

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

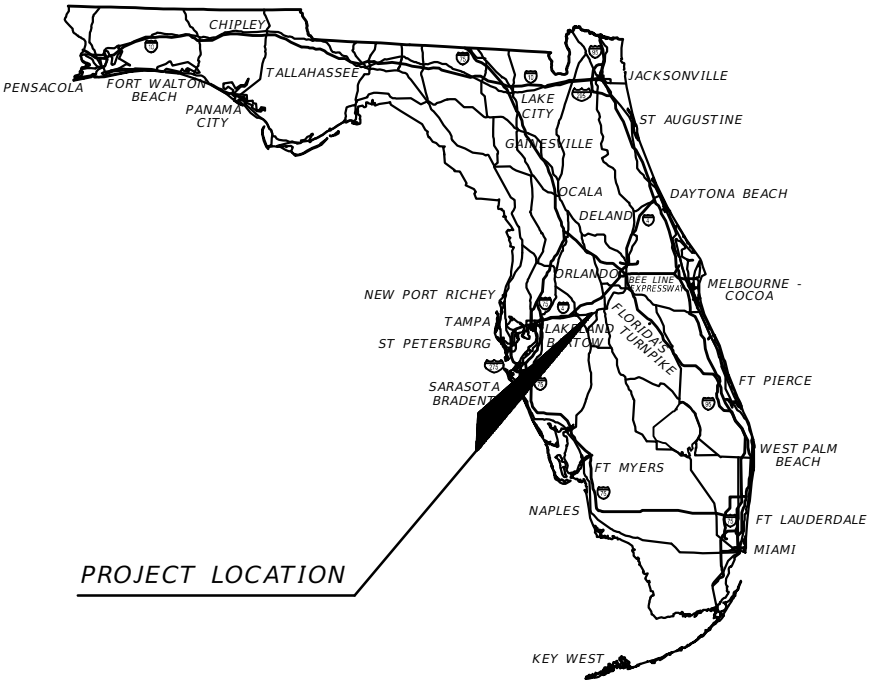
CONTRACT PLANS

FINANCIAL PROJECT ID 437300-1-52-01
FINANCIAL PROJECT ID 437300-2-52-01
POLK COUNTY (16470)
SUNTRAX TEST FACILITY

LIGHTING PLANS

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LIGHTING PLANS
ENGINEER OF RECORD:
BLAKE LAWRENCE SUDDETH, P.E.
P.E. NO. 69060
C.A. NO. 28730
VENDOR NO.
JOSEPH LAWRENCE & CO.
CONSULTING ENGINEERS, INC.
1180 HARDWOOD AVE., SUITE 3000
ALTAMONTE SPRINGS FL 32714
T. 321 972 4466
WWW.JLCENG.COM

REVISIONS:

KEY SHEET REVISIONS	
DATE	DESCRIPTION

FTE PROJECT MANAGER:
PATRICK M. MUENCH, P.E.

GEC PROJECT MANAGER:
JOSH PEDERSEN, P.E.

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
E8Q39	17	L-1

100% SUBMITTAL DECEMBER 6, 2016

[illegible]

PAY ITEM NOTES:

1. ITEM 715-1-AB: INCLUDES CONDUCTORS AS INDICATED IN THE PLANS AND DESIGN STANDARDS. DESIGN QUANTITY SHALL BE BASED ON LINEAR FEET OF SINGLE CONDUCTOR.
2. ITEMS 630-2-AB: INCLUDES CONDUITS, ELBOWS, SWEEPS, CONNECTING HARDWARE, TRENCHING AND BACKFILL AS PER THE PLANS AND DESIGN STANDARDS. THE LINEAR FOOT PRICE FOR CONDUIT SHALL ALSO INCLUDE THE COST OF RESTORING SIDEWALKS AND PAVEMENT TO THEIR ORIGINAL CONDITION. SOD SHALL BE REPLACED IN LIKE KIND OF THE ADJACENT SURROUNDING.
3. ITEM 715-7-AB: INCLUDES NEMA 3R SERVICE DISCONNECT ON LOAD SIDE OF METER, BASE MOUNTED ENCLOSURES, 480-120V CONTROL POWER TRANSFORMER, FUSES, SURGE PROTECTIVE DEVICE ON OUTSIDE OF ENCLOSURE, CONDUIT, FEEDER CONDUCTORS FROM THE POWER COMPANY POINT OF SERVICE TO THE LOAD CENTER, PULL BOX, AND ALL MISCELLANEOUS HARDWARE FOR A COMPLETE INSTALLATION AS PER PLANS AND STANDARD INDEX 17504. INCLUDES THE COST OF FURNISHING AND INSTALLING TYPE N-11 CONCRETE POLE AND ALL FEES FOR INSPECTION OF CONNECTION OF THE ELECTRICAL SERVICE.
4. ITEM 715-4-ABC: INCLUDES THE POLE, BRACKET ARM, LUMINAIRE WITH LAMP, ANCHOR BOLTS WITH LOCK NUTS AND WASHERS, FRANGIBLE TRANSFORMER TYPE BASE. (EXCEPT FOR POLES MOUNTED ON BRIDGE STRUCTURES. RETAINING WALLS OR BARRIER WALLS. WHICH SHALL HAVE NON-FRANGIBLE BASES), STANDARD FOUNDATION, OR SPECIAL FOUNDATION FOR INDICATED POLES, SODDING AROUND CONCRETE SLAB WHEN NOT IN SIDEWALK, AS INDICATED IN DESIGN STANDARDS.
5. ITEM 639-1-121: THIS PAY ITEM INCLUDES THE PROPOSED BURIED PRIMARY CIRCUITING, TRANSFORMERS, SWITCHGEARS, PULL BOXES, AND ALL OTHER ASSOCIATED APPURTENANCES SERVING DEPARTMENT OWNED FACILITIES THAT ARE TO BE FURNISHED AND INSTALLED BY TAMPA ELECTRIC COMPANY (TECO). TECO WILL DESIGN, CONSTRUCT, OWN, AND MAINTAIN THE PRIMARY FACILITIES. THE CONTRACTOR SHALL COORDINATE WITH MR. ARLEE JONES AT TECO, TEL. (813) 635-1581 TO OBTAIN TECO'S COSTS ASSOCIATED WITH THE NEW PRIMARY SERVICES WHICH SHALL INCLUDE, BUT NOT BE LIMITED TO, DESIGN, MATERIALS, INSTALLATION, AND INCIDENTALS NECESSARY TO PROVIDE COMPLETE AND FUNCTIONING ELECTRICAL SERVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND INCLUDE IN THIS PAY ITEM ALL COSTS ASSOCIATED WITH THE NEW PRIMARY SERVICES INCLUDING TECO'S COSTS, SCHEDULING, AND REQUIRED COORDINATION ASSOCIATED WITH THE NEW PRIMARY SERVICES PROVIDED BY TECO. THE CONTRACTOR SHALL CONTACT MR. ARLEE JONES AT TECO, TEL. (813) 635-1581 TO COORDINATE THE INSTALLATION OF THE NEW PRIMARY SERVICES AND ANY TEMPORARY SERVICE THAT MAY BE NECESSARY.

REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY TABULATION OF QUANTITIES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		L-2
					NA	POLK	437300-1-52-01		

TABULATION OF QUANTITIES																		
PAY ITEMS	DESCRIPTION	UNIT	SHEET NUMBERS												TOTAL THIS SHEET		GRAND TOTAL	
			L-14		L-15		L-16		L-17		L-18		L-19					
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
0630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH (1 SET OF 2"C.)	LF	750		1020		260		180						2210		8460	
0639-1-121	UTILITY BURIED PRIMARY CIRCUITRY, TRANSFORMERS, SWITCHGEARD(S), PULL BOXES ETC.	LS															1	
0715-1-12	LIGHTING CONDUCTORS F & I, INSULATED NO. 8-6	LF	3750		5100		1300		900						11050		54530	
0715-1-13	LIGHTING CONDUCTORS F & I, INSULATED NO. 4 TO NO. 2	LF													0		1520	
0715-4021	LIGHT POLE COMPLETE, F & I, SPECIAL FOUNDATION, WIND SPEED 130. POLE HEIGHT 40'	EA	4		6		1		1						12		33	
0715-4022	LIGHT POLE COMPLETE, F & I, SPECIAL FOUNDATION, WIND SPEED 130. POLE HEIGHT 45'	EA													0		22	
0715-7-11	LOAD CENTER, F & I, SECONDARY VOLTAGE	EA													0		3	
0715-11114	LUMINAIRE, F & I, ROADWAY, SHOE BOX	EA	4		6		1		1						12		77	
639-6-1	ELECTRICAL POWER SERVICE - TRANSFORMER FURNISH & INSTALL	EA															1	
REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730				STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY TABULATION OF QUANTITIES						SHEET NO. L-3	
DATE	DESCRIPTION	DATE	DESCRIPTION															
								ROAD NO.	COUNTY	FINANCIAL PROJECT ID								
								NA	POLK	437300-1-52-01								

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

POLE NO.	CIRCUIT	STATION	MOUNTING HEIGHT	SETBACK	PAY ITEM
1	C-3	600+65.09, 55.58' LT	40'	13.00'	715-4-122
2	C-4	602+65.16, 51.00' RT	40'	13.00'	715-4-122
3	C-1	602+70.12, 51.00' LT	40'	10.00'	715-4-122
4	C-2	602+65.16, 51.00' RT	40'	10.00'	715-4-122
5	C-3	604+62.29, 51.00' LT	40'	10.00'	715-4-122
6	C-4	604+57.49, 51.00' RT	40'	10.00'	715-4-122
7	C-1	606+64.19, 51.00' LT	40'	10.00'	715-4-122
8	C-2	606+59.57, 51.00' RT	40'	10.00'	715-4-122
9	C-3	608+68.88, 51.00' LT	40'	10.00'	715-4-122
10	C-4	608+63.53, 51.00' RT	40'	10.00'	715-4-122
11	C-1	610+70.92, 51.00' LT	40'	10.00'	715-4-122
12	C-2	610+60.20, 51.00' RT	40'	12.00'	715-4-122
13	C-3	612+80.91, 51.00' LT	40'	10.00'	715-4-122
14	C-4	612+58.52, 51.00' RT	40'	10.00'	715-4-122
15	C-1	614+33.55, 54.50' LT	40'	13.00'	715-4-122
16	C-2	614+48.12, 54.04' RT	40'	18.00'	715-4-122
17	C-3	615+85.20, 111.03' LT	40'	10.00'	715-4-122
18	C-4	615+93.07, 110.84' RT	40'	13.00'	715-4-122
19	C-1	617+31.82, 39.27' LT	40'	13.00'	715-4-122
20	C-2	617+37.59, 37.38' RT	40'	16.00'	715-4-122
21	C-5	619+00.00, 12, 29.00' LT	40'	10.00'	715-4-122
22	C-7	620+87.32, 29.00' LT	40'	10.00'	715-4-122
23	C-5	622+63.05, 33.00' LT	40'	10.00'	715-4-122
24	C-7	624+39.53, 33.00' LT	40'	10.00'	715-4-122
25	C-5	626+12.02, 33.00' LT	40'	10.00'	715-4-122
26	C-7	628+00.00, 33.00' LT	40'	10.00'	715-4-122
27	C-5	629+88.42, 33.00' LT	40'	10.00'	715-4-122
28	C-7	631+19.17, 42, 81.17' LT	40'	10.00'	715-4-122

POLE NO.	CIRCUIT	STATION	MOUNTING HEIGHT	SETBACK	PAY ITEM
29	C-5	710+43.80, 33.00' RT	40'	10.00'	715-4-122
30	C-7	708+56.73, 33.00' RT	40'	10.00'	715-4-122
31	C-5	632+46.80, 33.00' LT	45'	10.00'	715-4-122
32	C-7	633+76.47, 33.00' LT	45'	10.00'	715-4-122
33	B-14	635+5.59, 33.00' LT	45'	10.00'	715-4-122
34	A-6	304+33.21, 40.50' LT	45'	10.00'	715-4-122
35	A-4	305+30.03, 40.50' LT	45'	10.00'	715-4-122
36	A-2	306+32.40, 40.50' LT	45'	10.00'	715-4-122
37	A-4	307+35.79, 40.50' LT	45'	10.00'	715-4-122
38	A-2	308+51.00, 40.50' LT	45'	10.00'	715-4-122
39	A-1	309+62.40, 40.50' LT	45'	10.00'	715-4-122
40	A-3	311+1.40, 40.50' LT	45'	10.00'	715-4-122
41	A-1	312+33.92, 40.50' LT	45'	10.00'	715-4-122
42	A-3	313+58.67, 40.50' LT	45'	10.00'	715-4-122
43	A-5	314+63.47, 40.50' LT	45'	10.00'	715-4-122
44	A-7	315+60.89, 40.50' LT	45'	10.00'	715-4-122
45	B-7	515+98.27, 36.00' RT	45'	10.00'	715-4-122
46	B-5	515+0.83, 36.00' RT	45'	10.00'	715-4-122
47	B-3	513+96.06, 36.00' RT	45'	10.00'	715-4-122
48	B-1	512+71.45, 36.00' RT	45'	10.00'	715-4-122
49	B-3	511+39.04, 36.00' RT	45'	10.00'	715-4-122
50	B-1	510+00.00, 36.00' RT	45'	10.00'	715-4-122
51	B-2	508+88.29, 36.00' RT	45'	10.00'	715-4-122
52	B-4	507+73.36, 36.00' RT	45'	10.00'	715-4-122
53	B-2	506+70.57, 36.00' RT	45'	10.00'	715-4-122
54	B-4	505+67.99, 36.00' RT	45'	10.00'	715-4-122
55	B-6	504+70.93, 36.00' RT	45'	10.00'	715-4-122

REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY POLE DATA	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					NA	POLK	437300-1-52-01		
								L-4	

GENERAL NOTES

1. SPARE CONDUIT AT MAINLINE AND ARTERIAL ROAD PAVEMENT CROSSINGS SHALL BE CAPPED AT BOTH ENDS.
2. PRIOR TO ANY EQUIPMENT ORDER, 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

C) POLE FRANGIBILITY TEST

D) BOLT SPECIFICATIONS AND BOLT CIRCLE DIAMETER

E) POLE SHOP DRAWINGS

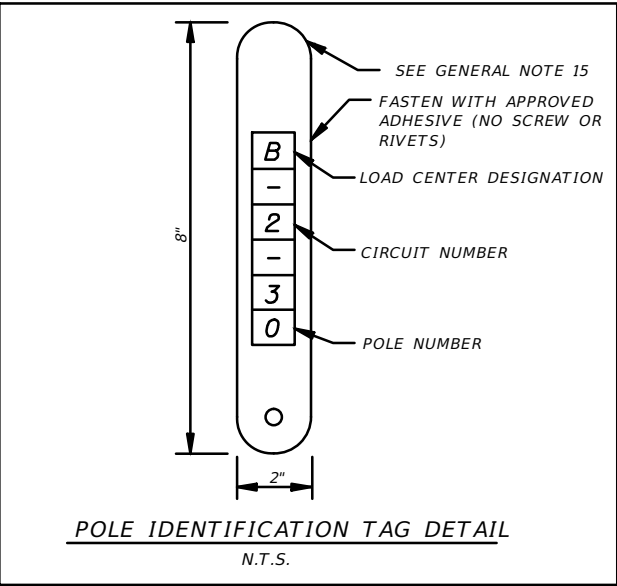
F) LOAD CENTER ELECTRICAL EQUIPMENT (INCLUDING SERVICE DISCONNECTS)
3. UTILITY OWNERS:

MR. DARYL LESLIE. TAMA ELECTRIC: 702 NORTH FRANKLIN STREET.

