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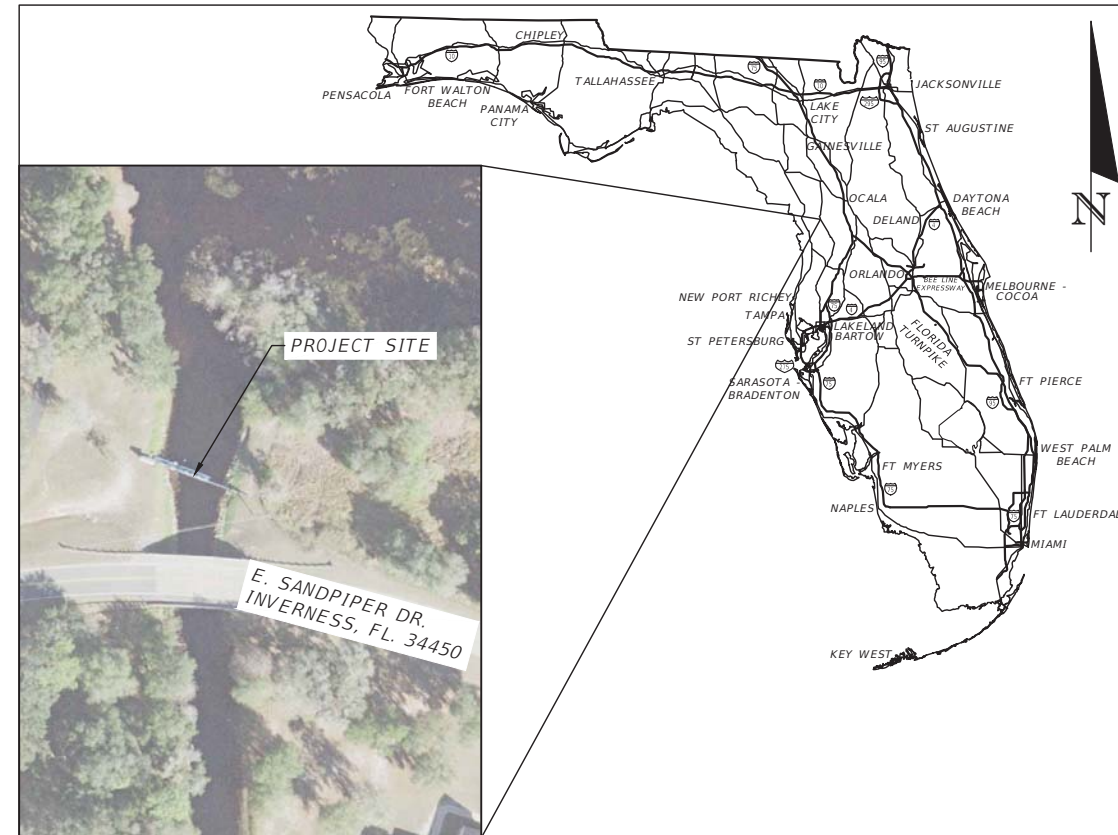
TWA NO: 18TW0001114

CONSTRUCTION PLANS OF PROPOSED

TSALA APOPKA

GOLF COURSE STRUCTURE MODIFICATION (C680)

AIM ENGINEERING & SURVEYING, INC. PROJECT No. 18-0790



LOCATION MAP

CITRUS COUNTY, FLORIDA
SECTION 26, TOWNSHIP 19 S, RANGE 20 E

SHEET INDEX

NO.	DESCRIPTION
CIVIL PLANS	
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C-04	GENERAL NOTES
C-05	EROSION CONTROL PLAN
C-06	EXIST. WEIR (PARTIAL) DEMOLITION PLAN
C-07	WEIR SITE PLAN
C-08 - C-09	WEIR PROPOSED CROSS SECTIONS
C-10	SLOPE PAVEMENT DETAILS
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STRUCTURAL PLANS	
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ELECTRICAL PLANS	
E1	GENERAL ELECTRICAL NOTES AND REQUIREMENTS
E2	ABBREVIATIONS AND ELECTRICAL SYMBOL LEGEND
E3	ELECTRICAL SITE PLAN
E4	KEY NOTES AND WEIR ELEVATION
E5	POWER RISER DIAGRAM

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

ELEVATIONS DEPICTED HEREIN ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). THE CONVERSION FACTOR FROM NAVD TO NGVD IS +0.840'

OWNER:

OFFICE:
SWFWMD
2379 BROAD ST.
BROOKSVILLE, FL. 34604
(352) 796-7211
WEBSITE: WWW.SWFWMD.STATE.FL.US

PROJECT MANAGER:
R.J. DOWLING, P.E.
(352) 796-7211 EXT. 4739
ROBERT.DOWLING@SWFWMD.STATE.FL.US

PROJECT CONSULTANT:

ENGINEER / SURVEYOR:
AIM ENGINEERING & SURVEYING, INC.
2161 FOWLER ST.
FT. MYERS, FL. 33901
(239) 332-4569

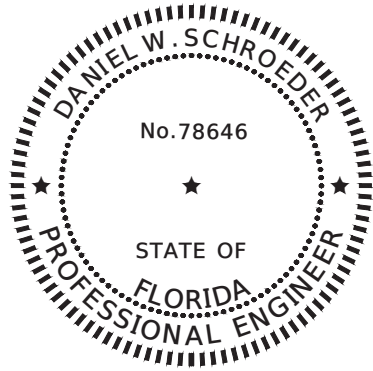
ENGINEER OF RECORD:
DANIEL SCHROEDER, P.E.
(239) 284-1911

PREPARED FOR:
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

2379 BROAD STREET
BROOKSVILLE, FL 34604-6899
(352) 796-7211

PREPARED BY:
AIM ENGINEERING & SURVEYING, INC.

2161 FOWLER STREET
FORT MYERS, FLORIDA 33901
PHONE (239) 332-4569
CERTIFICATE OF AUTHORIZATION NO. 3114



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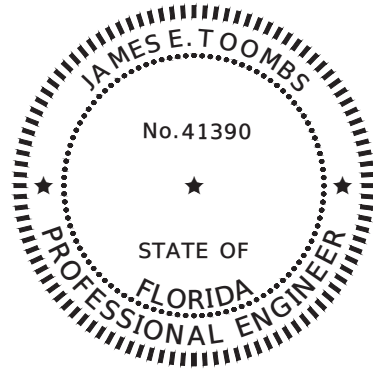
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CERTIFICATE OF AUTHORIZATION NO. 3114
DANIEL W. SCHROEDER, P.E. NO. 78646

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

PLAN INDEX

- C-01 COVER
- C-02 SIGNATURE SHEET
- C-03 AERIAL
- C-04 GENERAL NOTES
- C-05 EROSION CONTROL PLAN
- C-06 EXIST. WEIR (PARTIAL) DEMOLITION PLAN
- C-07 WEIR SITE PLAN
- C-08 - C-09 WEIR PROPOSED CROSS SECTIONS
- C-10 SLOPE PAVEMENT DETAILS
- C-11 SLIDE GATES DETAIL



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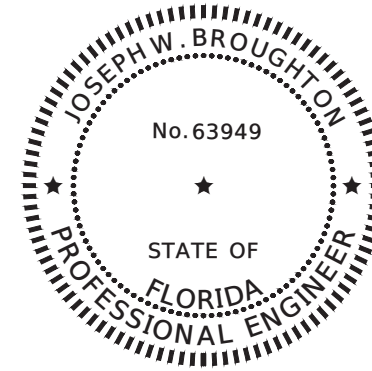
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AIM ENGINEERING & SURVEYING, INC.
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CERTIFICATE OF AUTHORIZATION NO. 3114
JAMES E. TOOMBS, P.E. NO. 41390

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

PLAN INDEX

- C-02 SIGNATURE SHEET
- S-01 PLAN SHEET / SECTION
- S-02 ELEVATION / SECTIONS
- S-03 SECTIONS
- S-04 RETAINING WALL DATA TABLES
- S-05 GENERAL NOTES



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BURGESS BRANT CONSULTING ENGINEERS
12995 S. CLEVELAND AVE., STE. 229
FORT MYERS, FL. 33907
CERTIFICATE OF AUTHORIZATION NO. 6032
JOSEPH W. BROUGHTON, P.E. NO. 63949

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

PLAN INDEX

- C-02 SIGNATURE SHEET
- E1 GENERAL ELECTRICAL NOTES AND REQUIREMENTS
- E2 ABBREVIATIONS AND ELECTRICAL SYMBOL LEGEND
- E3 ELECTRICAL SITE PLAN
- E4 KEY NOTES AND WEIR ELEVATION
- E5 POWER RISER DIAGRAM

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AIM Engineering & Surveying, Inc.
CIVIL ENGINEERING * LAND SURVEYING * S.U.E. * TRANSPORTATION * UTILITIES
* PROJECT MANAGEMENT * CONSTRUCTION ENGINEERING & MANAGEMENT
2161 FOWLER ST. STE. 100 FORT MYERS, FL 33901 * PHONE: 239-332-4569
EMAIL: ENGINEERING@AIMENGR.COM * CERTIFICATE OF AUTHORIZATION No. 3114

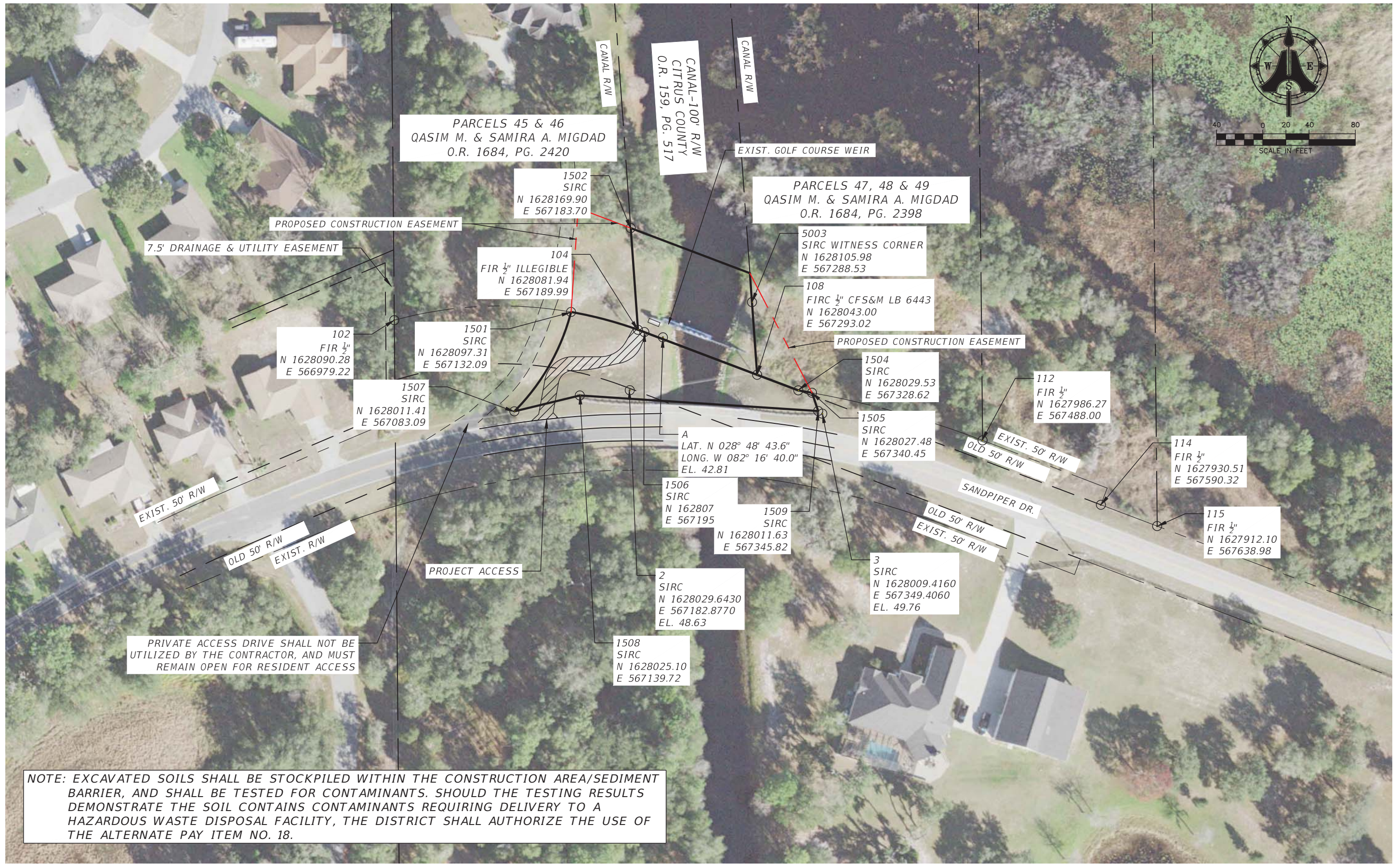
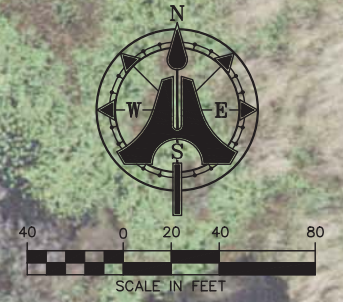
SOUTHWEST FLORIDA WATER
MANAGEMENT DISTRICT
2379 BROAD ST. BROOKSVILLE, FL. 34604-6899
PHONE: (352) 796-7211

DATE:	MARCH 2019
DRAWN BY:	BK
CHECKED BY:	DS

DANIEL W. SCHROEDER
PROFESSIONAL ENGINEER
P.E. No. 78646

TSALA APOPKA
GOLF COURSE STRUCTURE MODIFICATION
SIGNATURE SHEET

PROJECT NO.	18-0790
SHEET NO.:	C-02



NOTE: EXCAVATED SOILS SHALL BE STOCKPILED WITHIN THE CONSTRUCTION AREA/SEDIMENT BARRIER, AND SHALL BE TESTED FOR CONTAMINANTS. SHOULD THE TESTING RESULTS DEMONSTRATE THE SOIL CONTAINS CONTAMINANTS REQUIRING DELIVERY TO A HAZARDOUS WASTE DISPOSAL FACILITY, THE DISTRICT SHALL AUTHORIZE THE USE OF THE ALTERNATE PAY ITEM NO. 18.

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NO	DATE	DESCRIPTION

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 CIVIL ENGINEERING * LAND SURVEYING * S.U.E. * TRANSPORTATION * UTILITIES
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SOUTHWEST FLORIDA WATER
 MANAGEMENT DISTRICT
 2379 BROAD ST. BROOKSVILLE, FL. 34604-6899
 PHONE: (352) 796-7211

DATE: MARCH 2019	DANIEL W. SCHROEDER PROFESSIONAL ENGINEER P.E. No. 78646
DRAWN BY: BK	
CHECKED BY: DS	

PROJECT NO. 18-0790	
SHEET NO.: C-03	
TSALA APOPKA GOLF COURSE STRUCTURE MODIFICATION AERIAL	

SUMMARY OF PAY ITEMS			
ITEM	PAY ITEM DESCRIPTION	UNIT	QTY
1	Mobilization/Demobilization/TTCP/Project Sign	LS	1
2	Clearing and Grubbing (Demolition of existing unwanted weir components)	LS	1
3	Temporary Erosion Control (±400 LF Silt Fence & ±300 LF of Floating Turbidity Barrier)	LS	1
4	Dewatering (Including Temporary Dam for Dewatering)	LS	1
5	Earthwork (Approx. 320 CY Excavation & 25 CY Embankment) (Including testing of excavated soils for contaminants)	LS	1
6	Prestressed Concrete Piles - 14" (Two at 50 LF Each)	LF	100
7	Concrete Cap and Gate Support Structure (25.52 CY of Concrete) (Including 4,571 LBS Reinforcing Steel and Cap Seal)	LS	1
8	Metallization of Existing Structure (1,440 SF of sheet piling and 20 LF of 36" wide catwalk & railings)	LS	1
9	Retaining Wall (39.2 CY of Concrete) (Including 3,611 LBS Reinforcing Steel)	LS	1
10	Aluminum Slide Gates and Electric Operators (96" x 96" Bottom-Up Aluminum Slide Gate w/ Electric Actuator)	EA	2
11	Electrical Modifications (Including SCADA Modification)	LS	1
12	Aluminum Grate Catwalk with Handrail - 36" Wide (Ladder, Handrails, Grating, Anchors, Supports, & C6x4.50 Channels)	LF	26.5
13	Rip-Rap w/Filter Fabric (2.5' Bank & Shore with Filter Fabric)	CY	270
14	Concrete Slope Pgmt. (8") with Drain Backflow Preventor Devices (Including 29 Drains, Weepholes, Footer, & Reinforcing Steel)	SY	317
15	Restoration Sodding	SY	1200
16	Survey (Layout and As-built)	LS	1
Alternate (Owner's Option)			
17	Coating of Existing Sheet Piling and Catwalk (in lieu of Metalization) (Tnemec Series 90-98 Primer & Epoxy Overcoat, or equivalent)	LS	1
18	Disposal of Excavated Soil to a Hazardous Waste Disposal Facility (Required if testing shows excavated soils contain contaminants)	LS	1

ENGINEERING ABBREVIATIONS

LEGEND:
 APP. EQ. = APPROVED EQUIVALENT
 CONT. = CONTINUOUS
 CY = CUBIC YARD
 DIA. = DIAMETER
 EA = EACH
 EQ. SP. = EQUIVALENT SPACING
 EXIST. = EXISTING
 GALV. = GALVANIZED
 HORIZ. = HORIZONTAL
 INV. = INVERT
 LF = LINEAR FOOT
 LS = LUMP SUM
 MAX L NOM. = MAXIMUM LENGTH
 = NOMINAL
 N.T.S. = NOT TO SCALE
 O.C. = ON CENTER
 PAVT. = PAVEMENT
 PROP. = PROPOSED
 S.S. = STAINLESS STEEL
 SY = SQUARE YARDS
 TYP. = TYPICAL
 VERT. = VERTICAL
 W/ = WITH

GENERAL NOTES:

- ALL ELEVATIONS REFER TO NORTH AMERICAN VERTICAL DATUM (NAVD 88). CONVERSION TO NGVD 29 = NAVD + 0.840 FT ELEVATION.
- COMPENSATION FOR THE WORK AS SHOWN ON THE PLANS SHALL BE AT THE UNIT PRICE INCLUDED IN THE BID SCHEDULE. NO SEPARATE PAYMENT WILL BE MADE FOR TASKS (NOT ALL INCLUSIVE) INCLUDING SUCH ITEMS AS FIELD OFFICE, SANITARY FACILITIES, ROCK EXCAVATION, DEWATERING, MATERIAL DELIVERY AND STORAGE, TEMPORARY POWER, ETC. NECESSARY FOR THE COMPLETE EXECUTION OF THE WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING UTILITIES AND FOR ANY DAMAGE WHICH MAY OCCUR BY FAILING TO PRESERVE THEM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED FEDERAL, STATE, COUNTY AND/OR LOCAL CONSTRUCTION PERMITS/APPROVALS PRIOR TO STARTING ANY CONSTRUCTION ACTIVITIES. (INCLUDING A DEWATERING PERMIT IF NEEDED)
- THE CONTRACTOR SHALL NOTIFY ALL REQUIRED UTILITIES AND GOVERNMENT AGENCIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION. (48 HOURS BEFORE DIGGING CALL TOLL FREE 1-800-432-4770 SUNSHINE 811)
- ALL QUANTITIES SHOWN HEREIN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES SHOWN ON THE PLANS AND PROMPTLY NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOUND IN THE QUANTITIES.
- THE INFORMATION PROVIDED IN THESE PLANS ARE SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF THE WORK. ALL PROSPECTIVE CONTRACTORS ARE ENCOURAGED, PRIOR TO BIDDING, TO CONDUCT ANY SITE INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT MAY BE ENCOUNTERED, AND UPON WHICH THEIR BIDS SHALL BE BASED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC IN ACCORDANCE WITH LOCAL, COUNTY AND STATE REQUIREMENTS.
- TRENCH EXCAVATIONS IN EXCESS OF FIVE FEET (5') DEEP SHALL COMPLY WITH ALL APPLICABLE TRENCH SAFETY STANDARDS SET FORTH IN THE STATE OF FLORIDA "TRENCH SAFETY ACT" BILL #PCS/HB 3183 AND SB 2626, ALONG WITH OSHA STANDARDS DEFINED IN 29 CFR 1926.650 PART "P".
- CONTRACTOR SHALL SOD ALL DISTURBED AREAS OUTSIDE OF TOP OF BANK SLOPE. CONTRACTOR ALSO SHALL SOD ALL DISTURBED CANAL AREAS FROM TOP OF BANK TO ONE FOOT BELOW THE CANAL WATER CONTROL ELEVATION, OR THE WATER ELEVATION AT THE TIME OF SOD INSTALLATION (BOTTOM ROW OR SOD SHALL BE STAKED TO PREVENT MOVEMENT AS THE WATER LEVEL RISES)
- THE CONTRACTOR SHALL SECURE ANY ADDITIONAL TEMPORARY CONSTRUCTION EASEMENTS NECESSARY FOR CONSTRUCTION AND WILL BE RESPONSIBLE FOR RESTORATION OF ANY DISTURBED AREAS.
- ALL BACKFILLING SHALL BE IN LIFTS OF NOT MORE THAN 18" LOOSE MATERIAL AND COMPACTED TO 100% OF AASHTO T-99, METHOD "C". CONTRACTOR SHALL PROVIDE DENSITY REPORTS FOR ALL AREAS BACKFILLED (COPIES TO ENGINEER AND OWNER) AND SHALL BEAR ALL COSTS ASSOCIATED WITH TESTING AND/OR ANY RETESTING OF ANY AREAS THAT DO NOT MEET THE ABOVE STANDARDS.
- THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONSTRUCTION PLANS AND ALL PERMITS ON THE JOB SITE DURING ALL PHASES OF THE WORK. TWO (2) COMPLETE SETS OF "AS-BUILT" DRAWINGS MUST BE DELIVERED TO THE ENGINEER OF RECORD WITHIN FIFTEEN (15) DAYS OF COMPLETING CONSTRUCTION ALONG WITH ELECTRONIC FILES IN AUTOCAD FORMAT. CONTRACTOR SHALL OBTAIN THE SERVICES OF A FLORIDA PROFESSIONAL SURVEYOR AND MAPPER TO PERFORM "AS-BUILT" VERIFICATION OF ANY CRITICAL ELEVATIONS ASSOCIATED WITH ANY STRUCTURES AND/OR CULVERTS BUILT AS PART OF THIS PROJECT.
- CONSTRUCTION DEWATERING FOR THE PROJECT HAS NOT BEEN APPROVED. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A WATER USE DEWATERING PERMIT FROM THE WATER MANAGEMENT DISTRICT AND/OR COMPLYING WITH CONSTRUCTION DEWATERING NO-NOTICE REQUIREMENTS.

