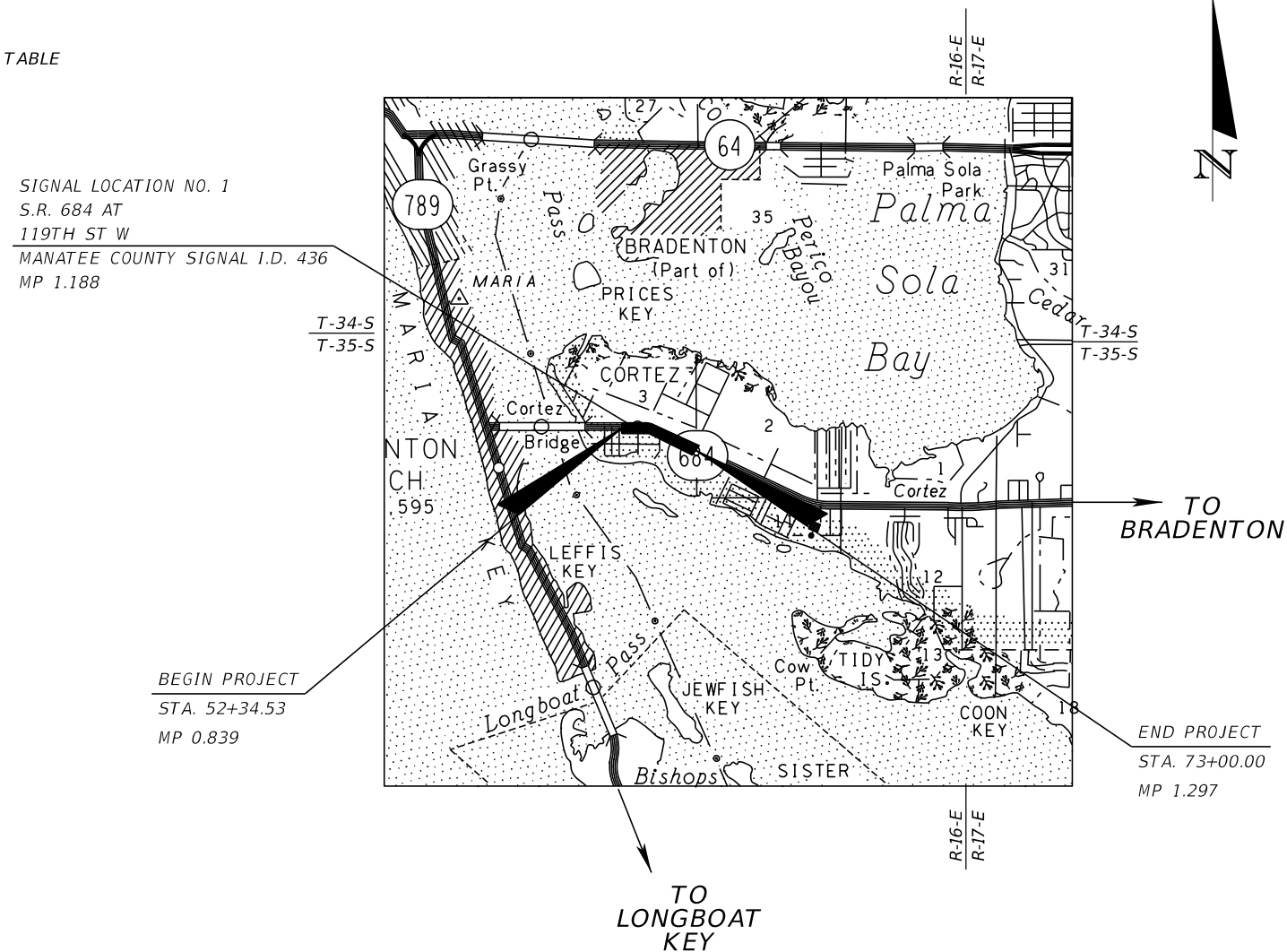


CONTRACT PLANS

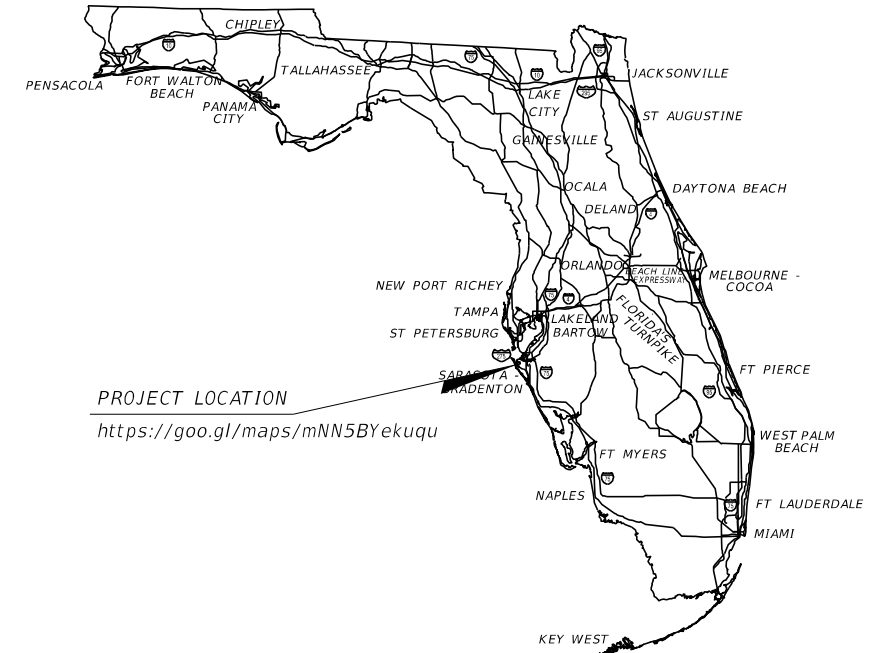
STATE ROAD NO. 684

SIGNALIZATION PLANS

<i>SHEET NO.</i>	<i>SHEET DESCRIPTION</i>
<i>T-1</i>	<i>KEY SHEET</i>
<i>T-2</i>	<i>SIGNATURE SHEET</i>
<i>T-3</i>	<i>TABULATION OF QUANTITIES</i>
<i>T-4 - T-5</i>	<i>GENERAL NOTES</i>
<i>T-6</i>	<i>PLAN SHEET</i>
<i>T-7</i>	<i>SIGNAL TIMING DETAIL</i>
<i>T-8 - T-9</i>	<i>INTERCONNECTION PLAN</i>
<i>T-10 - T-11</i>	<i>SPlicing DIAGRAM</i>
<i>T-12</i>	<i>GUIDE SIGN WORK SHEET</i>
<i>T-13</i>	<i>MAST ARM TABULATION</i>
<i>T-14</i>	<i>MAST ARM ASSEMBLIES DATA TABLE</i>
<i>T-15</i>	<i>REPORT OF SOIL BORINGS</i>



PROJECT LOCATION
<https://goo.gl/maps/mNN5BYekuqu>

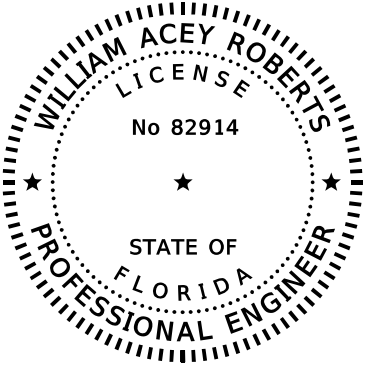


SIGNALIZATION PLANS
ENGINEER OF RECORD:

WILLIAM ACEY ROBERTS, P.E. #82914
ATKINS NORTH AMERICA, INC
4030 WEST BOY SCOUT BLVD. STE 700
TAMPA, FLORIDA 33607
CONTRACT NO.: C9L49
VENDOR NO.: F-590-896-138-001
CERTIFICATE OF AUTHORIZATION NO.: 24

FDOT PROJECT MANAGER:
RICHARD (MOSE) HOWARD, P.E.

