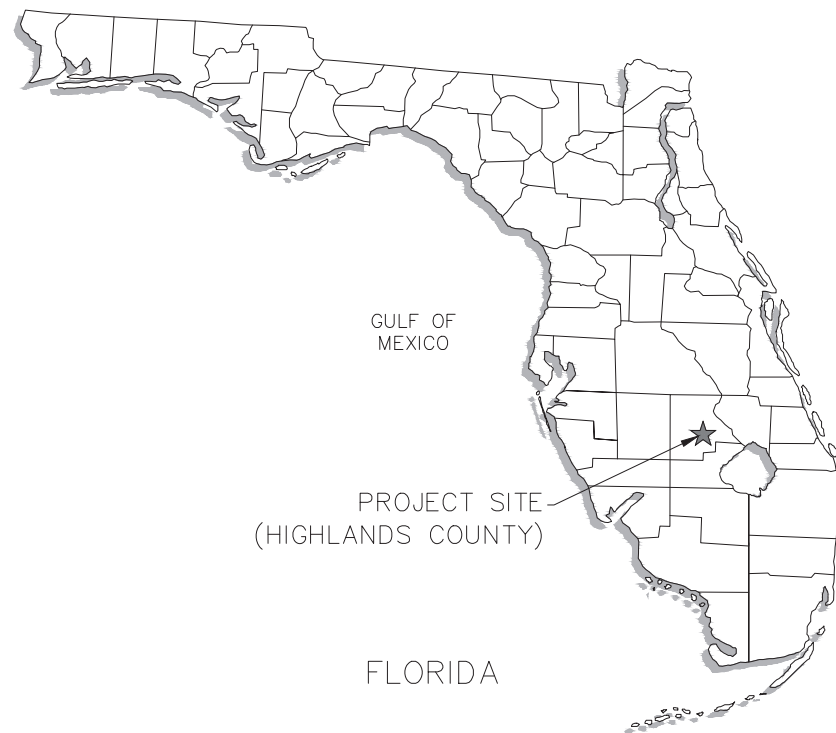
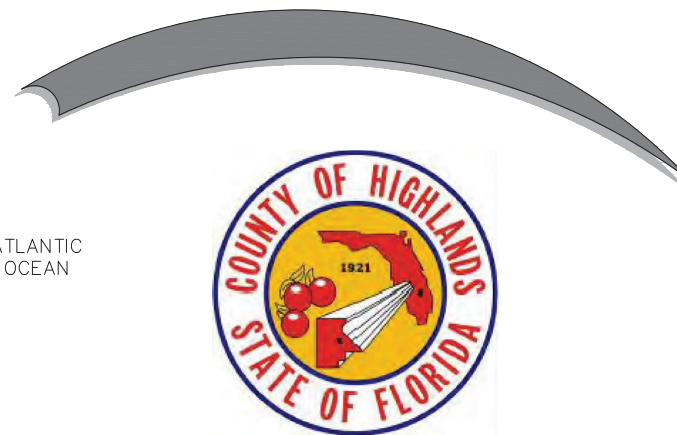


HIGHLANDS COUNTY BOARD OF COUNTY COMMISSIONERS ISTOKPOGA MARSH WATER IMPOUNDMENT DISTRICT IMPOUNDMENT PHASE II



VICINITY MAP
NTS



MARCH 2018

REVISED JULY 14, 2022

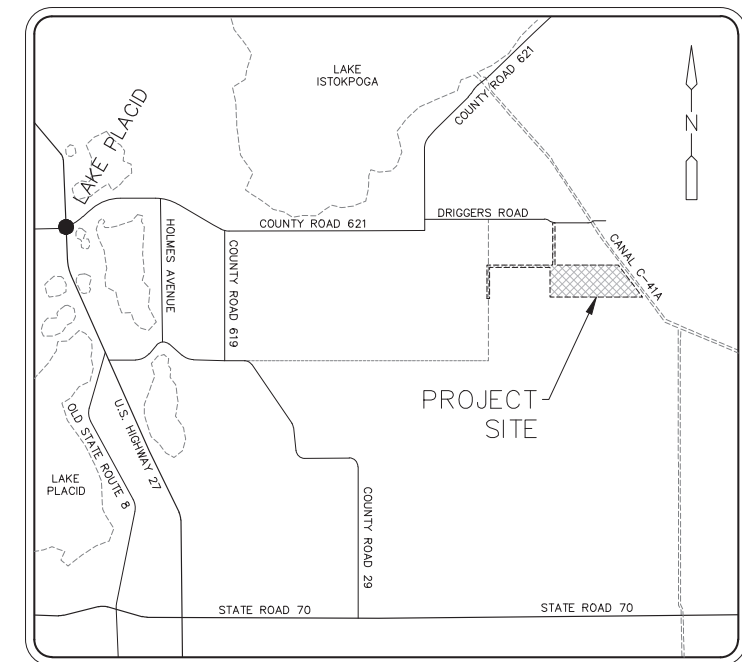
PREPARED BY:

ROYAL CONSULTING SERVICES, INC.

RCS PROJECT NO. 0202-02-ES



Royal Consulting Services, Inc.
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FL COA No. 7290



LOCATION MAP
NTS

PROFESSIONAL ENGINEER
STATE OF FLORIDA

GENERAL
CIVIL

Richard A. Jones
FL P.E. No. 31118

LEGEND

	BASELINE
	BENCHMARK
	CENTERLINE
	CONTOUR (MAJOR) - EXISTING
	CONTOUR (MINOR) - EXISTING
	CONTOUR (MAJOR) - PROPOSED
	CONTOUR (MINOR) - PROPOSED
	CONTROL STRUCTURE - EXISTING
	CONTROL STRUCTURE - PROPOSED
	CULVERT - EXISTING
	CULVERT - PROPOSED
	EASEMENT BOUNDARY
	FENCE - EXISTING
	FENCE - EXISTING TO BE REMOVED
	FENCE - PROPOSED
	FLOATING TURBIDITY BARRIER
	IRRIGATION LINE - EXISTING
	IRRIGATION LINE - PROPOSED
	LIMITS OF CONSTRUCTION
	OVERHEAD POWER LINE - EXISTING
	OVERHEAD POWER LINE - PROPOSED
	POTABLE WATER MAIN
	PROPERTY BOUNDARY
	REUSE WATER MAIN
	SILT FENCE
	SPOT ELEVATION - EXISTING
	SPOT ELEVATION - PROPOSED
	UNDERGROUND POWER LINE - EXISTING
	UNDERGROUND POWER LINE - PROPOSED
	WASTEWATER MAIN
	WETLAND

GENERAL NOTES

1. LINES AND GRADES

- a. ALL ELEVATIONS ARE REFERRED TO NORTH AMERICAN VERTICAL DATUM OF 1988. HORIZONTAL CONTROL / COORDINATES SHOWN HEREIN REFER TO STATE PLANE COORDINATE SYSTEM OF 1983 WITH THE 1999 ADJUSTMENT FOR FLORIDA EAST ZONE.
- b. TOPOGRAPHIC SURVEY WAS PERFORMED BY:

F.R.S. AND ASSOCIATES, INC.	SURVEY DATES:
2257 VISTA PARKWAY, SUITE 4	01-20-16 03-14-17
WEST PALM BEACH, FL 33411	02-01-16 03-27-17
(561) 478-7178	03-10-17 01-08-18
- c. ALL STATIONING AND OFFSETS REFER TO CONSTRUCTION BASELINE UNLESS OTHERWISE NOTED ON PLANS.
- d. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LINES AND GRADES SHOWN ON THE PLANS, OR AS GIVEN BY THE ENGINEER. THE FULL RESPONSIBILITY FOR KEEPING ALIGNMENT AND GRADE SHALL REST UPON THE CONTRACTOR.
- e. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UTILITIES. FURTHER, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGES TO UTILITIES, ABOVE OR BELOW GROUND, WHICH MAY BE CAUSED BY THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING THE WORK. CALL 1-800-432-4770 (72 HOURS BEFORE DIGGING)
- f. THE CONTRACTOR SHALL CONTACT THE ENGINEER'S OFFICE IMMEDIATELY UPON FINDING ANY CONFLICTS DURING CONSTRUCTION ON ANY IMPROVEMENTS SHOWN ON THE DRAWINGS.
- g. THE CONTRACTOR SHALL SAFEGUARD ALL POINTS, STAKES, GRADE MARKS, MONUMENTS, AND BENCHMARKS MADE OR ESTABLISHED ON THE WORK, BEAR THE COST OF REESTABLISHING THEM IF DISTURBED, BEAR THE ENTIRE EXPENSE OF RECTIFYING WORK IMPROPERLY INSTALLED DUE TO NOT MAINTAINING OR PROTECTING, OR TO REMOVING WITHOUT AUTHORIZATION SUCH ESTABLISHED POINTS, STAKES, AND MARKS.
- h. THE LIMITS OF CONSTRUCTION SHOWN ON THE PLANS SHALL BE STRICTLY OBSERVED BY THE CONTRACTOR. ALL INGRESS, EGRESS, AND TRAFFIC PATTERNS ON THE SITE SHALL BE WITHIN THE LIMITS OF CONSTRUCTION SHOWN ON THE DRAWINGS.

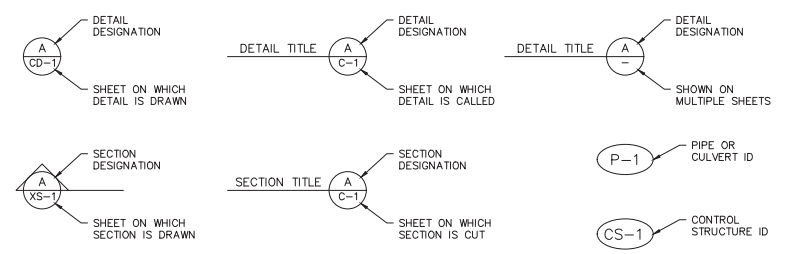
2. SPECIFICATIONS & PLANS NOTES

- a. THE SPECIFICATIONS HEREIN SHALL BECOME AN INTEGRAL PART OF THE ENGINEERING DESIGN PLANS. CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE CONTENT AND CONDITIONS OF THE DESIGN PLANS AND SPECIFICATIONS. IF QUESTIONS ARISE DURING THE COURSE OF HIS WORK, THE CONTRACTOR SHOULD SEEK CLARIFICATION FROM THE ENGINEER.

ABBREVIATIONS

AC	ACRE, ACRES
AL, ALUM	ALUMINUM
BM	BENCHMARK
BMP	BEST MANAGEMENT PRACTICE
BOT	BOTTOM
CBC	CONCRETE BOX CULVERT
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CS	CONTROL STRUCTURE
D/S	DOWNSTREAM
DIA, DIAM	DIAMETER
DIM	DIMENSION
EL, ELEV	ELEVATION
ER	EDGE OF ROAD
FBR	FLASHBOARD RISER
FT	FOOT, FEET
GND	GROUND
GPM	GALLONS PER MINUTE
HDPE	HIGH DENSITY POLYETHYLENE
IN	INCH, INCHES
INV	INVERT
IRR	IRRIGATION
MAX	MAXIMUM
MIN	MINIMUM
NTS	NOT TO SCALE
OC	ON CENTER
PNT	POINT
PVC	POLYVINYL CHLORIDE
R, RAD	RADIUS
R/W, ROW	RIGHT OF WAY
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
SQ. FT., SF	SQUARE FEET
SS	SIDE SLOPE
STA	STATION
TOB	TOP OF BANK
TOE	TOE OF SLOPE
TOP	TOP OF PIPE
TYP	TYPICAL
U/S	UPSTREAM
XS, X-SEC	CROSS SECTION

DETAIL AND SECTION NUMBERING SYSTEM



CONSTRUCTION SPECIFICATION TABLES

ITEM	TOLERANCE		UNITS
	+	-	
ROADS	DNA	0.0	%
DIKES AND EMBANKMENTS	DNA	0.0	%
CULVERTS, RISERS	DNA	0.0	%
DIKES AND EMBANKMENTS	DNA	0.0	FEET
TOP ELEVATION	1.0	0.0	FEET
SIDE SLOPES	0.5:1	0.25:1	FT. / FT.
DITCHES	0.0	1.0	FEET
BOTTOM WIDTH	10.0	10.0	%
SIDE SLOPES	0.5:1	0.25:1	NONE
SPECIFIED TOP WIDTH	10.0	10.0	%
NOT SPECIFIED TOP WIDTH	AS NEEDED FOR BOTTOM & SIDE SLOPE SPECIFICATION		
FARM ROADS	DNA	0.0	FEET
CURVE RADIUS	DNA	0.0	FEET
TOP WIDTH	DNA	0.0	FEET
ELEVATION	DNA	0.0	FEET
SHELL ROCK THICKNESS	DNA	0.0	FEET
SLUICE GATES	0.0	0.2	FEET
INVERT ELEVATION	0.0	0.2	FEET
CREST ELEVATION	10.0	10.0	%
CROSS SECTION AREA	10.0	10.0	%
DNA = NO APPLICABLE TOLERANCE SEE GENERAL NOTE 7b BELOW			

DESCRIPTION	BACKFILL TYPE	COMPACTION
SECONDARY FARM ROADS, DITCH FILL, ROAD SIDE SLOPE, & FARMSTEAD GROUNDS	RANDOM	CLASS A OR C
SITE GRADING, LOW AREA FILL, & LAND SMOOTHING	UNCLASSIFIED	NONE
SEE GENERAL NOTE 6f BELOW		

- b. DETAIL DRAWINGS, CALLOUTS, AND NOTES ON THE PLAN SHEETS SHALL HAVE PRIORITY OVER STATEMENTS OR CONDITIONS IN THE SPECIFICATIONS. FULL-SCALE (24x36) PLANS SHALL BE USED FOR ALL CONSTRUCTION, LAYOUT, INSPECTION, AND CERTIFICATION.
- c. THE NAMES OF PROPOSED MANUFACTURERS, MATERIAL SUPPLIERS, AND DEALERS ON THESE PLANS SHALL INFER "ENGINEER APPROVED OR EQUAL" UNLESS OTHERWISE STATED.
- 3. CONTRACTOR INSTRUCTION
 - a. FOR THE SCOPE OF WORK WHICH IS COVERED BY THESE PLANS AND SPECIFICATIONS, THE FOLLOWING DEFINITIONS SHALL APPLY:
 - i. OWNER - THE ENTITY WHICH HAS IMMEDIATE CONTROL OF THE PROPERTY AT WHICH THE WORK WILL BE COMPLETED. THIS MAY BE THE ACTUAL LAND OWNER, OR BE A PERSON ASSIGNED BY THE OWNER TO REPRESENT HIM OR A LESSEE.
 - ii. ENGINEER - THE ENGINEER FOR THIS PROJECT IS ROYAL CONSULTING SERVICES, INC. UNLESS OTHERWISE INDICATED ON THE PLANS.
 - iii. CONTRACTOR - THE CONTRACTOR OR CONTRACTORS REFERS TO THE ENTITY THAT WILL BE COMPLETING THE SCOPE OF WORK INDICATED BY THESE DESIGN PLANS AND SPECIFICATIONS. THE CONTRACTOR MAY BE THE OWNER IF HE IS SELF-PERFORMING OR IS ACTING AS A GENERAL BY COORDINATING SUBCONTRACTORS TO DO THE WORK.
 - iv. SUBCONTRACTOR - THIS REFERS TO THE CONTRACTORS WHO ARE COMPLETING A PORTION OF THE WORK AND HAS A CONTRACT OR AGREEMENT WITH THE CONTRACTOR AS DEFINED ABOVE. ALTHOUGH SUBCONTRACTORS HAVE A SEPARATE AGREEMENT IN NO WAY DOES THEIR SUBCONTRACTOR AGREEMENT SUPERCEDE THE DESIGN PLANS, SPECIFICATIONS, AND TERMS PRESENTED HEREIN.
 - b. CONTRACTORS SHALL BE REQUIRED TO MEET THE PROJECT'S MINIMUM STANDARDS FOR LICENSING AND INSURANCE COVERAGE AS DEFINED IN THE INVITATION TO BID AND CONTRACT DOCUMENTS. PROOF OF COMPLIANCE OF THIS REQUIREMENT WILL BECOME PART OF THE CONTRACTOR'S AGREEMENT AND SHALL BE AVAILABLE FOR INSPECTION BY THE OWNER AND MUST REMAIN IN GOOD STANDING FOR THE TERM OF THE WORK AND THE WARRANTY PERIOD.
 - c. THE CONTRACTOR SHALL FURNISH ALL LABOR, SUPERINTENDENCE, SAFETY PROFESSIONAL, MATERIALS, PLANT, POWER, LIGHT, HEAT, FUEL, WATER, TOOLS, APPLIANCES, EQUIPMENT, SUPPLIES, AND OTHER MEANS OF CONSTRUCTION NECESSARY OR PROPER FOR PERFORMING AND COMPLETING THE WORK. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS RELATED TO THE SCOPE OF WORK. THE CONTRACTOR SHALL PERFORM AND COMPLETE THE WORK IN THE MANNER BEST CALCULATED TO PROMOTE RAPID CONSTRUCTION CONSISTENT WITH SAFETY OF LIFE AND PROPERTY AND TO THE SATISFACTION OF THE ENGINEER, AND IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL CLEAN UP THE WORK SITE AND MAINTAIN IT DURING AND AFTER CONSTRUCTION, UNTIL ACCEPTED, AND SHALL DO ALL WORK AND PAY ALL COSTS INCIDENTAL THERETO. THE CONTRACTOR

- d. INSTALLATION OF ALL STORM SEWERS, INLETS, MANHOLES, CULVERTS, AND APPURTENANCES SHALL BE ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE SECTIONS OF THE UNITED STATES DEPARTMENTS OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE STANDARD SPECIFICATIONS, OR AS INDICATED ON THE DRAWINGS.
- 6. EARTHWORK
 - a. ALL EXCAVATION ACTIVITIES WILL BE IN COMPLIANCE WITH OSHA 29 CFR 1926 SUBPART P. ALL OPEN EXCAVATIONS SHALL BE ADEQUATELY SAFEGUARDED BY PROVIDING TEMPORARY BARRICADES, CAUTION SIGNS, LIGHTS, AND OTHER MEANS TO PREVENT ACCIDENTS TO PERSONS, AND DAMAGE TO PROPERTY. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, PROVIDE SUITABLE AND SAFE BRIDGES AND OTHER CROSSINGS FOR ACCOMMODATING TRAVEL BY WORKMEN.
 - b. EROSION CONTROL AND SEDIMENTATION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO BEGINNING OF ANY CLEARING, GRUBBING, DEMOLITION, OR CONSTRUCTION. THEY SHALL BE INSTALLED TO THE LIMITS SHOWN IN THE DRAWING, AS REQUIRED IN THE SPECIFICATIONS AND IN ACCORDANCE WITH ALL REGULATORY AGENCY REQUIREMENTS. SEE EROSION CONTROL NOTES ON SHEET CD-12.
 - c. THE CONTRACTOR IS REQUIRED TO PREPARE AND SUBMIT A POLLUTION PREVENTION PLAN PER F.D.E.P. AT THE CONTRACTOR'S EXPENSE, WHERE REQUIRED.
 - d. THE CONTRACTOR SHALL OBTAIN A PERMIT FOR BURNING FROM THE DEPARTMENT OF FORESTRY. (863-462-5163)
 - e. DITCH BOTTOM SEGMENT DEEPER THAN THE SPECIFIED MINIMUM ELEVATIONS SHALL NOT BE FILLED. SIDE SLOPES SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS.
 - f. EARTHWORK SHALL BE AS SPECIFIED ON THE PLANS SHEETS, IN THE SPECIFICATIONS SECTION OF THIS PLANSET, AND ACCORDING TO EARTHWORK SPECIFICATIONS TABLE (2) ABOVE.
- 7. STRUCTURES
 - a. UNLESS OTHERWISE INDICATED ON THE PLANS SHEETS, INSTALL ALL CULVERTS AND RISERS WITH THE UPSTREAM INVERT MATCHING THE DITCH OR SWALE BOTTOM. SLOPE THE PIPE DOWN TOWARD THE OUTLET AT A RATE OF 1/8" PER 10' OF PIPE. CONTRACTOR SHALL FOLLOW CULVERT MANUFACTURER'S RECOMMENDATIONS FOR MINIMUM PIPE BURIAL DEPTH OF BURIAL. CONTRACTOR TO ADJUST AS NECESSARY LENGTHS SPECIFIED FOR CULVERTS ON THE PLANS SHEETS TO FIT ACTUAL FIELD CONDITIONS, HOWEVER CULVERT DIAMETERS AND MATERIALS SHALL BE AS SHOWN.
 - b. SEE TOLERANCES TABLE (1) ABOVE FOR ALLOWABLE VARIATION FROM DESIGN OF DIMENSIONS AND ELEVATIONS FOR CULVERT AND WATER CONTROL STRUCTURE INSTALLATIONS. THE TOLERANCES FOUND IN THE TABLE ARE STANDARDS FOR CONSTRUCTION OF DESIGNS HEREIN. NO FINAL APPROVAL WILL BE MADE OUTSIDE OF THESE TOLERANCES WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER OF RECORD.

SHEET INDEX

SHEET	TITLE	REV	DATE
G-0	COVER		
G-1	INDEX, NOTES, LEGEND, AND ABBREVIATIONS		
G-2	SITE OVERVIEW		
G-3	IMPOUNDMENT KEY MAP		
G-4	ACCESS ROAD & CHANNEL B KEY MAP		
G-5	IMPOUNDMENT BASELINE STATIONING	1	7/2/19
G-6	CHANNEL B BASELINE STATIONING		
G-7	GEOTECHNICAL ANALYSIS - LOCATIONS		
G-8	GEOTECHNICAL ANALYSIS - GENERAL NOTES		
G-9	GEOTECHNICAL ANALYSIS - BORING PROFILES		
G-10	GEOTECHNICAL ANALYSIS - BORING PROFILES		
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C-2	CIVIL SITE PLAN - IMPOUNDMENT		
C-3	CIVIL SITE PLAN - IMPOUNDMENT		
C-4	CIVIL SITE PLAN - IMPOUNDMENT		
C-5	CIVIL SITE PLAN - IMPOUNDMENT		
C-6	CIVIL SITE PLAN - IMPOUNDMENT		
C-7	CIVIL SITE PLAN - IMPOUNDMENT		
C-8	CIVIL SITE PLAN - IMPOUNDMENT		
C-9	CIVIL SITE PLAN - ACCESS ROAD		
C-10	CIVIL SITE PLAN - CHANNEL B DIVERSION		
C-11	CIVIL SITE PLAN - CHANNEL B DIVERSION		
C-12	CIVIL SITE PLAN - CHANNEL B DIVERSION		
C-13	CIVIL SITE PLAN - CHANNEL B DIVERSION		
SD-1	SITE DETAIL - PUMP STATION	2	07/14/22
SD-2	SITE DETAIL - CULVERTS AND STRUCTURES		
SD-3	SITE DETAIL - CULVERTS AND STRUCTURES		
SD-4	SITE DETAIL - CULVERTS AND STRUCTURES		
SD-5	SITE DETAIL - CULVERTS AND STRUCTURES		
CD-1	PUMP STATION DETAILS	2	07/14/22
CD-2	PUMP STATION DETAILS	2	07/14/22
CD-3	PRECAST SUMP DETAILS	2	07/14/22
CD-4	SLUICE GATE DETAILS	2	07/14/22
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CD-9	MISCELLANEOUS DETAILS		
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CD-11	RISER DETAILS & STRUCTURE INFORMATION		
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XS-1	CROSS SECTIONS		
XS-2	CROSS SECTIONS		
XS-3	CROSS SECTIONS		
XS-4	CROSS SECTIONS		
XS-5	CROSS SECTIONS		
XS-6	CROSS SECTIONS		

Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

No.	Date:

HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPOUNDMENT DISTRICT
 IMPOUNDMENT PHASE II
 FLORIDA
 HIGHLANDS COUNTY

INDEX, ABBREVIATIONS,
 GENERAL NOTES & LEGEND

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SHEET
 G-1

Job: 0202-02-ES
Scale: As Shown
Date: 3-5-2018
Design: R.A.J.
Drawn: J.J.D.
Checked: D.C.R.
Approved: B.L.R.

Revision

No. Date

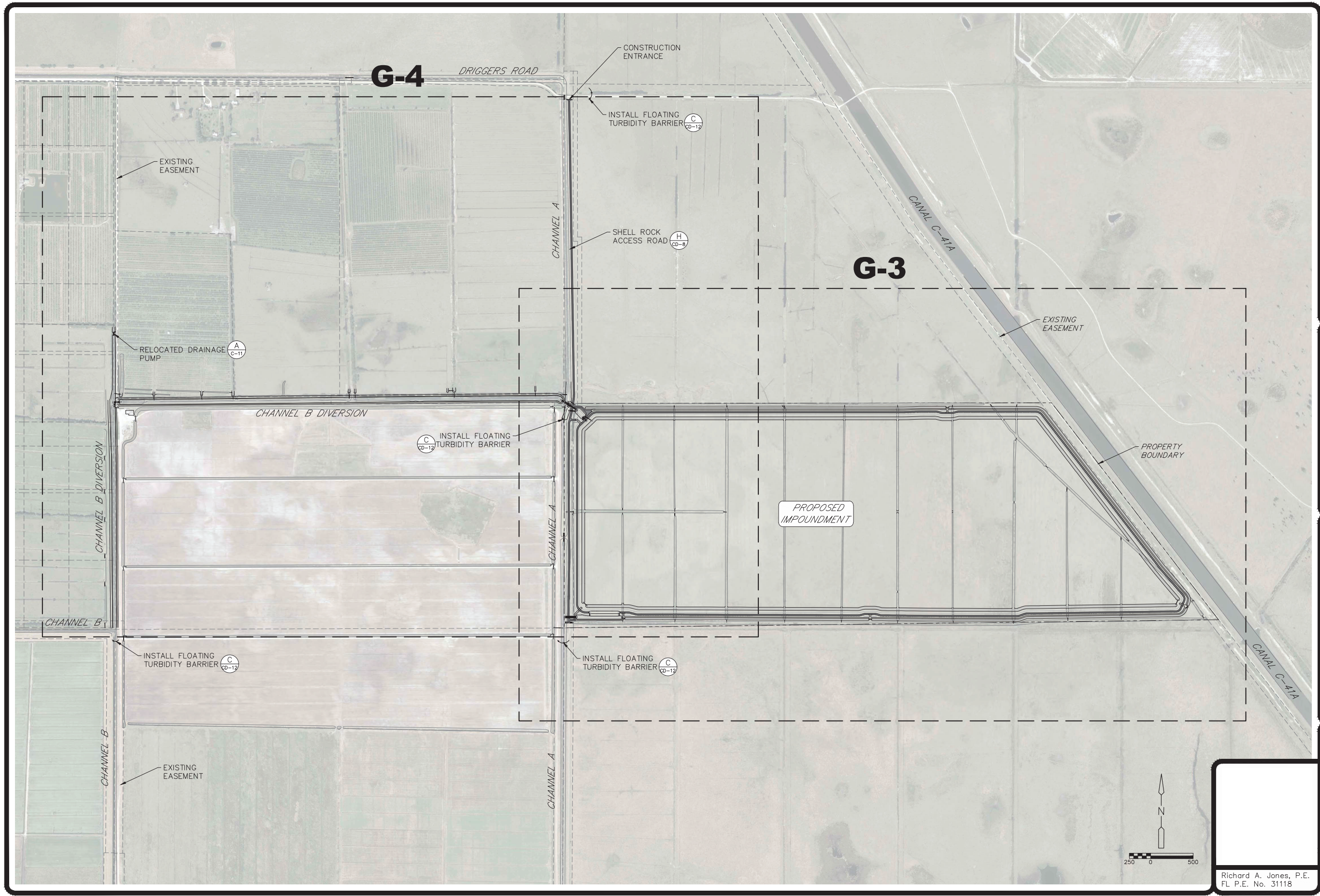
HIGHLANDS COUNTY BCC
ISTOKPOGA MARSH WATER
IMPOUNDMENT DISTRICT
IMPOUNDMENT PHASE II
FLORIDA
HIGHLANDS COUNTY

SITE OVERVIEW

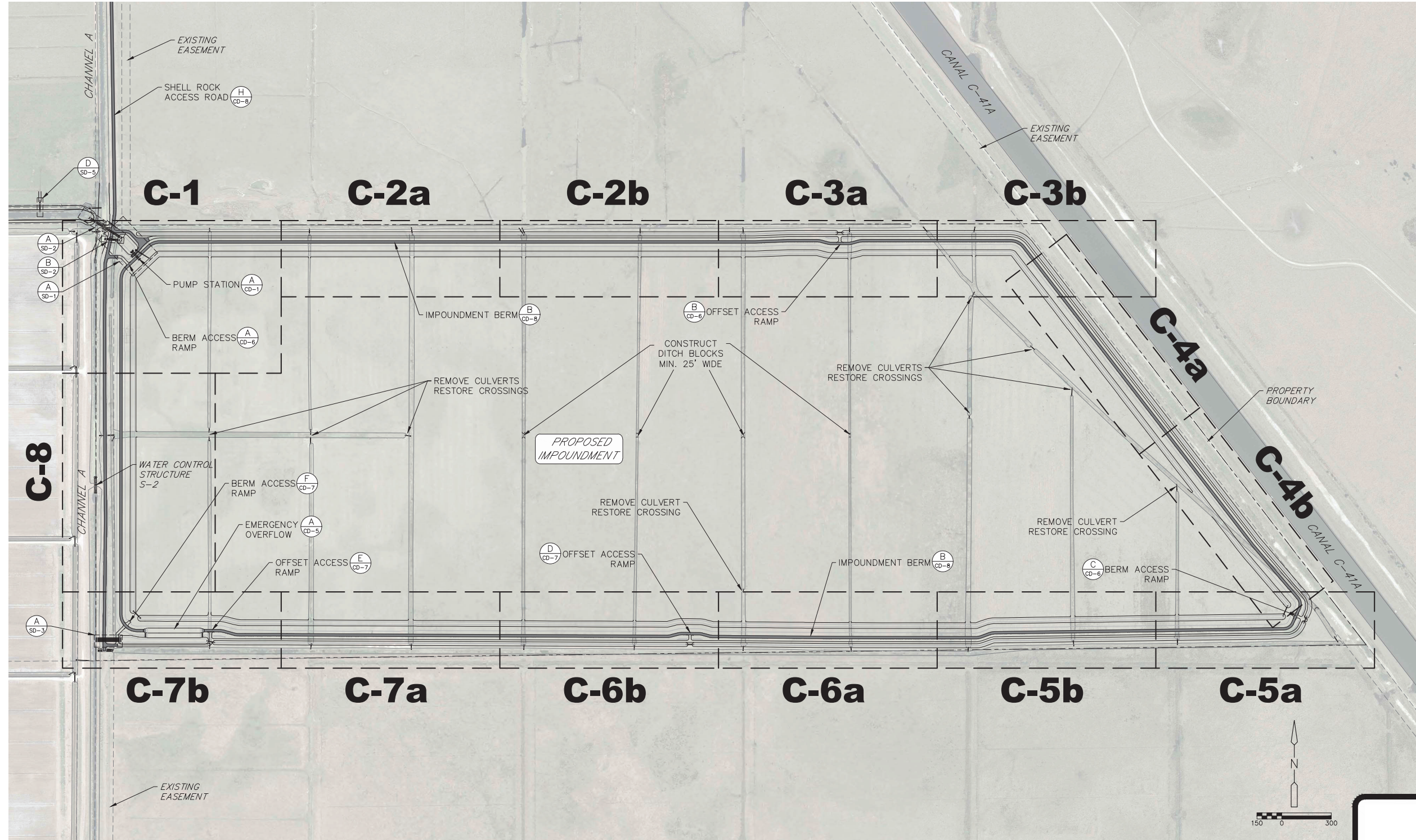
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FL CCR No. 7290

SHEET
G-2

Richard A. Jones, P.E.
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Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
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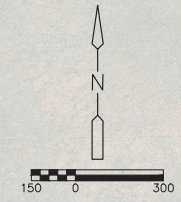


No.	Date	Revision

HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPOUNDMENT DISTRICT
 IMPOUNDMENT PHASE II
 FLORIDA
 HIGHLANDS COUNTY

IMPOUNDMENT
 KEY MAP

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Richard A. Jones, P.E.
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SHEET
G-3

Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

Revision

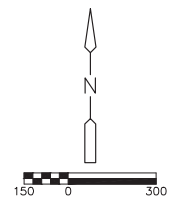
No. Date

HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPOUNDMENT DISTRICT
 IMPOUNDMENT PHASE II
 FLORIDA
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ACCESS ROAD AND
 CHANNEL B DIVERSION
 KEY MAP

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SHEET
G-4



Richard A. Jones, P.E.
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Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
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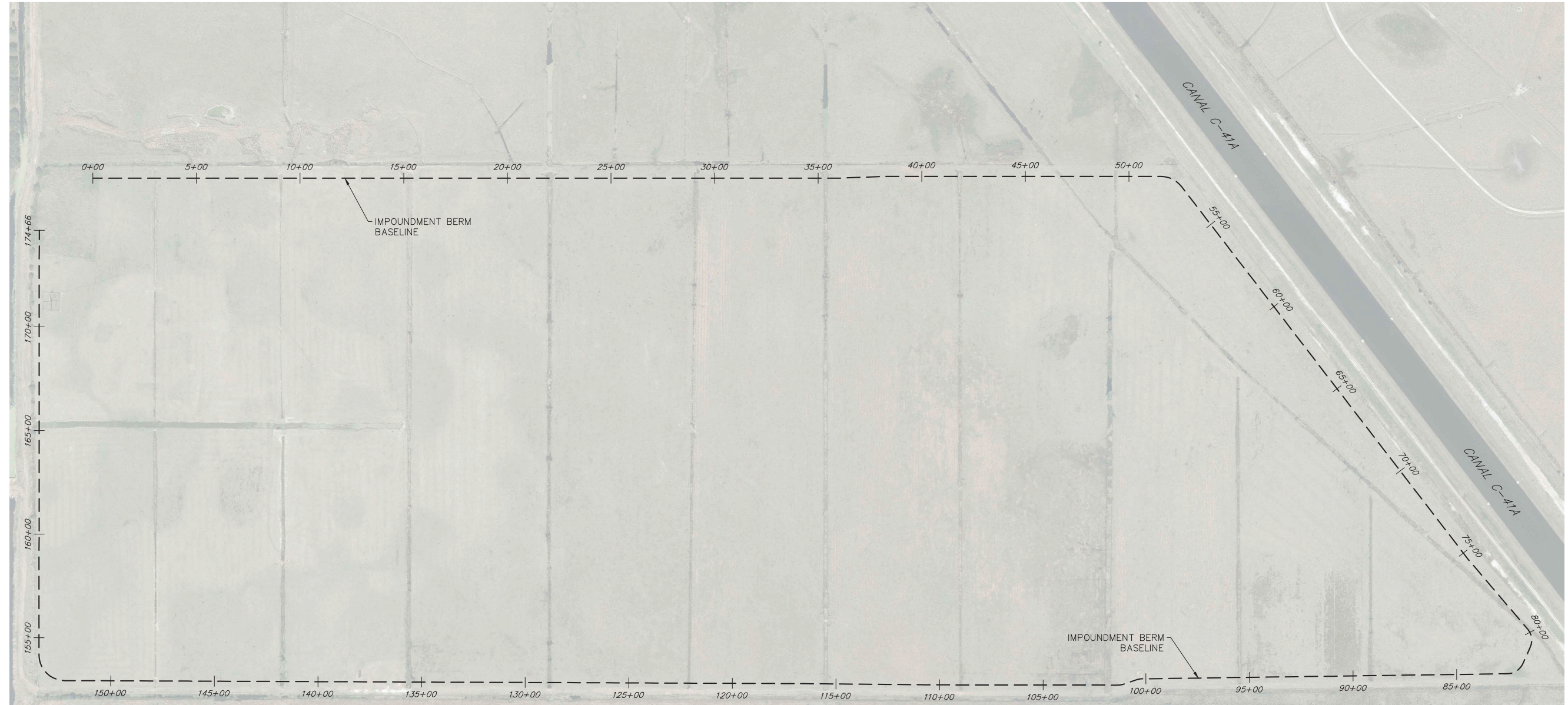
No.	Date	Revision
1	7/22/19	STATION 150+00 AVERAGE ELEVATION

HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPOUNDMENT DISTRICT
 IMPOUNDMENT PHASE II
 FLORIDA
 HIGHLANDS COUNTY

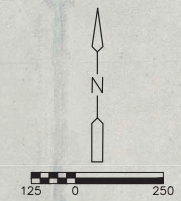
IMPOUNDMENT
 BASELINE STATIONING

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SHEET
 G-5

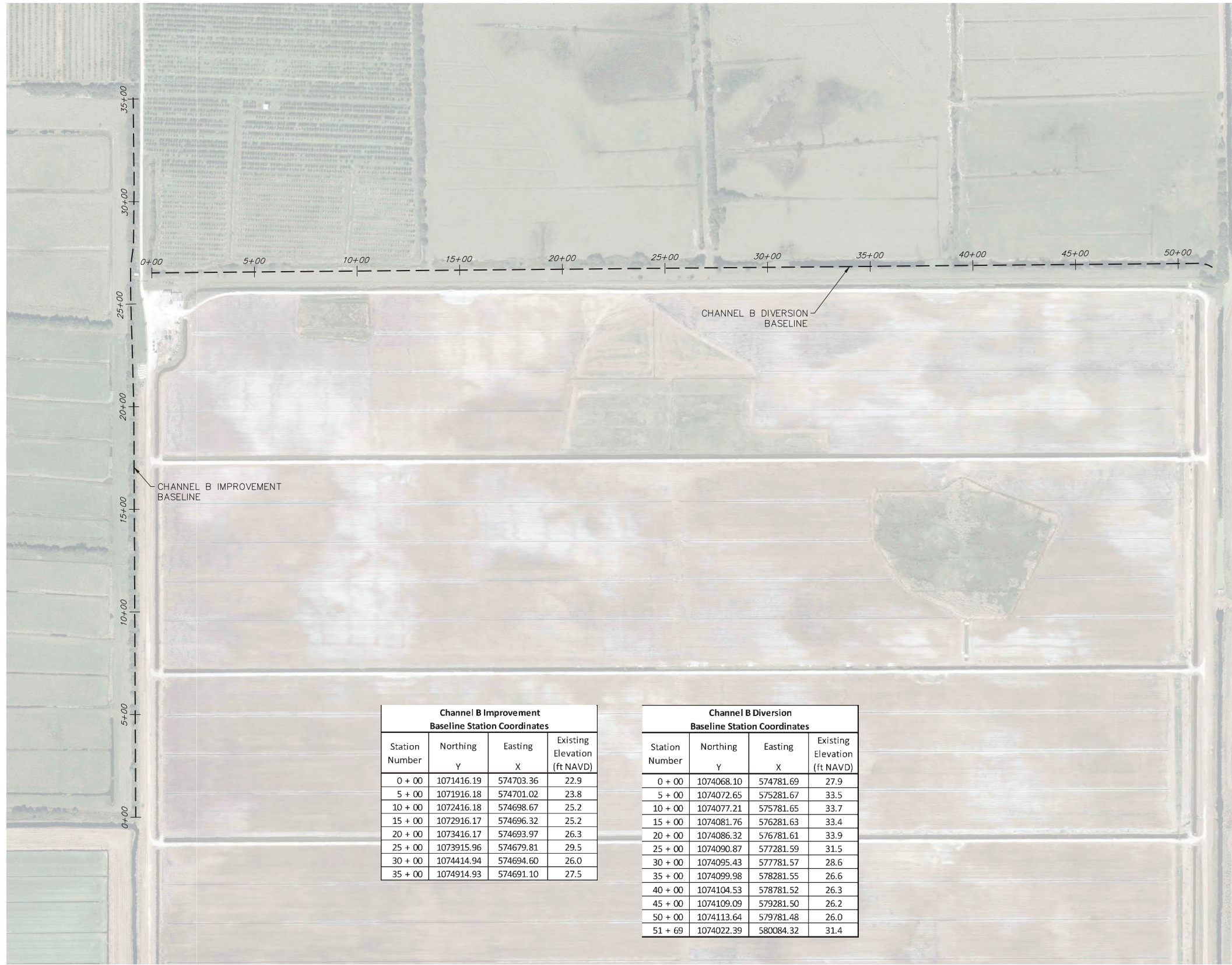


Impoundment Berm Baseline Station Coordinates											
Station Number	Northing Y	Easting X	Existing Elevation (ft NAVD)	Station Number	Northing Y	Easting X	Existing Elevation (ft NAVD)	Station Number	Northing Y	Easting X	Existing Elevation (ft NAVD)
0 + 00	1073972.72	580377.06	30.5	60 + 00	1073352.41	586076.19	31.1	120 + 00	1071534.30	583463.11	28.9
5 + 00	1073972.72	580877.06	30.9	65 + 00	1072956.03	586380.95	31.0	125 + 00	1071536.34	582963.11	28.8
10 + 00	1073972.72	581377.06	31.0	70 + 00	1072559.64	586685.72	31.4	130 + 00	1071538.38	582463.11	29.3
15 + 00	1073972.72	581877.06	30.8	75 + 00	1072163.26	586990.48	30.8	135 + 00	1071540.43	581963.12	28.6
20 + 00	1073972.73	582377.06	29.9	80 + 00	1071780.28	587311.61	29.3	140 + 00	1071542.47	581463.12	30.9
25 + 00	1073972.73	582877.06	29.5	85 + 00	1071577.20	586958.38	29.5	145 + 00	1071544.51	580963.13	30.8
30 + 00	1073972.73	583377.06	29.2	90 + 00	1071570.21	586458.43	29.1	150 + 00	1071546.55	580463.13	30.0
35 + 00	1073972.73	583877.06	28.9	95 + 00	1071563.22	585958.48	28.6	155 + 00	1071754.81	580117.08	29.7
40 + 00	1073980.59	584376.91	29.0	100 + 00	1071556.24	585458.53	29.4	160 + 00	1072254.81	580117.37	30.0
45 + 00	1073980.59	584876.91	29.6	105 + 00	1071526.23	584963.08	28.4	165 + 00	1072754.81	580117.66	31.7
50 + 00	1073980.58	585376.91	30.7	110 + 00	1071526.91	584463.08	28.7	170 + 00	1073254.81	580117.95	31.0
55 + 00	1073748.80	585771.43	31.0	115 + 00	1071531.48	583963.10	28.9	174 + 66	1073720.94	580118.22	30.8



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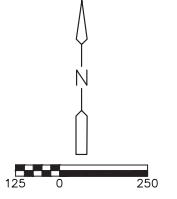


CHANNEL B IMPROVEMENT
 BASELINE

CHANNEL B DIVERSION
 BASELINE

Channel B Improvement Baseline Station Coordinates			
Station Number	Northing Y	Easting X	Existing Elevation (ft NAVD)
0 + 00	1071416.19	574703.36	22.9
5 + 00	1071916.18	574701.02	23.8
10 + 00	1072416.18	574698.67	25.2
15 + 00	1072916.17	574696.32	25.2
20 + 00	1073416.17	574693.97	26.3
25 + 00	1073915.96	574679.81	29.5
30 + 00	1074414.94	574694.60	26.0
35 + 00	1074914.93	574691.10	27.5

Channel B Diversion Baseline Station Coordinates			
Station Number	Northing Y	Easting X	Existing Elevation (ft NAVD)
0 + 00	1074068.10	574781.69	27.9
5 + 00	1074072.65	575281.67	33.5
10 + 00	1074077.21	575781.65	33.7
15 + 00	1074081.76	576281.63	33.4
20 + 00	1074086.32	576781.61	33.9
25 + 00	1074090.87	577281.59	31.5
30 + 00	1074095.43	577781.57	28.6
35 + 00	1074099.98	578281.55	26.6
40 + 00	1074104.53	578781.52	26.3
45 + 00	1074109.09	579281.50	26.2
50 + 00	1074113.64	579781.48	26.0
51 + 69	1074022.39	580084.32	31.4



No.	Date	Revision

HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
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 IMPROVEMENT PHASE II
 FLORIDA
 HIGHLANDS COUNTY

CHANNEL B
 BASELINE STATIONING

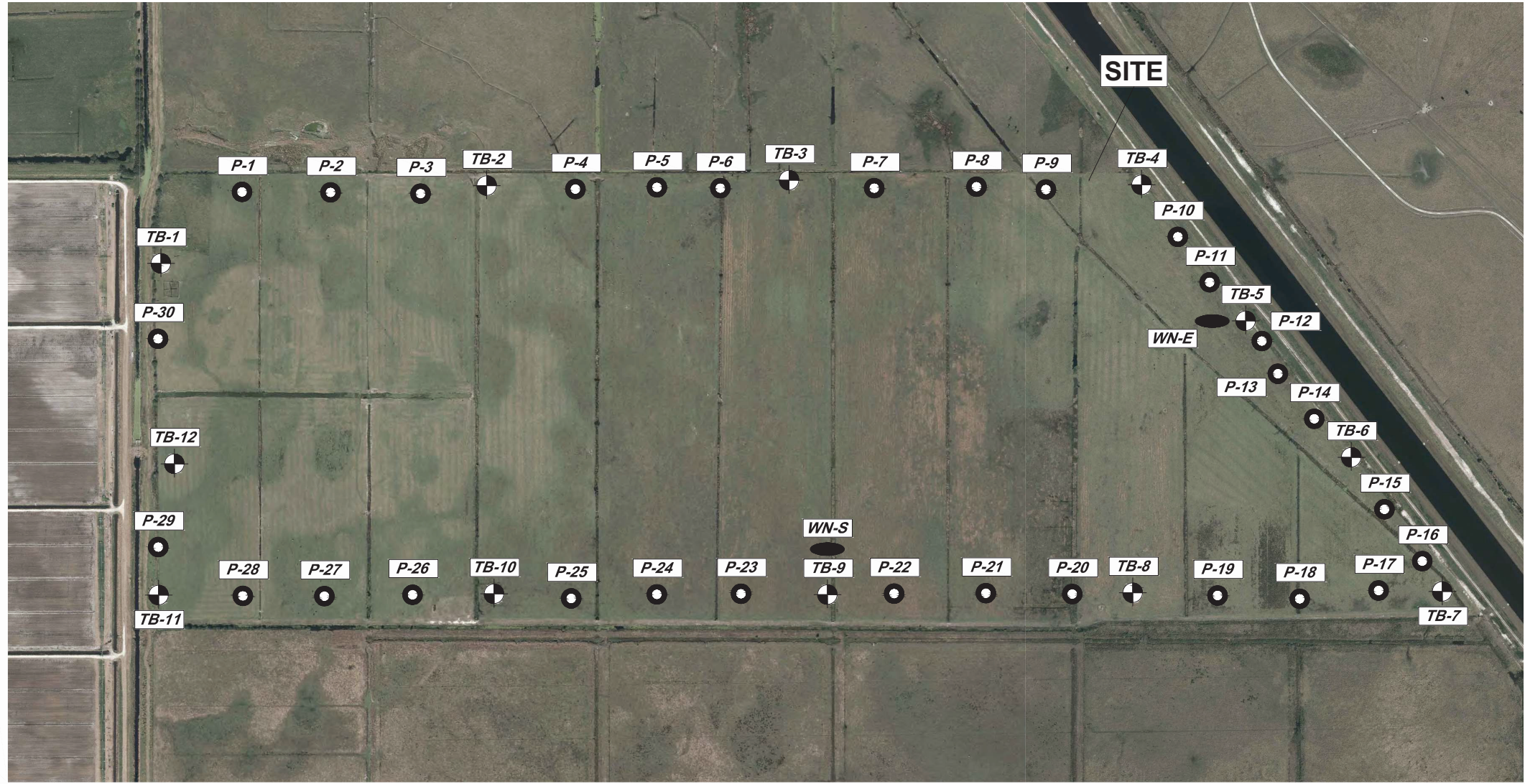
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SHEET
 G-6




Richard A. Jones, P.E.
 FL P.E. No. 31118

Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

No.	Date	Revision

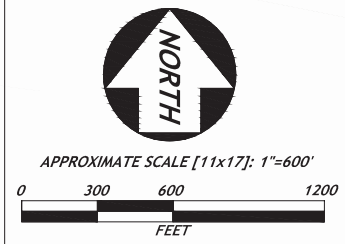


LEGEND & NOTES

- TB-#**

 Approximate Standard Penetration Test boring
- P-#**

 Approximate Muck Probe Location
- WN-#**

 Approximate Well/Piezometer Nest Location

Shown and noted field work locations are approximate. All field work locations were located using the provided site plan, obtained aerial photographs, existing site features, and a combination of a WAAS-enabled handheld GPS instrument and tape/wheel measurements. The shown field work locations should be considered accurate only to the degree implied by the method of measurement used.

