

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

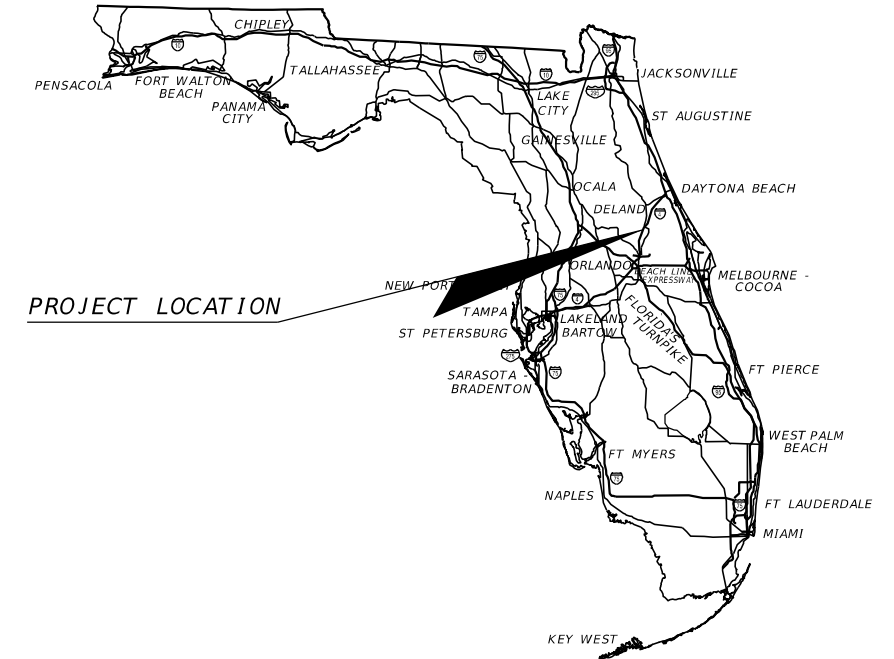
CONTRACT PLANS

FINANCIAL PROJECT ID 240200-2-52-01
(FEDERAL FUNDS)

SEMINOLE COUNTY (77320)

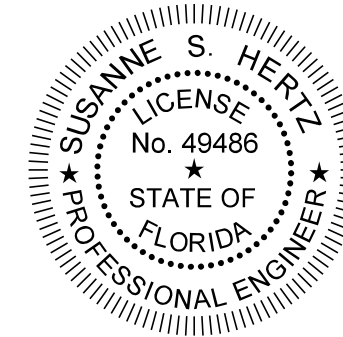
STATE ROAD NO. 429 (WEKIVA PARKWAY SECTION 7A)

LIGHTING PLANS



INDEX OF LIGHTING PLANS

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SIGNED AND SEALED BY:

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THE SIGNATURE MUST BE VERIFIED
IN THE ELECTRONIC DOCUMENTS.

LIGHTING PLANS
ENGINEER OF RECORD:

SUSANNE S. HERTZ, P.E. P.E. NO. 49486
TRAFFIC ENGINEERING DATA SOLUTIONS, INC.
80 SPRING VISTA DRIVE
DEBARY, FL 32713
CONTRACT NO.: C9B55
VENDOR NO.: F208375642002
CERTIFICATE OF AUTHORIZATION NO. 27392

FDOT PROJECT MANAGER:
KEVIN MOSS, P.E.

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
T5626	18	L-1

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			L-7		L-8		L-9		L-10		L-11		L-12		L-13		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	605		560		235		450		281		600		515		3246		3246	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	350		360		355		405		116		170		380		2136		2136	
630-2-14	CONDUIT, FURNISH & INSTALL, ABOVEGROUND	LF	50		50		50		50		50		150				400		400	
630-2-15	CONDUIT, FURNISH & INSTALL, BRIDGE MOUNTED	LF	140		185		188		225		200		295				1233		1233	
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	EA	14		14		10		13		5		11		14		81		81	
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS			1				1		1		1		1		5		5	
641-2-11	PRESTRESSED CONCRETE POLE, F&I, TYPE P-11 PEDESTAL	EA													1		1		1	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-11 SERVICE POLE	EA			1				1		1		1				4		4	
715-1-11	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 10 OR <	LF	420		555		565		670		595		885				3690		3690	
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO.8-6	LF	4715		4560		4285		4335		1535		2790		2230		24450		24450	
715-1-14	LIGHTING CONDUCTORS, F&I, INSULATED, NO.1 TO NO. 0	LF			90		95		55		710		50		460		1460		1460	
715-4-11	LIGHT POLE COMPLETE FURNISH & INSTALL STANDARD POLE STANDARD FOUNDATION, 30' MOUNTING HEIGHT	EA	10		8		5		8								31		31	
715-4-13	LIGHT POLE COMPLETE FURNISH & INSTALL STANDARD POLE STANDARD FOUNDATION, 40' MOUNTING HEIGHT	EA													6		6		6	
715-4-21	LIGHT POLE COMPLETE FURNISH & INSTALL STANDARD POLE SPECIAL FOUNDATION, 30' MOUNTING HEIGHT	EA					3										3		3	
715-5-32	LUMINAIRE, F&I, ROADWAY, COBRA HEAD	EA													4		4		4	
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA	1		1		1		1		1		1		1		7		7	
715-11-2	LUMINAIRE, UNDER DECK PENDANT, F&I, Project 240200-2-52-01	EA	8		9		9		9		4						39		39	
715-11-125	LUMINAIRE, F&I, UNDER DECK, WALL MOUNT	EA											16				20		20	
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, CONVENTIONAL	EA	10		8		5		8						6		37		37	
715-500-3	POLE CABLE DISTRIBUTION SYSTEM, WALL MOUNT	EA					3										3		3	

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

<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>DATE</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				DATE	DESCRIPTION	DATE	DESCRIPTION					<p>SUSANNE S. HERTZ, P.E. PE No. 49486 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392</p>			<p>STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION</p> <table border="1"> <thead> <tr> <th>ROAD NO.</th> <th>COUNTY</th> <th>FINANCIAL PROJECT ID</th> </tr> </thead> <tbody> <tr> <td>SR 429</td> <td>SEMINOLE</td> <td>240200-2-52-01</td> </tr> </tbody> </table>			ROAD NO.	COUNTY	FINANCIAL PROJECT ID	SR 429	SEMINOLE	240200-2-52-01	<p>TABULATION OF QUANTITIES</p>				<p>SHEET NO. L-2</p>
DATE	DESCRIPTION	DATE	DESCRIPTION																									
ROAD NO.	COUNTY	FINANCIAL PROJECT ID																										
SR 429	SEMINOLE	240200-2-52-01																										

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 | D) POLE STRENGTH CALCULATIONS |
| B) LOAD CENTER ELECTRICAL EQUIPMENT | E) POLE FRANGIBILITY TEST |
| C) POLE SHOP DRAWINGS | F) BOLT SPECIFICATIONS AND BOLT CIRCLE DIAMETER |

SUBMITTAL DATA SHALL INCLUDE COMPUTER PRINTOUT SHOWING HORIZONTAL FOOT CANDLE LEVELS TO BE OBTAINED USING THE 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. PAYMENT TO BE INCIDENTAL TO THE LIGHTING AND LUMINAIRE PAY ITEM NUMBERS. A REPORT DETAILING ACTUAL FIELD LIGHT LEVEL READINGS SHALL BE SUBMITTED FOR APPROVAL. SEVEN COPIES OF SHOP DRAWINGS AND DESIGN DATA FOR HIGHWAY LIGHTING EQUIPMENT AND LOAD CENTER ELECTRICAL EQUIPMENT SHALL BE SUBMITTED TO THE ENGINEER IN CHARGE OF THE PROJECT.

2. ALUMINUM POLES, LUMINAIRES AND BASES SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH AASHTO "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.

8. INSTALL SURGE PROTECTORS, PROPERLY GROUNDED, IN POWER (SECONDARY) ENTRANCES.

4. IN ACCORDANCE WITH N.E.C., IDENTIFY ALL CIRCUITS AND EQUIPMENT WITH "LAMACOID TAGS". INSTALL SIMILAR TAGS OF STAINLESS STEEL IDENTIFYING THE CIRCUIT FOR EACH LUMINAIRE AT ACCESS HANDHOLE FOR EACH POLE.

5. THE CONTRACTOR SHALL NOTIFY FLORIDA POWER & LIGHT AT LEAST 2 BUSINESS DAYS PRIOR TO ANY INSTALLATION THAT IS WITHIN TEN (10) FEET OF ENERGIZED ELECTRICAL CONDUCTORS. FLORIDA POWER & LIGHT, AT ITS OPTION, SHALL ASSIST THE CONTRACTOR, PROVIDE PROTECTION FOR ENERGIZED CONDUCTORS AT INSTALLATION SITE, OR TAKE OTHER SAFETY PRECAUTIONS AS NECESSARY. EXTREME CAUTION SHALL BE EXERCISED AT ALL TIMES IN PERFORMANCE OF WORK AROUND PRIMARY HIGH VOLTAGE COMPONENTS.

6. PULLING INSTRUCTIONS: CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO JACKET AND MEET MANUFACTURER'S REQUIREMENTS. USE PULLING COMPOUND PER MANUFACTURER'S REQUIREMENTS. ALL BENDS SHALL NOT BE LESS THAN RECOMMENDED BY N.E.C. OR N.E.S.C. FOR CABLE USED. PULL CABLE SHALL BE POLYESTER. STEEL CABLE OR FISH TAPES SHALL NOT BE UTILIZED.

7. CONTRACTOR SHALL PREPARE ACCURATELY DIMENSIONED "AS BUILT" PLANS OF FINAL POLE, CONTROLLER, CABLE AND CONDUIT PULL BOX LOCATIONS. PLANS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER AND SUBMITTED TO THE RESIDENT ENGINEER. COST OF SUCH PREPARATION SHALL BE INCIDENTAL TO PAY ITEMS PROVIDED.

8. INSPECT ALIGNMENT OF EACH INDIVIDUAL POLE AND FIXTURE AS FOLLOWS:

POLE ALIGNMENT: WITHIN ONE HALF DEGREE ON VERTICAL +/-, CONFIRM VERTICAL ALIGNMENT, VIEWING FROM ADJACENT SERIES OF POLES, IN BOTH DIRECTIONS.

FIXTURE ALIGNMENT: WITHIN ONE DEGREE OF HORIZONTAL +/-, USING CALIBRATED LEVEL ALONG BOTH AXES OF CUT-OFF FIXTURE FACE, WITH LENS ONLY.

9. SCREW TYPE ANCHOR FOUNDATION IS NOT TO BE USED ON THIS PROJECT.

10. LIGHTING CONTRACTOR SHALL COORDINATE WITH STRUCTURAL CONTRACTOR TO ENSURE PROPER MOUNTING BOLT CIRCLES ARE CONSTRUCTED FOR THE PROPOSED POLE BASES AND TO COORDINATE LOCATIONS OF EMBEDDED CONDUIT AND PULL BOXES WITHIN THE WALLS AND BRIDGES.

11. PULL BOXES AND LOAD CENTERS SHALL NOT BE PLACED IN DITCHES OR LOW LYING AREAS IN ORDER TO AVOID WATER INTRUSION.

12. ALL POLE SET BACKS SHOWN ON THE POLE DATA SHEETS ARE AS FOLLOWS:

- ALL UNDER DECK AND WALL MOUNTED FIXTURES AND LOAD CENTERS ARE FROM THE C OF CONSTRUCTION FOR SR 429
- ALL POLES ARE FROM THE NEAREST FRONTAGE ROAD/SIDE STREET BASELINE.

REVISIONS				SUSANNE S. HERTZ, P.E. PE No. 49486 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			GENERAL NOTES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		L-3
					SR 429	SEMINOLE	240200-2-52-01		

POLE DATA

CONVENTIONAL LIGHTING DESIGN CRITERIA

POLE NO.	CIRCUIT	STATION / BASELINE	POLE OFFSET	ARM LENGTH	WATTAGE	MOUNTING HEIGHT	PAY ITEM NUMBER
1**	A-1	3039+38.1/ @ CONST. WB FRONTAGE RD	21.1' LT	8'	215	30'	715-4-11
2	A-1	3040+47.1/ @ CONST. WB FRONTAGE RD	16.0' LT	8'	215	30'	715-4-11
3	A-1	3041+59.0/ @ CONST. WB FRONTAGE RD	43.0' LT	8'	215	30'	715-4-11
4	A-1	3042+30.0/ @ CONST. WB FRONTAGE RD	21.3' LT	8'	215	30'	715-4-11
5	A-1	2024+60.4/ @ CONST. EB FRONTAGE RD	9.3' RT	8'	215	30'	715-4-11
6**	A-1	2025+09.6/ @ CONST. EB FRONTAGE RD	29.4' RT	8'	215	30'	715-4-11
7**	A-1	2025+67.9/ @ CONST. EB FRONTAGE RD	45.8' RT	8'	215	30'	715-4-11
8**	A-1	2026+41.1/ @ CONST. EB FRONTAGE RD	72.9' RT	8'	215	30'	715-4-11
9**	A-1	2026+74.7/ @ CONST. EB FRONTAGE RD	24.7' RT	8'	215	30'	715-4-11
10**	A-1	2027+35.0/ @ CONST. EB FRONTAGE RD	21.3' RT	8'	215	30'	715-4-11
11**	B-1	3054+11.4/ @ CONST. WB FRONTAGE RD	38.6' LT	8'	215	30'	715-4-11
12	B-1	3054+66.1/ @ CONST. WB FRONTAGE RD	54.4' LT	8'	215	30'	715-4-11
13**	B-1	3055+46.6/ @ CONST. WB FRONTAGE RD	26.6' LT	8'	215	30'	715-4-11
14**	B-1	3056+35.7/ @ CONST. WB FRONTAGE RD	27.9' LT	8'	215	30'	715-4-11
15	B-1	2038+99.7/ @ CONST. EB FRONTAGE RD	12.4' RT	8'	215	30'	715-4-11
16**	B-1	2039+66.5/ @ CONST. EB FRONTAGE RD	25.1' RT	8'	215	30'	715-4-11
17**	B-1	2040+71.3/ @ CONST. EB FRONTAGE RD	33.8' RT	8'	215	30'	715-4-11
18**	B-1	2041+60.7/ @ CONST. EB FRONTAGE RD	25.4' RT	8'	215	30'	715-4-11
19	C-1	3096+97.0/ @ CONST. WB FRONTAGE RD	23.4' LT	8'	215	30'	715-4-21
20	C-1	3097+82.4/ @ CONST. WB FRONTAGE RD	33.3' LT	8'	215	30'	715-4-21
21	C-1	3098+37.6/ @ CONST. WB FRONTAGE RD	33.5' LT	8'	215	30'	715-4-21
22	C-1	3099+60.1/ @ CONST. WB FRONTAGE RD	32.4' LT	8'	215	30'	715-4-11
23**	C-1	2081+89.3/ @ CONST. EB FRONTAGE RD	30.8' RT	8'	215	30'	715-4-11
24**	C-1	2082+68.3/ @ CONST. EB FRONTAGE RD	45.9' RT	8'	215	30'	715-4-11
25**	C-1	2083+54.3/ @ CONST. EB FRONTAGE RD	68.3' RT	8'	215	30'	715-4-11
26**	C-1	2084+15.1/ @ CONST. EB FRONTAGE RD	44.1' RT	8'	215	30'	715-4-11
27	D-1	3131+84.6/ @ CONST. WB FRONTAGE RD	37.6' LT	8'	215	30'	715-4-11
28	D-1	3132+63.2/ @ CONST. WB FRONTAGE RD	32.4' LT	8'	215	30'	715-4-11
29	D-1	3133+18.6/ @ CONST. WB FRONTAGE RD	32.2' LT	8'	215	30'	715-4-11
30	D-1	3134+34.8/ @ CONST. WB FRONTAGE RD	23.6' LT	8'	215	30'	715-4-11
31	D-1	2117+06.4/ @ CONST. EB FRONTAGE RD	20.9' RT	8'	215	30'	715-4-11
32**	D-1	2117+74.7/ @ CONST. EB FRONTAGE RD	22.1' RT	8'	215	30'	715-4-11
33**	D-1	2118+71.4/ @ CONST. EB FRONTAGE RD	62.3' RT	8'	215	30'	715-4-11
34**	D-1	2119+17.5/ @ CONST. EB FRONTAGE RD	36.3' RT	8'	215	30'	715-4-11
35**	G-1	103+51.5/ @ CONST. ORANGE BLVD	92.4' LT	8'	215	40'	715-4-13
36**	G-1	103+91.3/ @ CONST. ORANGE BLVD	23.7' LT	8'	215	40'	715-4-13
37**	G-1	103+64.9/ @ CONST. ORANGE BLVD	86.3' LT	8'	215	40'	715-4-13
38**	G-1	101+96.4/ @ CONST. ORANGE BLVD	123.7' RT	8'	215	40'	715-4-13
39**	G-1	101+62.6/ @ CONST. ORANGE BLVD	15.6' LT	8'	215	40'	715-4-13
40**	G-1	102+08.2/ @ CONST. ORANGE BLVD	106.4' RT	8'	215	40'	715-4-13
MA-1	G-1	3177+95.2/ @ CONST. WB FRONTAGE RD	17.9' LT	12'	215	40'	715-5-32
MA-2	G-1	191+26.8/ @ STATE ROAD 46	85.8' LT	12'	215	40'	715-5-32
MA-3	G-1	191+53.4/ @ STATE ROAD 46	85.6' RT	12'	215	40'	715-5-32
MA-4	G-1	2164+28.6/ @ CONST. EB FRONTAGE RD	41.9' RT	12'	215	40'	715-5-32

** Pole installation requires an extended foundation due to 1:4 or greater slope.






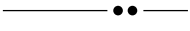
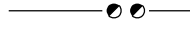


Average Initial Intensity 1.5 Foot Candles
 Uniformity Ratio Avg./Min. 4:1 or Less
 Max. / Min. 10:1 or Less
 Wind Speed 150 MPH
 Veiling Luminance 0.3 or Less

Note: Sidewalks and under deck roadway areas shall use conventional lighting criteria.

