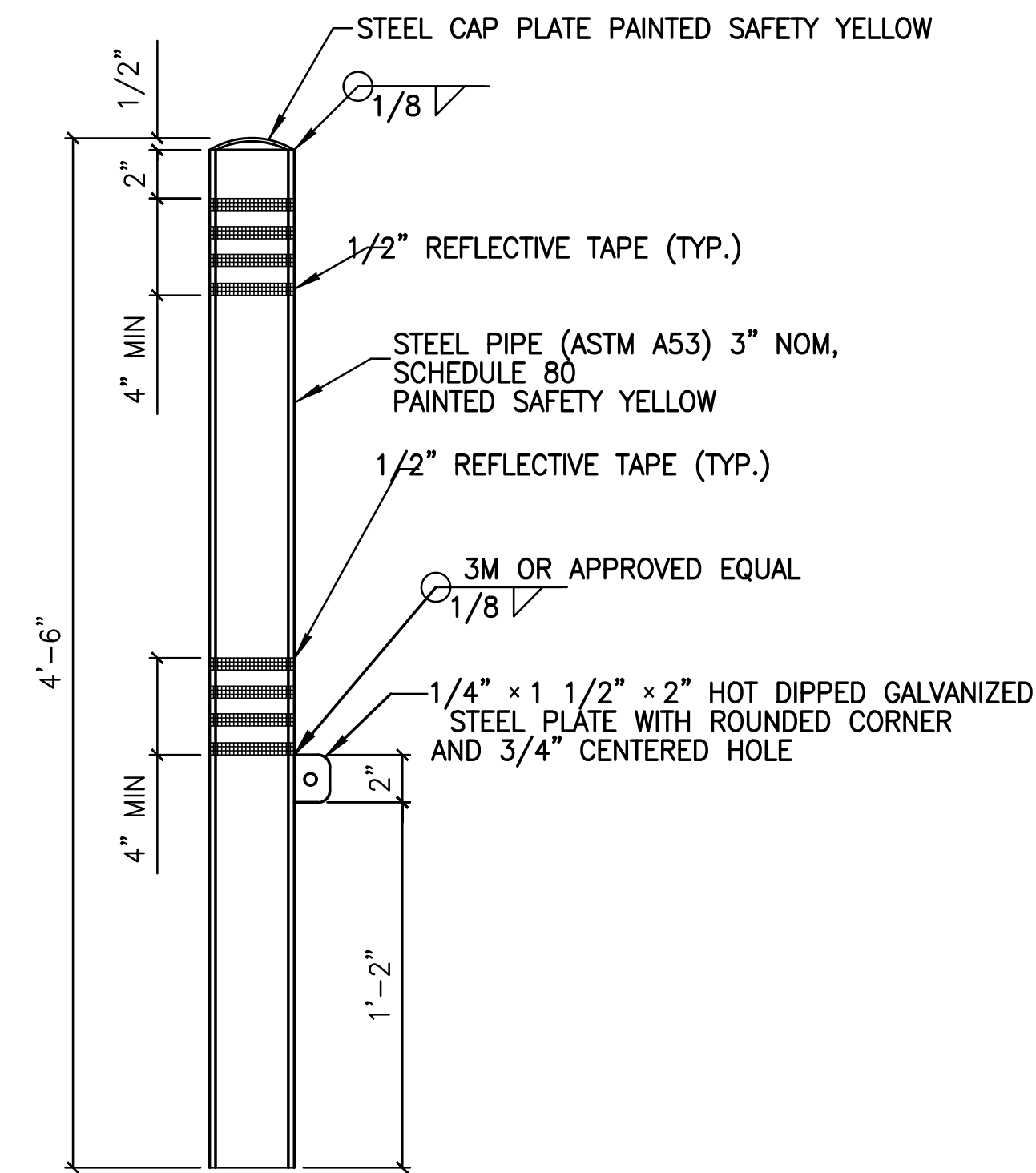
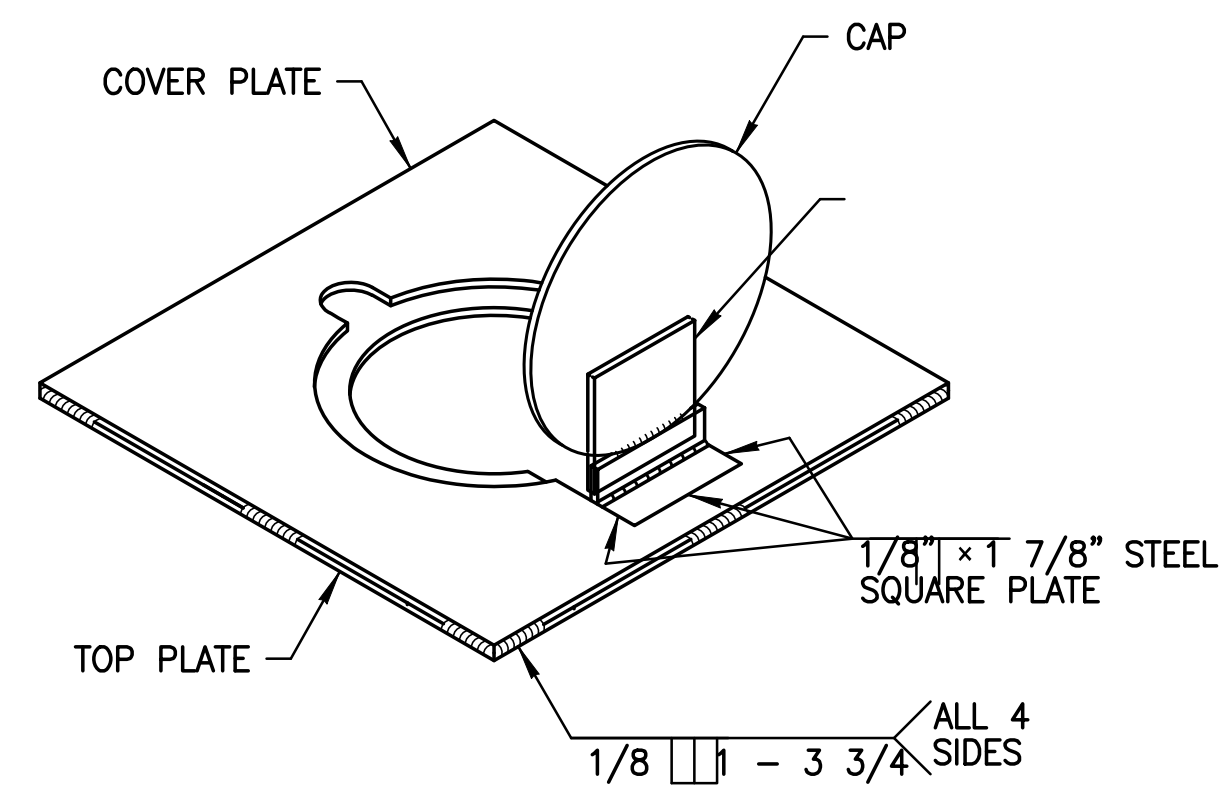
WALTER ALBERT NICKEL, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 68638	PROJECT NO:	DATE:
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		C5-8



