

THIS PROJECT TO BE LET TO CONTRACT  
WITH FINANCIAL PROJECT ID(S):  
442764-2-56-01, 442764-2-56-02, 442764-2-56-03

**CONTRACT PLANS COMPONENTS**

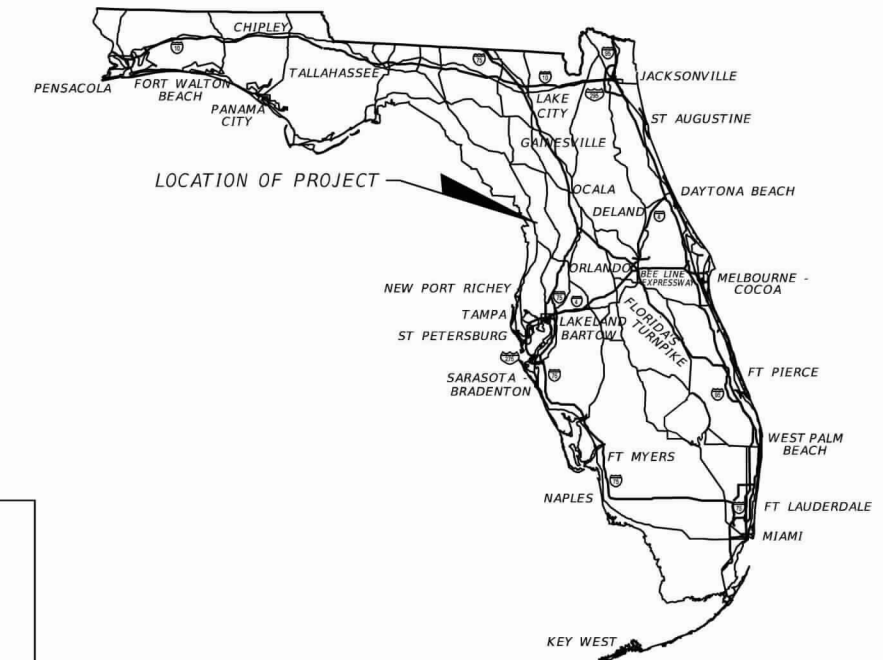
- ROADWAY
- SIGNING & PAVEMENT MARKING
- SIGNALIZATION
- INTELLIGENT TRANSPORTATION SYSTEM
- LIGHTING
- LANDSCAPE
- STRUCTURE
- TOLL FACILITIES
- UTILITY WORK BY HIGHWAY CONTRACTOR AGREEMENT
- EASTERN BORROW SITE

*STATE OF FLORIDA*  
**DEPARTMENT OF TRANSPORTATION**  
**EASTERN BORROW SITE PLANS**

FINANCIAL PROJECT ID 442764-2-52-01

CITRUS COUNTY (02470)  
STATE ROAD NO. 589 (SUNCOAST PARKWAY 2)

SUNCOAST II - PHASE 3A (SR 589)  
EASTERN BORROW SITE  
PARCEL ID: 17E18S12 40000



**INDEX OF EASTERN BORROW SITE PLANS**

SHEET NO.	SHEET DESCRIPTION
EB-1	KEY SHEET
EB-2	SIGNATURE SHEET
EB-3 - EB-4	DRAINAGE MAPS
EB-5 - EB-6	TYPICAL DETAILS
EB-7	PROJECT LAYOUT
EB-8	GENERAL NOTES
EB-9 - EB-10	BORROW SITE PLANS
EB-11	CONTROL POINT DATA TABLES
EB-12	LIMESTONE REMEDIATION
EB-13	ROADWAY SOIL SURVEY
EB-14 - EB-21	SOIL PROFILES

PROJECT LOCATION URL: <https://tinyurl.com/Suncoast2-3A>

PROJECT LIMITS: BEGIN MP 70.276 - END MP 75.707

EXCEPTIONS: NONE

BRIDGE LIMITS: NONE

RAILROAD CROSSING: NONE

**EASTERN BORROW SITE PLANS**  
**ENGINEER OF RECORD:**

TROY W. VARGAS, P.E.  
P.E. LICENSE NUMBER 57621  
WBQ DESIGN & ENGINEERING, INC.  
201 N. MAGNOLIA AVENUE, SUITE 200  
ORLANDO, FL 32801  
407-839-4300  
CONTRACT NO.: CA257  
VENDOR NO.: F593207004001

**FDOT PROJECT MANAGER:**

STEPHANIE J. SHARP, P.E.

**GEC PROJECT MANAGER:**

ANIL J. SHARMA, P.E.

**GOVERNING STANDARD PLANS:**

Florida Department of Transportation, FY2024-2025 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road Construction and associated IRs are available at the following website: <http://www.fdot.gov/design/standardplans>

Standard Plans for Bridge Construction are included in the Structures Plans Component

**GOVERNING STANDARD SPECIFICATIONS:**

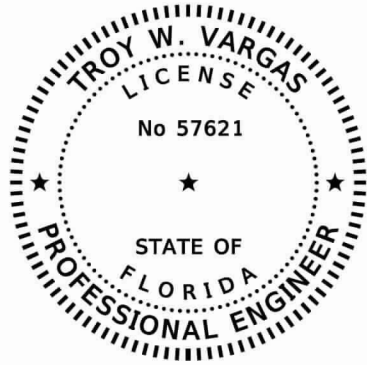
Florida Department of Transportation, FY2024-2025 Standard Specifications for Road and Bridge Construction at the following website: <http://www.fdot.gov/programmanagement/Implemented/SpecBooks>

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
E8V66	25	EB-1

PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
For Construction permits, the permittees shall notify, in writing, the SWFWMD Tampa Regulation Department when construction begins.



**RESPONSIBLE PROFESSIONAL:**



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Troy W Vargas 2026.04.03  
10:32:47-04'00'

ON THE DATE ADJACENT TO THE SEAL

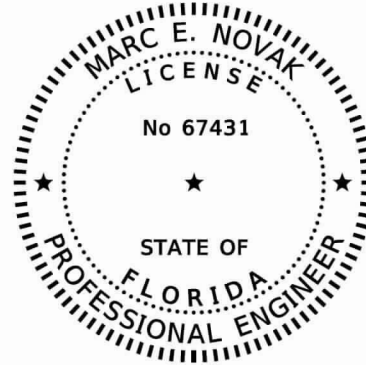
SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

WBQ DESIGN & ENGINEERING, INC.  
201 N MAGNOLIA AVENUE, SUITE 200  
ORLANDO, FL 32801  
TROY W. VARGAS, P.E. NO. 57621

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

SHEET NO.	SHEET DESCRIPTION
EB-1	KEY SHEET
EB-2	SIGNATURE SHEET
EB-3 - EB-4	DRAINAGE MAPS
EB-5 - EB-6	TYPICAL DETAILS
EB-7	PROJECT LAYOUT
EB-8	GENERAL NOTES
EB-9 - EB-10	BORROW SITE PLANS
EB-11	CONTROL POINT DATA TABLES

**RESPONSIBLE PROFESSIONAL:**



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Marc E Novak 2026.04.03  
10:44:27-04'00'

ON THE DATE ADJACENT TO THE SEAL

SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

TIERRA, INC.  
7351 TEMPLE TERRACE HIGHWAY  
TAMPA, FLORIDA 33637  
MARC E. NOVAK, PH.D., P.E. NO. 67431

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

SHEET NO.	SHEET DESCRIPTION
EB-2	SIGNATURE SHEET
EB-12	LIMESTONE REMEDIATION
EB-13	ROADWAY SOIL SURVEY
EB-14 - EB-21	SOIL PROFILES

PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
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3/26/2026 4:12:45 PM nviggiani  
P:\FDOT\10.12\FDOT\44276425201-REV-EastBorrow\Roadway\Borrow\SIGNRD100.dgn

REVISIONS				ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	TROY W. VARGAS LICENSE NUMBER: 57621 WBQ DESIGN & ENGINEERING, INC. 201 NORTH MAGNOLIA AVENUE, SUITE 200 ORLANDO, FL 32801		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	EB-2
						SR 589	CITRUS	442764-2-52-01	

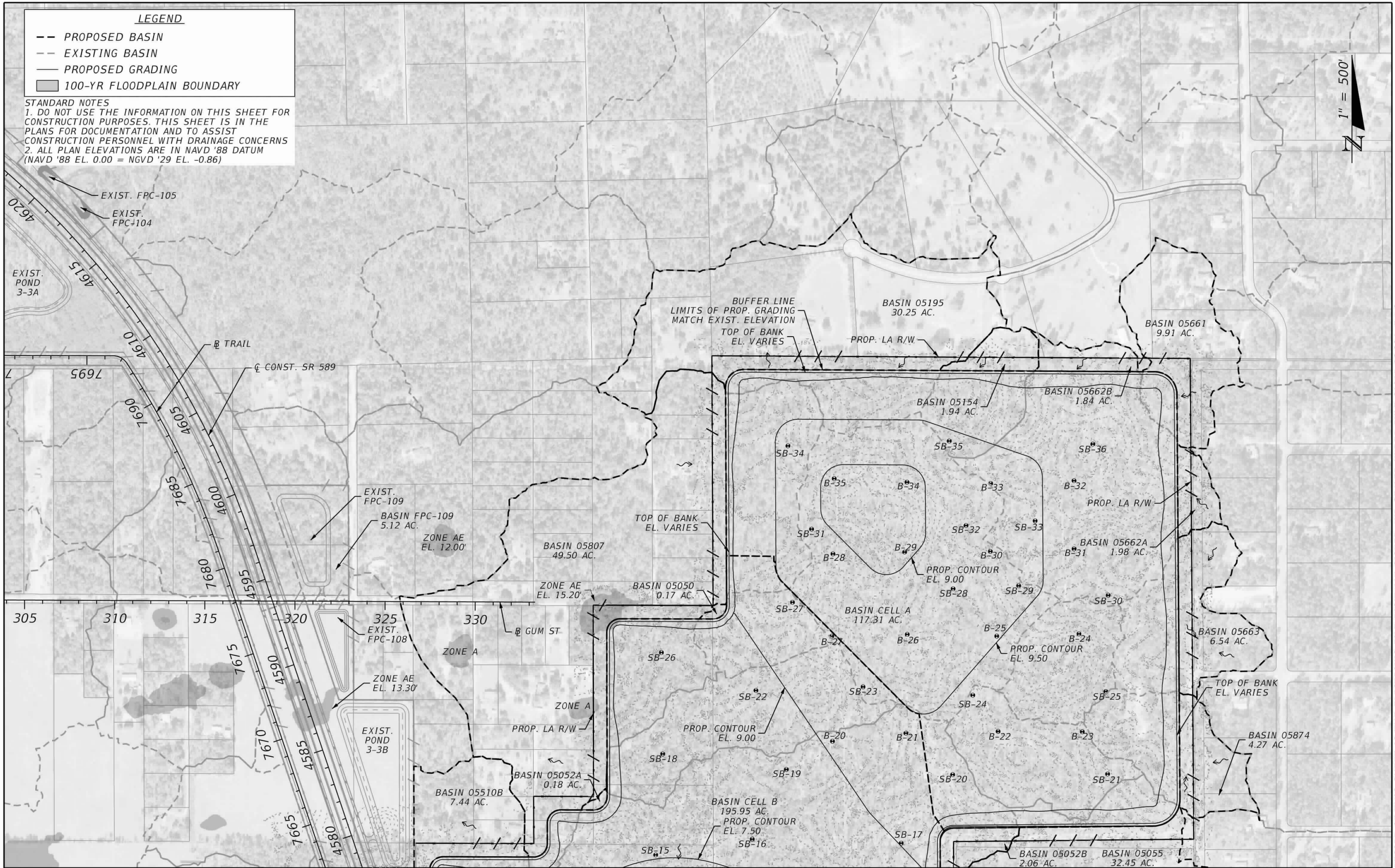
**SIGNATURE SHEET**

**LEGEND**

- PROPOSED BASIN
- - - EXISTING BASIN
- PROPOSED GRADING
- 100-YR FLOODPLAIN BOUNDARY

**STANDARD NOTES**

1. DO NOT USE THE INFORMATION ON THIS SHEET FOR CONSTRUCTION PURPOSES. THIS SHEET IS IN THE PLANS FOR DOCUMENTATION AND TO ASSIST CONSTRUCTION PERSONNEL WITH DRAINAGE CONCERNS  
 2. ALL PLAN ELEVATIONS ARE IN NAVD '88 DATUM (NAVD '88 EL. 0.00 = NGVD '29 EL. -0.86)



PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
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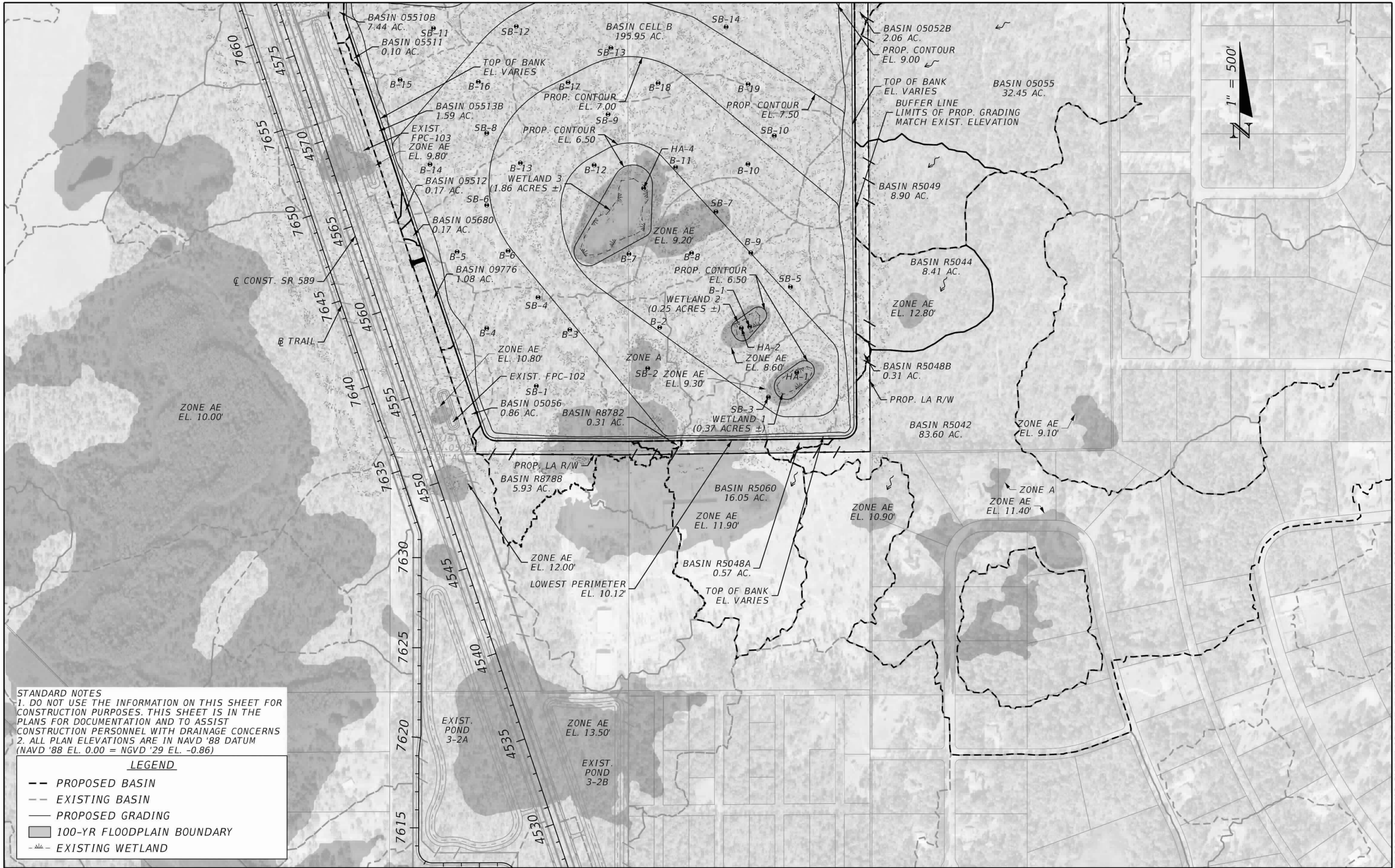


THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS				ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. <b>EB-3</b>
DATE	DESCRIPTION	DATE	DESCRIPTION			ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
				TROY W. VARGAS LICENSE NUMBER: 57621 WBQ DESIGN & ENGINEERING, INC. 201 NORTH MAGNOLIA AVENUE, SUITE 200 ORLANDO, FL 32801		SR 589	CITRUS	442764-2-52-01	

**DRAINAGE MAP (1)**

PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
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 2. ALL PLAN ELEVATIONS ARE IN NAVD '88 DATUM (NAVD '88 EL. 0.00 = NGVD '29 EL. -0.86)

**LEGEND**

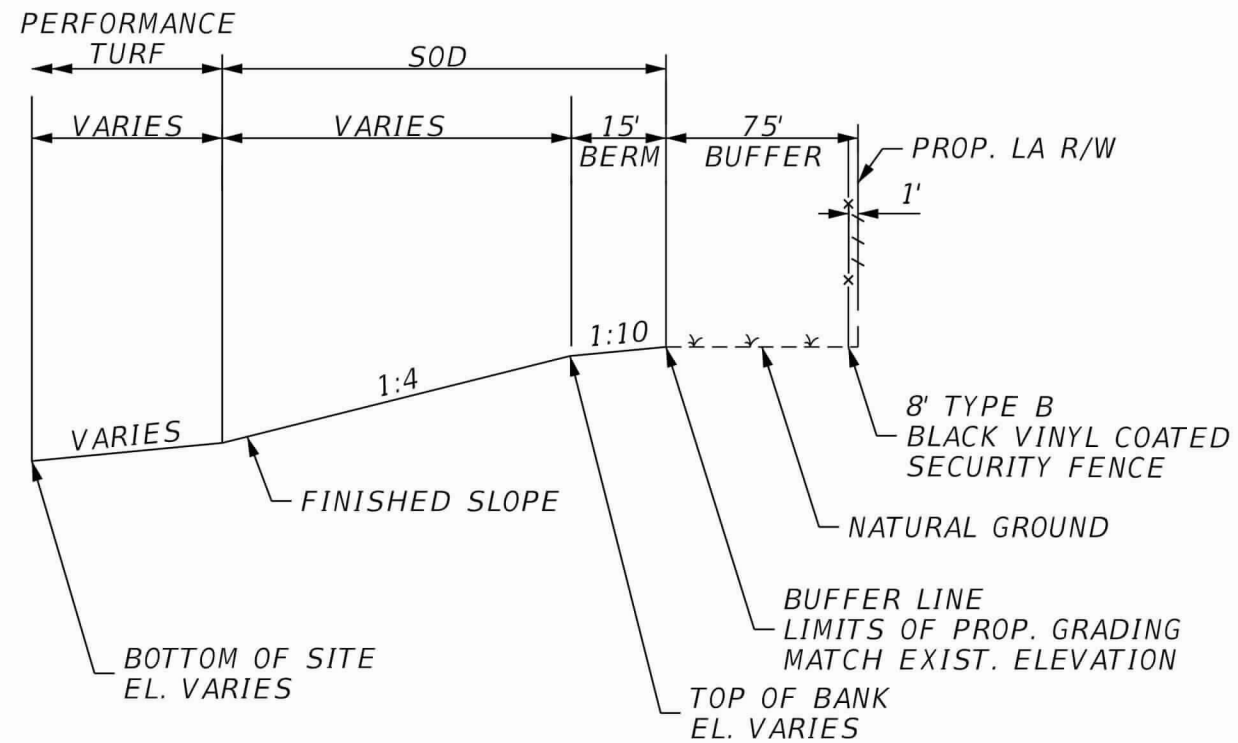
- PROPOSED BASIN
- - - EXISTING BASIN
- PROPOSED GRADING
- █ 100-YR FLOODPLAIN BOUNDARY
- ~~~ EXISTING WETLAND

REVISIONS		ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.  EB-4
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
			TROY W. VARGAS LICENSE NUMBER: 57621 WBQ DESIGN & ENGINEERING, INC. 201 NORTH MAGNOLIA AVENUE, SUITE 200 ORLANDO, FL 32801	SR 589	CITRUS	442764-2-52-01	

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# TYPICAL EXCAVATION CROSS SECTION

NOT TO SCALE



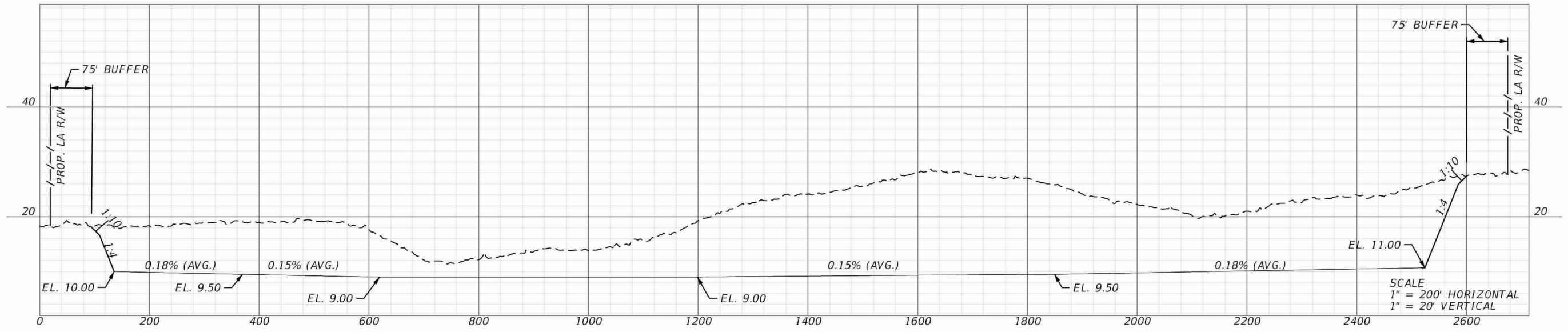
PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
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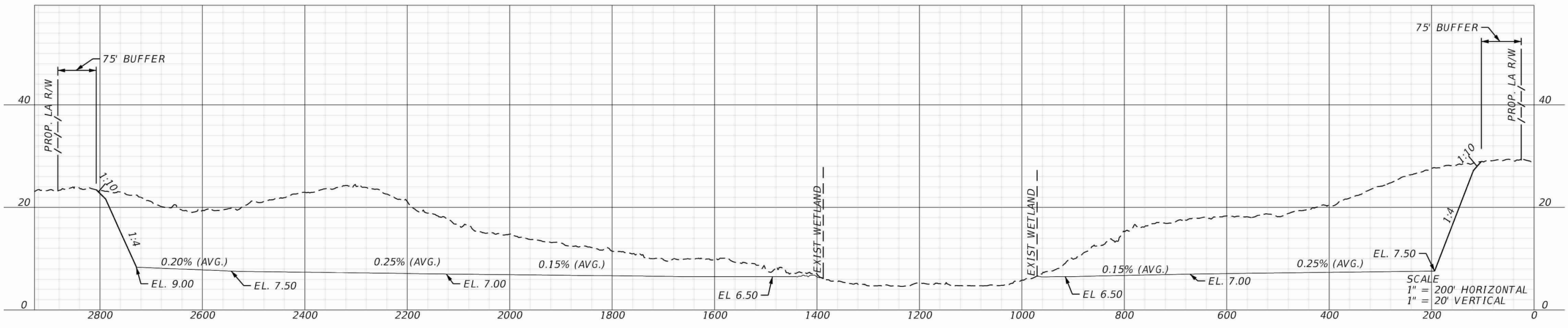
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REVISIONS				ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	TROY W. VARGAS LICENSE NUMBER: 57621 WBQ DESIGN & ENGINEERING, INC. 201 NORTH MAGNOLIA AVENUE, SUITE 200 ORLANDO, FL 32801		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	<b>TYPICAL SECTION DETAILS (1)</b>
								SR 589	

PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
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CELL A SECTION



CELL B SECTION

REVISIONS				ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TYPICAL SECTION DETAILS (2)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	TROY W. VARGAS LICENSE NUMBER: 57621 WBQ DESIGN & ENGINEERING, INC. 201 NORTH MAGNOLIA AVENUE, SUITE 200 ORLANDO, FL 32801		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						SR 589	CITRUS	442764-2-52-01		EB-6

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PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
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1" = 1000'

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DATE	DESCRIPTION	DATE	DESCRIPTION	TROY W. VARGAS LICENSE NUMBER: 57621 WBQ DESIGN & ENGINEERING, INC. 201 NORTH MAGNOLIA AVENUE, SUITE 200 ORLANDO, FL 32801		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
						SR 589	CITRUS	442764-2-52-01	EB-7

**PROJECT LAYOUT**

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**GENERAL NOTES**

1. ALL SURVEY INFORMATION WAS OBTAINED FROM A LICENSED FLORIDA PROFESSIONAL SURVEYOR AND MAPPER AND UTILIZED AS SUPPORTING DATA IN THE PRODUCTION OF DESIGN PLANS AND FOR CONSTRUCTION ON SUBJECT PROJECT. THE PROFESSIONAL SURVEYOR AND MAPPER OF RECORD IS:  
 HERMAN DANIEL WILLIAMS, III  
 P.S.M. NO.: 6227  
 WBQ DESIGN & ENGINEERING, INC.  
 201 NORTH MAGNOLIA AVENUE, SUITE 200  
 ORLANDO, FL 32801  
 CERTIFICATE OF AUTHORIZATION: LB7963
2. IN THE EVENT OF A CHIMNEY SINK OCCURENCE, UTILIZE THE REMEDIATION ACTION PLAN AS DESCRIBED IN SPECIAL PROVISION 442764-2 T120 REMEDIATION ACTION PLAN FOR CHIMNEY SINKS.
3. ANY WELLS WITHIN THE PROJECT LIMITS ENCOUNTERED DURING CONSTRUCTION SHALL BE ABANDONED BY A FLORIDA LICENSED WATER WELL CONTRACTOR.
4. MAINTENANCE BERMS WILL NOT BE STABILIZED AND WILL BE COMPACTED PER STANDARD INDEX AND SODDED.
5. THERE SHALL BE NO DISTURBANCE, CLEARING, GRADING, OR EXCAVATION WITHIN THE BUFFER AREA.

PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
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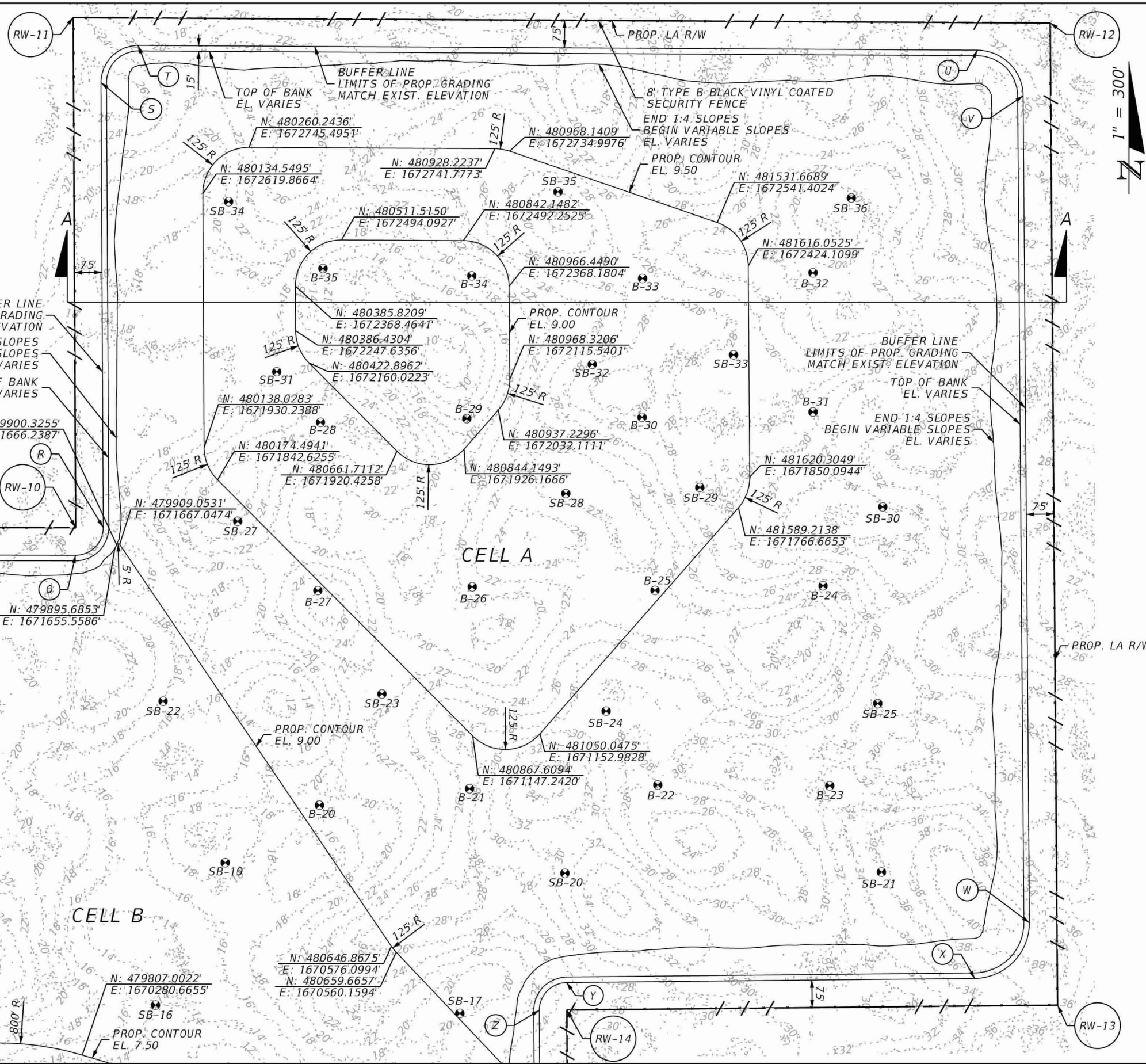
REVISIONS				ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			GENERAL NOTES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	TROY W. VARGAS LICENSE NUMBER: 57621 WBQ DESIGN & ENGINEERING, INC. 201 NORTH MAGNOLIA AVENUE, SUITE 200 ORLANDO, FL 32801		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		EB-8
						SR 589	CITRUS	442764-2-52-01		

SEE CONTROL POINT DATA TABLES FOR ADDITIONAL INFORMATION

**LEGEND**

- XX- EXISTING CONTOURS
- PROPOSED GRADING
- SOIL BORINGS
- BUFFER LINE CONTROL POINTS
- (RW-X) PROP. LA R/W CONTROL POINTS

NOTE: NO CLEARING AND GRUBBING WITHIN LIMITS OF 75' BUFFER OR WETLANDS



PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
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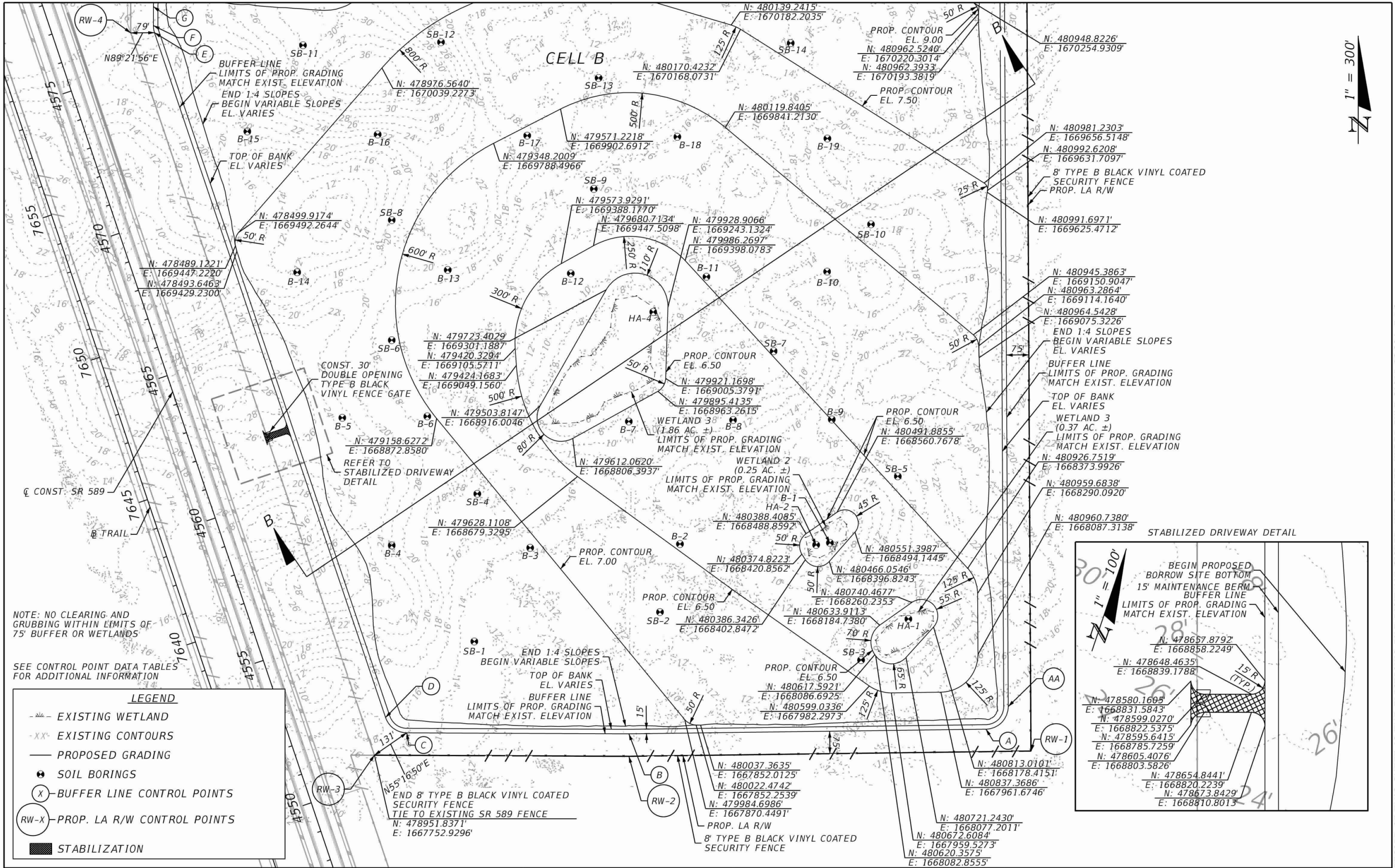


BEGIN 8' TYPE B BLACK VINYL COATED SECURITY FENCE TIE TO EXISTING SR 589 FENCE  
 N: 478140.2618'  
 E: 1670393.1528'

REVISIONS		ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
			TROY W. VARGAS LICENSE NUMBER: 57621 WBQ DESIGN & ENGINEERING, INC. 201 NORTH MAGNOLIA AVENUE, SUITE 200 ORLANDO, FL 32801	SR 589	CITRUS	442764-2-52-01	EB-9

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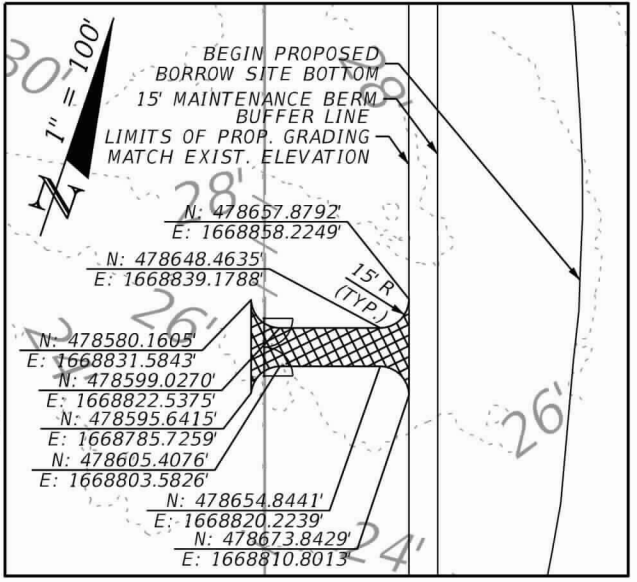


NOTE: NO CLEARING AND GRUBBING WITHIN LIMITS OF 75' BUFFER OR WETLANDS

