

STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 430204-2-52-01

(FEDERAL FUNDS)

MANATEE COUNTY (13040)

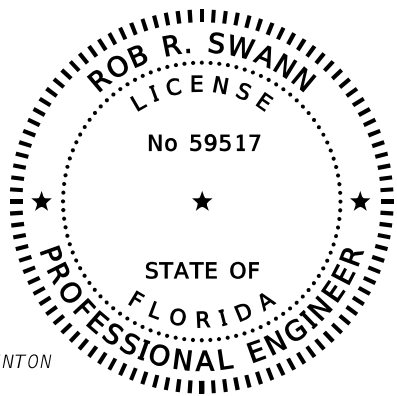
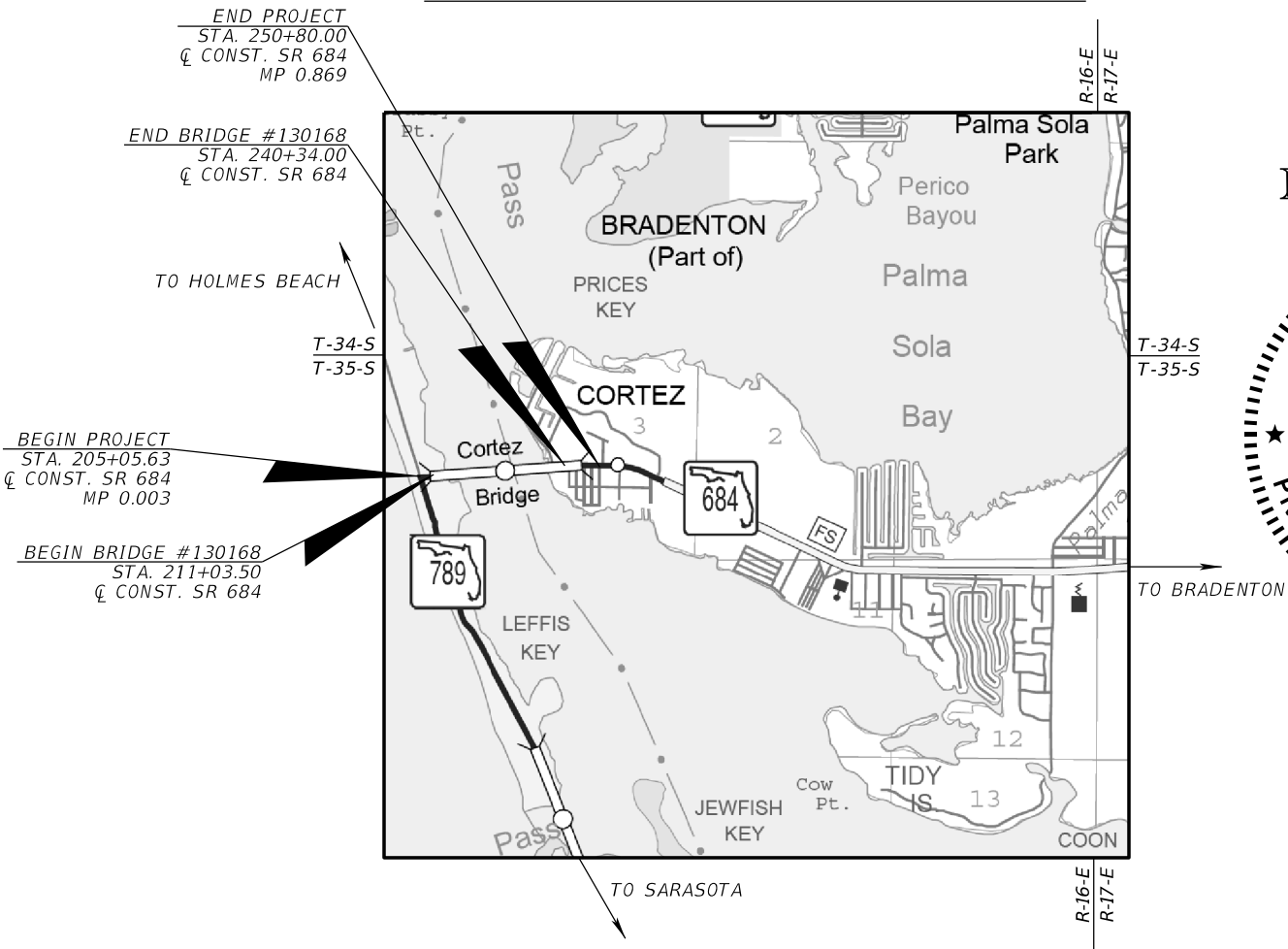
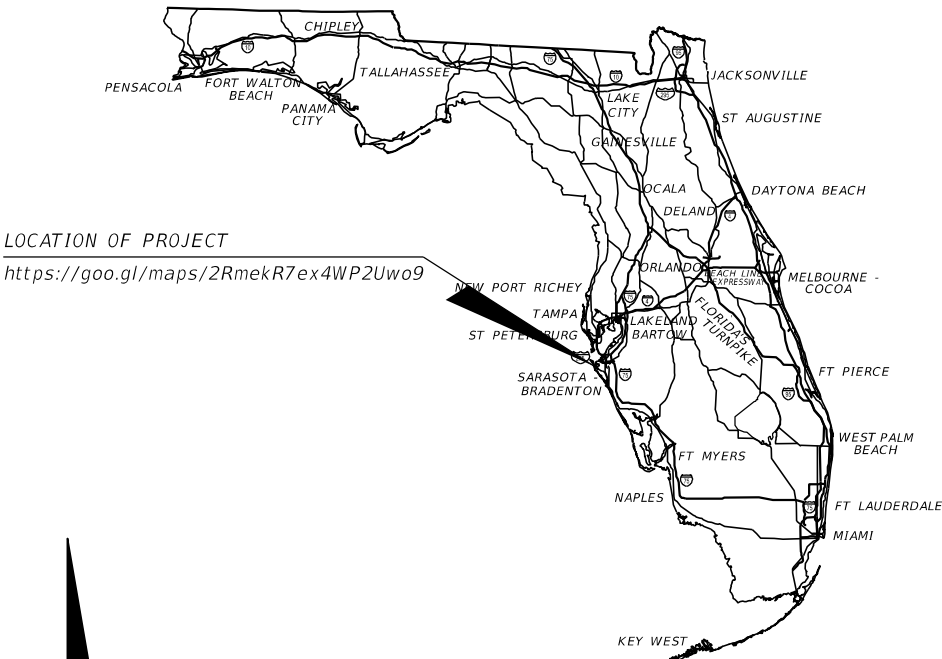
STATE ROAD NO. 684

