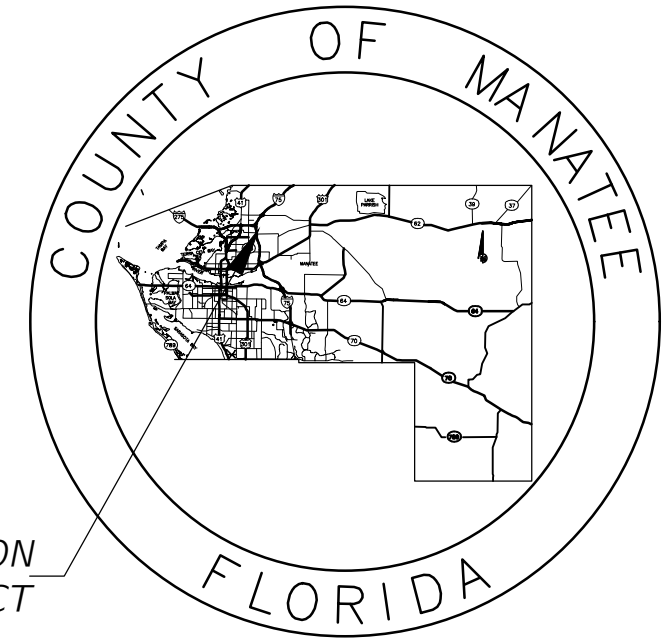


STATE OF FLORIDA COUNTY OF MANATEE



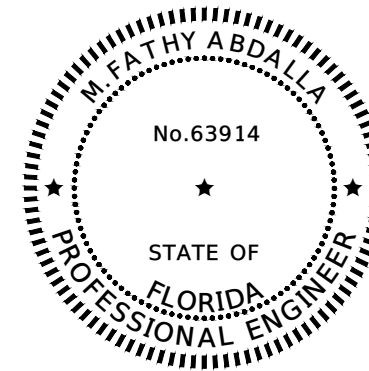
LOCATION
OF PROJECT

PROPOSED LIGHTING PLANS FOR 60TH AVE. EAST FROM US 301 TO MENDOZA RD. MANATEE COUNTY ELLENTON, FLORIDA

MANATEE COUNTY PROJECT No: 6083160

**90% PLANS
JUNE 2022**

<i>INDEX OF LIGHTING PLANS</i>	
<i>SHEET NO.</i>	<i>DESCRIPTION</i>
L-1	KEY SHEET
L-2	GENERAL NOTES
L-3	LIGHTING DATA AND LEGEND
L-4 - L-8	LIGHTING PLAN
L-9	SERVICE POINT DETAILS



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.

LIGHTING PLANS
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

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.

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, JULY 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.

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
N/A	23	L-1

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LIGHTING GENERAL NOTES

1. WHERE FOOTER OR FOUNDATION ARE TO BE INSTALLED BY AUGERING OR DRILLING, SURVEY AND STAKE OR PAINT TO AN ACCURACY OF 0.1' PRIOR TO REQUESTING UTILITY LOCATES. STAKE OR PAINT THE CENTER OF EACH LOCATION AND CLEARLY LABEL WITH STATION, OFFSET, IDENTIFYING STRUCTURE NUMBER, AND DIAMETER OF EXCAVATION IN INCHES.
2. WHERE AUGERING OR DRILLING, EXCAVATE THE FIRST 4 FEET BY NON MECHANICAL AND NON DESTRUCTIVE MEANS.
3. PROVIDE SHOP DRAWINGS OF THE PHOTOMETRIC CALCULATIONS FOR LUMINAIRES OTHER THAN THE BASIS OF DESIGN SHOWN IN THE PLANS. MEET ALL PHOTOMETRIC REQUIREMENTS IN THE CONTRACT DOCUMENTS AND THE FDOT DESIGN MANUAL.
4. THE LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE, DO NOT COVER ALL SEGMENTS OF THE PROJECT, AND ARE BASED ON LIMITED INVESTIGATION. ADDITIONAL UTILITIES MAY EXIST. CONTRACTOR SHALL VERIFY AND LOCATE ALL UTILITIES IN CONFLICT WITH PROPOSED LIGHT POLES.
5. THE CADD SYMBOLS USED TO REPRESENT LIGHT POLES ARE ENLARGED TO ENHANCE PLAN READABILITY AND DO NOT REPRESENT THE ACTUAL SIZE OF THESE ELEMENTS. PLACE THESE ELEMENTS AS SPECIFIED IN THE PLANS WHILE PROVIDING THE REQUIRED MINIMUM LATERAL OFFSET.

