

VILLAGE OF ESTERO PUBLIC WORKS

RIVER RANCH ROAD

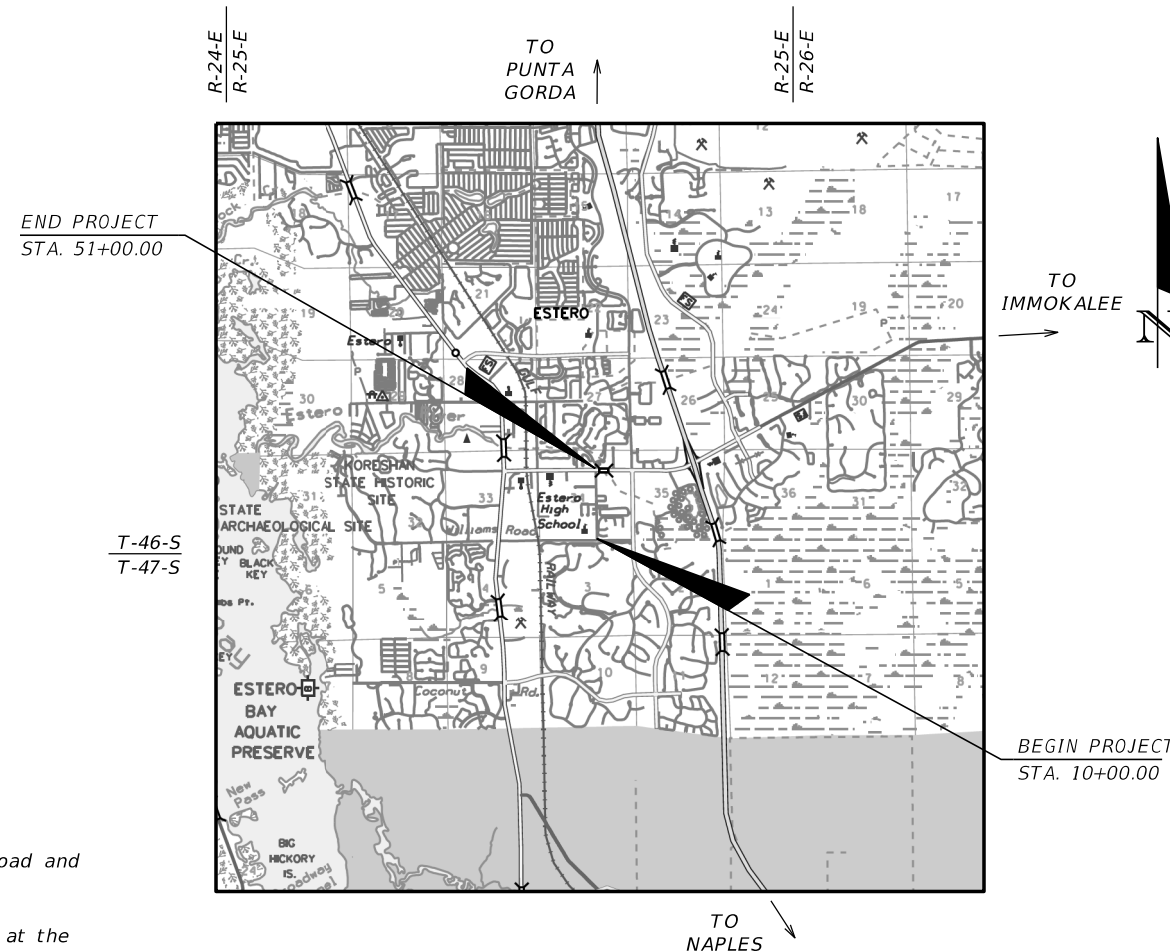
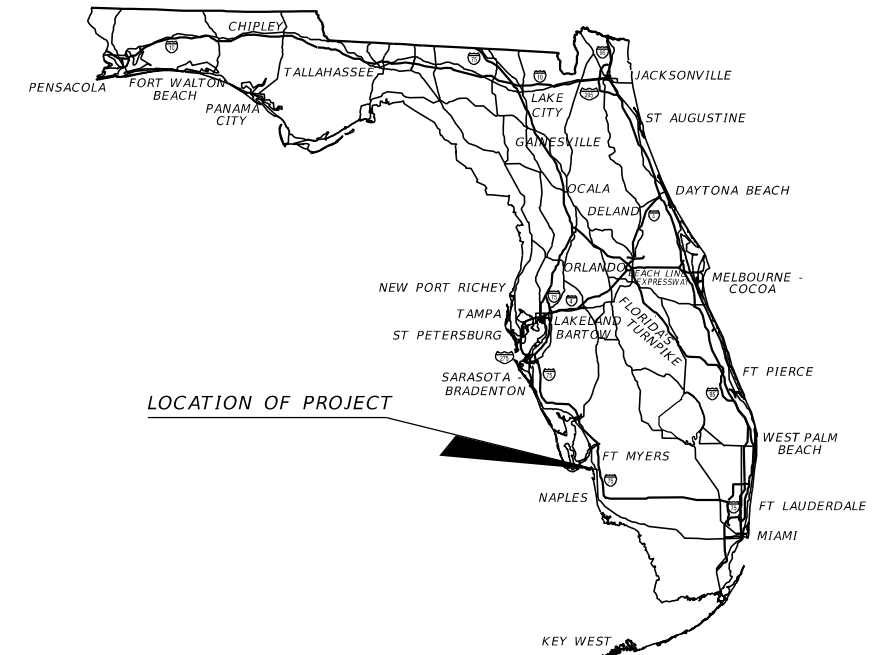
CORKSCREW ROAD TO WILLIAMS ROAD

JEI PROJECT ID: 20203048-000

LIGHTING PLANS

INDEX OF LIGHTING PLANS

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**GOVERNING STANDARD PLANS:**

Florida Department of Transportation, FY2023-24 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road Construction and associated IRs are available at the following website: <http://www.fdot.gov/design/standardplans>

Standard Plans for Bridge Construction are included in the Structures Plans Component

**GOVERNING STANDARD SPECIFICATIONS:**

Florida Department of Transportation, FY2023-24 Standard Specifications for Road and Bridge Construction at the following website: <http://www.fdot.gov/programmanagement/Implemented/SpecBooks>



LIGHTING PLANS  
ENGINEER OF RECORD:

LEAH M. HOLMES, P.E.  
P.E. NO.: 85359  
JOHNSON ENGINEERING, INC.  
2122 JOHNSON STREET  
FORT MYERS, FLORIDA 33901  
CERTIFICATE OF AUTHORIZATION NO.: 642

VILLAGE OF ESTERO  
PROJECT MANAGER:

DAVID WILLIAMS, P.E.

FINAL SUBMITTAL  
JULY 2023

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
	23	L-1

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

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2122 JOHNSON STREET  
FORT MYERS, FLORIDA 33901  
CERTIFICATE OF AUTHORIZATION: 00642  
LEAH M. HOLMES, P.E. NO. 85359

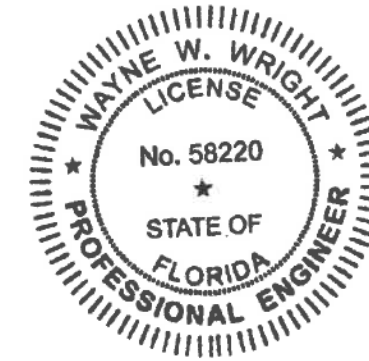
THE ABOVE NAMES PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE  
FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
L-1	KEY SHEET
L-2	SIGNATURE SHEET
L-3 - L-4	TABULATION OF QUANTITIES
L-5	GENERAL NOTES
L-6	PAY ITEM NOTES
L-7 - L-8	POLE DATA AND LEGEND SHEET
L-10 - L-19	LIGHTING PLAN SHEETS

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WAYNE W. WRIGHT, P.E. NO. 58220



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<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
L-2	SIGNATURE SHEET
L-9	SERVICE POINT DETAILS

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REVISIONS				 LEAH M. HOLMES • P.E. LICENSE NO. 85359 JOHNSON ENGINEERING, INC. 2122 JOHNSON STREET • FORT MYERS, FL 33902 CERTIFICATE OF AUTHORIZATION NO. 642	VILLAGE OF ESTERO PUBLIC WORKS			SHEET NO.  L-2
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	JEI PROJECT ID	
						LEE	20203048-000	

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			L-10		L-11		L-12		L-13		L-14		L-15		L-16		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	543		561		433		516		476		481		560		3569		4512	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF					127		45		89		80				341		341	
635-2-11	PULL & SPLICE BOX, F&I, 13" X 24" COVER SIZE	EA					3		2		4		2				11		11	
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF					150										150		150	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-11 SERVICE POLE	EA					1										1		1	
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 8-6 (NO. 6)	LF	1660		1714		1760		1747		1791		1745		1705		12122		15030	
715-4-11	LIGHT POLE COMPLETE, FURNISH & INSTALL STANDARD POLE STANDARD FOUNDATION, 28' MOUNTING HEIGHT	EA	4		4		4		4		4		4		3		27		37	
715-7-12	LOAD CENTER, F&I, PRIMARY VOLTAGE	EA					1										1		1	
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, CONVENTIONAL	EA	4		4		4		4		4		4		3		27		37	

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

**JOHNSON ENGINEERING**  
 LEAH M. HOLMES • P.E. LICENSE NO. 85359  
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VILLAGE OF ESTERO PUBLIC WORKS		
ROAD NO.	COUNTY	JEI PROJECT ID
	LEE	20203048-000

**TABULATION OF QUANTITIES**

SHEET NO.  
**L-3**

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

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS												TOTAL THIS SHEET		GRAND TOTAL	
			L-17		L-18		L-19								PLAN	FINAL	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	164		363		416										943	4512
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF																341
635-2-11	PULL & SPLICE BOX, F&I, 13" X 24" COVER SIZE	EA																11
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF																150
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-11 SERVICE POLE	EA																1
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 8-6 (NO. 6)	LF	508		1120		1281										2909	15030
715-4-11	LIGHT POLE COMPLETE, FURNISH & INSTALL STANDARD POLE STANDARD FOUNDATION, 28' MOUNTING HEIGHT	EA	2		4		4										10	37
715-7-12	LOAD CENTER, F&I, PRIMARY VOLTAGE	EA																1
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, CONVENTIONAL	EA	2		4		4										10	37