Figure No. 4 Source: GoogleEarthPro and provided impoundment layout (CAD)



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FIELD WORK LOCATION PLAN

GEOTECHNICAL ENGINEERING EVALUATION
 ISTOKPOGA MARSH WATER IMPROVEMENT DISTRICT (IMWID)
 PROPOSED CELL NO. 2 MINOR ABOVE-GROUND IMPOUNDMENT
 HIGHLANDS COUNTY, FLORIDA

Drawn by: PGA	Date: January 2017
Checked by: DPA	Date: January 2017
AACE File No: 16-112	Figure No. 4

HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPROVEMENT DISTRICT
 IMPOUNDMENT PHASE II
 HIGHLANDS COUNTY FLORIDA

GEOTECHNICAL ANALYSIS
 FIELD WORK LOCATION PLAN
 (BY OTHERS)

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G-7

Peter G. Andersen, P.E.
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 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

Revision

No. Date

HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPROVEMENT DISTRICT II
 IMPOUNDMENT PHASE II
 FLORIDA
 HIGHLANDS COUNTY

GEOTECHNICAL ANALYSIS
 GENERAL NOTES
 (BY OTHERS)

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SOIL BORING, SAMPLING AND TESTING METHODS

(abbreviated version for project specific methods and soil conditions)

GENERAL

Andersen Andre Consulting Engineers, Inc. (AAACE) borings describe subsurface conditions only at the locations drilled and at the time drilled. They provide no information about subsurface conditions below the bottom of the boreholes. At locations not explored, surface conditions that differ from those observed in the borings may exist and should be anticipated.

The information reported on our boring logs is based on our drillers' logs and on visual examination in our laboratory of disturbed soil samples recovered from the borings. The distinction shown on the logs between soil types is approximate only. The actual transition from one soil to another may be gradual and indistinct.

The groundwater depth shown on our boring logs is the water level the driller observed in the borehole when it was drilled. These water levels may have been influenced by the drilling procedures, especially in borings made by rotary drilling with bentonitic drilling mud. An accurate determination of groundwater level requires long-term observation of suitable monitoring wells. Fluctuations in groundwater levels throughout the year should be anticipated.

The absence of a groundwater level on certain logs indicates that no groundwater data is available. It does not mean that groundwater will not be encountered at that boring location at some other point in time.

HAND AUGER BORINGS

Hand auger borings are used, if soil conditions are favorable, when the soil strata are to be determined within a shallow (approximately 5-foot [1.5m]) depth or when access is not available to power drilling equipment. A 3-inch (75mm) diameter hand bucket auger with a cutting head is simultaneously turned and pressed into the ground. The bucket auger is retrieved at approximately 6-inch (0.15m) interval and its contents emptied for inspection. On occasion post-hole diggers are used, especially in the upper 3 feet (1m) or so. Penetrometer probings can be used in the upper 5 feet (1.5m) to determine the relative density of the soils. The soil sample obtained is described and representative samples put in bags or jars and transported to the AAACE soils laboratory for classification and testing, if necessary.

STANDARD PENETRATION TEST

The Standard Penetration Test (SPT) is a widely accepted method of in situ testing of foundation soils (ASTM D-1586). A 2-foot (0.6m) long, 2-inch (50mm) O.D. split-barrel sampler attached to the end of a string of drilling rods is driven 24 inches (0.60m) into the ground by successive blows of a 140-pound (63.5 kg) hammer freely dropping 30 inches (0.76m). The number of blows needed for each 6 inches (0.15m) increments penetration is recorded. The sum of the blows required for penetration of the middle two 6-inch (0.15m) increments of penetration constitutes the test result of N-value. After the test, the sampler is extracted from the ground and opened to allow visual description of the retained soil sample. The N-value has been empirically correlated with various soil properties allowing a conservative estimate of the behavior of soils under load. The following tables relate N-values to a qualitative description of soil density for cohesionless soils:

Cohesionless Soils: N-Value	Description
0 to 4	Very loose
4 to 10	Loose
10 to 30	Medium dense
30 to 50	Dense
Above 50	Very dense

Cohesive Soils: N-Value	Description	Qu
0 to 2	Very soft	Below 0.25 tsf (25 kPa)
2 to 4	Soft	0.25 to 0.50 tsf (25 to 50 kPa)
4 to 8	Medium stiff	0.50 to 1.0 tsf (50 to 100 kPa)
8 to 15	Stiff	1.0 to 2.0 tsf (100 to 200 kPa)
15 to 30	Very stiff	2.0 to 4.0 tsf (200 to 400 kPa)
Above 30	Hard	Above 4.0 tsf (400 kPa)

The tests are usually performed at 5 foot (1.5m) intervals. However, more frequent or continuous testing is done by AAACE through depths where a more accurate definition of the soils is required. The test holes are advanced to the test elevations by rotary drilling with a cutting bit, using circulating fluid to remove the cuttings and hold the fine grains in suspension. The circulating fluid, which is bentonitic drilling mud, is also used to keep the hole open below the water table by maintaining an excess hydrostatic pressure inside the hole. In some soil deposits, particularly highly pervious ones, flush-coupled casing must be driven to just above the testing depth to keep the hole open and/or prevent the loss of circulating fluid. After completion of a test borings, the hole is kept open until a steady state groundwater level is recorded. The hole is then sealed by backfilling, either with accumulated cuttings or lean cement.

Representative split-spoon samples from each sampling interval and from different strata are brought to our laboratory in air-tight jars for classification and testing, if necessary. Afterwards, the samples are discarded unless prior arrangement have been made.

SFWMD EXFILTRATION TESTS (USUAL CONDITION TEST)

In order to estimate the hydraulic conductivity of the upper soils, constant head or falling head exfiltration tests can be performed. These tests are performed in accordance with methods described in the South Florida Water Management District (SFWMD) Permit Information Manual, Volume IV. In brief, for the "Usual Condition Test", a 6 to 9 inch diameter hole is augered to depths of about 5 to 7 feet; the bottom one foot is filled with 57-stone; and a 6-foot long slotted PVC pipe is lowered into the hole. The distance from the groundwater table and to the ground surface is recorded and the hole is then saturated for 10 minutes with the water level maintained at the ground surface.

If a constant head test is performed, the rate of pumping will be recorded at fixed intervals of 1 minute for a total of 10 minutes, following the saturation period.

LABORATORY TEST METHODS

Soil samples returned to the AAACE soils laboratory are visually observed by a geotechnical engineer or a trained technician to obtain more accurate description of the soil strata. Laboratory testing is performed on selected samples as deemed necessary to aid in soil classification and to help define engineering properties of the soils. The test results are presented on the soil boring logs at the depths at which the respective sample was recovered, except that grain size distributions or selected other test results may be presented on separate tables, figures or plates as discussed in this report. The soil descriptions shown on the logs are based upon visual-manual procedures in accordance with local practices. Soil classification is performed in general accordance with the Unified Soil Classification System (ASTM D-2487) and is also based on visual-manual procedures.

THE PROJECT SOIL DESCRIPTION PROCEDURE FOR SOUTHEAST FLORIDA

For use with the ASTM D-2487 Unified Soil Classification System

CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES

BOULDERS (>12" [300 MM]) and COBBLES (3" [75 MM] TO 12" [300 MM]):

GRAVEL: Coarse Gravel: 3/4" (19 mm) to 3" (75 mm)
 Fine Gravel: No. 4 (4.75 mm) Sieve to 3/4" (19 mm)

Descriptive adjectives:
 0 - 5% - no mention of gravel in description
 5 - 15% - trace
 15 - 29% - some
 30 - 49% - gravelly (shell, limerock, cemented sands)

SANDS:

COARSE SAND: No. 10 (2 mm) Sieve to No. 4 (4.75 mm) Sieve
MEDIUM SAND: No. 40 (425 Fm) Sieve to No. 10 (2 mm) Sieve
FINE SAND: No. 200 (75 Fm) Sieve to No. 40 (425 Fm) Sieve

Descriptive adjectives:
 0 - 5% - no mention of sand in description
 5 - 15% - trace
 15 - 29% - some
 30 - 49% - sandy

SILT/CLAY: < #200 (75Fm) Sieve

SILTY OR SILT: PI < 4
SILTY CLAYEY OR SILTY CLAY: 4 # PI # 7
CLAYEY OR CLAY: PI > 7

Descriptive adjectives:
 < - 5% - clean (no mention of silt or clay in description)
 5 - 15% - slightly
 16 - 35% - clayey, silty, or silty clayey
 36 - 49% - very

ORGANIC SOILS:

Organic Content	Descriptive Adjectives	Classification
0 - 2.5%	Usually no mention of org.	See Above
2.6 - 5%	slightly organic	add "with organic fines" to group name
5 - 30%	organic	SM with organic fines Organic Silt (OL) Organic Clay (OC) Organic Silt (OH) Organic Clay (OH)

NOTES:

TB-# STANDARD PENETRATION TEST (SPT) BORING [ASTM D1586]
 N SPT RESISTANCE IN BLOWS PER FOOT
 X.X' GROUNDWATER TABLE (GWT) MEASURED ON THE DATE DRILLED
 N.E. NOT ENCOUNTERED
 EOB END OF BORING
 BLS BELOW LAND SURFACE
 SP, SP-SM, ETC: UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)
 USCS GROUPS DETERMINED BY VISUAL CLASSIFICATION, EXCEPT FOR NOTED LABORATORY TEST RESULTS.
 MC NATURAL MOISTURE CONTENT IN PERCENT [ASTM D2216]
 OC ORGANIC CONTENT IN PERCENT [ASTM D2974]
 -200 PERCENT PASSING NO. 200 SIEVE SIZE (PERCENT FINES) [ASTM D1140]

SPT BORING DATA
 DRILL CREW: CL/DTH/AAACE
 DRILL RIGS: CME-45/MOBILE B-57
 DRILL METHOD: ROTARY-WASH W. BENTONITE DRILLING SLURRY
 SPT DATA:
 SPOON I.D. = 1.375"
 SPOON O.D. = 2.0"
 HAMMER DROP = 30"
 HAMMER WEIGHT = 140 lbs.
 HAMMER TYPE = MANUAL

SOIL LEGEND:

- ORGANICS/PEAT
- FINE SAND W. T/O SILT/CLAY (SP)
- SLIGHTLY SILTY FINE SAND (SP-SM)
- SILTY FINE SAND (SM)
- SLIGHTLY CLAYEY FINE SAND (SP-SC)
- CLAYEY FINE SAND (SC)



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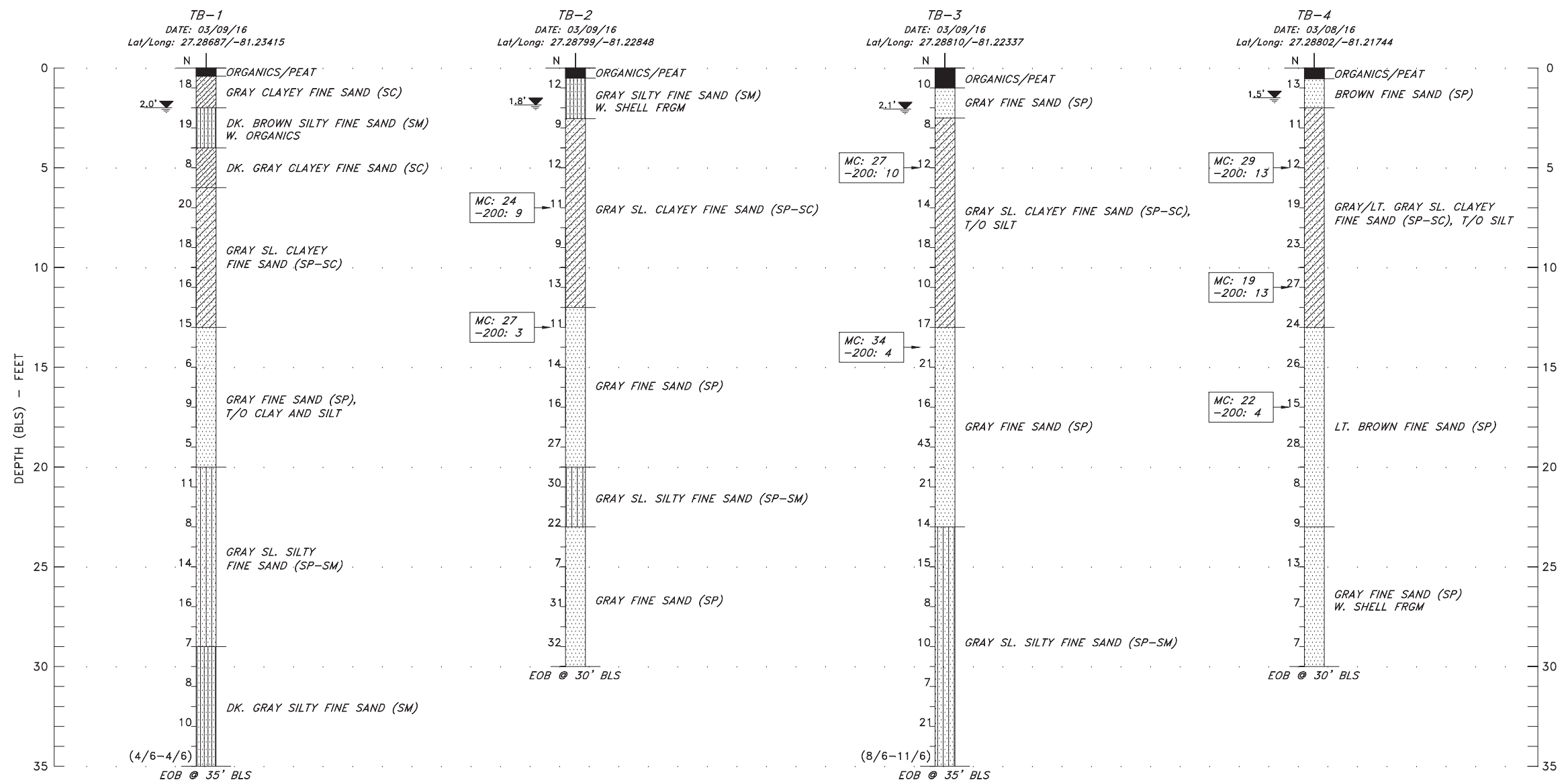
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GENERAL NOTES

GEOTECHNICAL ENGINEERING EVALUATION
 ISTOKPOGA MARSH WATER IMPROVEMENT DISTRICT (IMWID)
 PROPOSED CELL NO. 2 MINOR ABOVE-GROUND IMPOUNDMENT
 HIGHLANDS COUNTY, FLORIDA

Drawn by: PGA	Date: January 2017
Checked by: DPA	Date: January 2017
AAACE File No: 16-112	Sheet No. 1

Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.



SOIL LEGEND:

- ORGANICS/PEAT
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- SILTY FINE SAND (SM)
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- CLAYEY FINE SAND (SC)

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SOIL BORING PROFILES

GEOTECHNICAL ENGINEERING EVALUATION
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 HIGHLANDS COUNTY, FLORIDA

Drawn by: PGA	Date: January 2017
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AAACE File No: 16-112	Sheet No. 2

No.	Date	Revision

HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPROVEMENT DISTRICT
 IMPOUNDMENT PHASE II
 HIGHLANDS COUNTY
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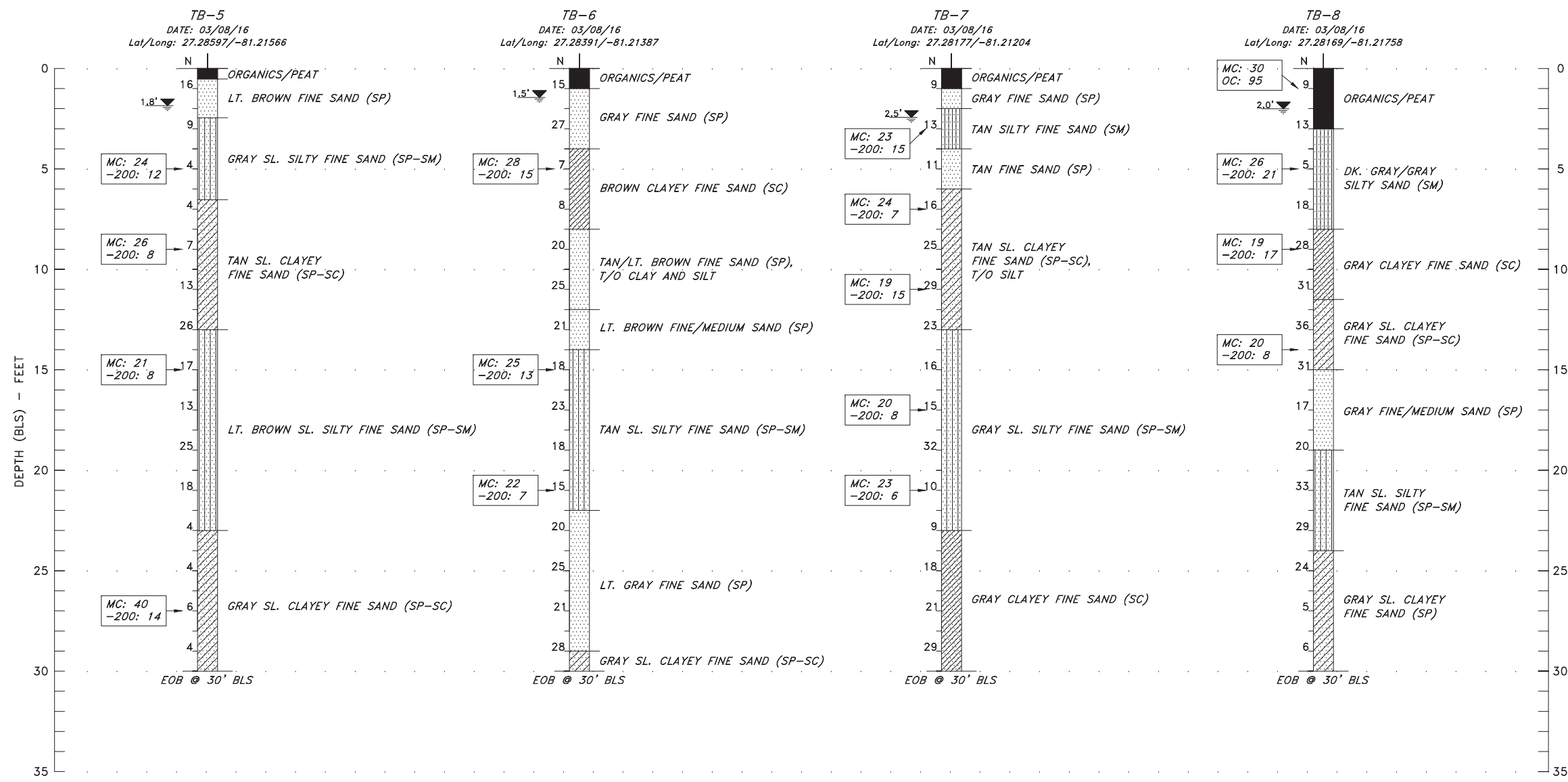
GEOTECHNICAL ANALYSIS
 SOIL BORING PROFILES
 (BY OTHERS)

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G-9

Peter G. Andersen, P.E.
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 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
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SOIL LEGEND:

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HIGHLANDS COUNTY BCC
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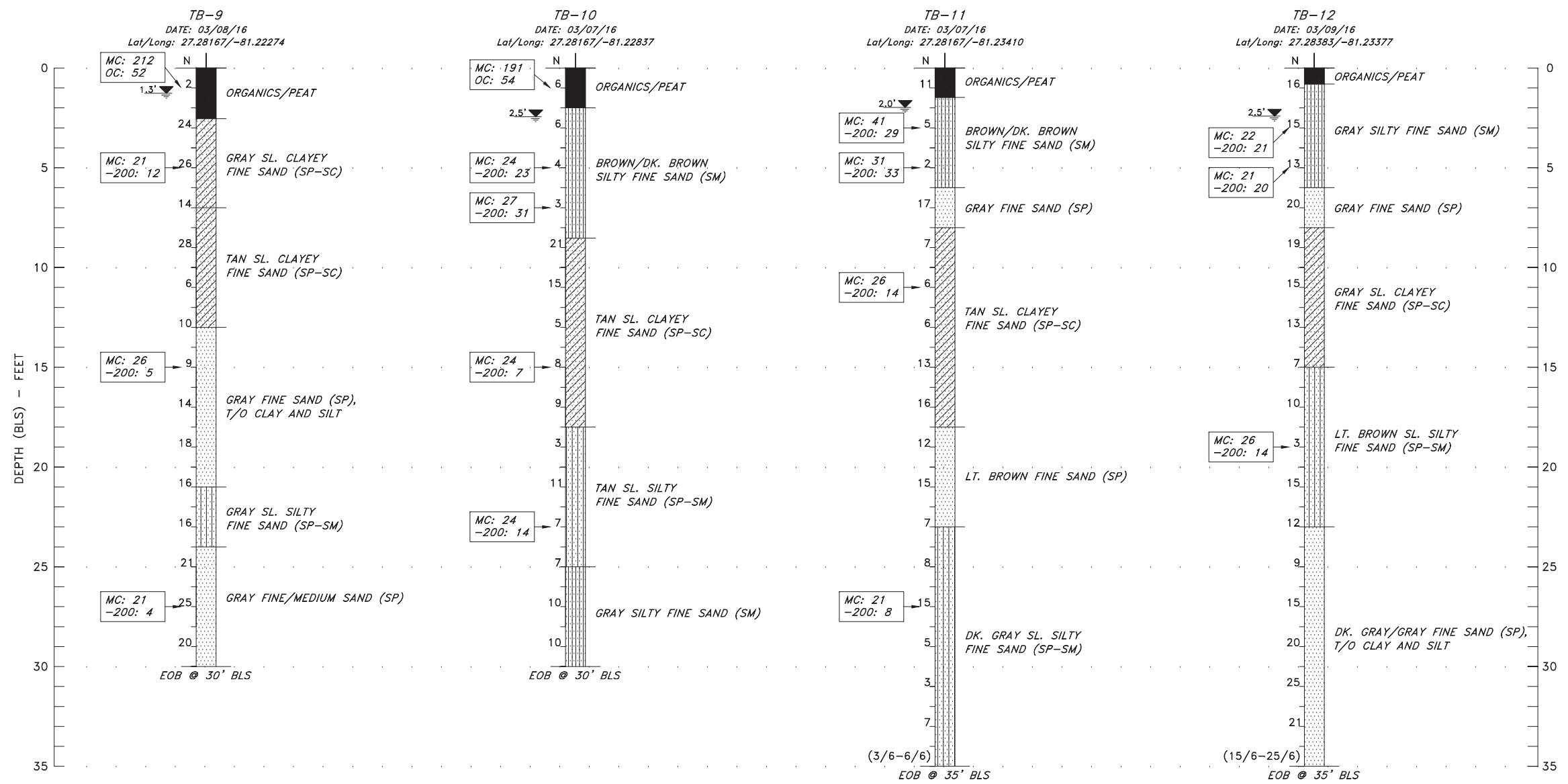
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 HIGHLANDS COUNTY, FLORIDA

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AAACE File No: 16-112	Sheet No. 4

No.	Date

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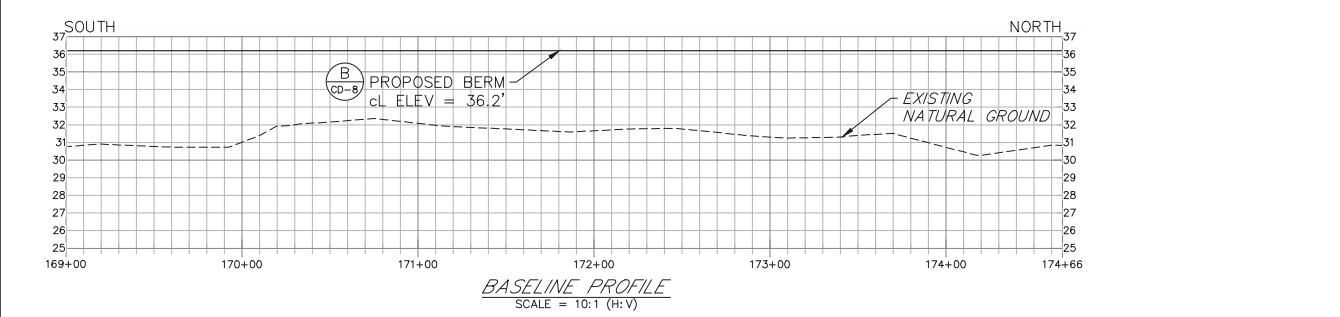
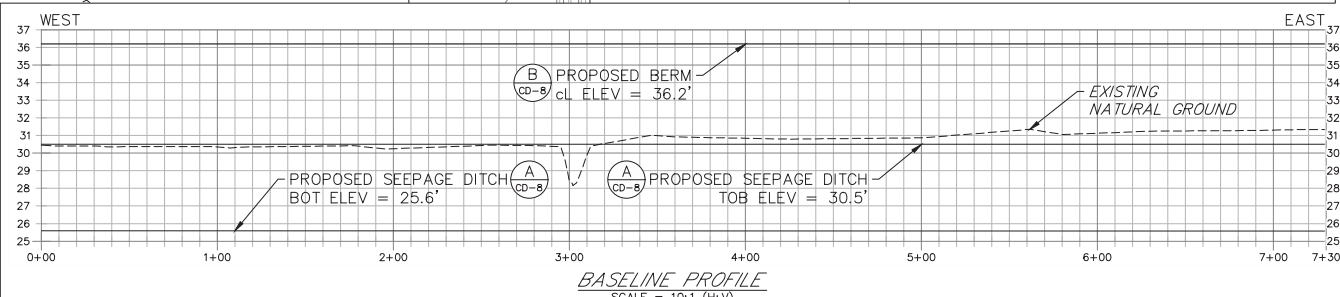
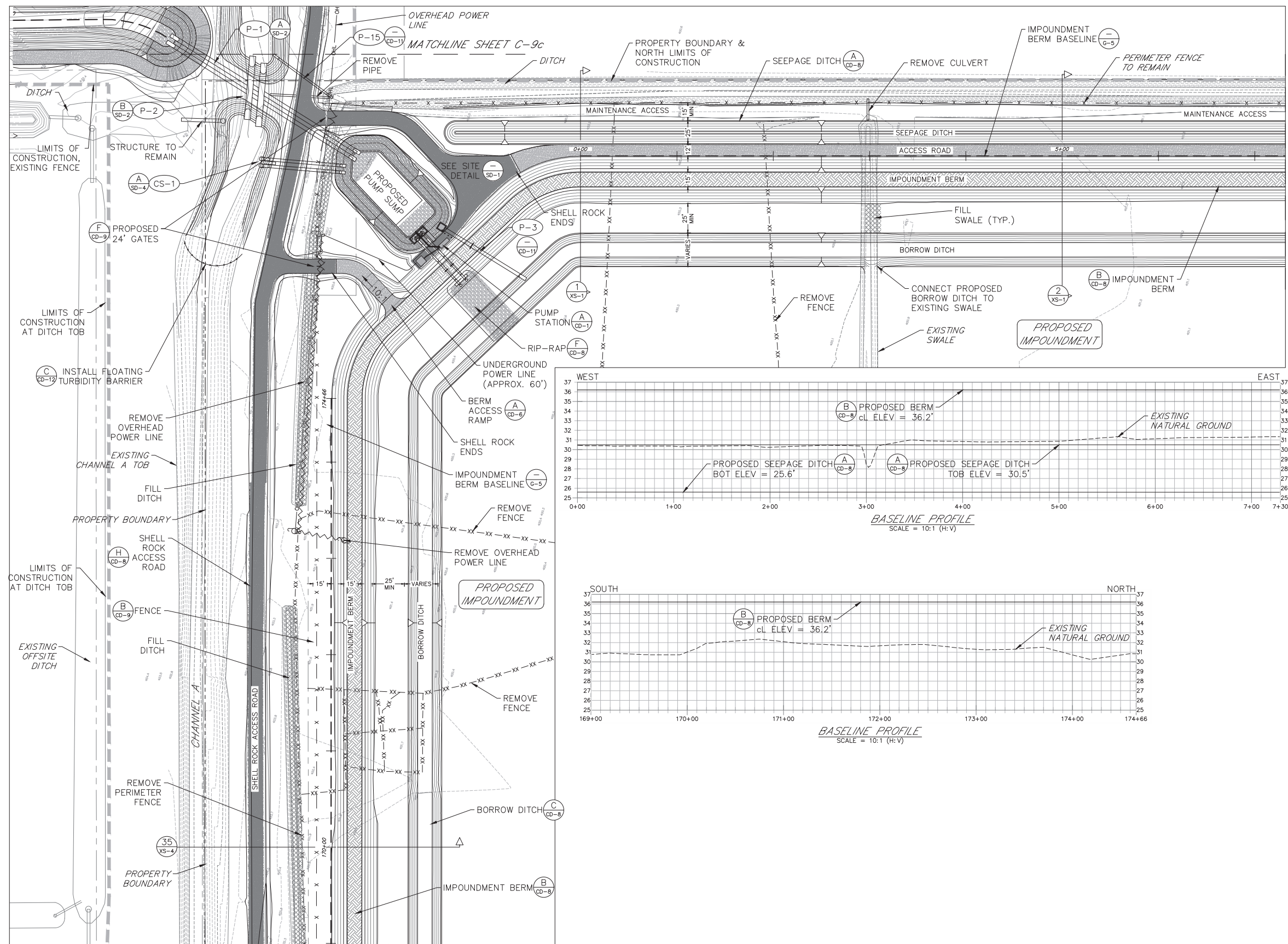
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 ISTOKPOGA MARSH WATER
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CIVIL SITE PLAN
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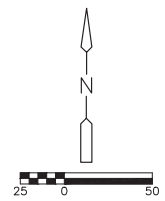
SHEET
 C-1

Richard A. Jones, P.E.
 FL P.E. No. 31118



MATCHLINE SHEET C-2a

MATCHLINE SHEET C-8



C-1

LEGEND

- PROPERTY BOUNDARY
- LIMITS OF CONSTRUCTION
- CONSTRUCTION BASELINE
- EASEMENT
- x - x - EXISTING FENCE TO REMAIN
- xx-xx-xx- EXISTING FENCE TO BE REMOVED
- x - x - PROPOSED FENCE

EXTEND EXISTING SWALE SECTION

Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

Revision	No.	Date

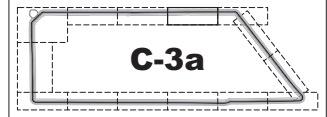
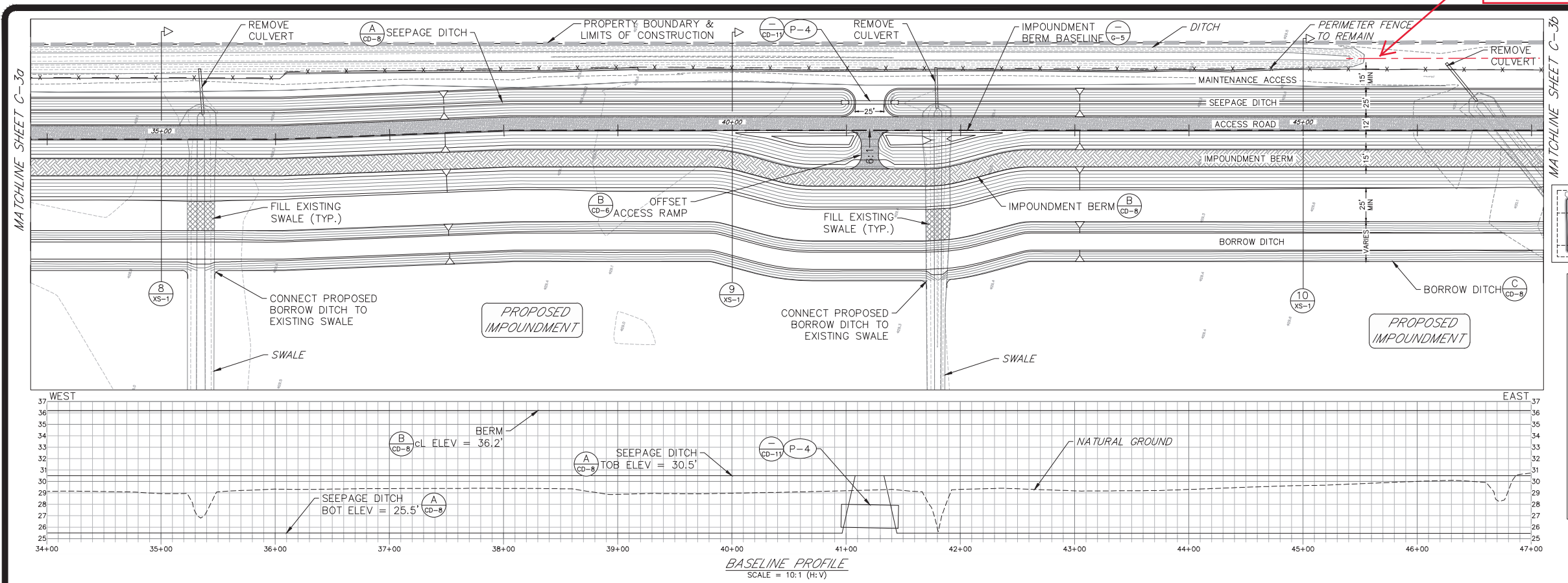
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 IMPOUNDMENT PHASE II
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 HIGHLANDS COUNTY

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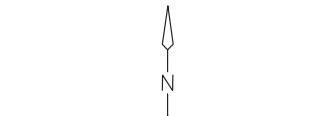
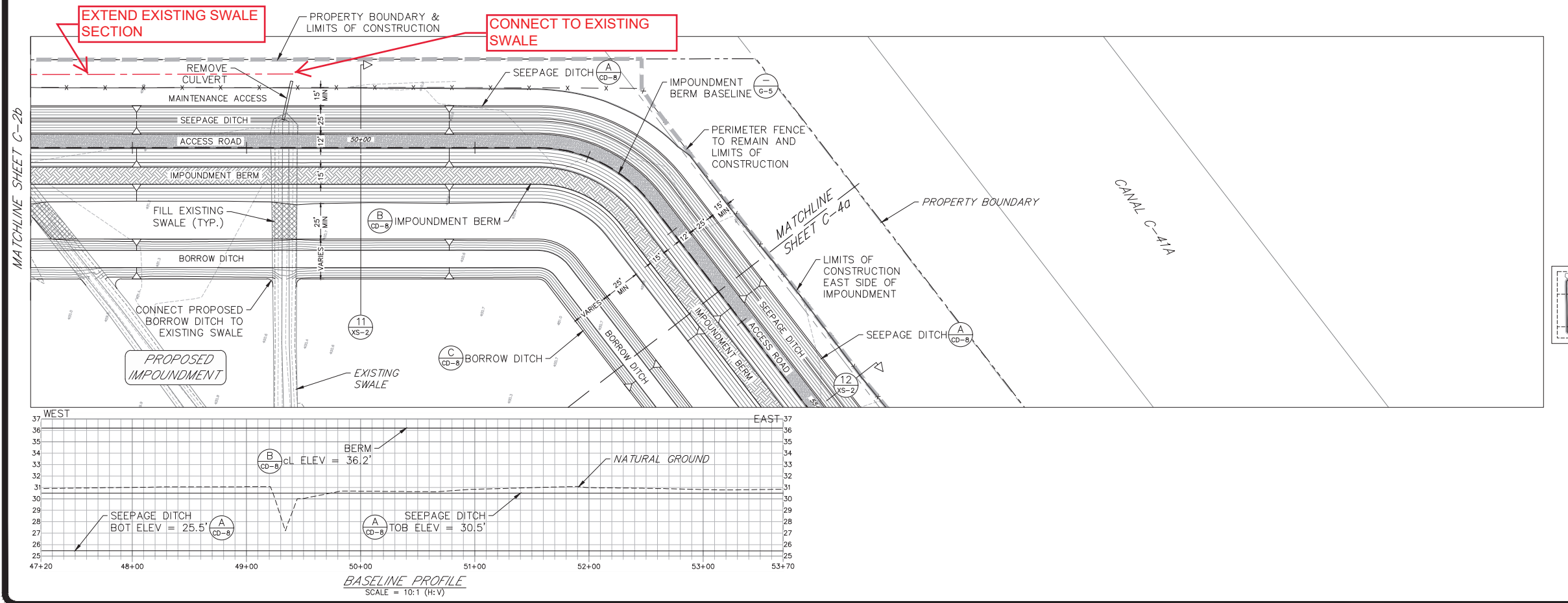
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 FL CCR No. 7290

SHEET
C-3

Richard A. Jones, P.E.
 FL P.E. No. 31118



- LEGEND**
- PROPERTY BOUNDARY
 - LIMITS OF CONSTRUCTION
 - CONSTRUCTION BASELINE
 - EASEMENT
 - x - x - EXISTING FENCE TO REMAIN
 - xx - xx - EXISTING FENCE TO BE REMOVED
 - x - x - PROPOSED FENCE



- LEGEND**
- PROPERTY BOUNDARY
 - LIMITS OF CONSTRUCTION
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 - x - x - EXISTING FENCE TO REMAIN
 - xx - xx - EXISTING FENCE TO BE REMOVED
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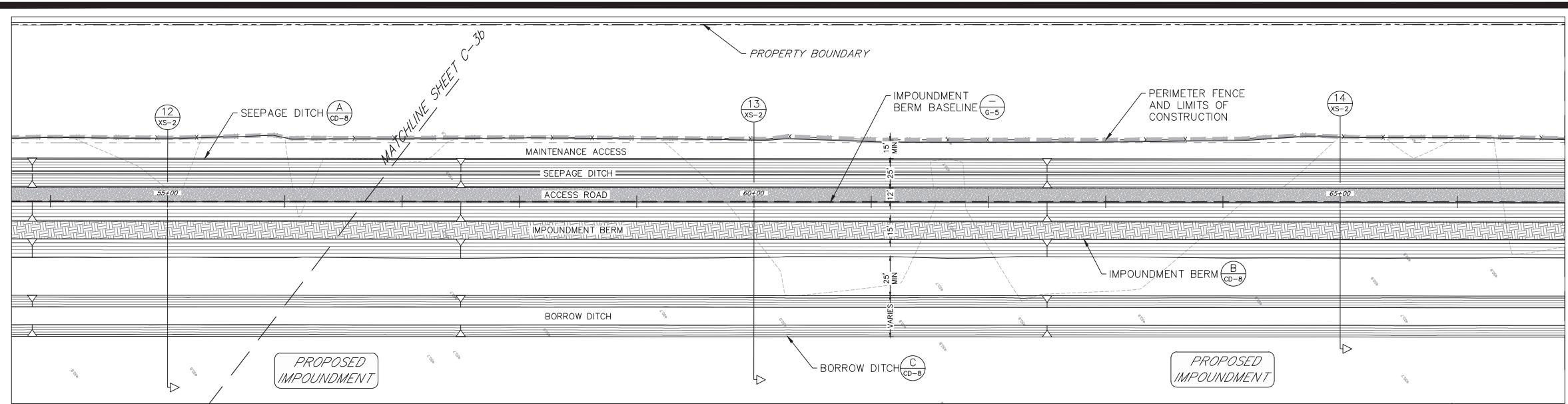
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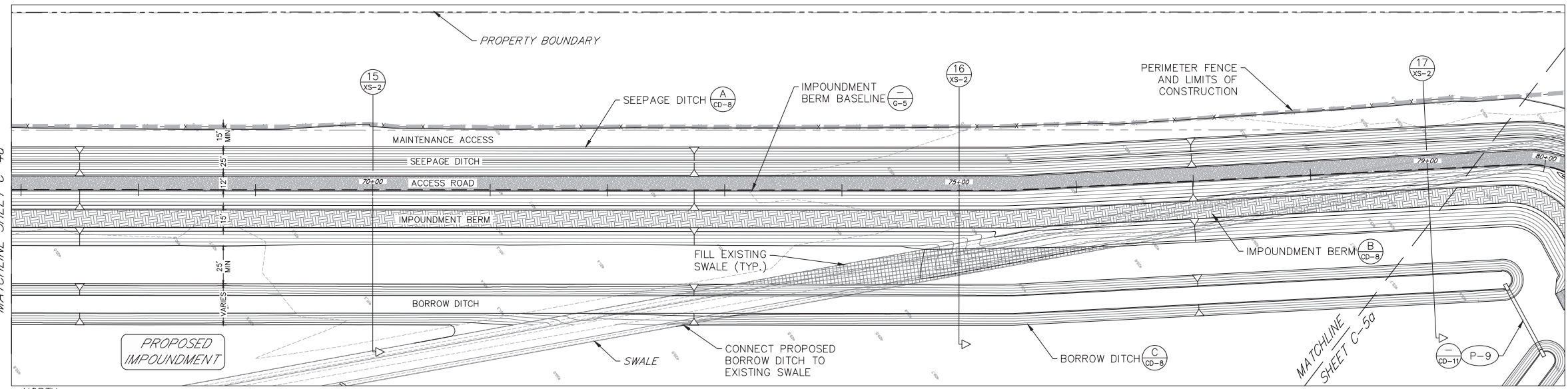
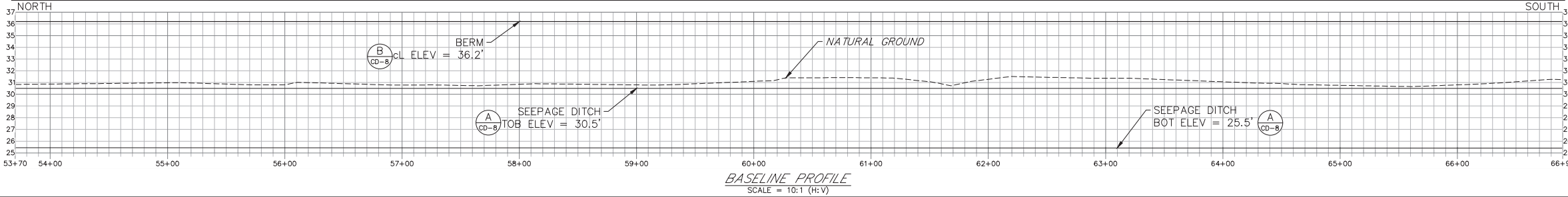
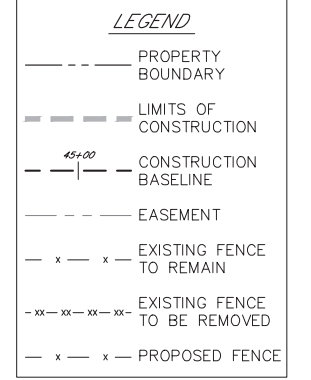
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SHEET
C-4

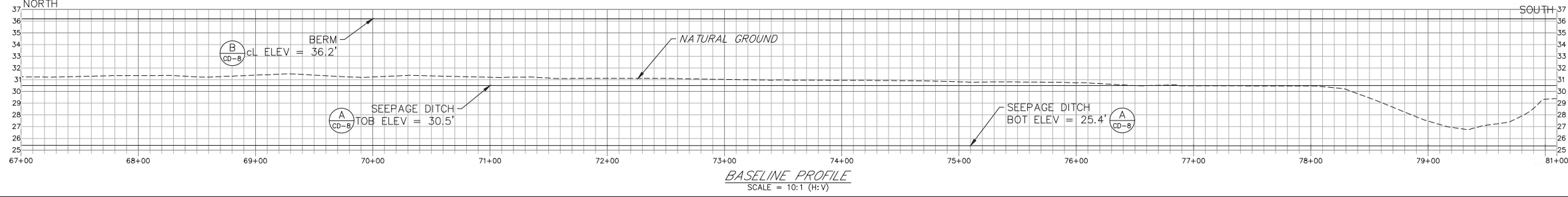
Richard A. Jones, P.E.
 FL P.E. No. 31118



C-4a



C-4b



Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

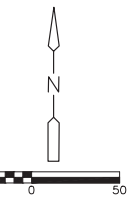
Revision	No.	Date

HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPOUNDMENT PHASE II
 FLORIDA
 HIGHLANDS COUNTY

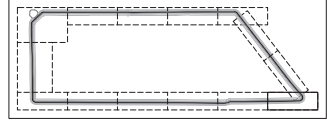
CIVIL SITE PLAN
 IMPOUNDMENT

Royal Consulting Services, Inc.
 211 West Warren Avenue
 Longwood, FL 32750
 (407) 831-3095 phone
 (407) 831-5095 fax
 www.royalconsulting.com
 FL CCR No. 7290

SHEET
C-5

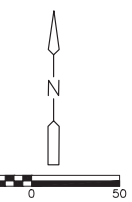
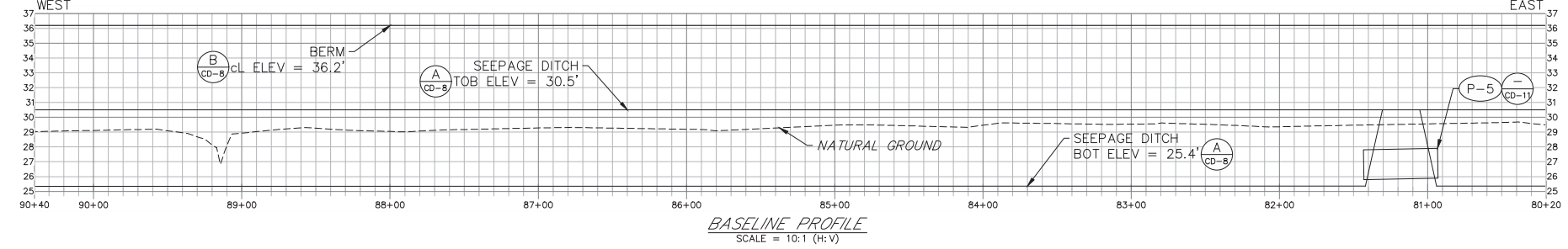
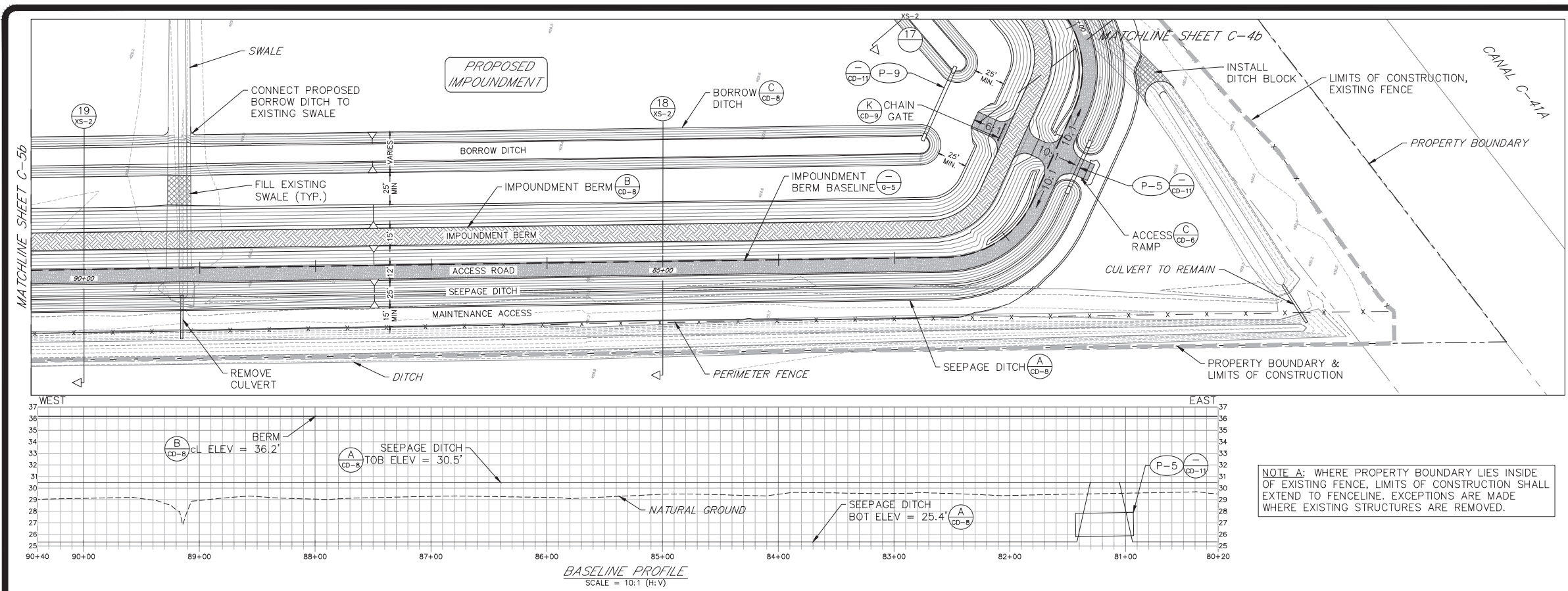


C-5a

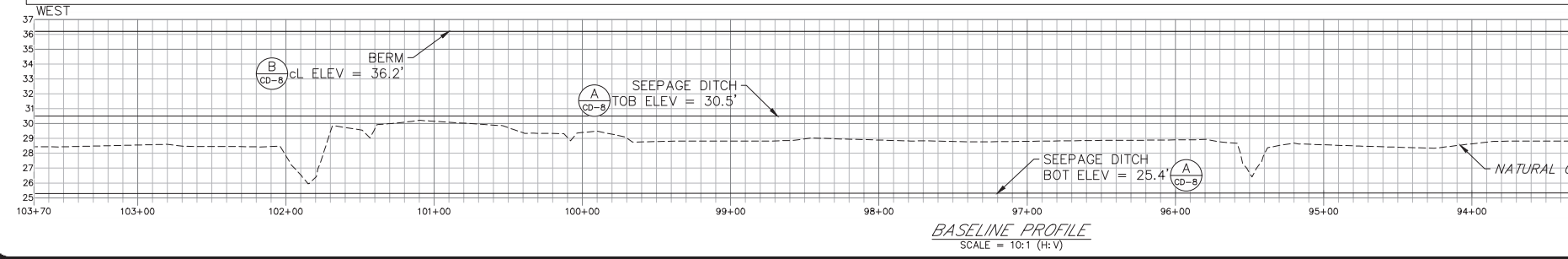
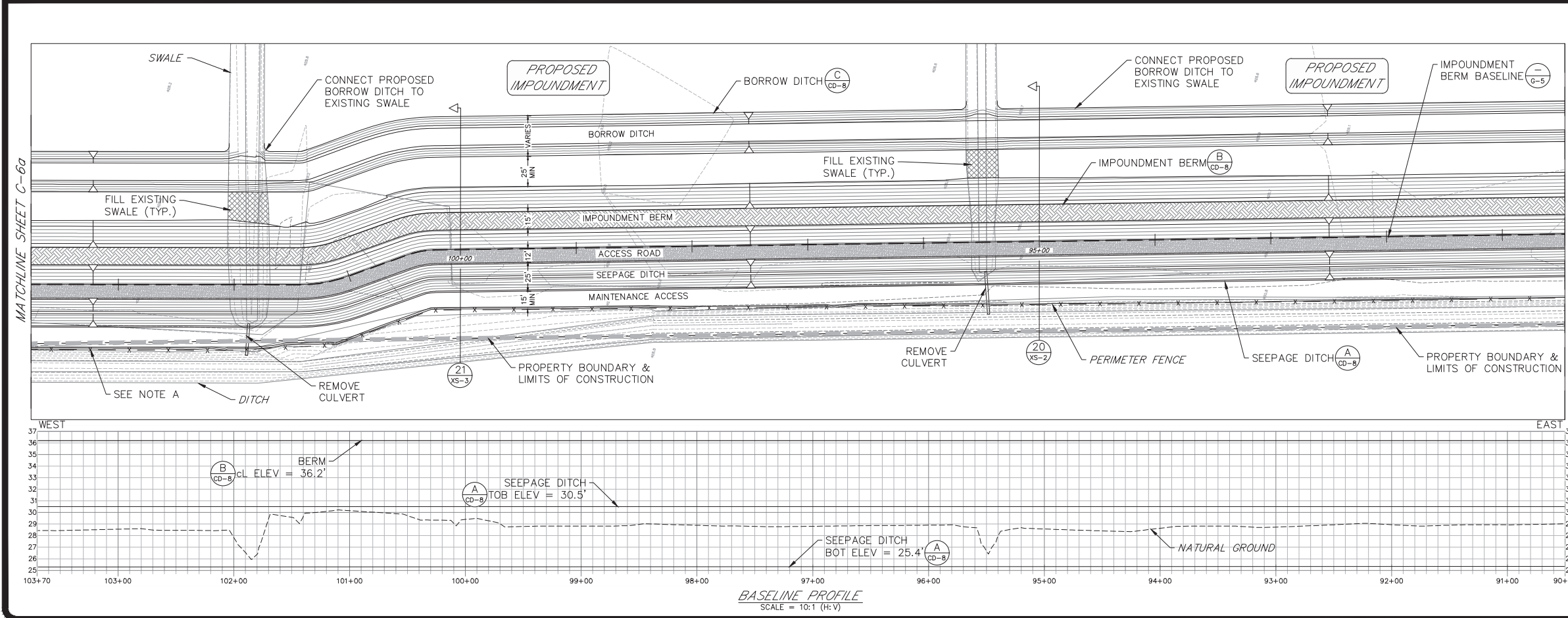
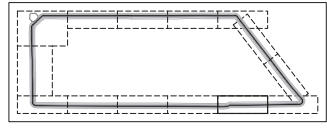


- LEGEND**
- PROPERTY BOUNDARY
 - - - LIMITS OF CONSTRUCTION
 - - - CONSTRUCTION BASELINE
 - - - EASEMENT
 - x - x - EXISTING FENCE TO REMAIN
 - x - x - EXISTING FENCE TO BE REMOVED
 - x - x - PROPOSED FENCE

NOTE A: WHERE PROPERTY BOUNDARY LIES INSIDE OF EXISTING FENCE, LIMITS OF CONSTRUCTION SHALL EXTEND TO FENCELINE. EXCEPTIONS ARE MADE WHERE EXISTING STRUCTURES ARE REMOVED.