CONVENTIONAL ROADWAY
LIGHTING CRITERIA


AVERAGE INITIAL INTENSITY (HORIZONTAL FOOT CANDLES)	1.5 FOOT CANDLES
UNIFORMITY RATIO AVG./MIN.	4:1 OR LESS
MAX./MIN	10:1 OR LESS
VEILING LUMINANCE RATIO	0.3:1 OR LESS
DESIGN WIND SPEED	140 MPH

SIGNALIZED INTERSECTION
LIGHTING CRITERIA (RECONSTRUCTION)

AVERAGE INITIAL INTENSITY (HORIZONTAL FOOT CANDLES)	1.5 - 3.0 FOOT CANDLES
AVERAGE INITIAL INTENSITY (VERTICAL FOOT CANDLES)	1.2 - 1.5 FOOT CANDLES
UNIFORMITY RATIO AVG./MIN.	4:1 OR LESS
MAX./MIN	10:1 OR LESS
VEILING LUMINANCE RATIO	N/A
DESIGN WIND SPEED	140 MPH

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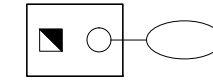
NUMBER	DESCRIPTION	DATE	PROJECT #	6083160	SURVEYED	RPH	5/2018	M. FATHY ABDALLA, P.E. P.E. LICENSE NUMBER 63914 KISINGER CAMPO & ASSOCIATES CORP. 201 N. FRANKLIN STREET SUITE 400 TAMPA, FL 33602	 PUBLIC WORKS DEPARTMENT ENGINEERING SERVICES 1022 26th Avenue East, Bradenton, FL 34208	GENERAL NOTES	SHEET NO. L-2
			SURVEY #	N/A	DESIGNED	NCR	9/2021				
			SEC./TWN./RGE	4/34S/18E	DRAWN	NCR	9/2021				
			SCALE	NTS	CHECKED	JR	9/2021				

POLE DATA

POLE NO.	CIRCUIT	℔ OR ℄	STATION	OFFSET	PAY ITEM
1	A-1	60TH AVE. E	101+60	72.12' LT.	715-61-311
2	A-2	60TH AVE. E	102+80	48.01' RT.	715-61-311
3	A-1	60TH AVE. E	104+20	65.33' LT.	715-61-311
4	A-2	60TH AVE. E	105+40	48.03' RT.	715-61-311
5	A-3	60TH AVE. E	106+60	63.13' LT.	715-61-311
6	A-4	60TH AVE. E	108+00	47.14' RT.	715-61-311
7	A-3	60TH AVE. E	109+40	63.95' LT.	715-61-311
8	A-4	60TH AVE. E	110+40	47.14' RT.	715-61-311
9	A-3	60TH AVE. E	111+02	97.96' LT.	715-61-311
10	A-4	60TH AVE. E	111+67	89.76' RT.	715-61-311
11	A-3	60TH AVE. E	112+55	47.86' LT.	715-61-311
12	A-4	60TH AVE. E	114+20	46.93' RT.	715-61-311
13	A-3	60TH AVE. E	116+00	50.07' LT.	715-61-311
14	A-4	60TH AVE. E	117+80	46.99' RT.	715-61-311
15	A-3	60TH AVE. E	119+60	48.17' LT.	715-61-311