REVISIONS				 LEAH M. HOLMES • P.E. LICENSE NO. 85359 JOHNSON ENGINEERING, INC. 2122 JOHNSON STREET • FORT MYERS, FL 33902 CERTIFICATE OF AUTHORIZATION NO. 642	VILLAGE OF ESTERO PUBLIC WORKS			TABULATION OF QUANTITIES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	JEI PROJECT ID		
						LEE	20203048-000		L-4

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**LIGHTING GENERAL NOTES:**

1. PRIOR TO ANY EQUIPMENT ORDER, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL EQUIPMENT SPECIFICATION OR DESIGN DATA FOR ALL MATERIAL PROPOSED FOR THE PROJECT. THESE MUST SPECIFICALLY INCLUDE:
  - A. LUMINAIRE PHOTOMETRICS.
  - B. POLE STRENGTH CALCULATIONS AND POLE SHOP DRAWINGS FOR PAY ITEM NO. 715-4-14
  - C. POLE FRANGIBILITY TEST
  - D. ANCHOR BOLT DESIGN CALCULATIONS AND SHOP DRAWINGS
  - E. DISTRIBUTION POINT ELECTRICAL EQUIPMENT
2. THE LOCATIONS OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, ARE APPROXIMATE AND BASED ON THE INFORMATION FURNISHED TO THE ENGINEER BY THE UTILITY OWNER(S) AND ARE SHOWN AS NOTICE TO THE CONTRACTOR THAT UNDERGROUND UTILITIES EXIST. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANY OWNER(S) FOR LOCATION AND STAKING OF UNDERGROUND FACILITIES BEFORE EXCAVATING.
3. STATE OF FLORIDA STATUTE 556 (2008) REQUIRES THAT BEFORE EXCAVATING, NOTICE BE GIVEN TO THE SUNSHINE STATE ONE CALL OF FLORIDA, INC. (SSOCOF) A MINIMUM OF TWO (2) FULL BUSINESS DAYS AT 1-800-432-4770. NOT ALL UTILITY COMPANIES ARE MEMBERS OF SSOCOF.
4. THE LOCATION OF THE POLES, CONDUCTORS, CONDUITS, JUNCTION BOXES AND SERVICE POLES ARE DIAGRAMMATIC ONLY AND MAY BE SHIFTED BY THE ENGINEER TO ACCOMMODATE LOCAL CONDITIONS AND EXISTING UTILITY LOCATIONS.
5. ALUMINUM POLES, LUMINAIRES AND BASES SHALL BE FABRICATED IN ACCORDANCE WITH AASHTO'S "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" AND SHALL HAVE BEEN TESTED BY FHWA APPROVED METHODS (LATEST EDITION). CERTIFICATION FOR TESTS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.
6. SHOP DRAWING SUBMITTAL DATA SHALL INCLUDE COMPUTER PRINTOUT SHOWING HORIZONTAL FOOT CANDLE LEVELS TO BE OBTAINED USING SUBMITTED LUMINAIRES ON THIS PROJECT. AT FINAL INSPECTION THE CONTRACTOR SHALL VERIFY THE HORIZONTAL FOOT CANDLE LEVELS ON THE ROADWAY WITH AN APPROVED CURRENTLY CALIBRATED LIGHT METER AND SUBMIT REPORT FOR APPROVAL.
7. ALL ELECTRICAL WORK SHALL MEET ALL REQUIREMENTS OF THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE (NEC), THE NATIONAL ELECTRICAL SAFETY CODE (NEC) AND THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARDS SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL COMPONENTS SHALL BE PROPERLY GROUNDED AND BONDED PER N.E.C. REQUIREMENTS.
8. INSTALL LIGHTNING ARRESTORS, PROPERLY GROUNDED, IN POWER (SECONDARY) ENTRANCES ON OUTSIDE OF ENCLOSURE.
9. IN ACCORDANCE WITH N.E.C., IDENTIFY ALL CIRCUITS AND EQUIPMENT WITH "LAMACOID TAGS". INSTALL SIMILAR TAGS OF STAINLESS STEEL IDENTIFYING CIRCUIT FOR EACH LUMINAIRE AT ACCESS HANDHOLE FOR EACH POLE.
10. THE CONTRACTOR SHALL NOTIFY FPL AT LEAST 48 HOURS PRIOR TO ANY INSTALLATION THAT IS WITHIN 20 FEET OF ENERGIZED ELECTRICAL CONDUCTORS. EXTREME CAUTION SHALL BE EXERCISED AT ALL TIMES IN PERFORMANCE OF WORK AROUND THE PRIMARY HIGH VOLTAGE COMPONENTS.
11. PULLING INSTRUCTIONS: CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO THE JACKET AND MEET THE MANUFACTURER'S REQUIREMENTS. USE PULLING COMPOUND PER MANUFACTURER'S REQUIREMENTS. ALL BENDS SHALL NOT BE LESS THAN RECOMMENDED BY THE NEC OR NECS FOR THE CABLE USED.
12. CONTRACTOR SHALL FURNISH AND INSTALL AN ALUMINUM IDENTIFICATION TAG ON EACH ROADWAY LIGHTING STANDARD. COST OF TAGS SHALL BE INCLUDED IN THE BID ITEMS FOR LIGHT POLE COMPLETE. COORDINATE THE POLE NUMBER AND TAG STYLE WITH VILLAGE OF ESTERO.
13. THE CONTRACTOR SHALL STAKE ALL POLE LOCATIONS AND REQUEST UTILITY COMPANIES TO LOCATE AND STAKE UNDERGROUND UTILITIES PRIOR TO EXCAVATING.
14. ALL CONDUITS UNDER ROADWAY (AND/OR SIDEWALK) SHALL BE INSTALLED PRIOR TO THE INSTALLATION OF ROADWAY BASE AND SURFACE (OR CONCRETE), EXCEPT WHERE OTHERWISE INDICATED IN THE PLANS.
15. AT LOCATIONS WHERE UNDERGROUND UTILITIES ARE WITHIN TWO FEET OF THE LIGHT POLE FOUNDATIONS OR CONDUIT RUNS, AS DETERMINED BY THE ENGINEER, THE CONTRACTOR WILL HAND DIG THE FIRST FOUR FEET OF THE HOLE FOR THE POLE FOUNDATION AND CONDUIT RUN.
16. ALL CONDUIT TRENCHES SHALL BE BACKFILLED COMPLETELY TO PROVIDE SAFE CROSSING BY THE END OF EACH WORKING DAY OR WHENEVER THE WORK ZONE BECOMES INACTIVE. THE CONTRACTOR SHALL NOT OPEN ANY AREA THAT CANNOT BE BACKFILLED IN THE SAME WORK PERIOD.
17. ALL EXCESS DIRT AND DEBRIS EXCAVATED FROM POLE FOUNDATIONS SHALL BE REMOVED DAILY TO AREAS APPROVED BY THE ENGINEER AND PAID FOR UNDER PAY ITEM 715-4-11.
18. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL SIDE STREETS, PRIVATE AND COMMERCIAL DRIVEWAYS AT ALL TIMES DURING THE CONSTRUCTION OPERATION.

19. THE LIGHTING SYSTEM WILL BE MAINTAINED BY VILLAGE OF ESTERO UPON FINAL ACCEPTANCE. THE CONTRACTOR SHALL SUBMIT "AS-BUILT" PLANS TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE.
20. CONTRACTOR SHALL SUBMIT TO THE ENGINEER OF RECORD SHOP DRAWINGS DETAILING THE LAYOUT OF THE ELECTRICAL EQUIPMENT INSIDE THE DISTRIBUTION POINT LIGHTING ELECTRICAL ENCLOSURE.
21. ALL CONDUCTORS SHALL HAVE THWN-2 600 VOLT INSULATION. ALL CONDUCTORS TO BE THHN/THWN-2. ALL CONDUCTORS SHALL BE CONTINUOUS IN COLOR FROM THE LOAD CENTER TO EACH STREET LIGHT POLE. PHASE TAPE SHALL NOT BE USED TO IDENTIFY A CONDUCTOR.
22. CONDUIT LOCATIONS AS SHOWN ON THE PLANS ARE DIAGRAMMATIC. CONDUITS MUST BE PLACED WITHIN THE ROADWAY LIMITS, BUT CAN BE ADJUSTED TO FIT AROUND EXISTING AND PROPOSED UTILITIES. WHERE PLANNED LOCATION OF LIGHTING CONDUIT RUNS 36" UNDER PAVEMENT IS FOUND TO CONFLICT WITH UNDERGROUND UTILITIES, THE LIGHTING CONDUIT POSITION SHALL BE ALTERED VERTICALLY OR HORIZONTALLY TO AVOID THE CONFLICT AS RECOMMENDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. A 24" ABSOLUTE MINIMUM DEPTH SHALL BE MAINTAINED WHERE LIGHTING CONDUITS ARE RELOCATED CLOSER THAN 36" BELOW THE GROUND SURFACE AND SHALL BE PLACED IN AN ADDITIONAL 3" PVC SLEEVE OR BACKFILLED WITH A MINIMUM OF 4" x 4" OF CONCRETE. COST OF SUCH TREATMENT WILL BE INCIDENTAL TO PAY ITEMS PROVIDED.
23. CONTRACTOR SHALL PREPARE ACCURATELY DIMENSIONED "AS-BUILT" PLANS OF FINAL POLE, CONTROLLER, AND CONDUIT LOCATIONS. "AS-BUILT" PLANS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO FINAL ACCEPTANCE. AFTER THE "AS-BUILT" PLANS ARE APPROVED, THE CONTRACTOR SHALL SUBMIT TWO COPIES TO THE RESIDENT ENGINEER AND ONE COPY TO THE VILLAGE OF ESTERO MAINTENANCE. COST OF SUCH PREPARATION SHALL BE INCIDENTAL TO THE PAY ITEMS PROVIDED.
24. ALL CONDUITS SHALL BE MANDREL TESTED AND CLEANED. CONDUIT PLACED FOR FUTURE USE SHALL HAVE 1/4" POLYESTER CORD PULLED IN PLACE AND CAPPED, WITH NOTATION INSIDE CONDUIT AS TO LOCATION OF OPPOSITE END. PLACE PULL BOXES TO MARK ENDS OF EMPTY CONDUITS.
25. THE CONTRACTOR SHALL CONTACT THE POWER COMPANY TO DETERMINE IF A SERVICE PROCESSING FEE IS REQUIRED. THE FEE SHALL BE INCLUDED AS PART OF PAYMENT FOR THE LOAD CENTER.
26. CONTRACTOR SHALL USE THE CONCRETE FOUNDATION PER FDOT STANDARD PLAN INDEX 715-002 (SCREW TYPE FOUNDATION IS NOT ALLOWED).
27. ALL POLE FOUNDATIONS SHOULD BE 2" ABOVE GRADE AT ALL LOCATIONS. IF ADJUSTMENTS ARE NECESSARY PLEASE NOTIFY ENGINEER.
28. STREETLIGHTS, ELECTRIC SERVICES, AND LOAD CENTERS SHALL NOT BE PLACED IN DITCHES, DRAINAGE SLOPES, SWALES, OR WHERE SHEET OR STANDING WATER CAN INTRUDE.
29. ALL ROADWAY STREET LIGHTING SHALL BE FP&L 240V PHASE TO PHASE 2 WIRE.
30. IF THE EOR DETERMINES A SPREAD FOOTER SHALL BE USED IN LIEU OF A PRE-FORMED FOUNDATION, THE SPREAD FOOTER SHALL CONFORM TO THE LATEST FDOT INDEX 715-002 FOR STANDARD ALUMINUM LIGHTING.

