

# LIGHTING PLANS

## FOR LENA ROAD

FROM NORTH OF 44TH AVENUE EAST TO SR 64  
MANATEE COUNTY, FLORIDA

MANATEE COUNTY PROJECT # 6107560



**PROJECT TEAM:**

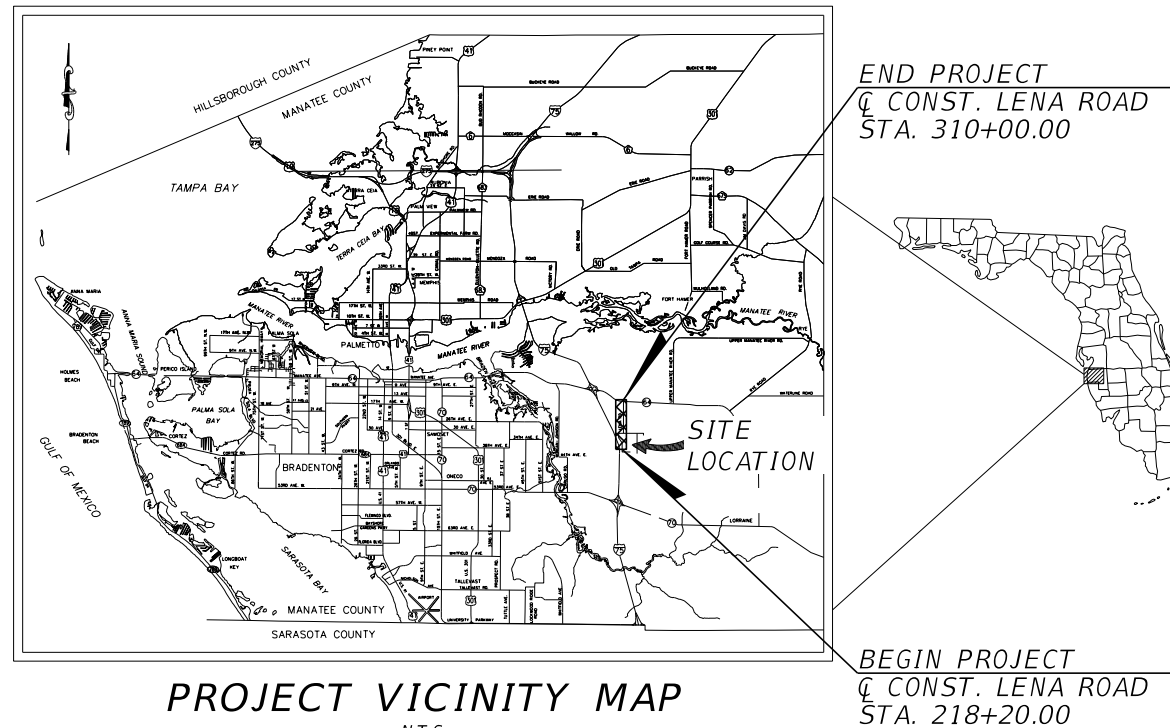
**OWNER:**  
MANATEE COUNTY  
1022 26TH AVE. E.  
BRADENTON, FL 34206  
CONTACT: TONY RUSSO, P.E.  
(941) 708-7450 ext. 7349

**ENGINEER:**  
KIMLEY-HORN AND ASSOCIATES, INC.  
201 NORTH FRANKLIN STREET, SUITE 1400  
TAMPA, FL 33602  
CONTACT: SHARI K. BARNWELL, P.E.  
(813) 620-1460

**SURVEYOR:**  
HYATT SURVEYING SERVICES INC.  
2012 LENA ROAD  
BRADENTON, FL 34211  
CONTACT: JOHN MATTHEWS  
(941) 748-4693

**INDEX OF LIGHTING PLANS**

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L-5	GENERAL NOTES
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L-22	SERVICE POINT DETAILS



90% PLANS SUBMITTAL  
AUGUST 2023

PREPARED BY

**Kimley»Horn**

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201 NORTH FRANKLIN ST., SUITE 1400  
TAMPA, FL 33602  
PHONE (813) 620-1460  
WWW.KIMLEY-HORN.COM

No.	REVISIONS	DATE	BY

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	CIP NO. 6107560
TIFFANY J. PARKER DOS SANTOS, P.E. FLORIDA LICENSE NUMBER: 87920 DATE: 7/7/2023	SHEET NUMBER <b>L-1</b>

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

THIS ITEM HAS BEEN DIGITALLY  
SIGNED AND SEALED BY

ON THE DATE ADJACENT TO THE SEAL



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KIMLEY-HORN AND ASSOCIATES, INC.  
189 SOUTH ORANGE AVENUE, SUITE 1000  
ORLANDO, FLORIDA 32801  
TIFFANY J. PARKER DOS SANTOS, P.E. NO 87920

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

LIGHTING PLANS



SHEET NO.	SHEET DESCRIPTION
L-1	KEY SHEET
L-2	SIGNATURE SHEET
L-3 TO L-4	TABULATION OF QUANTITIES
L-5	GENERAL NOTES
L-6 TO L-7	POLE DATA & LEGEND (01 & 02)
L-8 TO L-21	LIGHTING PLAN SHEETS
L-22	SERVICE POINT DETAILS

				 © 2023 KIMLEY-HORN AND ASSOCIATES, INC. 201 NORTH FRANKLIN STREET, SUITE 1400, TAMPA, FL 33602 PHONE: (813) 635-5514 WWW.KIMLEY-HORN.COM	KHA PROJECT 148400100	 LENA ROAD	LICENSED PROFESSIONAL TIFFANY J. PARKER DOS SANTOS, P.E. FL LICENSE NUMBER 87920	<i>SIGNATURE SHEET</i>	SHEET NUMBER L-2
No.	REVISIONS	DATE	BY		DATE JULY 2023 SCALE AS SHOWN DESIGNED BY TJP DRAWN BY MAZ CHECKED BY TJP				

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS												TOTAL THIS SHEET		GRAND TOTAL			
			L-8		L-9		L-10		L-11		L-12		L-13		L-14		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	465		1345		710		1030		520		155		220		4445			
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	100		135		720		280		370		585		880		3070			
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	7		8		6		8		8		6		7		50			
639-1-122	ELECTRICAL POWER SERIVE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS							1								1			
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH AND INSTALL	LF							30								30			
639-3-12	ELECTRICAL SERVICE DISCONNECT, F&I, CABINET	EA							1								1			
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-11 SERVICE POLE	EA							1								1			
715-1-13	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 8-6	LF	2559		5496		5106		4986		3630		3084		4260		29121			
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, FURNISH AND INSTALL, CONVENTIONAL	EA	7		6		5		4		6		6		7		41			
715-511-1XX	LIGHT POLE COMPLETE- SPECIAL DESIGN, F&I ,SINGLE ARM SHOULDER MOUNT, ALUMINUM, 14'	EA	6														6			
715-61-221	LIGHT POLE COMPLETE, F&I, STANDARD POLE STANDARD FOUNDATION, 35' MOUNTING HEIGHT, 10' ARM LENGTH	EA	1		6		5		4		6		6		6		34			
715-65-266	LIGHT POLE COMPLETE, F&I, UTILITY CONFLICT POLE STANDARD FOUNDATION, 35' MOUNTING HEIGHT, 16' ARM LENGTH	EA													1		1			
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA							1								1			

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 <p>© 2023 KIMLEY-HORN AND ASSOCIATES, INC. 201 NORTH FRANKLIN STREET, SUITE 1400, TAMPA, FL 33602 PHONE: (813) 635-5514 WWW.KIMLEY-HORN.COM</p>		<p>KHA PROJECT 148400100</p> <p>DATE JULY 2023</p> <p>SCALE AS SHOWN</p> <p>DESIGNED BY TJP</p> <p>DRAWN BY MAZ</p> <p>CHECKED BY TJP</p>	 <p>LENA ROAD</p>	<p>LICENSED PROFESSIONAL</p> <p>TIFFANY J. PARKER DOS SANTOS, P.E. FL LICENSE NUMBER 87920</p>	<p>TABULATION OF QUANTITIES (1)</p>	<p>SHEET NUMBER</p> <p>L-3</p>	
No.	REVISIONS	DATE	BY	<p>MANATEE COUNTY</p>			<p>FL DATE:</p>

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																TOTAL THIS SHEET		GRAND TOTAL	
			L-15		L-16		L-17		L-18		L-19		L-20		L-21		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	305		720		745		520		315		615		460				3680		8,125	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	360					325		425		825		545					2480		5,550	
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	6		5		5		9		5		13		16				59		109	
639-1-122	ELECTRICAL POWER SERIVE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS							1										1		2	
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH AND INSTALL	LF							20										20		50	
639-3-12	ELECTRICAL SERVICE DISCONNECT, F&I, CABINET	EA							1						1				2		3	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA							1										1		2	
715-1-13	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 8-6	LF	2667		2880		2955		3639		2940		6072		6210				27363		56,484	
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, FURNISH AND INSTALL, CONVENTIONAL	EA	5		5		5		5		5		11		12				48		89	
715-511-1XX	LIGHT POLE COMPLETE- SPECIAL DESIGN, F&I, SINGLE ARM SHOULDER MOUNT, ALUMINUM, 14'	EA																			6	
715-61-221	LIGHT POLE COMPLETE, F&I, STANDARD POLE STANDARD FOUNDATION, 35' MOUNTING HEIGHT, 10' ARM LENGTH	EA	5		5		5		5		5		11		7				43		77	
715-65-266	LIGHT POLE COMPLETE, F&I, UTILITY CONFLICT POLE STANDARD FOUNDATION, 35' MOUNTING HEIGHT, 16' ARM LENGTH	EA													5				5		6	
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA							1						1				2		3	

PAY ITEM NOTES:

715-61-221: LIGHT POLE NO. 86 SHALL BE INSTALLED ON A FRANGIBLE BREAKAWAY BASE

715-65-266: LIGHT POLE NO. 80, 81, 82, AND 83 SHALL BE INSTALLED ON A FRANGIBLE BREAKAWAY BASE

No.	REVISIONS	DATE	BY

**Kimley»Horn**

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 WWW.KIMLEY-HORN.COM

KHA PROJECT 148400100
DATE JULY 2023
SCALE AS SHOWN
DESIGNED BY TJP
DRAWN BY MAZ
CHECKED BY TJP

MANATEE COUNTY



LENA ROAD

LICENSED PROFESSIONAL

TIFFANY J. PARKER  
 DOS SANTOS, P.E.  
 FL LICENSE NUMBER  
 87920

TABULATION OF QUANTITIES (2)

SHEET NUMBER  
**L-4**

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LIGHTING GENERAL NOTES

1. 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 LOCATIONS/ ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.
2. UTILITY OWNERS:

COMPANY	CONTACT PERSON	CONTACT NUMBER
MANATEE COUNTY PUBLIC WORKS DEPT (UTILITY OPERATIONS)	SCOTT MAY, P.E.	941-708-7450 EXT. 7650
TECO/PEOPLES GAS CO.	ALEX MCFARLANE	813-275-3762
FRONTIER FLORIDA LLC.	DENISE HUTTON	941-906-6722
MANATEE COUNTY AREA TRANSIT (MCAT)	STEVEN ROBERTS	941-748-4501
FLORIDA POWER & LIGHT DISTRIBUTION	GREGORY COKER	813-422-8232
FLORIDA POWER & LIGHT TRANSMISSION	CRAIG LEDBETTER	CRAIG.LEDBETTER@FPL.COM
CROWN CASTLE FIBER, LLC	DANNY HASKETT	786-610-7073
CITY OF BRADENTON	KIM CLAYBACK	941-708-6300
MCI/VERIZON BUSINESS	ANDY COLE	813-847-4037
SPECTRUM SUNSHINE STATE, LLC	JAMES FLEMING	941-213-0877
UNTI FIBER LLC	TERRY YOUNG	251-422-3872
COMCAST	KEVIN MURPHY	941-356-1489
ZAYO GROUP, LLC	MATT RICHARDS	813-587-2584
MANATEE COUNTY PUBLIC WORK DEPT. (TRAFFIC OPERATIONS)	MUKUNDA GOPALAKRISHNA	941-749-3500 EXT. 7813
3. NO LIGHTING IMPROVEMENTS SHOULD BE INSTALLED, ADJUSTED, OR REMOVED OUTSIDE OF COUNTY R/W OR EXISTING/PROPOSED PERMANENT EASEMENTS.
4. AT LOCATIONS WHERE UNDERGROUND UTILITIES ARE CLOSE TO LIGHT POLE FOUNDATIONS, HAND DIG THE FIRST 48 INCHES OF DEPTH FOR THE POLE FOUNDATION.