CONCRETE SLOPE PAVEMENT NOTES:

- TYPE OF SLOPE PAVEMENT SHALL BE AS SHOWN ON PLANS.
- IN CONCRETE DITCH PAVEMENT, CONTRACTION JOINTS ARE TO BE SPACED AT 25' MAXIMUM INTERVALS, OR AS DIRECTED BY THE ENGINEER. CONTRACTION JOINTS MAY BE EITHER FORMED (CONSTRUCTION JOINT) OR TOOLED. NO OPEN JOINTS WILL BE PERMITTED IN CONCRETE DITCH PAVEMENT.
- EXPANSION JOINTS WITH 1/2" PREFORMED JOINT FILLER SHALL BE CONSTRUCTED AT ALL INLETS, ENDWALLS, VERTICAL STRUCTURES AND AT INTERVALS OF NOT MORE THAN 200'.
- TOEWALLS ARE TO BE USED WITH ALL DITCH PAVING. A TOEWALL IS NOT REQUIRED ADJACENT TO DRAINAGE STRUCTURES.
- WHEN WEEP HOLES WITH AGGREGATE ARE USED, PLACE FILTER FABRIC BELOW THE AGGREGATE TO FORM A MAT CONTINUES WITH THE PAVEMENT FILTER FABRIC OR UNDERLAPPING THE PAVEMENT FILTER FABRIC, IF PRESENT.
- COST OF FILTER FABRIC TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR CONCRETE SLOPE PAVEMENT.

SURVEY ABBREVIATIONS

LEGEND:

CM = CONCRETE MONUMENT
 CONC. = CONCRETE
 (D) = PER DEED
 DE = DRAINAGE EASEMENT
 E = EAST OR EASTING
 ELEV. / EL = ELEVATION
 ENG = ENGINEERING
 FCM = FOUND CONCRETE MONUMENT
 FIP = FOUND IRON PIPE
 FIR = FOUND IRON ROD
 FIRC = FOUND IRON ROD AND CAP
 FMAGD = FOUND MAGNETIC NAIL & DISK
 FPKD = FOUND PARKER-KALON NAIL & DISK
 ID. = IDENTIFICATION
 INC. = INCORPORATED
 INST = INSTRUMENT NUMBER
 LB = LICENSED BUSINESS
 LLC = LIMITED LIABILITY CORPORATION
 N = NORTH OR NORTHING
 NAVD 88 = NORTH AMERICAN VERTICAL DATUM OF 1988
 NO. OR # = NUMBER
 OR = OFFICIAL RECORD BOOK
 P.B. = PLAT BOOK
 PG = PAGE
 P.U.E = PUBLIC UTILITY EASEMENT
 R/W = RIGHT OF WAY
 SIRC = SET 5/8" IRON ROD W/ CAP "AIM ENG LB 3114"
 SMAGD = SET MAG NAIL & DISK
 TOB = TOP OF BANK
 W/ = WITH

 = SHARED UTILITY POLE
 = OVERHEAD UTILITY LINE
 = BURIED FIBER OPTIC LINE
 = GUY ANCHOR
 = OAK TREE, UNLESS OTHERWISE NOTED
 = SINGLE SUPPORT SIGN
 = GROUND ELEV.
 = HARD SURFACE ELEV.
 = PRESENT WATER ELEV. @ STAFF GAUGE

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NO	DATE	DESCRIPTION

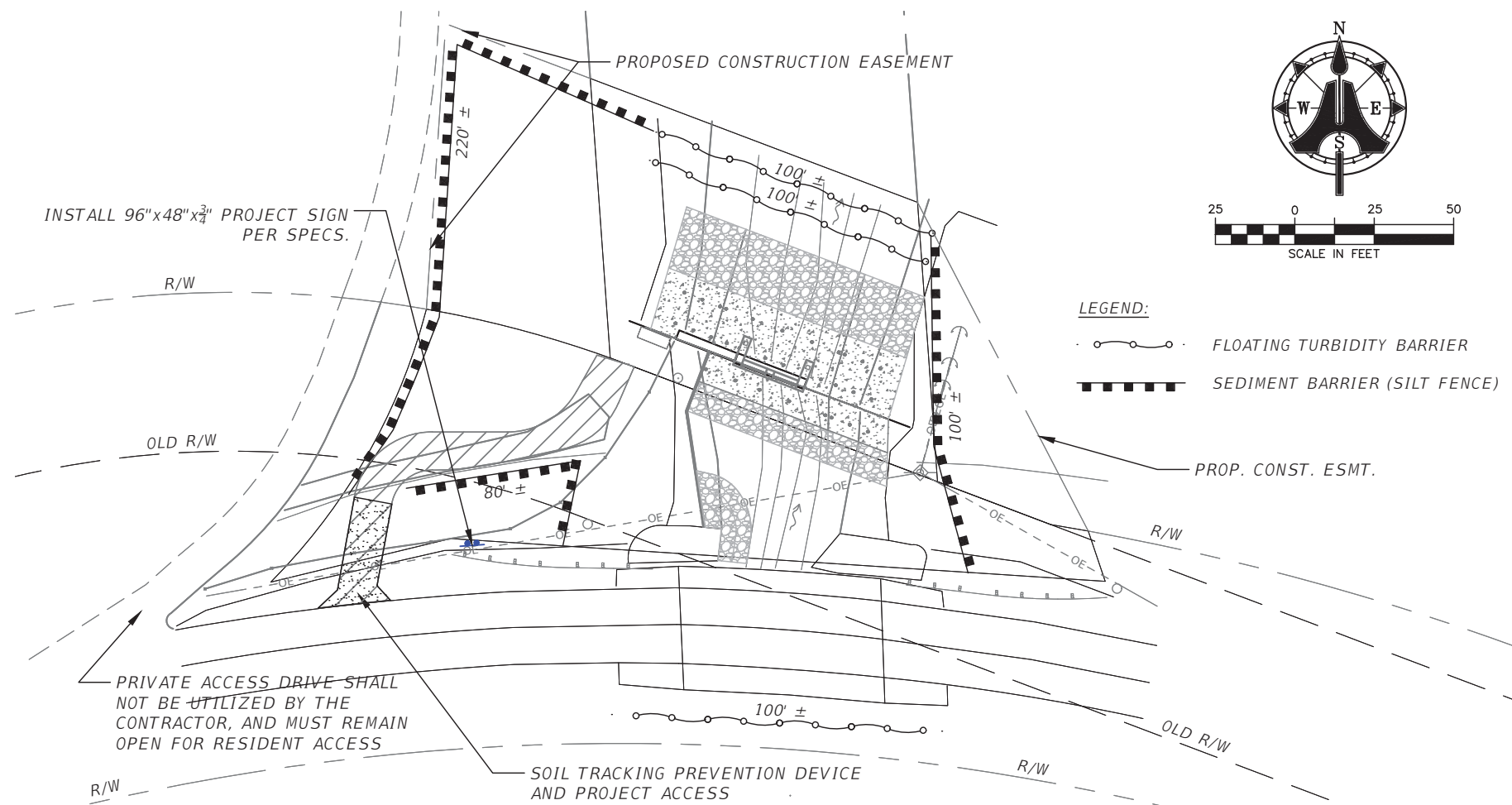
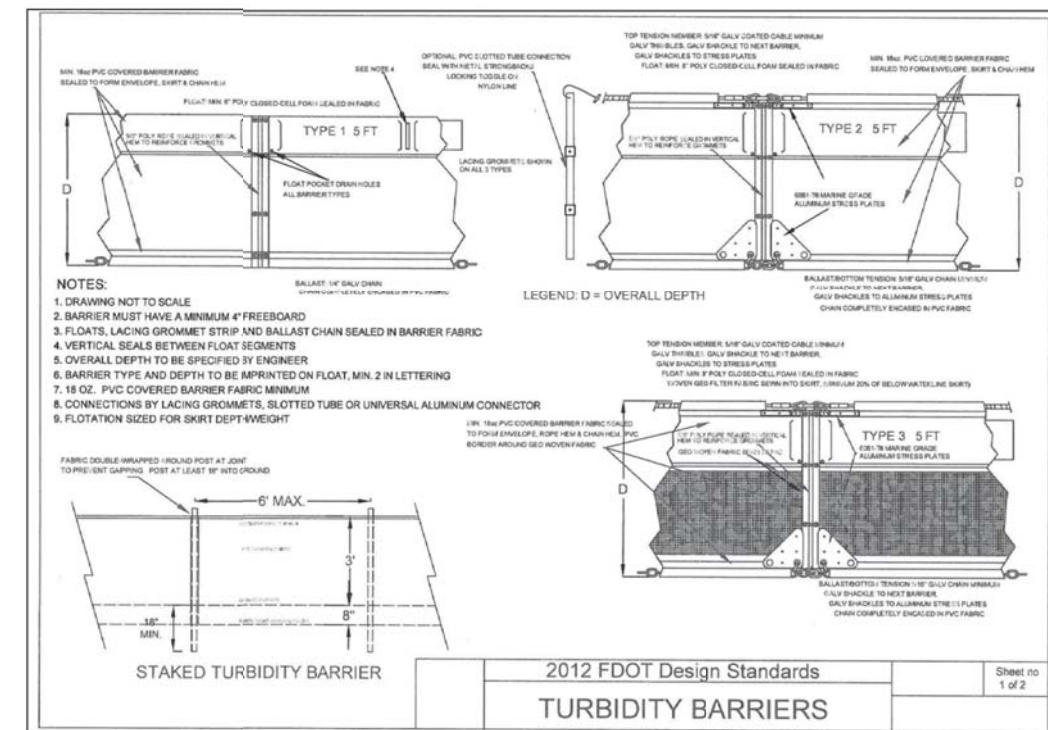
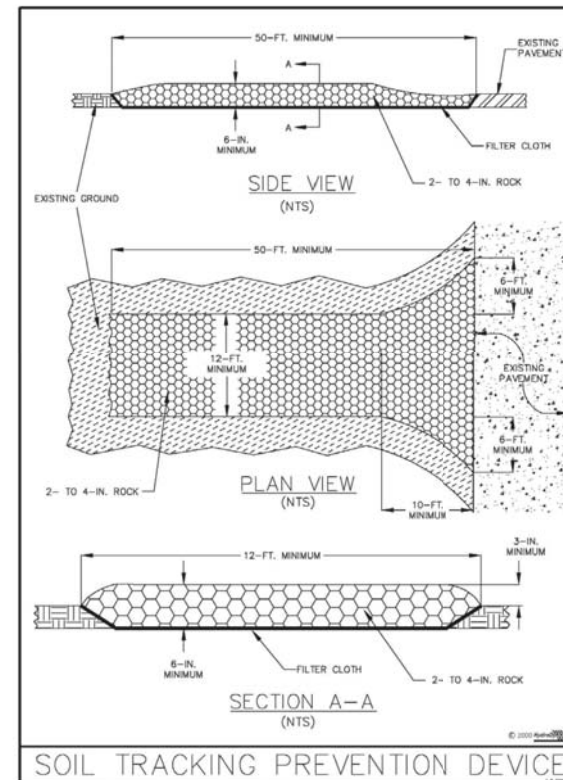
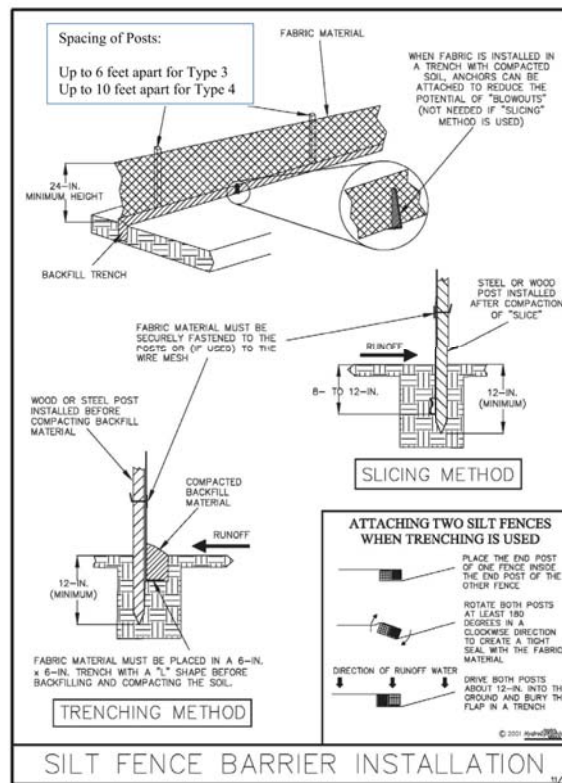
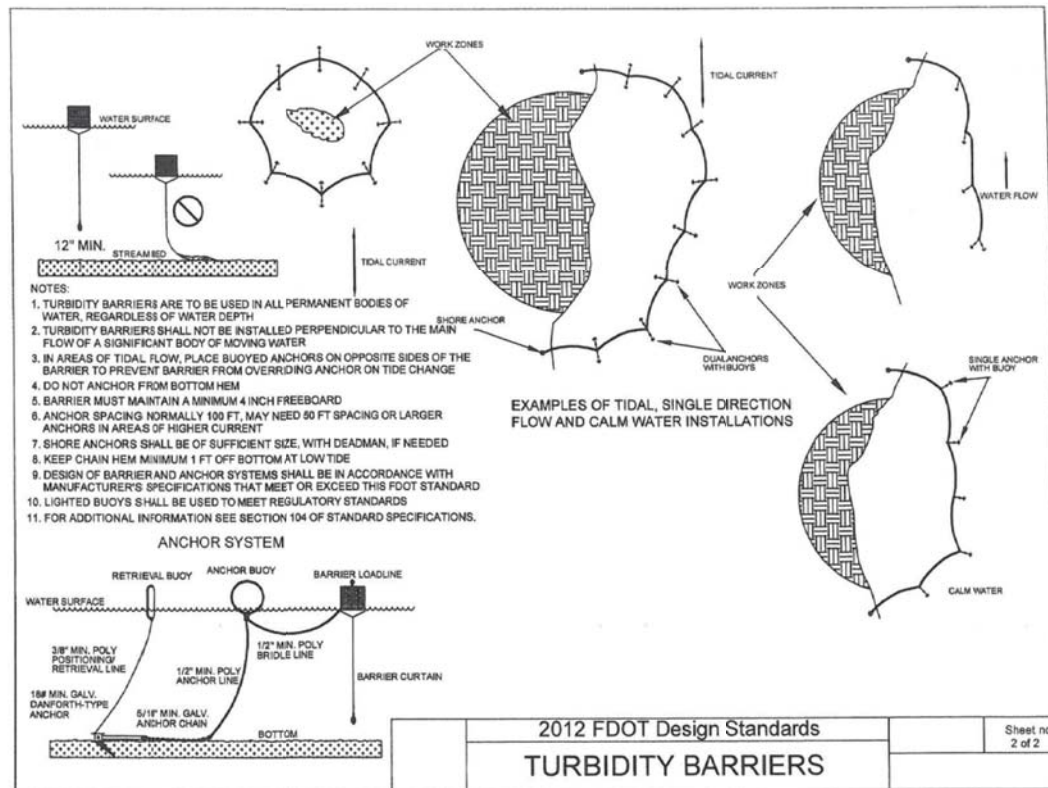
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SOUTHWEST FLORIDA WATER
 MANAGEMENT DISTRICT
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 PHONE: (352) 796-7211

DATE: MARCH 2019	
DRAWN BY: BK	DANIEL W. SCHROEDER PROFESSIONAL ENGINEER P.E. No. 78646
CHECKED BY: DS	

TSALA APOPKA
 GOLF COURSE STRUCTURE MODIFICATION
GENERAL NOTES
 PROJECT NO. 18-0790
 SHEET NO.: C-04

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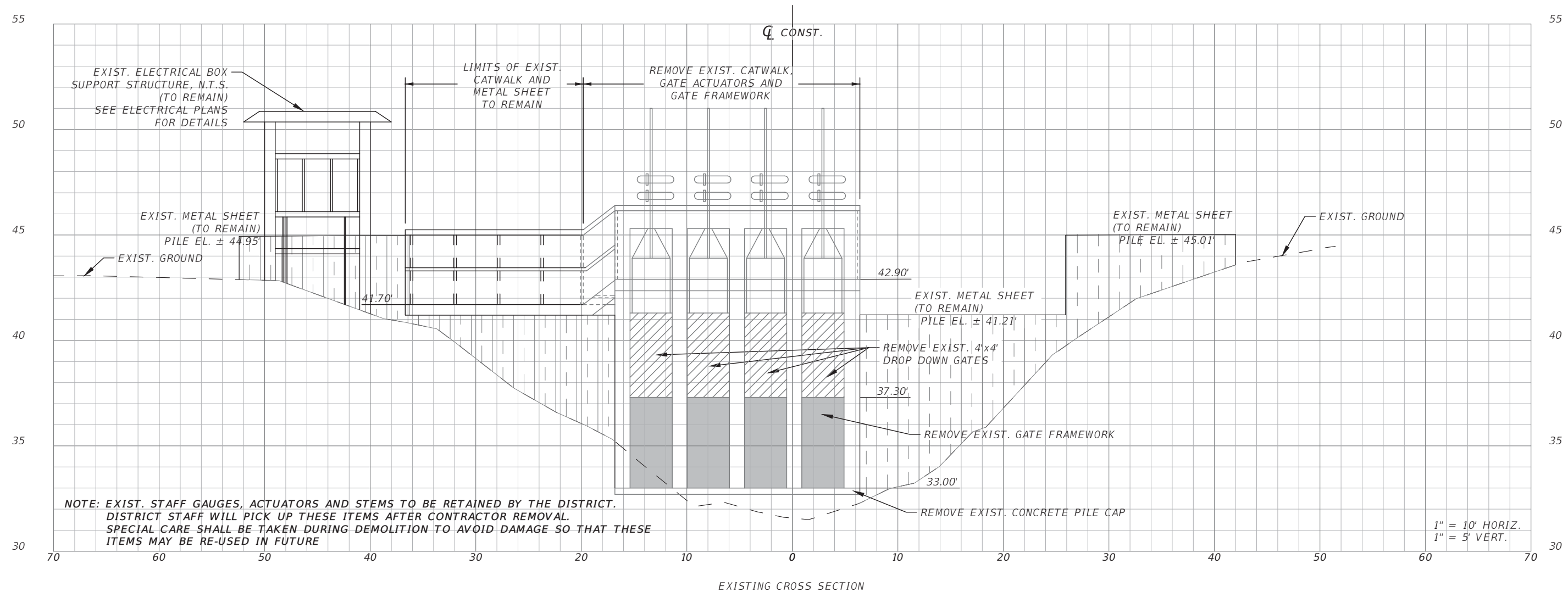


