

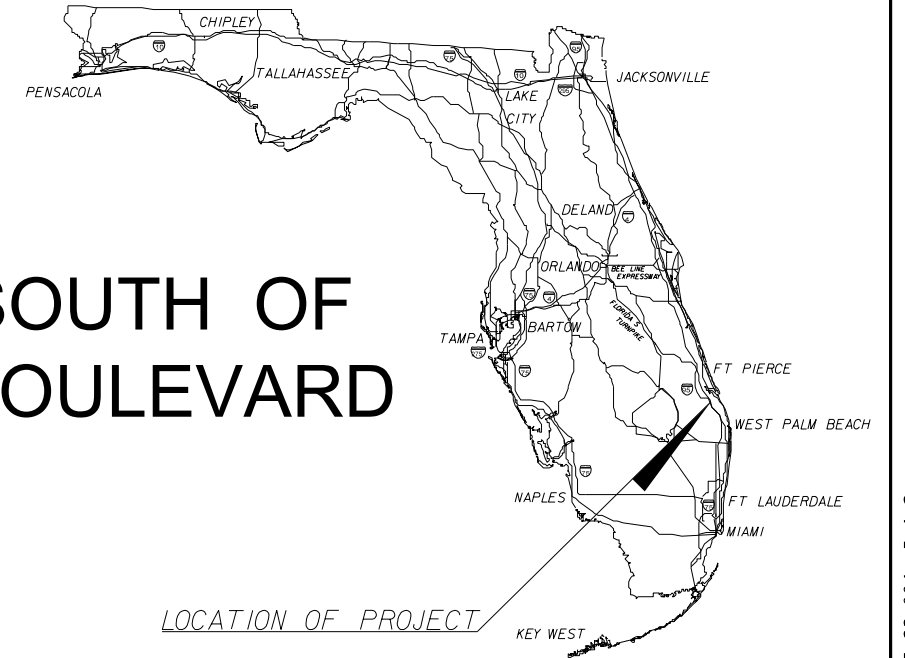
CITY OF PORT ST. LUCIE, FLORIDA
PUBLIC WORKS DEPARTMENT

CONSTRUCTION PLANS
FOR

SW PORT ST. LUCIE BOULEVARD FROM SOUTH OF
SW DARWIN BOULEVARD TO SW GATLIN BOULEVARD

CITY PROJECT #20160085
FDOT PROJECT #431752-4-54-01

LIGHTING PLANS



LOCATION OF PROJECT



INDEX OF LIGHTING PLANS

SHEET NO.	SHEET DESCRIPTION
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L-2	SIGNATURE SHEET
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L-4	LIGHTING NOTES AND POLE DETAIL
L-5	POLE DATA AND LEGEND
L-6	FPL POLE DATA AND LEGEND
L-7 TO L-10	LIGHTING PLANS
L-11	SERVICE POINT/LOAD CENTER DETAILS
L-12	SPREAD FOOTING FOUNDATION DETAILS

LIGHTING PLANS
ENGINEER OF RECORD:

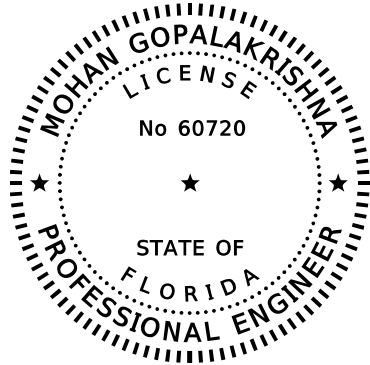
MOHAN GOPALAKRISHNA, P.E. 60720
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2041 VISTA PARKWAY, SUITE 101
WEST PALM BEACH, FLORIDA 33411
PHONE: (561) 253-9550
FAX: (561) 253-9551

CITY OF PORT ST. LUCIE
PROJECT MANAGER:

HEATH STOCTON, P.E.

FISCAL YEAR	SHEET NO.
20	L-1

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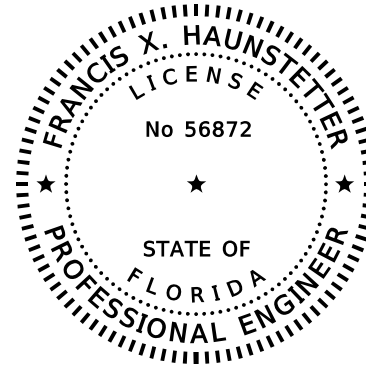
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Mohan Gopalakrishna, P.E. No. 60720

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	TABULATION OF QUANTITIES
L - 4	LIGHTING NOTES AND POLE DETAIL
L - 5	POLE DATA AND LEGEND
L - 6	FPL POLE DATA AND LEGEND
L - 7 TO L - 10	LIGHTING PLANS
L - 11	SERVICE POINT/LOAD CENTER DETAILS



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LIGHTING PLANS

SHEET NO.	SHEET DESCRIPTION
L - 2	SIGNATURE SHEET
L - 12	SPREAD FOOTING FOUNDATION DETAILS

REVISIONS						American Consulting Engineers of Florida, LLC 2041 Vista Parkway, Suite 101 West Palm Beach, Florida 33411 Phone: (561) 253-9550 Fax: (561) 253-9551 Certificate of Authorization No. 9302 Mohan Gopalakrishna, P.E. No. 60720	CITY OF PORT ST. LUCIE 121 S.W. PORT ST. LUCIE BLVD. PORT ST. LUCIE, FL 34984	SIGNATURE SHEET	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				L-2
						ROAD: SW PORT ST. LUCIE BLVD. COUNTY: ST. LUCIE			



TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS								TOTAL THIS SHEET		GRAND TOTAL	
			L-7		L-8		L-9		L-10		PLAN	FINAL	PLAN	FINAL
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL				
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	588		981		1043		310		2922		2922	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	102		180		120				402		402	
635-2-11	PULL & SPLICE BOX, F&I, 13" X 24" COVER SIZE	EA	9		9		7		3		28		28	
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER FURNISHED BY CONTRACTOR	AS	1								1		1	
715-1-12	LIGHTING CONDUCTORS, F & I, INSULATED, NO. 6	LF	2641		3942		3885		1116		11584		11584	
* 715-1-60	LIGHTING CONDUCTORS, REMOVE & DISPOSE, CONTRACTOR OWNS	LF	486		1121		1120		560		3287		3287	
** 715-4-11	LIGHT POLE COMPLETE, F&I, STANDARD POLE, STANDARD FOUNDATION, 30' MOUNTING HEIGHT	EA	4		7		6		3		20		20	
715-4-70	LIGHT POLE COMPLETE, REMOVE POLE AND FOUNDATION	EA	3		5		5		1		14		14	
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE (BASE MOUNTED)	EA	1								1		1	
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, CONVENTIONAL	EA	4		7		6		3		20		20	