UTILITIES LEGEND:

- |                |                             |                 |                                 |
|----------------|-----------------------------|-----------------|---------------------------------|
| -----OE----    | EXISTING OVERHEAD ELECTRIC  | -- -NPW(B)----  | EXISTING NON-POTABLE WATER MAIN |
| OE OE OE OE OE | PROPOSED OVERHEAD ELECTRIC  | NPW NPW NPW NPW | PROPOSED NON-POTABLE WATER MAIN |
| -----W(B)---   | EXISTING WATER MAIN         | ---BFOC(B)---   | EXISTING BURIED FIBER           |
| WWWWWWWWW      | PROPOSED WATER MAIN         | BFOC BFOC BFOC  | PROPOSED BURIED FIBER           |
| -----OT----    | EXISTING OVERHEAD TELEPHONE | ---BT(B)---     | EXISTING OVERHEAD TELEPHONE     |
| OT OT OT OT OT | PROPOSED OVERHEAD TELEPHONE | BTV BTV BTV BTV | PROPOSED OVERHEAD TELEPHONE     |
| -----G(B)---   | EXISTING GAS MAIN           | -----S(D)---    | EXISTING SANITARY SEWER MAIN    |
| GGGGGGGGG      | PROPOSED GAS MAIN           | SSSSSSSSSS      | PROPOSED SANITARY SEWER MAIN    |

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No.	REVISIONS	DATE	BY				

POLE DATA											
POLE NO.	CIRCUIT	STATION	POLE OFFSET	SIDE	LUMINAIRE WATTAGE	MOUNTING HEIGHT (FT)	ARM LENGTH (FT)	IES FILE	POLE SETBACK*	DISTRIBUTION TYPE	PAY ITEM
1	A-2	219+30.5	41.0'	RT	26	14	N/A	ERL1_03D340_347-480V	9.5'	IV	715-511-1XX
2	A-1	219+37.0	35.5'	LT	26	14	N/A	ERL1_03D340_347-480V	4.5'	IV	715-511-1XX
3	A-2	220+02.0	41.0'	RT	26	14	N/A	ERL1_03D340_347-480V	9.2'	IV	715-511-1XX
4	A-1	220+12.0	36.5'	LT	26	14	N/A	ERL1_03D340_347-480V	4.2'	IV	715-511-1XX
5	A-2	220+78.5	40.5'	RT	26	14	N/A	ERL1_03D340_347-480V	12.1'	IV	715-511-1XX
6	A-1	220+83.5	45.5'	LT	26	14	N/A	ERL1_03D340_347-480V	19.3'	IV	715-511-1XX
7	A-1	221+80.0	39.5'	LT	82	35	10	ERLH_10D340	19.1'	IV	715-61-221
8	A-2	223+24.0	33.5'	RT	82	35	10	ERLH_10D340	13.0'	IV	715-61-221
9	A-1	224+66.5	39.5'	LT	82	35	10	ERLH_10D340	19.0'	IV	715-61-221
10	A-1	226+02.5	83.5'	LT	149	35	10	ERLH_16D340	7.0'	IV	715-61-221
11	A-2	226+22.0	40.5'	RT	82	35	10	ERLH_10D340	19.5'	IV	715-61-221
12	A-1	227+19.5	40.5'	LT	82	35	10	ERLH_10D340	20.0'	IV	715-61-221
13	A-1	228+38.0	40.0'	LT	82	35	10	ERLH_10D340	19.5'	IV	715-61-221
14	A-2	229+86.5	31.0'	RT	82	35	10	ERLH_10D340	10.5'	IV	715-61-221
15	A-1	231+38.0	40.0'	LT	82	35	10	ERLH_10D340	19.0'	IV	715-61-221
16	A-2	232+92.0	32.5'	RT	82	35	10	ERLH_10D340	12.0'	IV	715-61-221
17	A-1	234+48.0	40.0'	LT	82	35	10	ERLH_10D340	19.5'	IV	715-61-221
18	A-2	235+80.0	32.5'	RT	82	35	10	ERLH_10D340	12.0'	IV	715-61-221
19	A-1	237+29.5	40.0'	LT	82	35	10	ERLH_10D340	19.0'	IV	715-61-221
20	A-2	238+80.0	33.0'	RT	82	35	10	ERLH_10D340	12.5'	IV	715-61-221
21	A-1	240+24.0	40.0'	LT	82	35	10	ERLH_10D340	19.5'	IV	715-61-221
22	A-3	241+63.0	33.5'	RT	82	35	10	ERLH_10D340	15.0'	IV	715-61-221
23	A-3	242+96.5	25.0'	LT	82	35	10	ERLH_10D340	6.0'	IV	715-61-221
24	A-3	244+34.5	29.5'	RT	82	35	10	ERLH_10D340	11.0'	IV	715-61-221
25	A-3	245+65.5	33.5'	RT	82	35	10	ERLH_10D340	15.0'	IV	715-61-221
26	A-3	246+98.0	33.5'	RT	82	35	10	ERLH_10D340	16.0'	IV	715-61-221
27	A-3	247+66.5	66.0'	LT	149	35	10	ERLH_16D340	13.0'	IV	715-61-221
28	A-3	249+00.5	40.5'	RT	82	35	10	ERLH_10D340	22.0'	IV	715-61-221
29	A-3	250+37.5	40.5'	RT	82	35	10	ERLH_10D340	22.0'	IV	715-61-221
30	A-3	251+67.5	41.0'	RT	82	35	10	ERLH_10D340	26.0'	IV	715-61-221
31	A-3	253+06.0	40.5'	RT	82	35	10	ERLH_10D340	22.0'	IV	715-61-221
32	A-3	254+37.0	33.5'	RT	82	35	10	ERLH_10D340	26.5'	IV	715-61-221
33	A-3	255+47.0	33.5'	RT	82	35	10	ERLH_10D340	15.0'	IV	715-61-221
34	A-3	256+88.5	41.5'	RT	82	35	10	ERLH_10D340	25.0'	IV	715-61-221
35	A-3	258+32.0	25.5'	LT	82	35	10	ERLH_10D340	6.5'	IV	715-61-221
36	A-3	259+70.0	40.0'	LT	82	35	10	ERLH_10D340	28.5'	IV	715-61-221
37	A-3	260+51.0	65.0'	RT	149	35	10	ERLH_16D340	6.0'	IV	715-61-222
38	A-3	261+00.0	80.0'	LT	149	35	16	ERLH_16D340	7.0'	IV	715-65-266
39	A-3	261+91.5	40.5'	RT	82	35	10	ERLH_10D340	22.0'	IV	715-61-221
40	A-3	263+34.5	40.5'	RT	82	35	10	ERLH_10D340	22.0'	IV	715-61-221
41	A-3	264+78.0	40.5'	RT	82	35	10	ERLH_10D340	22.5'	IV	715-61-221
42	A-3	266+22.5	40.5'	RT	82	35	10	ERLH_10D340	20.0'	IV	715-61-221
43	A-3	267+65.5	40.5'	RT	82	35	10	ERLH_10D340	20.0'	IV	715-61-221

\* POLE SETBACK IS THE HORIZONTAL DISTANCE FROM THE EDGE OF THE TRAVEL LANE TO THE POLE




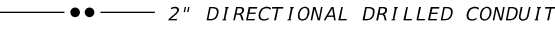

MANATEE COUNTY LIGHTING DESIGN CRITERIA (URBAN COLLECTOR)

AVERAGE INITIAL INTENSITY: 0.8 H.F.C.  
 UNIFORMITY RATIO AVG. / MIN.: 4 : 1 OR LESS  
 UNIFORMITY RATIO MAX. / MIN.: 10 : 1 OR LESS  
 DESIGN WIND SPEED: 140 MPH

FDOT SIGNALIZED INTERSECTION & ROUNDABOUT LIGHTING DESIGN CRITERIA (NEW CONSTRUCTION)







AVERAGE INITIAL INTENSITY: 3.0 H.F.C. (1.5 MIN)/  
 1.5 V.F.C. (1.2 MIN)  
 UNIFORMITY RATIO AVG. / MIN.: 4 : 1 OR LESS  
 UNIFORMITY RATIO MAX. / MIN.: 10 : 1 OR LESS



LEGEND (CONT.)