REVISIONS				 LEAH M. HOLMES • P.E. LICENSE NO. 85359 JOHNSON ENGINEERING, INC. 2122 JOHNSON STREET • FORT MYERS, FL 33902 CERTIFICATE OF AUTHORIZATION NO. 642	VILLAGE OF ESTERO PUBLIC WORKS			GENERAL NOTES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	JEI PROJECT ID		L-5
						LEE	20203048-000		

**PAY ITEM FOOTNOTES:**

**PAY ITEM NO. 630-2-11 AND 630-2-12:**

THE CONTRACT UNIT PRICE PER FOOT OF CONDUIT, FURNISHED AND INSTALLED WILL INCLUDE FURNISHING ALL HARDWARE AND MATERIALS AS SPECIFIED ON THE TABULATION SHEET (L-3 AND L-4). ALL LABOR, TRENCHING, BACK FILLING, AND RESTORATION MATERIALS NECESSARY FOR A COMPLETE AND ACCEPTED INSTALLATION. CONSIDER THE LOCATIONS OF CONDUIT AS SHOWN ON THE PLANS AS APPROXIMATE. CONSTRUCT CONDUIT RUNS AS STRAIGHT AS POSSIBLE AND OBTAIN THE ENGINEER'S APPROVAL OF ALL MAJOR DEVIATIONS IN CONDUIT LOCATIONS FROM THOSE SHOWN ON THE PLANS. UNDERGROUND CONDUITS ARE TO BE ADJUSTED TO AVOID UNDERGROUND UTILITIES AND SIDEWALKS. INCLUDES CONDUIT FOR MULTIPLE RUNS IN ONE TRENCH. LINEAR FOOTAGE SHOWN ON PLANS ARE FOR LENGTH OF TRENCH ONLY.

**PAY ITEM NO. 635-2-11:**

ALL PULL BOXES SHALL BE TRAFFIC-RATED, FIBERGLASS REINFORCED CONCRETE SHALL BE "QUAZITE COMPOSITE". ALL PULL BOXES SHALL BE USED FOR A SIGNLE, DEDICATED FUNCTION AND SHALL NOT CARRY CABLES OF VARYING FUNCTION. A PULL BOX WITH A MINIMUM COVER MEASUREMENT OF 24X36X24 SHALL BE USED ON INTERCONNECT BETWEEN CABINETS. COVER SHALL BE MARKED TRAFFIC SIGNAL. A PULL BOX WITH A MINIMUM COVER MEASUREMENT OF 30X60 RECTANGULAR OR 36" ROUND COVER SIZE SHALL BE USED ON THE INTERCONNECT AT CABINETS; COVER SHALL BE MARKED TRAFFIC SIGNAL. A PULL BOX WITH A MINIMUM COVER MEASUREMENT OF 13X24X12 SHALL BE USED ON TRAFFIC SIGNALS AND STREET LIGHTS. COVER SHALL BE MARKED TRAFFIC SIGNAL, STREET LIGHT, OF TRAFFIC SIGNAL INTERCONNECT.

**PAY ITEM NO. 639-1-122 AND 715-7-12:**


ROADWAY STREET LIGHTING ELECTRIC SERVICE SHALL BE MOUNTED ON TWO (2) - EIGHT (8) INCH X EIGHT (8) INCH X TWELVE (12) FOOT CONCRETE SERVICE POLES. A 100 AMP 600 VAC RATED NEMA 3R NON-FUSIBLE SINGLE THROW SAFETY SWITCH DISCONNECT (SQUARE D - HU363RB) SHALL BE INSTALLED ON THE CONCRETE SERVICE POLES, ON THE LINESIDE OF THE METER SOCKET. ALL ROADWAY STREET LIGHTING ELECTRICAL SERVICES SHALL BE METERED. METER SOCKET SHALL BE A 200 AMP LEVER BYPASS NEMA 3R ENCLOSURE RATED FOR OUTDOOR USE (MILBANK UAP9551-X-QG-HSP). METER SOCKET SHALL BE INSTALLED ON THE LOAD SIDE OF SAFETY SWITCH DISCONNECT ON THE CONCRETE SERVICE POLES. ROADWAY STREET LIGHTING LOAD CENTER ENCLOSURE CABINET SHALL BE INSTALLED ON THE CONCRETE SERVICE POLES. ROADWAY STREET LIGHTING LOAD CENTER ENCLOSURE CABINET SHALL BE STAINLESS STEEL NEMA 3R RAINPROOF ENCLOSURE AND APPROVED BY VILLAGE OF ESTERO.

**PAY ITEM NO. 715-1-12:**

SHALL INCLUDE CONDUCTORS AS INDICATED IN THE PLANS AND THE STANDARD PLANS. PAYMENT SHALL BE MADE ON LINEAR FOOT OF SINGLE CONDUCTOR. CONDUCTOR INSULATION SHALL BE THWN-2. USE NIGHTMASTER PART #D8903-SQH63-V06 AND REFER TO VILLAGE OF ESTERO SPECIFICATIONS.

**FP&L 240V PHASE TO PHASE 2 WIRE:**

- I. ALL LUMINAIRES SHALL HAVE THREE (3) #10 AWG (THHN/THWN-2) BLACK, BLACK, AND GREEN WIRE.
- II. ALL WIRING FROM THE LOAD CENTER AND FROM POLE TO POLE SHALL HAVE THREE (3) #6 AWG OR GREATER (THHN/THWN-2) BLACK, BLACK, AND GREEN WIRE.

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	JEI PROJECT ID	
						LEE	20203048-000	

*PAY ITEM NOTES*

**POLE DATA**

POLE NO.	CIRCUIT	STATION	TILT	DIST. OR ARM	LUMINAIRE WATTAGE	MOUNTING HEIGHT	POLE SETBACK	PAY ITEM
100	1	11+72.50	0°	0	85.3	28'	17.54'	715-4-11
101	1	12+88.00	0°	0	85.3	28'	65.17'	715-4-11
102	1	13+18.00	0°	0	85.3	28'	22.00'	715-4-11
103	1	14+00.00	0°	0	85.3	28'	47.64'	715-4-11
104	1	15+38.00	0°	0	85.3	28'	22.00'	715-4-11
105	1	16+88.00	0°	0	85.3	28'	30.50'	715-4-11
106	1	18+38.00	0°	0	85.3	28'	30.50'	715-4-11
107	1	19+50.00	0°	0	85.3	28'	30.50'	715-4-11
108	1	20+62.00	0°	0	85.3	28'	23.00'	715-4-11
109	1	21+98.00	0°	0	85.3	28'	23.00'	715-4-11
110	1	23+18.00	0°	0	85.3	28'	23.00'	715-4-11
111	1	24+62.00	0°	0	85.3	28'	25.57'	715-4-11
112	2	25+85.00	0°	0	85.3	28'	22.00'	715-4-11
113	2	27+20.00	0°	0	85.3	28'	22.47'	715-4-11
114	2	28+88.00	0°	0	85.3	28'	22.00'	715-4-11
115	2	30+18.00	0°	0	85.3	28'	26.00'	715-4-11
116	2	31+78.00	0°	0	85.3	28'	31.50'	715-4-11
117	2	33+38.00	0°	0	85.3	28'	31.50'	715-4-11
118	2	34+88.00	0°	0	85.3	28'	31.50'	715-4-11
119	2	36+38.00	0°	0	85.3	28'	31.50'	715-4-11
120	2	37+88.00	0°	0	85.3	28'	31.50'	715-4-11
121	2	39+38.00	0°	0	85.3	28'	31.50'	715-4-11
122	2	40+74.00	0°	0	85.3	28'	31.50'	715-4-11
123	2	42+20.00	0°	0	85.3	28'	28.00'	715-4-11
124	2	43+92.00	0°	0	85.3	28'	31.50'	715-4-11
125	2	45+28.00	0°	0	85.3	28'	36.00'	715-4-11
126	2	46+88.00	0°	0	85.3	28'	40.00'	715-4-11
127	2	48+44.00	0°	0	85.3	28'	41.00'	715-4-11
128	2	49+84.00	0°	0	85.3	28'	41.00'	715-4-11
129	1	65+20.00	0°	0	85.3	28'	32.00'	715-4-11
130	1	66+30.00	0°	0	85.3	28'	40.00'	715-4-11
131	1	67+30.00	0°	0	85.3	28'	62.41'	715-4-11
132	1	67+40.00	0°	0	85.3	28'	34.00'	715-4-11
133	1	68+61.00	0°	0	85.3	28'	34.00'	715-4-11
134	1	69+09.00	0°	0	85.3	28'	42.93'	715-4-11
135	1	69+84.00	0°	0	85.3	28'	34.00'	715-4-11
136	1	70+53.00	0°	0	85.3	28'	32.59'	715-4-11

**POLE DATA NOTES:**

POLE SETBACK REFERS TO DISTANCE TO CENTER OF POLE UP RIGHT.