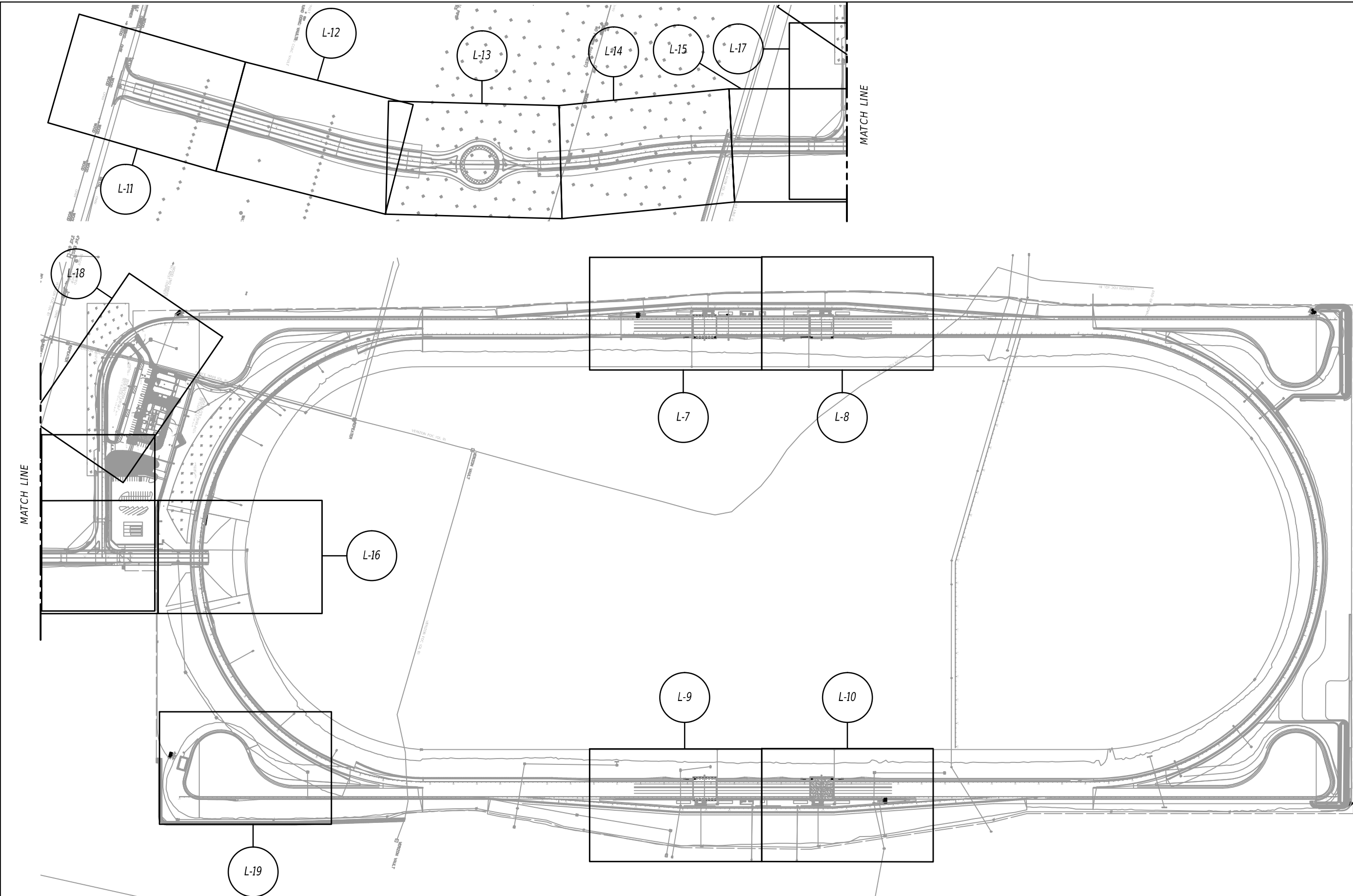
TAMPA, FL 33602 (813) 228-1157.

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. BEFORE EXCAVATING, NOTIFY THE UTILITY COMPANY OWNER(S) AND REQUEST THEM TO LOCATE AND STAKE THEIR
4. UNDERGROUND FACILITIES. UTILITIES ARE TO BE ADJUSTED BY OTHERS AS DIRECTED BY THE ENGINEER.
5. PROVIDE NOTICE TO THE UTILITY OWNER(S) BEFORE EXCAVATION, NOTICE TO BE GIVEN TO THE UTILITY OWNER A MINIMUM OF TWO (2) DAYS. EXCLUDING SATURDAY, SUNDAY AND LEGAL HOLIDAYS. NOT ALL UTILITY COMPANIES ARE MEMBERS OF "SUNSHINE" (1-800-432-4770). WWW.SUNSHINE811.COM. THE FLORIDA TURNPIKE ENTERPRISE IS NOT A MEMBER OF SUNSHINE ONE CALL.
6. 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.
7. 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. CERTIFICATION FOR TESTS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.
8. SUBMITTAL DATA SHALL INCLUDE COMPUTER PRINTOUTS 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 AND PROPERLY CALIBRATED LIGHT METER.
9. ALL ELECTRICAL WORK SHALL MEET ALL REQUIREMENTS OF THE LATEST ADOPTED EDITIONS OF THE NATIONAL ELECTRICAL CODE, THE NATIONAL ELECTRICAL SAFETY CODE, AND THE STATE OF FLORIDA D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL COMPONENTS SHALL BE PROPERLY GROUNDED AND BONDED PER N.E.C. REQUIREMENTS.
10. INSTALL SURGE PROTECTIVE DEVICES. PROPERLY GROUNDED IN POWER (SECONDARY) ENTRANCES.
11. IN ACCORDANCE WITH N.E.C., IDENTIFY ALL CIRCUITS AND EQUIPMENT WITH "LAMACOID TAGS". INSTALL SIMILIAR TAGS OF STAINLESS STEEL, IDENTIFYING CIRCUIT FOR EACH LUMINAIRE AT ACCESS HANDHOLE FOR EACH POLE.
12. NOTIFY TANPA ELECTRIC AT LEAST 48 HOURS PRIOR TO ANY INSTALLATION THAT IS WITHIN 10 FEET OF ENERGIZED ELECTRICAL CONDUCTORS. TAMPA ELECTRIC., AT IT'S OPTION, SHALL ASSIST THE F.D.O.T.CONTRACTOR TO COVER UP 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 THE PRIMARY, HIGH VOLTAGE COMPONENTS.
13. 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 NOT ALLOWED.
14. STAKE ALL POLE LOCATIONS AND REQUEST UTILITY COMPANIES TO LOCATE AND STAKE UNDERGROUND UTILITIES PRIOR TO EXCAVATING.
15. ALL ROADWAY LIGHTING AND ILLUMINATED OVERHEAD SIGNS SHALL HAVE AN IDENTIFICATION TAG. TAGS SHALL BE 2"x 8" IN SIZE WITH BLACK LETTERS ON YELLOW BACKGROUND ATTACHED WITH APPROVED ADHESIVE (NO RIVETS OR SCREWS). COST OF TAGS SHALL BE INCLUDED IN THE BID ITEMS FOR LIGHT POLE COMPLETE. TAGS SHALL BE PLACED 5 FEET ABOVE GRADE AND FACING THE ROADWAY. BEFORE ORDERING TAGS, COORDINATE WITH TURNPIKE ROADWAY MAINTENANCE FOR PROPER NUMBERING SEQUENCE OF LOAD CENTER AND CIRCUITS.
16. ALL CONDUITS UNDER ROADWAY (AND/OR SIDEWALK) SHALL BE INSTALLED PRIOR TO INSTALLATION OF ROADWAY BASE AND SURFACE (OR CONCRETE), EXCEPT WHERE OTHERWISE SPECIFIED IN THE PLANS.
17. JACK AND BORE OPERATIONS IF USED SHALL MEET THE REQUIREMENTS OF F.D.O.T.'S UTILITY ACCOMMODATION GUIDE. (LATEST EDITION).
18. AT LOCATIONS WHERE UNDERGROUND UTILITIES ARE IN CLOSE PROXIMITY TO THE LIGHTING POLE FOUNDATIONS OR CONDUIT RUN, AS DETERMINED BY THE ENGINEER, HAND DIG THE FIRST 4 FEET OF THE HOLE FOR THE POLE FOUNDATION AND CONDUIT RUN.
19. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE PROVISIONS THAT REQUIRES THE PREPARATION AND APPROVAL OF AN EROSION CONTROL PLAN THAT ADDRESSES PREVENTION CONTROL AND ABATEMENT OF WATER POLLUTION. THE COST OF PREPARING AN EROSION CONTROL PLAN IS INCLUDED IN ITEM_____

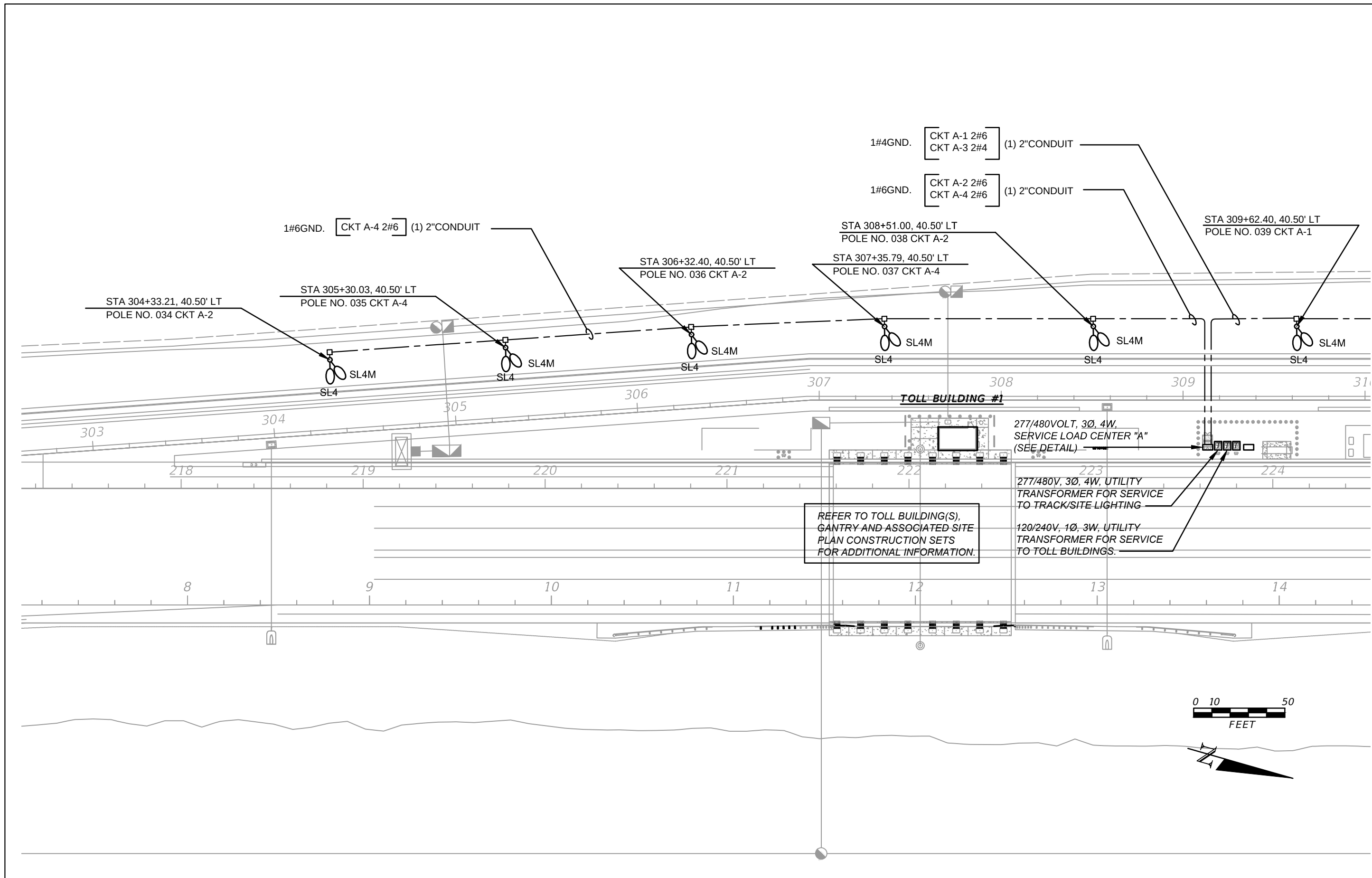
20. ALL CONDUIT TRENCHES SHALL BE BACKFILLED COMPLETELY TO PROVIDE SAFE CROSSING BY THE END OF EACH WORKING DAY OR WHENEVER THE WORK ZONE BECOMES INACTIVE. DO NOT OPEN ANY AREA THAT CAN NOT BE BACKFILLED IN THE SAME DAY/NIGHT OPERATION.
21. ALL EXCESS DIRT AND DEBRIS EXCAVATED FROM POLE FOUNDATIONS SHALL BE REMOVED DAILY TO AREAS APPROVED BY THE ENGINEER AND PAID FOR INCIDENTAL TO LIGHT POLE INSTALLATION.
22. MAINTAIN ACCESS TO ALL SIDE STREETS, PRIVATE AND COMMERCIAL DRIVEWAYS AT ALL TIMES DURING THE CONSTRUCTION OPERATION.
23. THE LIGHTING SYSTEM WILL BE MAINTAINED BY _____UPON FINAL ACCEPTANCE.
24. UPON FINAL ACCEPTANCE OF THE PROJECT, THE ENGINEER SHALL FORWARD A COMPLETE SET OF AS-BUILT PLANS WITH ALL CHANGES MARKED IN RED TO THE ATTENTION OF: _____ MAINTENANCE ENGINEER: _____(ADDRESS).
25. ANY EXISTING SIGNALIZATION LOOPS SYSTEM DAMAGED DURING THE CONDUIT INSTALLATION SHALL BE REPAIRED. THE COST SHALL BE INCIDENTAL TO ITEM NO. 715-2-AB.
26. WHEN THE SOIL IS EXPOSED, PREPARE TEMPORARY STABILIZATION AS SOON AS PRACTICABLE. BUT IN NO CASE SHALL THE TIME BE GREATER THAN SEVEN (7) CALENDAR DAYS.
27. EXISTING LIGHTING EQUIPMENT POWER SOURCES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING DEMOLITION/REMOVAL WORK.
28. ALL POLES MOUNTED ON BRIDGES, RETAINING WALLS OR BARRIER WALLS SHALL HAVE PULL BOXES AS SPECIFIED IN FDOT STANDARD INDEX NO. 21210.
29. REFERENCE THE BRIDGE STRUCTURAL PLANS FOR THE EMBEDDED ELECTRICAL ITEMS: CONDUIT. PULL BOX, JUNCTION BOX AND THEIR LOCATIONS.
30. CONDUIT LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. CONDUIT MUST BE PLACED WITHIN THE RIGHT-OF WAY BUT CAN BE ADJUSTED TO FIT AROUND THE EXISTING AND PROPOSED UTILITIES. WHERE PLANNED LOCATION OF LIGHTING CONDUIT RUNNING 30" 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 30" BELOW THE GROUND SURFACE AND SHALL BE PLACED IN AN ADDITIONAL 3" PVC SLEEVE OR BACKFILLED WITH A MIN. OF 4"x4" OF CONCRETE. COST OF SUCH TREATMENT WILL BE INCIDENTAL TO PAY ITEMS PROVIDED.
31. PREPARE ACCURATELY DIMENSIONED "AS BUILT" PLANS OF FINAL POLE. CONTROLLER, CABLE AND CONDUIT LOCATIONS. PLANS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER. COST OF SUCH PREPARATION SHALL BE INCIDENTAL TO PAY ITEMS PROVIDED.
32. ALL SPLICES SHALL BE MADE IN PULL BOXES ONLY.
33. SPLICES AND CONNECTIONS MADE IN PULL BOXES SHALL BE LIMITED TO THE SERVICE POINT AND CONDUIT JUNCTION WITH MULTI- DIRECTIONAL CONDUITS AS INDICATED ON PLANS. THE CONNECTION MADE AT THESE POINTS SHALL BE MADE PER FDOT SPECIFICATIONS.
34. INSPECT ALIGNMENT OF EACH INDIVIDUAL POLE AND FIXTURE AS FOLLOWS:
35. POLE ALIGNMENT: WITHIN ONE HALF DEGREE ON VERTICAL +/- . CONFIRM VERTICAL ALIGNMENT. VIEWING FROM ADJACENT SERIES OF POLES. IN BOTH DIRECTIONS.
36. FIXTURE ALIGNMENT: WITHIN ONE DEGREE OF HORIZONTAL +/- . USING CALIBRATED LEVEL ALONG BOTH AXES OF CUT-OFF FIXTURE FACE, WITH LENS ONLY: NO FIXTURE REFRACTOR SHALL BE
37. ALL CONDUITS SHALL BE MANDREL TESTED AND CLEANED. CONDUITS PLACED FOR FUTURE USE SHALL HAVE. 3/4" POLYESTER CORD PULLED IN PLACE AND CAPPED WITH NOTATION INSIDE CONDUIT AS TO LOCATION OF OPPOSITE END. PLACE DUCT MARKER OR PULL BOXES TO MARK ENDS OF EMPTY CONDUIT S.
- ALL LIGHT POLES, PULL BOXES AND LOAD CENTERS SHALL NOT BE INSTALLED WITHIN ANY AREAS (I.E. DITCHES, ETC.) THAT MAY CAUSE WATER INTRUSION.
39. AS PART OF THE 7 DAY TEST BURNING PERIOD, EACH CIRCUIT SHALL BE LABELED WITH THE LOAD AMPERAGE READING AT THE LOAD CENTER PANEL.
40. A LABEL SHALL BE PROVIDED ON POLES WITH OBSTRUCTION LIGHTS TO INDICATE THAT TWO SEPARATE VOLTAGES ARE PROVIDED AND INSTALLED WITHIN THE LIGHT POLES. ALSO INDICATE THAT THE 120 VOLT CIRCUIT IS "HOT" 24 HOURS A DAY. THE LABEL SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL OF THE WORDING AND PLACEMENT LOCATION.
42. THE CONTRACTOR SHALL REMOVE ALL OUT OF SERVICE ROADWAY LIGHTING SYSTEM COMPONENTS INCLUDING UNDERGROUND AND SURFACE MOUNT CONDUITS, CONDUCTORS, POLE BASES, POLES, PULL BOXES, SERVICE POINTS, LOAD CENTERS, AND ALL OTHER ANCILLARY COMPONENTS RELATED TO THE LIGHTING SYSTEM NOTED IN THE PLANS.
43. ON REMOVED SIGN STRUCTURES, THE CONTRACTOR SHALL REMOVE ALL ASSOCIATED WIRING FROM THE PULL BOX TO THE SIGN STRUCTURE, AND RE-SPLICE CONDUCTORS AS NEEDED.
44. THE CONTRACTOR MUST REFERENCE THE SIGNING AND PAVEMENT MARKING PLANS FOR THE COST OF INSTALLATION, REMOVAL, AND MODIFICATIONS OF THE SIGN LIGHTING SYSTEMS AND ALL ANCILLARY COMPONENTS ASSOCIATED WITH SIGN LIGHTING.