-  EXISTING LUMINAIRE
-  PROPOSED LOAD CENTER
-  2" DIRECT BURIED CONDUIT
-  2" DIRECTIONAL DRILLED CONDUIT
-  PROPOSED LOCATION OF 13" X 24" LIGHTING PULL BOX

635-2-11

LEGEND

-  GE EVOLVE LED ERL1 SERIES 4000K, 26W, PHOTOMETRIC CURVE NO. ERL1\_03D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 480V OPERATION
-  GE EVOLVE LED ERLH SERIES 4000K, 82W, PHOTOMETRIC CURVE NO. ERLH\_10D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 480V OPERATION
-  GE EVOLVE LED ERLH SERIES 4000K ON SPREAD FOOTING, 82W, PHOTOMETRIC CURVE NO. ERLH\_10D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 480V OPERATION
-  GE EVOLVE LED ERL SERIES 4000K UTILITY CONFLICT POLE, 82W, PHOTOMETRIC CURVE NO. ERLH\_10D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 480V OPERATION
-  GE EVOLVE LED ERLH SERIES 4000K WITH HOUSE SHIELD, 82W, PHOTOMETRIC CURVE NO. ERLH\_10D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 480V OPERATION
-  GE EVOLVE LED ERLH SERIES 4000K, 149W, PHOTOMETRIC CURVE NO. ERLH\_16D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 480V OPERATION
-  GE EVOLVE LED ERLH SERIES 4000K UTILITY CONFLICT POLE, 149W, PHOTOMETRIC CURVE NO. ERLH\_16D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 480V OPERATION
-  GE EVOLVE LED ERLH SERIES 4000K WITH HOUSE SHIELD, 149W, PHOTOMETRIC CURVE NO. ERLH\_16D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 480V OPERATION
-  GE EVOLVE LED ERL2 SERIES 4000K, 149W, PHOTOMETRIC CURVE NO. ERL2\_19D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 240V OPERATION
-  GE EVOLVE LED ERL2 SERIES 4000K UTILITY CONFLICT POLE, 149W, PHOTOMETRIC CURVE NO. ERL2\_19D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 240V OPERATION
-  GE EVOLVE LED ERL2 SERIES 4000K WITH HOUSE SHIELD, 149W, PHOTOMETRIC CURVE NO. ERL2\_19D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 240V OPERATION
-  GE EVOLVE LED ERL2 SERIES 4000K UTILITY CONFLICT POLE W/ HOUSE SHIELD, 149W, PHOTOMETRIC CURVE NO. ERL2\_19D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 240V OPERATION
-  GE EVOLVE LED ERL2 SERIES 4000K WITH HOUSE SHIELD, 214W, PHOTOMETRIC CURVE NO. ERL2\_25D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 480V OPERATION
-  GE EVOLVE LED ERL2 SERIES 4000K WITH HOUSE SHIELD ON SPREAD FOOTING, 214W, PHOTOMETRIC CURVE NO. ERL2\_25D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 480V OPERATION
-  GE EVOLVE LED ERL2 SERIES 4000K, 214W, PHOTOMETRIC CURVE NO. ERL2\_25C340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 240V OPERATION
-  GE EVOLVE LED ERL2 SERIES 4000K UTILITY CONFLICT POLE, 214W, PHOTOMETRIC CURVE NO. ERL2\_25C340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 240V OPERATION

				KHA PROJECT 148400100 DATE JULY 2023 SCALE AS SHOWN DESIGNED BY TJP DRAWN BY MAZ CHECKED BY TJP				LICENSED PROFESSIONAL TIFFANY J. PARKER DOS SANTOS, P.E. FL LICENSE NUMBER 87920		SHEET NUMBER  <b>POLE AND DATA LEGEND (01)</b>  L-6	
© 2023 KIMLEY-HORN AND ASSOCIATES, INC. 201 NORTH FRANKLIN STREET, SUITE 1400, TAMPA, FL 33602 PHONE: (813) 635-5514 WWW.KIMLEY-HORN.COM				MANATEE COUNTY LENA ROAD		FL		DATE:		\\\sarp02\FL_SAR2\SAR_Roadway\TAM_Lena_Road\12345615201\lighting\PLDTLT01.dgn	
No.	REVISIONS	DATE	BY								

POLE DATA											
POLE NO.	CIRCUIT	STATION	POLE OFFSET	SIDE	LUMINAIRE WATTAGE	MOUNTING HEIGHT (FT)	ARM LENGTH (FT)	IES FILE	POLE SETBACK*	DISTRIBUTION TYPE	PAY ITEM
44	B-1	269+07.5	40.5'	RT	82	35	10	ERLH 10D340	20.0'	IV	715-61-221
45	B-1	270+36.0	40.0'	LT	82	35	10	ERLH 10D340	19.5'	IV	715-61-221
46	B-1	271+78.0	39.5'	LT	82	35	10	ERLH 10D340	19.0'	IV	715-61-221
47	B-1	273+20.5	40.0'	LT	82	35	10	ERLH 10D340	19.0'	IV	715-61-221
48	B-1	274+63.0	40.5'	LT	82	35	10	ERLH 10D340	19.5'	IV	715-61-221
49	B-1	276+12.5	40.5'	LT	82	35	10	ERLH 10D340	20.0'	IV	715-61-221
50	B-1	277+57.0	39.5'	LT	82	35	10	ERLH 10D340	19.0'	IV	715-61-221
51	B-1	279+00.0	40.0'	LT	82	35	10	ERLH 10D340	19.5'	IV	715-61-221
52	B-1	280+49.5	40.0'	LT	82	35	10	ERLH 10D340	19.5'	IV	715-61-221
53	B-1	281+93.5	40.0'	LT	82	35	10	ERLH 10D340	19.5'	IV	715-61-221
54	B-1	283+35.0	39.5'	LT	82	35	10	ERLH 10D340	19.0'	IV	715-61-221
55	B-1	284+83.0	40.0'	LT	82	35	10	ERLH 10D340	19.5'	IV	715-61-221
56	B-1	286+30.0	41.0'	LT	82	35	10	ERLH 10D340	20.0'	IV	715-61-221
57	B-1	287+57.0	41.0'	LT	82	35	10	ERLH 10D340	20.0'	IV	715-61-221
58	B-1	28+94.0	41.0'	LT	82	35	10	ERLH 10D340	20.5'	IV	715-61-221
59	B-2	290+26.5	45.0'	LT	82	35	10	ERLH 10D340 -ELSHS-ERL1-BLCK	24.0'	IV	715-61-221
60	B-2	291+62.0	45.5'	LT	82	35	10	ERLH 10D340 -ELSHS-ERL1-BLCK	24.5'	IV	715-61-221
61	B-2	293+09.5	46.5'	LT	82	35	10	ERLH 10D340 -ELSHS-ERL1-BLCK	25.0'	IV	715-61-221
62	B-2	294+48.5	45.5'	LT	82	35	10	ERLH 10D340	25.0'	IV	715-61-221
63	B-2	295+97.5	41.0'	LT	82	35	10	ERLH 10D340 -ELSHS-ERL1-BLCK	20.5'	IV	715-61-221
64	B-2	297+44.5	41.0'	LT	82	35	10	ERLH 10D340 -ELSHS-ERL1-BLCK	20.5'	IV	715-61-221
65	B-2	298+78.5	42.0'	LT	82	35	10	ERLH 10D340 -ELSHS-ERL1-BLCK	21.5'	IV	715-61-221
66	B-2	299+83.5	48.5'	RT	82	35	10	ERLH 10D340 -ELSHS-ERL1-BLCK	16.0'	IV	715-61-221
67	B-2	300+93.0	39.5'	RT	149	35	10	ERLH 16D340 -ELSHS-ERL1-BLCK	16.0'	IV	715-61-221
68	B-2	301+73.5	76.5'	RT	214	35	10	ERL2 25D340 -ELSHS-ERL2-BLCK	18.0'	IV	715-61-221
69	B-2	301+74.5	83.0'	LT	214	35	10	ERL2 25D340 -ELSHS-ERL2-BLCK	18.5'	IV	715-61-221
70	B-2	302+07.5	146.5'	LT	149	35	10	ERLH 16D340 -ELSHS-ERL1-BLCK	12.5'	IV	715-61-221
71	B-2	302+53.0	147.5'	RT	149	35	10	ERLH 16D340	8.5'	IV	715-61-221
72	B-2	302+95.5	79.5'	LT	214	35	10	ERL2 25D340 -ELSHS-ERL2-BLCK	19.0'	IV	715-61-221
73	B-2	302+98.0	78.5'	RT	214	35	10	ERL2 25D340 -ELSHS-ERL2-BLCK	16.0'	IV	715-61-221
74	B-2	303+57.0	44.0'	LT	149	35	10	ERLH 16D340 -ELSHS-ERL1-BLCK	20.5'	IV	715-61-221
75	B-2	304+60.5	45.5'	LT	82	35	10	ERLH 10D340	10.5'	IV	715-61-221
76	B-2	305+87.0	36.5'	RT	82	35	10	ERLH 10D340	6.5'	IV	715-61-221
77	B-2	307+04.0	40.5'	RT	82	35	10	ERLH 10D340	6.5'	IV	715-61-221
78	B-2	308+09.5	50.0'	LT	82	35	16	ERLH 10D340	25.0'	IV	715-65-266
79	B-2	309+33.0	46.0'	RT	149	35	10	ERLH 16D340 -ELSHS-ERL1-BLCK	4.5'	IV	715-61-221
80	C-1	309+56.0	68.0'	LT	214	35	16	ERL2 25C340	14.5'	III	715-65-266
81	C-1	309+62.5	125.5'	LT	149	35	16	ERL2 19D340	22.0'	IV	715-65-266
82	C-1	309+66.5	65.0'	RT	149	35	16	ERL2 19D340 -ELSHS-ERL2-BLCK	8.5'	IV	715-65-266
83	C-1	309+74.5	112.5'	RT	149	35	16	ERL2 19D340 -ELSHS-ERL2-BLCK	22.0'	IV	715-65-266
84	C-1	311+15.5	112.5'	LT	149	40	10	ERL2 19D340	27.0'	IV	715-61-321
85	C-1	311+16.5	69.0'	LT	149	40	10	ERL2 19D340	25.0'	IV	715-61-321
86	C-1	311+20.0	106.5'	RT	149	40	10	ERL2 19D340	23.0'	IV	715-61-321
87	C-1	311+29.5	73.0'	RT	214	40	10	ERL2 25C340	18.0'	III	715-61-321
88	C-1	311+66.0	42.5'	LT	149	40	10	ERL2 19D340	22.5'	IV	715-61-321

\* POLE SETBACK IS THE HORIZONTAL DISTANCE FROM THE EDGE OF THE TRAVEL LANE TO THE POLE

MANATEE COUNTY LIGHTING DESIGN CRITERIA (URBAN COLLECTOR)

AVERAGE INITIAL INTENSITY: 0.8 H.F.C.  
 UNIFORMITY RATIO AVG. / MIN.: 4 : 1 OR LESS  
 UNIFORMITY RATIO MAX. / MIN.: 10 : 1 OR LESS  
 DESIGN WIND SPEED: 140 MPH

FDOT SIGNALIZED INTERSECTION & ROUNDABOUT LIGHTING DESIGN CRITERIA (NEW CONSTRUCTION)

AVERAGE INITIAL INTENSITY: 3.0 H.F.C. (1.5 MIN)/  
 1.5 V.F.C. (1.2 MIN)  
 UNIFORMITY RATIO AVG. / MIN.: 4 : 1 OR LESS  
 UNIFORMITY RATIO MAX. / MIN.: 10 : 1 OR LESS

LEGEND (CONT.)