LIGHTING LEGEND

DESCRIPTION



PROP. CONV. LIGHT POLE WITH LED LUMINAIRE. THE BASIS OF DESIGN USED WAS: MANUFACTURER: GE, MODEL: EVOLVE ERL2, PHOTOMETRIC CURVE C5, SINGLE ARM LIGHT POLE, 252 WATT, LED, 240 VOLT, TYPE III DISTRIBUTION, 40' MOUNTING HEIGHT, AND 8' ARM LENGTH. FILE NAME: ERL2_31C530.ies. SYMBOL INCLUDES LUMINAIRE, ARM, POLE, FOUNDATION, PULL BOX, CONCRETE SLAB, & POLE CABLE DISTRIBUTION SYSTEM. PULL BOX AND PCDS TO BE PAID FOR SEPARATELY.



PROPOSED LOAD CENTER RATED FOR 120 / 240V OPERATION, SINGLE PHASE, 3 WIRE



PULL BOX



2" SCH. 40 PVC CONDUIT, OPEN TRENCH, WITH CONDUCTORS INSIDE (CONDUIT AND CONDUCTOR SIZE SHOWN ON PLAN SHEETS). RUN ONE COPPER BOND CONDUCTOR (XHHW INSULATION) INSIDE CONDUIT WITH OTHER CONDUCTORS.



2" HDPE CONDUIT, DIRECTIONAL BORE, WITH CONDUCTORS INSIDE (CONDUIT AND CONDUCTOR SIZE SHOWN ON PLAN SHEETS). RUN ONE COPPER BOND CONDUCTOR (XHHW INSULATION) INSIDE CONDUIT WITH OTHER CONDUCTORS AND A SPARE CONDUIT. CONDUIT AND TRANSITION COUPLING SHALL BE UL LISTED. EXTEND CONDUIT BEYOND EDGE OF PAVEMENT TO PULL BOXES.


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NUMBER	DESCRIPTION	DATE

PROJECT #	6083160	SURVEYED	RPH	5/2018
SURVEY #	N/A	DESIGNED	NCR	9/2021
SEC./TWN./RGE	4/34S/18E	DRAWN	NCR	9/2021
SCALE	NTS	CHECKED	JR	9/2021

