

**..Title**

**US HWY 17-92 CRA** – Consider approval of the reallocation of funding requested by Seminole County, to complete the design and construction of a left only turn lane at the intersection of Spartan Road and US 17-92 at a cost not to exceed \$375,000. District 4 – Henley (Sonia Nordelo)

**..Department**

County Manager's Office

**..Division**

Economic Development Division

**..Authorized By**

Tricia Setzer

**..Contact/Phone number**

Sonia Nordelo - 407-665-7133

**..Motion/Recommendation**

1. Recommend approval of the reallocation of funding requested by Seminole County, to complete the design and construction of a left only turn lane at the intersection of Spartan Road and US 17-92 at a cost not to exceed \$375,000; or
2. Deny the approval of the reallocation of funding requested by Seminole County, to complete the design and construction of a left only turn lane at the intersection of Spartan Road and US 17-92 at a cost not to exceed \$375,000; or
3. Continue to a time and date certain.

**..Background**

On October 14, 2014, the US 17-92 Community Redevelopment Agency approved the request for funding to Seminole County, for the design and construction of the Spartan Turn Lane in an amount not to exceed \$375,000. Design is now complete, and the bidding process is in progress. However, unforeseen delays resulting from the ongoing widening of US 17-92 by the Florida Department of Transportation, has slowed the progress of the Spartan Turn Lane project making this request for reallocation of funds necessary. The request for reallocation is needed to meet the statutory requirements of project completion/expenditure imposed on CRA projects. Seminole County is therefore requesting reallocation of funding from the Community Redevelopment Agency (CRA) to construct the additional westbound lane on Spartan Road approaching the intersection of 17-92.

The lane will be utilized as a right/thru lane to alleviate the congestion that accumulates east of the intersection. Historically, many issues have arisen from this congestion

including motorists driving in the wrong direction. Seminole County Sheriff's Office has concerns about this condition and asked that it be addressed. An intersection traffic study for the new 7-11 at the intersection as well as a Turning Movement Data report confirms the need for this lane as a traffic safety improvement. The total costs are estimated to be \$375,000. The final costs will be determined upon the conclusion of Seminole County's bidding process which is in progress.

The proposed funding request furthers implementation of the following Goal, Objectives, and Policies of the US-17-92 Corridor Redevelopment Master Plan:

- **Goal:** Promote and provide a cohesive, economically sustainable, and functional built environment throughout the entire US 17-92 corridor.
  - **Objective 6:** Coordinate and facilitate the development of the necessary public facilities and infrastructure to accommodate redevelopment and new development within the CRA jurisdictional boundary and potential future connections to the immediate surrounding areas.

**..Technical Advisory Committee Recommendation**

No additional technical review is required.

**..Staff Recommendation**

Staff recommends approval of the reallocation of funding requested by Seminole County, to complete the design and construction of a left only turn lane at the intersection of Spartan Road and US 17-92, at a cost not to exceed \$375,000.

**..Board Date**

10/6/2016

**..Attachments**

- Seminole County Request

**Fonseca, Sonia**

*A-1238-14*

*Approved 10/14/14*

**From:** Nelson, Anthony  
**Sent:** Tuesday, September 06, 2016 11:18 AM  
**To:** Fonseca, Sonia  
**Subject:** RE: Spartan Turn Lane

Hi Sonia,

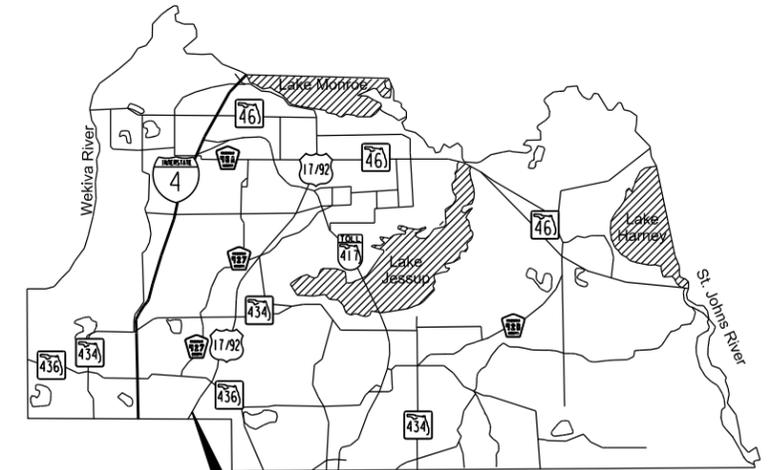
I've made the decision and would like to request reallocation of the funds to construct the referenced project. We will not have the money expended by October 14, 2016 as there was a delay obtaining the FDOT Driveway Connection Permit and also delay relocating several utilities in the project vicinity. I understand that we could continue and still put the project out to bid during the reallocation process. Let me know if you need anything else from us to get this done.



SEMINOLE COUNTY, FLORIDA  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION

COMPONENTS OF CONTRACT PLANS SET  
ROADWAY PLANS

PROPOSED PLANS FOR  
COUNTY CIP NO. 00282808



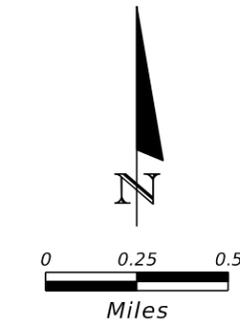
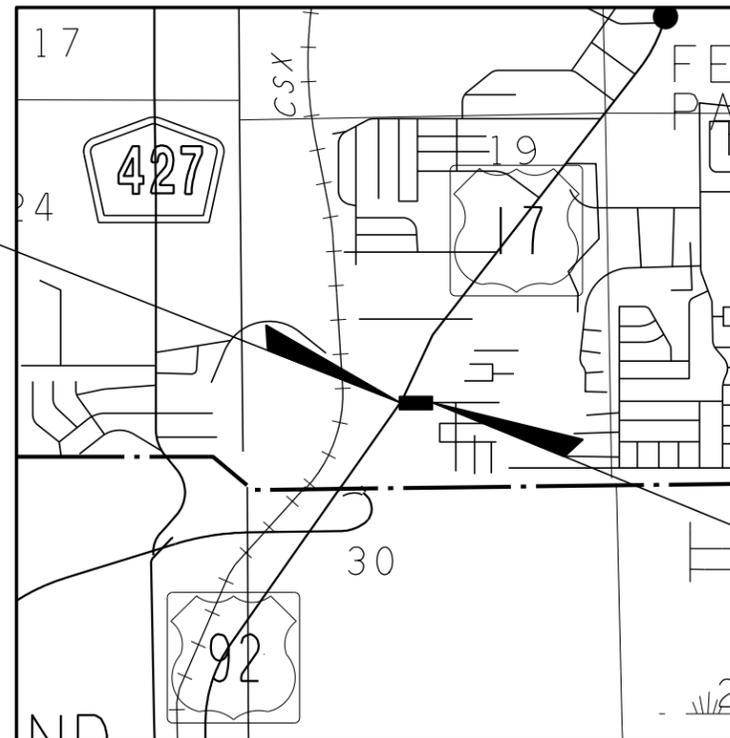
PROJECT LOCATION

**SPARTAN DRIVE IMPROVEMENTS**

INDEX OF ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	SUMMARY OF PAY ITEMS
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9	SUMMARY OF DRAINAGE STRUCTURES
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15	INTERSECTION DETAILS
16-17	DRAINAGE STRUCTURE SECTIONS
18-20	CROSS SECTIONS
21	EROSION CONTROL DETAILS
22	TRAFFIC CONTROL DETAILS SHEET
23-24	UTILITY ADJUSTMENT SHEETS
25-26	SIGNING AND PAVEMENT MARKINGS SHEETS
27	SIGNALIZATION PLAN
28	MAST ARM TABULATION/POLE SCHEDULE SHEET
29	SITE PLAN WITH BORING RESULTS
30	LIGHT POLE SPREAD FOOTING

BEGIN PROJECT  
SPARTAN DRIVE  
STA. 20+66.35



SEMINOLE COUNTY PROJECT MANAGER:  
ANTHONY NELSON, P.E., CFM  
SEMINOLE COUNTY ENGINEERING  
100 EAST FIRST STREET  
SANFORD, FL 32771  
407-665-5763

PLANS PREPARED BY:

**Inwood**  
consulting engineers  
3000 Dovera Drive, Suite 200  
Oviedo, Florida 32765  
Certificate of Authorization No. 7074  
Vendor Number 59-321-6593-002  
p 407.971.8850 f 407.971.8955

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

END PROJECT  
SPARTAN DRIVE  
STA. 24+65.00

GOVERNING STANDARDS AND SPECIFICATIONS:  
FLORIDA DEPARTMENT OF TRANSPORTATION,  
DESIGN STANDARDS DATED 2016, AND  
STANDARD SPECIFICATIONS FOR ROAD AND  
BRIDGE CONSTRUCTION DATED JANUARY 2016,  
AS AMENDED BY CONTRACT DOCUMENTS.

PROJECT LENGTH IS BASED ON  $\frac{1}{2}$  OF CONSTRUCTION

LENGTH OF PROJECT		
	LINEAR FEET	MILES
ROADWAY	398.65	0.076
BRIDGES	-	-
NET LENGTH OF PROJECT	398.65	0.076
EXCEPTIONS	-	-
GROSS LENGTH OF PROJECT	398.65	0.076

KEY SHEET REVISIONS		
DATE	BY	DESCRIPTION

ROADWAY PLANS  
ENGINEER OF RECORD: CATHERINE L. SPIESS, P.E.

P.E. NO.: 62501

SHEET  
NO.

1

## SUMMARY OF PAY ITEMS

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY TOTAL	
			PLANS	FINAL
101-1	MOBILIZATION	LS	1	
102-1	MAINTENANCE OF TRAFFIC	LS	1	
102-99	CHANGEABLE VARIABLE MESSAGE SIGN, TEMPORARY	ED	90	
104-13-1	STAKED SILT FENCE, TYPE III	LF	472	
104-18	INLET PROTECTION SYSTEM	EA	2	
110-1-1	CLEARING AND GRUBBING	LS	1	
120-1	REGULAR EXCAVATION	CY	120	
160-4	TYPE B STABILIZATION (12")	SY	180	
285-706	OPTIONAL BASE GROUP 6	SY	118	
327-70-4	MILLING EXISTING ASPHALT PAVEMENT, 3" DEPTH	SY	1535	
334-1-13	SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC C	TN	278.2	
400-1-15	CONCRETE CLASS I (MISCELLANEOUS)	CY	5	
425-1-361	INLETS, CURB TYPE P-6, <10'	EA	1	
425-2-61	MANHOLES, P-8, <10'	EA	1	
425-5	MANHOLES, ADJUST	EA	1	
430-1-325	CONCRETE PIPE CULVERT, CLASS III, 18"	LF	75	
520-1-10	CONCRETE CURB AND GUTTER, TYPE F	LF	344	
522-1	SIDEWALK, CONCRETE, 4" THICK	SY	250	
522-2	SIDEWALK, CONCRETE, 6" THICK	SY	33	
523-1	PATTERNED PAVEMENT, VEHICULAR AREAS	SY	81	
527-2	DETECTABLE WARNINGS, PREFORMED THERMOPLASTIC	SF	76	
570-1-2	PERFORMANCE TURF, SOD	SY	141	
580-X	LANDSCAPE MISCELLANEOUS	LS	1	
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	83	
630-2-12	CONDUIT, SIGNALS, F&I, DIRECTIONAL BORE	LF	152	
632-7-1	SIGNAL CABLE, NEW OR RECONSTRUCTED INTERSECTION, F&I	PI	1	
635-2-11	PULL & SPLICE BOX, F&I, 13"x24" COVER SIZE w/CONCRETE APRON	EA	6	
646-1-11	ALUMINUM SIGNALS POLE, F&I, PEDESTAL	EA	1	
649-31-208	MAST ARM, F&I, WIND SPEED-130, SINGLE ARM, W/ LUMINAIRE, ARM LENGTH 60	EA	1	
649-36-300	MAST ARM, REMOVE SHALLOW FOUNDATION, BOLT ON ATTACHMENT	EA	1	
650-1-14	TRAFFIC SIGNAL, FURNISH & INSTALL, ALUMINUM, 3 SECTION, 1 WAY	AS	2	
650-1-19	TRAFFIC SIGNAL, FURNISH & INSTALL, ALUMINUM, 5 SECTION CLUSTER, 1 WAY	AS	1	
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL, LED COUNTDOWN, 1 WAY	AS	2	
660-1-104	LOOP DETECTOR INDUCTIVE, FURNISH & INSTALL (TYPE 4, 1 CH, SS, S, TD)	EA	1	
660-2-102	LOOP ASSEMBLY, FURNISH & INSTALL, TYPE B	EA	1	
660-2-106	LOOP ASSEMBLY, FURNISH & INSTALL, TYPE F	EA	2	
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	EA	2	
670-5-400	TRAFFIC CONTROLLER ASSEMBLY, MODIFY	AS	1	
682-1-400	ITS CCTV CAMERA, RELOCATE	EA	1	
700-1-11	SINGLE POST SIGN, F&I, GROUND MOUNT, LESS THAN 12 SF	AS	3	
700-1-60	SINGLE POST SIGN, REMOVE	AS	2	
700-5-50	INTERNALLY ILLUMINATED SIGN, RELOCATE	EA	1	
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	EA	35	
711-11-121	THERMOPLASTIC, STANDARD, WHITE, SOLID, 6"	LF	942	
711-11-123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12"	LF	132	
711-11-125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24"	LF	32	
711-11-141	THERMOPLASTIC, STANDARD, WHITE, DOTTED/GUIDELINE/6-10 GAP EXT, 6"	LF	154	
711-11-170	THERMOPLASTIC, STANDARD, WHITE, ARROWS	EA	7	
711-11-221	THERMOPLASTIC, STANDARD, YELLOW, SOLID, 6"	LF	569	
711-11-241	THERMOPLASTIC, STANDARD, YELLOW, DOTTED/GUIDELINE/6-10 GAP EXT, 6"	LF	18	
711-17	THERMOPLASTIC, REMOVE EXISTING MARKINGS	SF	7	
715-4-400	LIGHT POLE COMPLETE, RELOCATE	EA	1	

102-1 INCLUDES THE COST OF ALL ITEMS NECESSARY FOR TRAFFIC CONTROL NOT SPECIFICALLY INCLUDED IN THE SUMMARY OF PAY ITEMS, I.E. SIGNS, BARRICADES, FLAGMAN, OFF-DUTY POLICE OFFICER AS NEEDED, ALL NECESSARY DETOUR FACILITIES, FURNISH AND INSTALL ALL TEMPORARY PAVEMENT AND TEMPORARY PAVEMENT MARKINGS, ETC. IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS DATED JANUARY 2016, DESIGN STANDARDS 600 SERIES DATED 2016 & MUTCD LATEST PUBLISHED EDITION . ALSO INCLUDES THE COST OF THE MAINTENANCE OF TRAFFIC PLAN, SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. THE CONTRACTOR SHALL MAINTAIN VEHICULAR ACCESS TO RESIDENCES, BUSINESSES AND SCHOOLS AT ALL TIMES. INCLUDES TEMPORARY PAINT PAVEMENT MARKINGS INSTALLATION DURING ASPHALT CURE PERIOD.

102-99 INCLUDES COST FOR ONE VARIABLE MESSAGE SIGN TO BE SET-UP 7 DAYS IN ADVANCE OF CONSTRUCTION AND THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES. CONTRACTOR TO COORDINATE LOCATION AND MESSAGE WITH THE COUNTY.

110-1-1 INCLUDES THE COST OF REMOVAL AND DISPOSAL OF ALL OBSTRUCTIONS, VEGETATION, DEBRIS, FENCES, EXISTING CURB, SIDEWALK, ASPHALT, TREE RELOCATION, TRIMMING OF TREES AND SHRUBS AS NECESSARY AND ALL OTHER ITEMS IN ORDER TO CONSTRUCT THE PROJECT. INCLUDES THE COST TO ADJUST THE EXISTING VALVE BOXES AND SEWER TOPS NOT SPECIFICALLY INCLUDED IN THE SUMMARY OF PAY ITEMS, RELOCATE THE EXISTING IRRIGATION HEADS AND LINES THAT ARE IN CONFLICT WITH THE CONSTRUCTION. CONTRACTOR TO COORDINATE LOCATION OF IRRIGATION SYSTEM WITH THE PROPERTY OWNER AND THE COUNTY. INCLUDES THE COST OF MAILBOX RELOCATION. INCLUDES THE COST TO RELOCATE OR REPLACE LANDSCAPING DISTURBED BY CONSTRUCTION ACTIVITIES. NO TREES ARE TO BE REMOVED WITHOUT APPROVAL FROM THE COUNTY. INCLUDES COST OF REMOVAL AND DISPOSAL OF EXISTING TRAFFIC SIGNAL PULL BOXES THAT ARE CALLED OUT IN THE PLANS.

523-1 INCLUDES PLACEMENT OF A PATTERNED PAVEMENT. WORKS AND MATERIALS (COLORING, COATING, ETC.) FOR TREATMENT ARE INCLUDED UNDER PAYMENT THIS ITEM. PRODUCTS MUST BE LISTED ON FDOT QPL. MATCH EXISTING PATTERN AND COLOR.

580-X INCLUDES REPLACING LANDSCAPING IN KIND DISTURBED BY THIS PROJECT.

632-7-1 INCLUDES THE COST OF CONNECTING THE EXISTING LOOP LEAD IN AND SIGNAL CABLE THROUGH THE CONDUIT TO THE EXISTING CONTROLLER CABINET.

649-36-300 INCLUDES REMOVAL OF THE FOUNDATION, AS WELL AS ANY ATTACHMENTS INCLUDING, BUT NOT LIMITED TO, VEHICULAR/PEDESTRIAN SIGNAL HEADS, PEDESTRIAN DETECTOR, AND LIGHTING.

665-1-11 INCLUDES THE COST OF FTP-68B-06 SIGNS.

682-1-400 INCLUDES MOUNTING HARDWARE, CABLING, AND POWER SUPPLY AS NECESSARY. INCLUDES TESTING OF ALL EQUIPMENT AND MATERIALS.