4			<p>AIM Engineering & Surveying, Inc. CIVIL ENGINEERING * LAND SURVEYING * S.U.E. * TRANSPORTATION * UTILITIES * PROJECT MANAGEMENT * CONSTRUCTION ENGINEERING & MANAGEMENT 2161 FOWLER ST. STE. 100 FORT MYERS, FL 33901 * PHONE: 239-332-4569 EMAIL: ENGINEERING@AIMENGR.COM * CERTIFICATE OF AUTHORIZATION No. 3114</p>	<p>SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT 2379 BROAD ST. BROOKSVILLE, FL. 34604-6899 PHONE: (352) 796-7211</p>	<p>DATE: MARCH 2019 DRAWN BY: BK CHECKED BY: DS</p>	<p>TSALA APOPKA GOLF COURSE STRUCTURE MODIFICATION EROSION CONTROL PLAN DANIEL W. SCHROEDER PROFESSIONAL ENGINEER P.E. No. 78646</p>	<p>PROJECT NO. 18-0790 SHEET NO. C-05</p>
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TSALA APOPKA GOLF COURSE STRUCTURE PHOTO (EXISTING CONDITIONS)



EXISTING CROSS SECTION

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NO	DATE	DESCRIPTION

AIM Engineering & Surveying, Inc.
 CIVIL ENGINEERING * LAND SURVEYING * S.U.E. * TRANSPORTATION * UTILITIES
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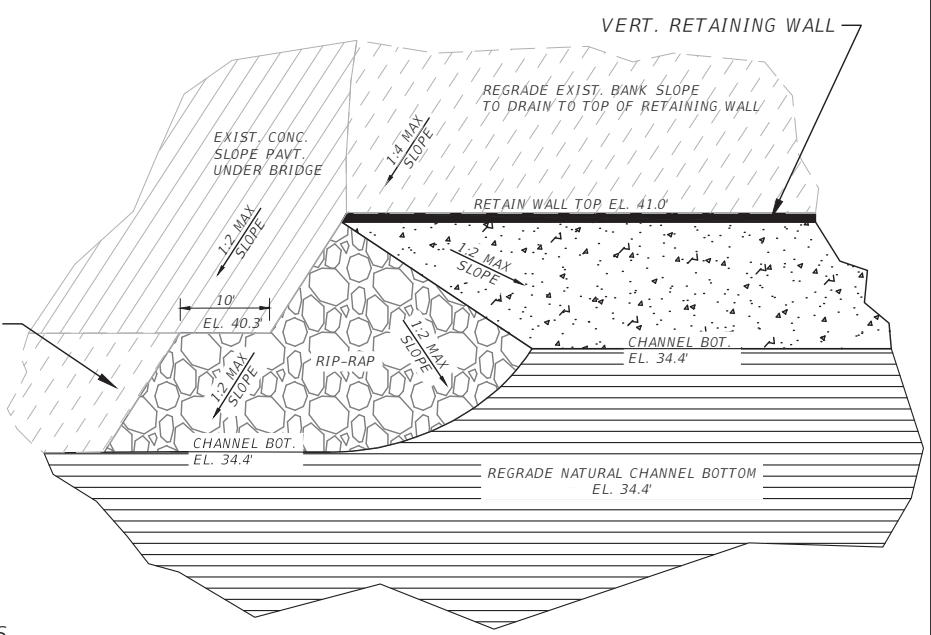
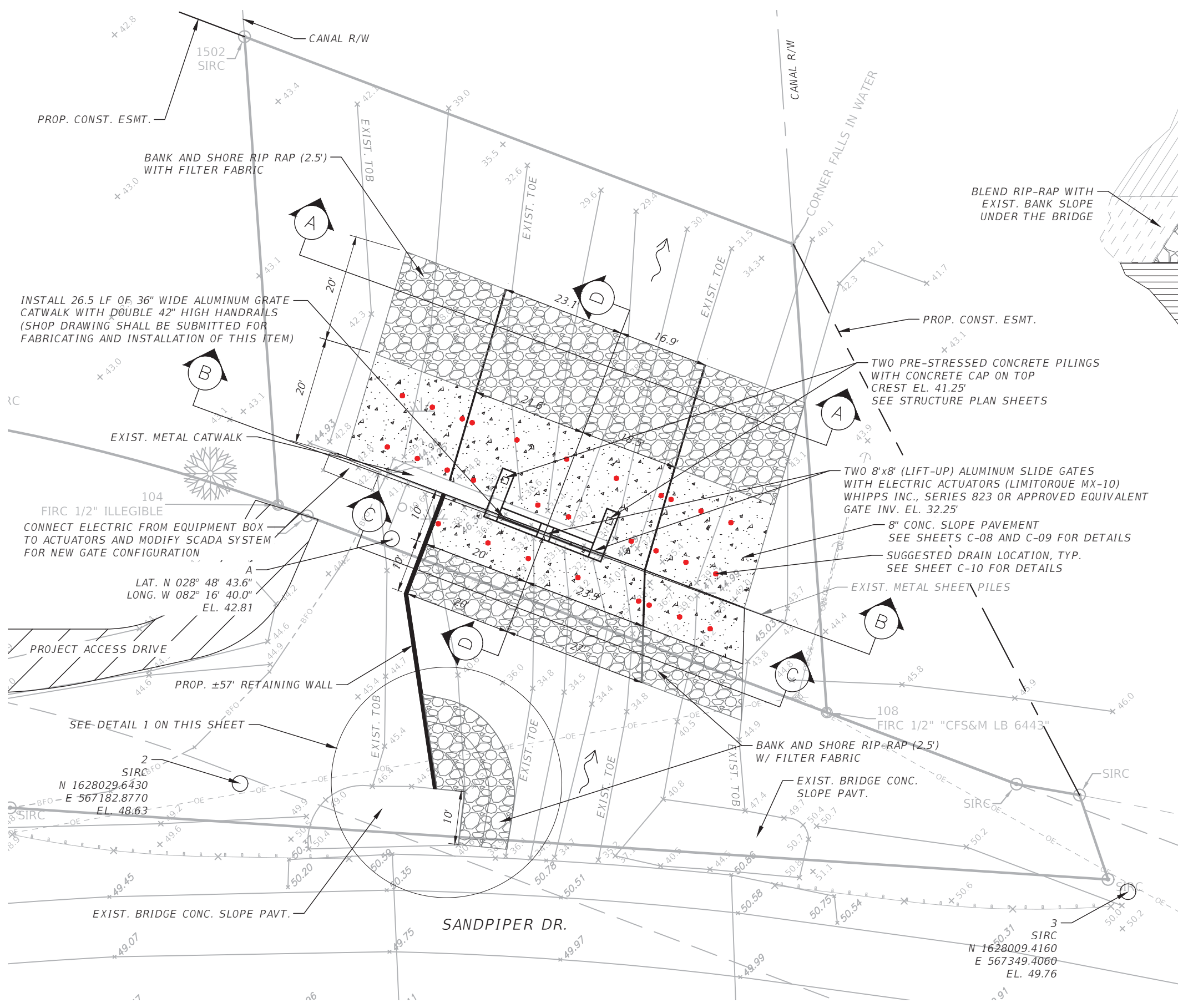
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 MANAGEMENT DISTRICT
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 DANIEL W. SCHROEDER
 PROFESSIONAL ENGINEER
 P.E. No. 78646

TSALA APOPKA
 GOLF COURSE STRUCTURE MODIFICATION
**EXIST. WEIR (PARTIAL)
 DEMOLITION PLAN**

PROJECT NO. 18-0790
 SHEET NO.: C-06

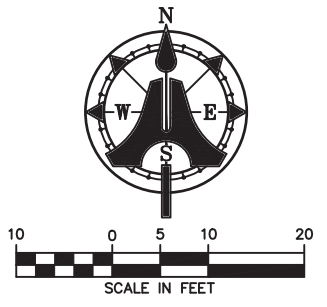
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DETAIL 1
NTS

THE ORIENTATION OF THIS DETAIL IS FROM THE PERSPECTIVE OF SOMEONE STANDING WITHIN THE CANAL INVERT FACING WEST.

- NOTES:**
1. ALL PROPOSED WORK MUST REMAIN WITHIN THE DISTRICT CANAL RIGHT OF WAY OR EASEMENT.
 2. MINIMUM DIMENSIONS HAVE BEEN PROVIDED. CONTRACTOR MAY PLACE LONGER PRE-STRESSED CONCRETE PILES AT HIS EXPENSE. WEIR CREST SHALL NOT BE MODIFIED.
 3. SEE STRUCTURAL SHEETS FOR STRUCTURAL DETAILS.
 4. A FLOW BYPASS SYSTEM IS NOT REQUIRED FOR THIS PROJECT AS A NEARBY STRUCTURE IS ABLE TO DIVERT FLOW.



- LEGEND**
- BANK AND SHORE RIP RAP (2.5')
 - CONCRETE SLOPE PAVT. (8.0")
 - EXIST. WATER LEVEL GAUGE

NO	DATE	DESCRIPTION
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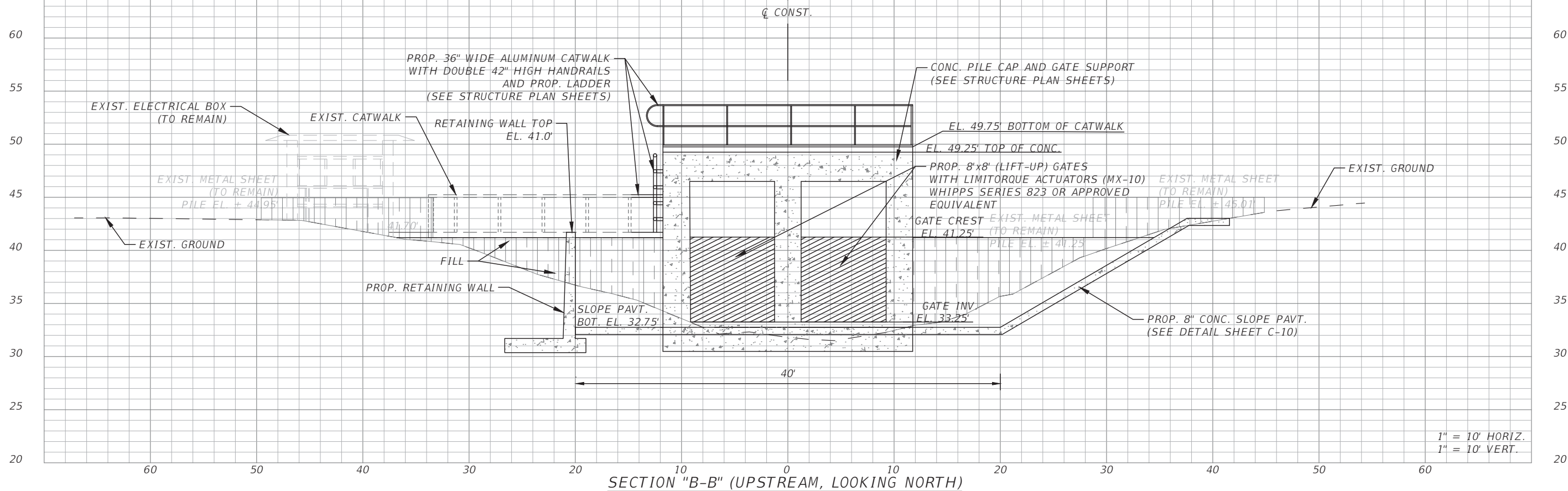
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SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
 2379 BROAD ST. BROOKSVILLE, FL. 34604-6899
 PHONE: (352) 796-7211

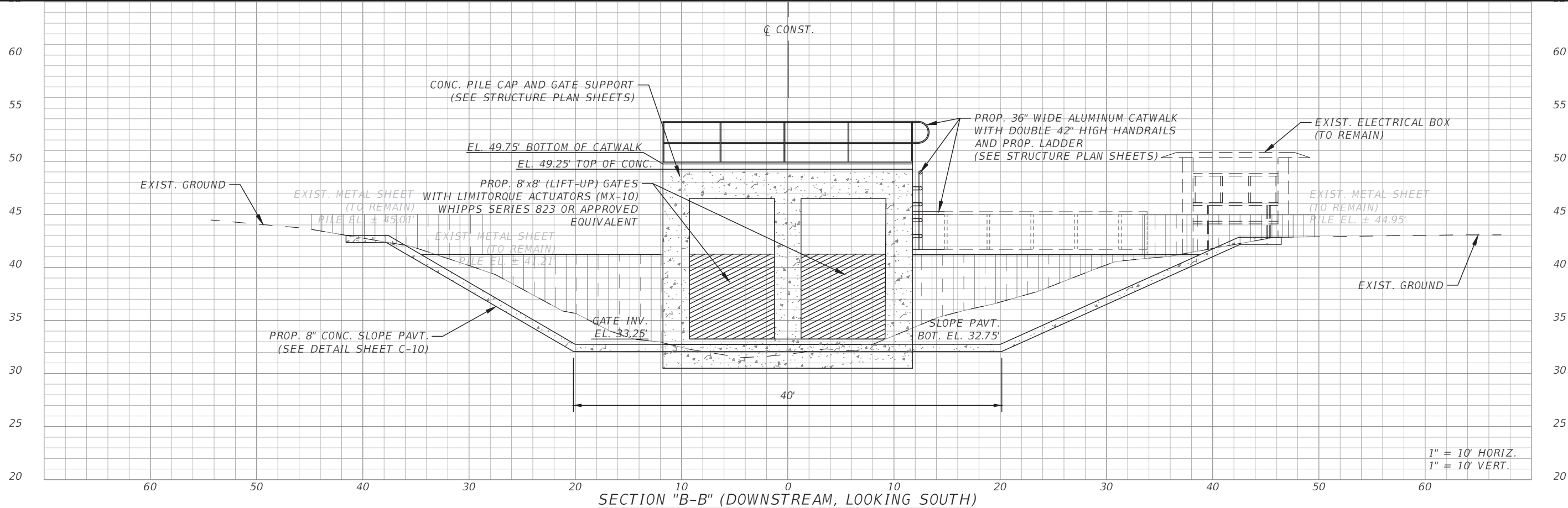
DATE: MARCH 2019
 DRAWN BY: BK
 CHECKED BY: DS
 DANIEL W. SCHROEDER
 PROFESSIONAL ENGINEER
 P.E. No. 78646

TSALA APOPKA GOLF COURSE STRUCTURE MODIFICATION
WEIR SITE PLAN
 PROJECT NO: 18-0790
 SHEET NO.: C-07

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SECTION "B-B" (UPSTREAM, LOOKING NORTH)



SECTION "B-B" (DOWNSTREAM, LOOKING SOUTH)

4.	.	
3.	.	
2.	.	
1.	.	
NO	DATE	DESCRIPTION



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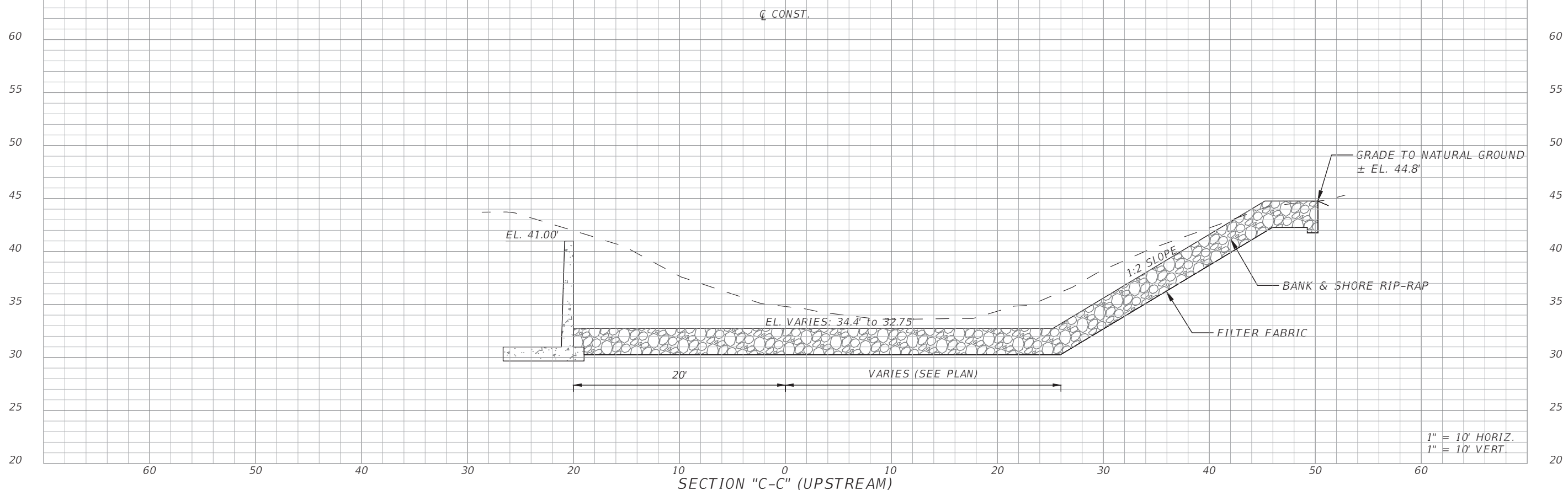
SOUTHWEST FLORIDA WATER
 MANAGEMENT DISTRICT
 2379 BROAD ST. BROOKSVILLE, FL. 34604-6899
 PHONE: (352) 796-7211

DATE: MARCH 2019
 DRAWN BY: BK
 CHECKED BY: DS
 DANIEL W. SCHROEDER
 PROFESSIONAL ENGINEER
 P.E. No. 78646

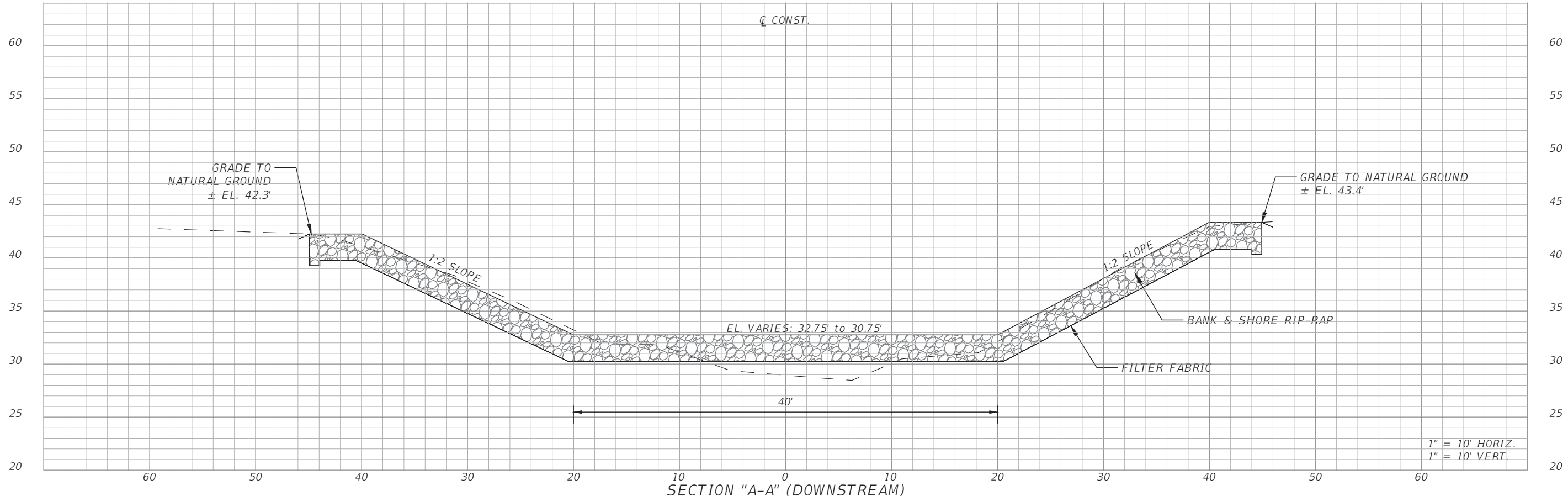
TSALA APOPKA
 GOLF COURSE STRUCTURE MODIFICATION
**WEIR PROPOSED CROSS
 SECTIONS**