<i>CONSTRUCTION CONTRACT NO.</i>	<i>FISCAL YEAR</i>	<i>SHEET NO.</i>
<i>T1720</i>	<i>19</i>	<i>T-1</i>



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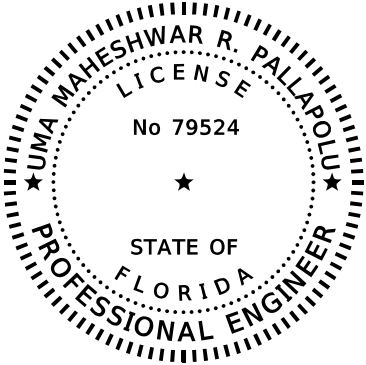
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ATKINS NORTH AMERICA, INC.
4030 WEST BOY SCOUT BLVD., STE. 700
TAMPA, FLORIDA 33607
FBPE CERTIFICATE OF AUTHORIZATION NO. 24
WILLIAM ACEY ROBERTS, P.E. #82914

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

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
T-1	KEY SHEET
T-2	SIGNATURE SHEET
T-3	TABULATION OF QUANTITIES
T-4 - T-5	GENERAL NOTES
T-6	PLAN SHEET
T-7	SIGNAL TIMING DETAIL
T-8 - T-9	INTERCONNECTION PLAN
T-10 - T-11	SPLICING DIAGRAM
T-12	GUIDE SIGN WORK SHEET
T-13	MAST ARM TABULATION



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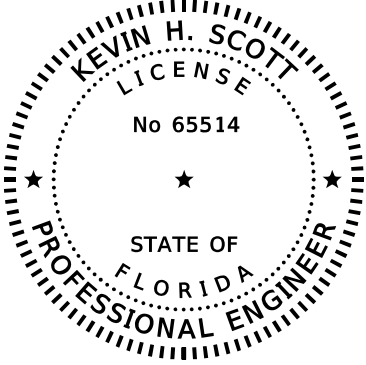
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ATKINS NORTH AMERICA, INC.
4030 WEST BOY SCOUT BLVD., STE 700
TAMPA, FLORIDA 33607
CERTIFICATE OF AUTHORIZATION: 24
UMA MAHESHWARE R. PALLAPOLU, P.E. NO. #79524

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<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
T-2	SIGNATURE SHEET
T-14	STANDARD MAST ARM ASSEMBLIES DATA TABLE



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TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637
CERTIFICATE OF AUTHORIZATION: 6486
MARC E. NOVAK, Ph. D., P.E. #67431

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

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
T-2	SIGNATURE SHEET
T-15	REPORT OF CORE BORINGS

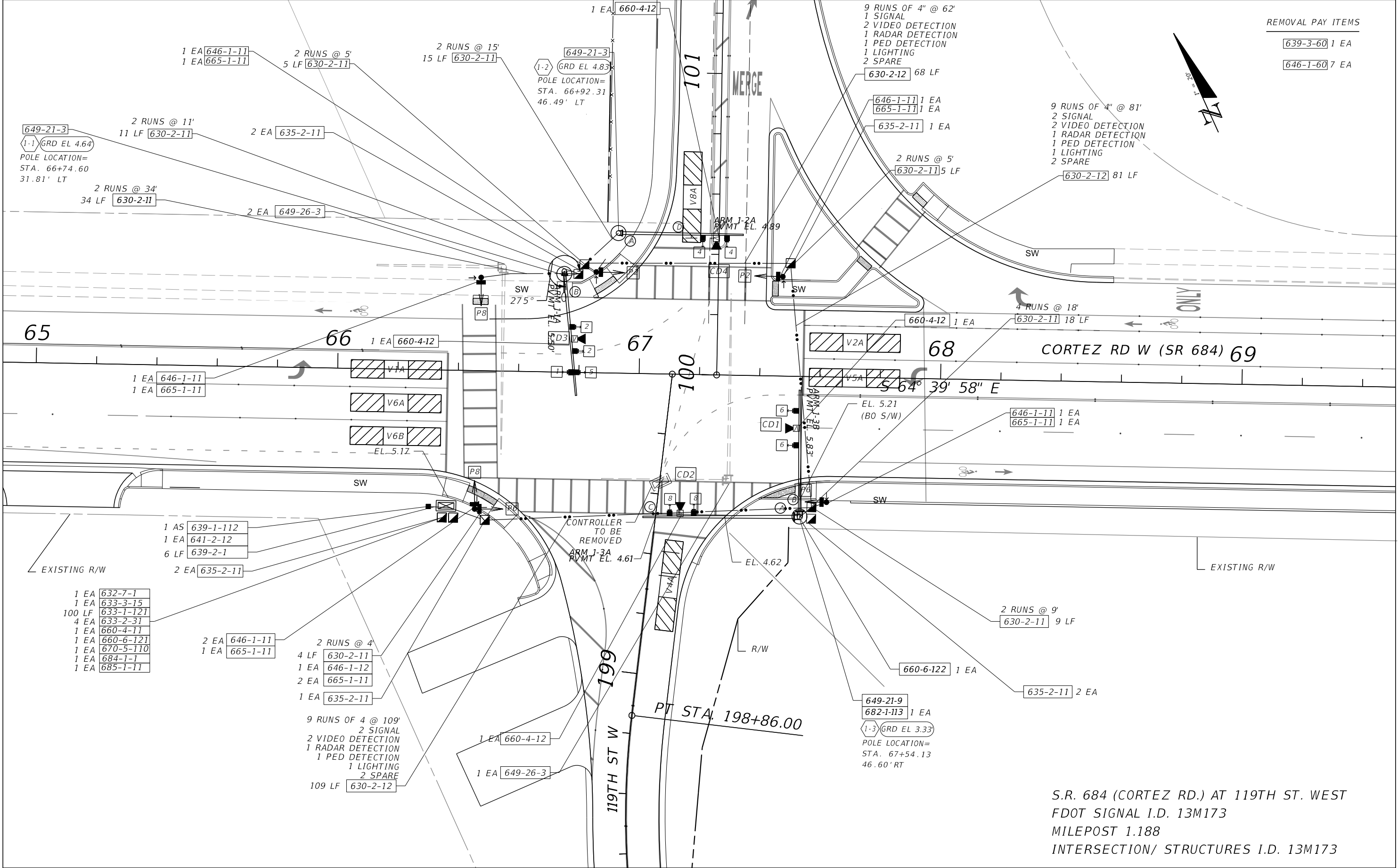
REVISIONS				WILLIAM ACEY ROBERTS P.E. NO. 82914 ATKINS NORTH AMERICA, INC. 4030 WEST BOY SCOUT BLVD. STE. 700 TAMPA, FLORIDA 33607 FBPE CERTIFICATE OF AUTHORIZATION NO. 24	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNATURE SHEET	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	436551-2-52-01		T-2

