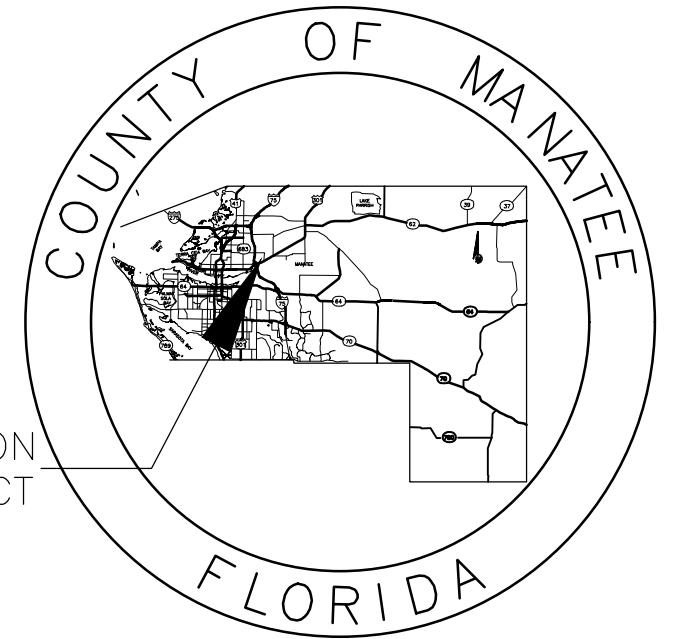


STATE OF FLORIDA COUNTY OF MANATEE

PROPOSED SIGNALIZATION PLANS FOR 60TH AVE. EAST FROM US 301 TO MENDOZA RD MANATEE COUNTY ELLENTON, FLORIDA MANATEE COUNTY PROJECT No: 6083160

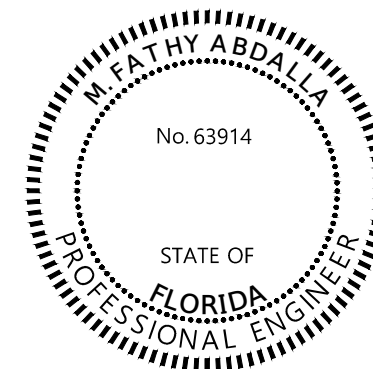


LOCATION
OF PROJECT

INDEX OF SIGNALIZATION PLANS	
SHEET NO.	DESCRIPTION
T-1	KEYSHEET
T-1A	NOTES TO REVIEWER
T-2	GENERAL NOTES
T-3	SIGNALIZATION PLAN (1)
T-4	GUIDE SIGN WORKSHEET
T-5	MAST ARM TABULATION

**90% PLANS
JUNE 2022**

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:



ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

PROFESSIONAL OF RECORD: M. FATHY ABDALLA, P.E. NO. 63914
KISINGER CAMPO & ASSOCIATES CORP.
201 N. FRANKLIN STREET, SUITE 400
TAMPA, FL 33602



Know what's below
Call before you dig

GOVERNING DESIGN STANDARDS:

FLORIDA DEPARTMENT OF TRANSPORTATION, FY 2022-23 DESIGN STANDARDS eBOOK (DSeB) AND APPLICABLE DESIGN STANDARDS REVISIONS (DSRs) AT THE FOLLOWING WEBSITE:

<https://www.fdot.gov/design/standardplans/current/default.shtm>

GOVERNING STANDARD SPECIFICATIONS:

FLORIDA DEPARTMENT OF TRANSPORTATION, JANUARY 2022 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AT THE FOLLOWING WEBSITE:

<http://www.fdot.gov/programmanagement/Implemented/SpecBooks>

MANATEE COUNTY PROJECT MANAGER: JIM SHULER, P.E.

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN ENLARGED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.


CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
N/A	2023	T-1

MOTES TO REVIEWER

1. GEOTECH SHEETS WILL BE ADDED FOR NEXT SUBMITTAL ONCE MAST ARM POLES LOCATION HAVE BEEN APPROVED AND FINALIZED.
2. STRUCTURAL SHEETS WILL BE INCLUDED FOR NEXT SUBMITTAL AFTER SUE AND GEOTECH HAVE BEEN COMPLETED.
3. BLANK OUT SIGNS WERE ADDED AT ONLY THREE INTERSECTIONS. THE EASTBOUND APPROACH CAN NOT HAVE A BLANK OUT SIGN PROHIBITING THE EXCLUSIVE RIGHT TURN LANES.

