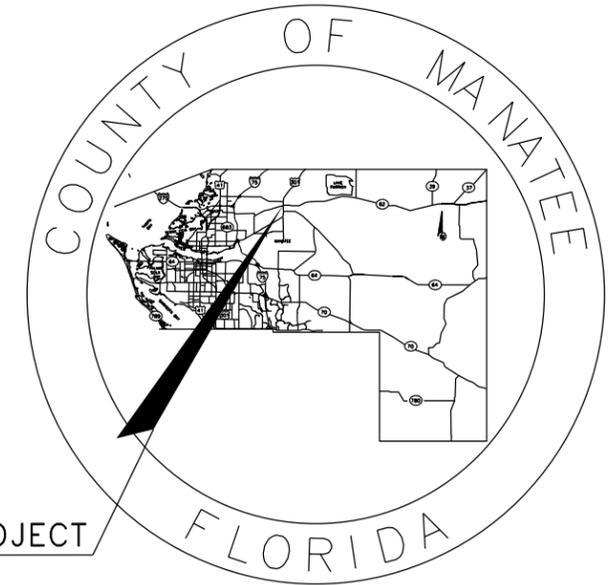


STATE OF FLORIDA COUNTY OF MANATEE



PLANS OF PROPOSED ERIE RD. AND SR 62 IMPROVEMENTS PARRISH, FLORIDA

MC PROJECT No. 850-6094060 LOCATION OF PROJECT
 FDOT JPA 445308-1-58-01
 FDOT MILE POST 11.175

INDEX OF LIGHTING PLANS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
L-1	KEY SHEET
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L-3	TABULATION OF QUANTITIES
L-4	GENERAL NOTES
L-5	POLE DATA AND LEGEND
L-6	LIGHTING PLAN



INTERSECTION LIGHTING
 STA. 107+31.00

NGVD 29 DATUM

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

PLANS PREPARED BY:

HDR ENGINEERING, INC.
 4830 W KENNEDY BLVD, SUITE 400
 TAMPA, FL 33609-2548
 (813) 282-2300
 VENDOR NO. VF-470680568

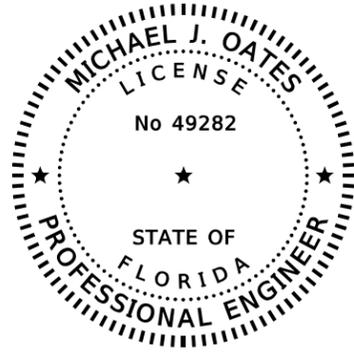


LIGHTING PLANS
 PROFESSIONAL OF RECORD: MICHAEL J. OATES, P.E.

FLORIDA P.E. # 49282

SHEET NO.

L-1



THIS ITEM HAS BEEN DIGITALLY
SIGNED AND SEALED BY

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE
NOT CONSIDERED SIGNED AND SEALED
AND THE SIGNATURE MUST BE VERIFIED
ON ANY ELECTRONIC COPIES.

HDR ENGINEERING, INC.
4830 W. KENNEDY BLVD., SUITE 400
TAMPA, FL 33609-2548
MICHAEL J. OATES, PE NO. 49282

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

LIGHTING PLANS

SHEET NO.	SHEET DESCRIPTION
L-1	KEY SHEET
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				SCALE	AS NOTED			 HDR Engineering, Inc. 4830 W Kennedy Blvd, Suite 400 Tampa, FL 33609-2548	DATE	10/2021	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	MICHAEL J. OATES	<i>SIGNATURE SHEET</i>	SHEET NO.	
				DESIGNED BY	MO				PROJECT NO.	850-6094060		FL. LICENSE NO.	49282		L-2	
				DRAWN BY	GS											
				CHECKED BY	IR											
No.	REVISIONS			DATE	BY											