715-4-400 INCLUDES REMOVAL OF OLD FOUNDATION, CONCRETE SLAB, AND PULL BOX. INCLUDES INSTALLATION OF NEW FOUNDATION, PULL BOX, WIRING, AND ALL INCIDENTALS FOR INSTALLATION/OPERATION.

NOTE: THE CONTRACTOR'S BID SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND ANY ITEMS NOT FOUND IN THE SUMMARY OF PAY ITEMS BUT NECESSARY TO COMPLETE THE PROJECT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



**Inwood**  
consulting engineers

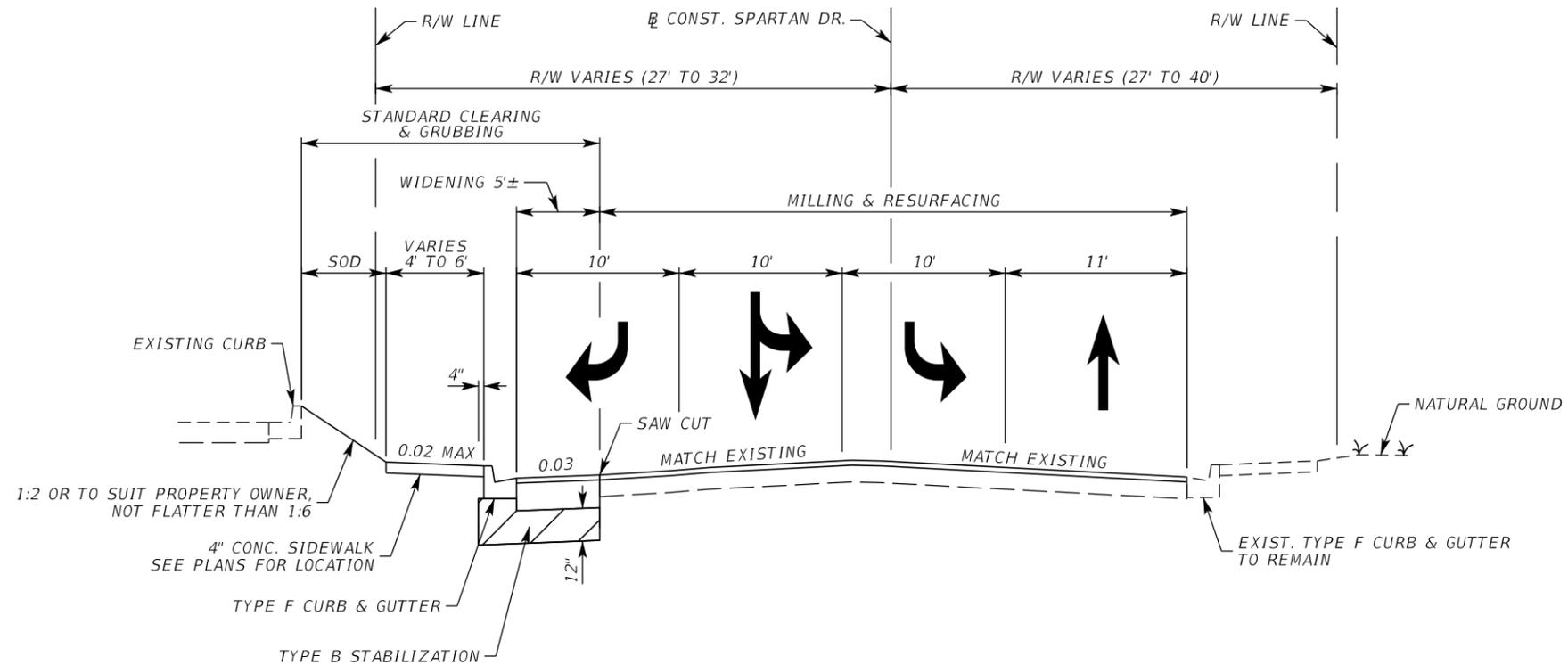
Catherine L. Spiess, PE 3000 Dovera Drive, Suite 200  
PE No. 62501 Oviedo, Florida 32765  
Certificate of Authorization No. 7074 p 407.971.8850

**SEMINOLE COUNTY**  
ENGINEERING DIVISION

ROAD NAME	COUNTY CIP NO.
SPARTAN DR.	00282808

**SUMMARY OF PAY ITEMS**

SHEET NO.  
**2**



**TYPICAL SECTION  
 SPARTAN DRIVE  
 STA. 20+66.35 TO STA. 24+65.00**

**MILLING**

MILL EXISTING ASPHALT  
PAVEMENT FOR DEPTH (3")

**OVERBUILD**

TYPE SP STRUCTURAL COURSE (TRAFFIC C)  
(THICKNESS VARIES, AVG. THICKNESS 3.67")  
(SEE TABLE OF OVERBUILD THICKNESS)

**RESURFACING**

TYPE SP STRUCTURAL COURSE (TRAFFIC C) (3")

**WIDENING**

OPTIONAL BASE GROUP 6 WITH  
TYPE SP STRUCTURAL COURSE (TRAFFIC C) (3")

DESIGN SPEED: 30 MPH  
POSTED SPEED: 25 MPH

**REVISIONS**

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



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PE No. 62501 Oviedo, Florida 32765  
Certificate of Authorization No. 7074 p 407.971.8850

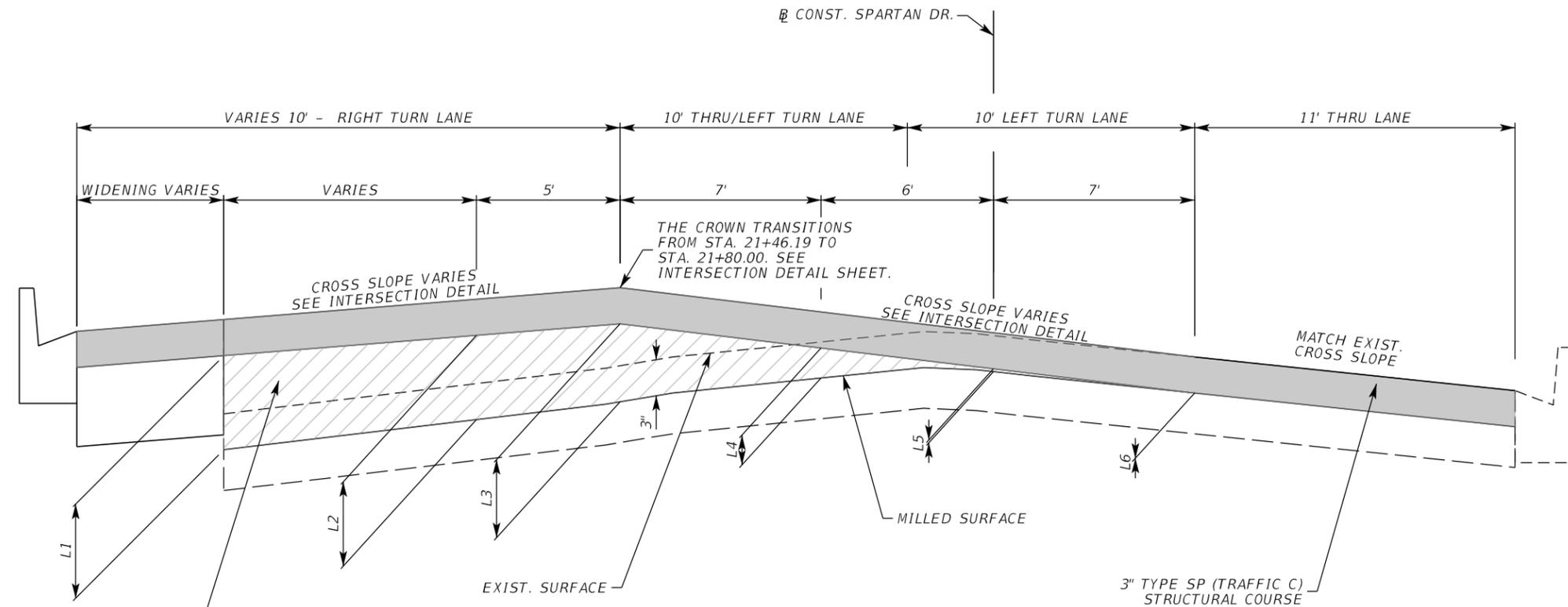
**SEMINOLE COUNTY**  
ENGINEERING DIVISION

ROAD NAME COUNTY CIP NO.  
SPARTAN DR. 00282808

**TYPICAL SECTION**

SHEET NO.

3



**MILLING, RESURFACING AND OVERBUILD DETAIL**  
**STA. 21+00.00 TO 21+90.00**

SEE INTERSECTION GRADING FOR ELEVATIONS AND SLOPES

**TABLE OF OVERBUILD THICKNESS**

STATION	L 1 (IN)	L 2 (IN)	L 3 (IN)	L 4 (IN)	L 5 (IN)	L 6 (IN)	CY	TN	
21+00.00	0.00	0.00	0.00	0.00	0.00	0.00			
21+17.70	0.00	5.76	5.64	3.12	0.84	0.00	4.48	0.90	
21+29.04	9.00	8.16	7.92	4.08	1.56	0.00	5.30	1.07	
21+38.27	10.32	9.00	8.64	3.72	1.92	0.00	3.63	0.73	
21+46.19	-	10.92	9.84	3.96	2.04	0.00	2.95	0.59	
21+60.00	-	9.84	7.80	4.20	1.92	0.00	5.04	1.02	
21+70.00	-	6.60	4.44	3.36	0.48	0.00	2.77	0.59	
21+80.00	-	3.36	2.28	1.44	1.56	0.00	1.69	0.34	
21+90.00	-	0.00	0.00	0.00	0.00	0.00	0.64	0.13	
Total:								5.37	

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

  
 Catherine L. Spiess, PE  
 PE No. 62501  
 Certificate of Authorization No. 7074

**SEMINOLE COUNTY**  
 ENGINEERING DIVISION  
 ROAD NAME: SPARTAN DR.  
 COUNTY CIP NO.: 00282808

**TYPICAL SECTION**  
 SHEET NO. 4



**SUMMARY OF PAVEMENT**

PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION		SIDE	AREA ID	LENGTH	WIDTH	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
		STA. TO STA.	DESCRIPTION						P	F	P	F		
0160 4	TYPE B STABILIZATION	21+22.51 to 23+35.00		LT	5708			SY	180.3		180			
285706	OPTIONAL BASE, BASE GROUP 06	21+22.51 to 23+35.00		LT	2966			SY	118.3		118			
0327 70 4	MILLING EXIST ASPH PAVT, 3" AVG DEPTH	20+66.35 to 24+65.00		LT/RT	9752			SY	1535.1		1535			
0334 1 13	SUPERPAVE ASPHALTIC CONCRETE (C)	20+66.35 to 24+65.00		LT/RT	10655			TN	272.81		278.2			
		OVERBUILD		LT/RT					5.37					
0523 1	PATTERNED PAVEMENT, VEHICULAR AREAS	20+96.25 to 21+33.80		LT/RT	6315			SY	81.2		81			

**SUMMARY OF CURB & GUTTER AND/OR TRAFFIC SEPARATORS**

PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	SIDE	AREA ID	UNIT	QUANTITY				TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS	
						STA. TO STA.	GROSS LENGTH	DEDUCTIONS		NET LENGTH				P
		TYPE						LENGTH	P	F				
0520 1 10	CONCRETE CURB & GUTTER, TYPE F	21+24.69 to 23+35.00	LT		LF	241.7	P-6	16	241.7		344			
		21+74.92 to 22+28.40	RT			53.5			53.5					
		22+52.43 to 22+63.99	RT			16.3			16.3					
		22+86.98 to 22+97.85	RT			17.1			17.1					
		24+24.27 to 24+28.25	RT			8.1			8.1					
		24+54.21 to 24+64.81	RT			22.8			22.8					

**REVISIONS**

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



Catherine L. Spiess, PE  
 PE No. 62501  
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3000 Dovera Drive, Suite 200  
 Oviedo, Florida 32765  
 p 407.971.8850

**SEMINOLE COUNTY**  
 ENGINEERING DIVISION

ROAD NAME: SPARTAN DR.  
 COUNTY CIP NO.: 00282808

**SUMMARY OF QUANTITIES**

SHEET NO.  
 6

SUMMARY OF SIDEWALK & DETECTABLE WARNINGS												
LOCATION STA. TO STA.	SIDE	AREA ID	LENGTH	WIDTH	CONC SIDEWALK 4"		CONC SIDEWALK 6"		DETECTABLE WARNINGS		DESIGN NOTES	CONSTRUCTION REMARKS
					0522 1		0522 2		0527 2			
					SY		SY		SF			
P	F	P	F	P	F							
21+22.69 to 23+64.09	LT	11849			186.7							
21+57.12 to 21+84.92	RT	10832			16.6							
22+18.40 to 22+28.40	RT	10841			5.0							
22+52.43 to 22+62.00	RT	6263			4.7							
22+89.14 to 23+04.42	RT	6271			8.5							
23+19.90 to 23+24.95	RT	6282			2.7							
24+11.95 to 24+26.35	RT	10855			7.2							
24+56.21 to 24+66.85	RT	10847			11.1							
25+22.10 to 25+33.04	RT	6304			7.1							
21+74.92 to 22+28.40	RT	11078					33.2					
21+23.24 to 21+35.78	LT	10815						41.9				
22+58.44 to 22+62.12	RT	8409						8.5				
22+88.55 to 22+90.75	RT	9824						6.5				
24+21.74 to 24+26.30	RT	8439						9.3				
24+56.21 to 24+58.26	RT	9831						9.7				
SUB-TOTAL:					249.6		33.2		75.9			
TOTAL:					250		33		76			

SUMMARY OF PERFORMANCE TURF										
LOCATION STA. TO STA.	SIDE	AREA ID	LENGTH	WIDTH	PERFORMANCE TURF		DESIGN NOTES	CONSTRUCTION REMARKS		
					0570 1 1					
					SY					
P	F									
21+23.19 to 21+44.93	LT	10794			15.9					
21+35.57 to 21+58.31	LT	11814			14.0					
21+43.33 to 23+64.09	LT	11875			87.2					
21+57.12 to 21+76.42	RT	10758			3.2					
22+52.46 to 22+62.00	RT	10765			1.5					
22+88.97 to 23+02.35	RT	9857			2.2					
22+91.26 to 23+05.09	RT	10772			2.0					
23+19.89 to 23+24.90	RT	9885			0.6					
23+19.95 to 23+24.96	RT	9890			0.6					
23+35.00 to 23+63.96	LT	4918			8.1					
24+11.93 to 24+22.65	RT	9904			1.2					
24+11.95 to 24+27.06	RT	10785			1.6					
24+56.21 to 24+67.09	RT	10011			2.0					
25+23.15 to 25+33.17	RT	9934			1.1					
SUB-TOTAL:					141.2					
TOTAL:					141					

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



**Inwood**  
consulting engineers

Catherine L. Spiess, PE  
PE No. 62501  
Certificate of Authorization No. 7074

3000 Dovera Drive, Suite 200  
Oviedo, Florida 32765  
p 407.971.8850

**SEMINOLE COUNTY**  
ENGINEERING DIVISION

ROAD NAME: SPARTAN DR.  
COUNTY CIP NO.: 00282808

**SUMMARY OF QUANTITIES**

SHEET NO.  
7

**TABULATION OF SIGNING AND PAVEMENT MARKING QUANTITIES**

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS				TOTAL THIS SHEET		GRAND TOTAL	
			SHEET 25		SHEET 26		PLAN	FINAL	PLAN	FINAL
			PLAN	FINAL	PLAN	FINAL				
700-1-11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	2		1		3		3	
700-1-60	SINGLE POST SIGN, REMOVE	AS	2				2		2	
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	EA	18		17		35		35	
711-11-121	THERMOPLASTIC, STANDARD, WHITE, SOLID, 6"	LF	466		476		942		942	
711-11-123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12"	LF	132				132		132	
711-11-125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24"	LF	32				32		32	
711-11-141	THERMOPLASTIC, STANDARD, WHITE, DOTTED/GUIDELINE/6-10 GAP EXT, 6"	LF	82		72		154		154	
711-11-170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	6		1		7		7	
711-11-221	THERMOPLASTIC, STANDARD, YELLOW, SOLID, 6"	LF	222		347		569		569	
711-11-241	THERMOPLASTIC, STANDARD, YELLOW, DOTTED/GUIDELINE/6-10 GAP EXT, 6"	LF			18		18		18	
711-17	THERMOPLASTIC, REMOVE EXISTING THERMOPLASTIC PAVEMENT MARKINGS	SF	7				7		7	

**TABULATION OF SIGNALIZATION QUANTITIES**

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS		TOTAL THIS SHEET		GRAND TOTAL	
			SHEET 27		PLAN	FINAL	PLAN	FINAL
			PLAN	FINAL				
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	83		83		83	
630-2-12	CONDUIT, SIGNALS, F&I, DIRECTIONAL BORE	LF	152		152		152	
632-7-1	SIGNAL CABLE, NEW OR RECONSTRUCTED INTERSECTION, F&I	PI	1		1		1	
635-2-11	PULL & SPLICE BOX, F&I, 13"X24" COVER SIZE w/CONCRETE APRON	EA	6		6		6	
646-1-11	ALUMINUM SIGNALS POLE, F&I, PEDESTAL	EA	1		1		1	
649-31-208	MAST ARM, F&I, WIND SPEED-130, SIGNAL ARM, W/ LUMINAIRE, ARM LENGTH 60	EA	1		1		1	
649-36-300	MAST ARM, REMOVE SHALLOW FOUNDATION, BOLT ON ATTACHMENT	EA	1		1		1	
650-1-14	TRAFFIC SIGNAL, FURNISH & INSTALL, ALUMINUM, 3 SECTION, 1 WAY	AS	2		2		2	
650-1-19	TRAFFIC SIGNAL, FURNISH & INSTALL, ALUMINUM, 5 SECTION CLUSTER, 1 WAY	AS	1		1		1	
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL, LED COUNTDOWN, 1 WAY	AS	2		2		2	
660-1-104	LOOP DETECTOR INDUCTIVE, FURNISH & INSTALL (TYPE 4, 1 CH, SS, S, TD)	EA	1		1		1	
660-2-102	LOOP ASSEMBLY, FURNISH & INSTALL, TYPE B	EA	1		1		1	
660-2-106	LOOP ASSEMBLY, FURNISH & INSTALL, TYPE F	EA	2		2		2	
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	EA	2		2		2	
670-5-400	TRAFFIC CONTROLLER ASSEMBLY, MODIFY	AS	1		1		1	
682-1-400	ITS CCTV CAMERA, RELOCATE	EA	1		1		1	
700-5-50	INTERNALLY ILLUMINATED SIGN, RELOCATE	EA	1		1		1	