PROJECT NO.
 18-0790
 SHEET NO.:
C-08

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SECTION "C-C" (UPSTREAM)



SECTION "A-A" (DOWNSTREAM)

4.	.
3.	.
2.	.
1.	.
NO	DATE DESCRIPTION

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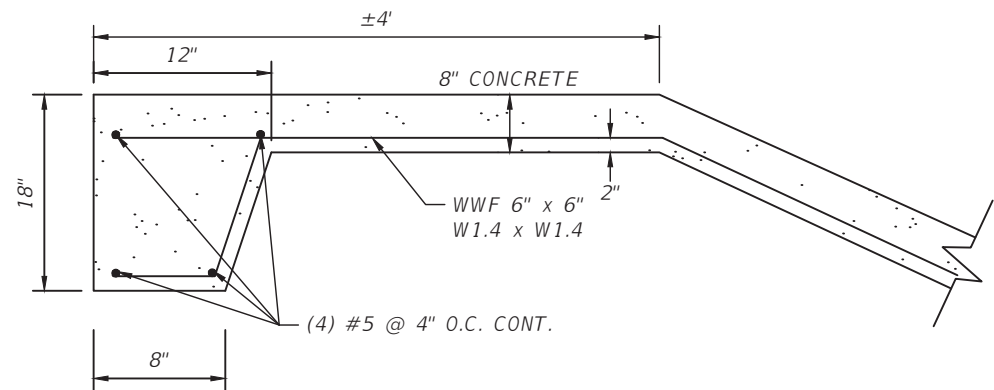
SOUTHWEST FLORIDA WATER
 MANAGEMENT DISTRICT
 2379 BROAD ST. BROOKSVILLE, FL. 34604-6899
 PHONE: (352) 796-7211

DATE: MARCH 2019
 DRAWN BY: BK
 CHECKED BY: DS
 DANIEL W. SCHROEDER
 PROFESSIONAL ENGINEER
 P.E. No. 78646

TSALA APOPKA
 GOLF COURSE STRUCTURE MODIFICATION
WEIR PROPOSED CROSS SECTIONS

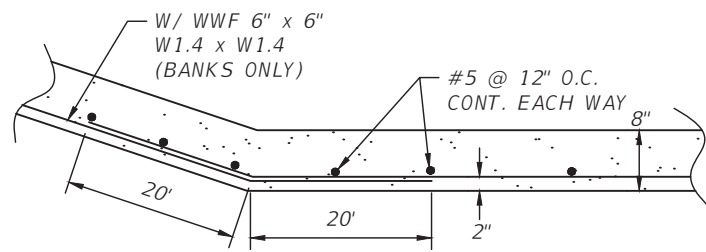
PROJECT NO.
 18-0790
 SHEET NO.:
 C-09

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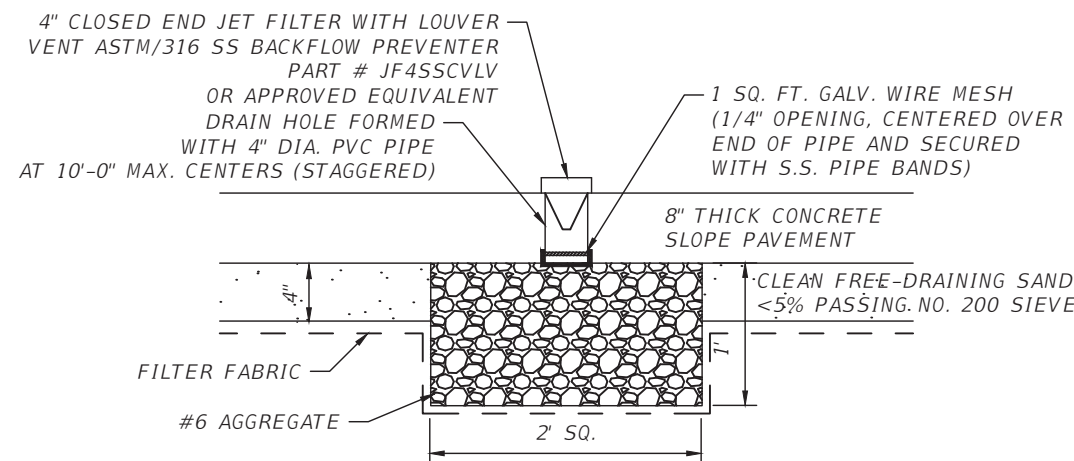
CANAL BANK ANCHOR DETAIL

N.T.S.



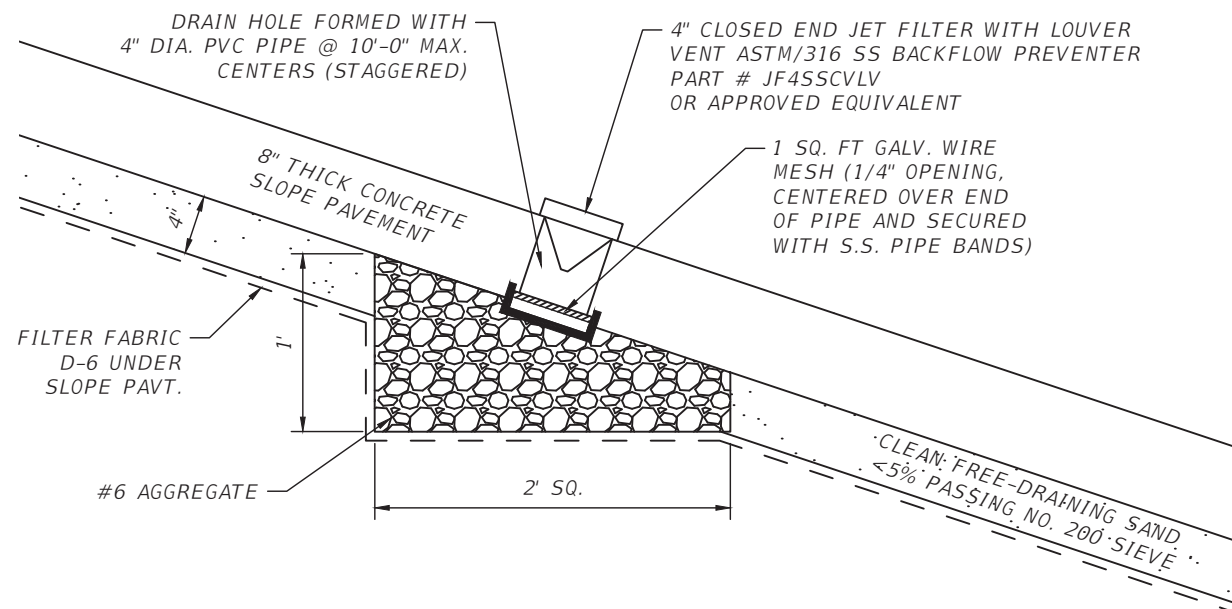
SLOPE PAVEMENT REINFORCEMENT

N.T.S.



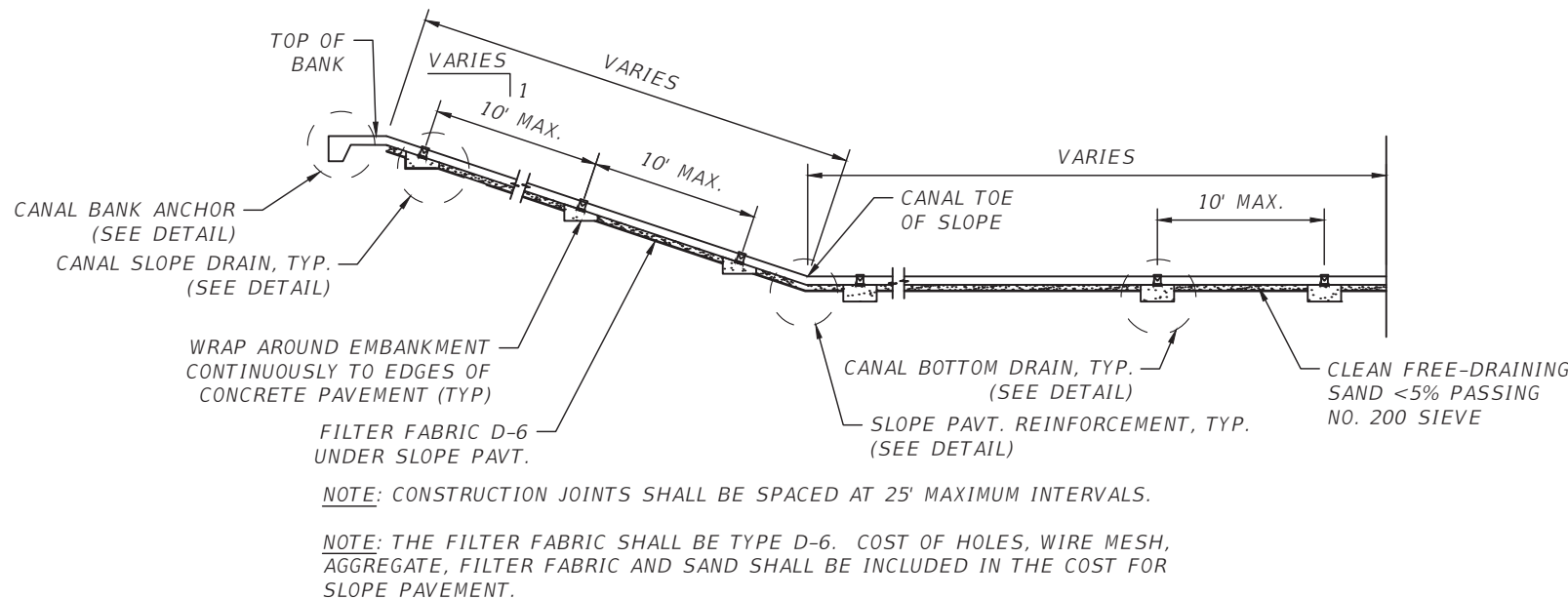
DRAIN DETAIL - CANAL BOTTOM

N.T.S.



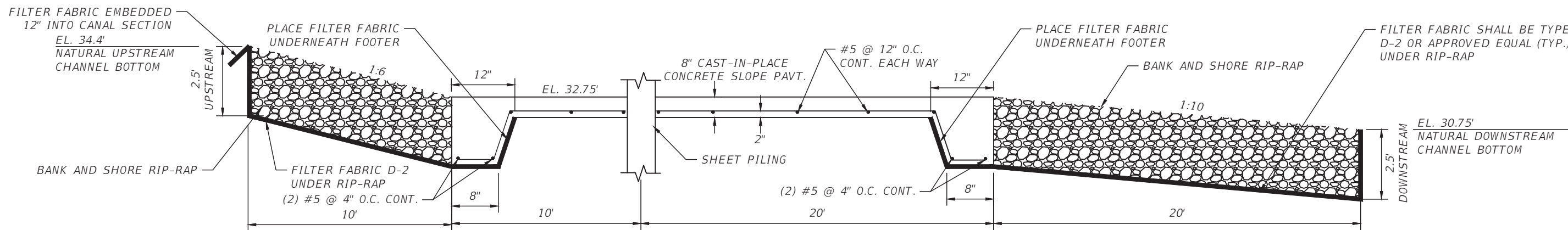
DRAIN DETAIL - CANAL SLOPE

N.T.S.



SLOPE PAVEMENT DETAIL

N.T.S.



SECTION "D-D" CANAL STABILIZATION

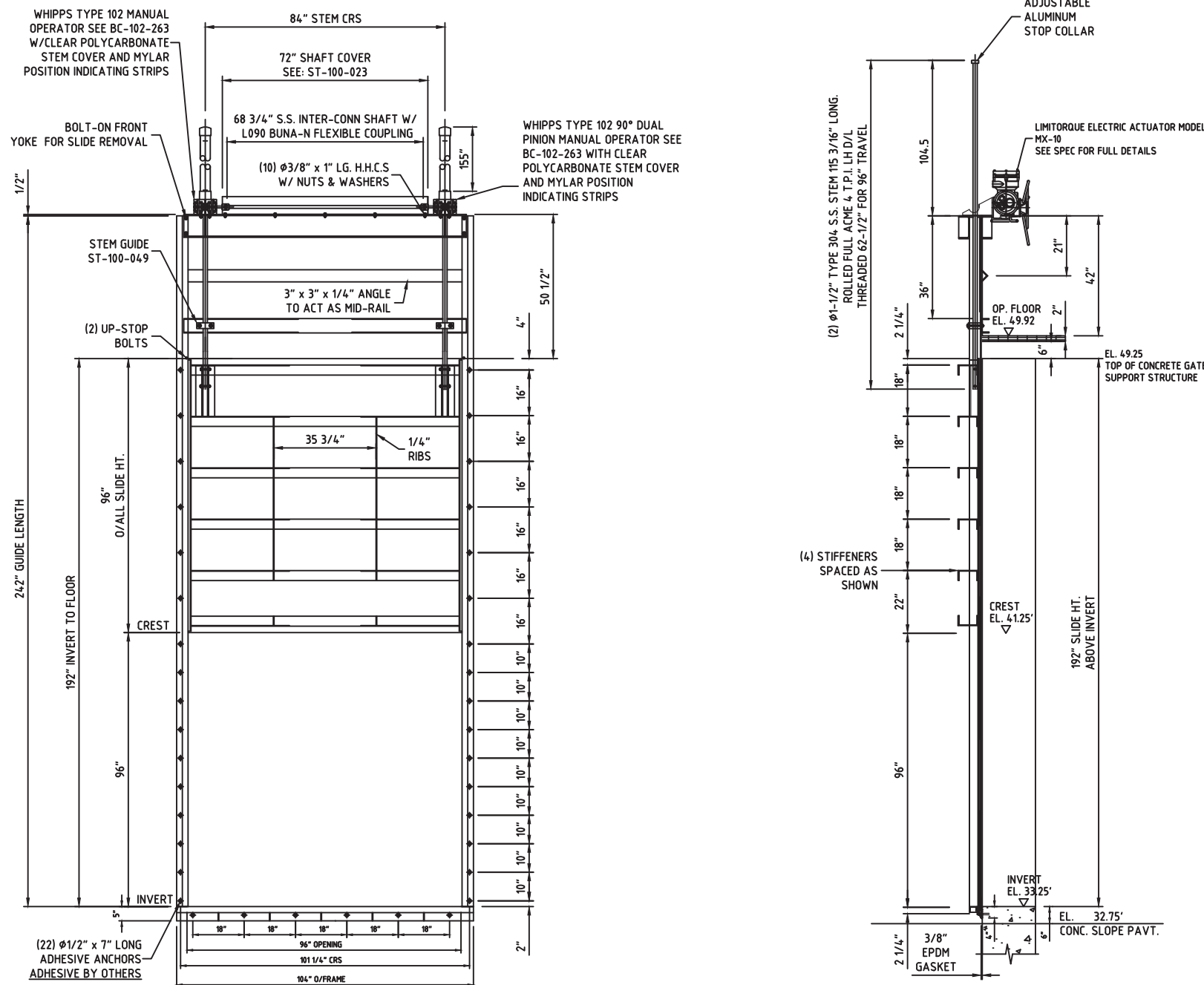
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4.		<p>AIM Engineering & Surveying, Inc. CIVIL ENGINEERING * LAND SURVEYING * S.U.E. * TRANSPORTATION * UTILITIES * PROJECT MANAGEMENT * CONSTRUCTION ENGINEERING & MANAGEMENT 2161 FOWLER ST. STE. 100 FORT MYERS, FL 33901 * PHONE: 239-332-4569 EMAIL: ENGINEERING@AIMENGR.COM * CERTIFICATE OF AUTHORIZATION No. 3114</p>	<p>SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT 2379 BROAD ST. BROOKSVILLE, FL. 34604-6899 PHONE: (352) 796-7211</p>	DATE:	MARCH 2019	<p>TSALA APOPKA GOLF COURSE STRUCTURE MODIFICATION SLOPE PAVEMENT DETAILS</p>	PROJECT NO.	18-0790
3.	DRAWN BY:			BK	<p>DANIEL W. SCHROEDER PROFESSIONAL ENGINEER P.E. No. 78646</p>		SHEET NO.:	C-10
2.	CHECKED BY:			DS				
1.								
NO	DATE	DESCRIPTION						

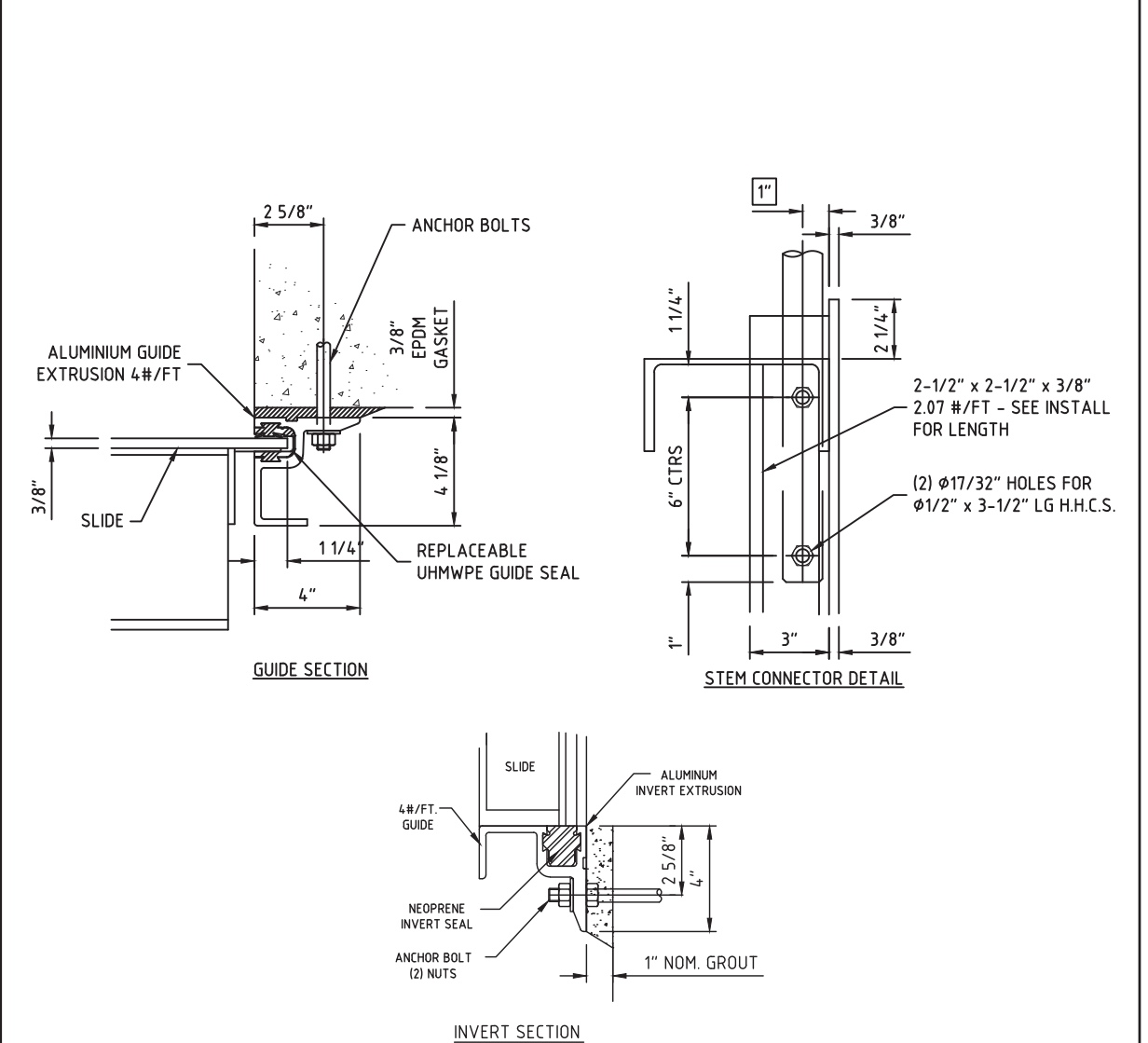
P:\JOBS-Active\18-0790\Cadd\Roadway\C-10 Slope Pavement Detail.s.dwg 4/16/2019 9:29 AM Beata Kobeszko

96"x96" ALUMINUM GATE GENERAL DETAILS (BOTTOM-UP OPENING) OR APPROVED EQUIVALENT

NOTE: CONTRACTOR TO SUBMIT SHOP DRAWINGS.