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

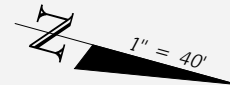
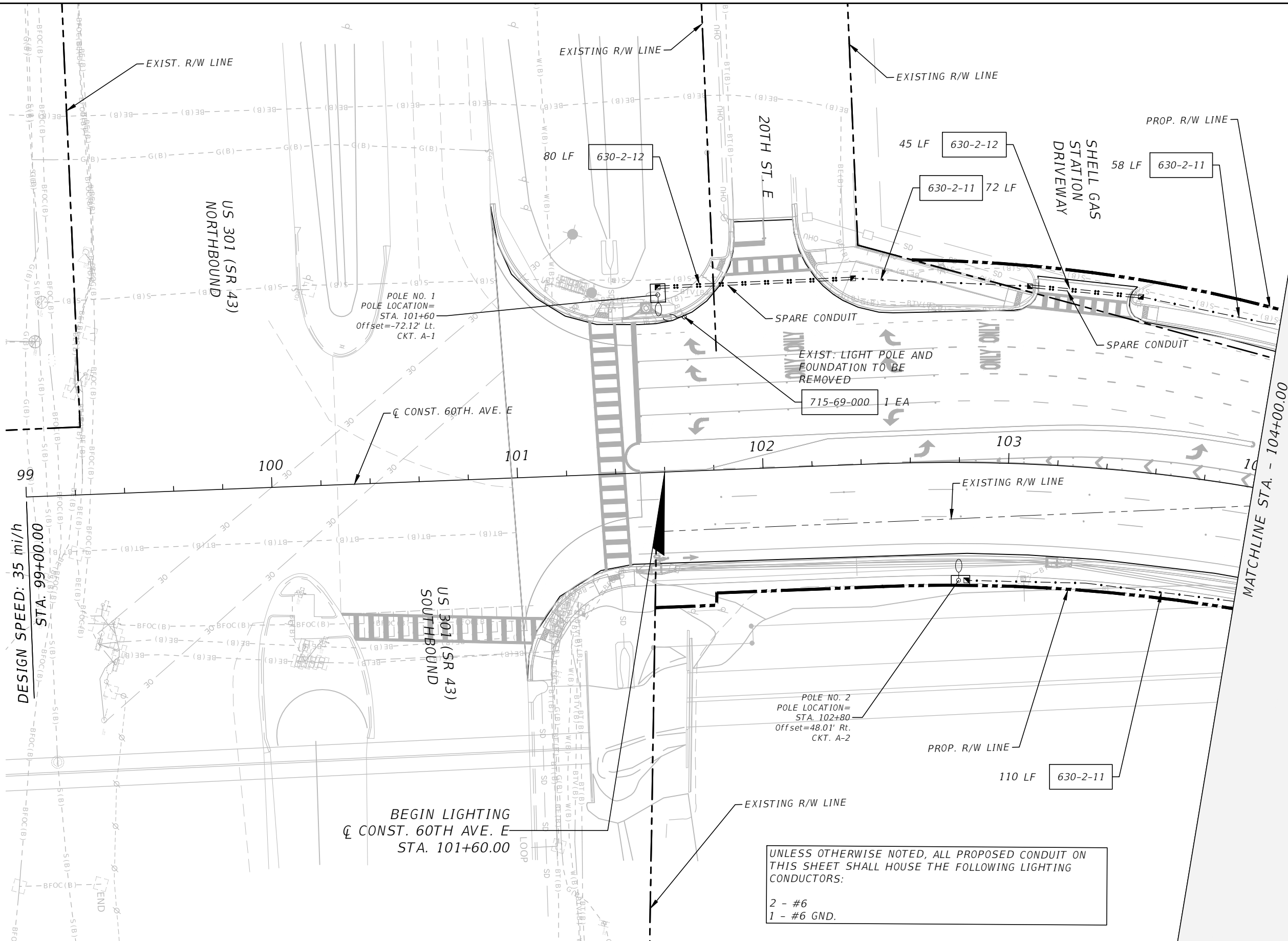


PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

LIGHTING DATA AND LEGEND

SHEET NO.
L-3

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DESIGN SPEED: 35 mi/h
STA. 99+00.00

MATCHLINE STA. - 104+00.00

BEGIN LIGHTING
CONST. 60TH AVE. E
STA. 101+60.00

UNLESS OTHERWISE NOTED, ALL PROPOSED CONDUIT ON THIS SHEET SHALL HOUSE THE FOLLOWING LIGHTING CONDUCTORS:
2 - #6
1 - #6 GND.

NUMBER	DESCRIPTION	DATE	PROJECT #	SURVEYED	HYATT	5/2021
			6083160			
			18-2238	DESIGNED	NCR	5/31/22
			4-345-18E	DRAWN	NCR	5/31/22
			SCALE 1" = 40'	CHECKED	JR	5/31/22