BRIDGE REPLACEMENT PROJECT

SIGNALIZATION PLANS

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IN THE ELECTRONIC DOCUMENTS.

SIGNALIZATION PLANS  
ENGINEER OF RECORD:

ROB R. SWANN, P.E.  
P.E. NO.: 59517  
H.W. LOCHNER, INC.  
4300 WEST CYPRESS STREET, SUITE 500  
TAMPA, FL, 33607  
CONTRACT NO.: C9V47  
VENDOR NO.: VF362338811001

FDOT PROJECT MANAGER:  
AMY E. BLAIR, P.E., CPM

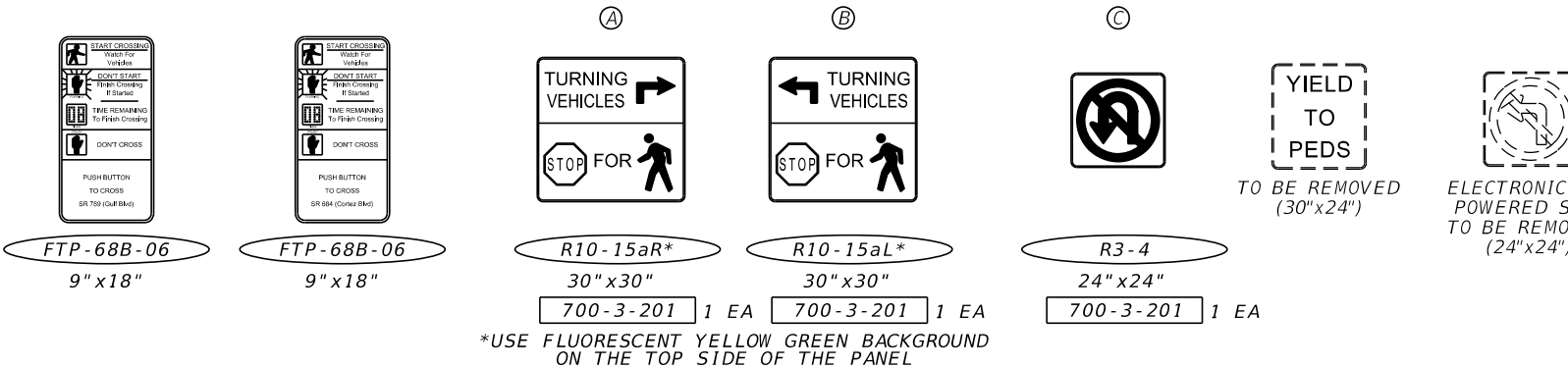
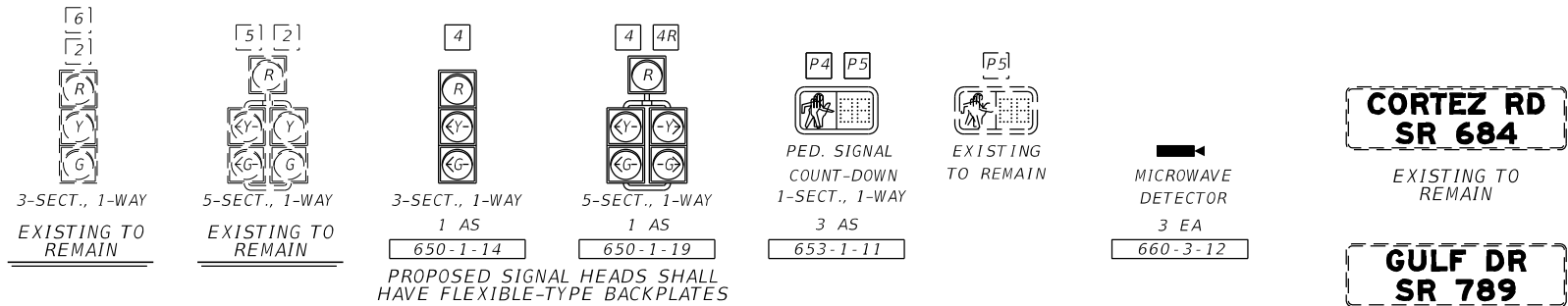
PHASE IV PLANS  
MAY 2025

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
T1920	26	T-1

TABULATION OF QUANTITIES																							
PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL				
			T - 4		T - 5																		
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL			
630-2-11	CONDUIT (F&I) (OPEN TRENCH)	LF	45														45		45				
630-2-12	CONDUIT (F&I) (DIRECTIONAL BORE)	LF	60														60		60				
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	1														1		1				
632-7-6	SIGNAL CABLE, REMOVE- INTERSECTION	PI	1														1		1				
635-2-14	PULL & SPLICE BOX (F&I) (17" X30")	EA	4														4		4				
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA	3														3		3				
646-1-60	ALUMINUM SIGNALS POLE, REMOVAL	EA	2														2		2				
650-1-14	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS	1														1		1				
650-1-19	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 5 SECTION CLUSTER, 1 WAY	AS	1														1		1				