C-5b



Richard A. Jones, P.E.
 FL P.E. No. 31118

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 Scale: As Shown
 Date: 3-5-2018
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 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

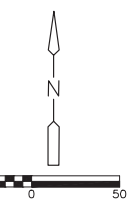
Revision

HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPOUNDMENT PHASE II
 FLORIDA
 HIGHLANDS COUNTY

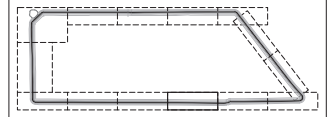
CIVIL SITE PLAN
 IMPOUNDMENT

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 FL CCR No. 7290

SHEET
 C-6

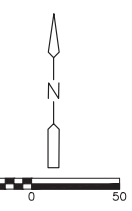


C-6a

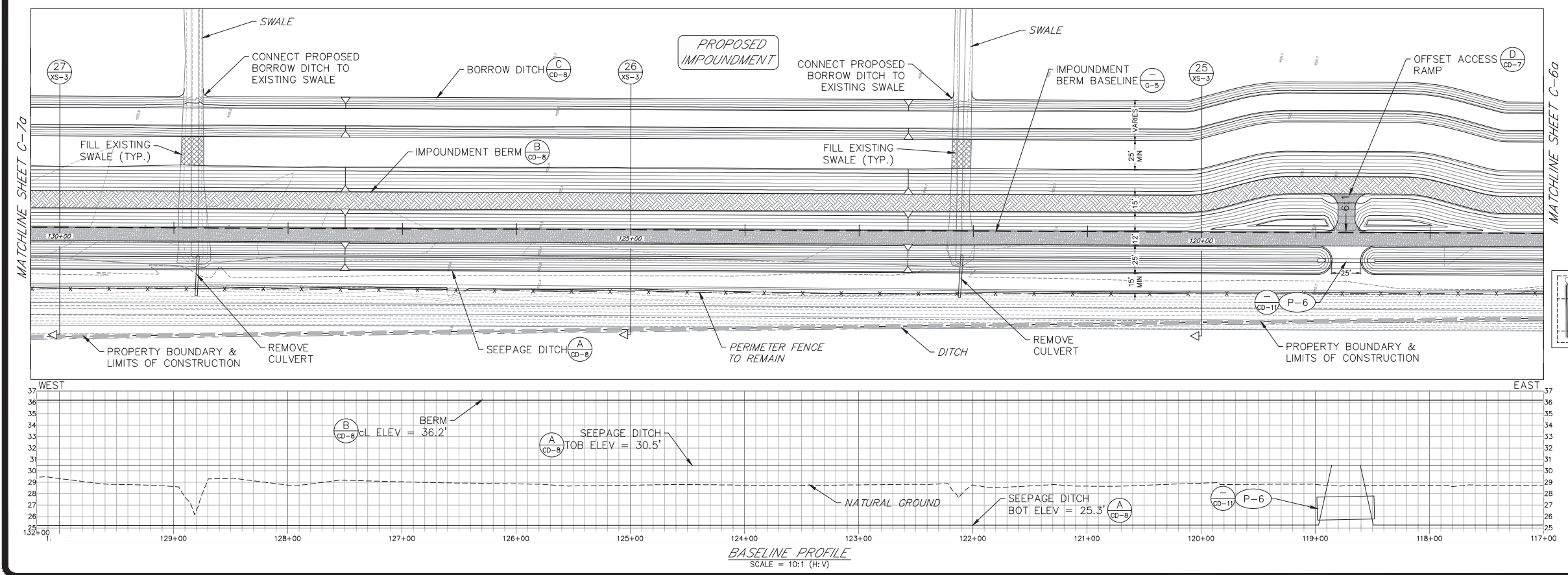
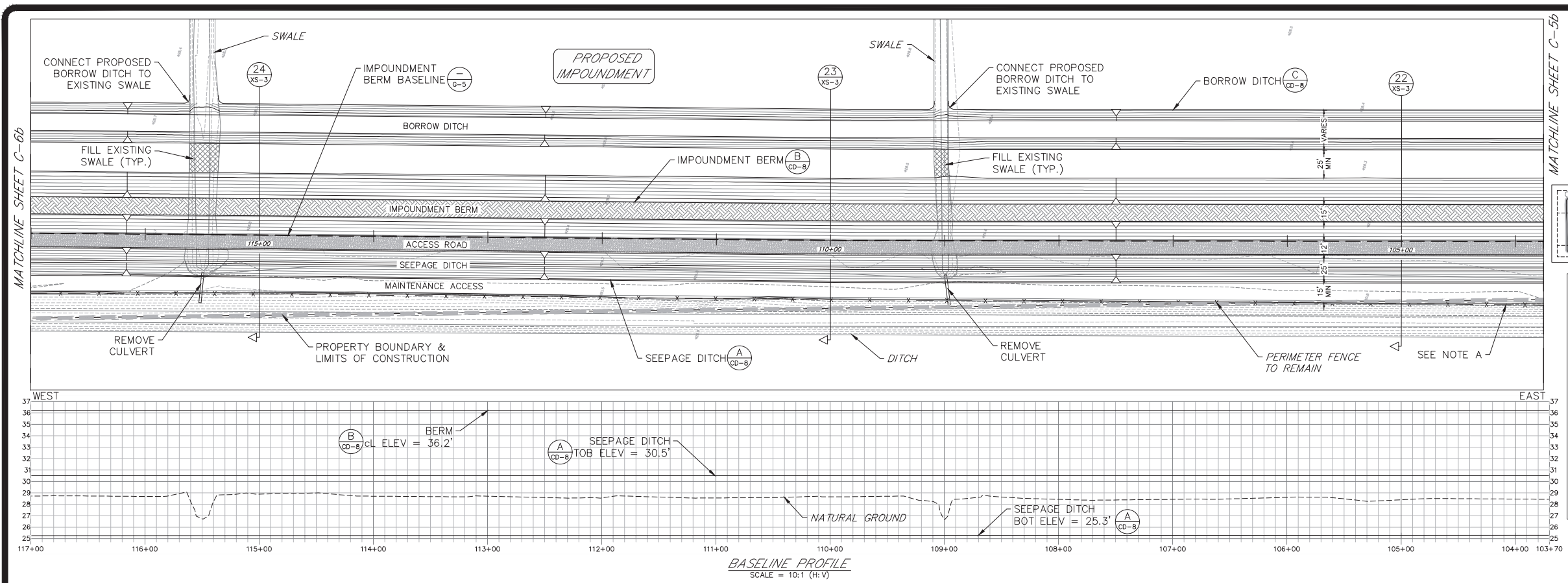
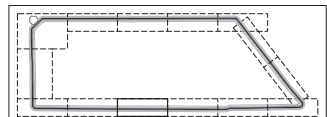


- LEGEND**
- PROPERTY BOUNDARY
 - LIMITS OF CONSTRUCTION
 - CONSTRUCTION BASELINE
 - EASEMENT
 - x - x - EXISTING FENCE TO REMAIN
 - xx - xx - EXISTING FENCE TO BE REMOVED
 - x - x - PROPOSED FENCE

NOTE A: WHERE PROPERTY BOUNDARY LIES INSIDE OF EXISTING FENCE, LIMITS OF CONSTRUCTION SHALL EXTEND TO FENCELINE. EXCEPTIONS ARE MADE WHERE EXISTING STRUCTURES ARE REMOVED.



C-6b



Richard A. Jones, P.E.
 FL P.E. No. 31118

Job: 0202-02-ES
 Scale: As Shown
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 Checked: D.C.R.
 Approved: B.L.R.

Revision
 No. Date

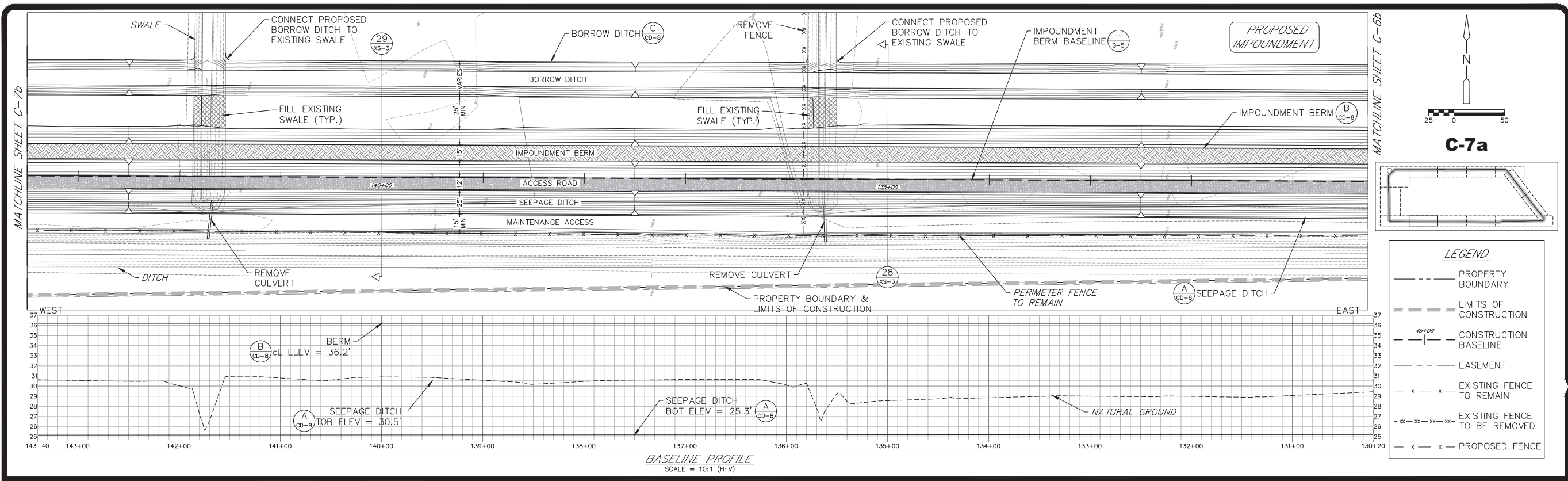
HIGHLANDS COUNTY BCC
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 IMPOUNDMENT PHASE II
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CIVIL SITE PLAN
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SHEET
C-7

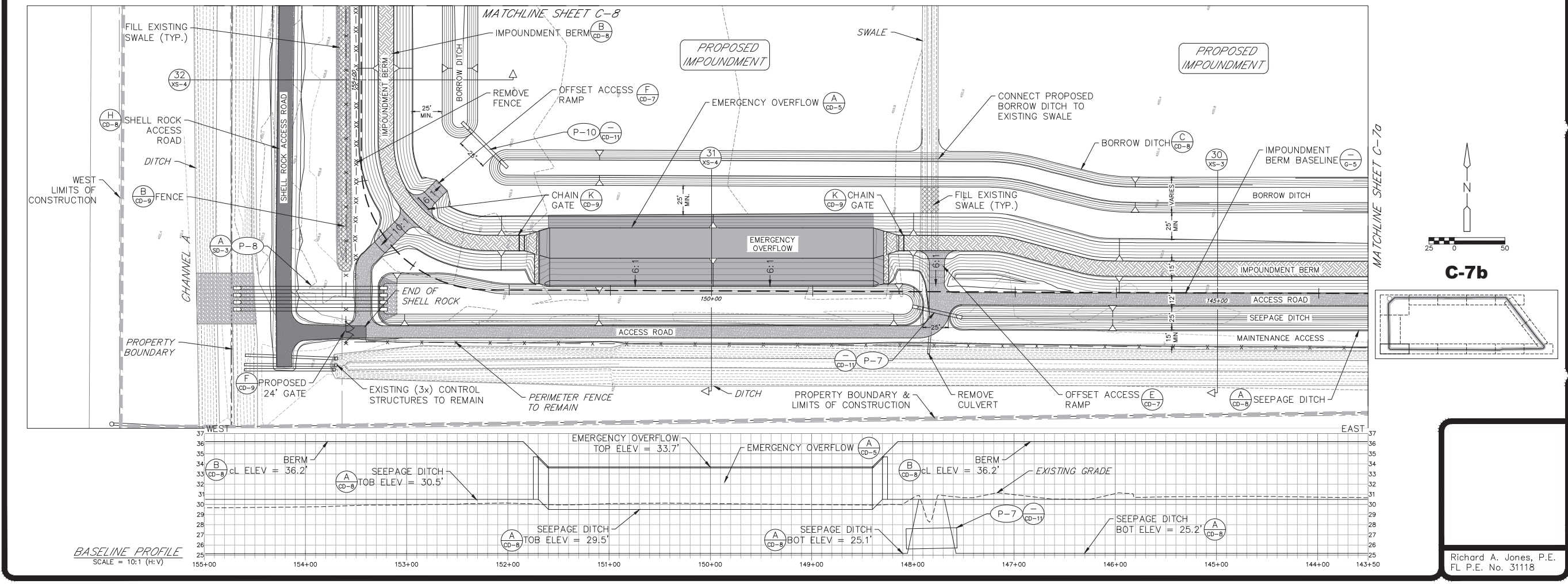
Richard A. Jones, P.E.
 FL P.E. No. 31118



C-7a

LEGEND

- PROPERTY BOUNDARY
- LIMITS OF CONSTRUCTION
- CONSTRUCTION BASELINE
- EASEMENT
- EXISTING FENCE TO REMAIN
- EXISTING FENCE TO BE REMOVED
- PROPOSED FENCE



C-7b

LEGEND

- PROPERTY BOUNDARY
- LIMITS OF CONSTRUCTION
- CONSTRUCTION BASELINE
- EASEMENT
- EXISTING FENCE TO REMAIN
- EXISTING FENCE TO BE REMOVED
- PROPOSED FENCE

Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

Revision

No. Date:

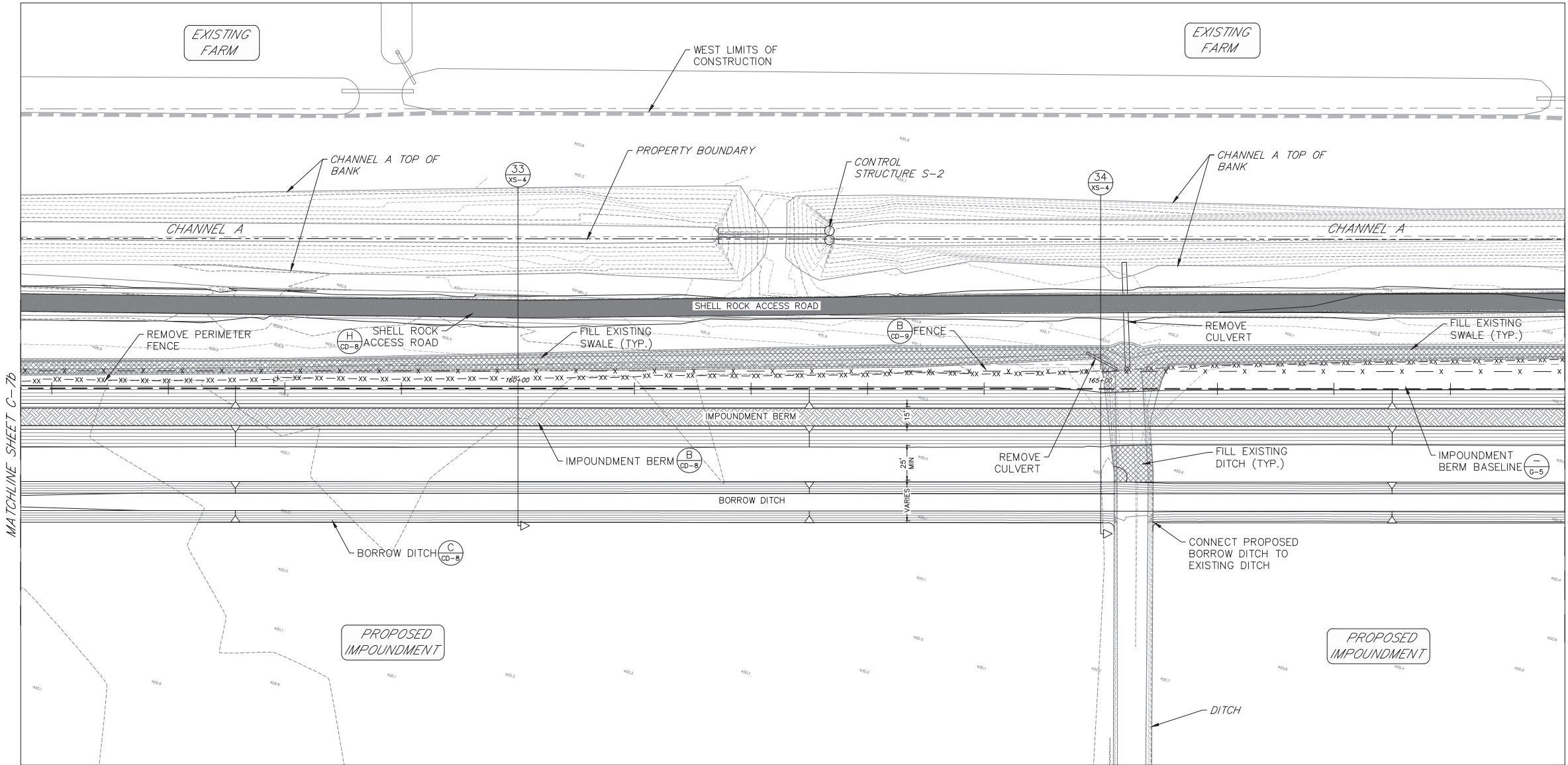
HIGHLANDS COUNTY BCC
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 IMPOUNDMENT DISTRICT II
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 FLORIDA
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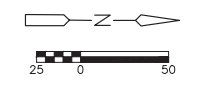
SHEET
 C-8

Richard A. Jones, P.E.
 FL P.E. No. 31118

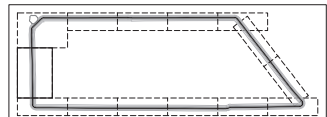


MATCHLINE SHEET C-1

MATCHLINE SHEET C-7B

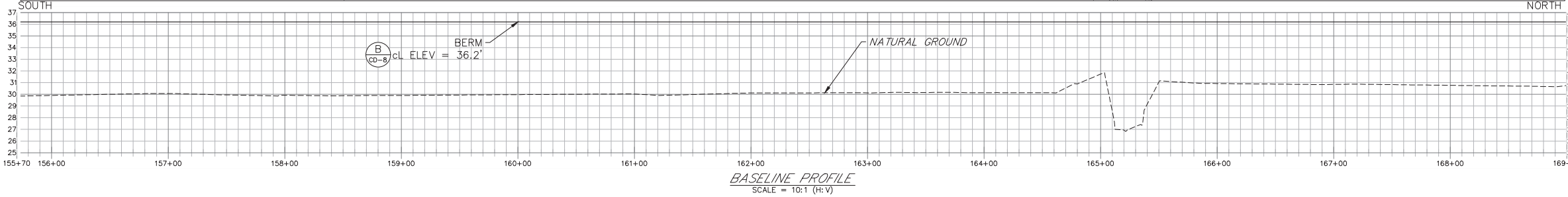


C-8



LEGEND

- PROPERTY BOUNDARY
- - - LIMITS OF CONSTRUCTION
- 45+00 - CONSTRUCTION BASELINE
- - - EASEMENT
- x - x - EXISTING FENCE TO REMAIN
- xx - xx - EXISTING FENCE TO BE REMOVED
- x - x - PROPOSED FENCE



BASELINE PROFILE
 SCALE = 10:1 (H:V)

Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

No.	Date	Revision

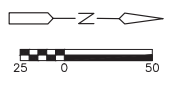
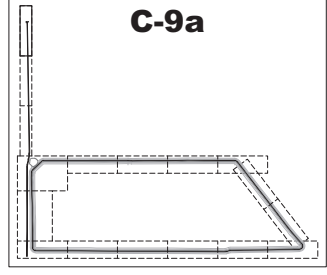
HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPOUNDMENT DISTRICT II
 IMPROVEMENT PHASE II
 FLORIDA
 HIGHLANDS COUNTY

CIVIL SITE PLAN
 ACCESS ROAD

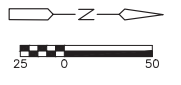
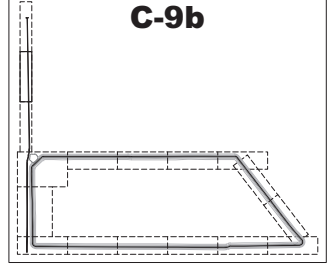
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SHEET
 C-9

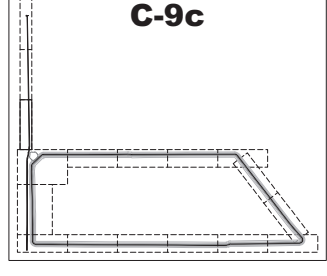
C-9a



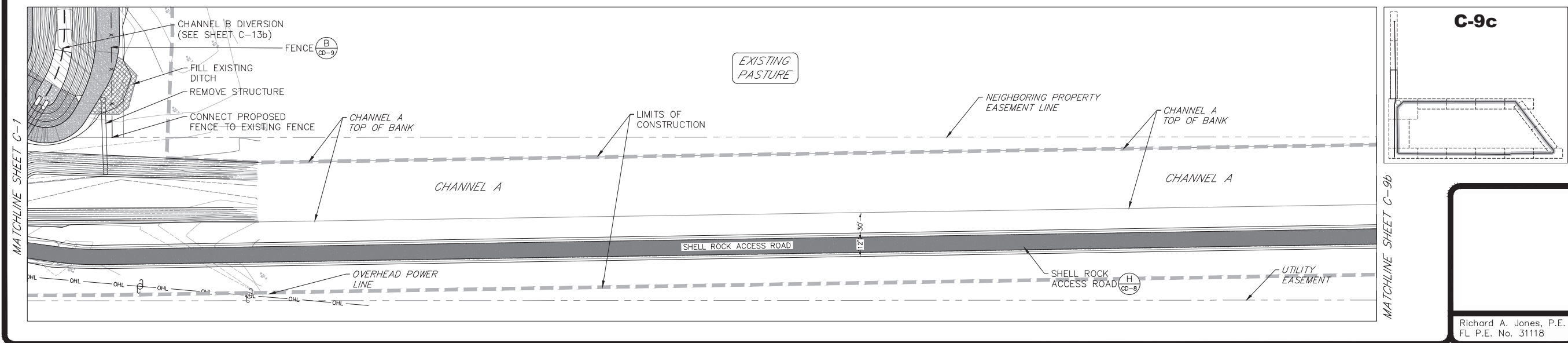
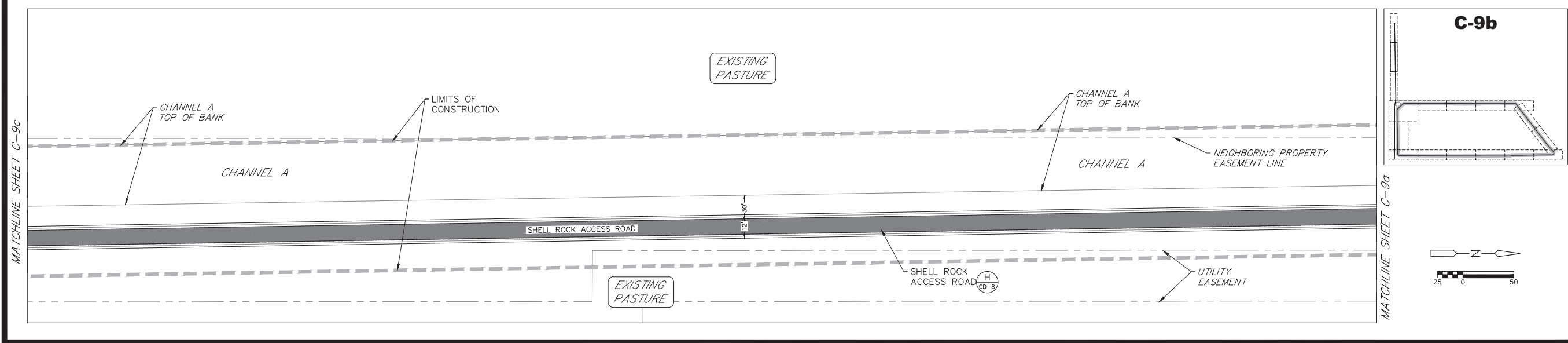
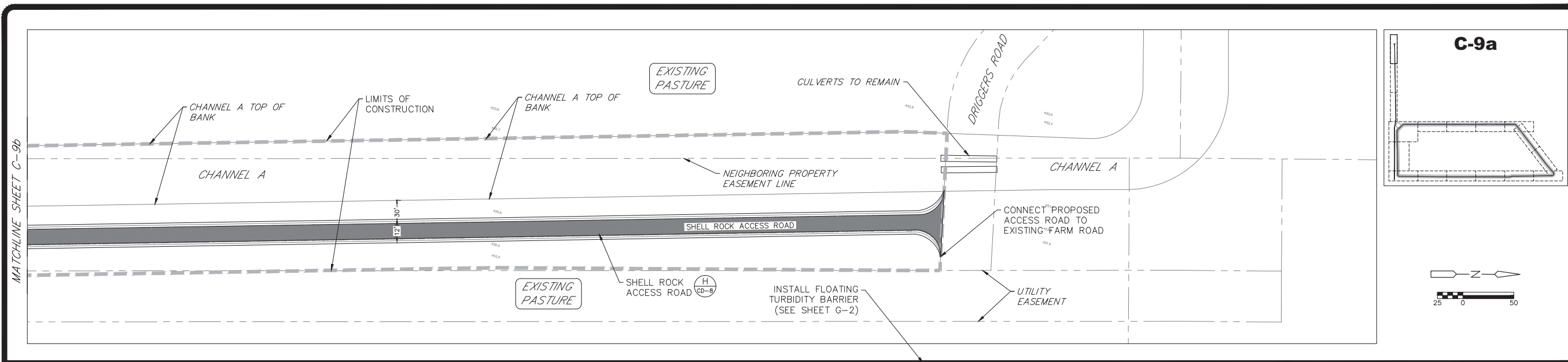
C-9b



C-9c



Richard A. Jones, P.E.
 FL P.E. No. 31118



Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
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 Checked: D.C.R.
 Approved: B.L.R.

Revision	No.	Date

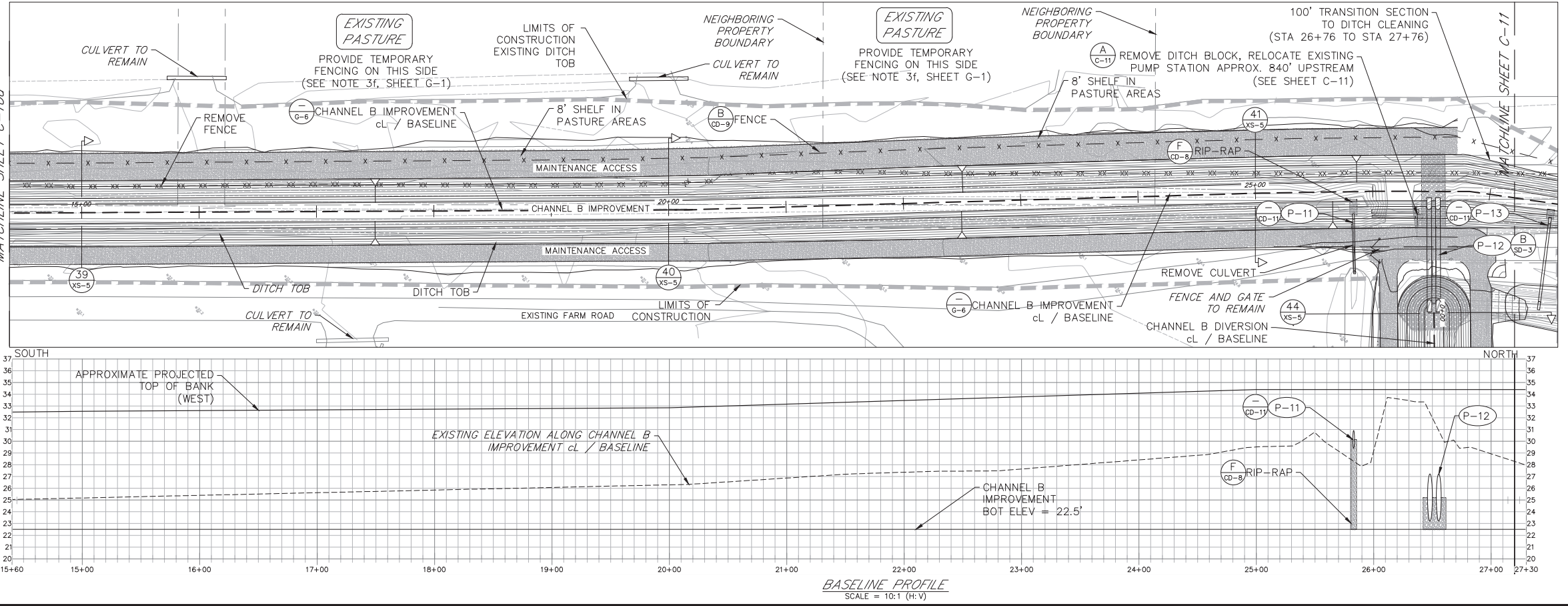
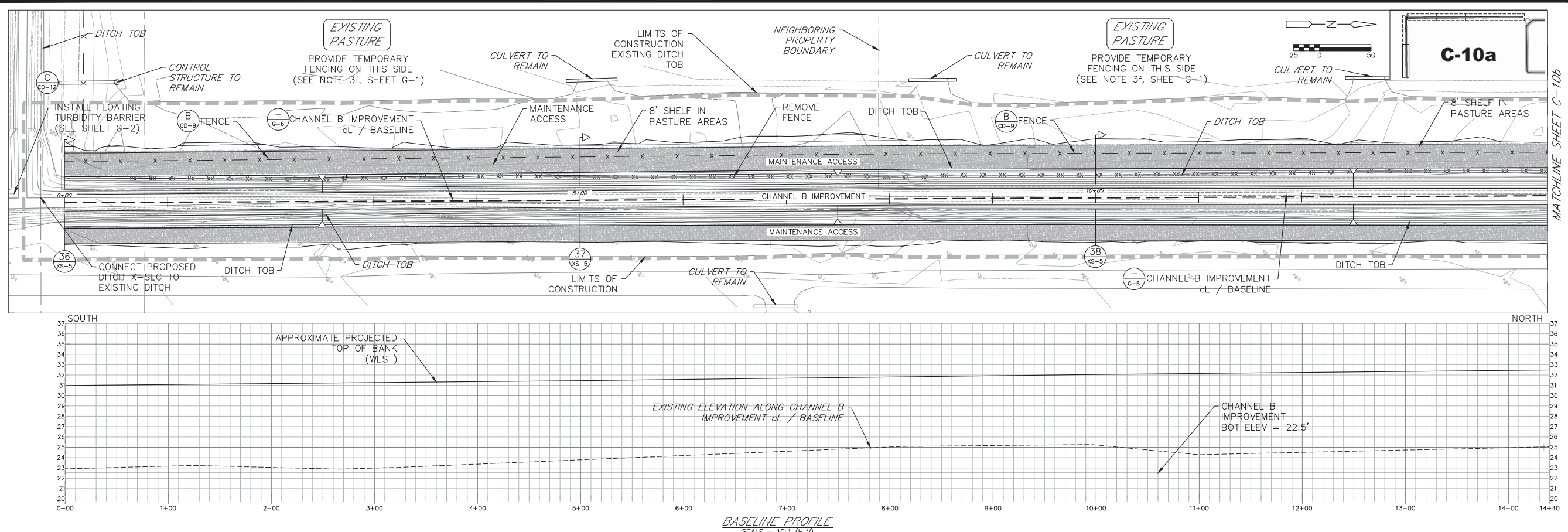
HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPROVEMENT DISTRICT II
 IMPROVEMENT PHASE II
 FLORIDA
 HIGHLANDS COUNTY

CIVIL SITE PLAN
 CHANNEL B IMPROVEMENT

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SHEET
C-10

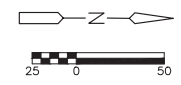
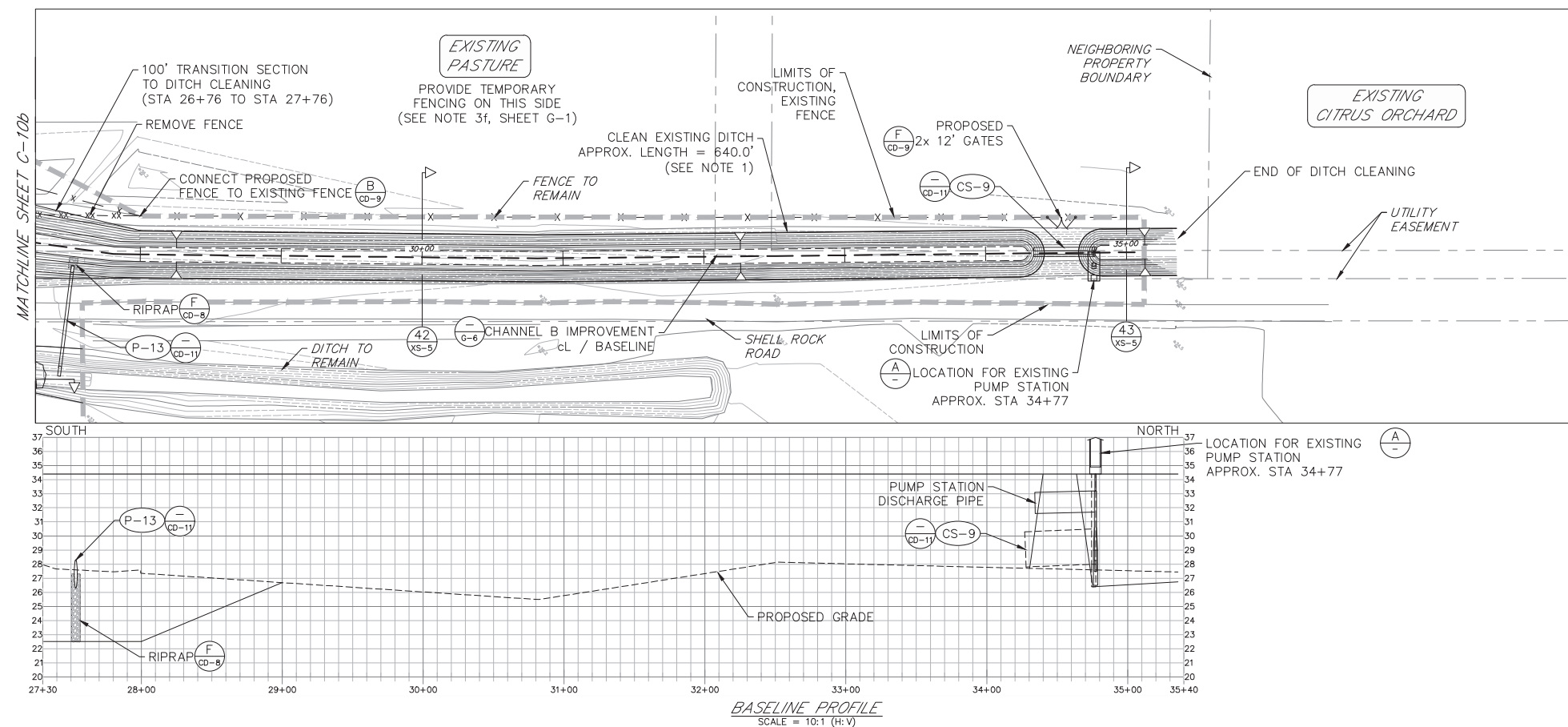
Richard A. Jones, P.E.
 FL P.E. No. 31118



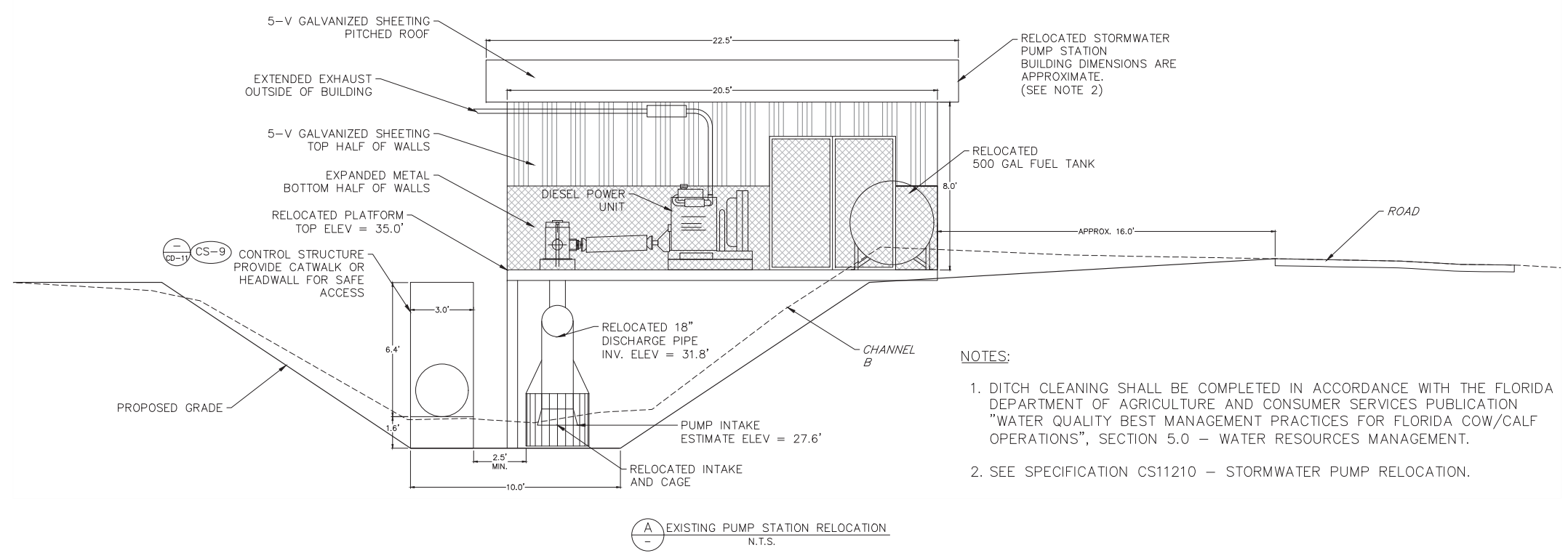
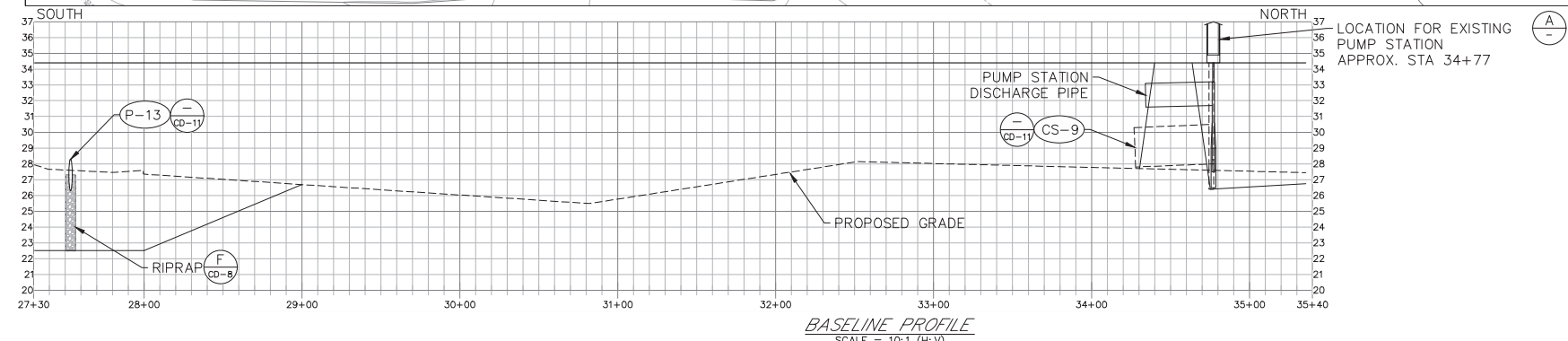
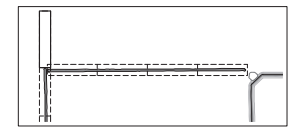
C-10b

LEGEND

- PROPERTY BOUNDARY
- LIMITS OF CONSTRUCTION
- - - CONSTRUCTION BASELINE
- - - EASEMENT
- x - x - EXISTING FENCE TO REMAIN
- x x x - EXISTING FENCE TO BE REMOVED
- x - x - PROPOSED FENCE



C-11



- NOTES:**
1. DITCH CLEANING SHALL BE COMPLETED IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES PUBLICATION "WATER QUALITY BEST MANAGEMENT PRACTICES FOR FLORIDA COW/CALF OPERATIONS", SECTION 5.0 - WATER RESOURCES MANAGEMENT.
 2. SEE SPECIFICATION CS11210 - STORMWATER PUMP RELOCATION.

Job: 0202-02-ES
Scale: As Shown
Date: 3-5-2018
Design: R.A.J.
Drawn: J.J.D.
Checked: D.C.R.
Approved: B.L.R.

No.	Date	Revision

HIGHLANDS COUNTY BCC
ISTOKPOGA MARSH WATER
IMPOUNDMENT DISTRICT II
IMPOUNDMENT PHASE II
FLORIDA
HIGHLANDS COUNTY

CIVIL SITE PLAN
CHANNEL B IMPROVEMENT

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SHEET
C-11

Richard A. Jones, P.E.
FL P.E. No. 31118

Job: 0202-02-ES
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 Design: R.A.J.
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 Approved: B.L.R.