SEE CONTROL POINT DATA TABLES FOR ADDITIONAL INFORMATION

**LEGEND**

- - - EXISTING WETLAND
- XX'- EXISTING CONTOURS
- PROPOSED GRADING
- SOIL BORINGS
- (X) BUFFER LINE CONTROL POINTS
- (RW-X) PROP. LA R/W CONTROL POINTS
- STABILIZATION





REVISIONS		ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
			TROY W. VARGAS LICENSE NUMBER: 57621 WBQ DESIGN & ENGINEERING, INC. 201 NORTH MAGNOLIA AVENUE, SUITE 200 ORLANDO, FL 32801	SR 589	CITRUS	442764-2-52-01	EASTERN BORROW SITE PLAN (2) EB-10

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BUFFER LINE CONTROL POINTS			
NORTHING	EASTING	LENGTH	RADIUS
A. 1667838.6220'	A. 480987.6034'	1189'	N/A
B. 1667823.1262'	B. 479798.6098'	739'	N/A
C. 1667826.4472'	C. 479059.3712'	N/A	75'
D. 1667877.4787'	D. 478988.6410'	2406'	N/A
E. 1670157.0078'	E. 478219.8579'	N/A	75'
F. 1670180.7414'	F. 478215.9255'	63'	N/A
G. 1670243.4713'	G. 478215.7296'	N/A	75'
H. 1670318.7052'	H. 478290.9518'	503'	N/A
I. 1670317.2123'	I. 478794.0125'	N/A	75'
J. 1670392.2967'	J. 478869.2351'	111'	N/A
K. 1670503.6335'	K. 478869.1093'	N/A	75'
L. 1670578.7179'	L. 478944.3320'	181'	N/A
M. 1670578.1793'	M. 479125.6609'	N/A	75'
N. 1670653.3222'	N. 479200.8836'	911'	N/A
O. 1671563.9604'	O. 479199.1446'	N/A	75'
P. 1671639.1034'	P. 479274.3249'	515'	N/A
Q. 1671637.8653'	Q. 479788.9397'	N/A	75'
R. 1671713.2381'	R. 479864.1192'	1208'	N/A
S. 1672921.6127'	S. 479858.1088'	N/A	100'
T. 1673022.1085'	T. 479958.6699'	2280'	N/A
U. 1673009.2873'	U. 482238.4033'	N/A	125'
V. 1672885.2251'	V. 482362.6968'	2245'	N/A
W. 1670639.9788'	W. 482379.5056'	N/A	150'
X. 1670488.8635'	X. 482231.0221'	1108'	N/A
Y. 1670477.6886'	Y. 481122.6765'	N/A	75'
Z. 1670402.2948'	Z. 481048.4338'	2488'	N/A
AA. 1667914.0132'	AA. 481061.6250'	N/A	75'

PROP. LA R/W CONTROL POINTS			
NORTHING	EASTING	LENGTH	RADIUS
RW-1. 1667765.5680'	RW-1. 481137.4130'	1339'	N/A
RW-2. 1667748.1240'	RW-2. 479798.9300'	847'	N/A
RW-3. 1667751.9296'	RW-3. 478951.8326'	2570'	N/A
RW-4. 1670156.1346'	RW-4. 478141.0020'	207'	N/A
RW-5. 1670394.1528'	RW-5. 478140.2587'	664'	N/A
RW-6. 1670392.2120'	RW-6. 478794.2351'	262'	N/A
RW-7. 1670654.1649'	RW-7. 478793.6392'	332'	N/A
RW-8. 1670653.1790'	RW-8. 479125.8837'	1061'	N/A
RW-9. 1671714.4656'	RW-9. 479123.8571'	665'	N/A
RW-10. 1671712.8651'	RW-10. 479789.1201'	1385'	N/A
RW-11. 1673098.1020'	RW-11. 479782.2300'	2654'	N/A
RW-12. 1673083.1760'	RW-12. 482436.2170'	2667'	N/A
RW-13. 1670416.1299'	RW-13. 482456.1835'	1333'	N/A
RW-14. 1670402.6924'	RW-14. 481123.4327'	2637'	N/A

NORTHING/EASTING TO STA./OFFSET EQUATION	
	$\begin{matrix} N: 1667751.9296' \\ E: 478951.8326' \end{matrix} = \frac{STA. 4550+82.71}{OFFSET 250.00' RT}$
	$\begin{matrix} N: 1670156.1346' \\ E: 478141.0020' \end{matrix} = \frac{STA. 4576+19.96}{OFFSET 250.00' RT}$

PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
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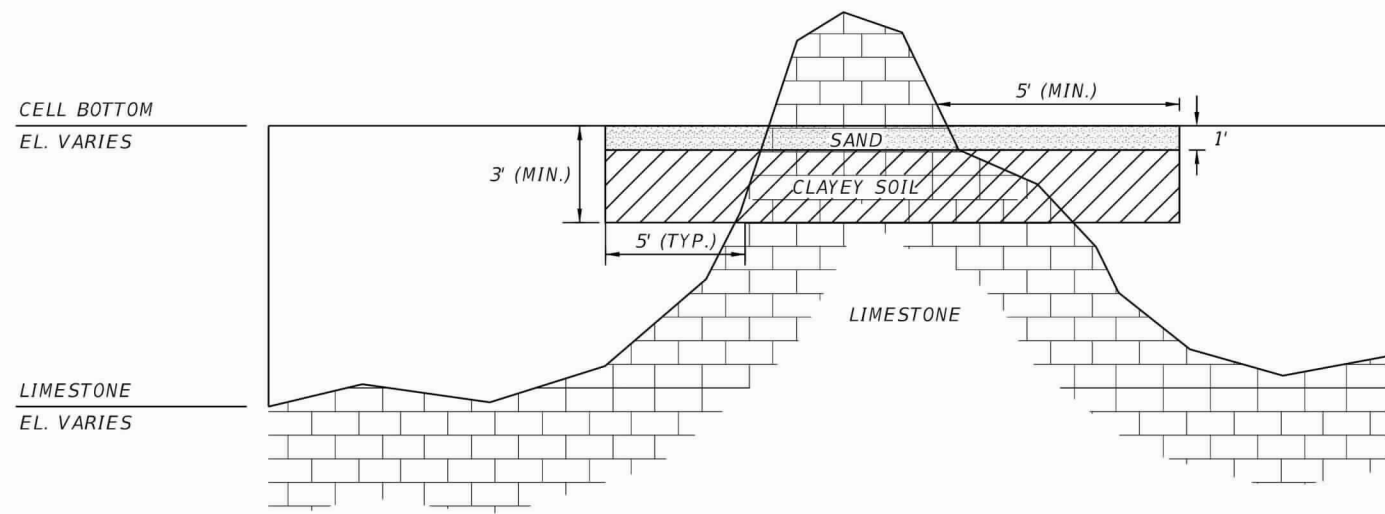


REVISIONS				ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			CONTROL POINT DATA TABLES	SHEET NO.  EB- 11
DATE	DESCRIPTION	DATE	DESCRIPTION	TROY W. VARGAS LICENSE NUMBER: 57621 WBQ DESIGN & ENGINEERING, INC. 201 NORTH MAGNOLIA AVENUE, SUITE 200 ORLANDO, FL 32801		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						SR 589	CITRUS	442764-2-52-01		

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

**LIMESTONE REMEDIATION NOTES:**

1. NOTIFY THE ENGINEER IF LIMESTONE IS ENCOUNTERED AT THE PROPOSED BOTTOM ELEVATION TO ASCERTAIN THAT THE ENCOUNTERED MATERIAL IS LIMESTONE.
2. IN THE EVENT THAT LIMESTONE IS ENCOUNTERED AT THE PROPOSED BOTTOM ELEVATION, OVER-EXCAVATE THE LIMESTONE (3) FEET BENEATH THE PROPOSED BOTTOM ELEVATION. THEN BACKFILL ATOP THE LIMESTONE WITH A MINIMUM (2) FEET OF CLAYEY SOIL (AASHTO A-2-6, A-6, OR A-7 MATERIAL). FINALLY, BACKFILL ATOP THE CLAYEY SOIL WITH (1) FOOT OF SAND COVER (A-3 OR A-2-4 MATERIAL) EVEN WITH FINISHED FINAL GRADE BOTTOM. REFER TO THE LIMESTONE REMEDIATION DETAIL PROVIDED ON THIS SHEET.
3. PLACE THE CLAYEY MATERIAL IN A RELATIVELY UNIFORM CONDITION OVER THE EXCAVATED LIMESTONE. PLACE AND COMPACT THE MATERIAL TO AN INSITU DENSITY OF 85% OR GREATER OF THE MODIFIED PROCTOR MAXIMUM (AASHTO T-180) DRY DENSITY.



**LIMESTONE REMEDIATION DETAIL**  
NTS

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REVISIONS				ENGINEER OF RECORD			STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	MARC E. NOVAK, PH.D., P.E. LICENSE NUMBER: 67431 TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637			ROAD NO.	COUNTY	FINANCIAL PROJECT ID	<b>LIMESTONE REMEDIATION</b> EB-12
							SR 589	CITRUS	442764-2-52-01	

STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION  
MATERIALS AND RESEARCH

DATE OF SURVEY: NOVEMBER 2007 TO OCTOBER 2024  
SURVEY MADE BY: TIERRA, INC.  
SUBMITTED BY: MARC E. NOVAK, Ph.D., P.E.

DISTRICT: TURNPIKE  
ROAD NO.: SR 589  
COUNTY: CITRUS

FINANCIAL PROJECT ID : 442764-2-52-01  
PROJECT NAME: SUNCOAST II - PHASE 3A (SR 589) CR 486 TO CR 495

CROSS SECTION SOIL SURVEY FOR THE DESIGN OF ROADS

BEGIN MP: 70.276      END MP: 75.707