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



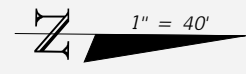
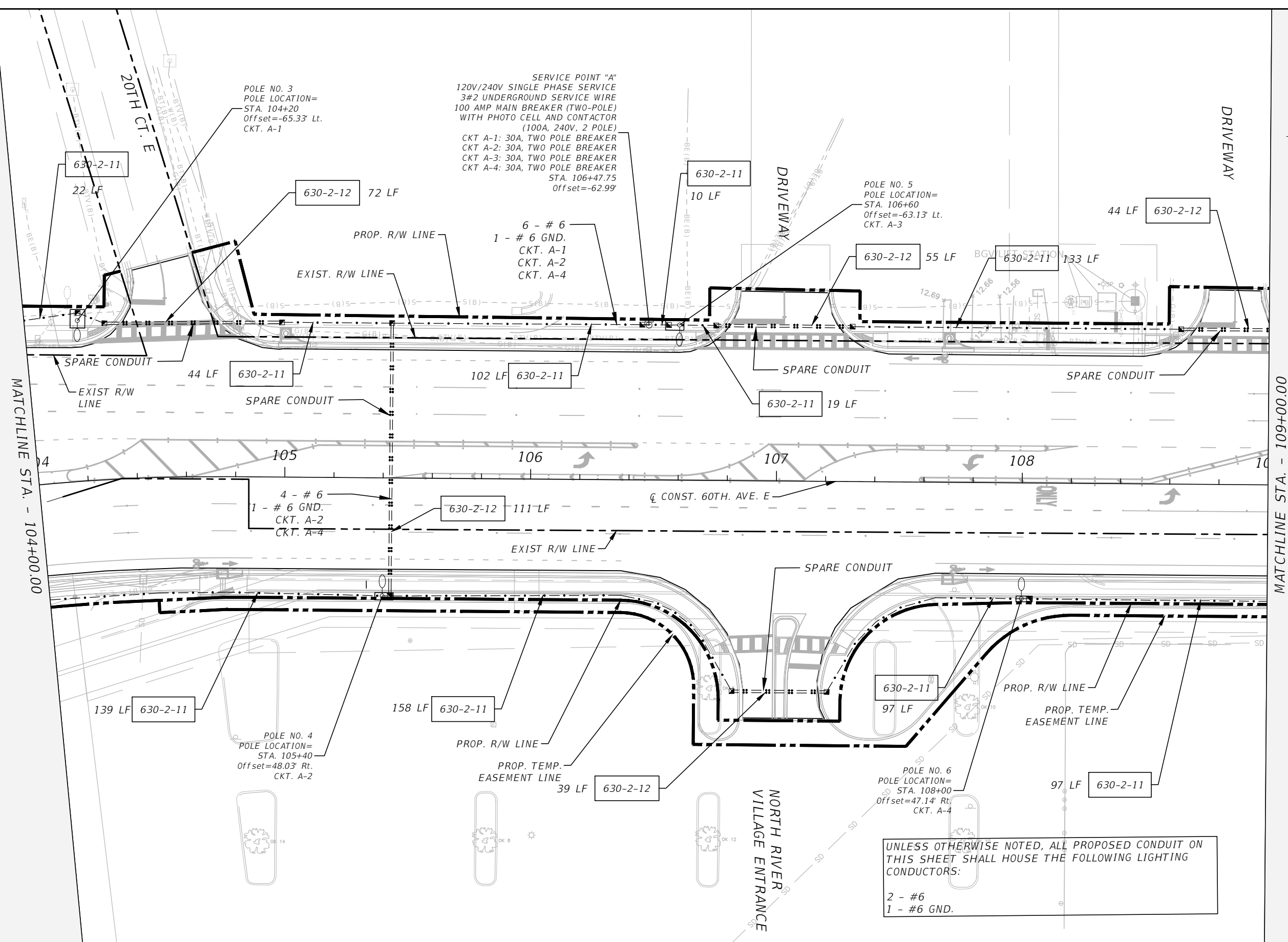
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

LIGHTING PLAN (1)

SHEET NO.
L-4

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MATCHLINE STA. - 104+00.00

MATCHLINE STA. - 109+00.00

NUMBER	DESCRIPTION	DATE	PROJECT #	SURVEYED	HYATT	5/2021
			6083160			
			18-2238	DESIGNED	NCR	5/31/22
			4-345-18E	DRAWN	NCR	5/31/22
			SCALE	CHECKED	JR	5/31/22