- CONTACT THE ENGINEER, IN CONJUNCTION WITH MANATEE COUNTY'S PROJECT MANAGEMENT DIVISION BEFORE STARTING WORK.
- ONE WEEK PRIOR TO THE BEGINNING OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY:

 MANATEE COUNTY PROJECT MANAGEMENT DIVISION
 MICHAEL L. STURM, P.E.
 1022 26TH AVENUE EAST
 BRADENTON, FLORIDA 34208
 PHONE: 941-708-7450 EXT. 7332

 MANATEE COUNTY TRAFFIC ENGINEERING DIVISION
 VISHAL KAKKAD
 2101 47TH TERRACE EAST
 BRADENTON, FLORIDA 34203
 PHONE: 941-749-3500 EXT. 7812
- FOR A LIST OF UTILITY OWNERS, SEE "UTILITY CONTACTS" LISTED BELOW.
- THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND BASED ON THE INFORMATION FURNISHED TO THE ENGINEER BY THE UTILITY OWNER(S) AND ARE SHOWN AS NOTICE TO THE CONTRACTOR THAT UNDERGROUND UTILITIES EXIST. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR, VIA SUNSHINE STATE ONE CALL OF FLORIDA, INC AT 811 OR 1-800-432-4770, IN COORDINATION WITH UNDERGROUND AND OVERHEAD UTILITY OWNERS. A MINIMUM OF 2 FULL BUSINESS DAYS PRIOR TO DIGGING IS REQUIRED. IN ADDITION, BEFORE EXCAVATING STAKE ALL POLE LOCATIONS AND TAKE RESPONSIBILITY FOR NOTIFYING THE UTILITY COMPANY OWNER(S) AND REQUEST THEM TO LOCATE AND STAKE THEIR UNDERGROUND FACILITIES.
- PRIOR TO ORDERING MATERIALS, SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW FOR ALL EQUIPMENT AND MATERIALS FURNISHED AND INSTALLED.
- THE ACCEPTANCE OF ANY SUBMITTED DATA FOR MATERIALS, AND EQUIPMENT SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF PLACING SAME AND PROPER DIMENSIONS, CAPACITIES, SIZES, QUANTITY AND INSTALLATIONS DETAILS TO EFFICIENTLY PERFORM THE REQUIREMENTS AND INTENT OF THE CONTRACT. SUCH ACCEPTANCE SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS OF ANY SORT ON THE SUBMITTAL DATA.
- VERIFY POLE LENGTHS REQUIRED IN ORDER TO ACHIEVE THE PROPER MOUNTING HEIGHT FOR EACH LUMINAIRE. THIS VERIFICATION SHALL OCCUR PRIOR TO THE SUBMISSION OF SHOP DRAWINGS. MOUNTING HEIGHTS ARE DETERMINED FROM THE BOTTOM OF THE LUMINAIRE HOUSING VERTICALLY TO PAVEMENT GRADE.
- THE CONTRACTOR SHALL RETURN ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS WITHIN 72 HOURS OF THE CONSTRUCTION ACTIVITY, INCLUDING BUT NOT LIMITED TO: RESTORATION OF GRADE; REMOVAL OF CONSTRUCTION TRASH; REPLACEMENT OF SIDEWALK; RESTORATION OF LANDSCAPE IRRIGATION, ETC. THE CONTRACTOR SHALL VERIFY THE LOCATION AND FUNCTION OF EXISTING IRRIGATION LINES PRIOR TO INITIALIZING CONSTRUCTION.
- THE CONTRACTOR SHALL INSTALL ALL PROJECT INFRASTRUCTURE AND FIELD ELEMENTS WITHIN THE RIGHT-OF-WAY.
- ALL AREAS OF EXPOSED EARTH RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE SODDED AS DIRECTED BY THE COUNTY. SEEDING AND MULCHING SHALL BE APPLIED ONLY WHERE DIRECTED BY THE COUNTY.