STRATUM NO.	ORGANIC CONTENT		MOISTURE CONTENT		SIEVE ANALYSIS RESULTS PERCENT PASS (%)					ATTERBERG LIMITS (%)				DESCRIPTION	CORROSION TEST RESULTS					
	NO. OF TESTS	% ORGANIC	NO. OF TESTS	MOISTURE CONTENT	NO. OF TESTS	10 MESH	40 MESH	60 MESH	100 MESH	200 MESH	NO. OF TESTS	LIQUID LIMIT	PLASTIC INDEX		AASHTO GROUP	NO. OF TESTS	RESISTIVITY ohm-cm	CHLORIDE ppm	SULFATES ppm	pH
1	--	--	12	19-53	324	100	88-100	57-96	29-76	1-14	12	NP	NP	A-3/A-2-4	GRAY TO ORANGE-BROWN TO BROWN SAND TO SILTY SAND	89	7,700-140,000	15-45	<5-21	4.5-8.3
2	--	--	72	10-59	121	100	98-100	83-96	39-81	15-35	72	NP-23	NP-5	A-2-4	GRAY TO ORANGE-BROWN TO BROWN SILTY SAND	4	2,600-29,000	15-30	<5-57	4.4-6.0
3	--	--	78	8-44	78	100	98-100	85-95	54-75	19-35	78	23-45	11-32	A-2-6/A-2-7	GRAY TO ORANGE-BROWN CLAYEY SAND	--	--	--	--	--
4	--	--	86	15-52	88	100	84-99	72-96	60-98	36-89	86	NP-49	NP-31	A-4/A-6/A-7-6	ORANGE-BROWN TO BLUE-GRAY CLAYEY SAND TO SILTY-CLAY	--	--	--	--	--
5	--	--	63	28-92	63	100	99-100	91-96	63-82	44-93	63	51-103	17-73	A-7-6/A-7-5	ORANGE-BROWN TO GREEN-GRAY SANDY CLAY TO CLAY	--	--	--	--	--
6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	WEATHERED LIMESTONE	--	--	--	--	--
7	22	6.7-68	22	33-67.8	16	--	--	--	--	3-50	--	--	--	A-8	DARK BROWN ORGANIC SAND TO ORGANIC SILTY SAND TO ORGANIC SILT TO MUCK	--	--	--	--	--
8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	DEBRIS INCLUDING WOOD	--	--	--	--	--

NOTES:

- THE MATERIAL FROM STRATUM 1 (A-3/A-2-4) APPEARS SATISFACTORY FOR USE IN THE EMBANKMENT WHEN UTILIZED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-001.
- THE MATERIAL FROM STRATUM 2 (A-2-4) APPEARS SATISFACTORY FOR USE IN THE EMBANKMENT WHEN UTILIZED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-001. HOWEVER, THIS MATERIAL IS LIKELY TO RETAIN EXCESS MOISTURE AND MAY BE DIFFICULT TO DRY AND COMPACT. IT SHOULD BE USED IN THE EMBANKMENT ABOVE THE WATER LEVEL EXISTING AT THE TIME OF CONSTRUCTION.
- THE MATERIAL FROM STRATA 3 AND 4 (A-2-6/A-4/A-6/A-7-6) IS PLASTIC MATERIAL AND SHALL BE REMOVED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-002 AND UTILIZED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-001.
- THE MATERIAL FROM STRATUM 5 (A-7-6/A-7-5) IS HIGH PLASTIC MATERIAL AND SHALL BE REMOVED IN ACCORDANCE WITH STANDARD PLANS INDEX 120-002 AND UTILIZED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-001.
- THE MATERIAL FROM STRATUM 7 (A-8) IS MUCK MATERIAL AND SHALL BE REMOVED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-002 AND UTILIZED IN ACCORDANCE WITH STANDARD PLANS, INDEX 12-001. STRATUM 7 WAS ENCOUNTERED WITHIN DEPRESSIONAL FEATURES FROM APPROXIMATE STATIONS 4483+40 TO 4484+80 Q CONST. SR 589, 4579+60 RT TO 4580+40 RT Q CONST. SR 589, 4645+60 RT TO 4646+20 RT Q CONST. SR 589, AND 2674+80 TO 2677+60 B RAMP 495 B. SOME STRATUM 7 MAY REMAIN IN PLACE WITHIN THESE LIMITS WHERE PARTIAL MUCK SUBSOIL EXCAVATION AND A TEMPORARY SURCHARGE PROGRAM WILL OCCUR. THE REMOVAL LIMITS ARE SHOWN ON THE MUCK DELINEATION PLAN SHEETS AND IN THE PROJECT PLANS. STRATUM 7 WAS ALSO ENCOUNTERED WITHIN POND BORING PBS-3-3B-8 AND IS AN ISOLATED CONDITION, BELOW THE PROPOSED POND BOTTOM, AND MAY REMAIN IN PLACE AT THIS LOCATION.

EMBANKMENT AND SUBGRADE MATERIAL

STRATA BOUNDARIES ARE APPROXIMATE. MAKE FINAL CHECK AFTER GRADING.

- ▼ - WATER TABLE ENCOUNTERED
- ▽ - ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- GNA- GROUNDWATER NOT APPARENT
- GNE- GROUNDWATER NOT ENCOUNTERED
- NP - NON-PLASTIC

- THE MATERIAL FROM STRATUM 6 IS NATURAL LIMESTONE. THIS MATERIAL IS ROCK AND IS LOCATED AT SHALLOW DEPTHS. SPECIAL TOOLS AND EQUIPMENT WILL BE REQUIRED TO EXCAVATE AND/OR DEWATER THIS MATERIAL. EXCAVATIONS INTO AND/OR THROUGH LIMESTONE WILL BE DIFFICULT AND WILL REQUIRE NON CONVENTIONAL CONSTRUCTION TECHNIQUES AND SPECIALIZED EQUIPMENT. LIMESTONE IS POROUS AND WILL BE DIFFICULT TO DEWATER.
- THE MATERIAL FROM STRATUM 8 CONSISTS OF WOOD DEBRIS. THIS MATERIAL WAS ENCOUNTERED FROM APPROXIMATE STATIONS 2674+80 TO 2677+60, BL RAMP 495 B. A COMBINATION OF DELETERIOUS MATERIAL INCLUDING STRATUM 7 AND STRATUM 8 WAS ENCOUNTERED WITHIN THESE LIMITS. THE REMOVAL LIMITS ARE SHOWN ON THE DELETERIOUS DELINEATION PLAN SHEET AND IN THE PROJECT PLANS.
- BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION ALONG THE PROJECT ALIGNMENT IS APPROXIMATELY +0 TO +10 FEET, NGVD 29 (APPROXIMATELY -1 TO +9 FEET, NAVD 88). ARTESIAN CONDITIONS WERE NOT ENCOUNTERED WITHIN THE BORINGS PERFORMED.
- THE "--" INDICATES AN UNMEASURED PARAMETER.

10/23/2024 4:16:55 PM bsawaska J:\6511\2021 Files\6511-21-184 Suncoast Pkwy Phase 3A\ORD\6511-21-184 Geotechnical\SSUVRD01.dgn

PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
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REVISIONS		ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ROADWAY SOIL SURVEY	SHEET NO.  EB-13
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				SR 589	CITRUS	442764-2-52-01		

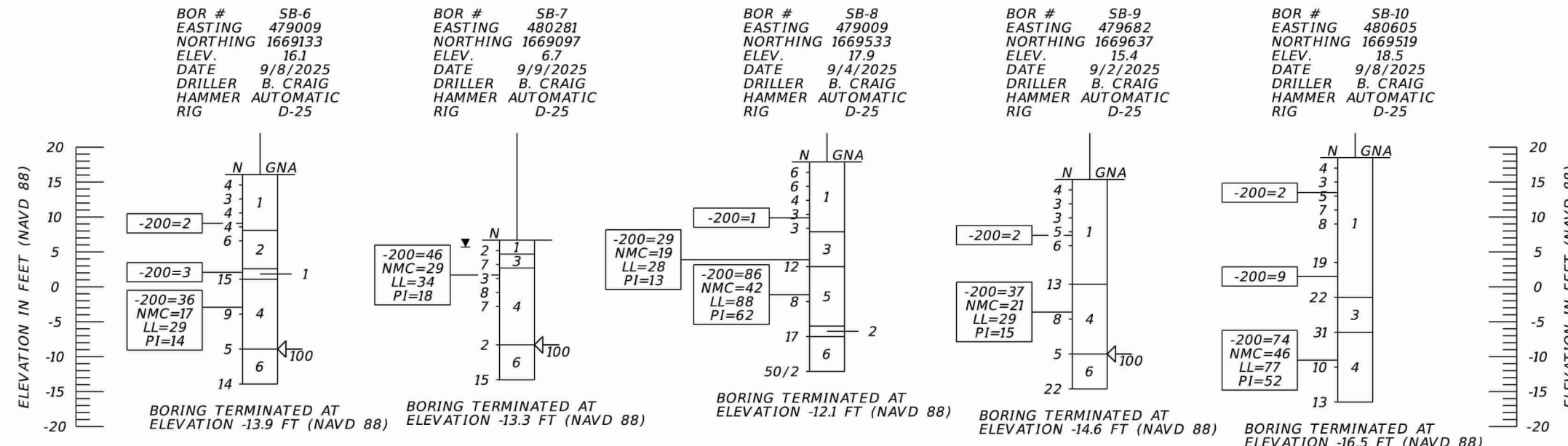
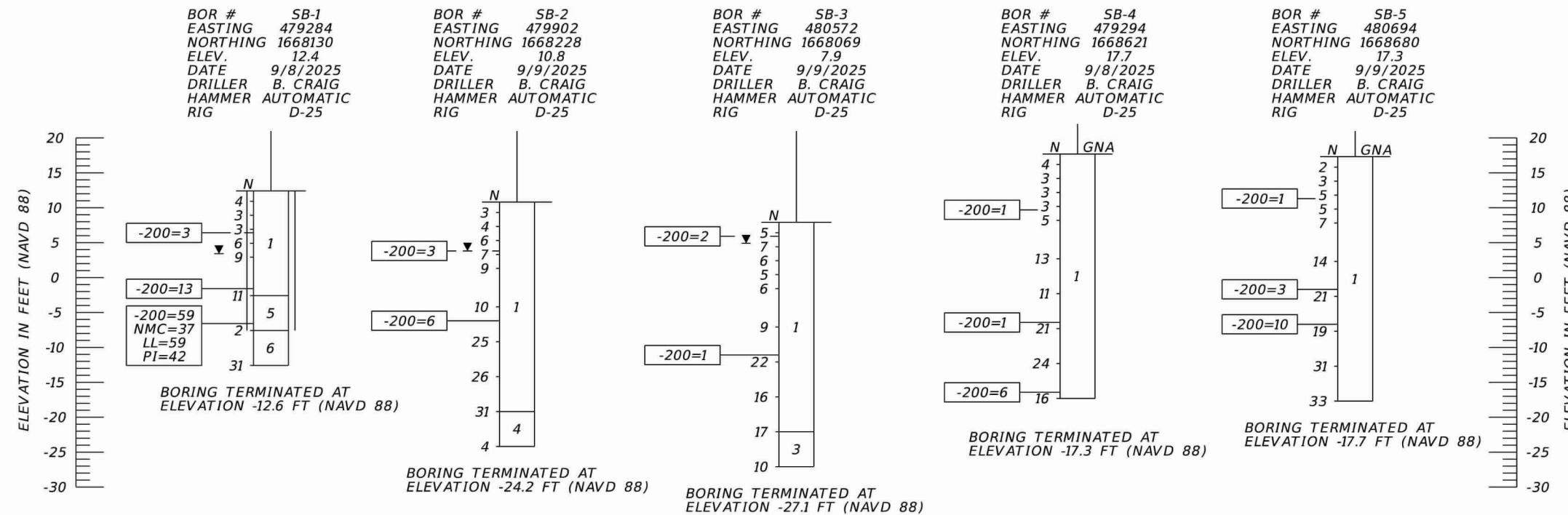
MARC E. NOVAK, PH.D., P.E.  
LICENSE NUMBER: 67431  
TIERRA, INC.  
7351 TEMPLE TERRACE HIGHWAY  
TAMPA, FLORIDA 33637

LEGEND

1. GRAY TO ORANGE-BROWN TO BROWN SAND TO SILTY SAND (A-3/A-2-4)