650-1-60	VEHICULAR TRAFFIC SIGNAL, REMOVE- POLES TO REMAIN	AS	2														2		2				
653-1-11	PEDESTRIAN SIGNAL, (F&I) (LED COUNTDOWN) (1 WAY)	AS	3														3		3				
654-2-22	MIDBLOCK CROSSWALK: RECTANGULAR RAPID FLASHING BEACON, FURNISH & INSTALL- SOLAR, COMPLETE SIGN ASSEMBLY- BACK TO BACK	AS			2												2		2				
660-1-600	LOOP DETECTOR INDUCTIVE, REMOVE- CABINET TO REMAIN	EA	5														5		5				
660-3-11	VEHICLE DETECTION SYSTEM-MICROWAVE (F&I) INSTALL CABINET EQUIPMENT	EA	1														1		1				
660-3-12	VEHICLE DETECTION SYSTEM-MICROWAVE (F&I) ABOVE GROUND EQUIPMENT	EA	3														3		3				
665-1-12	PEDESTRIAN DETECTOR (F&I) (ACCESSIBLE)	EA	3														3		3				
671-2-40	TRAFFIC CONTROLLER, MODIFY	EA	1														1		1				
676-1-500	TRAFFIC SIGNAL CONTROLLER CABINET, ADJUST/MODIFY	EA	1														1		1				
700-3-201	SIGN PANEL (F&I) OVERHEAD MOUNT, UP TO 12 SF	EA	3														3		3				
700-3-601	SIGN PANEL, REMOVE, UP TO 12 SF	EA	3														3		3				
700-141-903	ENHANCED HIGHWAY SIGN ASSEMBLY, AC POWERED, REMOVE - OVERHEAD MOUNT	EA	1														1		1				
REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H.W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA 33607						STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION						TABULATION OF QUANTITIES				SHEET NO.			
DATE	DESCRIPTION		DATE																			DESCRIPTION	
				ROAD NO.		COUNTY		FINANCIAL PROJECT ID												T-2			
				SR 684		MANATEE		430204-2-52-01															