**SERIES 823 WEIR GATE (96"x96" ALUMINUM BOTTOM-UP OPENING)
OR APPROVED EQUIVALENT**



**SERIES 823 WEIR GATE (SECTION DETAILS)
OR APPROVED EQUIVALENT**

4.		
3.		
2.		
1.		
NO	DATE	DESCRIPTION

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SOUTHWEST FLORIDA WATER
MANAGEMENT DISTRICT

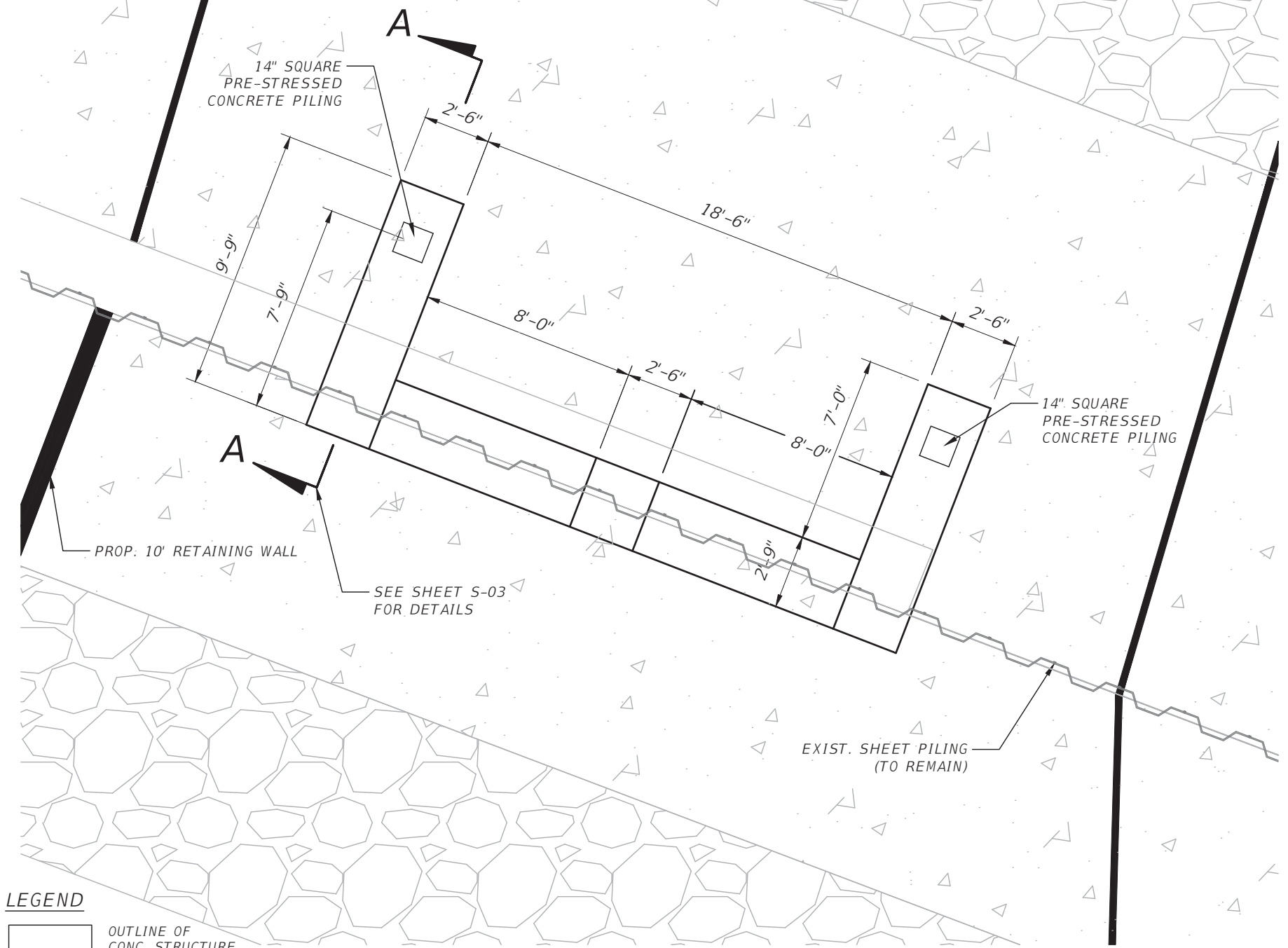
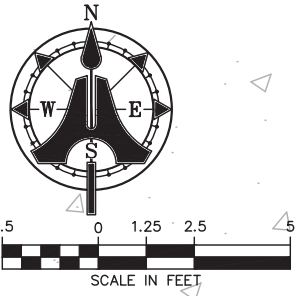
2379 BROAD ST. BROOKSVILLE, FL. 34604-6899
PHONE: (352) 796-7211

DATE:	MARCH 2019
DRAWN BY:	BK
CHECKED BY:	DS
	DANIEL W. SCHROEDER PROFESSIONAL ENGINEER P.E. No. 78646

TSALA APOPKA
GOLF COURSE STRUCTURE MODIFICATION

SLIDE GATE DETAIL

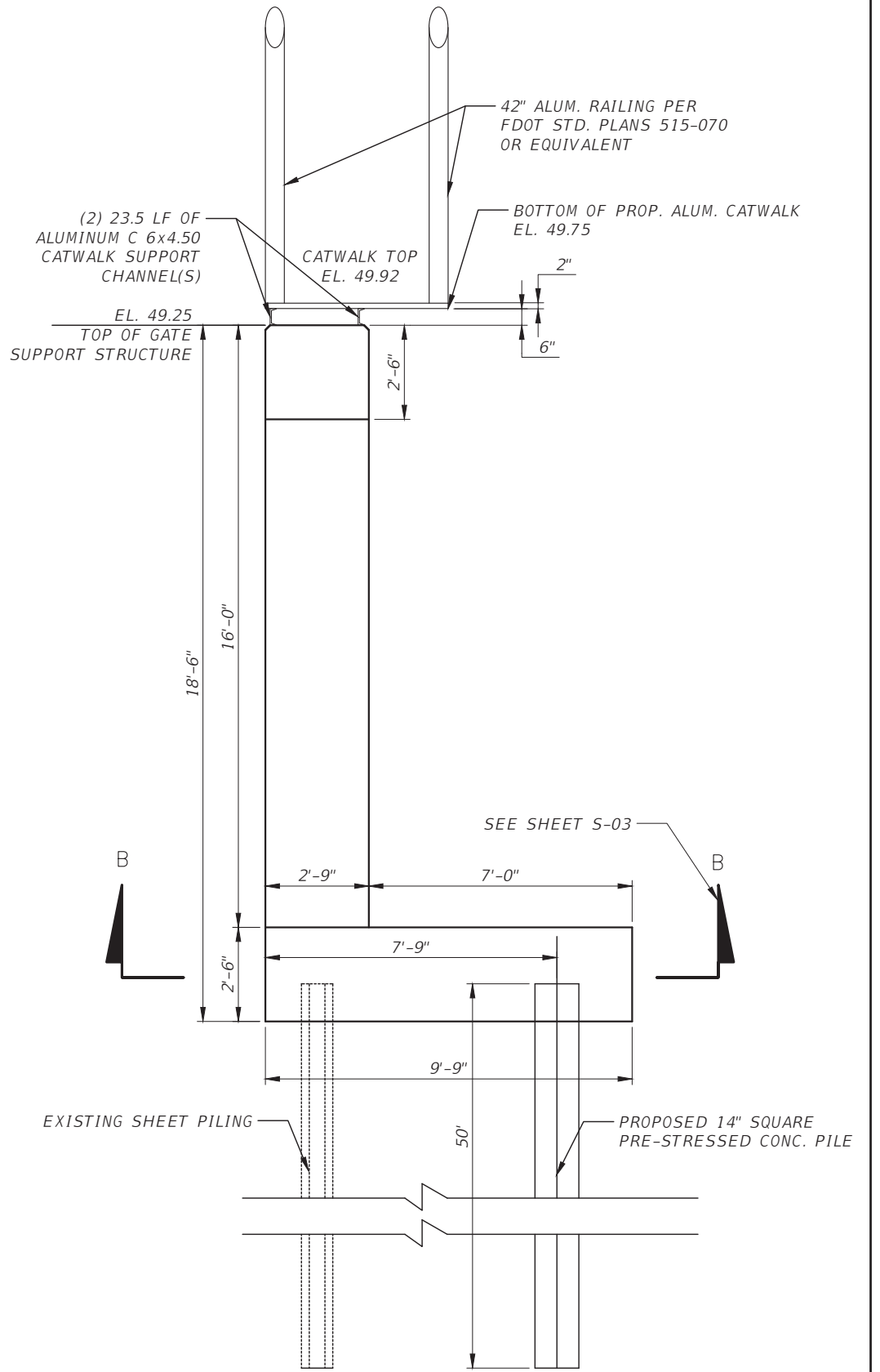
PROJECT NO.	18-0790
SHEET NO.:	C-11



LEGEND

	OUTLINE OF CONC. STRUCTURE
	BANK AND SHORE RIP RAP
	CONCRETE SLOPE PAVT.

PILE CAP PLAN



**SECTION A-A
NTS**

4	.	.
3	.	.
2	.	.
1	.	.
NO	DATE	DESCRIPTION

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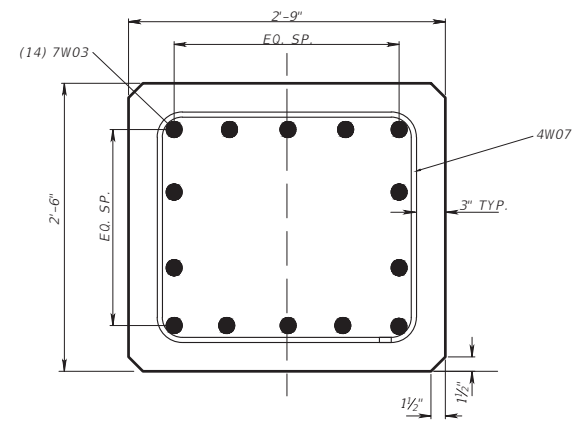
SOUTHWEST FLORIDA WATER
 MANAGEMENT DISTRICT
 2379 BROAD ST. BROOKSVILLE, FL. 34604-6899
 PHONE: (352) 796-7211

DATE: MARCH 2019
 DRAWN BY: JT
 CHECKED BY: RP
 JAMES TOOMBS
 PROFESSIONAL ENGINEER
 P.E. No. 41390

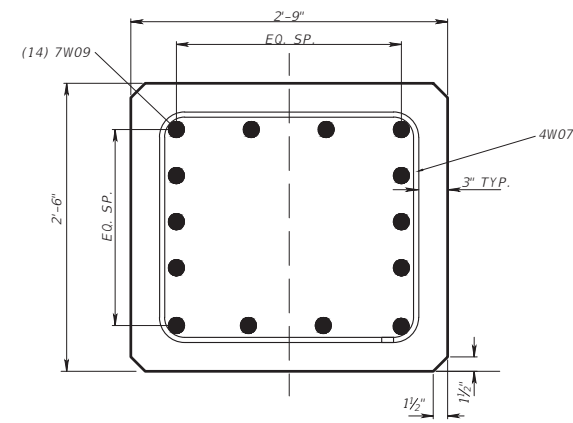
TSALA APOPKA
 GOLF COURSE STRUCTURE MODIFICATION
PLAN SHEET / SECTION

PROJECT NO. 18-0790
 SHEET NO. S-01

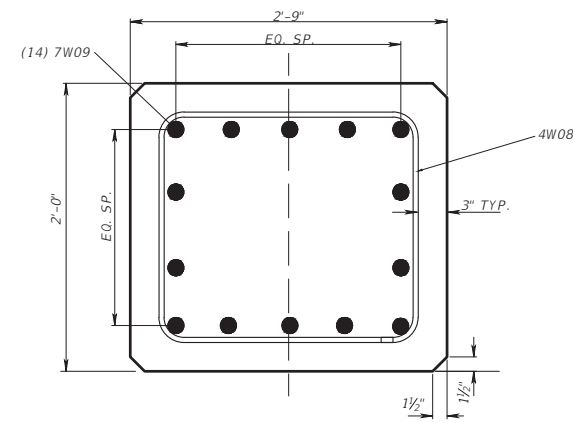
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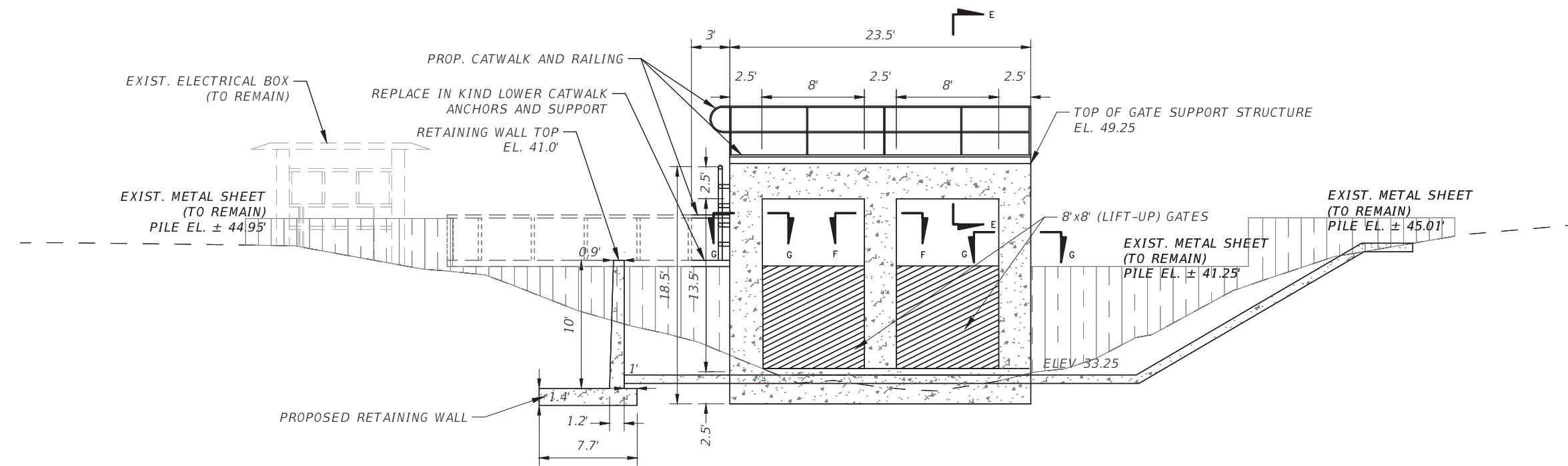
SECTION E-E
NTS



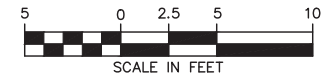
SECTION F-F
NTS



SECTION G-G
NTS



ELEVATION
(LOOKING NORTH)



LEGEND



NOTE: CUTTING/WELDING OF EXIST. SHEET PILING MAY BE REQUIRED FOR INCORPORATION OF GATE SUPPORT STRUCTURE.

4		
3		
2		
1		
NO	DATE	DESCRIPTION



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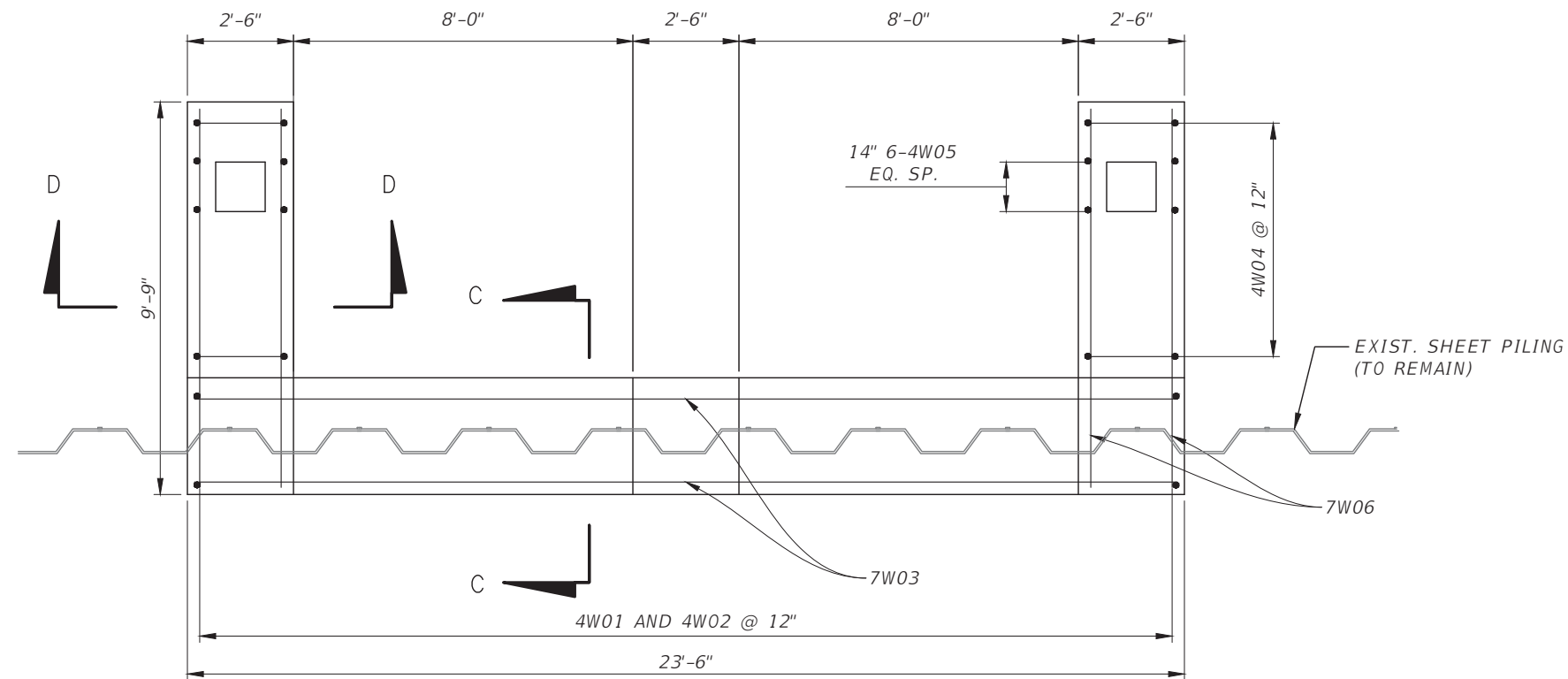
DATE:
MARCH 2019
 DRAWN BY:
JT
 CHECKED BY:
RP

