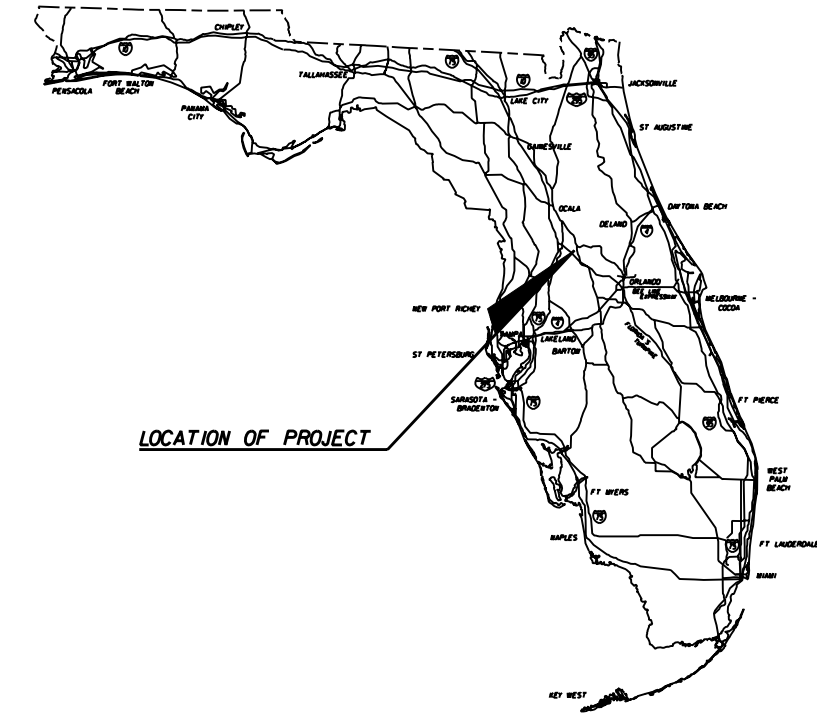


LAKE COUNTY CONTRACT PLANS

SIGNALIZATION PLANS

MAIN ST. AND LONE OAK DR.



LOCATION OF PROJECT

INDEX OF SIGNALIZATION PLANS

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	TABULATION OF QUANTITIES
T-3	GENERAL NOTES
T-4	SIGNALIZATION PLAN
T-5	SIGNING AND PAVEMENT MARKING PLAN
T-6	MAST ARM TABULATION
T-7	MAST ARM VARIABLES

SIGNALIZATION SHOP DRAWINGS TO BE SUBMITTED TO:

Dante A. Gabriel, P.E.
3751 Maguire Boulevard, Suite III
Orlando, FL 32803
Phone: 407-898-5424 Fax: 407-898-5425

PLANS PREPARED BY:

GMB Engineers & Planners, Inc.
3751 Maguire Boulevard, Suite III
Orlando, FL 32803
Phone: 407-898-5424 Fax: 407-898-5425



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

GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
ROADWAY AND TRAFFIC DESIGN STANDARDS
DATED JANUARY 2004, AND
STANDARDS SPECIFICATIONS FOR ROAD AND BRIDGE
CONSTRUCTION DATED 2004
AS AMENDED BY CONTRACT DOCUMENTS.

KEY SHEET REVISIONS		
DATE	BY	DESCRIPTION

SIGNALIZATION PLANS
ENGINEER OF RECORD: DANTE GABRIEL, P.E.

P.E. NO. 37271

DATE: _____

SHEET
NO.

T-1


TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS												GRAND TOTAL		REF. SHEET
			T-4		T-5										PLAN	FINAL	
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL			
102-1	MAINTENANCE OF TRAFFIC	LS	1												1		
522-1	CONCRETE SIDEWALK, 4" THICK	SY	217												217		
630-1-12	CONDUIT (F & I) (UNDERGROUND)	LF	1,213												1,213		
630-1-14	CONDUIT (F & I) (UNDERGROUND - JACKED)	LF	134												134		
632-7-1	CABLE (SIGNAL) (F & I)	PI	1												1		
635-1-11	PULL AND JUNCTION BOXES (F & I) (PULL BOX)	EA	16												16		
635-1-15	PULL AND JUNCTION BOXES (F & I) (FIBER OPTICS)	EA	1												1		
639-1-22	ELECTRICAL POWER SERVICE (UNDERGROUND POWER SOURCE)	AS	1												1		
639-2-1	ELECTRICAL SERVICE WIRE (F & I)	LF	153												153		
649-711-001	MAST ARM ASSEMBLY (F & I) (SINGLE ARM) (C1) (R1)	EA	2												2		
649-713-002	MAST ARM ASSEMBLY (F & I) (SINGLE ARM) (C3) (R2)	EA	2												2		
650-51-311	TRAFFIC SIGNAL, STANDARD (F & I) (3 SECTION, 1 WAY)	AS	8												8		
659-101	SIGNAL HEAD AUXILIARIES (F & I) (BACK PLATES, 3-SECTION)	EA	4												4		
659-109	SIGNAL HEAD AUXILIARIES (F & I) (CONCRETE PEDESTAL)	EA	1												1		
653-181	PEDESTRIAN SIGNAL (F & I) (LED) (1 WAY) (COUNTDOWN)	EA	8												8		
660-1-103	INDUCTIVE LOOP DETECTOR (F & I) (TYPE 3, 1 CH, SS, S)	EA	4												4		
660-2-102	LOOP ASSEMBLY (F & I) (TYPE B) (6' X 6')	AS	2												2		
660-2-106	LOOP ASSEMBLY (F & I) (TYPE F) (6' X 40')	AS	2												2		
665-11	PEDESTRIAN DETECTOR (F & I) (POLE OR CONTROLLER MOUNTED DETECTOR STATION)	AS	8												8		
670-5-111	ACTUATED SOLID STATE CONTROLLER ASSEMBLY (F & I) (NEMA) (1 PRE-EMPT)	AS	1												1		
699-1-1	SIGN, INTERNALLY ILLUMINATED	EA	4												4		
700-46-11	SIGN (REMOVAL)	AS			2										2		
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS (AMBER/AMBER)	EA			20										20		
711-35-121	SOLID TRAFFIC STRIPE THERMOPLASTIC (WHITE) (12")	LF			600										600		
711-35-241	SOLID TRAFFIC STRIPE THERMOPLASTIC (WHITE) (24")	LF			60										60		
711-36-61	SOLID TRAFFIC STRIPE THERMOPLASTIC (YELLOW) (6")	LF			800										800		

