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CECIL L. PENDEERGRASS DISTRICT 2
RAYMOND SANDELLI DISTRICT 3
BRIAN HAMMAN DISTRICT 4
FRANK MANN DISTRICT 5

COUNTY MANAGER
ROGER DESJARLAIS

ASSISTANT COUNTY MANAGER
DAVE HARNER

DIVISION OF NATURAL RESOURCES
ROLAND OTTOLINI, PE
DIRECTOR

ANURA KARUNA-MUNI, PE
OPERATIONS MANAGER

DAVID WARTHEN, EI
PROJECT MANAGER

CONSTRUCTION PLANS OF
YELLOW FEVER CREEK
HYDROLOGIC RESTORATION /
GATOR SLOUGH TRANSFER FACILITY
IN COOPERATION WITH THE CITY OF CAPE CORAL
SECTION 20, TOWNSHIP 43S, RANGE 24E
CITY OF CAPE CORAL
LEE COUNTY, FLORIDA

SITE DATA:

PROJECT DESCRIPTION / PURPOSE:
THIS IS A LEE COUNTY UTILITY NON-POTABLE WATER TRANSFER PROJECT
FOR ENVIRONMENTAL HYDROLOGIC RESTORATION PER INTER-LOCAL
AGREEMENT BETWEEN THE CITY OF CAPE CORAL AND LEE COUNTY.

AREA: 15.38 ACRES
PARCEL/TAX ID NO: 10136602
STRAP NOS.
20-43-24-C3-00002.0000 & C3-05675.0570 AND 29-43-24-C1-00001.0010
ZONING: PARK/PRESERVE & R-1B WITH MINOR UTILITY FACILITY
ADDRESS:
3306 NE 20th PLACE, CAPE CORAL, FL 33909 AND 2805 DELPRADO BLVD.

FOR THIS LIMITED REVIEW PROJECT: NO BUILDINGS, NO COMMERCIAL,
NO RESIDENTIAL AND NO INSTITUTIONAL USES, NO WATER MANAGEMENT
REQUIREMENTS, NO WATER AND SEWER USE, NO TRAFFIC GENERATION,
NO REQUIRED PARKING SPACES, NO TREE PRESERVATION DUE TO FILL &
EXCAVATION AND NO LANDSCAPING OTHER THAN PLANTS ALONG UTILITY FENCE.

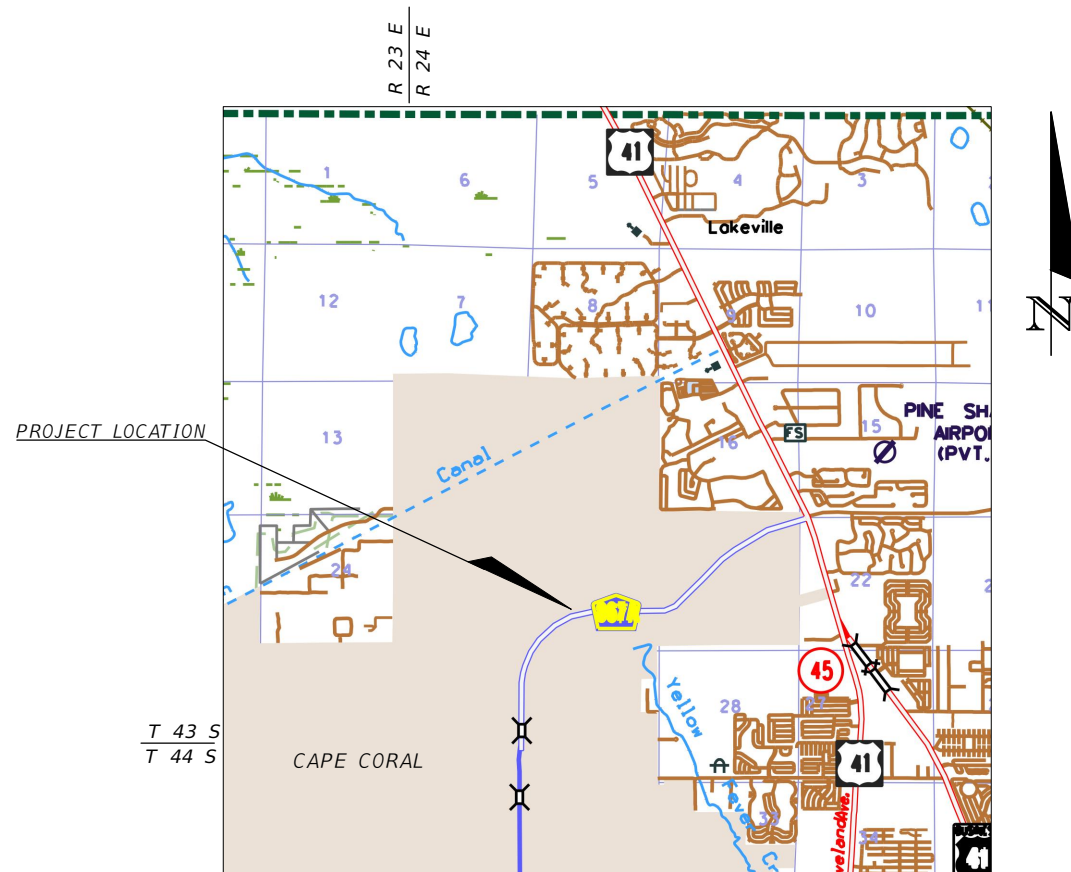
SHEET INDEX

NO.	DESCRIPTION
1	COVER
2	MASTER PLAN
3	LAKE / RESERVOIR PLAN
4	PUMP STATION PLAN
5	PLAN / PROFILE 10+00 TO 15+00
6	PLAN / PROFILE 98+00 TO 102+00
7	INTAKE PIPE AT PUMP STATION
8	LAKE / RESERVOIR INLET STRUCTURE
9	LAKE / RESERVOIR OUTLET STRUCTURE
10	TYPICAL SECTION
11	DETAILS
12	PUMP STATION DETAILS
13	ELECTRIC WIRING DETAILS
14	GENERAL NOTES
15	STORMWATER POLLUTION PREVENTION PLAN
16	STORMWATER POLLUTION PREVENTION NOTES
17-20	UTILITY DETAILS

UTILITY / AGENCY OWNERS:	CONTACT	TELEPHONE NUMBER
COMPANY	WILLIAM SPERRY	239.573.3039
CITY OF CAPE CORAL	WILLIS GILSON	239.336.2035
CENTURY LINK	MARK COOK	239.432.1805 / 415.4742
COMCAST	TOM BAILEY	239.656.2414
LCEC	MIKE PADGETT	239.533.9300
LCDOT TRAFFIC	JAMES FENCIL	239.533.9500 / 707.4870
LCDOT SIGNALS	MARILYN ALOI	239.690.5517 / 896.0812
TECO		

LIMITED REVIEW NOTES:

1. THE EXCESS FILL MATERIAL WILL BE TRUCKED ALONG EXISTING ROADS, SUCH AS DEL PRADO BOULEVARD TO A CITY PREPARED SITE. IN THE EVENT PREVIOUSLY DISCUSSED CITY PREPARED SITES IN THE YELLOW FEVER CREEK PRESERVE ARE NOT AVAILABLE, AN ALTERNATE FILL STORAGE SITE SUCH AS THE CITY SITE LOCATED ON NW 27TH STREET WILL BE USED.
2. A COPY OF THE GOPHER TORTOISE TAKE PERMIT SHALL BE PROVIDED PRIOR TO ANY LAND CLEARING.
3. A CULTURAL RESOURCES SURVEY BY A STATE CERTIFIED ARCHEOLOGIST SHALL BE REQUIRED PRIOR TO ANY LAND CLEARING.
4. IN REGARD TO THE PUMP STATION: THE CONTRACTOR SHALL BE REQUIRED TO REGRADE AND SOD THE ENTIRE SWALE ALONG THE PROPERTY FRONTAGE TO MAINTAIN PROPER DRAINAGE. STAGING AREAS AND ANY DISTURBED AREAS OF ADJACENT PROPERTY ARE REQUIRED TO BE RESTORED TO PRE-EXISTING DRAINAGE ELEVATIONS AND AT THE VERY LEAST BE SEEDED AND MULCHED.



LOCATION MAP
NOT TO SCALE

PREPARED FOR:
LEE COUNTY DIVISION OF NATURAL RESOURCES

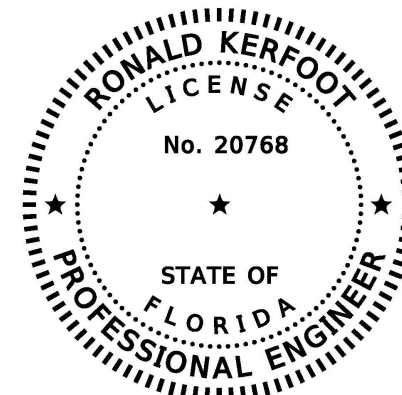
1500 MONROE STREET
FORT MYERS, FLORIDA 33901

PREPARED BY:
AIM ENGINEERING & SURVEYING, INC.

2161 FOWLER STREET
FORT MYERS, FLORIDA 33901
PHONE (239) 332-4569



CERTIFICATE OF AUTHORIZATION NO. 3114



THIS ITEM HAS BEEN DIGITALLY
SIGNED AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE
NOT CONSIDERED SIGNED AND SEALED
AND THE SIGNATURE MUST BE VERIFIED
ON ANY ELECTRONIC COPIES.

AIM ENGINEERING & SURVEYING, INC.
2161 FOWLER ST., STE. 100
FORT MYERS, FL. 33901
CERTIFICATE OF AUTHORIZATION NO.: 3114
RONALD KERFOOT, P.E. NO. 20768

AIM PROJ. 16-0436

SHEET 01
OCTOBER, 2020

RONALD KERFOOT P.E. 20768
ENGINEER OF RECORD

FDOT INDEX REFERENCES
REFER TO 2010 STANDARDS

NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION



100 0 50 100 200
SCALE IN FEET

FLUCCS LEGEND

CODE	COMMUNITY
411	PINE FLATWOODS
621	CYPRESS
625	HYDRIC PINE
625R	HYDRIC PINE (REST.)
630	PINE - OAK - CABBAGE PALM - CYPRESS
630R	PINE - OAK - CABBAGE PALM - CYPRESS (REST.)
740H	HYDRIC DISTURBED LAND
743	BERM

NO	DATE	DESCRIPTION
4	-	-
3	OCT 10 2020	ADDED FILL SITE
2	AUG 31 2020	REV.
1	JUN 23 2020	REV.



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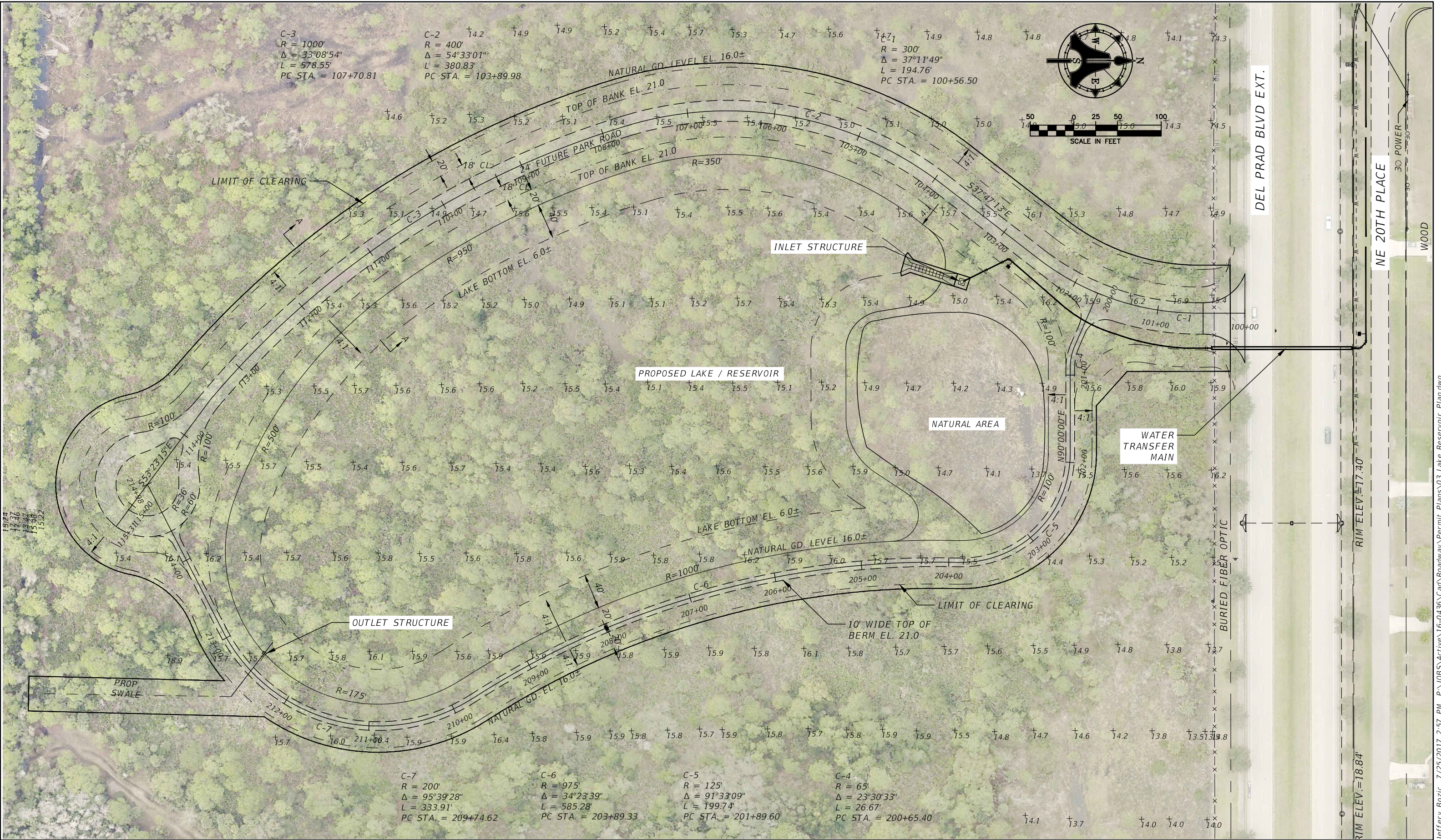
SCALE: AS-NOTED
DATE: OCT. 2017
JES/RK

YELLOW FEVER CREEK
RESTORATION PROJECT
MASTER PLAN

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P.E. LICENSE NUMBER 20768
DATE:

JOB NO.:
16-0436
SHEET NO.:
2

Jeffery Bozic 7/25/2017 2:57 PM P:\JOBS\Active\16-0436\Cad\Roadway\Permit Plans\02 Master Plan.dwg



NO	DATE	DESCRIPTION
4		
3		
2	AUG 31 2020	REV.
1	JUN 23 2020	REV.



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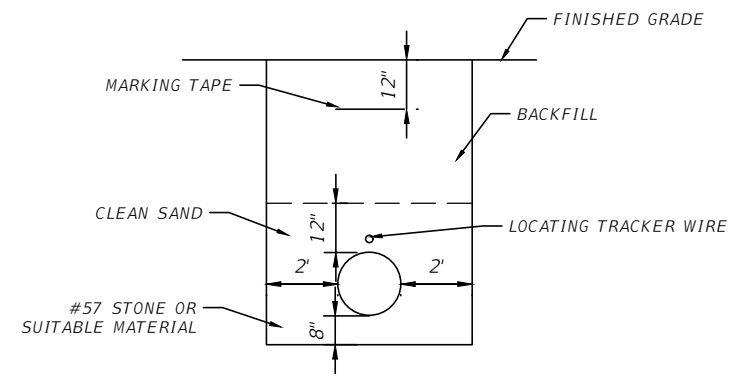
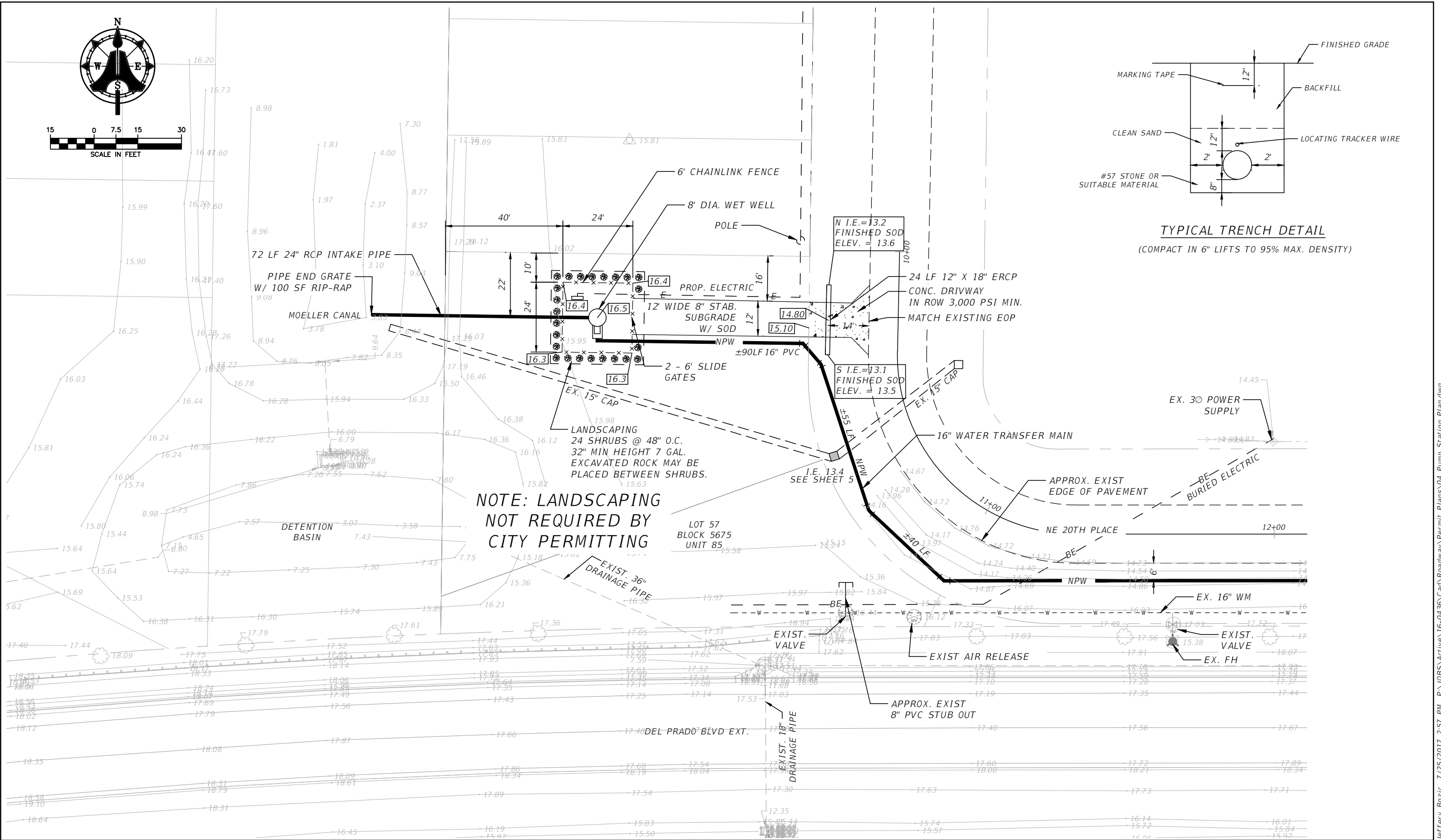
**YELLOW FEVER CREEK
RESTORATION PROJECT**

LAKE / RESERVOIR PLAN

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3



TYPICAL TRENCH DETAIL
(COMPACT IN 6" LIFTS TO 95% MAX. DENSITY)

NO	DATE	DESCRIPTION
4		
3	SEPT 15 2020	REV.
2	AUG 31 2020	REV.
1	JUN 23 2020	REV.



