

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 430204-2-52-01

(FEDERAL FUNDS)

MANATEE COUNTY (13040)

STATE ROAD NO. 684

BRIDGE REPLACEMENT PROJECT

LIGHTING PLANS

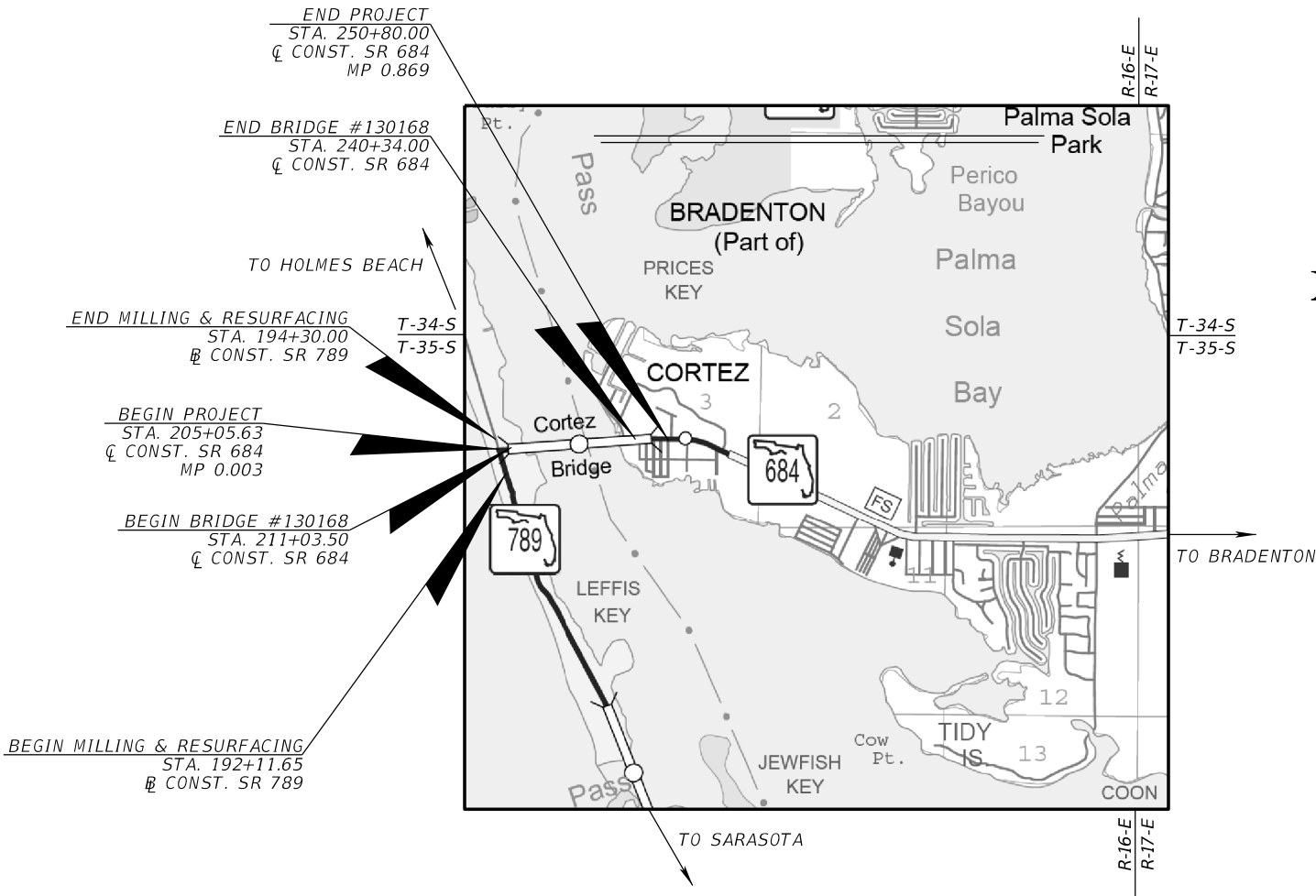
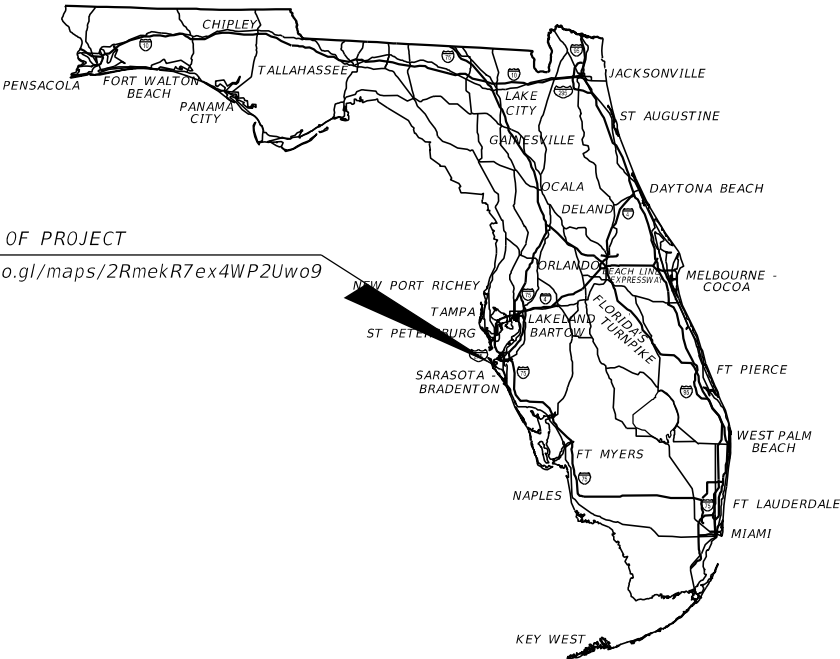
INDEX OF LIGHTING PLANS