* 715-1-60 TO INCLUDE REMOVAL OF EXISTING PULL BOXES. EXISTING CONDUIT TO BE ABANDONED IN PLACE AND ENDS CAPPED

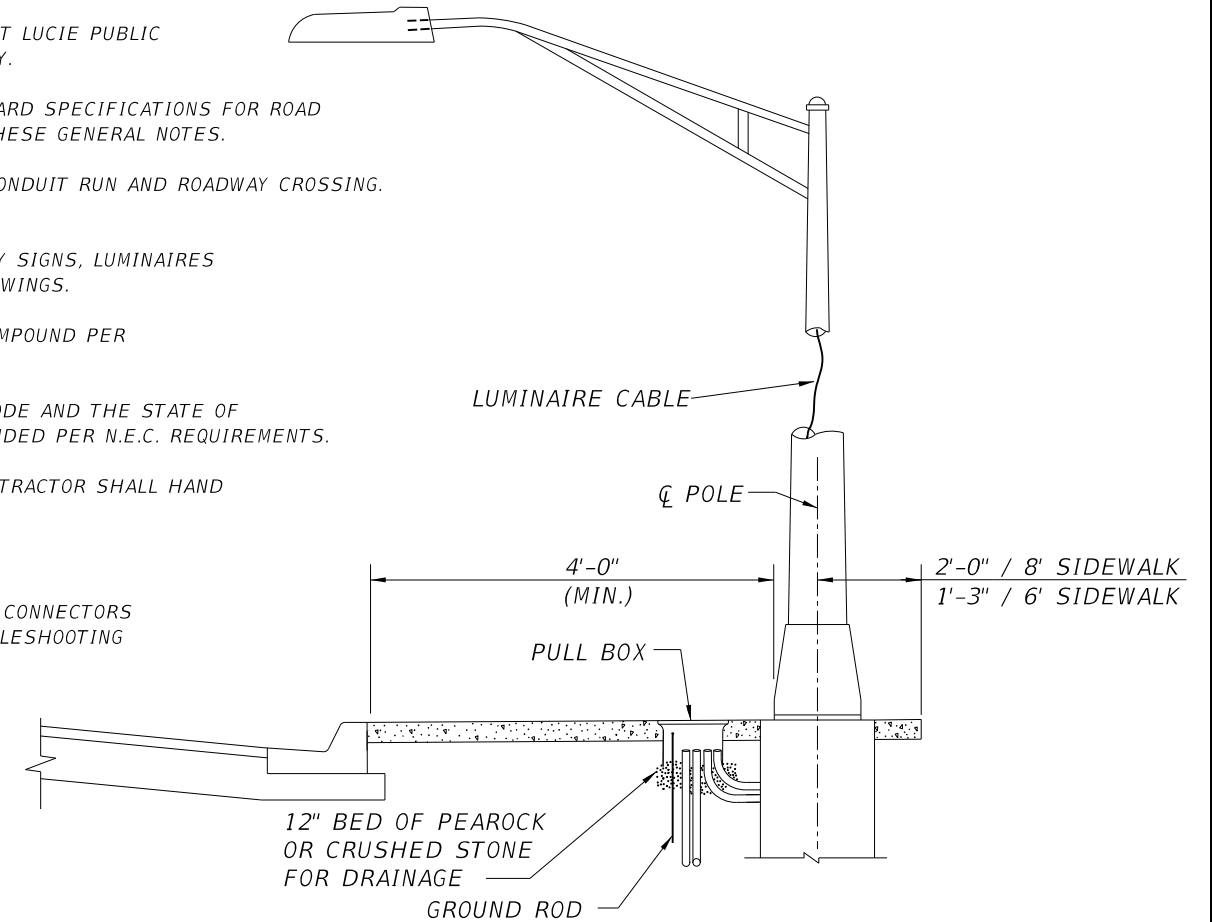
** 715-4-11 LIGHT POLE COMPLETE SHALL INCLUDE FURNISH AND INSTALL COSTS OF ANY SPREAD FOOTER FOUNDATIONS THAT MAY BE NEEDED WHEN UNDERGROUND UTILITIES ARE ENCOUNTERED. DETAIL INCLUDED IN THIS PLAN SET. ALUMINUM LIGHT POLES SHALL HAVE GALVANIZED FINISH (NO PAINT).

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				ROAD	COUNTY	L-3
									SW PORT ST. LUCIE BLVD.	ST. LUCIE	



LIGHTING GENERAL NOTES:

1. THE MAINTAINING AGENCY FOR THE ROADWAY LIGHTING SYSTEM (PROPOSED ALONG EAST SIDE OF PSL BLVD) IS CITY OF PORT ST. LUCIE.
2. LOCATIONS OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO EXCAVATION.
3. THE CONTRACTOR IS TO USE CAUTION WHEN WORKING IN OR AROUND ALL EXISTING UTILITIES, INCLUDING OVERHEAD POWER LINES.
4. THE CONTRACTOR SHALL NOTIFY THE CITY OF PORT ST. LUCIE PUBLIC WORKS DEPT. TWO (2) FULL BUSINESS DAYS IN ADVANCE OF ANY WORK TO BE CARRIED OUT AT ANY LIGHTING FACILITY. 772-871-5177
5. MAINTAIN FOUR COMPLETE SETS OF AS-BUILT PLANS INDICATING ALL CHANGES AND DEVIATIONS FROM PROPOSED CONSTRUCTION. USE COLOR PEN OR PENCIL TO MARK CHANGES AT TIME OF EXECUTION.
6. LIGHT POLE AND FOUNDATION SHALL BE LOCATED OUTSIDE OF CONCRETE SIDEWALKS WHERE RIGHT OF WAY PERMITS.
7. INSTALLATION OF PULL BOXES WITHIN THE SIDEWALK SHOULD BE AVOIDED WHENEVER POSSIBLE, BUT IF NECESSARY, SHALL BE APPROVED BY CITY OF PORT ST LUCIE PUBLIC WORKS PRIOR TO WORK BEING CONDUCTED AND SHALL BE FLUSH WITH SIDEWALK. PULL BOXES SHALL NEVER BE PLACED WITHIN SIDEWALK RAMPS OR ROADWAY.
8. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MOST CURRENT VERSION OF FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE MOST RECENT VERSION OF FDOT STANDARD PLANS UNLESS OTHERWISE SPECIFIED IN THE CITY APPROVED DESIGN OR THESE GENERAL NOTES.
9. CONDUCTOR AND/OR CABLE SHALL BE HOUSED IN 2" SCHEDULE 40 CONDUIT AS SHOWN ON APPROVED PLAN SHEETS. PROVIDE ONE SPARE CONDUIT FOR EACH CONDUIT RUN AND ROADWAY CROSSING. EACH SPARE CONDUIT SHALL BE SUPPLIED WITH PULL STRING.
10. 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. CERTIFICATION FOR TESTS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.
11. PULLING INSTRUCTIONS: CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO JACKET AND MEET THE MANUFACTURER'S REQUIREMENTS. USE PULLING COMPOUND PER MANUFACTURER'S REQUIREMENTS. ALL BENDS SHALL NOT BE LESS THAN THE MANUFACTURER'S REQUIREMENTS.
12. ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS OF THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE, THE NATIONAL ELECTRICAL SAFETY CODE AND THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL COMPONENTS SHALL BE PROPERLY GROUNDED AND BONDED PER N.E.C. REQUIREMENTS.
13. IN LOCATIONS WHERE UNDERGROUND UTILITIES ARE IN CLOSE PROXIMITY TO LIGHTING POLES OR CONDUIT RUNS, AS DETERMINED BY THE ENGINEER, THE CONTRACTOR SHALL HAND DIG THE FIRST 4' OF THE HOLE FOUNDATION AND CONDUIT RUN.
14. HAND HOLE COVERS FOR POLES AND TRANSFORMER BASES SHALL BE LOCATED OPPOSITE APPROACHING TRAFFIC.
15. THE WIRES AT THE POLE HAND HOLES AND PULL BOXES SHALL BE LOOPED IN THE POLE AND PULL BOXES WITH SUFFICIENT LENGTH TO COMPLETELY REMOVE CONNECTORS AND SPLICES ONE (1.00) FOOT OUTSIDE THE HAND HOLE AND PULL BOXES TO MAKE CONNECTIONS AND SPLICES ACCESSIBLE FOR CHANGING FUSES AND TROUBLESHOOTING THE SYSTEM.
16. ALL CONDUCTOR AND/OR WIRE CONNECTIONS SHALL BE BUTT SPLICED AND WATERPROOF. WIRE NUTS WILL NOT BE ACCEPTED.
17. EACH POLE SHALL BE EQUIPPED WITH AN ACCESSIBLE FUSE AND FUSE HOLDER WITH PROTECTIVE BOOTS.
18. EACH POLE SHALL BE EQUIPPED WITH A LIGHTNING SURRESTOR THAT IS PROPERLY GROUNDED.
19. A PULL BOX SHALL BE INSTALLED AT EACH POLE LOCATION. PULL BOX SHOULD BE LOCATED 2' MAX FROM POLE UNLESS OTHERWISE DIRECTED BY PROJECT ENGINEER. EACH PULL BOX SHALL BE SUPPLIED WITH A GROUNDING ROD AND EACH POLE SHALL BE PROPERLY GROUNDED.
20. ALL STREET LIGHTING AND PEDESTRIAN LIGHTING PULL BOXES SHALL BE ARMORCAST PRODUCTS COMPANY #A6001946TAPXX12 POLYMER CONCRETE BOX WITH NON-METALLIC LID AND NON-SKID SURFACE. LID MUST BE STAMPED "STREET LIGHTING". BOX DIMENSIONS ARE 13W X 24L X 12H. 20K WITH OPEN BOTTOM. LID MUST BE FASTENED TO BOX.
21. CONTACT SUNSHINE ONE CALL OF FLORIDA AT 811 OR SUNSHINE811.COM AT LEAST TWO (2) FULL BUSINESS DAYS BEFORE DIGGING.
22. THE CONTRACTOR SHALL COORDINATE WITH FLORIDA POWER AND LIGHT TO DETERMINE ELECTRICAL SERVICE FEED LOCATION.
23. ENERGY EFFICIENT LIGHTING TECHNOLOGIES SUCH AS LIGHT EMITTING DIODE (LED) SHALL BE CONSIDERED AND SHOULD BE GIVEN PREFERENCE. INCANDESCENT LIGHTING WILL ONLY BE APPROVED BY THE CITY UNDER UNIQUE CIRCUMSTANCES AND WILL REQUIRE APPROPRIATE JUSTIFICATION SEPARATE FROM PROJECT COST.
24. THE LIGHTING SYSTEM WILL BE MAINTAINED BY THE CITY ONLY AFTER FINAL ACCEPTANCE.
25. ALL LIGHTING PLANS, SUBMITTAL DATA AND LIGHTING SHOP DRAWINGS SHALL BE APPROVED BY CITY OF PORT ST LUCIE PUBLIC WORKS PRIOR TO THEIR USE. NO CHANGES TO THE APPROVED LIGHTING PLAN, EQUIPMENT SPECIFICATIONS OR INSTALLATION DETAILS SHALL BE MADE WITHOUT PRIOR APPROVAL BY CITY OF PORT ST LUCIE PUBLIC WORKS.



POLE DETAIL AT BACK OF SIDEWALK

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








REVISIONS						 American Consulting Engineers of Florida, LLC 2041 Vista Parkway, Suite 101 West Palm Beach, Florida 33411 Phone: (561) 253-9550 Fax: (561) 253-9551 Certificate of Authorization No. 9302 Mohan Gopalakrishna, P.E. No. 60720	 CITY OF PORT ST. LUCIE 121 S.W. PORT ST. LUCIE BLVD. PORT ST. LUCIE, FL 34984	ROAD COUNTY SW PORT ST. LUCIE BLVD. ST. LUCIE		LIGHTING NOTES AND POLE DETAIL	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					L-4	

POLE DATA

POLE NO.	CIRCUIT	STATION	DIST. OR ARM	LUMINAIRE WATTAGE	MOUNTING HEIGHT	POLE SETBACK	PAY ITEM
1	A-1	249+80	12'	204	30'	45' RT	715-4-11
2	A-1	250+92	12'	204	30'	47' RT	715-4-11
3	A-2	253+10	12'	204	30'	47' RT	715-4-11
4	A-2	255+00	12'	204	30'	43' RT	715-4-11
5	A-2	256+27	12'	204	30'	49' RT	715-4-11
6	A-2	257+60	12'	204	30'	49' RT	715-4-11
7	A-2	258+87	12'	204	30'	52' RT	715-4-11
8	A-2	260+41	12'	204	30'	49' RT	715-4-11
9	A-2	262+23	12'	204	30'	49' RT	715-4-11
10	A-2	263+21	12'	204	30'	43' RT	715-4-11
11	A-2	265+20	12'	204	30'	49' RT	715-4-11
12	A-2	267+21	12'	204	30'	49' RT	715-4-11
13	A-2	270+36	12'	204	30'	45' RT	715-4-11
14	A-2	271+73	12'	204	30'	45' RT	715-4-11
15	A-2	273+49	12'	204	30'	49' RT	715-4-11
16	A-2	275+55	12'	204	30'	48' RT	715-4-11
17	A-2	277+02	12'	204	30'	49' RT	715-4-11
18	A-2	279+00	12'	204	30'	49' RT	715-4-11
19	A-2	280+40	12'	204	30'	49' RT	715-4-11
20	A-2	281+40	12'	204	30'	49' RT	715-4-11

LEGEND
SYMBOLS



DESCRIPTION

-  INSTALL NEW ALUMINUM POLE, ARM, LUMINAIRE, PULL BOX & FOUNDATION. LUMINAIRE TO BE AMERICAN ELECTRIC LIGHTING AUTOBAHN ATB2 60B LED 4000K (25,421 LUMENS). 204W LED LUMINAIRE DESIGNED FOR MEDIUM TYPE IV DISTRIBUTION. SEE TABLE FOR POLE MOUNTING HEIGHT.
-  EXISTING POLE TO REMAIN.
-  EXISTING POLE TO BE REMOVED.
-  2" CONDUIT (OPEN TRENCH) WITH CONDUCTORS (SIZE AND NUMBER AS ON SHOWN PLAN SHEETS).
-  2" CONDUIT (DIRECTIONAL BORE) WITH CONDUCTORS (SIZE AND NUMBER AS ON SHOWN PLAN SHEETS).
-  EXISTING CONDUIT TO BE ABANDONED IN PLACE AND ENDS CAPPED
-  PROPOSED LOAD CONTROL (POLE MOUNTED)
-  PULL BOX. SEE SPECIFICATION 635. (EMBED IN SIDEWALK NEXT TO LIGHT POLE).
-  FP & L SERVICE POINT.