- IF THE LUMINAIRE USED IS DIFFERENT THAN DESIGNED, THE CONTRACTOR SHALL PROVIDE SUBMITTAL DATA WHICH INCLUDES A COMPUTER PRINTOUT SHOWING HORIZONTAL FOOTCANDLE LEVELS TO BE OBTAINED, USING THE SUBMITTED LUMINAIRES THAT ARE NOT THE BASIS OF DESIGN, ON THIS PROJECT. AT FINAL INSPECTION, VERIFY THE HORIZONTAL FOOTCANDLE LEVELS ON THE ROADWAY WITH AN APPROVED CURRENTLY CALIBRATED LIGHT METER.
- IDENTIFY ALL CIRCUITS AND EQUIPMENT WITH "LAMACOID TAGS". INSTALL SIMILAR TAGS OF STAINLESS STEEL IDENTIFYING CIRCUIT FOR EACH LUMINAIRE AT ACCESS HANDHOLE FOR EACH POLE.
- 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.
- AT LOCATIONS WHERE UNDERGROUND UTILITIES ARE WITHIN 2' TO THE LIGHTING POLE FOUNDATIONS AS DETERMINED BY THE ENGINEER, HAND DIG THE FIRST 4 FEET OF THE HOLE FOR THE POLE FOUNDATION AND/OR CONDUIT RUN(S).
- ALL EXCESS DIRT AND DEBRIS EXCAVATED FROM POLE FOUNDATIONS SHALL BE REMOVED DAILY TO AREAS APPROVED BY THE ENGINEER AND SHALL BE INCLUDED IN PAY ITEM NO. 715-4-13.
- PREPARE ACCURATELY DIMENSIONED "AS-BUILT" PLANS OF THE FINAL POLE AND LOAD CENTER LOCATIONS. PLANS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER. COST OF SUCH PREPARATION SHALL BE INCIDENTAL TO PAY ITEMS PROVIDED. UPON FINAL ACCEPTANCE OF THE PROJECT, FORWARD A COMPLETE SET OF AS-BUILT PLANS WITH ALL CHANGES MARKED IN RED TO THE ENGINEER.

CONDUIT NOTES

- ALL CONDUIT TRENCHES SHALL BE BACKFILLED COMPLETELY TO PROVIDE SAFE CROSSING BY THE END OF THE WORKING DAY OR WHENEVER THE WORK ZONE BECOMES INACTIVE. DO NOT OPEN ANY AREA THAT CANNOT BE BACKFILLED IN THE SAME DAY/NIGHT OPERATION.

PAY ITEM NOTES

- 630-2-11: CONDUIT SHOULD BE ADJUSTED TO FIT AROUND THE EXISTING AND PROPOSED UTILITIES. WHERE PLANNED LOCATION OF LIGHTING CONDUIT RUNS 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 LOCATED CLOSER THAN 30" BELOW THE GROUND SURFACE, PLACE IN AN ADDITIONAL 3" PVC COATED RGS SLEEVE OR BACKFILL WITH A MINIMUM 4" CONCRETE COVER. COST OF SUCH TREATMENT WILL BE INCIDENTAL TO PAY ITEMS PROVIDED.
- 715-4-70 THIS PAY ITEM SHALL INCLUDE THE COST OF FILLING IN THE VOIDS AFTER REMOVAL OF THE LIGHT POLE FOUNDATIONS. THE CONTRACTOR SHALL CLAIM OWNERSHIP OF REMOVED EQUIPMENT.