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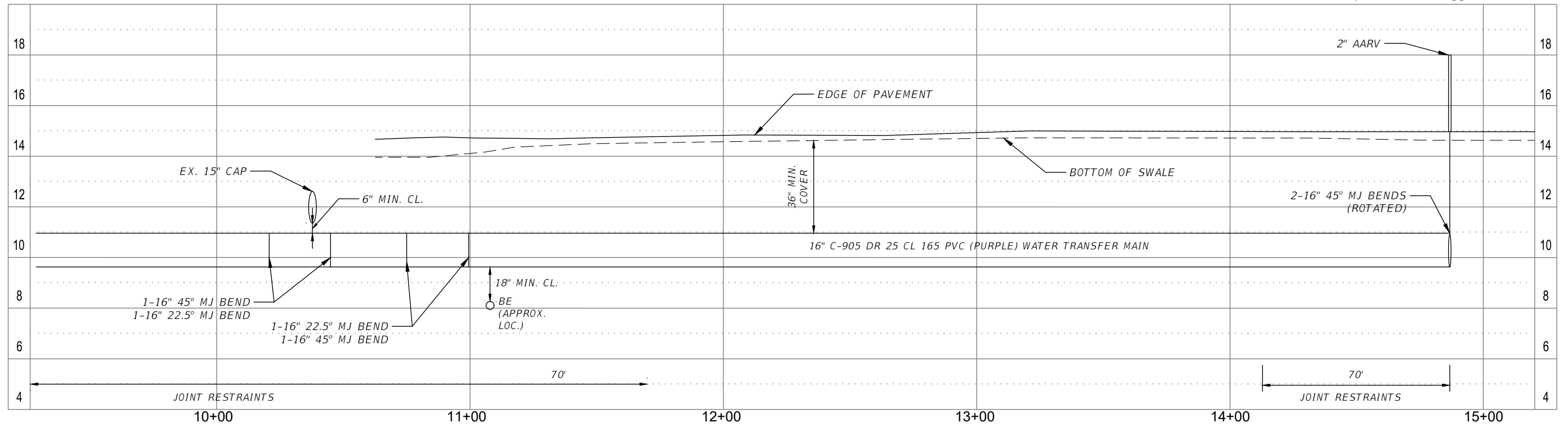
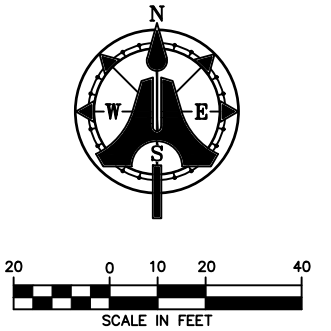
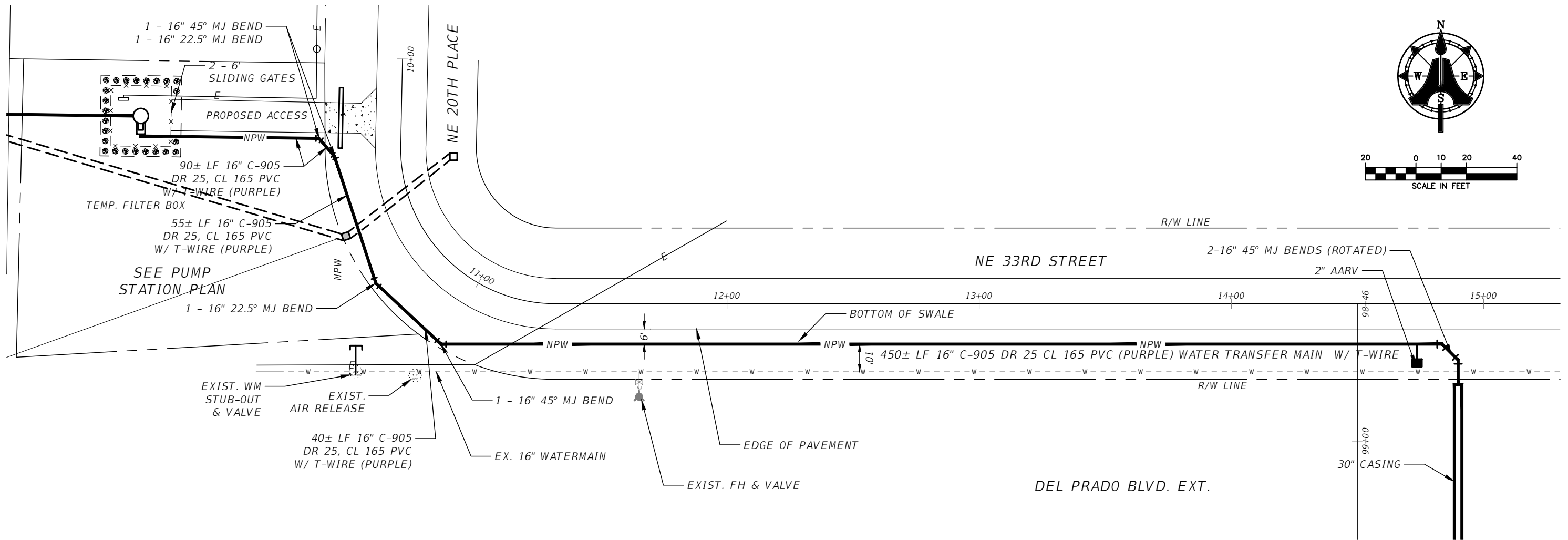
**YELLOW FEVER CREEK
RESTORATION PROJECT**

PUMP STATION PLAN

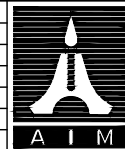
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SHEET NO.:
4



NO	DATE	DESCRIPTION
4		
3		
2	AUG 31 2020	REV.
1	JUN 23 2020	REV.



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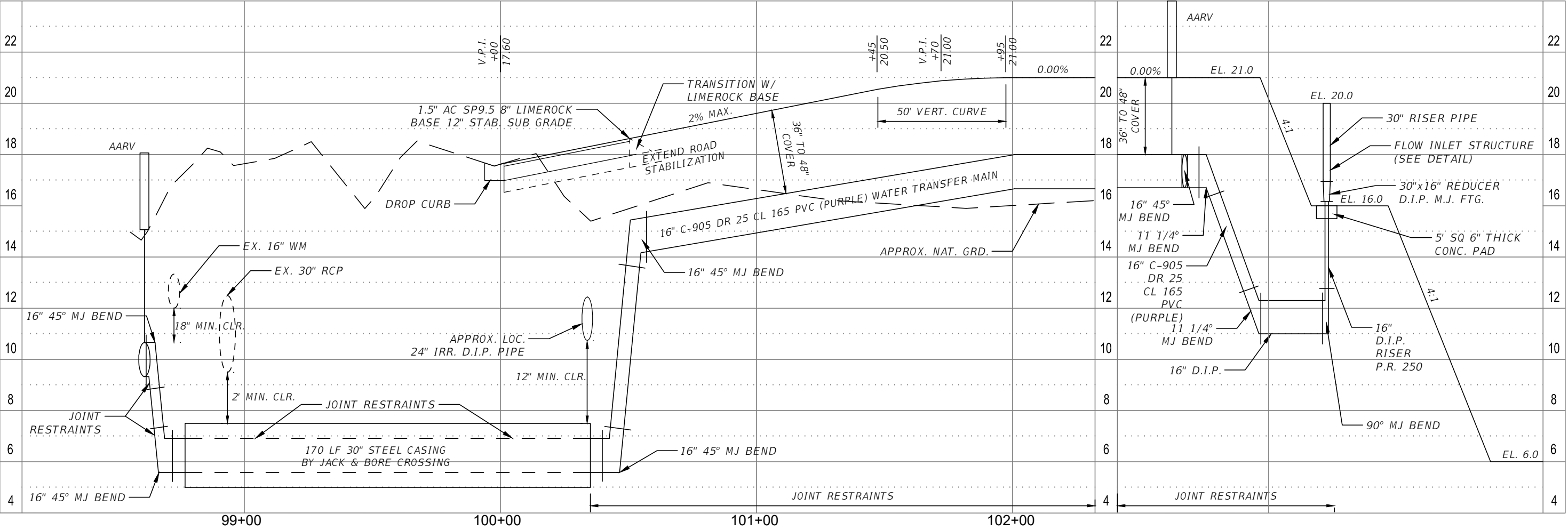
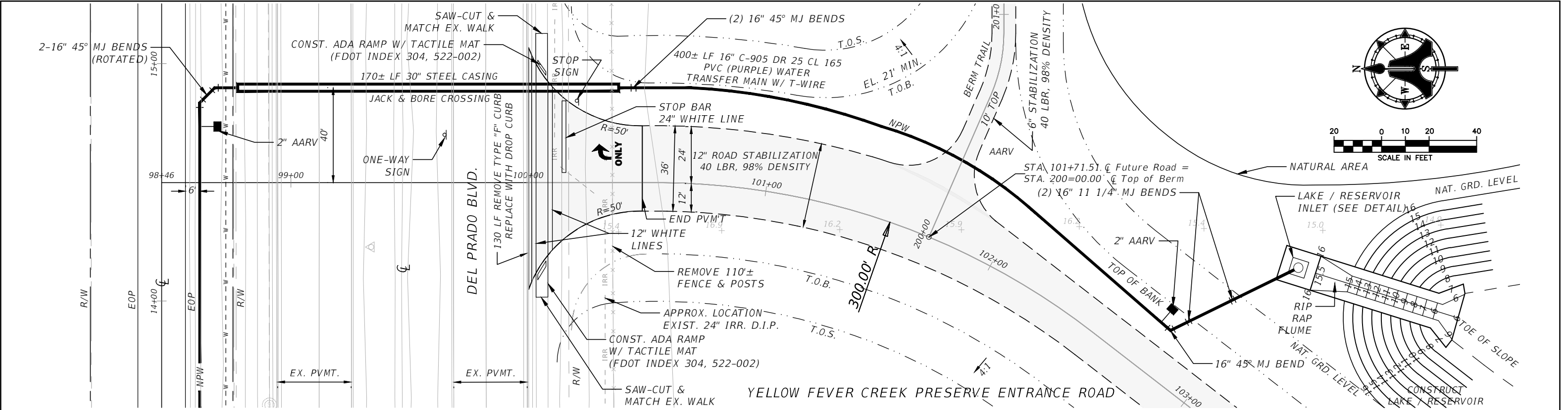
SCALE: AS-NOTED
DATE: OCT. 2017
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YELLOW FEVER CREEK
RESTORATION PROJECT

PLAN / PROFILE
10+00 TO 15+00

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DATE:

JOB NO.: 16-0436
SHEET NO.: 5



4

3

2

AUG 31 2020

REV.

1

JUN 23 2020

REV.

NO

DATE

DESCRIPTION

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LEE COUNTY DIVISION OF

NATURAL RESOURCES

SCALE: AS-NOTED

DATE: OCT. 2017

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YELLOW FEVER CREEK

RESTORATION PROJECT

PLAN / PROFILE

98+00 TO 102+00

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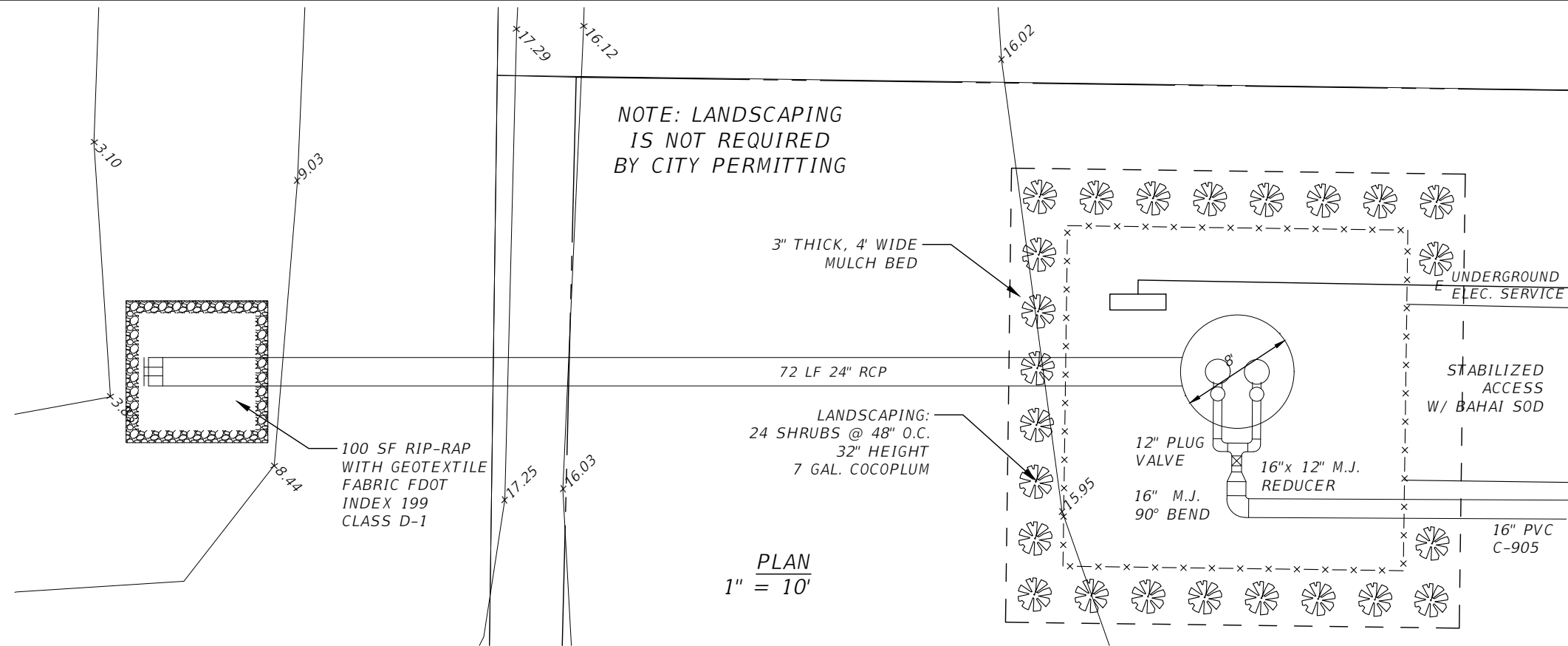
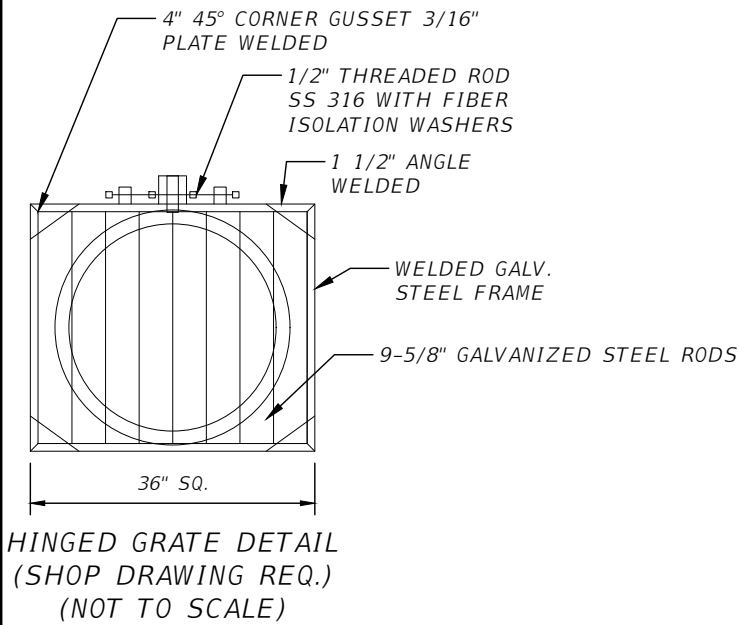
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16-0436

SHEET NO.:

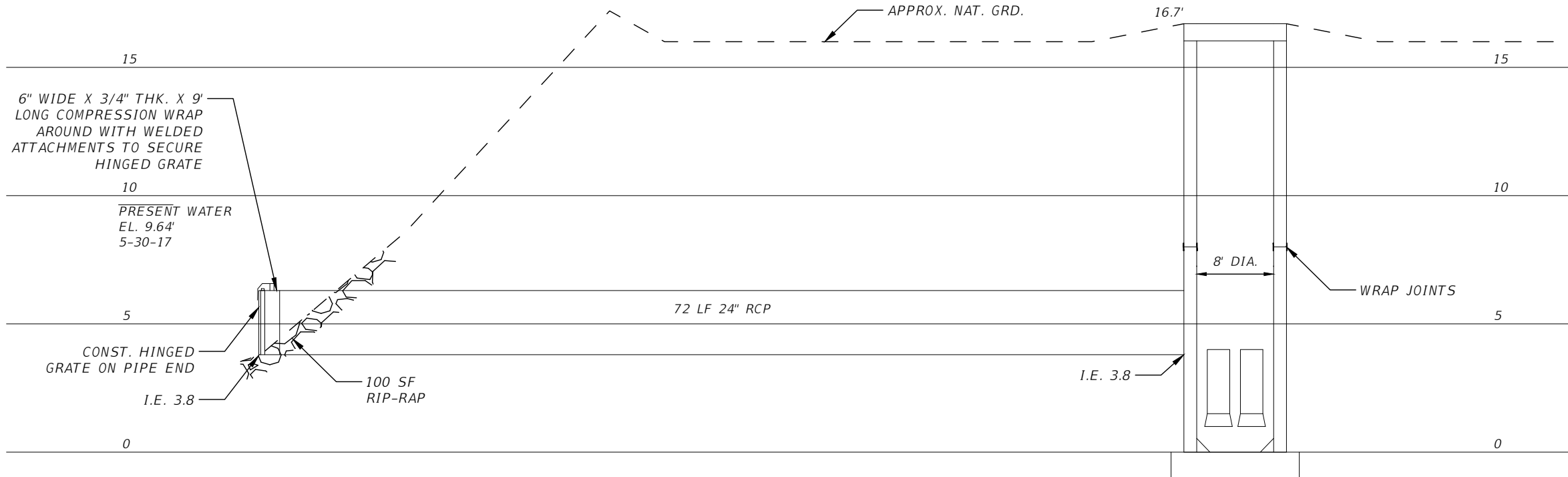
6

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PLANTING NOTES:

1. SHRUBS: 24 32" HT, 7 GAL. COCOPLUM CHRYSOBALANUSICACO SPACED AT 48" O.C. FOR LANDSCAPE SCREEN AND MEET FLORIDA GRADE 1 STANDARDS.
2. MULCH BED: 3" THICK, 4' WIDE MULCH BED GRADE 8 OR BETTER.
3. TREE PROTECTION: A BARRIER SHALL BE PROVIDED ON THE SITE PERIMETER FOR OFFSITE TREE PROTECTION.
4. IRRIGATION IS NOT AVAILABLE SO XERISCAPE PLANTINGS WERE SELECTED.
5. THE SLOPED AREAS OF THE SITE SHALL BE SODDED TO WATERS EDGE OR NATURAL GROUND AND OTHER DISTURBED AREAS SHALL BE SEEDED.