SHEET NO. SHEET DESCRIPTION

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LOCATION OF PROJECT

<https://goo.gl/maps/2RmekR7ex4WP2Uwo9>



PHASE IV PLANS
MAY 2025

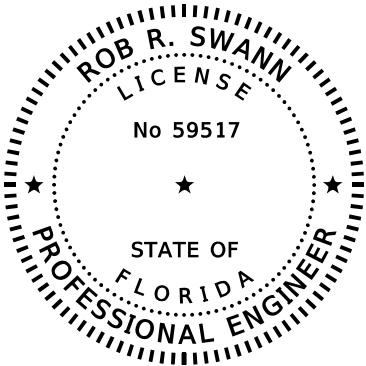
LIGHTING PLANS
ENGINEER OF RECORD:

Rob R. Swann, P.E.
P.E. NO.: 59517
H.W. Lochner, Inc.
4300 West Cypress Street, Suite 500
Tampa, FL, 33607
813-357-3750
CONTRACT NO.: C9V47
VENDOR NO.: VF362338811001

FDOT PROJECT MANAGER:

Amy E. Blair, P.E., CPM

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
T1920	26	L-1



THIS ITEM HAS BEEN DIGITALLY
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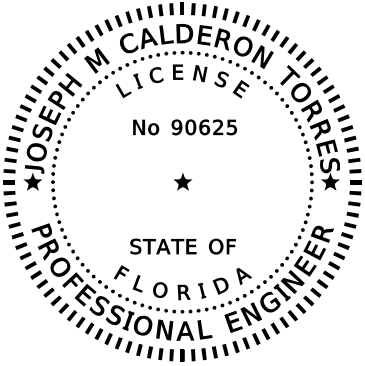
ON THE DATE ADJACENT TO THE SEAL

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H.W. LOCHNER, INC.
4300 W. CYPRESS STREET, SUITE 500
TAMPA, FLORIDA 33607
ROB R. SWANN, P.E. NO. 59517

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

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
L-1	KEY SHEET
L-2	SIGNATURE SHEET
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H.W. LOCHNER, INC.
4300 W. CYPRESS STREET, SUITE 500
TAMPA, FL 33607
JOSEPH M. CALDERON TORRES, II, P.E. NO. 90625

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

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
L-2	SIGNATURE SHEET
L-36 - L-38	SERVICE POINT DETAILS

REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNATURE SHEET	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		L-2
					SR 684	MANATEE	430204-2-52-01		