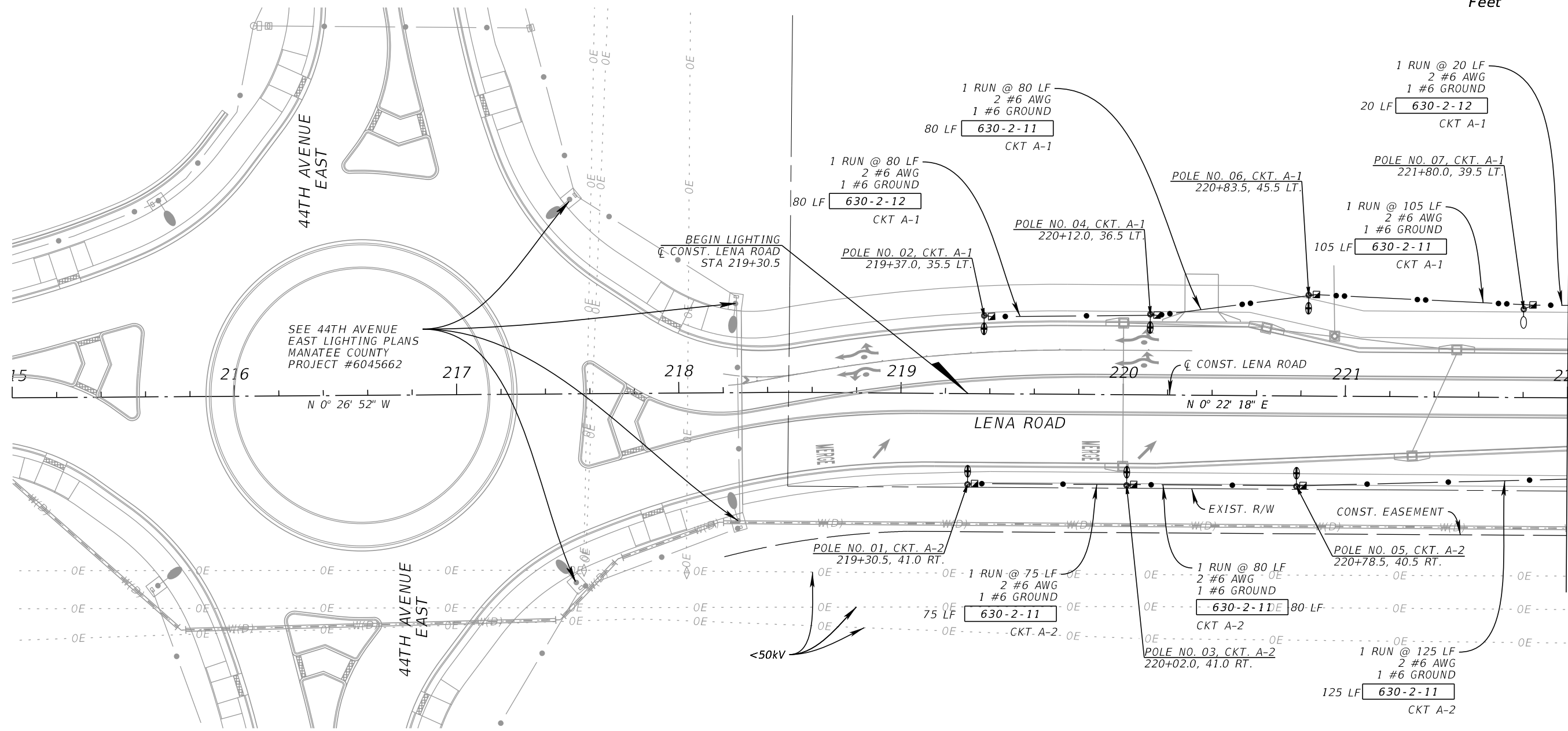
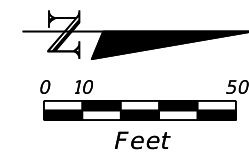
- EXISTING LUMINAIRE
- PROPOSED LOAD CENTER
- 2" DIRECT BURIED CONDUIT
- 2" DIRECTIONAL DRILLED CONDUIT
- PROPOSED LOCATION OF 13" X 24" LIGHTING PULL BOX

635-2-11

LEGEND

- GE EVOLVE LED ERL1 SERIES 4000K, 26W, PHOTOMETRIC CURVE NO. ERL1\_03D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 480V OPERATION
- GE EVOLVE LED ERLH SERIES 4000K, 82W, PHOTOMETRIC CURVE NO. ERLH\_10D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 480V OPERATION
- GE EVOLVE LED ERLH SERIES 4000K ON SPREAD FOOTING, 82W, PHOTOMETRIC CURVE NO. ERLH\_10D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 480V OPERATION
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- GE EVOLVE LED ERL2 SERIES 4000K UTILITY CONFLICT POLE, 149W, PHOTOMETRIC CURVE NO. ERL2\_19D340, SEE POLE DATA TABLE FOR IES FILE AND LIGHT DISTRIBUTION WIRED FOR 240V OPERATION
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				KHA PROJECT 148400100 DATE JULY 2023 SCALE AS SHOWN DESIGNED BY TJP DRAWN BY MAZ CHECKED BY TJP				LICENSED PROFESSIONAL TIFFANY J. PARKER DOS SANTOS, P.E. FL LICENSE NUMBER 87920		SHEET NUMBER <b>POLE AND DATA LEGEND (02)</b> L-7	
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No.	REVISIONS	DATE	BY								



MATCH LINE - STA. 222+00.00

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FLORIDA

**LENA ROAD**

MANATEE COUNTY  
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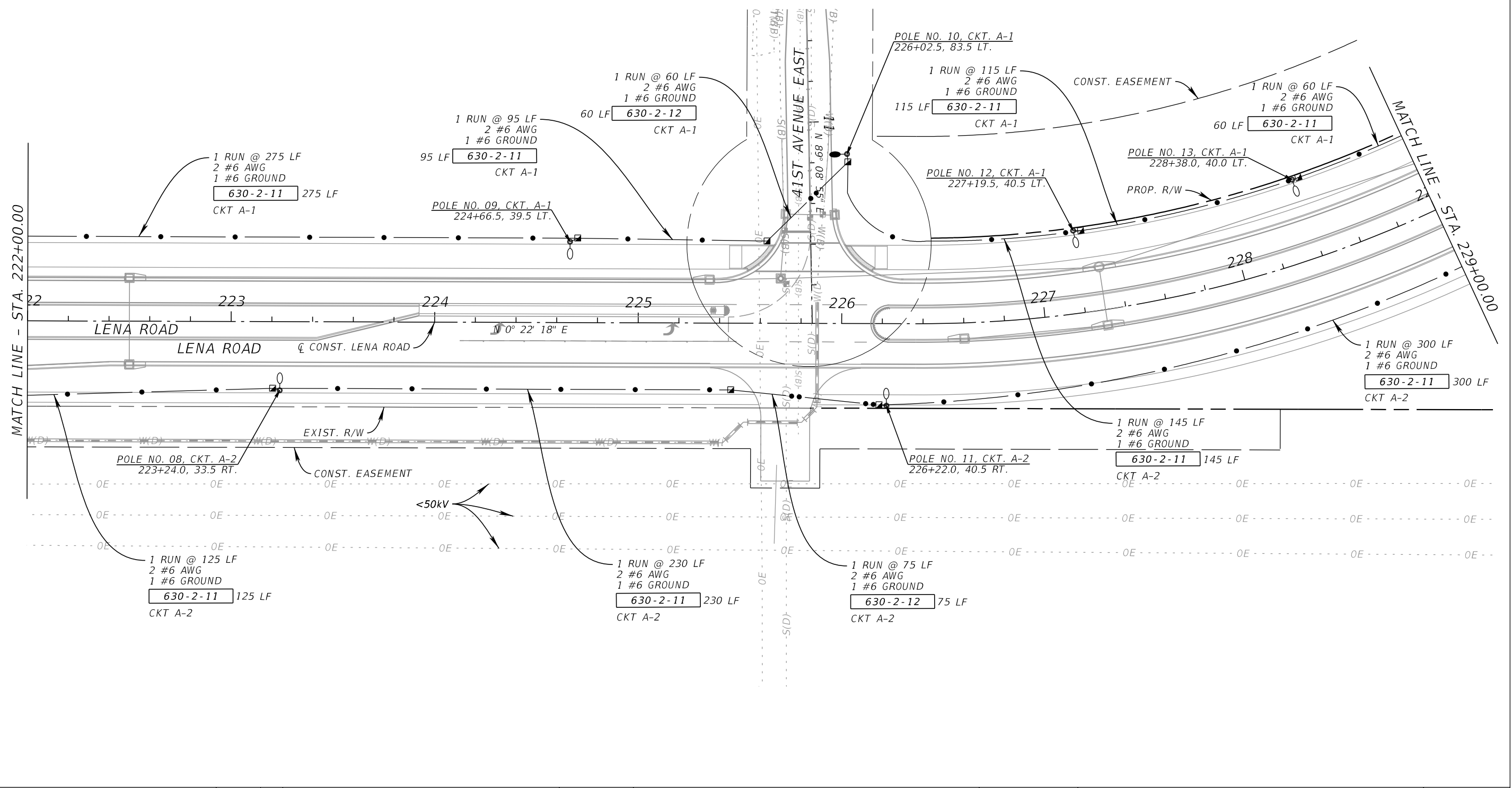
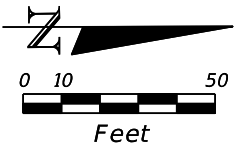
LICENSED PROFESSIONAL

TIFFANY J. PARKER  
DOS SANTOS, P.E.  
FL LICENSE NUMBER  
87920

**LIGHTING PLAN SHEET (01)**

SHEET NUMBER  
**L-8**





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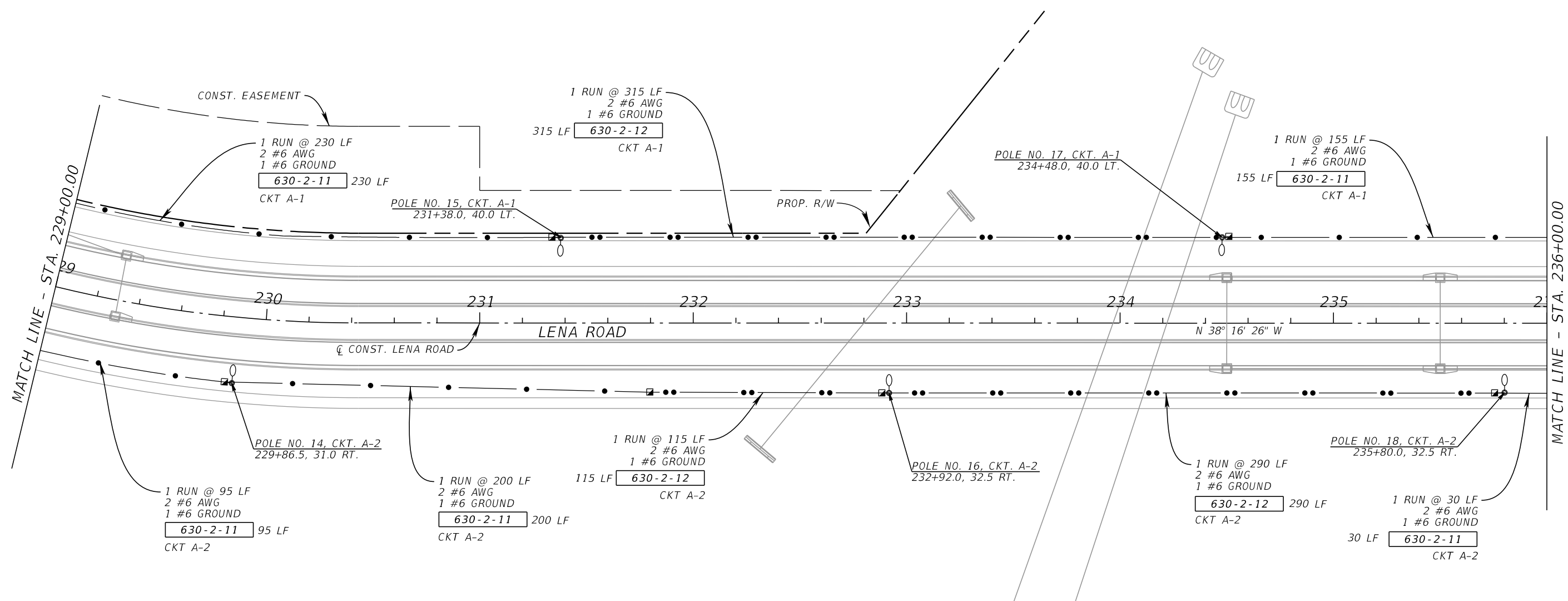
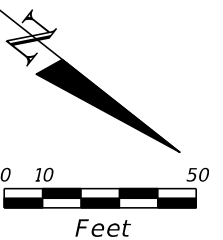
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FL LICENSE NUMBER  
87920