SECTION
1" = 10' (HORIZONTAL)
1" = 5' (VERTICAL)

NO	DATE	DESCRIPTION
4		
3		
2	AUG 31 2020	REV.
1	JUN 23 2020	REV.



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NATURAL RESOURCES

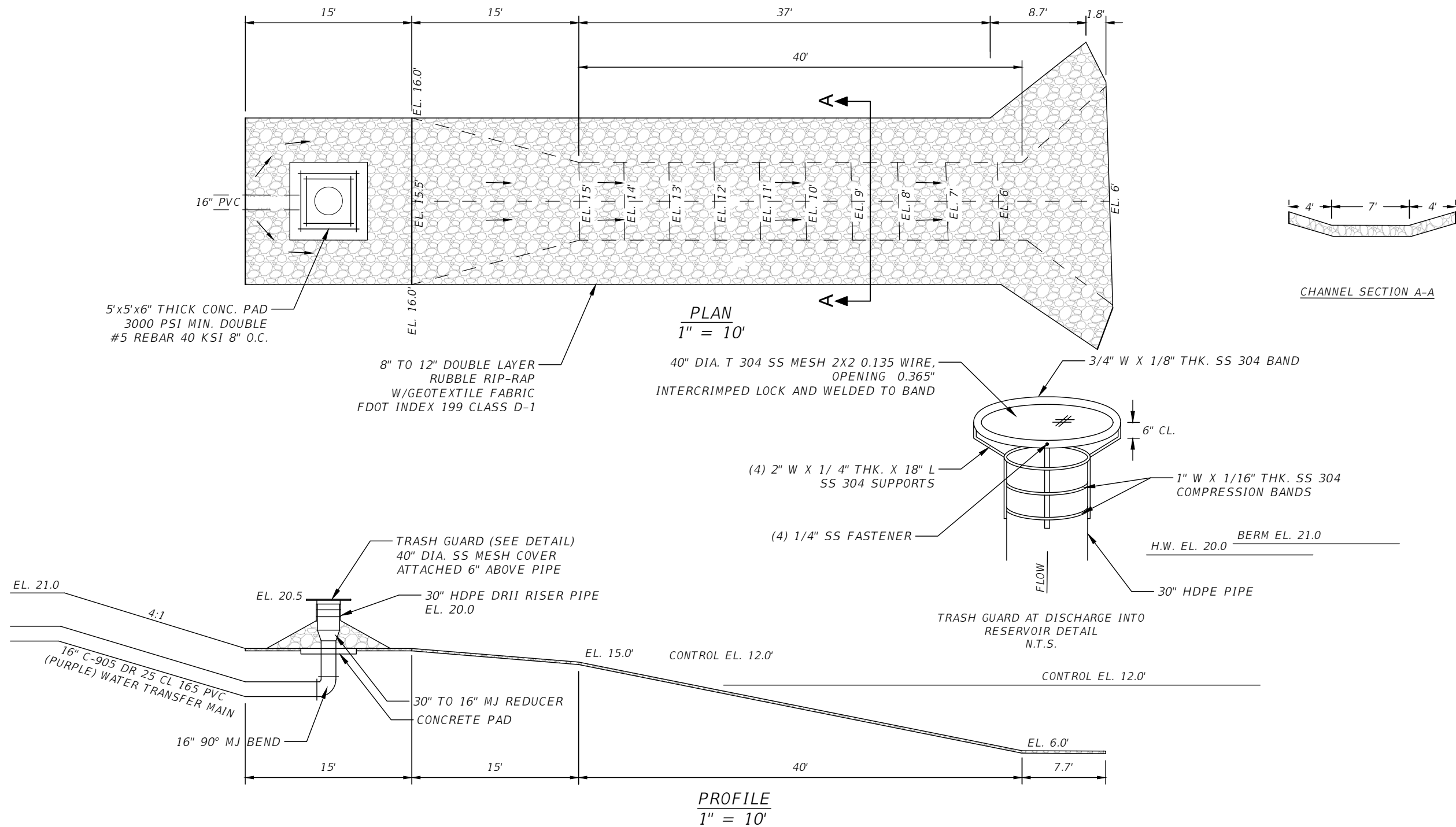
SCALE: AS-NOTED
DATE: OCT. 2017
JES/RK

YELLOW FEVER CREEK
RESTORATION PROJECT

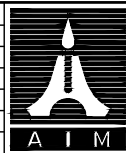
INTAKE PIPE AT PUMP STATION

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DATE:

JOB NO.: 16-0436
SHEET NO.: 7



NO	DATE	DESCRIPTION
1	JUN 23 2020	REV.



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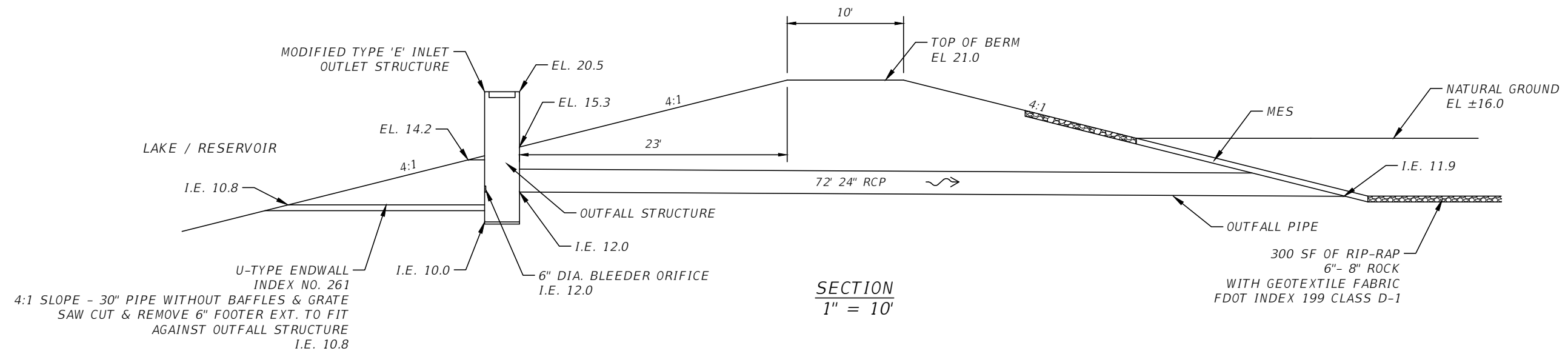
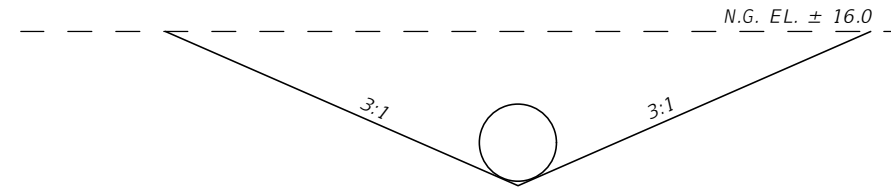
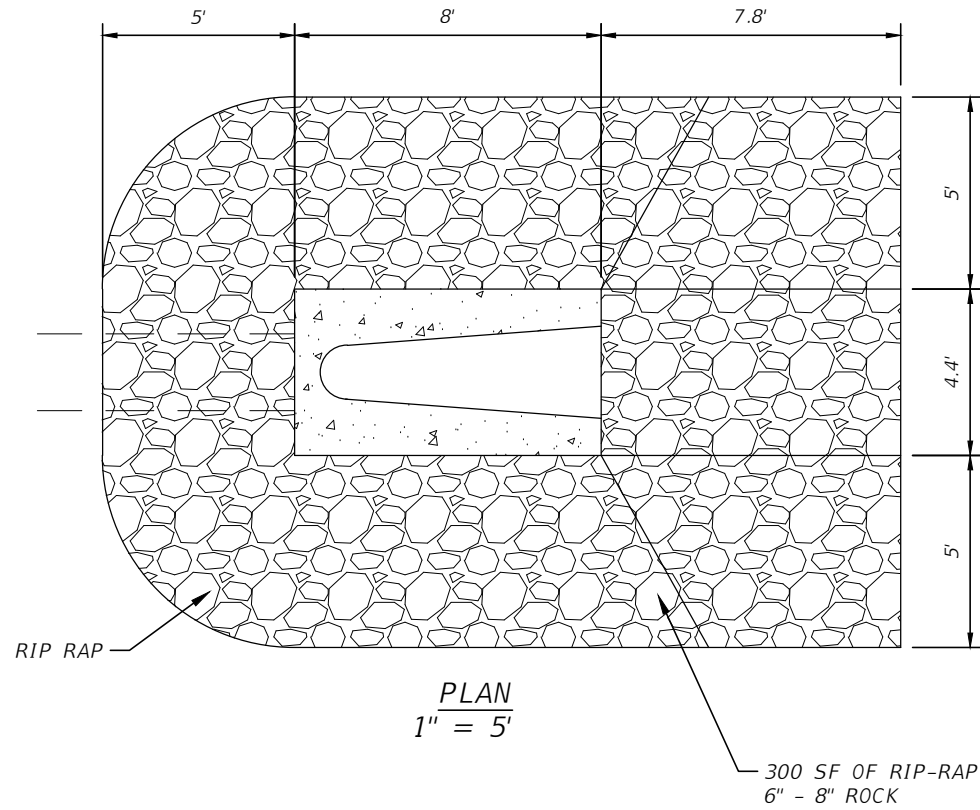
LEE COUNTY DIVISION OF NATURAL RESOURCES

SCALE: AS-NOTED
DATE: OCT. 2017
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**YELLOW FEVER CREEK
RESTORATION PROJECT**
**LAKE / RESERVOIR
INLET STRUCTURE**

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DATE:

JOB NO.: 16-0436
SHEET NO.: 8



NO	DATE	DESCRIPTION
1	JUN 23 2020	REV.



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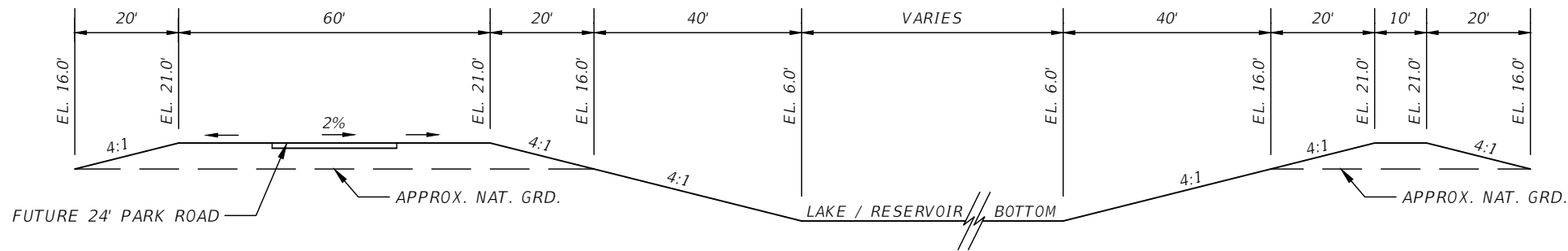
LEE COUNTY DIVISION OF
NATURAL RESOURCES

SCALE: AS-NOTED
DATE: OCT. 2018
JES/RK

YELLOW FEVER CREEK
RESTORATION PROJECT
LAKE / RESERVOIR
OUTLET STRUCTURE

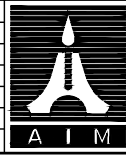
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DATE:

JOB NO.:
16-0436
SHEET NO.:
9



TYPICAL LAKE / RESERVOIR SECTION

NO	DATE	DESCRIPTION
4	.	.
3	.	.
2	.	.
1	JUN 23 2020	REV.



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NATURAL RESOURCES

SCALE: AS-NOTED
DATE: OCT. 2017
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YELLOW FEVER CREEK
RESTORATION PROJECT

TYPICAL SECTION

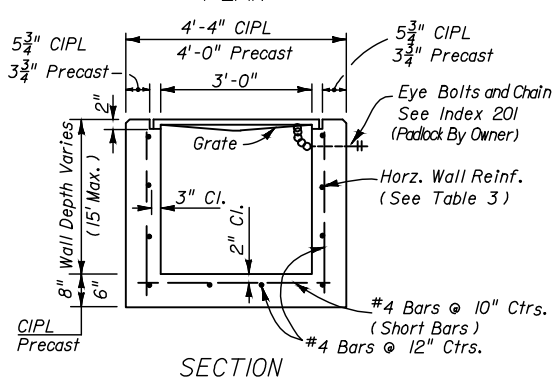
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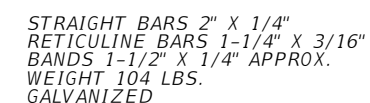
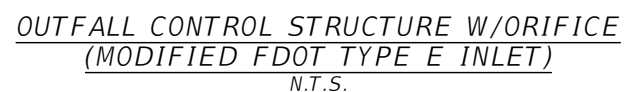
JOB NO.:
16-0436

SHEET NO.:
10



WALL DEPTH	SCHEDULE	AREA (in ² /ft)	MAX. SPACING	
			BARS	WWF
0'-5'	A12	0.20	12"	8"
0'-7.5'	A6	0.20	6"	5"
7.5'-10'	B5.5	0.24	5 $\frac{1}{2}$ "	5"
10'-15'	C6.5	0.37	6 $\frac{1}{2}$ "	6"

DITCH BOTTOM INLET
(PER FDOT INDEX No. 232)
N.T.S.