**TABULATION OF LIGHTING QUANTITIES**

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS		TOTAL THIS SHEET		GRAND TOTAL	
			SHEET 27		PLAN	FINAL	PLAN	FINAL
			PLAN	FINAL				
715-4-400	LIGHT POLE COMPLETE, RELOCATE	EA	1		1		1	

**REVISIONS**

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



Catherine L. Spiess, PE 3000 Dovera Drive, Suite 200  
 PE No. 62501 Oviedo, Florida 32765  
 Certificate of Authorization No. 7074 p 407.971.8850

**SEMINOLE COUNTY**  
 ENGINEERING DIVISION

ROAD NAME COUNTY CIP NO.  
 SPARTAN DR. 00282808

**SUMMARY OF QUANTITIES**

SHEET NO.  
 8

QUANTITY	STR. NO.	STATION	SIDE	DESCRIPTION	BARRELS	STORM DRAIN REINFORCED CONCRETE PIPE	CURB INLETS	MANHOLES		REMARKS
						ROUND SHAPE	P-6	P-8	J-8	
						18"	<10'	<10'	ADJUST	
P	S-1	21+25.00	LT	Manhole	1				1	TOP ONLY
F										
P	S-2	21+45.00	LT	Pipe, Manhole, Pipe	1	33		1		Conc. JACKET X 2
F										
P	S-3	21+90.00	LT	Inlet, Pipe	1	42	1			
F										
Sheet Summary					<u>P Total</u>	75	1	1	1	
					<u>F Total</u>					
Final Summary					<u>P Total</u>	75	1	1	1	
					<u>F Total</u>					

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



Renato E. Chuw, PE  
PE No. 56050  
Certificate of Authorization No. 7074

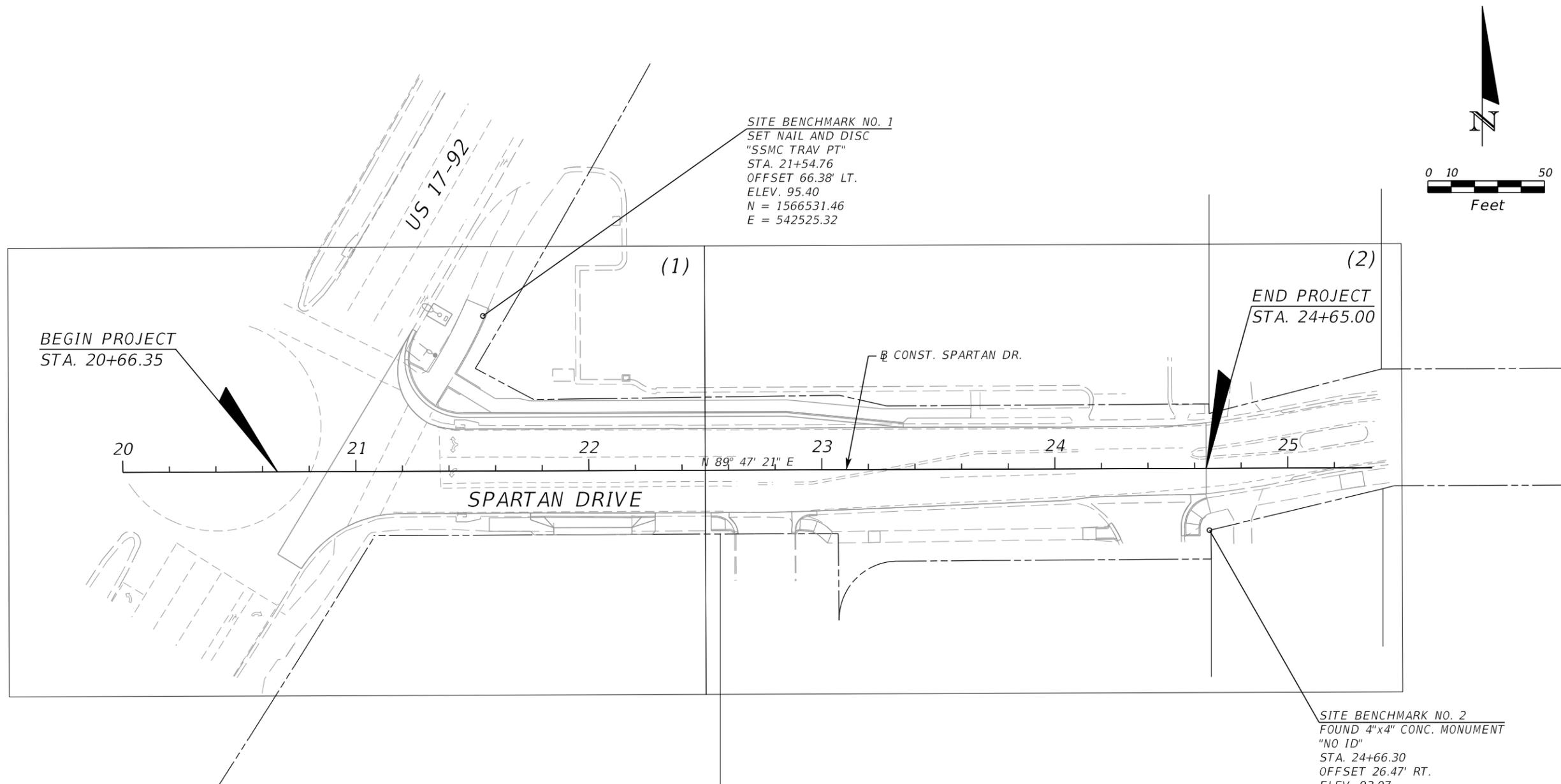
3000 Dovera Drive, Suite 200  
Oviedo, Florida 32765  
p 407.971.8850

**SEMINOLE COUNTY**  
ENGINEERING DIVISION

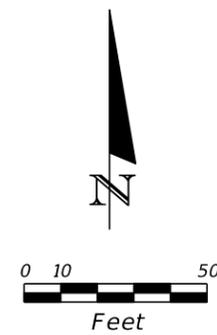
ROAD NAME: SPARTAN DR.  
COUNTY CIP NO.: 00282808

**SUMMARY OF  
DRAINAGE STRUCTURES**

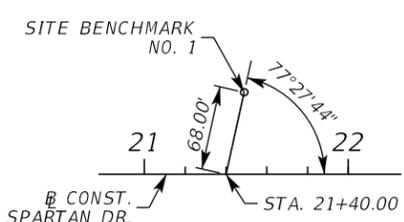
SHEET NO.  
9



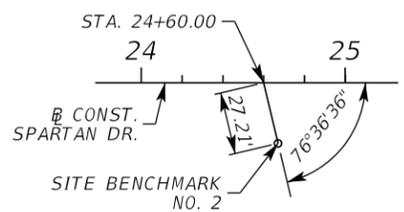
SITE BENCHMARK NO. 1  
 SET NAIL AND DISC  
 "SSMC TRAV PT"  
 STA. 21+54.76  
 OFFSET 66.38' LT.  
 ELEV. 95.40  
 N = 1566531.46  
 E = 542525.32



SITE BENCHMARK NO. 2  
 FOUND 4"x4" CONC. MONUMENT  
 "NO ID"  
 STA. 24+66.30  
 OFFSET 26.47' RT.  
 ELEV. 93.07  
 N = 1566439.75  
 E = 542837.20



REFERENCE TIE NO. 1  
 STA. 21+40.00  
 CONST. SPARTAN DR.  
 NOT TO SCALE



REFERENCE TIE NO. 2  
 STA. 24+60.00  
 CONST. SPARTAN DR.  
 NOT TO SCALE

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

**Inwood**  
 consulting engineers  
 Catherine L. Spiess, PE 3000 Dovera Drive, Suite 200  
 PE No. 62501 Oviedo, Florida 32765  
 Certificate of Authorization No. 7074 p 407.971.8850

**SEMINOLE COUNTY**  
 ENGINEERING DIVISION  
 ROAD NAME COUNTY CIP NO.  
 SPARTAN DR. 00282808

**PROJECT LAYOUT**  
 SHEET NO.  
 10

GENERAL NOTES

1. THE CONTRACTOR IS TO OBTAIN A CONSTRUCTION PERMIT ONE (1) WEEK PRIOR TO CONSTRUCTION FROM SEMINOLE COUNTY PUBLIC WORKS ENGINEERING DIVISION FOR "RIGHT-OF-WAY UTILIZATION". CONTACT SEMINOLE COUNTY PERMIT COORDINATOR AT 100 E. FIRST STREET, SANFORD, FL, 32771 TELEPHONE (407) 665-7409. NO FEE REQUIRED.
2. ALL CONSTRUCTION PROCEDURES, MATERIALS, INSPECTION, AND TESTING SHALL, AS A MINIMUM, CONFORM TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, JANUARY 2016 EDITION AND FDOT DESIGN STANDARDS, 2016 EDITION UNLESS OTHERWISE NOTED.
4. ALL PERSONAL PROPERTY WITHIN THE RIGHT-OF-WAY SHALL BE RELOCATED BY THE PROPERTY OWNER OR IT SHALL BE REMOVED BY THE CONTRACTOR AS NECESSARY TO CONSTRUCT THE PROJECT IN ACCORDANCE WITH THE PLANS. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY CONSTRUCTION WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING PRE-CONSTRUCTION CONDITION, UNLESS SPECIFICALLY EXEMPTED BY THE PLANS.
5. ALL LANDSCAPING DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED IN KIND. ALL EXISTING PALM TREES SHALL REMAIN UNDISTURBED. NO TREES ARE TO BE REMOVED WITHOUT THE APPROVAL FROM THE SEMINOLE COUNTY PROJECT MANAGER.
6. ANY DRAINAGE PROBLEMS EXISTING BEFORE AND DURING CONSTRUCTION SHOULD BE BROUGHT TO THE ATTENTION OF THE SEMINOLE COUNTY ENGINEERING INSPECTOR IMMEDIATELY.
7. ALL EXISTING DRAINAGE STRUCTURES ARE TO REMAIN UNLESS OTHERWISE SPECIFIED IN THE PLANS. EXISTING DRAINAGE PATTERNS SHALL BE MAINTAINED AND EXISTING DRAINAGE STRUCTURES AND FACILITIES SHALL BE MAINTAINED AND FULLY FUNCTIONAL DURING CONSTRUCTION.
8. TEMPORARY DRAINAGE SHALL BE PROVIDED DURING CONSTRUCTION TO ELIMINATE ANY FLOODING OF PRIVATE PROPERTY. COST FOR TEMPORARY DRAINAGE ITEMS SHALL BE INCLUDED UNDER 102-1.
9. SOIL MATERIALS USED FOR FILL OR GRADING ACTIVITIES SHALL BE APPROVED BY THE SEMINOLE COUNTY ENGINEERING INSPECTOR PRIOR TO USE.
10. THE CONTRACTOR SHALL NOTIFY THE SEMINOLE COUNTY ENGINEERING INSPECTOR FOR A FIELD INSPECTION PRIOR TO PLACEMENT OF ANY CONCRETE.
11. IRRIGATION LINES DAMAGED DURING CONSTRUCTION ARE TO BE CAPPED IMMEDIATELY AND REPORTED TO THE SEMINOLE COUNTY ENGINEERING INSPECTOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND/OR REPLACE ALL DAMAGED IRRIGATION COMPONENTS TO THE PRE-CONSTRUCTION CONDITION AT HIS EXPENSE PRIOR TO COMPLETION OF THE PROJECT. COST TO BE INCLUDED IN 110-1-1.
12. THE TEST REQUIREMENTS FOR CLASS I CONCRETE WILL BE WAIVED UPON PRESENTATION TO THE INSPECTOR A WRITTEN CERTIFICATION FROM THE PLANT THAT THE CONCRETE IS 3000 PSI CONCRETE MIX.
13. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL CONSTRUCTION DEBRIS PRIOR TO COMPLETION OF THE PROJECT.
14. ANY NGVD-29 MONUMENT WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF IN DANGER OF DAMAGE THE CONTRACTOR SHOULD NOTIFY THE FLORIDA DEPARTMENT OF NATURAL RESOURCES, BUREAU OF SURVEYS AND MAPPING, 3900 COMMONWEALTH BLVD., SUITE 309, TALLAHASSEE, FLORIDA 32399. TELEPHONE (904) 488-2427.
15. ANY PUBLIC LAND CORNER OR COUNTY MONUMENT WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE CONTRACTOR SHOULD NOTIFY THE SEMINOLE COUNTY SURVEYOR IMMEDIATELY BY TELEPHONE. CONTACT THE COUNTY SURVEYOR, MR. GARY LEISE, 149 BUSH LOOP, SANFORD, FL, 32773. TELEPHONE (407) 665-5647.
16. THE USE OF LARGE VIBRATORY COMPACTION EQUIPMENT IS PROHIBITED ON THIS CONSTRUCTION CONTRACT. WALK BEHIND OR HAND HELD VIBRATORY COMPACTION EQUIPMENT WITH A MAXIMUM BASE PLATE SIZE OF 12" WILL BE PERMITTED ON THIS JOB SITE. THE PERFORMANCE AND SPECIFIED REQUIREMENTS FOR COMPACTION OF MATERIALS AND REQUIRED MOISTURE-DENSITY RELATIONSHIPS SHALL BE MAINTAINED. IF THE CONTRACTOR SO DESIRES TO USE THIS EQUIPMENT, HE SHALL MAKE AVAILABLE TO SEMINOLE COUNTY THE OPPORTUNITY TO INSPECT AND INSURE THAT THE EQUIPMENT DESIGNATED FOR THIS PROJECT MEETS THE REQUIREMENTS SET FORTH IN THE MANUFACTURERS RECOMMENDATIONS AND WILL NOT CAUSE ANY VIBRATION TO THE SURROUNDING AREA RESIDENTS OR NOISE LIMITS THAT WOULD GO BEYOND ACCEPTABLE LIMITS.

UTILITY NOTES

1. EXISTING UTILITY LOCATIONS SHOWN IN THE PLANS ARE ONLY APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE ALL EXISTING UNDERGROUND UTILITIES LOCATED IN THE FIELD AND NOTIFY ALL UTILITY OWNERS PUBLIC OR PRIVATE, WITH FACILITIES IN THE AREA OF CONSTRUCTION ACTIVITIES FOR POSSIBLE CONFLICTS AND COORDINATE ANY ADJUSTMENTS AND/OR RELOCATION. ALL NOTIFICATIONS TO BE MADE ONE WEEK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. (CONTACT SUNSHINE STATE ONE CALL AT 1-800-432-4770).
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH THE CURRENT STATE OF FLORIDA UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT AND/OR RELATED STATE LAW. THE FOLLOWING INFORMATION IS BEING PROVIDED BY SEMINOLE COUNTY IN A EFFORT TO ASSIST THE CONTRACTOR BY LISTING UTILITIES THAT MAY PROVIDE SERVICE IN THE APPROXIMATE AREA OF THE PROPOSED CONSTRUCTION. THE CONTRACTOR SHOULD ASSUME OTHER UTILITIES THAT ARE NOT LISTED BELOW MAY PROVIDE SERVICE IN THE APPROXIMATE AREA OF THE PROPOSED CONSTRUCTION.

UTILITY AGENCY OWNER	TELEPHONE NUMBER
BRIGHT HOUSE NETWORKS	407-532-8509
DUKE ENERGY	407-905-3321
CITY OF ALTAMONTE SPRINGS	407-571-8346
CITY OF CASSELBERRY	407-262-7700x1236
LEVEL 3 COMMUNICATIONS	877-366-8344x2
AT&T - DISTRIBUTION	954-249-0558
SEMINOLE COUNTY	407-665-2021
TOWER CLOUD, INC.	813-417-2184
TRANSCORE	386-943-5315
CENTURYLINK	407-830-3359
PORSCHE OF ORLANDO	407-680-0785

SIGNING AND PAVEMENT MARKING NOTES

1. SIGNING AND PAVEMENT MARKINGS ARE TO BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009.
2. CAUTION SHALL BE EXERCISED WHILE RELOCATING EXISTING SIGNS TO PREVENT UNNECESSARY DAMAGE TO SIGNS. IF THE SIGNS ARE DAMAGED BEYOND USE, AS DETERMINED BY THE SEMINOLE COUNTY ENGINEERING INSPECTOR, SIGNS SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE. ALL SIGNS SHALL REMAIN UNLESS OTHERWISE NOTED IN THE PLANS.
3. THERMOPLASTIC PAVEMENT MARKINGS SHALL NOT BE INSTALLED UNTIL THE FINAL ASPHALT SURFACE HAS CURED FOR 30 DAYS. TEMPORARY PAINT PAVEMENT MARKINGS SHALL BE INSTALLED DURING THE CURE PERIOD.