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

<p>GENERAL NOTES:</p> <p>WHERE MAST ARM, STRAIN POLES, OR ANY OTHER SIGNAL EQUIPMENT REQUIRING FOUNDATIONS ARE PROPOSED WITHIN 4 FEET OF ANY UNDERGROUND UTILITY, THE UTILITY SHALL BE LOCATED, EXPOSED AND PROTECTED. THE INITIAL 5 FEET OF THE SHAFT INSTALLATION SHALL BE EXPOSED USING NON MECHANIZED EQUIPMENT.</p> <p>MAINTAINING AGENCY: MANATEE COUNTY.</p> <p>FOR REMOVED SIGNAL EQUIPMENT CLAIMED BY MAINTAINING AGENCY, CONTACT MANATEE COUNTY.</p> <p>PAVEMENT MARKINGS ARE SHOWN FOR REFERENCE PURPOSES ONLY. FOR PAVEMENT MARKING DESIGN INFORMATION, SEE PAVEMENT MARKING PLANS.</p> <p>AT LEAST TWO (2) FULL BUSINESS DAYS PRIOR TO BEGINNING THE TRAFFIC SIGNAL INSTALLATION, CONTACT THE TRAFFIC SIGNAL INSPECTOR/LIAISON:</p> <p>MANATEE AND SARASOTA COUNTY JAMES NICHOLS FLORIDA DEPARTMENT OF TRANSPORTATION MANATEE OPERATIONS CENTER 14000 STATE ROAD 64 EAST BRADENTON, FL 34212 PH: 941-708-4429</p> <p>WHEN CONSTRUCTION IS COMPLETE, IN ADDITION TO THE REQUIREMENT OF STANDARD SPECIFICATION 9-8, PROVIDE A SET OF "AS-BUILT" PLANS TO:</p> <p>MANATEE COUNTY TRAFFIC DIVISION MANAGER P. O. BOX 1000 BRADENTON, FL 34206-1000</p> <p>WHEN CONSTRUCTION IS COMPLETE, PROVIDE A SET OF "AS-BUILT" PLANS IN ELECTRONIC FORM (PDF) TO:</p> <p>FDOT TRAFFIC OPERATIONS NEAL TURNER, P.E., TSM&amp;O ENGINEER - ARTERIALS 801 N. BROADWAY AVE. P.O. BOX 1249 BARTOW, FL 33830-1249 EMAIL: NEAL.TURNER@DOT.STATE.FL.US PHONE: 863-519-2216</p> <p>THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE DESIGNATED Vv Vh AND Vvh) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATION/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN POINTS HAVE NOT BEEN VERIFIED.</p>	<p>PAY ITEM NOTES:</p> <p>630-2-11, 630-2-12:</p> <p>TWO (2) CONDUIT RUNS SHALL BE PROVIDED FOR THE PROVISION OF SEPARATING HIGH AND LOW VOLTAGE WIRING FOR PEDESTRIAN ASSEMBLIES.</p> <p>632-7-1:</p> <p>COMPLETELY REWIRE INTERSECTION AT ALL SIGNAL LOCATIONS.</p> <p>VERIFY THE COLOR CODE OF SIGNAL CABLE WITH THE MAINTAINING AGENCY PRIOR TO WIRING INTERSECTION.</p> <p>USE A MINIMUM OF 7 CONDUCTOR SIGNAL CABLE FOR SIGNAL HEADS AND PEDESTRIAN HEADS.</p> <p>635-2-14:</p> <p>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.</p> <p>TWO (2) PULL BOXES SHALL BE PROVIDED FOR THE PROVISION OF SEPARATING HIGH AND LOW VOLTAGE WIRING FOR PEDESTRIAN ASSEMBLIES.</p> <p>USE POLYMER CONCRETE CONSTRUCTION PULL BOXES WITH POLYMER CONCRETE COVERS.</p> <p>646-1-11:</p> <p>USE LOCKING COLLARS WHEN MOUNTING ALUMINUM PEDESTRIAN POLES TO PEDESTRIAN PEDESTAL BASES.</p> <p>USE BREAKAWAY ALUMINUM SQUARE BASE ASSEMBLIES WITH ALUMINUM DOORS FOR PEDESTRIAN PEDESTALS.</p> <p>650-1-14 AND 650-1-19</p> <p>TO AVOID ADDITIONAL STRESS ON EXISTING SIGNAL SUPPORT STRUCTURES BY DO NOT EXCEED LOAD ON PROPOSED MAST ARM TABULATION TABLE(S).</p> <p>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.