  2. GRAY TO ORANGE-BROWN TO BROWN SILTY SAND (A-2-4)
  3. GRAY TO ORANGE-BROWN CLAYEY SAND (A-2-6/A-2-7)
  4. ORANGE-BROWN TO BLUE-GRAY CLAYEY SAND TO SILTY-CLAY (A-4/A-6/A-7-6)
  5. ORANGE-BROWN TO GREEN-GRAY SANDY CLAY TO CLAY (A-7-6/A-7-5)
  6. WEATHERED LIMESTONE
- A-3 AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- 50/4 NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
- WH SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
- WR SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD
- 200 PERCENT PASSING #200 SIEVE  
 NMC NATURAL MOISTURE CONTENT (%)  
 LL LIQUID LIMIT (%)  
 PI PLASTICITY INDEX (%)  
 NP NON-PLASTIC
- NAVD 88 NORTH AMERICAN VERTICAL DATUM OF 1988
- ▼ GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- ←100 LOSS OF CIRCULATION OF DRILLING FLUID (%)
- || CASING
- GNA GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
- EASTING EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.

NOTE: THE LOCATIONS OF THE "SB" BORINGS WERE PROVIDED BY THE PROJECT SURVEYOR. THE LOCATIONS OF THE "B" BORINGS WERE ESTIMATED BASED ON COORDINATES PROVIDED BY OTHERS AND SHOULD BE CONSIDERED APPROXIMATE.

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24



PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
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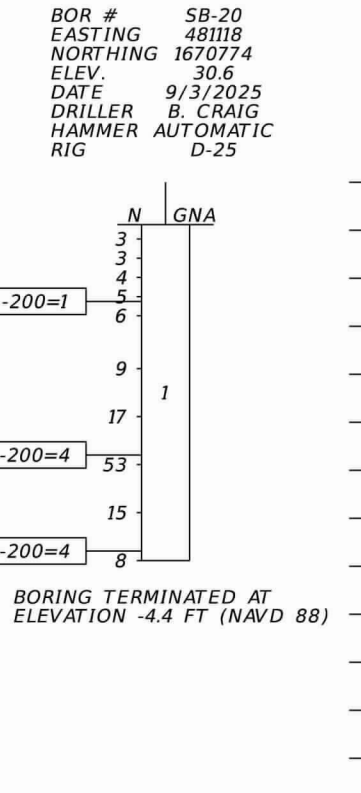
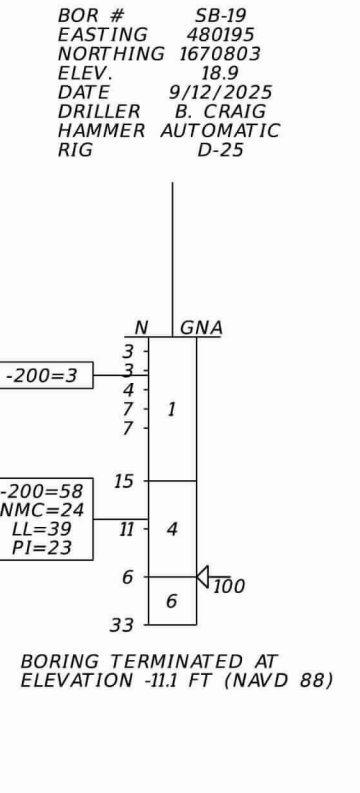
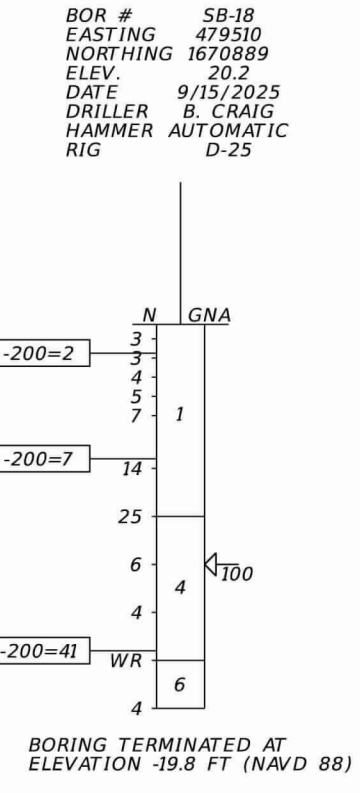
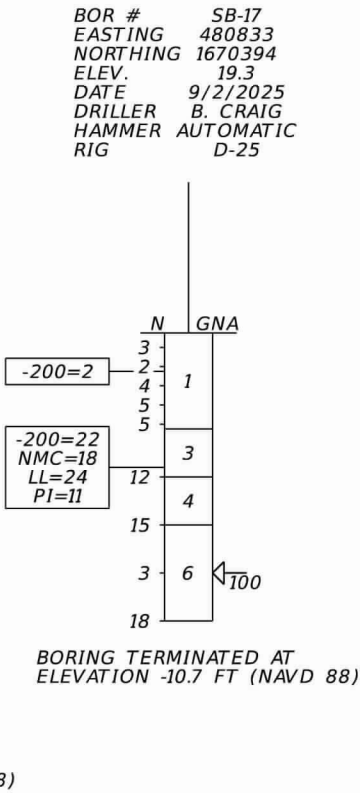
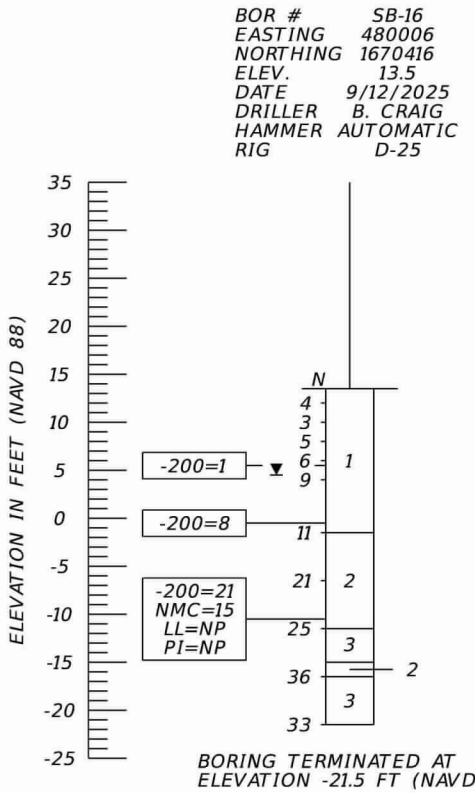
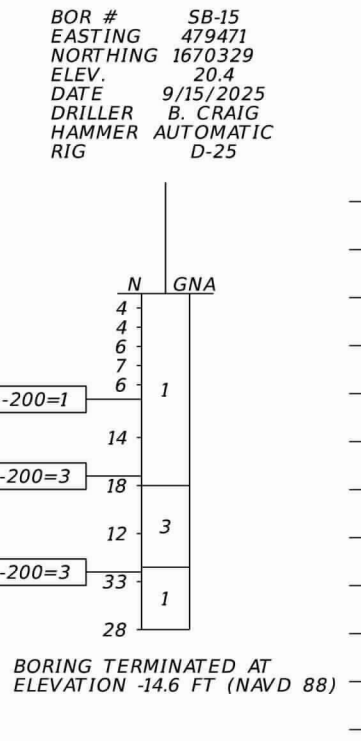
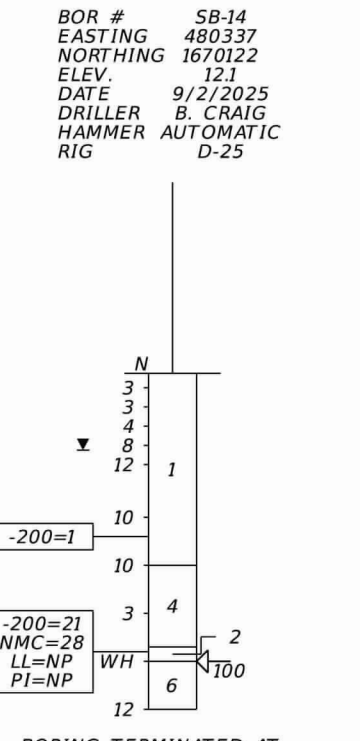
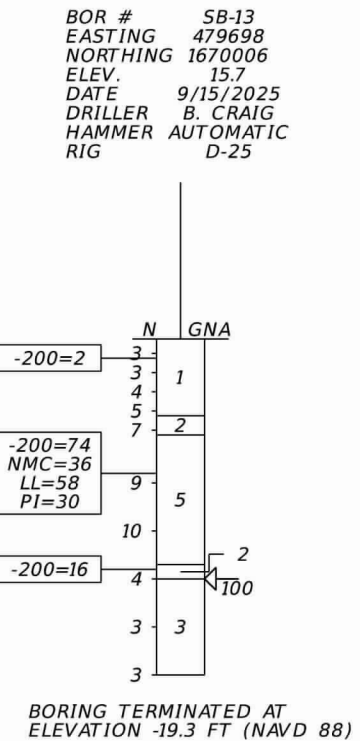
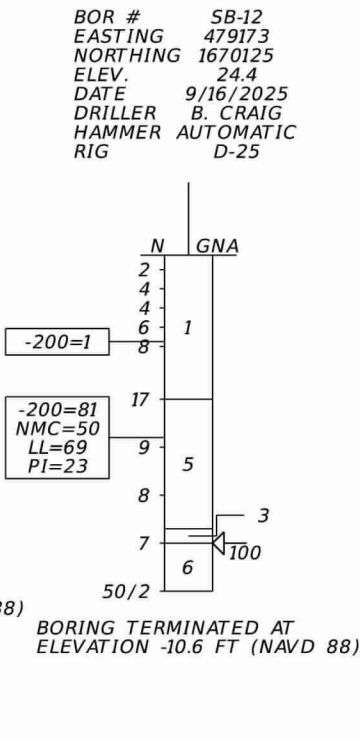
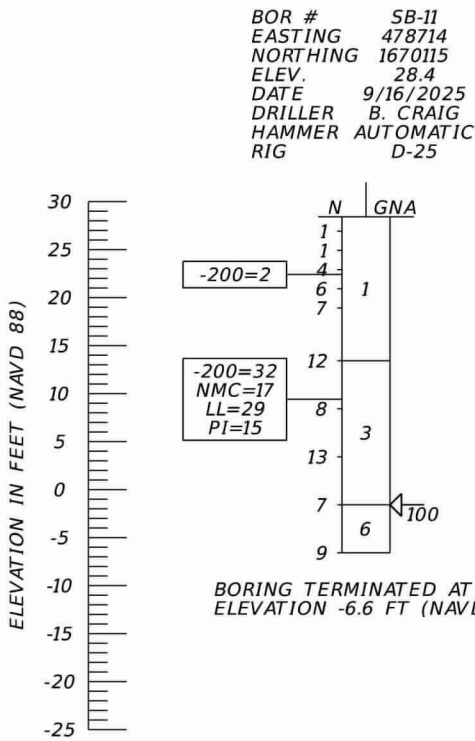
REVISIONS		ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
			MARC E. NOVAK, PH.D., P.E. LICENSE NUMBER: 67431 TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637	SR 589	CITRUS	442764-2-52-01	EB-14

SOIL PROFILES (1)

LEGEND

1. GRAY TO ORANGE-BROWN TO BROWN SAND TO SILTY SAND (A-3/A-2-4)
  2. GRAY TO ORANGE-BROWN TO BROWN SILTY SAND (A-2-4)
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- WR SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD
- 200 PERCENT PASSING #200 SIEVE  
 NMC NATURAL MOISTURE CONTENT (%)  
 LL LIQUID LIMIT (%)  
 PI PLASTICITY INDEX (%)  
 NP NON-PLASTIC
- NAVD 88 NORTH AMERICAN VERTICAL DATUM OF 1988
- ▼ GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- ←100 LOSS OF CIRCULATION OF DRILLING FLUID (%)
- || CASING
- GNA GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
- EASTING EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.
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			MARC E. NOVAK, PH.D., P.E. LICENSE NUMBER: 67431 TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637	SR 589	CITRUS	442764-2-52-01	EB-15

SOIL PROFILES (2)

PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
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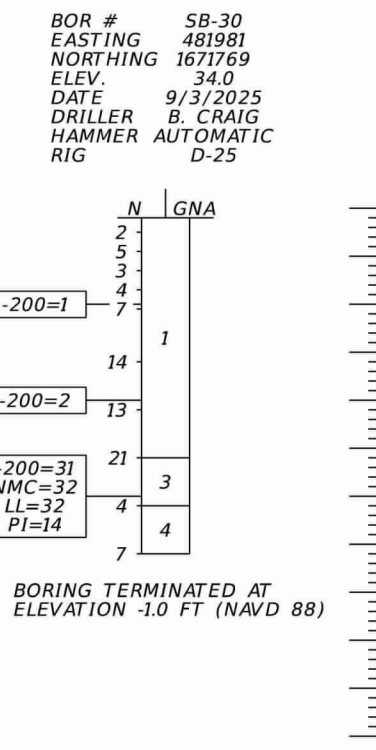
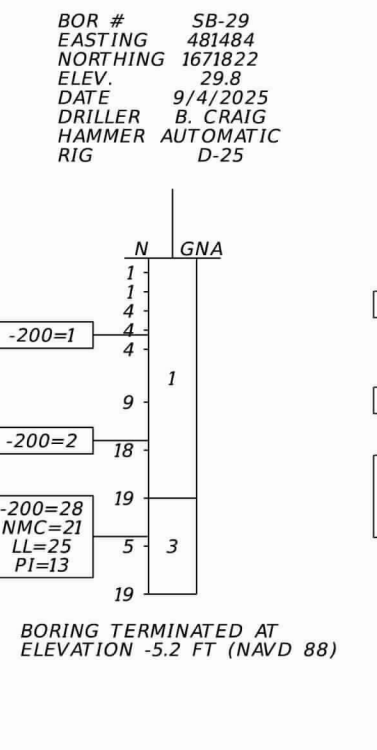
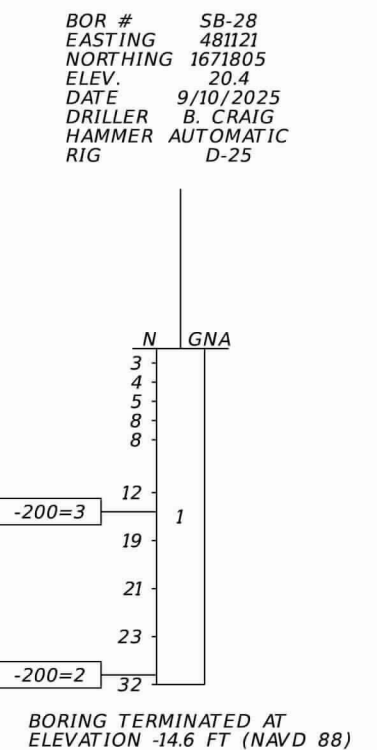
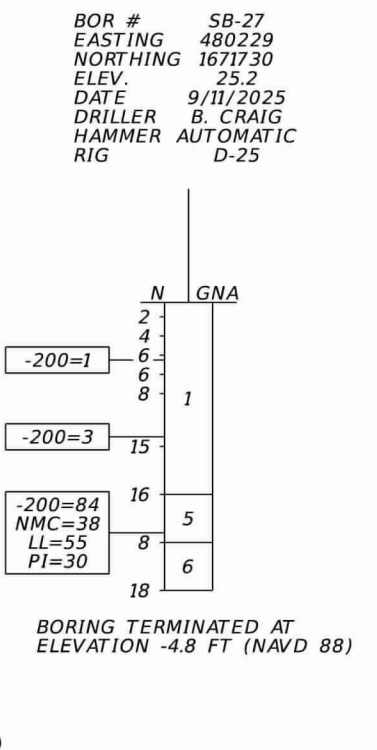
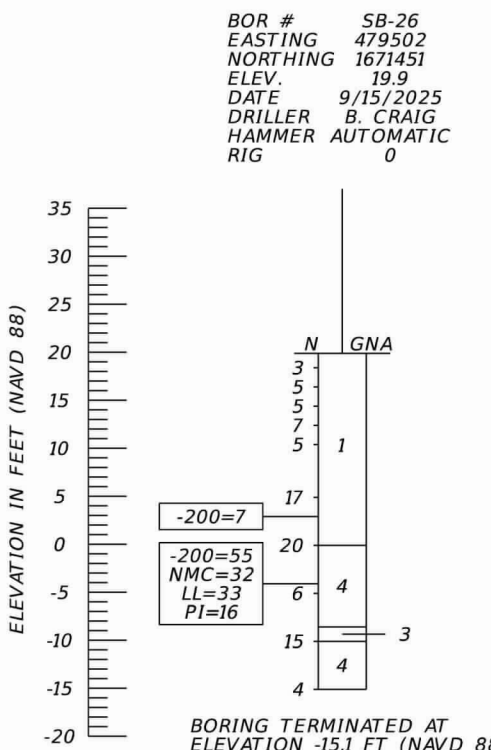
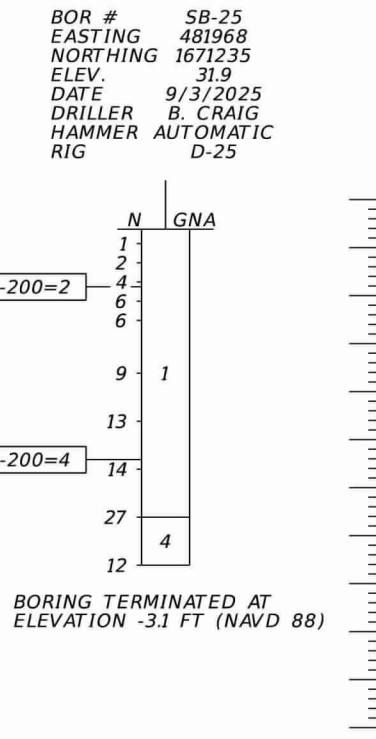
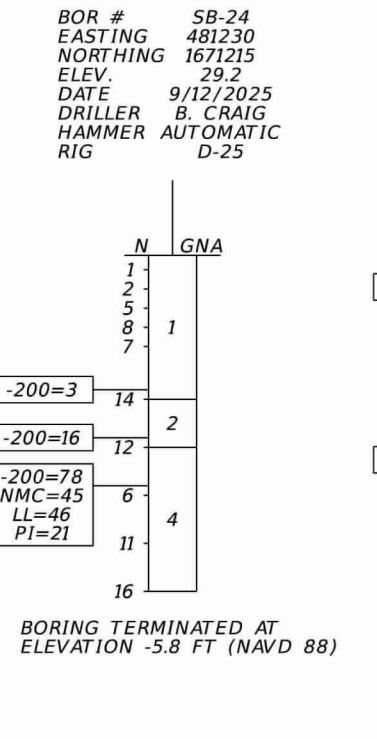
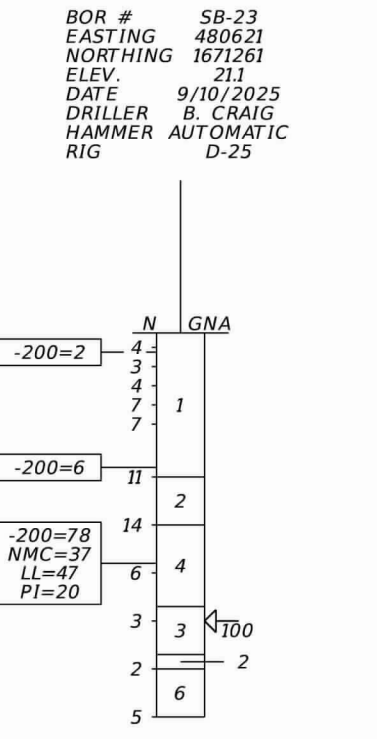
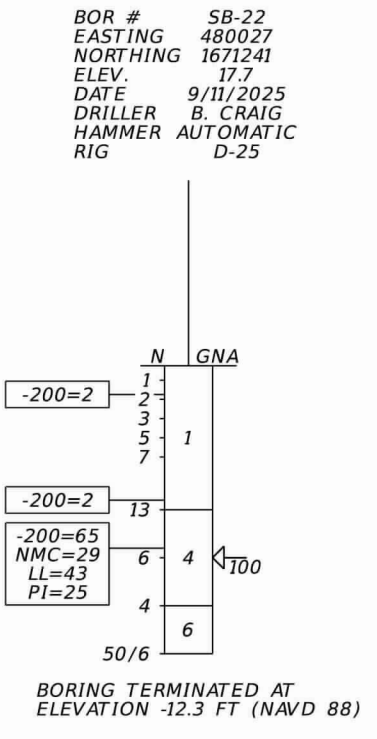
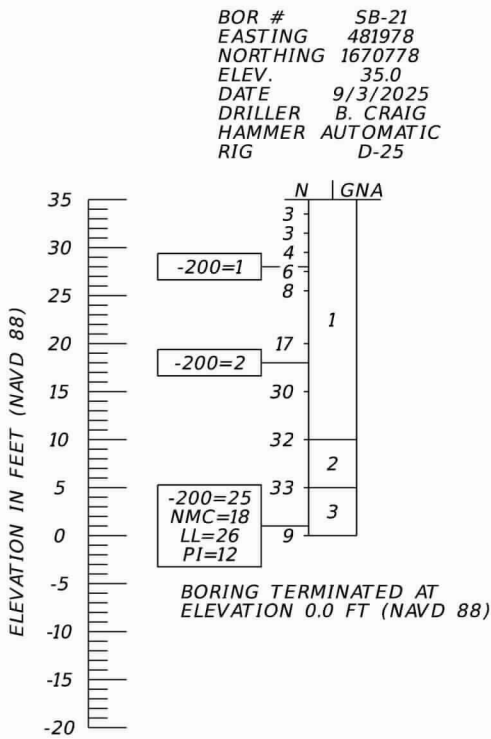
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LEGEND

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  2. GRAY TO ORANGE-BROWN TO BROWN SILTY SAND (A-2-4)
  3. GRAY TO ORANGE-BROWN CLAYEY SAND (A-2-6/A-2-7)
  4. ORANGE-BROWN TO BLUE-GRAY CLAYEY SAND TO SILTY-CLAY (A-4/A-6/A-7-6)
  5. ORANGE-BROWN TO GREEN-GRAY SANDY CLAY TO CLAY (A-7-6/A-7-5)
  6. WEATHERED LIMESTONE
- A-3 AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
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- 50/4 NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
- WH SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
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- 200 PERCENT PASSING #200 SIEVE  
 NMC NATURAL MOISTURE CONTENT (%)  
 LL LIQUID LIMIT (%)  
 PI PLASTICITY INDEX (%)  
 NP NON-PLASTIC
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REVISIONS		ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
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			MARC E. NOVAK, PH.D., P.E. LICENSE NUMBER: 67431 TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637	SR 589	CITRUS	442764-2-52-01	EB-16

SOIL PROFILES (3)

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 LL LIQUID LIMIT (%)  
 PI PLASTICITY INDEX (%)  
 NP NON-PLASTIC
- NAVD 88 NORTH AMERICAN VERTICAL DATUM OF 1988
- ▼ GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- ←100 LOSS OF CIRCULATION OF DRILLING FLUID (%)
- || CASING
- GNA GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
- EASTING EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.
- NOTE: THE LOCATIONS OF THE "SB" BORINGS WERE PROVIDED BY THE PROJECT SURVEYOR. THE LOCATIONS OF THE "B" BORINGS WERE ESTIMATED BASED ON COORDINATES PROVIDED BY OTHERS AND SHOULD BE CONSIDERED APPROXIMATE.