Revision	No.	Date

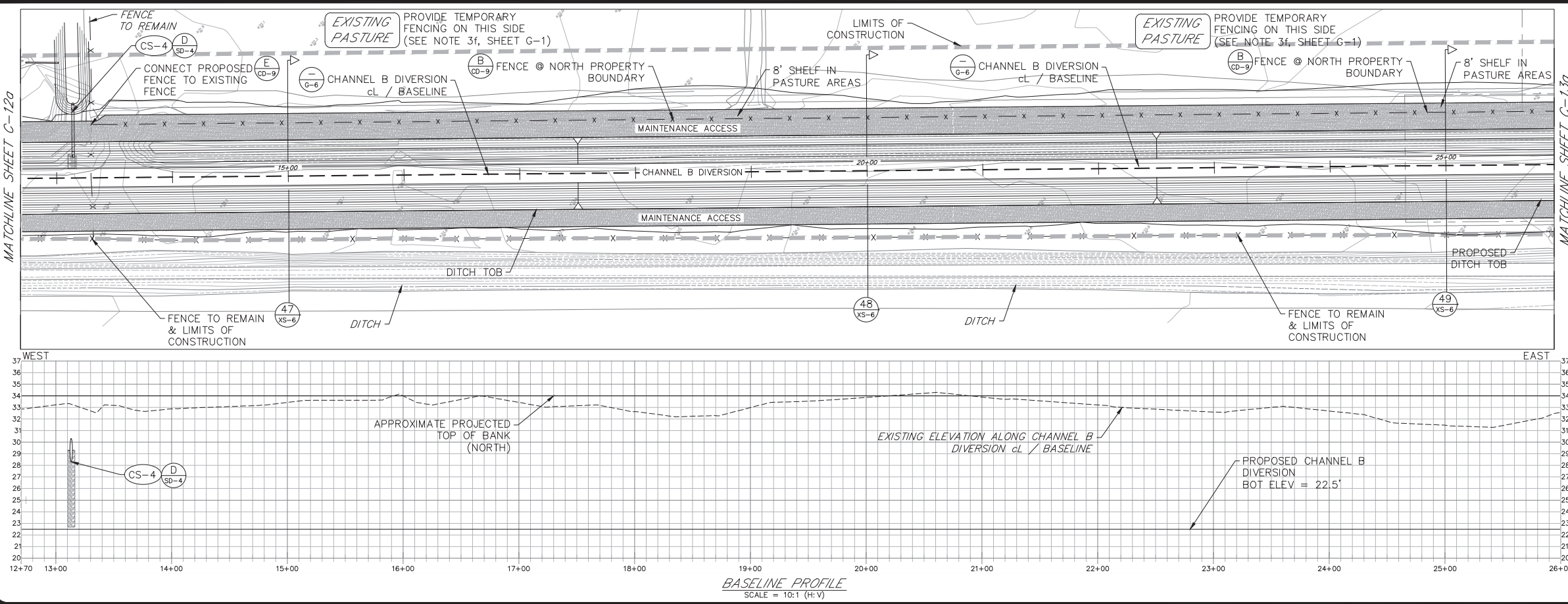
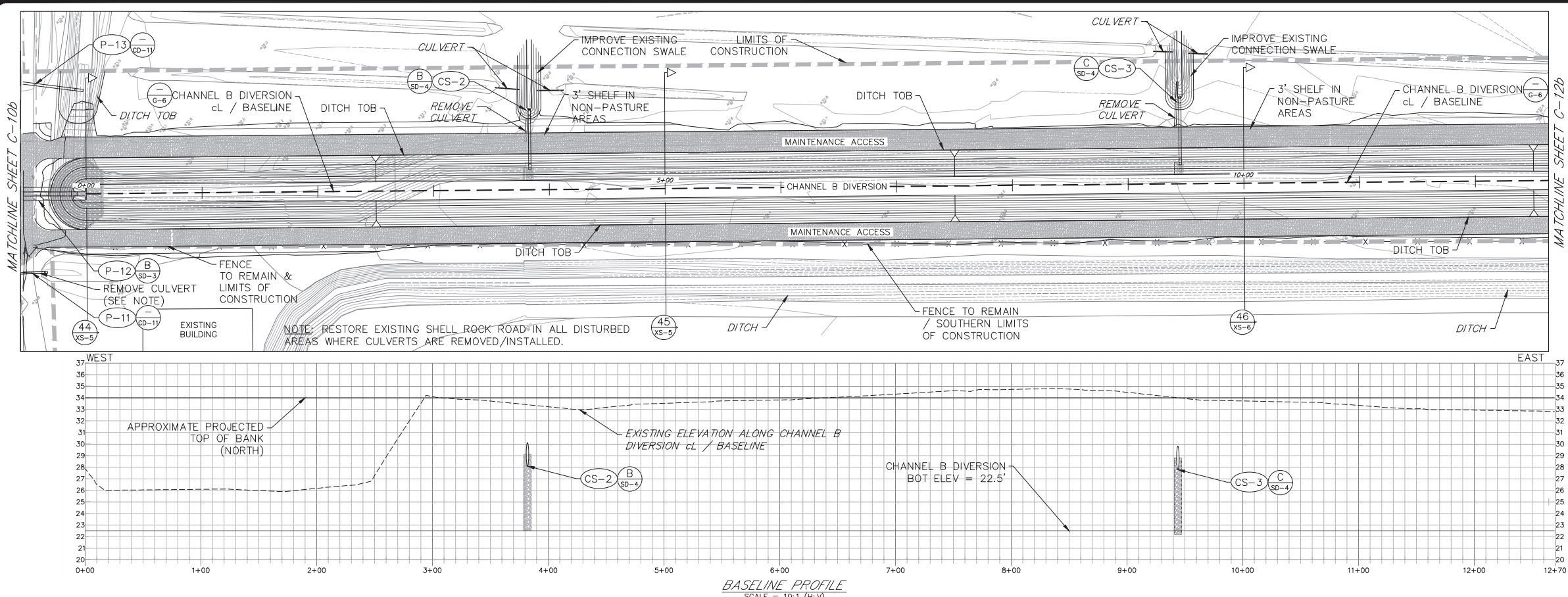
HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPOUNDMENT DISTRICT
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CIVIL SITE PLAN
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SHEET
C-12

Richard A. Jones, P.E.
 FL P.E. No. 31118



Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

Revision
 No. Date

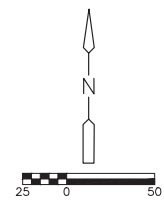
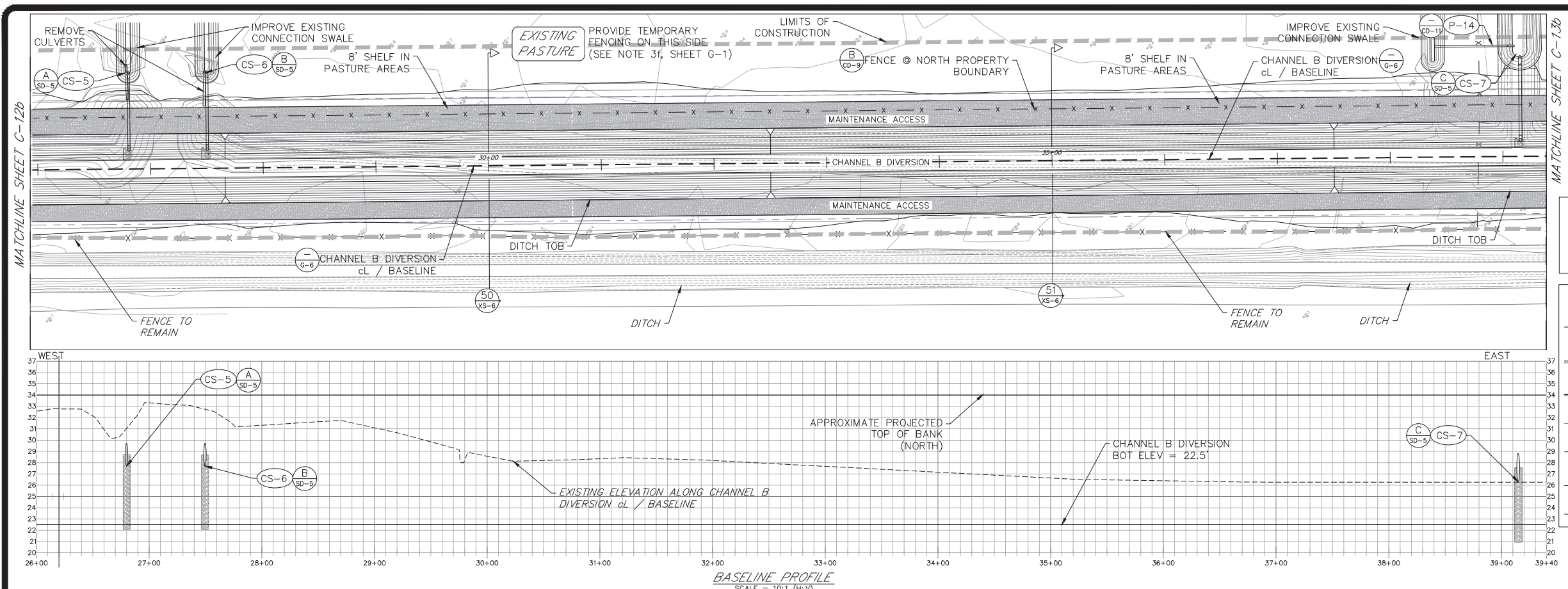
HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPOUNDMENT DISTRICT II
 IMPROVEMENT PHASE II
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 HIGHLANDS COUNTY

CIVIL SITE PLAN
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SHEET
C-13

Richard A. Jones, P.E.
 FL P.E. No. 31118

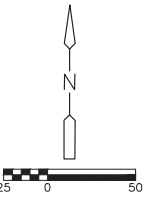
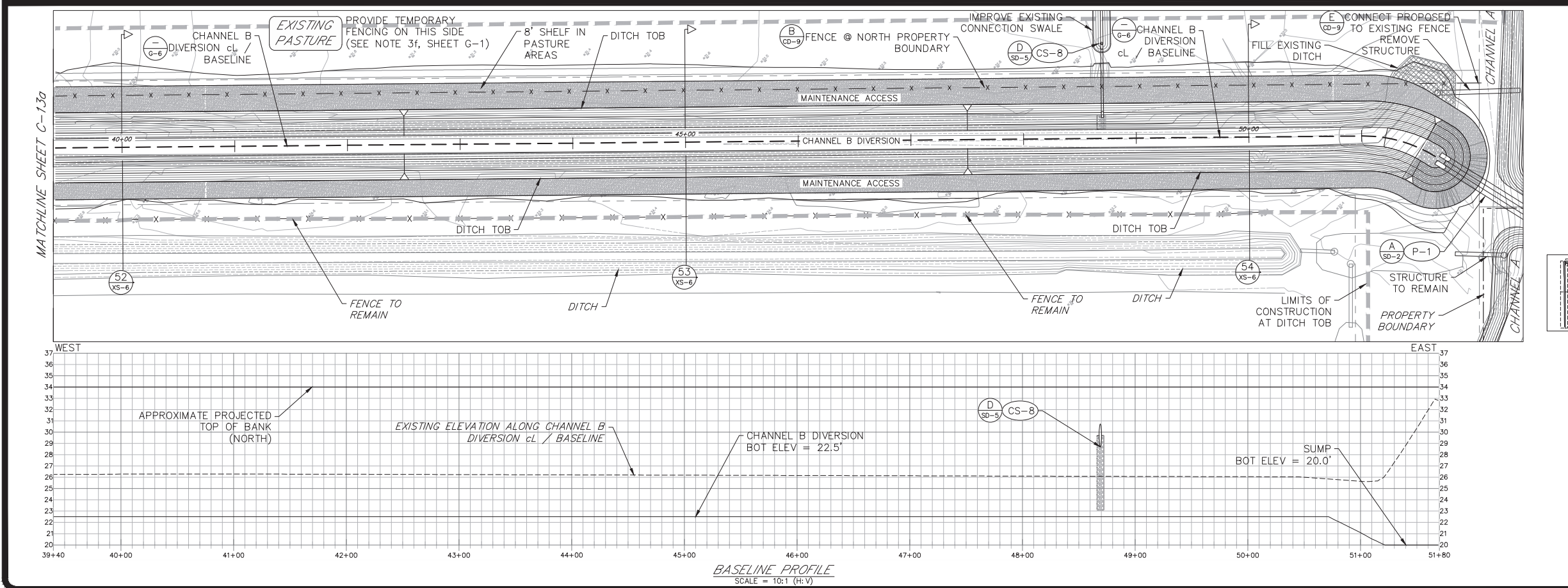


C-13a

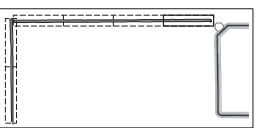


LEGEND

- PROPERTY BOUNDARY
- LIMITS OF CONSTRUCTION
- CONSTRUCTION BASELINE
- EASEMENT
- x - x - EXISTING FENCE TO REMAIN
- x - x - EXISTING FENCE TO BE REMOVED
- x - x - PROPOSED FENCE

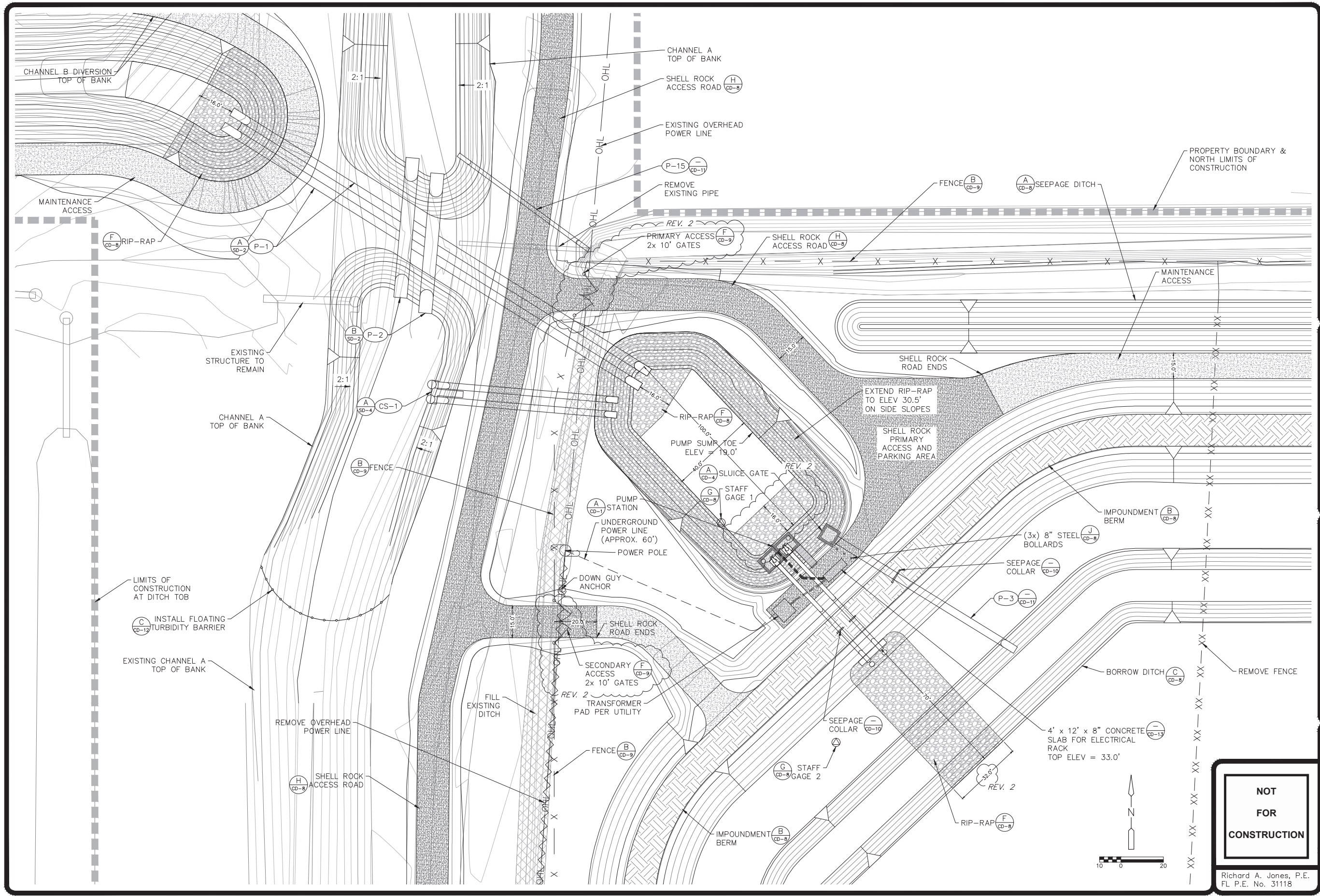


C-13b



LEGEND

- PROPERTY BOUNDARY
- LIMITS OF CONSTRUCTION
- CONSTRUCTION BASELINE
- EASEMENT
- x - x - EXISTING FENCE TO REMAIN
- x - x - EXISTING FENCE TO BE REMOVED
- x - x - PROPOSED FENCE



Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
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 Drawn: J.J.D.
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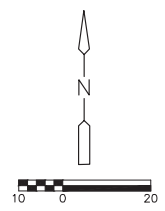
No.	Date	Revision
2	7/2/22	ACCESS GATES, RIP-RAP EXTENTS, DIMENSIONS ADDED

HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPOUNDMENT DISTRICT
 IMPOUNDMENT PHASE II
 HIGHLANDS COUNTY FLORIDA

SITE DETAIL
PUMP STATION

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 211 West Warren Avenue
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NOT FOR CONSTRUCTION



Richard A. Jones, P.E.
 FL P.E. No. 31118

SHEET SD-1

Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
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 Approved: B.L.R.

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 No. Date

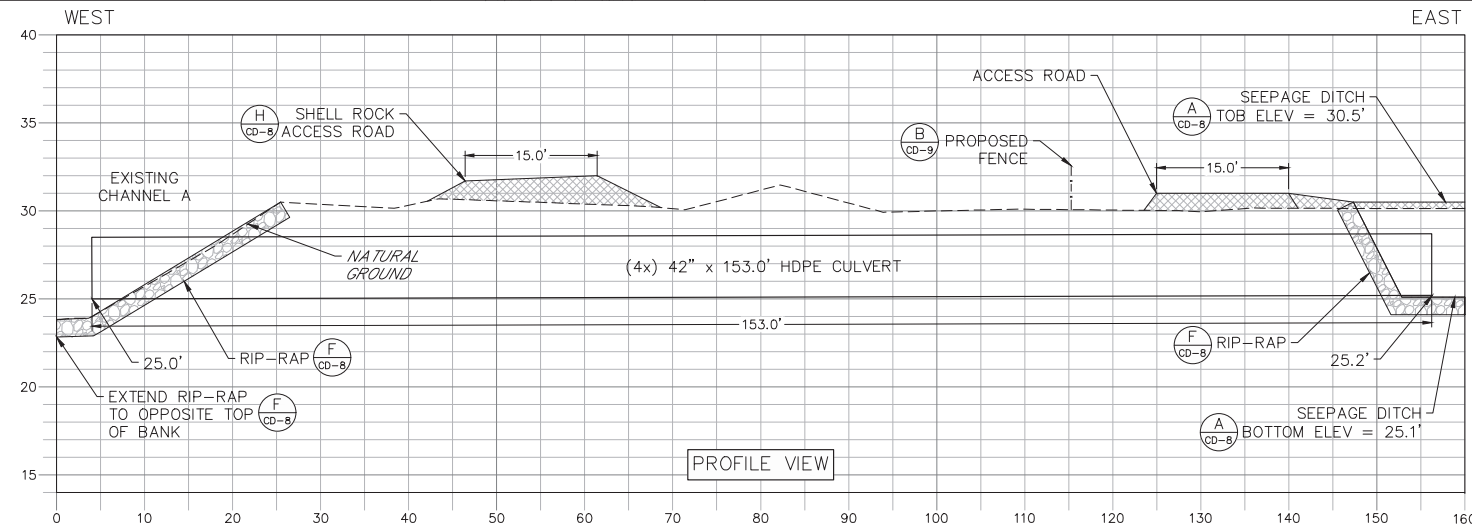
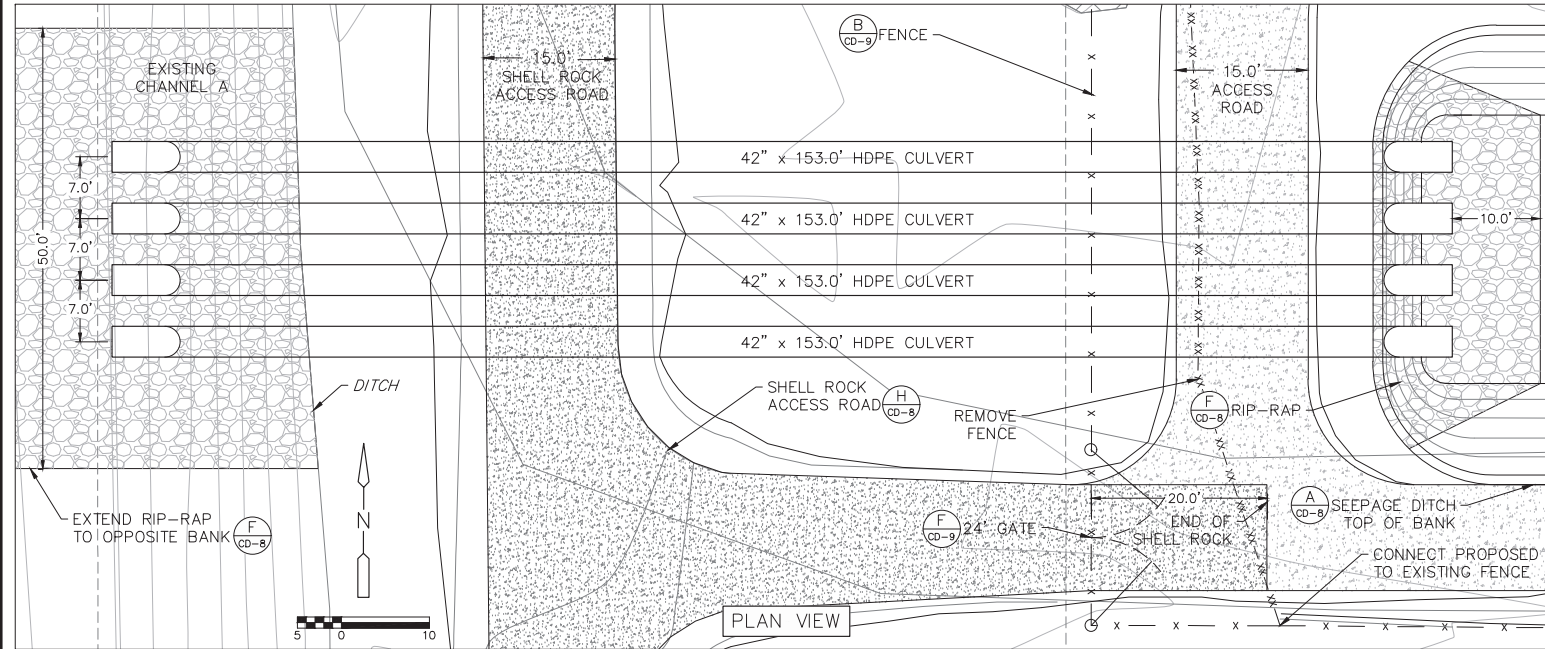
HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPOUNDMENT DISTRICT
 IMPROVEMENT PHASE II
 FLORIDA
 HIGHLANDS COUNTY

SITE DETAIL
 CULVERTS AND
 CONTROL STRUCTURES

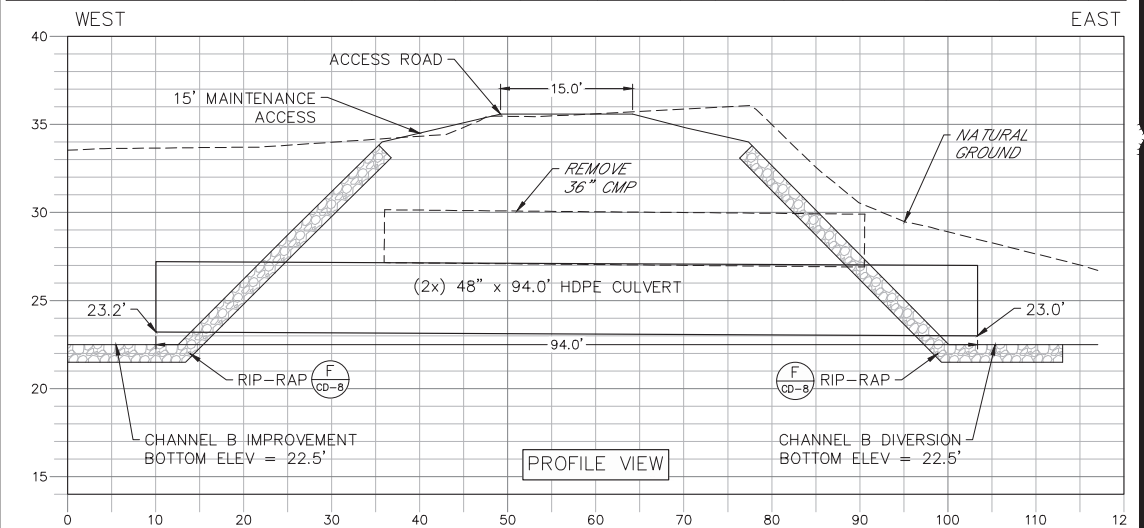
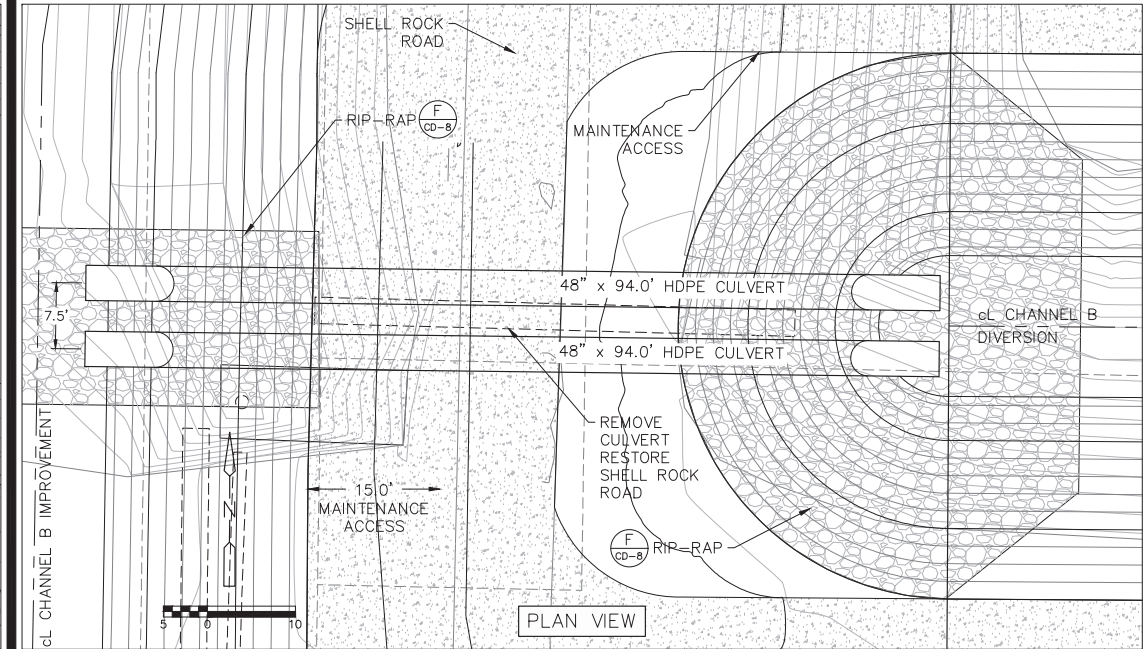
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 FL CCR No. 7290

SHEET
 SD-3

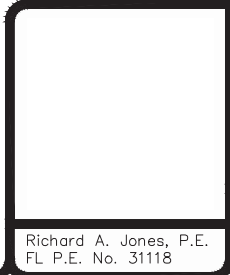
Richard A. Jones, P.E.
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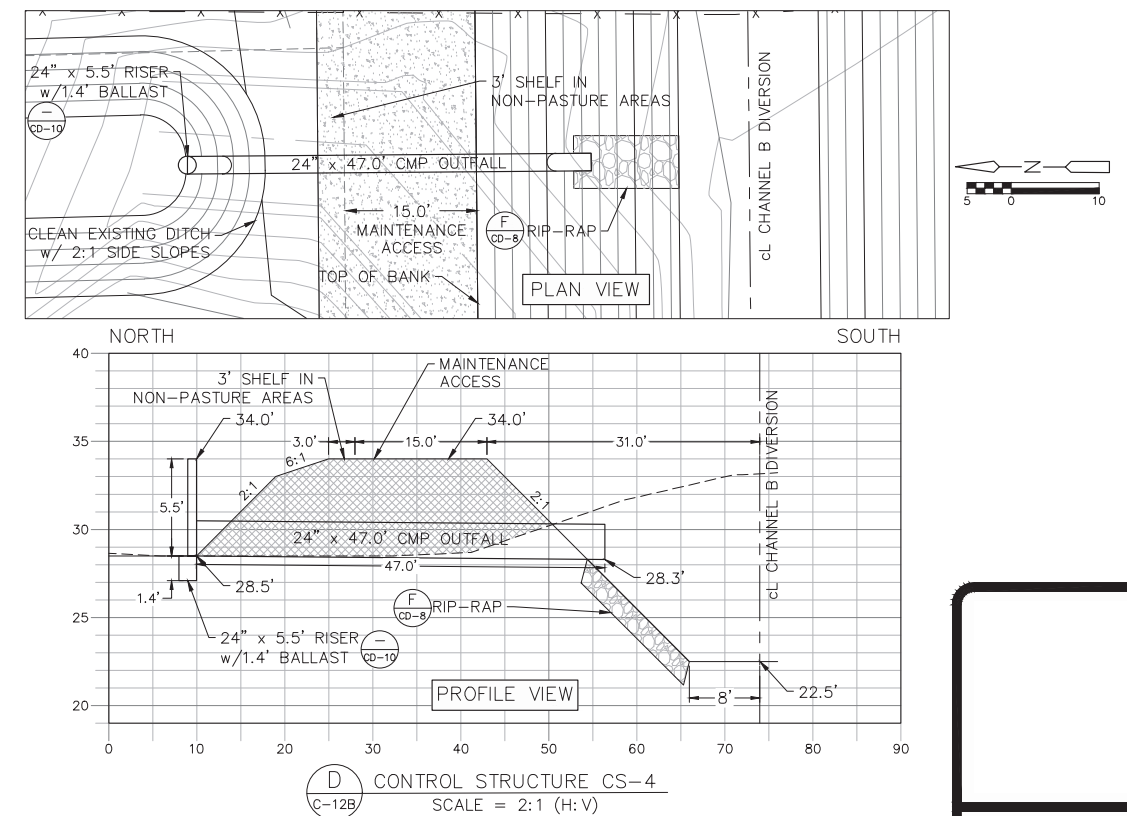
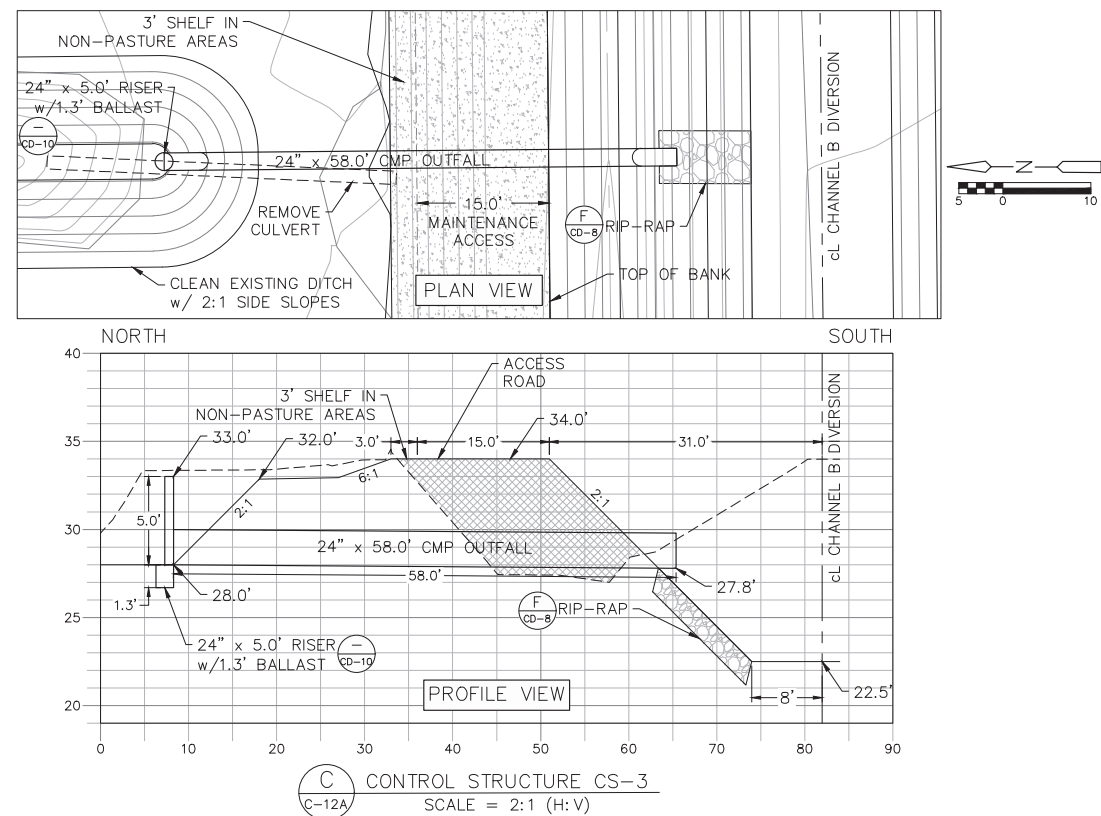
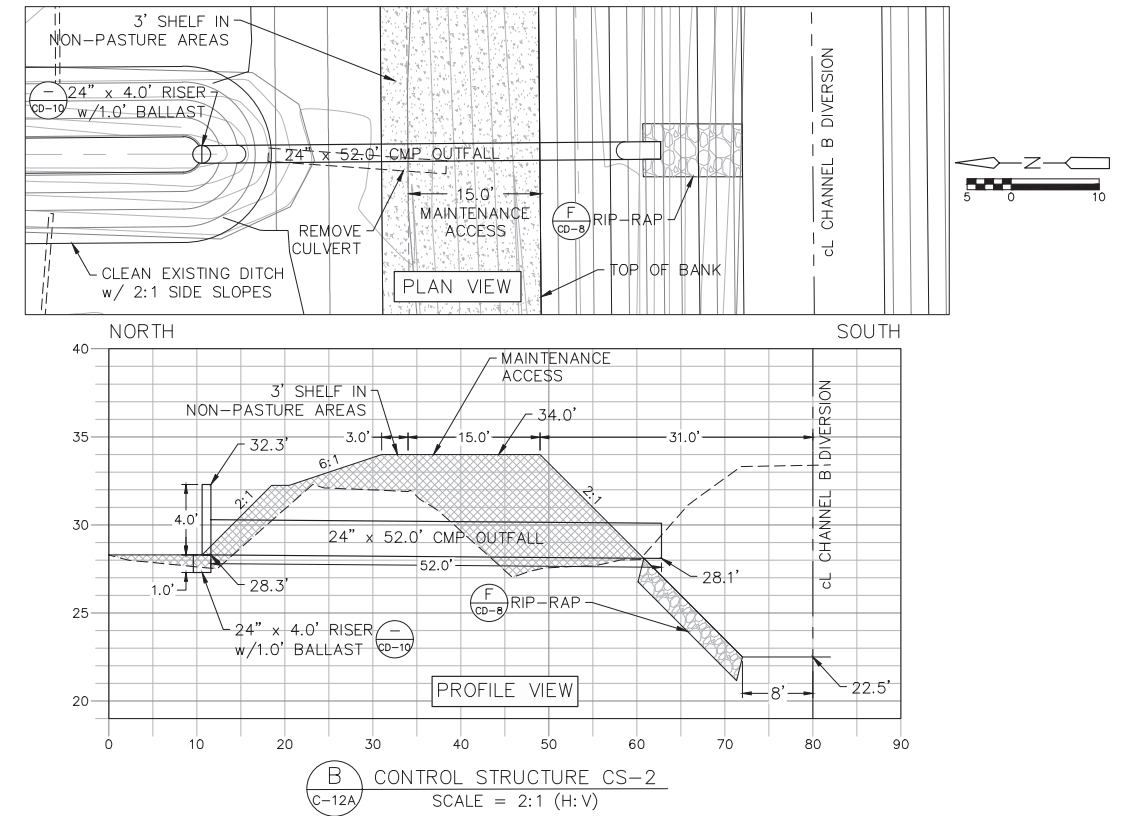
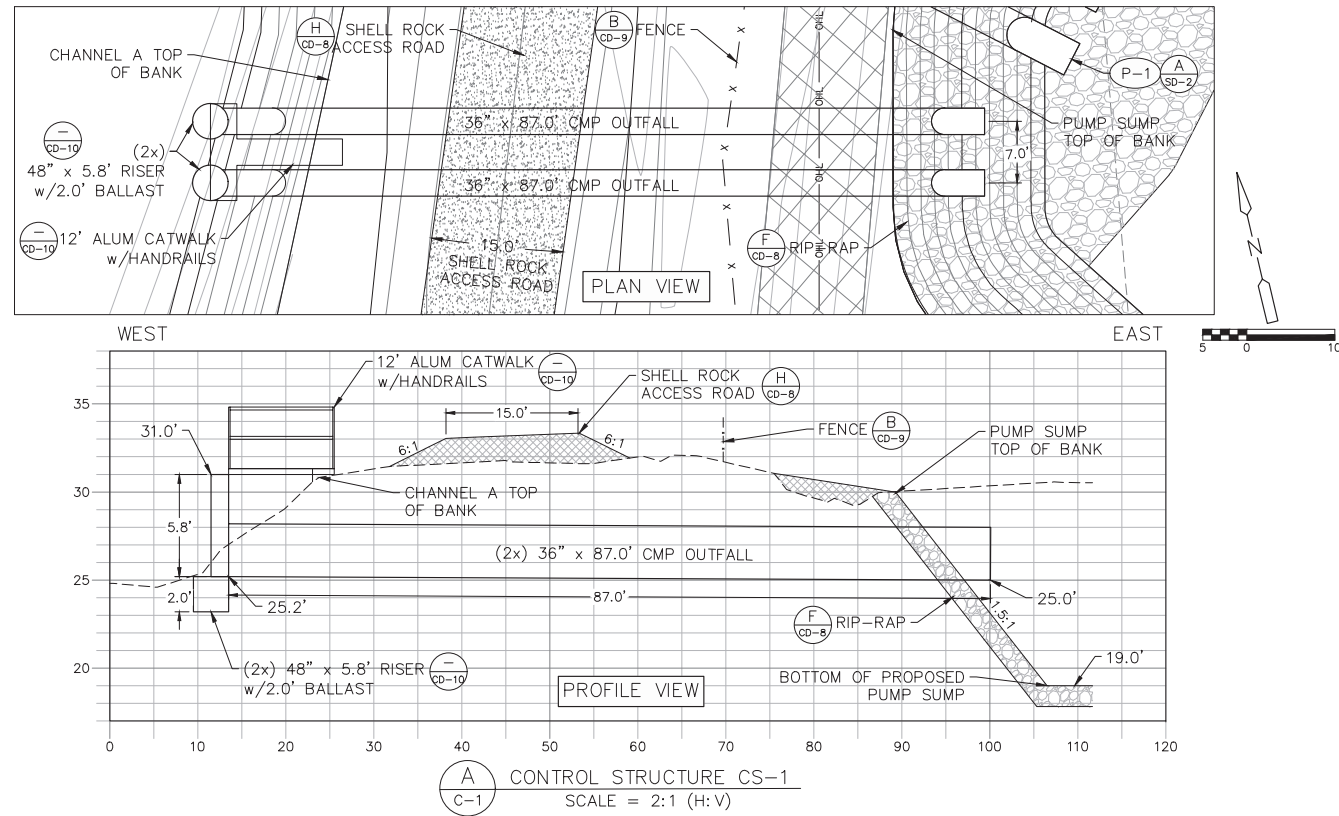


A CULVERT P-8
 C-7B SCALE = 2:1 (H:V)



B CULVERT P-12
 C-12A SCALE = 2:1 (H:V)





Job: 0202-02-ES
Scale: As Shown
Date: 3-5-2018
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Approved: B.L.R.

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No. Date:

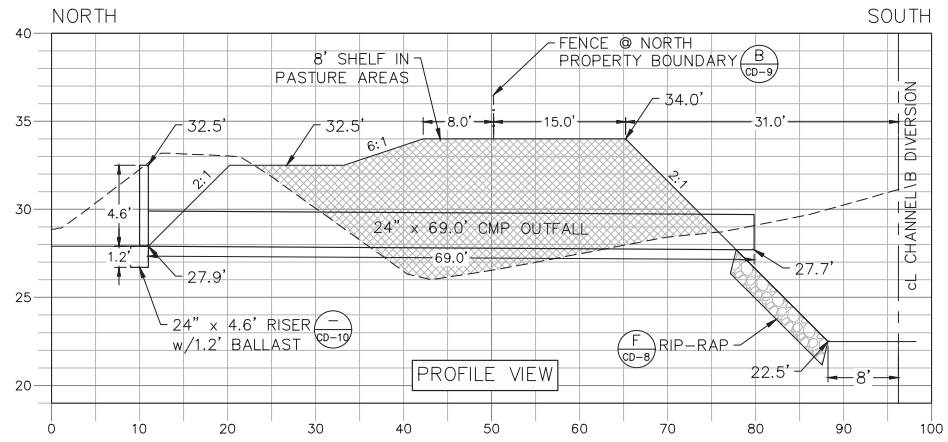
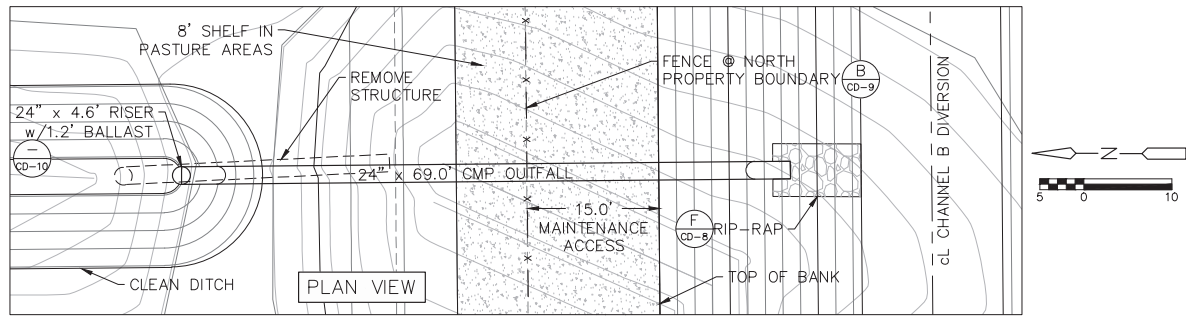
HIGHLANDS COUNTY BCC
ISTOKPOGA MARSH WATER
IMPOUNDMENT DISTRICT II
IMPOUNDMENT PHASE II
FLORIDA
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SITE DETAIL
CULVERTS AND
CONTROL STRUCTURES

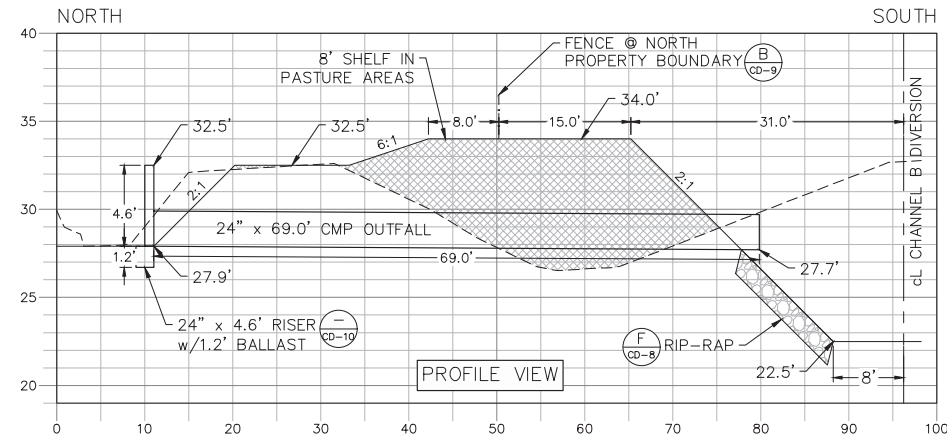
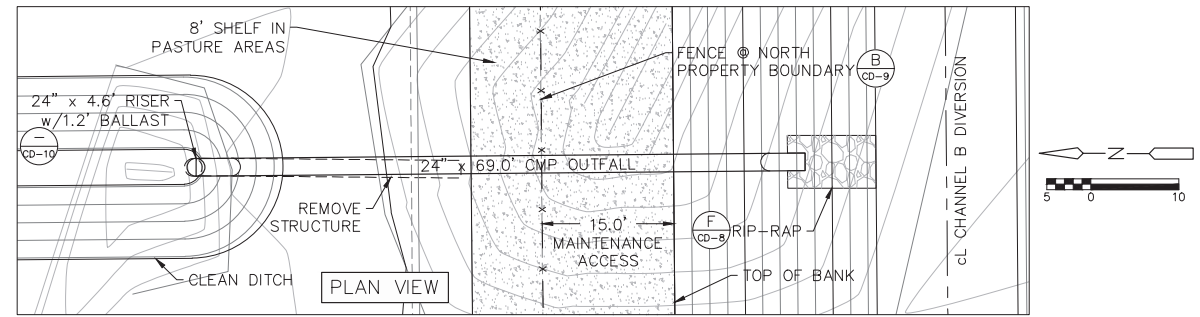
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SD-4

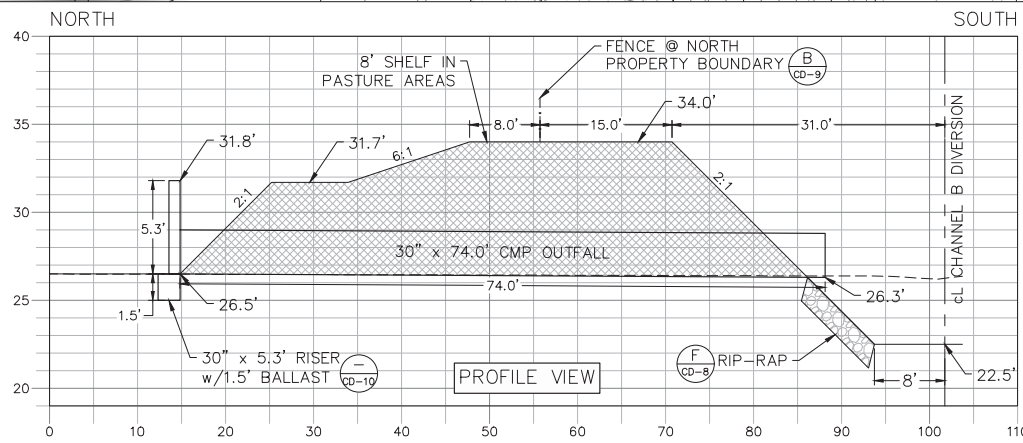
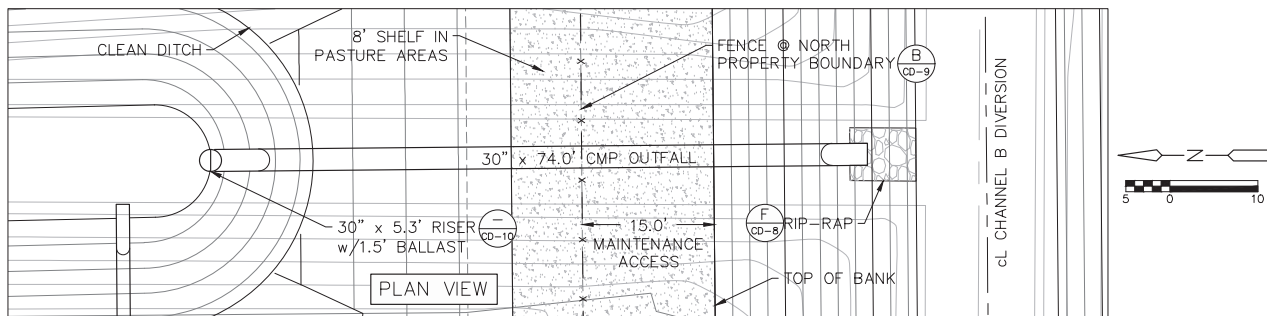
Richard A. Jones, P.E.
FL P.E. No. 31118



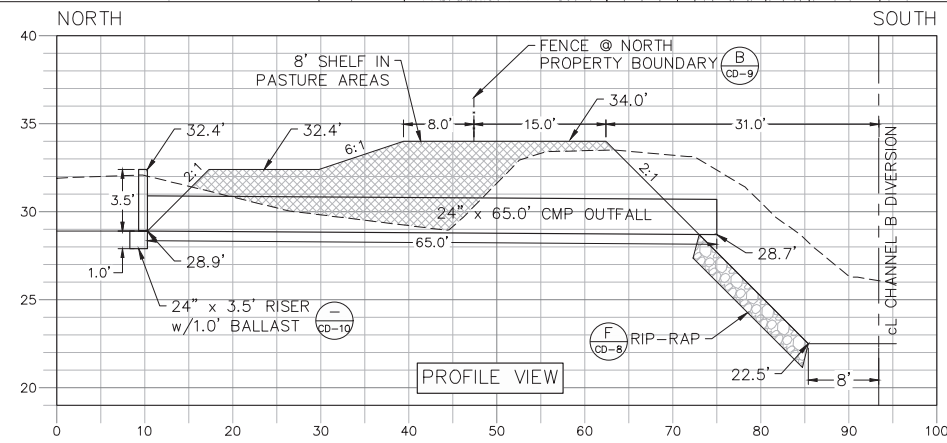
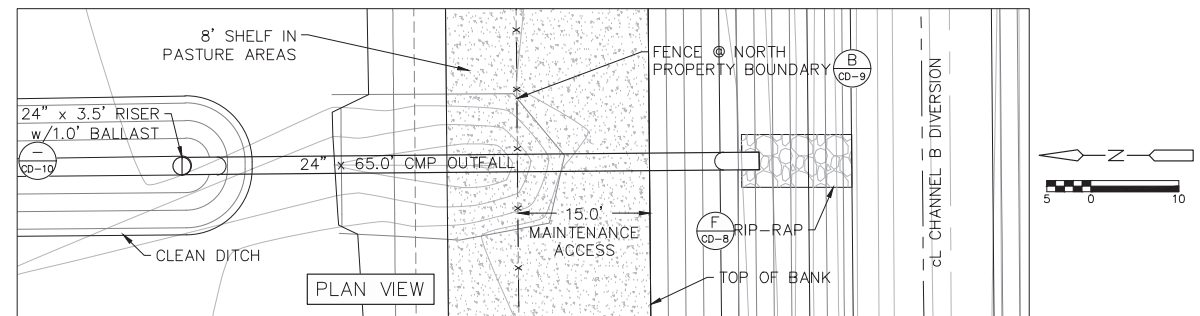
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SCALE = 2:1 (H:V)



(B) CONTROL STRUCTURE CS-6
SCALE = 2:1 (H:V)



(C) CONTROL STRUCTURE CS-7
SCALE = 2:1 (H:V)



(D) CONTROL STRUCTURE CS-8
SCALE = 2:1 (H:V)

Job: 0202-02-ES
Scale: As Shown
Date: 3-5-2018
Design: R.A.J.
Drawn: J.J.D.
Checked: D.C.R.
Approved: B.L.R.