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NUMBER	DESCRIPTION	DATE	PROJECT #	15-0909JE	SURVEYED	RPH	5/2018	M. FATHY ABDALLA, P.E. P.E. LICENSE NUMBER 63914 KISINGER CAMPO & ASSOCIATES CORP. 201 N. FRANKLIN STREET SUITE 400 TAMPA, FL 33602	 PUBLIC WORKS DEPARTMENT ENGINEERING SERVICES 1022 26th Avenue East, Bradenton, FL 34208	<i>NOTES TO REVIEWER</i>	
			SURVEY #	N/A	DESIGNED	NSL	6/3/22				
			SEC./TWN./RGE	28/33S/18E	DRAWN	NSL	6/3/22				
			SCALE	N.T.S.	CHECKED	JR	6/3/22				
											SHEET NO.
											T-1A

GENERAL NOTES

1. THE CONTRACTOR SHALL CONTACT MANATEE COUNTY TRAFFIC ENGINEERING DIVISION BEFORE STARTING WORK.
2. AT LEAST (5) BUSINESS DAYS PRIOR TO BEGINNING THE TRAFFIC SIGNAL INSTALLATION, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING DEPARTMENTS TO INFORM THEM OF CONSTRUCTION OPERATIONS:

MANATEE COUNTY TRAFFIC OPERATIONS DIVISION:
MR. AARON BURKETT
2904 12th STREET COURT EAST
BRADENTON, FLORIDA 34208
PHONE #: (941) 708-7450, EXT. 7509

MANATEE COUNTY TRAFFIC ENGINEERING DIVISION:
MR. VISHAL KAKKAD, P.E. PTOE
2101 47th TERRACE EAST
BRADENTON, FLORIDA 34208
PHONE #: (941) 708-7463, EXT. 7812

3. FORTY-EIGHT (48) HOURS PRIOR TO CONTRACT START DATE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES IN WRITING GIVING THE LOCATION, START DATE AND EMERGENCY NUMBERS FOR AFTER HOURS REPAIRS:

FLORIDA HIGHWAY PATROL:
POST OFFICE BOX 20009
BRADENTON, FLORIDA 34203
PHONE #: (941) 751-7646

MANATEE SHERIFF'S OFFICE:
515 11th STREET WEST
BRADENTON, FLORIDA 34205
PHONE #: (941) 747-3011

4. THE CONTRACTOR SHALL HAVE AN IMSA CERTIFIED LEVEL II (ELECTRONICS OR ELECTRICAL TECHNICIAN) AT THE JOB SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. ALL SIGNAL INSTALLATION TECHNICIANS SHALL HAVE MINIMUM OF IMSA LEVEL I CERTIFICATION.

5. DELIVER THREE (3) SETS OF AS-BUILT PLANS TO MR. MUKUNDA GOPALAKRISHNA, SR. PROJECT ENGINEER IN TRAFFIC ENGINEERING DIVISION AT 2101 47th TERRACE EAST, BRADENTON, FLORIDA 34208.

SR. PROJECT ENGINEER IN TRAFFIC ENGINEERING DIVISION:
MR. MUKUNDA GOPALAKRISHNA, P.E. PTOE
2101 47th TERRACE EAST
BRADENTON, FLORIDA 34208
PHONE #: (941) 749-3500. EXT. 7813

DELIVER THREE (3) SETS OF RECORD DRAWINGS, TWO (2) SETS OF IMSA FORMS AND ONE (1) COMPACT DISC OF RECORDING DRAWINGS TO MR. AARON BURKETT, AT 2904 12th STREET COURT EAST, BRADENTON, FLORIDA 34208. RECORD DRAWINGS MUST BE DELIVERED FIVE (5) BUSINESS DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION.