SIGNALIZATION NOTES

1. FOR TRAFFIC SIGNAL INSTALLATIONS INFORMATION SEE THE 2016 FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, INCLUDING BUT NOT LIMITED TO INDEX NOS. 17356, 17721, 17727, 17736, 17764, 17781, 17784, 147841, AND 17870. ALL INSTALLATIONS SHALL ALSO BE IN ACCORDANCE WITH THE MOST CURRENT SEMINOLE COUNTY STANDARDS.
2. THE CONTRACTOR SHALL NOTIFY ALL UTILITIES AT LEAST 48 HOURS IN ADVANCE OF ANY OPERATION THAT MAY CONFLICT WITH OVERHEAD, UNDERGROUND, OR AREA UTILITIES.
3. THE CONTRACTOR SHALL COORDINATE AND SEEK ANY NECESSARY APPROVAL, FROM OTHER UTILITIES, PRIOR TO WORKING ON OR INSTALLING JOINT-USE POLES, SPAN WIRE ASSEMBLIES, OR SIGNAL POLES ADJACENT TO THEIR FACILITIES OR POWER LINES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND WORKING NEAR AND AROUND ANY AND ALL UTILITIES WITHIN THE CONSTRUCTION AREA. IN ADDITION, THE CONTRACTOR SHALL BE SOLELY AND DIRECTLY RESPONSIBLE TO THE OWNERS AND OPERATORS OF SUCH PROPERTIES FOR ANY DAMAGE, INJURY, EXPENSE, LOSS, INCONVENIENCE, OR DELAY, CAUSED BY THE CONTRACTOR'S OPERATIONS.
5. THE CONTRACTOR SHALL CONTACT SEMINOLE COUNTY TRAFFIC ENGINEERING AT LEAST 48 HOURS PRIOR TO BEGINNING ANY WORK IN THE INTERSECTIONS. ALL SIGNAL EQUIPMENT REMOVED IS THE PROPERTY OF SEMINOLE COUNTY.
6. THE CONTRACTOR SHALL NOTIFY SEMINOLE COUNTY TRAFFIC ENGINEERING 24 HOURS PRIOR TO DESTROYING EXISTING ROADWAY SENSORS. EXISTING LOOPS OR SENSORS DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT THEIR EXPENSE. AT NO TIME IS THE CONTRACTOR TO CHANGE ANY SIGNAL TIMINGS WITHOUT COMMUNICATING WITH SEMINOLE COUNTY TRAFFIC ENGINEERING. IF LOOPS (NOT TEMPORARY DETECTION) ARE FUNCTIONING, RECALLS MAY BE REMOVED BY THE CONTRACTOR WITH APPROVAL FROM SEMINOLE COUNTY TRAFFIC ENGINEERING.

SIGNALIZATION NOTES CONTINUED

7. THE MAINTENANCE RESPONSIBILITY FOR ALL SIGNALS WITHIN THE CONSTRUCTION LIMITS SHALL REMAIN THE FULL RESPONSIBILITY OF THE CONTRACTOR, FROM THE TIME CONTRACT WORK BEGINS UNTIL FINAL ACCEPTANCE BY SEMINOLE COUNTY TRAFFIC ENGINEERING, ON A BY INTERSECTION BASIS. THE CONTRACTOR SHALL HAVE AN I.M.S.A. LEVEL 2 SIGNAL TECHNICIAN ON SITE THROUGH ALL PHASES OF CONSTRUCTION AND ON CALL WITH A 2 HOUR MAXIMUM RESPONSE TIME.
8. IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE, SCHEDULE, AND PAY FOR LAW ENFORCEMENT OFFICER ASSISTANCE, WHEN DEEMED NECESSARY, WHILE WORKING ON SIGNALS WITHIN THE INTERSECTION.
9. A CLEARANCE OF NO LESS THAN 17'-6" SHALL BE MAINTAINED BETWEEN THE SIGNAL HEADS AND THE ROADWAY. MAXIMUM SIGNAL HEAD HEIGHT AND SPACING SHALL BE IN ACCORDANCE WITH THE 2009 MUTCD AND 2016 FDOT STANDARDS.
10. THE CONTRACTOR SHALL VERIFY ALL ELEVATIONS AND ATTACHMENT HEIGHTS PRIOR TO ORDERING AND FABRICATION OF POLES. ALSO, THE CONTRACTOR SHALL LOCATE ALL UTILITIES AND CLEAR THE LOCATION OF POLE FOUNDATIONS (THROUGH SOFT DIGS) PRIOR TO ORDERING AND FABRICATION OF POLES.
11. A TERMINAL BLOCK WITH A MINIMUM OF 6 MM WIRE INSERTION ORIFICE (PREFERABLY CONTA-STRIPS NO. 27299.3) SHALL BE USED TO CONNECT CABLES AT THE SIGNAL POLE HAND HOLE WITH A MAXIMUM OF THREE 14 GAUGE CONDUCTORS PER LUG. AT LEAST 6' OF SLACK CABLE SHALL BE AVAILABLE FOR TROUBLESHOOTING.
12. SIGNAL CABLE AND LOOP WIRE ARE NOT TO BE IN THE SAME PULL BOX.
13. INDIVIDUAL PEDESTRIAN POLES SHALL BE THE PELCO ALUMINUM BREAK-AWAY TYPE MOUNTED ON A 24"x24"x36"DEEP CONCRETE BASE.
14. ALL VEHICLE AND PEDESTRIAN DISPLAYS, STREET ID'S, AND BLANK OUT SIGNS SHALL BE L.E.D. ALL PEDESTRIAN SIGNAL HEADS SHALL BE COUNTDOWN TYPE. LUMINAIRES SHOULD BE L.E.D. IF APPROVED.
15. CABLE GRIP SHALL BE OF SUFFICIENT SIZE TO NOT COMPROMISE THE INSTALLATION OF THE SIGNAL CABLE.
16. ALL CABLES WILL HAVE THREE SPARE CONDUCTORS.
17. THE USE OF "JONES" PLUGS IS NOT PERMITTED.
18. ALL SIGNAL HEADS, PEDESTRIAN HEADS AND PEDESTRIAN BUTTONS SHALL HAVE WEEP HOLES.
19. ALL POLES, FOUNDATIONS, AND CABINET ASSEMBLIES SHALL HAVE 50' OF GROUND ROD AND SHALL BE BONDED IN THE SIGNAL PULL BOX NEXT TO TRAFFIC SIGNAL CABINET.
20. SEMINOLE COUNTY HAS UNIQUE PHASING. ALL INTERSECTIONS SHALL BE BUILT TO SEMINOLE COUNTY STANDARDS. CALL TRAFFIC SIGNAL SHOP AT 407-665-5680 FOR FURTHER INFORMATION.
21. ALL EQUIPMENT AND MATERIALS SHALL BE APPROVED BY SEMINOLE COUNTY TRAFFIC ENGINEERING.
  - A. ALL SIGNAL HEADS TO BE DIE CAST WITH TUNNEL VISORS AND BACK PLATES.
  - B. ALL PULL BOXES TO BE 20K RATED NON-METALLIC, LOCATED A MINIMUM OF 5' FROM RADII AND 10' OFF EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED AND HAVE A 1' WIDE (MIN) CONCRETE APRON.
22. DELAY TIMES SHALL BE SET TO 5 SECONDS.
23. CONTRACTOR IS TO INSURE THAT ALL ADA REQUIREMENTS ARE MET IN ACCORDANCE WITH THE LATEST STANDARDS FOR SIDEWALKS AND RAMPS ADJACENT TO ALL PEDESTRIAN BUTTONS FOR PEDESTRIAN ACCESS POINTS.
24. CONDUIT THAT STARTS ON THE CABINET CORNER SHALL HAVE FOUR EACH, 2" CONDUIT FOR EACH CROSSING OR BORE. CONDUIT FOR ELECTRICAL POWER SERVICE SHALL BE 1 1/2 INCH RIGID GALVANIZED. ALL OTHER CONDUIT TO BE 2" (MINIMUM) SCHEDULE 40 P.V.C. PAYMENT SHALL INCLUDE THE COST OF DIRECTIONAL BORE AND ALL CONDUITS IN DIRECTIONAL BORE. IT SHALL BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED.
25. BEFORE ORDERING SIGNAL CABLE, THE CONTRACTOR SHALL VERIFY COLOR CODES WITH SEMINOLE COUNTY TRAFFIC ENGINEERING. ALL SIGNAL WIRING TO BE PER SEMINOLE COUNTY SPECIFICATIONS.
26. PULL BOXES SHALL BE NON-METALLIC, 20K RATED, TRAFFIC BEARING BOXES. SPECIFICATIONS SECTION B630-3-3, PARAGRAPH 5, IS HEREWITH EXPANDED TO INCLUDE PULL BOXES. PULL BOXES SHALL BE INSTALLED AT INTERVALS OF NOT MORE THAN 200 FEET AND SHALL NOT BE PLACED IN ANY DRIVEWAYS. PULL BOX COVERS SHALL BE FDOT APPROVED OF NON-METALLIC CONSTRUCTION WITH RECESSED COVER LOGO "TRAFFIC SIGNAL" OR "FIBER OPTIC" AS APPROPRIATE. PULL BOXES SHALL HAVE A 1' CONCRETE APRON PER 2016 FDOT STND.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



Catherine L. Spiess, PE 3000 Dovera Drive, Suite 200  
 PE No. 62501 Oviedo, Florida 32765  
 Certificate of Authorization No. 7074 p 407.971.8850



ROAD NAME COUNTY CIP NO.  
 SPARTAN DR. 00282808

**GENERAL NOTES**

SHEET NO.

11

SIGNALIZATION NOTES CONTINUED

27. TYPE "F" LOOPS SHALL BE 6'X40' AND TYPE "B" LOOPS SHALL BE 6'X6'. ALL LOOPS SHALL EXTEND 5' PAST THE STOP BAR, UNLESS SPECIFICALLY CALLED OUT IN THE PLANS. WHENEVER POSSIBLE LOOPS ARE TO BE CUT BEFORE FRICTION COURSE. LOOP WINDOW SHALL BE INSTALLED IN CONCRETE CURB; ALL SAW CUTS FOR LOOP INSTALLATION SHALL BE CLEANED OF DUST, DIRT, AND OTHER DEBRIS WITH COMPRESSED AIR PRIOR TO THE INSTALLATION OF LOOP WIRE OR LEAD-IN CABLE. FLEXIBLE LOOP SEALANT SHALL BE USED PER SPECIFICATIONS SECTION A660-9.4.1. ALL LOOP LEADINS FOR 6'X40' LOOPS SHALL BE CUT FROM THE BACK OF THE LOOP TO PULL BOX AWAY FROM THE ROAD RADIUS AND TRENCHED, NOT SAW CUT, TO THE CABINET. ALL LOOP SPLICES SHALL SOLDERED AND COVERED WITH A WATER PROOF SEAL.
28. FIELD TESTS: THE CONTRACTOR SHALL HAVE A QUALIFIED REPRESENTATIVE PRESENT AT ALL INSPECTIONS. A SIGNAL INSPECTION IS TO BE SCHEDULED 10 DAYS PRIOR TO THE SIGNAL BEING PLACED INTO OPERATION. SHOULD THE CONTRACTOR REQUEST AN INSPECTION AND THE CONTRACTOR IS NOT PREPARED FOR THE INSPECTION, THE CONTRACTOR WILL BE BACK CHARGED FOR THE CONSULTANT INSPECTOR'S TIME. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE A 90 DAY WARRANTY PERIOD AS OUTLINED IN FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
29. EXISTING DETECTION SHALL BE MAINTAINED FOR ALL ACTUATED MOVEMENTS. IF TEMPORARY OVERHEAD DETECTION IS USED, THE CONTRACTOR SHALL WIRE ISOLATION PANELS BETWEEN THE CONTROLLER ASSEMBLY AND OVERHEAD DETECTION WITHIN 48 HRS OF COMPROMISING EXISTING DETECTION.
30. PRIOR TO FINAL INSPECTION, THE CONTRACTOR SHALL FURNISH SEMINOLE COUNTY AND THE FDOT IF APPLICABLE, ONE SET EACH OF CONSTRUCTION AS-BUILT PLANS.

EROSION CONTROL NOTES

1. THE EROSION CONTROL MEASURES PER FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEW MANUAL (E&SC MANUAL) ARE THE MINIMUM REQUIRED. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DUE TO FIELD CONDITIONS AS DETERMINED BY THE SEMINOLE COUNTY ENGINEERING INSPECTOR OR THE REGULATORY AGENCIES.

REVISIONS						 <small>Catherine L. Spiess, PE PE No. 62501 Certificate of Authorization No. 7074</small>	<b>SEMINOLE COUNTY</b> ENGINEERING DIVISION		<b>GENERAL NOTES</b>	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NAME	COUNTY CIP NO.		12
						SPARTAN DR.	00282808			

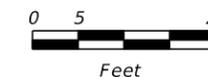
**NOTES:**

ALL LANDSCAPING DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED IN KIND. ALL EXISTING PALM TREES SHALL REMAIN UNDISTURBED.

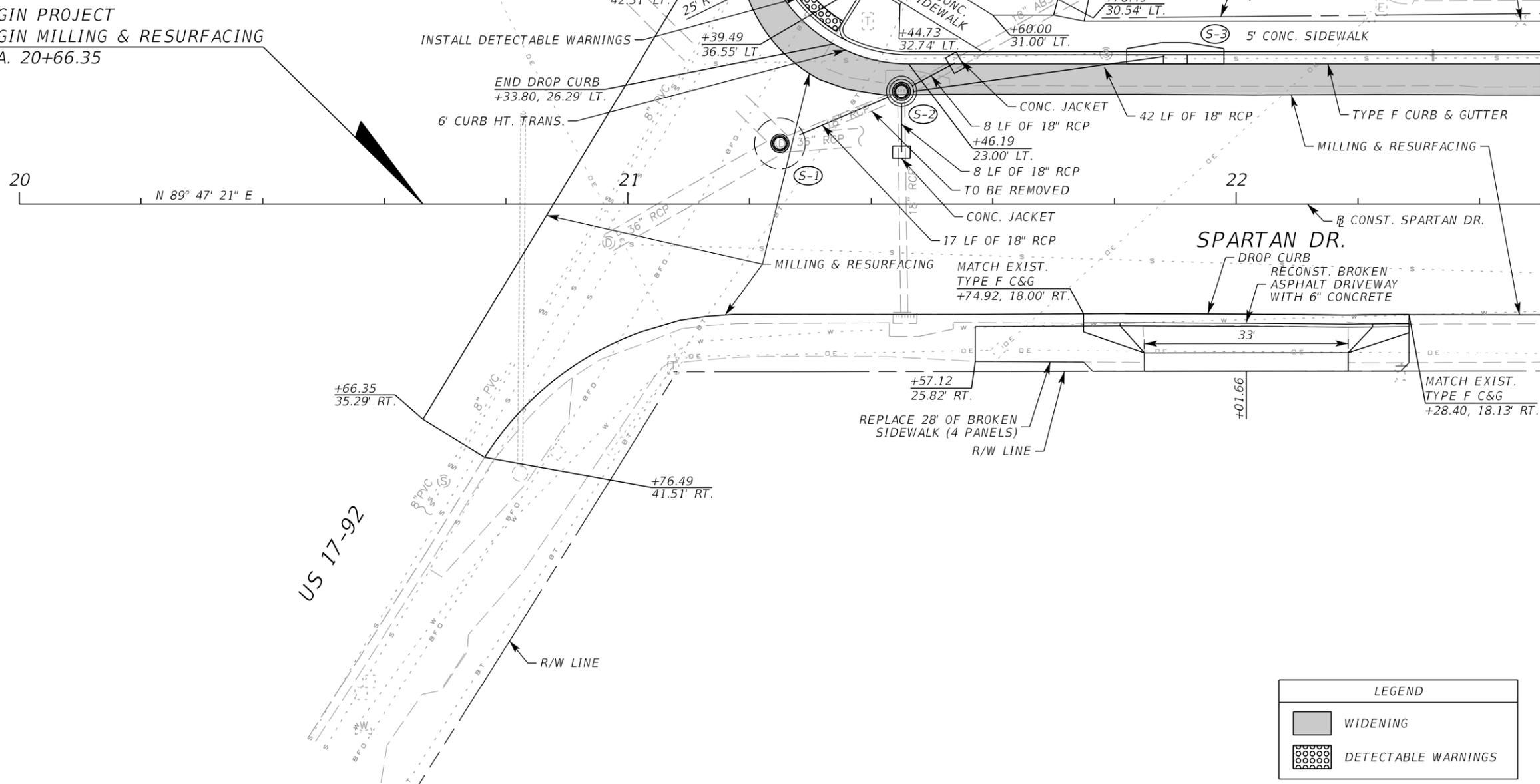
SEE INTERSECTION DETAILS FOR ADDITIONAL SIDEWALK AND ROADWAY GRADING INFORMATION.

BEGIN PROJECT  
 BEGIN MILLING & RESURFACING  
 STA. 20+66.35

20  
 N 89° 47' 21" E



DO NOT EXCAVATE POLE FOUNDATION. COORDINATE CONST. OF SIDEWALK AND SLOPE WITH PROPERTY OWNER.