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

Manatee County
 FLORIDA

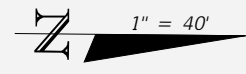
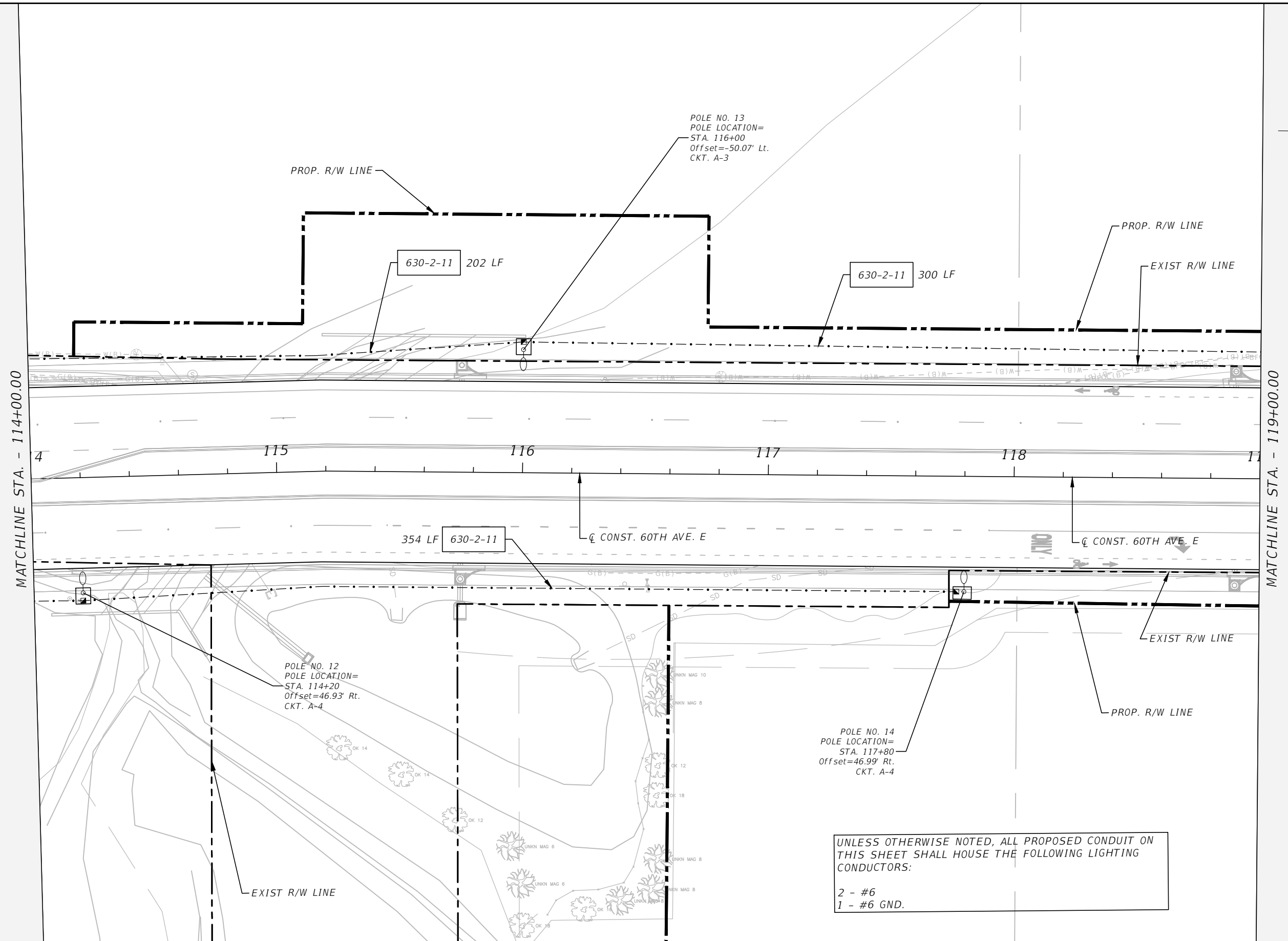
PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

LIGHTING PLAN (2)

SHEET NO.
L-5

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UNLESS OTHERWISE NOTED, ALL PROPOSED CONDUIT ON THIS SHEET SHALL HOUSE THE FOLLOWING LIGHTING CONDUCTORS:
 2 - #6
 1 - #6 GND.