TABULATION OF QUANTITIES																							
PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL				
			L - 12		L - 13		L - 14		L - 15		L - 16		L - 17		L - 18								
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	1393		131										649		2173						
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	119														119						
630-2-16	CONDUIT, FURNISH & INSTALL, EMBEDDED	LF	16		120		120		140		140		120		100		756						
635-2-11	PULL & SPLICE BOX, F&I,13" X 24" COVER SIZE	EA	14												4		18						
635-3-13	JUNCTION BOX, FURNISH & INSTALL, EMBEDDED	EA	4		16		12		14		14		12		15		87						
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND METER PURCHASED BY CONTRACTOR FROM POWER COMPANY	EA	1												1		2						
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF	123												15		138						
639-3-11	ELECTRICAL SERVICE DISCONNECT, FURNISH & INSTALL, POLE MOUNT	EA	1												1		2						
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA	1												1		2						
715-1-11	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 10 OR <	LF	244		1092		936		1092		1092		936		1014		6406						
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO.8 TO NO.6	LF	7417		6685		5057		3906		3306		3810		7612		37793						
715-1-13	LIGHTING CONDUCTORS, F&I, INSULATED, NO.4 TO NO.2	LF																					
715-1-60	LIGHTING CONDUCTORS, REMOVE & DISPOSE, CONTRACTOR OWNS	LF	1464		1620		1620		1620		942		1620		465		9351						
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA	1												1		2						
715-7-41	LOAD CENTER, REMOVE, SECONDARY VOLTAGE	EA	2												1		3						
715-11-125	LUMINAIRE, F&I, UNDER DECK, WALL MOUNT	EA																					
715-11-128	LUMINAIRE, F&I, UNDER DECK, FLOOD	EA																					
715-11-211	LUMINAIRE, F&I-REPLACE EXISTING LUMINAIRE ON EXISTING POLE/ARM,ROADWAY,COBRA HEAD	EA	2														2						
715-61-100	LIGHT POLE COMPLETE, F&I, STANDARD POLE STANDARD FOUNDATION, 30' MOUNTING HEIGHT, POLE TOP	EA	1														1						
715-61-252	LIGHT POLE COMPLETE, F&I, STANDARD POLE STANDARD FOUNDATION, 35' MOUNTING HEIGHT, 15' ARM LENGTH, 5'6" RISE	EA																					
715-61-811	LIGHT POLE COMPLETE, F&I, STANDARD POLE STANDARD FOUNDATION, 25' MH (WILDLIFE SENSITIVE LUMINAIRE), 8' ARM LENGTH, 3' RISE	EA	3														3						
715-65-266	LIGHT POLE COMPLETE, F&I, UTILITY CONFLICT POLE STANDARD FOUNDATION, 35' MOUNTING HEIGHT, 16' ARM LENGTH, 15' RISE	EA																					
715-69-000	LIGHT POLE COMPLETE, REMOVE POLE AND FOUNDATION	EA	6		5		3		2		2		3				21						
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, FURNISH & INSTALL, CONVENTIONAL	EA	11														11						
715-500-3	POLE CABLE DISTRIBUTION SYSTEM, FURNISH & INSTALL, WALL MOUNT	EA	3		14		12		14		14		12		14		83						
715-516-125	LIGHT POLE COMPLETE-SPECIAL DESIGN, F&I, POLE TOP MOUNT-ALUMINUM, 25'	EA	8		14		12		14		14		12		14		88						
715-526-125	LIGHT POLE COMPLETE-SPECIAL DESIGN, FURNISH, POLE TOP MOUNT-ALUMINUM, 25'	EA																					
REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607						STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION						TABULATION OF QUANTITIES				SHEET NO.			
DATE	DESCRIPTION		DATE																			DESCRIPTION	
																						L-3	
				ROAD NO.						COUNTY		FINANCIAL PROJECT ID											
				SR 684						MANATEE		430204-2-52-01											