CONTACTS:

MANATEE COUNTY PUBLIC WORKS DEPARTMENT
 INFRASTRUCTURE ENGINEERING
 CHRIS MOWBRAY, P.E.
 1022 26TH AVENUE EAST
 BRADENTON, FL 34208
 (941) 708-7450
 FAX: (941) 708-7431

MANATEE COUNTY HEALTH DEPARTMENT
 HARRY MESSICK
 410 6TH AVENUE EAST
 BRADENTON, FL 34208
 (941) 748-0747 EXT. 1355
 FAX: (941) 750-9364

FRONTIER COMMUNICATIONS
 DENISE HUTTON
 1701 RINGLING BLVD
 SARASOTA, FL 34236
 (941) 906-6722
 denise.hutton@ftr.com

FLORIDA GAS TRANSMISSION SAFETY HARBOR TEAM
 7804 ANDERSON ROAD
 TAMPA, FL 33634
 JOSEPH SANCHEZ
 (813) 466-3327
 CELL: (727) 639-7512
 joseph.e.sanchez@sug.com

FLORIDA POWER & LIGHT
 GREG COKER
 1253 12TH AVENUE EAST
 PALMETTO, FL 34221
 (941) 723-4430
 FAX: (941) 723-4430
 EMERGENCY:
 1-800-4-OUTAGE
 Greg_Coker@fpl.com

MANATEE COUNTY PUBLIC WORKS DEPARTMENT
 UTILITY ENGINEERING
 SCOTT MAY, P.E.
 1022 26TH AVENUE EAST
 BRADENTON, FL 34208
 (941) 708-7450 EXT. 7650
 FAX: (941) 708-7415

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
 SARASOTA SERVICE OFFICE
 STEVE LOPES, P.E.
 6750 FRUITVILLE ROAD
 SARASOTA, FL 34240
 (941) 377-3722
 FAX: (941) 373-7660

CHARTER COMMUNICATIONS
 JAMES CRUZAN
 5413 E. STATE ROAD 64
 BRADENTON, FL 34208-5535
 (727) 329-2846
 James.Cruzan@charter.com

TECO/PEOPLE GAS CO.
 DAN SHANAHAN
 8261 VICO COURT
 SARASOTA, FL 34240
 (813) 645-2700
 FAX: (941) 342-4011
 EMERGENCY:
 1-877-832-6911
 djshanahan@tecoenergy.com

PEACE RIVER ELECTRIC COOPERATIVE, INC.
 P.O. BOX 1310
 WACHULA, FL 33873
 DAVID McCLINTOCK
 (863) 767-4621
 David.McClintock@preco.coop

MANATEE COUNTY PUBLIC WORKS DEPARTMENT
 TRAFFIC ENGINEERING
 VISHAL KAKKAD, P.E.
 (941) 749-3500 EXT. 7812
 FAX: (941) 749-3517

DEPT OF ENVIRONMENTAL PROTECTION
 STEPHANIE BARIOS
 13051 N. TELECOM PKWY
 TEMPLE TERRACE, FL 33637
 (813) 632-7600, EXT. 408
 FAX: (813) 632-7662

SUNSHINE STATE ONE CALL OF FLORIDA
 1 (800) 432-4770

				SCALE	AS NOTED			DATE	10/2021	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	MICHAEL J. OATES	GENERAL NOTES	SHEET NO.
				DESIGNED BY	MO			PROJECT NO.	850-6094060		FL. LICENSE NO.	49282		L-4
				DRAWN BY	GS									
				CHECKED BY	IR									
No.	REVISIONS			DATE	BY									



HDR Engineering, Inc.
 4830 W. Kennedy Blvd.
 Suite 400
 Tampa, FL 33609-2548

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LEGEND

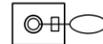
POLE DATA

SYMBOLS

DESCRIPTION



388 WATT 480V LED LUMINAIRE ATTACHED ON SHOULDER MOUNTED CONVENTIONAL LIGHT POLE. ANALYZED USING AMERICAN ELECTRIC LIGHTING LUMINAIRE, PHOTOMETRIC CURVE NUMBER ATB2_80BLEDE15_XXXXX_R4_4K_5K AT 41608 LUMENS. POLE MOUNTING HEIGHT IS 40 FT AND ARM LENGTH IS 8 FT. SYMBOL INCLUDES LUMINAIRE, ARM, POLE WITH STANDARD FOUNDATION, PULL BOX, BREAKAWAY TRANSFORMER BASE, AND POLE CABLE DISTRIBUTION SYSTEM. THE LUMINAIRE IS A CUTOFF FIXTURE DESIGNED FOR FOWARD THROW TYPE IV DISTRIBUTION WITH ZERO TILT.