</p> <p>USE FLEXIBLE-TYPE SIGNAL HEAD BACK PLATES.</p> <p>653-1-11:</p> <p>PEDESTRIAN SIGNAL HEADS TO BE 16" INTERNATIONAL SYMBOL, LED COUNTDOWN TYPE.</p> <p>660-3-11 AND 660-3-12:</p> <p>SEE PLAN SHEET FOR THE NUMBER OF RADAR DETECTORS INCLUDED IN THE RADAR DETECTION ASSEMBLY.</p> <p>MUST INCLUDE ALL LABOR AND MATERIALS TO FURNISH AND INSTALL A MICROWAVE (RADAR) VEHICLE DETECTION SYSTEM THAT UTILIZES RESOLUTION BANDWITH OF 245MHZ, A MULTI-BEAM RADAR CAPABLE OF COVERING UP TO 10 LANES AND A RADAR CAPABLE OF DETECTING PRESENCE IN DIFFERENT LANES AT A DISTANCE UP TO 140 FEET, IN CURVED LANES AND IN AREAS WITH ISLANDS AND MEDIANS. THE DETECTION SYSTEM WILL INCLUDE MICROWAVE (RADAR) DETECTION DEVICES, PRECESSORS, INTERFACE UNITS, CABLE PLANTS, MOUNTING BRACKETS AND ANY ADDITIONAL EQUIPMENT REQUIRED TO MAKE A COMPLETE AND ACCEPTABLE SYSTEM. THE MICROWAVE (RADAR) SYSTEM MUST BE COMPATIBLE WITH MANATEE COUNTY'S EQUIPMENT, CABINET AND TRAFFIC SIGNAL COMPUTER SYSTEM. THE ENGINEER OF RECORD MUST COORDINATE WITH THE MANUFACTURER DURING DESIGN TO DETERMINE OPTIMAL MOUNTING LOCATIONS FOR THE ABOVE GROUND DETECTION DEVICES. COORDINATE WITH MANATEE COUNTY TRAFFIC FOR UNIT ACCEPTANCE.</p>	<p>665-1-12:</p> <p>USE PEDESTRIAN BUTTON SIGNAL SIGN FTP-68B-06. STREET NAME SHALL BE IN ACCORDANCE WITH THE STREET NAMES SHOWN ON THE SIGNALIZATION PLAN SHEETS.</p> <p>USE AUDIBLE PUSHBUTTONS (VOICE SYNTHESIZED) WITH VISUAL INDICATION TYPE. INSTALL IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.</p> <p>671-2-40/ 676-1-500:</p> <p>MODIFY EXISTING CONTROLLER AND PERFORM ANY CABINET AND FIELD WIRING NECESSARY TO FACILITATE WIRING CHANGES, LABELING, TIMING CHANGES, VEHICLE DETECTION ADJUSTMENTS, AND OTHER MISCELLANEOUS LABOR AND MATERIALS TO COMPLETE THE SIGNALIZATION FOR THIS PROJECT.</p> <p>INCLUDES ALL WORK NECESSARY TO FACILITATE EXISTING AND PROPOSED ACCESSIBLE PEDESTRIAN DETECTION, TO INCLUDE ACCESSIBLE PEDESTRIAN DETECTION REQUIRED FOR TEMPORARY TRAFFIC CONTROL SIGNALIZATION (SEE ROADWAY PLANS FOR DETAILS).</p> <p>CORE-DRILL EXISTING CONTROLLER CABINET BASE AND INSTALL NEW CONDUITS IF SPARE CONDUIT STUB-OUTS CANNOT BE USED. INSTALL NEW CONDUITS INTO THE EXISTING FOUNDATION AS REQUIRED IN PLANS. WHEN ADDITIONAL CONDUITS ARE REQUIRED, THE CONDUIT SHALL BE A MINIMUM OF 3" IN DIAMETER. LOCATE NEW CONDUITS SO THEY WILL NOT OBSTRUCT THE MAINTENANCE OF EQUIPMENT IN THE CABINET OR THE ANCHORING OF THE CABINET FLANGE TO THE CONCRETE FOUNDATION.</p> <p>PROTECT INTERNAL CABINET AND EQUIPMENT FROM DUST AND DEBRIS CAUSED BY CORE DRILLING.</p>				
REVISIONS			STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION	GENERAL NOTES	SHEET NO.	
DATE	DESCRIPTION	DATE				DESCRIPTION
			ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H.W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA 33607			T-3
			ROAD NO. COUNTY FINANCIAL PROJECT ID			
			SR 684 MANATEE 430204-2-52-01			