LEGEND

SYMBOLS

DESCRIPTION

-  Wall mounted 215 watt LED luminaire (Philips Road Focus model RFL215W96LED4K-T-4UNIV or equal). Designed for TYPE IV short distribution. Bug rating = B3-U0-G4. Integral regulator type ballast wired for 240 volt operation. Pole mounting height 30 ft with 8 ft. arm. Use Philips Test No. S1502181-R1.
-  Shoulder mounted 215 watt LED luminaire (Philips Road Focus model RFL215W96LED4K-T-4UNIV or equal). Designed for TYPE IV short distribution. Bug rating = B3-U0-G4. Integral regulator type ballast wired for 240 volt operation. Pole mounting height 30 ft with 8 ft. arm. Use Philips Test No. S1502181-R1.
-  Mast arm mounted 215 watt LED luminaire (Philips Road Focus model RFL215W96LED4K-T-4UNIV or equal). Designed for TYPE IV short distribution. Bug rating = B3-U0-G4. Integral regulator type ballast wired for 240 volt operation. Pole mounting height 40 ft with 12 ft. arm. Use Philips Test No. S1502181-R1.
-  Shoulder mounted 215 watt LED luminaire (Philips Road Focus model RFL215W96LED4K-T-R3M or equal). Designed for TYPE III medium distribution. Bug rating = B3-U0-G3. Integral regulator type ballast wired for 240 volt operation. Pole mounting height 40 ft with 8 ft. arm. Use Philips Test No. S1410222-R1.
-  Pendant hung underdeck luminaire, 97 watt LED luminaire (McGraw model No. VPL-E04-LED-EI-W0, or equal). Designed for TYPE VS short distribution. Bug rating = B3-U0-G2. Integral regulator ballast wired for 240 volt operation. 50% of luminaire to be below bridge beam. Use EATON/McGraw-Edison Test P144430.
-  Pier cap mounted luminaire, 72 watt LED luminaire (Holophane model No. W4G_LED_20C_1000_40K_T3M or equal), equipped with glass refractor. Designed for TYPE IV short distribution. Bug rating = B1-U3-G3. Integral regulator ballast wired for 240 volt operation. Use Holophane Test No. LTL22752P3.
-  Schedule 40 PVC underground conduit with conductors inside (conduit size as shown on plan sheets). Run one (1) copper bond conductor (green insulation) inside conduit with other conductors.
-  Schedule 40 PVC underground conduit directional bored under pavement with one (1) spare conduit and conductors inside (conduit size as shown on plan sheets). Extend conduit beyond edge of pavement to pull boxes. Run one (1) copper bond conductor (green insulation) inside conduit with other conductors.
-  Rigid galvanized steel conduit bridge mounted with conductors inside (conduit and conductor size as shown on plan sheets). Run one (1) copper bond conductor (green insulation) inside conduit with other conductors.
-  Schedule 40 PVC embedded conduit. To be placed inside the bridge barrier wall. See structural plans for details.
-  Pull box.
-  Distribution point.
-  Utility pole with service transformer by power company. (Final location TBD)

REVISIONS				SUSANNE S. HERTZ, P.E. PE No. 49486 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			POLE DATA AND LEGEND	SHEET NO. L-4
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 429	SEMINOLE	240200-2-52-01		

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POLE DATA

POLE NO.	CIRCUIT	STATION / BASELINE	POLE OFFSET	ARM LENGTH	WATTAGE	MOUNTING HEIGHT	PAY ITEM NUMBER
UD-1	A-1	964+58.0/ @ CONST. SR 429	44.0' LT	0'	97	18'	715-11-2
UD-2	A-1	965+21.5/ @ CONST. SR 429	44.5' LT	0'	97	18'	715-11-2
UD-3	A-1	966+37.1/ @ CONST. SR 429	44.5' LT	0'	97	18'	715-11-2
UD-4	A-1	966+97.0/ @ CONST. SR 429	45.1' LT	0'	97	18'	715-11-2
UD-5	A-1	964+51.3/ @ CONST. SR 429	39.6' RT	0'	97	18'	715-11-2
UD-6	A-1	965+19.3/ @ CONST. SR 429	39.2' RT	0'	97	18'	715-11-2
UD-7	A-1	966+38.0/ @ CONST. SR 429	39.2' RT	0'	97	18'	715-11-2
UD-8	A-1	966+97.9/ @ CONST. SR 429	38.6' RT	0'	97	18'	715-11-2
UD-9	B-1	978+96.5/ @ CONST. SR 429	35.7' LT	0'	97	18'	715-11-2
UD-10	B-1	979+57.8/ @ CONST. SR 429	35.8' LT	0'	97	18'	715-11-2
UD-11	B-1	980+20.5/ @ CONST. SR 429	55.3' LT	0'	97	18'	715-11-2
UD-12	B-1	980+85.1/ @ CONST. SR 429	36.7' LT	0'	97	18'	715-11-2
UD-13	B-1	981+42.5/ @ CONST. SR 429	37.0' LT	0'	97	18'	715-11-2
UD-14	B-1	978+96.9/ @ CONST. SR 429	37.4' RT	0'	97	18'	715-11-2
UD-15	B-1	979+58.2/ @ CONST. SR 429	36.9' RT	0'	97	18'	715-11-2
UD-16	B-1	980+84.5/ @ CONST. SR 429	37.2' RT	0'	97	18'	715-11-2
UD-17	B-1	981+42.9/ @ CONST. SR 429	36.1' RT	0'	97	18'	715-11-2
UD-18	C-1	1021+82.6/ @ CONST. SR 429	52.4' LT	0'	97	19'	715-11-2
UD-19	C-1	1022+33.2/ @ CONST. SR 429	27.8' LT	0'	97	19'	715-11-2
UD-20	C-1	1023+68.1/ @ CONST. SR 429	27.4' LT	0'	97	19'	715-11-2
UD-21	C-1	1024+23.9/ @ CONST. SR 429	41.3' LT	0'	97	19'	715-11-2
UD-22	C-1	1021+79.6/ @ CONST. SR 429	52.3' RT	0'	97	19'	715-11-2
UD-23	C-1	1022+33.8/ @ CONST. SR 429	24.4' RT	0'	97	19'	715-11-2
UD-24	C-1	1023+03.3/ @ CONST. SR 429	51.7' RT	0'	97	19'	715-11-2
UD-25	C-1	1023+69.6/ @ CONST. SR 429	24.5' RT	0'	97	19'	715-11-2
UD-26	C-1	1024+15.5/ @ CONST. SR 429	53.0' RT	0'	97	19'	715-11-2
UD-27	D-1	1056+57.3/ @ CONST. SR 429	47.2' LT	0'	97	20'	715-11-2
UD-28	D-1	1057+13.5/ @ CONST. SR 429	34.6' LT	0'	97	20'	715-11-2
UD-29	D-1	1058+45.3/ @ CONST. SR 429	32.8' LT	0'	97	20'	715-11-2
UD-30	D-1	1059+03.2/ @ CONST. SR 429	33.8' LT	0'	97	20'	715-11-2

POLE DATA

POLE NO.	CIRCUIT	STATION / BASELINE	POLE OFFSET	ARM LENGTH	WATTAGE	MOUNTING HEIGHT	PAY ITEM NUMBER
UD-31	D-1	1056+53.1/ @ CONST. SR 429	50.3' RT	0'	97	20'	715-11-2
UD-32	D-1	1057+07.7/ @ CONST. SR 429	35.6' RT	0'	97	20'	715-11-2
UD-33	D-1	1057+83.0/ @ CONST. SR 429	50.2' RT	0'	97	20'	715-11-2
UD-34	D-1	1058+50.3/ @ CONST. SR 429	35.7' RT	0'	97	20'	715-11-2
UD-35	D-1	1059+02.3/ @ CONST. SR 429	49.2' RT	0'	97	20'	715-11-2
UD-36	E-1	1081+83.0/ @ CONST. SR 429	53.0' RT	0'	97	23'	715-11-2
UD-37	E-1	1082+23.4/ @ CONST. SR 429	26.0' RT	0'	97	23'	715-11-2
UD-38	E-1	1082+81.7/ @ CONST. SR 429	21.4' LT	0'	97	23'	715-11-2
UD-39	E-1	1082+93.2/ @ CONST. SR 429	52.5' RT	0'	72	16'	715-11-125
UD-40	E-1	1083+12.7/ @ CONST. SR 429	51.4' LT	0'	97	23'	715-11-2
UD-41	E-1	1083+24.6/ @ CONST. SR 429	25.0' RT	0'	72	16'	715-11-125
UD-42	E-1	1083+77.5/ @ CONST. SR 429	22.2' LT	0'	72	16'	715-11-125
UD-43	E-1	1084+11.1/ @ CONST. SR 429	52.0' LT	0'	72	16'	715-11-125
UD-44	F-1	1104+25.6/ @ CONST. SR 429	49.7' RT	0'	72	16'	715-11-125
UD-45	F-1	1104+44.5/ @ CONST. SR 429	26.0' RT	0'	72	16'	715-11-125
UD-46	F-1	1104+84.2/ @ CONST. SR 429	22.6' LT	0'	72	16'	715-11-125
UD-47	F-1	1105+07.8/ @ CONST. SR 429	53.1' LT	0'	72	16'	715-11-125
UD-48	F-1	1105+60.2/ @ CONST. SR 429	55.1' RT	0'	72	16'	715-11-125
UD-49	F-1	1105+67.2/ @ CONST. SR 429	24.5' RT	0'	72	16'	715-11-125
UD-50	F-1	1105+76.9/ @ CONST. SR 429	19.3' LT	0'	72	16'	715-11-125
UD-51	F-1	1105+84.2/ @ CONST. SR 429	52.1' LT	0'	72	16'	715-11-125
UD-52	F-1	1107+48.6/ @ CONST. SR 429	50.9' LT	0'	72	16'	715-11-125
UD-53	F-1	1107+79.8/ @ CONST. SR 429	20.0' LT	0'	72	16'	715-11-125
UD-54	F-1	1108+26.0/ @ CONST. SR 429	25.0' RT	0'	72	16'	715-11-125
UD-55	F-1	1108+56.3/ @ CONST. SR 429	53.8' RT	0'	72	16'	715-11-125
UD-56	F-1	1109+00.1/ @ CONST. SR 429	49.9' LT	0'	72	16'	715-11-125
UD-57	F-1	1109+30.3/ @ CONST. SR 429	21.3' LT	0'	72	16'	715-11-125
UD-58	F-1	1109+80.0/ @ CONST. SR 429	25.1' RT	0'	72	16'	715-11-125
UD-59	F-1	1110+04.6/ @ CONST. SR 429	47.5' RT	0'	72	16'	715-11-125

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

SUSANNE S. HERTZ, P.E. PE No. 49486
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

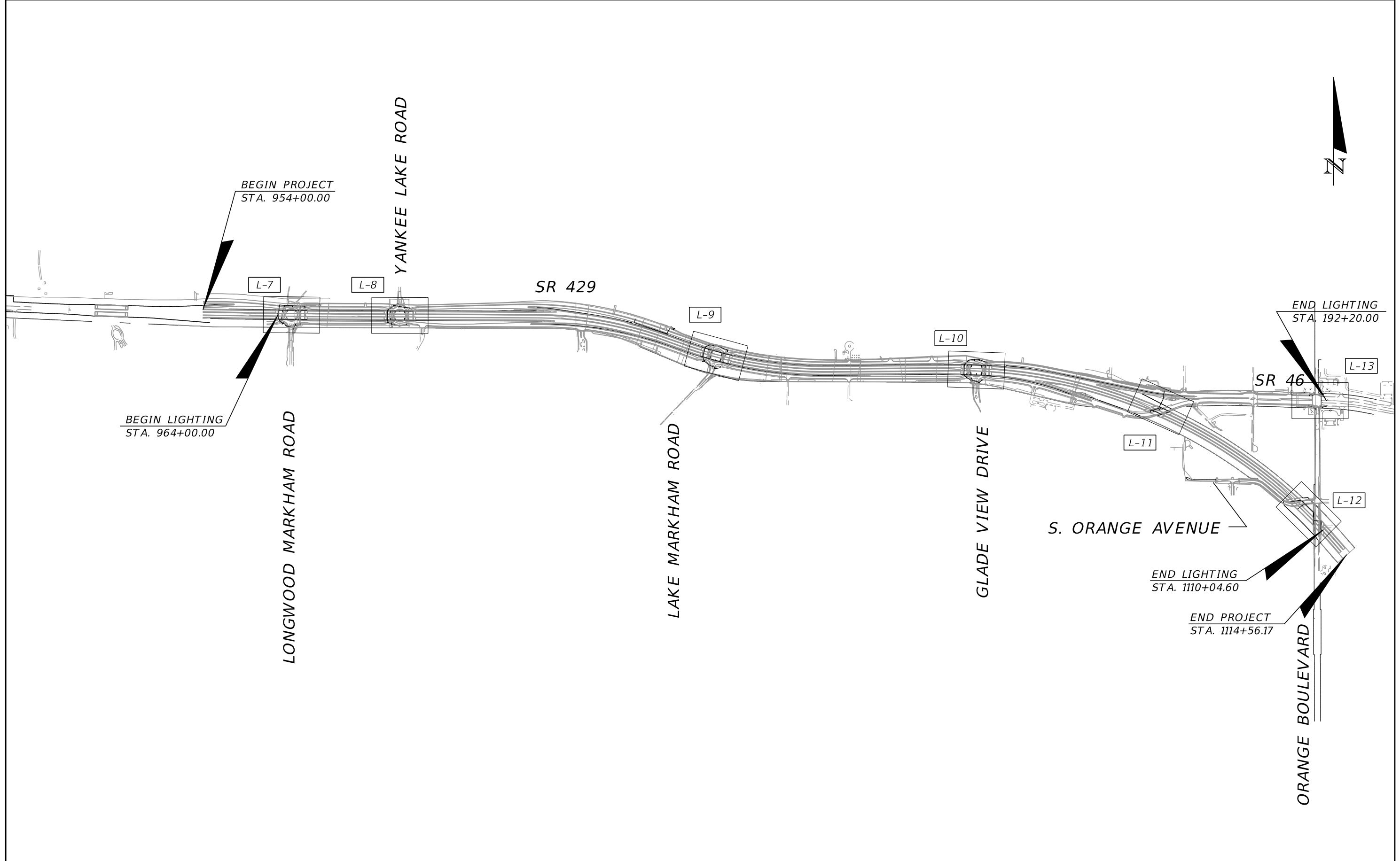
STATE OF FLORIDA
 DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

POLE DATA

SHEET NO.

L-5



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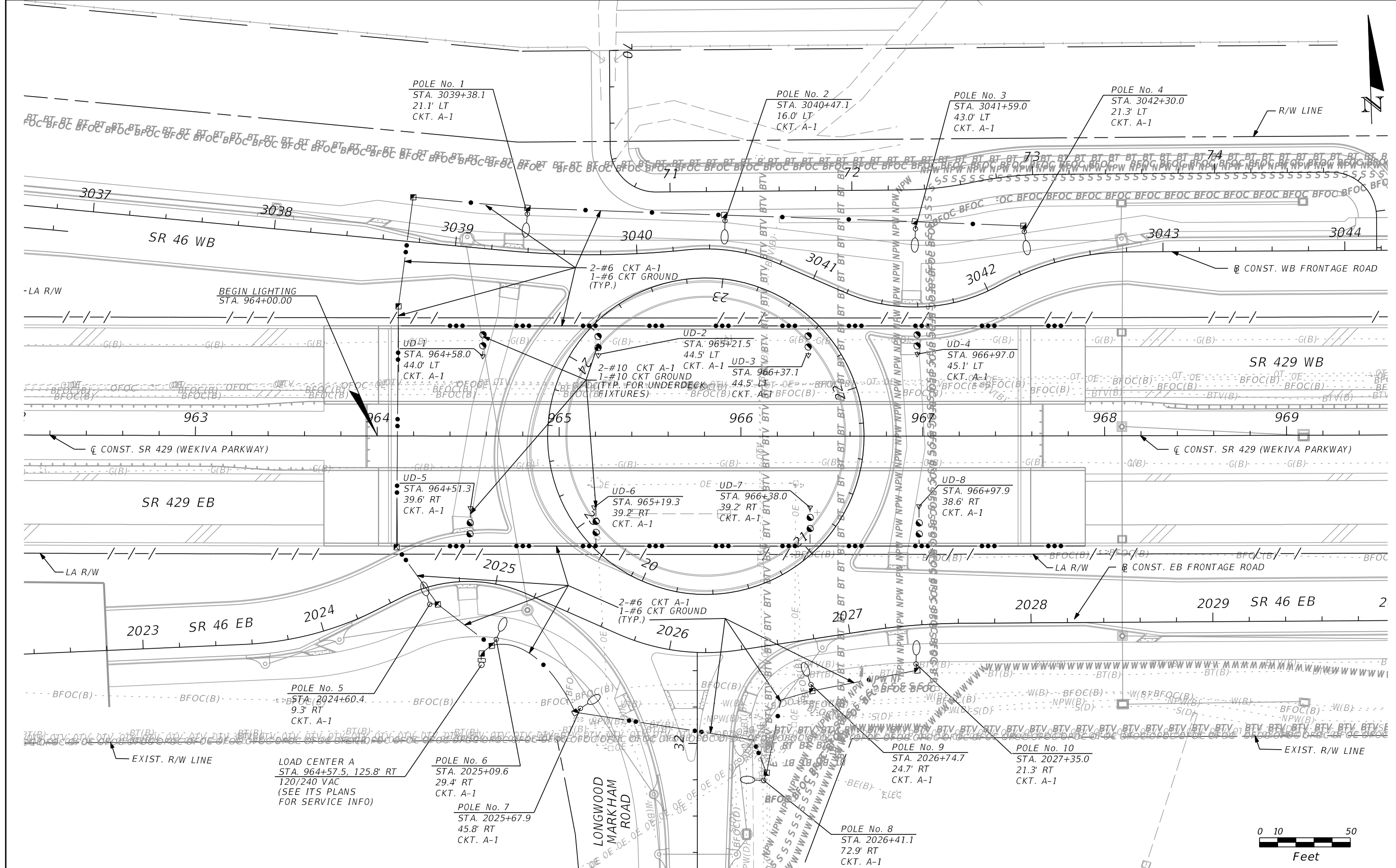
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SUSANNE S. HERTZ, P.E. PE No. 49486
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