388 WATT 480V LED LUMINAIRE ATTACHED ON SHOULDER MOUNTED CONVENTIONAL LIGHT POLE. ANALYZED USING AMERICAN ELECTRIC LIGHTING LUMINAIRE, PHOTOMETRIC CURVE NUMBER ATB2_80BLEDE15_XXXXX_R3_4K_5K AT 41857 LUMENS. POLE MOUNTING HEIGHT IS 40 FT AND ARM LENGTH IS 8 FT. SYMBOL INCLUDES LUMINAIRE, ARM, POLE WITH STANDARD FOUNDATION, PULL BOX, BREAKAWAY TRANSFORMER BASE, AND POLE CABLE DISTRIBUTION SYSTEM. THE LUMINAIRE IS A CUTOFF FIXTURE DESIGNED FOR MEDIUM THROW TYPE III DISTRIBUTION WITH ZERO TILT.



388 WATT 480V LED LUMINAIRE ATTACHED ON SHOULDER MOUNTED CONVENTIONAL LIGHT POLE. ANALYZED USING AMERICAN ELECTRIC LIGHTING LUMINAIRE, PHOTOMETRIC CURVE NUMBER ATB2_80BLEDE15_XXXXX_R4_4K_5K AT 41608 LUMENS. POLE MOUNTING HEIGHT IS 40 FT AND ARM LENGTH IS 8 FT. SYMBOL INCLUDES LUMINAIRE, ARM, POLE, BREAKAWAY TRANSFORMER BASE, AND POLE CABLE DISTRIBUTION SYSTEM. THE LUMINAIRE IS A CUTOFF FIXTURE DESIGNED FOR FOWARD THROW TYPE IV DISTRIBUTION WITH ZERO TILT.



CONDUIT INSTALLED BY OPEN TRENCH METHOD WITH CONDUCTORS INSIDE. RUN ONE (1) COPPER GROUND BONDING CONDUCTOR (GREEN INSULATION) INSIDE WITH OTHER CONDUCTORS.



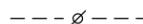
PROPOSED TYPICAL FDOT SHOULDER MOUNTED LIGHTING PULL BOX WITH CONCRETE SLAB PER FDOT DESIGN STANDARDS AND SPECIFICATIONS. PULL BOX COVER SIZE 13" X 24" UNLESS OTHERWISE NOTED. MODIFIED SLAB IS 36" X 36".



EXISTING HPS LIGHT POLE TO BE REMOVED.



EXISTING HPS LIGHT POLE TO REMAIN.



EXISTING CONDUCTORS TO BE REMOVED.

CONVENTIONAL LIGHTING DESIGN CRITERIA FOR SIGNALIZED INTERSECTION

DESIGN WIND SPEED	140 MPH
AVERAGE HORIZONTAL INITIAL ILLUMINATION	3.0 H.F.C.
AVERAGE VERTICAL INITIAL ILLUMINATION	2.3 V.F.C.
AVERAGE TO MIN.	4:1 OR LESS
MAX TO MIN.	10:1 OR LESS

CONVENTIONAL LIGHTING DESIGN CRITERIA FOR STATE ROADWAY SEGMENT

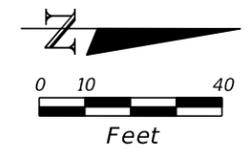
DESIGN WIND SPEED	140 MPH
AVERAGE HORIZONTAL INITIAL ILLUMINATION	1.5 H.F.C.
AVERAGE TO MIN.	4:1 OR LESS
MAX TO MIN.	10:1 OR LESS