CONVENTIONAL LIGHTING DESIGN CRITERIA

AVERAGE MAINTAINED ILLUMINANCE	1.6 FOOT CANDLES
UNIFORM RATIO AVG./MIN.	3:1 OR LESS
VEILING LUMINANCE RATIO	0.3:1 OR LESS
WIND SPEED	160 MPH
VOLTAGE DROP CRITERIA	5 PERCENT

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				L-5

FP&L POLE DATA

POLE NO.	CIRCUIT	STATION	DIST. OR ARM	LUMINAIRE WATTAGE	MOUNTING HEIGHT	POLE SETBACK	PAY ITEM
FP&L 1	FP&L	248+85	12'	133	30'	EXIST. FP&L POLE	*
FP&L 2	FP&L	251+18	12'	133	30'	EXIST. FP&L POLE	*
FP&L 3	FP&L	252+26	12'	133	30'	EXIST. FP&L POLE	*
FP&L 4	FP&L	253+93	12'	133	30'	EXIST. FP&L POLE	*
FP&L 5	FP&L	255+47	12'	133	30'	EXIST. FP&L POLE	*
FP&L 6	FP&L	257+04	12'	133	30'	EXIST. FP&L POLE	*
FP&L 7	FP&L	259+44	12'	133	30'	EXIST. FP&L POLE	*
FP&L 8	FP&L	261+86	12'	133	30'	EXIST. FP&L POLE	*
FP&L 9	FP&L	264+16	12'	133	30'	EXIST. FP&L POLE	*
FP&L 10	FP&L	266+39	12'	133	30'	EXIST. FP&L POLE	*
FP&L 11	FP&L	268+84	12'	133	30'	EXIST. FP&L POLE	*
FP&L 12	FP&L	269+92	12'	133	30'	EXIST. FP&L POLE	*
FP&L 13	FP&L	272+27	12'	133	30'	EXIST. FP&L POLE	*
FP&L 14	FP&L	274+72	12'	133	30'	EXIST. FP&L POLE	*
FP&L 15	FP&L	276+32	12'	133	30'	EXIST. FP&L POLE	*
FP&L 16	FP&L	277+84	12'	133	30'	EXIST. FP&L POLE	*
FP&L 17	FP&L	279+87	12'	133	30'	EXIST. FP&L POLE	*
FP&L 18	FP&L	280+78	12'	133	30'	EXIST. FP&L POLE	*

* N/A. PROVIDED BY FP&L.

* LUMINAIRES/CIRCUITRY TO BE INSTALLED AND MAINTAINED BY FP&L

LEGEND SYMBOLS

FP&L POLES ONLY DESCRIPTION



INSTALL NEW ARM. LUMINAIRE TO BE AMERICAN ELECTRIC LIGHTING AUTOBAHN ATB2 40B LED 4000K (16,592 LUMENS). 133W LED LUMINAIRE DESIGNED FOR MEDIUM TYPE IV DISTRIBUTION. SEE TABLE FOR POLE MOUNTING HEIGHT.





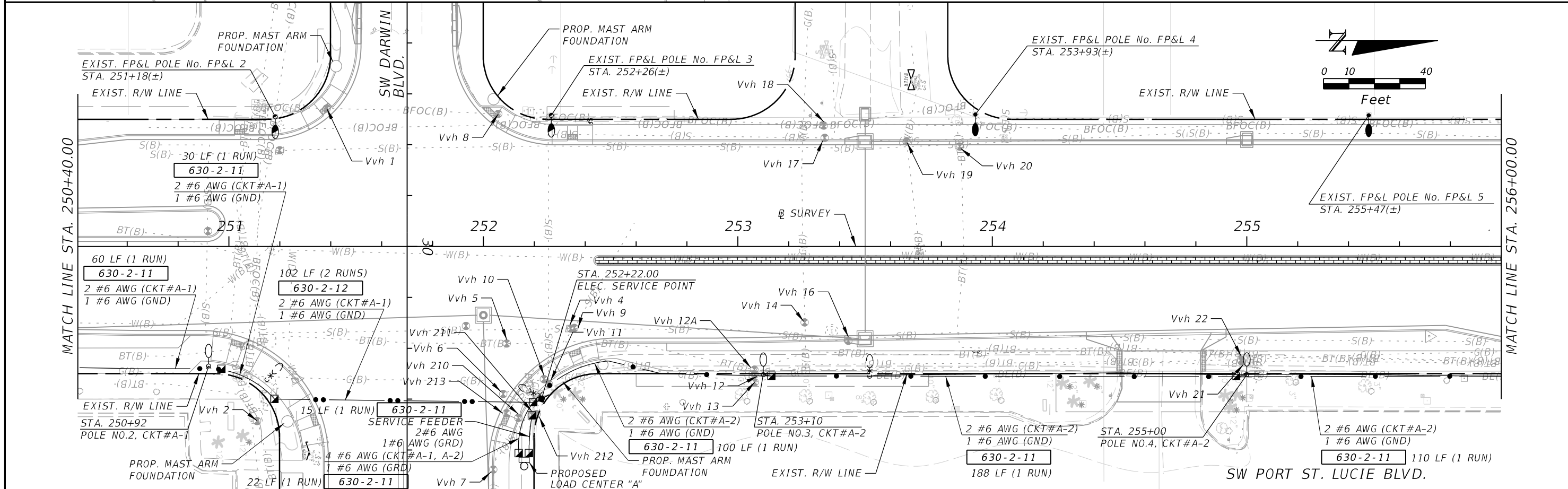
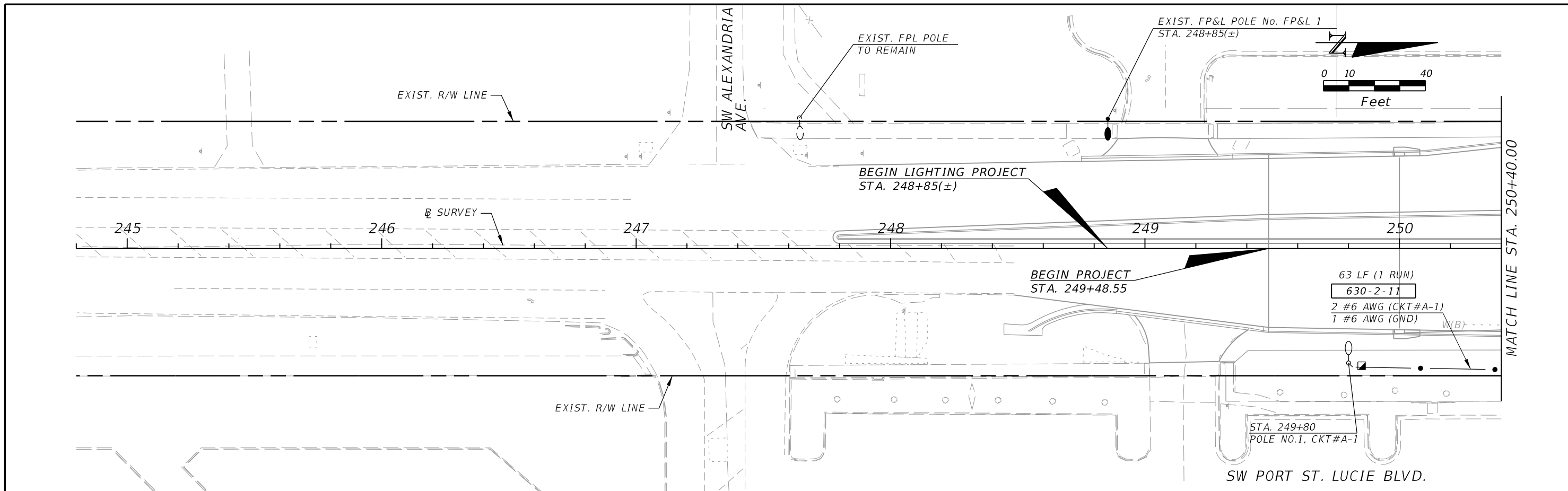
REMOVE EXISTING LUMINAIRE AND INSTALL NEW LUMINAIRE TO BE AMERICAN ELECTRIC LIGHTING AUTOBAHN ATB2 40B LED 4000K (16,592 LUMENS). 133W LED LUMINAIRE DESIGNED FOR MEDIUM TYPE IV DISTRIBUTION.