LEGEND	
	WIDENING
	DETECTABLE WARNINGS

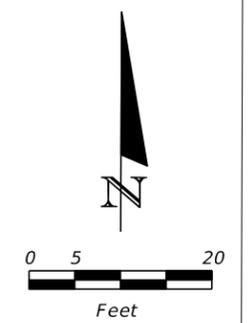
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

**Inwood**  
 consulting engineers  
 Catherine L. Spiess, PE 3000 Dovera Drive, Suite 200  
 PE No. 62501 Oviedo, Florida 32765  
 Certificate of Authorization No. 7074 p 407.971.8850

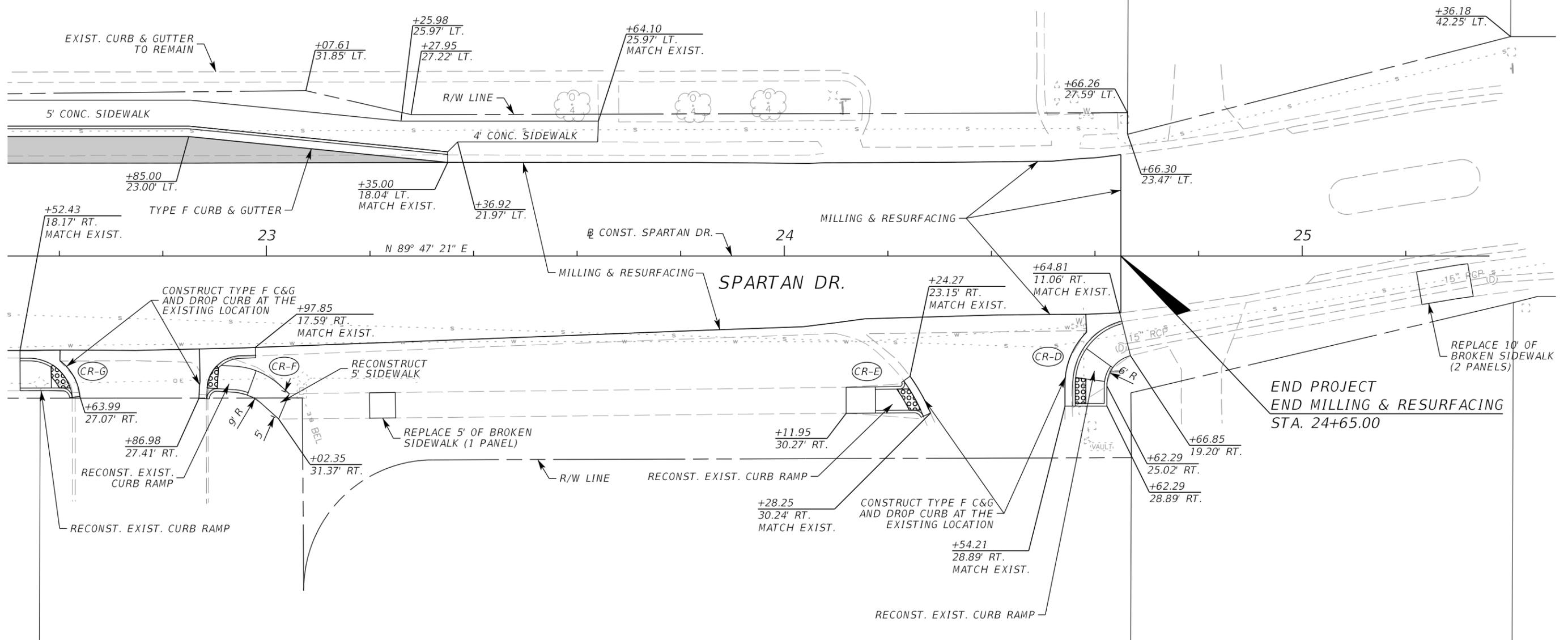
**SEMINOLE COUNTY**  
 ENGINEERING DIVISION  
 ROAD NAME COUNTY CIP NO.  
 SPARTAN DR. 00282808

**PLAN SHEET (1)**

SHEET NO.  
 13



NOTE: ALL LANDSCAPING DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED IN KIND. ALL EXISTING PALM TREES SHALL REMAIN UNDISTURBED.



END PROJECT  
END MILLING & RESURFACING  
STA. 24+65.00

LEGEND	
	WIDENING
	DETECTABLE WARNINGS

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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PE No. 62501  
Certificate of Authorization No. 7074

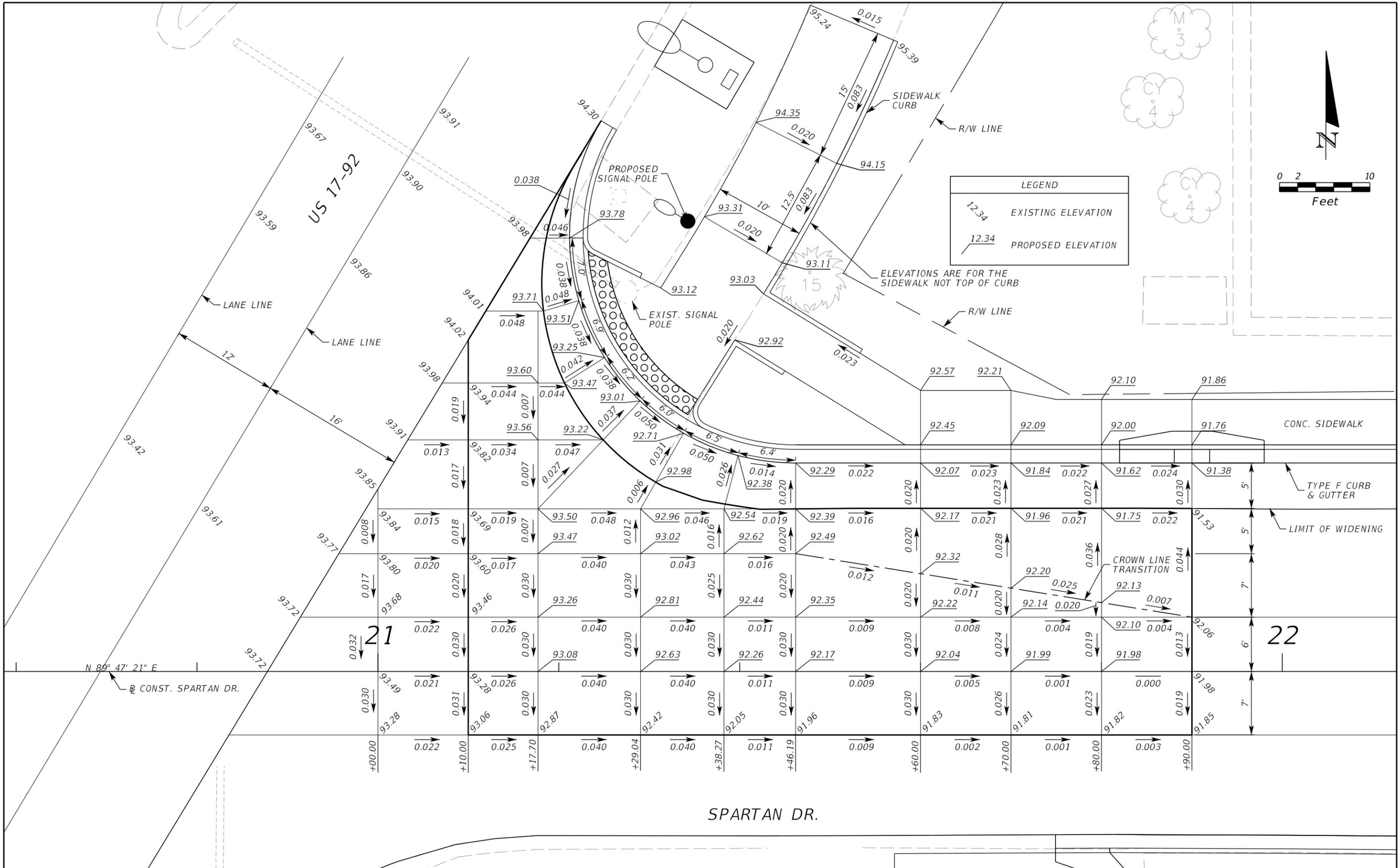
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**SEMINOLE COUNTY**  
ENGINEERING DIVISION

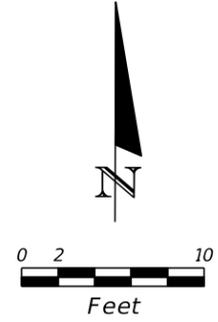
ROAD NAME: SPARTAN DR.  
COUNTY CIP NO.: 00282808

**PLAN SHEET (2)**

SHEET NO. 14



LEGEND	
<u>12.34</u>	EXISTING ELEVATION
- - - 12.34	PROPOSED ELEVATION



REVISIONS					
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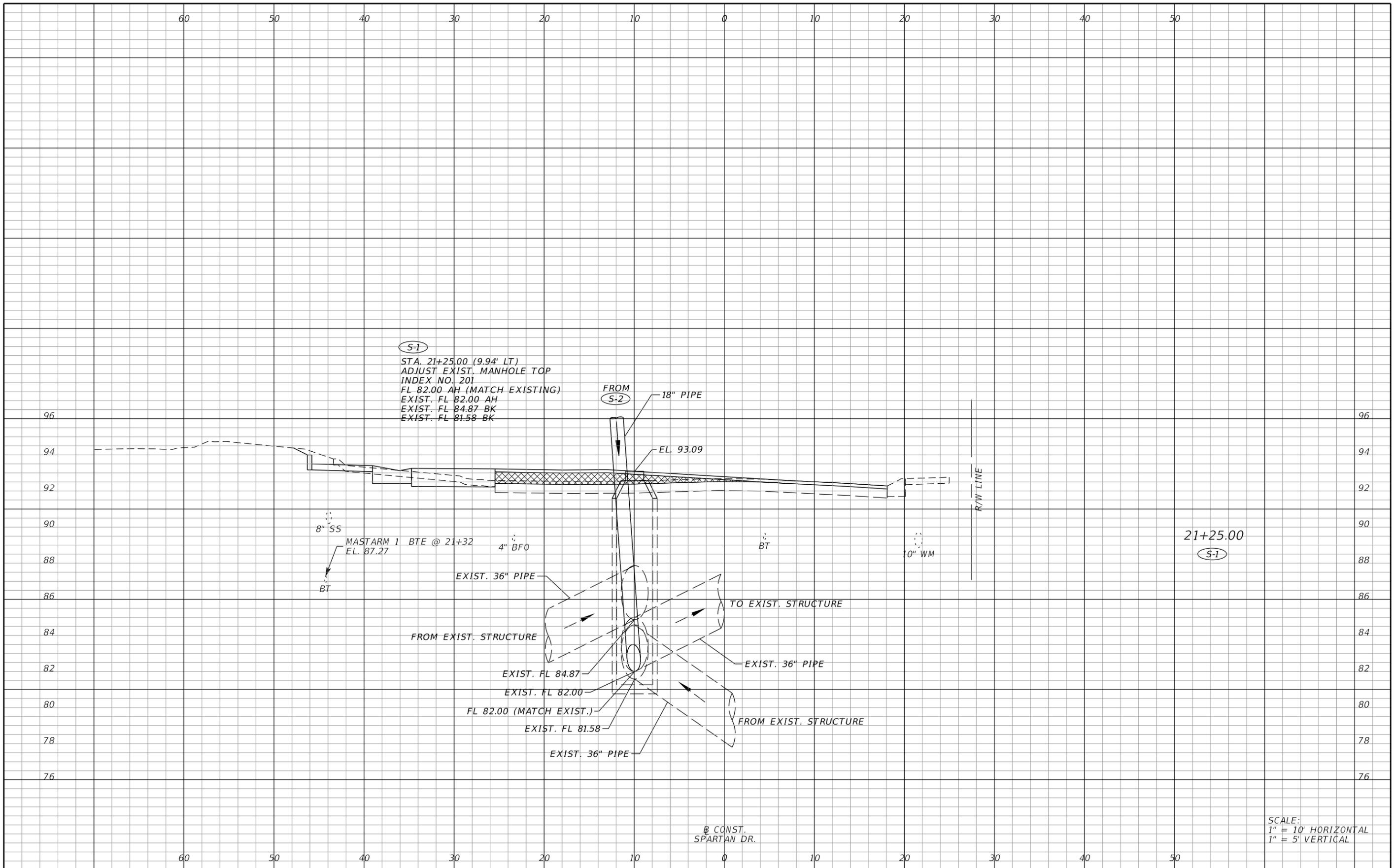
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**SEMINOLE COUNTY**  
ENGINEERING DIVISION

ROAD NAME: SPARTAN DR.  
COUNTY CIP NO.: 00282808

**INTERSECTION DETAILS**

SHEET NO.  
15



(S-1)  
 STA. 21+25.00 (9.94' LT)  
 ADJUST EXIST. MANHOLE TOP  
 INDEX NO. 201  
 FL 82.00 AH (MATCH EXISTING)  
 EXIST. FL 82.00 AH  
 EXIST. FL 84.87 BK  
 EXIST. FL 81.58 BK

FROM (S-2)  
 18" PIPE

EL. 93.09

8" SS  
 MASTARM 1 BTE @ 21+32  
 EL. 87.27

4" BFO

10" WM

21+25.00  
 (S-1)

EXIST. 36" PIPE  
 FROM EXIST. STRUCTURE  
 EXIST. FL 84.87  
 EXIST. FL 82.00  
 FL 82.00 (MATCH EXIST.)  
 EXIST. FL 81.58  
 EXIST. 36" PIPE  
 TO EXIST. STRUCTURE  
 EXIST. 36" PIPE  
 FROM EXIST. STRUCTURE

CONST.  
 SPARTAN DR.

SCALE:  
 1" = 10' HORIZONTAL  
 1" = 5' VERTICAL

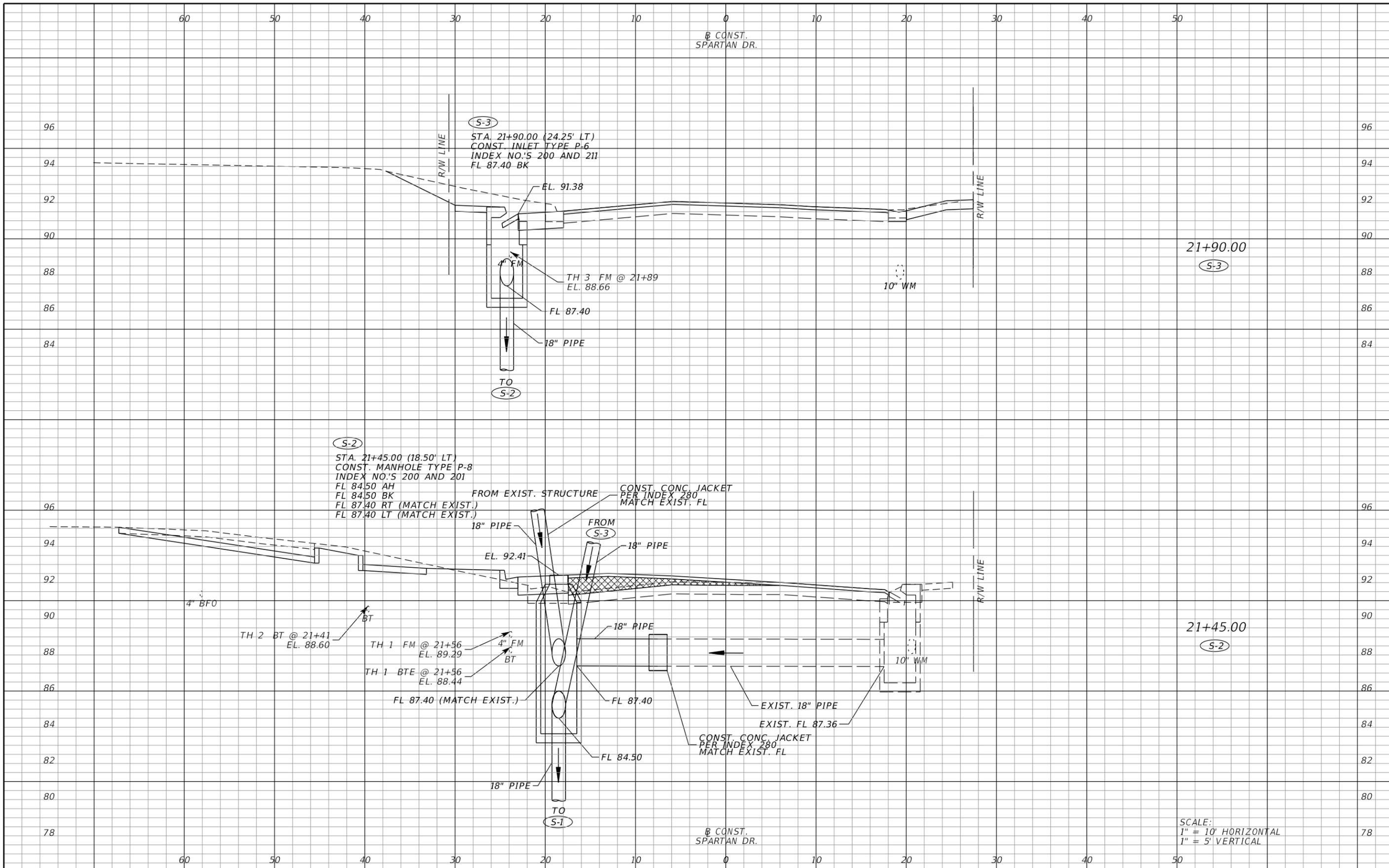
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

**Inwood** consulting engineers  
 Renato E. Chuw, PE  
 PE No. 56050  
 Certificate of Authorization No. 7074  
 3000 Dovera Drive, Suite 200  
 Oviedo, Florida 32765  
 p 407.971.8850

**SEMINOLE COUNTY**  
 ENGINEERING DIVISION  
 ROAD NAME: SPARTAN DR.  
 COUNTY CIP NO.: 00282808

**DRAINAGE STRUCTURES**

SHEET NO.  
 16



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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Renato E. Chuw, PE  
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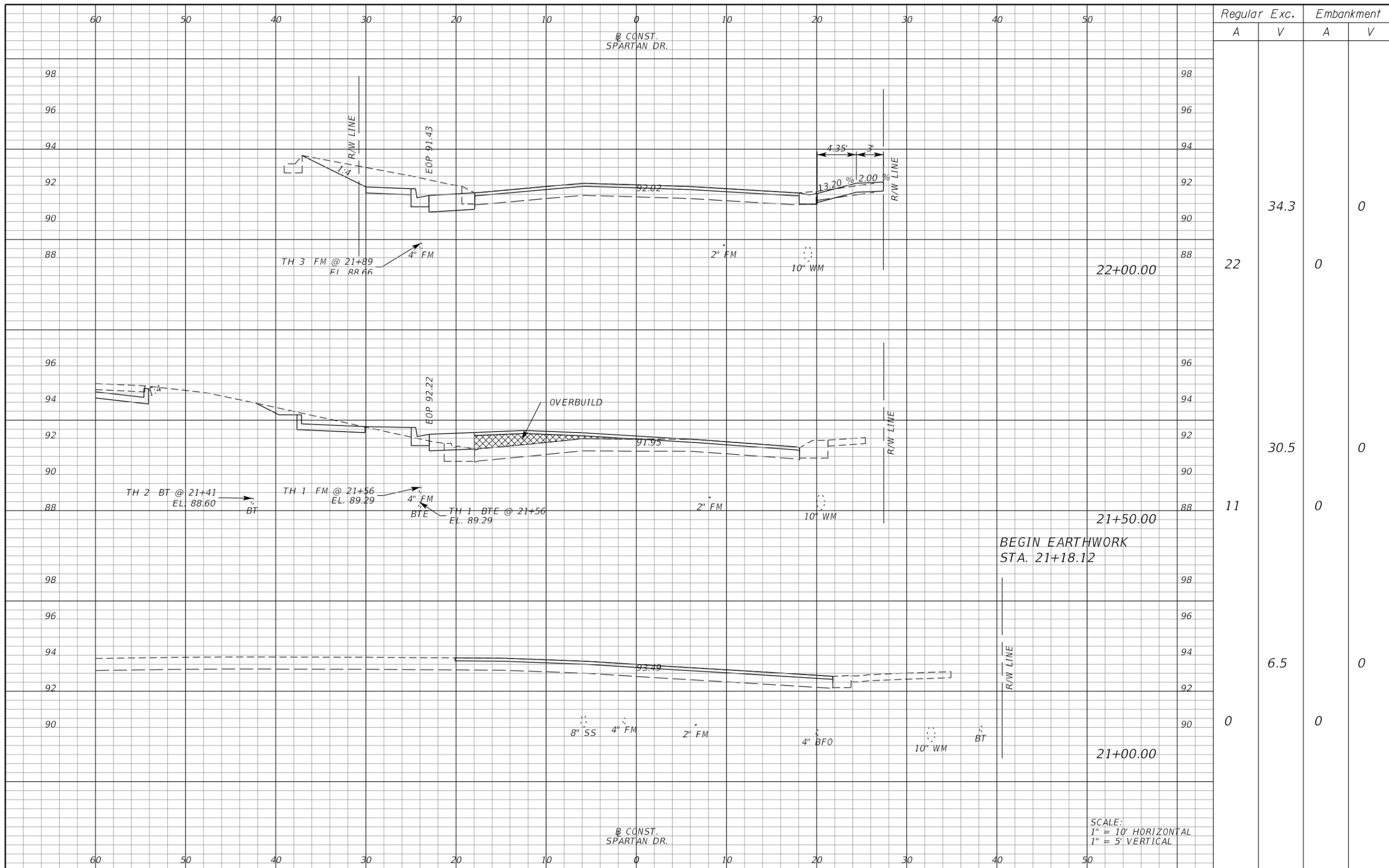
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**SEMINOLE COUNTY**  
 ENGINEERING DIVISION