SECTION 1-1



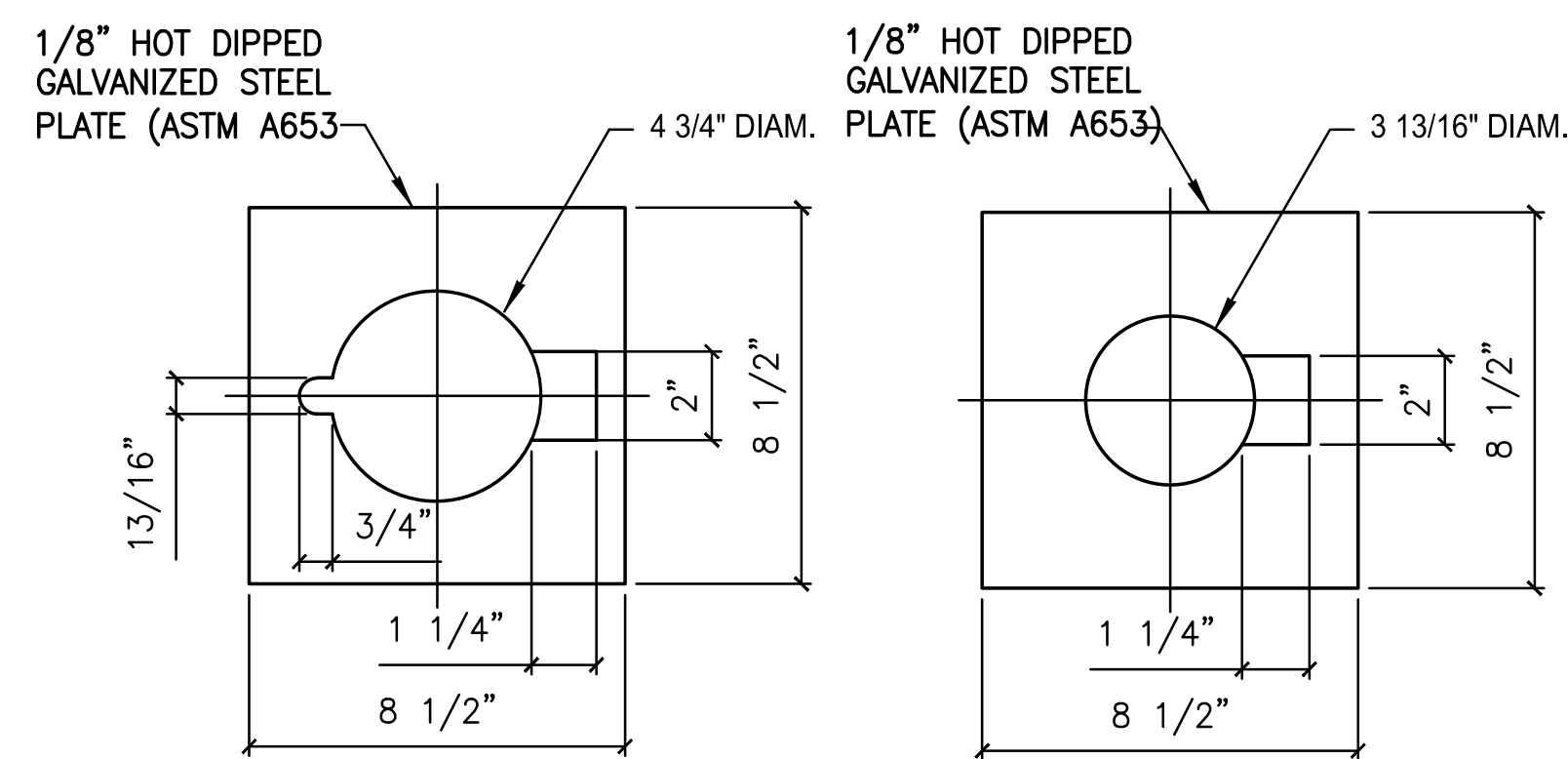
BASE ASSEMBLY



POST

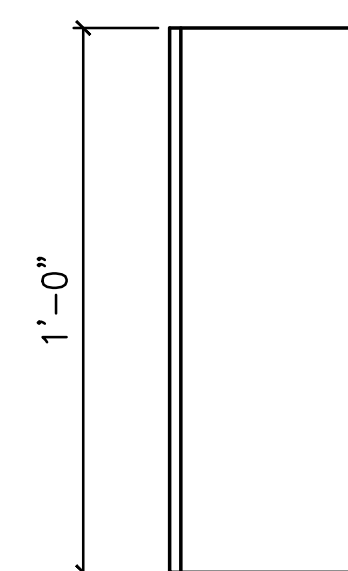
REMOVABLE BOLLARD NOTES:

- A. ALL STEEL SHALL BE HOT DIPPED GALVANIZED PER ASTM A 123
- B. ALL PIPE SHALL COMPLY WITH ASTM A 53 GRADE 50 STEEL
- C. ALL PLATES SHALL COMPLY WITH ASTM A 36
- D. GALVANIZED SURFACES SHALL BE DELIVERED PREPARED FOR PAINTING. BOLLARD SHALL BE PAINTED SAFETY YELLOW