Revision

No. Date:

HIGHLANDS COUNTY BCC
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SITE DETAIL
CULVERTS AND
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Richard A. Jones, P.E.
FL P.E. No. 31118

Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

No.	Date	Revision
1	7/27/18	PEAK STORAGE ELEVATION REVISED
2	7/27/18	MANHOLES ADDED, PUMP INTAKE LEVEL SENSOR RELOCATED, DIMENSION UPDATES, GROUT ADDED.

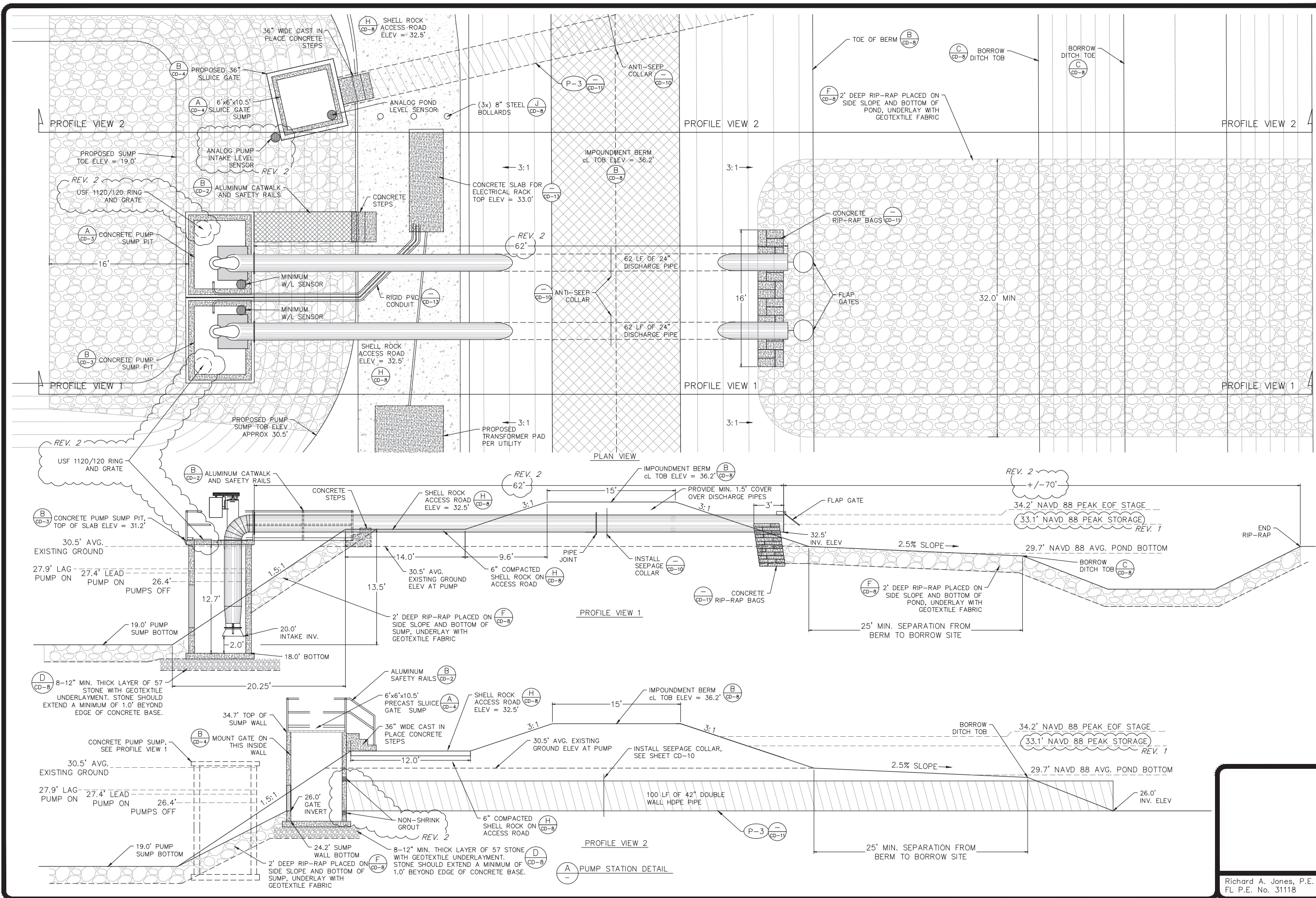
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Job: 0202-02-ES
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 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

Revision	Description
2	MANHOLES ADDED, ALUM. RAILING DETAIL UPDATE

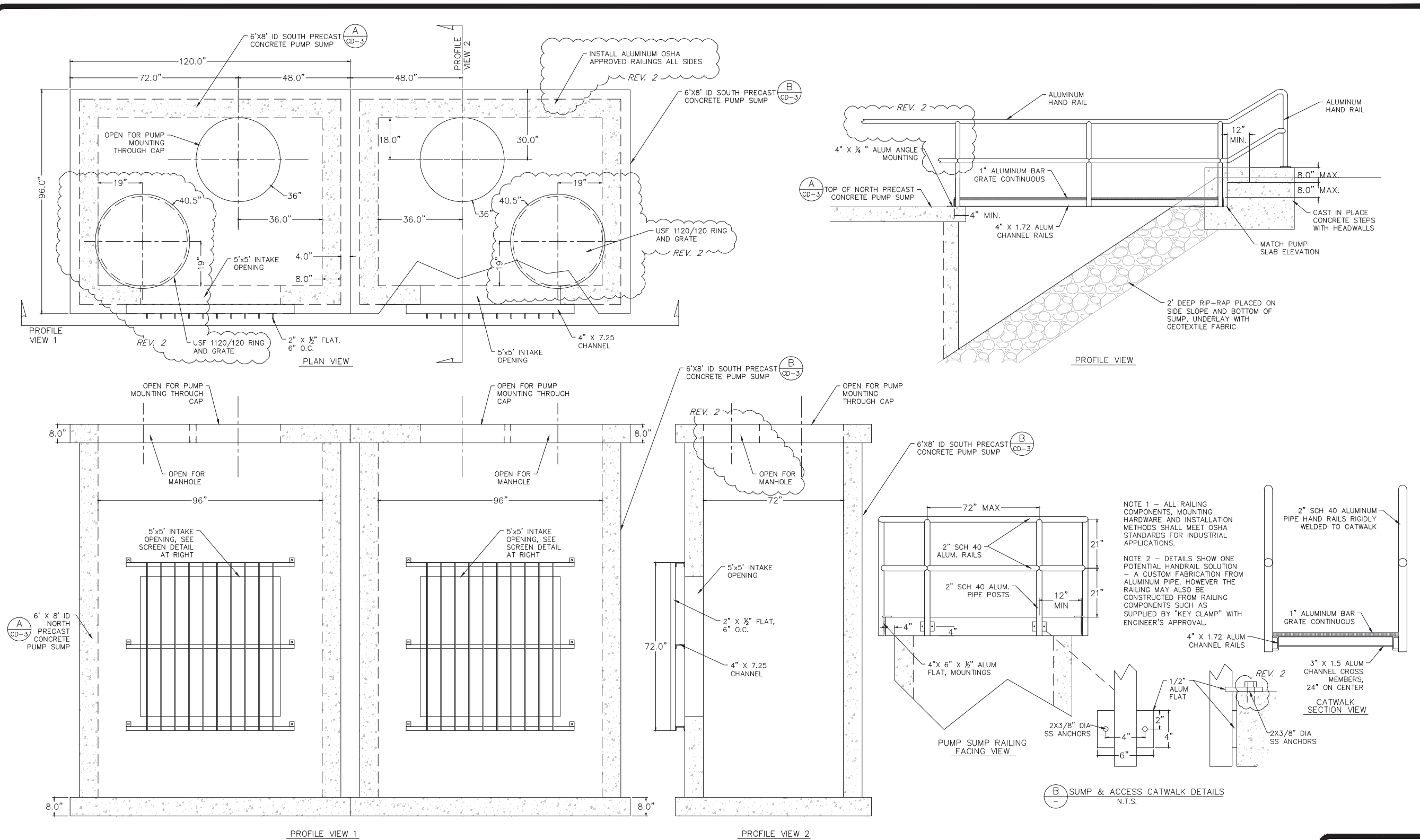
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NOTE 1 - DIMENSIONS FOR PUMP SUMP SHALL BE REVIEWED AND APPROVED BY PUMP SUPPLIER TO FIT THE REQUIREMENTS OF THE PUMPS TO BE INSTALLED.

NOTE 2 - PRECAST CONCRETE MANUFACTURER SHALL VERIFY STRUCTURAL DESIGN FOR PUMP SUMP, FOUNDATION AND CAPS.

NOTE 3 - INTAKE SCREEN DESIGN SHALL BE APPROVED BY PUMP MANUFACTURER AND HOT DIP GALVANIZED AFTER FABRICATION.

(A) CONCRETE SUMP DETAIL
 N.T.S.

(B) SUMP & ACCESS CATWALK DETAILS
 N.T.S.

Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

No. Date: 2 7/14/22 MANHOLES ADDED

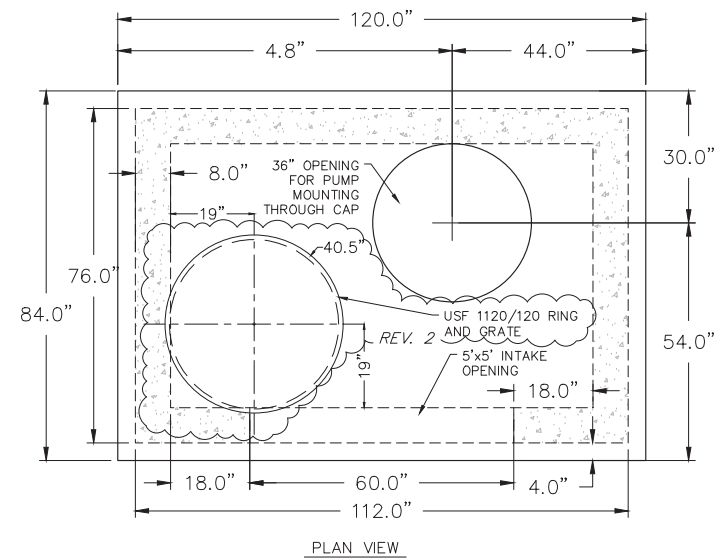
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PRECAST SUMP DETAILS

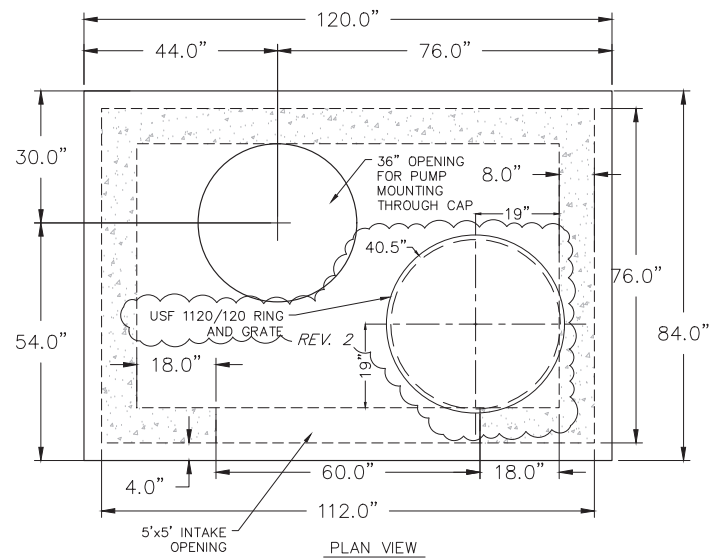
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SHEET
 CD-3

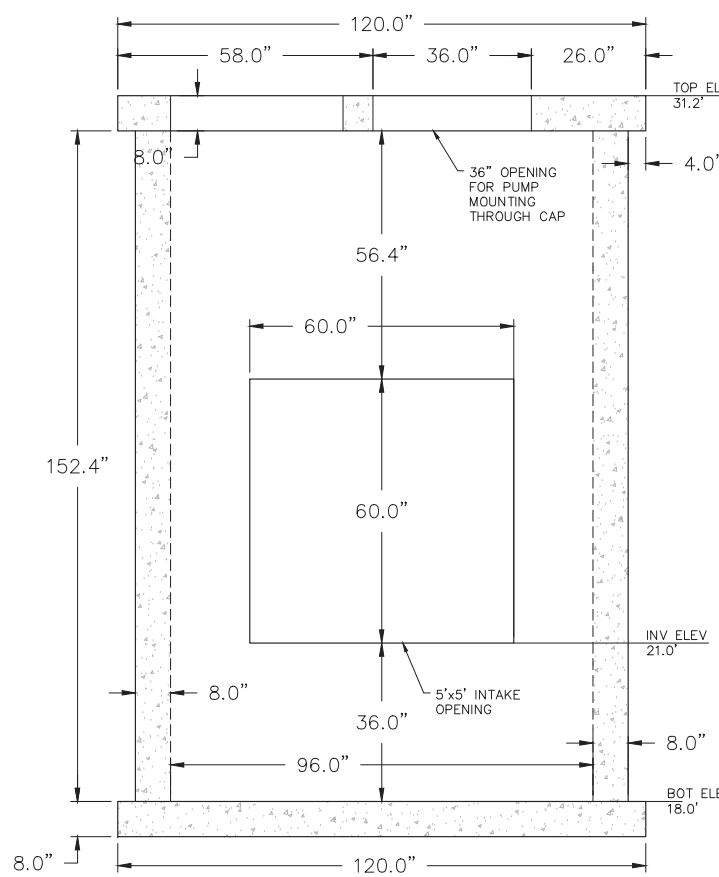
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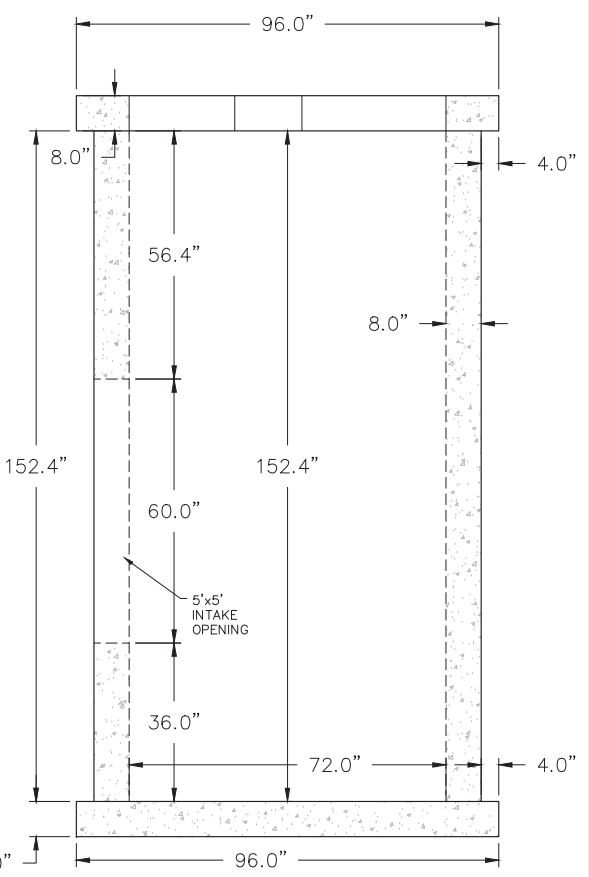
PLAN VIEW



PLAN VIEW

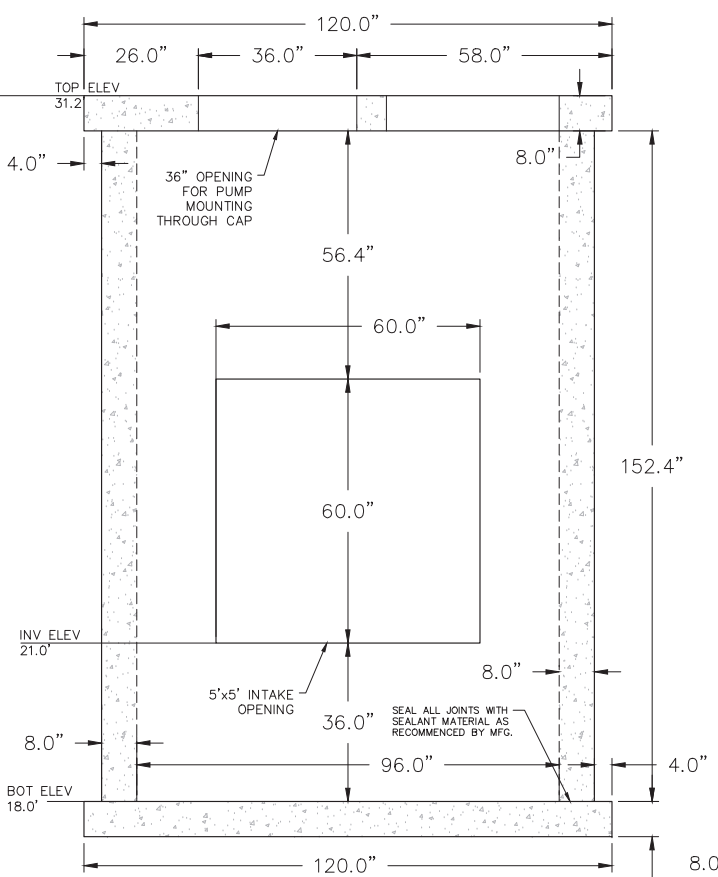


FACING VIEW

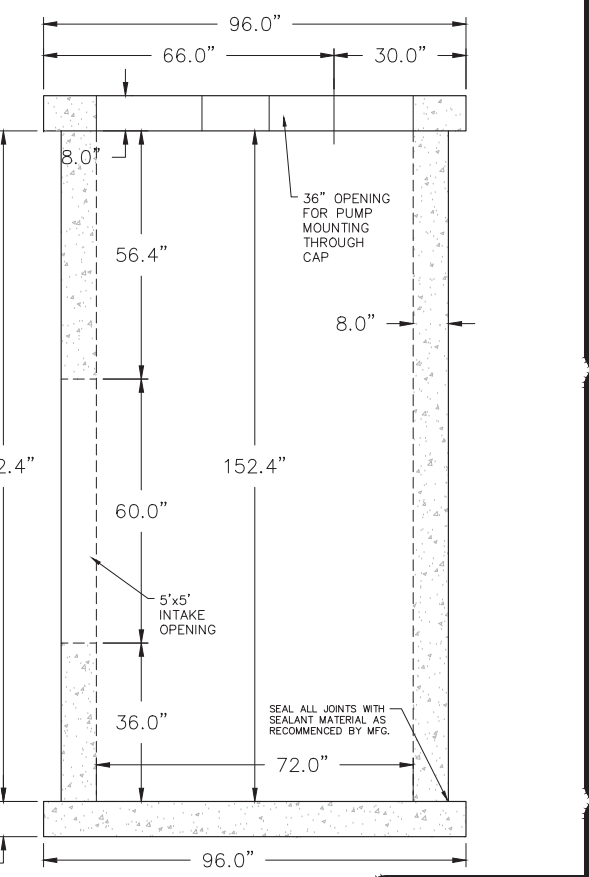


PROFILE VIEW

(A) NORTH PUMP SUMP



FACING VIEW



PROFILE VIEW

(B) SOUTH PUMP SUMP

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 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

Revision
 2 7/4/22 NON-SHRINK GROUT ADDED, ELEVATIONS EDIT

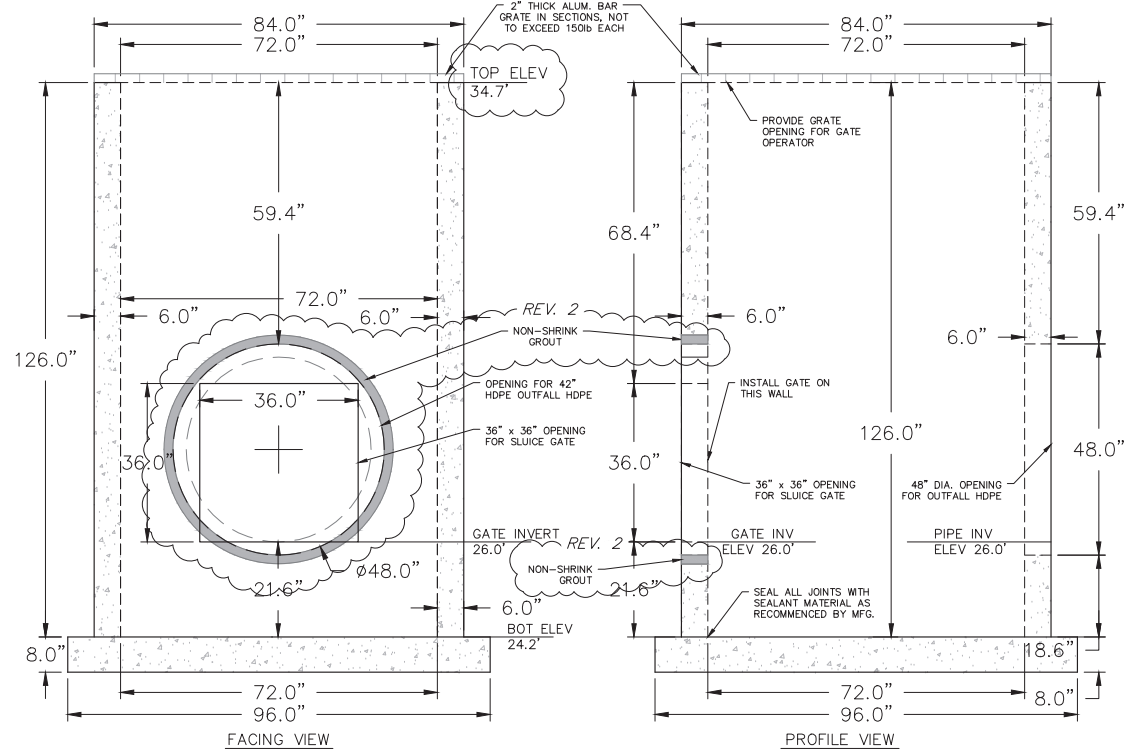
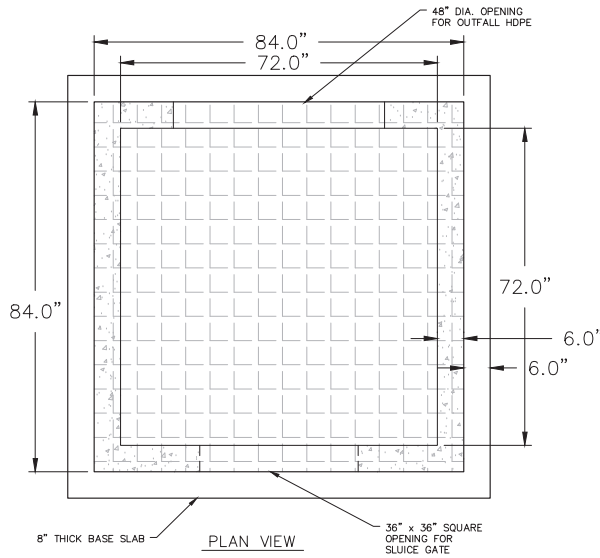
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SLUICE GATE
 DETAILS

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 CD-4

Richard A. Jones, P.E.
 FL P.E. No. 31118



A SLUICE GATE SUMP

MATERIAL KEY		FINISH KEY		PAINT KEY	
1. CAST IRON: ASTM A-126 CL B		1. AS CAST		6G BLAST CLEAN PER SSPC-SP6	
4. MANGANESE BRONZE: ASTM B-584 ALLOY 865		2. MILL		TDFT-5 MILS (MIN.)	
9A. STAINLESS STEEL: ASTM A-276 TYPE 304		3. MACHINED		POLYAMIDE EPOXY COLOR: GRAY [6]	
13. NEOPRENE RUBBER: ASTM D-2000		4. GALVANIZE-ASTM A-123			
14. CLEAR PLASTIC BUTYRATE PIPE		5. GALVANIZE-ASTM A-153			
15A. STAINLESS STEEL HARDWARE: ASTM F-593 & 594 TYPE 304 (GRADE 8 & 8B)		6. SEE PAINT KEY			
17. ALUMINUM: ASTM B-209 ALLOY 6061-T6					
21. UHMW POLYETHYLENE PLASTIC					

ITEM DESCRIPTION	MATERIAL KEY	FINISH KEY	PART NO. OR SIZE (FOR WATERMAN USE ONLY)	QTY/ GATE	TOTAL QTY
1. GATE ASSEMBLY	-	-	-	1	1
a) FRAME WELDMENT	17	2	-	1	1
1) HEADRAIL	17	2	C3 x 2.7 CHANNEL (107908)	2	1
2) STEM BRACE	17	2	3 x 3 x 1/4 ANGLE	1	1
b) COVER WELDMENT	-	-	-	1	1
c) ASSEMBLY HARDWARE	15A	2	3/8 NC.	A/R	-
d) SEATS & SPACER	-	-	-	-	-
1) SIDE SEAL	21	2	REF. 107595/108391	2	1
2) TOP SEAL	21	2	REF. 107596/108392	1	1
e) SEALS	-	-	-	-	-
1) SEAL	13	2	REF. 109352-21	1	1
2) FLUSHBOTTOM SEAL	13	2	REF. 107879	1	1
f) RETAINER BAR	17	2	3 x 3 x 1/4 ANGLE	2	2
g) STEM BOLT & NUT	15A	2	1/2 NC x 2-3/4 LG.	2/2	2
3. STEM (RISING)	9A	2,3	1-1/4 DIA. , 4 TPI, LH [5]	1	1
4. LIMIT NUT	1	5	1-1/4 DIA. , 4 TPI, LH	1	1
7. LIFT ASSEMBLY	-	-	-	1	1
a) LIFT	1,4	6G	TYPE 2N-B	1	1
b) HANDWHEEL (24 IN.) W/S.C.A.	1	6G	W-794 & W-1264	1/1	1
c) BASEPLATE	1	6G	W-2067	1	1
d) HEX HEAD BOLT, NUT, & WASHER	15A	2	5/8 NC X 2-1/2 LG.	2/2/4	4
8. STEM COVER (W/ MYLAR STRIP)	14	2	REF. 102786 (3 in) 42 LG.	1	1
51. ALL THREADED STUD [6]	9A	2,3	1/2 NC X 9 LG.	24	24
75. HEX NUT	15A	2	1/2 NC	48	48
76. WASHER	15A	2	1/2 DIA.	48	48

NOTES: UNLESS OTHERWISE SPECIFIED.

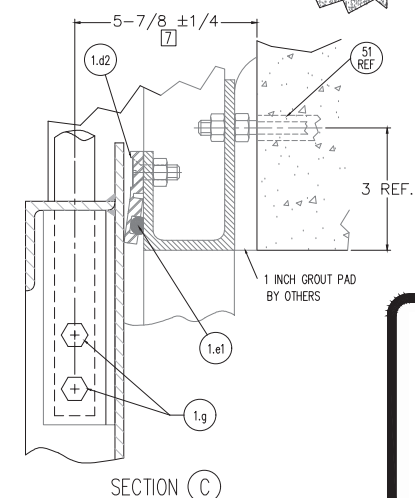
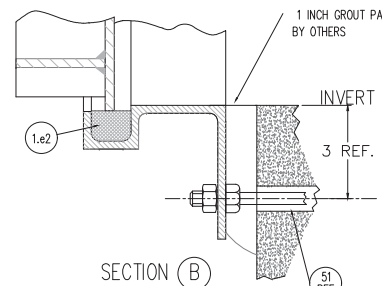
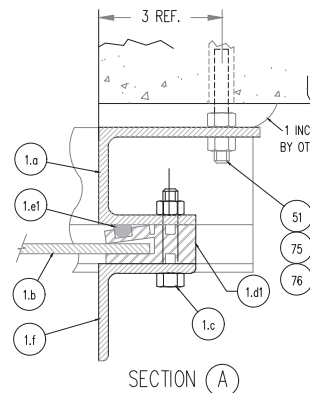
- (GATE CAPACITY) MAXIMUM SEATING HEAD = 10 FT.; MAXIMUM UNSEATING HEAD = 10 FT.
- OPERATING HEAD FROM GATE CENTER LINE: SEATING HEAD = 5.75 FT.; UNSEATING HEAD = 5.75 FT. [6]
- LIFT CAPACITY @ 40 LBS PULL = 3490 LBS.
- TURN HANDWHEEL CCW TO OPEN (RAISE) GATE.
- 29" MODIFIED STUB ACME THREADS.
- CONTRACTOR TO VERIFY OR SUPPLY.
- DIMENSION INCLUDES 1 INCH FOR GROUT PAD.
- CONTRACTOR TO PROVIDE EPOXY A-7 (OR EQUAL) EPOXY FOR ANCHORS.

EMBEDDED DEPTH FOR ALL THREADED STUDS			
DIAMETER	EMBEDDED DEPTH	HOLE DEPTH	HOLE DIA.
1/2	6-1/2	6-3/4	9/16

NOTE: HANDRAILS BY CONTRACTOR. CONTRACTOR TO ENSURE CLEARANCE FOR HANDWHEEL OPERATION

NOTE: OPENING IN GRATING NOT SHOWN. CONTRACTOR TO PROVIDE REQUIRED OPENINGS.

DIMENSIONS AND DETAILS SHOWN ARE FOR A WATERMAN A-251-1-Y SLUICE GATE. CONTRACTOR MAY USE THE WATERMAN GATE CUSTOM FABRICATED FOR THE PROJECT OR ANOTHER MANUFACTURED GATE APPROVED BY ENGINEER WITH SIMILAR FUNCTIONALITY, MATERIALS SPECIFICATIONS AND DIMENSIONS.



B SLUICE GATE DETAILS
 N.T.S.

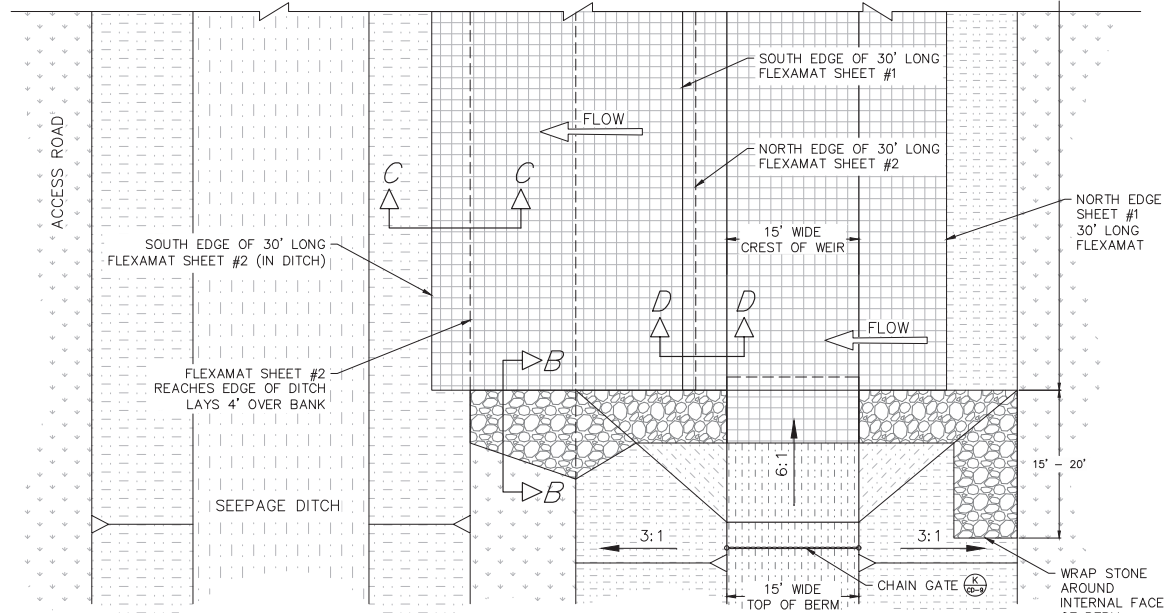
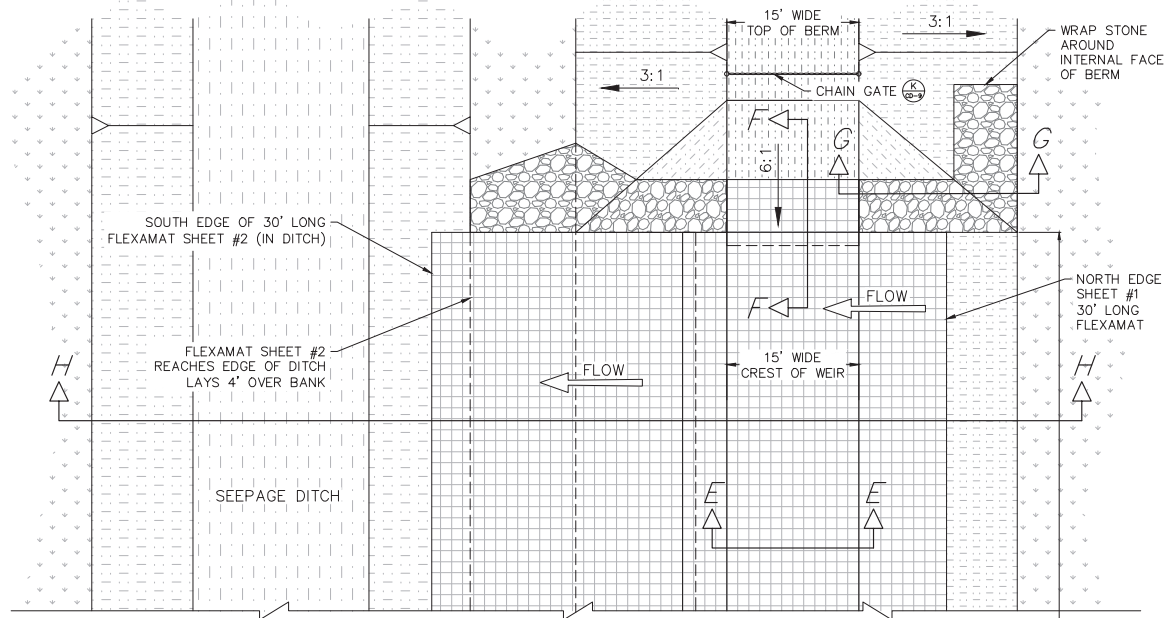
2" THICK ALUM. BAR GRATE IN SECTIONS, NOT TO EXCEED 150lb EACH
 REV. 2
 TOP OF WALL EL. = 34.7'

REV. 2
 NOTE:
 2" ALUM BAR GRATE
 TOP OF WALL EL. = 34.7'

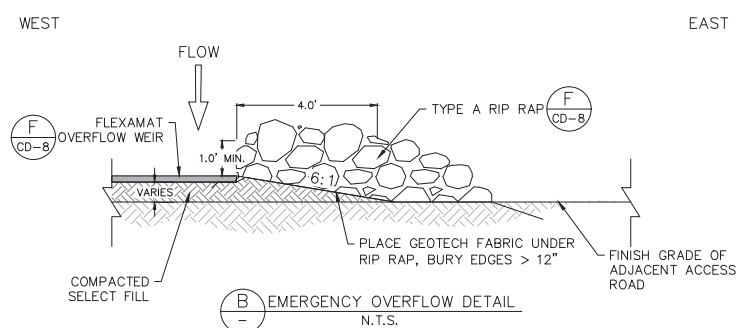
NOTE: ALUMINUM IN CONTACT WITH CONCRETE TO BE FIELD PAINTED

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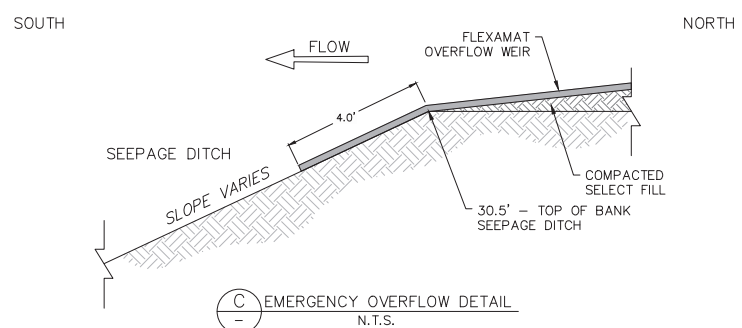
Revision
 1. 7/22/19 IMPOUNDMENT AVERAGE BOTTOM ELEVATION



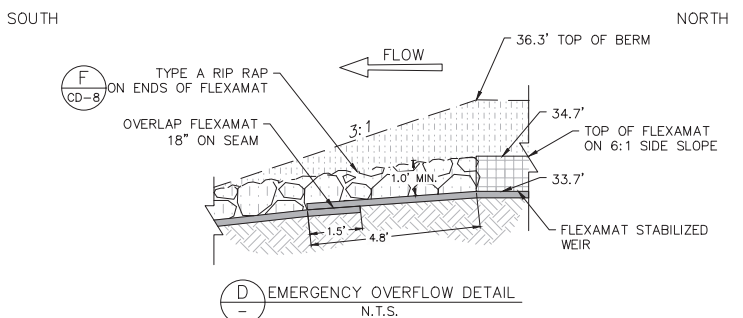
(A) EMERGENCY OVERFLOW DETAIL
 SITE PLAN



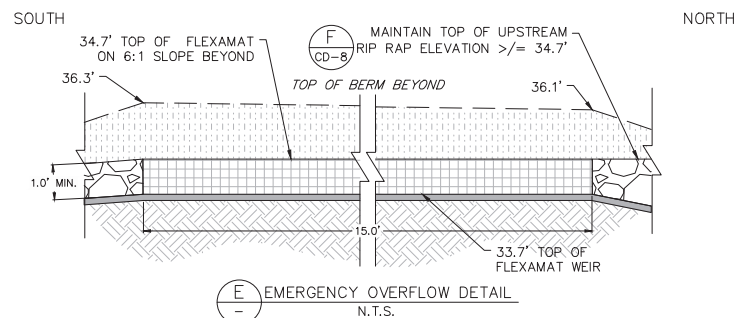
(B) EMERGENCY OVERFLOW DETAIL
 N.T.S.



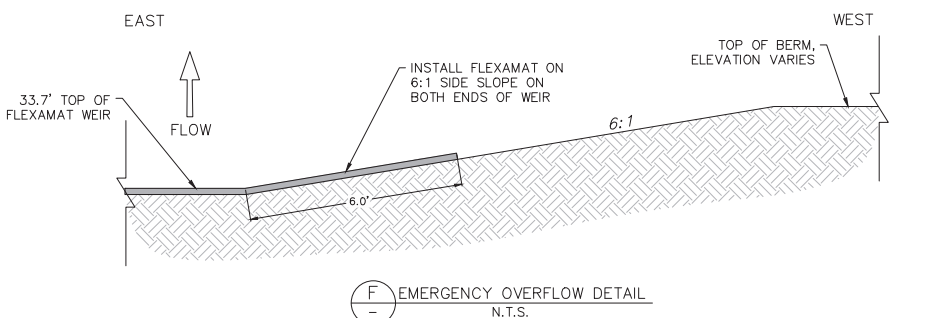
(C) EMERGENCY OVERFLOW DETAIL
 N.T.S.



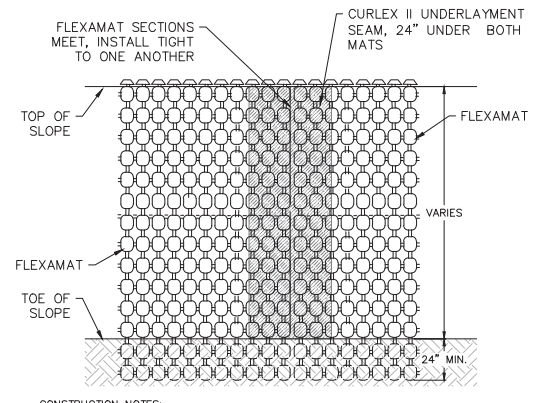
(D) EMERGENCY OVERFLOW DETAIL
 N.T.S.



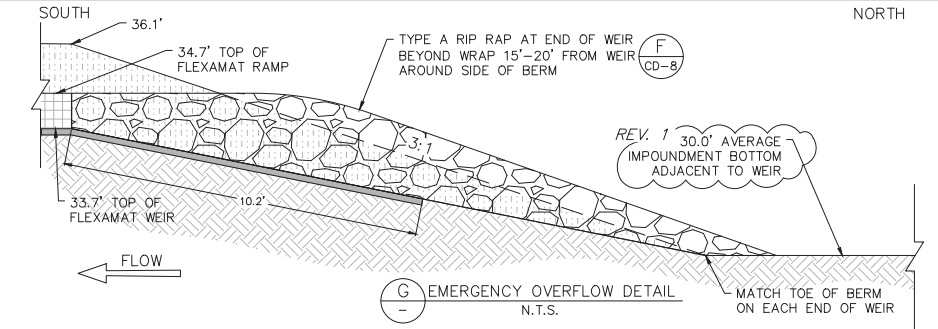
(E) EMERGENCY OVERFLOW DETAIL
 N.T.S.



(F) EMERGENCY OVERFLOW DETAIL
 N.T.S.

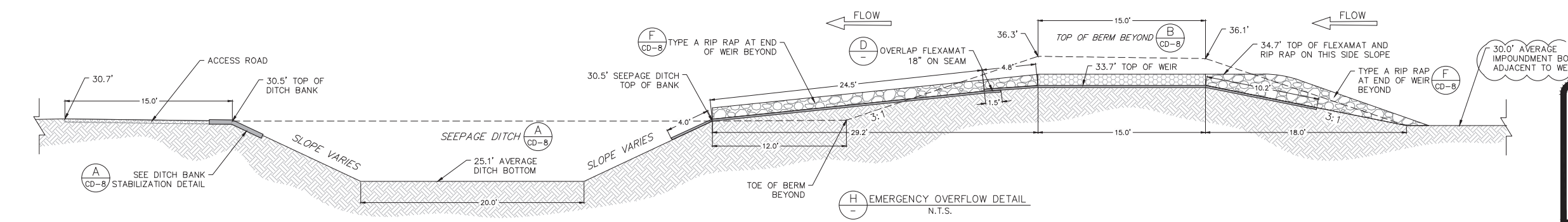


(I) FLEXAMAT SLOPE STABILIZATION
 N.T.S.



(G) EMERGENCY OVERFLOW DETAIL
 N.T.S.

- CONSTRUCTION NOTES:
- GRADE A UNIFORM SUBGRADE. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF STICKS, ROOTS, OR DEBRIS OF ANY KIND. THE PREPARED SURFACE SHALL PROVIDE A FIRM UNYIELDING FOUNDATION FOR THE MATS.
 - PRIOR TO INSTALLING THE FLEXAMAT, SEED THE SLOPE WITH SITE SPECIFIC SEED.
 - INSTALL FLEXAMAT AS SHOWN ON THIS DETAIL SHEET AND DETAIL SHEET C-7.
 - ABUT EACH SECTION OF MAT TIGHTLY TO THE PREVIOUS SECTION. INSTALL A 4' SECTION OF CURLEX II ECB UNDER THE ABUTTED FLEXAMAT PANELS, BRIDGING THE SEAM EQUALLY SO THAT 24" OF THE ECB IS UNDER EITHER MAT.



(H) EMERGENCY OVERFLOW DETAIL
 N.T.S.