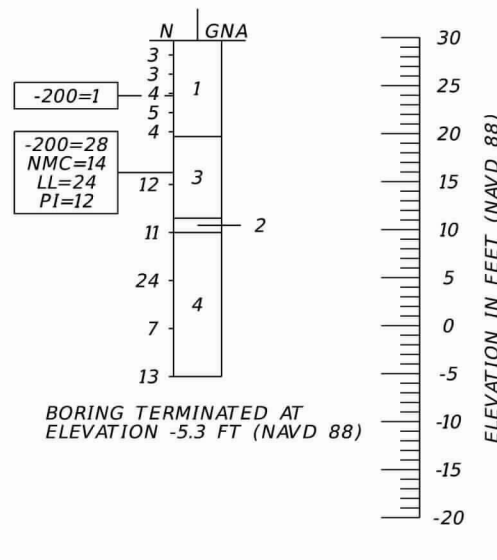
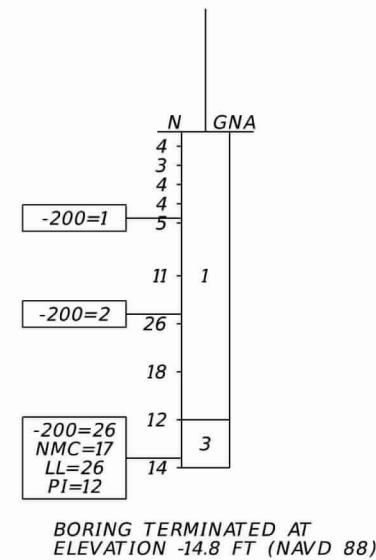
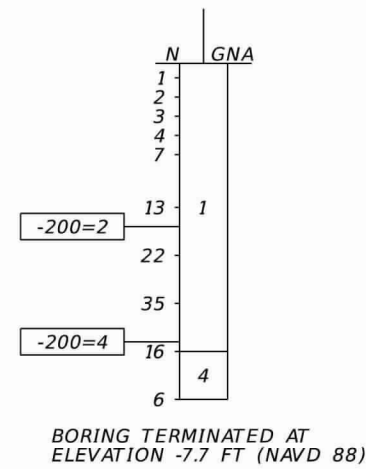
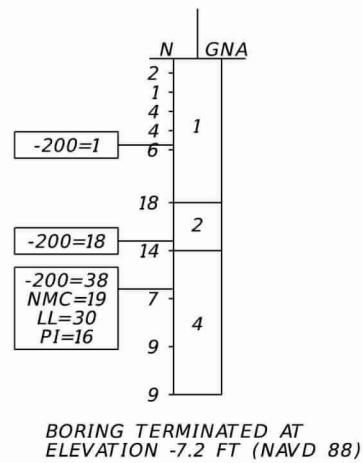
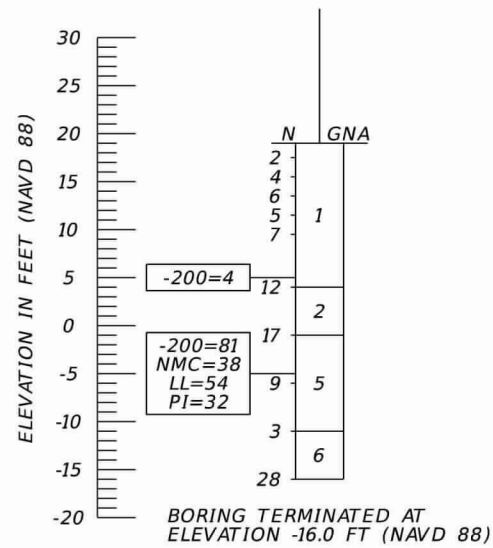
BOR # SB-31  
 EASTING 480336  
 NORTHING 1672136  
 ELEV. 19.0  
 DATE 9/11/2025  
 DRILLER B. CRAIG  
 HAMMER AUTOMATIC  
 RIG D-25

BOR # SB-32  
 EASTING 481192  
 NORTHING 1672156  
 ELEV. 27.8  
 DATE 9/10/2025  
 DRILLER B. CRAIG  
 HAMMER AUTOMATIC  
 RIG D-25

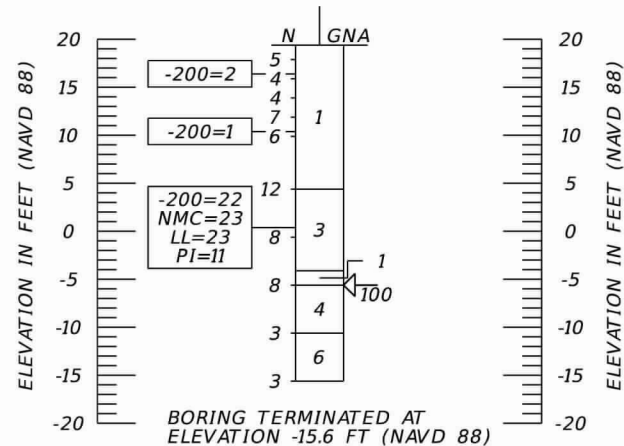
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 NORTHING 1672182  
 ELEV. 27.3  
 DATE 9/4/2025  
 DRILLER B. CRAIG  
 HAMMER AUTOMATIC  
 RIG D-25

BOR # SB-34  
 EASTING 480205  
 NORTHING 1672598  
 ELEV. 20.2  
 DATE 9/11/2025  
 DRILLER B. CRAIG  
 HAMMER AUTOMATIC  
 RIG D-25

BOR # SB-35  
 EASTING 481099  
 NORTHING 1672625  
 ELEV. 29.7  
 DATE 9/10/2025  
 DRILLER B. CRAIG  
 HAMMER AUTOMATIC  
 RIG D-25



BOR # SB-36  
 EASTING 481896  
 NORTHING 1672608  
 ELEV. 19.4  
 DATE 9/4/2025  
 DRILLER B. CRAIG  
 HAMMER AUTOMATIC  
 RIG D-25



	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
 For Construction permits, the permittees shall notify, in writing, the SWFWMD Tampa Regulation Department when construction begins.



THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS		ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.	
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				MARC E. NOVAK, PH.D., P.E. LICENSE NUMBER: 67431 TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637	SR 589	CITRUS	442764-2-52-01	EB-17

SOIL PROFILES (4)

BOR # B-1  
EASTING 480468  
NORTHING 1668459  
ELEV. 5.0  
DATE 2/12/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC RIG D-25

BOR # B-2  
EASTING 479969  
NORTHING 1668455  
ELEV. 12.9  
DATE 2/11/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC RIG D-25

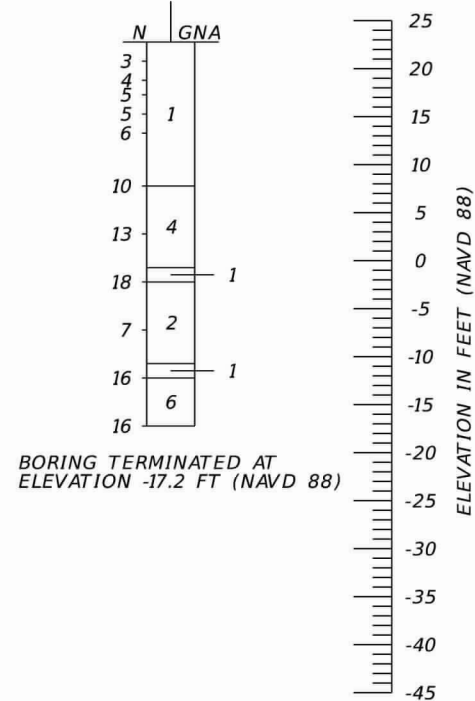
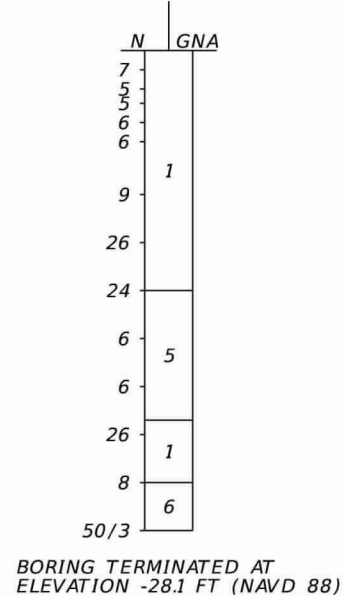
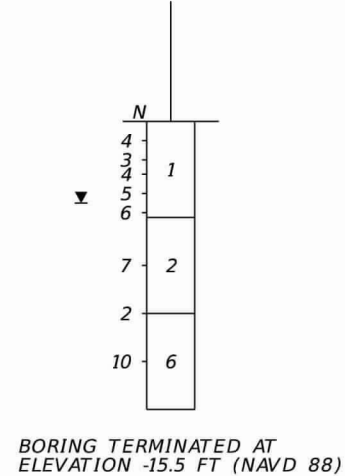
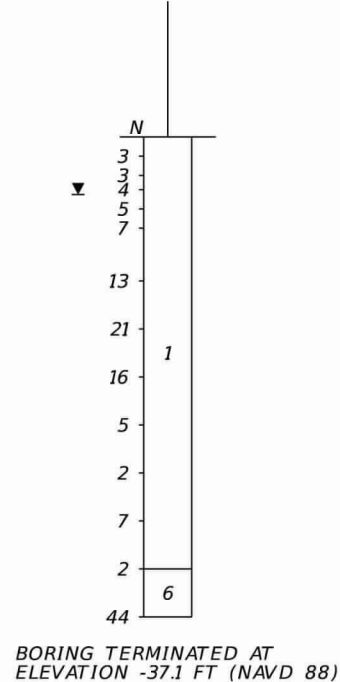
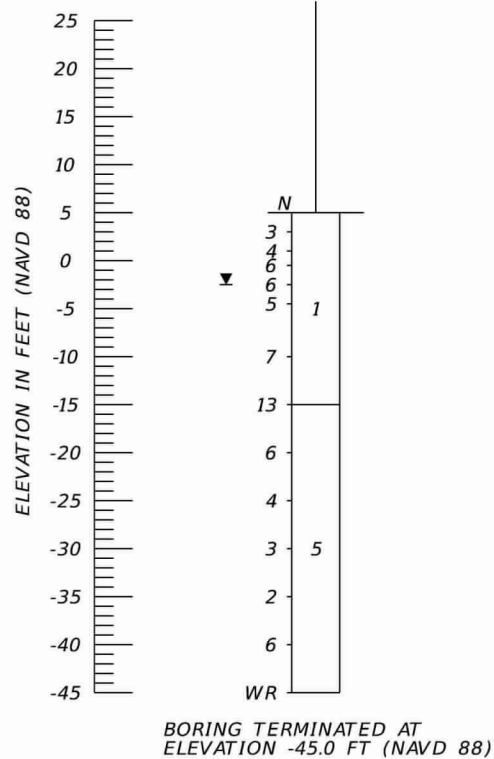
BOR # B-3  
EASTING 479470  
NORTHING 1668442  
ELEV. 14.5  
DATE 2/10/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC RIG D-25

BOR # B-4  
EASTING 479009  
NORTHING 1668450  
ELEV. 21.9  
DATE 2/5/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC RIG D-25

BOR # B-5  
EASTING 478845  
NORTHING 1668875  
ELEV. 22.8  
DATE 2/7/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC RIG D-25

LEGEND

1. GRAY TO ORANGE-BROWN TO BROWN SAND TO SILTY SAND (A-3/A-2-4)
  2. GRAY TO ORANGE-BROWN TO BROWN SILTY SAND (A-2-4)
  3. GRAY TO ORANGE-BROWN CLAYEY SAND (A-2-6/A-2-7)
  4. ORANGE-BROWN TO BLUE-GRAY CLAYEY SAND TO SILTY-CLAY (A-4/A-6/A-7-6)
  5. ORANGE-BROWN TO GREEN-GRAY SANDY CLAY TO CLAY (A-7-6/A-7-5)
  6. WEATHERED LIMESTONE
- A-3 AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- 50/4 NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
- WH SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
- WR SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD
- 200 PERCENT PASSING #200 SIEVE  
NMC NATURAL MOISTURE CONTENT (%)  
LL LIQUID LIMIT (%)  
PI PLASTICITY INDEX (%)  
NP NON-PLASTIC
- NAVD 88 NORTH AMERICAN VERTICAL DATUM OF 1988
- ▽ GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- ←100 LOSS OF CIRCULATION OF DRILLING FLUID (%)
- || CASING
- GNA GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
- EASTING EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.



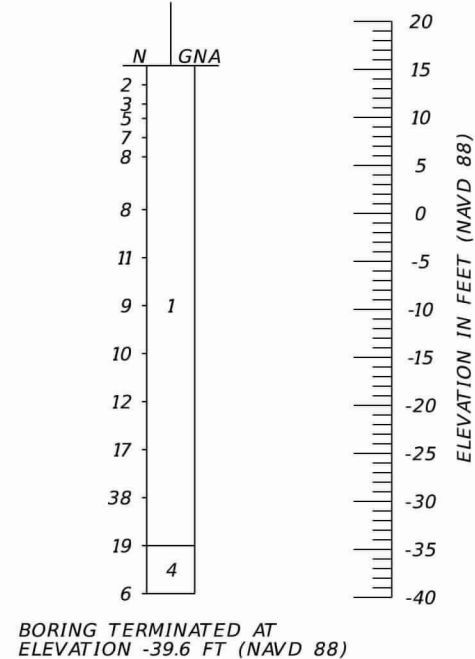
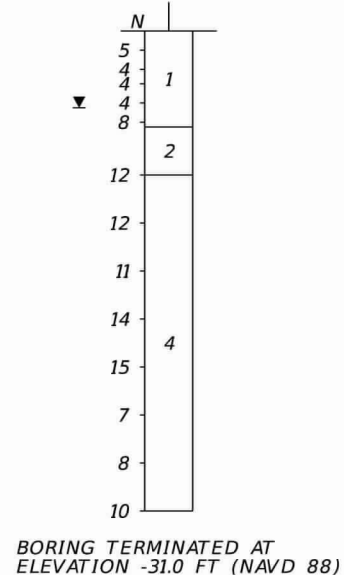
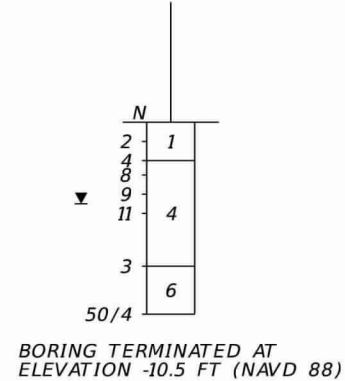
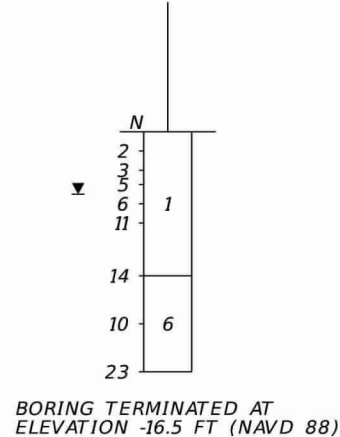
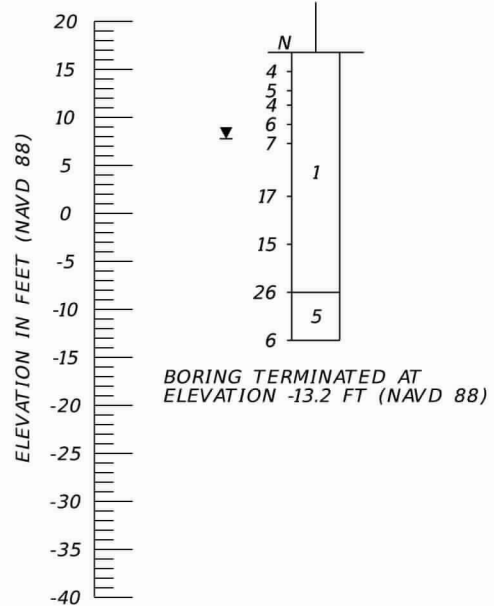
BOR # B-6  
EASTING 479128  
NORTHING 1668879  
ELEV. 16.8  
DATE 2/5/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC RIG D-25

BOR # B-7  
EASTING 479799  
NORTHING 1668863  
ELEV. 8.5  
DATE 2/10/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC RIG D-25

BOR # B-8  
EASTING 480146  
NORTHING 1668868  
ELEV. 9.5  
DATE 2/11/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC RIG D-25

BOR # B-9  
EASTING 480474  
NORTHING 1668870  
ELEV. 19.0  
DATE 2/12/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC RIG D-25

BOR # B-10  
EASTING 480459  
NORTHING 1669362  
ELEV. 15.4  
DATE 2/6/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC RIG D-25



	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
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VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

REVISIONS		ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
			MARC E. NOVAK, PH.D., P.E. LICENSE NUMBER: 67431 TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637	SR 589	CITRUS	442764-2-52-01	EB-18

SOIL PROFILES (5)

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PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
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BOR # B-11  
EASTING 480057  
NORTHING 1669344  
ELEV. 9.0  
DATE 2/10/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC  
RIG D-25

BOR # B-12  
EASTING 479605  
NORTHING 1669355  
ELEV. 10.9  