NUMBER	DESCRIPTION	DATE	PROJECT #	SURVEYED	HYATT	5/2021
			6083160			
			18-2238	DESIGNED	NCR	5/31/22
			4-345-18E	DRAWN	NCR	5/31/22
			SCALE 1" = 40'	CHECKED	JR	5/31/22

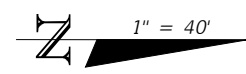
M. FATHY ABDALLA, P.E.
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 KISINGER CAMPO & ASSOCIATES CORP.
 201 N. FRANKLIN STREET
 SUITE 400
 TAMPA, FL 33602



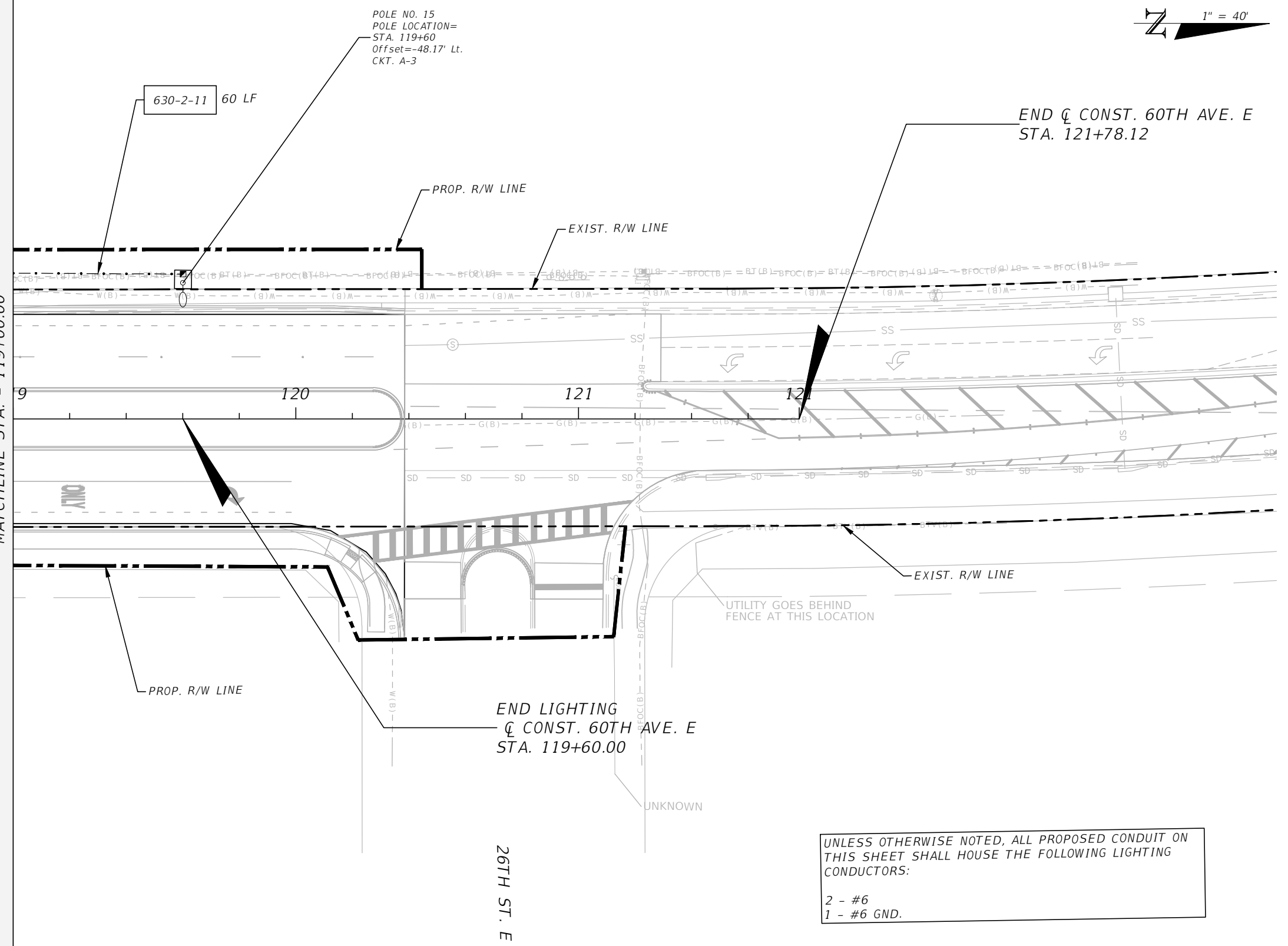
PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