(A) SEE DITCH BANK STABILIZATION DETAIL
 CD-8

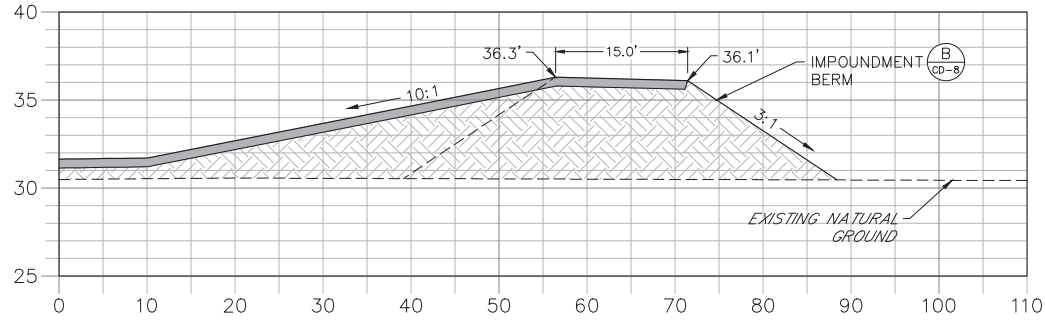
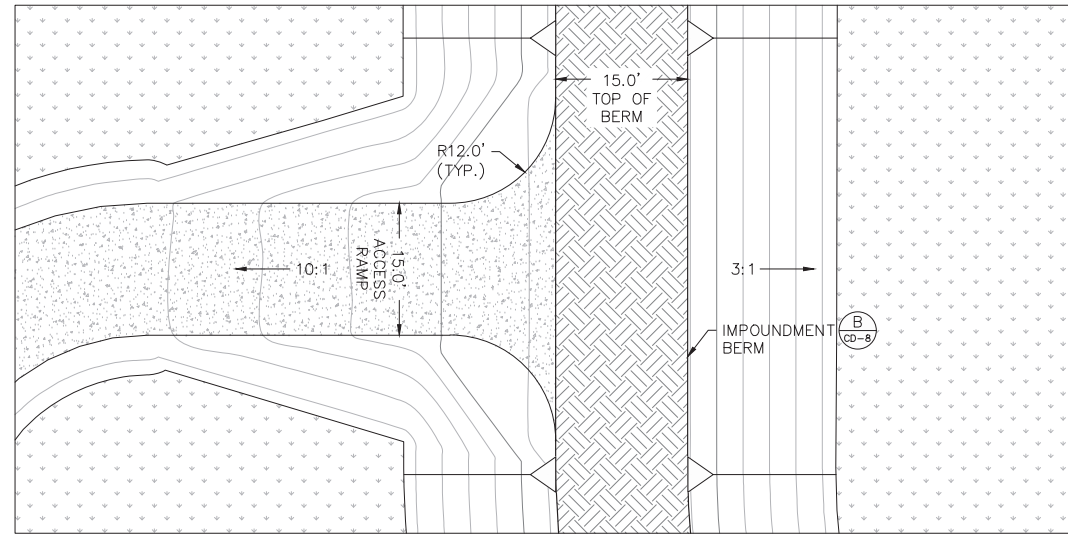
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EMERGENCY OVERFLOW
 DETAILS

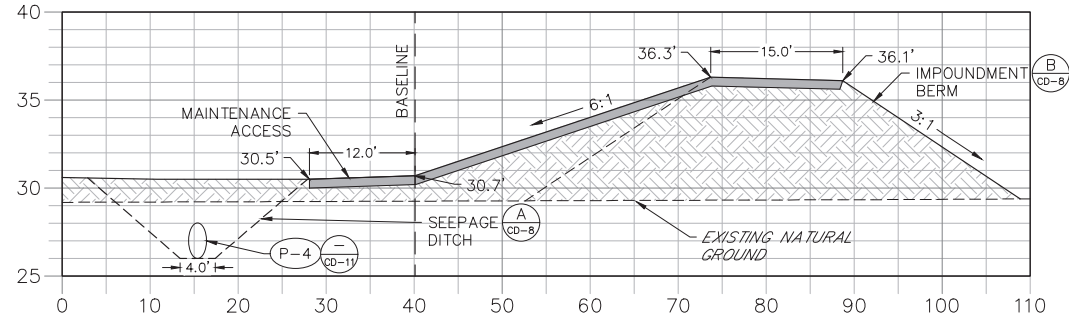
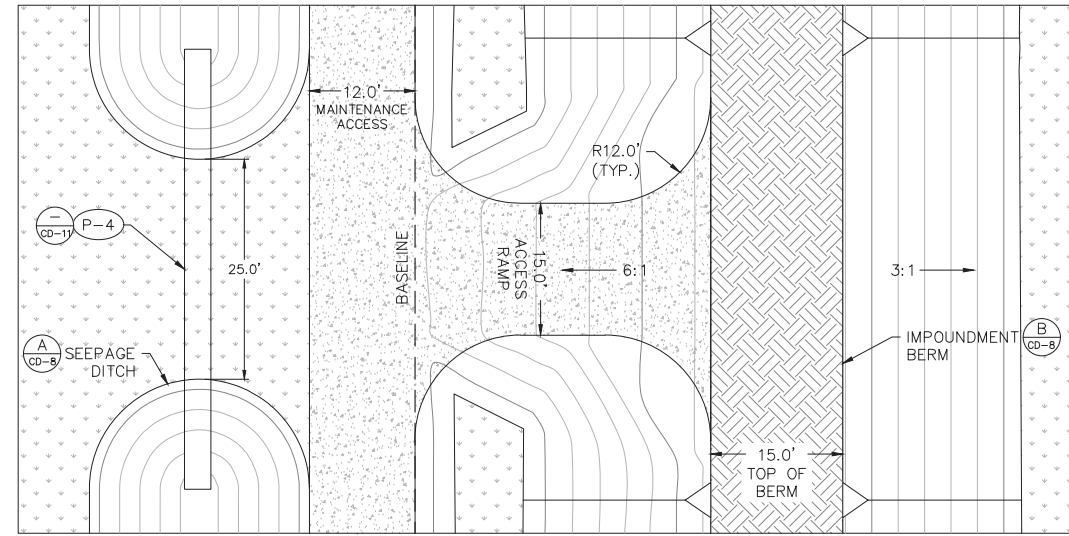
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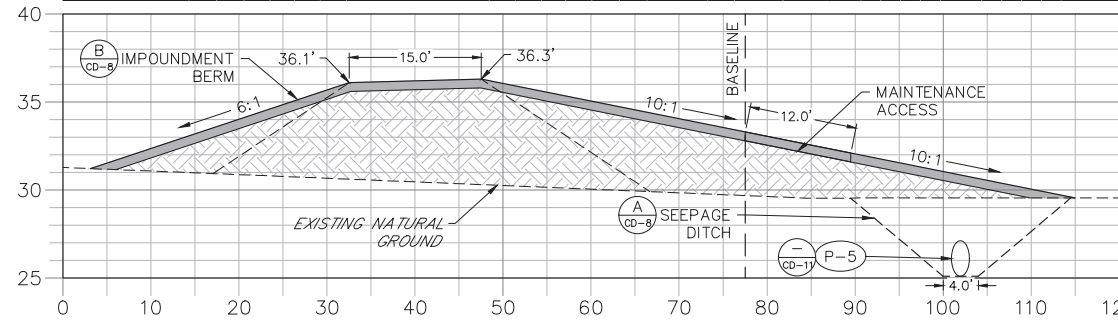
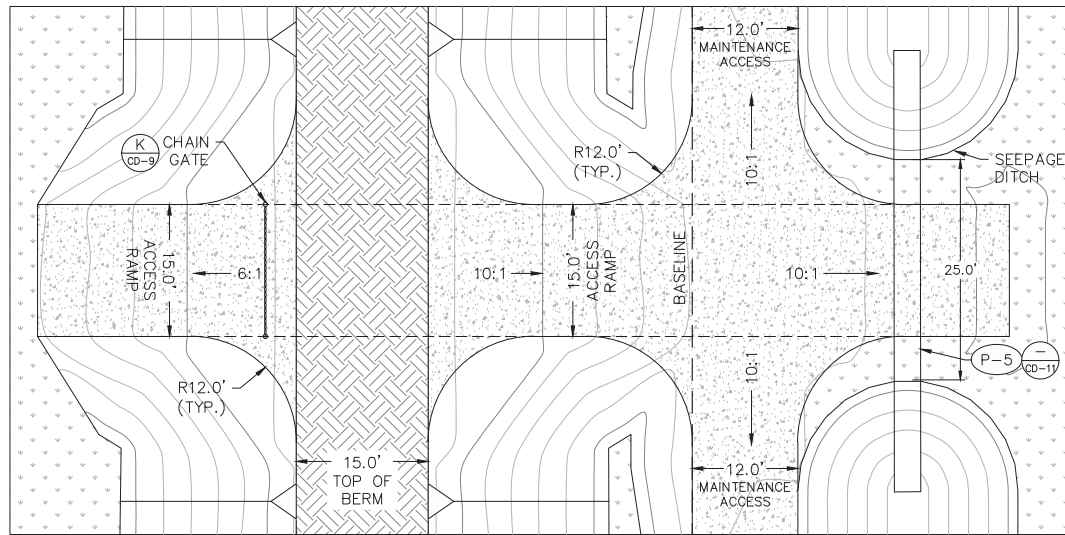
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 FL P.E. No. 31118



(A) ACCESS RAMP A
SCALE = 2:1 (H:V)



(B) ACCESS RAMP B
SCALE = 2:1 (H:V)



(C) ACCESS RAMP C
SCALE = 2:1 (H:V)

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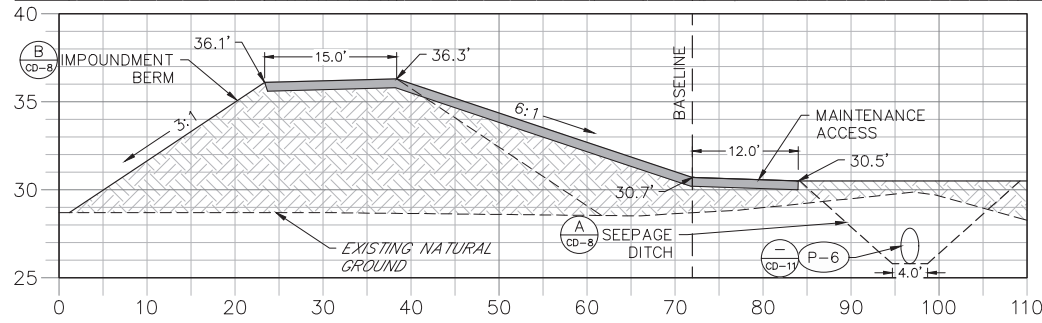
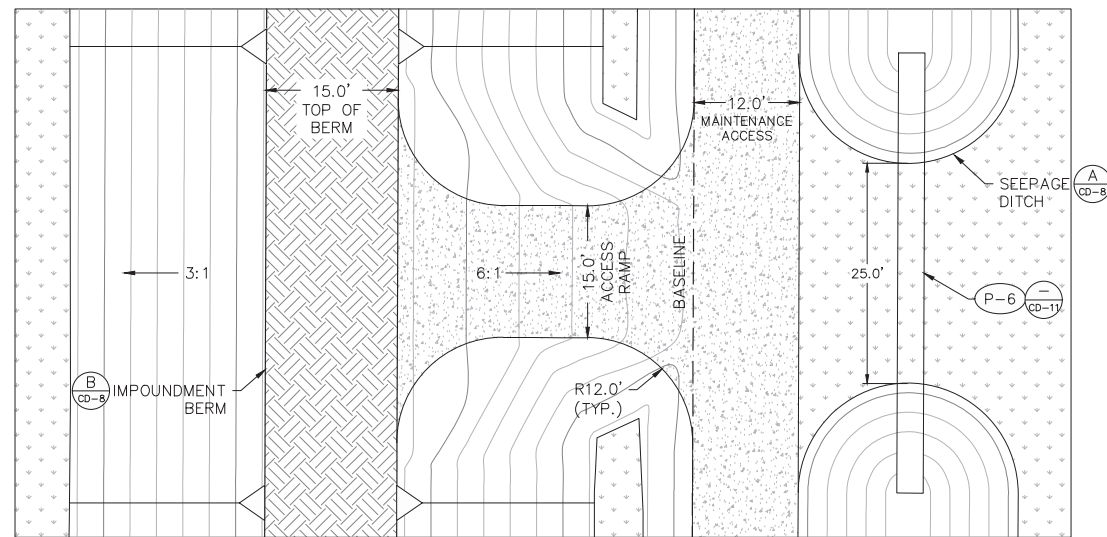
ACCESS RAMP
DETAILS

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CONSTRUCTION

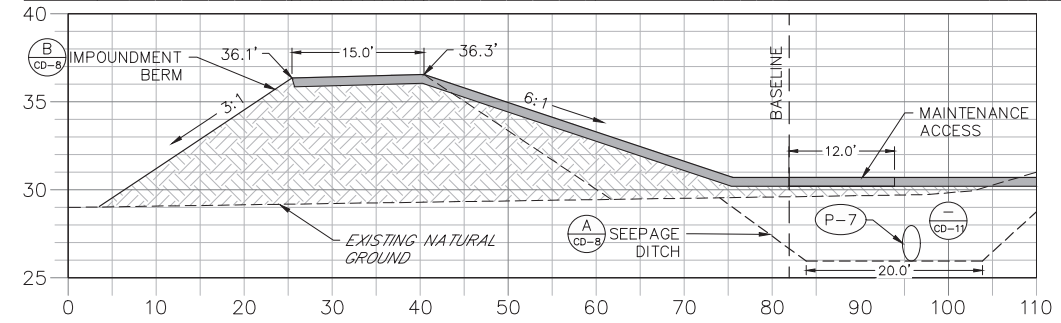
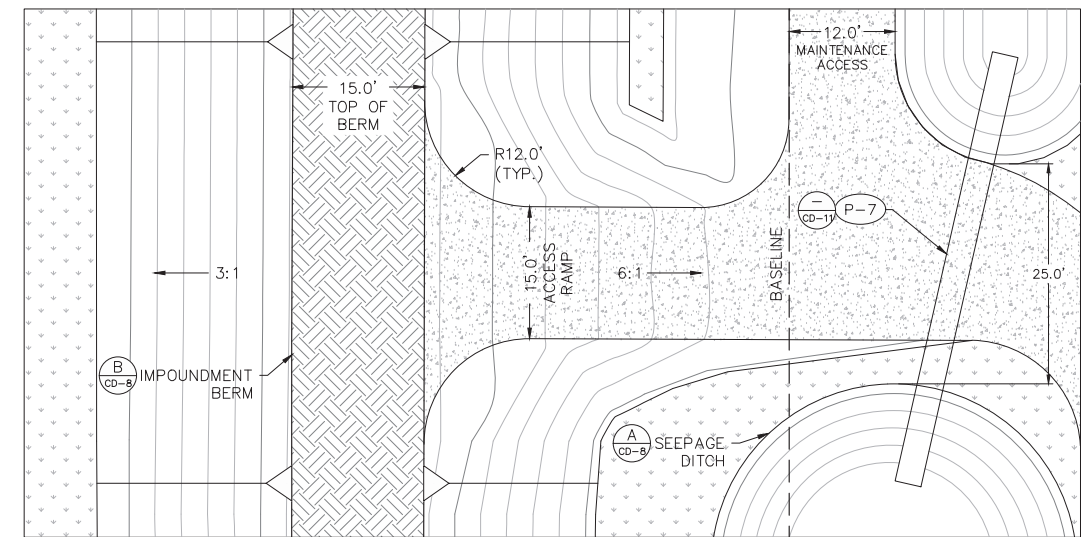
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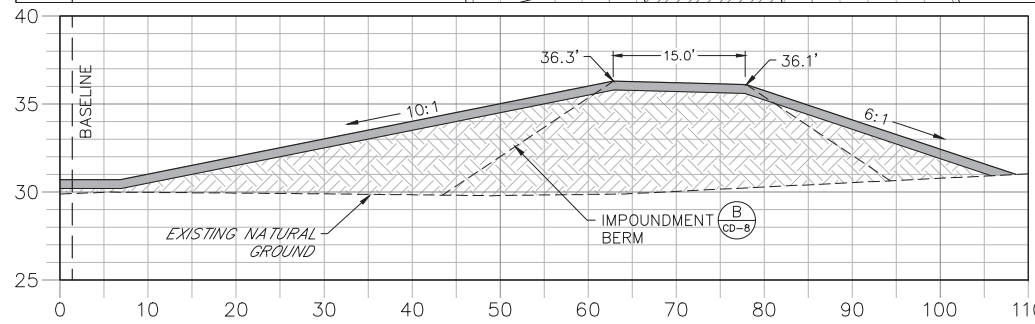
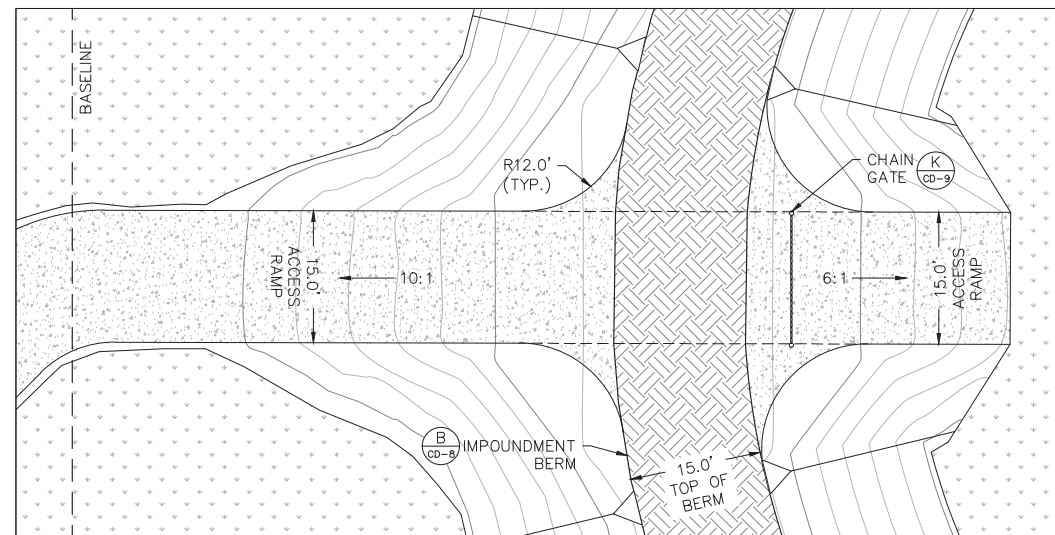
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CD-6



(D) ACCESS RAMP D
SCALE = 2:1 (H:V)



(E) ACCESS RAMP E
SCALE = 2:1 (H:V)



(F) ACCESS RAMP F
SCALE = 2:1 (H:V)

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Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

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HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPOUNDMENT DISTRICT
 IMPOUNDMENT PHASE II
 FLORIDA
 HIGHLANDS COUNTY

MISCELLANEOUS
 DETAILS

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 211 West Warren Avenue
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 FL GOA No. 7290

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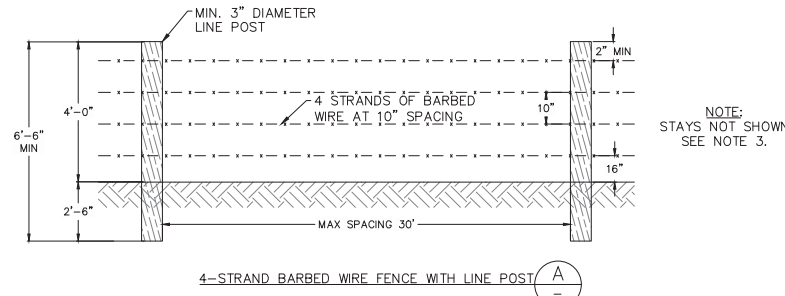
Richard A. Jones, P.E.
 FL P.E. No. 31118

FENCING AND GATE SPECIFICATIONS
 (N.R.C.S. CODE 382)

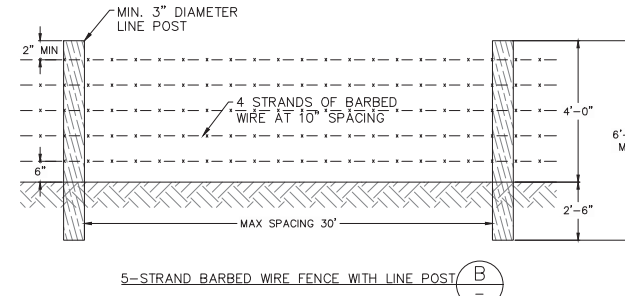
- ALL FENCES SHALL MEET N.R.C.S. STANDARDS AND SPECIFICATIONS FOR FENCING, CODE 382 IN THE LOCAL N.R.C.S. FIELD OFFICE TECHNICAL GUIDE.
- BARBED WIRE SHALL BE CLASS 3 GALVANIZED CONFORMING TO ASTM A121. BARBED WIRE SHALL BE ATTACHED TO THE POST ON THE SIDE THAT WILL RECEIVE THE GREATEST AMOUNT OF PRESSURE, EXCEPT IN CORNERS. BARBS SHALL BE SPACED NO MORE THAN 5 INCH CENTERS WITH 4-POINT OR 4 INCH CENTERS WITH 2-POINT BARB. ALL BARBED WIRE SHALL BE THE DOUBLE STRAND TYPE AND SHALL MEET ONE OF THE FOLLOWING CRITERIA:
 - MINIMUM 12 1/2 GAGE STANDARD STEEL WIRE.
 - MINIMUM 15 1/2 GAGE HIGH TENSILE STRENGTH STEEL WIRE.
- POST SPACING SHALL NO EXCEED 30 FEET. IF POSTS ARE PLACED MORE THAN 16 FT. APART, STAYS WILL BE REQUIRED. STAYS SHALL BE PLACED AS FOLLOWS:

POST SPACING	STAYS
< 16'	0
> 16' AND < 22'	1
> 22' AND < 30'	2

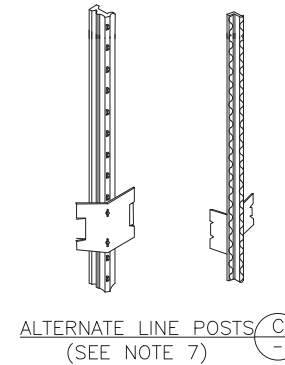
- STAPLES SHALL BE 9 GAGE, CLASS 3 GALVANIZED, AND SHALL BE A MINIMUM OF 1 1/2 INCHES LONG FOR SOFT WOODS AND 1 INCH LONG FOR HARD WOOD POSTS. NAILS SHALL BE GALVANIZED AND SPIRAL OR RING SHAPED AT LEAST 3 1/2 INCHES LONG.
- ALL WIRE AND HARDWARE WILL BE NEW GALVANIZED MATERIAL.
- BRACES ARE REQUIRED AT ALL CORNERS, GATES, AT ALL DEFINITE ANGLES (>15 DEGREES) IN THE FENCE LINE, AND AT INTERVALS NOT TO EXCEED 1320 FEET. A TENSION MEMBER COMPOSED OF 2 COMPLETE LOOPS OF 9 GAGE SMOOTH WIRE OR DOUBLE STRAND BARBED WIRE SHALL EXTEND FROM A POINT APPROXIMATELY 6 INCHES BELOW THE TOP OF THE VERTICAL BRACE POST TO 3" ABOVE GROUND LEVEL OF THE POST BEING BRACED. THE BRACE WIRE SHALL BE TWISTED TO SECURE THE BRACE AND PROVIDE NEEDED RIGIDITY. THE HORIZONTAL BRACE SHALL BE NOTCHED INTO THE BRACE POST AND POST BEING BRACED AND/OR USE 3/8" GALVANIZED PIN OR SPIKE DRIVEN THROUGH THE POST THAT PENETRATES THE HORIZONTAL MEMBER AT LEAST 4" IN DEPTH.
- STANDARD "TEE" OR "U" SECTION STEEL POST CONFORMING TO ASTM A702 MAY BE USED FOR TEMPORARY FENCING IN LIEU OF WOODEN LINE POSTS. LENGTH SHALL BE SAME AS FOR WOODEN POST. STEEL POST SHALL BE ROLLED FROM HIGH CARBON STEEL AND WEIGH A MINIMUM OF 12.25 LB/FT, EXCLUSIVE OF THE ANCHOR PLATE. THE COATING MAY BE EITHER GALVANIZED BY THE HOT DIP PROCESS OR PAINTING IN ACCORDANCE WITH COMMERCIAL STANDARD 184 WITH ONE OR MORE COATS OF HIGH GRADE, WEATHER RESISTANT STEEL PAINT, OR ENAMEL. STEEL POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED FOR THE ATTACHMENT OF WIRE TO THE POSTS. WIRE SHALL BE ATTACHED TO THE POSTS BY WRAPPING WITH 14 GAGE GALVANIZED WIRE OR BY USE OF MANUFACTURER'S SPECIAL DESIGNED CLIPS.



4-STRAND BARBED WIRE FENCE WITH LINE POST (A)



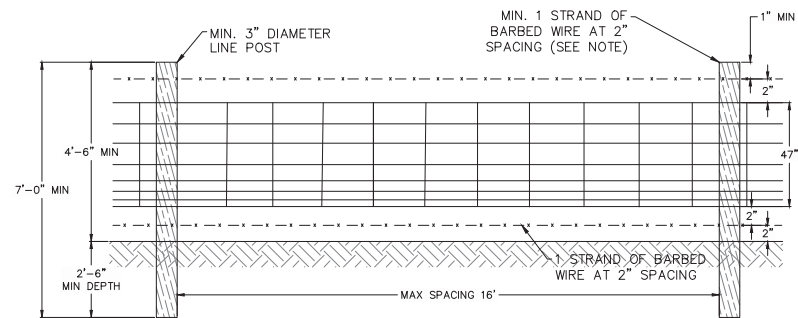
5-STRAND BARBED WIRE FENCE WITH LINE POST (B)



ALTERNATE LINE POSTS (C) (SEE NOTE 7)

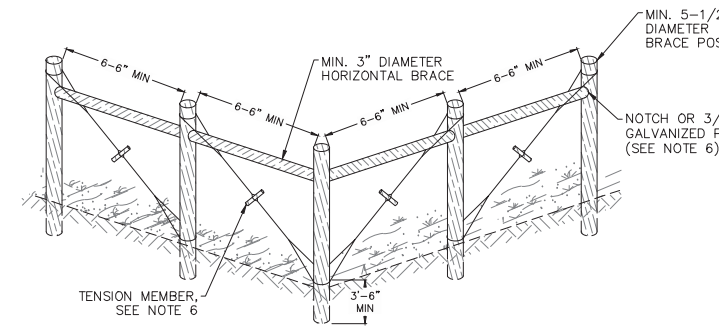
NOTE:
 STAYS NOT SHOWN
 SEE NOTE 3.

BARBED WIRE FENCE

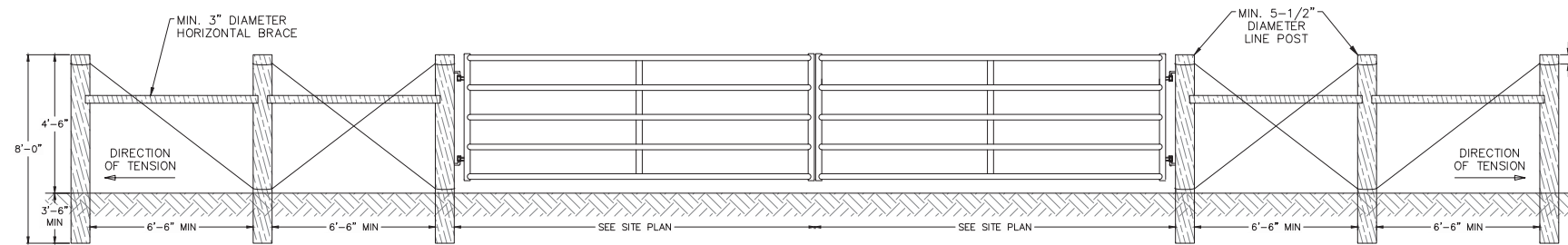


WOVEN WIRE FENCE (D)

A MINIMUM OF ONE STRAND OF BARBED WIRE IS TO BE USED ABOVE THE WOVEN WIRE FENCE, AT A SPACING OF 2" ABOVE THE WOVEN WIRE FENCE. IN THE CASE OF TALLER POSTS, ADDITIONAL STRANDS MAY BE USED AT 2" INTERVALS, PROVIDED THAT A 1" CLEARANCE FROM TOP OF POST IS MAINTAINED.



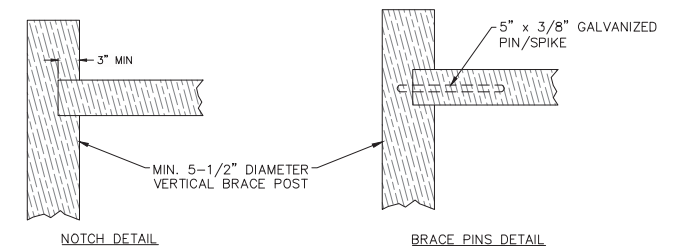
CORNER BRACE (E) (SEE NOTE 6)



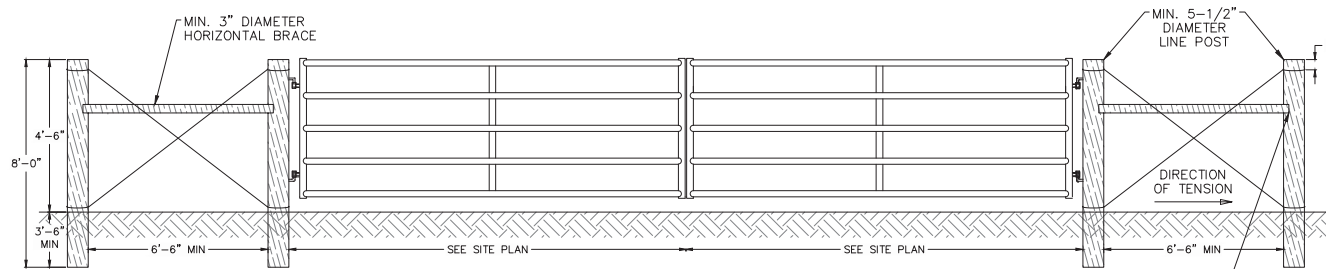
GATES SHALL BE WELDED ROUND TUBE, HOT DIPPED GALVANIZED STEEL, AFTER FABRICATION. VERTICALS SHALL BE 2" X 11 GAUGE AND HORIZONTAL SHALL BE 1.9" X 12 GAUGE.

GATE PANEL DETAIL WITH DOUBLE END BRACE (F)

USE DOUBLE END BRACES FOR FENCES THAT EXCEED 660' WITHOUT A GATE, CORNER OR TEE.



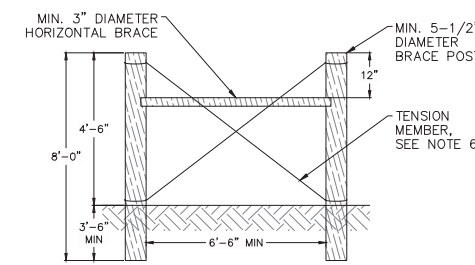
HORIZONTAL BRACE CONNECTION (G)



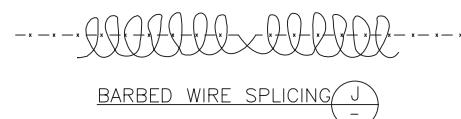
GATES SHALL BE WELDED ROUND TUBE, HOT DIPPED GALVANIZED STEEL, AFTER FABRICATION. VERTICALS SHALL BE 2" X 11 GAUGE AND HORIZONTAL SHALL BE 1.9" X 12 GAUGE.

GATE PANEL DETAIL WITH SINGLE END BRACE (H)

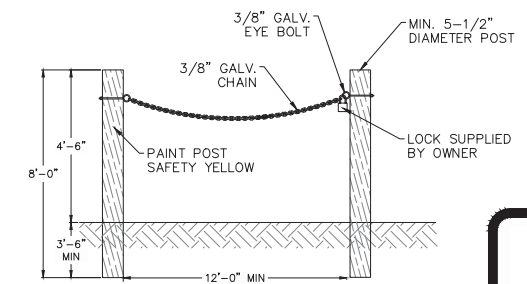
USE SINGLE END BRACES FOR FENCES THAT ARE LESS THAN 660' WITHOUT A GATE, CORNER, OR TEE.



SINGLE HORIZONTAL IN-LINE BRACE (I)



BARBED WIRE SPLICING (J)



CHAIN GATE DETAIL (K)

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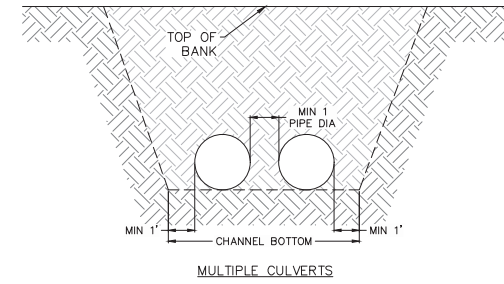
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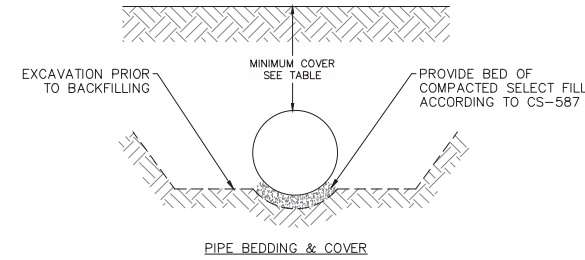
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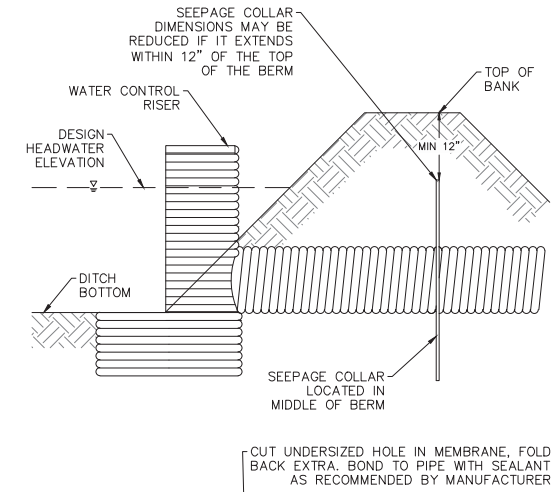
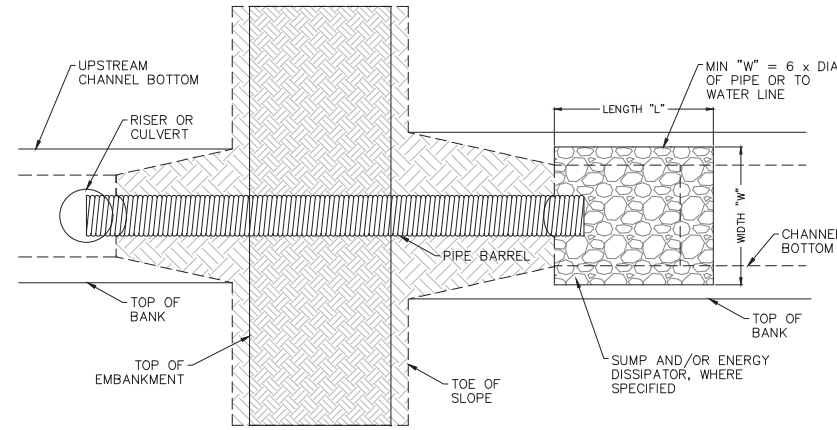
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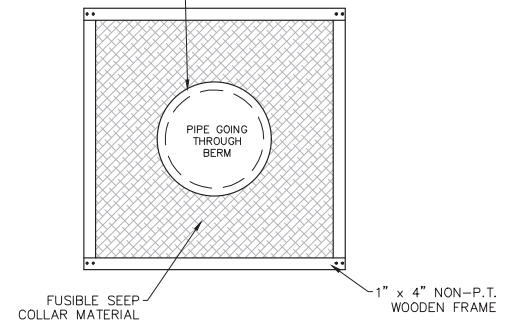
MULTIPLE CULVERTS



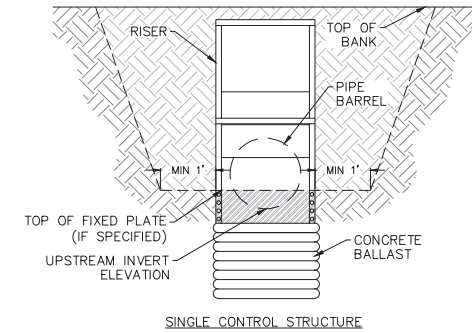
PIPE BEDDING & COVER



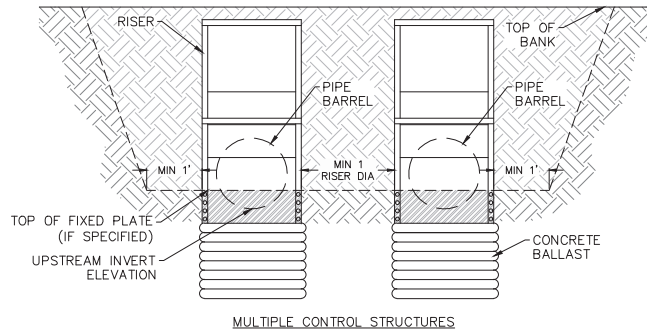
CUT UNDERSIZED HOLE IN MEMBRANE, FOLD BACK EXTRA, BOND TO PIPE WITH SEALANT AS RECOMMENDED BY MANUFACTURER



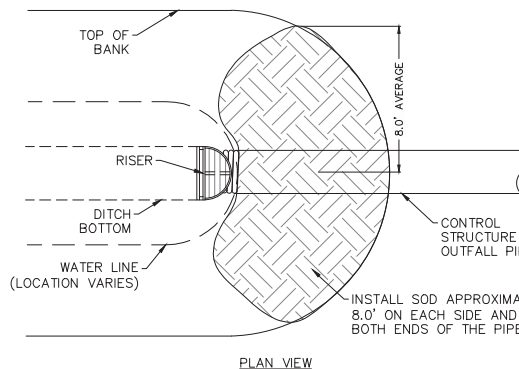
ALL PIPES, WHETHER DRAINAGE, IRRIGATION OR ELECTRIC, PASSING THROUGH OR UNDER AN ABOVE GROUND BERM FOR WATER STORAGE SHALL HAVE A SEEPAGE COLLAR INSTALLED. COLLARS MAY BE FABRICATED FROM RIGID OR FLEXIBLE MATERIAL WHICH WILL NOT DECAY WHEN BURIED AND IS COMPATIBLE WITH THE PIPE MATERIAL. COLLARS MUST BE CONNECTED TO THE PIPE IN A MANNER THAT PREVENT WATER LEAKAGE THROUGH THE JOINT. CONTRACTOR MUST USE CARE NOT TO ALLOW THE COLLAR TO PLACE PRESSURE ON THE PIPE WHEN INSTALLING.



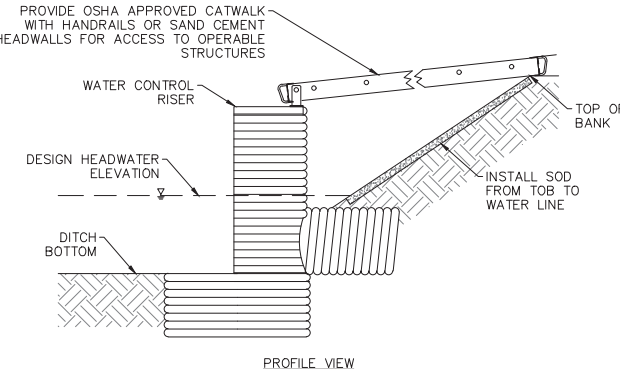
SINGLE CONTROL STRUCTURE



MULTIPLE CONTROL STRUCTURES

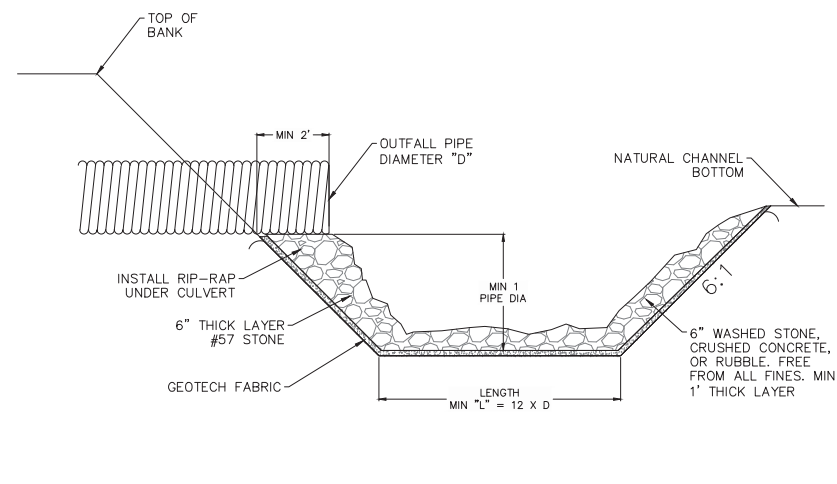


PLAN VIEW



PROFILE VIEW

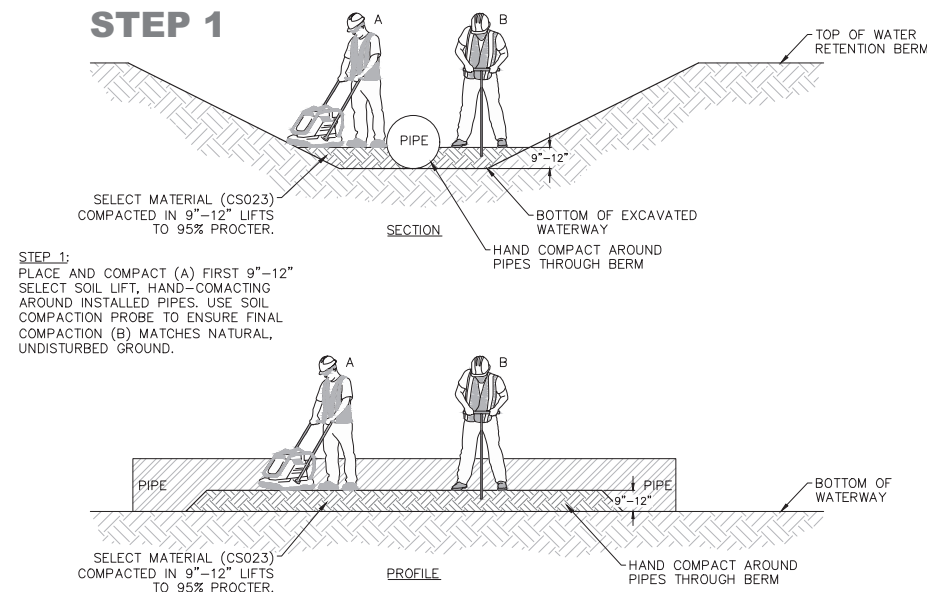
STRUCTURE INSTALLATION DETAILS



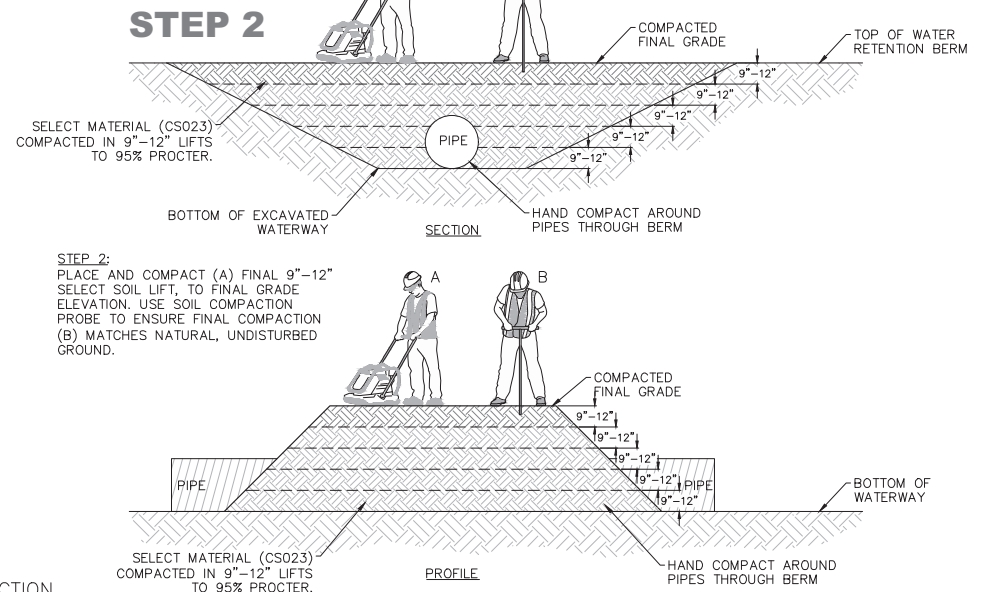
ENERGY DISSIPATION DETAIL

SEEPAGE COLLAR

SEEPAGE COLLAR INFORMATION				
PIPE DESCRIPTION	QTY (ea)	DIAMETER (in)	MIN. DIMENSION (in)	OVERALL DIMENSION (in)
Pump Discharge Pipes	2	24	12	48
Sluice Gate Culvert	1	42	12	66

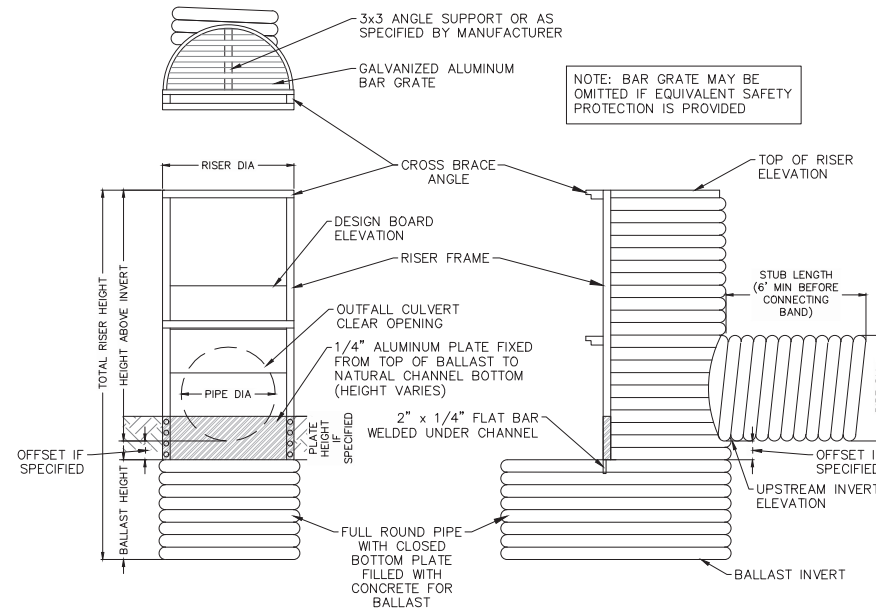


BERM COMPACTION

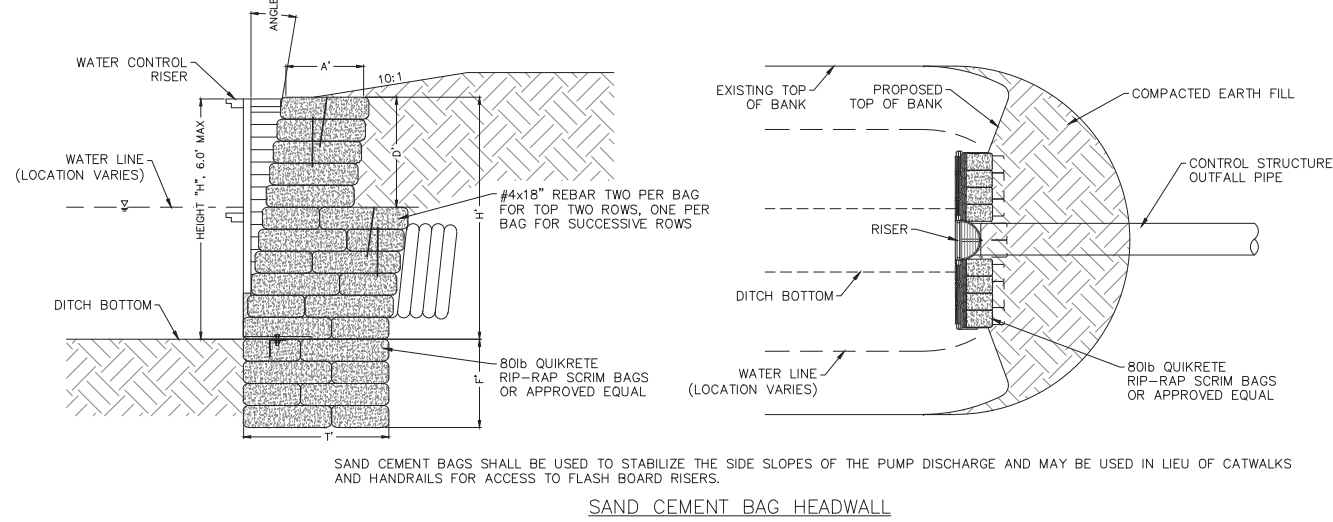


BERM COMPACTION

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FLASHBOARD W/INTERNAL BALLAST



SAND CEMENT BAG HEADWALL

H	T	F	A	D
2	2	1	1	1
2.5	2	1	1	1
3	2	1	1	2
3.5	3	1.5	1	2
4	3	1.5	1	2
4.5	3	1.5	1	2
5	3	2	1	2
5.5	3	2	1	2
6	3	2	1	2

ID	QTY.	MATERIAL	GAUGE	CORRUGATION	DIAMETER (in.)	LENGTH (ft.)	U/S INVERT (ft.)	D/S INVERT (ft.)	MIN. COVER (in.)
P-1	2	HDPE	na	na	42.0	232.0	20.0	19.0	15.0
P-2	2	ALUM	8	2-2/3 x 1/2	72.0	66.0	25.1	24.9	24.0
P-3	1	HDPE	na	na	42.0	100.0	26.0	26.0	15.0
P-4	1	HDPE	na	na	24.0	50.0	26.0	25.9	15.0
P-5	1	HDPE	na	na	24.0	50.0	25.9	25.8	15.0
P-6	1	HDPE	na	na	24.0	50.0	25.8	25.7	15.0
P-7	1	HDPE	na	na	24.0	50.0	25.7	25.6	15.0
P-8	4	HDPE	na	na	42.0	153.0	25.2	25.0	15.0
P-9	1	HDPE	na	na	24.0	70.0	see note	see note	15.0
P-10	1	HDPE	na	na	24.0	60.0	see note	see note	15.0
P-11	1	ALUM	16	2-2/3 x 1/2	18.0	51.0	32.6	29.4	15.0
P-12	2	HDPE	na	na	48.0	94.0	23.2	23.0	15.0
P-13	1	ALUM	16	2-2/3 x 1/2	24.0	79.0	26.6	26.3	15.0
P-14	1	HDPE	na	na	24.0	71.0	27.7	27.5	15.0
P-15	1	ALUM	16	2-2/3 x 1/2	24.0	76.0	26.0	25.7	15.0

Note: Seepage ditch bottom elevation varies as needed to provide fill. Connecting culverts shall match bottom elevation, and maintain 2% slope.