**LIGHTING PLAN SHEET (02)**

SHEET NUMBER

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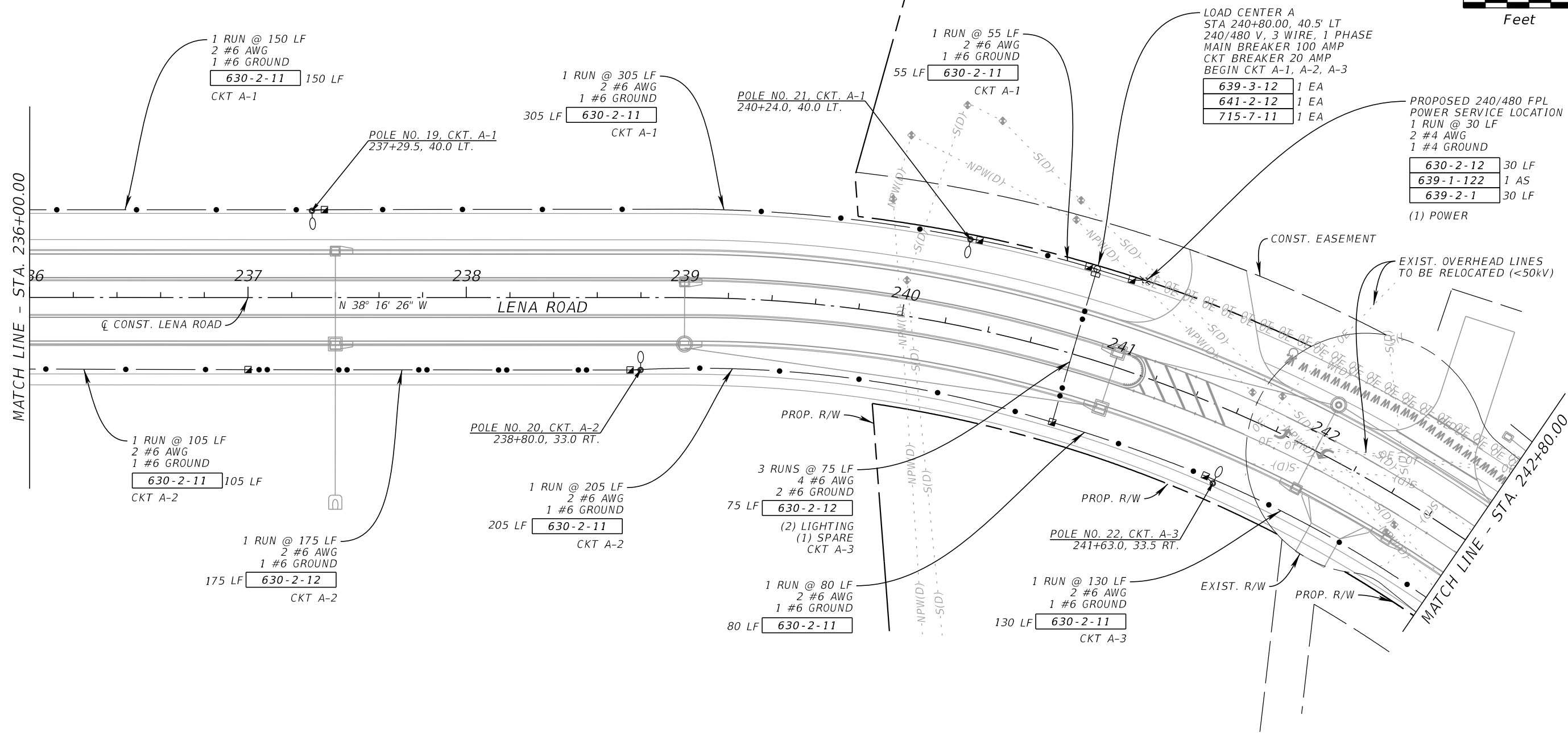
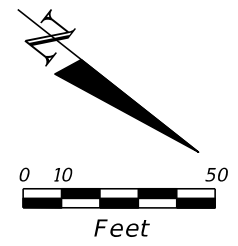
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**LIGHTING PLAN SHEET (03)**

SHEET NUMBER

**L-10**

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MATCH LINE - STA. 236+00.00

MATCH LINE - STA. 242+80.00

- PROPOSED 240/480 FPL  
POWER SERVICE LOCATION  
1 RUN @ 30 LF  
2 #4 AWG  
1 #4 GROUND
- |           |       |
|-----------|-------|
| 630-2-12  | 30 LF |
| 639-1-122 | 1 AS  |
| 639-2-1   | 30 LF |
- (1) POWER

No.	REVISIONS	DATE	BY

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**Manatee County**  
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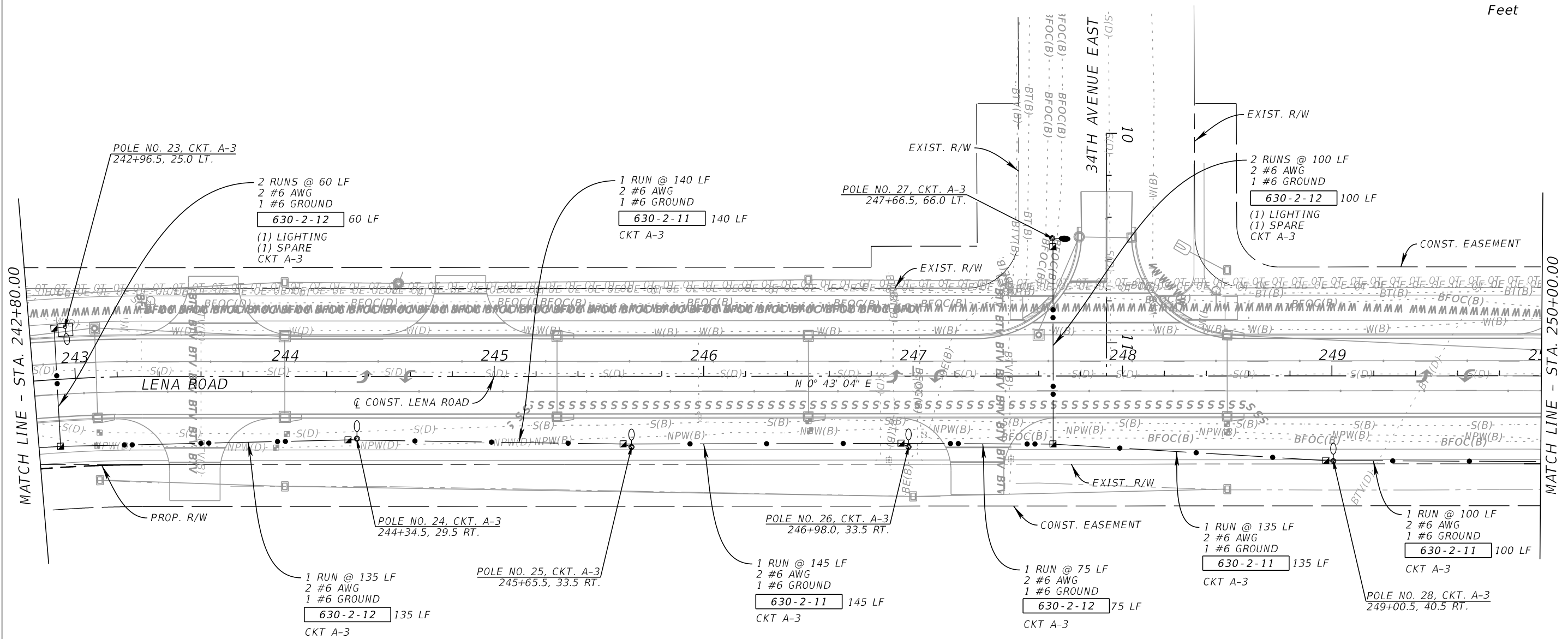
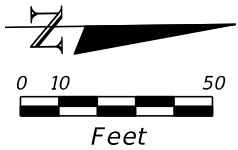
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DOS SANTOS, P.E.  
FL LICENSE NUMBER  
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**LIGHTING PLAN SHEET (04)**

SHEET NUMBER

**L-11**

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**Manatee County Florida**

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MANATEE COUNTY

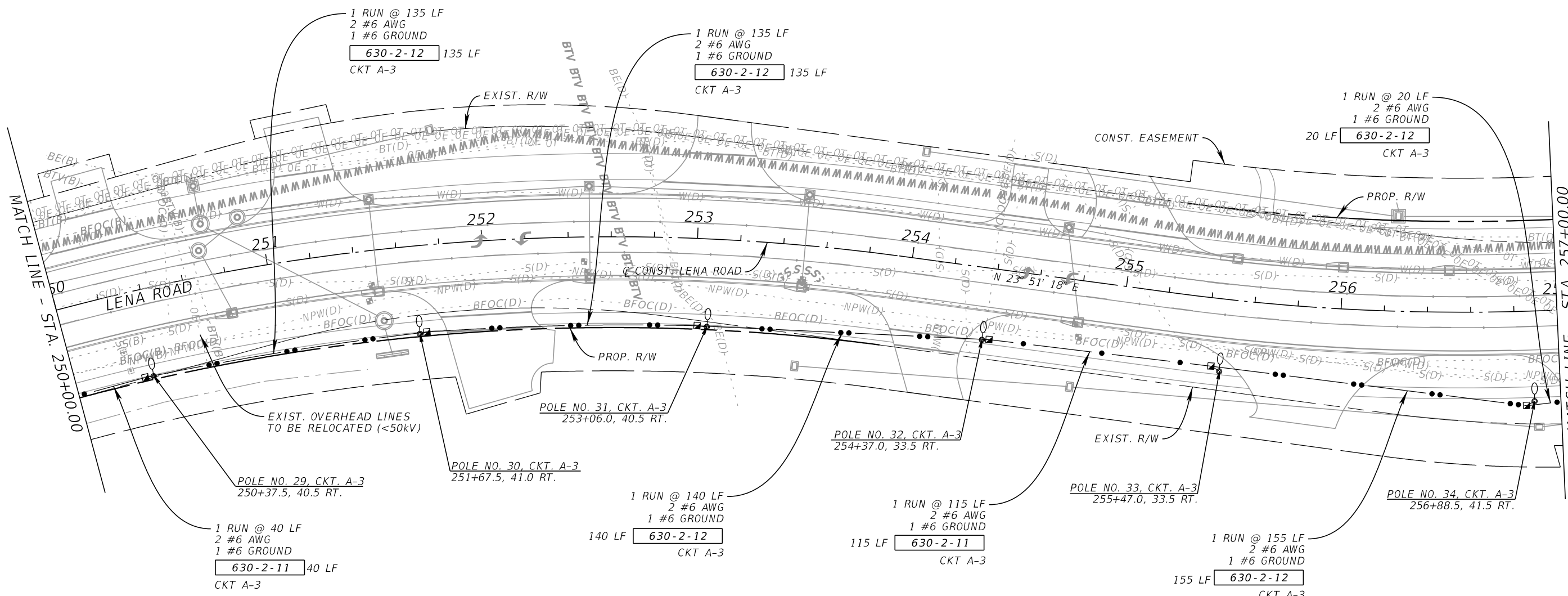
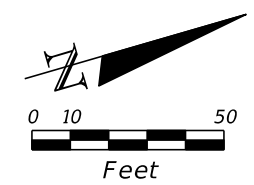
LICENSED PROFESSIONAL