TABULATION OF QUANTITIES																				
PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			T-6		T-7		T-8		T-9											
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	101						10								111		111	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	258				1673		1072								3003		3003	
632-7-1	SIGNAL CABLE, RECONSTRUCTED INTERSECTION - FURNISH & INSTALL	PI	1														1		1	
633-1-121	FIBER OPTIC CABLE, FURNISH & INSTALL, UNDERGROUND, 2-12	LF	100														100		100	
633-1-123	FIBER OPTIC CABLE, FURNISH & INSTALL, UNDERGROUND, 49 - 96 FIBERS	LF					1773		1225								2998		2998	
633-1-620	FIBER OPTIC CABLE, REMOVE, UNDERGROUND	LF							354								354		354	
633-2-32	FIBER OPTIC CONNECTION, INSTALL, TERMINATION	EA	4				72		72								148		148	
633-3-11	FIBER OPTIC CONNECTION HARDWRE, FURNISH & INSTALL, SPLICE ENCLOSURE	EA					1		1								2		2	
633-3-15	FIBER OPTIC CONNECTION HARDWARE, FURNISH & INSTALL, PRETERMINATED PATCH PANEL	EA	1														1		1	
635-2-11	PULL & SPLICE BOX, FURNISH AND INSTALL, 17" X 30"	EA	8														8		8	
635-2-12	PULL & SPLICE BOX, FURNISH AND INSTALL, 24" X 36" COVER	EA					3		6								9		9	
639-1-112	ELECTRICAL POWER SERVICE, FURNISH & INSTALL, OVERHEAD METER PURCHASED BY CONTRACTOR FROM POWER COMPANY	AS	1														1		1	
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF	8														8		8	
639-3-60	ELECTRICAL SERVICE DISCONNECT, REMOVE - POLE OR CABINET TO REMAIN	EA	1														1		1	
641-2-12	PRESTRESSED CONCRETE POLE, FURNISH & INSTALL, TYPE P-II SERVICE POLE	EA	1														1		1	
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA	5														5		5	
646-1-60	ALUMINUM SIGNALS POLE, REMOVE	EA			7												7		7	
649-21-3	STEEL MAST ARM ASSEMBLY, SINGLE 40'	EA	2														2		2	
649-21-8	STEEL MAST ARM ASSEMBLY, DOUBLE 50'-40'	EA	1														1		1	
649-26-3	STEEL MAST ARM ASSEMBLY, REMOVAL,	EA	2														2		2	
650-1-34	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL POLYCARBONATE, 3 SECTION, 1 WAY	AS			8												8		8	
650-1-36	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL POLYCARBONATE, 4 SECTION, 1 WAY	AS			2												2		2	
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL COUNTDOWN, 1 WAY	AS			4												4		4	
653-1-12	PEDESTRIAN SIGNAL, FURNISH & INSTALL COUNTDOWN, 2 WAY	AS			1												1		1	
660-4-11	VEHICLE DETECTION SYSTEM - VIDEO, F&I CABINET EQUIPMENT	EA	1														1		1	
660-4-12	VEHICLE DETECTION SYSTEM- VIDEO, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA	4														4		4	
660-6-121	VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, CABINET EQUIPMENT	EA	1														1		1	
660-6-122	VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA	1														1		1	
665-1-11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA	6														6		6	
670-5-110	TRAFFIC CONTROLLER ASSEMBLY, FURNISH & INSTALL, NEMA	AS	1														1		1	
682-1-113	ITS CCTV CAMERA, FURNISH & INSTALL, DOME PTZ ENCLOSURE - PRESSURIZED, IP, THERMAL, HYBRID	EA	1														1		1	
684-1-1	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA	1														1		1	
685-1-12	UNINTERRUPTIBLE POWER SUPPLY, FURNISH & INSTALL, ONLINE/DOUBLE CONVERSION	EA	1														1		1	
700-5-21	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12FT^2	EA			4												4		4	
700-11-391	ELECTRONIC DISPLAY SIGN, FIRNISH & INSTALL OVERHEAD MOUNT -AC, BLANK OUT SIGN, UP TO 12 SF	EA			3												3		3	
REVISIONS				WILLIAM ACEY ROBERTS P.E. NO. 82914 ATKINS NORTH AMERICA, INC. 4030 WEST BOY SCOUT BLVD. STE. 700 TAMPA, FLORIDA 33607 FBPE CERTIFICATE OF AUTHORIZATION NO. 24				STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION				TABULATION OF QUANTITIES						SHEET NO.		
DATE	DESCRIPTION		DATE					DESCRIPTION		ROAD NO.	COUNTY							FINANCIAL PROJECT ID		
										SR 684	MANATEE							436551-2-52-01		
																			T-3	

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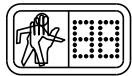
<div>PAY ITEM NOTES:</div> <div><div>1.630-2-11, 630-2-12:</div><div>USE 4" DIAMETER HDPE CONDUIT WITH 2-2" INNER DUCTS COLORED ORANGE FOR FIBER OPTIC INTERCONNECT CABLE.</div><div>USE A MINIMUM OF 3" DIAMETER CONDUIT FOR ALL DIRECTIONAL BORE UNLESS OTHERWISE NOTED IN THE PLANS.</div><div>NOTCH CONDUIT FOR RIGHT ANGLE CABLE ENTRY AND USE REMOVABLE PVC PRESSURE CAPS TO SEAL CONDUIT.</div><div>USE FOUR (4) RUNS OF SDR 13.5 POLY CONDUITS (GREEN, BLUE, ORANGE AND YELLOW) (USE A # 10 COPPER WIRE IN THE ORANGE CONDUIT FOR LOCATION PURPOSES) FOR INTERCONNECT CABLE.</div></div> <div><div>2.635-2-11, 635-2-12:</div><div><div>A. USE POLYMER CONCRETE CONSTRUCTION PULL BOX WITH A POLYMER CONCRETE COVER MARKED "MANATEE COUNTY FIBER OPTIC NETWORK" FOR FIBER OPTIC COMMUNICATION. USE 24" X 36" X 12" PULL BOXES PLACED A MINIMUM OF 800' APART</div><div>B. PULL BOXES ARE TO BE PLACED BEHIND CURB AND GUTTER. IF THERE IS NO CURB AND GUTTER, PULL BOXES SHALL BE PLACED A MINIMUM OF 7' FROM THE EDGE OF PAVEMENT</div><div>C. USE POLYMER CONCRETE CONSTRUCTION PULL BOXES WITH POLYMER CONCRETE COVERS</div><div>D. PULL BOX DIMENSIONS SHALL BE 17" X 30" X12" AND THE LID SHALL BE STAMPED "MANATEE COUNTY TRAFFIC SIGNAL" ON THE COVER</div></div></div> <div><div>3a.639-1-112:</div><div>USE ALUMINUM RIGID ABOVEGROUND CONDUIT FOR ELECTRICAL POWER SERVICE.</div><div>USE GALVANIZED (STEEL) RIGID ABOVEGROUND CONDUIT FOR ELECTRICAL POWER SERVICE.</div><div>USE A LEVER-TYPE BYPASS METER SOCKET.</div></div>				<div>PAY ITEM NOTES (CONTINUED):</div> <div><div>3b.639-1-112 (CONTINUED):</div><div>THE ELECTRICAL SERVICE DISCONNECT IS 100 AMP, COMPRISING OF A SIX (6) CIRCUIT DISCONNECT BOX WITH FOUR CIRCUIT BREAKERS - ONE 40 AMP/120 VOLT FOR CONTROLLER CABINET, ONE 15 AMP/120 VOLT FOR INTERNALLY ILLUMINATED STREET SIGNS, ONE 15 AMP/120 VOLT FOR FUTURE USE AND ONE 15 AMP/120 OR 15 AMP/240 VOLT FOR LIGHTING LUMINAIRE.</div></div> <div><div>4.639-2-1:</div><div>USE A BONDING WIRE FROM ELECTRICAL SERVICE POINT TO CONTROLLER.</div></div> <div><div>5.641-2-12:</div><div>USE TWO 2" CONDUITS (EXCEPT FOR THE POLE LOCATED ADJACENT TO THE CONTROLLER CABINET WHICH SHALL HAVE THREE 2" CONDUITS) STUBBED OUT THROUGH PRESTRESSED CONCRETE POLE FOOTER AND TEMPORARILY SEAL.</div><div>ADD AUXILIARY HOLES FOR FUTURE SIGNALIZATION.</div></div> <div><div>6.646-1-11:</div><div>USE LOCKING COLLARS WHEN MOUNTING ALUMINUM PEDESTRIAN POLES TO PEDESTRIAN PEDESTAL BASES.</div><div>USE BREAKAWAY ALUMINUM SQUARE BASE ASSEMBLIES WITH ALUMINUM DOORS FOR PEDESTRIAN PEDESTALS. SPLICE SIGNAL CABLE IN BASE OF PEDESTAL (NOT IN PEDESTRIAN HEADS).</div></div> <div><div>7.650-1-14:</div><div>USE RED, YELLOW, GREEN, AND WHITE THHN #14 COPPER WIRES FROM DISCONNECT TO SIGNAL HEAD. PLACE A PERMANENT MARKING ON THE WIRE DESIGNATING THE PHASE USED.</div><div>USE LOUVERED ALUMINUM SIGNAL HEAD BACK PLATES WITH A 2" YELLOW REFLECTORIZED OUTER EDGE BORDER.</div><div>BACK PLATES TO BE ONE-PIECE ALUMINUM.</div><div>RIGID MOUNT TRAFFIC SIGNAL HEADS TO MAST ARMS UTILIZING STAINLESS STEEL WIRE ROPE CABLE.</div></div> <div><div>8.653-1-11:</div><div>MOUNT PEDESTRIAN SIGNAL HEADS 9'-6" ABOVE GRADE.</div><div>PEDESTRIAN SIGNAL HEADS TO BE 16" INTERNATIONAL SYMBOL, LED COUNTDOWN TYPE.</div></div>
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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		T-5
					SR 684	MANATEE	436551-2-52-01		