6. PRIOR TO ORDERING MATERIALS, THE SIGNAL CONTRACTOR SHALL CONTACT THE TRAFFIC OPERATION DIVISION AND VERIFY CURRENT COLOR CODES TO BE USED FOR SIGNAL AND INTERCONNECT CABLE.
7. UPON PASSING THE FINAL INSPECTION, THE CONTRACTOR SHALL SEND A WRITTEN REQUEST TO THE MANATEE COUNTY TRAFFIC OPERATIONS DIVISION TO TRANSFER MAINTENANCE FROM THE CONTRACTOR TO MANATEE COUNTY.
8. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT THE LOCAL POWER COMPANY PROVIDING ELECTRICAL POWER TO DETERMINE IF A SERVICE PROCESSING IS FEE IS REQUIRED
9. THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR, VIA SUNSHINE STATE ONE CALL OF FLORIDA, INC. AT 1-800-432-4770, IN COORDINATION WITH UNDERGROUND AND OVERHEAD UTILITY OWNERS. THE CONTRACTOR SHALL NOTIFY UTILITY OWNERS/AGENCIES LISTED WITHIN OR

IMPACTED BY THESE PLANS, NOT LESS THAN TWO (2) FULL BUSINESS DAYS IN ADVANCE OF BEGINNING CONSTRUCTION.

10. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS IN ADVANCE OF POLE SETTING OPERATIONS WHERE CONFLICT WITH OVERHEAD ELECTRICAL CONDUCTORS IS EXPECTED AND, IN ALL CASES WHERE JOINT USE POLES ARE CALLED FOR.

THE CONTRACTOR SHALL CONTACT THE LOCAL POWER COMPANY FOR THEIR ASSISTANCE IN PERFORMING ALL NECESSARY WORK UNDER POWER LINES AT SIGNAL POLES, SUCH AS INSTALLATION OF SIGNAL CABLE, FIBERGLASS INSULATORS, AND SIGNAL POLES.

ALL LOCATIONS WHERE THE REQUIRED VERTICAL CLEARANCE TO THE POWER LINE CANNOT BE MAINTAINED, A QUALIFIED REPRESENTATIVE FROM THE POWER COMPANY SHALL BE PRESENT DURING ALL WORK UNDER POWER LINES. ANY COST RELATED TO THIS SHALL BE INCLUDED IN THE RELATED PAY ITEMS.

11. THE CONTRACTOR SHALL HAND DIG THE FIRST 48 INCHES OF THE HOLE FOR THE POLE FOUNDATION OR THE CONDUIT RUN WHERE UTILITIES ARE IN CLOSE PROXIMITY.
12. ALL MATERIALS, EQUIPMENT, AND OTHER CONTRACTOR SUPPLIED ITEMS SHALL BE INSTALLED AND MAINTAINED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION, UNLESS SPECIFICALLY DIRECTED OTHERWISE BY THE ENGINEER.
13. THE CONTRACTOR SHALL SUPPLY ALL MATERIAL SUBMITTALS TO THE ENGINEER, PRIOR TO CONSTRUCTION, FOR APPROVAL.
14. ELEVATION OF THE TOP OF MAST ARM FOUNDATION SHALL BE SIX (6) INCHES ABOVE EXISTING GRADE, UNLESS LOCATED DIRECTED AT THE BACK OF SIDEWALK. IF LOCATED AT BACK OF SIDEWALK, THE FOUNDATION ELEVATION SHALL MATCH SIDEWALK GRADE. SEE TOP OF FOUNDATION ELEVATION ON 'MAST ARM TABULATION SHEET'.