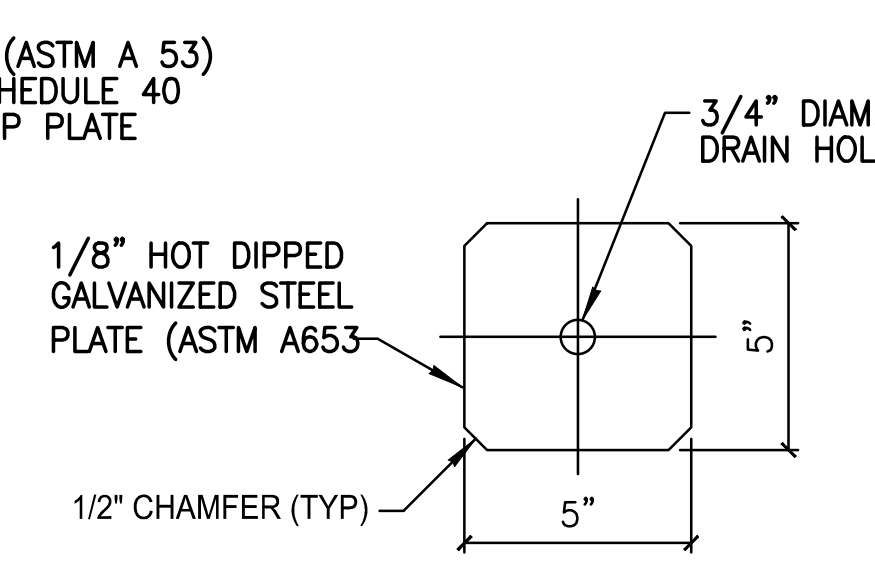


COVER PLATE

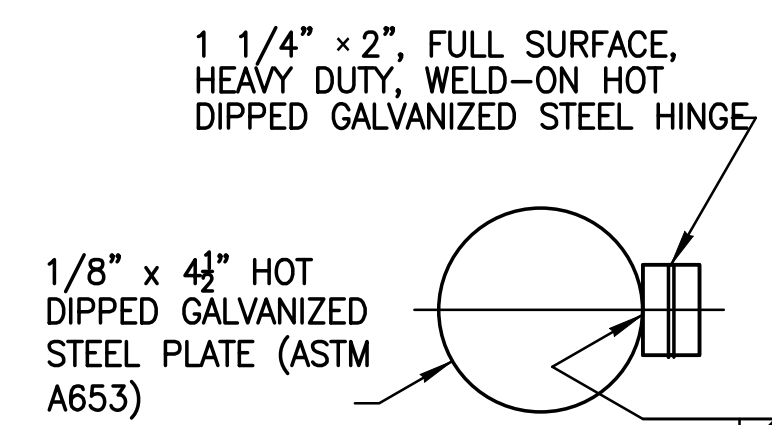
TOP PLATE



POST SLEEVE



BASE PLATE



CAP AND HINGE

REMOVABLE BOLLARD DETAIL 1
NTS C5-2

ACCESS DETAILS

LTR.	DATE	REVISIONS	BY	APPRD.

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DRAWN	D HAUBRICH
CHECKED	R KOLLER

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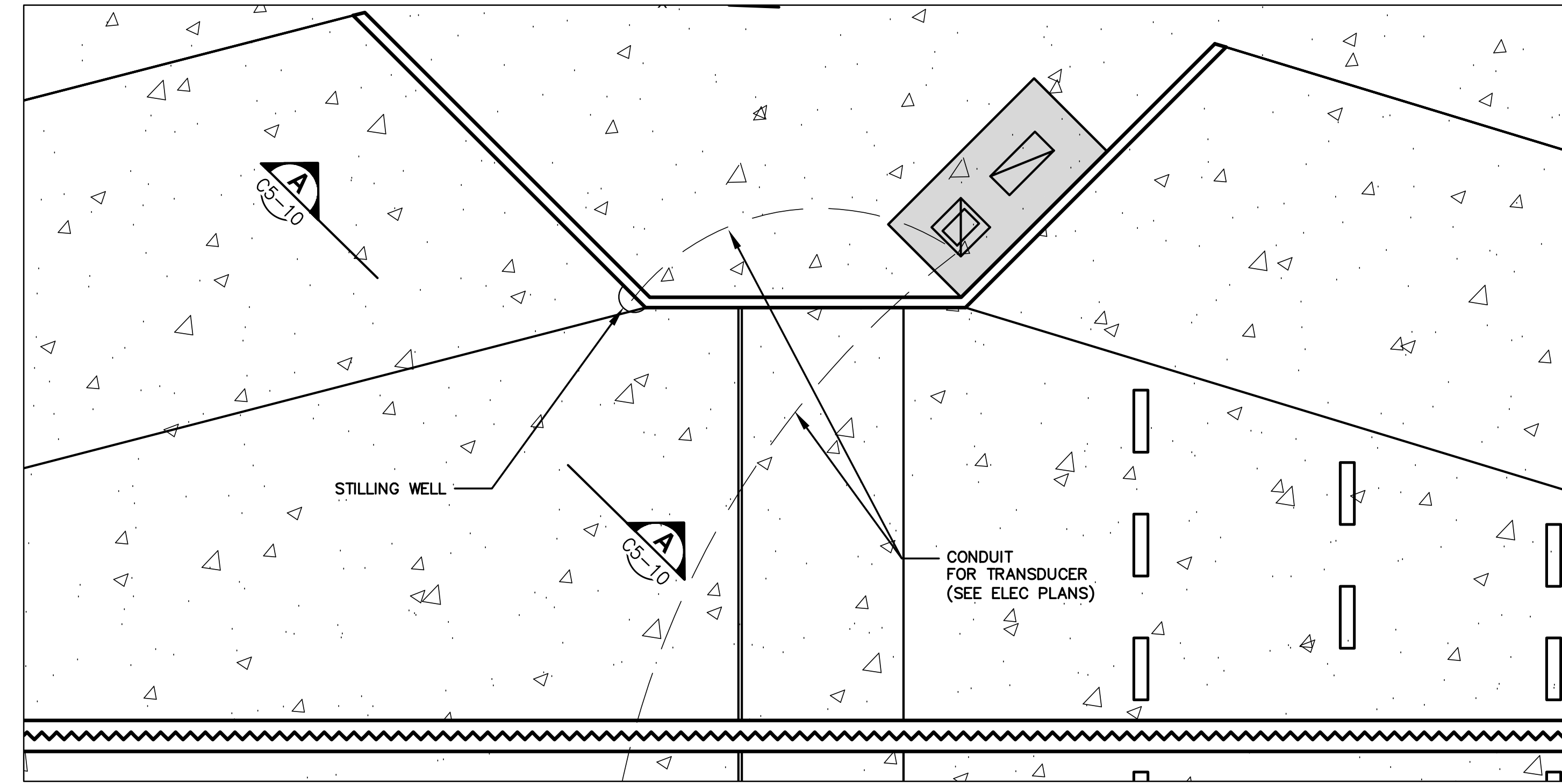
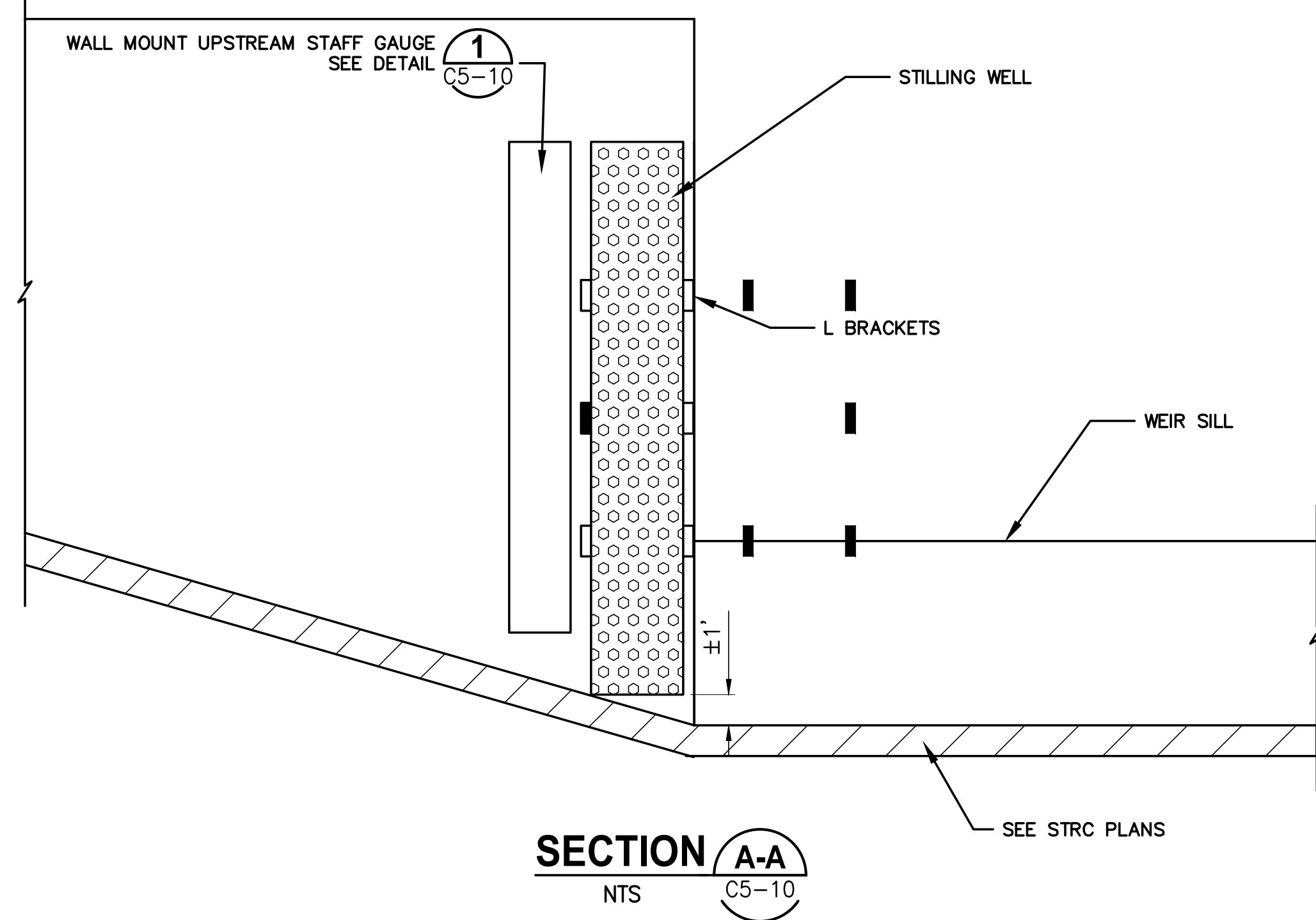
**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