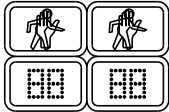
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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	436551-2-52-01		

PEDESTRIAN SIGNAL HEAD
& SIGNING DETAILS



PED. SIGNAL
COUNT-DOWN
1-SECT., 1-WAY
4 AS

653-1-11



PED. SIGNAL
COUNT-DOWN
2-SECT., 2-WAY
1 AS

653-1-12



FTP-68B-06, 6 REQUIRED
(INCLUDED W/ 665-1-11)

TRAFFIC SIGNAL HEAD DETAILS



3-SECT., 1-WAY
8 AS

650-1-34



4-SECT., 1-WAY
2 AS

650-1-36

CONTROLLER TIMINGS (SECONDS)

TIMING FUNCTION									
MOVEMENT NUMBER		1	2	3	4	5	6	7	8
DIRECTION		EBL	WB		NB	WBL	EB		SB
TIMING FUNCTION	TURN TYPE	P/P				P/P			
	MINIMUM GREEN	7	7		7	7	7		7
	EXTENSION	3	5		3	3	5		3
	YELLOW CLEARANCE	4	4		4	4	4		3.7
	ALL RED	3	3		3	3	3		2.9
	MAXIMUM GREEN 1	15	140		25	15	140		25
	MAXIMUM GREEN 2								
	MAX LIMIT								
	ADJUST								
	PEDESTRIAN WALK		7				7		7*
	PED. CLEARANCE		16				16		30
	DETECTOR MEMORY								
	DET. CROSS SWITCH	YES				YES			
	DUAL ENTRY				ON				ON
	RECALL		MIN				MIN		

CONTROLLER OPERATIONS

1. MAJOR STREET IS CORTEZ RD, (MOVEMENTS 2 AND 6),
AND MINOR STREET IS 119TH ST, (MOVEMENTS 4 AND 8)

STANDARD SIGNAL OPERATING PLAN NO. 7 WITH NO SPECIAL
FEATURES

2. SPECIAL SIGNAL OPERATING PLAN WITH THE FOLLOWING:

A) AT LEAST THREE (3) WEEKS PRIOR TO TIMING IMPLEMENTATION
AND PROGRAMMING OF THE CONTROLLER, REQUEST UPDATED SIGNAL
TIMINGS (BASIC CONTROLLER AS WELL AS COORDINATION) FROM FDOT
ARTERIAL MANAGEMENT SYSTEM ENGINEER, (863- 519-2746). PROVIDE
ALL "AS-BUILT"INFORMATION NEEDED TO ADEQUATELY TIME THE SIGNALIZED
INTERSECTION. THE CONTROLLER SHALL BE PROGRAMMED AS PER THE
TIMINGS PROVIDED.

B) CONCURRENT/ACTUATED PEDESTRIANS FOR MOVEMENTS 2 (P2), 8 (P8), AND
6 (P6).

C) PROVIDE A LEADING PEDESTRIAN INTERVAL OF 5 SECONDS FOR PEDESTRIAN
MOVEMENT 8 (P8).

3. THE CONTRACTOR SHALL PROGRAM PHASE RESTRICTIONS TO OMIT MOVEMENT 1 AND
REDIRECT CALLS FROM MOVEMENT 1 TO MOVEMENT 6, WHEN MOVEMENT 2 IS GREEN
AND TO OMIT MOVEMENT 5 AND REDIRECT CALLS FROM MOVEMENT 5 TO MOVEMENT 2,
WHEN MOVEMENT 6 IS GREEN.

NOTES

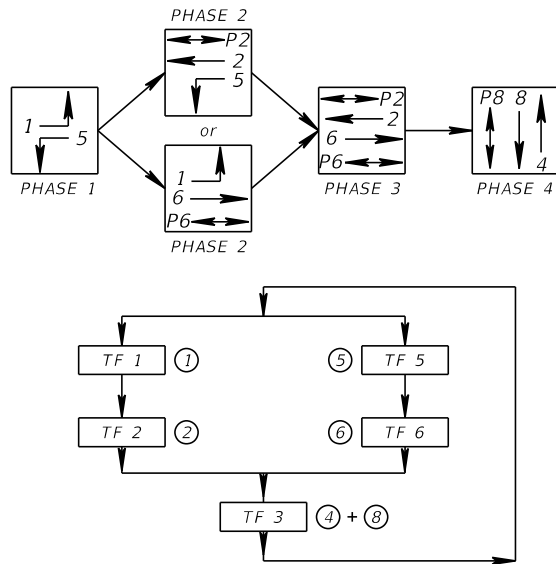
1. REFER TO
INTERCONNECTION PLAN FOR ALL
EXISTING AND PROPOSED DESIGN
ELEMENTS RELATED TO FIBER OPTIC
COMMUNICATIONS

2. REFER TO SHEET T-6
FOR LINEAR FOOT LENGTH
QUANTITIES FOR CONDUIT

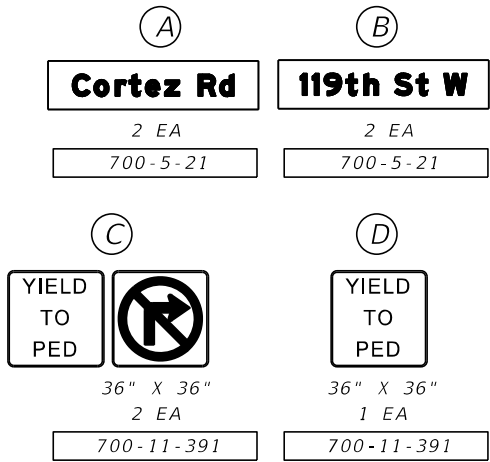
3. PROGRAM 4.0 SECONDS OF "FYA DELAY"
FOR FLASHINGYELLOW ARROW INDICATION
ON MOVEMENTS 1 AND 5

*PEDESTRIAN WALK TIME FOR MOVEMENT 8 (P8)
TO BE PROGRAMMED WITH A LEAD PEDESTRIAN
INTERVAL OF 5-SECONDS.