PROJECT LAYOUT

SHEET NO.
L-6



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

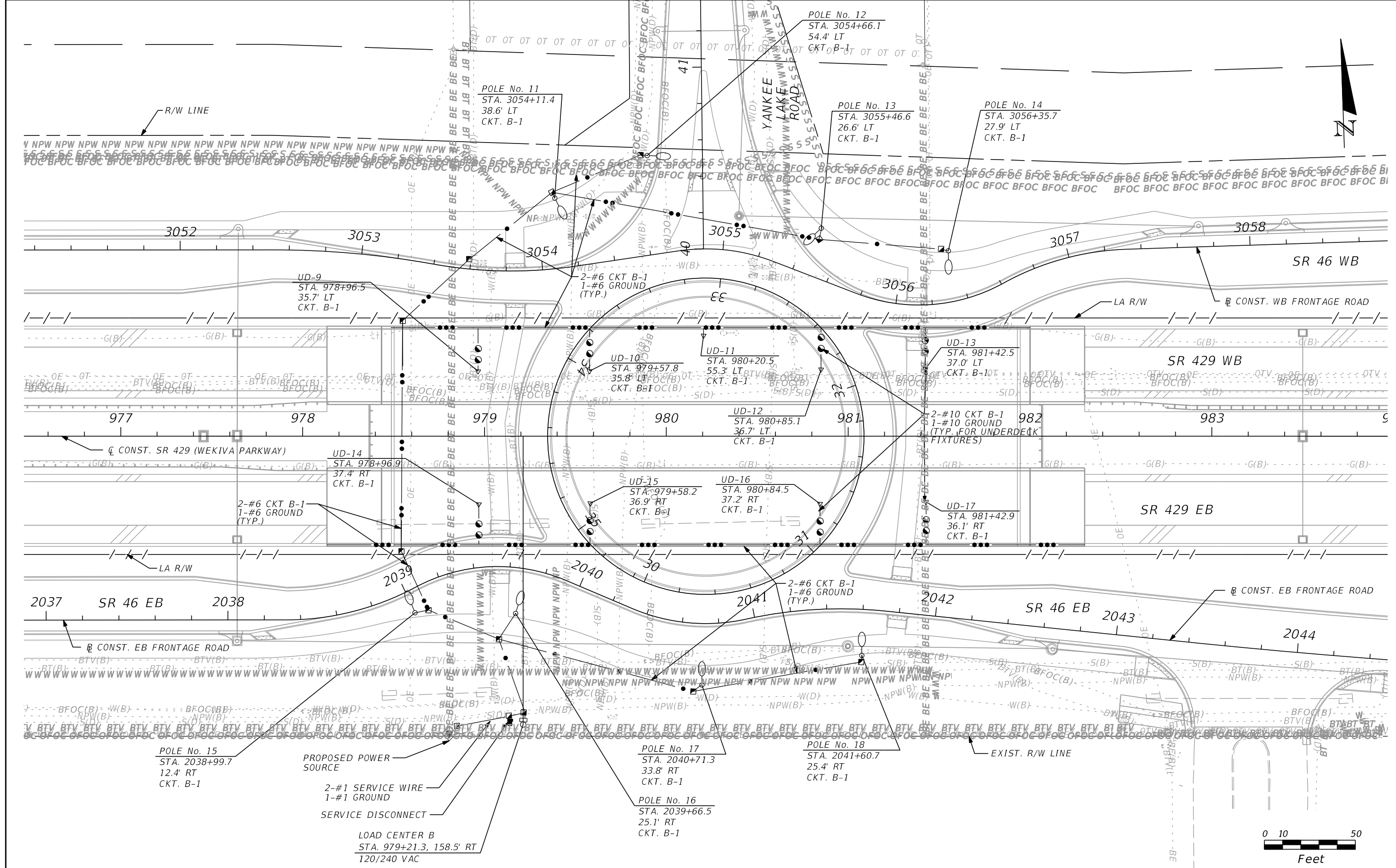
SUSANNE S. HERTZ, P.E. PE No. 49486
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

LIGHTING PLAN

SHEET NO.
L-7

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

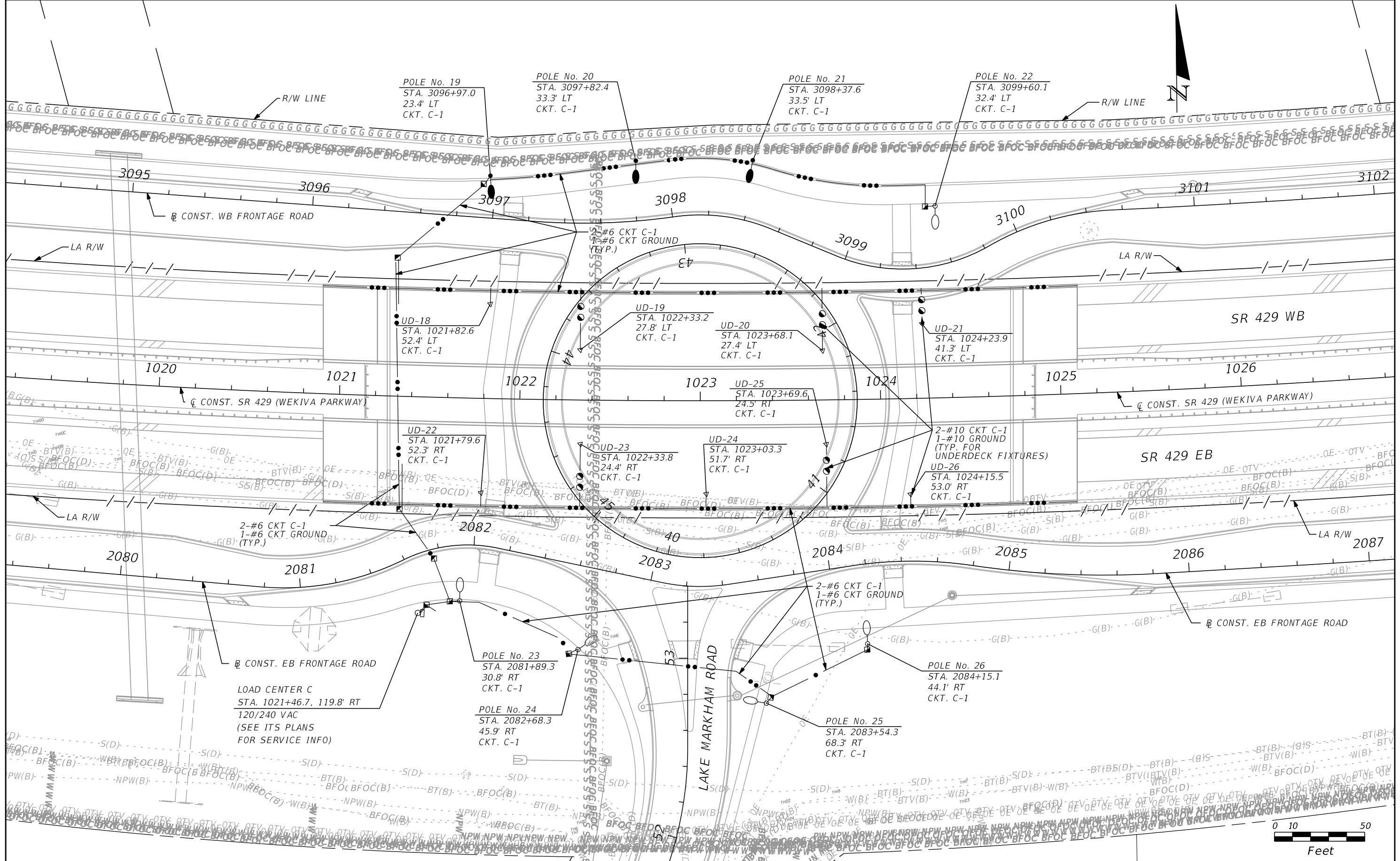
SUSANNE S. HERTZ, P.E. PE No. 49486
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 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

LIGHTING PLAN

SHEET NO.
L-8

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

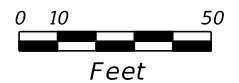
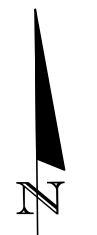
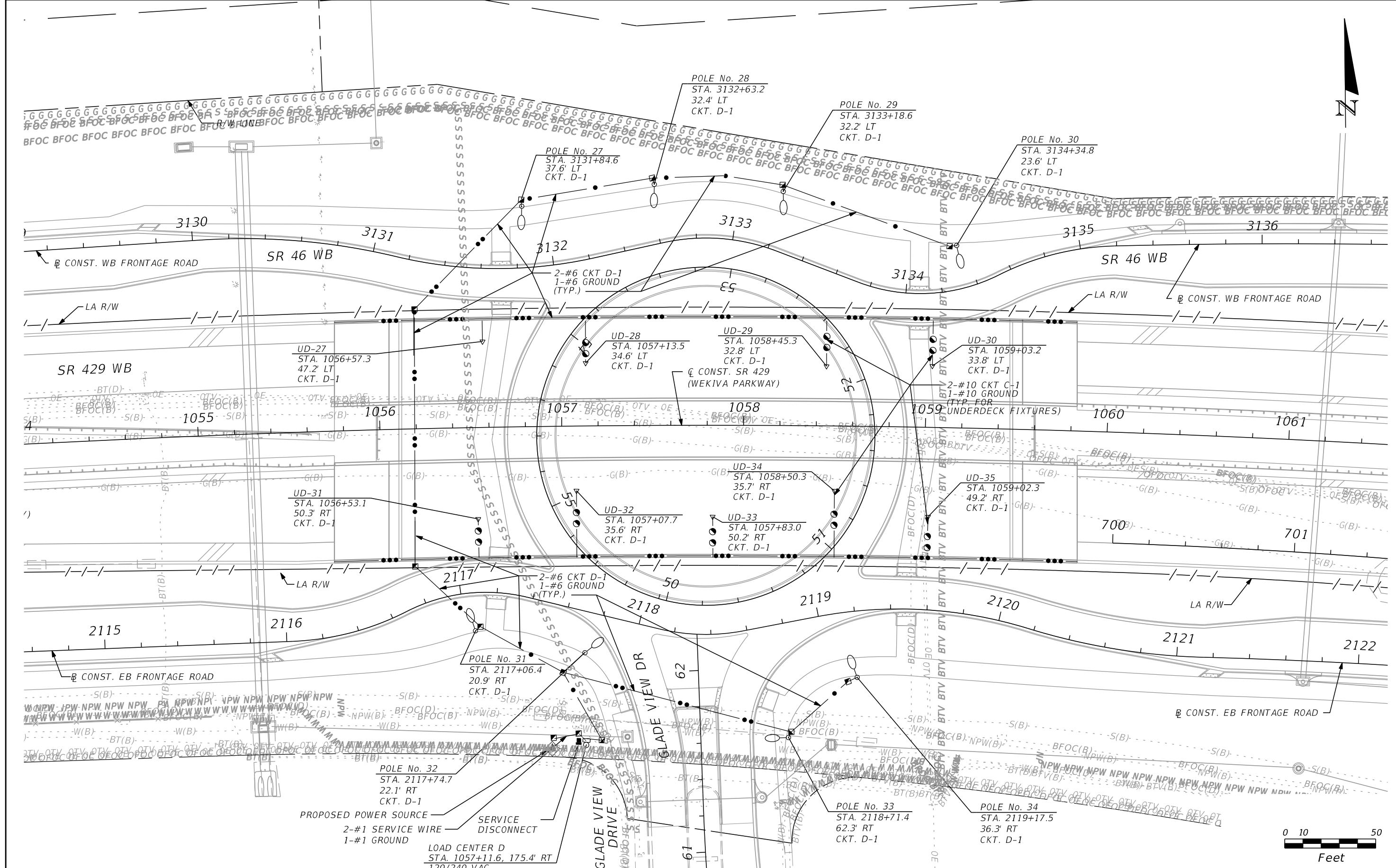
SUSANNE S. HERTZ, P.E. PE No. 49486
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 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

LIGHTING PLAN

SHEET NO.
L-9

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

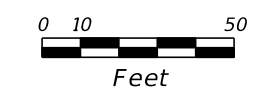
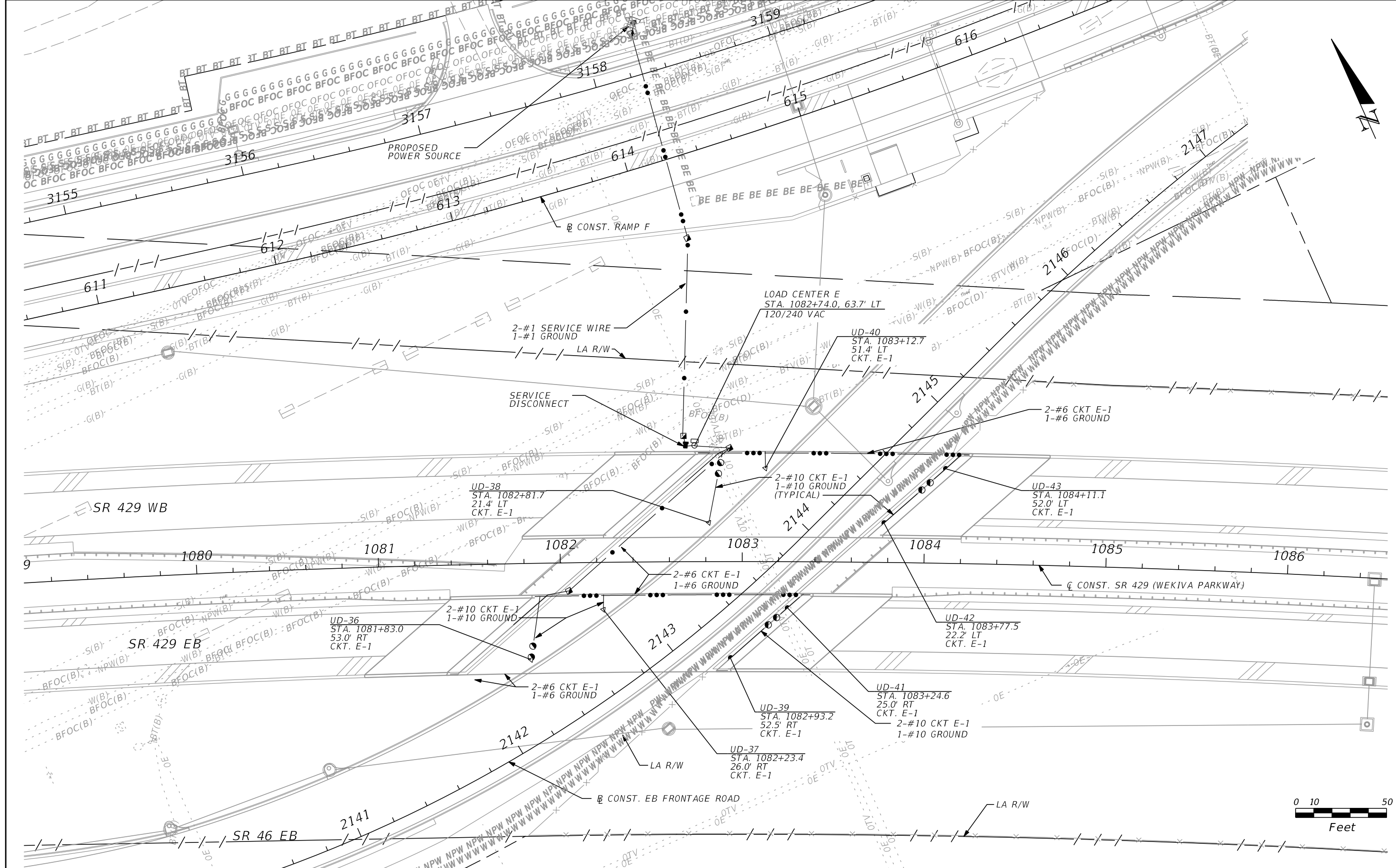
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

LIGHTING PLAN

SHEET NO.
L-10

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

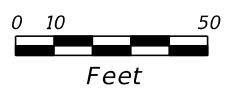
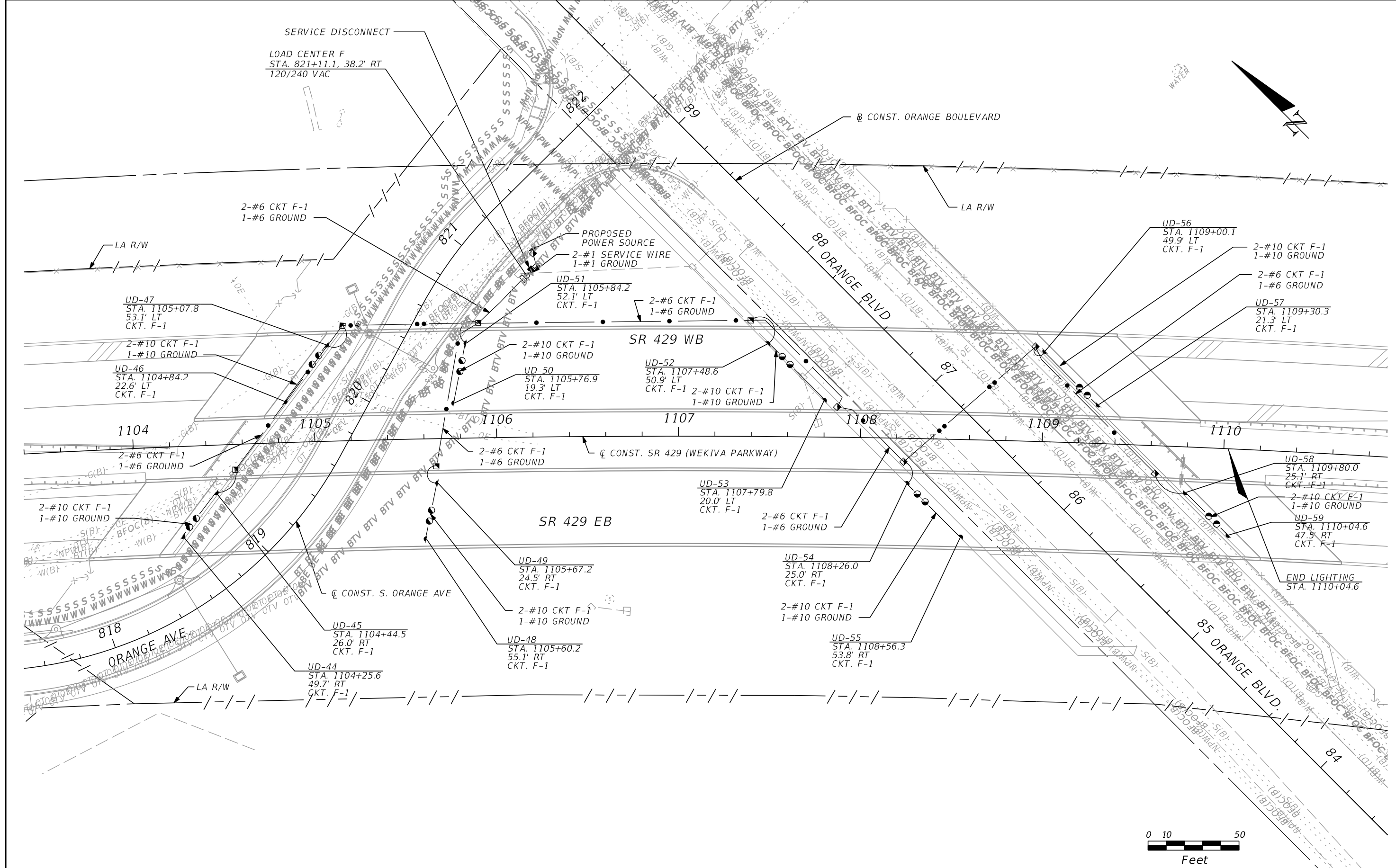
SUSANNE S. HERTZ, P.E. PE No. 49486
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 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