ROAD NAME: SPARTAN DR.  
 COUNTY CIP NO.: 00282808

**DRAINAGE STRUCTURES**

SHEET NO. 17



Regular		Exc.		Embankment	
A	V	A	V	A	V
			34.3		0
22		0			
			30.5		0
11		0			
			6.5		0
0		0			

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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Catherine L. Spiess, PE  
PE No. 62501  
Certificate of Authorization No. 7074

3000 Dovera Drive, Suite 200  
Oviedo, Florida 32765  
p 407.971.8850

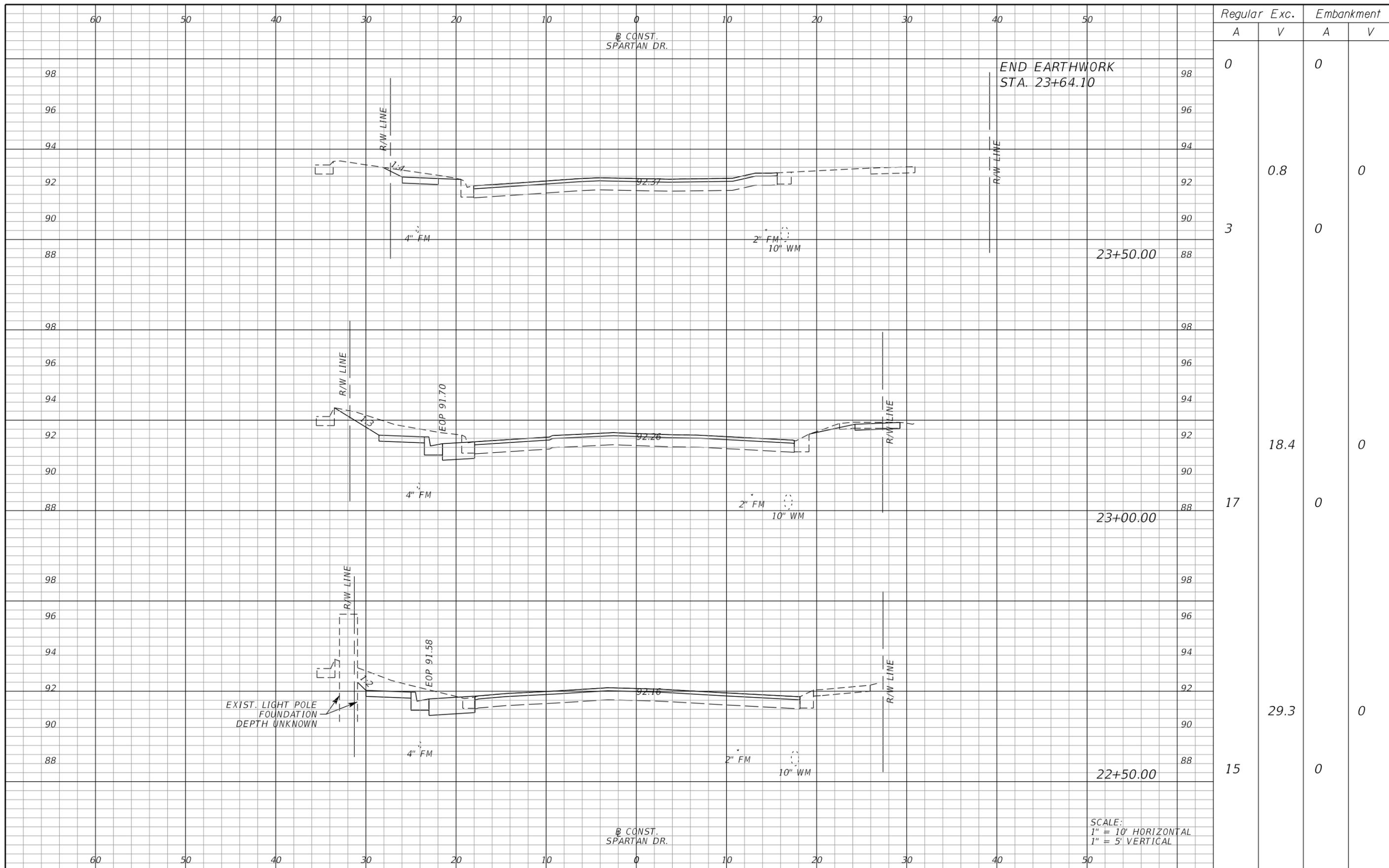
**SEMINOLE COUNTY**  
ENGINEERING DIVISION

ROAD NAME: SPARTAN DR.  
COUNTY CIP NO.: 00282808

**CROSS SECTIONS**

SHEET NO. 18

SCALE:  
1" = 10' HORIZONTAL  
1" = 5' VERTICAL



Station	Regular		Exc.		Embankment	
	A	V	A	V	A	V
23+64.10	0				0	
23+50.00	3	0.8	0		0	
23+00.00	17	18.4	0		0	
22+50.00	15	29.3	0		0	

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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consulting engineers

Catherine L. Spiess, PE  
PE No. 62501  
Certificate of Authorization No. 7074

3000 Dovera Drive, Suite 200  
Oviedo, Florida 32765  
p 407.971.8850

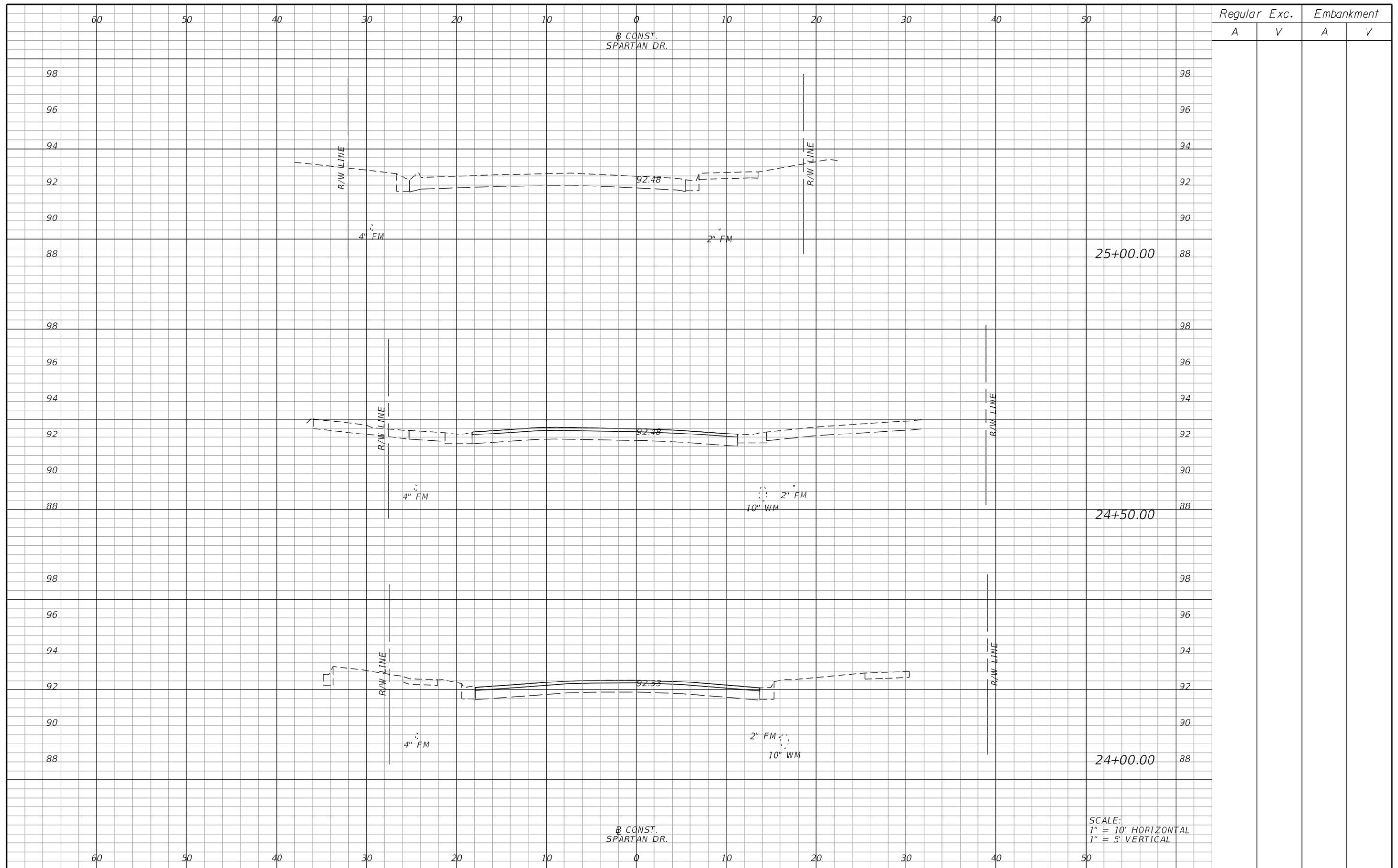
**SEMINOLE COUNTY**  
ENGINEERING DIVISION

ROAD NAME: SPARTAN DR.  
COUNTY CIP NO.: 00282808

**CROSS SECTIONS**

SHEET NO. 19

SCALE:  
1" = 10' HORIZONTAL  
1" = 5' VERTICAL



SCALE:  
 1" = 10' HORIZONTAL  
 1" = 5' VERTICAL

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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 consulting engineers  
 Catherine L. Spiess, PE  
 3000 Dovera Drive, Suite 200  
 Oviedo, Florida 32765  
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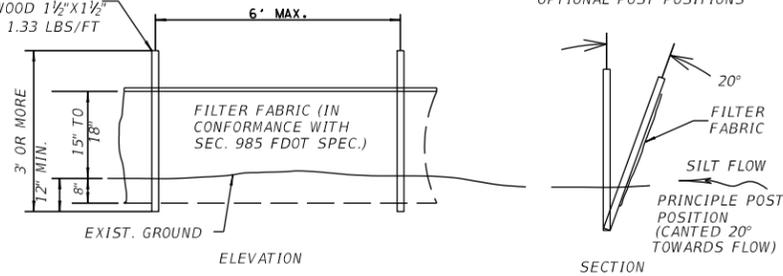
**SEMINOLE COUNTY**  
 ENGINEERING DIVISION  
 ROAD NAME: SPARTAN DR.  
 COUNTY CIP NO.: 00282808

**CROSS SECTIONS**

SHEET NO.  
 20

## SILT FENCE DETAILS

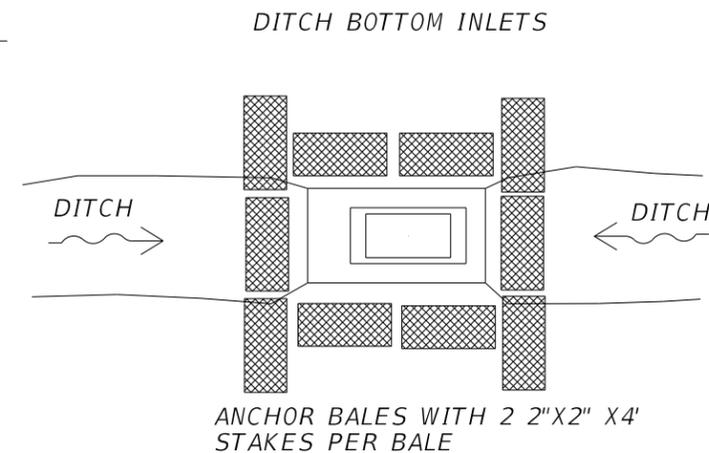
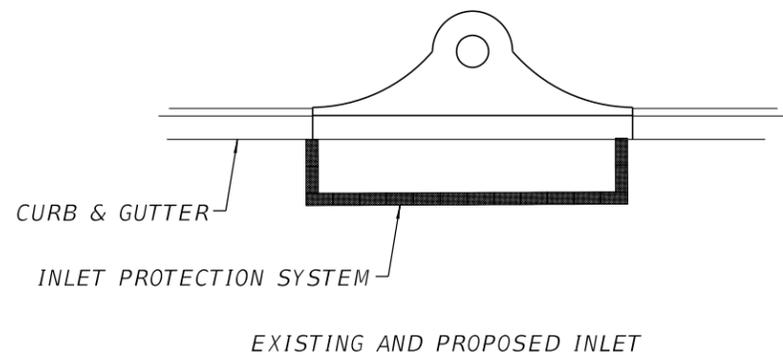
POST OPTIONS:  
 SOFTWOOD 2½" DIA.  
 SOFTWOOD 2" X 4"  
 HARDWOOD 1½" X 1½"  
 STEEL 1.33 LBS/FT



### NOTES:

1. SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE, TYPE III (LF), PAY ITEM NO. 104-13-1. QUANTITIES ARE APPROXIMATE.
2. DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATER COURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS ARE TO BE USED AT PERMANENT BODIES OF WATER.
3. WHERE USED AS SLOPE PROTECTION SILT FENCE IS TO BE CONSTRUCTED ON 0% LONGITUDINAL GRADE TO AVOID CHANNELIZING RUNOFF ALONG THE LENGTH OF THE FENCE.

## PROTECTION AROUND INLETS OR SIMILAR STRUCTURES



### NOTES:

1. TYPE I AND II SYNTHETIC BARRIERS SHOULD BE SPACED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL MANUAL.
2. SYNTHETIC BALES SHALL BE TRENCHED 3" TO 4" AND ANCHORED WITH 2 - 1" X 2" (OR 1" DIA.) X 4" WOOD STAKES. STAKES OF OTHER MATERIALS OR SHAPES PROVIDING EQUIVALENT STRENGTH MAY BE USED IF APPROVED BY THE ENGINEER. STAKES OTHER THAN WOOD SHALL BE REMOVED UPON COMPLETION OF THE PROJECT.
3. RAILS AND POSTS SHALL BE 2" X 4" WOOD. OTHER MATERIALS PROVIDING EQUIVALENT STRENGTH MAY BE USED IF APPROVED BY THE ENGINEER.
4. ADJACENT BALES SHALL BE BUTTED FIRMLY TOGETHER.
5. WHERE USED IN CONJUNCTION WITH SILT FENCE, SYNTHETIC BALES SHALL BE PLACED ON THE UPSTREAM SIDE OF THE FENCE.

### REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



Renato E. Chuw, PE  
 PE No. 56050  
 Certificate of Authorization No. 7074

3000 Dovera Drive, Suite 200  
 Oviedo, Florida 32765  
 p 407.971.8850

SEMINOLE COUNTY  
 ENGINEERING DIVISION

ROAD NAME COUNTY CIP NO.  
 SPARTAN DR. 00282808

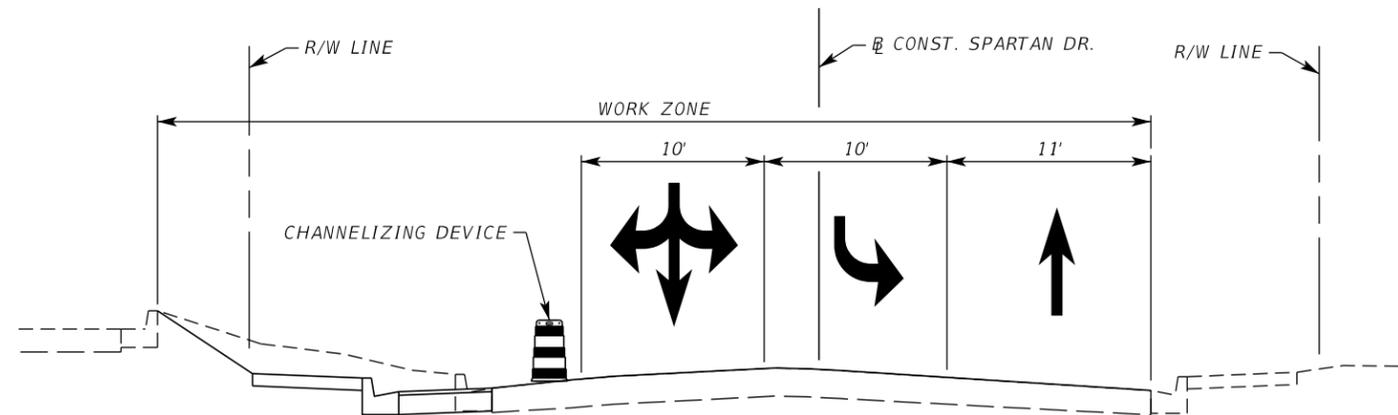
EROSION CONTROL  
 DETAILS

SHEET  
 NO.