PAY ITEM NOTES:

1. LUMP SUM MAINTENANCE OF TRAFFIC SHALL INCLUDE ALL COSTS ASSOCIATED WITH THE MAINTENANCE OF TRAFFIC IN THE WORK ZONE. THIS INCLUDES SIGNS, WARNING DEVICES AND ALL OTHER ITEMS REQUIRED FOR THE INSTALLATION OF THE TRAFFIC SIGNAL.

REVISIONS						DESIGNED BY			DRAWN BY			CHECKED BY			SUPERVISED BY		
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	NAME	DATE	NAME	DATE	NAME	DATE	NAME	DATE	NAME	DATE	NAME	DATE
						AJD	10/05	AJD	10/05	KLL	10/05	KLL	10/05	DANTE A. GABRIEL	10/05		



GMB
ENGINEERS & PLANNERS, INC.

GMB Engineers & Planners, Inc.
3751 Maguire Boulevard, Suite 111
Orlando, FL 32803
Phone: 407-898-5424 Fax: 407-898-5425

LAKE COUNTY

TABULATION OF QUANTITIES

GENERAL NOTES

1. IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY JACKING AND TRENCHING AND/OR WHERE POLE INSTALLATIONS ARE LOCATED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS IN ACCORDANCE WITH SECTION 2-4 OF THE SPECIFICATIONS. THE CONTRACTOR SHALL HAND DIG THE FIRST 4' AT EACH POLE LOCATION TO VERIFY NO UTILITY CONFLICT.
2. ALL CONDUIT EXCEPT ELECTRICAL POWER SERVICE CONDUIT SHALL BE 2 INCH MINIMUM UNLESS OTHERWISE SPECIFIED IN THE PLANS.
3. PULL BOXES SHALL BE PLACED BEHIND CURB AND GUTTER. IF THERE IS NO CURB AND GUTTER THEN PULL BOXES SHALL BE PLACED AT LEAST 10 FEET FROM THE EDGE OF PAVEMENT.
4. THE BASE OF THE CONTROLLER CABINETS SHALL BE EQUAL TO OR GREATER THAN THE ELEVATION OF THE ROADWAY.
5. THE CABINET DOOR SHALL OPEN AWAY FROM THE INTERSECTION.
6. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AT LEAST 48 HOURS IN ADVANCE OF LOOP CUTTING. THE PROJECT ENGINEER WILL CONTACT THE COUNTY TRAFFIC ENGINEER WHO MAY CHALK THE LOOPS AND OBSERVE THEIR INSTALLATION IF HE SO DESIRES.
7. ALL LOOPS TO HAVE INDIVIDUAL LEAD-INS TO CABINET. LOOP SPLICES TO BE ACCORDING TO FDOT SPECIFICATIONS.
8. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY DEPARTMENT, MAINTAINING AGENCY AND THE FDOT AT LEAST 48 HOURS IN ADVANCE OF POLE SETTING OPERATIONS WHERE A CONFLICT WITH OVERHEAD ELECTRICAL CONDUCTORS IS EXPECTED AND IN ALL CASES WHERE JOINT USE POLES ARE TO BE USED.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING THE PROPER AMOUNT OF RAKE WITH RESPECT TO LOADING TO BE USED ON POLES AT TIME OF INSTALLATION. THIS INFORMATION IS AVAILABLE FROM THE POLE MANUFACTURER.
10. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AT LEAST 48 HOURS IN ADVANCE OF ANY LANE CLOSURES ON SR 50. NO LANE CLOSURES FROM 6:00 AM - 8:00 PM EASTBOUND AND WESTBOUND. THE TIMES MAY BE ADJUSTED BY THE PROJECT ENGINEER IF NECESSARY TO MEET FIELD CONDITIONS, LANE CLOSURES ARE REQUIRED FOR OVERHEAD SIGNAL WORK AND LOOP INSTALLATION AND SHALL FOLLOW THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS (2004).
11. WHEN THE CONTRACTOR IS PERFORMING SIGNAL WORK IN AN INTERSECTION (INSTALLING CONDUIT IN THE STREET, REMOVING EXISTING SIGNAL EQUIPMENT, INSTALLING NEW SIGNAL EQUIPMENT, INSTALLING LOOPS AND RUNS, AND TURNING ON OF NEW SIGNALS) WHERE A LANE IS CLOSED AN OFF-DUTY LAW ENFORCEMENT OFFICER IS INCIDENTAL TO THE COST OF THE PROJECT.