DATE 2/10/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC  
RIG D-25

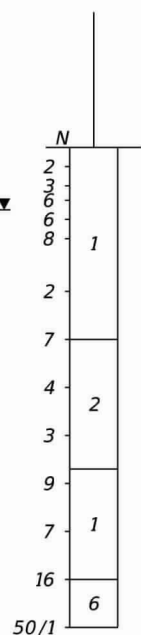
BOR # B-13  
EASTING 479196  
NORTHING 1669367  
ELEV. 20.0  
DATE 2/5/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC  
RIG D-25

BOR # B-14  
EASTING 478695  
NORTHING 1669360  
ELEV. 12.3  
DATE 2/7/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC  
RIG D-25

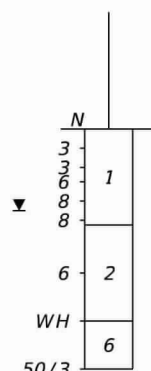
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EASTING 478528  
NORTHING 1669828  
ELEV. 19.2  
DATE 2/7/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC  
RIG D-25

LEGEND

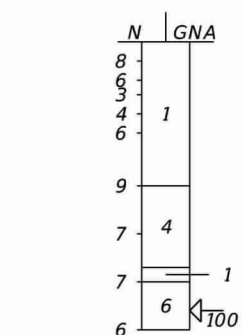
1. GRAY TO ORANGE-BROWN TO BROWN SAND TO SILTY SAND (A-3/A-2-4)
  2. GRAY TO ORANGE-BROWN TO BROWN SILTY SAND (A-2-4)
  3. GRAY TO ORANGE-BROWN CLAYEY SAND (A-2-6/A-2-7)
  4. ORANGE-BROWN TO BLUE-GRAY CLAYEY SAND TO SILTY-CLAY (A-4/A-6/A-7-6)
  5. ORANGE-BROWN TO GREEN-GRAY SANDY CLAY TO CLAY (A-7-6/A-7-5)
  6. WEATHERED LIMESTONE
- A-3 AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- 50/4 NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
- WH SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
- WR SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD
- 200 PERCENT PASSING #200 SIEVE  
NMC NATURAL MOISTURE CONTENT (%)  
LL LIQUID LIMIT (%)  
PI PLASTICITY INDEX (%)  
NP NON-PLASTIC
- NAVD 88 NORTH AMERICAN VERTICAL DATUM OF 1988
- ▼ GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- ←100 LOSS OF CIRCULATION OF DRILLING FLUID (%)
- || CASING
- GNA GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.



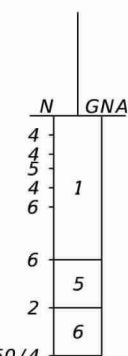
BORING TERMINATED AT ELEVATION -41.0 FT (NAVD 88)



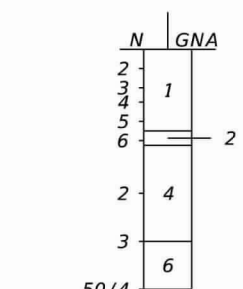
BORING TERMINATED AT ELEVATION -14.1 FT (NAVD 88)



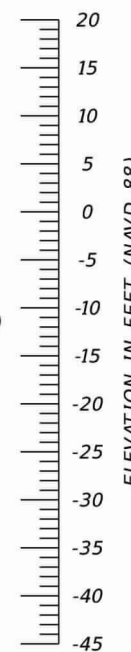
BORING TERMINATED AT ELEVATION -10.0 FT (NAVD 88)



BORING TERMINATED AT ELEVATION -12.7 FT (NAVD 88)



BORING TERMINATED AT ELEVATION -5.8 FT (NAVD 88)



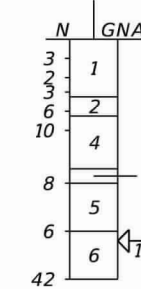
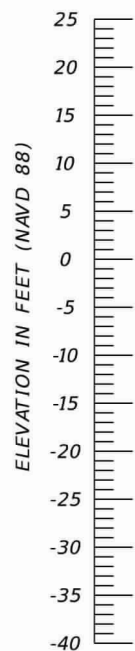
BOR # B-16  
EASTING 478963  
NORTHING 1669818  
ELEV. 22.9  
DATE 2/7/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC  
RIG D-25

BOR # B-17  
EASTING 479461  
NORTHING 1669814  
ELEV. 18.6  
DATE 2/10/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC  
RIG D-25

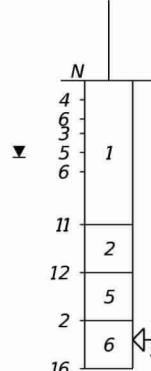
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NORTHING 1669810  
ELEV. 16.4  
DATE 2/6/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC  
RIG D-25

BOR # B-19  
EASTING 480459  
NORTHING 1669805  
ELEV. 20.9  
DATE 2/6/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC  
RIG D-25

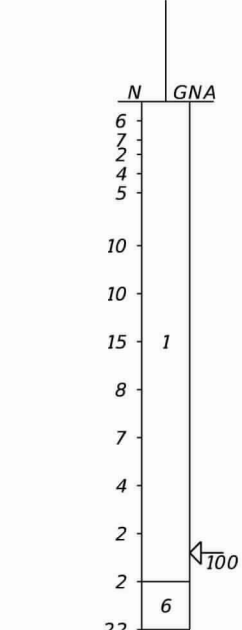
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NORTHING 1670959  
ELEV. 18.7  
DATE 2/12/2025  
DRILLER J. HERNANDEZ  
HAMMER AUTOMATIC  
RIG D-25



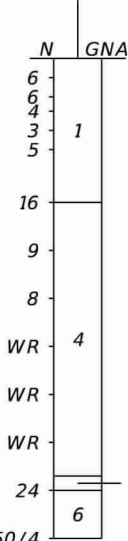
BORING TERMINATED AT ELEVATION -2.1 FT (NAVD 88)



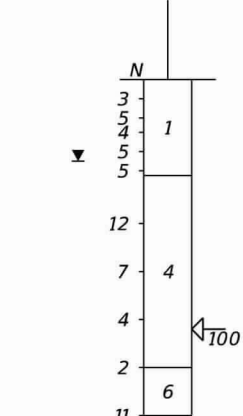
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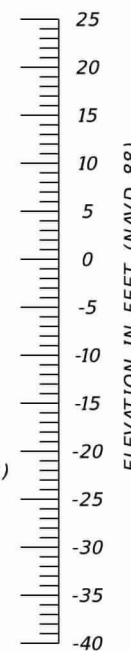
BORING TERMINATED AT ELEVATION -38.6 FT (NAVD 88)



BORING TERMINATED AT ELEVATION -29.1 FT (NAVD 88)



BORING TERMINATED AT ELEVATION -16.3 FT (NAVD 88)



EASTING EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.

NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.

NOTE: THE LOCATIONS OF THE "SB" BORINGS WERE PROVIDED BY THE PROJECT SURVEYOR. THE LOCATIONS OF THE "B" BORINGS WERE ESTIMATED BASED ON COORDINATES PROVIDED BY OTHERS AND SHOULD BE CONSIDERED APPROXIMATE.

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
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REVISIONS		ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
				MARC E. NOVAK, PH.D., P.E. LICENSE NUMBER: 67431 TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637	SR 589	CITRUS	442764-2-52-01

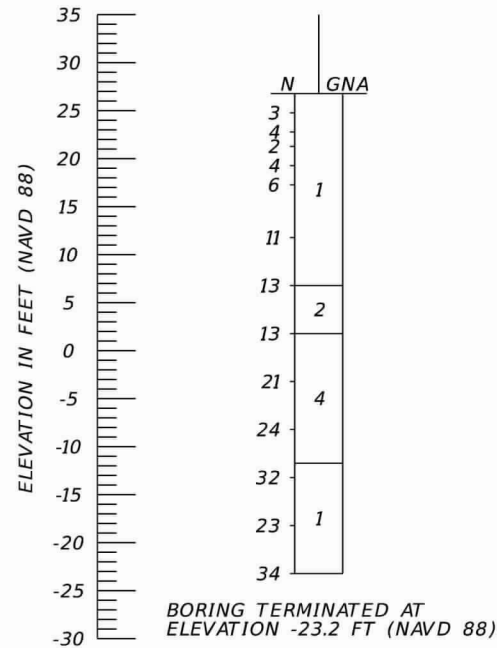
SOIL PROFILES (6)

EB-19

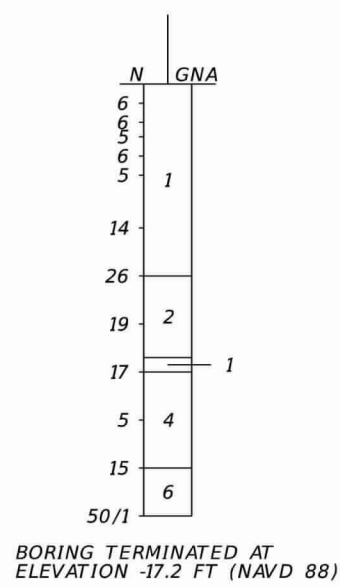
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PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
 For Construction permits, the permittee shall notify, in writing, the  
 SWFWMD Tampa Regulation Department when construction begins.

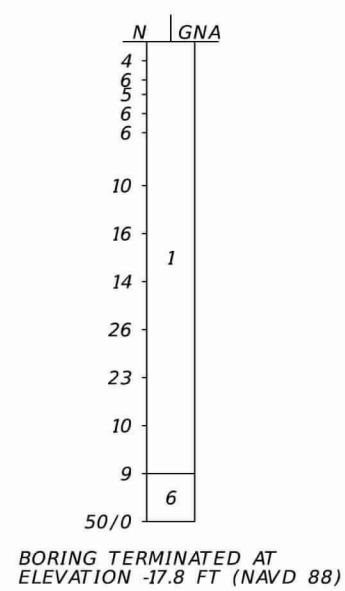
BOR # B-21  
 EASTING 480859  
 NORTHING 1671004  
 ELEV. 26.8  
 DATE 2/18/2025  
 DRILLER J. HERNANDEZ  
 HAMMER AUTOMATIC  
 RIG D-25



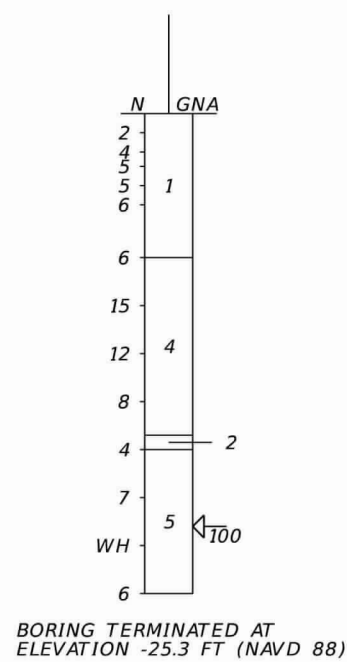
BOR # B-22  
 EASTING 481370  
 NORTHING 1671014  
 ELEV. 27.8  
 DATE 2/18/2025  
 DRILLER J. HERNANDEZ  
 HAMMER AUTOMATIC  
 RIG D-25



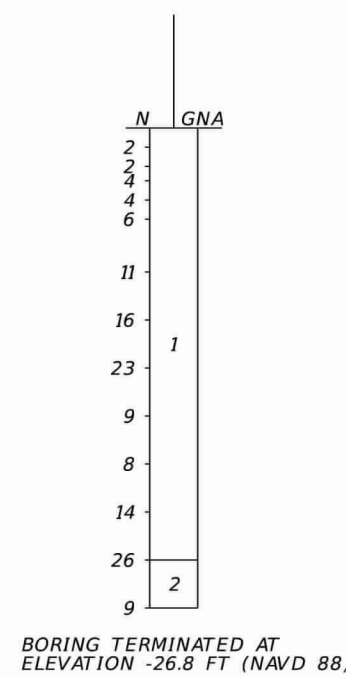
BOR # B-23  
 EASTING 481837  
 NORTHING 1671012  
 ELEV. 32.2  
 DATE 2/18/2025  
 DRILLER J. HERNANDEZ  
 HAMMER AUTOMATIC  
 RIG D-25



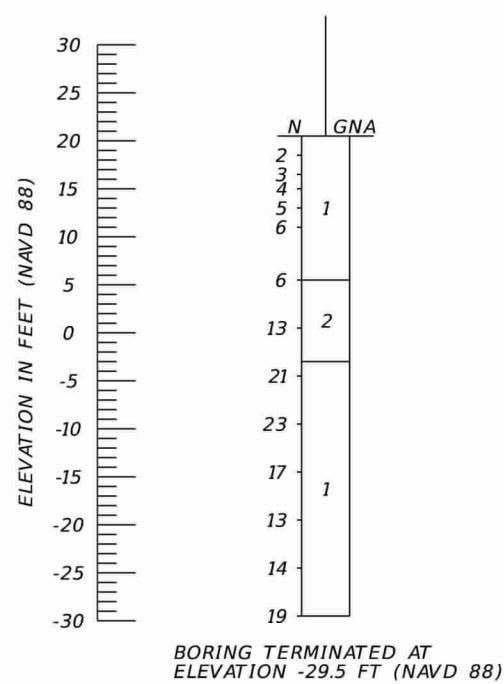
BOR # B-24  
 EASTING 481819  
 NORTHING 1671555  
 ELEV. 24.7  
 DATE 2/18/2025  
 DRILLER J. HERNANDEZ  
 HAMMER AUTOMATIC  
 RIG D-25



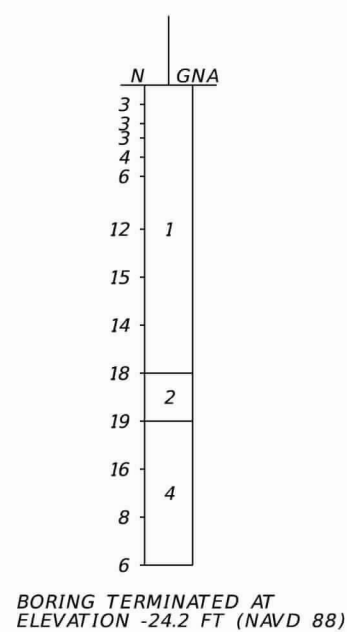
BOR # B-25  
 EASTING 481363  
 NORTHING 1671542  
 ELEV. 23.2  
 DATE 2/18/2025  
 DRILLER J. HERNANDEZ  