PROJECT NO:	19750-066-01	DATE:	OCT 2020
INDEX NO:		DWG NO:	C5-9

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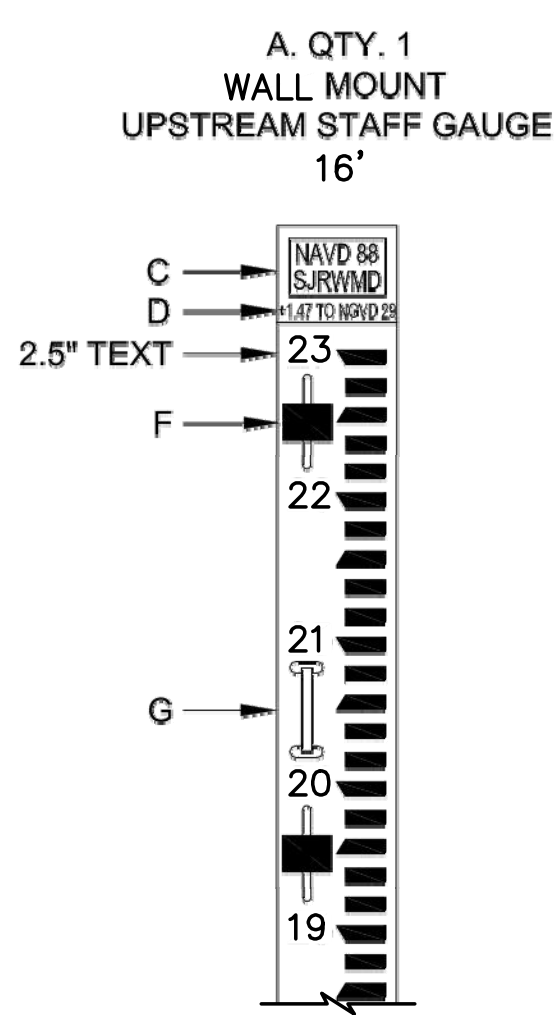


PLAN VIEW
1"=10'