21

## TRAFFIC CONTROL NOTES

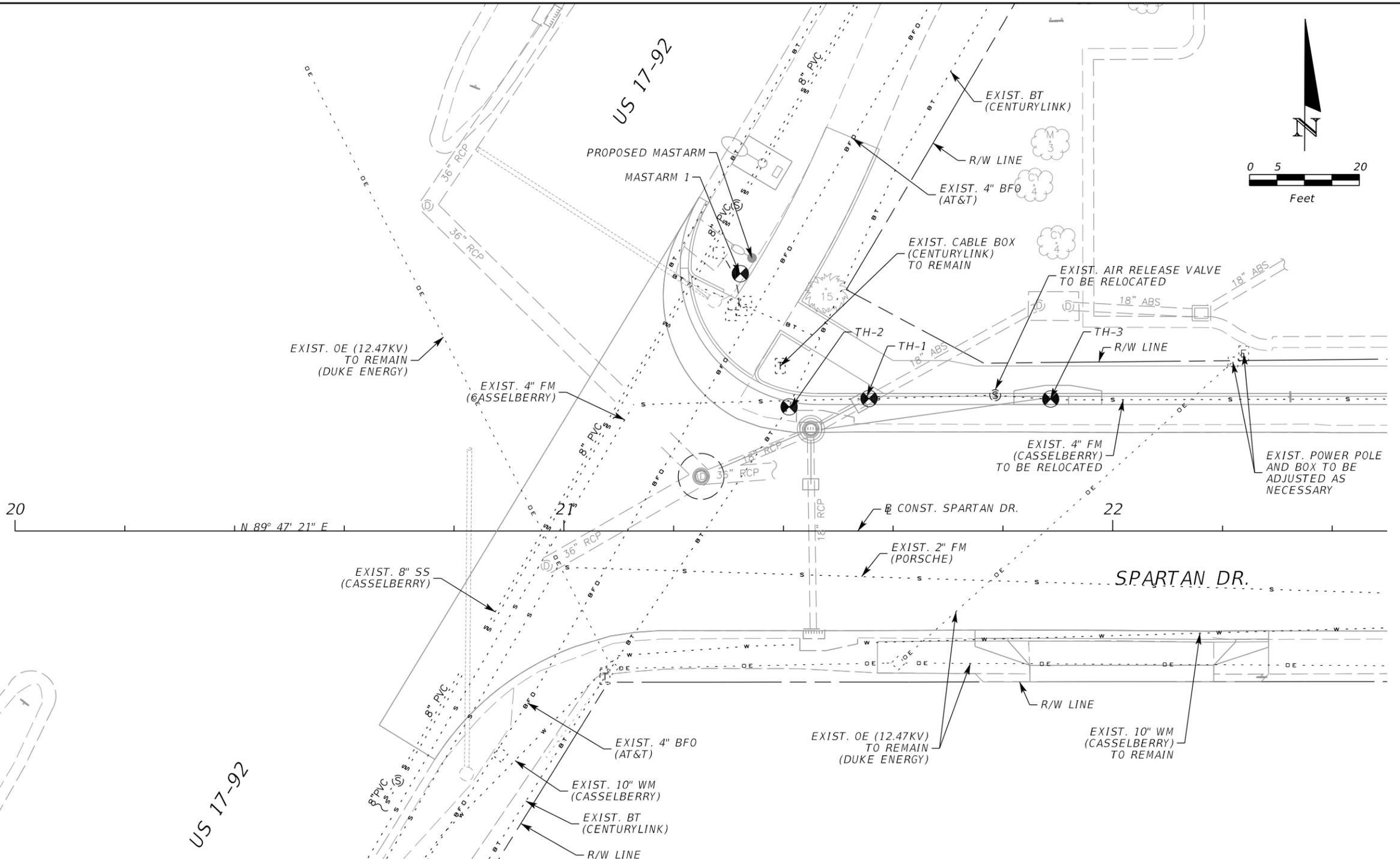
1. THE CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) (2009) AND FDOT DESIGN STANDARDS (2016) AT ALL TIMES.
2. ALL TRAFFIC CONTROL DEVICES (TEMPORARY SIGNS, PAVEMENT MARKINGS, BARRIER WALL, ETC.) REQUIRED DURING A CONSTRUCTION PHASE SHALL BE APPROVED BY THE COUNTY ENGINEERING INSPECTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL BE MAINTAINED IN ACCORDANCE WITH THE MUTCD (DEFER TO FDOT DESIGN STANDARDS INDEX 600 IF CASE IS NOT COVERED IN MUTCD). FDOT DESIGN STANDARDS INDEX 600 SERIES SHALL BE USED IN CONJUNCTION WITH ALL OTHER INDICES SPECIFICALLY MENTIONED.
3. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN TRAFFIC DURING CONSTRUCTION IN ACCORDANCE WITH FDOT DESIGN STANDARDS INDEX 600 SERIES.
4. ALL EXISTING SIGNS WHICH CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE REMOVED OR TEMPORARILY RELOCATED AS NECESSARY.
5. ALL SIGNS 48" X 48" OR LARGER SHALL BE MAINTAINED ON TWO (2) BREAKAWAY SUPPORTS OR YIELDING POSTS AS SHOWN IN FIGURE 6-1 OF THE MUTCD. THE CONTRACTOR SHALL USE THE MUTCD TO DETERMINE THE APPROPRIATE PLACEMENT AND ELEVATION OF CONSTRUCTION SIGNS. REFLECTIVITY SHALL ADHERE TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (JANUARY 2016).
6. VEHICULAR ACCESS TO RESIDENCES, BUSINESSES AND SCHOOLS SHALL BE MAINTAINED AT ALL TIMES.
7. MINIMUM LANE WIDTHS SHALL BE TEN (10) FEET.
8. A MINIMUM OF 1' SHY DISTANCE SHALL BE MAINTAINED BETWEEN THE TRAVEL LANES AND CHANNELIZING DEVICE.
9. TRAFFIC CONDITIONS, ACCIDENTS AND OTHER UNFORESEEN EMERGENCY CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE COUNTY ENGINEERING INSPECTOR.
10. THE EXISTING POSTED SPEED SHALL BE MAINTAINED DURING CONSTRUCTION. SPARTAN DRIVE IS POSTED AT 25 MPH. US 17-92 IS POSTED AT 45 MPH.
11. IT IS THE COUNTY'S POLICY TO PLACE THE RESPONSIBILITY FOR MAINTENANCE OF TRAFFIC DURING CONSTRUCTION ON THE CONTRACTOR. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A TRAFFIC CONTROL PLAN, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA TO THE COUNTY PRIOR TO BEGINNING THE PROJECT. THIS TRAFFIC CONTROL DETAILS SHEET IS INTENDED TO DEMONSTRATE THAT THE PROJECT IS CONSTRUCTIBLE AS DESIGNED.
12. LANE CLOSURES SHOULD BE AVOIDED AS MUCH AS POSSIBLE. LANE CLOSURES ARE PERMITTED BETWEEN 9 AM AND 4 PM. ALL ACTIVITIES REQUIRING LANE CLOSURES SHALL BE BROUGHT TO THE ATTENTION OF THE SEMINOLE COUNTY PROJECT MANAGER. LANES SHALL ONLY BE CLOSED DURING ACTIVE WORK PERIODS.



**TRAFFIC CONTROL TYPICAL SECTION - SPARTAN DRIVE**

MILLING OPERATION CAN BE ACHIEVED USING INDICES 604 AND 605

REVISIONS						 <small>Catherine L. Spiess, PE PE No. 62501 Certificate of Authorization No. 7074</small>	<b>SEMINOLE COUNTY</b> ENGINEERING DIVISION		<b>TRAFFIC CONTROL</b> <b>DETAILS</b>	SHEET NO.  22
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NAME	COUNTY CIP NO.		
						SPARTAN DR.	00282808			



**SUMMARY OF VERIFIED UTILITIES**

Vvh #	UTILITY DESCRIPTION (Owner, type)	SIZE	MATERIALS	Ø and/or C			EXISTING GROUND ELEVATION	TOP ELEVATION	COMMENTS
				STATION	OFFSET	LT/RT			
MASTARM 1	TRAFFIC SIGNAL	2-2 1/2"	PVC	21+32	46.81	LT	93.72'	NA	POLE LOCATION MOVE 4'
	BURRIED TELEPHONE	4-1/2"	PVC	21+32	46.81	LT	93.72'	87.27'	NORTH PER CLIENT DUE TO BTE, RELOCATE TRAFFIC SIGNAL CABLE
TH-1	CITY OF CASSELBERRY, FORCE MAIN	5" OD	PVC	21+56	24.10	LT	91.74'	89.29'	
TH-2	CENTURY LINK, BURRIED TELEPHONE	2 1/2"	HDPE	21+56	24.10	LT	91.74'	88.44'	
TH-3	CITY OF CASSELBERRY, FORCE MAIN	5" OD	PVC	21+89	24.01	LT	92.31'	88.66'	

**REVISIONS**

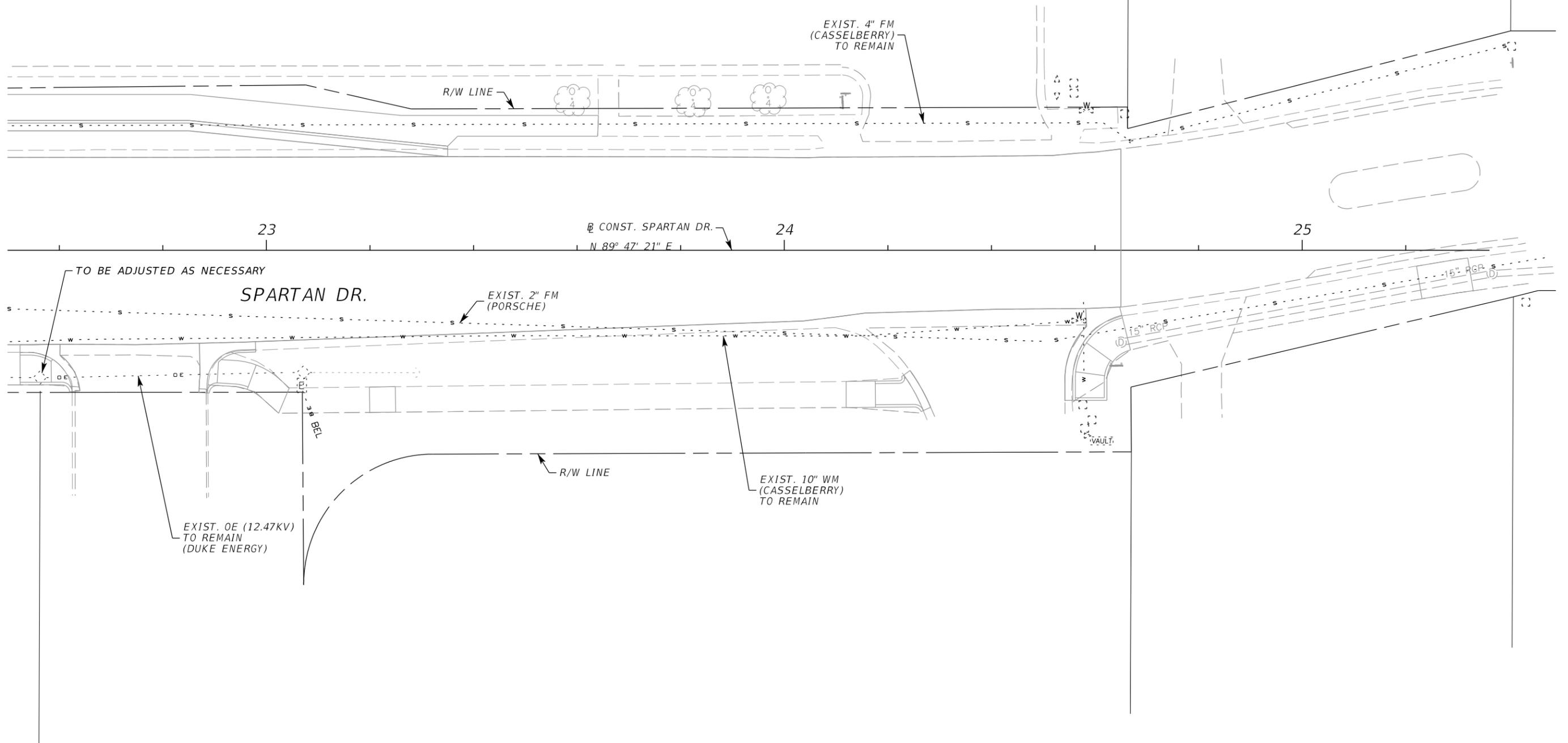
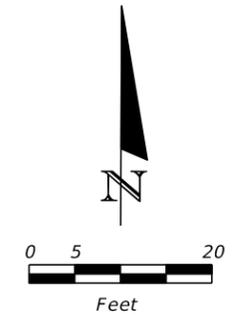
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

**Inwood**  
consulting engineers  
Catherine L. Spiess, PE  
3000 Dovera Drive, Suite 200  
PE No. 62501  
Oviedo, Florida 32765  
Certificate of Authorization No. 7074

**SEMINOLE COUNTY**  
ENGINEERING DIVISION  
ROAD NAME: SPARTAN DR.  
COUNTY CIP NO.: 00282808

**UTILITY ADJUSTMENT SHEET**

SHEET NO.  
23



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Catherine L. Spiess, PE  
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p 407.971.8850

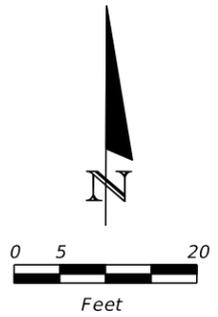
**SEMINOLE COUNTY**  
ENGINEERING DIVISION

ROAD NAME	COUNTY CIP NO.
SPARTAN DR.	00282808

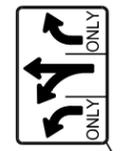
**UTILITY ADJUSTMENT SHEET**

SHEET NO.  
24





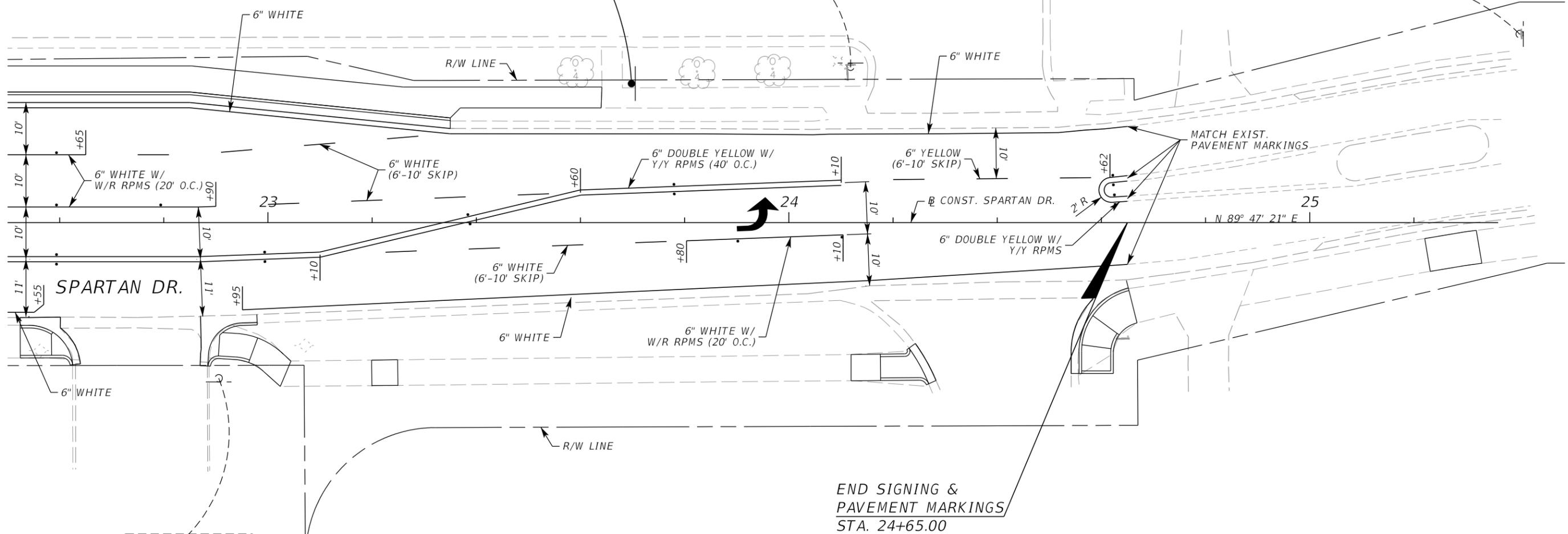
R3-8A  
48" x 30"  
STA. 23+70  
700-1-11



TO REMAIN



TO REMAIN



REVISIONS					
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Catherine L. Spiess, PE  
PE No. 62501  
Certificate of Authorization No. 7074

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Oviedo, Florida 32765  
p 407.971.8850