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

TABULATION OF QUANTITIES																						
PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL			
			L - 19		L - 20		L - 21		L - 22		L - 23		L - 24		L - 25							
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	840		245		573		744		124						2526					
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	256		91												347					
630-2-16	CONDUIT, FURNISH & INSTALL, EMBEDDED	LF									40		60		80		180					
635-2-11	PULL & SPLICE BOX, F&I,13" X 24" COVER SIZE	EA	12		3		8		4								27					
635-3-13	JUNCTION BOX, FURNISH & INSTALL, EMBEDDED	EA	1						2		8		6		8		25					
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND METER PURCHASED BY CONTRACTOR FROM POWER COMPANY	EA							1								1					
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF							118								118					
639-3-11	ELECTRICAL SERVICE DISCONNECT, FURNISH & INSTALL, POLE MOUNT	EA							1								1					
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA							1								1					
715-1-11	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 10 OR <	LF									270		324		432		1026					
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO.8 TO NO.6	LF	4306		1152		2271										7729					
715-1-13	LIGHTING CONDUCTORS, F&I, INSULATED, NO.4 TO NO.2	LF							2887		3630		3528		3570		13615					
715-1-60	LIGHTING CONDUCTORS, REMOVE & DISPOSE, CONTRACTOR OWNS	LF																				
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA							1								1					
715-7-41	LOAD CENTER, REMOVE, SECONDARY VOLTAGE	EA	1														1					
715-11-125	LUMINAIRE, F&I, UNDER DECK, WALL MOUNT	EA																				
715-11-128	LUMINAIRE, F&I, UNDER DECK, FLOOD	EA									4		6		8		18					
715-11-211	LUMINAIRE, F&I-REPLACE EXISTING LUMINAIRE ON EXISTING POLE/ARM,ROADWAY,COBRA HEAD	EA																				
715-61-100	LIGHT POLE COMPLETE, F&I, STANDARD POLE STANDARD FOUNDATION, 30' MOUNTING HEIGHT, POLE TOP	EA																				
715-61-252	LIGHT POLE COMPLETE, F&I, STANDARD POLE STANDARD FOUNDATION, 35' MOUNTING HEIGHT, 15' ARM LENGTH, 5'6" RISE	EA	2		1												3					
715-61-811	LIGHT POLE COMPLETE, F&I, STANDARD POLE STANDARD FOUNDATION, 25' MH (WILDLIFE SENSITIVE LUMINAIRE), 8' ARM LENGTH, 3' RISE	EA																				
715-65-266	LIGHT POLE COMPLETE, F&I, UTILITY CONFLICT POLE STANDARD FOUNDATION, 35' MOUNTING HEIGHT, 16' ARM LENGTH, 15' RISE	EA	1		1												2					
715-69-000	LIGHT POLE COMPLETE, REMOVE POLE AND FOUNDATION	EA																				
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, FURNISH & INSTALL, CONVENTIONAL	EA	4		2		8										14					
715-500-3	POLE CABLE DISTRIBUTION SYSTEM, FURNISH & INSTALL, WALL MOUNT	EA	1														1					
715-516-125	LIGHT POLE COMPLETE-SPECIAL DESIGN, F&I, POLE TOP MOUNT-ALUMINUM, 25'	EA	2				8										10					
715-526-125	LIGHT POLE COMPLETE-SPECIAL DESIGN, FURNISH, POLE TOP MOUNT-ALUMINUM, 25'	EA																				
REVISIONS							ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607					STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION					TABULATION OF QUANTITIES					SHEET NO.
DATE	DESCRIPTION			DATE	DESCRIPTION							ROAD NO.		COUNTY		FINANCIAL PROJECT ID						
												SR 684		MANATEE		430204-2-52-01						
																						L-4

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** - Extra poles, bases and fixtures with hardware to be delivered to Manatee County's Field Maintenance Division.