CONTROLLER OPERATION

- THE MAIN STREET IS SR 789 (GULF DR): MOVEMENTS 2, 5 & 6. MINOR STREET IS SR 684 (CORTEZ RD): MOVEMENT 4 & 4R. FLASHING OPERATION SHALL BE YELLOW ON MOVEMENTS 2 & 6 AND RED ON ALL OTHER MOVEMENTS.
- SR 789 (GULF BLVD) POSTED SPEED 35 MPH. SR 684 (CORTEZ RD) POSTED SPEED 35 MPH.
- PREEMPTION TIMINGS TO BE REMOVED.
- MOVEMENT 4R TO BE PROGRAMMED AS OVERLAP A TO COME UP WITH MOVEMENTS 4 AND 5 WITH 7 SECONDS OF MINIMUM GREEN, 4 SECONDS OF YELLOW, AND 2.1 SECONDS OF ALL RED.
- PROGRAM PHASE RESTRICTIONS TO OMIT MOVEMENT 5 AND REDIRECT CALLS FROM MOVEMENT 5 TO MOVEMENT 2, WHEN MOVEMENT 6 IS GREEN.
- REQUEST UPDATED SIGNAL TIMINGS FROM FDOT TSM&O ENGINEER - ARTERIALS (863-519-2216) WHEN ALL LANES, STRIPING, SIGNALS AND PEDESTRIAN FACILITIES ARE IN THEIR FINAL CONFIGURATION AND THE SIGNAL IS OPERATING AS DESIGNED. PROVIDE FDOT WITH ALL 'AS-BUILT' INFORMATION NECESSARY TO DEVELOP THE BASIC SIGNAL TIMING PARAMETERS AND ALLOW THREE (3) WEEKS FOLLOWING THE REQUEST FOR FDOT TO DEVELOP THE UPDATED TIMINGS. PROGRAM THE CONTROLLER PER THE TIMINGS PROVIDED BY FDOT