S.O.P. 7

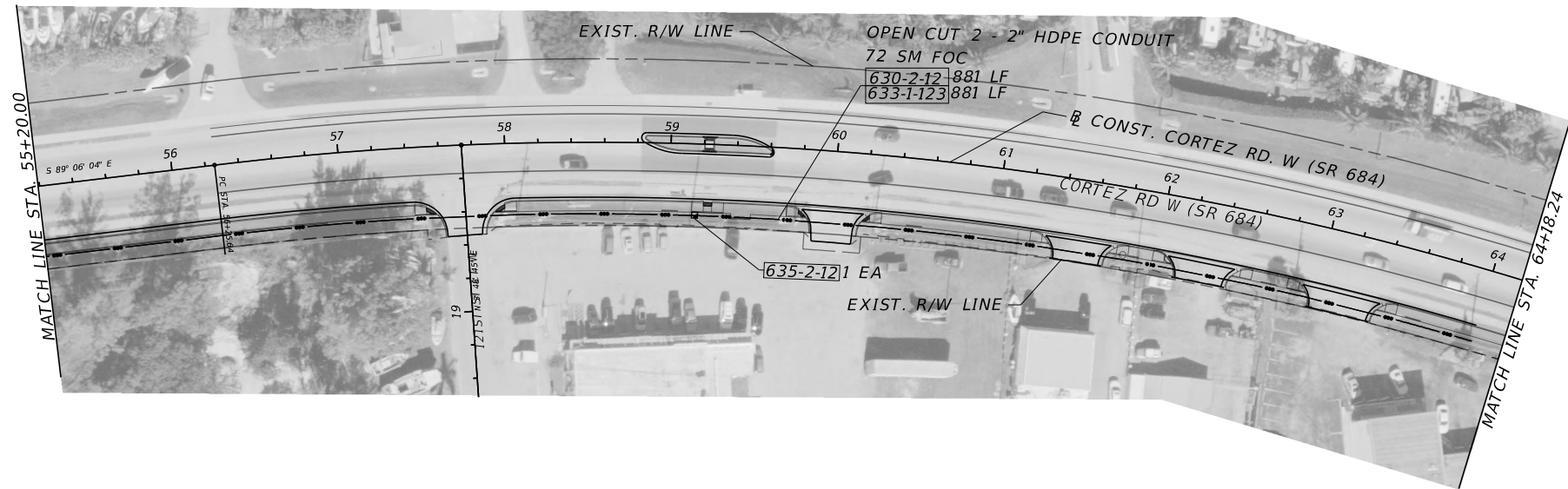
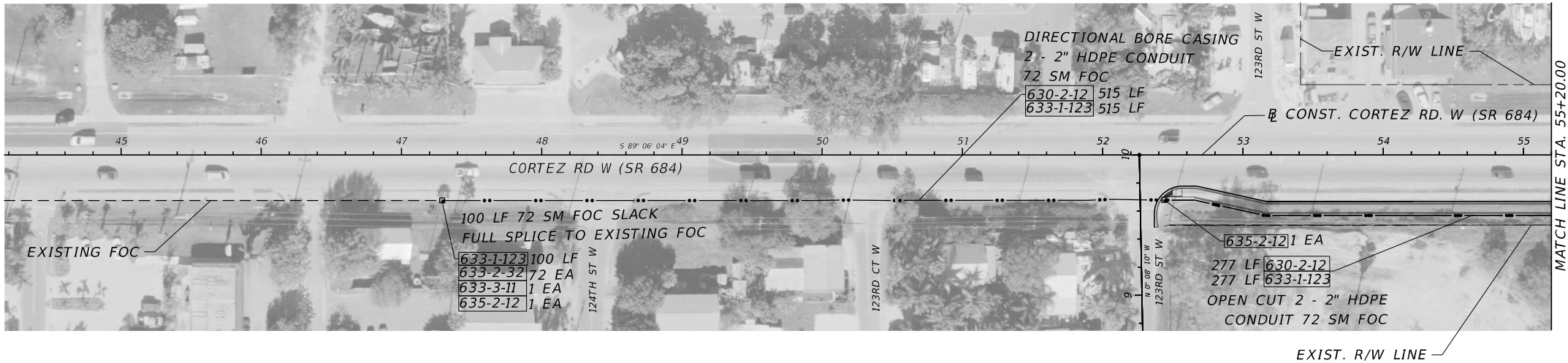


OVERHEAD SIGNING DETAILS



DUAL SIGNS TO BE ACTIVATED
DURING LEAD PEDESTRIAN INTERVAL

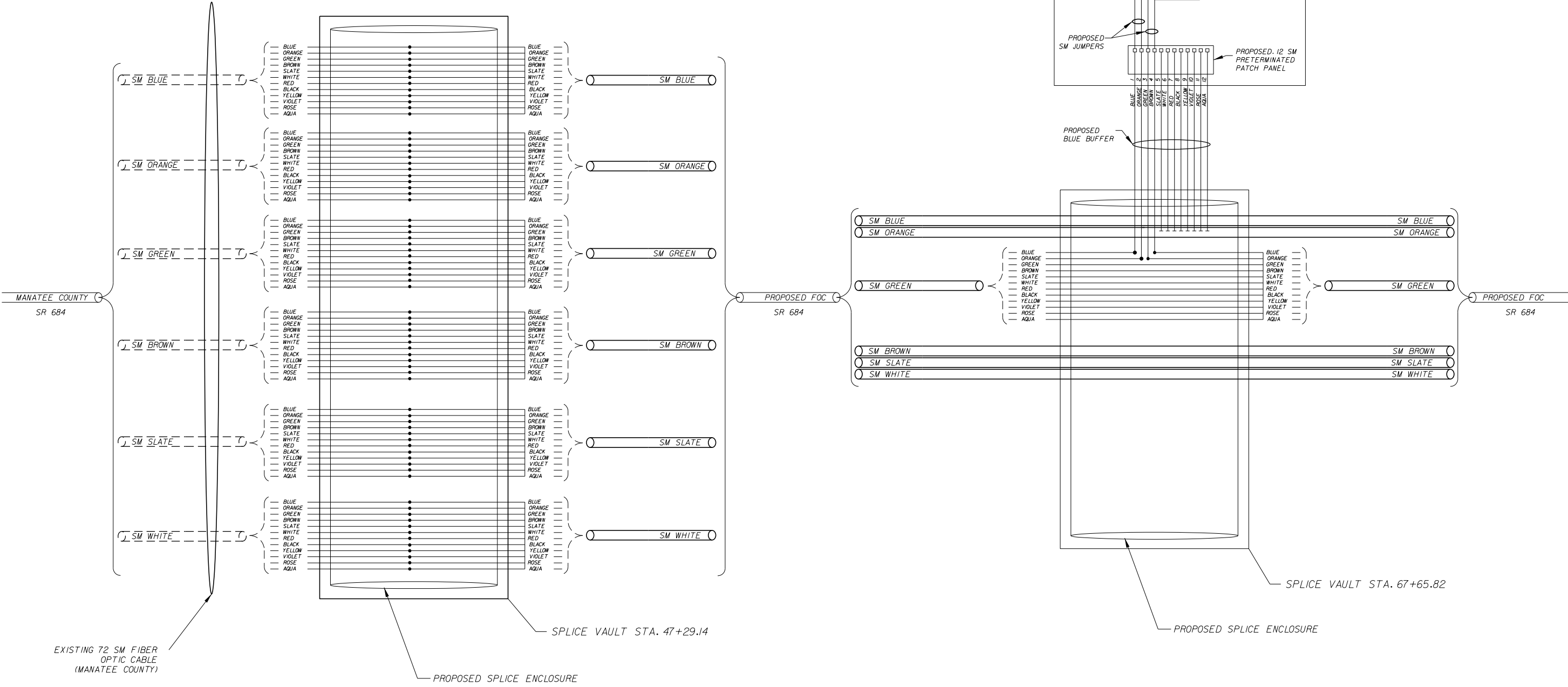
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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	436551-2-52-01		
									T-7