ALL HASH MARKS ARE 1.2" IN HEIGHT

4" WIDE

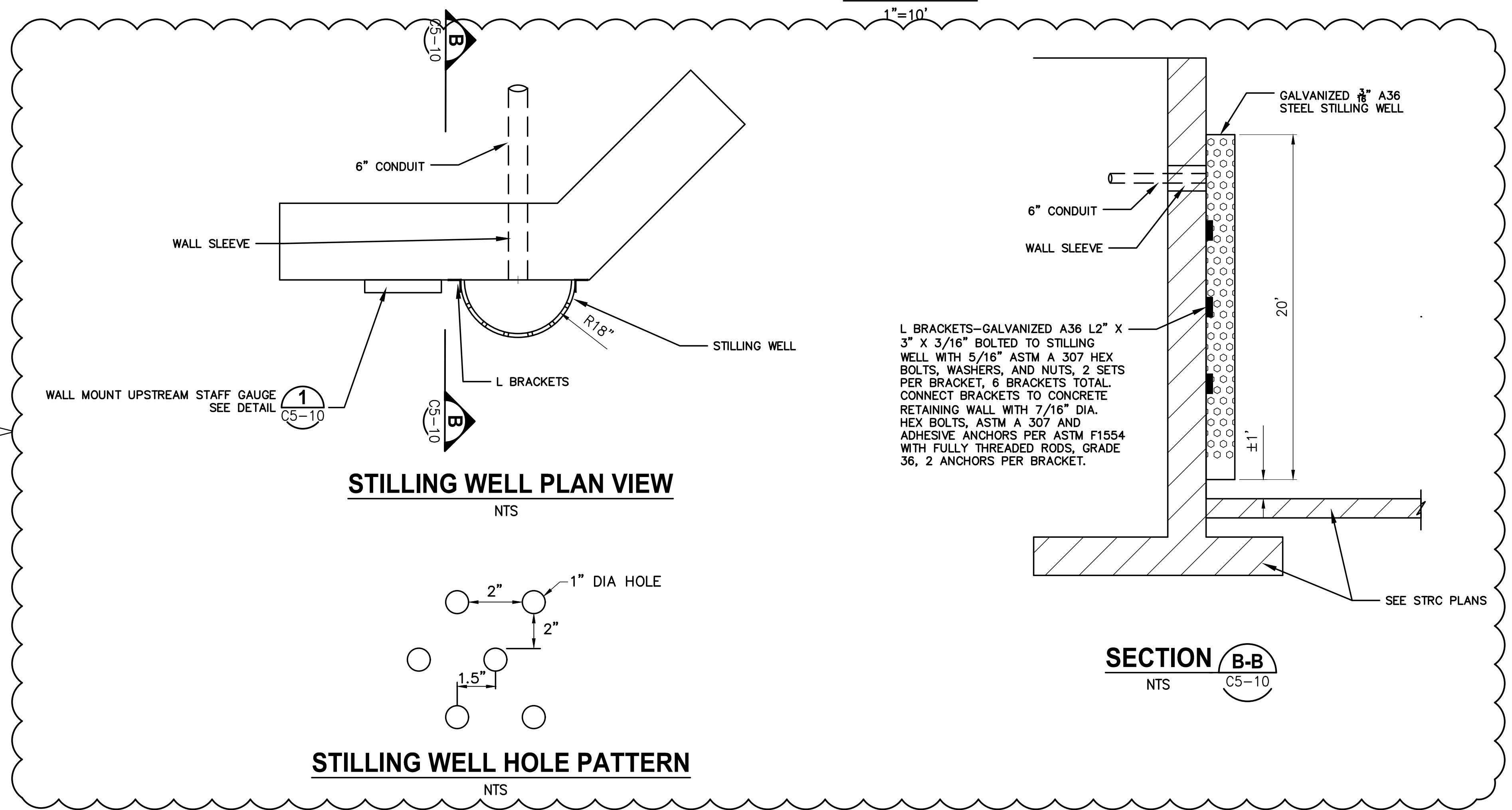
3.25" WIDE



STAFF GAUGE DETAIL
NTS

NOTES:

- A. STAFF GAUGES AND GATE POSITION GUIDES: 2"x10" (1.5"x9.5") MADE FROM TANGENT TECHNOLOGIES POLYFORCE RECYCLED PLASTIC LUMBER, WHITE OVER BLACK, OR EQUAL.
 - C. TITLE PLAQUE INSERT: WHITE WITH RED LETTERING
 - D. NGVD OFFSET = +1.47
 - E. STAFF GAUGE SPLICE LINES
 - F. ALL SLOTS ARE 0.89"x7.31" AND ARE SUPPLIED WITH SS WASHERS 1/4"x3"x4". THRU HOLES ARE 3/8" DIAMETER. PROVIDE SS CONCRETE ANCHORS OR SS HEX HEAD THRU-BOLT 3/8"x4".
 - G. 8" SS CLEAT MOUNTED WITH THREADED INSERTS.
1. ALL HARDWARE SHALL BE STAINLESS STEEL.
 2. ELEVATIONS MARKED IN REFERENCE TO NAVD88.



STILLING WELL PLAN VIEW
NTS

STILLING WELL HOLE PATTERN
NTS

SECTION B-B
NTS

DESIGNED	W NICKEL			
DRAWN	D HAUBRICH			
CHECKED	R KOLLER			
LTR.	DATE	REVISIONS	BY	APPRD.
E	10/30/20	BID RESPONSE	JA	RK

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730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
8657 BAYPINE ROAD SUITE 300, JACKSONVILLE, FL 32256 / (904) 744-5401

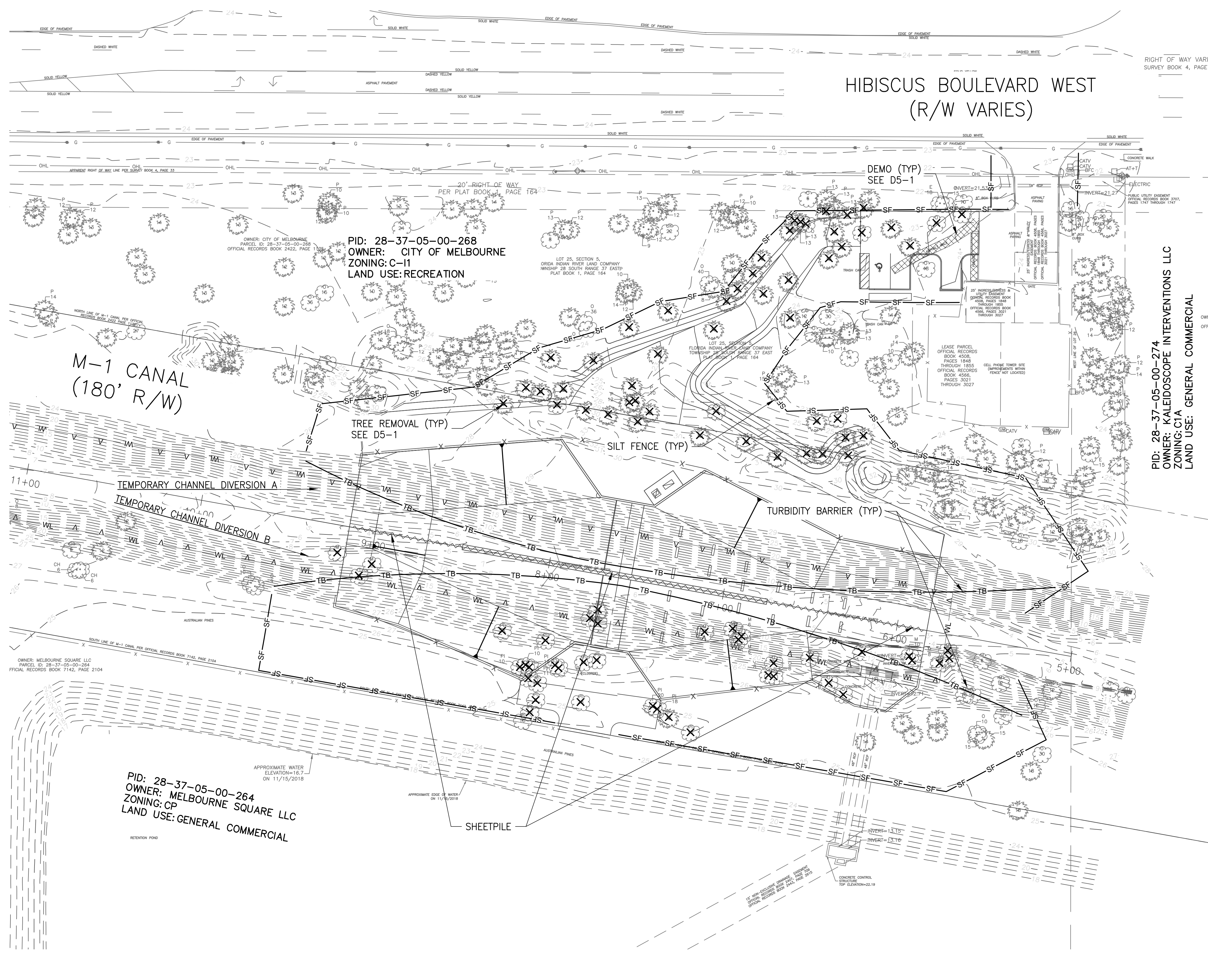
CRANE CREEK M-1 CANAL FLOW RESTORATION
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT

WEIR STILLING WELL DETAILS

WALTER ALBERT NICKEL, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 68638	PROJECT NO:	DATE:
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY WALTER ALBERT NICKEL ON THE DATE AT THE RIGHT.	19750-066-01	OCT 2020
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		C5-10

SAVED: 10/30/2020 2:02 PM JALLEN Y:\19750-SURWMD\PROJECTS\066-01-CRANE CREEK M-1_FLOW_RESTORATION_DESIGN\CAD\DWGS\CIVIL\19750-066-01-C5-10.DWG

Y:\19750-SJR\PROJECTS\066-01_CRANE CREEK M-1_FLOW RESTORATION DESIGN\CAD\DWGS\ENV\19750-066-01-EC5-1.DWG
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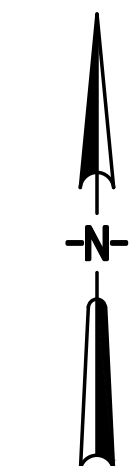
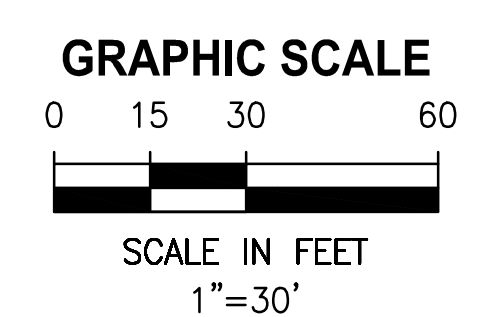
- NOTES:
- CONTRACTOR SHALL PREPARE A CONSTRUCTION PLAN INCORPORATING THE FOLLOWING:
 - SCHEDULE
 - MEANS AND METHODS
 - MAINTENANCE OF FLOW IN THE M-1 CANAL
 - EROSION CONTROL
 - DEWATERING
 - TURBIDITY CONTROL
 - THE PLAN SHALL BE SUBMITTED TO THE OWNER FOR REVIEW PRIOR TO MOBILIZING FOR CONSTRUCTION.
 - THE WIDENING OF THE CHANNEL ALLOWS THE WEIR TO BE CONSTRUCTED IN 2 SECTIONS. THE ALTERNATE SIDE MAY BE USED TO DIVERT THE FLOW OF THE M-1 CANAL AROUND THE ACTIVE WORK SITE.
 - THE CENTER DIVERSION WALL HAS A MAX TOP OF WALL ELEVATION OF 18 FT.
 - CONTRACTOR CANNOT IMPEDE FLOW ABOVE TOP OF WALL ELEVATION AND MUST MAINTAIN A HYDRAULIC EQUIVALENT FLOW PATH TO THE EXISTING M-1 CHANNEL AS SHOW ON C5-5, SEC 9+30.

PID: 28-37-05-00-274
 OWNER: KALEIDOSCOPE INTERVENTIONS LLC
 ZONING: C1A
 LAND USE: GENERAL COMMERCIAL

M-1 CANAL
 (180' R/W)

PID: 28-37-05-00-268
 OWNER: CITY OF MELBOURNE
 ZONING: C-11
 LAND USE: RECREATION

PID: 28-37-05-00-264
 OWNER: MELBOURNE SQUARE LLC
 ZONING: CP
 LAND USE: GENERAL COMMERCIAL



FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED	A GOODDEN
DRAWN	D HAUBRICH
CHECKED	R KOLLER

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 CERTIFICATE OF AUTHORIZATION #1841
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
 8657 BAYPINE ROAD SUITE 300, JACKSONVILLE, FL 32256 / (904) 744-5401

**CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT**

WEIR EROSION CONTROL PLAN

AMY LIANE GOODDEN, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 60097 THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY AMY LIANE GOODDEN ON THE DATE AT THE RIGHT. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.	PROJECT NO: 19750-066-01	DATE: OCT 2020
	INDEX NO: EC5-1	DWG NO: EC5-1

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CONTRACTOR REQUIREMENTS

Table with 4 main columns: SITE DESCRIPTION, GENERAL, SPILL CONTROL PRACTICES, and MAINTENANCE/INSPECTION PROCEDURES. Includes sub-sections like SEQUENCE OF MAJOR ACTIVITIES, SPILL PREVENTION, and EROSION AND SEDIMENT CONTROLS.

Revision table with columns: LTR., DATE, REVISIONS, BY, APPRD., CHECKED. Includes entries for A GOODDEN, D HAUBRICH, and R KOLLER.

Jones Edmunds logo and contact information: 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

CRANE CREEK M-1 CANAL FLOW RESTORATION ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT

WEIR STORMWATER POLLUTION PREVENTION NOTES

Project information table with columns: ANY LIANE GOODDEN, PROJECT NO., DATE, INDEX NO., DWG NO. Includes values: 19750-066-01, OCT 2020, EC5-2.