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 DOS SANTOS, P.E.  
 FL LICENSE NUMBER  
 87920

**LIGHTING PLAN SHEET (05)**

SHEET NUMBER

**L-12**



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**Manatee County**  
FLORIDA

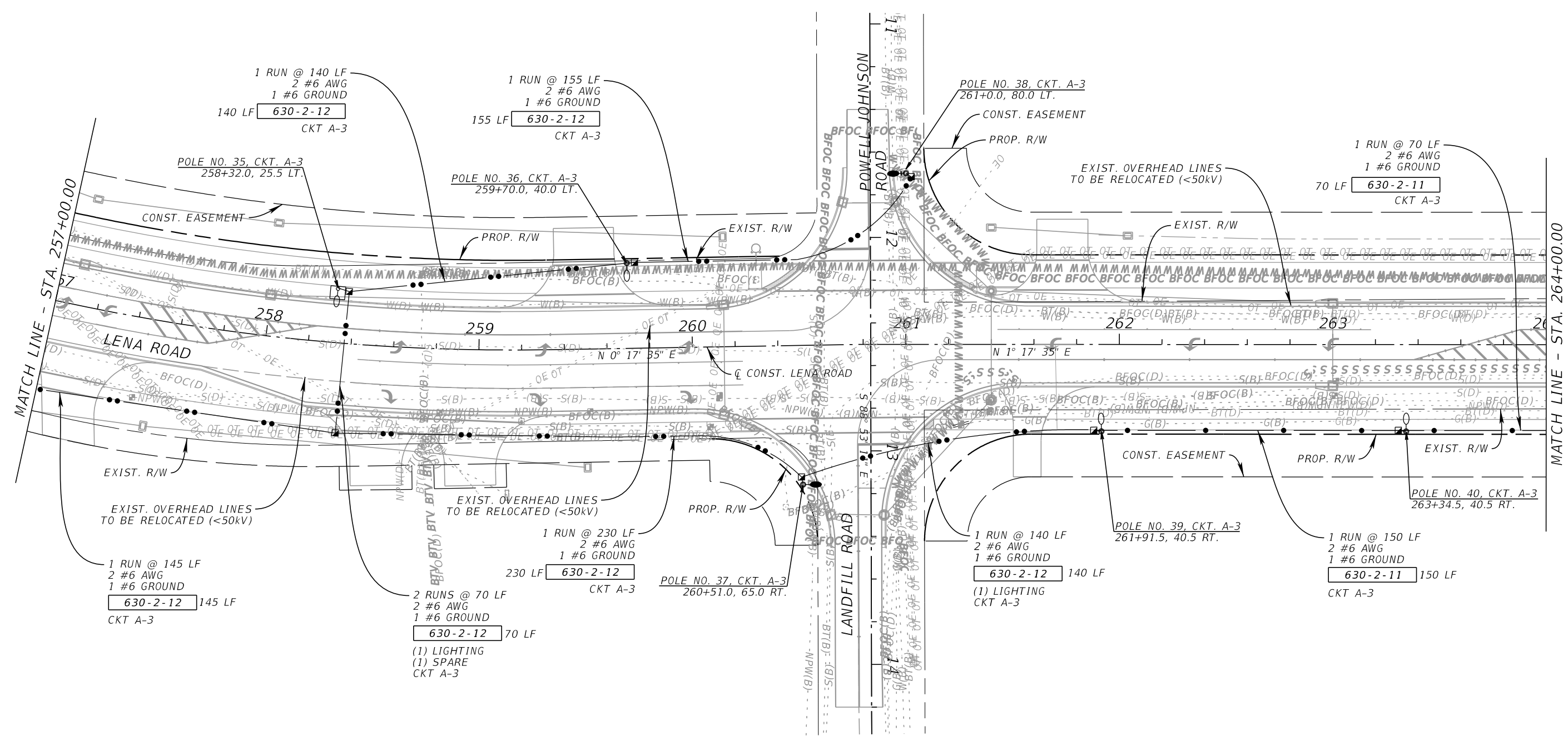
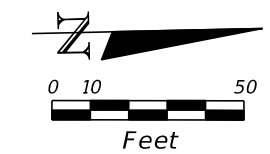
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**TIFFANY J. PARKER**  
DOS SANTOS, P.E.  
FL LICENSE NUMBER  
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**LIGHTING PLAN SHEET (06)**

SHEET NUMBER  
**L-13**



No.	REVISIONS	DATE	BY

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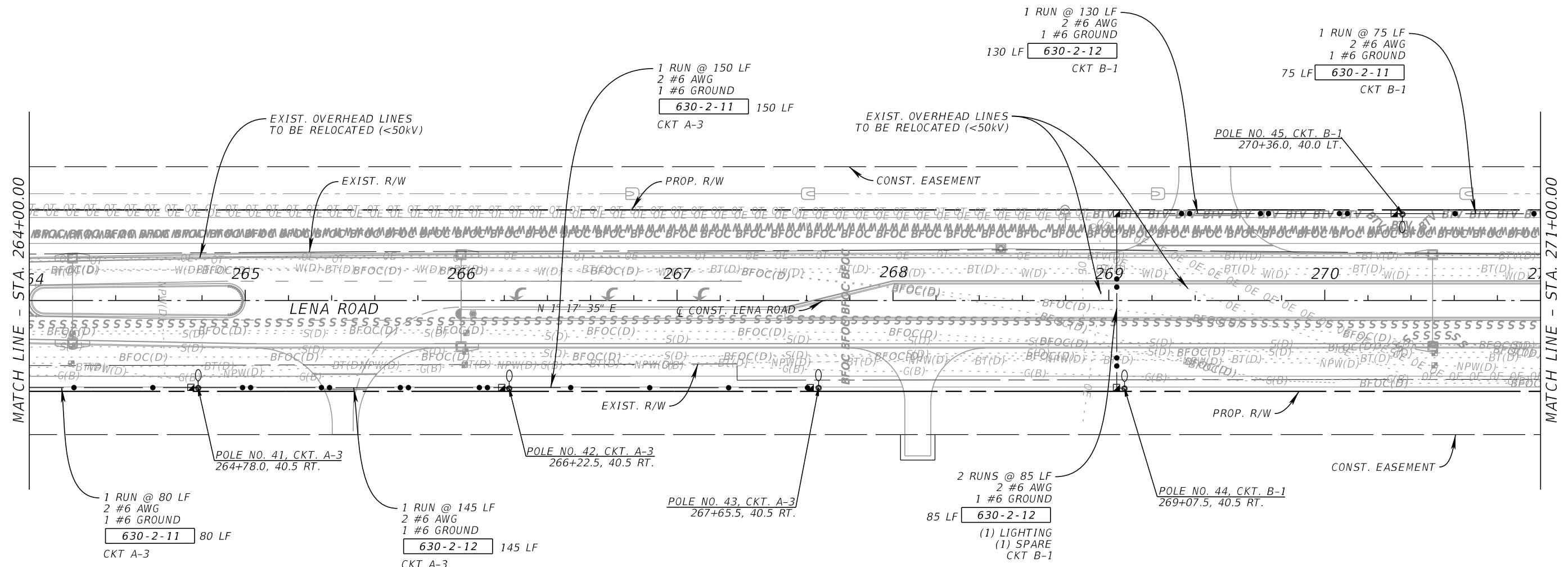
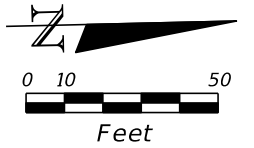
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DOS SANTOS, P.E.  
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**LIGHTING PLAN SHEET (07)**

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**L-14**

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 PHONE: (813) 635-5514  
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KHA PROJECT 148400100
DATE JULY 2023
SCALE AS SHOWN
DESIGNED BY TJP
DRAWN BY MAZ
CHECKED BY TJP

**Manatee County**  
 FLORIDA

**LENA ROAD**

MANATEE COUNTY  
Default

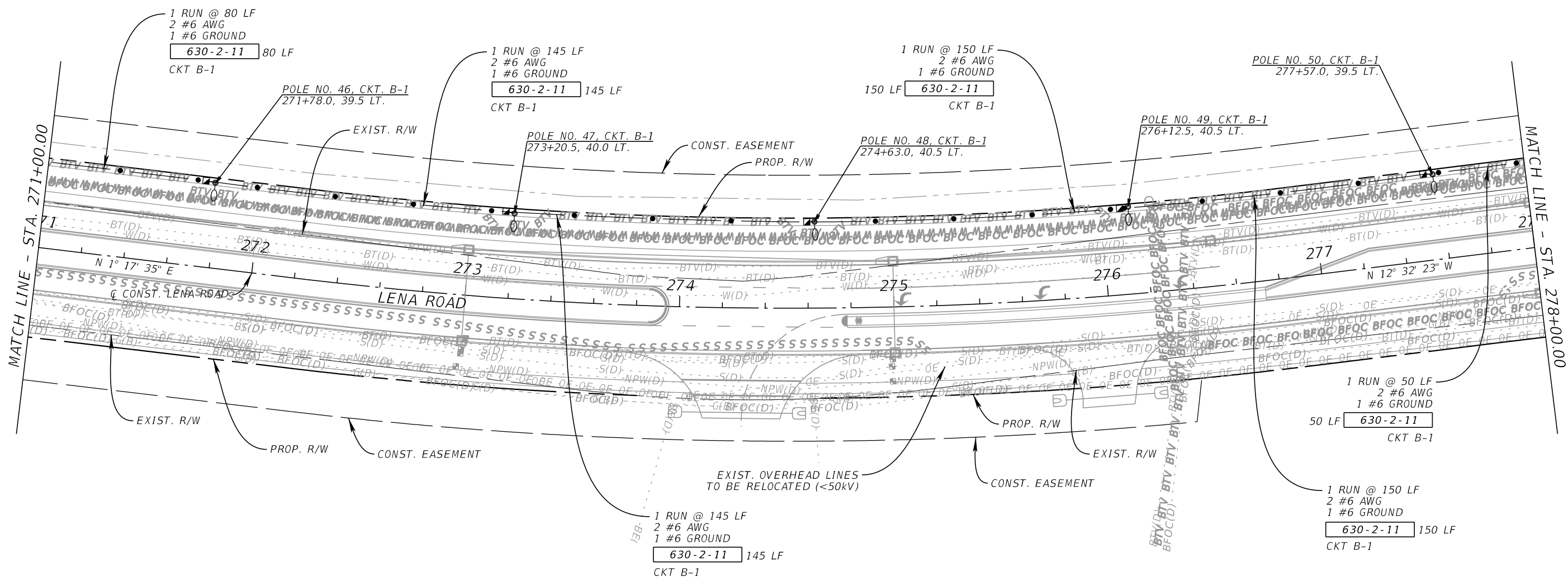
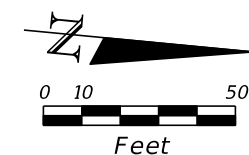
LICENSED PROFESSIONAL