39" FOR 32" SLOT
57" FOR 50" SLOT

4"

3"

12"

4"

3"

DEBRIS SKIMMER
HOT DIPPED GALV. STEEL PLATE
0.1345" THICK (10 GAGE)

(4) 3/8" DIA. SS STUD EXP. ANCHOR
W/ NUT & WASHER
EMBEDMENT 2 1/2"

DEBRIS SKIMMER DETAIL
N.T.S.
(SHOP DRAWING REQUIRED)

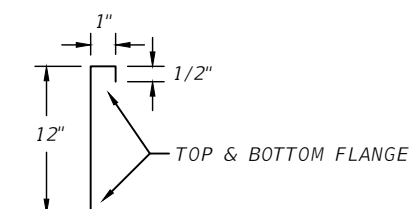
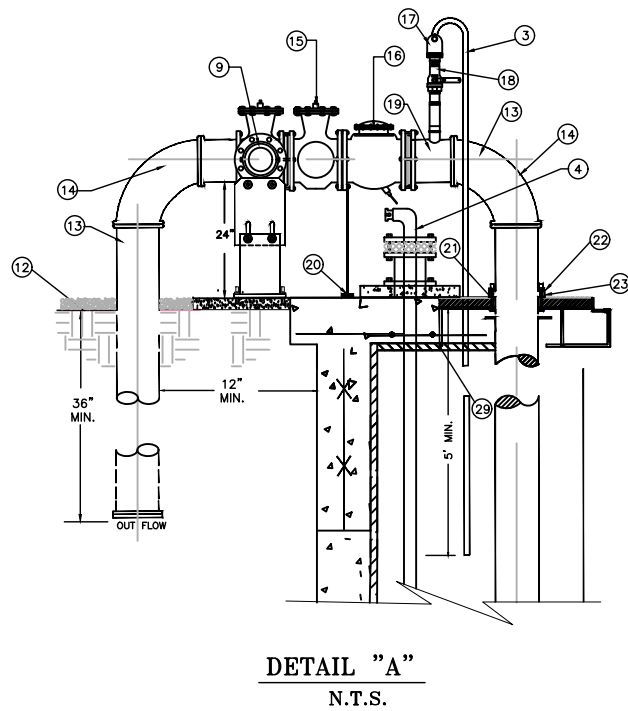
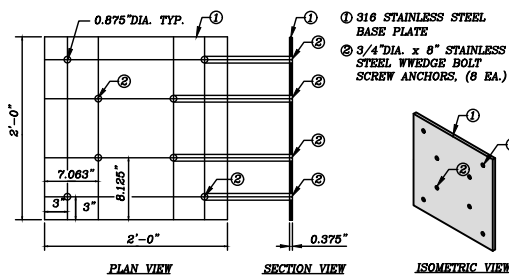
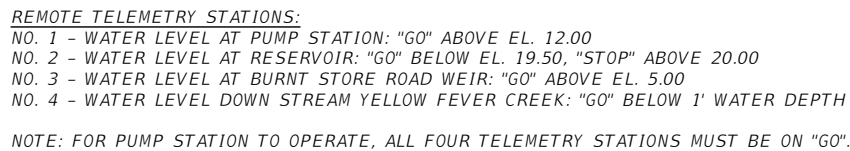
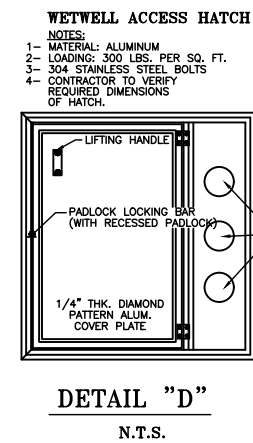
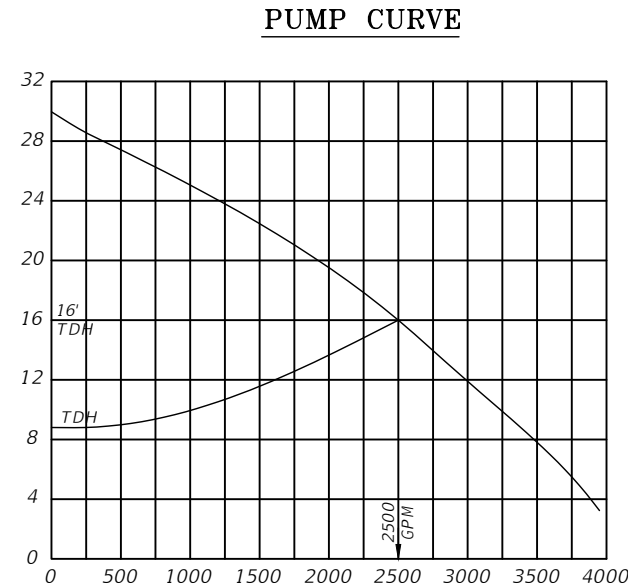


PLATE CROSS SECTION
N.T.S.



- 1 1/4" THK. SERIES 300 STAINLESS STEEL HOOKS FOR HOIST CABLES
- 2 12" PLUG VALVE
- 3 PCV DRAIN LINE FROM AIR RELEASE VALVE TO WET WELL
- 4 EMERGENCY PUMP OUT AND AIRVENT (SAME DIAMETER AS DISCHARGE PIPING (SEE DETAIL "B")
- 5 GUIDE RAILS
- 6 SPOOL PIECE
- 7 STAINLESS STEEL FLOAT CABLE SUPPORT
- 8 INFLOW PIPE INSTALLED RADIALLY FROM WETWELL CENTER
- 9 FEMALE QUICK CONNECT COUPLER WITH CAP AND PLUG VALVE
- 10 POWER CABLE
- 11 FLOAT CONTROLS
- 12 FILTER CLOTH WITH 4" OF COMPACTED #57 STONE
- 13 12" PVC PIPE
- 14 LONG RADIUS 90° BEND
- 15 PLUG VALVE (PAINT BLACK)
- 16 SWING FLEX CHECK VALVE (PAINT BLACK)
- 17 2" AUTOMATIC AIR RELEASE VALVE; (SEE APPROVED MATERIAL LIST) ON EACH DISCHARGE PIPE
- 18 2" STAINLESS STEEL BALL VALVE (SEE APPROVED MATERIAL LIST)
- 19 HDPE BRANCH SADDLE PE 3408 ASTM D3350 (BLACK) WITH FEMALE THREADED INSERT BRASS ALLOY STAINLESS COMPRESSION RING GRADE TYPE 304 OR 316
- 20 STAINLESS STEEL PIPE SUPPORT (SEE DETAIL "C")
- 21 NEOPRENE GASKET
- 22 STAINLESS STEEL FLANGE RING
- 23 HDPE RIM (FUSED TO HDPE PIPE)
- 24 LINER OR COATING (SEE APPROVED MATERIAL LIST)
- 25 ALUMINUM HATCH (SEE DETAIL D)
- 26 COAL TAR EPOXY (BELOW FINISHED GRADE)
- 27 SENSOR CABLE
- 28 SERIES 316 STAINLESS STEEL 1/4" CABLE
- 29 SERIES 316 STAINLESS STEEL PIPE SUPPORT
- 30 2" SERIES 316 STAINLESS STEEL GUIDE RAILS
- 31 PUMP OFF
- 32 SUBMERSIBLE LEVEL TRANSMITTER
- 33 CAST IN PLACE FLEXIBLE PIPE CONNECTION WITH SERIES 316 STAINLESS STEEL CLAMP C-923, CHARDON RUBBER, O/E (TYP.) WALL THICKNESS 8" MIN.
- 34 STEEL REINFORCEMENT
- 35 RAM-NEK BLANKET OUTER SIDE OF WET WELL
- 36 RAM-NEK OR EQUAL PREFORMED PLASTIC GASKET MATERIAL BETWEEN PRECAST UNITS (TYP.)
- 37 AUTOMATIC DISCHARGE CONNECTION TO SUIT PUMP
- 38 SUBMERSIBLE PUMPS
- 39 #5 AT 8" CENTER
- 40 SERIES 316 STAINLESS STEEL 3/8" CHAIN (1'-6" LONG)
- 41 #4 AT 8" CENTER
- 42 CONC. OR PORTLAND TYPE II & SAND MIX
- 43 3/4" DIA. x 8" STAINLESS STEEL WEDGE BOLT SCREW ANCHORS, 8 EA.
- 44 BASE SECTION TO BE A MONOLITHIC CASTING
- 45 12" MIN. COMPACTED #57 STONE
- 46 CAM LOCK COUPLING ON EMERGENCY PUMP OUT
- 47 STAINLESS STEEL BOLTS
- 48 BLIND FLANGE
- 49 STAINLESS STEEL CLAMP
- 50 STAINLESS STEEL SCREEN CLOTH
- 51 STAINLESS STEEL CONCRETE BOLTS
- 52 3/8" STAINLESS STEEL
- 53 4" THICK 3,000 P.S.I. CONCRETE SLAB
- 54 AIR VENT TO BE 2 PIPE SIZES LARGER THAN EMERGENCY PUMP OUT. THE ACTUAL LOCATION IS TO BE DETERMINED IN THE FIELD.
- 55 PREFERS THE LIFT STATION FENCE TO HAVE DARK GREEN VINYL COATING. HOWEVER, BLACK VINYL IS ACCEPTABLE.
- 56 PUMP DISCHARGE BASE PLATE, REFER TO STANDARD DETAIL

NUMBER OF PUMPS	# 1	# 2	* OPTIONAL PUMP
PUMP MANUFACTURER	FLYGT	FLYGT	ABS APPROVED ALT.
PUMP MODEL NUMBER	3152	3152	
IMPELLER SIZE	620	620	
TYPE OF PUMP	SUBMERSIBLE		
DESIGN CAPACITY PER PUMP	2500	2500	(GPM)
TOTAL DYNAMIC HEAD	16	16	(FEET)
SHUT-OFF HEAD	—		(FEET)
DESIGN SPEED	1150	1150	(RPM)
MIN. HORSEPOWER PER PUMP	14	14	(HP)
VOLTS	460	460	(VOLTS)
PHASE POWER	3	3	(PH)
PUMP DISCHARGE SIZE	8"	8"	(INCHES)
DIAMETER RISER PIPE	12"	12"	(INCHES)
PUMP ON ELEVATION	BY TELEMETRY		
HIGH WATER ALARM	BY TELEMETRY		
PUMP OFF ELEVATION	BY TELEMETRY		
DIAMETER PIPE AFTER RISER	12	(INCHES)	
DIAMETER WETWELL (I.D.)	6	(FEET)	
TOP OF WETWELL ELEVATION	EL 16.7	(FEET)	
BOTTOM ELEVATION	EL 0.00	(FEET)	
INFLOW PIPE ELEVATION	EL 3.8	(FEET)	



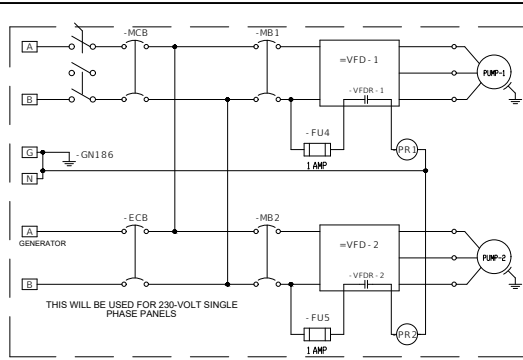
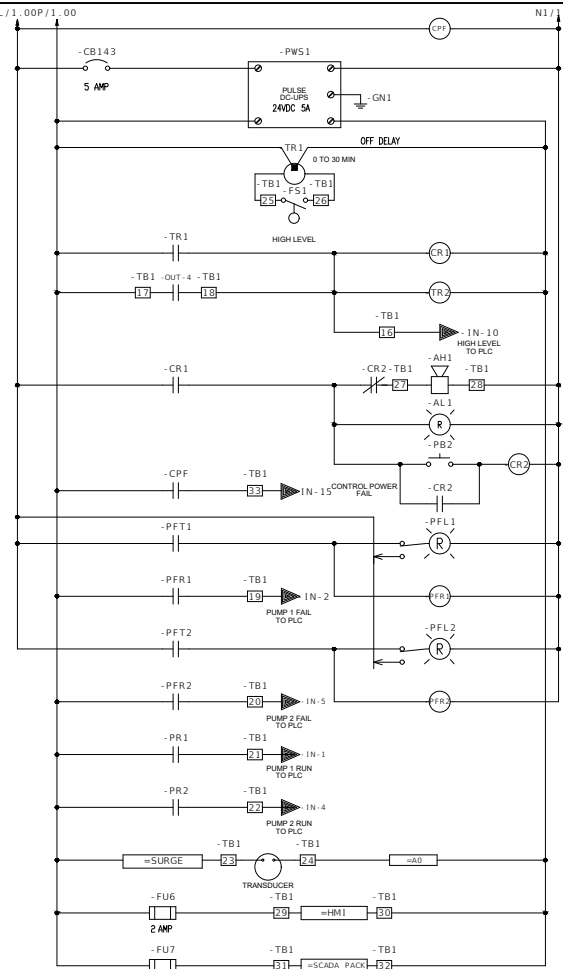
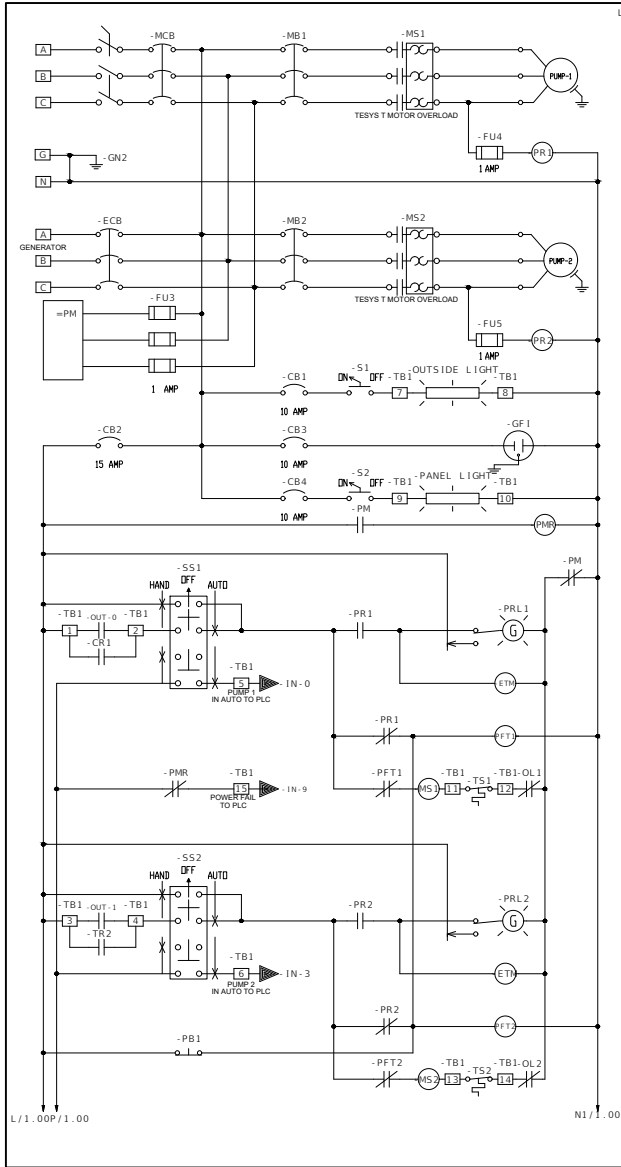
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LEE COUNTY DIVISION OF
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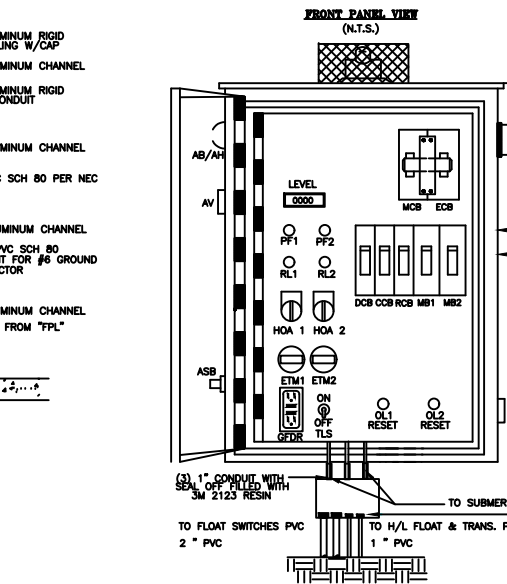
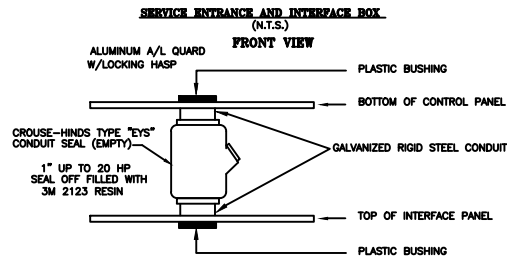
SCALE: AS-NOTED	YELLOW FEVER CREEK RESTORATION PROJECT	THESE DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED BELOW:	JOB NO.:
DATE: OCT. 2017			16-0436
	PUMP STATION DETAILS	RONALD KERFOOT, P.E. P.E. LICENSE NUMBER 20768	SHEET NO.:
JES/RK			12



LADDER DIAGRAM MUST INCLUDE PROVISIONS FOR GFR

COMPONENT LEGEND

AL - ALARM LIGHT	LCB - LIGHT CONTROL BREAKER
ALT - ALTERNATOR	MB - MOTOR BREAKER
ATS - ALTERNATOR TEST SWITCH	MCB - MAIN CIRCUIT BREAKER
AV - AIR VENT	MS - MOTOR STARTER
BCB - BLOWER CONTROL BREAKER	OL - OVERLOAD
CCB - CONTROL CIRCUIT BREAKER	PF - PUMP FAILURE
DPDT - DOUBLE-POLE, DOUBLE-THROW	PFT - PUMP FAILURE TIMER
DR - DISABLE RELAY	PM - PHASE MONITOR
DRB - DUPLEX RECEPTACLE BREAKER	PR - PUMP RUN
ECB - EMERGENCY CIRCUIT BREAKER	R - RELAY
ETM - ELAPSED TIME METER	RCB - RTU CIRCUIT BREAKER
F - FUSE	RCB - RECEPTACLE CONTROL BREAKER
FB - FUSE BLOCK	RL - RUNNING LIGHT
FL - FLASHER	RTU - REMOTE TELEMETRY UNIT
FLG - FLUORESCENT LIGHT	T - TERMINAL
FLS - FLUORESCENT LIGHT SWITCH	TB - TERMINAL BLOCK
FR - FLOAT REGULATOR	TD - TIME DELAY
FTS - FLOAT TEST SWITCH	TDOE - TIME DELAY ON DE-ENERGIZE
GFR - GROUND FAULT DUPLEX RECEPTACLE	TDOE2 - TIME DELAY ON ENERGIZE
GND - EARTH GROUND	TPDT - TRIPLE-POLE, DOUBLE-THROW
GR - GENERATOR RECEPTACLE	TTS - THERMAL TERMINAL STRIP
HOA - HAND-OFF-AUTO SELECTOR SWITCH	XFMR - TRANSFORMER
LA - LIGHTNING ARRESTOR	PFR - PUMP FAIL RESET