12. ALL CABLE SHALL BE PULLED IN THE CONDUIT WITH A CABLE GRIP DESIGNED TO PROVIDE A FIRM HOLD ON THE EXTERIOR COVERING OF THE CABLE. A WINCH WITH A SLIP CLUTCH SHALL BE USED TO ENSURE THAT THE ALLOWABLE TENSION LIMIT IS NOT EXCEEDED. AN APPROVED LUBRICANT SHALL BE USED TO FACILITATE THE PULLING OF THE CABLE.
13. AS DIRECTED BY THE PROJECT ENGINEER, THE CONTRACTOR SHALL ADJUST CONDUIT VERTICALLY TO AVOID ANY POSSIBLE CONFLICTS WITH UNDERGROUND UTILITIES.
14. ALL PULL BOX COVERS SHALL BE FDOT APPROVED OF NON METALLIC CONSTRUCTION WITH RECESSED COVER LOGO "TRAFFIC SIGNAL" OR "FIBER OPTIC" AS APPROPRIATE.
15. THE LOCATION OF THE UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EXACT LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO DIGGING.
16. SIGNAL CABLE AND SPAN WIRE INSTALLATION SHALL BE A TWO POINT ATTACHMENT.
17. TYPE F LOOPS SHALL BE 6'X40' AND EXTEND 5' BEYOND THE STOP BAR.
18. FOR MULTIPLE RUNS OF UNDER PAVEMENT CONDUIT, ONLY ONE RUN WILL BE PAID FOR AS UNDER PAVEMENT AND ADDITIONAL RUNS WILL BE PAID FOR AS UNDERGROUND.
19. TRAFFIC SIGNAL MAINTAINING AGENCY IS LAKE COUNTY TRAFFIC DEPARTMENT LOCATED AT:
123 N. SINCLAIR AVENUE
TAVARES, FL. 32778
PHONE (352) 253-4944
20. SIGNAL DISCONNECT SHALL BE 12" w x 6" h x 4 1/2" d, WITH HINGED DOOR AND 18 POSITION TERMINAL STRIP. NO CINCH JONES PLUGS WILL BE ACCEPTED.
21. THE CONTRACTOR SHALL VERIFY SIGNAL CABLE COLOR CODES WITH LAKE COUNTY BEFORE ORDERING.
22. THE CONTROLLER CABINET ASSEMBLY SHALL BE A NAZTEC TS 2, TYPE 2 AND HAVE ALL NECESSARY HARDWARE TO COMMUNICATE WITH LAKE COUNTY CLOSED LOOP SYSTEM AND SHALL USE THE APPROPRIATE COMMUNICATION PROTOCOL TO CONFORM TO THE RCSS REQUIREMENTS. THE ADDITIONAL EQUIPMENT AND ACCESSORIES FOR THE FIBER OPTIC CABLE INTERCONNECT SHALL BE FURNISHED AND INSTALLED AS PART OF THE CONTROLLER ASSEMBLY.
23. THE TRAFFIC SIGNAL SHALL FLASH NO LESS THAN 7 DAYS AND NO MORE THAN 14 DAYS PRIOR TO THE TURN-ON INSPECTION. THE CONTRACTOR SHALL CONTACT THE PERMIT ENGINEER 48 HOURS PRIOR TO TURNING THE SIGNAL ON FLASH.
24. SIGNAL CABLE AND LOOP WIRES TO BE IN SEPARATE PULL BOXES.
25. DELAY DETECTORS SHALL BE SET TO 5 SECONDS.
26. A SIGNAL INSPECTION IS TO BE SCHEDULED WITH MR. RAY MARLIN AT (386) 943-5318, OF TRAFFIC OPERATIONS, 10 DAYS PRIOR TO THE SIGNAL BEING PLACED INTO OPERATION.
27. ANY NEW OR EXISTING STRIPING CUT BECAUSE OF LOOP PLACEMENT SHALL BE RESTRIPE PRIOR TO ACCEPTANCE.
28. PRE-EMPTION SYSTEM SHALL BE COMPATIBLE WITH MAINTAINING AGENCY'S EXISTING SYSTEM.
29. OVERHEAD BELDON TO BE UV RATED.
30. VEHICLE SIGNAL HEAD ASSEMBLIES SHALL BE BLACK, CAST ALUMINUM, WITH TUNNEL VISORS, AND LED'S FOR ALL INDICATIONS, UNLESS OTHERWISE NOTED.
31. A MANUAL PUSH BUTTON CORD SHALL BE FURNISHED IN ALL CONTROLLER CABINETS.
32. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS, INCLUDING THE ELECTRIC PERMIT AND FOR COORDINATING APPLICATION FOR POWER WITH THE CITY OF LEESBURG AT 352-728-9750.
33. INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL HAVE A SEPARATE CIRCUIT BREAKER, PHOTOCELL, AND BYPASS SWITCH, INSIDE THE CABINET.
34. THE CONTRACTOR SHALL NOTIFY LAKE COUNTY TRAFFIC OPERATIONS (352) 742-1766 AT LEAST 24 HOURS IN ADVANCE OF INSTALLING SIGNAL POLES, GROUND RODS, UNDERGROUND CONDUIT, AND SEALING SIGNAL HEAD ASSEMBLIES SO THAT THESE OPERATIONS CAN BE OBSERVED.
35. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED WITH LAKE COUNTY TRAFFIC OPERATIONS, (352) 742-1766, PRIOR TO ANY CONSTRUCTION.
36. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE POWER COMPANY PROVIDING THE ELECTRICAL POWER, TO DETERMINE IF ANY ADDITIONAL FEES ARE REQUIRED TO CONNECT POWER AND FOR CONNECTION OF POWER. IF REQUIRED THE FEE SHALL BE INCLUDED AS PART OF THE BID ITEM PAYMENT FOR ELECTRICAL SERVICE ASSEMBLY.
37. THE INSIDE LANE DISCONNECT SHALL BE WIRED FOR FUTURE 5 SECTION HEADS.
38. LOOP HOME RUNS SHALL NOT BE CUT INTO THE RADIUS.
39. A GENERATOR SWITCH BOX ASSEMBLY SHALL BE INSTALLED, RELIANCE CONTROLS CSR301 WITH POWER INDICATOR LIGHT, OR EQUIVALENT.
40. A GENERATOR PAD, 3'X3'X4" CONCRETE WITH TWO EYEBOLTS SHALL BE INSTALLED. PAYMENT FOR THE CONCRETE PAD AND INSTALLATION SHALL BE INCLUDED UNDER PAY ITEM NUMBER 670-5-ABC.
41. THE FIRST BUFFER OF SINGLE MODE AND MULTI MODE FIBER SHALL BE TERMINATED IN THE CABINET USING ST CONNECTORS.
42. INTERNALLY ILLUMINATED STREET NAME SIGN SHALL BE INSTALLED 1' BELLOW THE MESSENGER CABLE WHERE POSSIBLE, POWERED BY A SEPARATE CIRCUIT BREAKER, AND SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH LAKE COUNTY PUBLIC WORKS INTERNALLY ILLUMINATED STREET NAME SIGN DETAIL.
43. AS PHOTOCELL SHALL BE INSTALLED INSIDE THE CABINET WITH A 2" PLEXIGLASS WINDOW, OR NEAR THE ELECTRIC SERVICE WITHIN REACH OF A LIFT TRUCK. CARE TO BE GIVEN TO INSTALL WHERE STREET LIGHTING DOES NOT AFFECT OPERATION.
44. THE CONTRACTOR SHALL FURNISH LAKE COUNTY TRAFFIC OPERATIONS WITH EMERGENCY CONTACTS AND PHONE NUMBERS AND HAVE AN IMSA LEVEL II CERTIFIED SIGNAL TECHNICIAN ON CALL WITHIN A TWO HOUR MINIMUM RESPONSE TIME.
45. THE CONTRACTOR SHALL FURNISH LAKE COUNTY TRAFFIC OPERATIONS TWO COMPLETE SETS OF AS-BUILT PLANS THAT INCLUDE CONDUIT AND PULL BOX LOCATIONS AT FINAL INSPECTION.
46. THE INSIDE LANE DISCONNECT SHALL BE WIRED FOR FUTURE 5 SECTION HEADS.
47. A FIBER PULL BOX AND CONDUIT INTO THE CONTROLLER ASSEMBLY SHALL BE INSTALLED.
48. ANY LANDSCAPING DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE.
49. THE CONTRACTOR SHALL COORDINATE WITH BOB BRUCK AT LEESBURG ELECTRIC (PH# 352-728-9819) FOR THE SERVICE REQUIREMENTS AND LOCATION.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	NAME	DATE	NAME	DATE		
						DESIGNED BY	AJD 01/05	DRAWN BY	AJD 01/05		
						CHECKED BY	RLK 01/05	CHECKED BY	RLK 01/05		
						SUPERVISED BY: DANTE A. GABRIEL, P.E. *37271					