JAMES TOOMBS
 PROFESSIONAL ENGINEER
 P.E. No. 41390

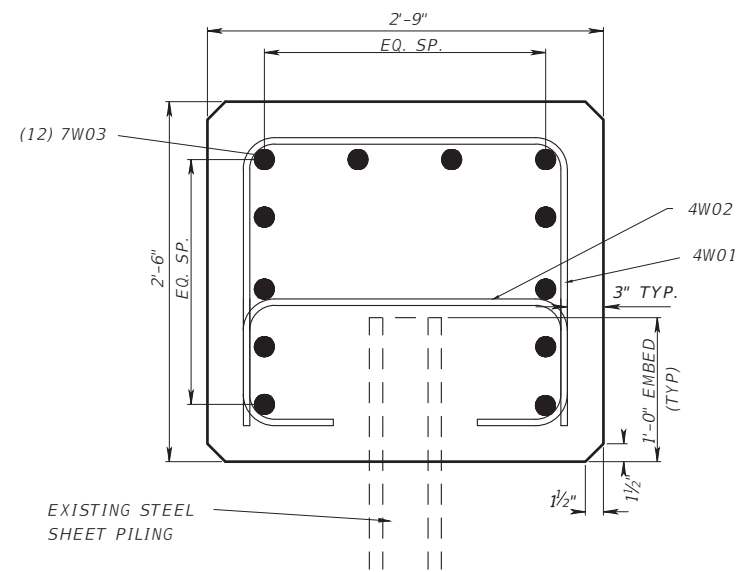
TSALA APOPKA
 GOLF COURSE STRUCTURE MODIFICATION
ELEVATION / SECTIONS

PROJECT NO.
18-0790
 SHEET NO.:
S-02

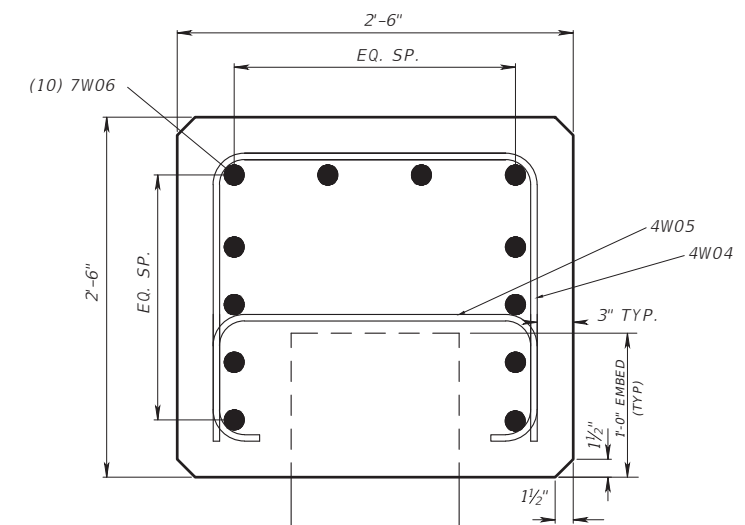
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SECTION B-B
NTS



SECTION C-C
NTS



SECTION D-D
NTS

NO	DATE	DESCRIPTION
4	.	.
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 PHONE: (352) 796-7211

DATE:
MARCH 2019
 DRAWN BY:
JT
 CHECKED BY:
RP

JAMES TOOMBS
 PROFESSIONAL ENGINEER
 P.E. No. 41390

TSALA APOPKA
 GOLF COURSE STRUCTURE MODIFICATION
SECTIONS

PROJECT NO.
18-0790
 SHEET NO.:
S-03

C-I-P CANTILEVER RETAINING WALLS DATA TABLES

Wall No.	Begin		End		Height		Wall Length		D	W	L _{foot}		L _{toe}		Slope Bkwall	D _{soil}		L _{key}	D _{key}	V _{step}	Wall Cover	FtgCov (typ.)	FtgCov (bot.)		
	Station	Offset	Station	Offset	Begin		End		ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	in.	in.	in.	in.	in.	in.	
					ft.	in.	ft.	in.																	
					10	0	10	0	57	0	16	10	6	6	1	0	32	1	6	0	0	12	2	3	4

Table Date 01-01-11

Wall No.	BILL OF REINFORCING STEEL																											
	Bars J											Bars K										Bars M						
	Size	No.	Spacing	A				B		Average Total Length	Size	No.	Spacing	A				B		Average Total Length	Size	No.	A		B		Total Length	
Begin				End		ft.	in.	ft.	in.					ft.	in.	ft.	in.	ft.	in.				ft.	in.	ft.	in.	ft.	in.
6	86	8	3	0	3	0	1	9.25	4	9.25	0	0	0	0	0	0	0	0	0	0	4	58	2	4	5	1	7	5

Table Date 01-01-11

Wall No.	BILL OF REINFORCING STEEL																											
	Bars H					Bars G1						Bars R				Bars Z				Bars A								
	Size	No.	Spacing	Length		Size	No.	Spacing	No. of Lap Splices	Total Length		Size	No.	Length		Size	No.	Spacing	Length		Size	No.	Length				Average Length	
in.				ft.	in.					ft.	in.			ft.	in.				ft.	in.			ft.	in.	ft.	in.		ft.
5	58	12	6	0	4	16	12	0	56	6	0	0	2	0	0	0	0	0	0	0	4	86	9	10	9	10	9	10

Table Date 01-01-11

Wall No.	BILL OF REINFORCING STEEL															
	Bars F						Bars G2					Bars D				
	Size	No.	Spacing	Length			Average Length	Size	No.	Length		Size	No.	Length		
Begin				End		ft.				in.	ft.			in.	ft.	in.
4	58	12	9	10	9	10	9	10	4	60	18	8	5	30	1	6

Table Date 01-01-11

Total Wall Quantities

- 1: Concrete
 - Footing - 18.3 CY
 - Wall - 20.9 CY
 - Total - 39.2 CY
- 2: Steel
 - Rebar - 3,611 lbs

NOTES:

1. Work these Data Tables with Index 400-010.
2. Concrete Class IV (f'c = 5,500 psi for retaining wall) with silica fume, metakaolin or ultrafine fly ash.
3. Wall exposed face surface texture shall be Type "A", Smooth.
4. Environmental Classification is N/A.
5. Minimum Soil Nominal Bearing Resistance = 2,000 psf.
6. A value of '0' for Slope Backwall indicates front and back of wall are parallel.
7. D_{soil} is typical depth of soil and is used for design purposes only. See Control Drawings for actual ground line.
8. Non-zero values for L_{key} and D_{key} indicate the existence of a shear key.
9. A non-zero value for V_{step} indicates the existence of a footing step, see Control Drawings for location.
10. Bars J, K, A and F vary uniformly between begin and end wall heights as indicated by begin and end dimensions.
11. The number of G1 Bars includes 2 additional bars when a shear key is specified.
12. For walls with variable begin/end height, Bars G2 shall be fanned such that they are evenly spaced throughout length of wall.

4	.	.
3	.	.
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1	.	.
NO	DATE	DESCRIPTION



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SOUTHWEST FLORIDA WATER
 MANAGEMENT DISTRICT
 2379 BROAD ST. BROOKSVILLE, FL. 34604-6899
 PHONE: (352) 796-7211

DATE: MARCH 2019	JAMES TOOMBS PROFESSIONAL ENGINEER P.E. No. 41390
DRAWN BY: JT	
CHECKED BY: RP	

TSALA APOPKA
 GOLF COURSE STRUCTURE MODIFICATION
RETAINING WALL DATA
 TABLES

PROJECT NO. 18-0790
SHEET NO.: S-04

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DESIGN METHODOLOGY:

LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD.

DESIGN LOADING:

1. DEAD LOAD:
 - A) REINFORCED CONCRETE: 150 PCF
2. LIVE LOAD:
 - A) MAINTENANCE WALKWAY: 40 PSF
3. WIND LOAD:
 - A) RISK CATEGORY II
 - B) EXPOSURE CATEGORY B
 - C) BROOKSVILLE, FL
 - D) HEIGHT OF STRUCTURE ABOVE GROUND: 20 FT
 - E) WIND PRESSURE: 30 PSF

VERTICAL DATUM:

ELEVATIONS ARE ACCORDING TO NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.

PLAN DIMENSIONS:

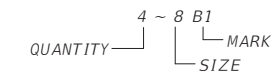
1. ALL DIMENSIONS IN THESE PLANS ARE MEASURED IN FEET AND INCHES EITHER HORIZONTALLY OR VERTICALLY UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS ARE GIVEN FOR A MEAN TEMPERATURE OF 70°F.
3. A MINIMUM OF 3" CLEARANCE FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.
4. ABBREVIATIONS:
 - E.F. - EACH FACE
 - O.H. - OPPOSITE HAND

CONCRETE:

1. CONCRETE: $f'_c=5,000$ PSI COMPRESSIVE STRENGTH AT 28 DAYS, FOR GATE SUPPORT STRUCTURE, FDOT SECTION 400.
2. IT WAS ASSUMED THAT THE ENVIRONMENT IS CLASSIFIED AS SLIGHTLY AGGRESSIVE. NO DOCUMENTS OF SPECIFIC WATER TESTS WERE AVAILABLE TO CLASSIFY THE ENVIRONMENT AS MODERATE OR EXTREMELY AGGRESSIVE.
3. REFERENCE THE GEOTECHNICAL ENGINEERING REPORT RECOMMENDATIONS REGARDING GROUND WATER CONDITIONS, SITE CONDITIONS AND SUBSURFACE EXPLORATION.
4. ALL EXPOSED EDGES AND CORNERS OF CONCRETE SHALL BE CHAMFERED 1 1/2" UNLESS OTHERWISE NOTED.

REINFORCING STEEL:

1. ALL REINFORCING STEEL SHALL BE GRADE 60 CARBON STEEL PER SPECIFICATION SECTION 931.
2. ALL DIMENSIONS PERTAINING TO LOCATION OF REINFORCEMENTS ARE TO CENTERLINE OF BARS EXCEPT WHERE THE CLEAR DIMENSION IS SHOWN TO FACE OF CONCRETE.
3. ALL HOOKS AND BENDS, UNLESS OTHERWISE NOTED IN THE PLANS, SHALL BE IN ACCORDANCE WITH THE FDOT STANDARD PLANS INDEX 415-001, "BAR BENDING DETAILS (STEEL)."
4. ALL LAP SPLICES, UNLESS OTHERWISE NOTED IN PLANS, SHALL BE IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
5. REINFORCEMENT DETAIL DIMENSIONS ARE OUT-TO-OUT OF BARS.
6. TYPICAL REINFORCING BARS ARE DESIGNATED AS:



BILL OF REINFORCING:

MARK	LENGTH	NO	TYPE	STY	B			C			D			E			F			G			H			I			J			K			N	Φ
					FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR		
4	W01	6'-3"	24	11			2'-3"		2'-0"		2'-0"																									
4	W02	4'-6"	24	5			0'-9"		2'-3"		0'-4.5"		0'-4.5"																							
7	W03	23'-0"	26	1			23'-0"																													
4	W04	6'-0"	14	11			2'-0"		2'-0"		2'-0"																									
4	W05	4'-3"	12	5			0'-9"		2'-0"		0'-4"		0'-4"																							
7	W06	9'-3"	20	1			9'-3"																													
4	W07	9'-3"	37	4			2'-0"		2'-3"		0'-4.5"		0'-4.5"																							
4	W08	8'-3"	27	4			1'-6"		2'-3"		0'-4.5"		0'-4.5"																							
7	W09	18'-0"	42	1			18'-0"																													
7	W10	6'-0"	64	10			3'-0"		3'-0"																											

4	.	.
3	.	.
2	.	.
1	.	.
NO	DATE	DESCRIPTION



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 EMAIL: ENGINEERING@AIMENGR.COM * CERTIFICATE OF AUTHORIZATION No. 3114

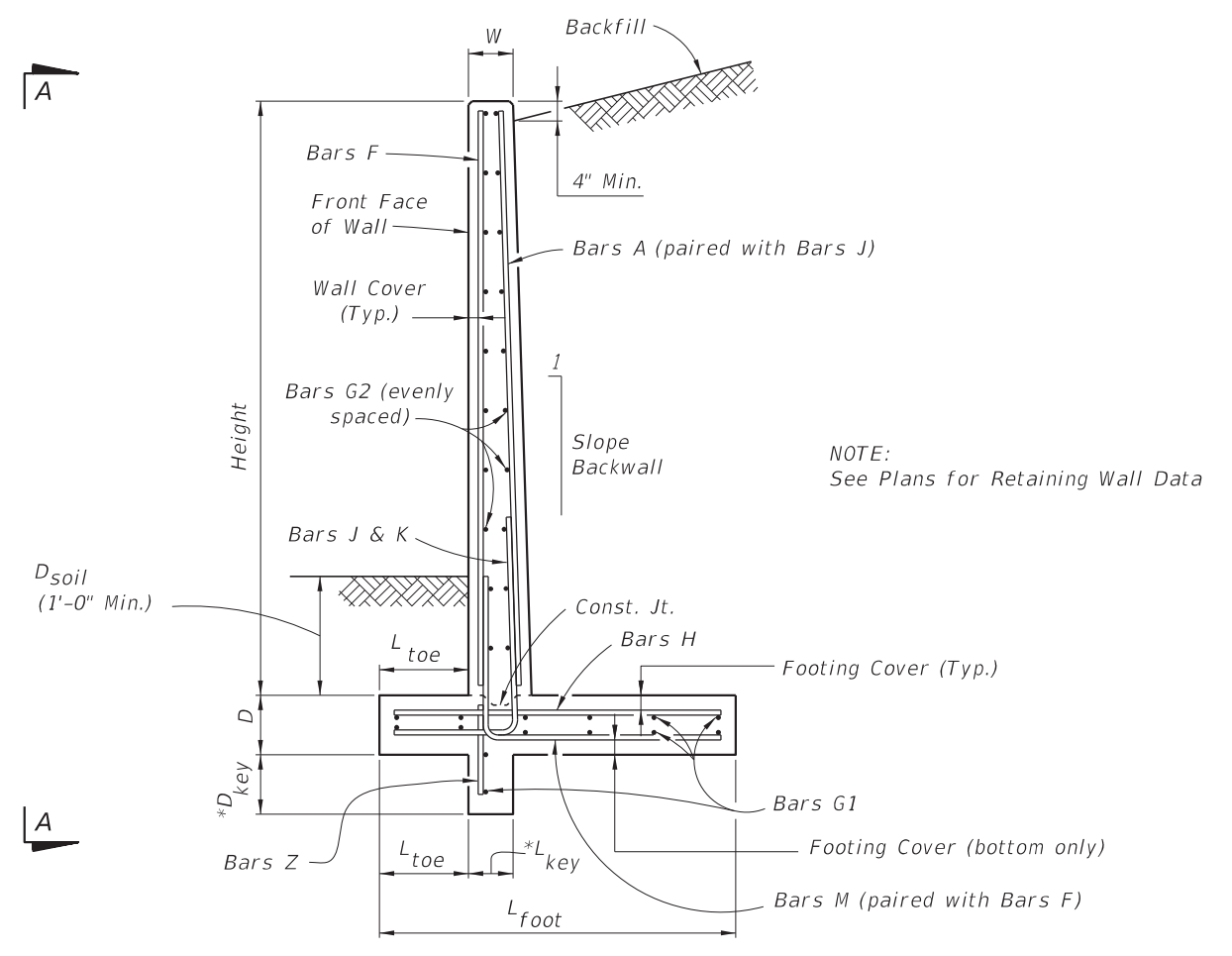
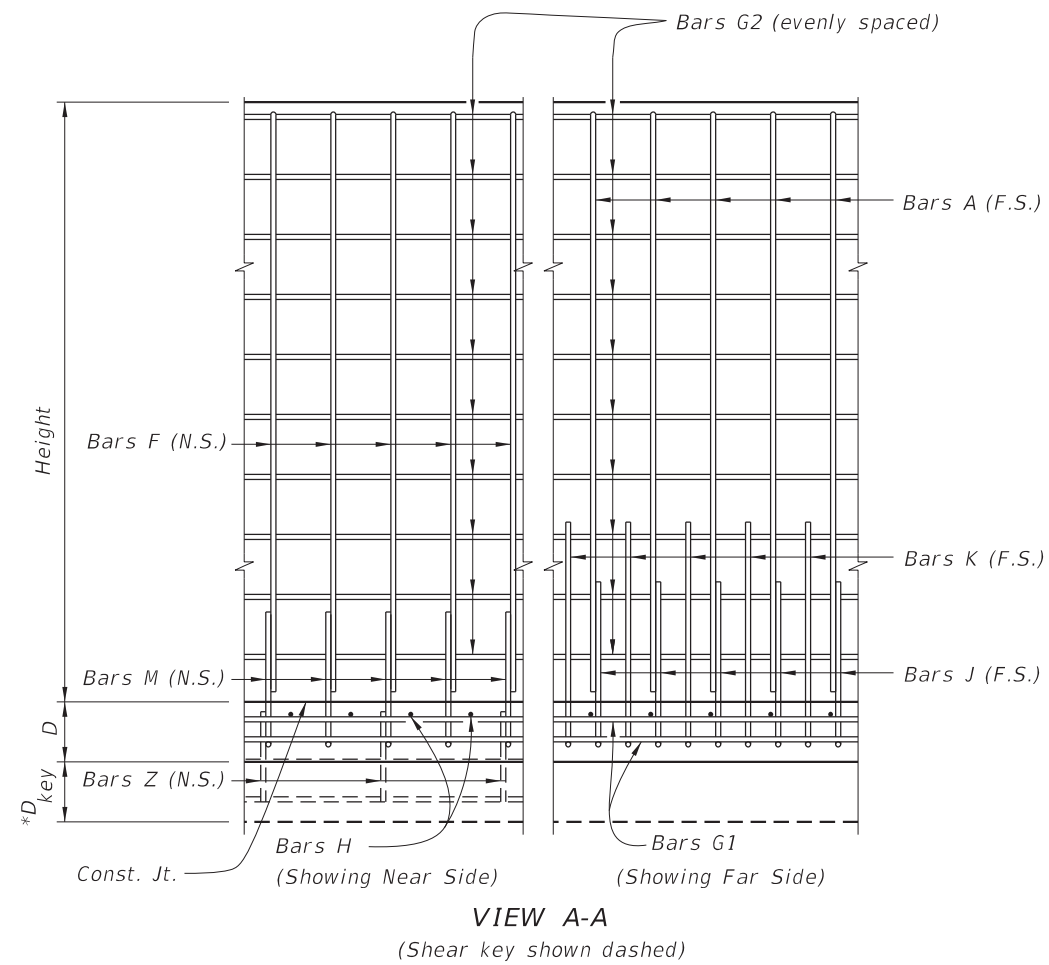
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
 2379 BROAD ST. BROOKSVILLE, FL. 34604-6899
 PHONE: (352) 796-7211

DATE:	MARCH 2019
DRAWN BY:	JT
CHECKED BY:	RP
	JAMES TOOMBS PROFESSIONAL ENGINEER P.E. No. 41390

TSALA APOPKA
 GOLF COURSE STRUCTURE MODIFICATION
GENERAL NOTES

PROJECT NO.	18-0790
SHEET NO.:	S-05

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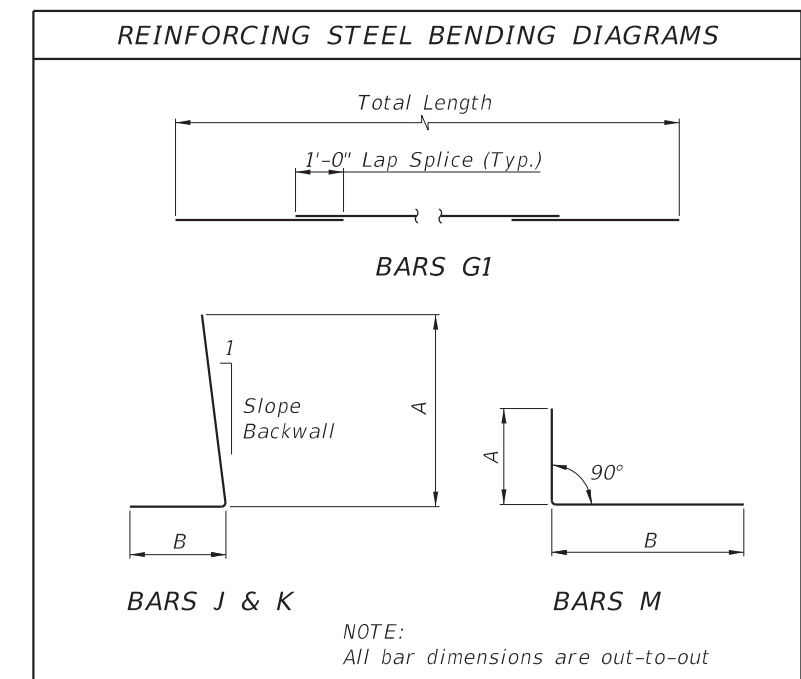
* Shear Key is required only when specified in the Plans.