GENERAL NOTES AND REQUIREMENTS

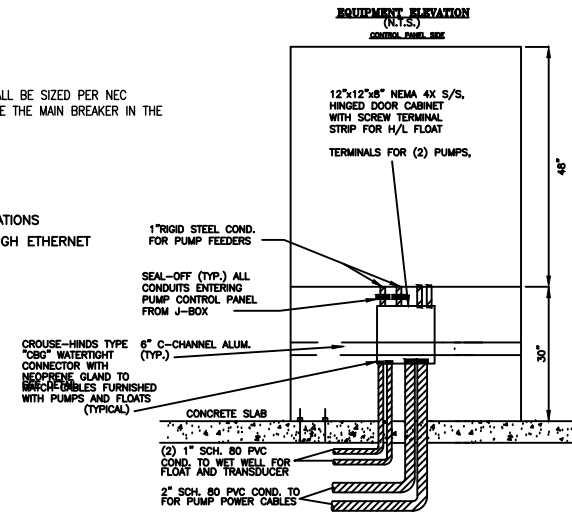
- THE ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE STANDARD BUILDING CODES AND LOCAL CODES AS MAY BE APPLICABLE. SIX SHOP DRAWINGS OF ALL MAJOR EQUIPMENT SHALL BE REQUIRED PRIOR TO ORDERING EQUIPMENT.
- WORK SHALL INCLUDE ALL LABOR, MATERIALS, PERMITS AND COSTS FOR INSTALLATION OF A COMPLETE ELECTRICAL SYSTEM.
- ALL EQUIPMENT, FIXTURES, ETC., SHALL BE STARTED, TESTED, ADJUSTED AND PLACED IN SATISFACTORY OPERATING CONDITION BY THIS CONTRACTOR WHO SHALL GUARANTEE ALL WORKMANSHIP, MATERIALS AND EQUIPMENT TO BE FREE OF DEFECTS FOR A PERIOD OF (1) ONE YEAR FROM DATE OF CERTIFICATE OF OCCUPANCY (C.O.); AND SHALL REPAIR SUCH DEFECTS WITHOUT COST TO THE OWNER. ALL EQUIPMENT SHALL BE COVERED FOR THE DURATION OF THE MANUFACTURER'S GUARANTEE OR WARRANTY, AND THIS CONTRACTOR SHALL FURNISH THE OWNER WITH ALL MANUFACTURER'S GUARANTEES AND WARRANTIES.
- ALL WIRE SIZES SHOWN ARE FOR TINNED COPPER CONDUCTORS.
- THE ELECTRICAL CONTRACTOR SHALL INSTALL METERING OF A TYPE APPROVED BY THE UTILITY COMPANY AND U.L. LISTED. THIS METER SHALL BE MADE OF ALUMINUM OR STAINLESS.
- IT IS NOT THE INTENT OF THESE PLANS TO SHOW ALL DETAILS OF CONSTRUCTION. THE ELECTRICAL CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS SUCH AS HARDWARE, CONDUIT FITTINGS, ETC., AS NECESSARY FOR A COMPLETE ELECTRICAL SYSTEM IN WORKING ORDER.
- PROVIDE A SERVICE GROUND ACCORDING TO N.E.C. ART. 250, PART "H" MINIMUM INSTALLATION TO INCLUDE: FOOTER/FOUNDATION REINFORCING STEEL (20' OF #4 MIN. SIZE), TURNED UP OR OTHERWISE EXPOSED AT THE SERVICE WITH APPROVED CONNECTORS BONDING A GROUNDING CONDUCTOR SIZED PER TABLE 250-94 TO THE STEEL AND A DRIVEN ROD GROUND (MIN. 5/8" X 8' DEEP) WITH #6 COPPER GROUNDING CONDUCTOR. ALSO BOND: METAL PIPING AND EQUIPMENT.
- ALL FASTENERS FOR CONSTRUCTION OF THE PANEL ENCLOSURE SHALL BE TYPE 304 S/S SCREWS, NUTS, BOLTS & WASHERS.
- PLASTIC WARNING LABELS STATING "DANGER HIGH VOLTAGE" "PUMP STATION VOLTAGE" IN RED WITH 1" WHITE LETTERS. SECURE LABEL TO DOOR.
- NON FUSED SAFETY DISCONNECT SWITCH SHALL BE SQ-D CLASS 3110 IN NEMA 4X STAINLESS STEEL ENCLOSURE C/W HANDLE WITH POWER ON POSITION LOCKING PLATE. POWER SUPPLY TO CONTROL PANEL SHALL EXIT THRU UNDERSIDE. DISCONNECT BOX SHALL HAVE LOCKABLE QUICK RELEASE DOOR LATCH ON CABINET ENCLOSURE. (NO SCREW DOWN COVER WILL BE ACCEPTED) NOTE: IF SITE HAS GENERATOR DISCONNECT SHALL HAVE A BREAKER SIZED PER NEC IN A CLASS 610 SQ-D NEMA 4X SS BREAKER ENCLOSURE.
- LADDER DIAGRAM IS DRAWN FOR THREE PHASE 230V. CHANGES ARE REQUIRED FOR SINGLE PHASE 230V, THREE PHASE 208V OR THREE PHASE 460V.
- CONTROL PANEL ENCLOSURE SHALL HAVE A PAINTED STEEL BACKPLATE, AND ALUMINUM DEADFRONT DOOR. ENCLOSURE SHALL BE TYPE 304 STAINLESS STEEL, NEMA 4X GASKETED TYPE WITH PAD LOCKABLE HASP. THREE POINT LATCH SYSTEM AND WIND RESTRAINER ARM THAT INCLUDES HARDWARE TO RESTRAIN DEADFRONT DOOR WHEN OPEN. ALL METAL COMPONENTS OF LATCH SYSTEM AND RESTRAINER TO BE MANUFACTURED OF TYPE 304 STAINLESS STEEL. ALL DEVICES MOUNTED ON ENCLOSURE ARE TO BE GASKETED OR CAULKED WITH SEALANT TO RETAIN NEMA RATING. ENCLOSURE SHALL BE FURNISHED WITH TYPE 304 STAINLESS STEEL. 1-7/8" UNISTRUTS, WELDED. PROVIDE 1-7/8" STAINLESS STEEL CHANNEL. STRUT C/W TYPE 304 STAINLESS STEEL NUTS AND BOLTS TO SUIT, AS SUPPLIED BY B-LINE SYSTEMS INC. OR EQUAL. ISOLATE DISSIMILAR METALS WITH TEFLON GASKETING. PROVIDE PAD LOCKING PROVISIONS. PANEL SHALL BE ASSEMBLED IN A UL 508 RATED SHOP.
- ALL ELECTRICAL CONDUITS TO/FROM CONTROL PANELS AND SERVICE FEEDER ARE TO DROP VERTICALLY TO CONCRETE SLAB AND ROUTED UNDER SLAB TO THEIR RISE LOCATION AND CONTINUE VERTICALLY TO DESTINATION.
- AFTER ALL WIRING IS COMPLETED, ALL CGB'S MUST BE TIGHTENED TO SEAL AROUND CABLES.
- FLOATS SHALL HAVE MERCURY CONTACTS.
- PLC, RTU SHALL PROVIDE THE FUNCTIONS AS SPECIFIED IN THE TECHNICAL SPECIFICATIONS.
- WHEN AN ODOR CONTROL SYSTEM IS REQUIRED THE PANEL MANUFACTURER SHALL PROVIDE AN APPROPRIATELY SIZED BREAKER AND AN ALARM CONTACT FOR THE RTU.
- THE VARIABLE DRIVE SHALL BE A SQ-D ALTIVAR 61 OR APPROVED EQUAL BY LCU PROPER VENTILATION SHALL BE PROVIDED AS PER MANUFACTURER SPEC.
- THE CONTRACTOR SHALL PROVIDE A LIGHTNING SURGE ARRESTOR RATED FOR THE INCOMING VOLTAGE AND CURRENT.
- WHEN PANEL IS SUPPLIED WITH 480 VOLT A SIGN SHALL BE ADDED BY GFI RECEPTACLE STATING NOT RATED FOR POWER TOOLS.
- ALL FEEDER WIRING FROM THE MAIN DISCONNECT TO THE CONTROL PANEL MAIN BREAKER SHALL HAVE NO TERMINATIONS, OR SPLICES NO EXCEPTIONS.

ELECTRICAL NOTES:

- RTU SHALL BE SCADA PACK 334E
- MODEM OR ANY OTHER COMMUNICATIONS WILL BE SUPPLIED BY LCU
- VARIABLE DRIVES TO BE USED ON ALL SINGLE PHASE POWER
- VARIABLE DRIVES SHALL BE SQUARE D ALTIVAR 61
- POWER SUPPLY SHALL HAVE BATTERY BACKUP
- ALL SWITCHES SHALL BE SQUARE D 30 MM
- ALL STARTERS SHALL BE SQUARE D
- ALL BREAKERS SHALL BE SQUARE D
- ALL INDICATOR LIGHTS SHALL HAVE LED LAMPS
- HMI SHALL BE C-MORE EAT-SGM
- PLC CODE WILL BE INSTALLED BY LCU
- ALL BREAKERS, STARTERS, VARIABLE DRIVE, WIRE SHALL BE SIZED PER NEC
- ALL CONDUCTORS FROM THE MAIN DISCONNECT TO BE THE MAIN BREAKER IN THE CONTROL PANEL SHALL HAVE NO TERMINATIONS

THE FOLLOWING ARE OPTIONS:

- TESYS T MOTOR MANAGEMENT FOR 3 PHASE STATIONS
- DRIVES CONNECTED TO THE SCADA PACK THROUGH ETHERNET



NOTE: ADJUST ELECTRICAL PLAN FOR SINGLE PUMP, INCLUDE A PHASE CONVERTER AND FOUR TELEMETRY "GO-NO GO" CONTROLS.

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LEE COUNTY DIVISION OF NATURAL RESOURCES

SCALE: AS-NOTED	YELLOW FEVER CREEK RESTORATION PROJECT	THESE DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED BELOW:	JOB NO.: 16-0436
DATE: OCT. 2018		RONALD KERFOOT, P.E. P.E. LICENSE NUMBER 20768	SHEET NO.: 13
JES/RK	ELECTRIC WIRING DETAILS	DATE:	



NO	DATE	DESCRIPTION
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2	OCT 10 2020	ADDED FILL SITE
1	JUN 23 2020	REV.



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LEE COUNTY DIVISION OF
NATURAL RESOURCES

SCALE: AS-NOTED
DATE: OCT. 2017
JES/RK

YELLOW FEVER CREEK
RESTORATION PROJECT

SWPPP PLAN

THESE DRAWINGS ARE NOT
APPROVED UNLESS SIGNED &
SEALED BELOW:

RONALD KERFOOT, P.E.
P.E. LICENSE NUMBER 20768

DATE:

JOB NO.:
16-0436

SHEET NO.:
15

SITE DESCRIPTION:

1) **NATURE OF CONSTRUCTION ACTIVITY:**
THE PROJECT IS LOCATED IN LEE COUNTY ON DEL PRADO BLVD., IN SECTION 20, T43S, R24E. THE PROJECT IS 15.6 AC IN AREA.
PROJECT AREA BREAKDOWN : LAKE / RESERVOIR PARCEL = 15.2 AC
PUMP STATION PARCEL = 0.4 AC

2) **SEQUENCE OF MAJOR SOIL:**
DISTURBING ACTIVITIES: THE CONTRACTOR SHALL BE REQUIRED TO PREPARE A SITE SPECIFIC EROSION CONTROL PLAN ALONG WITH DETAILED CONSTRUCTION SCHEDULE TO INDICATE DATES OF MAJOR GRADING ACTIVITIES AND DETERMINE SEQUENCES OF TEMPORARY AND PERMANENT SOIL DISTURBING ACTIVITIES ON ALL PORTIONS OF THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO MODIFY THE PLAN OR MATERIALS TO ADAPT TO SEASONAL VARIATIONS, CONSTRUCTION ACTIVITY VARIATIONS, OR AS DIRECTED BY THE ENGINEER. APPLICABLE EROSION CONTROL DEVICES AND IMPLEMENTATION PROCEDURES ARE SUPPLIED IN THE FDOT STANDARD INDEX 104 AND 105. THE ENGINEER IS RESPONSIBLE FOR DETERMINING IF ANY MODIFICATIONS OR ADDITIONAL CONTROLS ARE REQUIRED AND TO OBTAIN DEPLOYMENT SCHEDULES FOR THE IMPLEMENTATION OF ALL ADDITIONAL EROSION CONTROL DEVICES FROM THE CONTRACTOR.

3) **GENERAL NOTES:**
a. ALL EROSION CONTROL DEVICES FOR EACH PHASE OF WORK ARE TO BE INSTALLED PRIOR TO BEGINNING WORK ON THAT PHASE.
b. INSTALL SEDIMENT BARRIER WHERE LISTED IN THE CONTRACTOR'S APPROVED EROSION CONTROL PLAN FOR PERIMETER CONTROLS BEFORE THE LAND IS DISTURBED.
c. PROVIDE SEDIMENT BARRIER WHERE LISTED IN THE CONTRACTOR'S APPROVED EROSION CONTROL PLAN AS DITCH BLOCKS DURING CONSTRUCTION.
d. PROVIDE INLET PROTECTION SYSTEM AT INLET OPENINGS.
e. COVER OR STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE.
f. DO NOT DISTURB AN AREA UNTIL IT IS NECESSARY FOR CONSTRUCTION TO PROCEED.
g. TIME CONSTRUCTION ACTIVITIES TO LIMIT IMPACT FROM SEASONAL CLIMATE CHANGES OR WEATHER EVENTS.
h. DO NOT REMOVE PERIMETER CONTROLS UNTIL AFTER ALL UPSTREAM AREAS ARE FULLY STABILIZED AND PERMANENT GRASSING IS ESTABLISHED.

4) **PROJECT AREAS:**
THE ESTIMATED TOTAL PROJECT AREA:
PUMP STATION: 0.4 ACRES
LAKE PROPERTY: 15.2 ACRES
THE ESTIMATED AREA TO BE DISTURBED BY CONSTRUCTION ACTIVITIES:
PUMP STATION: 0.4 ACRES
LAKE PROPERTY: 15.2 ACRES

5) **RUNOFF COEFFICIENTS BEFORE CW(B), DURING CW(D) AND AFTER CW(A) CONSTRUCTION**
RUNOFF COEFFICIENTS FOR:
GRASSED SHOULDERS ADJACENT TO ROADWAY: C=0.20
IMPERVIOUS ROADWAYS, CONCRETE AND PAVED SHOULDER(S): C=0.95
DISTURBED AREAS, EXPOSED SOIL, ETC., DURING CONSTRUCTION: C=0.40

WEIGHTED RUNOFF COEFFICIENT:
BEFORE: CW(B) = 0.6 DURING: CW(D) = 0.7 AFTER: CW(A) = 0.6

THE RUNOFF COEFFICIENT DURING CONSTRUCTION, CW(D), IS CALCULATED ASSUMING THAT THE MAXIMUM ALLOWABLE AREA OF SOIL IS DISTURBED DURING CONSTRUCTION AND THE REMAINING AMOUNT IS THE EXISTING IMPERVIOUS AND GRASSED SHOULDER AREAS.

6) **DESCRIPTION OF SOIL OR QUALITY OF DISCHARGE:**
THE MAJORITY OF THE PROJECT LIES WITHIN SOILS COMPRISED OF #2 CANAVERAL FINE SAND AND #5 CAPTIVA FINE SAND.

7) **ESTIMATED DRAINAGE AREA AND AVERAGE SLOPE OF DRAINAGE AREA FOR EACH OUTFALL:**
SITE MAP: INCLUDED IN THE PLAN SET
DRAINAGE MAP: INCLUDED IN THE PLAN SET

8) **RECEIVING WATERS:**
THE ON-SITE RUNOFF IS COLLECTED AND CONVEYED VIA EXISTING DRAINAGE SWALES ALL OF WHICH OUTFALL INTO DITCHES TO THE ULTIMATE POINT OF DISCHARGE INTO THE YELLOW FEVER CREEK. THE CONTRACTOR SHALL TAKE ALL REASONABLE MEASURE TO PREVENT UNAUTHORIZED MATERIALS FROM ENTERING THE WATERWAYS.

9) **THE OUTFALLS ARE NOT 303(D) LISTED WATERS FOR TOTAL SUSPENDED SOLIDS (TSS), TURBIDITY, AND SETTLEABLE SOLIDS.**

10) **OUTFALL LOCATION: (TEMPORARY AND PERMANENT)**

	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>RECEIVING WATER</u>
PERMANENT	26°42'45"N	81°55'51"W	OVER LAND TO YELLOW FEVER CREEK

11) **WETLAND IMPACTS ARE LIMITED TO THE AREAS DESCRIBED IN THE ENVIRONMENTAL ASSESSMENT FOR THE PROJECT.**

12) **DESCRIPTION OF STORM WATER MANAGEMENT: (EXISTING/PROPOSED)**
EXISTING DRAINAGE RUNOFF TYPICALLY SHEET FLOWS TO DRAINAGE WAYS WITH NO FORMAL TREATMENT OR ATTENUATION FOR PROPOSED CONDITIONS. ON-SITE FLOWS ARE MANAGED IN WETLAND SYSTEM AND EVENTUALLY DISCHARGE INTO THE YELLOW FEVER CREEK. THE EXISTING DRAINAGE PATTERNS AND POINTS OF DISCHARGE WILL BE MAINTAINED FOR BOTH ON-SITE AND OFF-SITE FLOWS.

2. **CONTROLS, EROSION AND SEDIMENT CONTROLS:**

1) **WATER QUALITY MONITORING SHALL BE CONDUCTED BY THE ENGINEER UPON THE OBSERVATION THAT THE WATER QUALITY STANDARDS MAY BE VIOLATED BY THE CONTRACTOR'S ACTIVITIES. MONITORING LOCATIONS SHALL BE DESIGNATED BY THE ENGINEER. THE ENGINEER WILL BE RESPONSIBLE FOR MONITORING ANY ACTIVITIES FOR VIOLATION OF WATER QUALITY STANDARDS AS THEY RELATE TO TURBIDITY (29 NTU'S ABOVE BACKGROUND). MONITORING OF WATER QUALITY SHALL BE CONDUCTED A MINIMUM OF TWICE DAILY FOR ANY EARTHWORK ACTIVITIES WITHIN THE STRUCTURE IMPROVEMENT AREA. MONITORING WILL BE ACCOMPLISHED BY RECORDING TURBIDITY READINGS FROM THE CENTER OF THE STREAM, ONE (1) UPSTREAM OF THE ACTIVITY AND ONE (1) DOWNSTREAM OF THE EROSION CONTROL DEVICES, BUT WITHIN THE PROJECT RIGHT OF WAY. IF WATER QUALITY STANDARDS ARE VIOLATED, CONSTRUCTION SHOULD BE STOPPED IMMEDIATELY AND EROSION CONTROL DEVICES REVIEWED BY THE FDOT REPRESENTATIVE PRIOR TO ANY CONTINUATION OF ACTIVITY. MONITORING ACTIVITIES AND TURBIDITY READINGS SHALL BE RECORDED ON THE CONSTRUCTION INSPECTION REPORT AND CONTINUED UNTIL TURBIDITY READINGS FALL BELOW AN ACCEPTABLE LEVEL (29 NTU'S ABOVE BACKGROUND). WATER QUALITY MONITORING MAY BE CONDUCTED DURING ANY PHASE OF CONSTRUCTION AS DIRECTED BY THE ENGINEER.**

2) **STABILIZATION PRACTICES:**
STABILIZATION MEASURES SUCH AS SODDING OR SEEDING OF SIDE SLOPES, PLACEMENT OF ASPHALT OR CONCRETE SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE SHALL THE TIME BE GREATER THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASES.