<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>				REVISIONS		DATE	DESCRIPTION			<p align="center"><b>JOHNSON ENGINEERING</b>                  LEAH M. HOLMES • P.E. LICENSE NO. 85359                  JOHNSON ENGINEERING, INC.                  2122 JOHNSON STREET • FORT MYERS, FL 33902                  CERTIFICATE OF AUTHORIZATION NO. 642</p>	<p align="center"><b>VILLAGE OF ESTERO PUBLIC WORKS</b></p> <table border="1"> <tr> <td>ROAD NO.</td> <td>COUNTY</td> <td>JEI PROJECT ID</td> </tr> <tr> <td> </td> <td>LEE</td> <td>20203048-000</td> </tr> </table>			ROAD NO.	COUNTY	JEI PROJECT ID		LEE	20203048-000	<p align="center"><b>POLE DATA</b></p>	SHEET NO. L-7
REVISIONS																					
DATE	DESCRIPTION																				
ROAD NO.	COUNTY	JEI PROJECT ID																			
	LEE	20203048-000																			
DATE: 7/13/2023 12:01:03 PM Default																					
U:\Projects\20203048-000\lighting\PLDRTL01.dgn																					

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## LIGHTING FIXTURE SCHEDULE

SYMBOL	MANUFACTURER	ORDER INFORMATION					REMARKS
		PREVIOUS INSTALL	LAMP	LUMINAIRE CATALOG NUMBER	VOLTAGE	MOUNTING	
A	CYCLONE *		85.3 W LED*	* CY55P1A-FGC-T2HS-P60-30K **	240	POLE	CYCLONE LIGHTING- DOMIA LED STREET LIGHTING. PROPOSED POLE: 28-FT MOUNTING HEIGHT WITH A 6-FT DECORATIVE ARM AND HOUSE SIDE SHIELDS. THERMOSETTING POLYESTER POWDER COAT PAINTED BRONZE ALUMINUM POLE . ATTACHED TO A CONCRETE FOUNDATION WITH BREAKAWAY BOLTS. PROPOSED LAYOUT: ONE SIDE AT OR BEYOND THE CLEAR ZONE PER PLANS

\* NOTE: OTHER APPROVED EQUAL, SUBJECT TO ENGINEER AND VILLAGE OF ESTERO APPROVAL, AS APPLICABLE.  
 \*\*NOTE: HOUSE SHIELDS

### CONVENTIONAL LIGHTING DESIGN CRITERIA

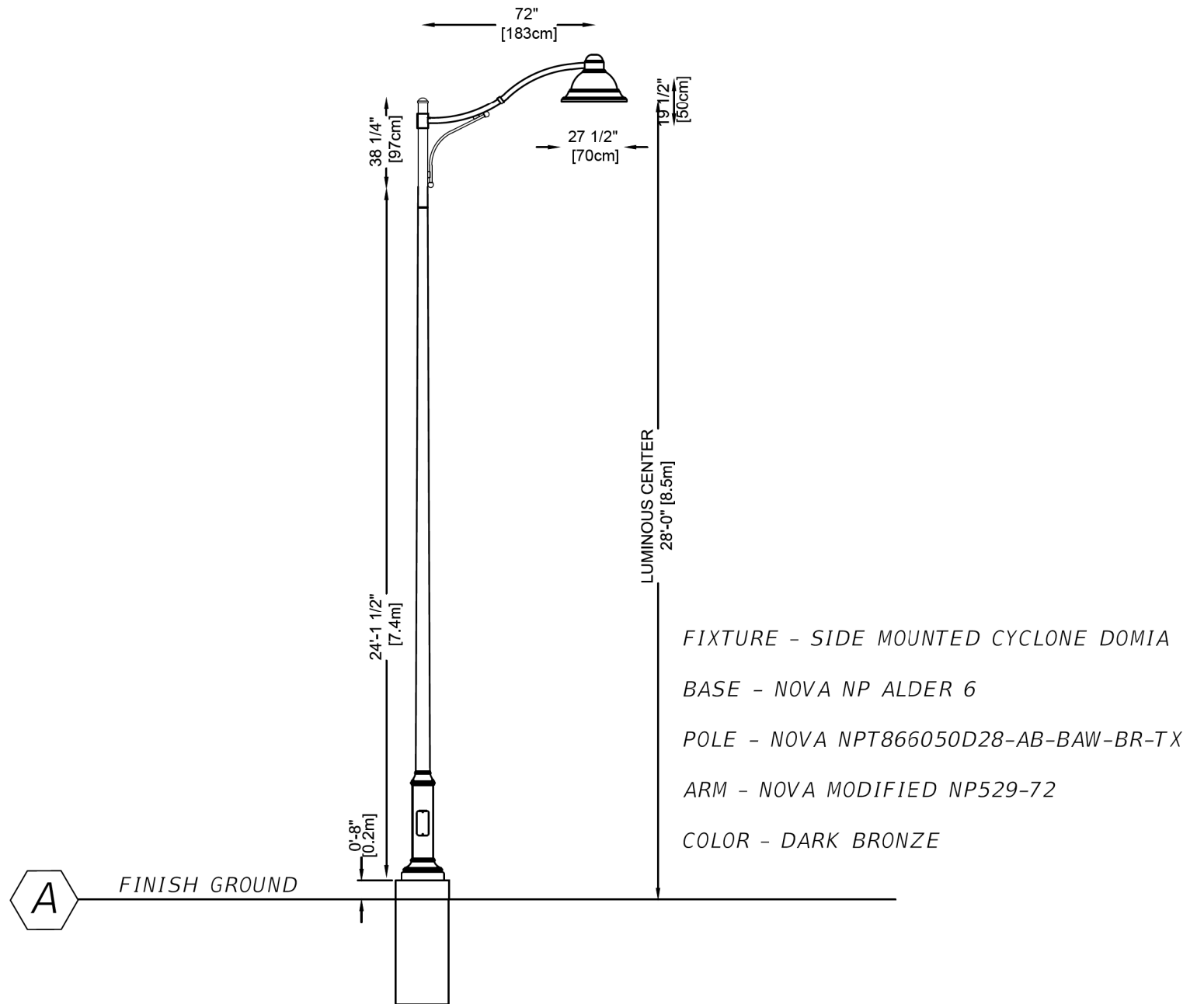
Average Initial Intensity: 0.8 foot candle  
 Uniformity Ratio Avg./Min: 4:1 Or Less    Max./Min. 10:1 Or Less  
 Wind Speed: 160 MPH

### LEGEND

#### SYMBOLS

#### DESCRIPTION

- LED LUMINAIRE. POLE MOUNTING HEIGHT 28 FT. (VILLAGE OF ESTERO)
- SCHEDULE 40 PVC CONDUIT WITH XLP / USE CONDUCTORS INSIDE (CONDUIT AND CONDUCTOR SIZE AS SHOWN ON PLAN SHEETS).
- SCHEDULE 80 PVC CONDUIT, DIRECTIONAL BORED UNDER PAVEMENT WITH XLP / USE CONDUCTORS INSIDE (CONDUIT AND CONDUCTOR SIZE AS SHOWN ON PLAN SHEETS). EXTEND CONDUIT BEYOND EDGE OF PAVEMENT TO PULL BOXES.
- PULL BOX. FOR SPECIFICATIONS SEE LEE COUNTY OR THE VILLAGE OF ESTERO STANDARDS, AS APPLICABLE.
- DISTRIBUTION POINT. FOR REQUIREMENTS SEE INDEX NO. 639-001 OF FDOT STANDARD PLANS, OR VILLAGE OF ESTERO STANDARDS , AS APPLICABLE.




REVISIONS				<b>JOHNSON ENGINEERING</b> <small>LEAH M. HOLMES • P.E. LICENSE NO. 85359                  JOHNSON ENGINEERING, INC.                  2122 JOHNSON STREET • FORT MYERS, FL 33902                  CERTIFICATE OF AUTHORIZATION NO. 642</small>	VILLAGE OF ESTERO PUBLIC WORKS			<h2 style="margin: 0;">POLE DATA AND LEGEND</h2>	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	JEI PROJECT ID		L-8
						LEE	20203048-000		

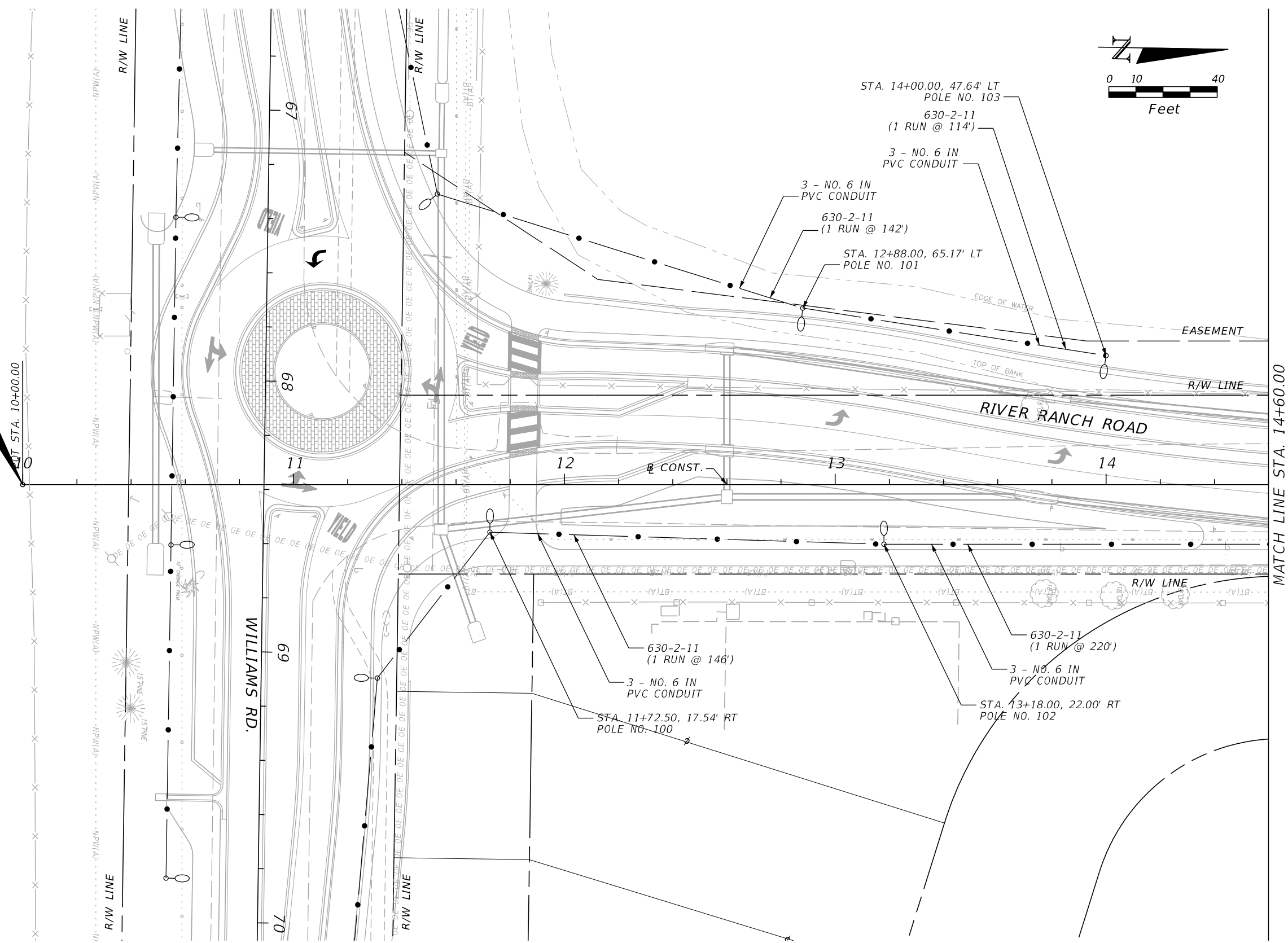
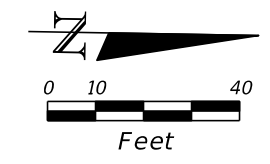