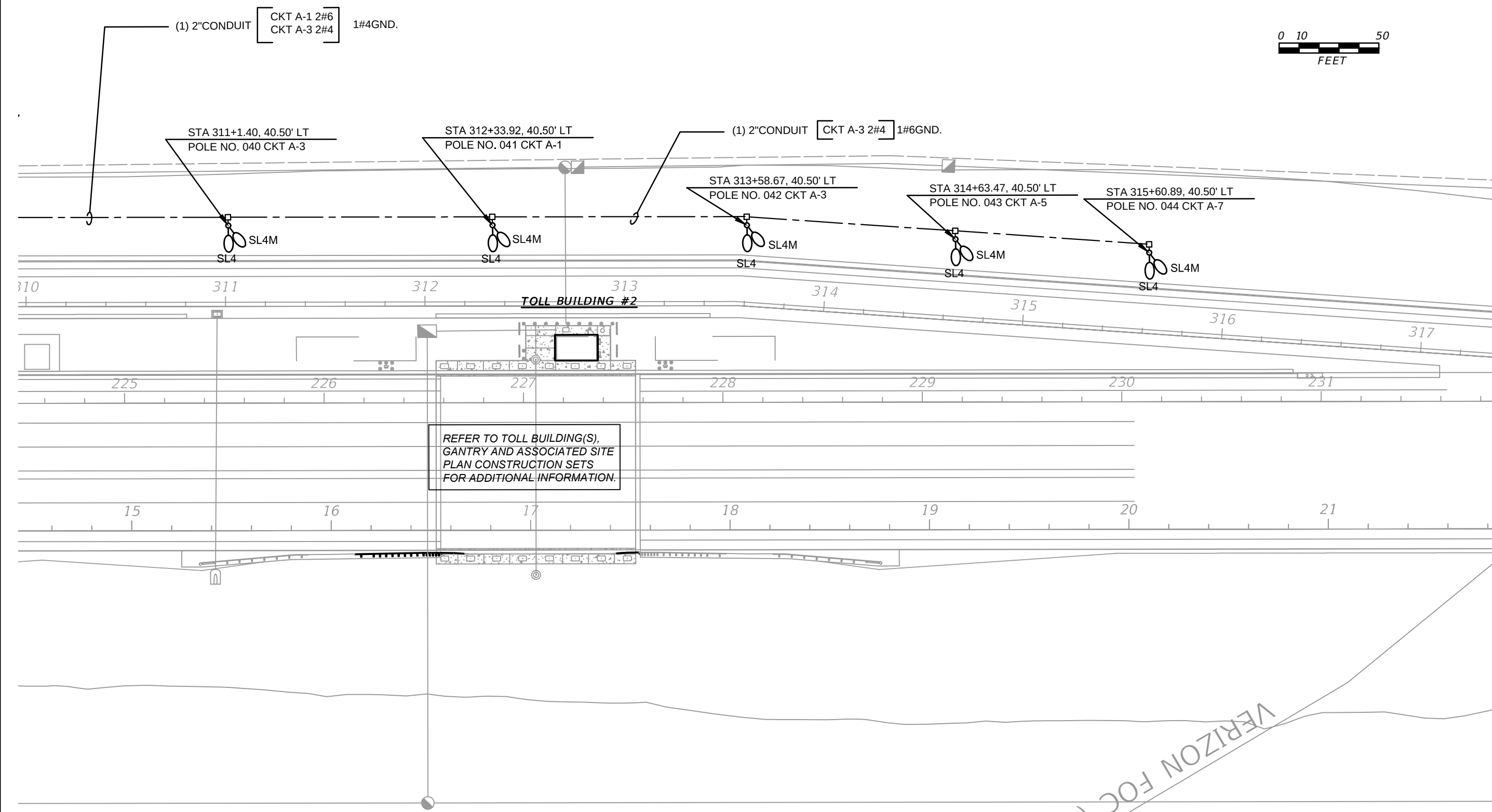
REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY GENERAL NOTES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		L-5
					NA	POLK	437300-1-52-01		



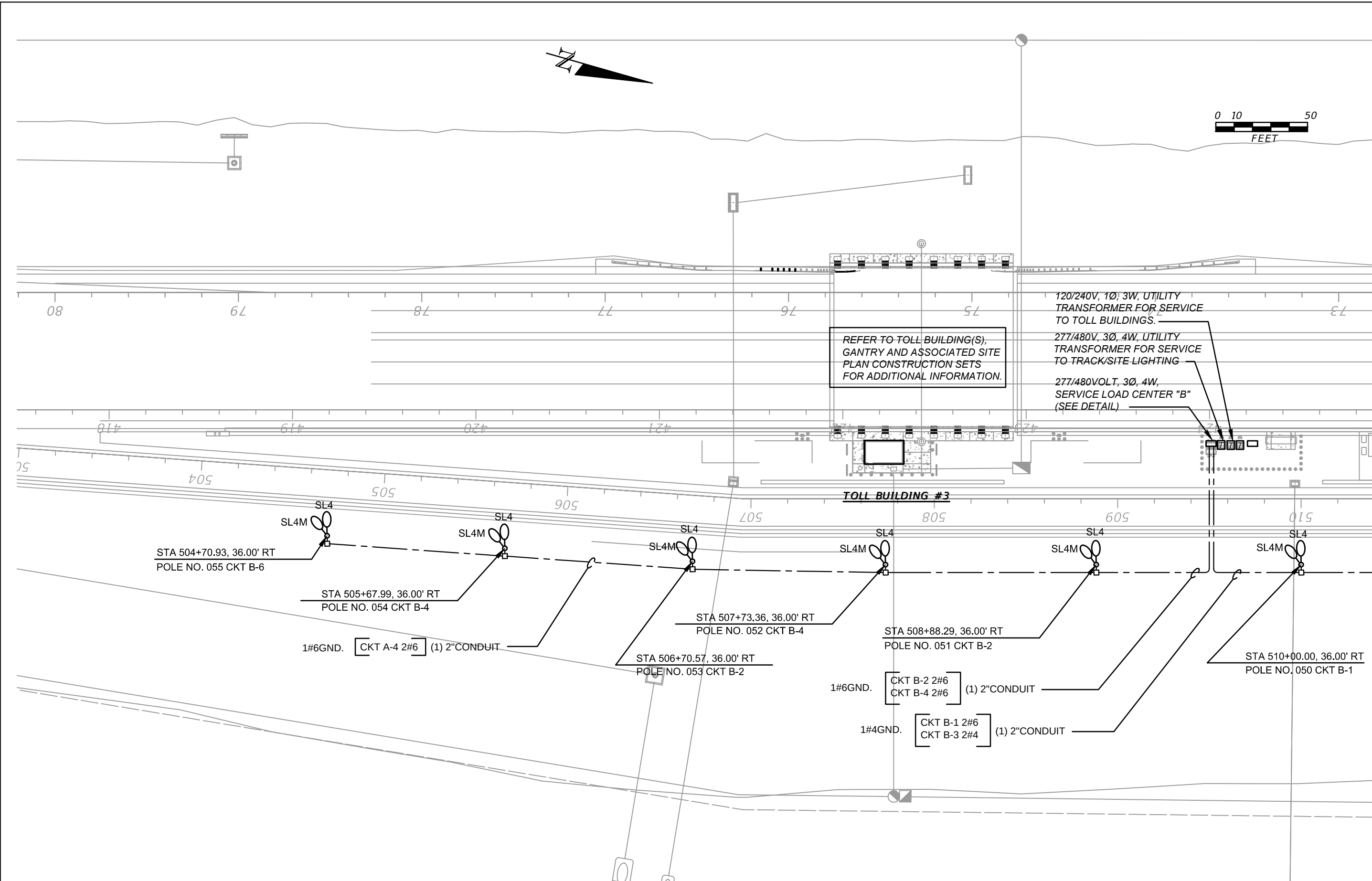
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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID				
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										L-6	



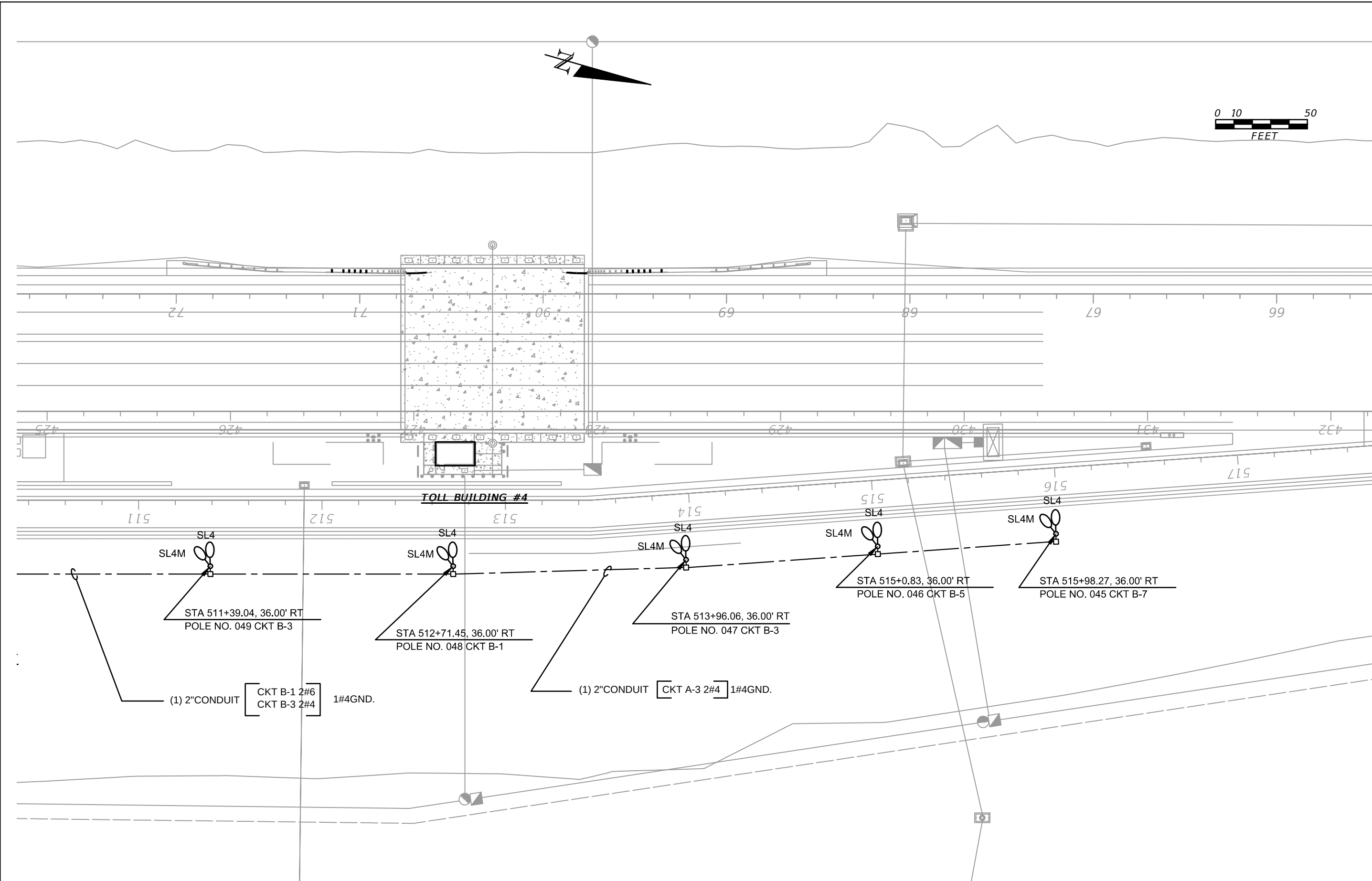
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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY LIGHTING PLAN	SHEET NO. L-8
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY LIGHTING PLAN	SHEET NO. L-9
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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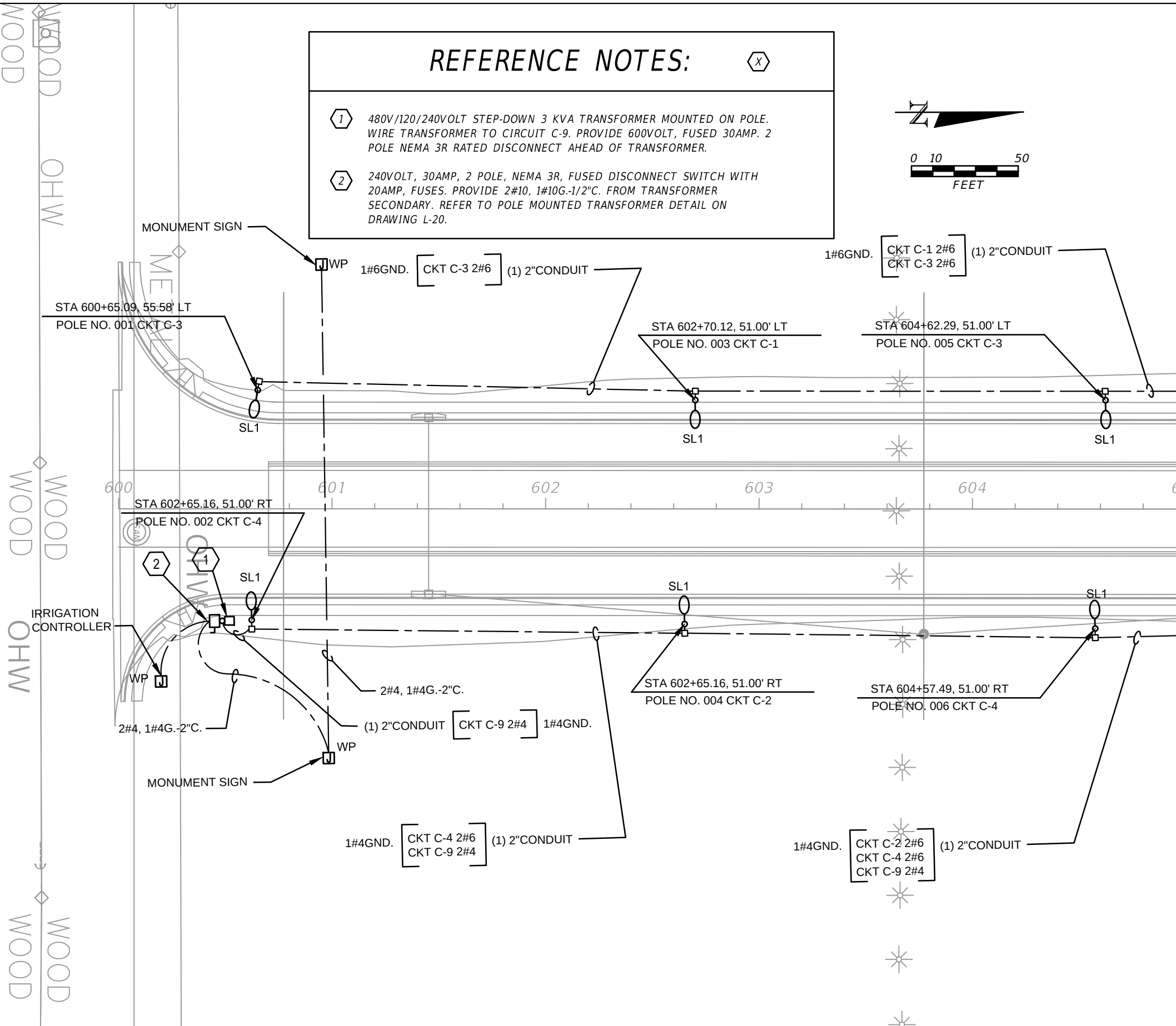
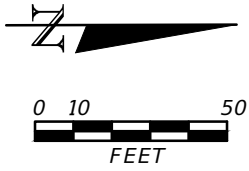


REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY LIGHTING PLAN		SHEET NO. L-10
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID			
					NA	POLK	437300-1-52-01			

REFERENCE NOTES:



- 1 480V/120/240VOLT STEP-DOWN 3 KVA TRANSFORMER MOUNTED ON POLE. WIRE TRANSFORMER TO CIRCUIT C-9. PROVIDE 600VOLT, FUSED 30AMP. 2 POLE NEMA 3R RATED DISCONNECT AHEAD OF TRANSFORMER.
- 2 240VOLT, 30AMP, 2 POLE, NEMA 3R, FUSED DISCONNECT SWITCH WITH 20AMP, FUSES. PROVIDE 2#10, 1#10G.-1/2"C. FROM TRANSFORMER SECONDARY. REFER TO POLE MOUNTED TRANSFORMER DETAIL ON DRAWING L-20.