LIGHTING PLAN

SHEET NO.
L-11

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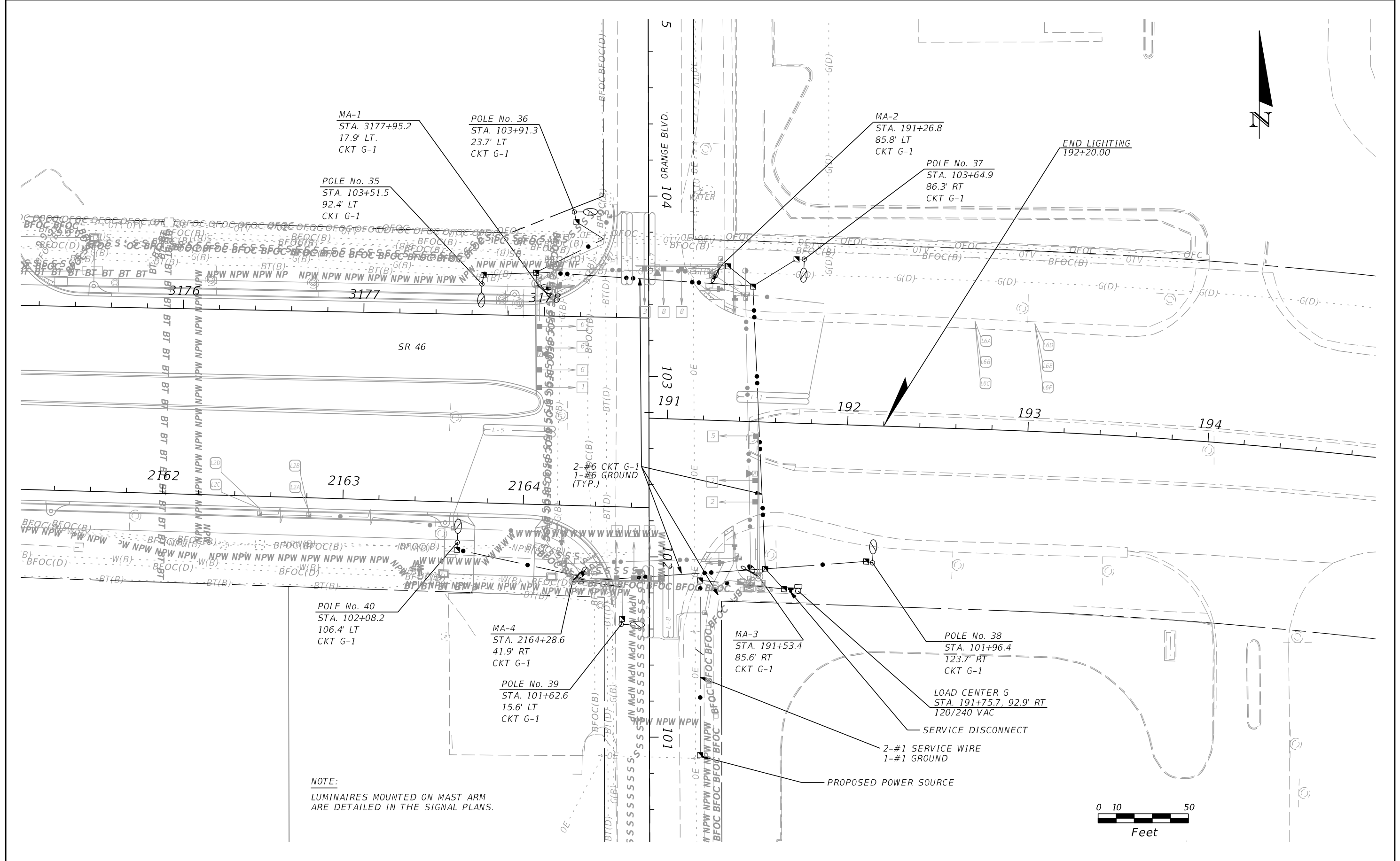
SUSANNE S. HERTZ, P.E. PE No. 49486
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 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

LIGHTING PLAN

SHEET NO.
L-12

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

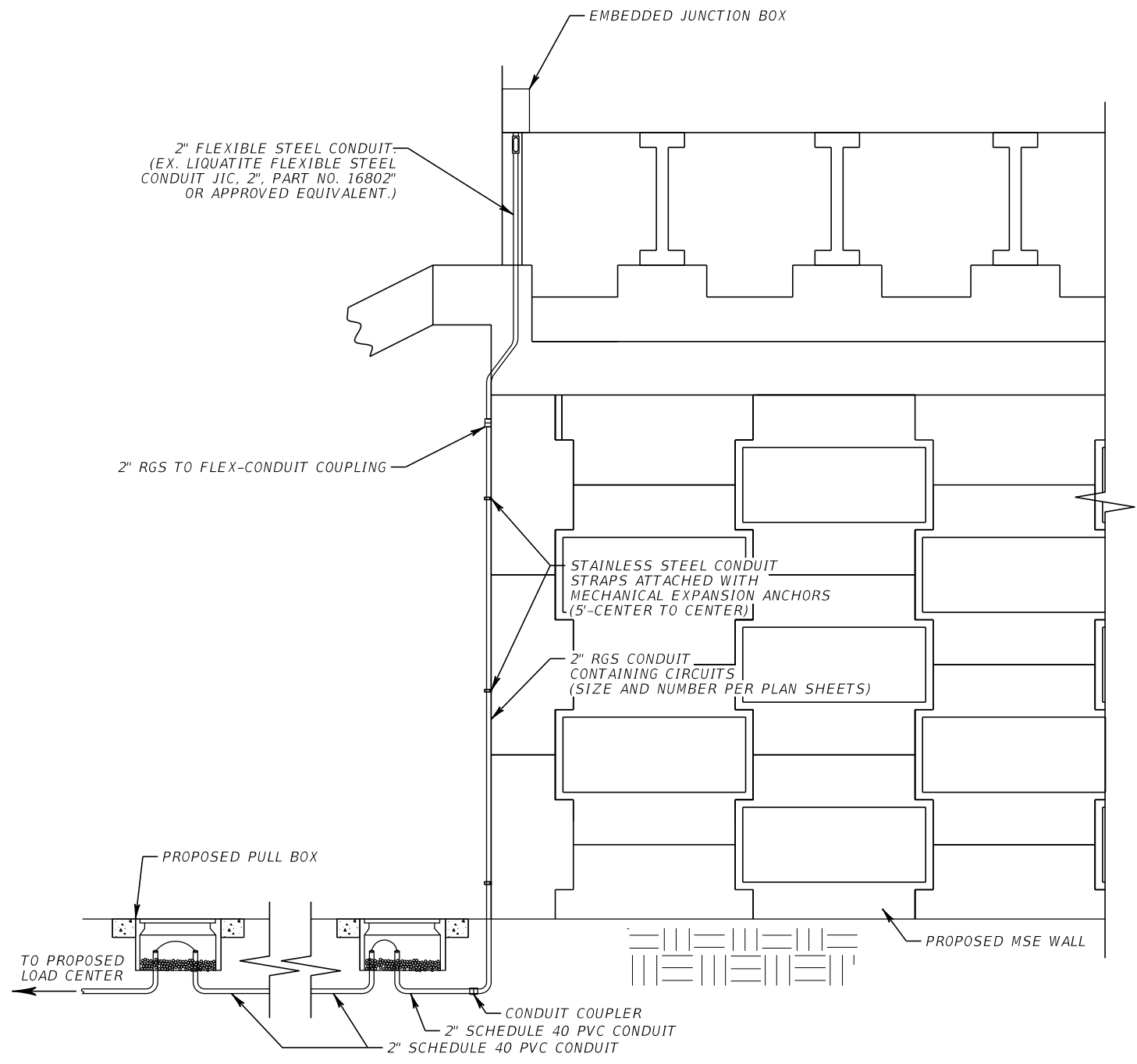
SUSANNE S. HERTZ, P.E. PE No. 49486
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 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

LIGHTING PLAN

SHEET NO.
L-13

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NOTES:

1. ALL ATTACHMENT HARDWARE SHALL BE 316 STAINLESS STEEL.
2. ENSURE ALL ELEMENTS ARE BONDED AND GROUNDED PER NEC REQUIREMENTS.
3. ALL CONDUIT ATTACHMENTS TO COUPLERS, EQUIPMENT ENCLOSURES (CABINETS), AND PULLING ELBOWS SHALL BE WEATHER TIGHT.

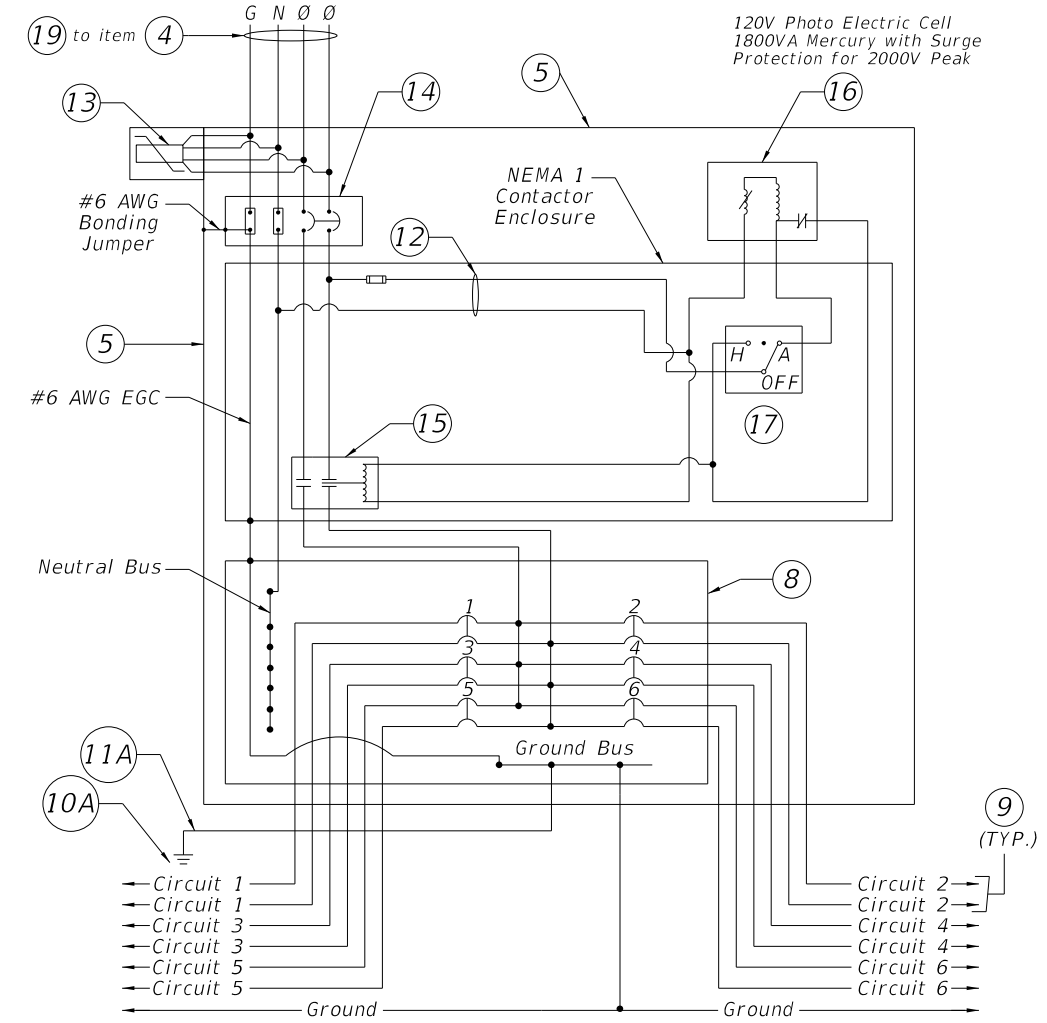
REVISIONS				SUSANNE S. HERTZ, P.E. PE No. 49486 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			UNDER DECK LIGHTING DETAILS	SHEET NO. L-14
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 429	SEMINOLE	240200-2-52-01		

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SERVICE POINT DETAIL LOAD CENTER A

Keyed Notes:

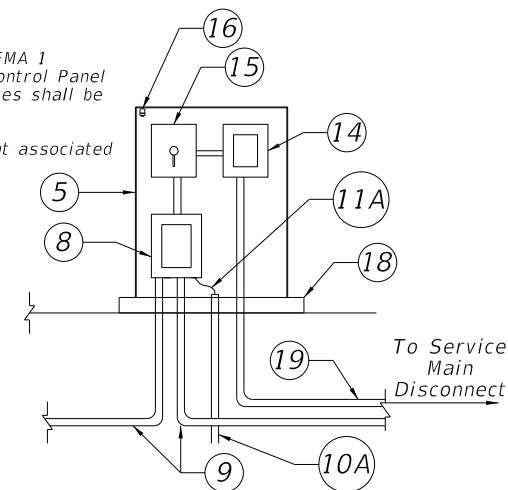
1. 120/240V, Single Phase, 3 Wire Electric Distribution Overhead Service Drop.
2. 2-#1 AWG Ungrounded Service Conductors & 1-#1 AWG Grounded Service Conductor (Neutral) in 2" Underground Conduit
3. Meter Socket by Contractor
4. Service Main Disconnect: 240V, 2 Pole, S/N, 100A, 22,000 AIC Min. Rated Circuit Breaker, in Service Entrance Rated NEMA 4X Circuit Breaker Enclosure. Bound Enclosure to Grounded Conductor (Neutral) with #6 Main Bonding Jumper.
5. Lighting Control Panel Enclosure. Dimensions as Necessary for Equipment Inside. Ground Mounted Cabinet per Index 17736.
6. Service Point H-Frame.
7. Point of Service: Utility Company Installed Handhole. Contractor to provide 10' of slack service feeder for connection by Utility Company.
8. Main Lug Only Panelboard in NEMA 1 Enclosure. Number and Rating of Branch Circuit Breakers shall be as Indicated on Panelboard Schedule.
9. Branch Circuit to Roadway Luminaires in 2" Underground Conduit (See plan sheets for count of conduits).
10. 5/8" x 20" Min. Copper Clad Ground Rod (Electrode). Extend or Add Additional Bonded with #2 AWG Tin Plated Bare Copper Ground Wire to Achieve 5 Ohms or Less Resistance to Ground.
- 10A. 5/8" Copper Clad Ground Rod, 40' Long.
11. #2 Insulated Copper Ground Wire (Common). Bond the Service Neutral to Ground in Wire Trough at Neutral Bus. Refer to ITS Plans for Further Detail.
- 11A. #6 Insulated Copper Ground Wire.
12. Fused Control Circuit, 120VAC. Size conductors according to contactor manufactures recommendation, and size fuse per NEC.
13. Lightning Arrester (Surge Protective Device) Mounted on Outside of Enclosure.
14. Lighting Control Panel Main Breaker in NEMA 1 Enclosure: 240V, 2 Pole, S/N, 60A, 22,000 AIC Min. Rated
15. 2 Pole Electrically Held Feeder Disconnect Style Lighting Contactor in NEMA 1 Enclosure: Minimum Voltage and Current Rating to Meet Lighting Control Panel Main Breaker, 120VAC 60Hz Coil
16. Photo Electric Switch-120V Rated.
17. Hand-off Automatic Selector Switch (Part of Lighting Contactor)
18. Concrete Pad.
19. Underground Feeder: 3-#1 & 1-#6 Ground in 2" Underground Conduit
20. Mount on Service Point H-Frame.
21. Ground BUS.



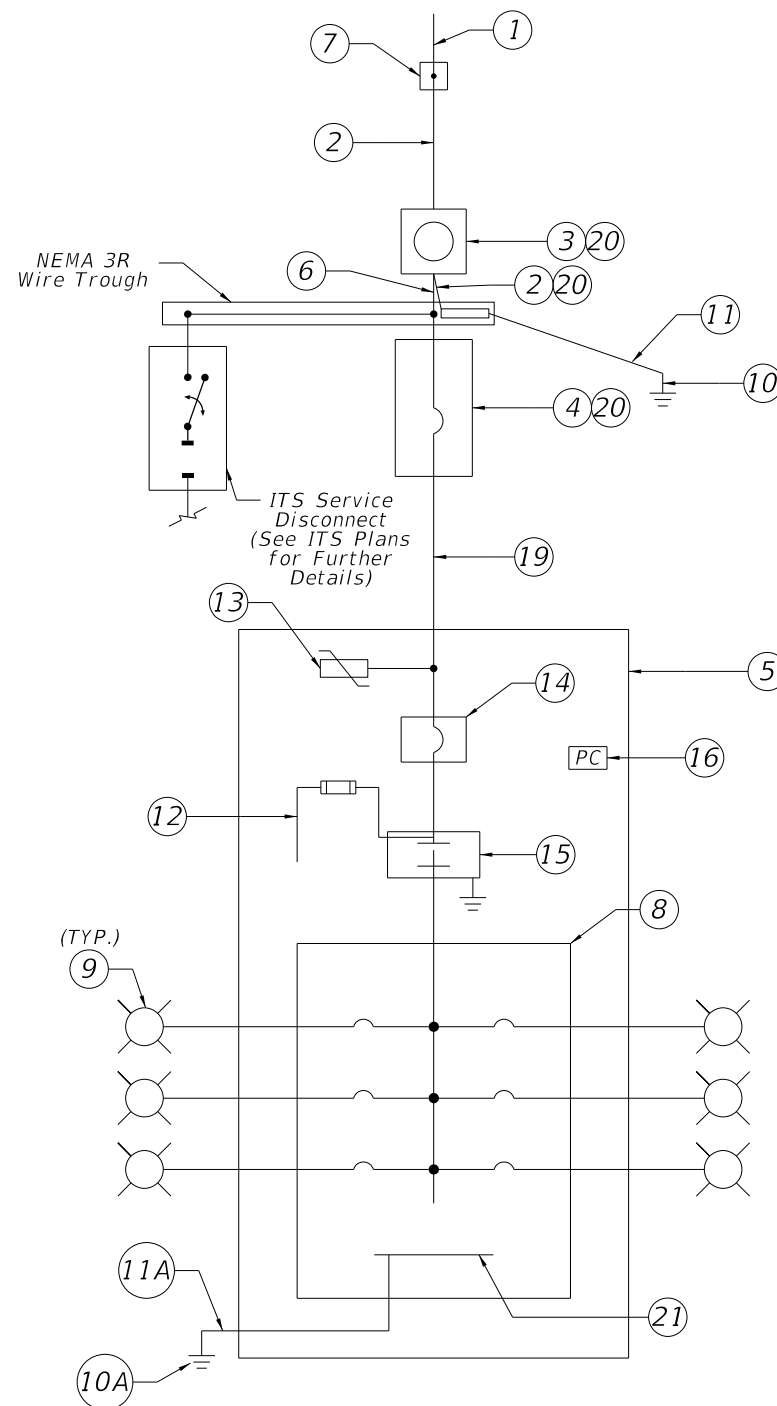
TYPICAL DISTRIBUTION POINT SCHEMATIC DETAIL

Notes:

1. All equipment shall be enclosed individual NEMA 1 Enclosures inside of the NEMA 4X Lighting Control Panel Enclosure. All wiring between these enclosures shall be installed in Intermediate Metal Conduit.
2. Shop Drawings are required for all equipment associated with the Lighting Control Panel.