POLE NO.	CIRCUIT	STATION	DIST. OR ARM	LUMINAIRE WATTAGE	MOUNTING HEIGHT	POLE SETBACK	PAY ITEM
85 C14	85 C	303+77, RT	8'	388	40'	FOP 2.58' FROM BOS	715-4-13
85 E14	85 E	305+37, RT	8'	388	40'	FOP 2.58' FROM BOS	715-4-13
85 C15	85 C	307+05, RT	8'	388	40'	FOP 1' FROM BOS	715-4-13
1	A	106+60, RT	8'	388	40'	FOP 2.58' FROM BOS	715-4-13
2	A	305+79, RT	8'	388	40'	FOP 2.58' FROM BOS	715-4-13
3	A	108+30 LT	8'	388	40'	FOP 20' FROM EOTL	715-4-13

BOS - BACK OF SIDEWALK
 EOTL - EDGE OF TRAVEL LANE
 FOP - FACE OF POLE

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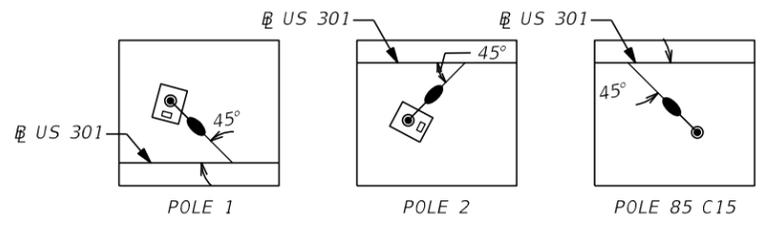
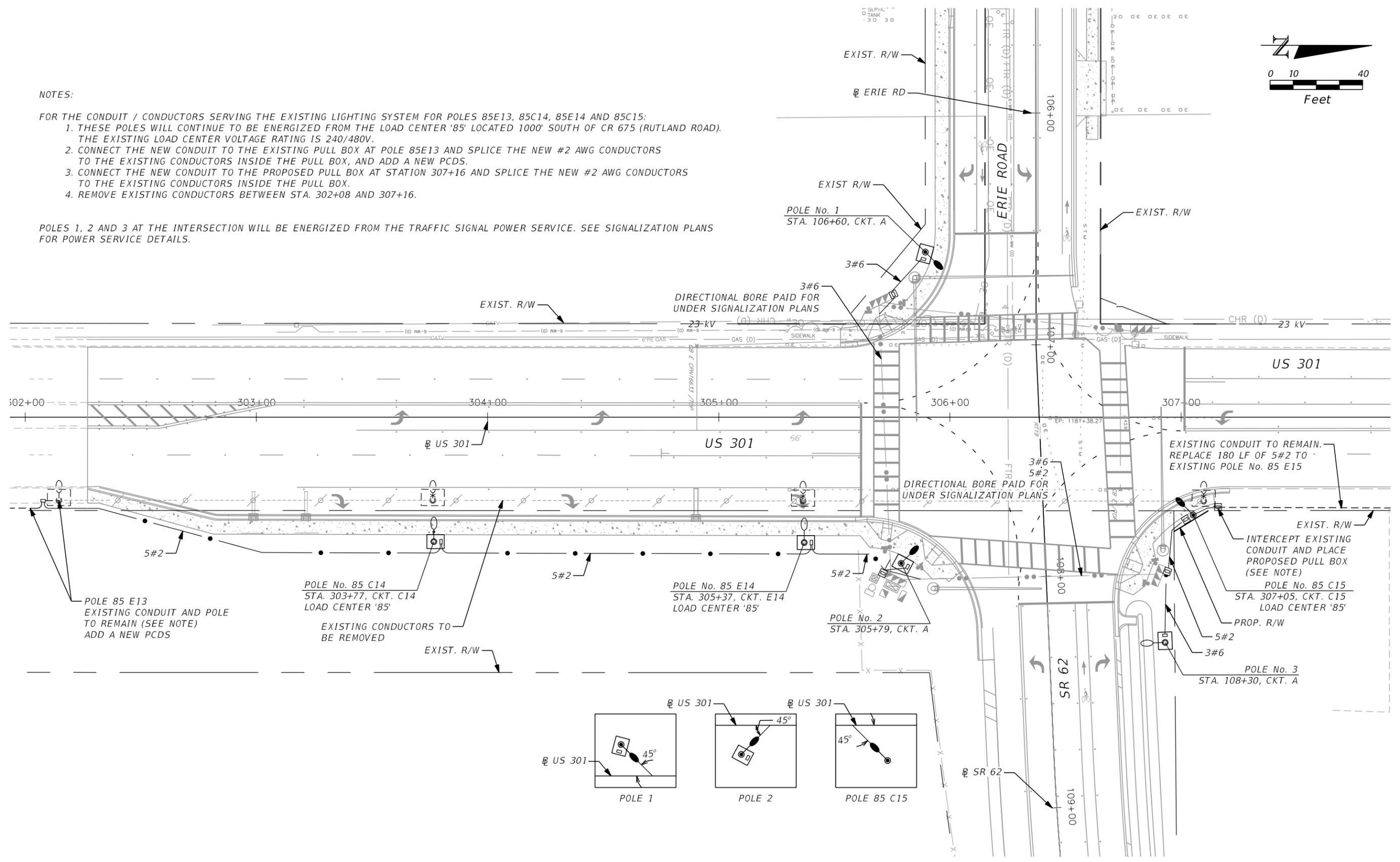
No.	REVISIONS	DATE	BY	SCALE	 HDR Engineering, Inc. 4830 W Kennedy Blvd, Suite 400 Tampa, FL 33609-2548	DATE	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	MICHAEL J. OATES FL. LICENSE NO. 49282	SHEET NO. L-5
				AS NOTED		10/2021		PROJECT NO.		
				DESIGNED BY		850-6094060				
				DRAWN BY						
				CHECKED BY						