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			L - 26		L - 27		L - 28		L - 29		L - 30		**							
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF					188										188		4887	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF																	466	
630-2-16	CONDUIT, FURNISH & INSTALL, EMBEDDED	LF	80		60		40										180		1116	
635-2-11	PULL & SPLICE BOX, F&I,13" X 24" COVER SIZE	EA					3										3		48	
635-3-13	JUNCTION BOX, FURNISH & INSTALL, EMBEDDED	EA	8		6		10										24		136	
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND METER PURCHASED BY CONTRACTOR FROM POWER COMPANY	EA					1										1		4	
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF					15										15		271	
639-3-11	ELECTRICAL SERVICE DISCONNECT, FURNISH & INSTALL, POLE MOUNT	EA					1										1		4	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-11 SERVICE POLE	EA					1										1		4	
715-1-11	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 10 OR <	LF	432		324		270		186		384						1596		9028	
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO.8 TO NO.6	LF	1992		3525		3626										9143		54665	
715-1-13	LIGHTING CONDUCTORS, F&I, INSULATED, NO.4 TO NO.2	LF	1044														1044		14659	
715-1-60	LIGHTING CONDUCTORS, REMOVE & DISPOSE, CONTRACTOR OWNS	LF																	9351	
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA					1										1		4	
715-7-41	LOAD CENTER, REMOVE, SECONDARY VOLTAGE	EA																	4	
715-11-125	LUMINAIRE, F&I, UNDER DECK, WALL MOUNT	EA							3		4						7		7	
715-11-128	LUMINAIRE, F&I, UNDER DECK, FLOOD	EA	6		6		4										16		34	
715-11-211	LUMINAIRE, F&I-REPLACE EXISTING LUMINAIRE ON EXISTING POLE/ARM,ROADWAY ,COBRA HEAD	EA																	2	
715-61-100	LIGHT POLE COMPLETE, F&I, STANDARD POLE STANDARD FOUNDATION, 30' MOUNTING HEIGHT, POLE TOP	EA																	1	
715-61-252	LIGHT POLE COMPLETE, F&I, STANDARD POLE STANDARD FOUNDATION, 35' MOUNTING HEIGHT, 15' ARM LENGTH, 5'6" RISE	EA																	3	
715-61-811	LIGHT POLE COMPLETE, F&I, STANDARD POLE STANDARD FOUNDATION, 25' MH (WILDLIFE SENSITIVE LUMINAIRE), 8' ARM LENGTH, 3' RISE	EA																	3	
715-65-266	LIGHT POLE COMPLETE, F&I, UTILITY CONFLICT POLE STANDARD FOUNDATION, 35' MOUNTING HEIGHT, 16' ARM LENGTH, 15' RISE	EA																	2	
715-69-000	LIGHT POLE COMPLETE, REMOVE POLE AND FOUNDATION	EA																	21	
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, FURNISH & INSTALL, CONVENTIONAL	EA																	25	
715-500-3	POLE CABLE DISTRIBUTION SYSTEM, FURNISH & INSTALL, WALL MOUNT	EA																	84	
715-516-125	LIGHT POLE COMPLETE-SPECIAL DESIGN, F&I, POLE TOP MOUNT-ALUMINUM, 25'	EA																	98	
715-526-125	LIGHT POLE COMPLETE-SPECIAL DESIGN, FURNISH, POLE TOP MOUNT-ALUMINUM, 25'	EA											4				4		4	

REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TABULATION OF QUANTITIES		SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION							
					ROAD NO.	COUNTY	FINANCIAL PROJECT ID			
					SR 684	MANATEE	430204-2-52-01			L-5

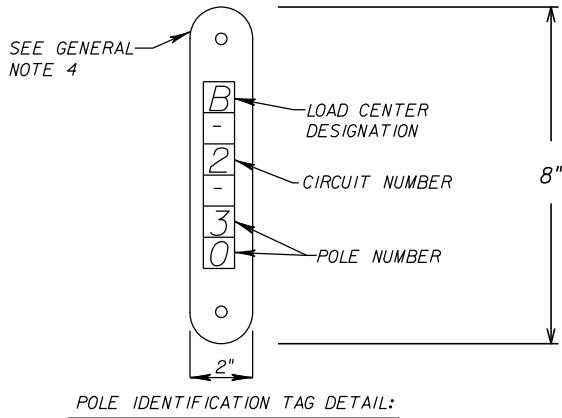
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GENERAL NOTES
=====

1. UTILITY OWNERS: SEE ROADWAY PLANS.
2. ALL ELECTRICAL WORK SHALL MEET ALL REQUIREMENTS OF THE LATEST 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 THE NATIONAL ELECTRIC CODE REQUIREMENTS.
3. THE MAIN LINE LIGHTING SYSTEM WILL BE MAINTAINED BY MANATEE COUNTY UPON FINAL ACCEPTANCE. THE PIER AESTHETIC LIGHTING, THE UNDERDECK LIGHTING AND THE CHANNEL CENTER NAVIGATIONAL LIGHTING WILL BE MAINTAINED BY FDOT. SUBMIT THE "AS BUILT" PLANS TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE.
4. FURNISH AND INSTALL A 2 INCH BY 8 INICH ALUMINUM IDENTIFICATION PLATE ON EACH LIGHT POLE. ATTACH PLATES TO THE POLE AS APPROVED BY THE ENGINEER. ATTACHMENT METHODS REQUIRING SCREWS, BOLTS OR RIVETS MUST BE APPROVED BY THE POLE MANUFACTURER. INSTALL PLATES FIVE FEET ABOVE GRADE ON THE EXTERIOR TRAFFIC LANE SIDE OF THE POLE. USE 3/4 INCH BLACK TEXT ON WHITE BACKGROUND. ORIENT THE TEXT VERTICALLY ON THE PLATE WITH THE FOLLOWING INFORMATION: LOAD CENTER DESIGNATION, CIRCUIT NUMBER AND THE POLE NUMBER. NUMBER THE POLES AS SHOWN IN THE PLANS.
5. CONTROL PANELS 8A AND 7A CONTAIN CIRCUITS FOR THE MAIN LINE LIGHTING ONLY. CONTROL PANELS 8B AND 7B CONTAIN THE CIRCUITS FOR THE UNDERDECK LIGHTING, PIER AESTHETIC LIGHTING, AND CHANNEL CENTER NAVIGATIONAL LIGHTS.