RISER DIAGRAM - TYPICAL DISTRIBUTION POINT



ONE LINE DIAGRAM DISTRIBUTION POINT

AVAILABLE BOLTED FAULT CURRENT AT EQUIPMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	7.3
LIGHTING LOAD CENTER	6.5

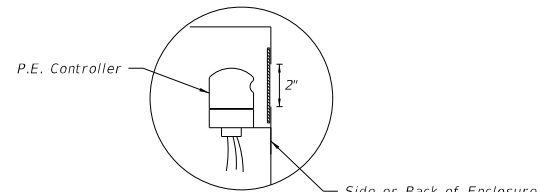


PHOTO ELECTRIC CONTROLLER DETAIL

PANELBOARD SCHEDULE											
VOLTAGE: 120/240						MAINS TYPE: LUG					
PHASE: 1						MAINS RAITING: 100 A					
WIRES: 3						AIC: 22,000 A					
CKT	CKT NAME	CONNECTED LOAD	TRIP	POLES	A LOAD (VA)	B LOAD (VA)	POLES	TRIP	CKT NAME	CONNECTED LOAD	CKT
1	A-1	LED LUMINARIES	20 A	2	1466						2
3	---	---	---	---		1466		---	---	---	4
5											6
7											8
9											10
11											12
LOAD PER LEG:					1466	1466					
TOTAL LOAD (VA):					2932						
TOTAL AMPS @ 240V:					12.2						

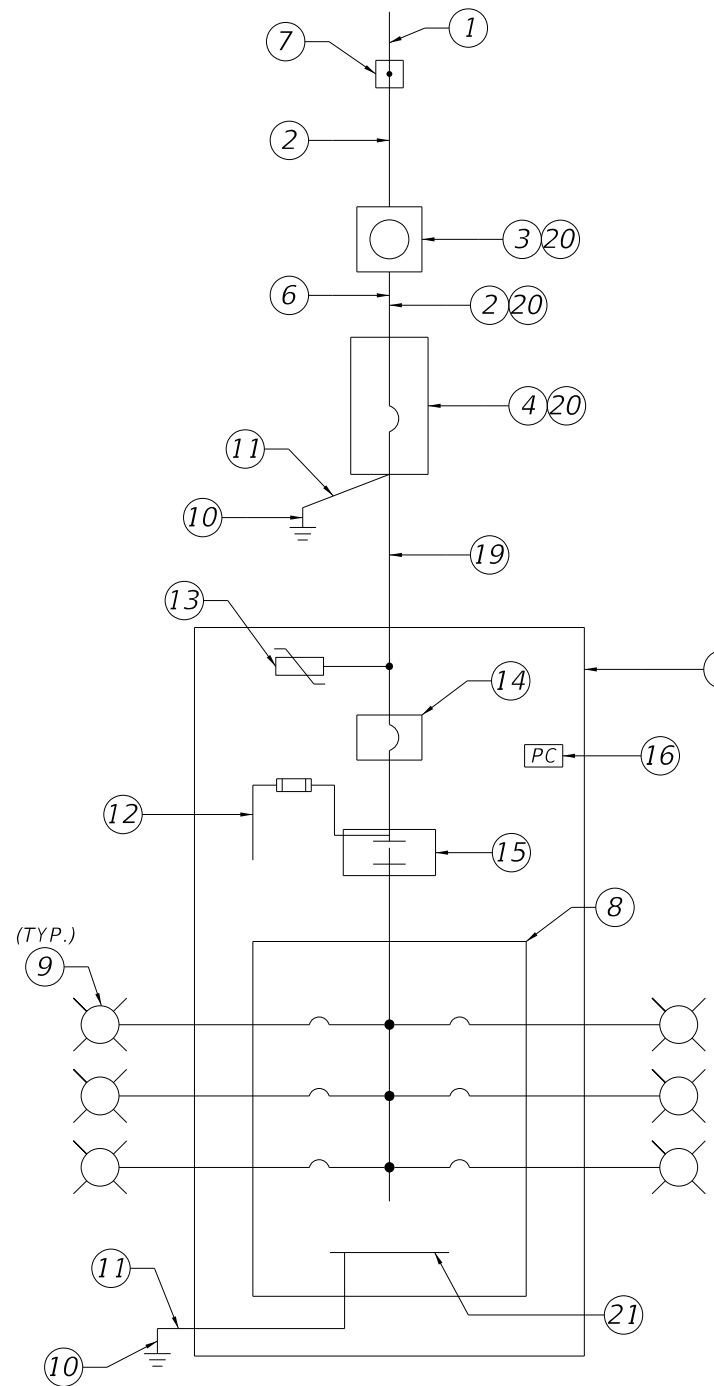
REVISIONS				SUSANNE S. HERTZ, P.E. PE No. 49486 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SERVICE POINT DETAIL SHEET LOAD CENTER A	SHEET NO. L-15
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 429	SEMINOLE	240200-2-52-01		

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SERVICE POINT DETAIL LOAD CENTER B

Keyed Notes:

1. 120/240V, Single Phase, 3 Wire Electric Distribution Underground Service Drop.
2. 2-#1 AWG Ungrounded Service Conductors & 1-#1 AWG Grounded Service Conductor (Neutral) in 2" Underground Conduit
3. Meter Socket by Contractor
4. Service Main Disconnect: 240V, 2 Pole, S/N, 100A, 22,000 AIC Min. Rated Circuit Breaker, in Service Entrance Rated NEMA 4X Circuit Breaker Enclosure
5. Lighting Control Panel Enclosure. Dimensions as Necessary for Equipment Inside. Ground Mounted Cabinet per Index 17736.
6. Concrete Riser Pole.
7. Point of Service: Utility Company Installed Handhole. Contractor to provide 10' of slack service feeder for connection by Utility Company.
8. Main Lug Only Panelboard in NEMA 1 Enclosure. Number and Rating of Branch Circuit Breakers shall be as Indicated on Panelboard Schedule.
9. Branch Circuit to Roadway Luminaires in 2" Underground Conduit (See plan sheets for count of conduits).
10. 5/8" Copper Clad Ground Rod, 40' Long.
11. #6 Insulated Copper Ground Wire. Bond the Service Neutral to Ground at Service Main Disconnect.
12. Fused Control Circuit, 120VAC. Size conductors according to contactor manufactures recommendation, and size fuse per NEC.
13. Lightning Arrester (Surge Protective Device) Mounted on Outside of Enclosure.
14. Lighting Control Panel Main Breaker in NEMA 1 Enclosure: 240V, 2 Pole, S/N, 60A, 22,000 AIC Min. Rated
15. 2 Pole Electrically Held Feeder Disconnect Style Lighting Contactor in NEMA 1 Enclosure; Minimum Voltage and Current Rating to Meet or Exceed Lighting Control Panel Main Breaker, 120VAC 60Hz Coil
16. Photo Electric Switch-120V Rated.
17. Hand-off Automatic Selector Switch (Part of Lighting Contactor)
18. Concrete Pad.
19. Underground Feeder: 3-#1 & 1-#6 Ground in 2" Underground Conduit
20. Mount on Riser Pole.
21. Ground BUS.



ONE LINE DIAGRAM DISTRIBUTION POINT

AVAILABLE BOLTED FAULT CURRENT AT EQUIPMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	14.2
LIGHTING LOAD CENTER	11.5

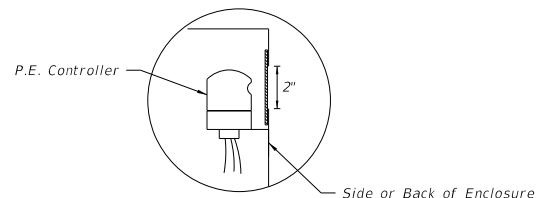
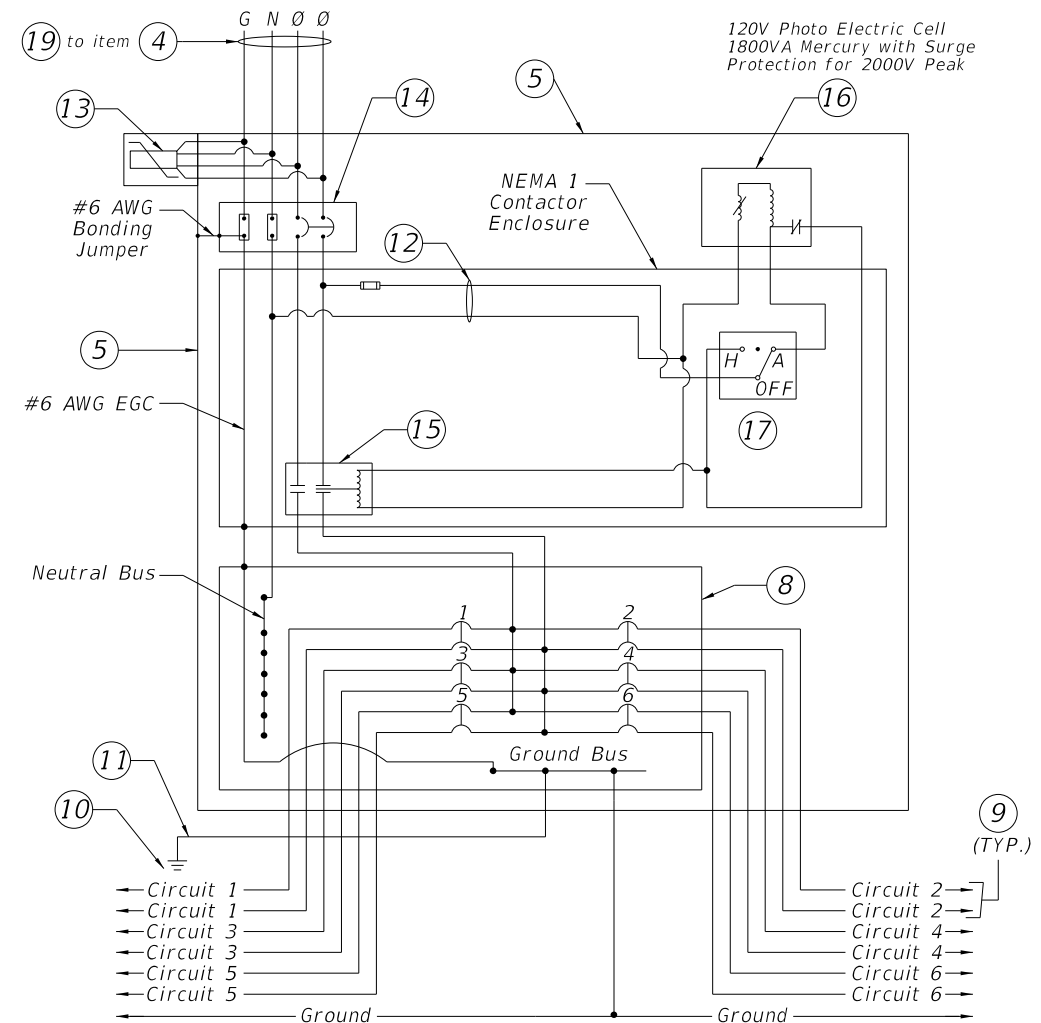


PHOTO ELECTRIC CONTROLLER DETAIL

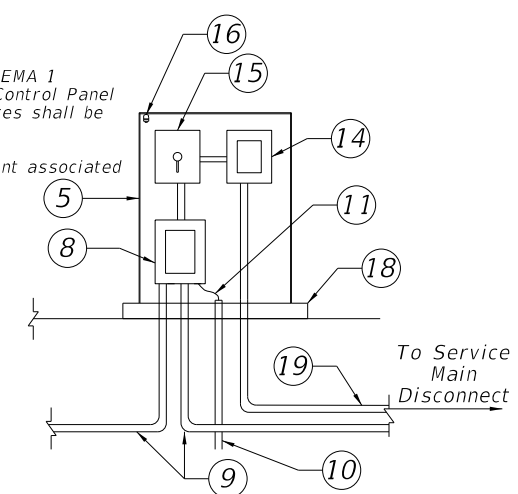
PANELBOARD SCHEDULE											
VOLTAGE: 120/240						MAINS TYPE: LUG					
PHASE: 1						MAINS RAITING: 100 A					
WIRES: 3						AIC: 22,000 A					
CKT	CKT NAME	CONNECTED LOAD	TRIP	POLES	A LOAD (VA)	B LOAD (VA)	POLES	TRIP	CKT NAME	CONNECTED LOAD	CKT
1	B-1	LED LUMINARIES	20 A	2	1302						2
3	---	---	---	---		1302		---	---	---	4
5											6
7											8
9											10
11											12
LOAD PER LEG:					1302	1302					
TOTAL LOAD (VA):					2603						
TOTAL AMPS @ 240V:					10.9						

Notes:

1. All equipment shall be enclosed individual NEMA 1 Enclosures inside of the NEMA 4X Lighting Control Panel Enclosure. All wiring between these enclosures shall be installed in Intermediate Metal Conduit.
2. Shop Drawings are required for all equipment associated with the Lighting Control Panel.



TYPICAL DISTRIBUTION POINT SCHEMATIC DETAIL



RISER DIAGRAM - TYPICAL DISTRIBUTION POINT

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

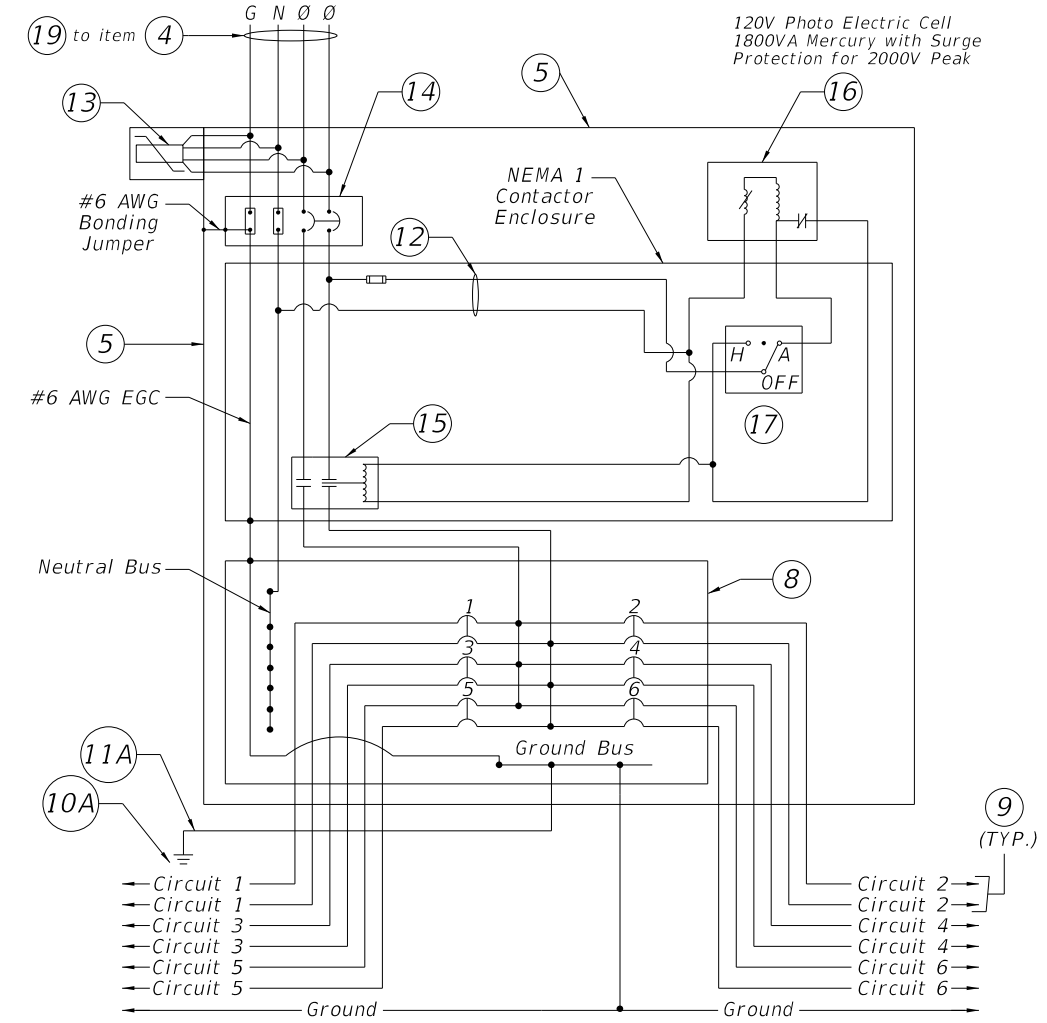
SERVICE POINT DETAIL SHEET
LOAD CENTER B