NOTES:

- FOR THE CONDUIT / CONDUCTORS SERVING THE EXISTING LIGHTING SYSTEM FOR POLES 85E13, 85C14, 85E14 AND 85C15:
1. THESE POLES WILL CONTINUE TO BE ENERGIZED FROM THE LOAD CENTER '85' LOCATED 1000' SOUTH OF CR 675 (RUTLAND ROAD). THE EXISTING LOAD CENTER VOLTAGE RATING IS 240/480V.
 2. CONNECT THE NEW CONDUIT TO THE EXISTING PULL BOX AT POLE 85E13 AND SPLICE THE NEW #2 AWG CONDUCTORS TO THE EXISTING CONDUCTORS INSIDE THE PULL BOX, AND ADD A NEW PCDS.
 3. CONNECT THE NEW CONDUIT TO THE PROPOSED PULL BOX AT STATION 307+16 AND SPLICE THE NEW #2 AWG CONDUCTORS TO THE EXISTING CONDUCTORS INSIDE THE PULL BOX.
 4. REMOVE EXISTING CONDUCTORS BETWEEN STA. 302+08 AND 307+16.

POLES 1, 2 AND 3 AT THE INTERSECTION WILL BE ENERGIZED FROM THE TRAFFIC SIGNAL POWER SERVICE. SEE SIGNALIZATION PLANS FOR POWER SERVICE DETAILS.



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SCALE		AS NOTED		<p>HDR Engineering, Inc. 4830 W Kennedy Blvd, Suite 400 Tampa, FL 33609-2548</p>	DATE	10/2021	<p>MANATEE COUNTY PUBLIC WORKS</p>	DESIGN ENGINEER	MICHAEL J. OATES	SHEET NO.
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