TYPICAL SECTION

NOTES

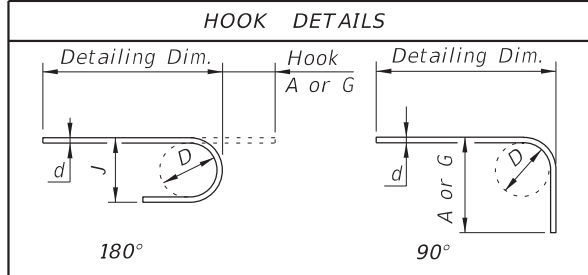
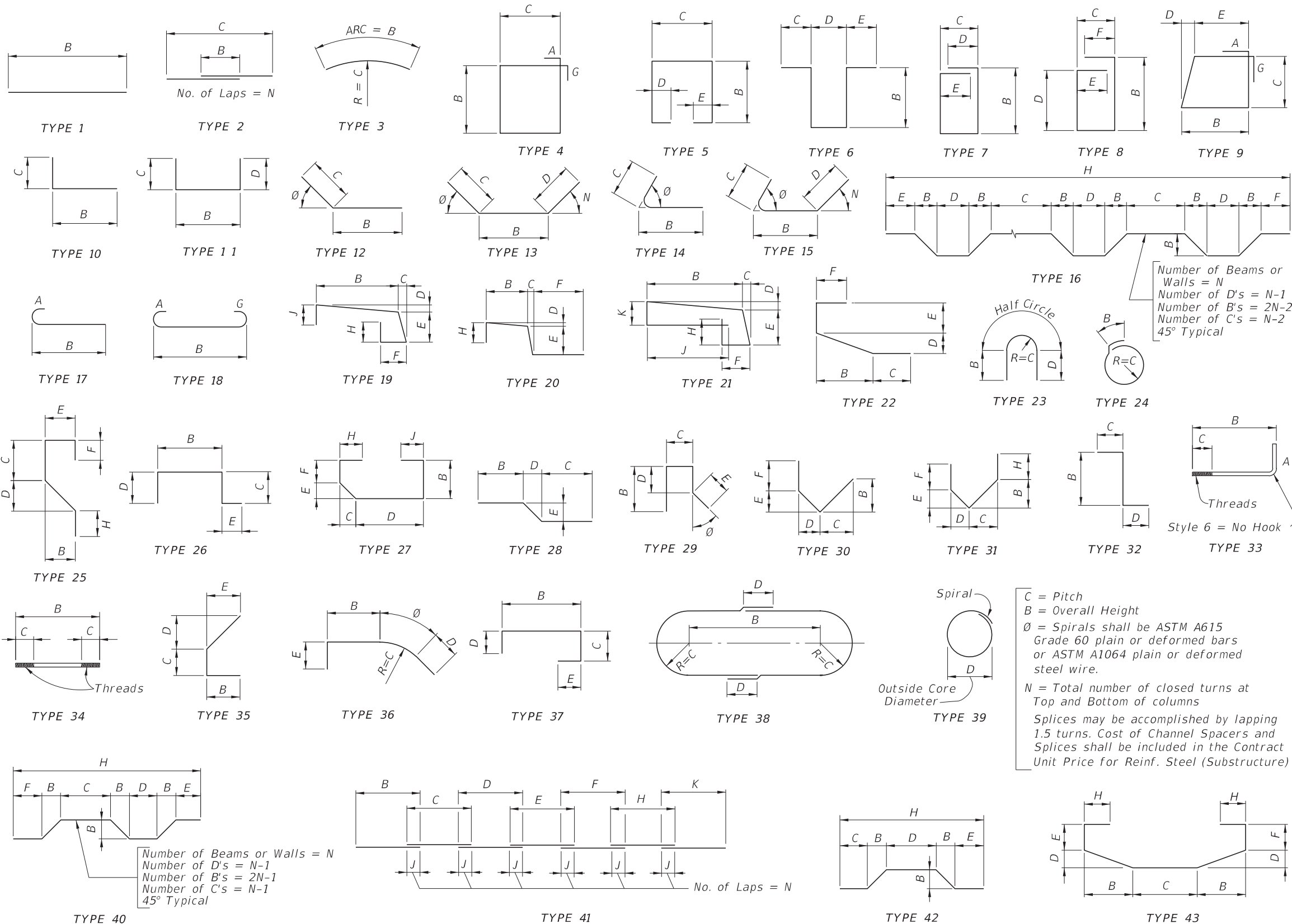
TRAFFIC RAILINGS OR PARAPETS:
If there is a Traffic Railing or Parapet on the wall, align Wall Joints with V-Grooves, and Wall Expansion Joints with Barrier Open Joints.

FOUNDATION: Prepare the soil below the footing in accordance with the requirements for spread footings in Specification Section 455.

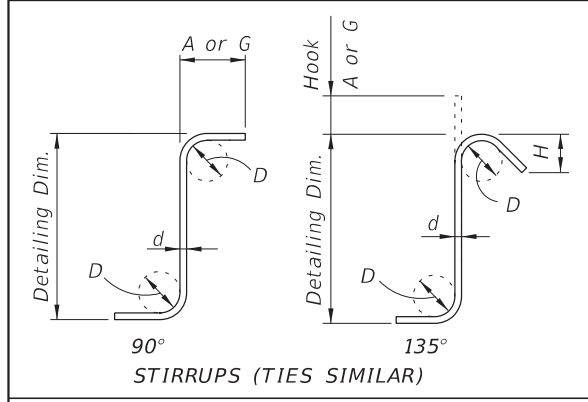


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LAST REVISION 11/01/17	REVISION	DESCRIPTION:	 FY 2019-20 STANDARD PLANS	CANTILEVER RETAINING WALL (C-I-P)	INDEX 400-010	SHEET 1 of 2 SHEET NO. S-06
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BAR SIZE	D	180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	1'-0"
#7	5 1/4"	10"	7"	1'-2"
#8	6"	11"	8"	1'-4"
#9	9 1/2"	1'-3"	11 3/4"	1'-7"
#10	10 3/4"	1'-5"	1'-1 1/4"	1'-10"
#11	12"	1'-7"	1'-2 3/4"	2'-0"
#14	18 1/4"	2'-3"	1'-9 3/4"	2'-7"
#18	24"	3'-0"	2'-4 1/2"	3'-5"
STYLE		1		3



STIRRUP & TIE HOOK DIMENSIONS				
BAR SIZE	D	90° HOOKS		135° HOOKS
		A or G	A or G	H *
#3	1 1/2"	4"	4"	2 1/2"
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	1'-0"	8"	4 1/2"
#7	5 1/4"	1'-2"	9"	5 1/4"
#8	6"	1'-4"	10 1/2"	6"
STYLE		4		5

STYLE 6 = NO HOOK

* Dimension is approximate.
Hook Styles Detailed on this sheet are for Illustration Only.
Actual Hook Style for any particular bar will be shown under A or G Heading on REINFORCING BAR LIST sheet(s) in Structures Plans.
All Dimensions are out-to-out.

C = Pitch
B = Overall Height
Ø = Spirals shall be ASTM A615 Grade 60 plain or deformed bars or ASTM A1064 plain or deformed steel wire.
N = Total number of closed turns at Top and Bottom of columns
Splices may be accomplished by lapping 1.5 turns. Cost of Channel Spacers and Splices shall be included in the Contract Unit Price for Reinf. Steel (Substructure)

NOTE: For Bar Dimensions See REINFORCING BAR LIST Sheet(s) in Structures Plans.

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GENERAL ELECTRICAL NOTES AND REQUIREMENTS

1. **INSTALLATION REQUIREMENTS:**
 THE ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE 2017 FLORIDA BUILDING CODE. THE FLORIDA FIRE PREVENTION CODE (SIXTH EDITION) WITH CHAPTER 69A-60 APPLICABLE N.F.P.A. CODES WHICH INCLUDES THE 2014 N.E.C. (N.F.P.A. - 70).

 THE INSTALLATION OF THE SYSTEMS SHALL BE IN ACCORD WITH THE MATERIALS AND METHODS INDICATED IN THE PLANS AND SPECIFICATIONS. ANY DESIRED DEVIATIONS SHALL BE SUBMITTED (IN WRITING) TO AND APPROVED BY THE ENGINEER. IF NOT INCLUDED IN THE SUBMITTALS AND NOT SPECIFICALLY REQUESTED, MATERIALS AND METHODS SHALL BE PROVIDED PER PLANS AND SPECIFICATIONS.

 THE CODES REPRESENT THE MINIMUM INSTALLATION CRITERIA FOR THE PROJECT. IT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO ADHERE TO THE DESIGN DOCUMENTS SO LONG AS THEY DO NOT INDICATE INSTALLATIONS THAT WILL PRESENT CODE VIOLATIONS. NO ADDITIONAL CHARGES WILL BE APPROVED OR ACCEPTED TO CHANGE THE INSTALLATION IN ORDER TO COMPLY WITH CODE OR TO RETROFIT ANY WORK THAT WAS INSTALLED IN VIOLATION OF A CODE.
2. WORK SHALL INCLUDE ALL LABOR, MATERIALS, PERMITS AND COSTS FOR INSTALLATION OF A COMPLETE ELECTRICAL SYSTEM.

 THE CONTRACTOR SHALL APPLY FOR AND OBTAIN SEPARATE PERMITS FOR THE LOW VOLTAGE SYSTEMS TO BE INSTALLED AS PART OF THE ELECTRICAL SYSTEM. THIS INCLUDES (BUT IS NOT LIMITED TO) FIRE ALARM, TELEPHONE, INTERCOM, ACCESS CONTROL, SECURITY, AND OTHER SIMILAR SYSTEMS.
3. IT IS NOT THE PURPOSE OF THESE PLANS TO SHOW ALL DETAILS OF CONSTRUCTION, ONLY THE INTENT. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE PURCHASE AND INSTALLATION OF ALL ITEMS SUCH AS HARDWARE, J-BOXES, CONDUITS AND FITTINGS, ETC., AS NECESSARY FOR A COMPLETE ELECTRICAL SYSTEM IN WORKING ORDER.
4. CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPLETE BIDS BASED UPON THE ENTIRE SET OF CONSTRUCTION DOCUMENTS. THIS EXTENDS TO ALL DEVICES INDICATED ON PLANS AND ALL EQUIPMENT REQUIRED TO SUPPORT THOSE DEVICES. IF FOR ANY REASON, THE INTENT OF THE ENGINEER, ARCHITECT OR CLIENT IS UNCLEAR THEN THE CONTRACTOR IS TO GET CLARIFICATION PRIOR TO PROVIDING A BID. IF THE CONTRACTOR FAILS TO DO SO, THE CONTRACTOR SHALL BE REQUIRED TO ASSUME ANY ADDITIONAL COSTS INVOLVED IN REALIZING THE INTENT OF THE ENGINEER, ARCHITECT, OR CLIENT.
5. ALL EQUIPMENT, FIXTURES, ETC., SHALL BE STARTED, TESTED, ADJUSTED AND PLACED IN SATISFACTORY OPERATING CONDITION BY THIS CONTRACTOR WHO SHALL GUARANTEE ALL WORKMANSHIP, MATERIALS AND EQUIPMENT TO BE FREE OF DEFECTS FOR A PERIOD OF (1) ONE YEAR FROM DATE OF OWNER ACCEPTANCE, AND SHALL REPAIR SUCH DEFECTS WITHOUT COST TO THE OWNER. ALL EQUIPMENT SHALL BE COVERED FOR THE DURATION OF THE MANUFACTURER'S GUARANTEE OR WARRANTY, AND THIS CONTRACTOR SHALL FURNISH THE OWNER WITH ALL MANUFACTURER'S GUARANTEES AND WARRANTIES.
6. ALL CONDUCTORS, BUSSING, ETC. SHOWN ARE TO BE COPPER UNLESS NOTED OTHERWISE.
7. ALL WIRING TO HAVE THHN/THWN, 75°C INSULATION UNLESS NOTED OTHERWISE.
8. MINIMUM WIRE SIZE TO BE #12 Cu.
9. NO "WAFER" OR "PIGGYBACK" BREAKERS PERMITTED.
10. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH OTHER PARTIES FOR INSTALLATION OF ALL DEVICES. THIS SHALL INCLUDE (BUT NOT LIMITED TO) THE FOLLOWING:
 - a. DEVICES AND EQUIPMENT ON SITE WITH EXISTING/NEW UTILITIES, BUILDINGS/STRUCTURES, PLANTINGS, ETC.
 - b. ALL INTER-CONNECTIONS BETWEEN ANY OF THE TRADES (CONTROLS, STRUCTURE, ETC.).
15. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMMEDIATELY [WITHIN (2) WORKING DAYS OF DISCOVERY] NOTIFY IN WRITING (VIA FAX, EMAIL) OR PHONE CALL AND ASSOCIATED HARD COPY LETTER WITH COPIES TO ALL PARTIES INVOLVED. THE GENERAL AND ELECTRICAL CONTRACTORS SHALL COORDINATE WITH THE APPROPRIATE UTILITY COMPANY WITH REGARDS TO THE ELECTRICAL SERVICE TO THE PROJECT. THIS SHALL OCCUR IMMEDIATELY UPON PROJECT STARTUP PRIOR TO ANY ORDERING MATERIALS OR CONSTRUCTION OF PROJECT. ARCHITECT AND ENGINEER SHALL BE NOTIFIED IN WRITING AS TO THE DATE OF COORDINATION AND THE RESULTS OF THE COORDINATION. ANY ISSUES SHALL BE REVIEWED BY THE ARCHITECT AND ENGINEER AND REVISIONS (IF REQUIRED) SHALL BE MADE PRIOR TO ANY INSTALLATIONS. THE CONTRACTOR/S ARE TO VERIFY ACTUAL AVAILABLE FAULT CURRENT PRIOR TO ANY INSTALLATION. COORDINATE SERVICE EQUIPMENT FAULT CURRENT RATINGS ACCORDINGLY. PROVIDE COST DIFFERENTIAL IN WRITING TO OWNER / ARCHITECT / ENGINEER FOR COST INCREASE OR CREDIT ACCORDINGLY.

18. DO NOT SCALE THE ELECTRICAL DRAWINGS, REFER TO THE ACTUAL SITE CONDITIONS FOR EQUIPMENT LOCATIONS, CABINERY, CEILING GRIDS, DOOR SWINGS, ETC.
19. SHOP DRAWINGS SHALL BE PROVIDED FOR ALL ELECTRICAL EQUIPMENT THAT IS TO BE USED ON THIS PROJECT WHETHER OR NOT THE EQUIPMENT IS SPECIFICALLY SPECIFIED IN THESE DOCUMENTS. THIS INCLUDES (BUT IS NOT LIMITED TO) DISTRIBUTION EQUIPMENT, LIGHT FIXTURES, WIRING DEVICES, METERING, CONDUCTORS, CONDUITS, FITTINGS, BOXES, GROUNDING METHODS, ETC.. SHOP DRAWINGS SHALL BE REQUIRED PRIOR TO ORDERING OR ANY INSTALLATION OF EQUIPMENT. ANY EQUIPMENT NOT INCLUDED IN THE SHOP DRAWING SUBMITTALS, SHALL BE PROVIDED PER THE PLANS AND SPECIFICATIONS.

 SUBMITTALS ARE TO BE TOTAL & COMPLETE. INCOMPLETE SHOP DRAWINGS WILL NOT BE REVIEWED. A MINIMUM OF FOUR (4) SETS OF SUBMITTALS SHALL BE PROVIDED IN BOOK/BINDER FORMAT WITH ALL EQUIPMENT (INCLUDING ANY/ALL OPTIONS) CLEARLY SELECTED/INDICATED ON THE CUTSHEETS INCLUDED IN THE SUBMITTAL. VERIFY WITH THE PROJECT ARCHITECT FOR ADDITIONAL SETS AS MAY BE REQUIRED. ELECTRONIC SUBMITTALS SUBMITTED ARE ACCEPTABLE, HOWEVER ALL COSTS INCURRED WITH PRINTING SHOP DRAWINGS RECEIVED ELECTRONICALLY SHALL BE REIMBURSED.

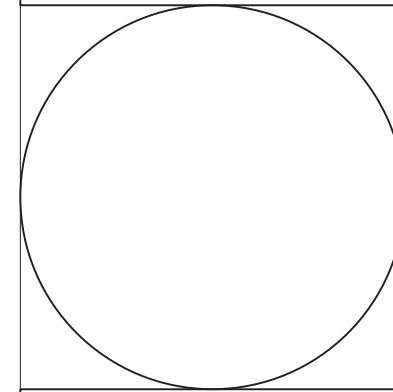
 SHOP DRAWINGS SUBMITTED BY WAY OF AN ELECTRONIC PROJECT MANAGEMENT SYSTEM ARE NOT ACCEPTABLE.
20. WIRING TO BE:
 - a. HDG RS CONDUIT AND CONDUCTORS.
 - b. LFNC-B CONDUIT WHERE SUBJECT TO VIBRATION.
 - c. UNO - NO ALUMINUM CONDUITS ARE ALLOWED.
21. EXISTING PANELS: THE ELECTRICAL CONTRACTOR SHALL UPDATE THE DIRECTORY OF ANY EXISTING PANEL BEING USED FOR THIS RENOVATION. THE NEW DIRECTORY SHALL INCLUDE ALL INFORMATION AS PREVIOUSLY REFERENCED AND SHALL INCLUDE ACCURATE BRANCH CIRCUIT DESCRIPTIONS OF EXISTING BRANCH CIRCUITS. THE ELECTRICAL CONTRACTOR SHALL TRACE EXISTING CIRCUITRY AS NECESSARY TO PROVIDE THE NEW AND ACCURATE DIRECTORY.
22. CONDUCTORS SHALL BE COLOR CODED AS FOLLOWS:
 120/240 VOLT SINGLE PHASE BLACK/RED/WHITE/GREEN

 WIRE SIZE #6 AND SMALLER SHALL HAVE FACTORY COLORED INSULATION AS LISTED ABOVE. WIRING SIZE #4 AND LARGER MAY BE COLOR CODED BY TAPE. COLOR TAPE SHALL BE APPLIED TO ALL CONDUCTORS AT 5' INTERVALS, WITH 6" (MINIMUM) "SWATCHES."
23. NOTICE TO CONTRACTOR:
 REVISIONS TO THESE DRAWINGS AND CERTIFICATION THERETO, WHICH MAY BE REQUIRED BY THE APPLICABLE INSPECTION AUTHORITY, BECAUSE OF CONTRACTOR (OR "OTHERS") OPTED REVISIONS SHALL BE COMPENSATED TO THE ENGINEER/S BY THE REQUESTING CONTRACTOR. PAYMENT WILL BE REQUIRED AT TIME OF CERTIFICATION DELIVERY.
24. WITHIN 30 DAYS OF PROJECT COMPLETION, RECORD DRAWINGS (AS BUILT) OF THE PROJECT BE PROVIDED BY THE CONTRACTOR/S AND SUBMITTED TO THE OWNER. THESE SHALL INCLUDE (MINIMALLY) A SINGLE LINE POWER RISER, PANEL SCHEDULES AND FLOOR PLANS. IN ADDITION OWNER COPIES OF OPERATIONS MANUALS FOR ALL EQUIPMENT REQUIRING SERVICE WITH NAMES AND ADDRESS, AND, CONTACT FOR QUALIFIED SERVICE AGENCY/S.

 IT IS HERE NOTED THAT IF THERE ARE NO CONSTRUCTION OBSERVATION ("CO") TRIPS PERFORMED BY THE ENGINEER/S OF RECORD THERE WILL BE NO CERTIFIED PLANS ("AS BUILT") PROVIDED BY THE ENGINEER/S OF RECORD.
25. AS DESIGNED, THE SYSTEM VOLTAGE DROPS ARE LESS THAN 2% FOR FEEDERS AND 3% FOR THE BRANCH CIRCUITS.