SHEET NO.
L-16

SERVICE POINT DETAIL LOAD CENTER C

Keyed Notes:

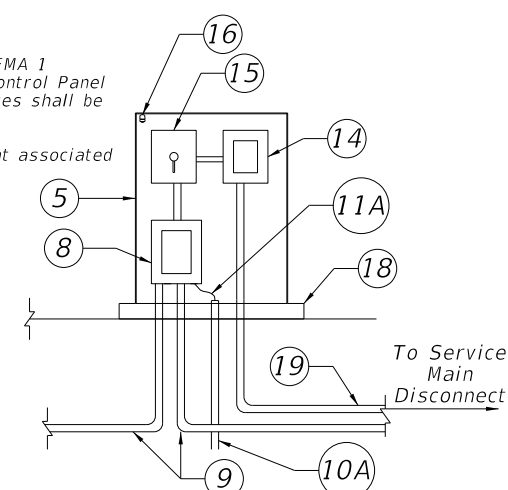
1. 120/240V, Single Phase, 3 Wire Electric Distribution Overhead Service Drop.
2. 2-#1 AWG Ungrounded Service Conductors & 1-#1 AWG Grounded Service Conductor (Neutral) in 2" Underground Conduit
3. Meter Socket by Contractor
4. Service Main Disconnect: 240V, 2 Pole, S/N, 100A, 22,000 AIC Min. Rated Circuit Breaker, in Service Entrance Rated NEMA 4X Circuit Breaker Enclosure. Bound Enclosure to Grounded Conductor (Neutral) with #6 Main Bonding Jumper.
5. Lighting Control Panel Enclosure. Dimensions as Necessary for Equipment Inside. Ground Mounted Cabinet per Index 17736.
6. Service Point H-Frame.
7. Point of Service: Utility Company Installed Handhole. Contractor to provide 10' of slack service feeder for connection by Utility Company.
8. Main Lug Only Panelboard in NEMA 1 Enclosure. Number and Rating of Branch Circuit Breakers shall be as Indicated on Panelboard Schedule.
9. Branch Circuit to Roadway Luminaires in 2" Underground Conduit (See plan sheets for count of conduits).
10. 5/8" x 20" Min. Copper Clad Ground Rod (Electrode). Extend or Add Additional Bonded with #2 AWG Tin Plated Bare Copper Ground Wire to Achieve 5 Ohms or Less Resistance to Ground.
- 10A. 5/8" Copper Clad Ground Rod, 40' Long.
11. #2 Insulated Copper Ground Wire (Common). Bond the Service Neutral to Ground in Wire Trough at Neutral Bus. Refer to ITS Plans for Further Detail.
- 11A. #6 Insulated Copper Ground Wire.
12. Fused Control Circuit, 120VAC. Size conductors according to contactor manufactures recommendation, and size fuse per NEC.
13. Lightning Arrester (Surge Protective Device) Mounted on Outside of Enclosure.
14. Lighting Control Panel Main Breaker in NEMA 1 Enclosure: 240V, 2 Pole, S/N, 60A, 22,000 AIC Min. Rated
15. 2 Pole Electrically Held Feeder Disconnect Style Lighting Contactor in NEMA 1 Enclosure: Minimum Voltage and Current Rating to Meet Lighting Control Panel Main Breaker, 120VAC 60Hz Coil
16. Photo Electric Switch-120V Rated.
17. Hand-off Automatic Selector Switch (Part of Lighting Contactor)
18. Concrete Pad.
19. Underground Feeder: 3-#1 & 1-#6 Ground in 2" Underground Conduit
20. Mount on Service Point H-Frame.
21. Ground BUS.



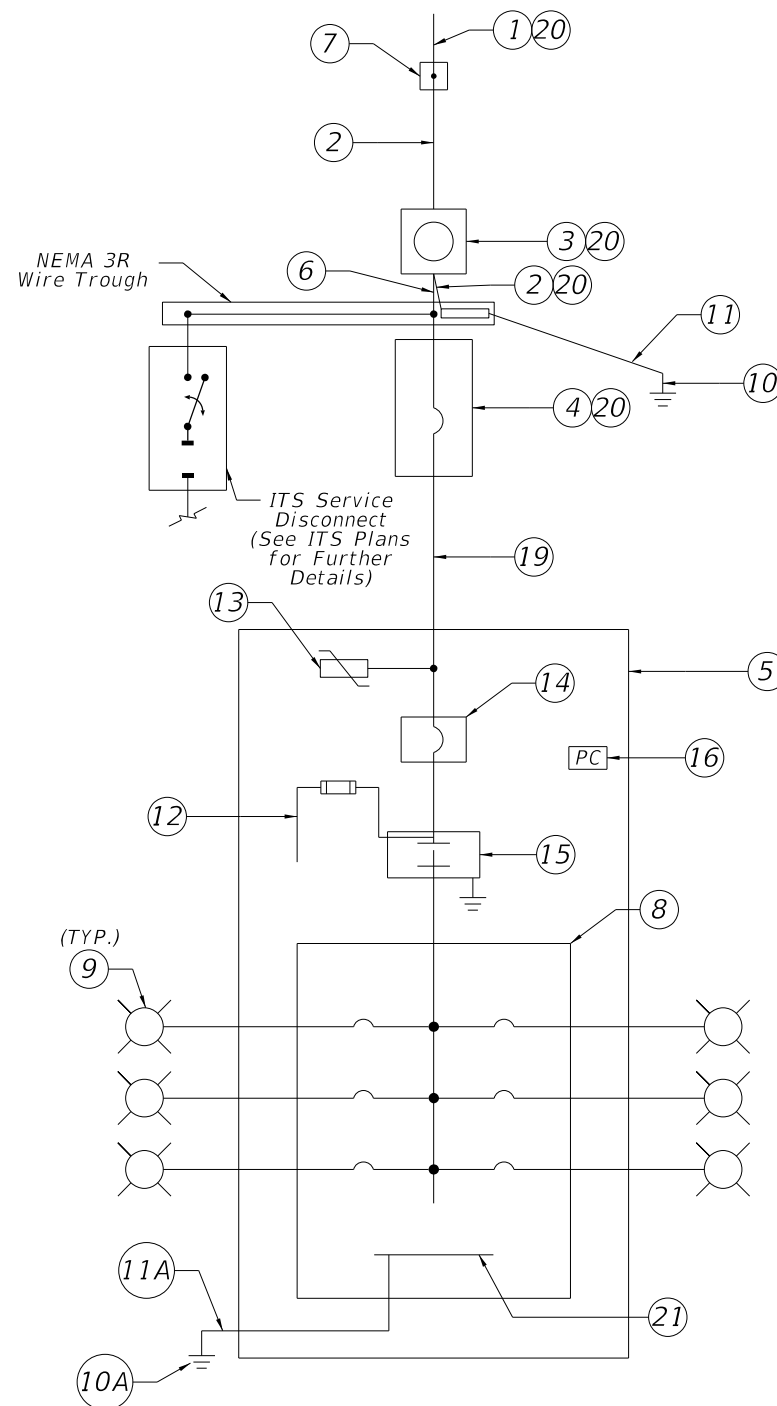
TYPICAL DISTRIBUTION POINT SCHEMATIC DETAIL

Notes:

1. All equipment shall be enclosed individual NEMA 1 Enclosures inside of the NEMA 4X Lighting Control Panel Enclosure. All wiring between these enclosures shall be installed in Intermediate Metal Conduit.
2. Shop Drawings are required for all equipment associated with the Lighting Control Panel.



RISER DIAGRAM - TYPICAL DISTRIBUTION POINT



ONE LINE DIAGRAM DISTRIBUTION POINT

AVAILABLE BOLTED FAULT CURRENT AT EQUIPMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	5.1
LIGHTING LOAD CENTER	4.7

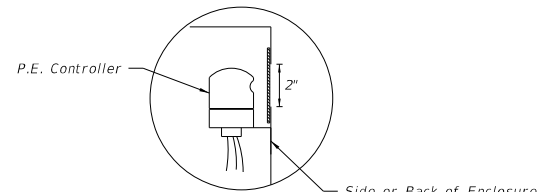


PHOTO ELECTRIC CONTROLLER DETAIL

PANELBOARD SCHEDULE											
VOLTAGE: 120/240						MAINS TYPE: LUG					
PHASE: 1						MAINS RAITING: 100 A					
WIRES: 3						AIC: 22,000 A					
CKT	CKT NAME	CONNECTED LOAD	TRIP	POLES	A LOAD (VA)	B LOAD (VA)	POLES	TRIP	CKT NAME	CONNECTED LOAD	CKT
1	C-1	LED LUMINARIES	20 A	2	1302						2
3	---	---	---	---		1302		---	---	---	4
5											6
7											8
9											10
11											12
LOAD PER LEG:					1302	1302					
TOTAL LOAD (VA):					2603						
TOTAL AMPS @ 240V:					10.9						

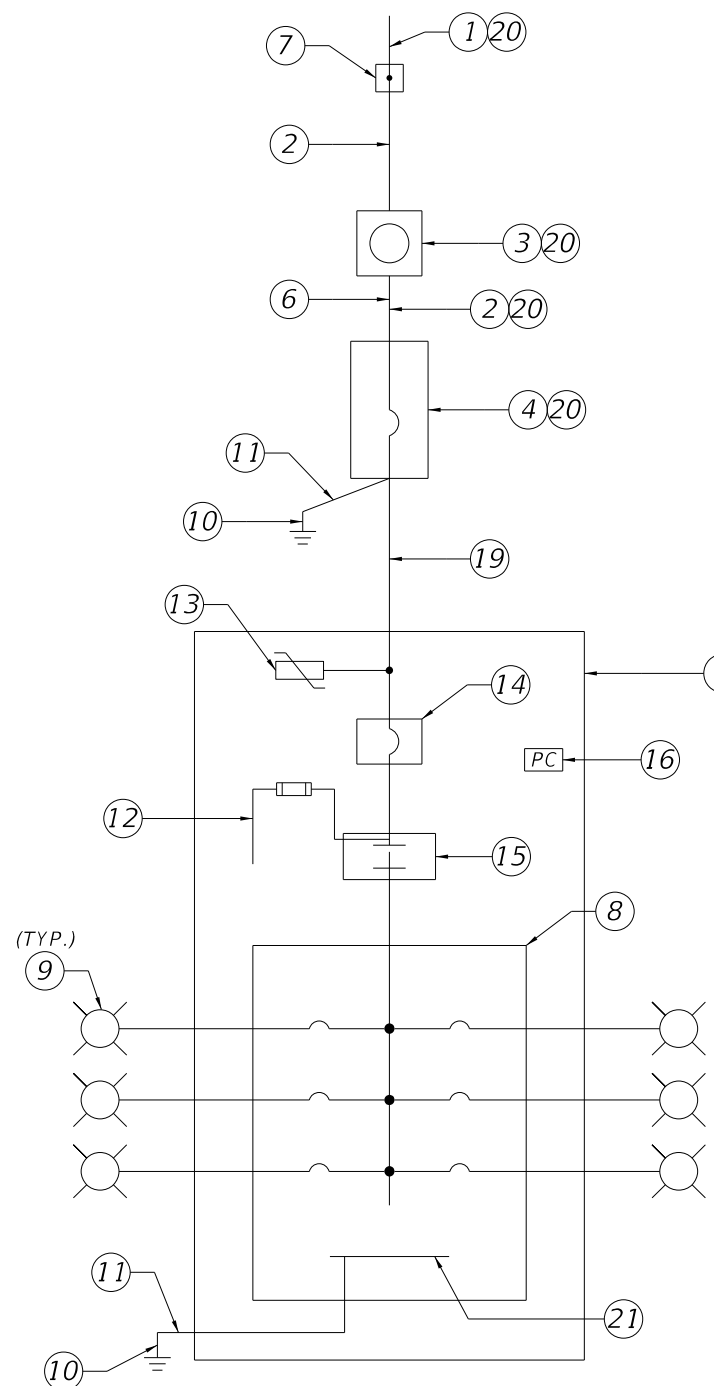
REVISIONS				SUSANNE S. HERTZ, P.E. PE No. 49486 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SERVICE POINT DETAIL SHEET LOAD CENTER C	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		L-17
				SR 429	SEMINOLE	240200-2-52-01			

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

SERVICE POINT DETAIL LOAD CENTER D

Keyed Notes:

1. 120/240V, Single Phase, 3 Wire Electric Distribution Underground Service Drop.
2. 2-#1 AWG Ungrounded Service Conductors & 1-#1 AWG Grounded Service Conductor (Neutral) in 2" Underground Conduit
3. Meter Socket by Contractor
4. Service Main Disconnect: 240V, 2 Pole, S/N, 100A, 22,000 AIC Min. Rated Circuit Breaker, in Service Entrance Rated NEMA 4X Circuit Breaker Enclosure
5. Lighting Control Panel Enclosure. Dimensions as Necessary for Equipment Inside. Ground Mounted Cabinet per Index 17736.
6. Concrete Riser Pole.
7. Point of Service: Utility Company Installed Handhole. Contractor to provide 10' of slack service feeder for connection by Utility Company.
8. Main Lug Only Panelboard in NEMA 1 Enclosure. Number and Rating of Branch Circuit Breakers shall be as Indicated on Panelboard Schedule.
9. Branch Circuit to Roadway Luminaires in 2" Underground Conduit (See plan sheets for count of conduits).
10. 5/8" Copper Clad Ground Rod, 40' Long.
11. #6 Insulated Copper Ground Wire. Bond the Service Neutral to Ground at Service Main Disconnect.
12. Fused Control Circuit, 120VAC. Size conductors according to contactor manufactures recommendation, and size fuse per NEC.
13. Lightning Arrester (Surge Protective Device) Mounted on Outside of Enclosure.
14. Lighting Control Panel Main Breaker in NEMA 1 Enclosure: 240V, 2 Pole, S/N, 60A, 22,000 AIC Min. Rated
15. 2 Pole Electrically Held Feeder Disconnect Style Lighting Contactor in NEMA 1 Enclosure; Minimum Voltage and Current Rating to Meet or Exceed Lighting Control Panel Main Breaker, 120VAC 60Hz Coil
16. Photo Electric Switch-120V Rated.
17. Hand-off Automatic Selector Switch (Part of Lighting Contactor)
18. Concrete Pad.
19. Underground Feeder: 3-#1 & 1-#6 Ground in 2" Underground Conduit
20. Mount on Riser Pole.
21. Ground BUS.



ONE LINE DIAGRAM DISTRIBUTION POINT

AVAILABLE BOLTED FAULT CURRENT AT EQUIPMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	16.9
LIGHTING LOAD CENTER	13.2

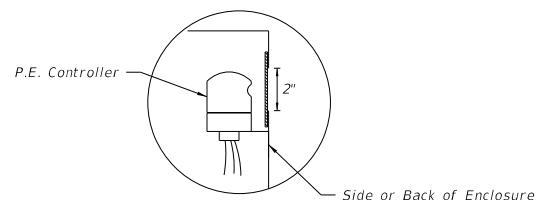
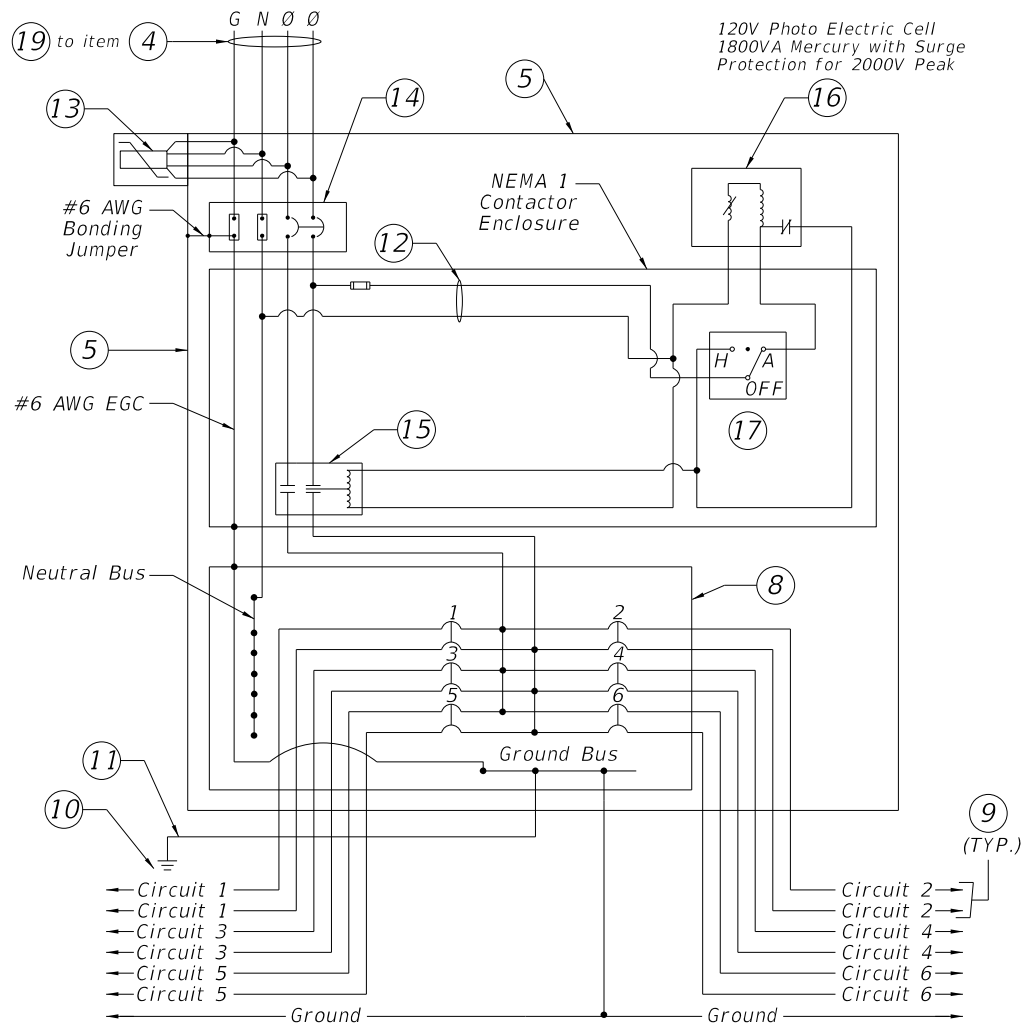


PHOTO ELECTRIC CONTROLLER DETAIL

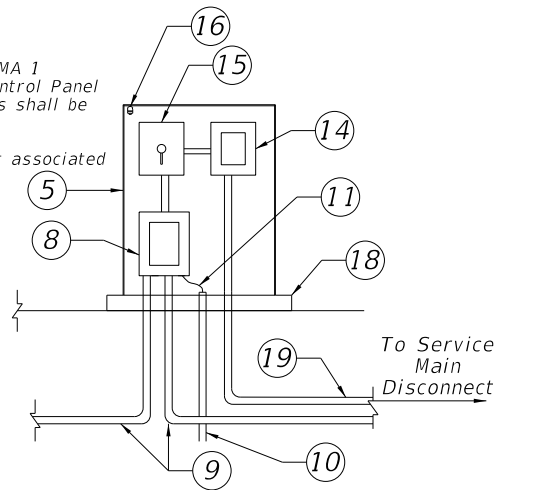
PANELBOARD SCHEDULE											
VOLTAGE: 120/240						MAINS TYPE: LUG					
PHASE: 1						MAINS RAITING: 100 A					
WIRES: 3						AIC: 22,000 A					
CKT	CKT NAME	CONNECTED LOAD	TRIP	POLES	A LOAD (VA)	B LOAD (VA)	POLES	TRIP	CKT NAME	CONNECTED LOAD	CKT
1	D-1	LED LUMINARIES	20 A	2	1302						2
3	---	---	---	---		1302					4
5											6
7											8
9											10
11											12
LOAD PER LEG:					1302	1302					
TOTAL LOAD (VA):					2603						
TOTAL AMPS @ 240V:					10.9						

Notes:

1. All equipment shall be enclosed individual NEMA 1 Enclosures inside of the NEMA 4X Lighting Control Panel Enclosure. All wiring between these enclosures shall be installed in Intermediate Metal Conduit.
2. Shop Drawings are required for all equipment associated with the Lighting Control Panel.