PAY ITEM NOTES
=====

1. 630-2-11 AND 630-2-12: THE CONDUITS CROSSING SR 684 ARE LABELED AND QUANTIFIED IN SHEETS FOR MAIN LINE LIGHTING.
2. 630-2-16: THE EMBEDDED CONDUITS IN THE TRAFFIC BARRIERS FROM APPROACH SLAB TO SLAB ARE PAID FOR IN THE STRUCTURES PLANS.
2. 715-11-125 & 715-11-128: PAY ITEMS INCLUDE THE COST OF THE LUMINAIRES, MOUNTING BRACKETS, FIXTURE CABLES, JUNCTION BOXES AND ALL HARDWARRE NEEDED FOR A COMPLETE INSTALLATION.



NOTE TO REVIEWER: PLANS PREPARED USING 2021 FDM.

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		L-6
					SR 684	MANATEE	430204-2-52-01		

LIGHTING CRITERIA

CONVENTIONAL & UNDERDECK
LIGHTING DESIGN CRITERIA

SIGNALIZED INTERSECTION LIGHTING
RETROFIT DESIGN CRITERIA

WILDLIFE-SENSITIVE CONVENTIONAL
LIGHTING DESIGN CRITERIA

MIDBLOCK CROSSWALK
LIGHTING DESIGN CRITERIA

Average Initial Intensity (SR 684)
Average Initial Intensity (HUNTERS PT WAY)
Uniformity Ratio Avg./Min.
Max./Min.
Veiling Luminance Ratio
Wind Speed

1.5 Foot Candles
1.0 Foot Candles
4:1 Or Less
10:1 Or Less
0.3 or Less
140 MPH

AVERAGE INITIAL INTENSITY

UNIFORMITY RATIO AVG./MIN.
MAX./MIN.
Wind Speed

1.5 H.F.C/1.5 V.F.C. (STD)
1.0 H.F.C/1.0 V.F.C. (MIN)
4:1 OR LESS
10:1 OR LESS
140 MPH

Average Initial Intensity
Uniformity Ratio Avg./Min.
Max./Min.
Veiling Luminance Ratio
Wind Speed

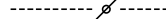
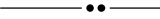
1.0 - 1.5 H.F.C
4:1 Or Less
10:1 Or Less
0.3 or Less
140 MPH

AVERAGE INITIAL INTENSITY
1.5 V.F.C.