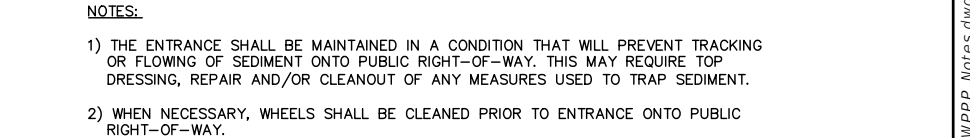
3) **STRUCTURAL PRACTICES INCLUDE:**
a. SEDIMENT BARRIERS
b. SOIL TRACKING PREVENTION DEVICES AT CONSTRUCTION ENTRANCES/EXITS
c. STAKED TURBIDITY BARRIER
d. FLOATING TURBIDITY BARRIER
e. SYNTHETIC BALES

- ENVIRONMENTAL RESOURCE PERMIT
ARMY CORPS OF ENGINEERS (ACOE)
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP). (CONTRACTOR SHALL OBTAIN NPDES PERMIT).
- 4) APPLICATION OF FERTILIZERS AND PESTICIDES
- FERTILIZERS AND PESTICIDES WILL BE USED ON THIS PROJECT IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 570, AT DIRECTION TO THE CONTRACTOR WITH THE COORDINATION OF THE ENGINEER.
- 5) NON-STORMWATER (INCLUDING SPILL REPORTING)

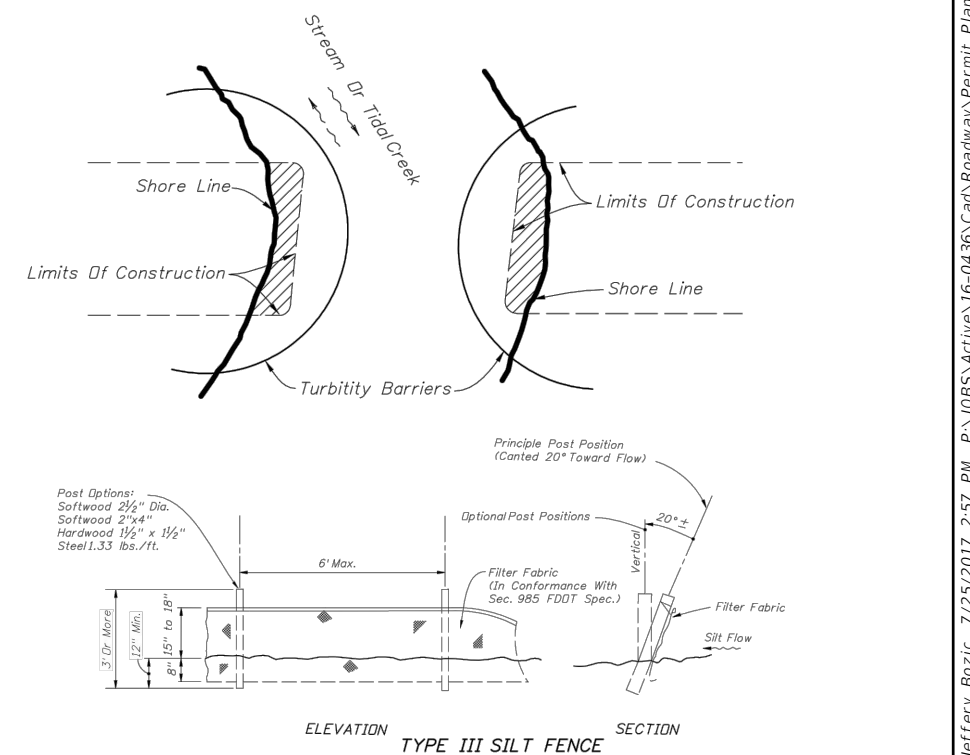
- 1) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIRS OF EROSION AND SEDIMENT CONTROL DEVICES, AND REMOVAL OF EROSION AND SEDIMENT CONTROL DEVICES WHEN NOTICE OF TERMINATION IS MAILED.
- 2) INSTALLATION, MAINTENANCE, REPAIR AND REMOVAL REQUIRED FOR THE CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION SHALL BE INCLUDED IN THE INDIVIDUAL COSTS OF THE EROSION CONTROL DEVICES.
- 3) THE FOLLOWING PRACTICES WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS:
GENERAL-ALL CONTROL MEASURES WILL BE MAINTAINED DAILY BY THE CONTRACTOR. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY IT WILL BE INITIATED WITHIN 24 HOURS OF NOTICE.
- 4) STRUCTURAL PRACTICES-BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE AND FLOATING TURBIDITY BARRIERS WHEN IT HAS REACHED ONE-HALF OF THE HEIGHT OF THE FENCE. SODDING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH. SILT FENCES SHALL BE REPLACED EVERY TWELVE (12) MONTHS OR WHEN IT HAS SERVED ITS USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORMWATER FLOW OR DRAINAGE. STABILIZED CONSTRUCTION ENTRANCES SHALL BE MAINTAINED TO PREVENT CLOGGING OF ROCK BEDDING WHICH MAY IMPEDE THE USEFULNESS OF THE STRUCTURE.

- NOTE: CONTRACTOR AND PREPARER CERTIFICATION STATEMENTS ARE REQUIRED

1. THE CONTRACTOR SHALL USE TEMPORARY EROSION CONTROL METHODS TO PREVENT SILTATION OF EXISTING UTILITY AND STORMWATER DRAIN ENTRIES, DRAINAGE DITCHES, WATER BODIES, WETLANDS AND ADJACENT PROPERTY.
2. THE CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES FOR EROSION CONTROL
3. THE CONTRACTOR SHALL SOD, SEED AND MULCH UPON FINAL GRADING TO LIMIT EROSION AND SILTATION.
4. THE CONTRACTOR SHALL SAFELY STORE EQUIPMENT, FUEL, OIL AND OTHER HAZARDOUS SUBSTANCES FROM CONTAMINATING THE AREA.
5. THE CONTRACTOR SHALL MONITOR, MAINTAIN AND CORRECT DEFICIENCIES OF THE EROSION CONTROL FACILITIES DAILY.
6. CONTRACTOR SHALL CONTROL OFF-SITE TRACKING INCLUDING MATERIAL SPILLAGE OR SOIL TRACKING ONTO PUBLIC ROADS. THIS MAY BE ACCOMPLISHED BY MANUAL REMOVAL AS NECESSARY, BUT NOT LESS THAN SEMI-WEEKLY.
7. A SILT FENCE OR GRASSED BERM SHALL BE PLACED AT THE WORK SITE.
8. THE CONTRACTOR SHALL ENSURE THAT THE ADJACENT PROPERTIES ARE NOT IMPACTED BY WIND EROSION OR EMISSIONS OF UNCONFINED PARTICULATE MATTER IN ACCORDANCE WITH RULE 62-296.320(4)(c), FLORIDA ADMINISTRATIVE CODE, FROM THE CONSTRUCTION SITE DURING ALL PHASES OF CONSTRUCTION BY TAKING APPROPRIATE MEASURES TO STABILIZE AFFECTED AREAS.
9. THE CONTRACTOR SHALL IMMEDIATELY CORRECT ALL OFFSITE SURFACE WATER DISCHARGES WITH TURBIDITY IN EXCESS OF 29 NTU (NEPHELOMETRIC TURBIDITY UNITS) ABOVE BACKGROUND LEVEL SUCH INCIDENTS SHALL BE REPORTED TO THE GOVERNING AGENCY WITHIN 24 HOURS OF THE OCCURRENCE. NOTIFICATION SHALL INCLUDE CAUSE OF THE DISCHARGE AND CORRECTIVE ACTIONS TAKEN.
10. FUEL OR OTHER PETROLEUM PRODUCT SPILLS THAT ARE IN EXCESS OF 25 GALLONS SHALL BE CONTAINED CLEANED UP AND REPORTED IMMEDIATELY TO THE GOVERNING AGENCY. SMALLER GROUND SURFACE SPILLS SHALL BE CLEANED UP AS SOON AS PRACTICAL. IN ACCORDANCE WITH INDUSTRY STANDARDS.
11. IF CONTAMINATED SOIL AND/OR GROUNDWATER IS DISCOVERED DURING CONSTRUCTION THE WORK ACTIVITY IN THE VICINITY OF THE CONTAMINATION SHALL IMMEDIATELY CEASE, AND THE GOVERNING AGENCY SHALL BE CONTACTED.



N.T.S.



			 AIM Engineering & Surveying, Inc. CIVIL ENGINEERING * LAND SURVEYING * S.U.E. * TRANSPORTATION * UTILITIES * PROJECT MANAGEMENT * CONSTRUCTION ENGINEERING & MANAGEMENT 2161 FOWLER ST. FORT MYERS, FL. 33901 * E-Mail: engineering@aimengr.com PHONE: 239-332-4569 * CERTIFICATION OF AUTHORIZATION No. 3114	<h1>LEE COUNTY DIVISION OF NATURAL RESOURCES</h1>	SCALE: AS-NOTED	<h2>YELLOW FEVER CREEK RESTORATION PROJECT</h2>	THESE DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED BELOW:	JOB NO.: 16-0436
4	-	-			DATE: OCT. 2017			
3	-	-				<h2>SWPPP NOTES</h2>	RONALD KERFOOT, P.E. P.E. LICENSE NUMBER 20768	SHEET NO.: 16
2	-	-						
1	JUN 23 2020	REV.						
NO	DATE	DESCRIPTION			JES/RK		DATE:	

TYPICAL GENERAL UTILITY NOTES: (NOT ALL ITEMS ARE APPLICABLE TO THIS PROJECT)

1. THE CONTRACTOR OR OWNER'S REPRESENTATIVE WILL BE RESPONSIBLE FOR OBTAINING AN APPROPRIATELY SIZED TEMPORARY JUMPER ASSEMBLY WITH METER FROM THE CITY OF CAPE CORALS UTILITY COLLECTION AND DISTRIBUTION DEPARTMENT AT 574_0852 PRIOR TO RECEIVING CITY WATER FOR CONSTRUCTION AND/OR TYING INTO ANY EXISTING POTABLE WATER MAIN LINES. A BILLING ACCOUNT MUST BE SET UP THROUGH THE CITY'S CUSTOMER BILLING DEPARTMENT PRIOR TO INSTALLATION. A REPRESENTATIVE FROM THE CITY OF CAPE CORAL'S DEVELOPMENT SERVICES AT 239_826_1569 MUST BE NOTIFIED 48 HOURS IN ADVANCE OF INSTALLATION AND BE PRESENT TO WITNESS AND RECORD THE INSTALLATION PROCESS. ACCOUNT DOCUMENTATION MUST BE SUBMITTED TO THE SITE DEVELOPMENT AND REVIEW INSPECTOR AT THE TIME OF METER INSTALLATION. AFTER CONSTRUCTION IS COMPLETE AND BEFORE THE TEMPORARY JUMPER AND METER IS REMOVED ALL POTABLE WATER MAINS SHALL BE FLUSHED AND PRESSURE TESTED PER AWWA SECTION C_600 AND DISINFECTED PER AWWA C_651.

2. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE CITY OF CAPE CORAL'S UTILITIES COLLECTION/ DISTRIBUTION DIVISION AT 574_0852 A MINIMUM OF 7 DAYS PRIOR TO ANY SHUT DOWN OR DIVERSION OF AN EXISTING WATER MAIN. A 48_HOUR NOTICE IS REQUIRED FOR A PRESSURE TEST, HOT TAP, OR TIE INTO EXISTING UTILITY MAIN, AND PRIOR TO BEGINNING ANY UTILITY CONSTRUCTION. ALSO, THE CONTRACTOR WILL DISTRIBUTE ANY INTERRUPTION OF SERVICES NOTICES TO ALL AFFECTED PARTIES AND THE CITY WILL DISTRIBUTE ALL BOIL WATER AND RESCISSION NOTICES.

3. IF ANY UTILITY WORK (WATER, SEWER AND IRRIGATION) IS PERFORMED AFTER HOURS (SCHEDULED OR UNSCHEDULED) AND THE UTILITY WORK REQUIRES THE PRESENCE OF A CITY OF CAPE CORAL UTILITY INSPECTOR THE SUBJECT OVERTIME WILL BE REQUIRED TO BE PAID FOR BY THE CONTRACTOR. A BILL WILL BE CREATED AND ATTACHED TO THE APPROPRIATE PERMIT AND PAYMENT WILL BE REQUIRED BEFORE THE WATER FINAL INSPECTION IS COMPLETED.

4. ALL UTILITY MAIN EXTENSIONS AND UTILITY MAIN REPLACEMENTS ARE REQUIRED TO BE A MINIMUM 6" MAIN. ALL SERVICE LATERALS 3" AND LARGER WILL REQUIRE A MINIMUM 6" TAP WITH 6" GATE VALVE AT THE CONNECTION POINT TO THE UTILITY MAIN WITH THE EXCEPTION OF TAPS ON MAINS SMALLER THAN 6".

5. THE CONTRACTOR IS PROHIBITED FROM TURNING OFF ANY EXISTING MAIN LINE VALVES. THESE WILL BE TURNED OFF BY A REPRESENTATIVE OF THE CITY OF CAPE CORAL'S UTILITY DEPARTMENT AT THE CONTRACTORS ARRANGED TIME AND DATE.

6. ALL EXISTING UTILITY SERVICE CONNECTIONS THAT WILL NOT BE UTILIZED FOR THIS PROJECT SHALL BE ABANDONED AT THE MAIN OR POINT AGREED UPON BY THE UTILITY INSPECTOR, PER CITY OF CAPE CORAL SPECIFICATIONS. WATER AND IRRIGATION SERVICES MUST BE ABANDONED AT THE MAIN. SEWER LATERALS MUST BE CAPPED AT THE ROW WITH AN APPROVED LOCATOR INSTALLED. A VISUAL INSPECTION MUST BE COMPLETED BY A CITY OF CAPE CORAL UTILITIES INSPECTOR.

7. THE ENGINEERS ESTIMATED FLOW DEMANDS FOR POTABLE WATER, IRRIGATION WATER AND SANITARY SEWER MUST BE PROVIDED ON THE UTILITY PAGE OF THE SITE PLANS.

8. THE CONTRACTOR WILL NEED TO ADJUST THE EXISTING UTILITIES AFFECTED BY THE NEWLY PROPOSED FINISHED GRADE AT THEIR EXPENSE. THESE ITEMS INCLUDE BUT NOT LIMITED TO: VALVE BOXES, VALVE PADS, VALVE STEM EXTENSIONS, SERVICE CONNECTIONS AND ACCESSORIES, BACKFLOW PREVENTION DEVICES, METER BOXES, FIRE HYDRANTS, MANHOLE COVERS AND/OR ADJUSTMENT RINGS. IT IS THE CONTRACTORS' RESPONSIBILITY TO VERIFY THAT ADEQUATE DEPTHS AND CLEARANCES EXIST TO MAKE THE SYSTEM HYDRAULICS WORK PROPERLY. ANY CHANGES TO EXISTING UTILITIES MUST MEET THE CITY OF CAPE CORAL SPECIFICATIONS. DISINFECTION AND RE_SAMPLING WILL BE REQUIRED WHEN ANY EXISTING POTABLE WATER MAIN OR SERVICE IS DISTURBED AND IS THE RESPONSIBILITY OF THE CONTRACTOR AT HIS EXPENSE.

9. ALL FIRE LINES AND PRIVATE HYDRANTS WILL REQUIRE THE INSTALLATION OF AN APPROVED DDCV ASSEMBLY INSTALLED AS CLOSE TO THE ROW AS POSSIBLE WITHIN THE PUE. A FIRE HYDRANT RESPONSIBILITY AGREEMENT WILL BE REQUIRED FOR ALL PRIVATE FIRE HYDRANTS. ALL ABOVE GROUND ASSEMBLIES, PIPE, AND FITTINGS MUST BE PAINTED PER CITY OF CAPE CORAL TECHNICAL SPECIFICATIONS PROTECTIVE COATINGS SECTION 09800.

10. ALL BACKFLOW CERTIFICATIONS MUST BE EMAILED TO UCDINSP@CAPECORAL.NET AND TO THE ASSIGNED UTILITY INSPECTOR.

11. ANY WORK OR MATERIALS WHICH DO NOT CONFORM TO THE CITY OF CAPE CORAL'S SPECIFICATIONS OR ANY WORK PERFORMED WITHOUT THE KNOWLEDGE OF THE CITY OF CAPE CORAL UTILITY INSPECTORS OR REPRESENTATIVES IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.

12. THE STANDARD MINIMUM COVER FOR A WATER, IRRIGATION OR FORCE MAIN, WHICH IS NOT UNDER PAVEMENT, IS 30" BELOW FINISHED GRADE, OR 42" BELOW THE EDGE OF PAVEMENT. THE MINIMUM COVER FOR WATER MAINS PLACED UNDER PAVEMENT IS 36". PLEASE DEFER TO THE UTILITY DESIGN PROCEDURES MANUAL SECTION 4.1.5.

13. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO DEWATER TRENCH AND SECURE EXCAVATIONS. THE CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS ASSOCIATED WITH THE CITY OF CAPE CORALS UTILITY DESIGN PROCEDURES MANUAL TECHNICAL SPECIFICATIONS SECTION 02140. ALL DEWATERING SHALL COMPLY WITH THE REGULATIONS OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT AND ANY AGENCY WITH JURISDICTION.

14. THE CONTRACTOR SHALL LOCATE AND VERIFY THE SIZE, LOCATION, AND DEPTH OF ALL EXISTING UTILITIES ON SITE. THE LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR HAS SOLE RESPONSIBILITY TO LOCATE AND PROTECT UNDERGROUND UTILITIES IN THE PROJECT AREA. THE CONTRACTOR SHALL HAVE ALL UTILITIES IDENTIFIED AND MARKED PRIOR TO BEGINNING CONSTRUCTION.