TYPICAL DISTRIBUTION POINT SCHEMATIC DETAIL



RISER DIAGRAM - TYPICAL DISTRIBUTION POINT

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SUSANNE S. HERTZ, P.E. PE No. 49486
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

SERVICE POINT DETAIL SHEET
LOAD CENTER D

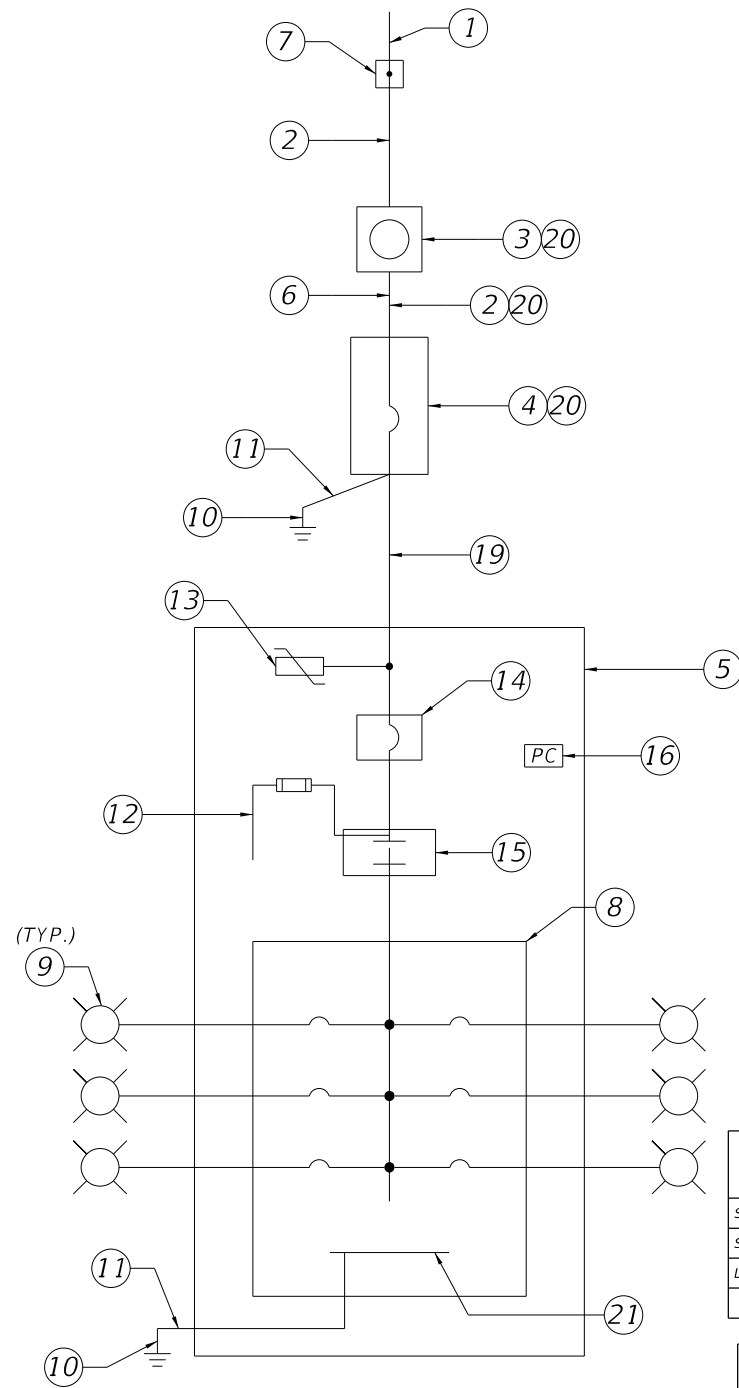
SHEET NO.
L-18

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

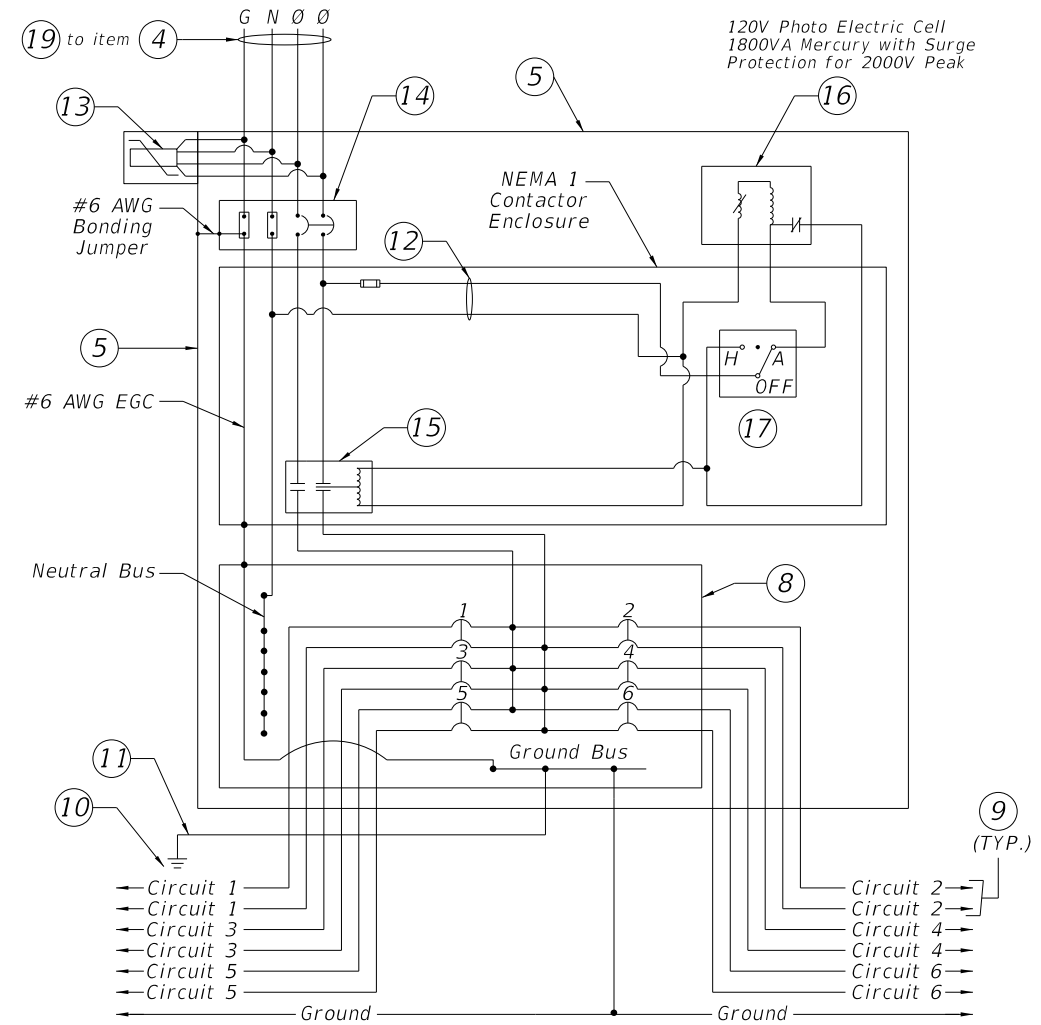
SERVICE POINT DETAIL LOAD CENTER E

Keyed Notes:

1. 120/240V, Single Phase, 3 Wire Electric Distribution Underground Service Drop.
2. 2-#1 AWG Ungrounded Service Conductors & 1-#1 AWG Grounded Service Conductor (Neutral) in 2" Underground Conduit
3. Meter Socket by Contractor
4. Service Main Disconnect: 240V, 2 Pole, S/N, 100A, 22,000 AIC Min. Rated Circuit Breaker, in Service Entrance Rated NEMA 4X Circuit Breaker Enclosure
5. Lighting Control Panel Enclosure. Dimensions as Necessary for Equipment Inside. Ground Mounted Cabinet per Index 17736.
6. Concrete Riser Pole.
7. Point of Service: Utility Company Installed Handhole. Contractor to provide 10' of slack service feeder for connection by Utility Company.
8. Main Lug Only Panelboard in NEMA 1 Enclosure. Number and Rating of Branch Circuit Breakers shall be as Indicated on Panelboard Schedule.
9. Branch Circuit to Roadway Luminaires in 2" Underground Conduit (See plan sheets for count of conduits).
10. 5/8" Copper Clad Ground Rod, 40' Long.
11. #6 Insulated Copper Ground Wire. Bond the Service Neutral to Ground at Service Main Disconnect.
12. Fused Control Circuit, 120VAC. Size conductors according to contactor manufactures recommendation, and size fuse per NEC.
13. Lightning Arrester (Surge Protective Device) Mounted on Outside of Enclosure.
14. Lighting Control Panel Main Breaker in NEMA 1 Enclosure: 240V, 2 Pole, S/N, 60A, 22,000 AIC Min. Rated
15. 2 Pole Electrically Held Feeder Disconnect Style Lighting Contactor in NEMA 1 Enclosure; Minimum Voltage and Current Rating to Meet or Exceed Lighting Control Panel Main Breaker, 120VAC 60Hz Coil
16. Photo Electric Switch-120V Rated.
17. Hand-off Automatic Selector Switch (Part of Lighting Contactor)
18. Concrete Pad.
19. Underground Feeder: 3-#1 & 1-#6 Ground in 2" Underground Conduit
20. Mount on Riser Pole.
21. Ground BUS.



ONE LINE DIAGRAM DISTRIBUTION POINT



TYPICAL DISTRIBUTION POINT SCHEMATIC DETAIL

AVAILABLE BOLTED FAULT CURRENT AT EQUIPMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	3.4
LIGHTING LOAD CENTER	3.3

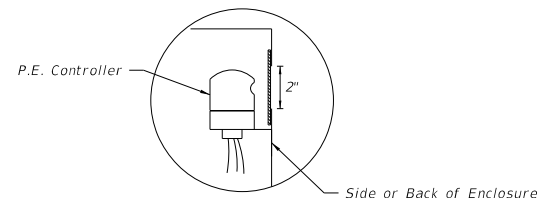
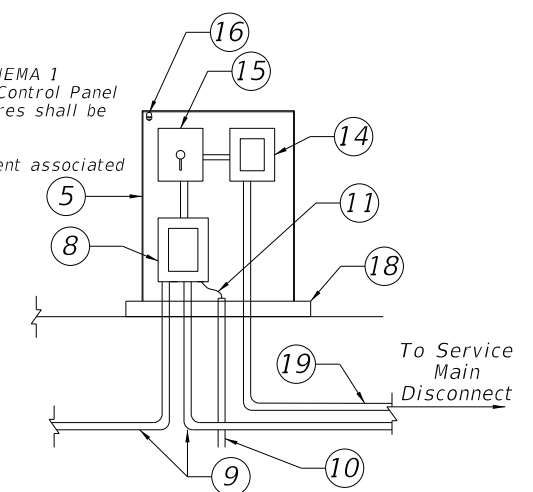


PHOTO ELECTRIC CONTROLLER DETAIL

PANELBOARD SCHEDULE											
VOLTAGE: 120/240						MAINS TYPE: LUG					
PHASE: 1						MAINS RAITING: 100 A					
WIRES: 3						AIC: 22,000 A					
CKT	CKT NAME	CONNECTED LOAD	TRIP	POLES	A LOAD (VA)	B LOAD (VA)	POLES	TRIP	CKT NAME	CONNECTED LOAD	CKT
1	E-1	LED LUMINARIES	20 A	2	358						2
3	---	---	---	---		358		---	---	---	4
5											6
7											8
9											10
11											12
					LOAD PER LEG:						
					TOTAL LOAD (VA):		716				
					TOTAL AMPS @ 240V:		3.0				

Notes:

1. All equipment shall be enclosed individual NEMA 1 Enclosures inside of the NEMA 4X Lighting Control Panel Enclosure. All wiring between these enclosures shall be installed in Intermediate Metal Conduit.
2. Shop Drawings are required for all equipment associated with the Lighting Control Panel.



RISER DIAGRAM - TYPICAL DISTRIBUTION POINT

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SUSANNE S. HERTZ, P.E. PE No. 49486
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

SERVICE POINT DETAIL SHEET
LOAD CENTER E

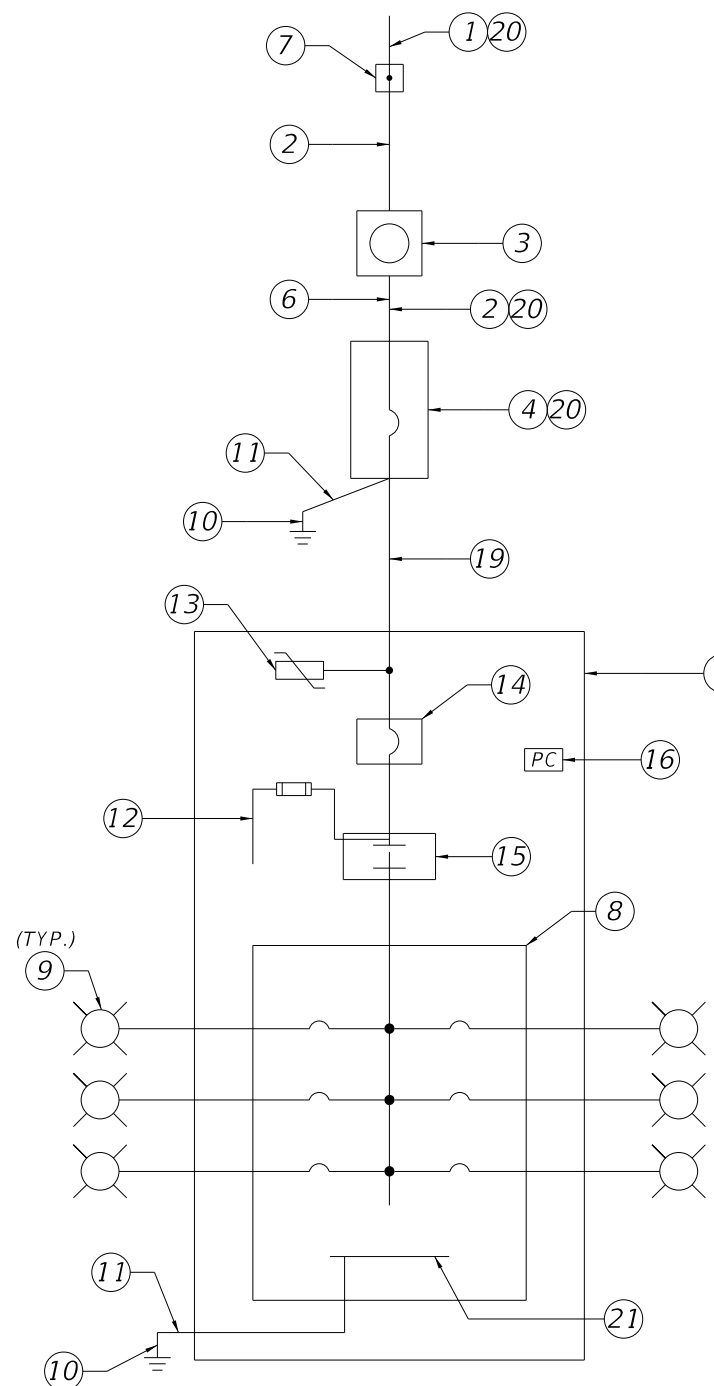
SHEET NO.

L-19

SERVICE POINT DETAIL LOAD CENTER F

Keyed Notes:

1. 120/240V, Single Phase, 3 Wire Electric Distribution Underground Service Drop.
2. 2-#1 AWG Ungrounded Service Conductors & 1-#1 AWG Grounded Service Conductor (Neutral) in 2" Underground Conduit
3. Meter Socket by Contractor
4. Service Main Disconnect: 240V, 2 Pole, S/N, 100A, 35,000 AIC Min. Rated Circuit Breaker, in Service Entrance Rated NEMA 4X Circuit Breaker Enclosure
5. Lighting Control Panel Enclosure. Dimensions as Necessary for Equipment Inside. Ground Mounted Cabinet per Index 17736.
6. Concrete Riser Pole.
7. Point of Service: Utility Company Installed Handhole. Contractor to provide 10' of slack service feeder for connection by Utility Company.
8. Main Lug Only Panelboard in NEMA 1 Enclosure. Number and Rating of Branch Circuit Breakers shall be as Indicated on Panelboard Schedule.
9. Branch Circuit to Roadway Luminaires in 2" Underground Conduit (See plan sheets for count of conduits).
10. 5/8" Copper Clad Ground Rod, 40' Long.
11. #6 Insulated Copper Ground Wire. Bond the Service Neutral to Ground at Service Main Disconnect.
12. Fused Control Circuit, 120VAC. Size conductors according to contactor manufactures recommendation, and size fuse per NEC.
13. Lightning Arrester (Surge Protective Device) Mounted on Outside of Enclosure.
14. Lighting Control Panel Main Breaker in NEMA 1 Enclosure: 240V, 2 Pole, S/N, 60A, 22,000 AIC Min. Rated
15. 2 Pole Electrically Held Feeder Disconnect Style Lighting Contactor in NEMA 1 Enclosure; Minimum Voltage and Current Rating to Meet or Exceed Lighting Control Panel Main Breaker, 120VAC 60Hz Coil
16. Photo Electric Switch-120V Rated.
17. Hand-off Automatic Selector Switch (Part of Lighting Contactor)
18. Concrete Pad.
19. Underground Feeder: 3-#1 & 1-#6 Ground in 2" Underground Conduit
20. Mount on Riser Pole.
21. Ground BUS.