TRAFFIC CONTROLLER CABINET AND CONTROLLER ASSEMBLY

1. ALL TRAFFIC SIGNAL CONTROLLER CABINETS SHOULD BE TYPE VI.
2. ALL SIGNAL CONTROLLER CABINETS SHALL HAVE A FRONT AND BACK DOOR.
3. PROVIDE ONE (1) PHOTOCELL OUTSIDE THE RESPECTIVE DISCONNECT BOX FOR INTERNALLY ILLUMINATED STREET NAME SIGNS.
4. CONTROLLER CABINET SHALL BE WIRED FOR SOP 10 REGARDLESS OF THE PROPOSED SIGNAL OPERATION AT THE PROJECT'S INTERSECTION. HOWEVER, THE CONTROLLER SHALL BE PROGRAMMED ACCORDING TO THE PROPOSED SOP AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
5. THE MOUNTING SURFACE OF THE CONTROLLER CABINET SHOULD BE ORIENTED TO ENSURE THE MAIN CABINET DOOR WILL OPEN AWAY FROM ONCOMING TRAFFIC.
6. THE UPS SHALL BE MOUNTED TO THE SIDE OF THE TRAFFIC SIGNAL CONTROLLER CABINET IN A MANNER DOES NOT OBSTRUCT ACCESS TO NEARBY TRAFFIC SIGNAL EQUIPMENT.
7. THE PROJECT IS TO FURNISH AND INSTALL A COMPLETE UPS ASSEMBLY THAT INCLUDES A CABINET AND BATTERIES TO MEET COUNTY SPECIFICATIONS.
8. PROVIDE ONE (1) UNINTERRUPTIBLE POWER SUPPLE (UPS) MODEL No. ALPHA FXM 110 EQUIPPED WITH AN ETHERNET PORT. ALL UPS'S SHALL SUPPORT SNMP (PROTOCOL) FOR REMOTE MONITORING AND MANAGEMENT.
9. THE CONTROLLER CABINET SHALL BE NAZTEC 980 ATC, COMPATIBLE WITH MANATEE COUNTY ATMS.NOW SYSTEM. THE CONTROLLER SUPPLIED WITH THE CABINET SHALL COME EQUIPPED WITH FOUR (4) SERIES PORT, ONE (1) ETHERNET PORT AND ONE (1) USB PORT.

SIGNAL HEADS AND INTERNALLY ILLUMINATED SIGNS

1. USE ALUMINUM LOUVERED BACK PLATES ON ALL VEHICULAR SIGNAL HEADS. ALL BACK PLATES SHALL INCLUDE A 2" YELLOW REFLECTED (TYPE III REFLECTIVITY) OUTER EDGE BORDER. (FOR MAST ARMS).
2. USE LOCKING COLLARDS FOR MOUNTING PEDESTRIAN SIGNAL HEADS TO PEDESTRIAN PEDESTALS.
3. INTERNALLY ILLUMINATED SIGNS SHALL BE RIGIDLY ATTACHED TO THE MAST ARM AS SHOWN IN THE PLANS.

DETECTION


1. STOP BAR VEHICLE DETECTION SHALL BE RADAR DETECTION USING WAVETRONIX MATRIX SENSOR.
2. THE SYSTEM INSTALLER SHALL LEAVE A MINIMUM OF 30 INCHES OF SPACE CABLE AT EACH BRACKET. THE SLACK SHALL BE NEATLY FORMED INTO A LOOP AND SECURED TO THE SENSOR.
3. A MINIMUM OF 10 FEET OF SENSOR CABLE SLACK SHALL BE NEATLY STORED AT EACH PULL BOX LOCATION WITH A CONDUIT RUN.
4. IN ADDITION TO STOP BAR PRESENCE DETECTION. ADVANCE VEHICLE DETECTION SHALL BE PROVIDED FOR ALL MAJOR STREET APPROACHES. THE WAVETRONIX SMARTSENSOR ADVANCE SHALL BE USED FOR ADVANCE VEHICLE DETECTION, UNLESS OTHERWISE APPROVED BY TRAFFIC ENGINEERING DIVISION.
5. ALL ACTUATED PHASES SHALL BE MAINTAINED DURING THE PROJECT WITH THE USE OF VIDEO OR MICROWAVE DETECTORS. THE CONTRACTOR SHALL MAINTAIN TEMPORARY VEHICLE DETECTION ON ALL APPROACHES THROUGHOUT CONSTRUCTION UNTIL MANATEE ACCEPTS THE PROJECT.