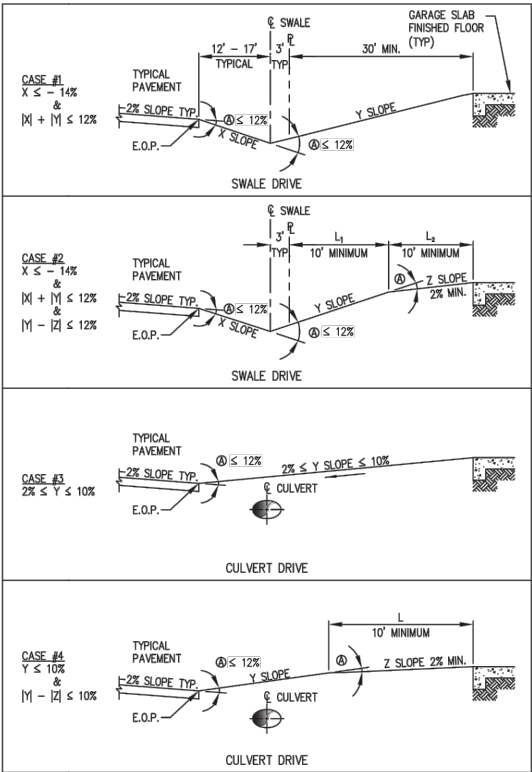
15. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN THE AREA BEFORE BEGINNING CONSTRUCTION AND BE RESPONSIBLE FOR PROTECTION OF ON_SITE UTILITIES INCLUDING LOCATES DURING CONSTRUCTION. ANY UTILITIES THAT ARE DISTURBED OR DAMAGED BY THE CONTRACTOR SHALL BE IMMEDIATELY REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE USING CITY APPROVED MATERIALS AND MUST BE REPORTED TO THE CITY OF CAPE CORAL UTILITIES COLLECTION/ DISTRIBUTION DEPARTMENT (574_0852). ALL REPAIRS MUST BE INSPECTED BY A CITY UTILITIES INSPECTOR PRIOR TO BACKFILL AND RESTORATION. IF THE CONTRACTOR IS UNABLE TO MAKE THE NECESSARY REPAIRS, THE CONTRACTOR WILL BE HELD LIABLE FOR COSTS ASSOCIATED WITH THE REPAIRS BY CITY PERSONNEL.

16. THE CONTRACTOR SHALL ADJUST (AS REQUIRED) PIPELINE ALIGNMENTS HORIZONTALLY AND/OR VERTICALLY TO AVOID CONFLICTS WITH ACTUAL FIELD CONDITIONS AS UNCOVERED DURING CONSTRUCTION. HORIZONTAL AND VERTICAL SEPARATION SHALL CONFORM TO THE CITY OF CAPE CORAL DESIGN PROCEDURES MANUAL SECTIONS 1.5.1 AND 1.5.2.

17. "IN ACCORDANCE WITH THE CITY LAND DEVELOPMENT CODE SECTION 5.1.6, PROTECTION OF EASEMENTS (FKA LUDR SECTION 3.14), ANY IMPROVEMENTS PERMITTED TO BE INSTALLED IN ANY EASEMENT ON THE PROPERTY ARE SUBJECT TO REMOVAL, REPLACEMENT AND RESTORATION BY THE LANDOWNER SHOULD A UTILITY REQUIRE ACCESS TO THE SUBJECT EASEMENT FOR ANY PURPOSE. THE CITY WILL PROVIDE THE PROPERTY OWNER WITH ADVANCE NOTICE IF THE CITY REQUIRES ACCESS TO THE SUBJECT EASEMENTS FOR INSTALLATION OR MAINTENANCE PURPOSES EXCEPT IN EMERGENCY SITUATIONS."

18. THE CONTRACTOR SHALL MAINTAIN A CURRENT AND UPDATED SET OF AS_BUILT DRAWINGS AT ALL TIMES AND PROVIDE ONE COPY TO THE ENGINEER UPON COMPLETION OF CONSTRUCTION. ACCEPTANCE OF THE COMPLETED UTILITY SYSTEM WILL NOT BE GIVEN FINAL APPROVAL BY THE UTILITIES DEPARTMENT UNTIL AS_BUILT PLANS HAVE BEEN SUBMITTED AND APPROVED BY THE ENGINEER OF RECORD.

19. SEWER LATERAL REMOVAL AND EXISTING UNUSED MANHOLE CORE REPAIR PROCEDURE: THE EXISTING 8" SEWER STUB AND BOOT IS TO BE REMOVED AND THE OLD CORE FILLED BY DOWELING IN EPOXY COATED RE_BAR, FILLING THE VOID WITH POLY_RESIN CONCRETE AND INSTALLING THE REQUIRED PROTECTIVE COATING PER TECHNICAL SPECIFICATION SECTION 09800. THE UTILITY DEPARTMENTS PREFERRED CONTRACTOR FOR THE MANHOLE CORE REPAIR IS PAINTS AND COATINGS OR RESTORATION & PROTECTIVE SOLUTIONS. THE REMOVAL OF THE 8" SEWER STUB AND MANHOLE CORE REPAIR IS REQUIRED TO BE COMPLETED AND CURED PRIOR TO THE NEW CORE BEING DRILLED.



Ⓢ MAXIMUM SLOPE CHANGE AT ANY VERTICAL ANGLE POINT NOT TO EXCEED 12%.
L SWALE & CULVERT SHALL BE FIELD DETERMINED BY THE CITY OF CAPE CORAL

G-04 TYPICAL DRIVEWAY SECTIONS

NOT TO SCALE

PIPE DIA (INCHES)	RESTRAINED LENGTH EACH SIDE OF RESTRAINED FITTING (FEET)								RESTRAINED LENGTH FOR REDUCERS											
	DIP				PVC															
	90"	45"	22-1/2"	11-1/4"	90"	45"	22-1/2"	11-1/4"	3	4	6	8	10	12	16	20	24	30	36	
4	35	15	10	5	55	25	15	10	40	-	-	-	-	-	-	-	-	-	PVC	
6	55	25	10	5	80	35	20	10	50	45	-	-	-	-	-	-	-	-	PVC	
8	65	30	15	10	90	40	20	10	75	70	40	-	-	-	-	-	-	-	PVC	
10	80	35	20	10	110	50	25	15	95	90	70	40	-	-	-	-	-	-	PVC	
12	95	40	20	10	130	55	30	15	120	115	100	75	40	-	-	-	-	-	PVC	
16	120	50	25	15	165	70	35	20	160	155	140	125	100	70	-	-	-	-	PVC	
20	150	65	30	15	200	85	40	20	200	195	185	170	150	130	75	-	-	-	PVC	
24	160	70	35	20	210	90	45	25	160	155	150	140	135	120	90	50	-	-	DIP	
30	190	80	40	20	250	105	50	25	195	190	185	180	170	160	120	105	70	-	DIP	
36	220	95	45	25	-	-	-	-	225	220	215	210	205	195	180	150	125	70	-	DIP
42	245	105	50	25	-	-	-	-	245	240	235	230	225	220	205	180	155	105	50	DIP
48	260	120	60	30	-	-	-	-	255	250	245	240	235	230	215	195	175	125	70	DIP

RESTRAINED LENGTHS FOR DEAD ENDS, BRANCHES AND HOPE TO PVC TRANSITIONS SHALL BE THE SAME AS FOR 90° BENDS. RESTRAINED LENGTHS FOR TEES SHALL BE THE SAME AS FOR 45° BENDS. IN-LINE VALVES SHALL BE RESTRAINED 20' EACH SIDE OF THE VALVE. (IF A JOINT FALLS AT THE MAXIMUM DISTANCE, IT SHALL BE RESTRAINED). TABLE BASED ON DUCTILE IRON FITTINGS. TEST PRESSURE 150 PSI.

W-105 RESTRAINED JOINT SCHEDULE

NOT TO SCALE

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3	.	.
2	AUG 31 2020	REV.
1	JUN 23 2020	REV.
NO	DATE	DESCRIPTION

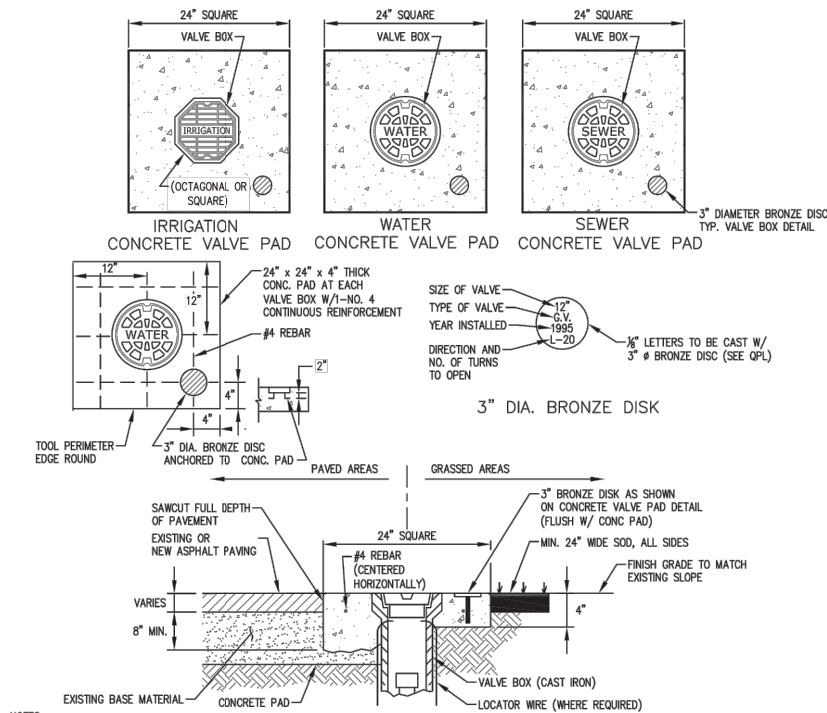


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* PROJECT MANAGEMENT * CONSTRUCTION ENGINEERING & MANAGEMENT
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PHONE: 239-332-4569 * CERTIFICATION OF AUTHORIZATION No. 3114

LEE COUNTY DIVISION OF
NATURAL RESOURCES

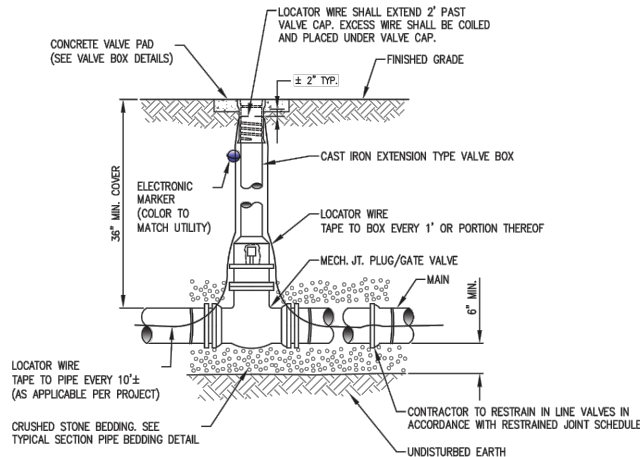
SCALE: AS-NOTED	YELLOW FEVER CREEK RESTORATION PROJECT	THESE DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED BELOW:	JOB NO.: 16-0436
DATE: OCT. 2018			
	UTILITY DETAILS	RONALD KERFOOT, P.E. P.E. LICENSE NUMBER 20768	SHEET NO.: 17
JES/RK			
		DATE:	

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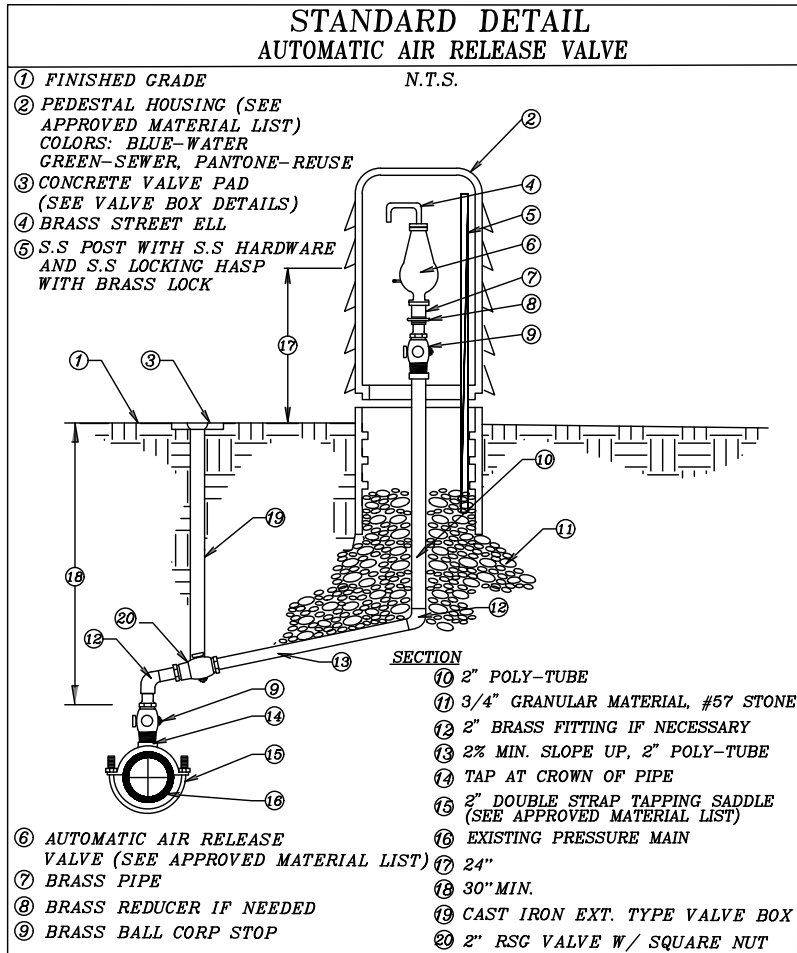
- NOTES:
- CAUTION SHOULD BE TAKEN NOT TO ALLOW ANY MATERIAL TO FALL INTO THE VALVE BOX CYLINDER. CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING ANY AND ALL MATERIAL RESULTING FROM THEIR VALVE BOX INSTALLATION AND/OR ADJUSTMENT OPERATION.
 - ELECTRONIC MARKERS SHALL BE REQUIRED AT ALL VALVES 2" OR LARGER.
 - FOR PRODUCTS AND MATERIALS SEE THE PROJECT SPECIFICATIONS AND THE CITY OF CAPE CORAL QUALIFIED PRODUCTS LIST.
 - EDGE OF VALVE PAD TO BE INSTALLED PARALLEL WITH CENTERLINE OF ROADWAY.
 - VALVE PAD SHALL NOT STRADDLE PAVEMENT EDGE.
 - FOR DEPTHS GREATER THAN 4' FROM FINISH GRADE TO VALVE NUT PROVIDE EXTENSION WITH COLLAR AS REQUIRED AND BOLT TO VALVE NUT.
 - LOCATOR WIRE SHALL EXTEND 2' PAST VALVE CAP. EXCESS WIRE SHALL BE COILED AND PLACED UNDER VALVE CAP. TAPE LOCATOR WIRE TO PIPE EVERY 10'±, AS APPLICABLE PER PROJECT.
 - INSTALL TO ADA SLOPE COMPLIANCE IF LOCATED WITHIN SIDEWALK.
 - ANY DAMAGE TO THE EXISTING ASPHALT SURFACE SHALL BE REPAIRED AS DEFINED IN THE ENGINEERING DESIGN STANDARDS.

W-210 VALVE BOX (PAVED AREAS/GRASSED AREAS)
NOT TO SCALE

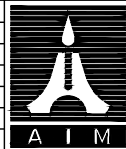


- NOTES:
- FOR DEPTHS GREATER THAN 4 FEET FROM FINISH GRADE TO VALVE NUT, PROVIDE EXTENSION WITH COLLAR AS REQUIRED AND BOLT TO VALVE NUT.
 - ELECTRONIC MARKERS SHALL BE REQUIRED AT ALL VALVES 2" OR LARGER.
 - FOR PRODUCTS AND MATERIALS SEE THE PROJECT SPECIFICATIONS AND THE CITY OF CAPE CORAL QUALIFIED PRODUCTS LIST.

W-212 GATE VALVE
NOT TO SCALE



NO	DATE	DESCRIPTION
4		
3		
2	AUG 31 2020	REV.
1	JUN 23 2020	REV.