CIRCUIT DATA							
LOAD CENTER	CIRCUIT	OUTPUT VOLTAGE (VOLTS)	PHASE	BRANCH BREAKER SIZE	MAIN BREAKER SIZE	DESIGN LOAD (KVA)	DEMAND LOAD (KVA)
LC	1	240V	1	40A/2P	60A/2P	1.6	2.0
	2	240V	1	40A/2P		1.6	2.0
<b>TOTAL</b>						<b>3.2</b>	<b>4.0</b>

\* (20 AMP LOAD RATING)  
 \* (100 AMP LOAD RATING)  
 SERVICE WIRE - #2 AWG IN 2" GALVANIZED CONDUIT

REVISIONS				 LEAH M. HOLMES • P.E. LICENSE NO. 85359 JOHNSON ENGINEERING, INC. 2122 JOHNSON STREET • FORT MYERS, FL 33902 CERTIFICATE OF AUTHORIZATION NO. 642	VILLAGE OF ESTERO PUBLIC WORKS			<b>SERVICE POINT DETAILS</b>	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	JEI PROJECT ID		L-9
						LEE	20203048-000		

BEGIN PROJECT  
STA. 10+00.00



MATCH LINE STA. 14+60.00

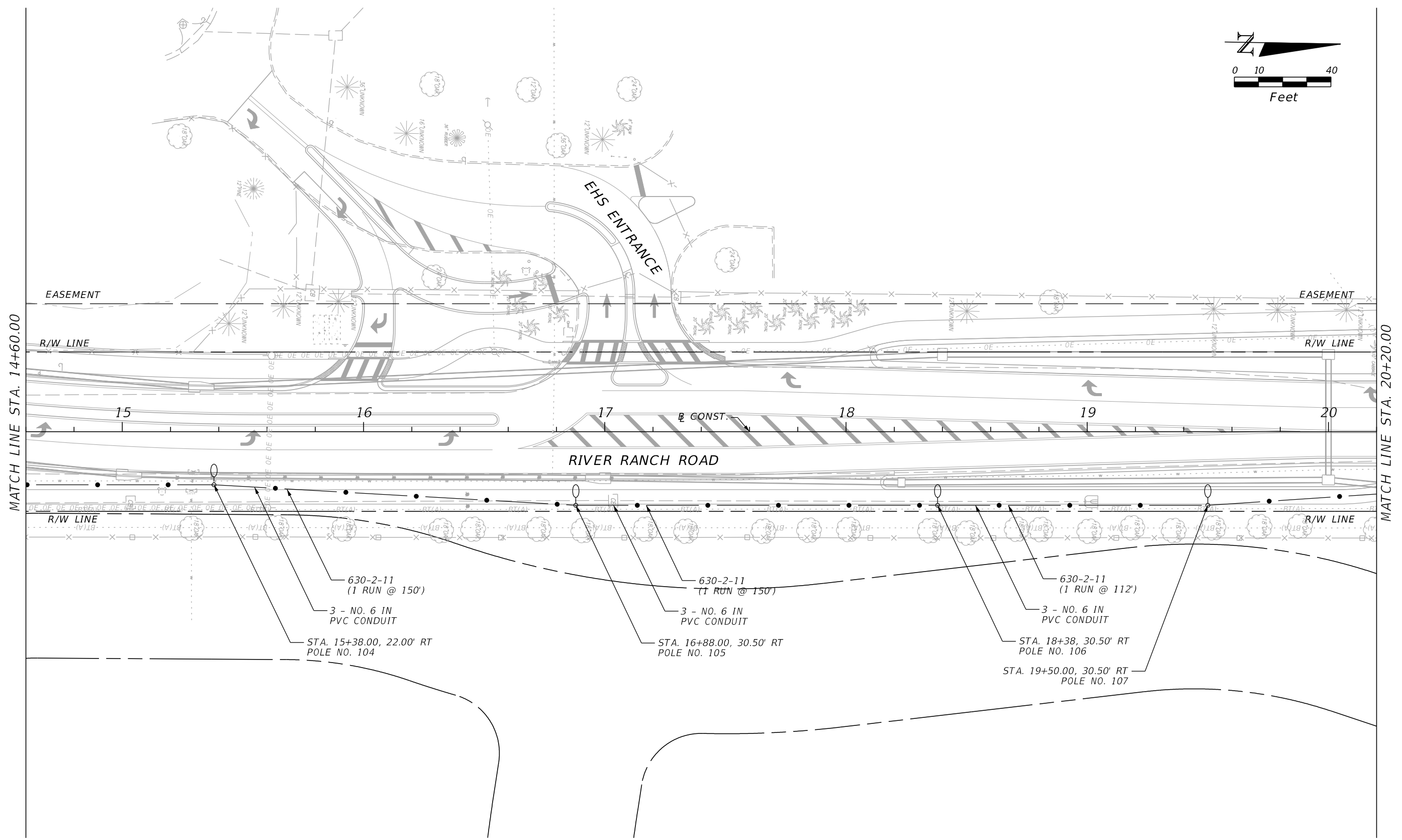
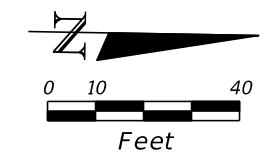
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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VILLAGE OF ESTERO PUBLIC WORKS		
ROAD NO.	COUNTY	JEI PROJECT ID
	LEE	20203048-000

**LIGHTING PLAN**  
**RIVER RANCH ROAD**  
**ST. 10+00.00 TO STA. 14+60.00**

SHEET NO.  
L-10



MATCH LINE STA. 14+60.00

MATCH LINE STA. 20+20.00

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

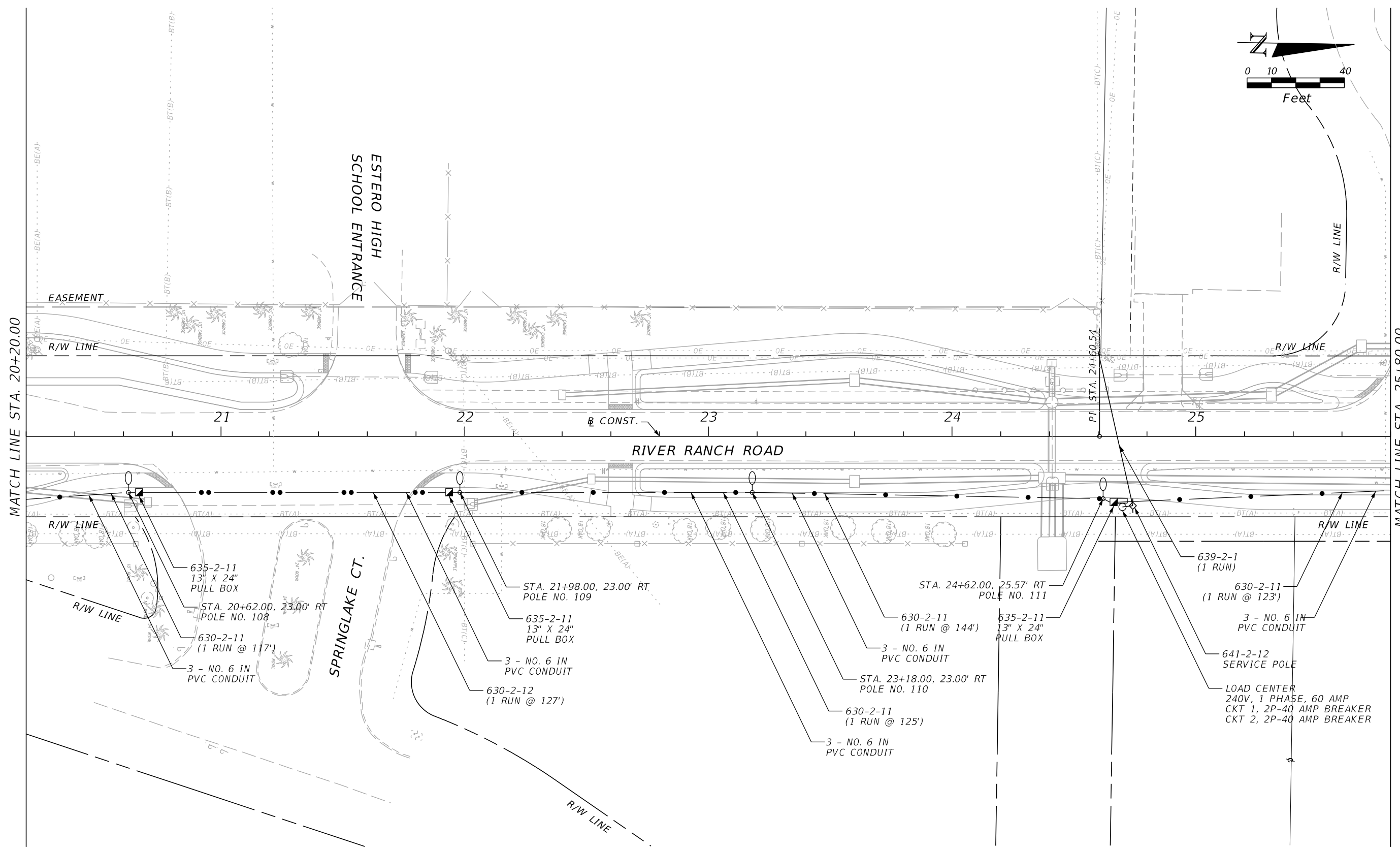
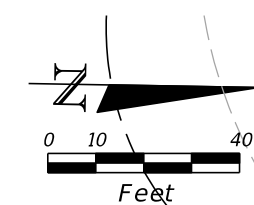
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VILLAGE OF ESTERO PUBLIC WORKS		
ROAD NO.	COUNTY	JEI PROJECT ID
	LEE	20203048-000