MICROWAVE DETECTION

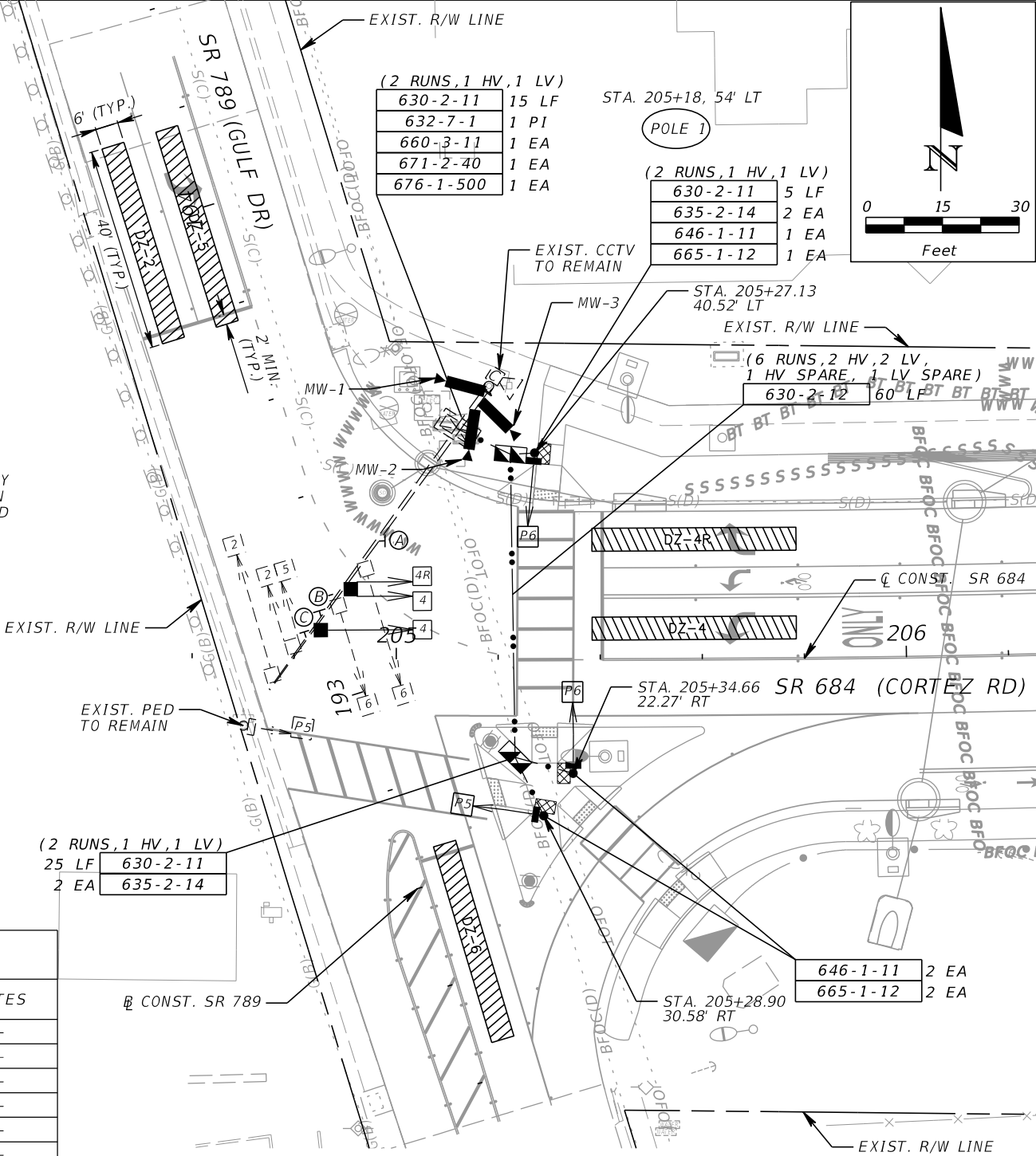
MICROWAVE DETECTOR	DETECTION ZONE	DELAY TIME (SEC)
MW - 1	DZ - 2	-
	DZ - 5	-
MW - 2	DZ - 6	-
	DZ - 4	3
MW - 3	DZ - 4R	8

DELAY TIME IS INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER.

\*EXISTING SIGNAL TIMING TO REMAIN

CONTROLLER TIMINGS									
MOVEMENT # (CONTROLLER PHASE Ø)	1	2	3	4	5	6	7	8	NOTES
DIRECTION	-	SB	-	WB	SBL	NB	-	-	-
TURN TYPE	-	-	-	-	PROT/ PERM	-	-	-	-
MIN GREEN	-	5	-	*7	*5	*7	-	-	-
EXT	-	3.0	-	*4.0	*3.0	*4.0	-	-	-
YELLOW	-	4	-	4	4	4	-	-	-
ALL RED	-	2.6	-	2.1	2.6	2.4	-	-	-
MAX I	-	30	-	*60	*30	*40	-	-	-
MAX II	-	30	-	*30	*30	*30	-	-	-
MAX LIMIT	-	-	-	*120	-	*55	-	-	-
ADJUST BY	-	-	-	*20	-	*5	-	-	-
WALK	-	-	-	-	*7	*7	-	-	-
FLASHING DON'T WALK	-	-	-	-	10	9	-	-	-
DETECTOR MEMORY	-	-	-	-	-	-	-	-	-
DET. CROSS SWITCH	-	-	-	-	YES	-	-	-	-
DUAL ENTRY	-	ON	-	-	-	ON	-	-	-
RECALL	-	MIN	-	-	-	MIN	-	-	-

TIMINGS ARE INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER.