FOR CONSTRUCTION

STORMWATER POLLUTION PREVENTION PLAN

INSPECTIONS MUST OCCUR AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM EVENT THAT IS 0.50 INCHES OR GREATER

INSPECTOR: _____ FDEP NPDES STORMWATER IDENTIFICATION NUMBER: _____

LOCATION	RAIN DATA	TYPE OF CONTROL (SEE BELOW)	DATE INSTALLED / MODIFIED	CURRENT CONDITION (SEE BELOW)	CORRECTIVE ACTION / OTHER REMARKS

CONDITION CODE:
 G = GOOD M = MARGINAL, NEEDS MAINTENANCE OR REPLACEMENT SOON P = POOR, NEEDS IMMEDIATE MAINTENANCE OR REPLACEMENT
 C = NEEDS TO BE CLEARED O = OTHER

CONTROL TYPE CODES

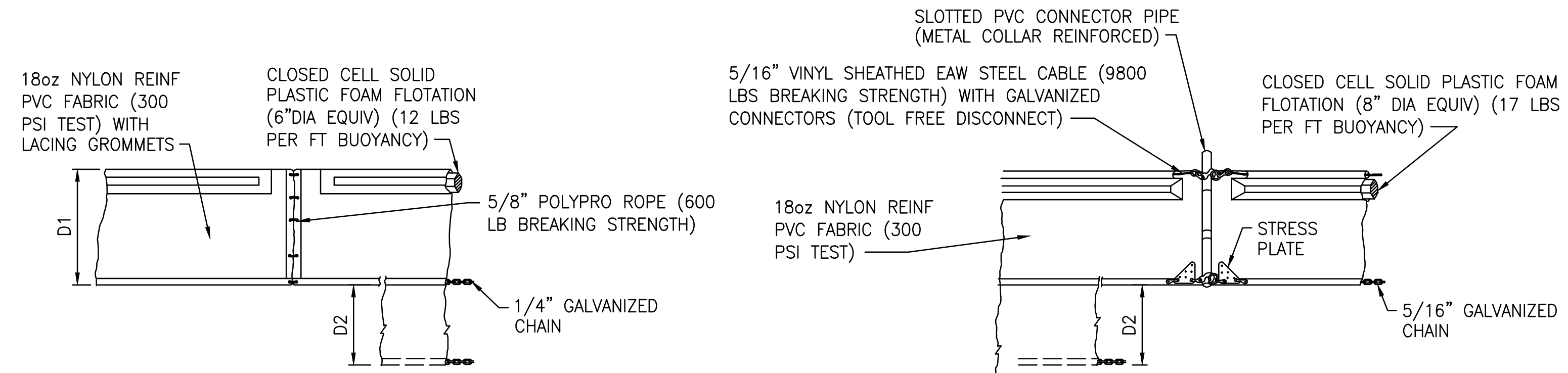
1. SILT FENCE	10. STORM DRAIN INLET PROTECTION	19. REINFORCED SOIL RETAINING SYSTEM	28. TREE PROTECTION
2. EARTH DIKES	11. VEGETATIVE BUFFER STRIP	20. GABION	29. RETENTION POND
3. STRUCTURAL DIVISION	12. VEGETATIVE PRESERVATION AREA	21. SEDIMENT BASIN	30. RETENTION POND
4. SWALE	13. RETENTION POND	22. TEMPORARY SEED / SOD	31. WASTE DISPOSAL / HOUSEKEEPING
5. SEDIMENT TRAP	14. CONSTRUCTION ENTRANCE STABILIZATION	23. PERMANENT SEED / SOD	32. DAM
6. CHECK DAM	15. PERIMETER DITCH	24. MULCH	33. SAND BAG
8. PIPE SLOPE DRAIN	16. CURB AND GUTTER	25. WATTLES	34. OTHER
9. LEVEL SPREADERS	17. PAVED ROAD SURFACE	26. GEOTEXTILE	
9. LEVEL SPREADERS	18. ROCK OUTLET PROTECTION	27. RIP-RAP	

INSPECTOR INFORMATION:

NAME: _____ QUALIFICATION: _____ DATE: _____
 THE ABOVE SIGNATURE ALSO SHALL CERTIFY THAT THIS FACILITY IS IN COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN AND THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES IF THERE ARE NOT ANY INCIDENTS OF NON-COMPLIANCE IDENTIFIED ABOVE.

 "I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

NAME (RESPONSIBLE AUTHORITY) _____ DATE _____

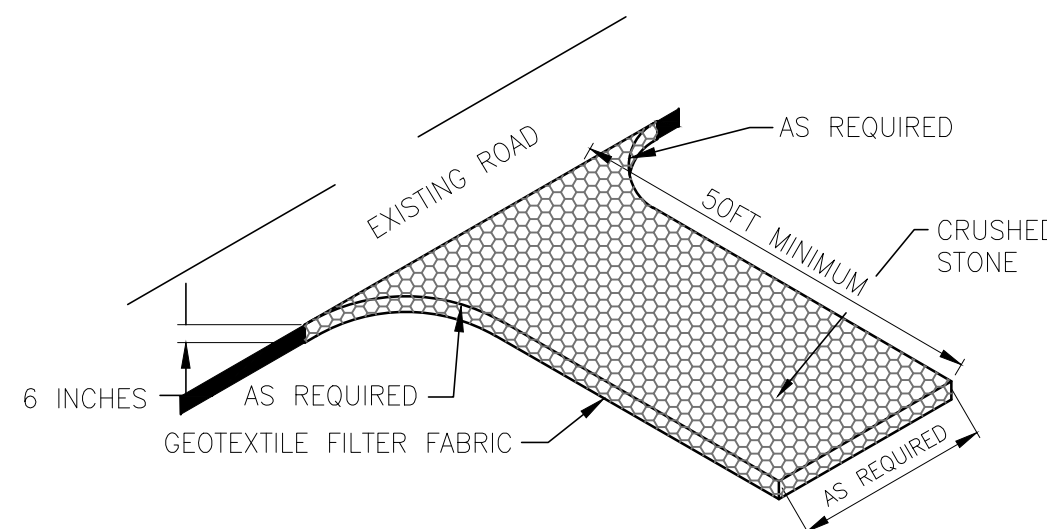


TYPE 1
 D1 = 5' STD (SINGLE PANEL FOR DEPTHS 5' OR LESS)
 D2 = 5' STD (ADDITIONAL PANEL FOR DEPTHS 5')
 CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET. TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALL FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.
 NOTICE: COMPONENTS OF TYPES 1 AND 2 MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES 1 AND 2 SHALL BE AS APPROVED BY THE ENGINEER.