**LIGHTING PLAN**  
**RIVER RANCH ROAD**  
**ST. 14+60.00 TO STA. 20+20.00**

SHEET NO.  
L-11

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

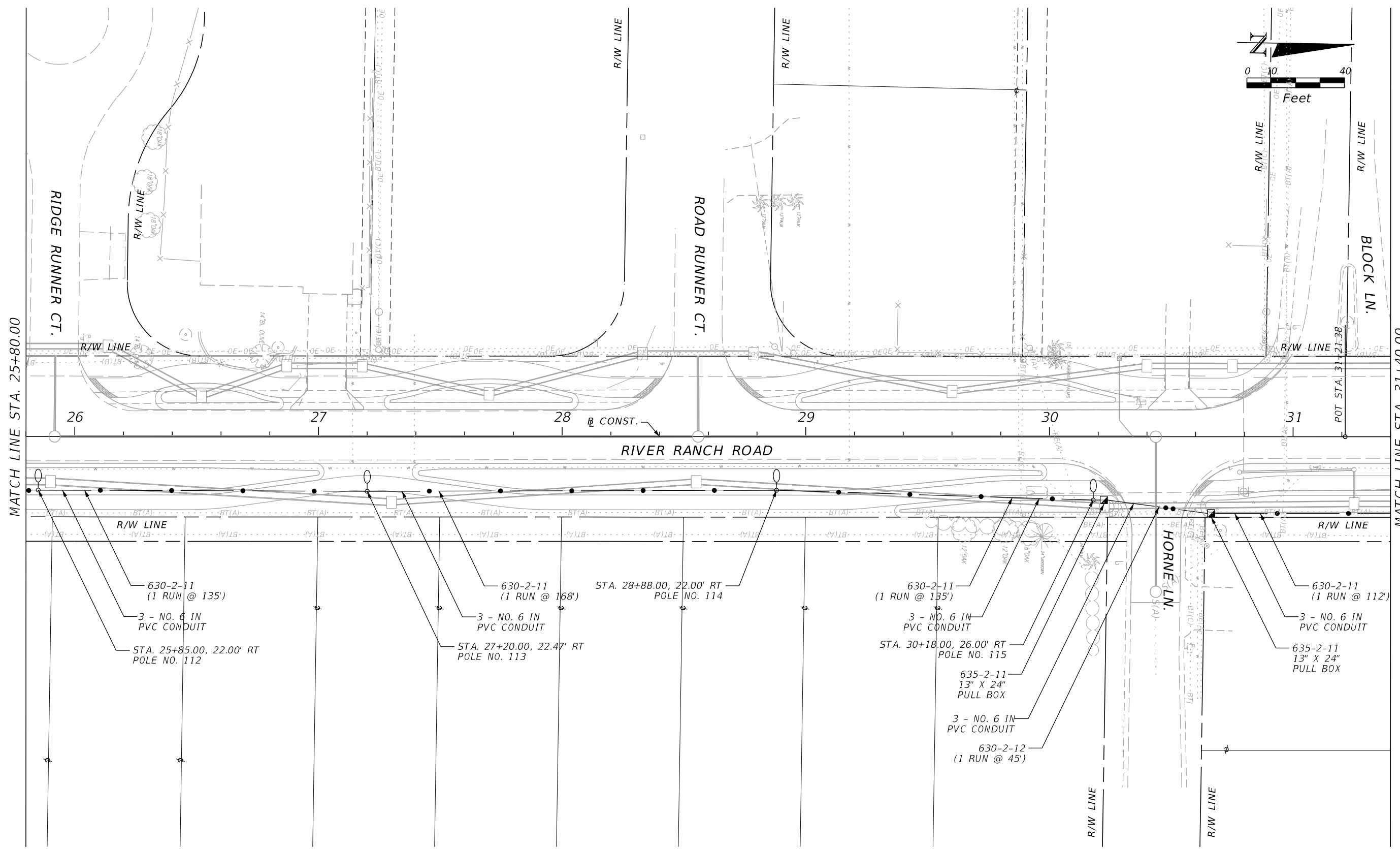
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VILLAGE OF ESTERO PUBLIC WORKS		
ROAD NO.	COUNTY	JEI PROJECT ID
	LEE	20203048-000

**LIGHTING PLAN**  
**RIVER RANCH ROAD**  
**ST. 20+20.00 TO STA. 25+80.00**

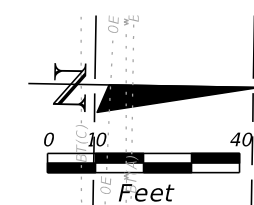
SHEET NO.  
**L-12**

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MATCH LINE STA. 25+80.00

MATCH LINE STA. 31+40.00



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

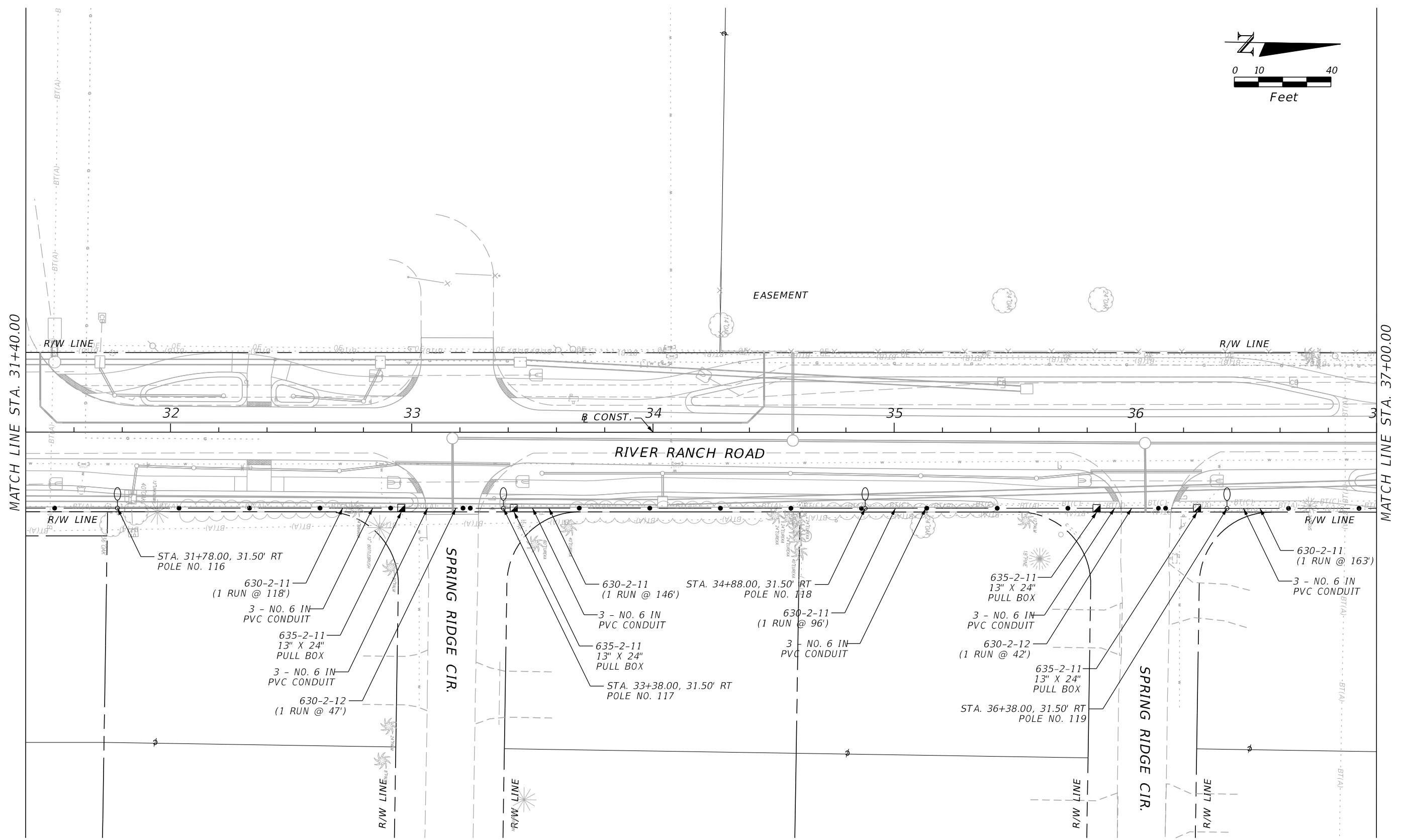
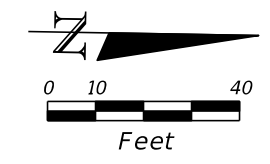
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 CERTIFICATE OF AUTHORIZATION NO. 642