LEGEND

SYMBOLS

DESCRIPTION

	EMBEDDED PULL BOX. 1'-6" X 8" X 8" GALVANIZED STEEL JUNCTION BOX IN CONCRETE STRUCTURE PER SECTION 715-002 OF STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION. ONE CONDUIT IS TO ENTER PULL BOX. THE THIRD CONDUIT IS FOR ITS. PULL BOX TO BE PAID UNDER PAY ITEM NO. 635-3-13.
	PULL BOX. FOR SPECIFICATIONS SEE SECTION 635-001 OF STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION. COST OF CONCRETE SLAB IS INCIDENTAL TO PULL BOX PAY ITEM NO. 635-2-11.
	EXISTING CONDUCTORS AND CONDUIT TO BE REMOVED UNLESS NOTED OTHERWISE.
	SIZE 2" SCHEDULE 40 PVC CONDUIT UNDERGROUND, WITH THWN-2 CONDUCTORS INSIDE (CONDUCTOR SIZE AS SHOWN ON PLAN SHEETS). RUN ONE (1) #6 AWG (MINIMUM) COPPER BOND CONDUCTOR (THWN-2 GREEN INSULATION) INSIDE CONDUIT WITH OTHER CONDUCTORS.
	SIZE 2" HDPE CONDUIT, UL LISTED CONDUIT AND TRANSITION COUPLING DIRECTIONALLY BORED UNDERPAVEMENT WITH THWN-2 CONDUCTORS INSIDE (CONDUCTOR SIZE AS SHOWN ON PLAN SHEETS). EXTEND CONDUIT BEYOND EDGE OF PAVEMENT TO PULL BOXES. RUN ONE (1) #6 AWG (MINIMUM) COPPER BOND CONDUCTOR (THWN-2 GREEN INSULATION) INSIDE CONDUIT WITH OTHER CONDUCTORS. ONE CONDUIT IS FOR SPARE.
	THREE - SIZE 2" SCHEDULE 80 PVC CONDUIT EMBEDDED IN BARRIER WALL WITH THWN-2 CONDUCTORS INSIDE (CONDUCTOR SIZE AS SHOWN ON PLAN SHEETS). RUN ONE #6 AWG (MINIMUM) COPPER BOND CONDUCTOR (THWN-2 GREEN INSULATION) INSIDE CONDUIT WITH OTHER CONDUCTORS. TWO CONDUITS ARE FOR SPARE.
	SIZE 1" CONDUIT SCHEDULE 80 PVC EMBEDDED IN CONCRETE WITH THWN-2 CONDUCTORS INSIDE (CONDUCTOR SIZE AS SHOWN ON PLAN SHEETS). RUN ONE COPPER BOND CONDUCTOR (THWN-2 GREEN INSULATION) INSIDE CONDUIT WITH OTHER CONDUCTORS.
	1-70 WATT LED POST TOP LUMINAIRE, PILASTER OR BARRIER MOUNTED, WITH TYPE III DISTRIBUTION (ANALYZED USING PHOTOMETRIC FILE NO. MPTR-70W64LED3K-G3-LE3 AT 8028 LUMENS AND 3000K CCT). LUMINAIRE SHALL INCLUDE LED DRIVER WIRED FOR 240 VOLT OPERATION. MOUNTING HEIGHT - 25 FEET. SYMBOL INCLUDES LUMINAIRE, POLE, AND POLE CABLE DISTRIBUTION SYSTEM (PCDS). PCDS IS PAID FOR SEPARATELY UNDER PAY ITEM 715-500- 3.
	1-70 WATT LED POST TOP LUMINAIRE, SHOULDER MOUNTED, WITH TYPE IV DISTRIBUTION (ANALYZED USING PHOTOMETRIC FILE NO. MPTR-70W64LED3K-G3-LE4 AT 8060 LUMENS AND 3000K CCT). LUMINAIRE SHALL INCLUDE LED DRIVER WIRED FOR 240 VOLT OPERATION. MOUNTING HEIGHT - 25 FEET. SYMBOL INCLUDES LUMINAIRE, POLE, FOUNDATION AND POLE CABLE DISTRIBUTION SYSTEM (PCDS). PCDS IS PAID FOR SEPARATELY UNDER PAY ITEM 715-500- 1.
	1-70 WATT LED POST TOP LUMINAIRE, SHOULDER MOUNTED, WITH TYPE III DISTRIBUTION (ANALYZED USING PHOTOMETRIC FILE NO. MPTR-70W64LED3K-G3-LE3 AT 8028 LUMENS AND 3000K CCT). LUMINAIRE SHALL INCLUDE LED DRIVER WIRED FOR 240 VOLT OPERATION. MOUNTING HEIGHT - 25 FEET. SYMBOL INCLUDES LUMINAIRE, POLE, FOUNDATION AND POLE CABLE DISTRIBUTION SYSTEM (PCDS). PCDS IS PAID FOR SEPARATELY UNDER PAY ITEM 715-500- 1.
	1-321 WATT LED WILDLIFE (TURTLE) LUMINAIRE, SHOULDER MOUNTED, WITH TYPE III DISTRIBUTION (ANALYZED USING PHOTOMETRIC FILE NO. BLX-II-6_T3_192LC_5_TS.IES AT 9519 LUMENS). LUMINAIRE SHALL INCLUDE LED DRIVER WIRED FOR 240 VOLT OPERATION. MOUNTING HEIGHT - 25 FEET WITH 8' ARM. SYMBOL INCLUDES LUMINAIRE, POLE, FOUNDATION AND POLE CABLE DISTRIBUTION SYSTEM (PCDS). PCDS IS PAID FOR SEPARATELY UNDER PAY ITEM 715-500- 1.
	1-321 WATT LED WILDLIFE (TURTLE) LUMINAIRE, RETROFITTED ON EXISTING POLE, WITH TYPE III DISTRIBUTION (ANALYZED USING PHOTOMETRIC FILE NO. BLX-II-6_T3_192LC_5_TS.IES AT 9519 LUMENS). LUMINAIRE SHALL INCLUDE LED DRIVER WIRED FOR 240 VOLT OPERATION. SYMBOL INCLUDES LUMINAIRE AND ALL HARDWARE NECESSARY FOR A COMPLETE INSTALLATION. SYMBOL ALSO INCLUDES POLE CABLE DISTRIBUTION SYSTEM WHICH IS PAID FOR SEPARATELY UNDER PAY ITEM 715-500- 1.