TIFFANY J. PARKER  
 DOS SANTOS, P.E.  
 FL LICENSE NUMBER  
 87920

**LIGHTING PLAN SHEET (08)**

SHEET NUMBER  
**L-15**

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**Manatee  
County  
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LENA ROAD

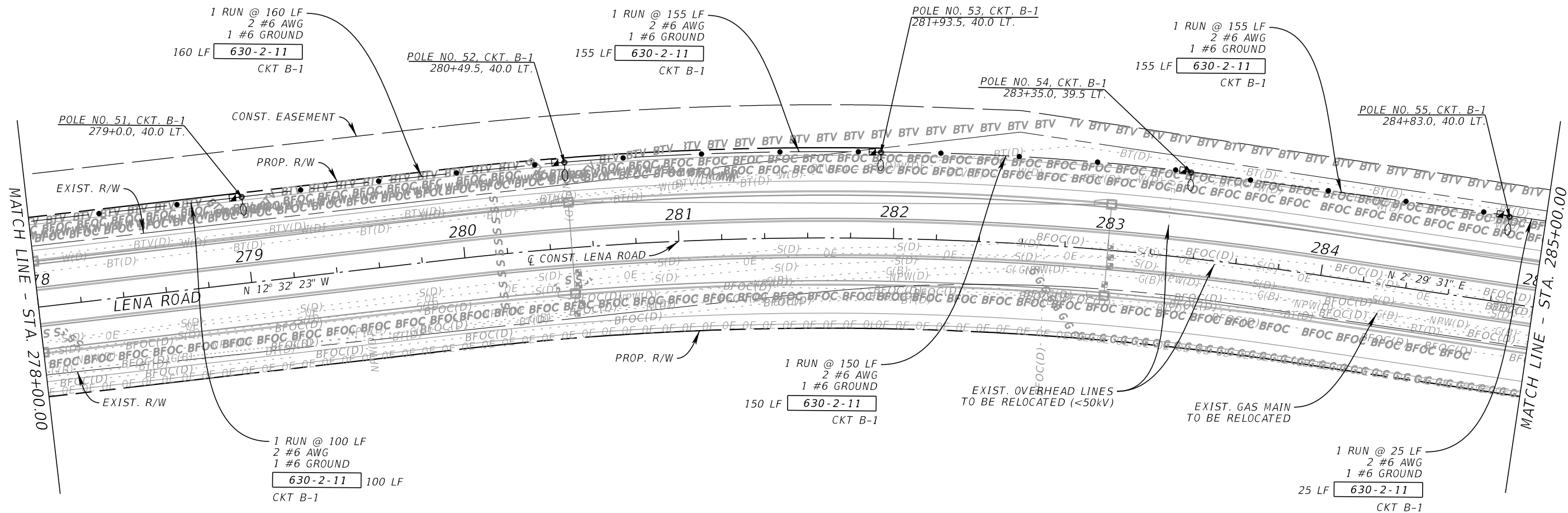
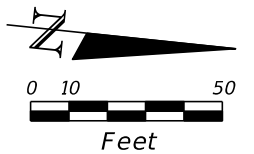
LICENSED PROFESSIONAL  
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DOS SANTOS, P.E.  
FL LICENSE NUMBER  
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**LIGHTING PLAN SHEET (09)**

SHEET NUMBER  
**L-16**

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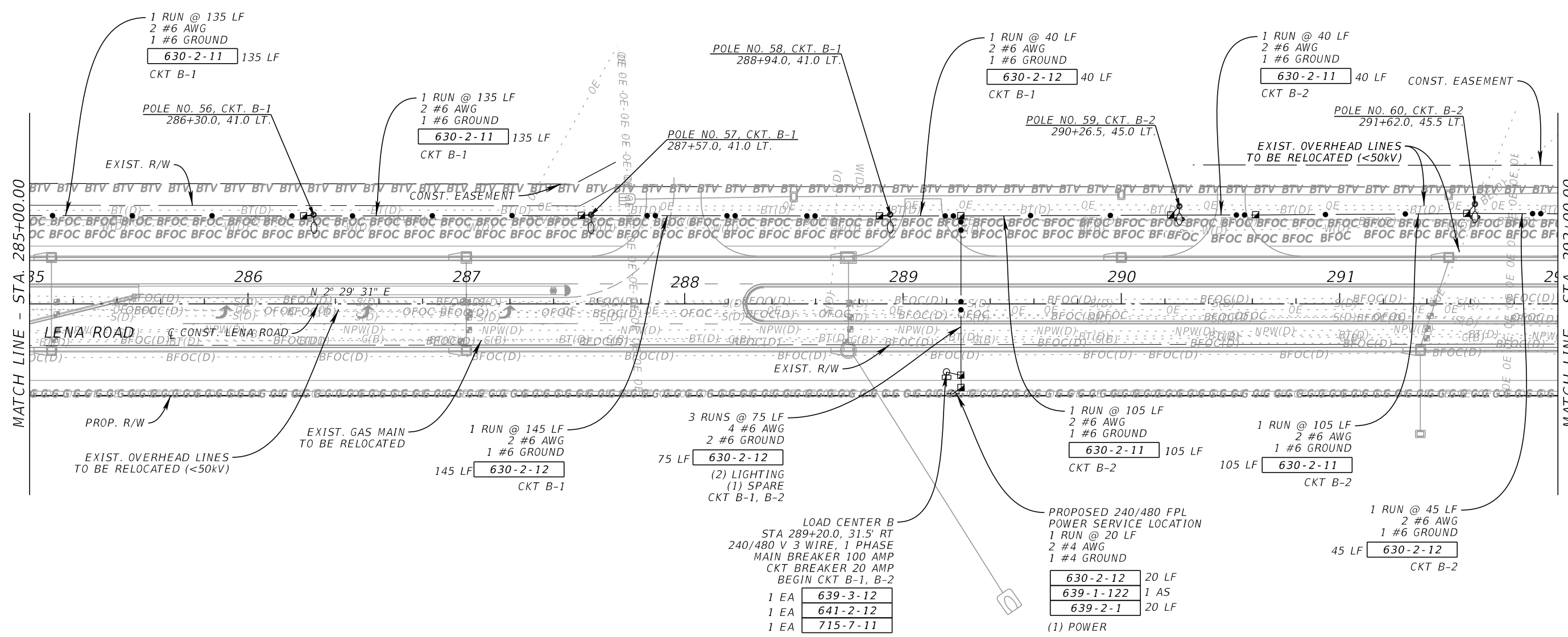
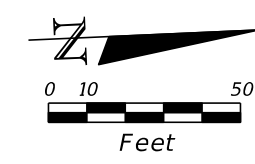
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**LIGHTING PLAN SHEET (10)**

SHEET NUMBER  
**L-17**

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**LENA ROAD**

MANATEE COUNTY

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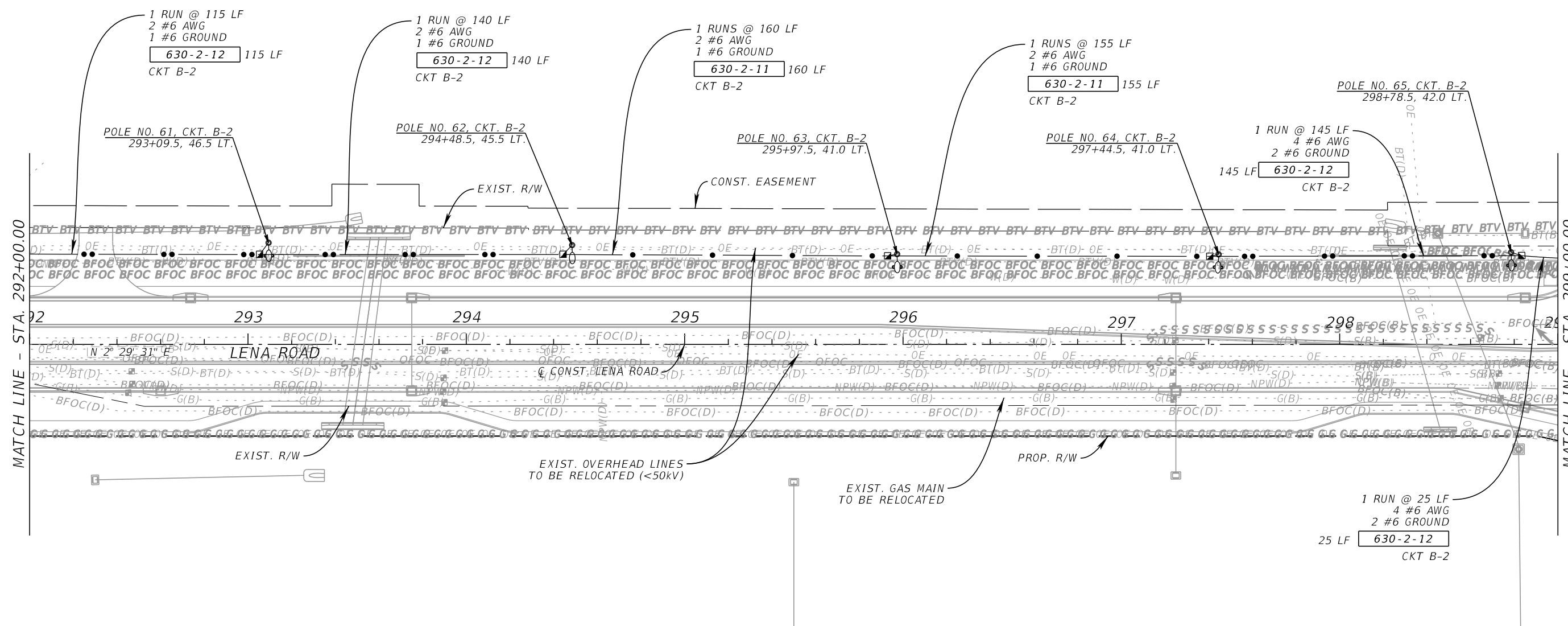
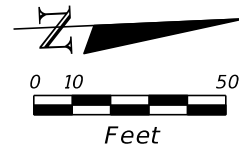
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**LIGHTING PLAN SHEET (11)**