VILLAGE OF ESTERO PUBLIC WORKS		
ROAD NO.	COUNTY	JEI PROJECT ID
	LEE	20203048-000

**LIGHTING PLAN**  
**RIVER RANCH ROAD**  
**ST. 25+80.00 TO STA. 31+40.00**

SHEET NO.  
**L-13**

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

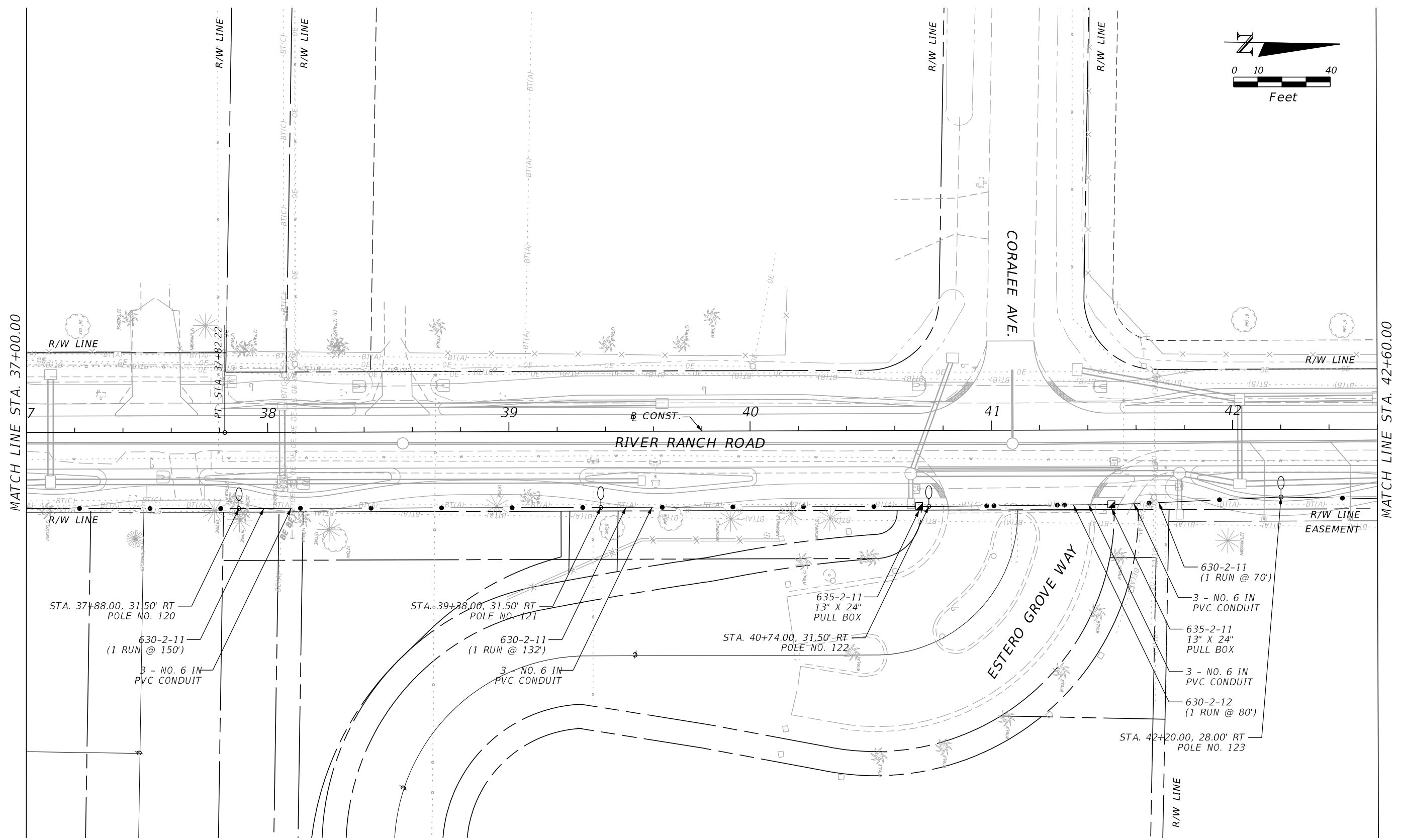
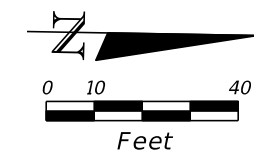
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VILLAGE OF ESTERO PUBLIC WORKS		
ROAD NO.	COUNTY	JEI PROJECT ID
	LEE	20203048-000

**LIGHTING PLAN**  
**RIVER RANCH ROAD**  
**ST. 31+40.00 TO STA. 37+00.00**

SHEET NO.  
**L-14**

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

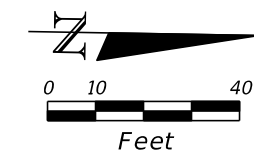
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VILLAGE OF ESTERO PUBLIC WORKS		
ROAD NO.	COUNTY	JEI PROJECT ID
	LEE	20203048-000

**LIGHTING PLAN**  
**RIVER RANCH ROAD**  
**ST. 37+00.00 TO STA. 42+60.00**

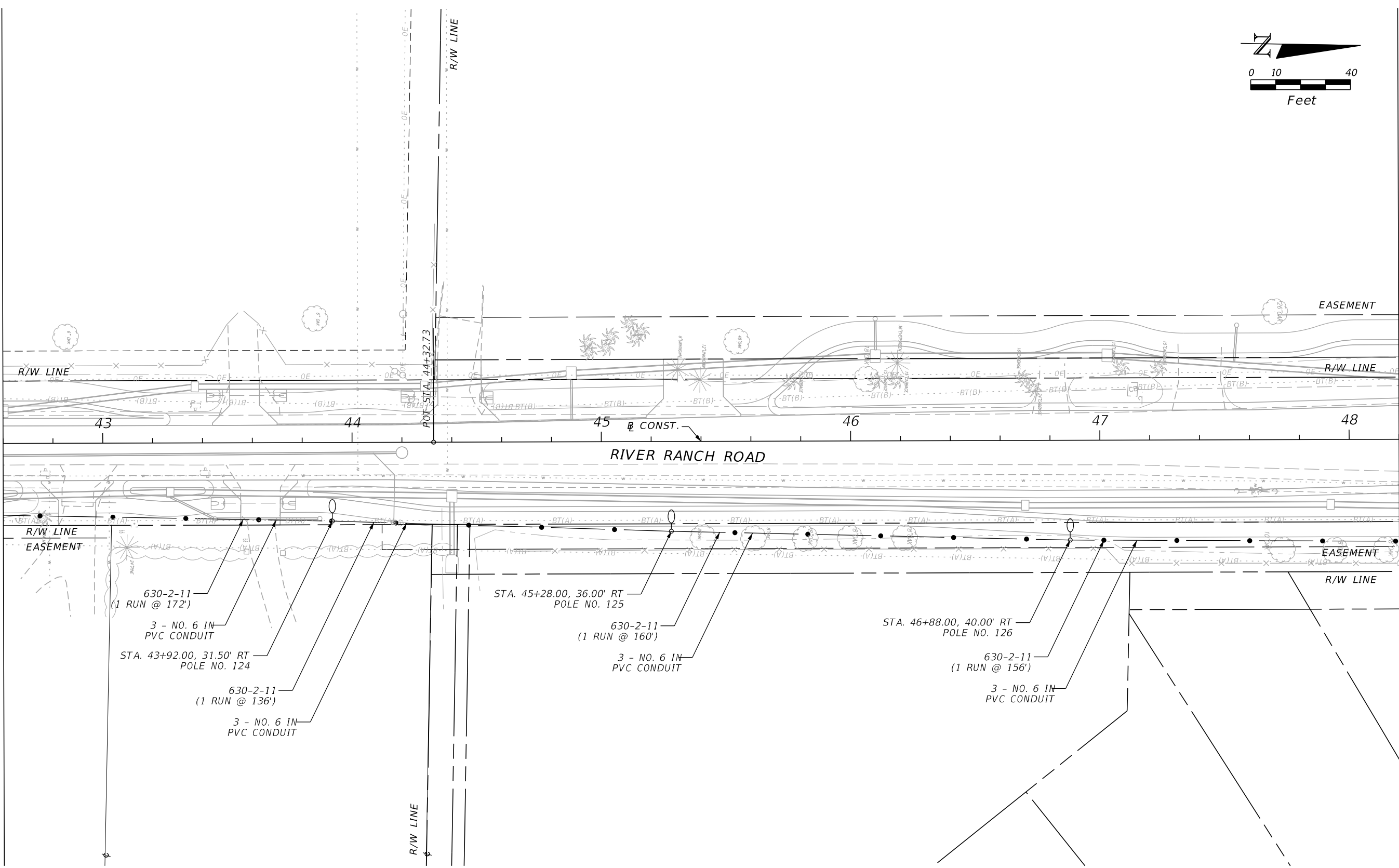
SHEET NO.  
**L-15**

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MATCH LINE STA. 42+60.00

MATCH LINE STA. 48+20.00



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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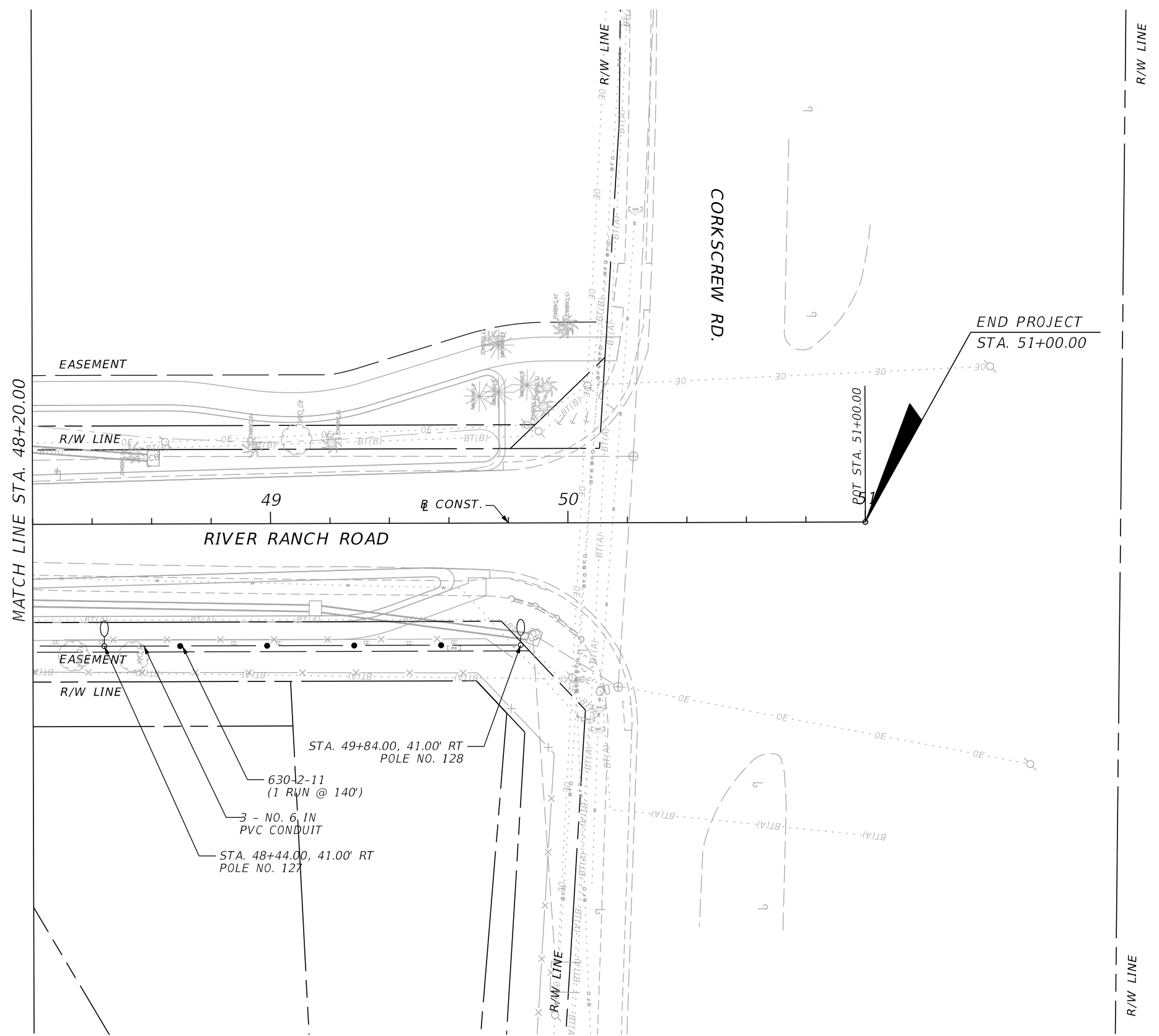
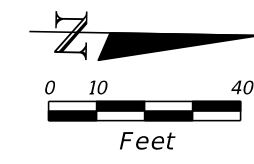
VILLAGE OF ESTERO PUBLIC WORKS		
ROAD NO.	COUNTY	JEI PROJECT ID
	LEE	20203048-000