CONDUIT NOTES

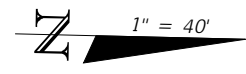
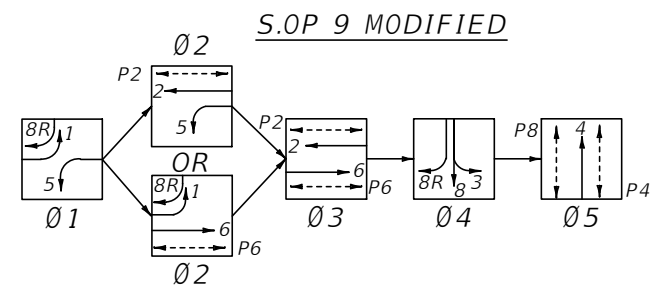
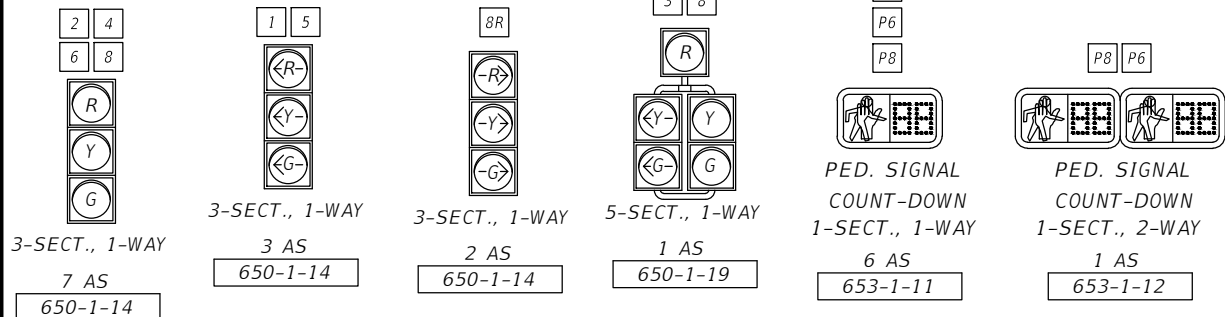
1. THE CONDUITS TO BE INSTALLED ARE TO BE PLACED SO AS TO TOTALLY AVOID ANY CONFLICT WITH EXISTING UTILITIES ALONG THE ROUTE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE NECESSARY INFORMATION REQUIRED TO PLAN THE WORK AHEAD FOR THE INSTALLATION OF THE REQUIRED CONDUITS WITHIN DESIGN OR SPECIFIED PARAMETERS AND HIS TIME FRAME. THE CONTRACTOR SHALL USE HAND EXCAVATION METHODS WHEN EXCAVATING NEAR EXISTING UTILITIES, NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY.
2. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD LOCATE ALL ABOVEGROUND AND UNDERGROUND CONFLICTS IN ADVANCE OF PLACEMENT OF ANY CONDUIT AND OTHER FACILITIES. NO PULL BOXES SHALL BE LOCATED IN DRAINAGE SWALES OR PAVED SHOULDERS.
3. THE CONDUIT DETAILS GIVEN ARE MEANT TO BE SCHEMATIC IN NATURE. DUE TO ACTUAL FIELD CONDITIONS AND/OR NEEDS, DEVIATIONS MAY BE NECESSARY. DIMENSIONAL DISTANCES FOR CONDUIT LOCATIONS ARE PROVIDED TO ASSIST THE CONTRACTOR WITH CONDUIT PLACEMENT. THE CONTRACTOR SHALL TAKE THIS INTO ACCOUNT WHEN PLACING CONDUIT. THE CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATION CONDUIT AROUND EXISTING UTILITIES AND OBSTRUCTIONS.
4. ALL NEW CONDUIT SHALL BE PLACED AT A MINIMUM DEPTH OF 30 INCHES IN AN AREA OF NEW FILL, IN WHICH CASE THE CONDUIT SHALL BE 48 INCHES. DIRECTIONALLY BORED CONDUIT SHALL BE AT A MINIMUM DEPTH OF 48 INCHES.

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NUMBER	DESCRIPTION	DATE	PROJECT #	15-0909JE	SURVEYED	RPH	5/2018	M. FATHY ABDALLA, P.E. P.E. LICENSE NUMBER 63914 KISINGER CAMPO & ASSOCIATES CORP. 201 N. FRANKLIN STREET SUITE 400 TAMPA, FL 33602	 PUBLIC WORKS DEPARTMENT ENGINEERING SERVICES 1022 26th Avenue East, Bradenton, FL 34208	GENERAL NOTES	SHEET NO. T-2
			SURVEY #	N/A	DESIGNED	NSL	5/24/22				
			SEC./TWN./RGE	28/33S/18E	DRAWN	NSL	5/24/22				
			SCALE	N.T.S.	CHECKED	JR	5/24/22				

SIGNAL HEAD DETAIL



- MICROWAVE DETECTOR 660-3-12 6 EA
- PREEMPTION DETECTOR 663-1-112 4 EA
- MATRIX DETECTION ZONE (6' x 40') POSITIONED 2' BEYOND STOP BAR
- MATRIX DETECTION ZONE (6' x 20') POSITIONED 2' BEYOND STOP BAR
- ADVANCE DETECTION ZONE (6' x 6') POSITIONED 138' AND 106' BEYOND STOP BAR