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LEE COUNTY DIVISION OF
NATURAL RESOURCES

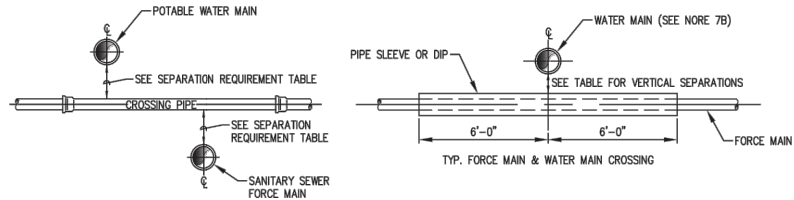
SCALE: AS-NOTED
DATE: OCT. 2018
JES/RK

YELLOW FEVER CREEK
RESTORATION PROJECT

UTILITY DETAILS

THESE DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED BELOW:
RONALD KERFOOT, P.E. P.E. LICENSE NUMBER 20768
DATE:

JOB NO.: 16-0436
SHEET NO.: 18

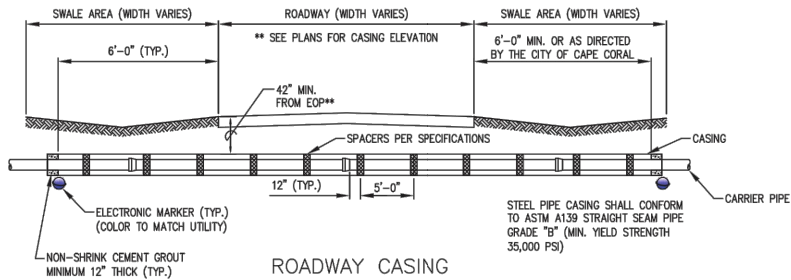
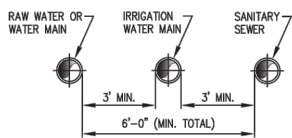


HORIZONTAL AND VERTICAL SEPARATION REQUIREMENTS									
PROPOSED UTILITY	POTABLE WATER		IRRIGATION WATER		SANITARY SEWER (GRAVITY & F.M.)		STORM DRAIN		ACCEPTABLE VARIANCES
	HORIZ.	VERT.	HORIZ.	VERT.	HORIZ.	VERT.	HORIZ.	VERT.	
POTABLE WATER	-	12"	3' 0/0	12"	6' 0/0	12"	3' 0/0	12"	SEE NOTE NO. 7
IRRIGATION WATER	3' 0/0	12"	12"	12"	3' 0/0	12"	5' 0/0	12"	
SANITARY SEWER (GRAVITY & F.M.)	6' 0/0	12"	3' 0/0	12"	3' 0/0	12"	5' 0/0	12"	
RAW WATER	3' 0/0	12"	3' 0/0	12"	6' 0/0	12"	3' 0/0	12"	

0/0 - DENOTES OUTSIDE OF PIPE TO OUTSIDE OF PIPE

- NOTES:
- THE TABLE REPRESENTS THE MINIMUM SEPARATION REQUIREMENTS AS DESCRIBED IN F.D.E.P. RULES OF THE FLORIDA ADMINISTRATIVE CODE (FAC). THESE SEPARATION REQUIREMENTS SHALL APPLY BETWEEN NEWLY PROPOSED UTILITY LINES AND EXISTING OR PROPOSED UTILITY LINES. F.A.C. 62-555.314
 - FOR THE PURPOSE OF THIS TABLE IRRIGATION WATER SHALL MEAN UNRESTRICTED PUBLIC ACCESS REUSE WATER AS DEFINED BY F.A.C. 62-610. OTHER TYPES OF RECLAIMED WATER ARE CONSIDERED RAW SEWAGE AND SEPARATIONS LISTED FOR SANITARY SEWER SHALL APPLY.
 - ALL SEPARATION DISTANCES ARE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE UNLESS OTHERWISE SPECIFIED. CRITERION PRODUCING GREATEST CLEARANCE SHALL BE USED.
 - MINIMUM DISTANCE BETWEEN PIPE AND ANY STRUCTURES TO BE 12" O/O.
 - FOR VERTICAL SEPARATIONS ON WATER MAINS, 12" IS REQUIRED, HOWEVER, 6" IS ACCEPTABLE IF THE WATER MAIN IS ABOVE THE GRAVITY SANITARY SEWER OR STORM DRAIN, UPON RECEIVING PRIOR APPROVAL FROM THE CITY OF CAPE CORAL.
 - FOR SEPARATIONS NOT INVOLVING WATER MAINS, 12" IS REQUIRED, HOWEVER, 6" IS ACCEPTABLE UPON RECEIVING PRIOR APPROVAL FROM CONSTRUCTION MANAGER.
 - ACCEPTABLE VARIANCES:
 - WHERE HORIZONTAL SEPARATION IS NOT ATTAINABLE, DUCTILE IRON PIPE OR PVC ENCASEMENT MUST BE USED UNTIL MINIMUM CLEARANCE IS REGAINED. THE PIPE JOINTS SHALL BE STAGGERED AS FOLLOWS: 1) 3' BETWEEN WM AND VACUUM SEWERS, STORM SEWERS, AND RECLAIMED WATER MAIN JOINTS; 2) 6' BETWEEN WM AND GRAVITY SANITARY SEWER, SANITARY FORCE MAINS, SANITARY SEWER AND NON-REGULATED RECLAIMED WATER MAINS.
 - FOR SANITARY SEWERS OR STORM DRAINS CROSSING UNDER MAINS WHERE 6" MINIMUM VERTICAL SEPARATION IS NOT ATTAINABLE; FOR IRRIGATION AND FORCE MAINS, USE ONE FULL LENGTH OF PVC ENCASED PIPE CENTERED AT THE POINT OF CROSSING; AND FOR THE WATER MAIN, USE ONE FULL LENGTH OF PIPE CENTERED AT THE POINT OF CROSSING WITH NO LESS THAN 6' BETWEEN ANY TWO JOINTS.
 - IF MINIMUM DEPTH OF COVER IS NOT MAINTAINED, SPECIAL PROTECTION OR PIPE MATERIAL UPGRADE MAY BE REQUIRED PER CITY OF CAPE CORAL SPECIFICATIONS.
 - MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS & GRAVITY-TYPE SEWER MAY BE REDUCED TO 3' WHERE BOTTOM OF WATER MAIN IS 6" ABOVE TOP OF SEWER.
 - FOR SANITARY SEWERS CROSSING OVER WATER MAINS, A MINIMUM VERTICAL DISTANCE OF 12 INCHES AND THE CRITERIA FOR MINIMUM SEPARATION OF JOINTS IN 7(B) ABOVE MUST BE MAINTAINED.
 - NO WATER PIPE SHALL PASS THROUGH, OR COME IN CONTACT WITH, ANY PART OF A SANITARY MANHOLE OR STRUCTURE.
 - A MINIMUM VERTICAL SEPARATION OF 6" SHALL BE KEPT BETWEEN SANITARY SEWER SERVICES AND MAIN LINE PIPES.
 - UTILITY LINES SHALL HAVE A MINIMUM 3' VERTICAL AND HORIZONTAL SEPARATION FROM ELECTRICAL AND FIBER OPTIC LINES. WHEN FACILITY/UTILITY LINES WILL CROSS ELECTRICAL OR FIBER OPTIC LINES, HAND DIGGING SHALL BE REQUIRED TO LOCATE THESE LINES.

W-102 UTILITY SEPERATION REQUIREMENTS
NOT TO SCALE

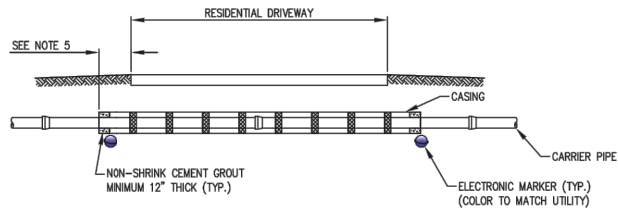


- NOTES:
- SPACERS REQUIRED FOR ALL JACK AND BORE INSTALLATIONS.
 - CARRIER PIPE SHALL BE RESTRAINED PER SPECIFICATIONS.
 - CASING SHALL BE SIZED PER THE STEEL CASING PIPE SCHEDULE SHOWN ABOVE.
 - EXTEND CASING 6 FEET MINIMUM BEYOND EDGE OF PAVEMENT AND/OR BACK OF CURB FOR LEE COUNTY DOT MAINTAINED ROW AND 8 FEET FOR STATE ROADWAYS.
 - ELECTRONIC MARKERS SHALL BE PLACED AT THE ENDS OF THE CASING PIPE, ALL CHANGES OF DIRECTION, START AND END OF VERTICAL DEFLECTIONS, AND SERVICES AT THE CORPORATION STOP OR SEWER SERVICE WYE. MARKERS SHALL BE LOCATED AT A MAXIMUM DEPTH OF 4 FEET. THE MARKERS SHALL NOT BE PLACED IN CONTACT WITH DIP FITTINGS.
- POTABLE WATER ----- COLOR BLUE
SANITARY SEWER ----- COLOR GREEN
SANITARY SEWER FORCE MAIN ----- COLOR GREEN
IRRIGATION/REUSE WATER ----- COLOR LAVENDER
6. FOR PRODUCTS AND MATERIALS SEE THE PROJECT SPECIFICATIONS AND THE CITY OF CAPE CORAL QUALIFIED PRODUCTS LIST.

W-220 PIPE CASING
NOT TO SCALE

STEEL CASING PIPE SCHEDULE			
CARRIER PIPE NOMINAL DIAMETER	STEEL CASING PIPE NOMINAL DIAMETER	ROADWAY CASING WALL THICKNESS	DRIVEWAY CASING WALL THICKNESS
4"	14"	0.250"	0.188"
6"	16"	0.281"	0.219"
8"	18"	0.312"	0.250"
10"	22"	0.344"	0.281"
12"	24"	0.375"	0.312"
16"	30"	0.469"	0.406"
20"	36"	0.531"	0.469"
24"	42"	0.625"	0.562"
30"	48"	0.688"	0.625"

NOTE:
ALL STEEL CASING JOINTS SHALL BE WELDED PER AWS STANDARDS



- NOTES:
- SPACERS REQUIRED FOR ALL CASING INSTALLATIONS.
 - CARRIER PIPE SHALL BE RESTRAINED PER SPECIFICATIONS.
 - CASING PIPE MAY BE STEEL (PER TABLE) OR HDPE SDR11.
 - CASING PIPE SHALL BE SIZED PER THE STEEL CASING PIPE SCHEDULE SHOWN.
 - EXTEND CASING 3 FEET MINIMUM BEYOND EDGE OF DRIVEWAY PAVEMENT AND ASSOCIATED BORDERS.
 - ELECTRONIC MARKERS SHALL BE PLACED AT THE ENDS OF THE CASING PIPE, ALL CHANGES OF DIRECTION, START AND END OF VERTICAL DEFLECTIONS, AND SERVICES AT THE CORPORATION STOP OR SEWER SERVICE WYE. MARKERS SHALL BE LOCATED AT A MAXIMUM DEPTH OF 4 FEET. THE MARKERS SHALL NOT BE PLACED IN CONTACT WITH DIP FITTINGS.
- POTABLE WATER ----- COLOR BLUE
SANITARY SEWER ----- COLOR GREEN
SANITARY SEWER FORCE MAIN ----- COLOR GREEN
IRRIGATION/REUSE WATER ----- COLOR LAVENDER
7. FOR PRODUCTS AND MATERIALS SEE THE PROJECT SPECIFICATIONS AND THE CITY OF CAPE CORAL QUALIFIED PRODUCTS LIST.
8. THE COST OF CASING INSTALLATION SHALL BE INCLUDED IN THE COST OF DRIVEWAY RESTORATION.

NO	DATE	DESCRIPTION
4	.	.
3	.	.
2	AUG 31 2020	REV.
1	JUN 23 2020	REV.



AIM Engineering & Surveying, Inc.
CIVIL ENGINEERING * LAND SURVEYING * S.U.E. * TRANSPORTATION * UTILITIES
* PROJECT MANAGEMENT * CONSTRUCTION ENGINEERING & MANAGEMENT
2161 FOWLER ST. FORT MYERS, FL. 33901 * E-Mail: engineering@aimengr.com
PHONE: 239-332-4569 * CERTIFICATION OF AUTHORIZATION No. 3114

LEE COUNTY DIVISION OF
NATURAL RESOURCES

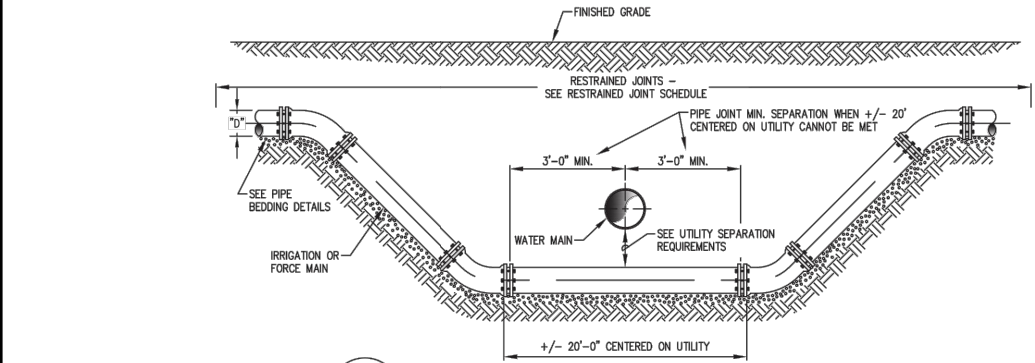
SCALE: AS-NOTED
DATE: OCT. 2018
JES/RK

YELLOW FEVER CREEK
RESTORATION PROJECT

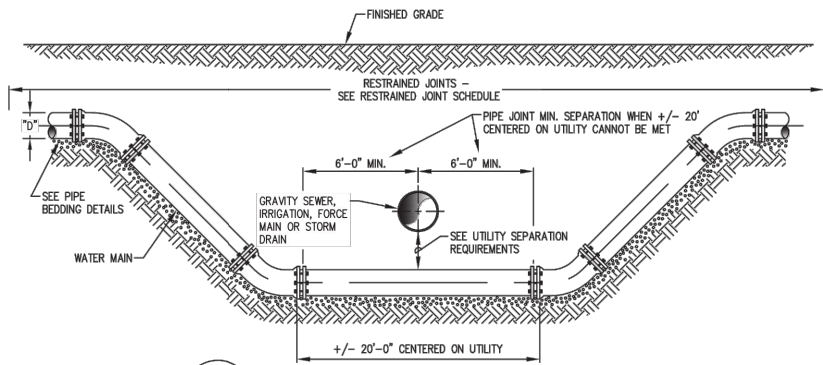
UTILITY DETAILS

THESE DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED BELOW:
RONALD KERFOOT, P.E. P.E. LICENSE NUMBER 20768
DATE:

JOB NO.: 16-0436
SHEET NO.: 19



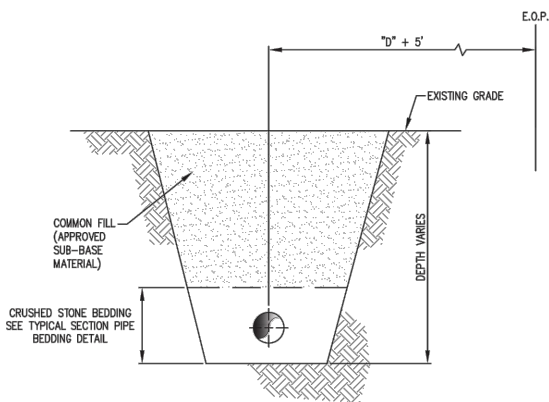
W-104 UTILITY CROSSING FOR IRRIGATION AND FORCE MAINS
NOT TO SCALE



W-104 UTILITY CROSSING FOR WATER MAINS
NOT TO SCALE

NOTES:

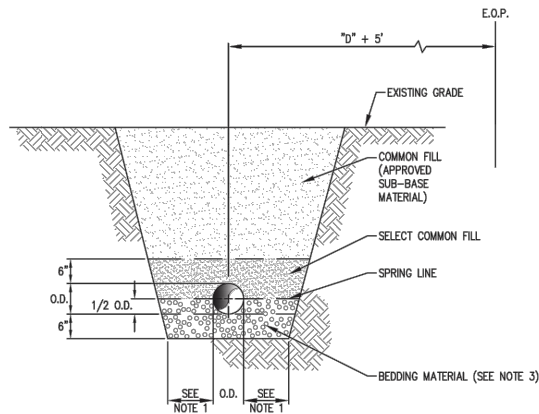
- ELECTRONIC MARKERS SHALL BE PLACED AT ALL CHANGES OF DIRECTION, START AND END OF VERTICAL DEFLECTIONS, AND SERVICES AT THE CORPORATION STOP OR SEWER SERVICE WYE. MARKERS SHALL BE LOCATED AT A MAXIMUM DEPTH OF 4 FEET. THE MARKERS SHALL NOT BE PLACED IN CONTACT WITH DIP FITTINGS. THE MARKERS SHALL BE:
POTABLE WATER ----- COLOR BLUE
SANITARY SEWER ----- COLOR GREEN
SANITARY SEWER FORCE MAIN ----- COLOR GREEN
IRRIGATION/REUSE WATER ----- COLOR LAVENDER
- FOR PRODUCTS AND MATERIALS SEE THE PROJECT SPECIFICATIONS AND THE CITY OF CAPE CORAL QUALIFIED PRODUCTS LIST.
- ALL DIVERSIONS SHALL BE CONSTRUCTED USING DUCTILE IRON PIPE.



NOTE:

- COMMON FILL (APPROVED SUB-BASE MATERIAL) SHALL BE COMPACTED TO AT LEAST 95% MAXIMUM DENSITY (AASHTO T-180). WHEN THE CENTERLINE OF THE TRENCH IS WITHIN A DISTANCE OF "D" + 5' FROM THE EDGE OF A PAVED ROAD OR DRIVEWAY, COMMON FILL (APPROVED SUB-BASE MATERIAL) (LBR 40) MINIMUM SHALL BE USED AND COMPACTED TO AT LEAST 98% MAXIMUM DENSITY (AASHTO T-180).

W-231 TYPICAL SECTION: BACKFILL - UNPAVED AREAS
NOT TO SCALE



NOTES:

- DIMENSION VARIES WITH PIPE DIAMETER:
10" MAX. FOR NOMINAL PIPE DIAMETER OF 24" OR LESS.
12" MAX. FOR NOMINAL PIPE DIAMETER OF MORE THAN 24" AND LESS THAN 42".
24" MAX. FOR NOMINAL PIPE DIAMETER OF 42" OR MORE.
- COMMON FILL (APPROVED SUB-BASE MATERIAL) SHALL BE COMPACTED TO AT LEAST 95% MAXIMUM DENSITY (AASHTO T-180). WHEN THE CENTERLINE OF THE TRENCH IS WITHIN A DISTANCE OF "D" + 5' FROM THE EDGE OF A PAVED ROAD OR DRIVEWAY, COMMON FILL (APPROVED SUB-BASE MATERIAL) (LBR 40) MINIMUM SHALL BE USED AND COMPACTED TO AT LEAST 98% MAXIMUM DENSITY (AASHTO T-180).
- BEDDING MATERIAL SHALL BE FDOT #57 STONE IF IN OR BELOW THE GROUNDWATER TABLE, OR FDOT #89 STONE IF ABOVE THE GROUNDWATER TABLE.
- BEDDING FOR GRAVITY SEWER SHALL BE #57 STONE.

W-233 TYPICAL SECTION: PVC BEDDING
NOT TO SCALE

NO	DATE	DESCRIPTION
4	.	.
3	.	.
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LEE COUNTY DIVISION OF NATURAL RESOURCES

SCALE: AS-NOTED	YELLOW FEVER CREEK RESTORATION PROJECT	THESE DRAWINGS ARE NOT APPROVED UNLESS SIGNED & SEALED BELOW:	JOB NO.: 16-0436
DATE: OCT. 2018			
JES/RK	UTILITY DETAILS	RONALD KERFOOT, P.E. P.E. LICENSE NUMBER 20768 DATE:	SHEET NO.: 20