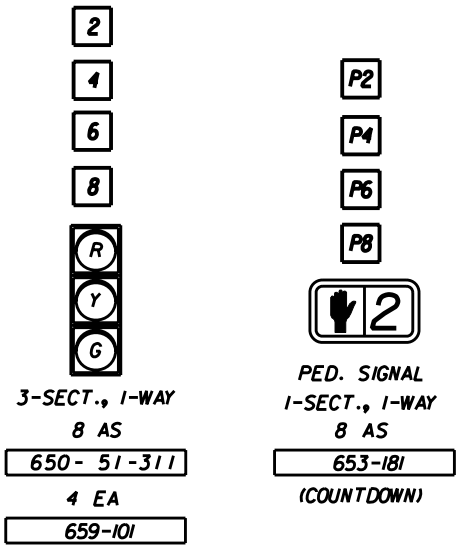
GMB
ENGINEERS & PLANNERS, INC.

GMB Engineers & Planners, Inc.
3751 Maguire Boulevard, Suite III
Orlando, FL 32803
Phone: 407-898-5424 Fax: 407-898-5425

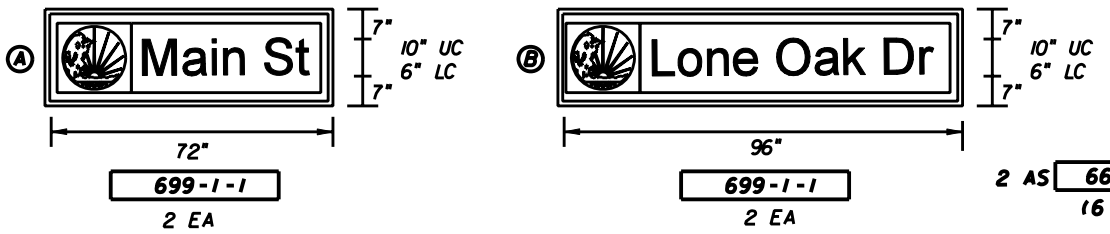
LAKE COUNTY

GENERAL NOTES

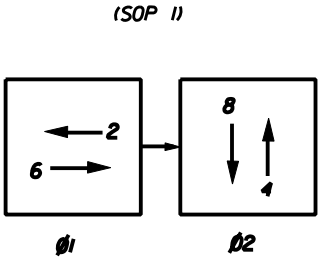
SIGNAL HEAD DETAILS



INTERNALLY ILLUMINATED OVERHEAD SIGNS



MOVEMENT DIAGRAM (ISOP II)

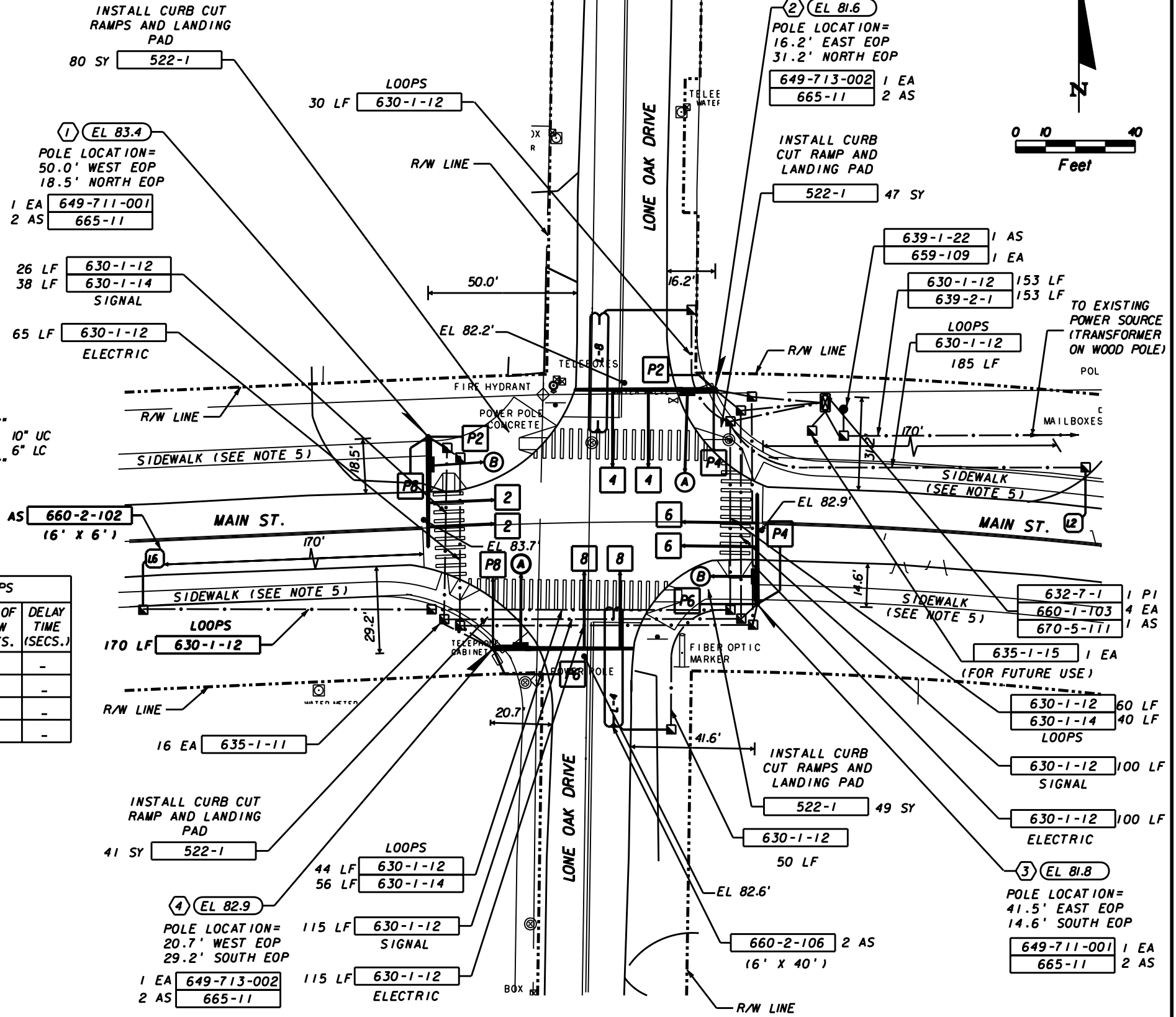


CONTROLLER TIMINGS								
TIMING FUNCTION	1	2	3	4	5	6	7	8
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN	-	16	-	5	-	16	-	5
EXTENSION	-	3.5	-	3	-	3.5	-	3
MAXIMUM GREEN 1	-	50	-	30	-	50	-	21
MAXIMUM GREEN 2	-	-	-	-	-	-	-	-
YELLOW CLEARANCE	-	4	-	4	-	4	-	4
ALL RED	-	1.5	-	2	-	1.5	-	2
PEDESTRIAN WALK	-	7	-	7	-	7	-	7
PED. CLEARANCE	-	17	-	8	-	17	-	8
RECALL	-	MIN	-	-	-	MIN	-	-