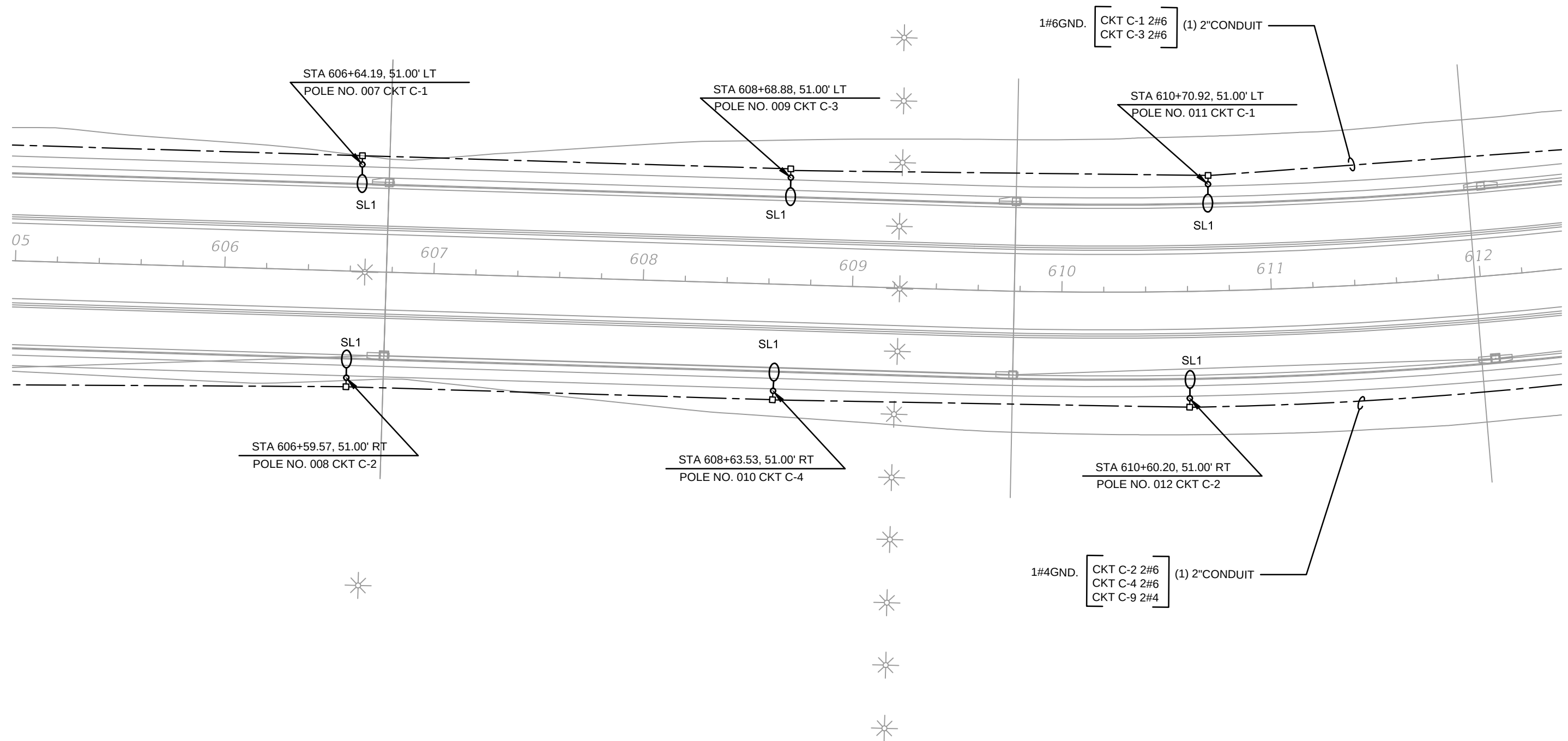
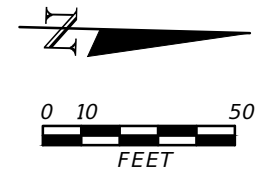
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

BLAKE LAWRENCE SUDDETH, P.E.
FLORIDA P.E. NO.: 69060
JOSEPH, LAWRENCE & CO.
1180 HARWOOD AVENUE, SUITE 3000
ALTAMONTE SPRINGS, FLORIDA 32714
CA NO.: 28730

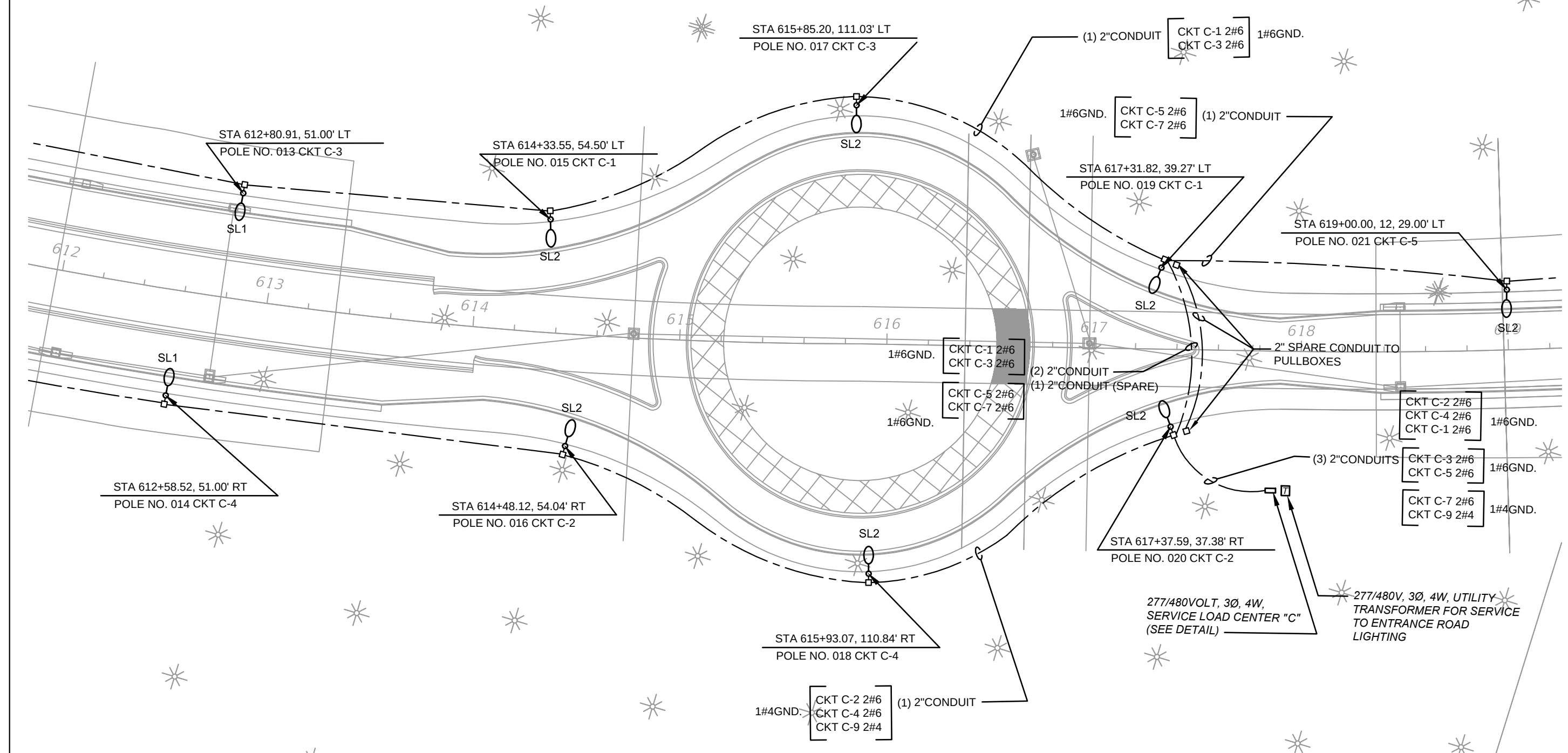
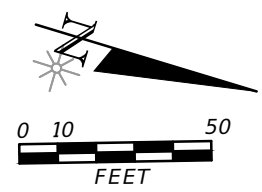
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
NA	POLK	437300-1-52-01

SUNTRAX TEST FACILITY
LIGHTING PLAN

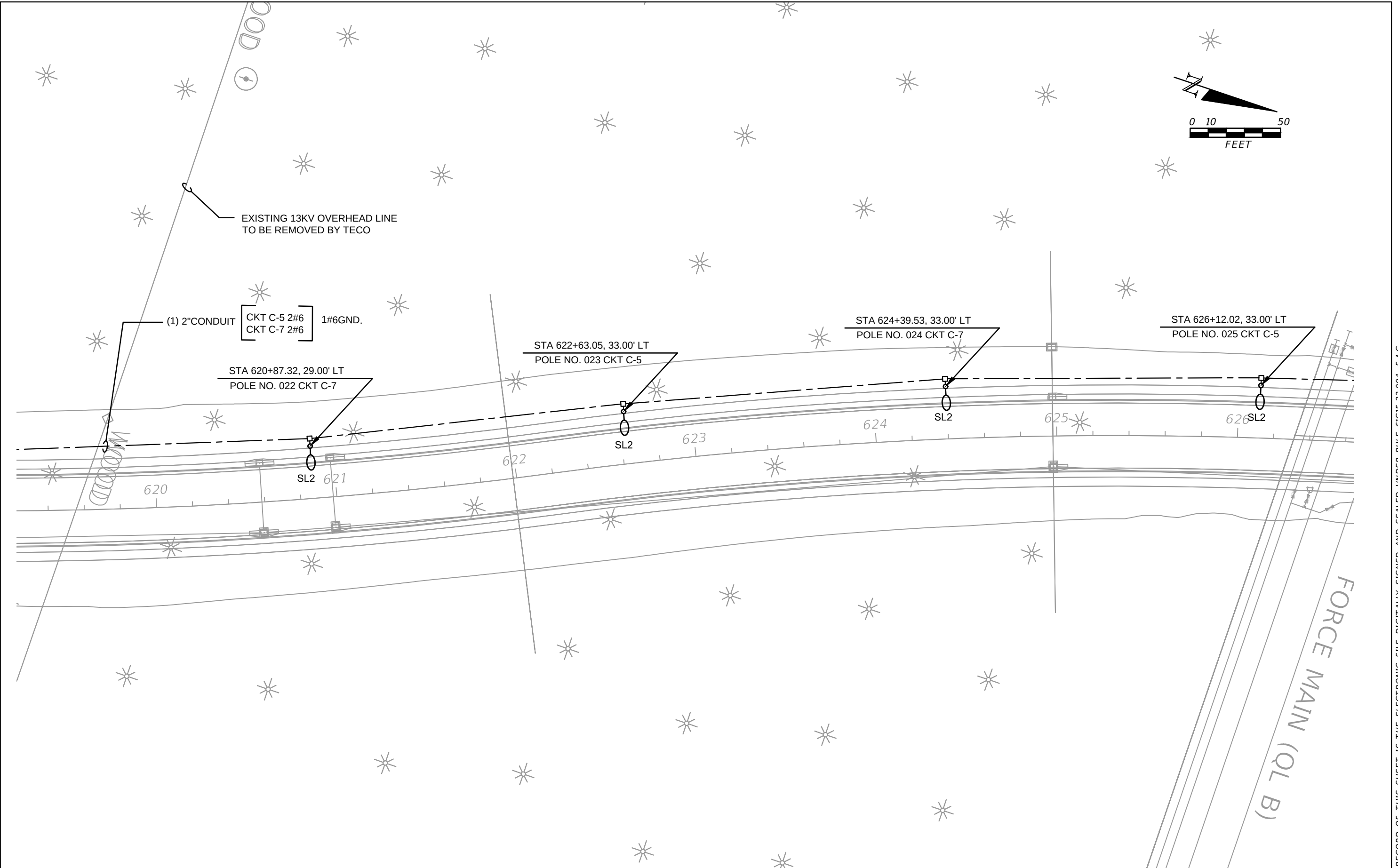
SHEET NO.
L-11



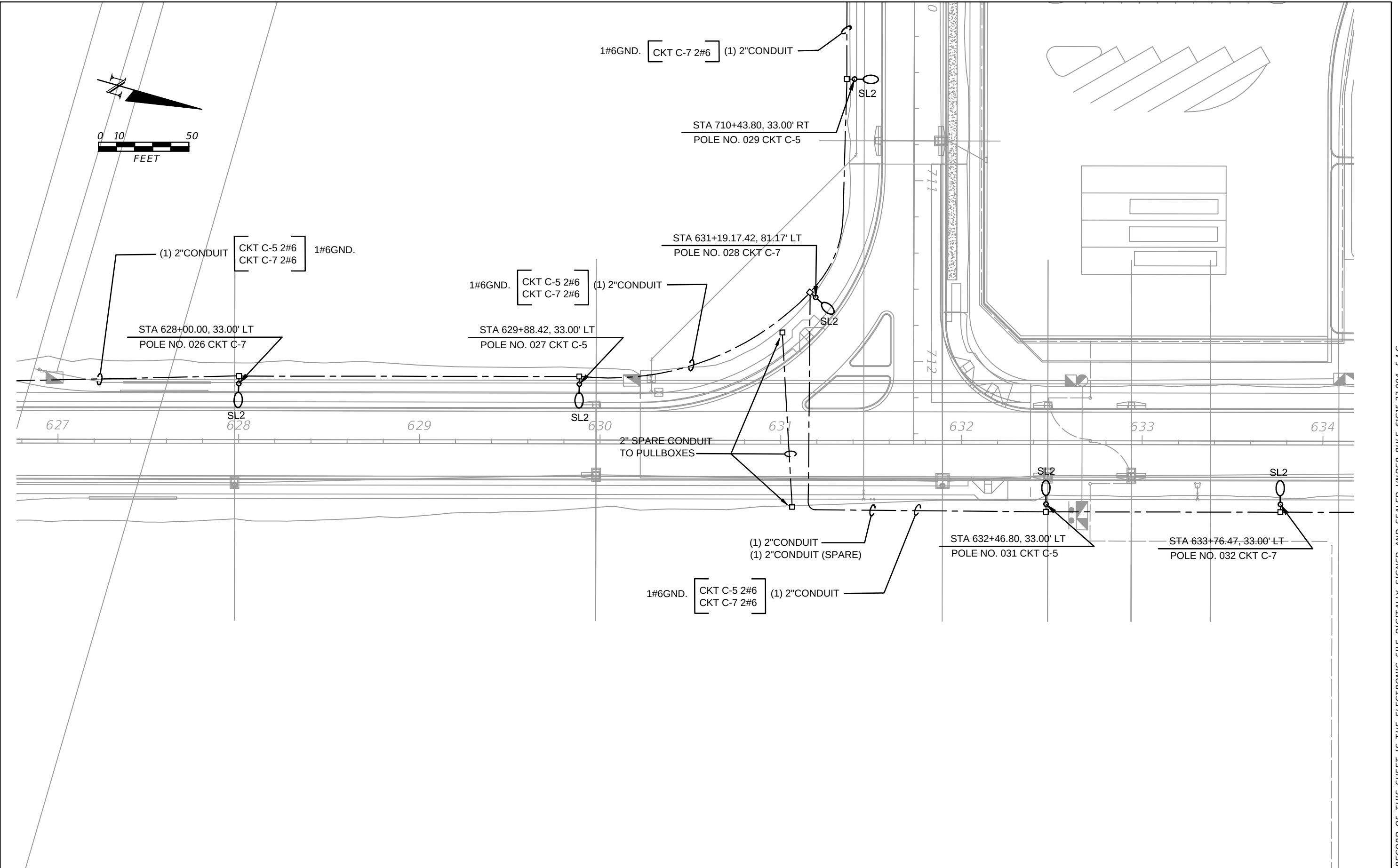
REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY LIGHTING PLAN	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		L-12
					NA	POLK	437300-1-52-01		