Tsala Apopka
Golf Course Structure Modification
Southwest Florida water
Management District
2379 Broad St. Brooksville, FL 34604



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By:	JWB
Date:	03-01-2019
E1	

ABBREVIATIONS

<p>AC ALTERNATING CURRENT</p> <p>AFF/G ABOVE FINISH FLOOR/GRADE</p> <p>AIC AMPS INTERRUPTING CAPACITY</p> <p>B BOND</p> <p>CB CIRCUIT BREAKER</p> <p>Cu COPPER</p> <p>DISC DISCONNECT</p> <p>FCA FAULT CURRENT AVAILABLE</p> <p>FPL FLORIDA POWER & LIGHT</p> <p>FS FUSED SWITCH</p> <p>G GROUND</p> <p>HGT HEIGHT</p> <p>HP HORSE POWER</p> <p>KVA KILOVOLT AMPERE</p> <p>KW KILOWATT</p> <p>N1 NEMA 1 (INDOOR ENCLOSURE)</p>	<p>N3R NEMA 3R (RAIN TIGHT ENCLOSURE)</p> <p>N/NEUT NEUTRAL</p> <p>NP NON-PROTECTED</p> <p>O/H OVER HEAD</p> <p>P POWER</p> <p>RS RIGID STEEL CONDUIT</p> <p>S/N SOLID NEUTRAL</p> <p>SPD SURGE PROTECTION DEVICE</p> <p>SS STAINLESS STEEL</p> <p>UNO UNLESS NOTED OTHERWISE</p> <p>UG UNDERGROUND</p> <p>UL UNDERWRITERS LABORATORIES</p> <p>WP WEATHER PROOF</p> <p>WR WEATHER RESISTANT</p>
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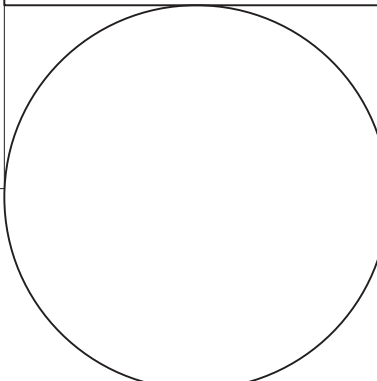
ELECTRICAL SYMBOL LEGEND

- POWER PANEL (FLUSH/SURFACE) SEE SCHEDULES
- KEY NOTE, SEE KEY NOTES ON EACH SHEET, THESE NOTES ARE ONLY APPLICABLE TO THOSE SHEETS ON WHICH THEY APPEAR.
- CONDUIT RUN (CONCEALED)
- CONDUIT RUN (IN SLAB OR GRADE)

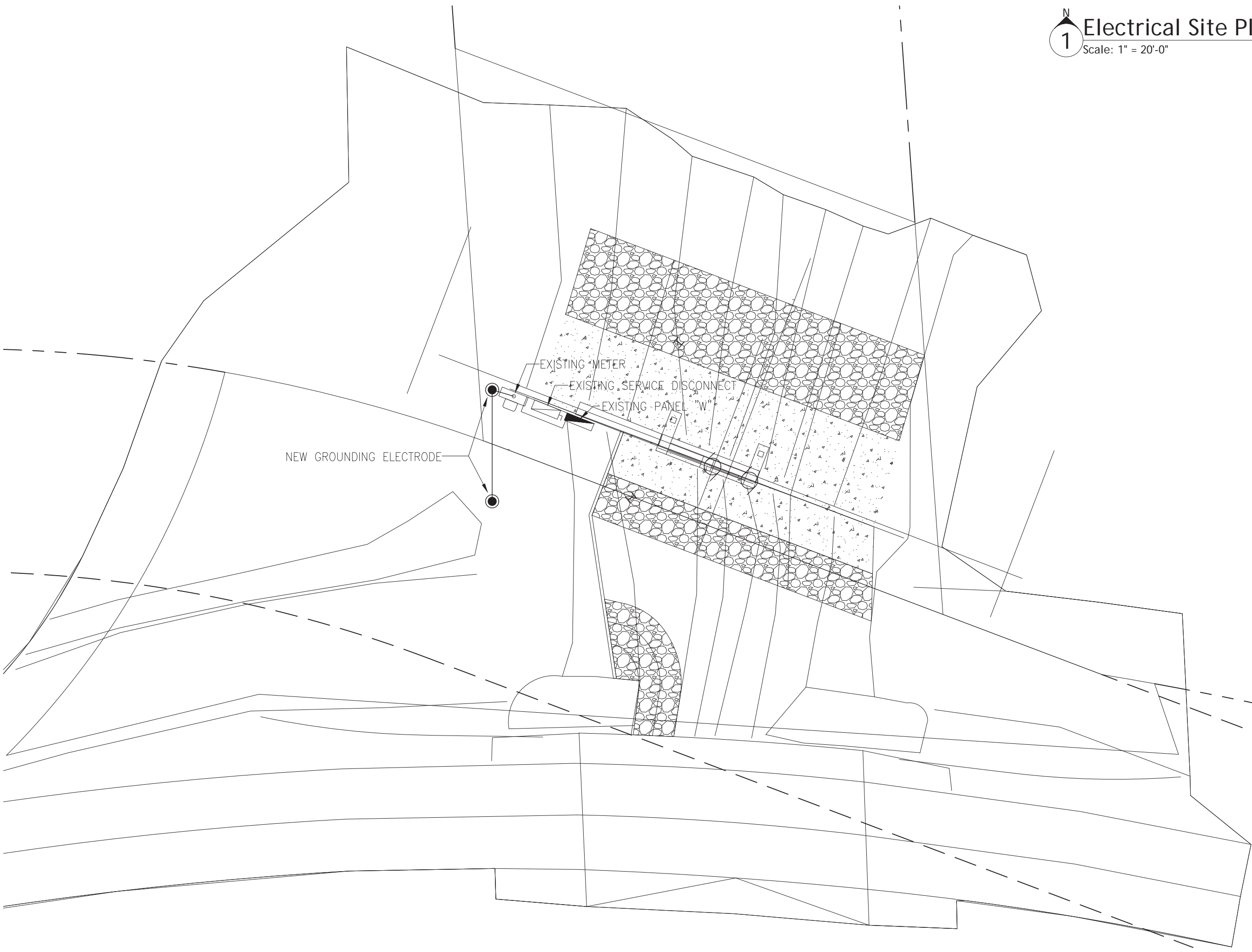


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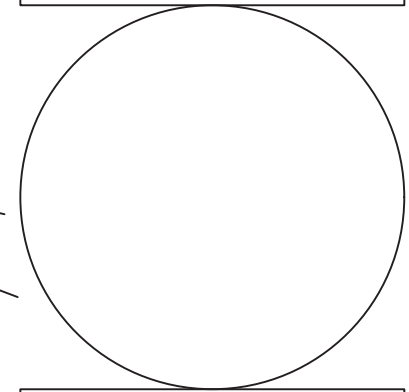


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E2



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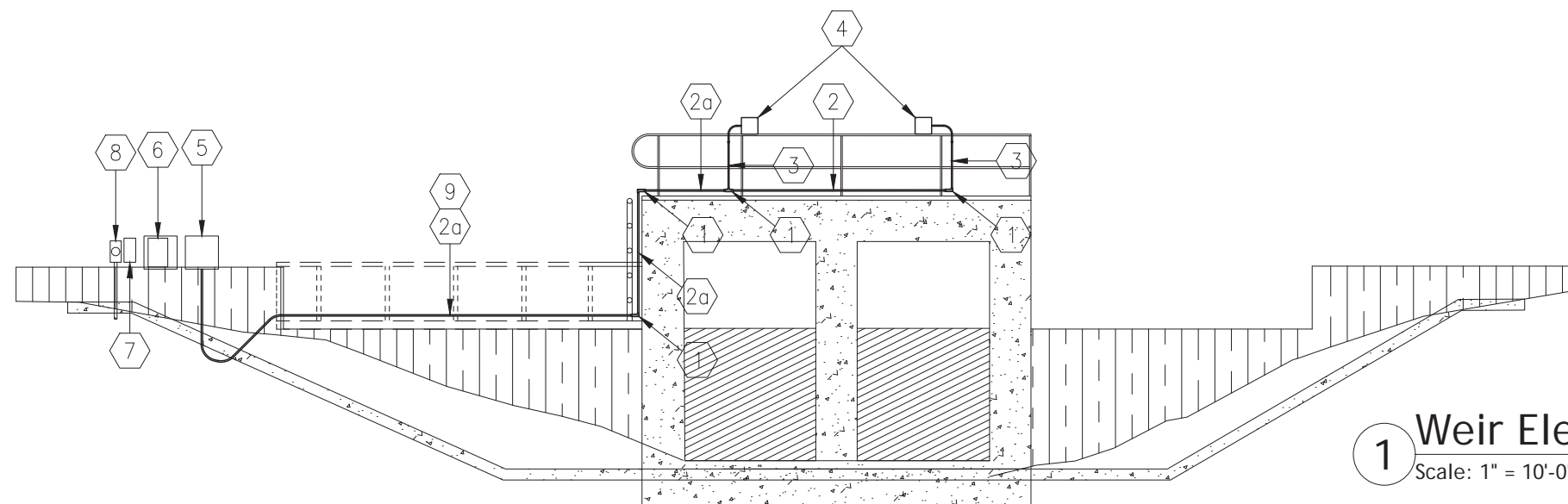
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Date:	03-01-2019
E3	

KEY NOTES

1. 1" HDG-RS CONDUIT BODY SELECTED AND POSITIONED SUCH THAT COVER OPENING IS ACCESSIBLE FROM CATWALK FOR SERVICING. EQUAL TO CROUSE-HINDS HDG SERIES.
2. 1" HDG-RS CONDUIT WITH CONDUCTORS AS FOLLOWS:
 - 2a. (2) #12 Cu [H/H FOR ACTUATOR #1]; (2) #12 Cu [H/H FOR ACTUATOR #2]; AND (1) #12 Cu-B.
 - 2b. (2) #12 Cu [H/H FOR ACTUATOR #2]; AND (1) #12 Cu-B.

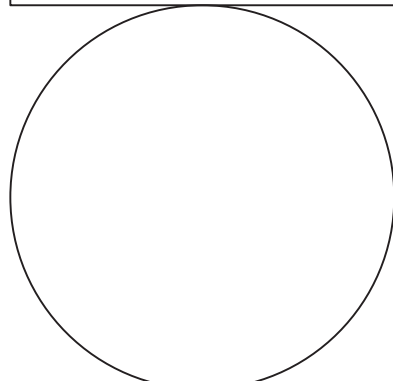
NOTE: THE CONDUCTORS REFERENCED IN THIS NOTE ARE TO BE RATED AT 90°C FOR TEMPERATURE AND CONDUIT-FILL DERATING PURPOSES

NOTE: THE CURRENT CARRYING CONDUCTORS FOR THESE CIRCUITS ARE TO BE UN-SPLICED FOR THEIR ENTIRE LENGTH FROM SOURCE TO LOAD. THE EQUIPMENT BONDING CONDUCTOR IS TO BE TAPPED FOR CONNECTION AS NECESSARY.
3. 3/4" HDG-RS CONDUIT WITH (3) #12 Cu [H/H/B]. TRANSITION TO 3/4" LFNC-B FOR FINAL CONNECTION TO ACTUATOR. MAXIMUM LENGTH OF 18".
4. ACTUATOR. BASIS OF DESIGN IS RATED AT 2/3 HP, 240 VOLT, 1-PHASE, 4.6 AMPS (FULL LOAD), 20 AMPS (LOCKED ROTOR).
5. EXISTING CONTROL CABINET TO BE REUSED AND REWORKED FOR NEW CONTROLS.
6. EXISTING PANEL "W" LOCATED WITHIN A WEATHERPROOF ENCLOSURE. PANEL TO BE REUSED AND REWORKED FOR NEW ACTUATORS. SEE PANEL SCHEDULE FOR DETAILS.
7. EXISTING SERVICE DISCONNECT TO BE REUSED. CLEAN AND LUBRICATE MECHANISM.
8. EXISTING UTILITY METER TO BE REUSED.
9. REUSE OF EXISTING WEIR CONDUIT: IT IS PERMISSIBLE TO REUSE THE EXISTING 1" HDG RS CONDUIT WHICH IS ROUTED FROM THE SHORE MOUNTED CONROL CABINET TO THE EXISTING GATES. THIS CONDUIT MAY BE REUSED UP TO THE FIRST COUPLING, ROUGHLY 10' ONTO THE EXSTING WEIR STRUCTURE. PRIOR TO RESUSE, THE CONTRACTOR SHALL VERIFY THE INTEGRITY OF THE EXSTING CONDUIT. PRICING FOR A COMPLETE RUN OF NEW CONDUIT SHALL BE INCLUDED IN THE BID.

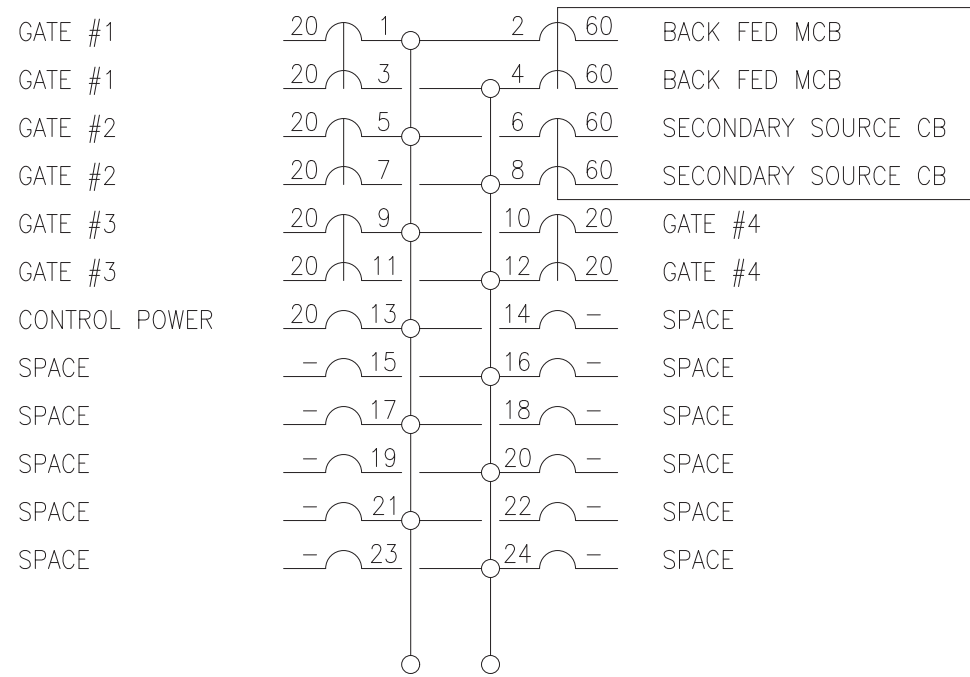


1 Weir Elevation
Scale: 1" = 10'-0"

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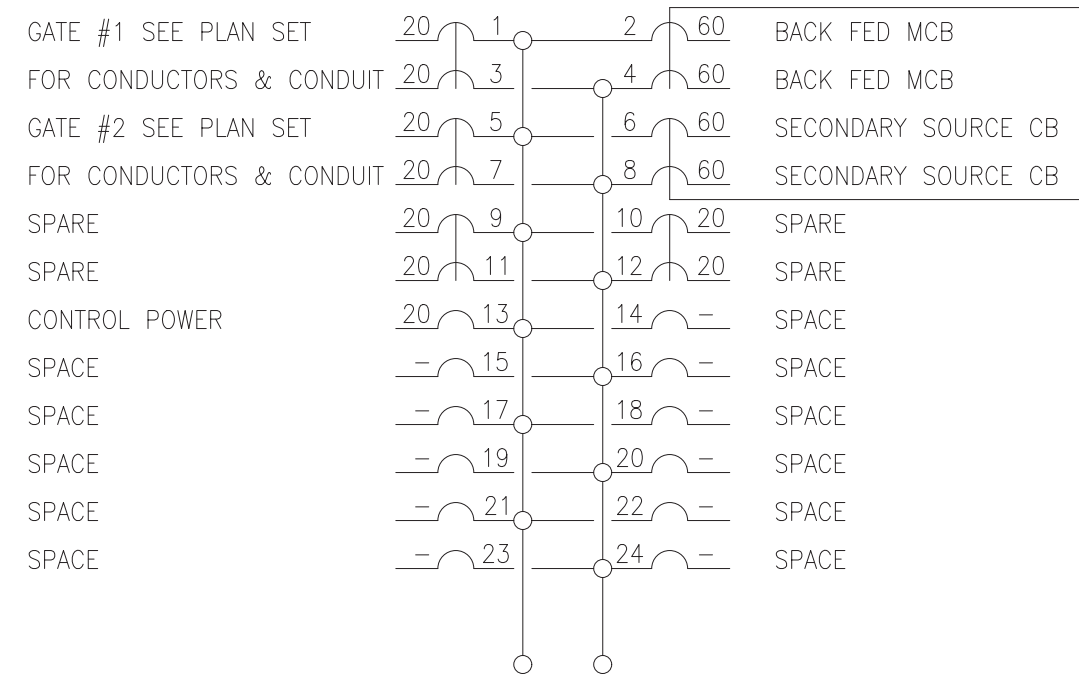
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E4	



EXISTING PANEL "W" SCHEDULE

100 AMP BUS - MCB (BACK FED) - 120/240V - 1 PHASE - S/N
 24 CIRCUIT - SURFACE MOUNTED - NEMA 1
 LOADCENTER

NOTE: THE MCB AND THE SECONDARY SOURCE CB ARE CONNECTED WITH A HANDLE TIE FOR USE AS A MANUAL TRANSFER SWITCH.



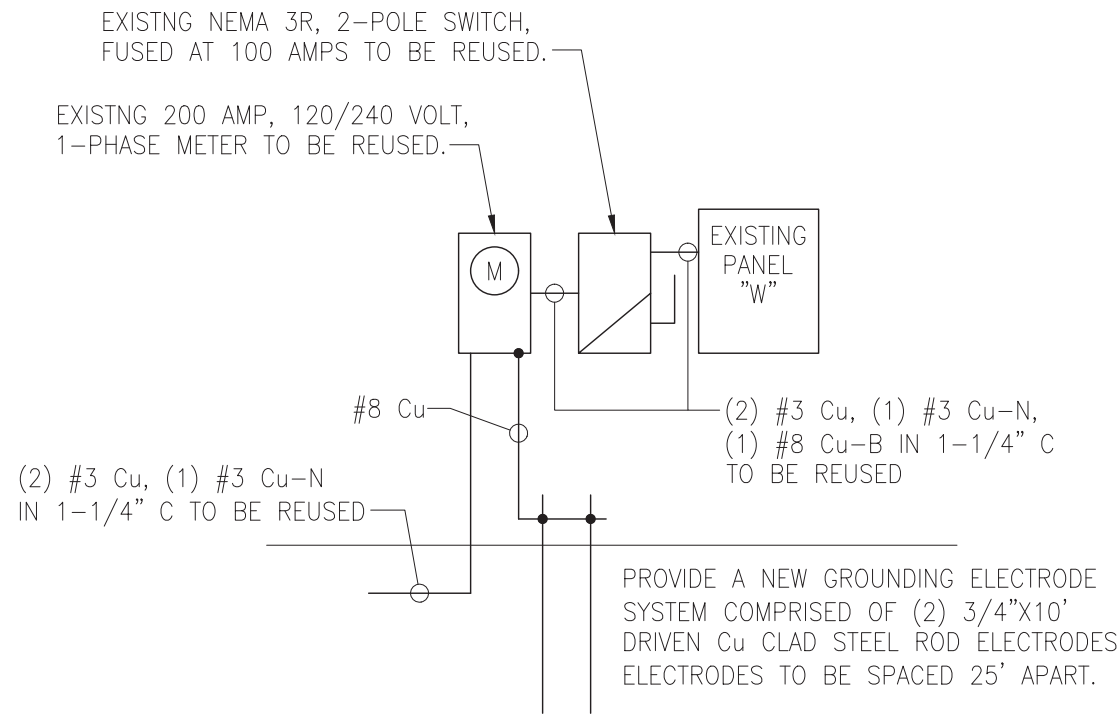
EXISTING PANEL "W" SCHEDULE

125 AMP BUS - MCB (BACK FED) - 120/240V - 1 PHASE - S/N
 24 CIRCUIT - SURFACE MOUNTED - NEMA 1
 LOADCENTER

NOTE: THE MCB AND THE SECONDARY SOURCE CB ARE CONNECTED WITH A HANDLE TIE FOR USE AS A MANUAL TRANSFER SWITCH.

PANEL "W"

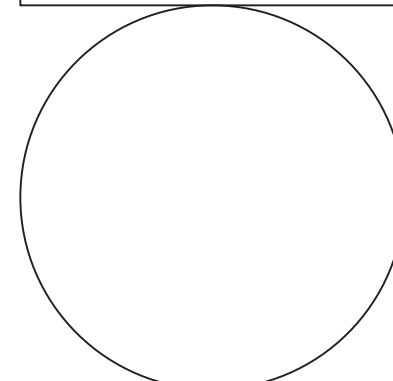
(2) GATE ACTUATORS @ 1.2 KVA EACH	=	2.4 KVA
25% OF LARGEST MOTOR	=	0.3 KVA
CONROLS	=	1.0 KVA
	=	3.7 KVA
	=	240 V
100 AMPS EXISTING		15.4 AMPS



1 Power Riser Diagram
 Not to Scale



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