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

- NOTES:
- LOOP SPACING BASED ON A SPEED LIMIT OF 40 MPH.
 - EAST-WEST FACING HEADS SHALL HAVE BACKPLATES.
 - MAJOR STREET IS MAIN STREET (2 & 6) AND MINOR STREET IS LONE OAK DR. (4 & 8).
 - DURING FLASH OPERATION, SIGNAL HEADS 2 AND 6 SHALL FLASH YELLOW AND SIGNAL HEADS 4 AND 8 SHALL FLASH RED.
 - LANDING PADS SHALL BE CONSTRUCTED CONCURRENTLY WITH THE SIGNAL INSTALLATION. SIDEWALK SHALL BE CONSTRUCTED BY OTHERS AT A LATER DATE.

DETECTORS FOR LOOPS			
NO. OF LOOPS	NO. OF LOOPS	NO. OF NEW DETS.	DELAY TIME (SECS.)
L-2	1	1	-
L-4	1	1	-
L-6	1	1	-
L-8	1	1	-



REVISIONS

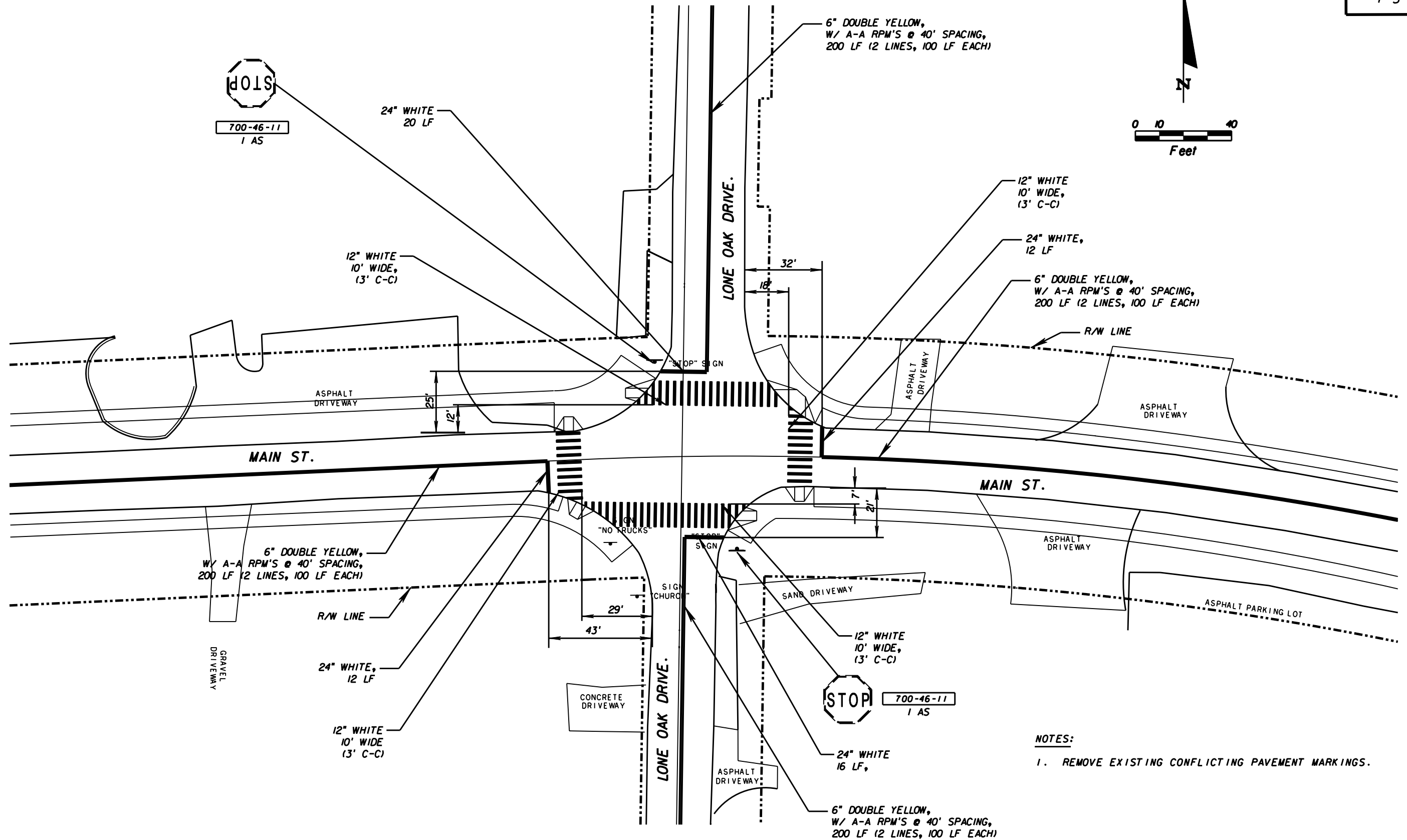
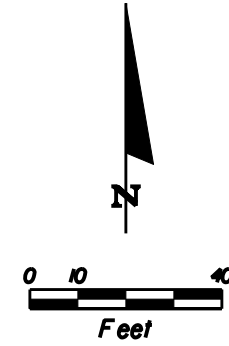
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