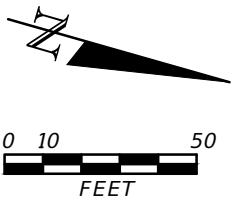
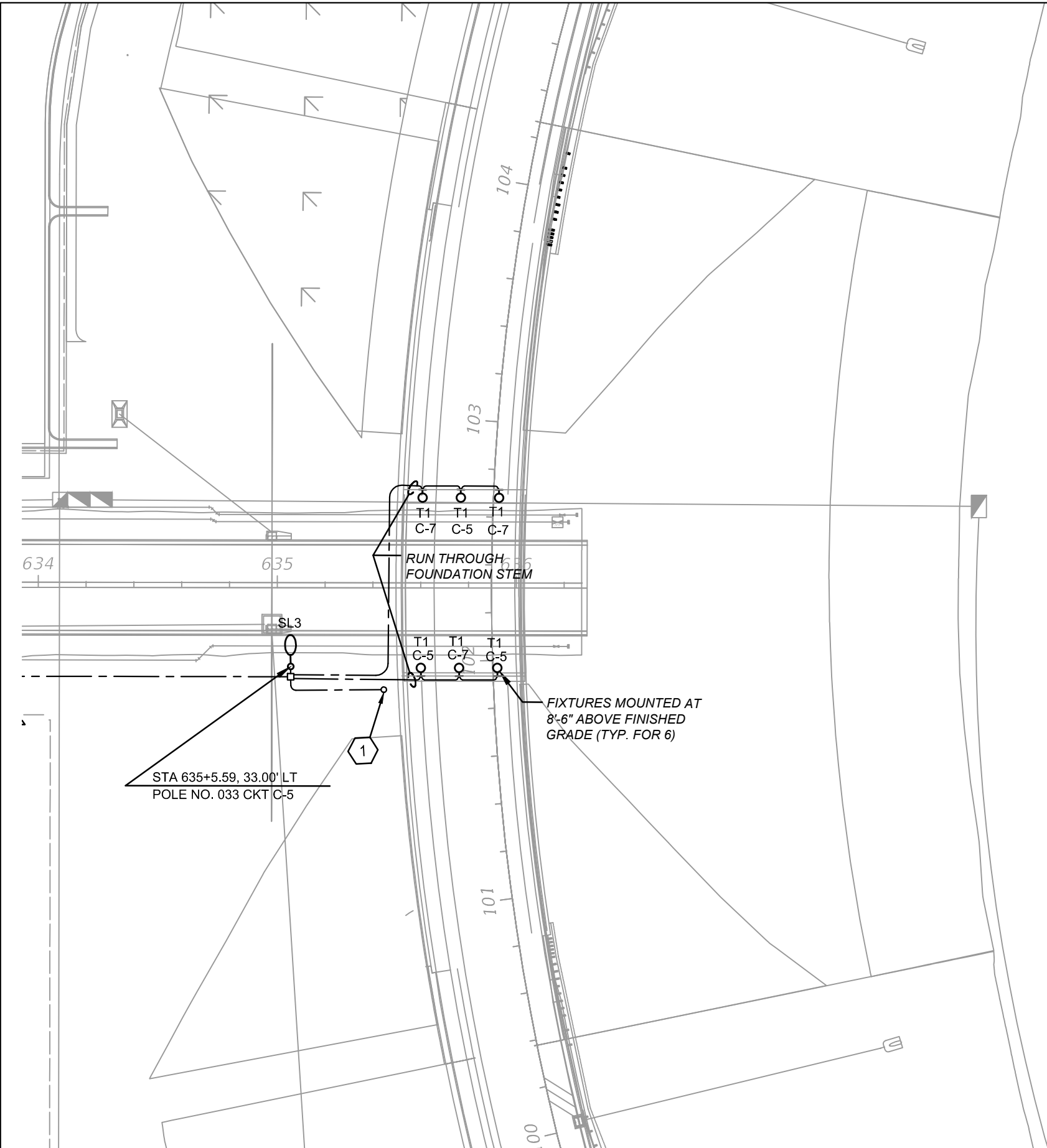
REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY LIGHTING PLAN	SHEET NO. L-13
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY LIGHTING PLAN	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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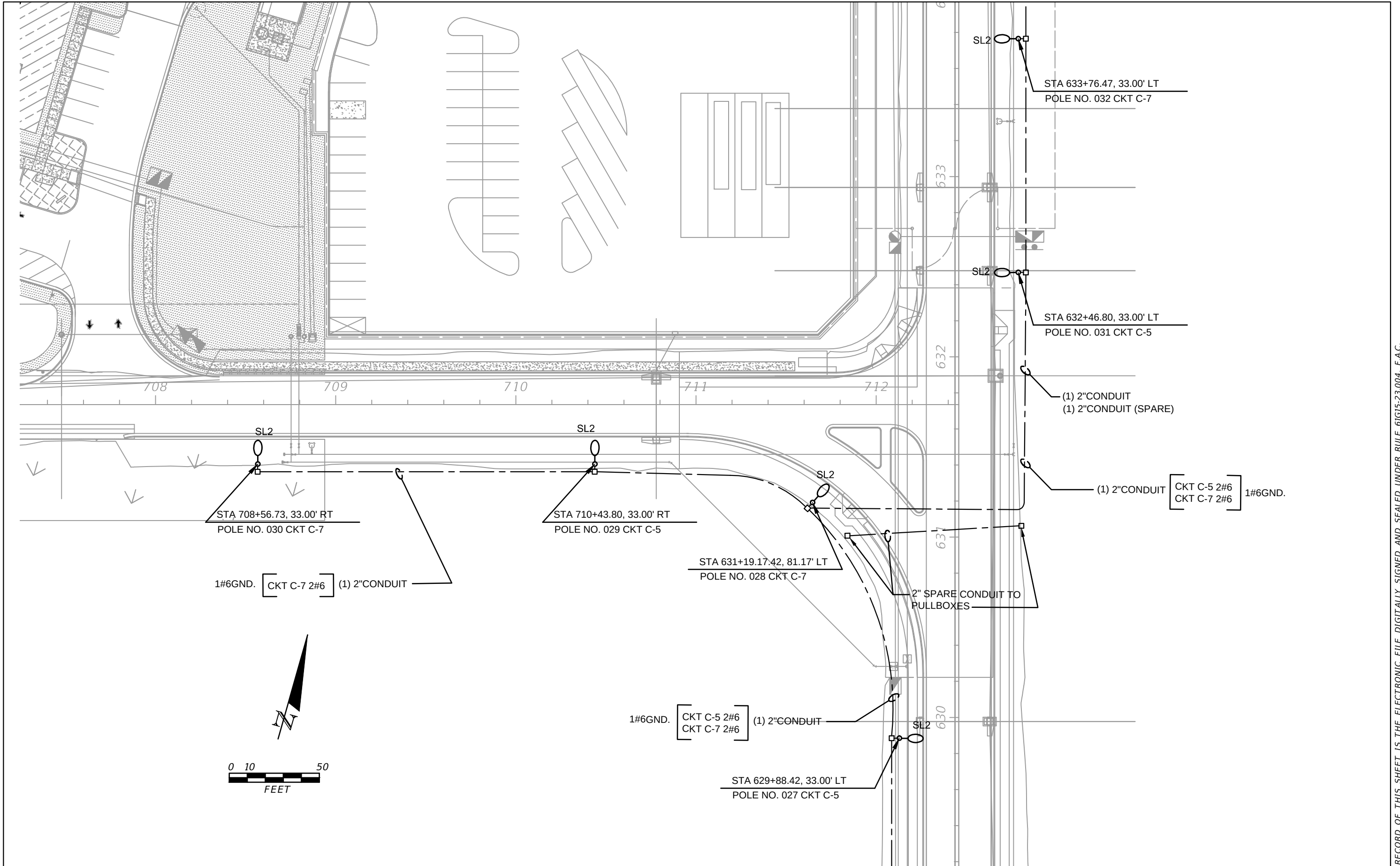
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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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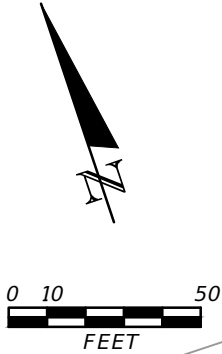
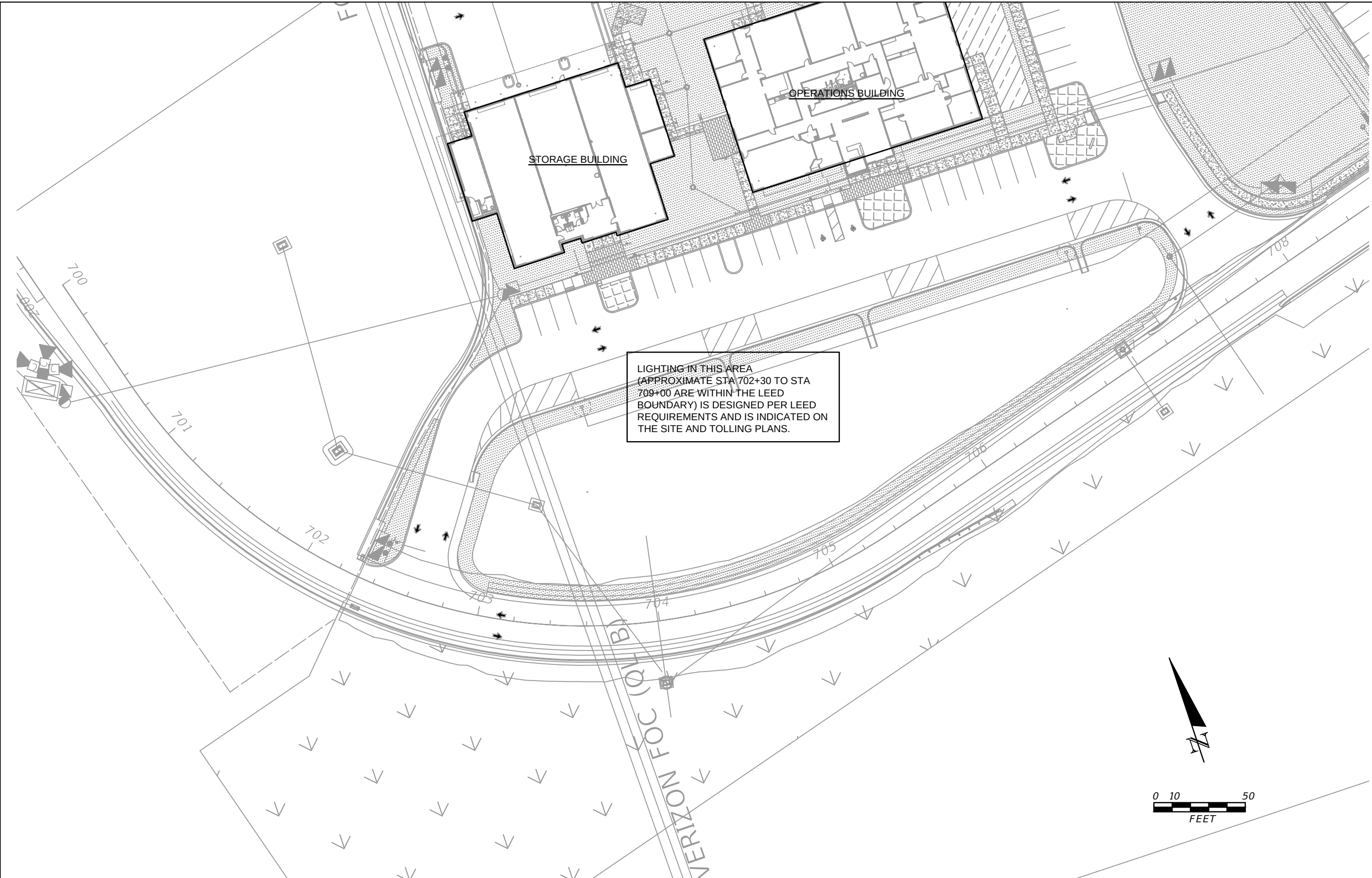
REFERENCE NOTES: (X)

- (1) 2" CONDUIT FROM LIGHTING POLE PULL BOX TO LOCATION INDICATED FOR FUTURE TUNNEL ENTRANCE ILLUMINATED SIGN. CAP MARK AND PROVIDE PULL CORD AS REQUIRED.