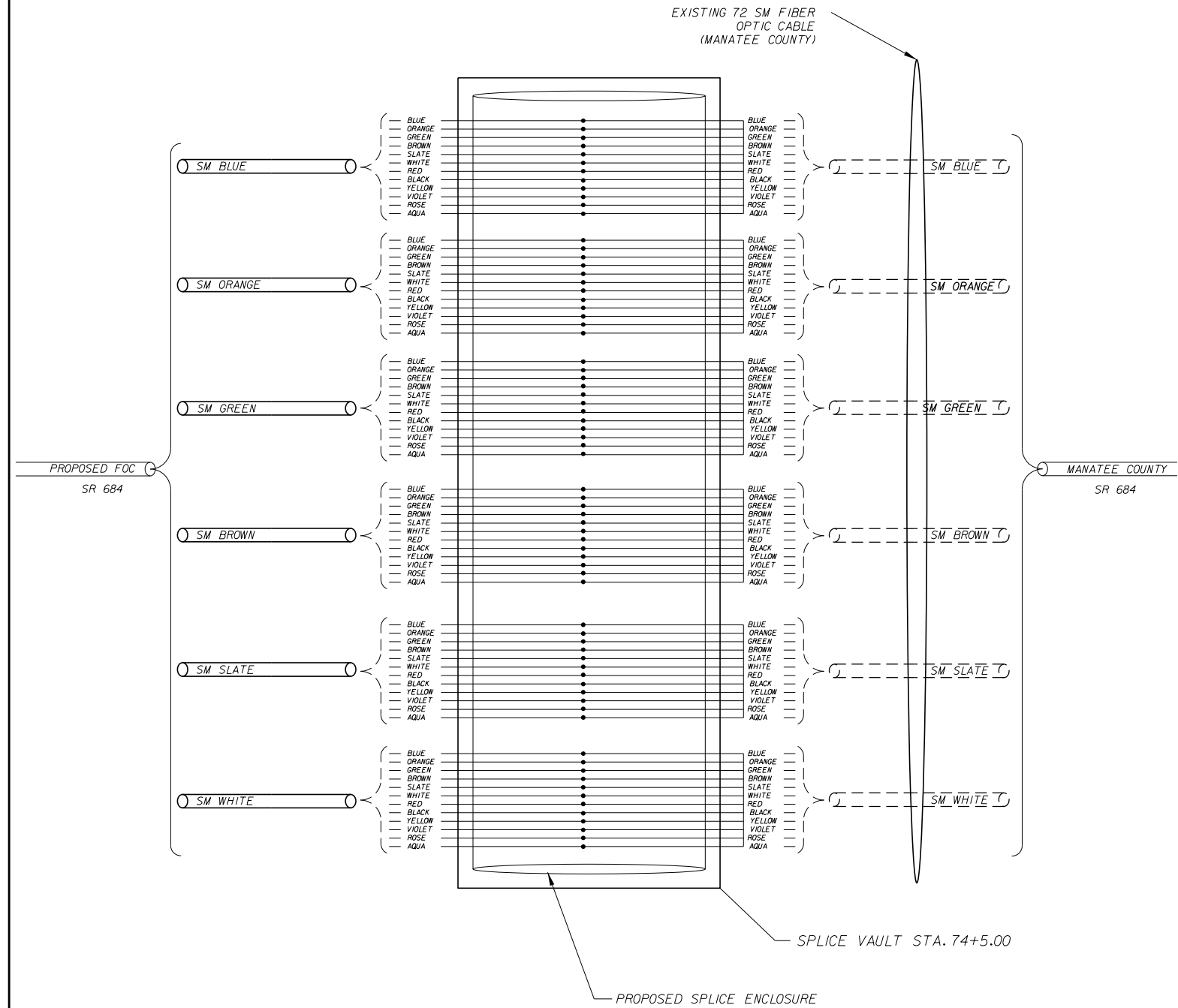
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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	436551-2-52-01		T-8

KEY

- PROPOSED FUSION SPLICE •
EXISTING FUSION SPLICE ○
FUSION BUTT SPLICE ⊙
UTERMINATED FIBER(S) —
FIBER TERMINATION □
ETHERNET SWITCH [ETHERNET SWITCH SYMBOL]
FIBER PATCH PANEL [FIBER PATCH PANEL SYMBOL]
PROPOSED —
EXISTING - - -



REVISIONS				WILLIAM ACEY ROBERTS P.E. NO. 82914 ATKINS NORTH AMERICA, INC. 4030 WEST BOY SCOUT BLVD. STE. 700 TAMPA, FLORIDA 33607 FBPE CERTIFICATE OF AUTHORIZATION NO. 24	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SPLICING DIAGRAM (1)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	436551-2-52-01		T-10

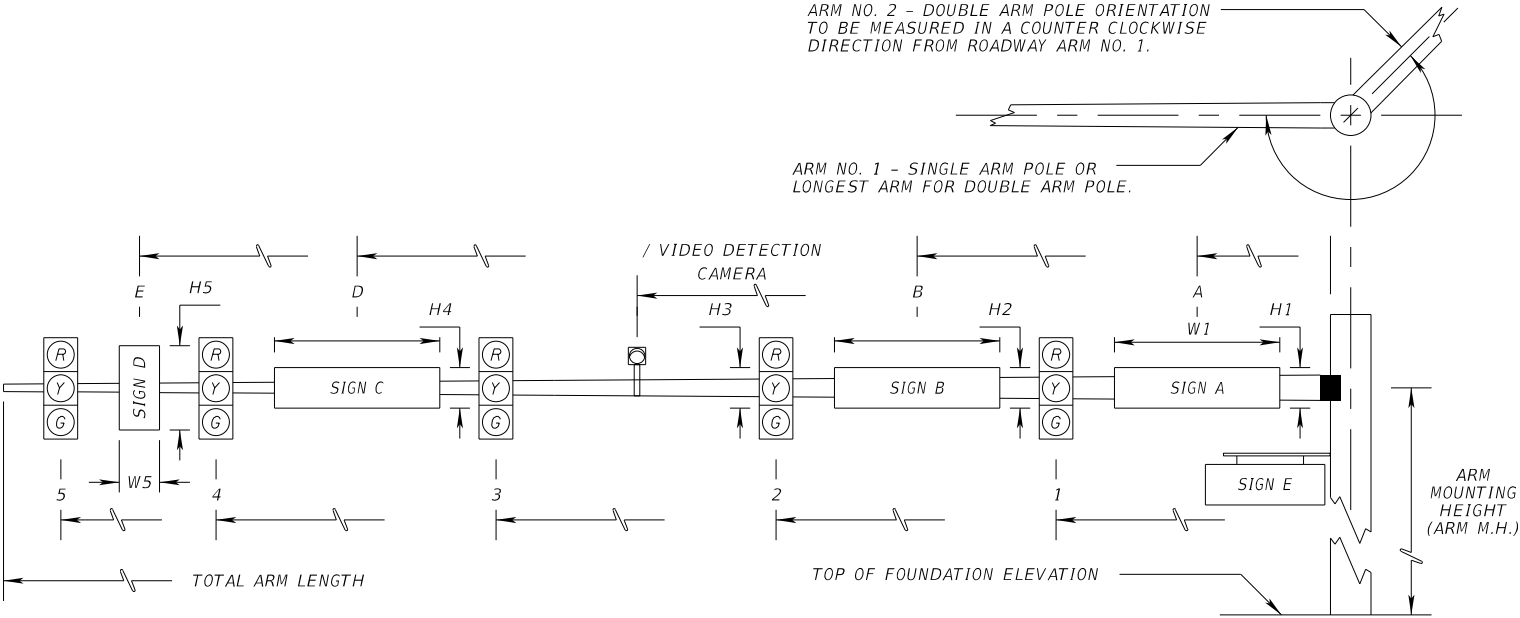
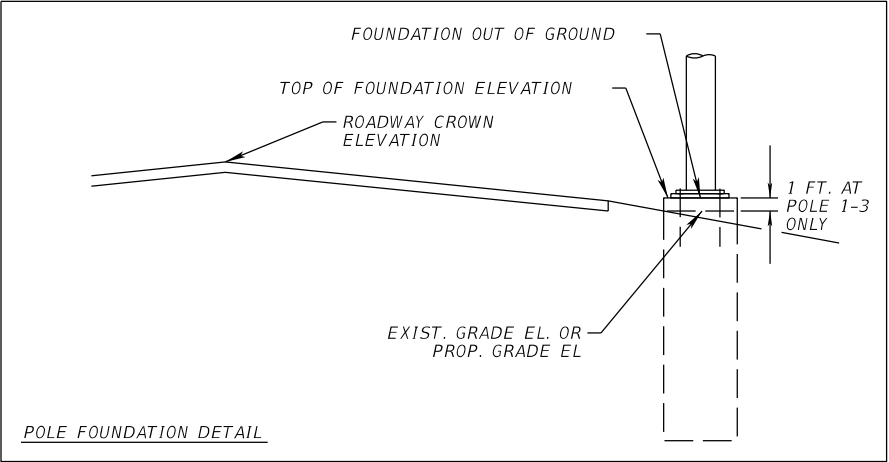