ID	QTY	RISER INFORMATION							OUTFALL INFORMATION							
		MATERIAL	GAUGE	CORRUGATION	DIAMETER (in.)	TOP (ft.)	BALLAST (ft.)	TOTAL (ft.)	MATERIAL	GAUGE	CORRUGATION	DIAMETER (in.)	LENGTH (ft.)	U/S INVERT (ft.)	D/S INVERT (ft.)	MIN. COVER (in.)
CS-1	2	ALUM	12	2-2/3 x 1/2	48.0	31.0	2.0	7.8	ALUM	14	2-2/3 x 1/2	36.0	87.0	25.2	25.0	18.0
CS-2	1	ALUM	16	2-2/3 x 1/2	24.0	32.3	1.0	5.0	ALUM	16	2-2/3 x 1/2	24.0	52.0	28.3	28.1	15.0
CS-3	1	ALUM	16	2-2/3 x 1/2	24.0	33.0	1.3	6.3	ALUM	16	2-2/3 x 1/2	24.0	58.0	28.0	27.8	15.0
CS-4	1	ALUM	16	2-2/3 x 1/2	24.0	34.0	1.4	6.9	ALUM	16	2-2/3 x 1/2	24.0	47.0	28.5	28.3	15.0
CS-5	1	ALUM	16	2-2/3 x 1/2	24.0	32.5	1.2	5.8	ALUM	16	2-2/3 x 1/2	24.0	69.0	27.9	27.7	15.0
CS-6	1	ALUM	16	2-2/3 x 1/2	24.0	32.5	1.2	5.8	ALUM	16	2-2/3 x 1/2	24.0	69.0	27.9	27.7	15.0
CS-7	1	ALUM	14	2-2/3 x 1/2	30.0	31.8	1.5	6.8	ALUM	14	2-2/3 x 1/2	30.0	74.0	26.5	26.3	18.0
CS-8	1	ALUM	16	2-2/3 x 1/2	24.0	32.4	1.0	4.5	ALUM	16	2-2/3 x 1/2	24.0	65.0	28.9	28.7	15.0
CS-9	1	ALUM	14	2-2/3 x 1/2	36.0	34.4	1.6	6.4	ALUM	14	2-2/3 x 1/2	30.0	48.0	28.0	27.8	18.0

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RISER DETAILS AND
 STRUCTURE INFORMATION

NOT
 FOR
 CONSTRUCTION

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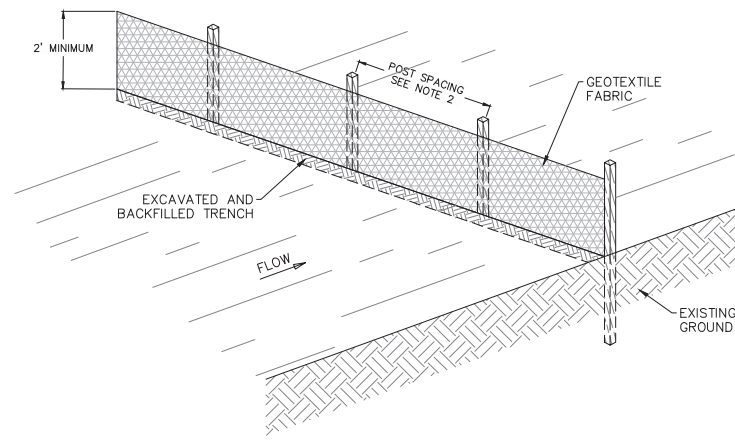
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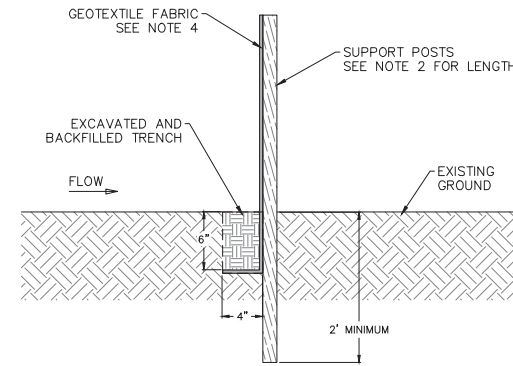
EROSION CONTROL SPECIFICATIONS
(CONSTRUCTION CODES 005 & 006)

IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE EROSION AND TURBIDITY CONTROLS AS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED, MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT TURBID OR POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION AND TURBIDITY CONTROLS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED, TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS. THE FOLLOWING BEST MANAGEMENT PRACTICES WILL BE IMPLEMENTED BY THE CONTRACTOR AS REQUIRED BY THE EROSION AND TURBIDITY CONTROL PLAN AND AS REQUIRED SITE BY THE REGULATORY AGENCIES.

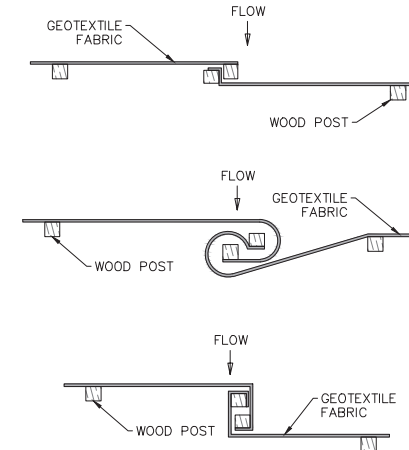
- SEDIMENT BASINS AND TRAPS, PERIMETER DITCHES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP BEFORE ANY LAND-DISTURBING TAKES PLACE TO MEET THE EROSION AND TURBIDITY REQUIREMENTS IMPOSED ON THE PROJECT.
- ALL SEDIMENT CONTROL MEASURES ARE TO BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND BE CONSTRUCTED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE BALANCE ON BALANCE OF SITE. PERIMETER SEDIMENT BARRIERS SHALL BE CONSTRUCTED TO PREVENT SEDIMENT OR TRASH FROM FLOWING OR FLOATING ON TO ADJACENT PROPERTIES.
- DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTIONS AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
- AFTER ANY SIGNIFICANT RAINFALL SEDIMENT CONTROL STRUCTURES WILL BE INSPECTED FOR INTEGRITY. ANY DAMAGED DEVICES SHALL BE REPAIRED IMMEDIATELY.
- CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAINS STRUCTURE.
- WHENEVER WATER SEEPS FROM A SLOPE FACE ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
- SEDIMENT WILL BE PREVENTED FROM ENTERING ANY STORM DRAIN SYSTEM, DITCH, OR CHANNEL. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT. GRATE INLETS AND CURB INLETS SHALL BE PROTECTED WITH GRATE INLET PROTECTION PCD-1000 AND CURB INLET PROTECTION PRODUCED BY SUNTREE ISLES, INC., OR APPROVED EQUAL.
- BEFORE TEMPORARY OR NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS ARE MADE OPERATIONAL ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
- WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENRICHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.
- STOCKPILING MATERIAL; NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORM WATER COLLECTION FACILITY.
- EXPOSED AREA LIMITATION: THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED 5 ACRES. IF THE TOTAL AREA TO BE CLEARED IS EQUAL TO, OR EXCEEDS FIVE (5) ACRES, THEN THE CONTRACTOR WILL BE RESPONSIBLE FOR PREPARING A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH EPA'S NPDES REGULATIONS. THE CONTRACTOR WILL BE RESPONSIBLE FOR SUBMITTING FDEP'S NOTICE ON INTENT (NOI) TO EPA FORTY-EIGHT (48) HOURS PRIOR TO COMMENCING CONSTRUCTION.
- TEMPORARY SEEDING: AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE RE-EXCAVATED OR DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN 30 DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING.
- TEMPORARY SEEDING AND MULCHING: SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN PARAGRAPH 12 ABOVE, A SUFFICIENT AMOUNT OF MULCH MATERIAL SHALL BE CUT INTO THE SOIL OF THE SEEDED AREA ADEQUATE TO PREVENT MOVEMENT OF SEED AND MULCH.
- TEMPORARY GRASSING: THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED OR HYDROMULCHED OR OTHER SUITABLE METHODS IF REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER. TEMPORARY GRASSING SHALL BE THE SAME MIX & AMOUNT REQUIRED FOR PERMANENT GRASSING IN THE CONTRACT SPECIFICATIONS.
- TEMPORARY REGRESSING: IF, AFTER 14 DAYS FROM SEEDING, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75 PERCENT GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATIVE COVER.
- MAINTENANCE: ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED.
- PERMANENT EROSION CONTROL: THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON THE OFFSITE FACILITIES.
- PERMANENT SEEDING: ALL AREAS WHICH HAVE BEEN DISTURBED BY CONSTRUCTION WILL, AS A MINIMUM, BE SEEDED. THE SEEDING MIX MUST PROVIDE BOTH LONG-TERM VEGETATION AND RAPID GROWTH SEASONAL VEGETATION. SLOPES STEEPER THAN 4:1 SHALL BE SEEDED AND MULCHED OR SODDED.



ISOMETRIC VIEW

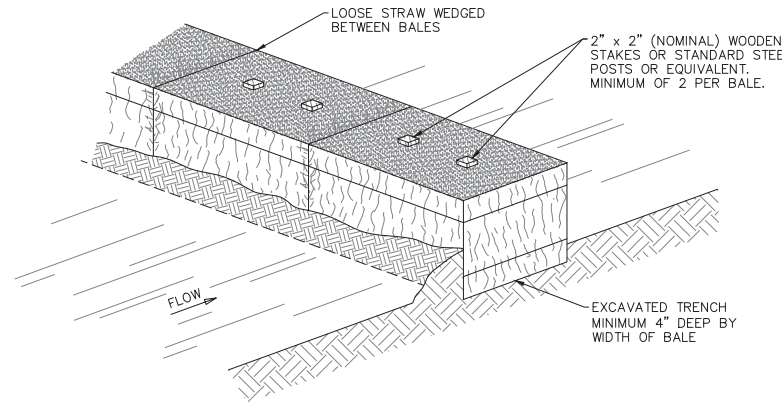


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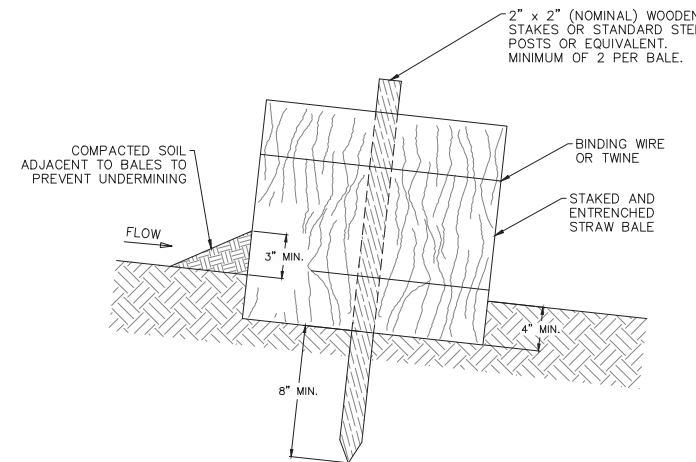


TWO JOINING METHODS

SILT FENCE INSTALLATION A



ISOMETRIC VIEW

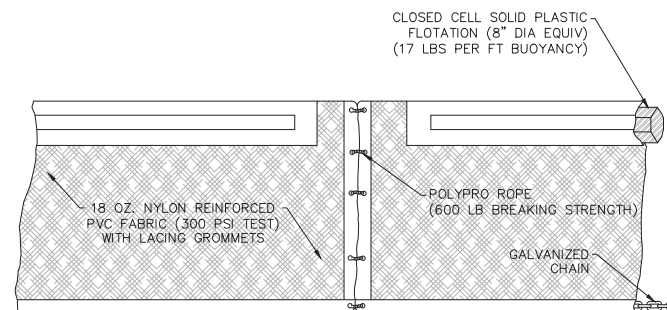


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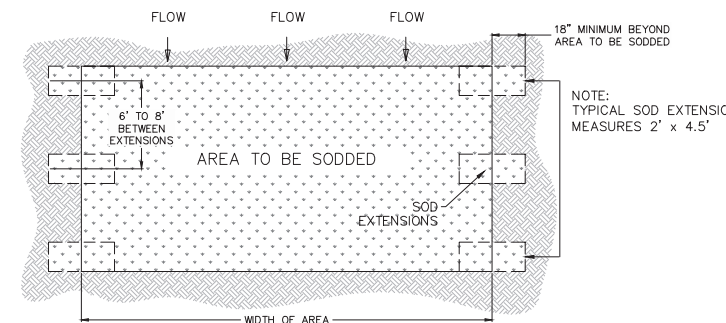
NOTES

- TURN THE ENDS OF THE STRAW BALE SEDIMENT TRAP UPSLOPE 1 TO 2 FEET IN ELEVATION TO PREVENT FLANKING.
- THE STRAW BALES SHALL BE BUTTED TOGETHER AS TIGHTLY AS POSSIBLE.
- THE FIRST ANCHOR STAKE SHALL BE DRIVEN TOWARD THE PREVIOUSLY ANCHORED BALE TO HELP CREATE A TIGHT FIT.

STRAW BALE INSTALLATION B



FLOATING TURBIDITY BARRIER C



SOD INSTALLATION D

Job: 0202-02-ES
Scale: As Shown
Date: 3-5-2018
Design: R.A.J.
Drawn: J.J.D.
Checked: D.C.R.
Approved: B.L.R.

No.	Date:	Revision

HIGHLANDS COUNTY BCC
ISTOKPOGA MARSH WATER
IMPOUNDMENT DISTRICT
IMPOUNDMENT PHASE II
FLORIDA
HIGHLANDS COUNTY

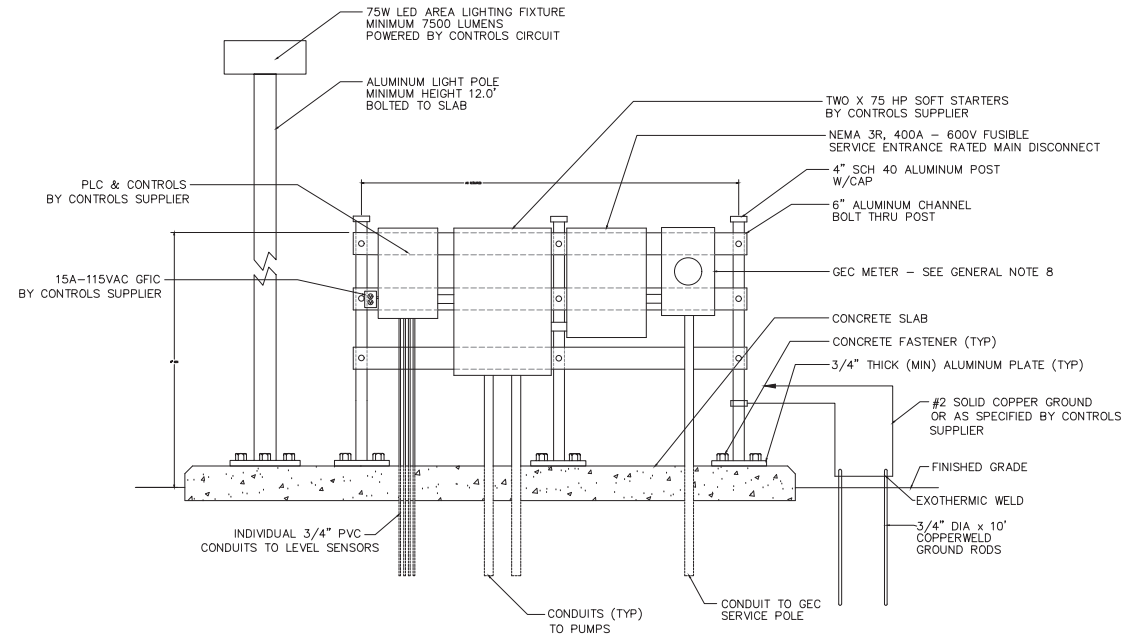
**EROSION CONTROL
DETAILS**

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FL GOA No. 7290

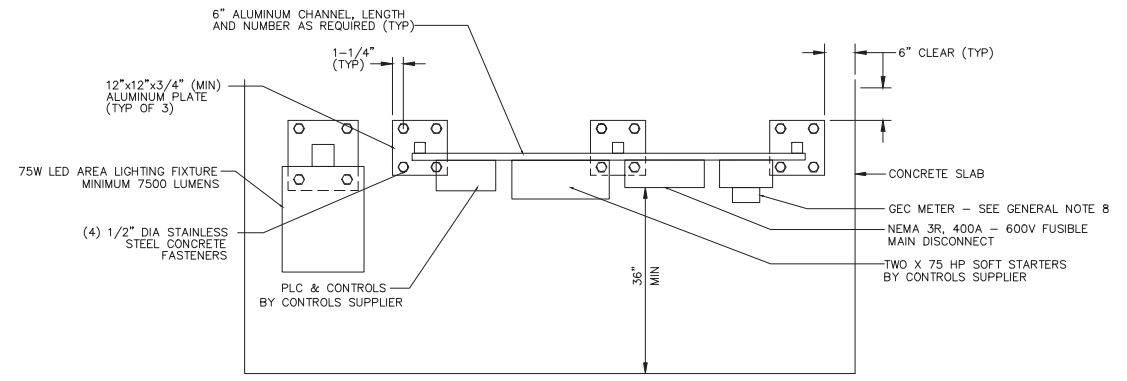
**SHEET
CD-12**

Richard A. Jones, P.E.
FL P.E. No. 31118

Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

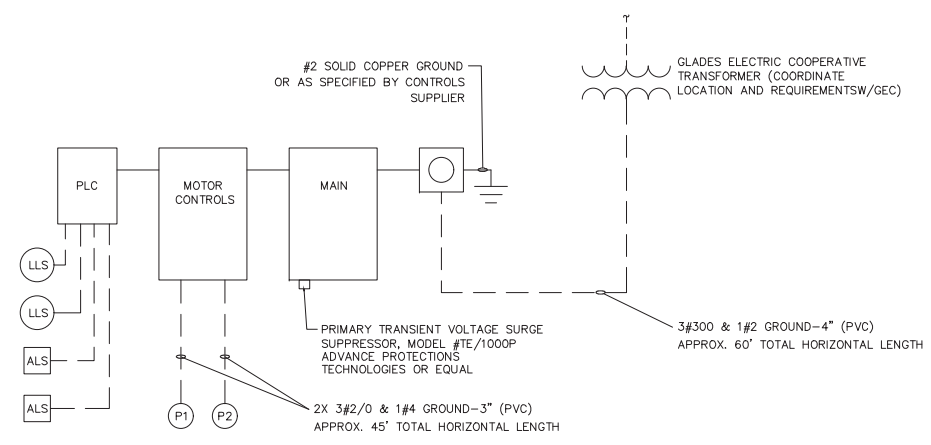


FRONT ELEVATION NTS



PLAN VIEW NTS

EQUIPMENT MOUNTING DETAIL NTS



POWER DISTRIBUTION DIAGRAM NTS

ABBREVIATIONS

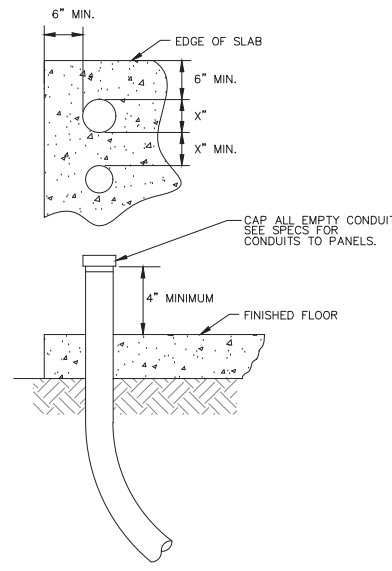
A	AMPERE	PLC	PROGRAMMABLE LOGIC CONTROLLER
/C	CONDUCTOR	PVC	RIGID SCH 40 PVC CONDUIT
CB	CIRCUIT BREAKER	RA	RIGID SCH 40 ALUMINUM
DIA	DIAMETER	RGS	RIGID GALVANIZED STEEL
GEC	GLADES ELECTRIC COOPERATIVE	RTU	REMOTE TELEMETRY UNIT
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TC	TERMINAL CABINET
GND	GROUND	SE	SERVICE ENTRANCE
MAX	MAXIMUM	SH	SHIELDED
MB	MAIN BREAKER	SS	STAINLESS STEEL
MFR	MANUFACTURER	TYP	TYPICAL
MIN	MINIMUM	V	VOLTS
NEC	NATIONAL ELECTRICAL CODE	W	WATT/WIRE/WITH
NTS	NOT TO SCALE		

GENERAL NOTES

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH ALL LOCAL UTILITIES, AND TO MEET ALL OF THEIR INSTALLATION REQUIREMENTS. ALL LABOR, EQUIPMENT OR MATERIALS NECESSARY TO MEET THESE REQUIREMENTS IS TO BE INCLUDED IN THE PROPOSAL. THE CONTRACTOR SHALL OBTAIN, DELIVER AND INSTALL ALL CONDUITS, PULL-BOXES AND EQUIPMENT AS REQUIRED BY THE UTILITIES TO THEIR SPECIFICATIONS.
- CONDUIT AND CONDUCTOR SIZES SPECIFIED ON THESE PLANS ARE FOR INFORMATIONAL AND BIDDING PURPOSES. THE INSTALLATION SHALL MEET ALL REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AND ALL CODES HAVING JURISDICTION.
- AN EQUIPMENT GROUND WIRE SIZED PER THE NEC SHALL BE PULLED IN ALL ELECTRICAL CONDUITS, POWER & CONTROL, WHETHER OR NOT INDICATED ON PLANS.
- ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND UNUSED AND U.L. LISTED.
- ALL EQUIPMENT FURNISHED AND INSTALLED BY THE CONTRACTOR SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE UNLESS OTHERWISE SPECIFIED.
- DO NOT SCALE THE ELECTRICAL DRAWINGS. COORDINATE ALL EQUIPMENT LOCATIONS WITH THE ENGINEER AND MECHANICAL CONTRACTOR BEFORE ANY INSTALLATION. ALL EQUIPMENT DIMENSIONS AND CONDUIT OPENINGS SHALL BE VERIFIED WITH THE MANUFACTURER'S APPROVED SHOP DRAWINGS PRIOR TO FORMING CONCRETE WORK.
- THE DRAWINGS ARE NOT INTENDED TO SHOW THE EXACT LOCATION OF EQUIPMENT OR CONDUIT RUNS. THESE ARE TO BE COORDINATED WITH THE OTHER TRADES SO THAT CONFLICTS ARE AVOIDED.
- METER MAY BE LOCATED BY GEC AT PAD MOUNTED TRANSFORMER INSTEAD ON ELECTRIC RACK AS SHOWN.

ELECTRICAL SPECIFICATIONS

- ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC. ABOVE GRADE CONDUIT SHALL BE SCHEDULE 80 PVC BEGINNING WITH THE UNDERGROUND ELBOW.
- ALL WIRING SHALL BE COPPER, 600V, TYPE XHHW-2, UNLESS SPECIFIED ON PLANS.
- FUSIBLE DISCONNECT SWITCHES SHALL BE HEAVY-DUTY, QUICK-MAKE, QUICK-BREAK, VISIBLE BLADES WITH FULL COVER INTERLOCK. ALL CURRENT CARRYING PARTS SHALL BE COPPER. ENCLOSURE TYPE SHALL BE NEMA-3R, PAINTED STEEL, WITH STAINLESS STEEL MOUNTING HARDWARE. DISCONNECT SWITCHES SHALL BE HORSEPOWER RATED AS MANUFACTURED BY THE SQUARE-D COMPANY, CLASS 3110, TYPE H, OR APPROVED EQUAL.
- SURGE ARRESTORS SHALL BE INSTALLED WHERE REQUIRED. SURGE ARRESTORS SHALL BE AS MANUFACTURED BY THE GENERAL ELECTRIC COMPANY, TRANQUILL SERIES, MODEL 9L15 OR APPROVED EQUAL.
- SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT AND MATERIALS.



TYPICAL CONDUIT THRU SLAB NTS

LEGEND

(P1)	75 HP DEWATERING PUMP #1
(P2)	75 HP DEWATERING PUMP #2
(LLS)	LIQUID LEVEL SWITCH.
(ALS)	4-20 MA LEVEL SENSOR
---	CONDUIT CONCEALED IN OR BELOW FLOOR OR UNDERGROUND.
---	CONDUIT RUN EXPOSED. RUN PARALLEL OR PERPENDICULAR
⏏	SERVICE OR EQUIPMENT GROUND.

LOAD CALCULATIONS

LOAD	HP	FLA	NOTES
PUMP 1	75	96	NEC 430.250
PUMP 2	75	96	NEC 430.250
115 V CONTROLS	-	12	ESTIMATED
25% LARGEST MOTOR	-	24	
TOTAL	-	228	

Revision

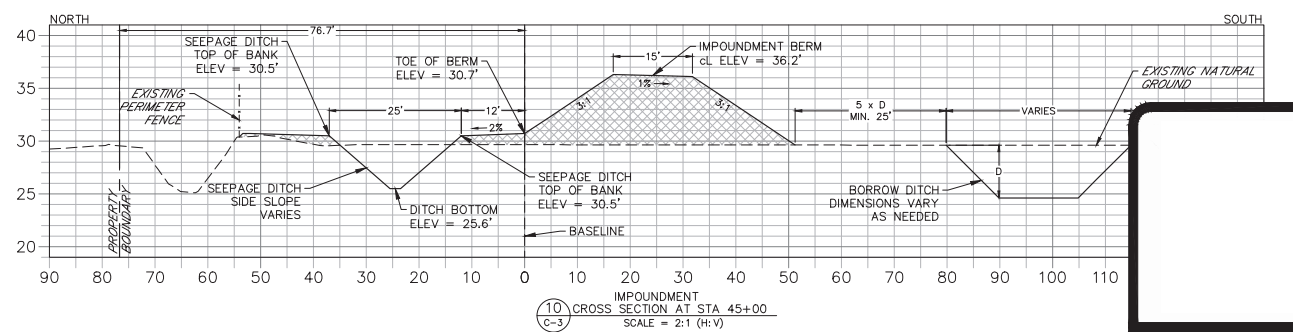
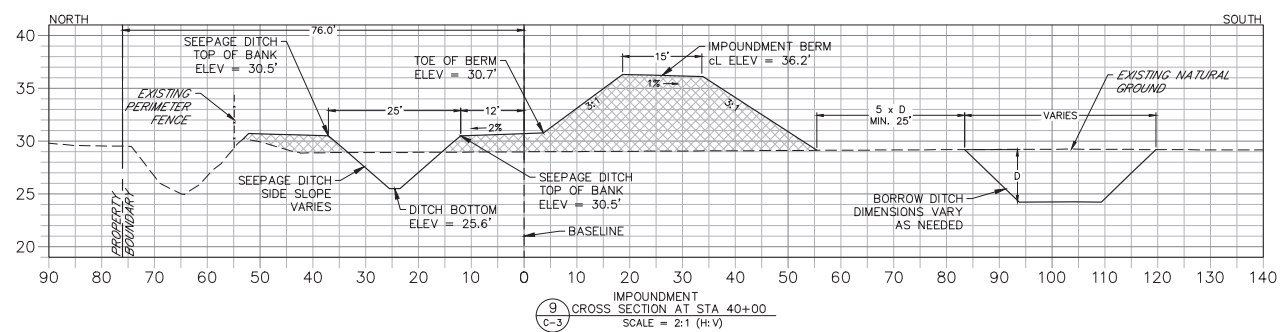
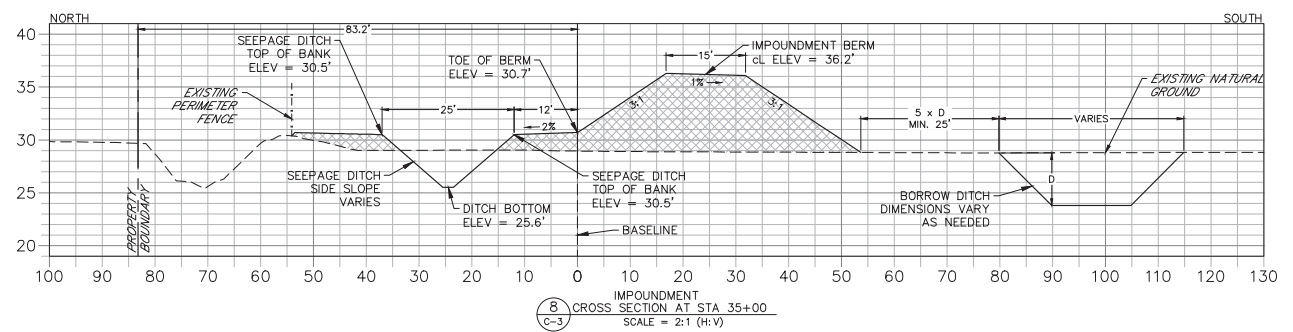
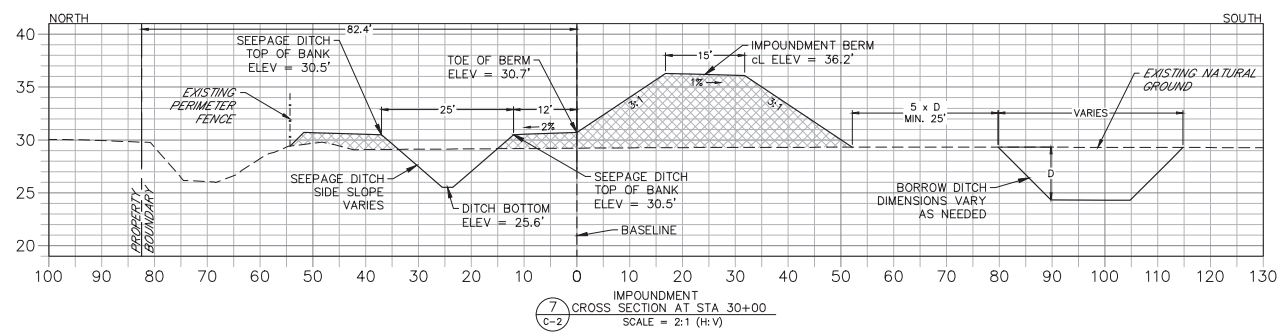
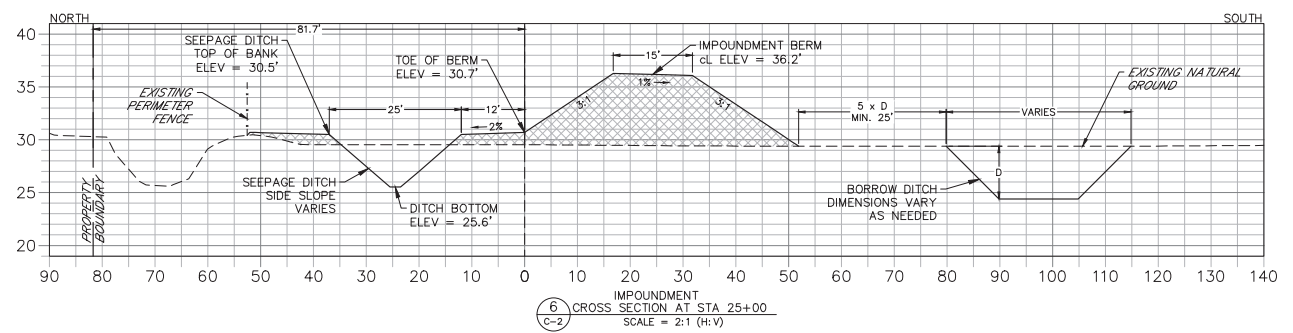
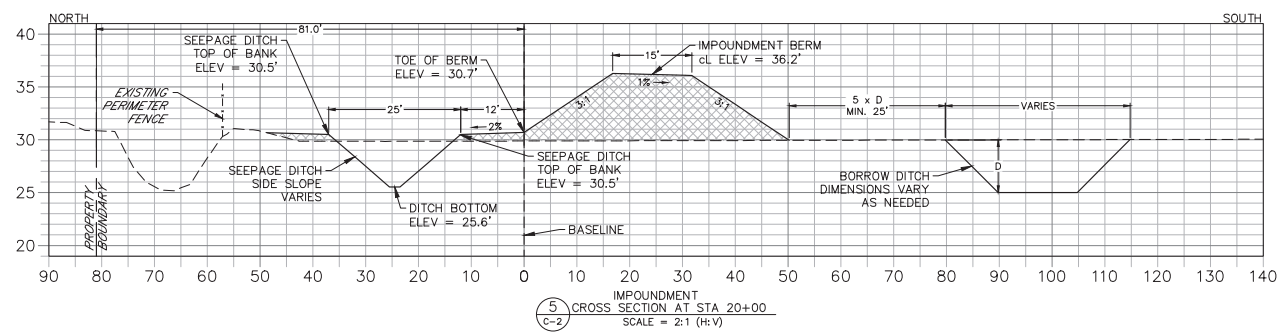
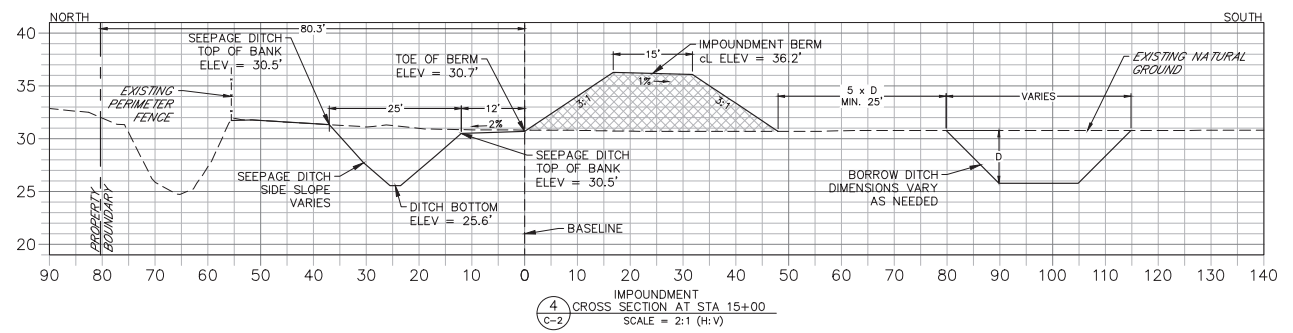
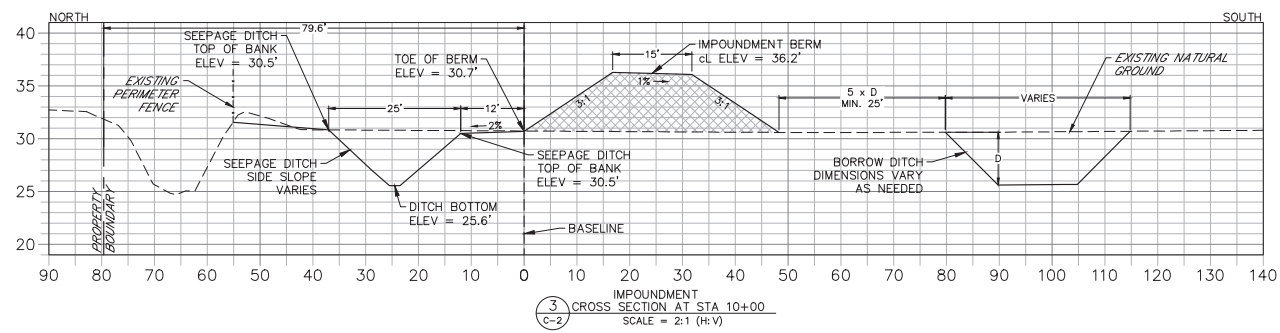
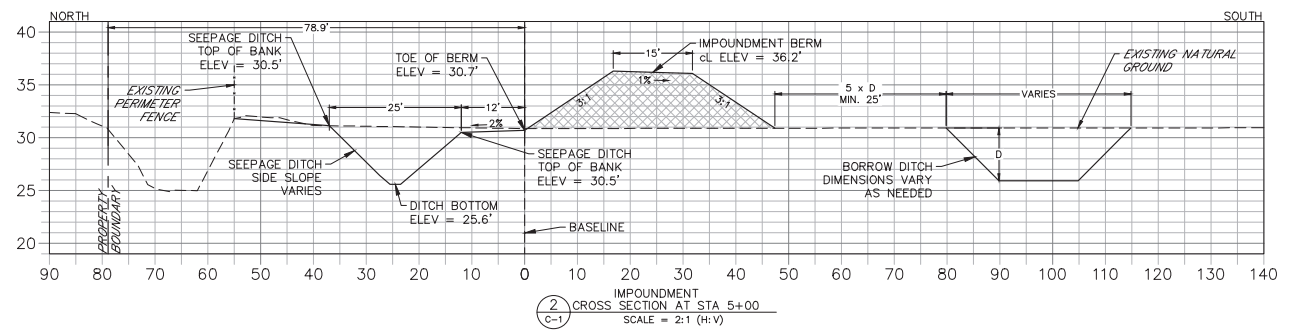
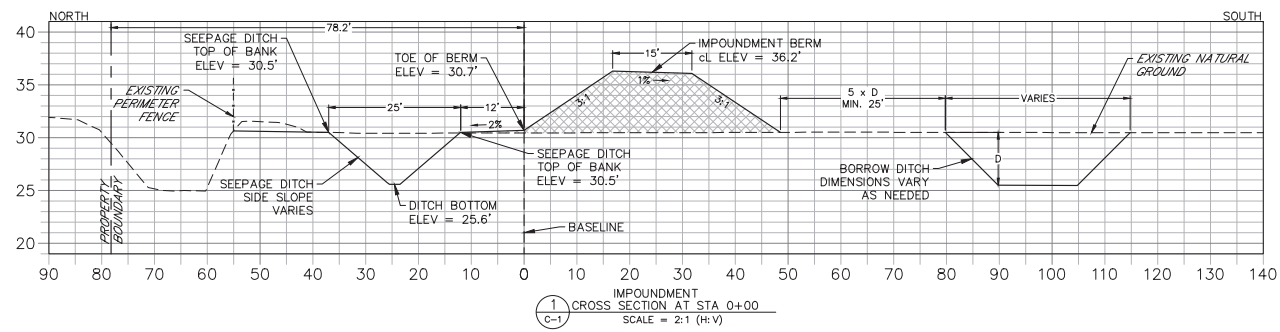
HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPOUNDMENT DISTRICT II
 FLORIDA

PUMP STATION
 ELECTRICAL DETAILS

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SHEET
 CD-13

Richard A. Jones, P.E.
 FL P.E. No. 31118



Job: 0202-02-ES
Scale: As Shown
Date: 3-5-2018
Design: R.A.J.
Drawn: J.J.D.
Checked: D.C.R.
Approved: B.L.R.

No.	Date	Revision

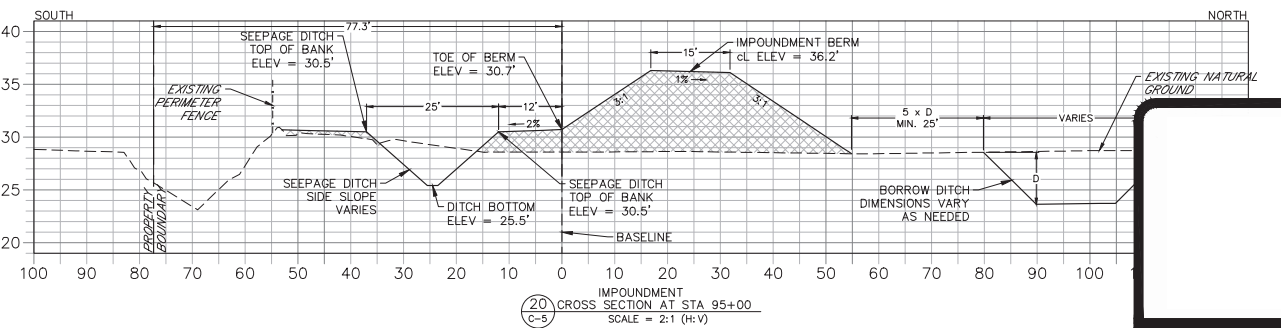
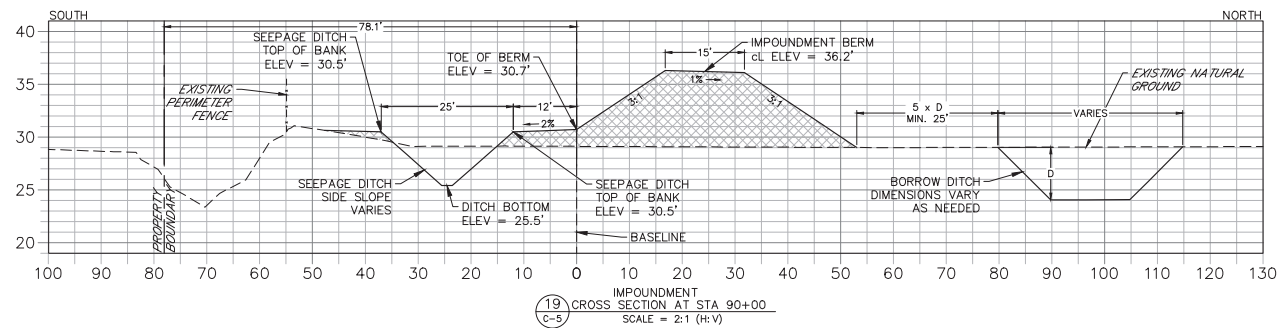
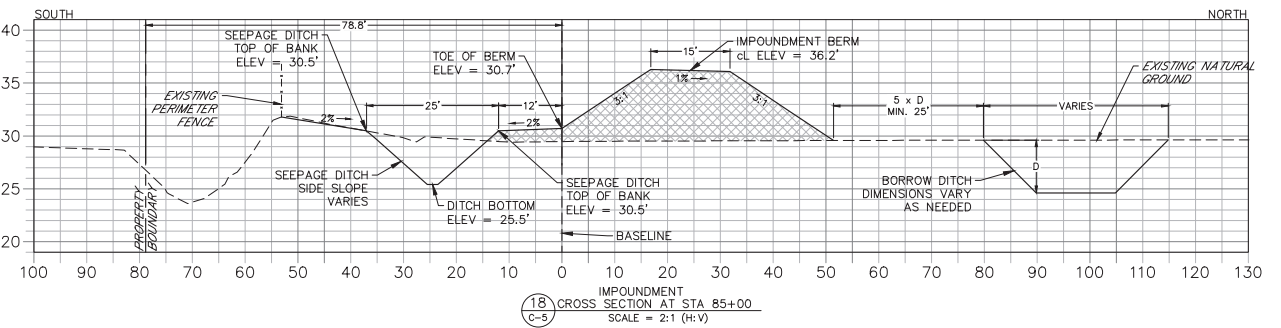
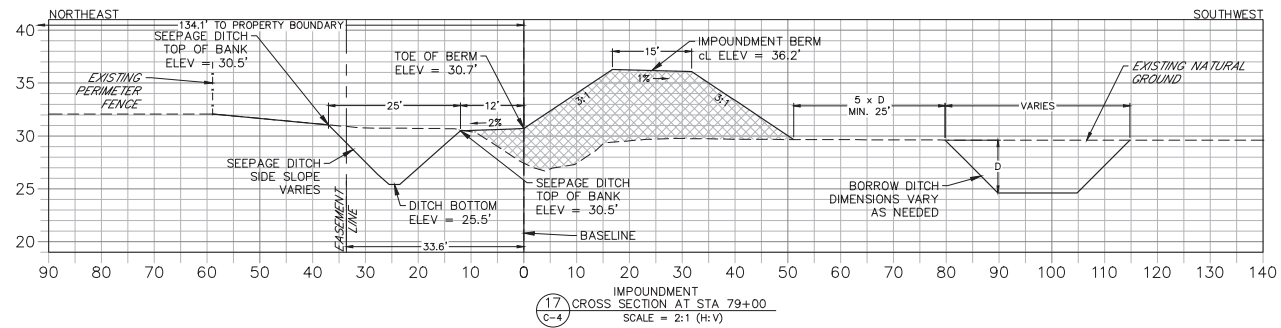
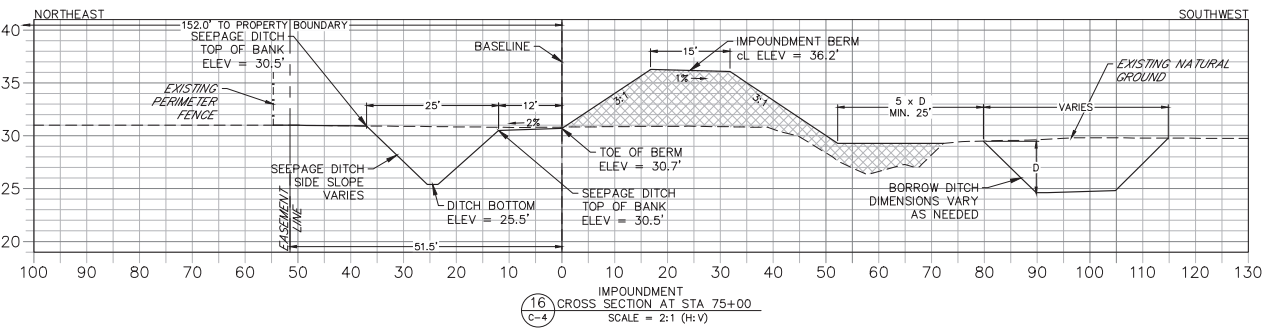
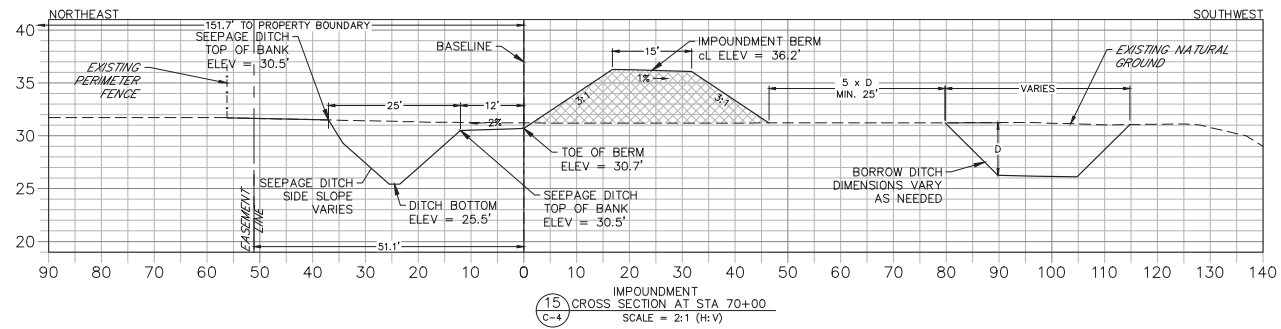
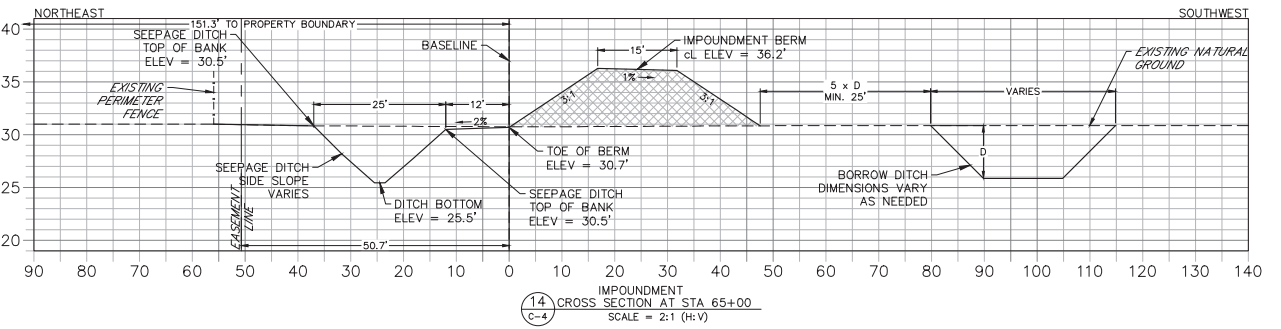
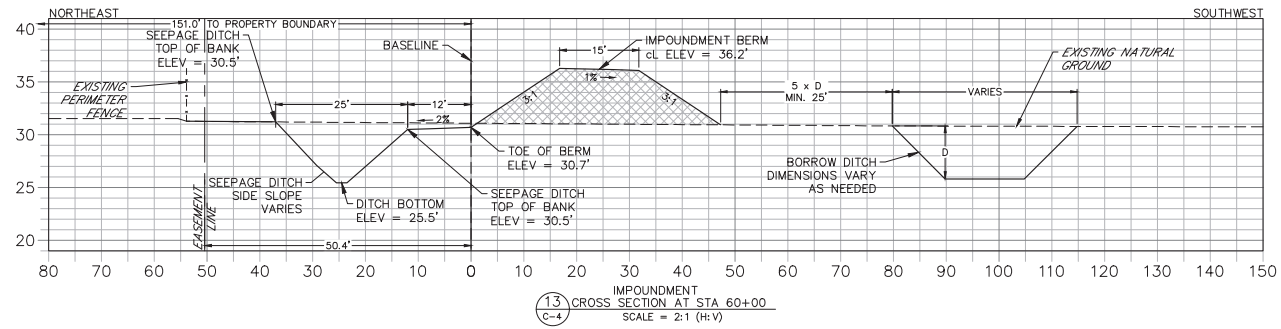
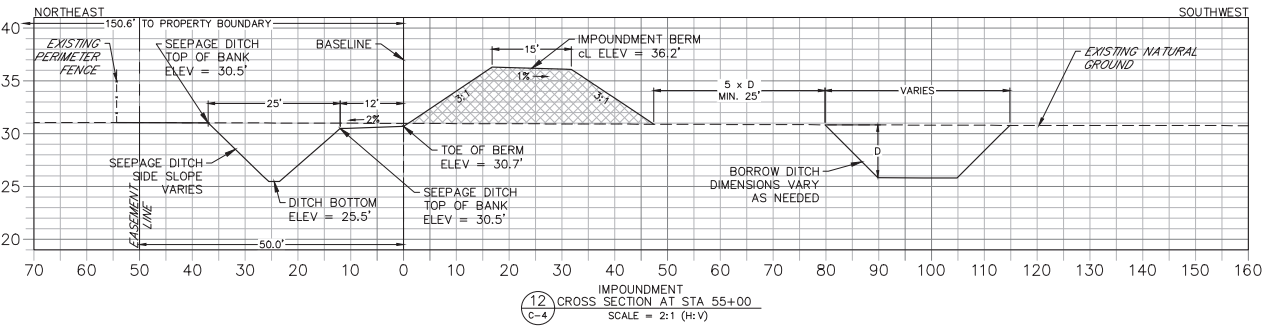
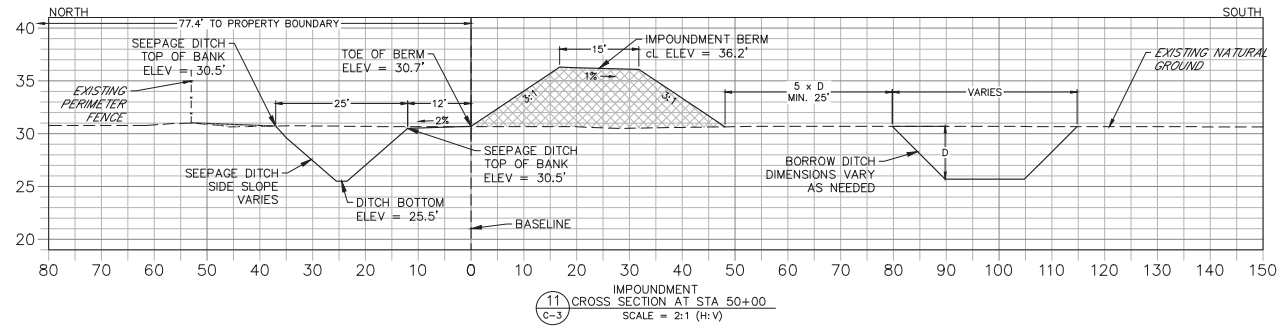
HIGHLANDS COUNTY BCC
ISTOKPOGA MARSH WATER
IMPOUNDMENT PHASE II
FLORIDA
HIGHLANDS COUNTY

CROSS SECTIONS

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211 West Warren Avenue
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SHEET
XS-1

Richard A. Jones, P.E.
FL P.E. No. 31118



Job: 0202-02-ES
Scale: As Shown
Date: 3-5-2018
Design: R.A.J.
Drawn: J.J.D.
Checked: D.C.R.
Approved: B.L.R.