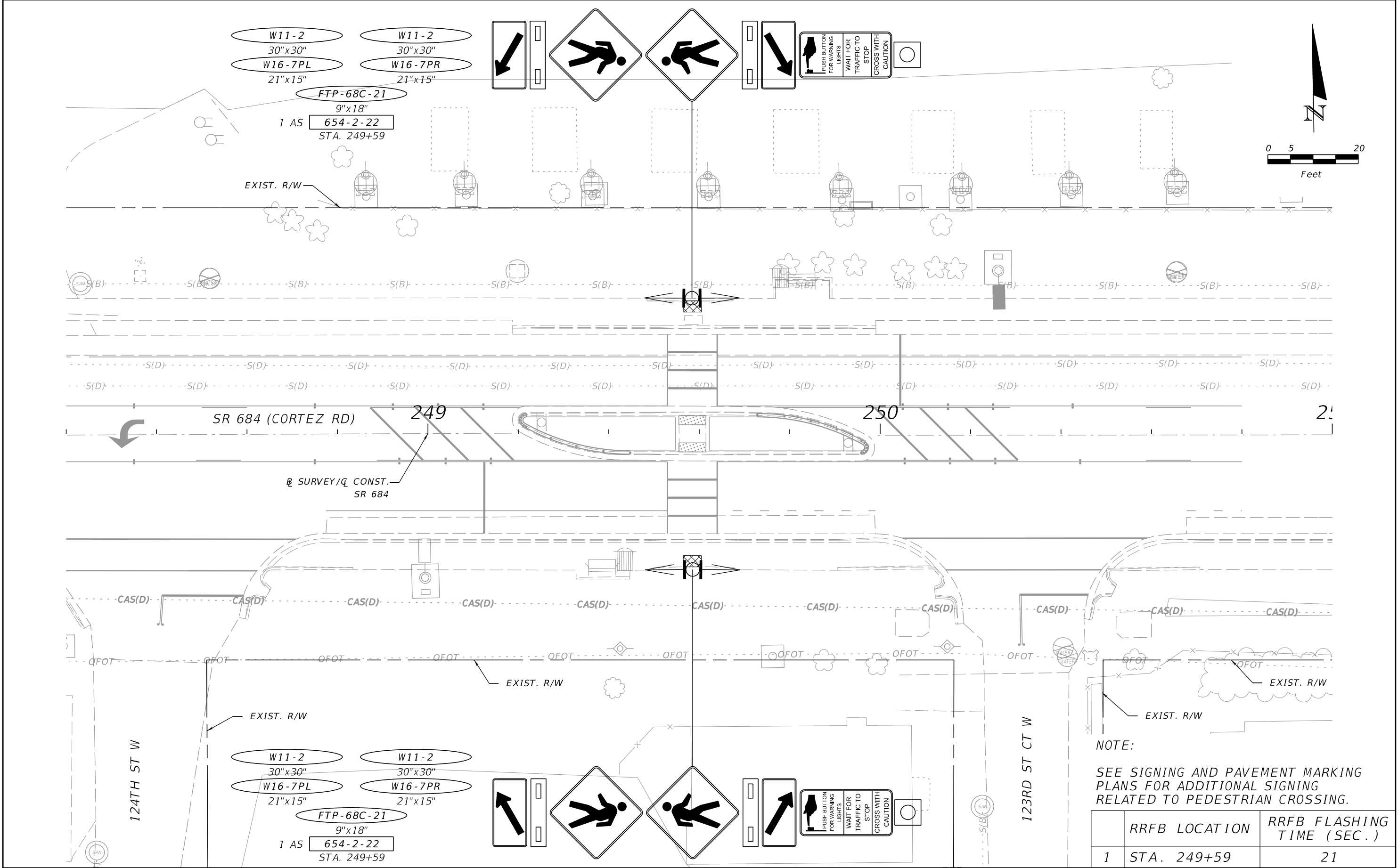
REMOVAL ITEMS:

632-7-6	1 PI
646-1-60	2 EA
650-1-60	2 AS
660-1-600	5 EA
700-3-601	3 EA
700-141-903	1 EA

LEGEND:

30" X 48" FLAT AREA

REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H.W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNALIZATION PLAN	SHEET NO.  T-4
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		



REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H.W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNALIZATION PLAN	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		T-5
					SR 684	MANATEE	430204-2-52-01		