CONVENTIONAL LIGHTING DESIGN CRITERIA

AVERAGE MAINTAINED ILLUMINANCE	1.6 FOOT CANDLES
UNIFORM RATIO AVG./MIN.	3:1 OR LESS
VEILING LUMINANCE RATIO	0.3:1 OR LESS
WIND SPEED	160 MPH

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			ROAD	COUNTY			



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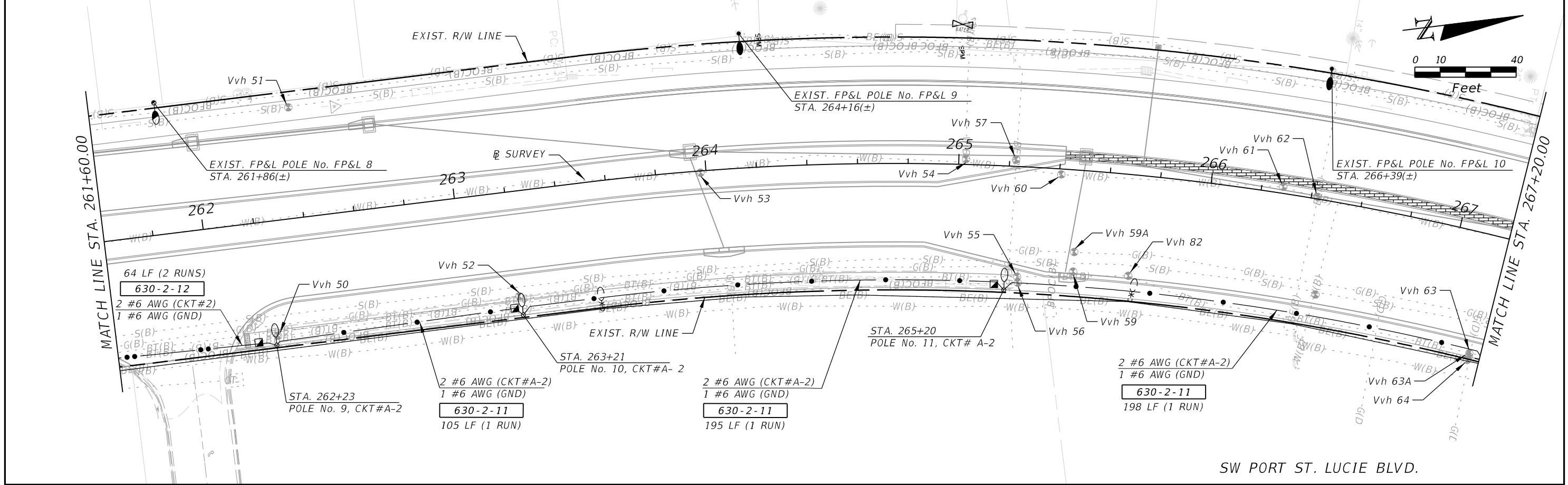
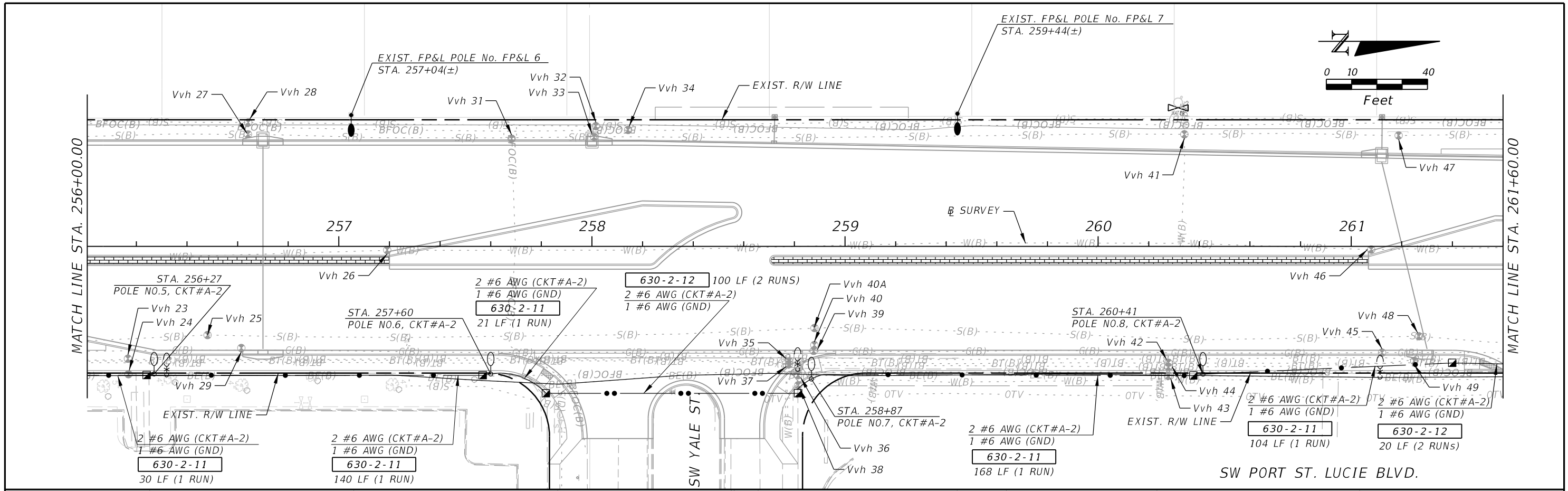
CITY OF PORT ST. LUCIE
 121 S.W. PORT ST. LUCIE BLVD.
 PORT ST. LUCIE, FL 34984