NO TURN ON RED
 R10-11A 24" x 30"
 1 EA
 700-3-201

- 60th Ave E 2200 2100**
- 60th Ave E 2100 2200**
- Factory Shops Blvd 6000 5900**
- Factory Shops Blvd 5900 6000**

NOTES AND CONTROLLER OPERATIONS:

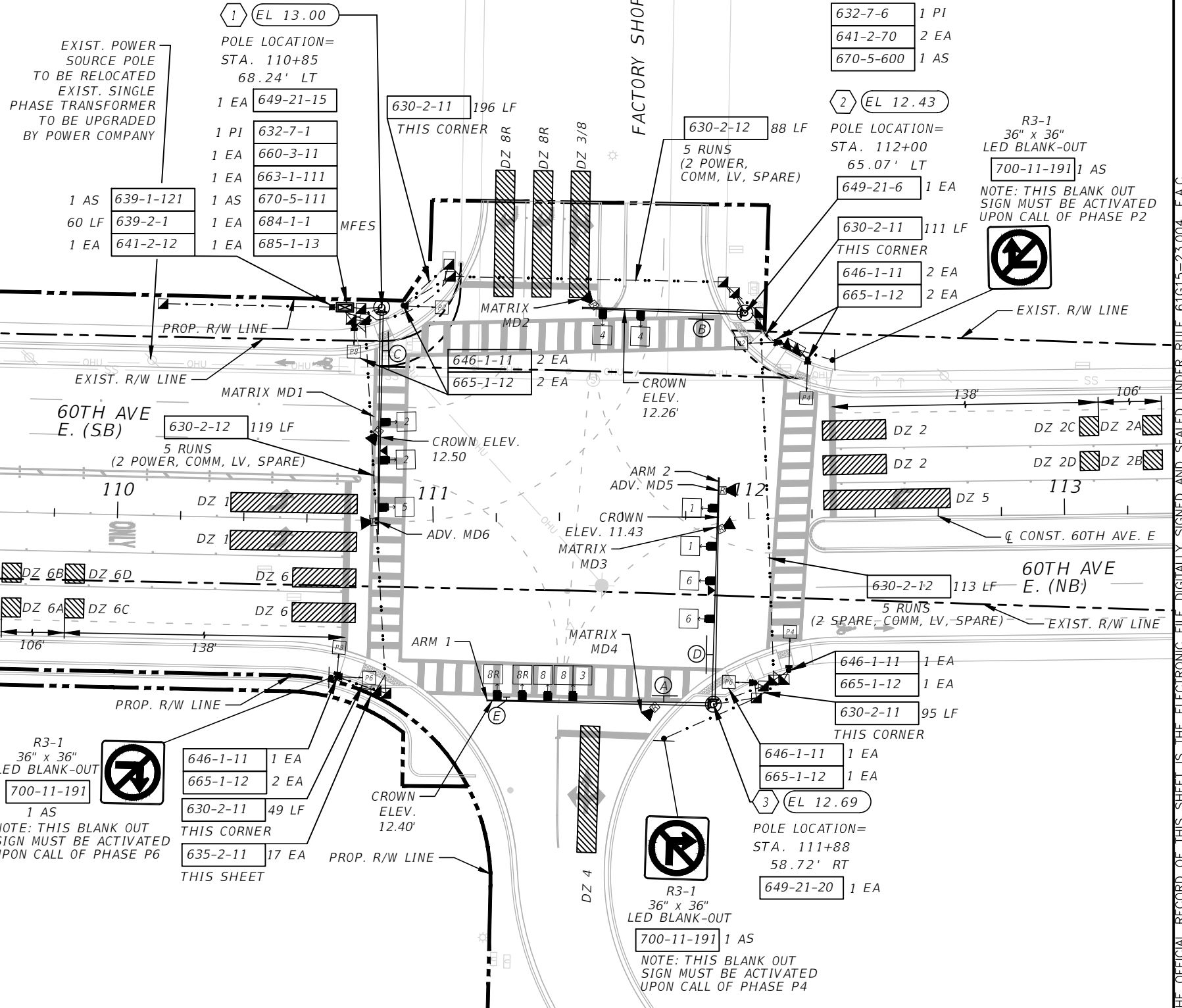
- BEFORE ORDERING, CONTRACTOR IS TO CONFIRM ALL SIGNALIZATION EQUIPMENT SPECIFICATIONS WITH MANATEE COUNTY SIGNAL SUPERVISOR.
- MAJOR STREET IS 60TH AVE E AND MINOR STREET IS FACTORY SHOPS BLVD.
- FOR FLASHING OPERATIONS, MOVEMENTS 2 AND 6 SHALL FLASH YELLOW. ALL OTHER MOVEMENTS SHALL FLASH RED.
- SPEED LIMIT FOR MAJOR APPROACHES IS 35 MPH AND SPEED LIMIT FOR MINOR APPROACHES IS 20 MPH.
- ALL PEDESTRIAN DETECTORS MUST HAVE AUDIBLE FEATURES.