LIGHTING PLAN (4)

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MATCHLINE STA. - 119+00.00




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NUMBER	DESCRIPTION	DATE	PROJECT #	SURVEYED	HYATT	5/2021
			6083160	DESIGNED	NCR	5/31/22
			18-2238	DRAWN	NCR	5/31/22
			4-345-18E	CHECKED	JR	5/31/22
			1" = 40'			

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

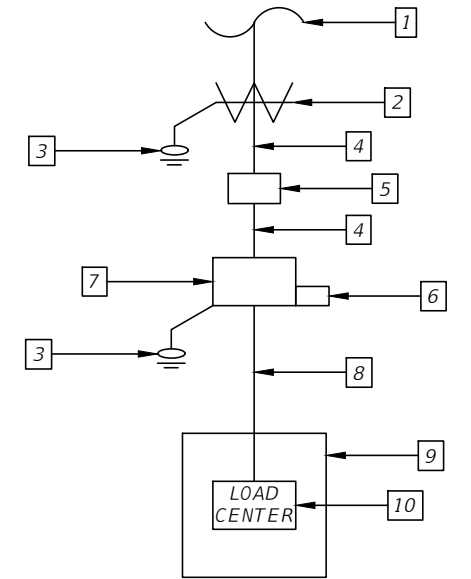
LIGHTING PLAN (5)

SHEET NO.
L-8

MAIN: 100A MLO VOLTAGE: 120/240 PHASE: 1 - WIRE: 3		SERVICE POINT "A" (LOAD CENTER SCHEDULE)			POLES: 15 AIC RATING: 35K
CKT. NO.	KVA	AMPS/PHASE	CIRCUIT BREAKER		LOAD
			AMPS	POLES	
A-1	1.01	2.1	30	2	ROADWAY LIGHTING WEST SIDE OF ROADWAY SOUTH OF SERVICE POINT
A-2	1.01	2.1	30	2	ROADWAY LIGHTING EAST SIDE OF ROADWAY SOUTH OF SERVICE POINT
A-3	3.02	6.3	30	2	ROADWAY LIGHTING WEST SIDE OF ROADWAY NORTH OF SERVICE POINT
A-4	2.74	5.7	30	2	ROADWAY LIGHTING EAST SIDE OF ROADWAY NORTH OF SERVICE POINT
MCB		100A - 2P			
CONNECTED LOAD		7.78 KVA			
TOTAL DEMAND LOAD		16.2 AMPS			


SERVICE POINT DIAGRAM

1. PRIMARY ELECTRICAL DISTRIBUTION SYSTEM.
2. UTILITY POLE MOUNTED TRANSFORMER.
3. GROUNDING SYSTEM
4. ELECTRICAL SERVICE CONDUCTORS AND CONDUIT.
5. KWH METER.
6. SURGE PROTECTIVE DEVICE.
7. MAIN SERVICE DISCONNECT, ENCLOSED CIRCUIT BREAKER.
8. FEEDER CONDUCTORS AND CONDUIT.
9. LIGHTING CONTROL CABINET.
10. LOAD CENTER.



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			SURVEY #	N/A	DESIGNED	NCR	9/2021				
			SEC./TWN./RGE	4/34S/18E	DRAWN	NCR	9/2021				
			SCALE	NTS	CHECKED		9/2021				