NAME	DATE	NAME	DATE
DESIGNED BY: AJD	10/05	DRAWN BY: AJD	10/05
CHECKED BY: RLL	10/05	CHECKED BY: RLL	10/05
SUPERVISED BY: DANTE A. GABRIEL, P.E. *37271			

GMB Engineers & Planners, Inc.
3751 Maguire Boulevard, Suite 111
Orlando, FL 32803
Phone: 407-898-5424 Fax: 407-898-5425

LAKE COUNTY

SIGNALIZATION PLAN



NOTES:
1. REMOVE EXISTING CONFLICTING PAVEMENT MARKINGS.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

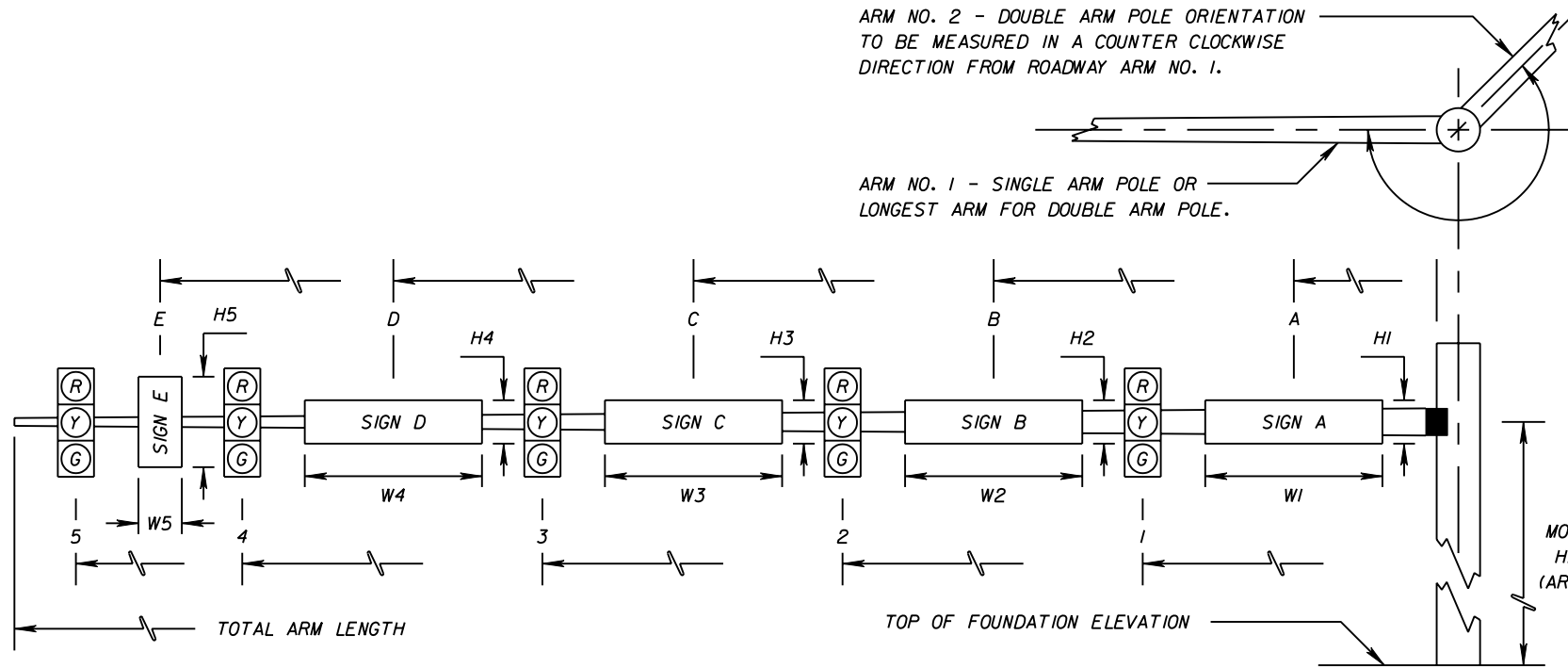
NAME	DATE	NAME	DATE
DESIGNED BY: AJD	10/05	DRAWN BY: AJD	10/05
CHECKED BY: RLL	10/05	CHECKED BY: RLL	10/05
SUPERVISED BY: DANTE A. GABRIEL, P.E. *37271			

GMB Engineers & Planners, Inc.
3751 Maguire Boulevard, Suite 111
Orlando, FL 32803
Phone: 407-898-5424 Fax: 407-898-5425