ONE LINE DIAGRAM DISTRIBUTION POINT

AVAILABLE BOLTED FAULT CURRENT AT EQUIPMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	20.8
LIGHTING LOAD CENTER	10.1

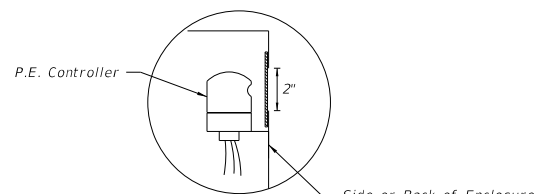
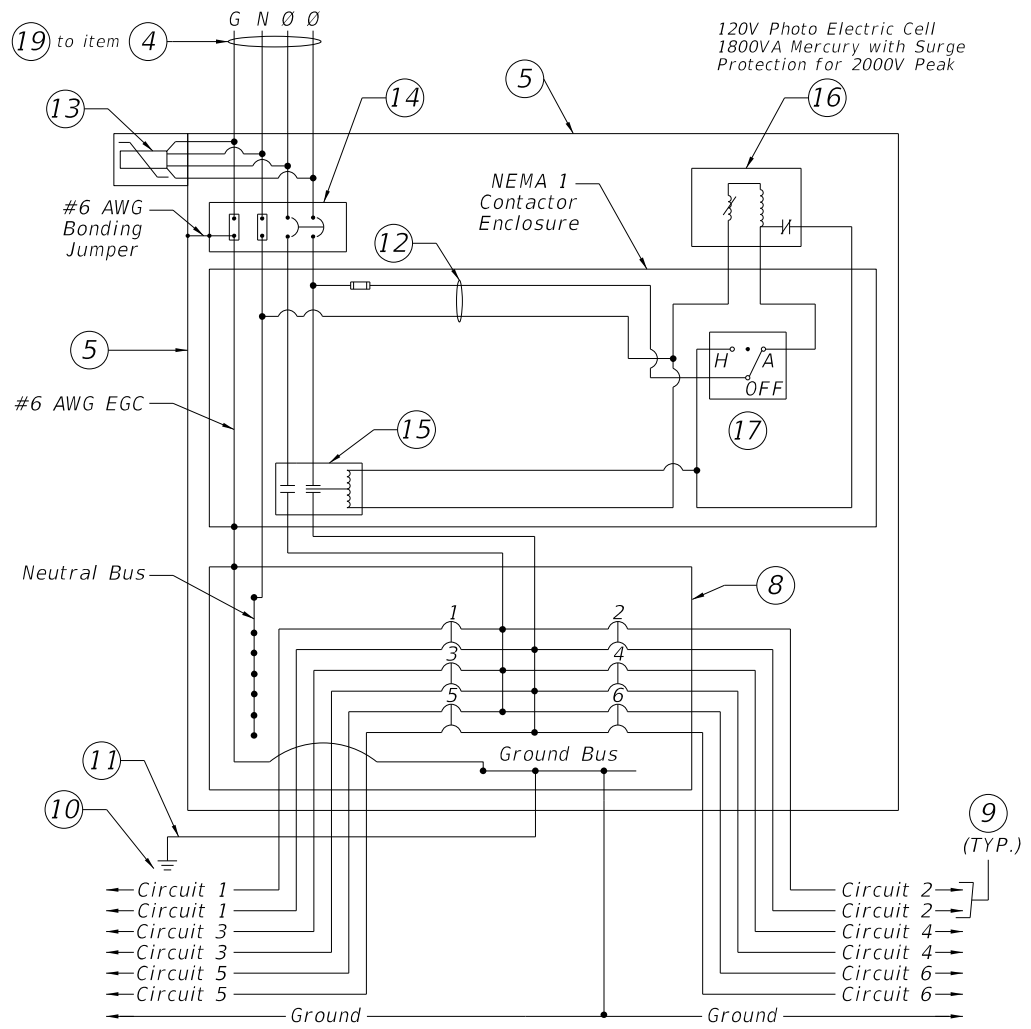


PHOTO ELECTRIC CONTROLLER DETAIL

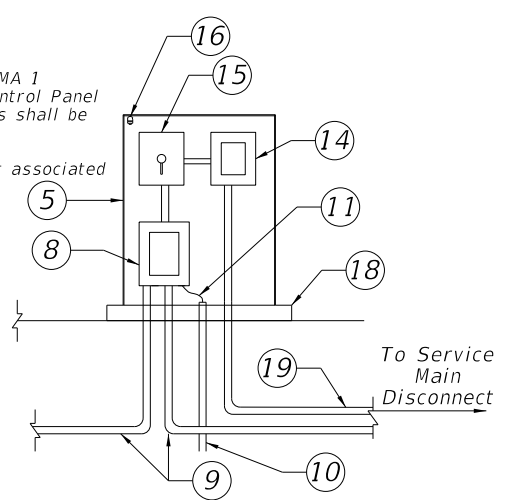
PANELBOARD SCHEDULE											
VOLTAGE: 120/240						MAINS TYPE: LUG					
PHASE: 1						MAINS RAITING: 100 A					
WIRES: 3						AIC: 22,000 A					
CKT	CKT NAME	CONNECTED LOAD	TRIP	POLES	A LOAD (VA)	B LOAD (VA)	POLES	TRIP	CKT NAME	CONNECTED LOAD	CKT
1	F-1	LED LUMINARIES	20 A	2	640						2
3	---	---	---	---		640		---	---	---	4
5											6
7											8
9											10
11											12
					LOAD PER LEG:						
					TOTAL LOAD (VA):		1280				
					TOTAL AMPS @ 240V:		5.3				

Notes:

1. All equipment shall be enclosed individual NEMA 1 Enclosures inside of the NEMA 4X Lighting Control Panel Enclosure. All wiring between these enclosures shall be installed in Intermediate Metal Conduit.
2. Shop Drawings are required for all equipment associated with the Lighting Control Panel.



TYPICAL DISTRIBUTION POINT SCHEMATIC DETAIL



RISER DIAGRAM - TYPICAL DISTRIBUTION POINT

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SUSANNE S. HERTZ, P.E. PE No. 49486
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

SERVICE POINT DETAIL SHEET
LOAD CENTER F

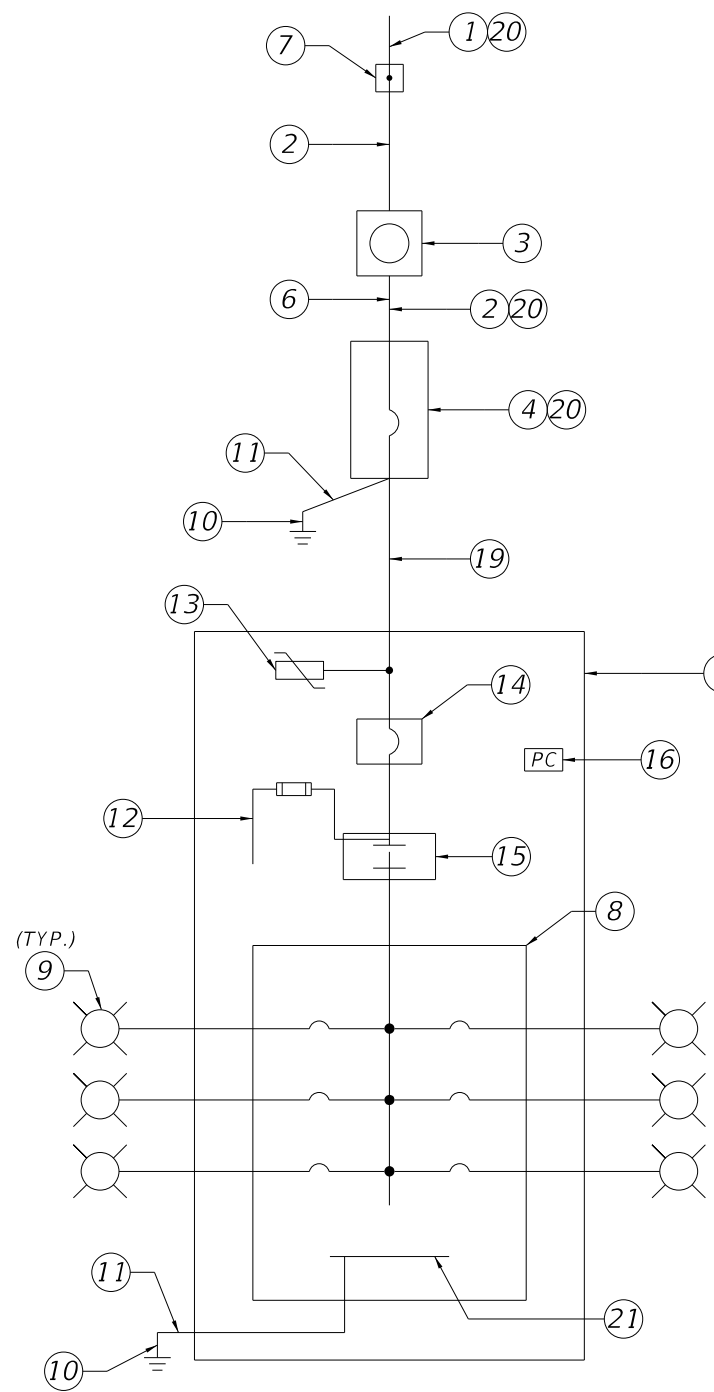
SHEET NO.
L-20

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

SERVICE POINT DETAIL LOAD CENTER G

Keyed Notes:

1. 120/240V, Single Phase, 3 Wire Electric Distribution Underground Service Drop.
2. 2-#1 AWG Ungrounded Service Conductors & 1-#1 AWG Grounded Service Conductor (Neutral) in 2" Underground Conduit
3. Meter Socket by Contractor
4. Service Main Disconnect: 240V, 2 Pole, S/N, 100A, 22,000 AIC Min. Rated Circuit Breaker, in Service Entrance Rated NEMA 4X Circuit Breaker Enclosure
5. Lighting Control Panel Enclosure. Dimensions as Necessary for Equipment Inside. Ground Mounted Cabinet per Index 17736.
6. Concrete Riser Pole.
7. Point of Service: Utility Company Installed Handhole. Contractor to provide 10' of slack service feeder for connection by Utility Company.
8. Main Lug Only Panelboard in NEMA 1 Enclosure. Number and Rating of Branch Circuit Breakers shall be as Indicated on Panelboard Schedule.
9. Branch Circuit to Roadway Luminaires in 2" Underground Conduit (See plan sheets for count of conduits).
10. 5/8" Copper Clad Ground Rod, 40' Long.
11. #6 Insulated Copper Ground Wire. Bond the Service Neutral to Ground at Service Main Disconnect.
12. Fused Control Circuit, 120VAC. Size conductors according to contactor manufactures recommendation, and size fuse per NEC.
13. Lightning Arrester (Surge Protective Device) Mounted on Outside of Enclosure.
14. Lighting Control Panel Main Breaker in NEMA 1 Enclosure: 240V, 2 Pole, S/N, 60A, 22,000 AIC Min. Rated
15. 2 Pole Electrically Held Feeder Disconnect Style Lighting Contactor in NEMA 1 Enclosure; Minimum Voltage and Current Rating to Meet or Exceed Lighting Control Panel Main Breaker, 120VAC 60Hz Coil
16. Photo Electric Switch-120V Rated.
17. Hand-off Automatic Selector Switch (Part of Lighting Contactor)
18. Concrete Pad.
19. Underground Feeder: 3-#1 & 1-#6 Ground in 2" Underground Conduit
20. Mount on Riser Pole.
21. Ground BUS.



ONE LINE DIAGRAM DISTRIBUTION POINT

AVAILABLE BOLTED FAULT CURRENT AT EQUIPMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	5.1
LIGHTING LOAD CENTER	4.7

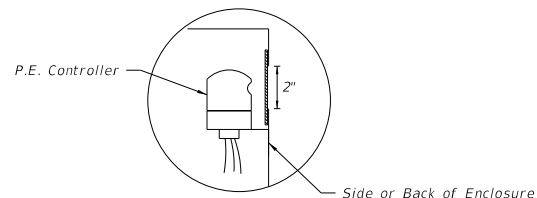
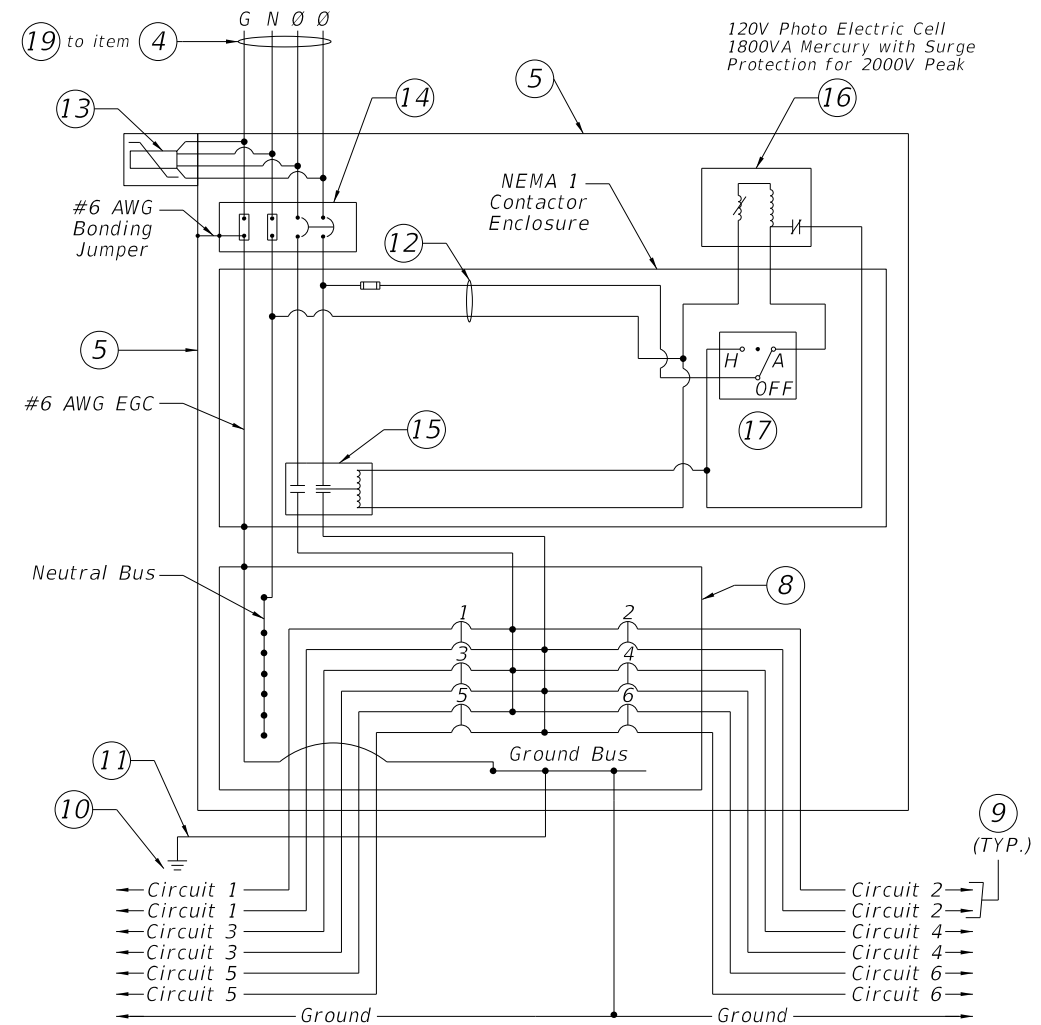


PHOTO ELECTRIC CONTROLLER DETAIL

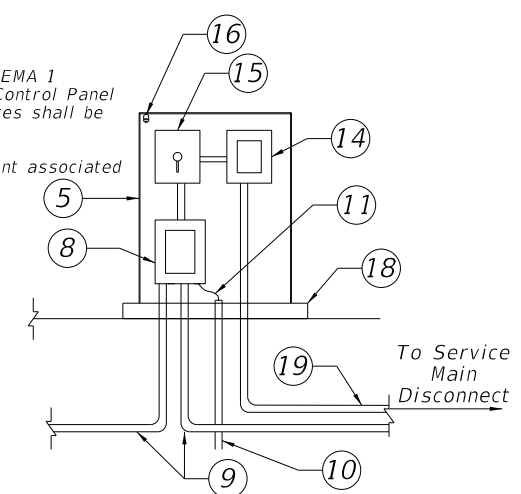
PANELBOARD SCHEDULE											
VOLTAGE: 120/240						MAINS TYPE: LUG					
PHASE: 1						MAINS RAITING: 100 A					
WIRES: 3						AIC: 22,000 A					
CKT	CKT NAME	CONNECTED LOAD	TRIP	POLES	A LOAD (VA)	B LOAD (VA)	POLES	TRIP	CKT NAME	CONNECTED LOAD	CKT
1	G-1	LED LUMINARIES	20 A	2	963						2
3	---	---	---	---		963		---	---	---	4
5											6
7											8
9											10
11											12
					LOAD PER LEG:	963	963				
					TOTAL LOAD (VA):	1926					
					TOTAL AMPS @ 240V:	8.0					

Notes:

1. All equipment shall be enclosed individual NEMA 1 Enclosures inside of the NEMA 4X Lighting Control Panel Enclosure. All wiring between these enclosures shall be installed in Intermediate Metal Conduit.
2. Shop Drawings are required for all equipment associated with the Lighting Control Panel.



TYPICAL DISTRIBUTION POINT SCHEMATIC DETAIL



RISER DIAGRAM - TYPICAL DISTRIBUTION POINT

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SUSANNE S. HERTZ, P.E. PE No. 49486
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

SERVICE POINT DETAIL SHEET LOAD CENTER G

SHEET NO.
L-21