No.	Date:

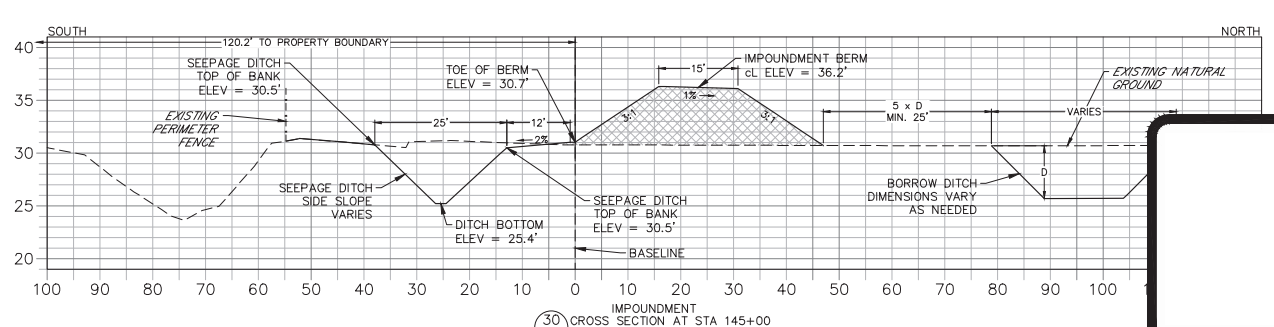
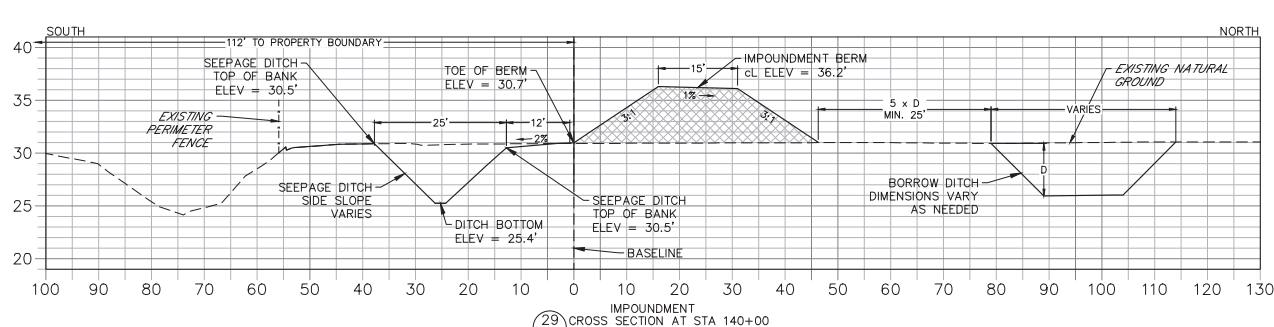
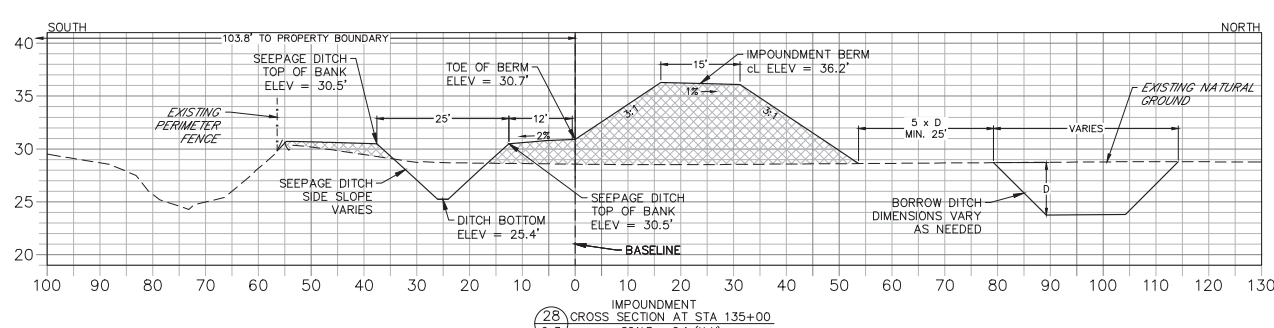
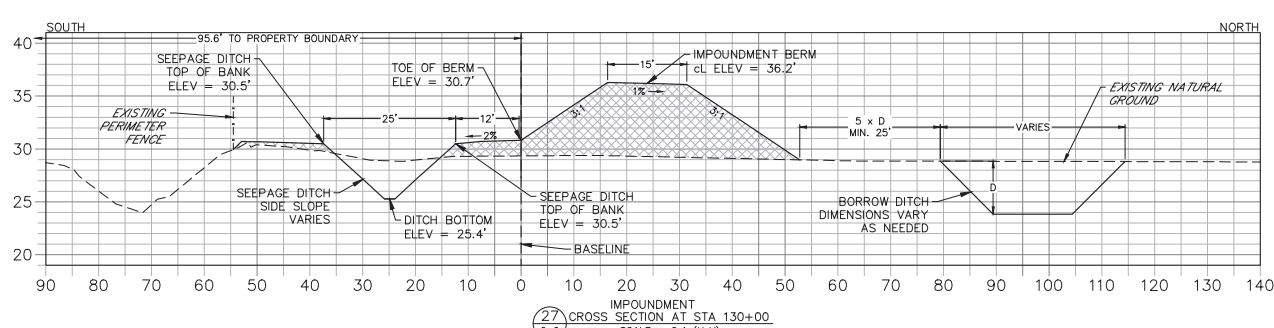
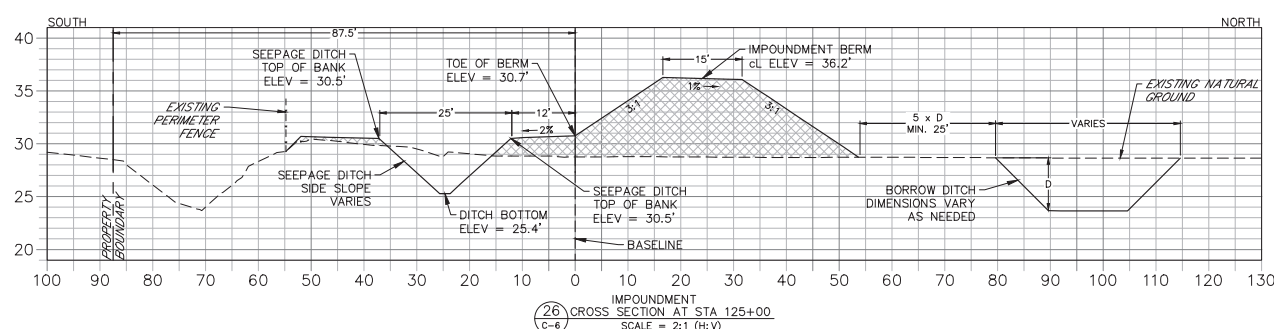
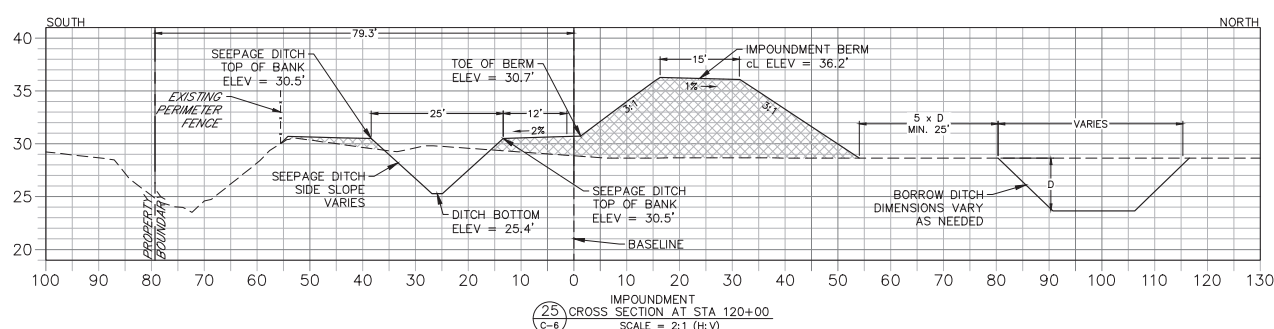
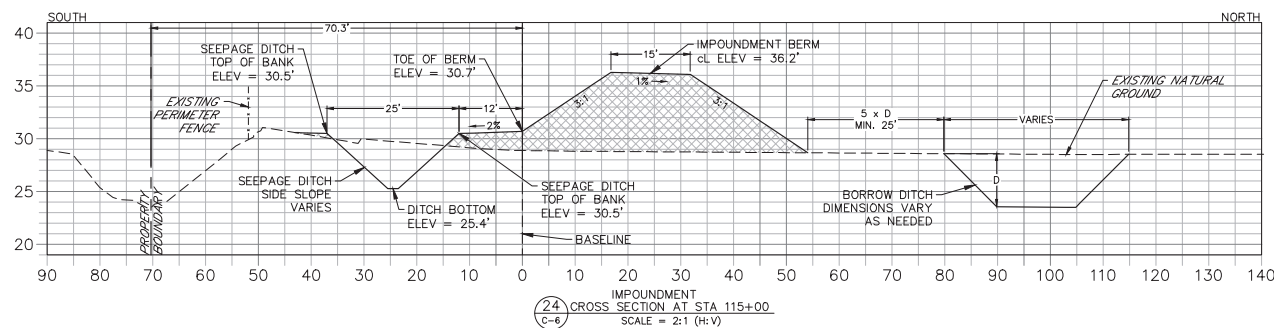
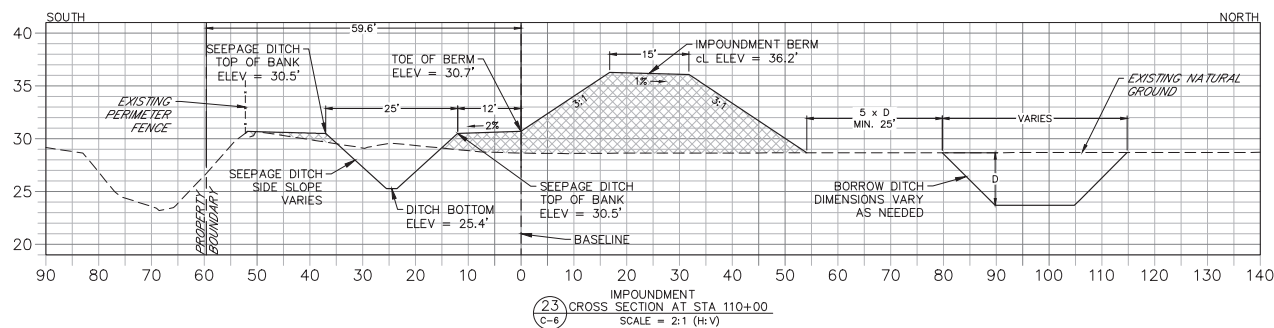
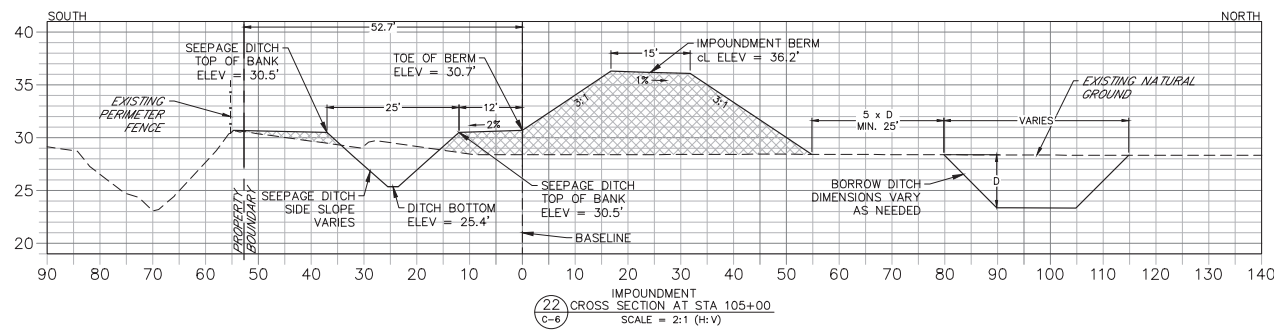
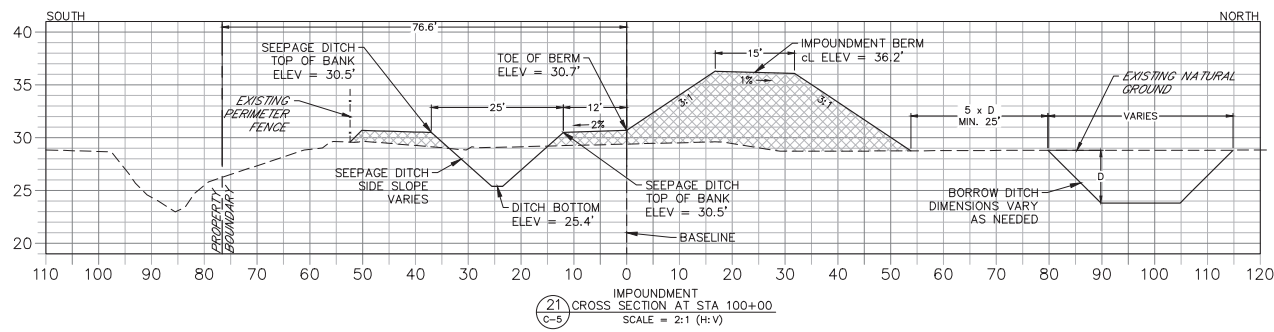
HIGHLANDS COUNTY BCC
ISTOKPOGA MARSH WATER
IMPOUNDMENT DISTRICT
IMPOUNDMENT PHASE II
FLORIDA
HIGHLANDS COUNTY

CROSS SECTIONS

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SHEET XS-2

Richard A. Jones, P.E.
FL P.E. No. 31118



Job: 0202-02-ES
Scale: As Shown
Date: 3-5-2018
Design: R.A.J.
Drawn: J.J.D.
Checked: D.C.R.
Approved: B.L.R.

No.	Date:

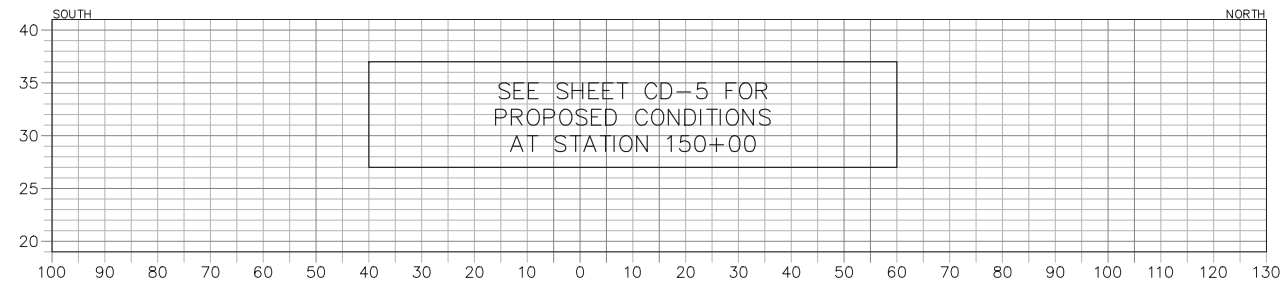
HIGHLANDS COUNTY BCC
ISTOKPOGA MARSH WATER
IMPOUNDMENT DISTRICT II
IMPOUNDMENT PHASE II
FLORIDA
HIGHLANDS COUNTY

CROSS SECTIONS

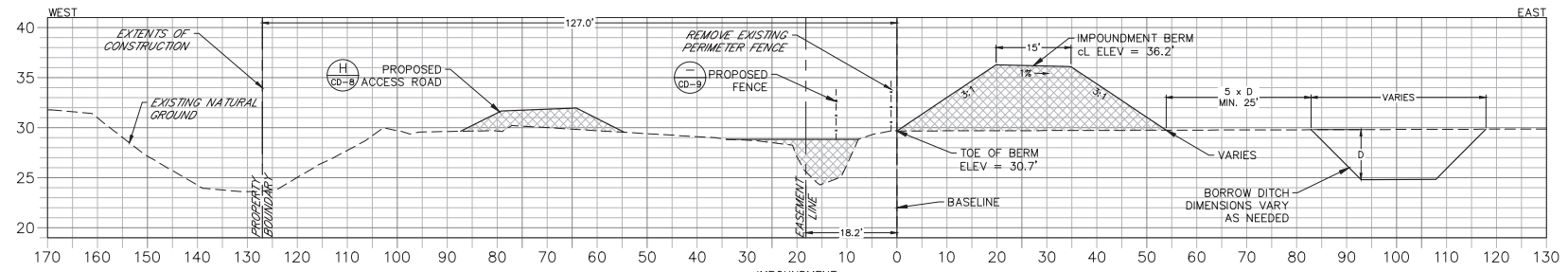
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FL GC# Reg. #290

SHEET
XS-3

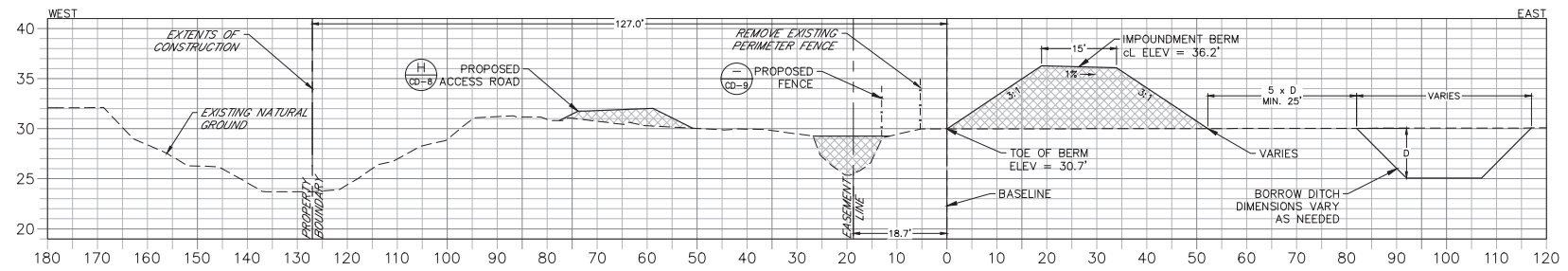
Richard A. Jones, P.E.
FL P.E. No. 31118



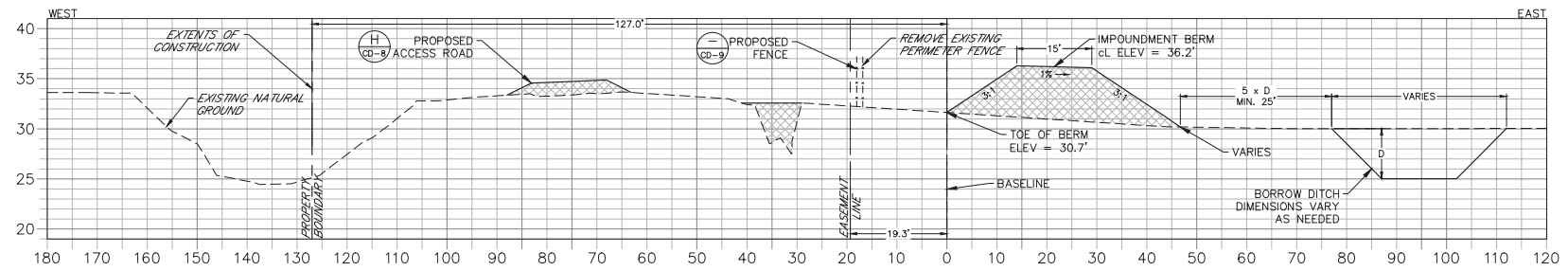
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C-7 SCALE = 2:1 (H:V)



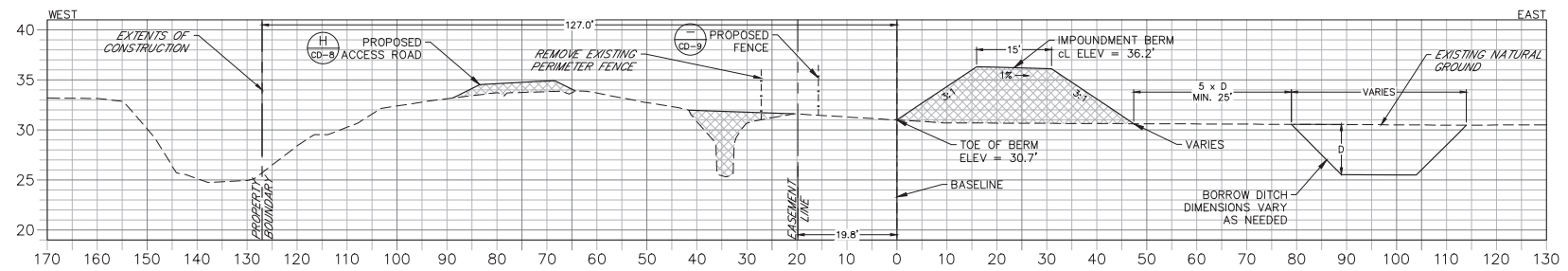
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34 IMPOUNDMENT CROSS SECTION AT STA 165+00
C-8 SCALE = 2:1 (H:V)



35 IMPOUNDMENT CROSS SECTION AT STA 170+00
C-1 SCALE = 2:1 (H:V)

Job: 0202-02-ES
Scale: As Shown
Date: 3-5-2018
Design: R.A.J.
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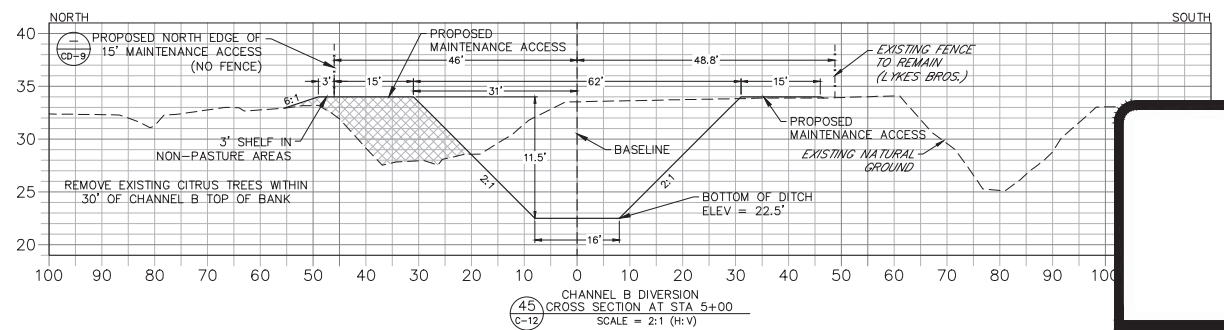
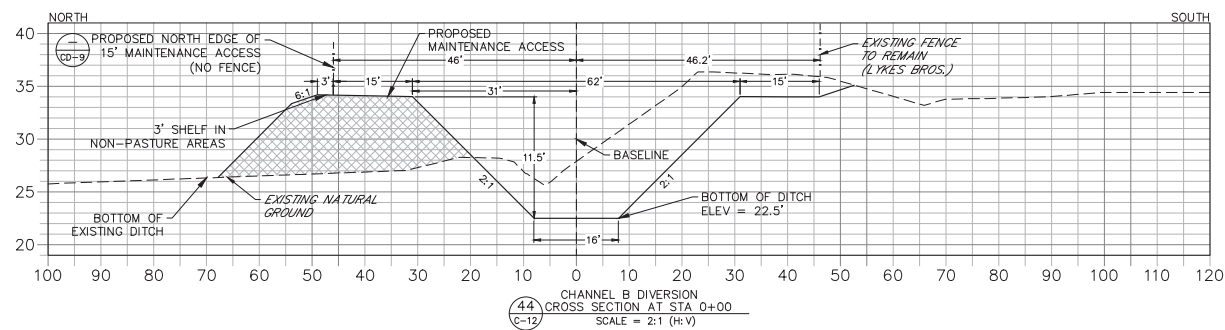
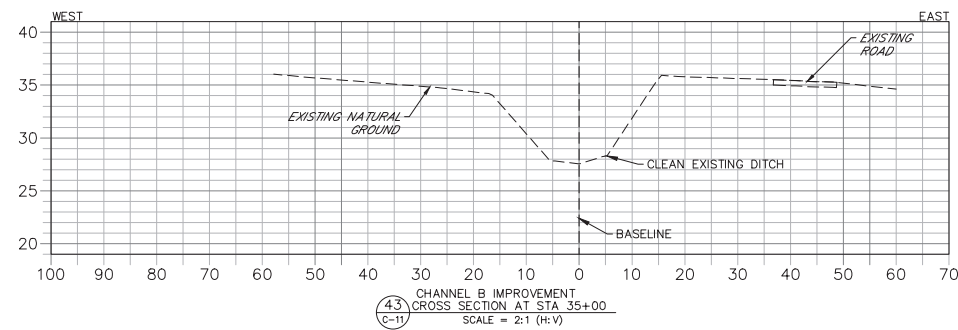
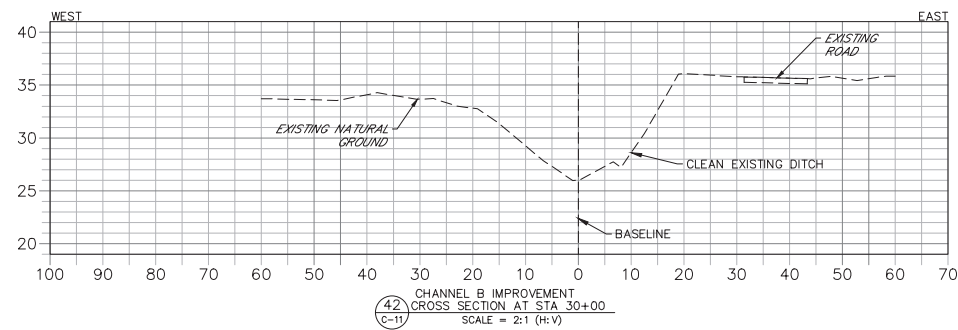
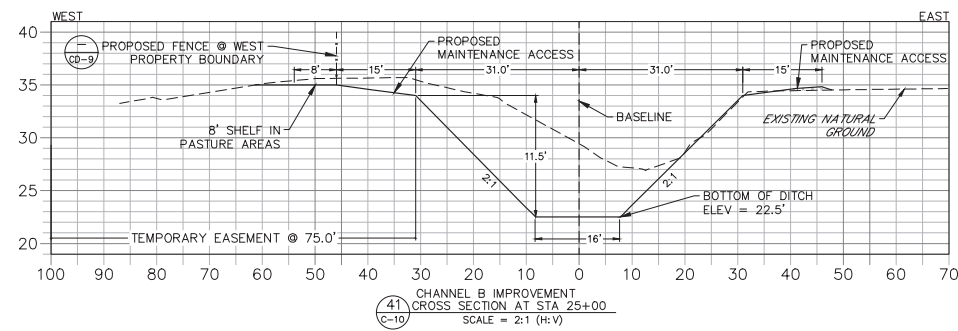
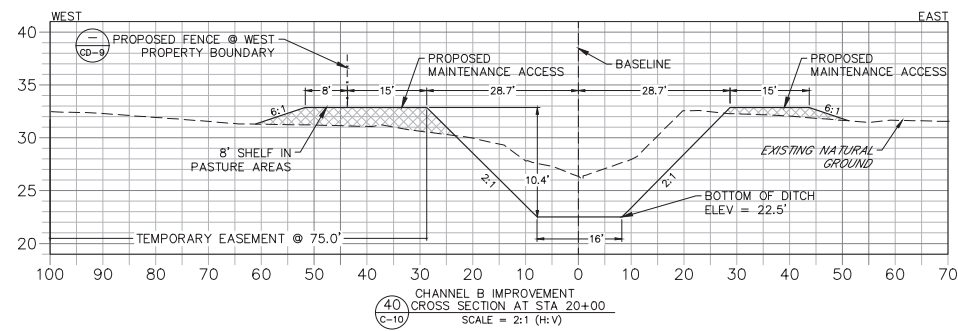
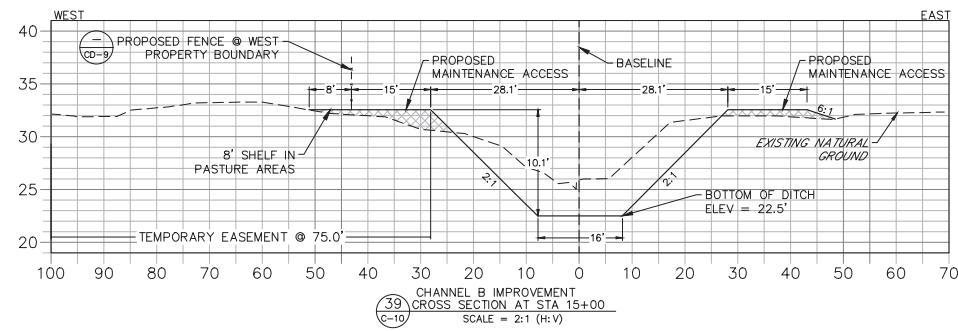
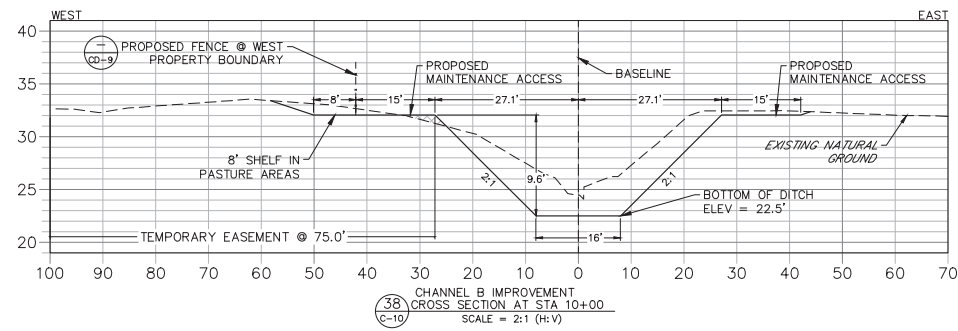
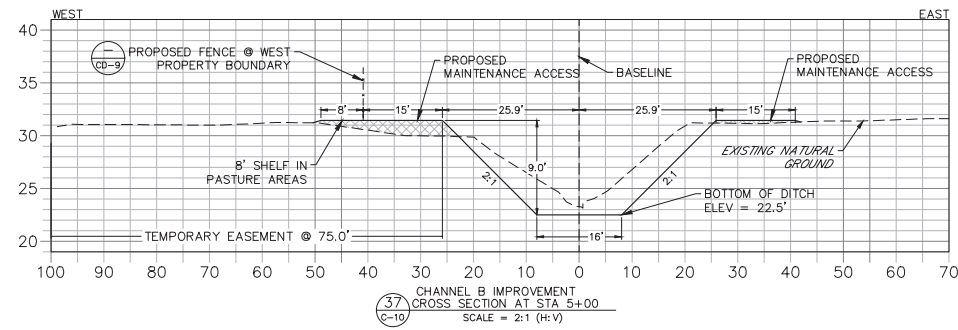
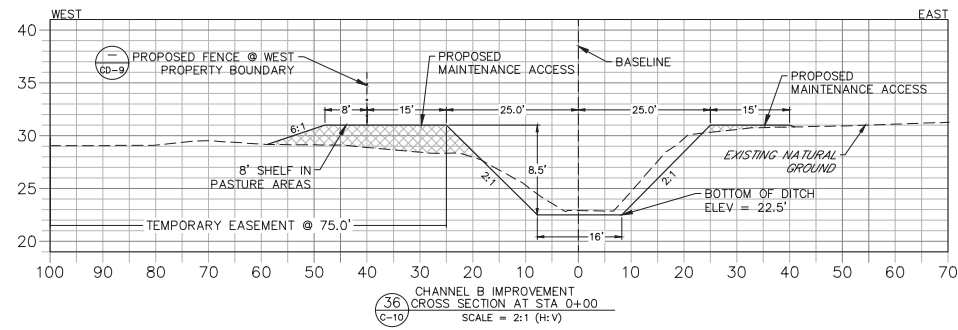
HIGHLANDS COUNTY BCC
ISTOKPOGA MARSH WATER
IMPOUNDMENT DISTRICT
IMPOUNDMENT PHASE II
FLORIDA
HIGHLANDS COUNTY

CROSS SECTIONS

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SHEET
XS-4

Richard A. Jones, P.E.
FL P.E. No. 31118



Job: 0202-02-ES
 Scale: As Shown
 Date: 3-5-2018
 Design: R.A.J.
 Drawn: J.J.D.
 Checked: D.C.R.
 Approved: B.L.R.

Revision
 No. Date

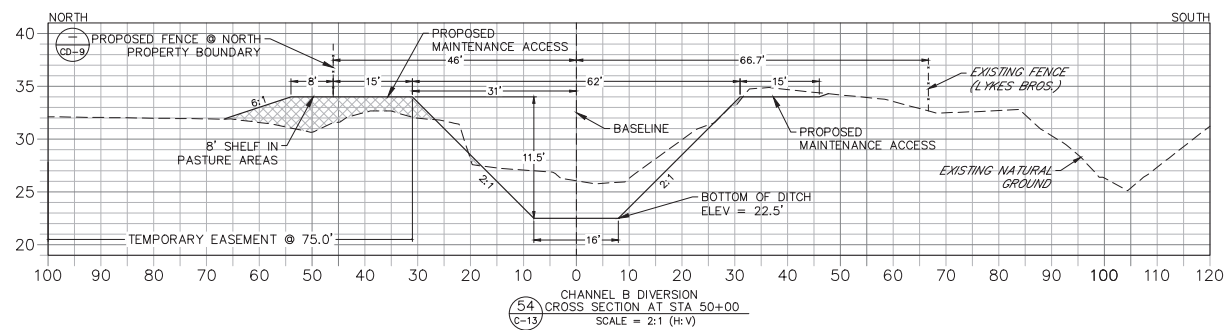
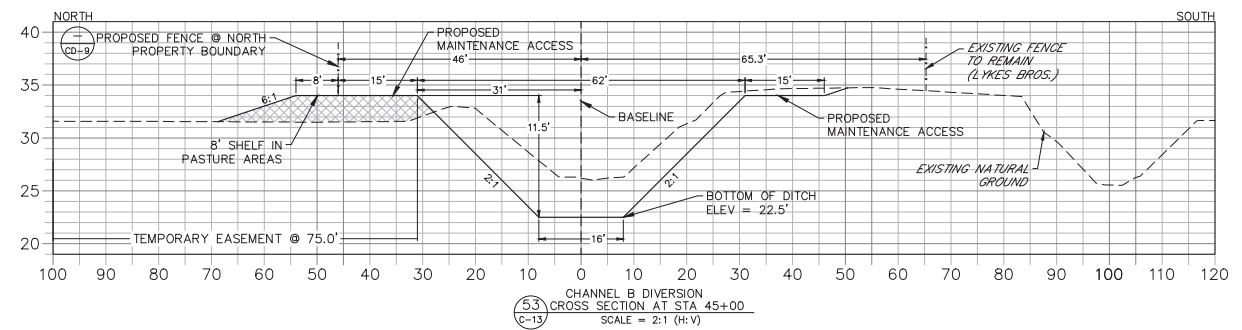
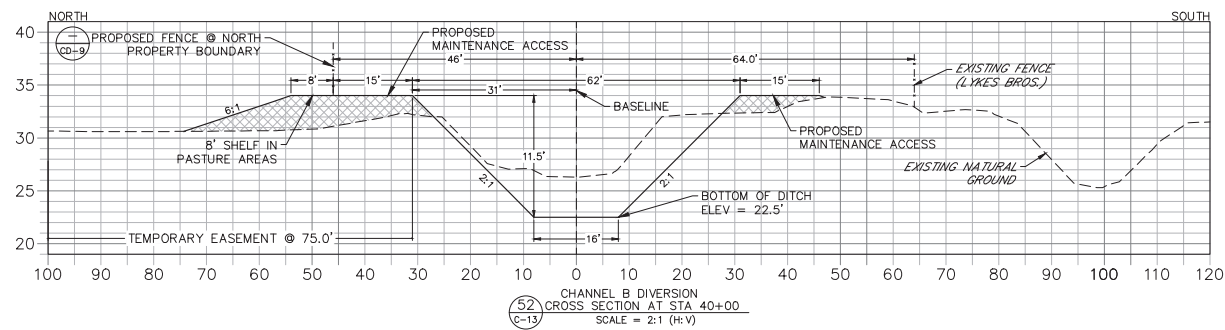
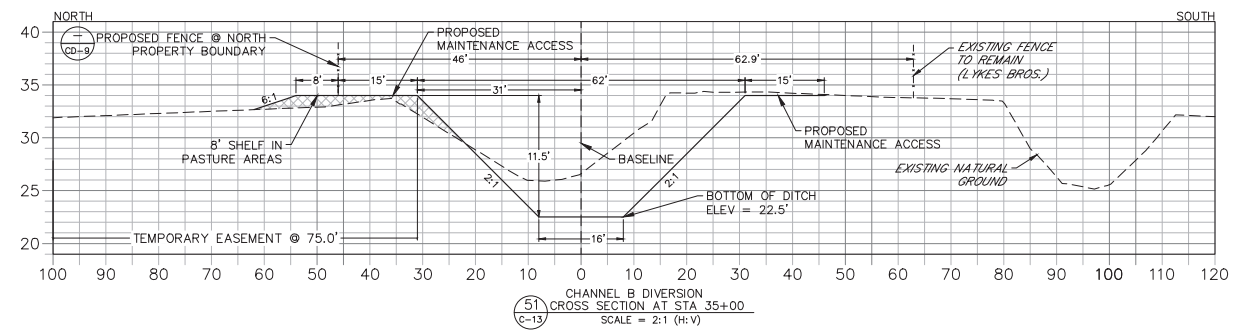
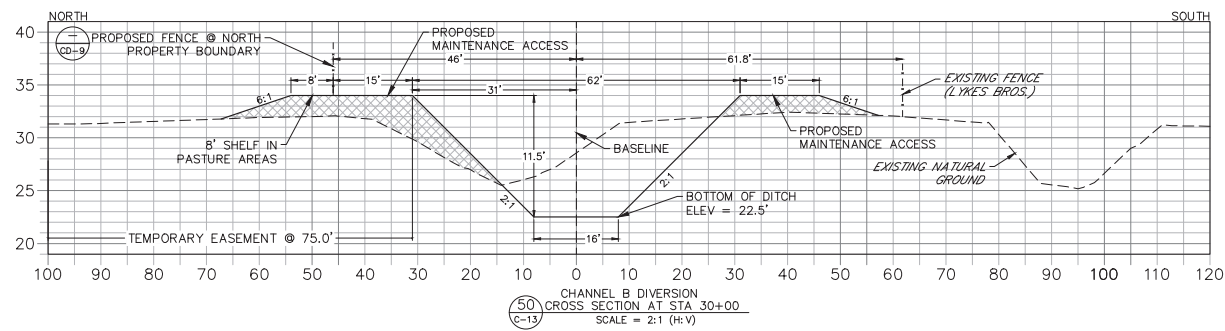
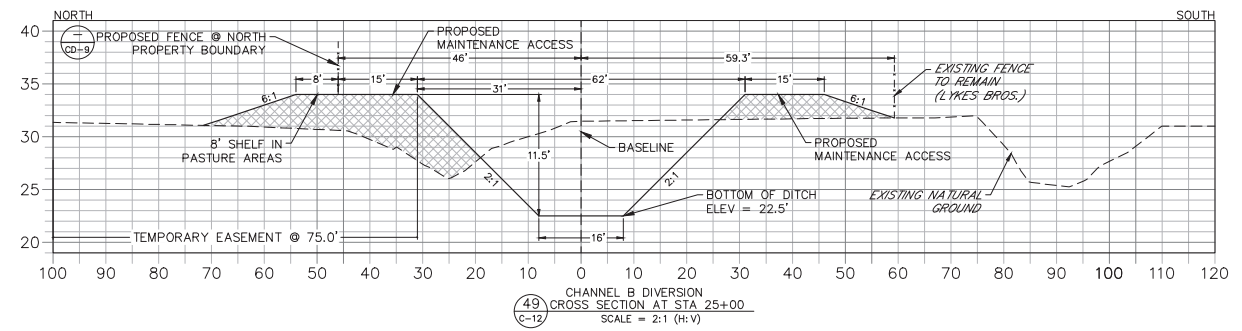
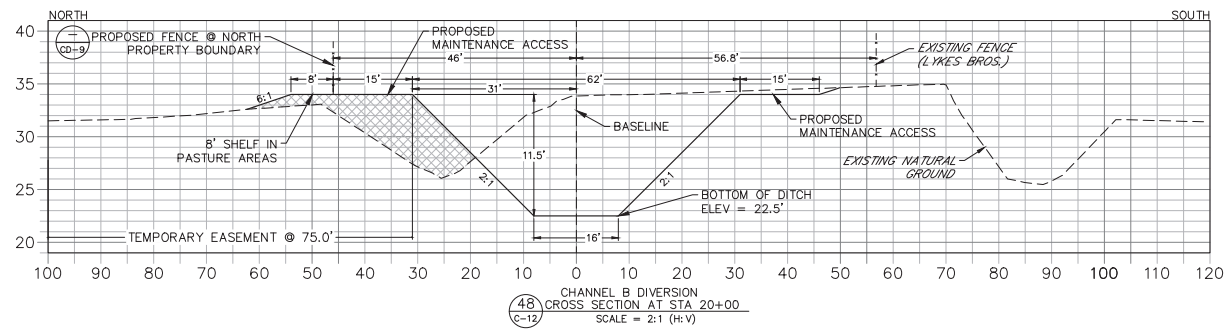
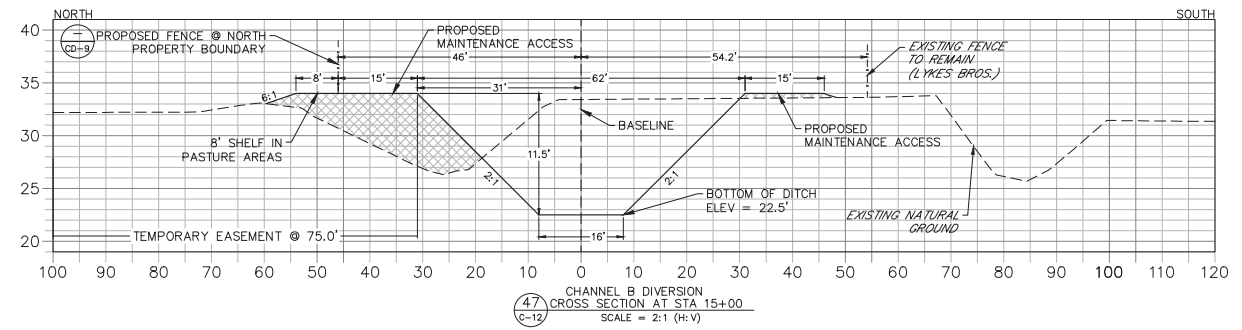
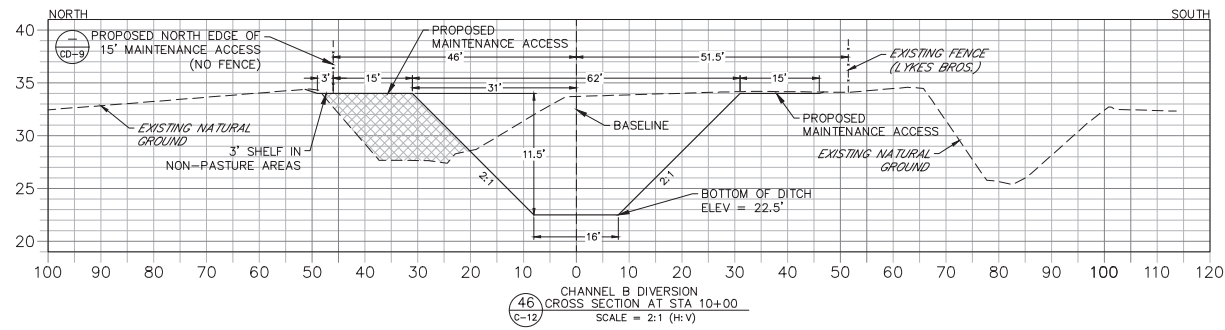
HIGHLANDS COUNTY BCC
 ISTOKPOGA MARSH WATER
 IMPOUNDMENT DISTRICT
 IMPOUNDMENT PHASE II
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 XS-5

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Job: 0202-02-ES
Scale: As Shown
Date: 3-5-2018
Design: R.A.J.
Drawn: J.J.D.
Checked: D.C.R.
Approved: B.L.R.

Revision

No. Date:

HIGHLANDS COUNTY BCC
ISTOKPOGA MARSH WATER
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