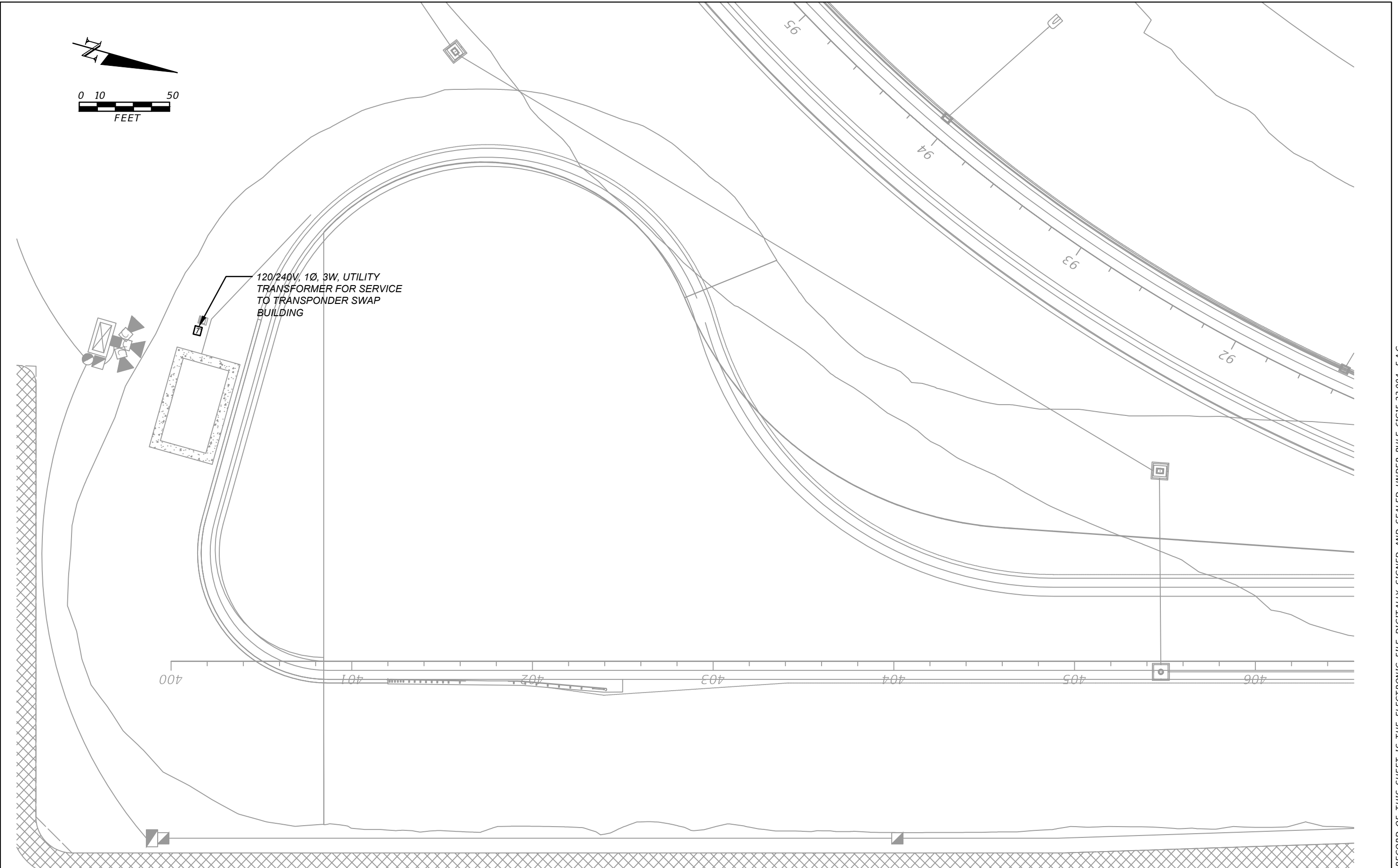
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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
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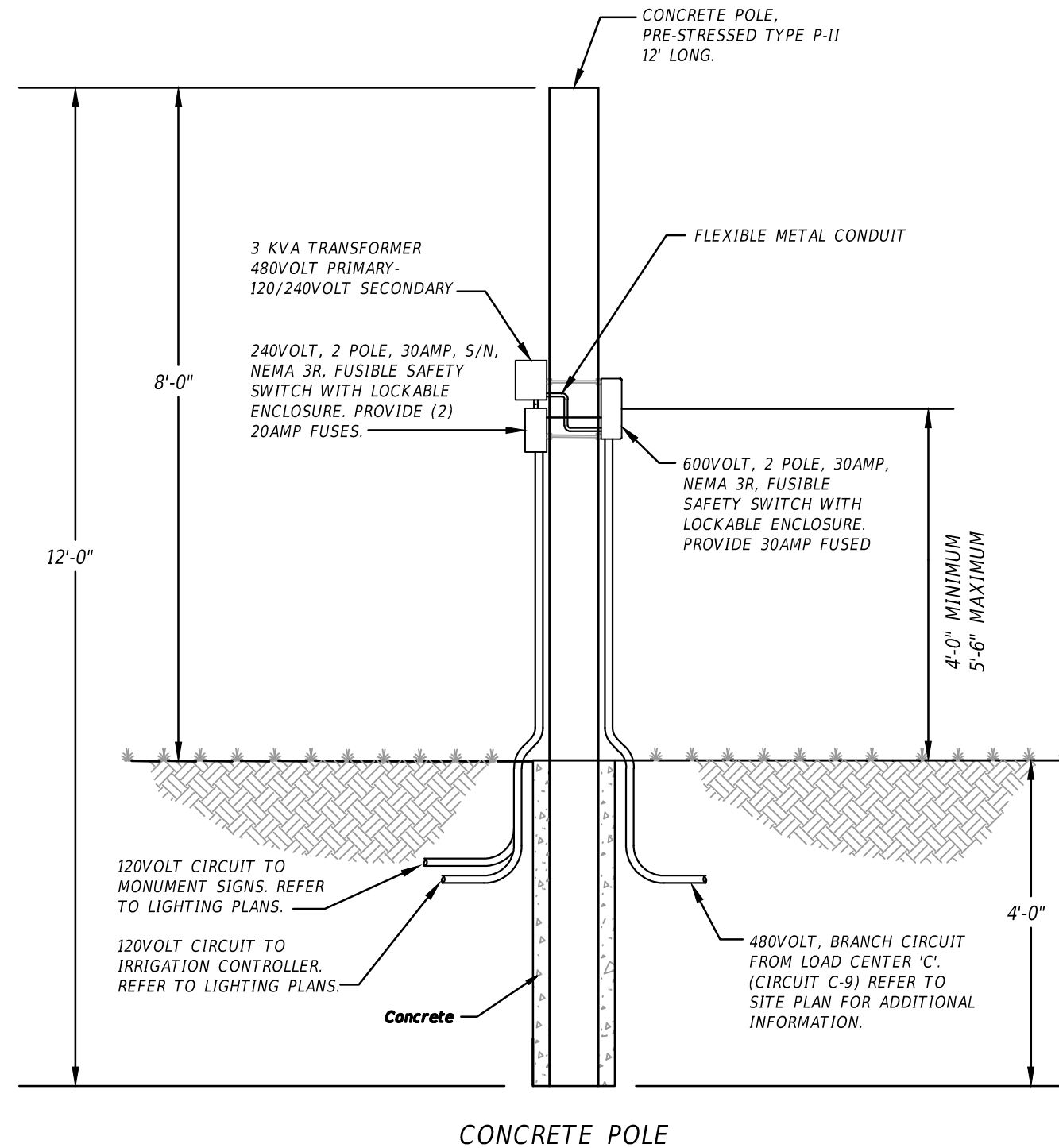
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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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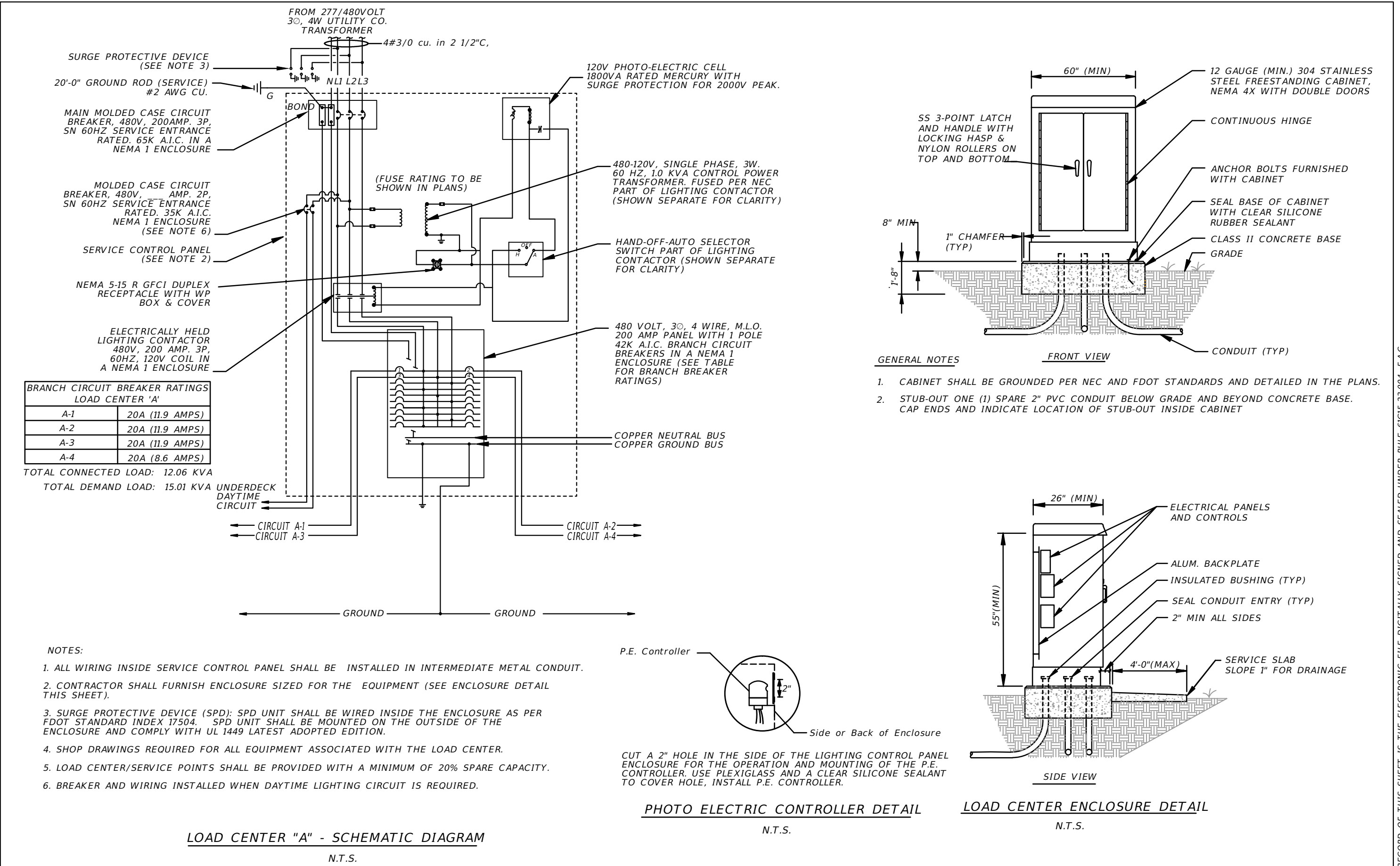
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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID			
					NA	POLK	437300-1-52-01			



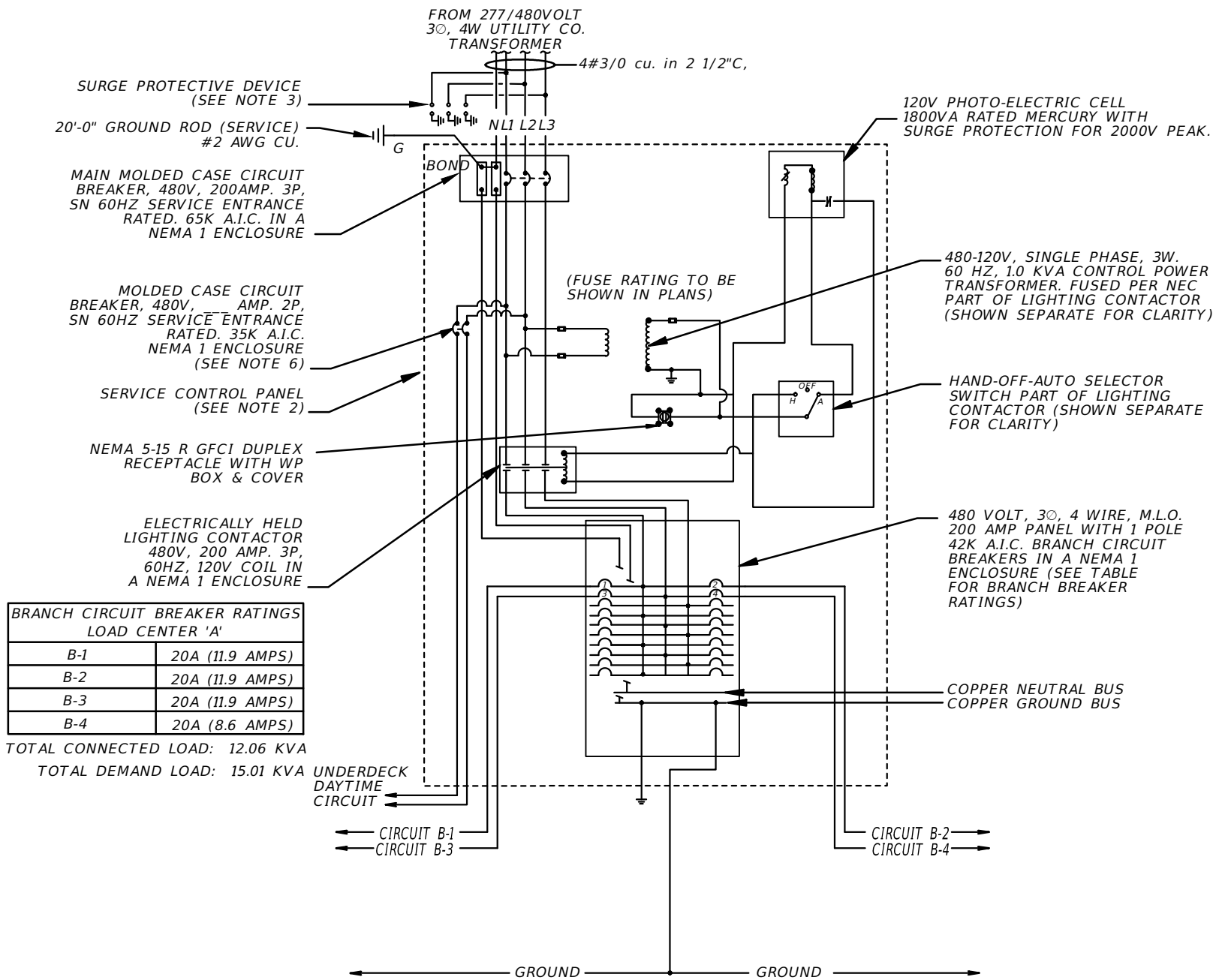
REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY LIGHTING PLAN	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		L-19
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REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY POLE MOUNTED TRANSFORMER DETAIL		SHEET NO.	
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID			L-20	
					NA	POLK	437300-1-52-01				



REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY LOAD CENTER DETAIL "A"	SHEET NO. L-21
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					NA	POLK	437300-1-52-01		

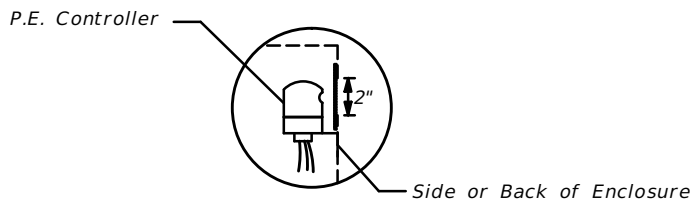


NOTES:

1. ALL WIRING INSIDE SERVICE CONTROL PANEL SHALL BE INSTALLED IN INTERMEDIATE METAL CONDUIT.
2. CONTRACTOR SHALL FURNISH ENCLOSURE SIZED FOR THE EQUIPMENT (SEE ENCLOSURE DETAIL THIS SHEET).
3. SURGE PROTECTIVE DEVICE (SPD): SPD UNIT SHALL BE WIRED INSIDE THE ENCLOSURE AS PER FDOT STANDARD INDEX 17504. SPD UNIT SHALL BE MOUNTED ON THE OUTSIDE OF THE ENCLOSURE AND COMPLY WITH UL 1449 LATEST ADOPTED EDITION.
4. SHOP DRAWINGS REQUIRED FOR ALL EQUIPMENT ASSOCIATED WITH THE LOAD CENTER.
5. LOAD CENTER/SERVICE POINTS SHALL BE PROVIDED WITH A MINIMUM OF 20% SPARE CAPACITY.
6. BREAKER AND WIRING INSTALLED WHEN DAYTIME LIGHTING CIRCUIT IS REQUIRED.

LOAD CENTER "B" - SCHEMATIC DIAGRAM

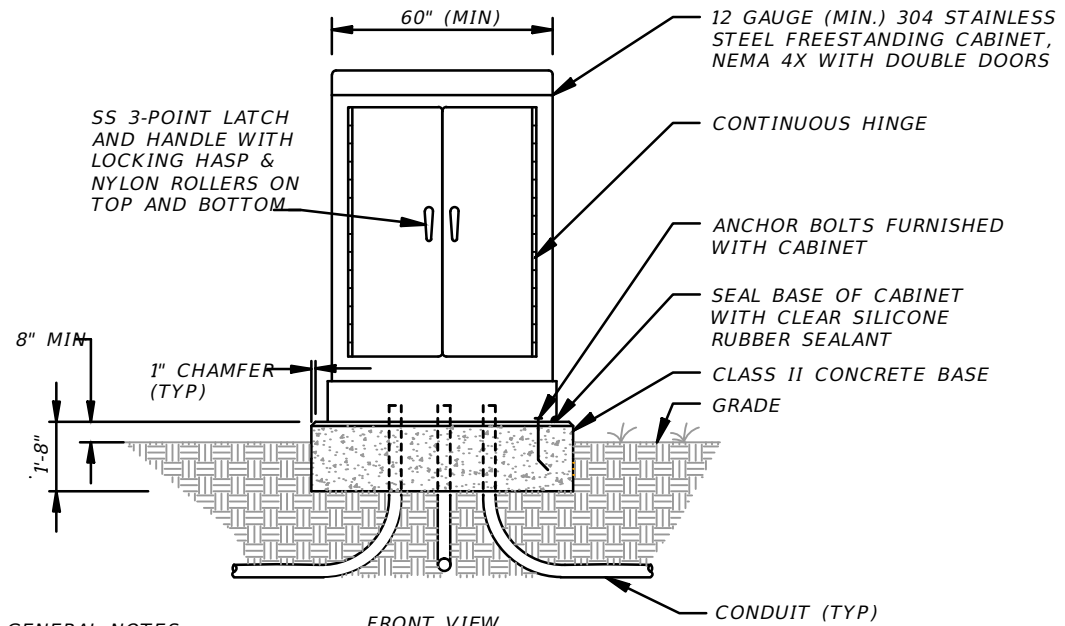
N.T.S.



CUT A 2" HOLE IN THE SIDE OF THE LIGHTING CONTROL PANEL ENCLOSURE FOR THE OPERATION AND MOUNTING OF THE P.E. CONTROLLER. USE PLEXIGLASS AND A CLEAR SILICONE SEALANT TO COVER HOLE, INSTALL P.E. CONTROLLER.