TYPICAL FLOATING TURBIDITY BARRIER DETAIL

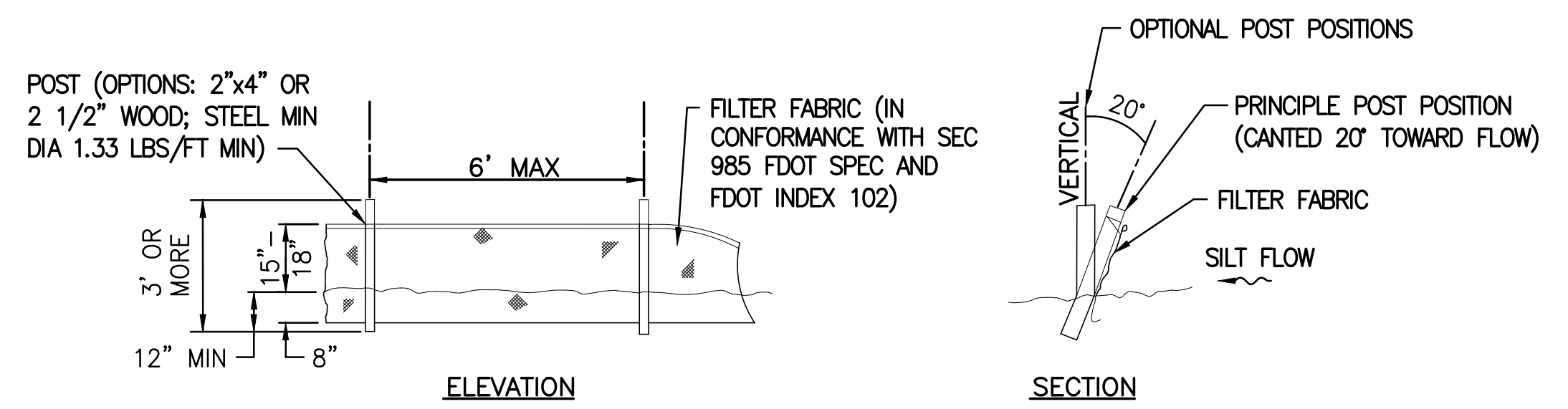
CITY OF MELBOURNE EROSION & SEDIMENTATION CONTROL NOTES

- THE FOLLOWING PRINCIPLES ARE TO BE ADDED VERBATIM TO CONSTRUCTION DRAWINGS AS MINIMUM MEASURES TO BE INSTALLED FOR ANY LAND DISTURBING ACTIVITY:
- A. THE LAND-DISTURBING ACTIVITY SHALL CONFORM TO EXISTING TOPOGRAPHY AND SOIL TYPE SO AS TO CREATE THE LOWEST PRACTICAL EROSION POTENTIAL.
 - B. LAND-DISTURBING ACTIVITIES SHALL BE CONDUCTED IN A MANNER MINIMIZING EROSION.
 - C. THE DISTURBED AREA AND THE DURATION OF EXPOSURE TO EROSION ELEMENTS SHALL BE KEPT TO A PRACTICABLE MINIMUM.
 - D. EROSION CONTROL MUST BE STRICTLY MAINTAINED DURING CUT AND FILL OPERATIONS.
 - E. DISTURBED SOIL SHALL BE STABILIZED AS QUICKLY AS PRACTICABLE.
 - F. WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED AND SUPPLEMENTED.
 - G. TEMPORARY VEGETATION OR MULCHING SHALL BE EMPLOYED TO PROTECT EXPOSED CRITICAL AREAS DURING DEVELOPMENT.
 - H. PERMANENT VEGETATION AND STRUCTURAL EROSION CONTROL MEASURES SHALL BE INSTALLED AS SOON AS PRACTICABLE.
 - I. ADEQUATE PROVISIONS MUST BE PROVIDED TO MINIMIZE DAMAGE FROM SURFACE WATER TO THE CUT FACE OF EXCAVATIONS OR THE SLOPING SURFACE OF FILLS.
 - J. TO THE EXTENT NECESSARY, SEDIMENT IN RUNOFF WATER MUST BE TRAPPED BY THE USE OF DEBRIS BASINS, SEDIMENT BASINS, SILT TRAPS OR SIMILAR MEASURES UNTIL THE DISTURBED AREA IS STABILIZED.
 - K. CUTS AND FILLS MUST BE CONSTRUCTED IN SUCH A MANNER THAT EROSION AND RUNOFF FROM THE SITE DOES NOT ENDANGER ADJOINING PROPERTY.
 - L. FILLS MAY NOT ENCROACH UPON NATURAL WATERCOURSES OR CONSTRUCTED CHANNELS IN A MANNER SO AS TO ADVERSELY AFFECT OTHER PROPERTY OWNERS WITHOUT ADEQUATE PROVISIONS FOR AN EQUIVALENT ALTERNATE SYSTEM WITH A POSITIVE OUTFALL.
 - M. ALL R.O.W.'S, WATERWAYS, STREETS AND SIDEWALKS SHALL BE BUFFERED BY A TWENTY (20) FOOT WIDE STRIP OF GRASS OR OTHER SUITABLE MEANS.
 - N. GRADING EQUIPMENT MUST CROSS FLOWING STREAMS BY MEANS OF BRIDGES OR CULVERTS EXCEPT WHEN SUCH METHODS ARE NOT FEASIBLE AND PROVIDED IN ANY CASE, THAT SUCH CROSSINGS ARE KEPT TO A MINIMUM AND SEDIMENTATION CONTROL DEVICES ARE PROVIDED.



STABILIZED CONSTRUCTION ENTRANCE (Co)

NTS



TYPICAL SILT FENCE (Sd1)

NTS

- NOTES:
- A. DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.
 - B. WHEN JOINING BUTT ENDS OF SILT FENCE FABRIC; JOIN FABRIC ENDS, WRAP AROUND A POST 360-DEGREES, AND SET POST.

TYPICAL SILT FENCE (Sd1)

NTS

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LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED	A GOODDEN
DRAWN	D HAUBRICH
CHECKED	R KOLLER

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CRANE CREEK M-1 CANAL FLOW RESTORATION
 ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT

WEIR EROSION CONTROL
 NOTES AND DETAILS

ANY LIANE GOODDEN, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NUMBER 60097	PROJECT NO:	DATE:
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		EC5-3

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