CONTROLLER TIMINGS

TIMING FUNCTION	MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN		7	20	7	10	7	20	7	10
EXTENSION		3	3	3	3	3	3	3	3
MAXIMUM GREEN 1		30	50	30	30	30	50	30	30
MAXIMUM GREEN 2									
YELLOW CLEARANCE		4.0	4.0	2.9	2.9	4.0	4.0	2.9	2.9
ALL RED		2.8	3.0	4.7	5.2	2.8	3.0	4.7	5.2
PEDESTRIAN WALK			7		7		7		7
PED. CLEARANCE			27		29		27		29
RECALL			MIN				MIN		

MATRIX & ADVANCE DETECTION MICROWAVE SMART SENSOR DETECTION CHART

DETECTOR	DETECTION ZONE	DELAY TIME (SECS.)
MATRIX MD1	DZ 1	
MATRIX MD2	DZ 8R	8
MATRIX MD3	DZ 5	
MATRIX MD4	DZ 2	
ADV. MD5	DZ 2ABCD	
ADV. MD6	DZ 6ABCD	



- REMOVED ITEMS**
- 632-7-6 1 PI
 - 641-2-70 2 EA
 - 670-5-600 1 AS

- POLE LOCATION= STA. 112+00 65.07' LT
- 649-21-6 1 EA
 - 630-2-11 111 LF THIS CORNER
 - 646-1-11 2 EA
 - 665-1-12 2 EA

R3-1 36" x 36" LED BLANK-OUT 700-11-191 1 AS
 NOTE: THIS BLANK OUT SIGN MUST BE ACTIVATED UPON CALL OF PHASE P2

EXIST. POWER SOURCE POLE TO BE RELOCATED
 EXIST. SINGLE PHASE TRANSFORMER TO BE UPGRADED BY POWER COMPANY

- POLE LOCATION= STA. 110+85 68.24' LT
- 649-21-15 1 EA
 - 632-7-1 1 PI
 - 660-3-11 1 EA
 - 663-1-111 1 EA
 - 670-5-111 1 AS
 - 684-1-1 1 EA
 - 685-1-13 1 EA

- 639-1-121 1 AS
- 639-2-1 60 LF
- 641-2-12 1 EA

- 60TH AVE E. (SB)
- 630-2-12 119 LF
 - 5 RUNS (2 POWER, COMM, LV, SPARE)

- DZ 6B DZ 6D
- DZ 6A DZ 6C
- DZ 6

R3-1 36" x 36" LED BLANK-OUT 700-11-191 1 AS
 NOTE: THIS BLANK OUT SIGN MUST BE ACTIVATED UPON CALL OF PHASE P6

- 646-1-11 1 EA
- 665-1-12 2 EA
- 630-2-11 49 LF THIS CORNER
- 635-2-11 17 EA THIS SHEET

- 646-1-11 1 EA
- 665-1-12 1 EA
- 630-2-11 95 LF THIS CORNER

- 646-1-11 1 EA
- 665-1-12 1 EA

POLE LOCATION= STA. 111+88 58.72' RT
 649-21-20 1 EA

R3-1 36" x 36" LED BLANK-OUT 700-11-191 1 AS
 NOTE: THIS BLANK OUT SIGN MUST BE ACTIVATED UPON CALL OF PHASE P4

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M. FATHY ABDALLA, P.E.
 P.E. LICENSE NUMBER 63914
 KISINGER CAMPO & ASSOCIATES CORP.
 201 N. FRANKLIN STREET
 SUITE 400
 TAMPA, FL 33602



PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

SIGNALIZATION PLAN (1)