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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	436551-2-52-01		T-11

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

SPECIAL NOTES:

- A. EACH POLE AND MAST ARM SHALL BE IDENTIFIED WITH A PERMANENT ONE (1") INCH HIGH ENGRAVED OR IMPRESSED MARK WHICH BEARS THE POLE IDENTIFICATION NUMBER SHOWN ON THE PLANS.
- B. ANCHOR BOLT COVERS (ORNAMENTAL, NON-ORNAMENTAL, AND/OR PAINTED) SHALL BE GALVANIZED STEEL OR CAST ALUMINUM AND SHALL BE SECURED BY A MINIMUM OF TWO (2) THREADED FASTENERS. THE BOLT COVERS SHALL BE OF SUFFICIENT SIZE SO THAT THERE IS NO GAP BETTER ITSELF AND THE POLE SHAFT.
- C. FIELD VERIFY ALL ELEVATIONS LISTED HEREIN.
- D. INFORMATION BELOW IS FOR DESIGN PURPOSES ONLY, FIELD ADJUSTMENTS MAY BE REQUIRED.
- E. SEE APPROPRIATE PLAN SHEET FOR PROPOSED SIGNAL HEAD ALIGNMENTS AND SIGN CONFIGURATION/LOCATION.
- F. ALL PROPOSED SIGNAL AND SIGN DATA ARE MEASURED FROM THE CENTER OF EACH SIGNAL POLE UPRIGHT.



INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE SINGLE-PANEL, LED TYPE, AND RIGIDLY MOUNTED TO THE MAST ARM.
INTERNALLY ILLUMINATED SIGN "A" SHALL BE INSTALLED ON SEPARATE CANTILEVER ARMS ATTACHED TO THE SIGNAL POLE UPRIGHT

SHOP DRAWINGS AND SUPPORT CALCULATIONS ARE REQUIRED FOR POLE CANTILEVER ARMS AND HARDWARE
WHEN INTERNALLY ILLUMINATED STREET NAME SIGNS EXCEED 18 SQUARE FEET AND/OR 144 LBS. SEND
SHOP DRAWINGS AND SUPPORT CALCULATIONS TO DISTRICT ONE STRUCTURES DEPARTMENT AT 801 NORTH
BROADWAY AVE. BARTOW, FLORIDA 33830

* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY

						SIGNAL DATA															SIGN DATA																PAINT COLOR			
POLE NO.	SHEET NO.	LOCATION BY NORTHING AND EASTING	GROUND ELEVATION	RDWY ARM NO.	CROWN ELEV.	SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	DISTANCE FROM POLE												TOTAL ARM LENGTH	ARM M.H.	∠ BETWEEN DUAL ARMS 90/270	DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN																
									1	*	2	*	3	*	4	*	5	*	A	H1				W1	B	H2	W2	C	H3	W3	D	H4	W4	E	H5	W5				
1-1	T-6	66+75, 31.81' LT	4.64	1-1A	5.50	V	Y	N	18	3	22	V	26	3	33**	4**		40	22		0'	18"	78"																	
1-2	T-6	66+92, 46.49' LT	4.83	1-2A	4.89	V	Y	N	27	3	32	V	37	3				40	21		0'	18"	78"	24'	36"	36"														
1-3	T-6	67+54, 46.60' RT	3.33	1-3A	4.61	V	Y	N	35	3	39	V	43	3				50	22	270	0'	18"	78"	48'	36"	36"														
				1-3B	5.83	V	Y	N	24	3	29	V	35	3				40			0'	18"	78"																	

* INTERSECTION/ STRUCTURE I.D. 13M173
** THERE ARE TWO SIGNAL HEADS ATTACHED AT THIS LOCATION FACING OPPOSITE DIRECTIONS.

REVISIONS				WILLIAM ACEY ROBERTS P.E. NO. 82914 ATKINS NORTH AMERICA, INC. 4030 WEST BOY SCOUT BLVD. STE. 700 TAMPA, FLORIDA 33607 FBPE CERTIFICATE OF AUTHORIZATION NO. 24	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			MAST ARM TABULATION	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	436551-2-52-01		
									T-13

STANDARD MAST ARM ASSEMBLIES DATA TABLE											Table Date 11-01-16
STRUCTURE ID NUMBERS	DESIGNATION	FIRST ARM		SECOND ARM		UF (deg)	LL (deg)	POLE			DRILLED SHAFT ID
		ARM ID	FAA (ft.)	ARM ID	SAA (ft.)			POLE ID	UAA (ft.)	UB (ft.)	
1-1(13M173)	A40/S-P2/S/L	A40/S						P2/S/L		22	DS/14/4.5
1-2(13M173)	A40/S-P2/S	A40/S						P2/S	24	21	DS/14/4.5
1-3(13M173)	A50/D-A40/D-P3/D	A50/D		A40/D		270		P3/D		22	DS/20/5.0

NOTES:

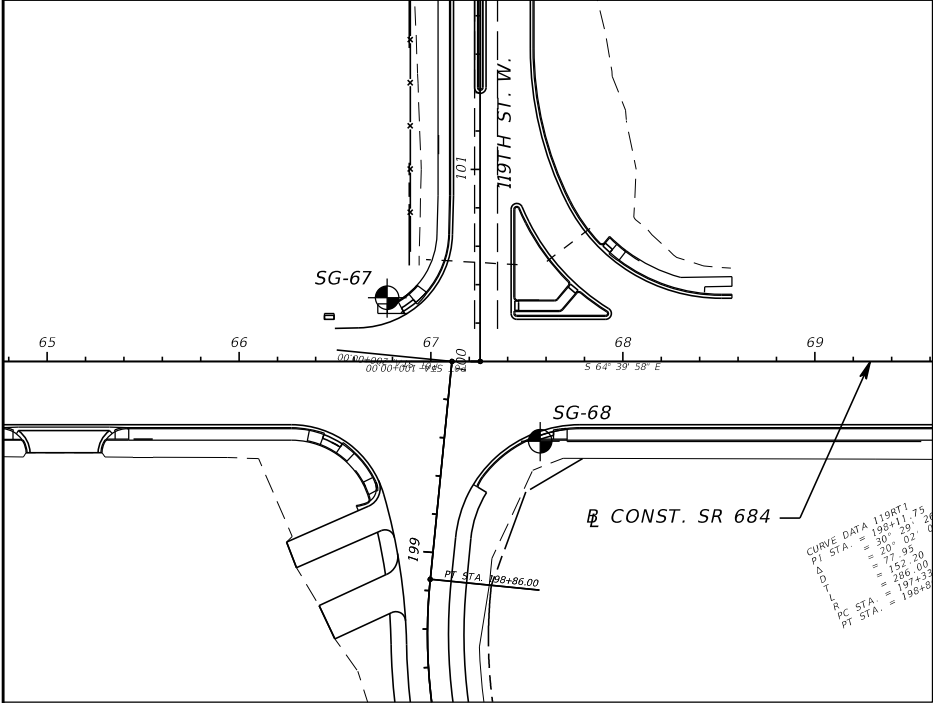
- If an entry appears in column FAA, a shorter arm is required. This is obtained by removing length from the arm tip and the arm length shortened from FA to FAA. SAA Similar.
- If an entry appears in column UAA, a shorter pole is required. This is obtained by removing length from the pole tip and the pole height shortened from UA to UAA.
- Arm mounting height UB must be between 18-22 feet.
- Pole types P2 and larger require a minimum 4.5 foot diameter drilled shaft. Pole types P5 and larger require a minimum 5.0 foot diameter drilled shaft.
- Work this sheet with the Signal Designer's "Mast Arm Tabulation". See "Mast Arm Tabulation" for special instructions that include non-standard Handhole location, paint color, terminal compartment requirement, and pedestrian features.
- Work with Indexes 649-030 and 649-031.

FOUNDATION NOTES:

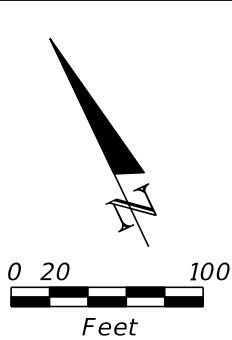
- Design based on Borings taken August, 2018 Sealed by Tierra, Inc.
- Assumptions and Values used in design:
Soil Type = Sand
Design Water Table is 0 ft. below surface
Soil Layer Thickness = Drilled Shaft Length

STRUC. NO.	SOIL UNIT WEIGHT (PCF)	SOIL FRICTION ANGLE (DEGREES)
1-1	43.0	29
1-2	43.0	29
1-3	43.0	29

REVISIONS				ATKINS NORTH AMERICA, INC. 4030 WEST BOY SCOUT BLVD. STE. 700 TAMPA, FLORIDA 33607 (813) 282-7275 FBPE CERTIFICATE OF AUTHORIZATION NO. 24 UMA MAHESWAR R. PALLAPOLU, P.E. NO. 79524	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			MAST ARM ASSEMBLIES	SHEET NO.
DATE	DESCRIPTION		DATE		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	436551-2-52-01		T-14



BORING LOCATION PLAN



- LIGHT GRAY TO GRAY SAND TO SAND WITH SILT OCCASIONALLY WITH SHELL (SP/SP-SM)
- SP

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW.
- N

NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- HA

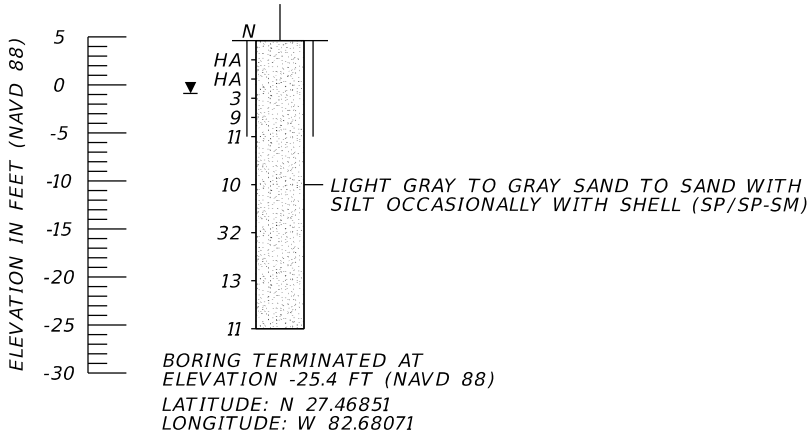
HAND AUGERED TO VERIFY UTILITY CLEARANCE
- NAVD 88

NORTH AMERICAN VERTICAL DATUM OF 1988
- APPROXIMATE SPT BORING LOCATION
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- CONST. SR 684

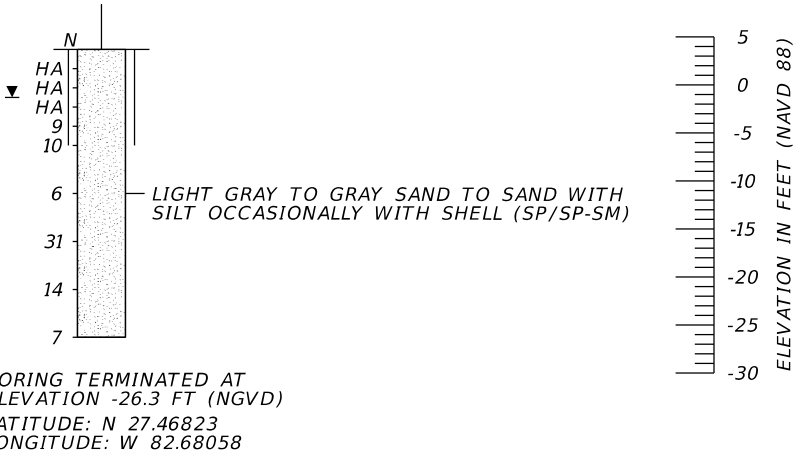
BASELINE CONSTRUCTION OF SR 684

RECOMMENDED SOIL PARAMETERS							
BORING NUMBER	DEPTH (FT)	N	SOIL CLASSIFICATION	SOIL UNIT WEIGHT (PCF)		SOIL ANGLE OF FRICTION (DEGREES)	COHESION (PSF)
				γ SAT	γ SUB		
SG-67	0 TO 18.5	HA TO 11	SP/SP-SM	105	43.0	29	0
	18.5 TO 23.5	32	SP/SP-SM	115	53.0	32	0
	23.5 TO 30	11 TO 13	SP/SP-SM	112	50.0	30	0
SG-68	0 TO 18.5	HA TO 10	SP/SP-SM	105	43.0	29	0
	18.5 TO 23.5	31	SP/SP-SM	115	53.0	32	0
	23.5 TO 30	7 TO 14	SP/SP-SM	105	43.0	29	0

BOR # SG-67
STA. 66+77
REF. CONST. SR 684
OFF. 33' LT.
ELEV. 4.6
DATE 8/24/2018
DRILLER J. SHAW
HAMMER AUTOMATIC
RIG D-25



BOR # SG-68
STA. 67+57
REF. CONST. SR 684
OFF. 41' RT.
ELEV. 3.7
DATE 8/24/2018
DRILLER J. SHAW
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 LOOSE MEDIUM DENSE DENSE VERY DENSE	LESS THAN 4 4 to 10 10 to 30 30 to 50 GREATER THAN 50	LESS THAN 3 3 to 8 8 to 24 24 to 40 GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT SOFT FIRM STIFF VERY STIFF HARD	LESS THAN 2 2 to 4 4 to 8 8 to 15 15 to 30 GREATER THAN 30	LESS THAN 1 1 to 3 3 to 6 6 to 12 12 to 24 GREATER THAN 24

SIGNALS

REVISIONS				KEVIN H. SCOTT, P.E. P.E. LICENSE NUMBER 65514 TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637 CERTIFICATE OF AUTHORIZATION NO. 6486	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			REPORT OF CORE BORINGS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		T-15
					SR 684	MANATEE	436551-2-52-01		

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