ROAD	COUNTY
SW PORT ST. LUCIE BLVD.	ST. LUCIE

LIGHTING PLAN

SHEET NO.
L-7

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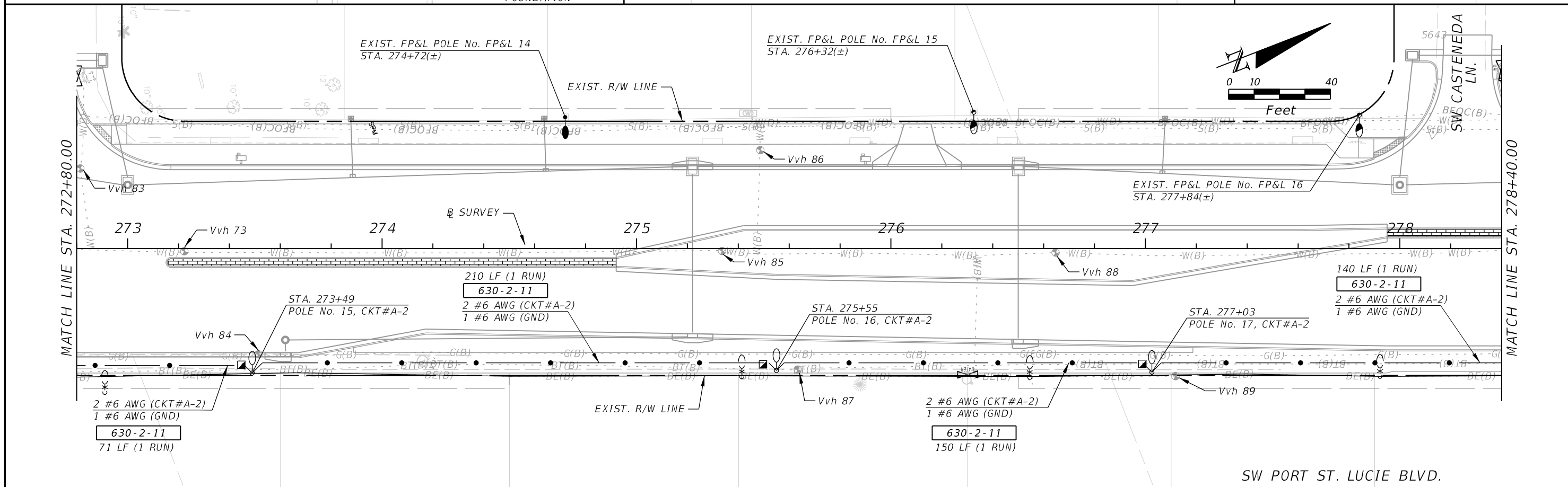
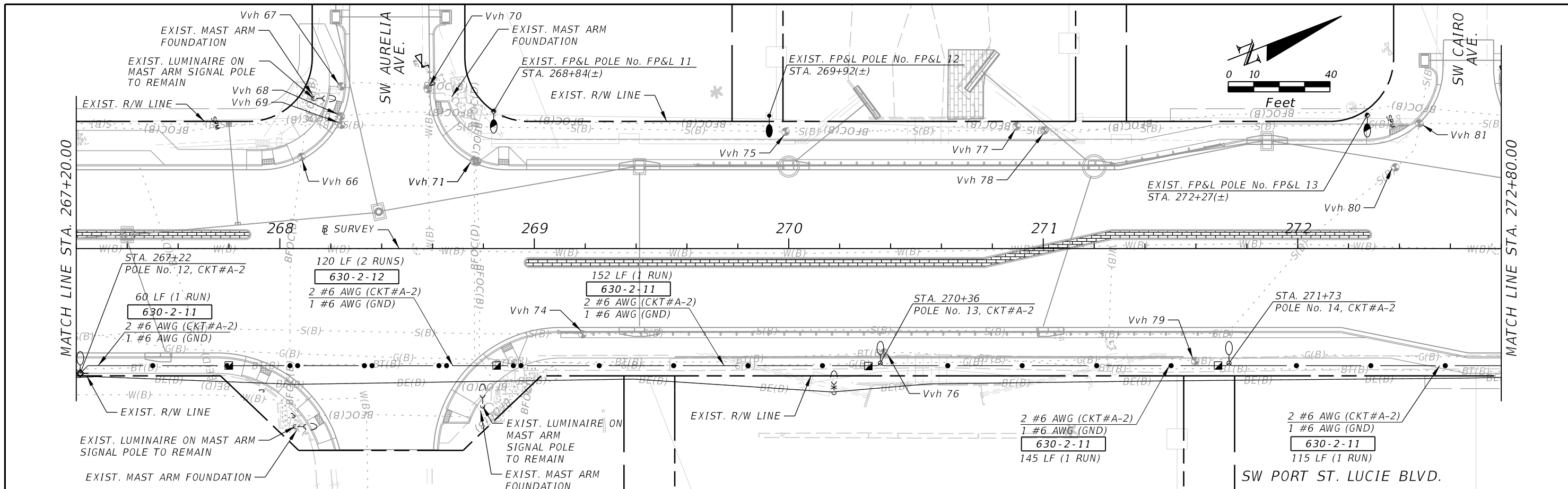
CITY OF PORT ST. LUCIE
 121 S.W. PORT ST. LUCIE BLVD.
 PORT ST. LUCIE, FL 34984