**SEMINOLE COUNTY**  
ENGINEERING DIVISION

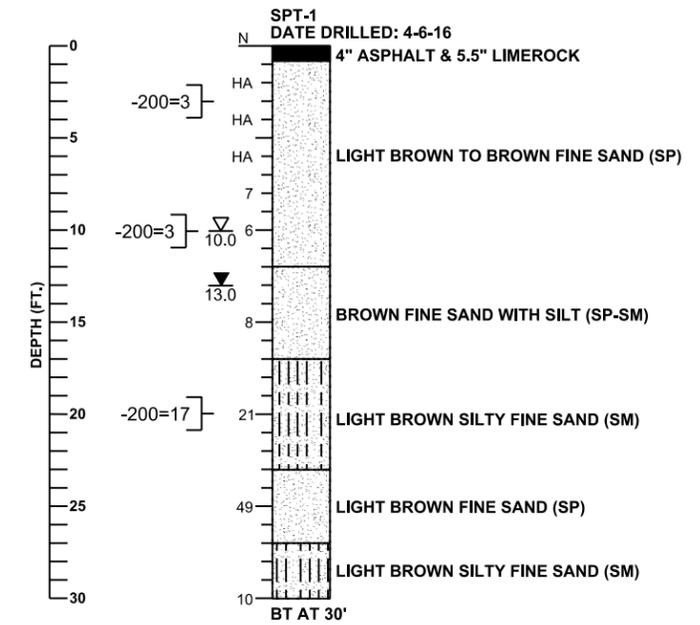
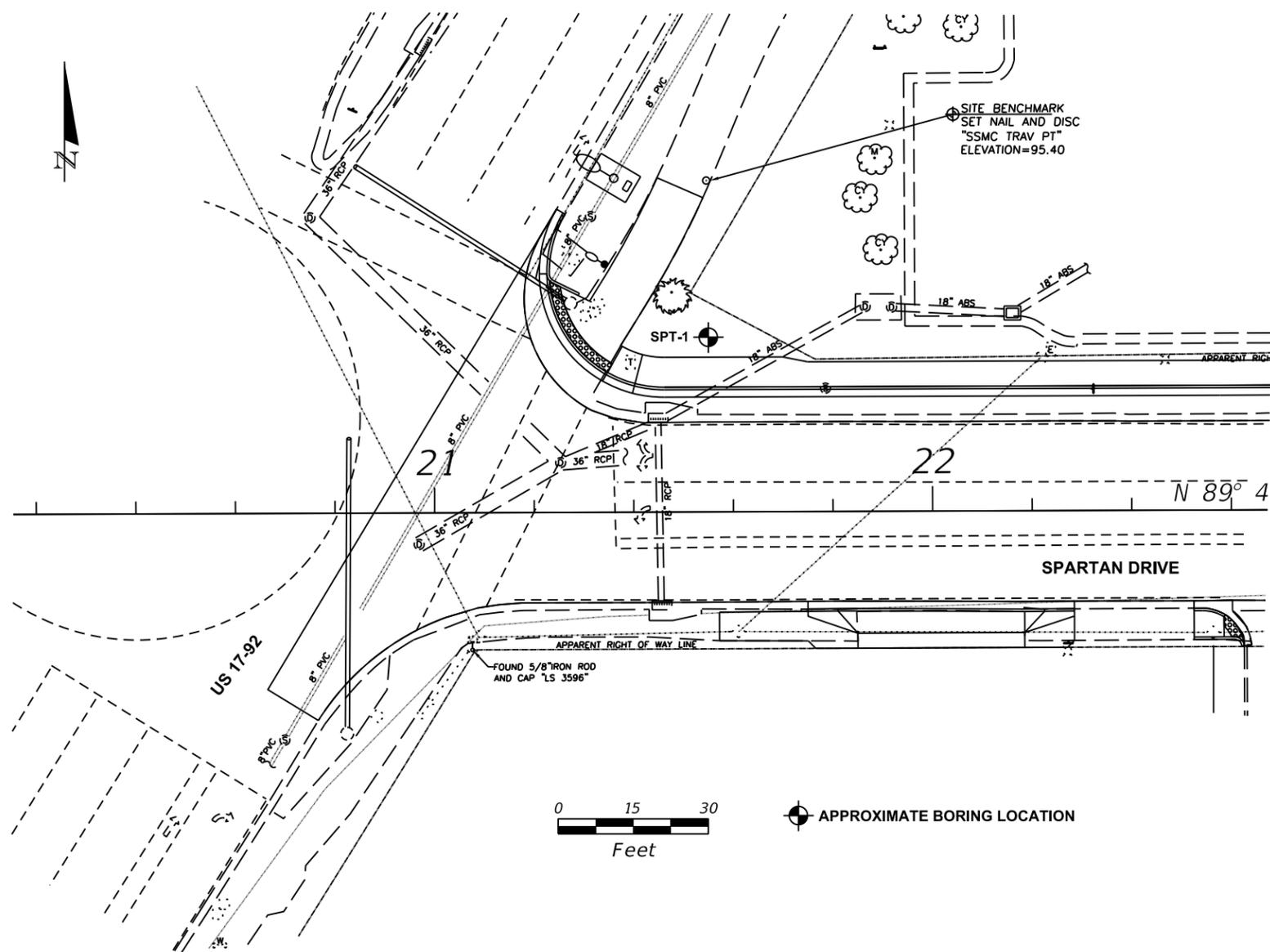
ROAD NAME: SPARTAN DR.  
COUNTY CIP NO.: 00282808

**SIGNING AND PAVEMENT MARKINGS**

SHEET NO.  
26







**LEGEND**

- N STANDARD PENETRATION RESISTANCE, BLOWS PER FOOT
- HA HAND AUGERED FOR UTILITY CLEARANCE
- ▽ 10.0 ESTIMATED SEASONAL HIGH GROUNDWATER DEPTH (FT.)
- ▽ 13.0 ENCOUNTERED GROUNDWATER DEPTH (FT.) ON DATE DRILLED
- BT BORING TERMINATED AT DEPTH INDICATED
- 200= PERCENT PASSING NO. 200 U.S. STANDARD SIEVE
- [Pattern] SAND
- [Pattern] SAND AND SILT

**GENERAL NOTES**

SUBSURFACE CONDITIONS SHOWN ON THE BORING REPRESENT THE CONDITIONS ENCOUNTERED AT THE BORING LOCATION. ACTUAL CONDITIONS NEAR THE BORING MAY VARY FROM THOSE SHOWN. UNIFIED SOIL CLASSIFICATIONS SHOWN ON THE BORING ARE BASED ON VISUAL EXAMINATION AND THE LABORATORY TESTING SHOWN.

STANDARD PENETRATION TEST BORING WAS PERFORMED IN ACCORDANCE WITH ASTM D-1586. STANDARD PENETRATION RESISTANCES ARE SHOWN ON THE BORING AT THE TEST DEPTHS IN IN BLOWS PER FOOT UNLESS OTHERWISE NOTED.

THE BORING LOCATION WAS NOT SURVEYED. BORING LOCATION WAS ESTABLISHED IN THE FIELD BY MEASURING DISTANCES FROM EXISTING STRUCTURES.

BASED ON REVIEW OF THE U.S. GEOLOGICAL SURVEY MAP ENTITLED "POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER IN THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT AND VICINITY, FLORIDA, SEPTEMBER 2008" FOR THE PROJECT AREA, THE MAXIMUM ELEVATION OF THE ARTESIAN HEAD IS ESTIMATED TO BE APPROXIMATELY +55 FT. NGVD. THE CONTRACTOR SHALL BE PREPARED TO HANDLE ARTESIAN HEAD LEVELS UP TO +55 FT. NGVD.

SPLIT SPOON SAMPLER:  
 INSIDE DIAMETER: 1.375 IN. AVERAGE HAMMER DROP: 30 IN.  
 OUTSIDE DIAMETER: 2.0 IN. HAMMER WEIGHT: 140 LBS.

**CORRELATION OF STANDARD PENETRATION RESISTANCE WITH RELATIVE DENSITY AND CONSISTENCY OF SOIL**

MANUAL HAMMER (SAFETY)		
GRANULAR SOILS	N VALUE (blows per foot)	RELATIVE DENSITY
SANDS	0-4	VERY LOOSE
	4-10	LOOSE
	10-30	MEDIUM DENSE
	30-50	DENSE
	OVER 50	VERY DENSE
MANUAL HAMMER (SAFETY)		
NON-GRANULAR SOILS	N VALUE (blows per foot)	CONSISTENCY
SILTS, CLAYS, MUCK, PEAT	0-2	VERY SOFT
	2-4	SOFT
	4-8	FIRM
	8-15	STIFF
	15-30	VERY STIFF
	OVER 30	HARD

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

**GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC.**  
 919 Lake Baldwin Lane  
 Orlando, FL 32814  
 T 407-898-1818 F 407-898-1837  
 Certificate of Authorization No. 5882  
**CRAIG G. BALLOCK PE NO. 71571**

**SEMINOLE COUNTY**  
 ENGINEERING DIVISION

ROAD NAME	COUNTY CIP NO.
SPARTAN DR.	

**SITE PLAN WITH BORING RESULTS**

**FIGURE 2**

SHEET NO.  
29

**GENERAL NOTES**

**SPECIFICATIONS:**

CONSTRUCT SPREAD FOOTING IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 455D. SPREAD FOOTINGS.

**DESIGN METHODS:**

LOAD RESISTANCE FACTOR DESIGN.

**CONCRETE:**

CLASS	MINIMUM 28-DAY COMPRESSIVE STRENGTH	LOCATION
IV	$f'_c = 5500$ PSI	LUMINAIRE SPREAD FOOTING

**REINFORCING STEEL:**

REINFORCEMENT CAN BE EITHER DEFORMED BAR REINFORCEMENT OR WELDED WIRE FABRIC. BAR REINFORCEMENT SHALL BE ASTM A615, GRADE 60. DEFORMED WELDED WIRE FABRIC SHALL HAVE A DESIGN STRENGTH OF 65 KSI.

**CONCRETE COVER:**

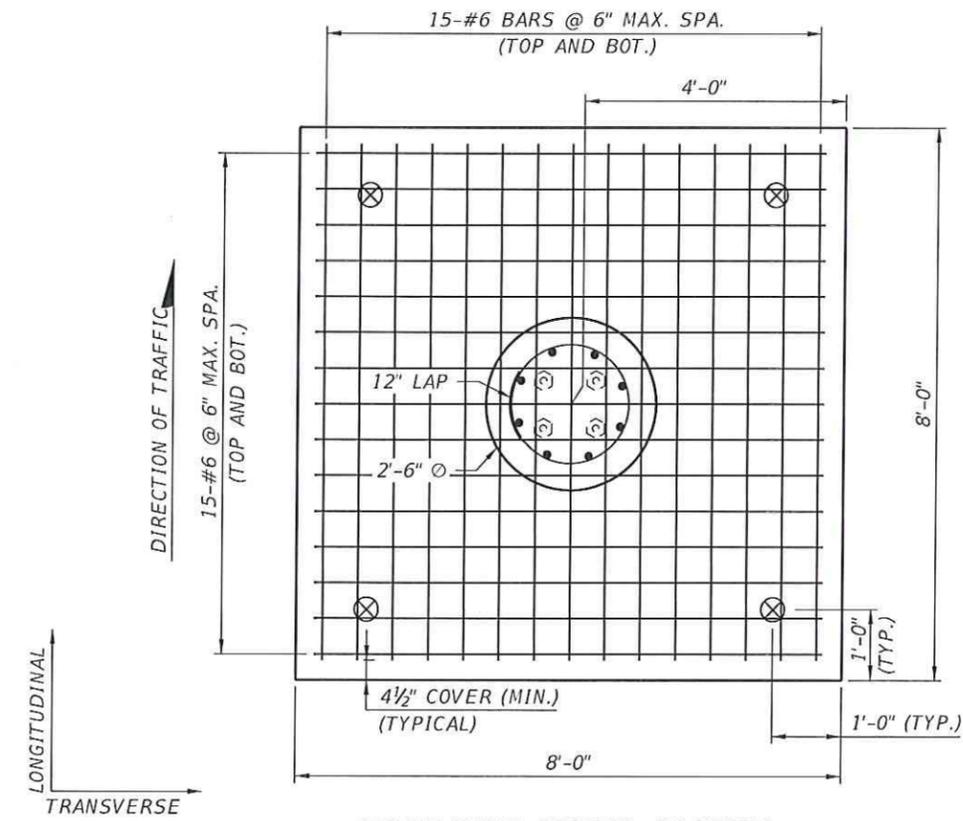
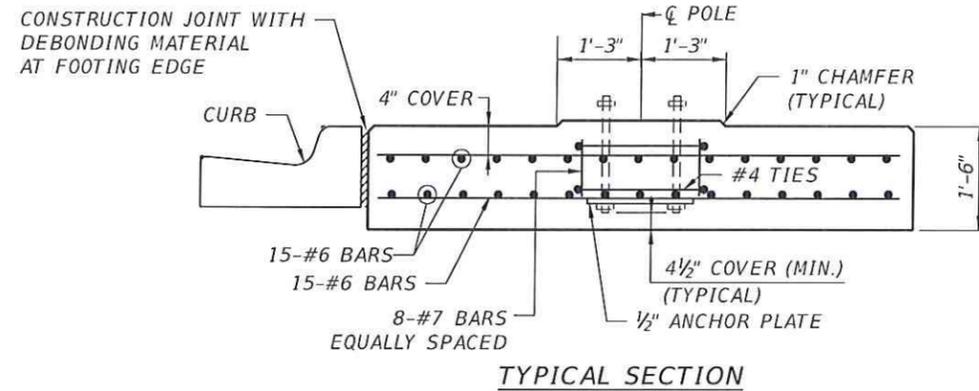
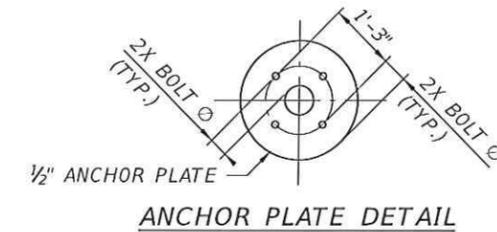
CONCRETE COVER SHOWN IN THE PLANS DOES NOT INCLUDE REINFORCEMENT PLACEMENT AND FABRICATION TOLERANCE UNLESS SHOWN AS "MINIMUM COVER". SEE FDOT STANDARD SPECIFICATIONS FOR ALLOWABLE REINFORCEMENT PLACEMENT TOLERANCES.

**LUMINAIRE SPREAD FOOTING NOTES:**

1. AT THE CONTRACTORS RISK, BASED ON THE EXISTING UTILITIES, HE MAY SUBSTITUTE THE SPREAD FOOTING WITH THE CYLINDRICAL SHAFT AS SHOWN IN INDEX 17515 OF THE FDOT DESIGN STANDARDS.
2. THE COST OF THE FOOTING IS INCLUDED IN THE PAY ITEM NUMBER FOR LIGHT POLE.
3. SOIL BELOW FOOTING HAS A RECOMMENDED MINIMUM ALLOWABLE BEARING CAPACITY OF 2000 PSF
4. ANCHOR BOLTS ARE TO HAVE A MINIMUM OF 4½ INCH CONCRETE COVER AT THE BOTTOM OF THE FOOTING.
5. THE CONTRACTOR SHALL COORDINATE THE ANCHOR BOLT DESIGN PROVIDED BY THE FABRICATOR WITH THE DETAILS SHOWN ON THIS SHEET. SEE INDEX 17515 FOR MATERIAL PROPERTIES, DIAMETER, LENGTH, EMBEDMENT, AND PROJECTION ABOVE TOP OF FOOTING. THE CONTRACTOR MUST ALSO VERIFY THAT THE FORCES OF THE LIGHT POLE DO NOT EXCEED THE DESIGN LOADS OF THIS FOOTER. CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA SHALL BE SUBMITTED BY THE CONTRACTOR TO SEMINOLE COUNTY FOR REVIEW AND APPROVAL SHOWING THAT THESE REQUIREMENTS HAVE BEEN MET PRIOR TO CONSTRUCTION.
6. THE PULL BOX SHALL BE INSTALLED ADJACENT TO AND NOT ABOVE THE FOOTING, THEREFORE ALLOWING ADEQUATE DRAINAGE OF THE PULL BOX.
7. DESIGN (SERVICE) LOADS NOT TO EXCEED:  
 MOMENT IN TRANSVERSE DIR. = 18.09 FT \* KIP      MOMENT IN LONGITUDINAL DIR. = 18.09 FT \* KIP  
 TORSION = 0.28 FT \* KIP  
 AXIAL = 0.79 KIP  
 SHEAR IN TRANSVERSE DIR. = 0.74 KIP      SHEAR IN LONGITUDINAL DIR. = 0.74 KIP
8. ALL CONDUIT SHOULD BE RIGID GALVANIZED STEEL OR SCHEDULE 40 PVC. LOCATION OF THE CONDUIT SHALL BE VERIFIED PRIOR TO CONSTRUCTION (CONDUIT NOT SHOWN FOR CLARITY).
9. SPREAD FOOTING MAY BE CAST IN PLACE OR PRECAST. FOR PRECAST OPTION, SHOP DRAWINGS SHALL BE SUBMITTED IN ACCORDANCE WITH STANDARD SPECIFICATION 5-1.4.5 FOR REVIEW AND APPROVAL PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL DETERMINE THE EXACT LOCATIONS WHERE THE PRECAST FOOTING CAN BE USED.

**PRECAST OPTION FOOTING NOTES:**

1. SURFACE FINISH: THE EXPOSED PART OF THE PEDESTAL SHALL HAVE A CLASS 3 FINISH.
2. HANDLING: PRECAST CONCRETE FOOTINGS MUST BE MAINTAINED IN A FLAT POSITION. THEY MUST BE PICKED UP FROM TWO (2) POINTS LOCATED AT EACH END.
3. STORAGE AND TRANSPORTATION: ALL PRECAST CONCRETE FOOTINGS MUST BE STORED ON ADEQUATE DUNNAGE. THE PRECAST CONCRETE FOOTING MUST BE SUPPORTED NO CLOSER THAN 6 INCHES AND NO FURTHER THAN 18 INCHES FROM THE END.
4. MARKING: EACH PRECAST CONCRETE FOOTING SHALL BE MARKED SHOWING CASTING DATE, AND IDENTIFICATION LETTERS AND NUMBERS.
5. WHEN WELDED WIRE FABRIC IS USED, THE AREA MUST BE AT LEAST EQUAL TO THE AREA OF THE REINFORCEMENT SHOWN IN THE DRAWING.



REVISIONS		DATE		DESCRIPTION	
DATE	DESCRIPTION	DATE	DESCRIPTION		

JUAN A. VALENZUELA, PE P.E. LICENSE NUMBER 68208 FBT-FLORIDA BRIDGE AND TRANSPORTATION, INC. 633 DARTMOUTH STREET ORLANDO, FL 32804 (407) 513-9709 CERTIFICATE OF AUTHORIZATION 26379		<b>SEMINOLE COUNTY</b> ENGINEERING DIVISION ROAD NO. SPARTAN DR. COUNTY CIP NO. 00282808	<b>LIGHT POLE SPREAD FOOTING</b>	SHEET NO. 30
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Drawn By : BSW 05-16  
 Checked By : DAB 05-16  
 Designed By : KB 05-16  
 Checked By : DAB 05-16