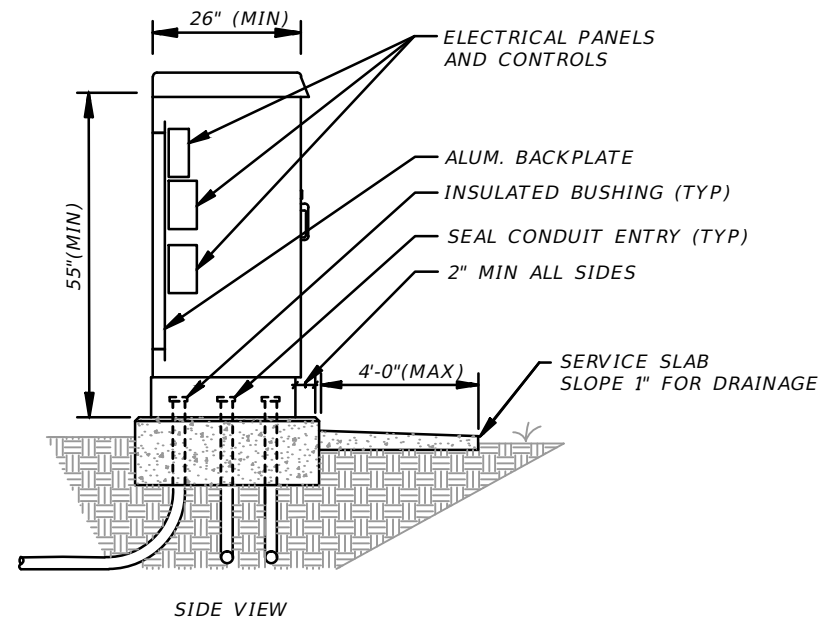
PHOTO ELECTRIC CONTROLLER DETAIL

N.T.S.



GENERAL NOTES

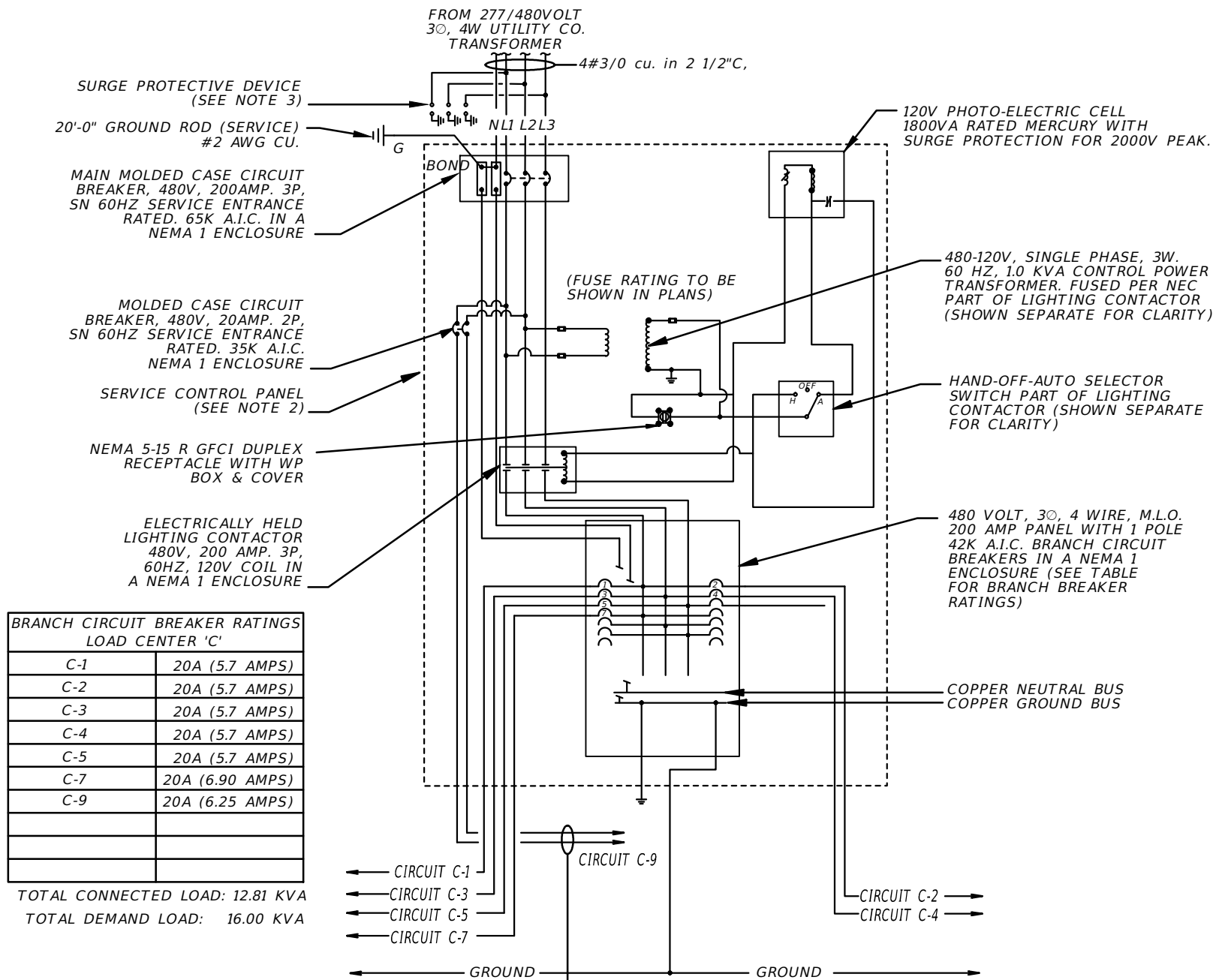
1. CABINET SHALL BE GROUNDED PER NEC AND FDOT STANDARDS AND DETAILED IN THE PLANS.
2. STUB-OUT ONE (1) SPARE 2" PVC CONDUIT BELOW GRADE AND BEYOND CONCRETE BASE. CAP ENDS AND INDICATE LOCATION OF STUB-OUT INSIDE CABINET



LOAD CENTER ENCLOSURE DETAIL

N.T.S.

REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY LOAD CENTER DETAIL "B"		SHEET NO. L-22
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID			
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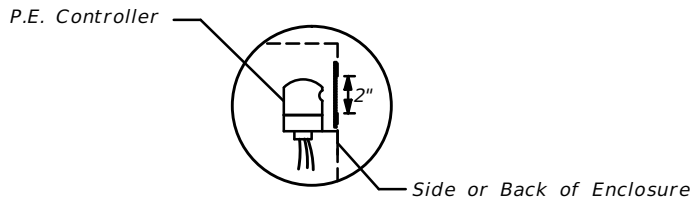


NOTES:

- ALL WIRING INSIDE SERVICE CONTROL PANEL SHALL BE INSTALLED IN INTERMEDIATE METAL CONDUIT.
- CONTRACTOR SHALL FURNISH ENCLOSURE SIZED FOR THE EQUIPMENT (SEE ENCLOSURE DETAIL THIS SHEET).
- SURGE PROTECTIVE DEVICE (SPD): SPD UNIT SHALL BE WIRED INSIDE THE ENCLOSURE AS PER FDOT STANDARD INDEX 17504. SPD UNIT SHALL BE MOUNTED ON THE OUTSIDE OF THE ENCLOSURE AND COMPLY WITH UL 1449 LATEST ADOPTED EDITION.
- SHOP DRAWINGS REQUIRED FOR ALL EQUIPMENT ASSOCIATED WITH THE LOAD CENTER.
- LOAD CENTER/SERVICE POINTS SHALL BE PROVIDED WITH A MINIMUM OF 20% SPARE CAPACITY.

LOAD CENTER "C" - SCHEMATIC DIAGRAM

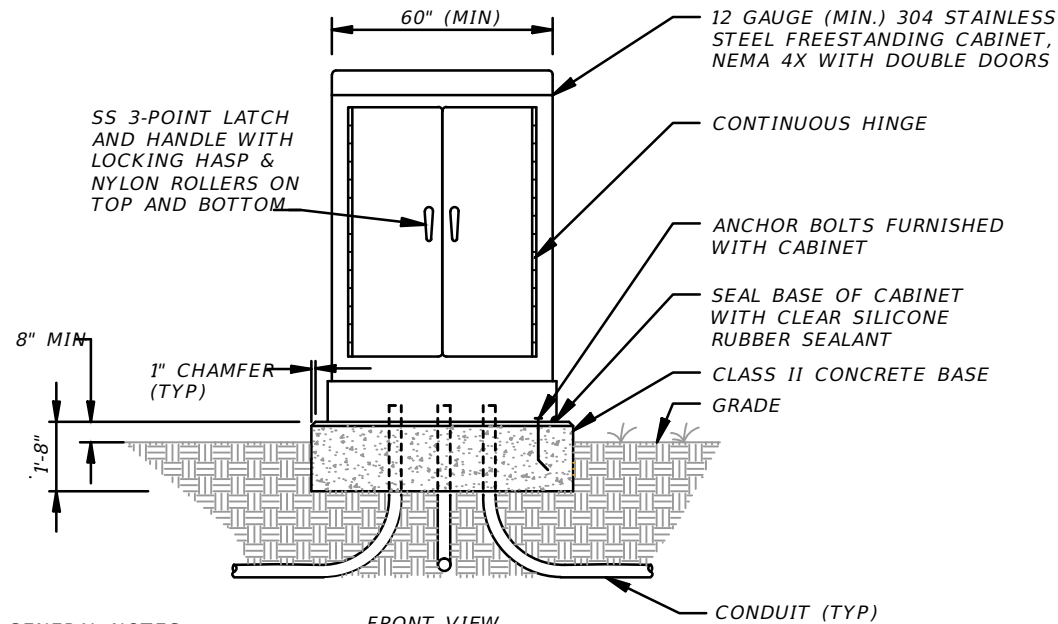
N.T.S.



CUT A 2" HOLE IN THE SIDE OF THE LIGHTING CONTROL PANEL ENCLOSURE FOR THE OPERATION AND MOUNTING OF THE P.E. CONTROLLER. USE PLEXIGLASS AND A CLEAR SILICONE SEALANT TO COVER HOLE, INSTALL P.E. CONTROLLER.

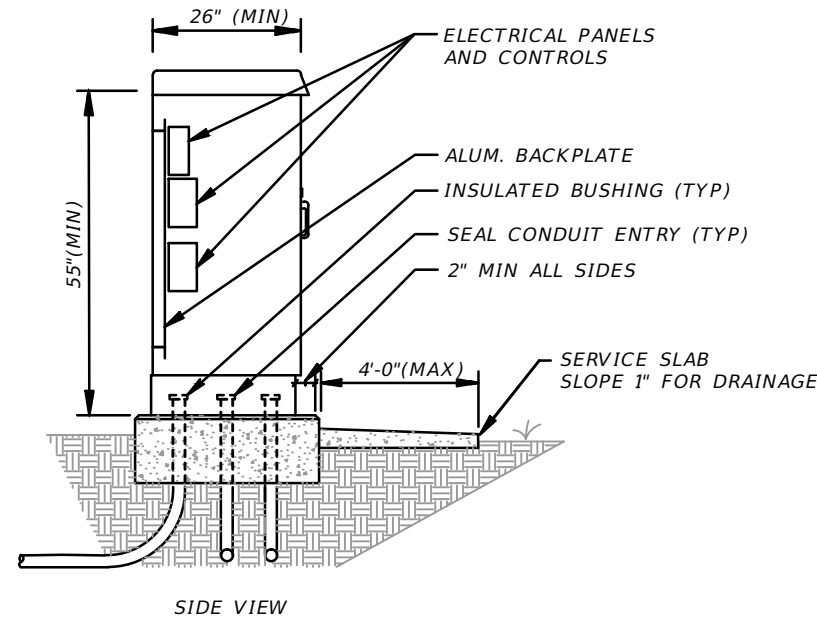
PHOTO ELECTRIC CONTROLLER DETAIL

N.T.S.



GENERAL NOTES

- CABINET SHALL BE GROUNDED PER NEC AND FDOT STANDARDS AND DETAILED IN THE PLANS.
- STUB-OUT ONE (1) SPARE 2" PVC CONDUIT BELOW GRADE AND BEYOND CONCRETE BASE. CAP ENDS AND INDICATE LOCATION OF STUB-OUT INSIDE CABINET



LOAD CENTER ENCLOSURE DETAIL

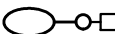
N.T.S.

REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY LOAD CENTER DETAIL "C"	SHEET NO. L-23
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					NA	POLK	437300-1-52-01		

LIGHTING FIXTURE SCHEDULE								
MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLTS	LAMP			FIXTURE WATTS
					QTY	WATTS	MODEL	
SL1	LED TYPE 2, 4000K, 128LED 700MA DRIVER MODULE - WITH 40' ALUMINUM POLE	VISIONAIRE LIGHTING	BLX-4-T2-128LC-7-4K-UNV	277	-	-	LED	282
SL2	LED TYPE 4, 4000K, 128LED 700MA DRIVER MODULE - WITH 40' ALUMINUM POLE	VISIONAIRE LIGHTING	BLX-4-T4-128LC-10-4K-UNV	277	-	-	LED	282
SL3	LED TYPE 4, 4000K, 128LED 530MA DRIVER MODULE - WITH 40' ALUMINUM POLE	VISIONAIRE LIGHTING	BLX-4-T4-128LC-5-4K-UNV	277	-	-	LED	211
SL4	LED TYPE 4, 4000K, 256LED 1000MA DRIVER MODULE - WITH 45' POLE AND 30'=0" MID PPOLE MOUNTING BRACKETS	VISIONAIRE LIGHTING	BLX-8-T4-256LC-10-4K-UNV	277	-	-	LED	884
		UNITED LIGHTING STANDARDS (BRACKET)	CR22-02 (SIZE C)	N/A	-	-	N/A	N/A
SL4M	LED TYPE 4, 4000K, 128LED 700MA DRIVER MODULE - MID POLE MOUNTED @ 30'-0" A.F.G.	VISIONAIRE LIGHTING	BLX-4-T4-128LC-7-4K-UNV	277	-	-	LED	282
T1	LED WALL MOUNTED (INVERTED) TYPE 3, 4000K,	VISIONAIRE LIGHTING	VSC-1-T3-32LC-7-4K-UNV	277	-	-	LED	73
NOTES: 1. DIVISION 16 CONTRACTOR SHALL VERIFY ALL FIXTURE TYPES AND FINISHES WITH OWNER PRIOR TO ORDERING. 2. COORDINATE LED TEMPERATURE/COLOR SELECTION WITH OWNER.								

LEGEND

DESCRIPTION



ROADWAY/AREA HIGH PERFORMANCE POLE MOUNTED LED FIXTURE WITH EXTRUDED ALUMINUM DRIVER HOUSING AND DIECAST ALUMINUM LUMINIARE CONSTRUCTION. DISTRIBUTION PATTERNS AS INDICATED ON LIGHTING FIXTURE SCHEDULE. 4000 LUMEN COLOR TEMPERATE AND FURNISHED WITH INTEGRAL WIRELESS LIGHTING CONTROL UNIT (LCU) NODE/SYSTEM AND PHOTCELL/RECEPTACLE OUTLET.



DUAL (MIDWAY AND TOP MOUNTED) ROADWAY/AREA HIGH PERFORMANCE POLE MOUNTED LED FIXTURES WITH EXTRUDED ALUMINUM DRIVER HOUSING AND DIECAST ALUMINUM LUMINIARE CONSTRUCTION. DISTRIBUTION PATTERNS AS INDICATED ON LIGHTING FIXTURE SCHEDULE. 4000 LUMEN COLOR TEMPERATE AND FURNISHED WITH INTEGRAL WIRELESS LIGHTING CONTROL UNIT (LCU) NODE/SYSTEM AND PHOTCELL/RECEPATCLE OUTLET. FIXTURE PROVIDED WITH MID POLE ADJUSTABLE MOUNTING ARM.