SHEET NUMBER

**L-18**

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MATCH LINE - STA. 292+00.00

MATCH LINE - STA. 299+00.00

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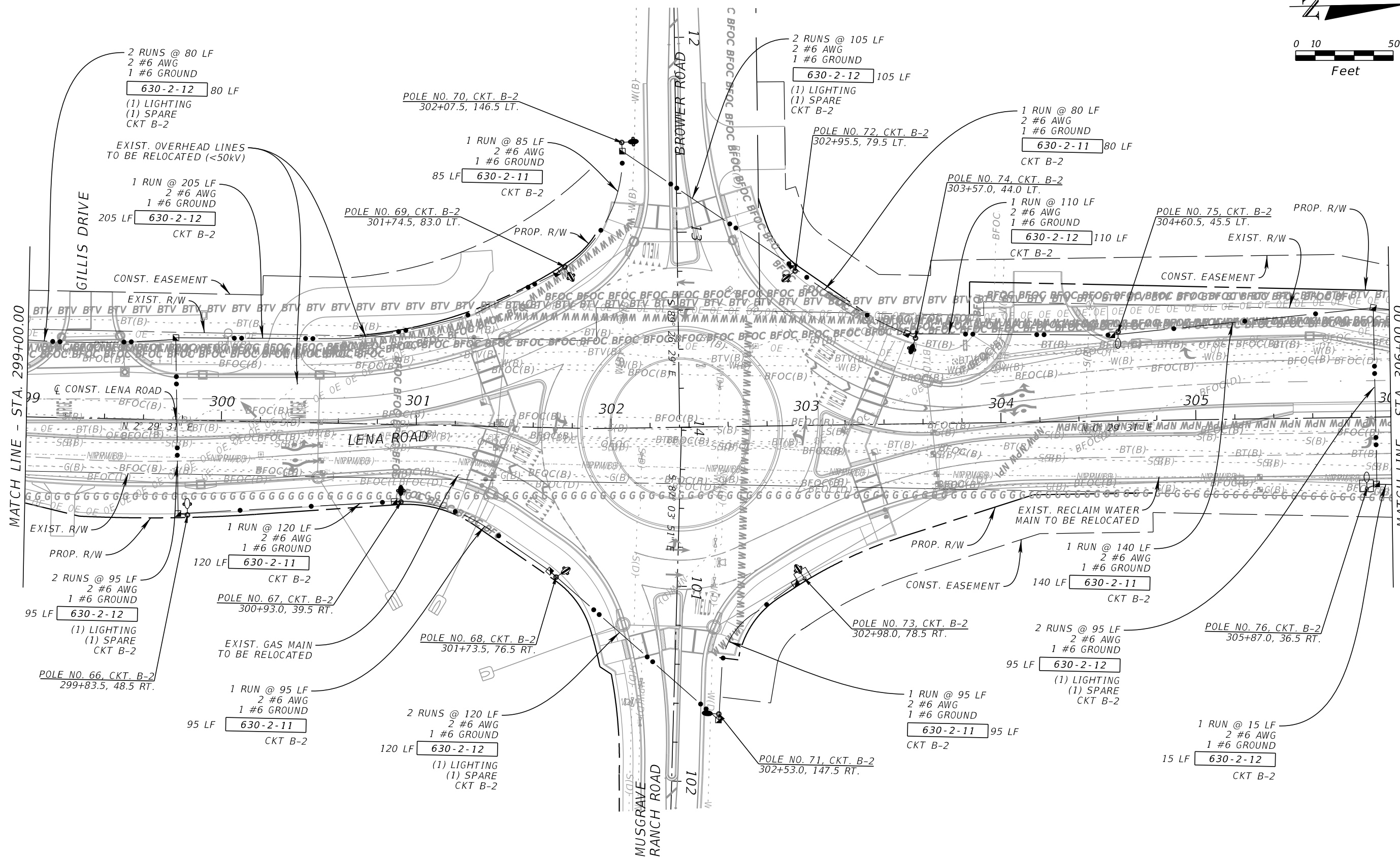
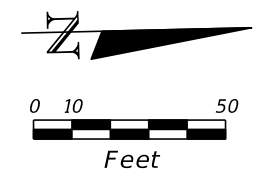
  
**Manatee County**  
 FLORIDA  
**LENA ROAD**

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**LIGHTING PLAN SHEET (12)**

SHEET NUMBER  
**L-19**

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FLORIDA

LENA ROAD

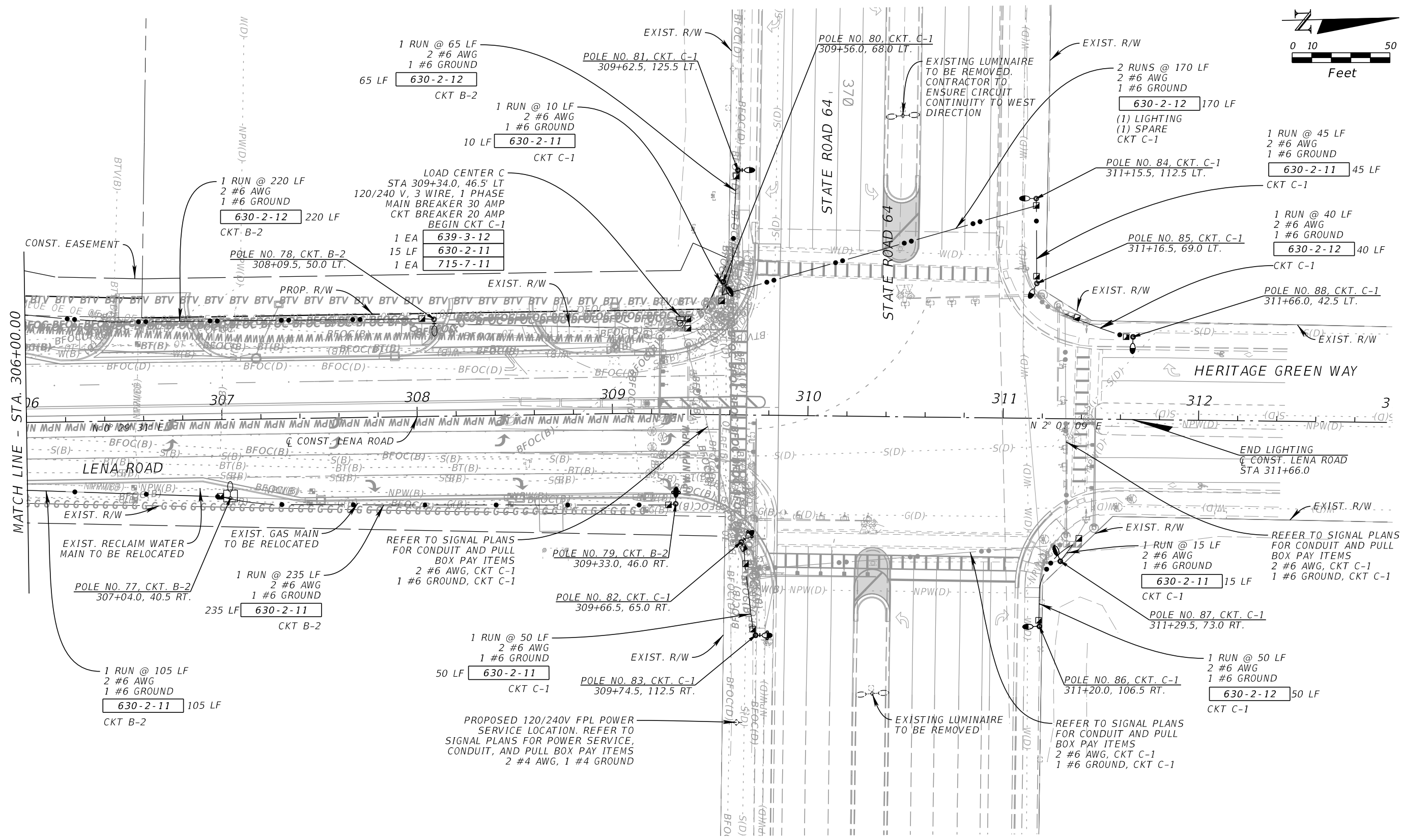
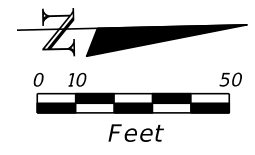
LICENSED PROFESSIONAL

TIFFANY J. PARKER  
DOS SANTOS, P.E.  
FL LICENSE NUMBER  
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**LIGHTING PLAN SHEET (13)**

SHEET NUMBER  
**L-20**

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MATCH LINE - STA. 306+00.00

No.	REVISIONS	DATE	BY

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**Manatee County**  
FLORIDA

LENA ROAD

LICENSED PROFESSIONAL

TIFFANY J. PARKER  
DOS SANTOS, P.E.  
FL LICENSE NUMBER  
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**LIGHTING PLAN SHEET (14)**

SHEET NUMBER

L-21

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LOAD CENTER "A"  
 240/480V, SINGLE PHASE, 3 WIRE  
 STA. 240+80, 40.5' LT. (C CONST. LENA ROAD)

LOAD CENTER DESIGNATION	MAIN & CIRCUIT BREAKER SIZES	# OF BRANCH CIRCUITS	TOTAL DEMAND LOAD (AMPS)	TOTAL DESIGN LOAD (AMPS)	# SERVICE ENTRANCE CONDUCTORS & CONDUIT AND BRANCH CIRCUIT SIZE
A	100 A, 1P	3	7.6	9.5	# 4 AWG
A-1	20 A, 1P		1.7	2.1	# 6 AWG
A-2	20 A, 1P		1.2	1.5	# 6 AWG
A-3	20 A, 1P		4.7	5.9	# 6 AWG



LOAD CENTER "B"  
 240/480V, SINGLE PHASE, 3 WIRE  
 STA. 289+20, 31.5' RT. (C CONST. LENA ROAD)

LOAD CENTER DESIGNATION	MAIN & CIRCUIT BREAKER SIZES	# OF BRANCH CIRCUITS	TOTAL DEMAND LOAD (AMPS)	TOTAL DESIGN LOAD (AMPS)	# SERVICE ENTRANCE CONDUCTORS & CONDUIT AND BRANCH CIRCUIT SIZE
B	100 A, 1P	2	7.8	9.7	# 4 AWG
B-1	20 A, 1P		2.6	3.2	# 6 AWG
B-2	20 A, 1P		5.2	6.5	# 6 AWG

LOAD CENTER "C"  
 120/240V, SINGLE PHASE, 3 WIRE  
 STA. 309+34, 46.5' LT. (C CONST. LENA ROAD)

LOAD CENTER DESIGNATION	MAIN & CIRCUIT BREAKER SIZES	# OF BRANCH CIRCUITS	TOTAL DEMAND LOAD (AMPS)	TOTAL DESIGN LOAD (AMPS)	# SERVICE ENTRANCE CONDUCTORS & CONDUIT AND BRANCH CIRCUIT SIZE
C	30 A, 1P	1	12.3	15.3	# 4 AWG
C-1	20 A, 1P		12.3	15.3	# 6 AWG

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<small>No.</small>	<small>REVISIONS</small>	<small>DATE</small>	<small>BY</small>	<small>MANATEE COUNTY</small>	<small>FL</small>		