**LIGHTING PLAN**  
**RIVER RANCH ROAD**  
**ST. 42+60.00 TO STA. 48+20.00**

SHEET NO.
L-16

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MATCH LINE STA. 48+20.00

END PROJECT  
STA. 51+00.00

BPT STA. 51+00.00

R/W LINE

R/W LINE

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

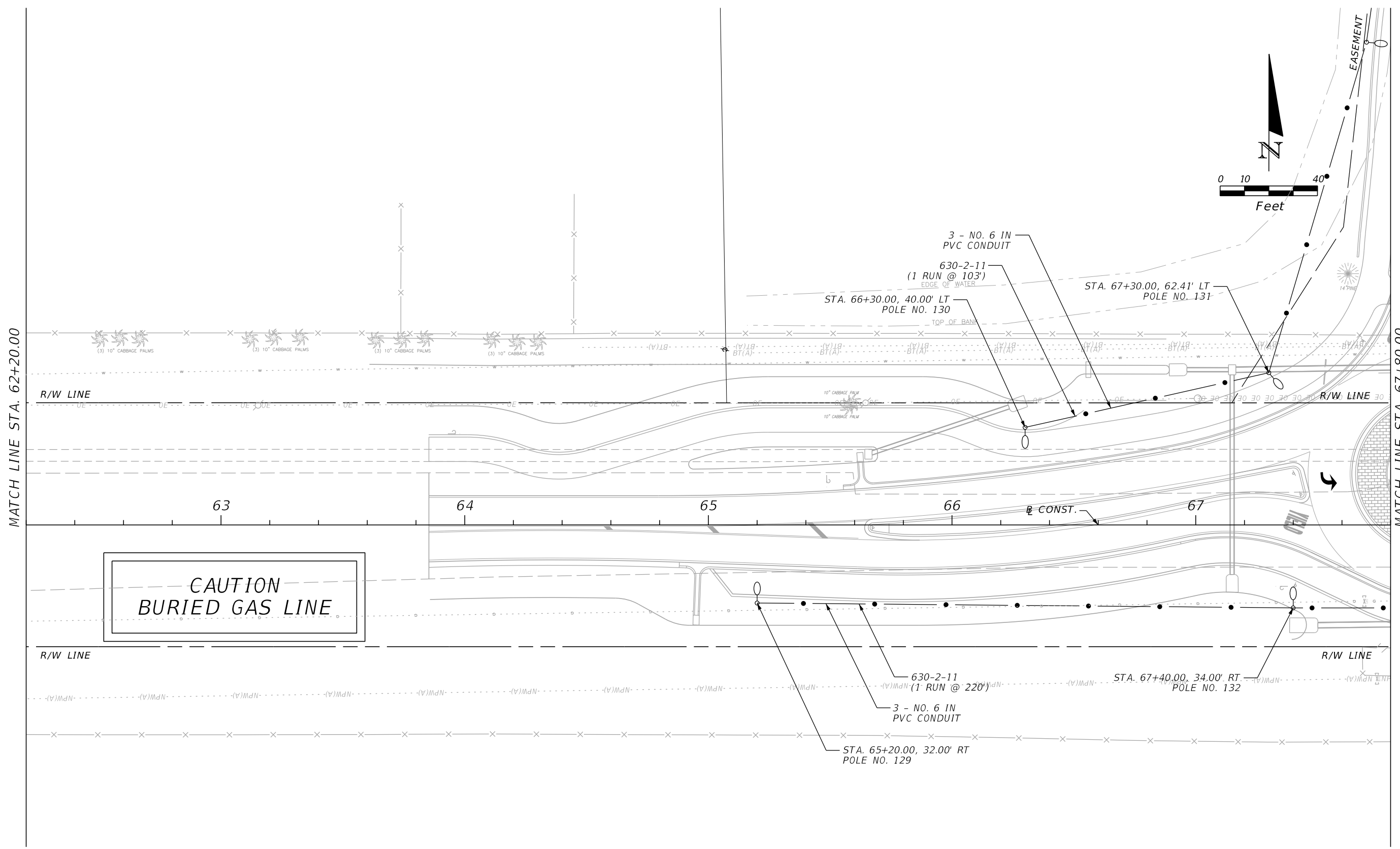
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VILLAGE OF ESTERO PUBLIC WORKS		
ROAD NO.	COUNTY	JEI PROJECT ID
	LEE	20203048-000

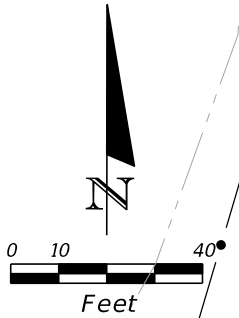
**LIGHTING PLAN**  
**RIVER RANCH ROAD**  
**ST. 48+20.00 TO STA. 51+00.00**

SHEET NO.  
L-17

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CAUTION  
BURIED GAS LINE



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

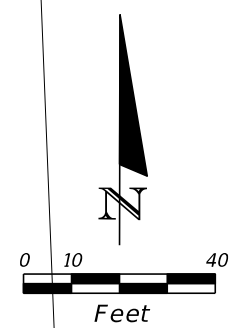
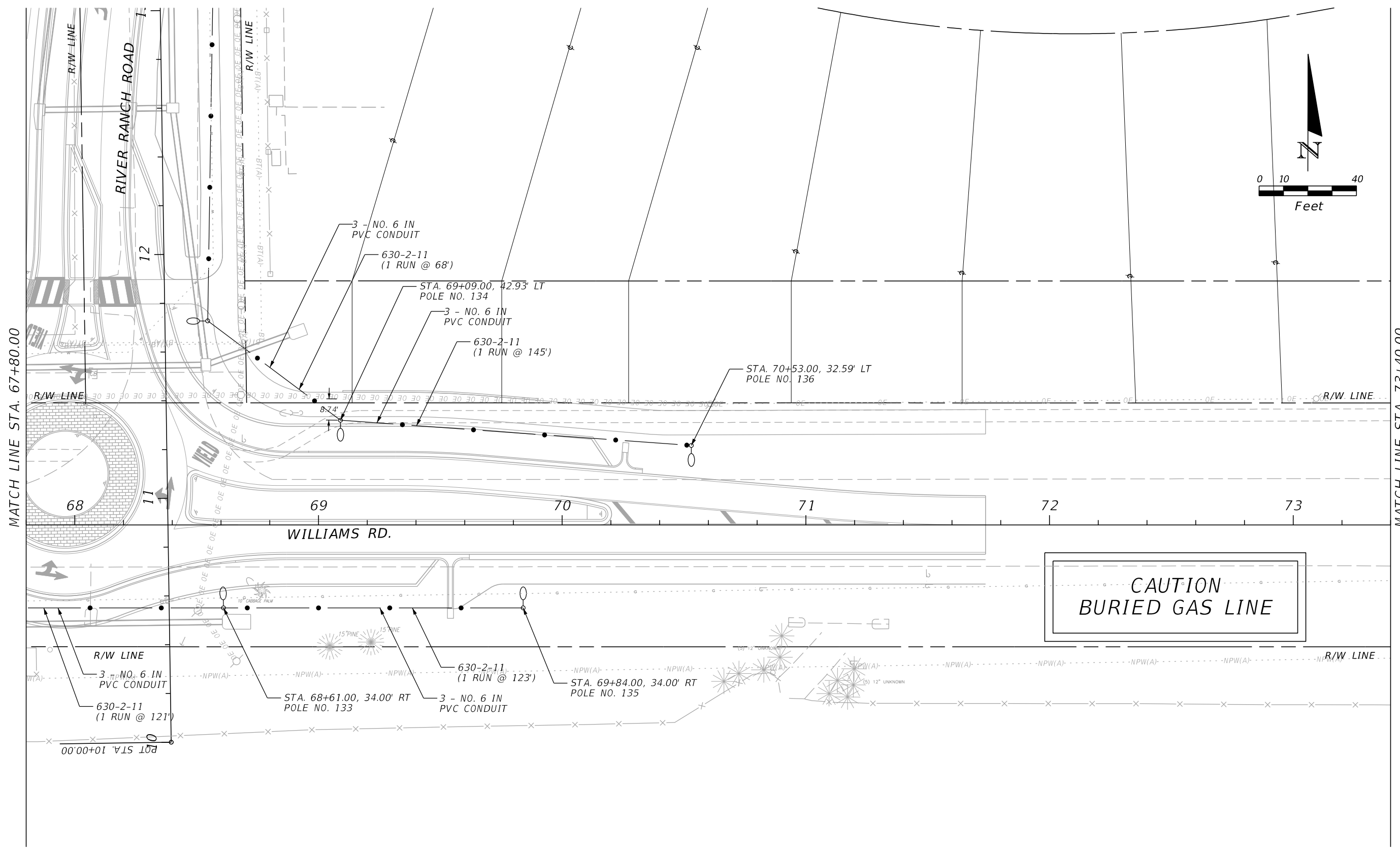
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VILLAGE OF ESTERO PUBLIC WORKS		
ROAD NO.	COUNTY	JEI PROJECT ID
	LEE	20203048-000

**LIGHTING PLAN**  
**WILLIAMS ROAD**  
**STA. 62+20.00 TO STA. 67+80.00**

SHEET NO.  
L-18

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MATCH LINE STA. 67+80.00

MATCH LINE STA. 73+40.00

**CAUTION  
BURIED GAS LINE**

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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VILLAGE OF ESTERO PUBLIC WORKS		
ROAD NO.	COUNTY	JEI PROJECT ID
	LEE	20203048-000

**LIGHTING PLAN  
WILLIAMS ROAD  
STA. 67+80.00 TO STA. 73+40.00**

SHEET NO.  
**L-19**

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