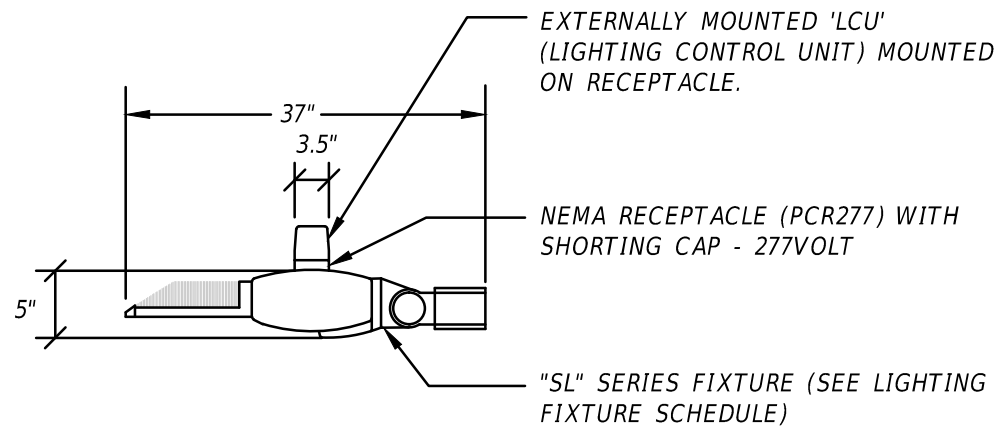
WALL MOUNTED (INVERTED) LED EXTERIOR RATED FIXTURE



EXTERIOR RATED ELECTRICAL SERVICE LOAD CENTER. (SEE DETAILS)

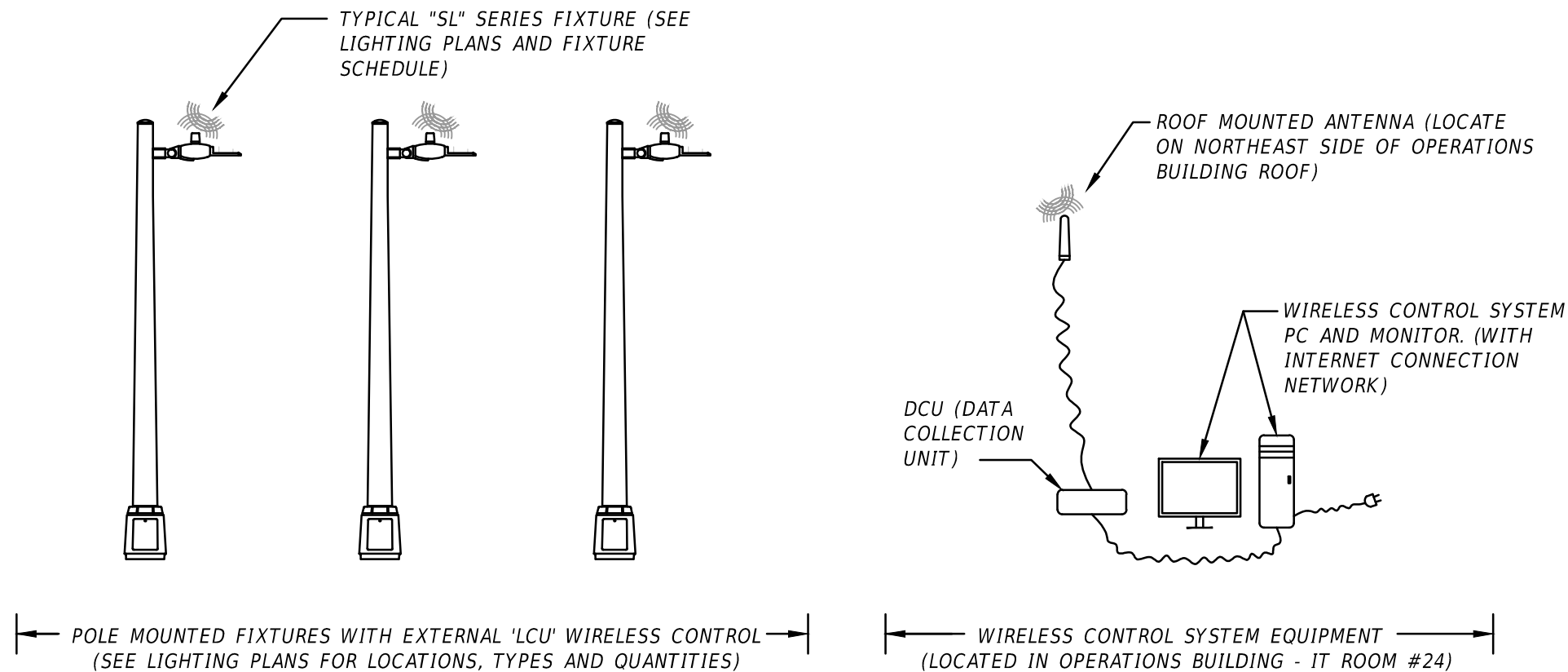
REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY LEGEND AND LIGHTING SCHEDULE	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					NA	POLK	437300-1-52-01		

L-24



TYPICAL FIXTURE LCU MOUNTING DETAIL

N.T.S.



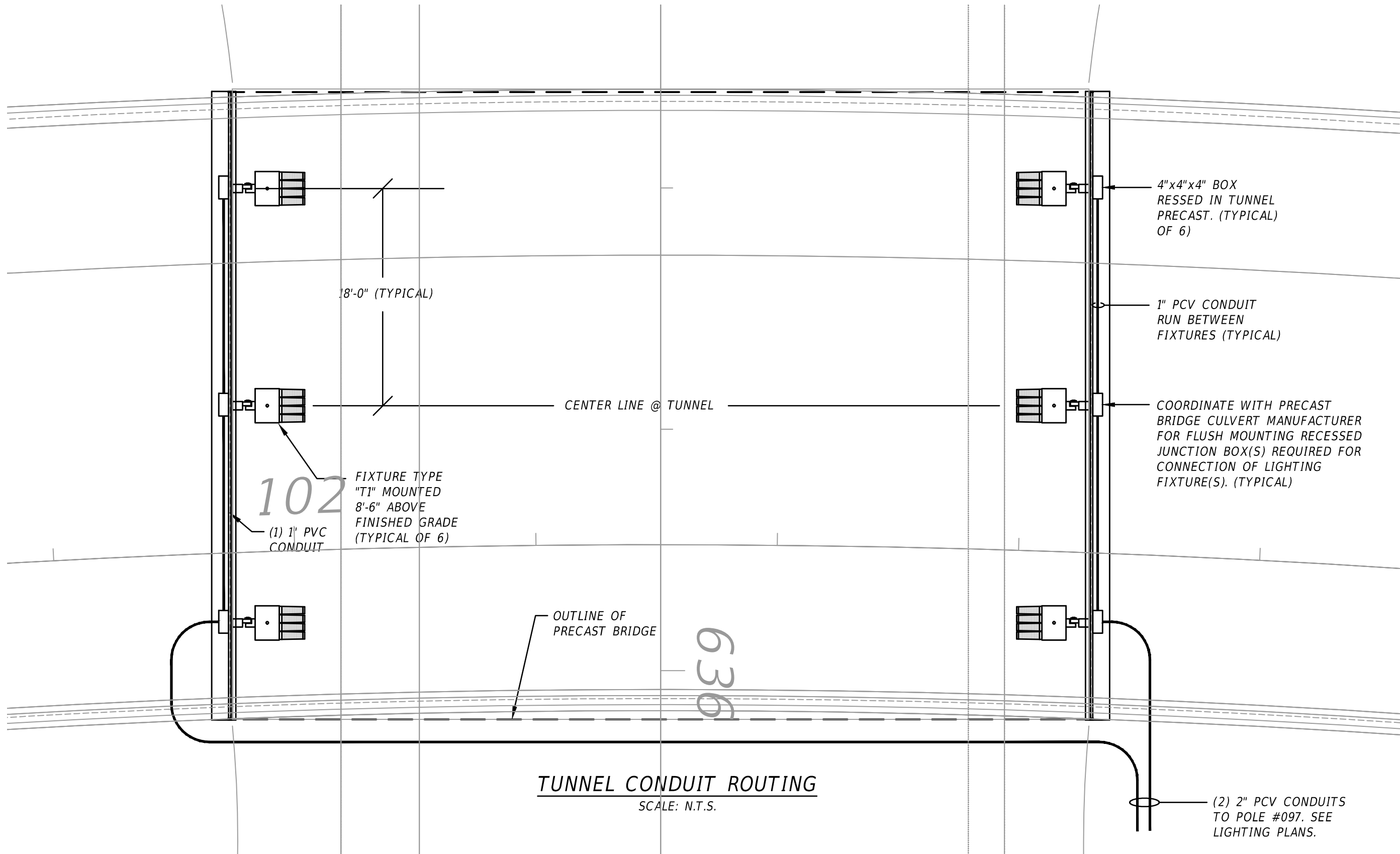
WIRELESS CONTROL SYSTEM SCHEMATIC

N.T.S.

SYSTEM NOTES:

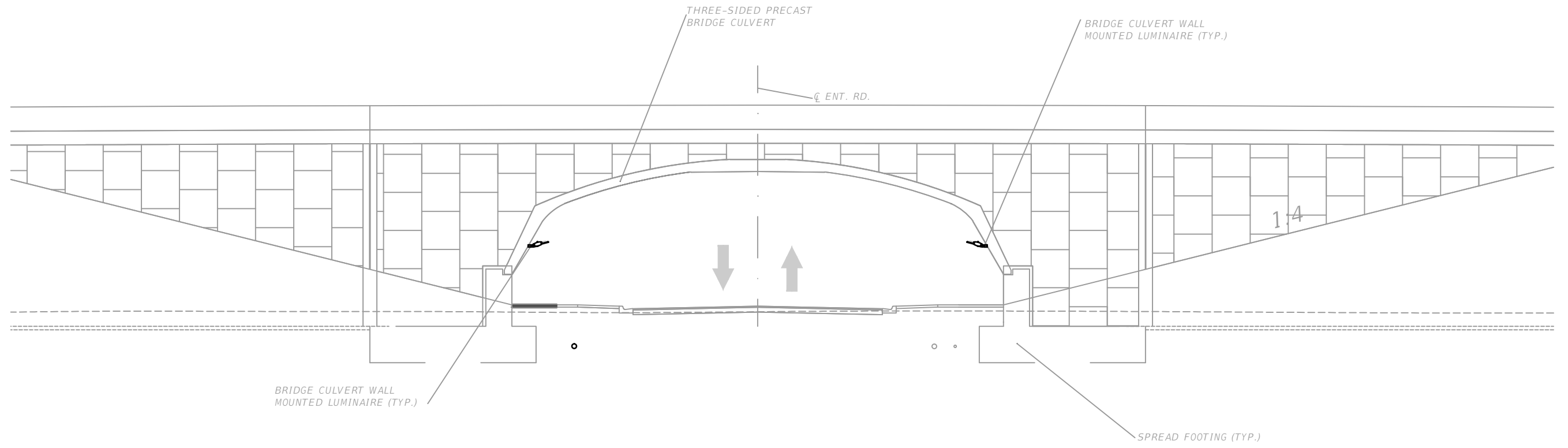
1. REAL TIME CLOCK WITH UPDATE CAPABILITIES FOR PRE-DEFINED SCHEDULED ELEMENTS.
2. SYSTEM HIGH TEMPERATURE ALERT TRIGGER WITH REMOTE WARNING.
3. DIMMING PRE-ASSIGNED LEVELS AND LIVE ONBOARD REMOTE DIMMING CONTROL CAPABLE.
4. POWER READING/MEASUREMENTS:
 - VOLTAGE (VOLTS)
 - CURRENT (AMPERES)
 - ACCUMULATED POWER (WATTS)
 - PF-POWER FACTOR RANGE BETWEEN 0-1000)
 - LINE FREQUENCY (HZ)
5. LCU STATIC INFORMATION:
 - DCU ID
 - GPS COORDINATES
 - ADDRESS
 - IDENTIFIER
 - UNIQUE ADDRESS
 - POLE TYPE
 - LUMINAIRE TYPE
 - INSTALLATION DATE
6. LCU ALARMS
 - POWER TOO LOW
 - POWER TOO HIGH
 - TEMPERATURE
 - DRIVER FAILURE

REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY CONTROL SCHEMATIC	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					NA	POLK	437300-1-52-01		
									L-25



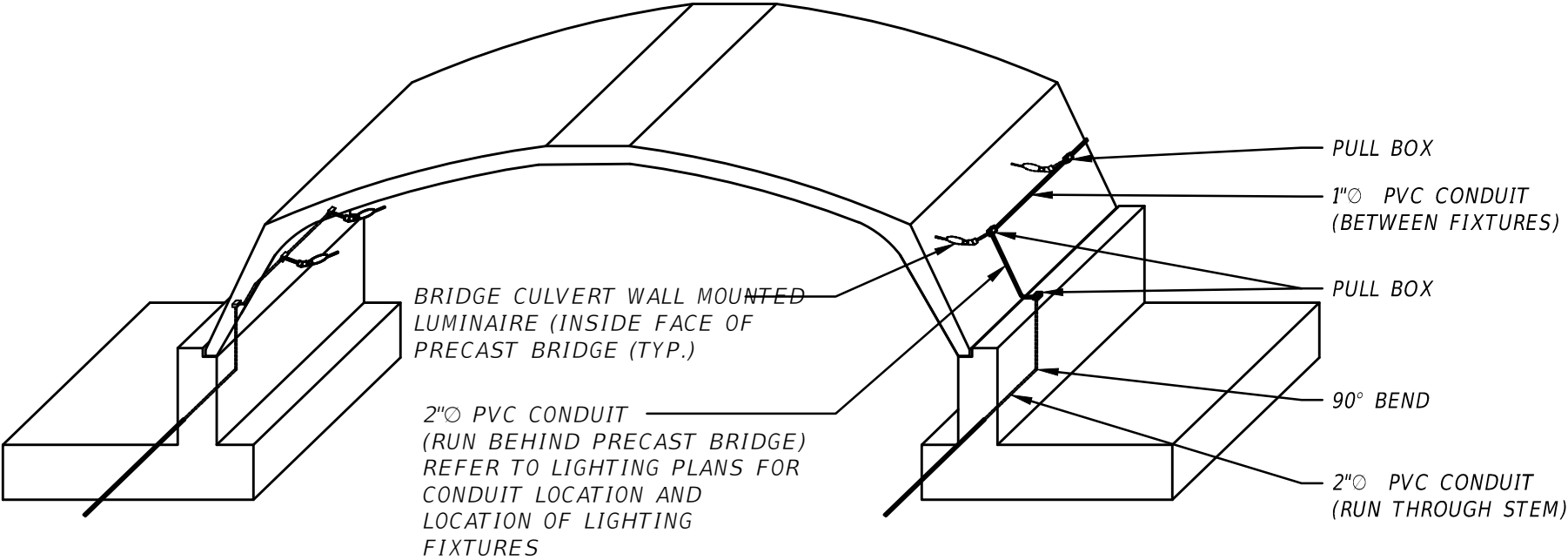
TUNNEL CONDUIT ROUTING
SCALE: N.T.S.

REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY TUNNEL DETAIL - LIGHT FIXTURE & CONDUIT ROUTING	SHEET NO. L-26
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					NA	POLK	437300-1-52-01		

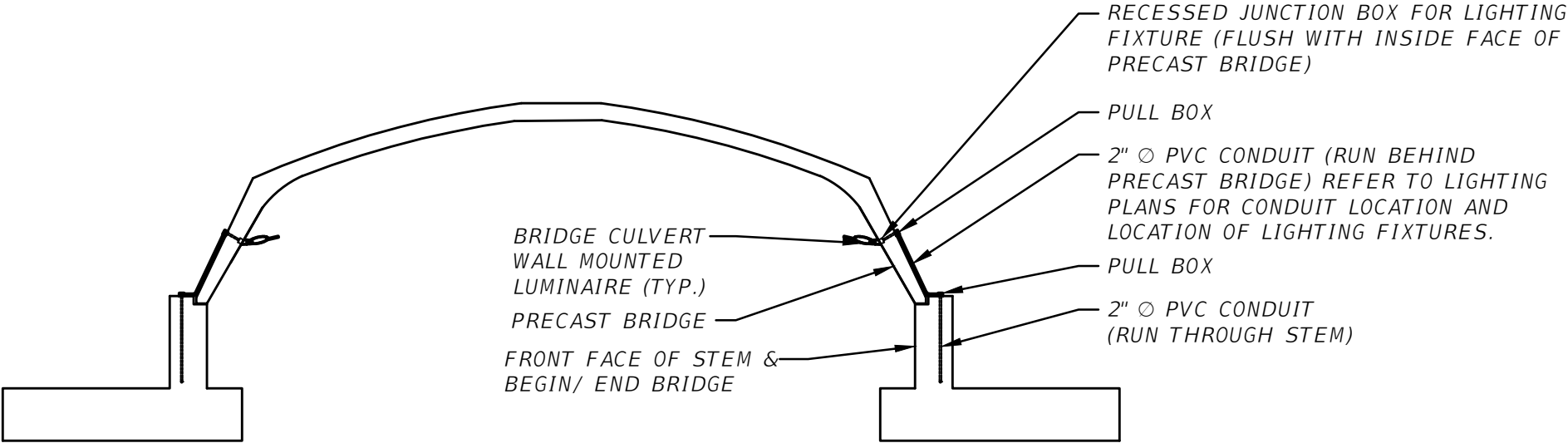


ELEVATION

REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY TUNNEL ELEVATION		SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID			
					NA	POLK	437300-1-52-01			L-27



PRECAST SUPPORT DETAIL
SCALE: N.T.S.



PRECAST SUPPORT DETAIL
SCALE: N.T.S.

REVISIONS				BLAKE LAWRENCE SUDDETH, P.E. FLORIDA P.E. NO.: 69060 JOSEPH, LAWRENCE & CO. 1180 HARWOOD AVENUE, SUITE 3000 ALTAMONTE SPRINGS, FLORIDA 32714 CA NO.: 28730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNTRAX TEST FACILITY TUNNEL PRECAST CONDUIT ROUTING DETAIL	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					NA	POLK	437300-1-52-01		
									L-28

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