LAKE COUNTY

SIGNING AND PAVEMENT MARKING PLAN

SPECIAL INSTRUCTIONS					
ID NO.	PED. BUTTON		PED. SIGNALS		HANDHOLE LOCATION
1	0°	90°	0°	90°	
2	0°	90°	0°	90°	
3	0°	90°	0°	90°	
4	0°	90°	0°	90°	



* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY

ID NO.	SHEET NO.	LOCATION BY STA.	TOP OF FOUNDATION ELEVATION	RDWY ARM NO.	CROWN ELEV.	SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	SIGNAL DATA										TOTAL ARM LENGTH	ARM M.H.	∠ BETWEEN DUAL ARMS 90/270	SIGN DATA															PAINT COLOR
									DISTANCE FROM POLE													DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN															
1	*	2	*	3	*	4	*	5	*	1	H1	W1	B	H2	W2	C	H3	W3	D	H4	W4	E	H5	W5													
1	T-4		83.4	1	83.7	V	Y	Y	21	3	29	3																		HUNTER GREEN							
2	T-4		81.6	1	82.2	V	N	Y	21	3	33	3																		HUNTER GREEN							
3	T-4		81.8	1	82.9	V	Y	Y	18	3	26	3																		HUNTER GREEN							
4	T-4		82.9	1	82.6	V	N	Y	30	3	42	3																		HUNTER GREEN							
				2																																	
				2																																	
				1																																	
				2																																	
				1																																	
				2																																	
				1																																	
				2																																	
				1																																	
				2																																	
				1																																	
				2																																	
				1																																	
				2																																	
				1																																	
				2																																	
				1																																	
				2																																	

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DESIGNED BY	AJD	DATE	0/05	DRAWN BY	AJD	DATE	0/05
CHECKED BY	KLL	DATE	0/05	CHECKED BY	KLL	DATE	0/05

SUPERVISED BY: DANTE A. GABRIEL, P.E. *3727*

 GMB <small>ENGINEERS & PLANNERS, INC.</small>	GMB Engineers & Planners, Inc. 3751 Maguire Boulevard, Suite 111 Orlando, FL 32803 Phone: 407-898-5424 Fax: 407-898-5425	LAKE COUNTY	MAST ARM TABULATION

STANDARD MAST ARM ASSEMBLIES DESIGN TABLE																
STRUCTURE ID NUMBERS	ASSEMBLY NUMBERS (1)	FIRST ARM			SECOND ARM			UF (deg)	POLE				SPECIAL DRILLED SHAFT DATA (4)			
		ARM TYPE	FAA (FT) ⁽²⁾	FBA (IN) ⁽²⁾	ARM TYPE	FAA (FT) ⁽²⁾	FBA (IN) ⁽²⁾		POLE TYPE	UAA (FT) ⁽³⁾	UB (M)	UCA (CM) ⁽³⁾	DA (M)	DB (M)	RA	RB
1	C1 - R1	C1	-	-	-	-	-	-	R1	-	-	-	-	-	-	-
2	C3 - R2	C3	-	-	-	-	-	-	R2	-	-	-	-	-	-	-
3	C1 - R1	C1	-	-	-	-	-	-	R1	-	-	-	-	-	-	-
4	C3 - R2	C3	-	-	-	-	-	-	R2	-	-	-	-	-	-	-

TABLE NOTES:

- (1) Assembly Number Legend
 - Single Arm:
 Arm Type - Pole Type = B^a - O^a
 = C^a - R^a
 - Double Arm:
 First Arm Type - Second Arm Type - Pole Type = B^a - B^a - O^a
 = B^a - B^a - O^a
- (2) If an entry appears in columns "FAA" and "FBA", a shorter arm is required. This is obtained by removing length from the arm tip. For these cases the mast arm length shall be shortened from "FA" to "FAA" and the tip diameter shall be increased from "FB" to "FBA".
- (3) If an entry appears in columns "UAA" and "UCA", a shorter pole is required. This is obtained by removing length from the pole tip. For these cases the pole height shall be shortened from "UA" to "UAA" and the pole tip diameter shall be increased from "UC" to "UCA".
- (4) The foundations for Standard Mast Arm Assemblies are pre-designed and are based upon the following conservative soil criteria which covers the great majority of soil types found in Florida. Only complete the "Special Drilled Shaft Data" information if site conditions dictate drilled shafts with additional foundation capacity.
 - Classification = Cohesionless (Fine Sand)
 - Friction Angle = 30 degrees (30°)
 - Unit Weight = 50 lbs./cu. ft. (assumed saturation)
- (5) Concrete shall meet the requirements for an Extremely Aggressive environmental condition.

GENERAL NOTES:

- (1) Work this sheet with the Signal Designer's "Mast Arm Tabulation Sheet". See "Mast Arm Tabulation Sheet" for special instructions that include non-standard Handhole location, paint color, and pedestrian features.
- (2) Work this sheet with "Design Standards" index I7741 and I7743.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

NAME	DATE	NAME	DATE
DESIGNED BY: AJD	10/05	DRAWN BY: AJD	10/05
CHECKED BY: RLL	10/05	CHECKED BY: RLL	10/05
SUPERVISED BY: DANTE A. GABRIEL, P.E. *37271			



GMB Engineers & Planners, Inc.
 3751 Maguire Boulevard, Suite #
 Orlando, FL 32803
 Phone: 407-898-5424 Fax: 407-898-5425

LAKE COUNTY

MAST ARM VARIABLES