ROAD	COUNTY
SW PORT ST. LUCIE BLVD.	ST. LUCIE

LIGHTING PLAN

SHEET NO.
L-8

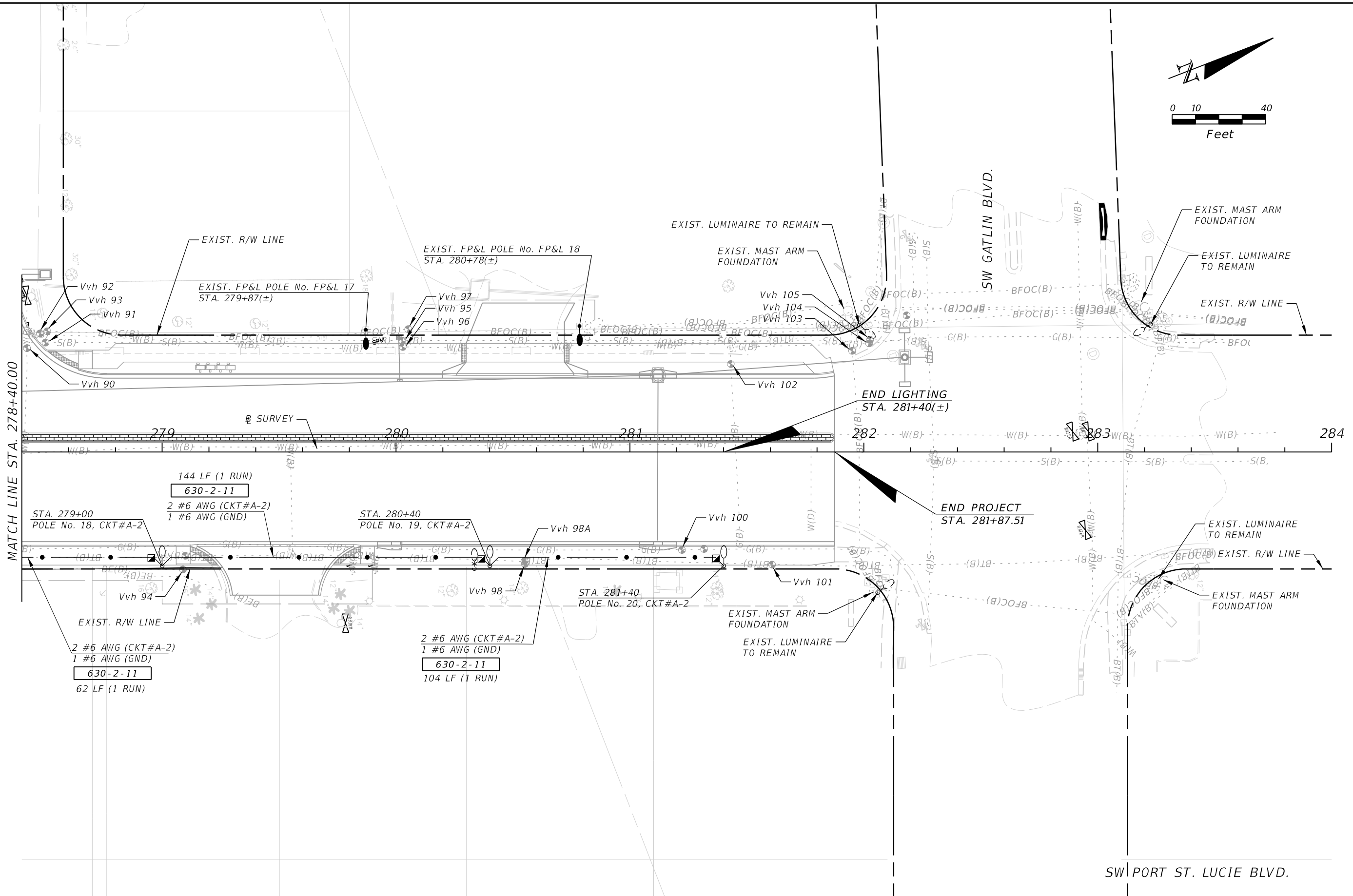
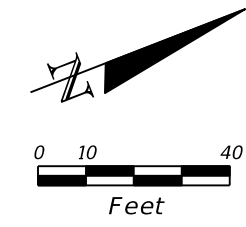
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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

<p>American Consulting Engineers of Florida, LLC 2041 Vista Parkway, Suite 101 West Palm Beach, Florida 33411 Phone: (561) 253-9550 Fax: (561) 253-9551 Certificate of Authorization No. 9302 Mohan Gopalakrishna, P.E. No. 60720</p>	<p>CITY OF PORT ST. LUCIE 121 S.W. PORT ST. LUCIE BLVD. PORT ST. LUCIE, FL 34984</p>	<p>LIGHTING PLAN</p>		<p>SHEET NO. L-9</p>
SW PORT ST. LUCIE BLVD.	ST. LUCIE			

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MATCH LINE STA. 278+40.00

END PROJECT
STA. 281+87.51

END LIGHTING
STA. 281+40(±)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

American
Consulting Engineers of Florida, LLC
2041 Vista Parkway, Suite 101
West Palm Beach, Florida 33411
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
Mohan Gopalakrishna, P.E. No. 60720

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
SW PORT ST. LUCIE BLVD.	ST. LUCIE

LIGHTING PLAN

SHEET NO.
L-10

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SERVICE POINT DETAILS:

REFER TO FDOT INDEX 639-001 (1 OF 2) DETAIL B (UNDERGROUND FEED)



LIGHTING LOAD CENTER DETAILS:

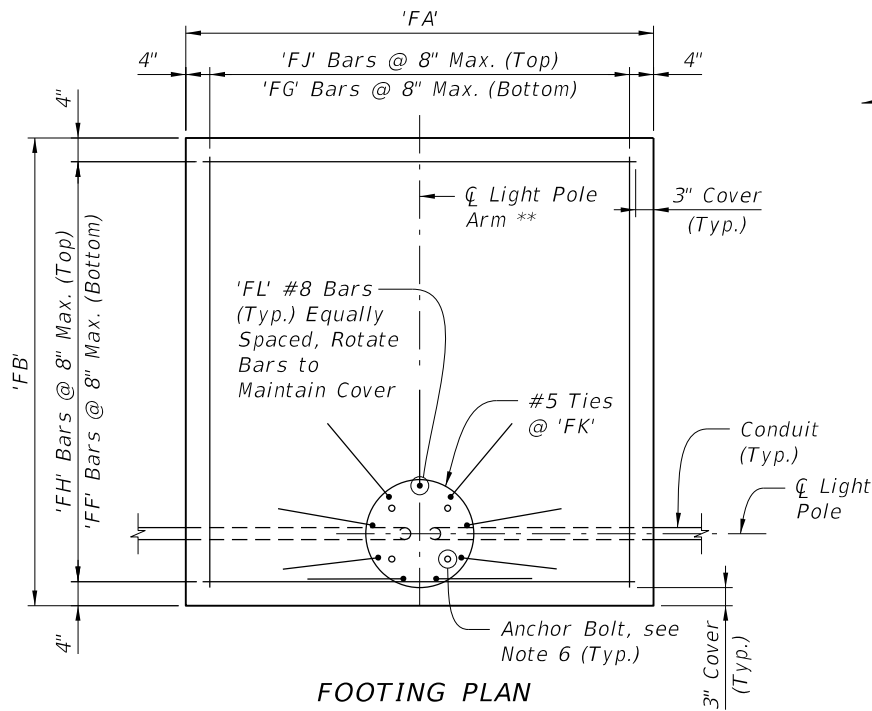
REFER TO FDOT INDEX 639-001 (2 OF 2) FOR 240/480V, SINGLE PHASE, 3 WIRE SERVICE