 HAMMER AUTOMATIC  
 RIG D-25



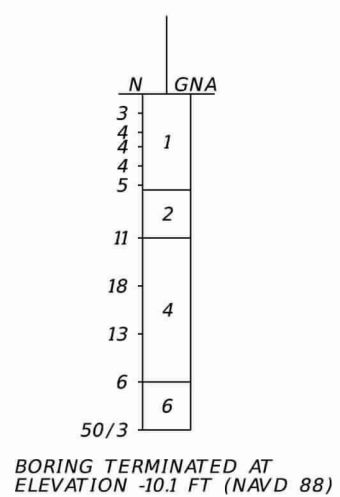
BOR # B-26  
 EASTING 480866  
 NORTHING 1671552  
 ELEV. 20.5  
 DATE 2/18/2025  
 DRILLER J. HERNANDEZ  
 HAMMER AUTOMATIC  
 RIG D-25



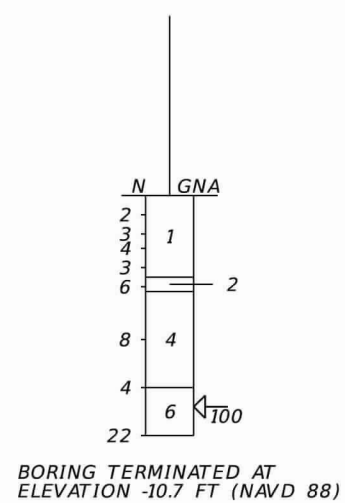
BOR # B-27  
 EASTING 480447  
 NORTHING 1671542  
 ELEV. 25.8  
 DATE 2/13/2025  
 DRILLER J. HERNANDEZ  
 HAMMER AUTOMATIC  
 RIG D-25



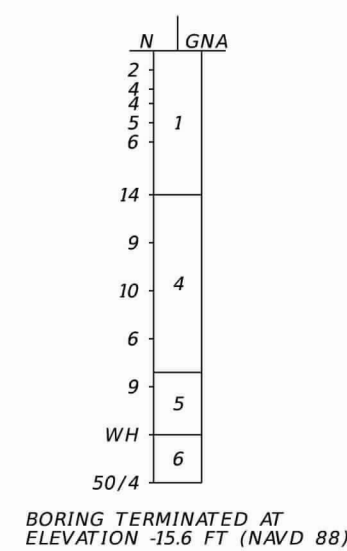
BOR # B-28  
 EASTING 480454  
 NORTHING 1671999  
 ELEV. 24.9  
 DATE 2/13/2025  
 DRILLER J. HERNANDEZ  
 HAMMER AUTOMATIC  
 RIG D-25



BOR # B-29  
 EASTING 480851  
 NORTHING 1672009  
 ELEV. 14.3  
 DATE 2/19/2025  
 DRILLER J. HERNANDEZ  
 HAMMER AUTOMATIC  
 RIG D-25



BOR # B-30  
 EASTING 481327  
 NORTHING 1672012  
 ELEV. 29.4  
 DATE 2/18/2025  
 DRILLER J. HERNANDEZ  
 HAMMER AUTOMATIC  
 RIG D-25



LEGEND

1. GRAY TO ORANGE-BROWN TO BROWN SAND TO SILTY SAND (A-3/A-2-4)
  2. GRAY TO ORANGE-BROWN TO BROWN SILTY SAND (A-2-4)
  3. GRAY TO ORANGE-BROWN CLAYEY SAND (A-2-6/A-2-7)
  4. ORANGE-BROWN TO BLUE-GRAY CLAYEY SAND TO SILTY-CLAY (A-4/A-6/A-7-6)
  5. ORANGE-BROWN TO GREEN-GRAY SANDY CLAY TO CLAY (A-7-6/A-7-5)
  6. WEATHERED LIMESTONE
- A-3 AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- 50/4 NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
- WH SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
- WR SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD
- 200 PERCENT PASSING #200 SIEVE
- NMC NATURAL MOISTURE CONTENT (%)
- LL LIQUID LIMIT (%)
- PI PLASTICITY INDEX (%)
- NP NON-PLASTIC
- NAVD 88 NORTH AMERICAN VERTICAL DATUM OF 1988
- ▼ GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- ←100 LOSS OF CIRCULATION OF DRILLING FLUID (%)
- || CASING
- GNA GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
- EASTING EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.
- NOTE: THE LOCATIONS OF THE "SB" BORINGS WERE PROVIDED BY THE PROJECT SURVEYOR. THE LOCATIONS OF THE "B" BORINGS WERE ESTIMATED BASED ON COORDINATES PROVIDED BY OTHERS AND SHOULD BE CONSIDERED APPROXIMATE.

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

REVISIONS				ENGINEER OF RECORD			STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	MARC E. NOVAK, PH.D., P.E. LICENSE NUMBER: 67431 TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637			ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
							SR 589	CITRUS	442764-2-52-01	EB-20

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

BOR # B-31  
 EASTING 481792  
 NORTHING 1672027  
 ELEV. 29.0  
 DATE 2/18/2025  
 DRILLER J. HERNANDEZ  
 HAMMER AUTOMATIC  
 RIG D-25

BOR # B-32  
 EASTING 481791  
 NORTHING 1672405  
 ELEV. 20.9  
 DATE 2/17/2025  
 DRILLER J. HERNANDEZ  
 HAMMER AUTOMATIC  
 RIG D-25

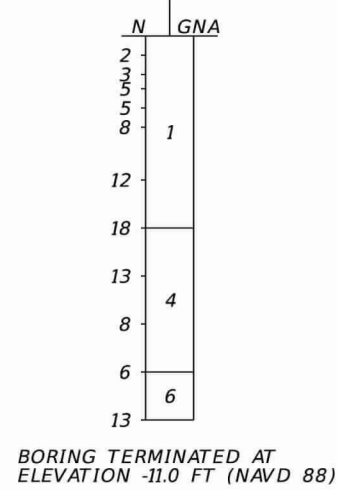
BOR # B-33  
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 NORTHING 1672390  
 ELEV. 26.4  
 DATE 2/14/2025  
 DRILLER J. HERNANDEZ  
 HAMMER AUTOMATIC  
 RIG D-25

BOR # B-34  
 EASTING 480865  
 NORTHING 1672397  
 ELEV. 19.3  
 DATE 2/14/2025  
 DRILLER J. HERNANDEZ  
 HAMMER AUTOMATIC  
 RIG D-25

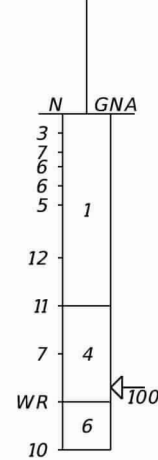
BOR # B-35  
 EASTING 480461  
 NORTHING 1672416  
 ELEV. 14.2  
 DATE 2/14/2025  
 DRILLER J. HERNANDEZ  
 HAMMER AUTOMATIC  
 RIG D-25

LEGEND

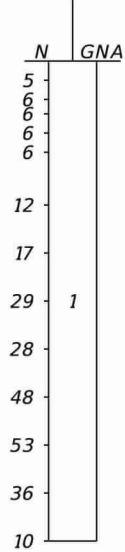
1. GRAY TO ORANGE-BROWN TO BROWN SAND TO SILTY SAND (A-3/A-2-4)
  2. GRAY TO ORANGE-BROWN TO BROWN SILTY SAND (A-2-4)
  3. GRAY TO ORANGE-BROWN CLAYEY SAND (A-2-6/A-2-7)
  4. ORANGE-BROWN TO BLUE-GRAY CLAYEY SAND TO SILTY-CLAY (A-4/A-6/A-7-6)
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- WR SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD
- 200 PERCENT PASSING #200 SIEVE  
 NMC NATURAL MOISTURE CONTENT (%)  
 LL LIQUID LIMIT (%)  
 PI PLASTICITY INDEX (%)  
 NP NON-PLASTIC
- NAVD 88 NORTH AMERICAN VERTICAL DATUM OF 1988
- ▼ GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
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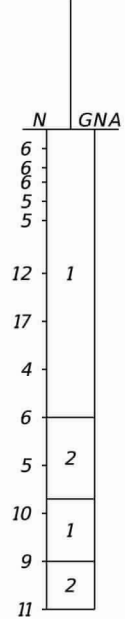
BORING TERMINATED AT ELEVATION -11.0 FT (NAVD 88)



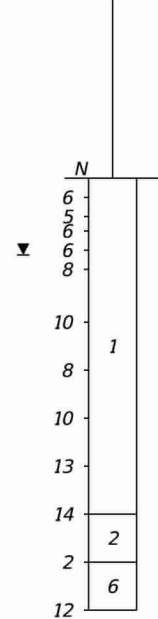
BORING TERMINATED AT ELEVATION -14.1 FT (NAVD 88)



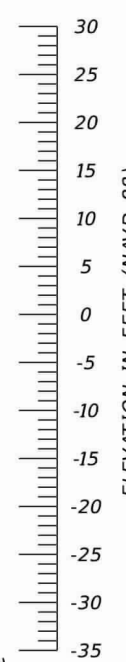
BORING TERMINATED AT ELEVATION -23.6 FT (NAVD 88)



BORING TERMINATED AT ELEVATION -30.7 FT (NAVD 88)



BORING TERMINATED AT ELEVATION -30.8 FT (NAVD 88)



	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
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SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

PERMITTED DRAWINGS SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)  
 For Construction permits, the permittees shall notify, in writing, the SWFWMD Tampa Regulation Department when construction begins.



REVISIONS				ENGINEER OF RECORD			STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	MARC E. NOVAK, PH.D., P.E. LICENSE NUMBER: 67431 TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637			ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
							SR 589	CITRUS	442764-2-52-01	EB-21

SOIL PROFILES (8)

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