PROP. LOAD CENTER "A" (BASE MOUNTED)
240 V -480 V, SINGLE PHASE, 3 WIRE
STA. 252+15, 85' RT

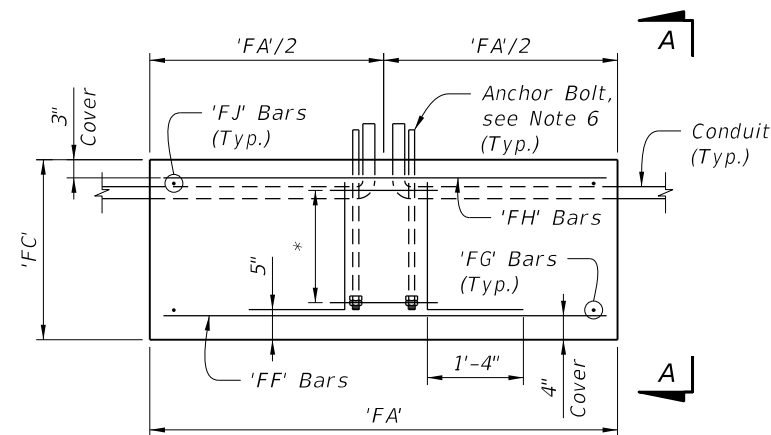
LOAD CENTER AND CIRCUIT DISTRIBUTION	MAIN & CIRCUIT BREAKER SIZES	TOTAL DEMAND LOAD (AMPS)	TOTAL DESIGN LOAD (AMPS)	OVERCURRENT DESIGN LOAD (KVA)
A	100 AMPS 2P (MAIN)	11.17	13.96	6.70
A-1	* 40 AMPS 2P (BRANCH)	1.12	1.40	
A-2	* 40 AMPS 2P (BRANCH)	10.05	12.56	

* FDOT MIN SIZE BREAKER

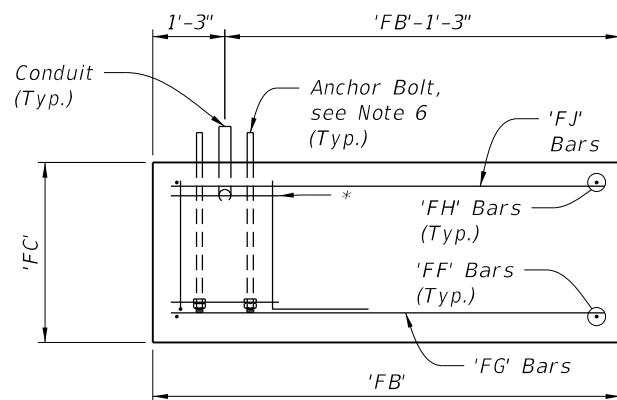
REVISIONS						 American Consulting Engineers of Florida, LLC 2041 Vista Parkway, Suite 101 West Palm Beach, Florida 33411 Phone: (561) 253-9550 Fax: (561) 253-9551 Certificate of Authorization No. 9302 Mohan Gopalakrishna, P.E. No. 60720	 CITY OF PORT ST. LUCIE 121 S.W. PORT ST. LUCIE BLVD. PORT ST. LUCIE, FL 34984		SERVICE POINT/ LOAD CENTER DETAILS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD	COUNTY		L-11
						SW PORT ST. LUCIE BLVD.	ST. LUCIE			



FOOTING PLAN



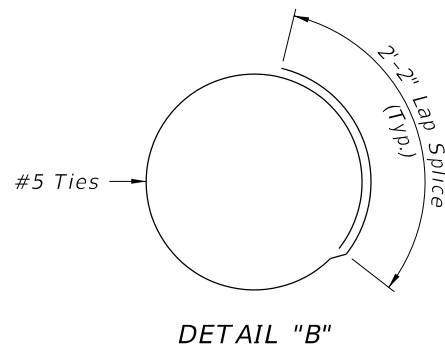
FOOTING ELEVATION



VIEW A-A

Direction of Traffic

* #5 Ties @ 'FK' Max. (Closed Ties), Provide a minimum of one Tie near the top of the footing for Type 1 Spread Footing (Type 1), See Detail "B".
 ** Light Pole arm shall be oriented toward the middle of the footer.



DETAIL "B"

TABLE OF SPREAD FOOTING VARIABLES																
SPREAD FOOTING TYPE	SPREAD FOOTING DIMENSIONS										FOOTING REINF.				PED. REINF.	
	'FA'		'FB'		'FC'		'FD'		'FE'		'FF'	'FG'	'FH'	'FJ'	'FK'	'FL'
	ft	in	ft	in	ft	in	ft	in	ft	in	Size	Size	Size	Size	in	#
1	6	6	6	6	2	6	0	0	0	0	#5	#5	#5	#5	12	9

NOTES:

- Reinforcing steel shall be ASTM A615, Grade 60.
- Concrete shall be Class II with a minimum 28-day compressive strength of 3.4 ksi for all environmental classifications.
- The foundation for the Light Pole Structure shall be constructed in accordance with Section 455 of the Specifications except that no payment for the foundation shall be made under Section 455.
- This foundation is designed to resist the following Service Loading at the base of the Light Pole:
 Wind Moment - 8.66 kip-ft (about axis Parallel to Arm) & 6.47 kip-ft (about axis Perpendicular to Arm)
 Dead Load Moment - 1.05 kip-ft (about axis Perpendicular to Arm)
 Torsion - 1.44 kip-ft
 Shear - 0.47 kip (Perpendicular to Arm) & 0.36 kip (Parallel to Arm)
 Axial - 0.28 kip
 If the furnished pole produces greater reactions than those listed above, then redesign the foundation submitting the necessary drawings and calculations, signed and sealed by a Professional Engineer registered in the State of Florida, to the Engineer for review and approval at no additional cost to the City.
- The following design soil data was used in the design of these Light Pole Spread Footing foundations:
 Effective Soil Unit Weight - 37.6 pcf
 Internal Angle of Friction - 28°
 Nominal Bearing Capacity - 2200 psf
 LRFD Strength Limit States were used in the design of the footing for eccentricity, sliding and torsion.
- The design of the Anchor Bolts shall assure that the Anchor Bolts fit within the reinforcing and that they effectively transmit the required forces to the Spread Footer foundation. A minimum 4" cover for the Anchor Bolts shall be maintained. Submit the necessary drawings and calculations, signed and sealed by a Professional Engineer registered with the State of Florida, for review and approval at no additional cost to the City.
- The pull box shall not be located within the Spread Footer foundation.
- Groundline is at the top of the footer. Top of footer is also intended to be the top of the sidewalk.

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REVISIONS					
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CITY OF PORT ST. LUCIE
 121 S.W. PORT ST. LUCIE BLVD.
 PORT ST. LUCIE, FL 34984

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SW PORT ST. LUCIE BLVD.	ST. LUCIE

**SPREAD FOOTING
 FOUNDATION DETAILS**

SHEET NO.
 L-12