SYMBOLS

DESCRIPTION

	1-321 WATT LED WILDLIFE (TURTLE) LUMINAIRE, SHOULDER MOUNTED, WITH TYPE IV DISTRIBUTION (ANALYZED USING PHOTOMETRIC FILE NO. BLX-II-6_T4_192LC_5_TS.IES AT 9283 LUMENS). LUMINAIRE SHALL INCLUDE LED DRIVER WIRED FOR 240 VOLT OPERATION. MOUNTING HEIGHT - 30 FEET, POLE TOP MOUNTED. SYMBOL INCLUDES LUMINAIRE, POLE, FOUNDATION AND POLE CABLE DISTRIBUTION SYSTEM (PCDS). PCDS IS PAID FOR SEPARATELY UNDER PAY ITEM 715-500- 1.
	1-321 WATT LED WILDLIFE (TURTLE) LUMINAIRE, SHOULDER MOUNTED, WITH TYPE IV DISTRIBUTION (ANALYZED USING PHOTOMETRIC FILE NO. BLX-II-6_T4_192LC_5_TS.IES AT 9283 LUMENS). LUMINAIRE SHALL INCLUDE LED DRIVER WIRED FOR 240 VOLT OPERATION. MOUNTING HEIGHT - 25 FEET WITH 8' ARM. SYMBOL INCLUDES LUMINAIRE, POLE, FOUNDATION AND POLE CABLE DISTRIBUTION SYSTEM (PCDS). PCDS IS PAID FOR SEPARATELY UNDER PAY ITEM 715-500- 1.
	1-175 WATT LED CONVENTIONAL LUMINAIRE, SHOULDER MOUNTED, WITH TYPE III DISTRIBUTION (ANALYZED USING PHOTOMETRIC FILE NO. ATB2P601 R3 3K.IES AT 25199 LUMENS AND 3000K CCT). LUMINAIRE SHALL INCLUDE LED DRIVER WIRED FOR 240 VOLT OPERATION. MOUNTING HEIGHT - 35 FEET WITH 15' ARM. SYMBOL INCLUDES LUMINAIRE, POLE, FOUNDATION AND POLE CABLE DISTRIBUTION SYSTEM (PCDS). PCDS IS PAID FOR SEPARATELY UNDER PAY ITEM 715-500-1.
	1-175 WATT LED CONVENTIONAL LUMINAIRE, SHOULDER MOUNTED, WITH TYPE III DISTRIBUTION (ANALYZED USING PHOTOMETRIC FILE NO. ATB2P601 R3 3K.IES AT 25199 LUMENS AND 3000K CCT). LUMINAIRE SHALL INCLUDE LED DRIVER WIRED FOR 240 VOLT OPERATION. MOUNTING HEIGHT - 35 FEET WITH 16' ARM (UTILITY CONFLICT POLE. SYMBOL INCLUDES LUMINAIRE, POLE, FOUNDATION AND POLE CABLE DISTRIBUTION SYSTEM (PCDS). PCDS IS PAID FOR SEPARATELY UNDER PAY ITEM 715-500-1.
	POINT OF SERVICE.
	POWER COMPANY'S SERVICE PEDESTAL
	LIGHTING CONTROL PANEL. FOR REQUIREMENTS SEE INDEX 639-001 OF STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION.
	EXISTING LIGHTING CONTROL PANEL - TO BE REMOVED.
	COLUMN MOUNTED LUMINAIRE, 218 WATT LED, NEMA 1 FLOOD EQUIPPED WITH LED DRIVER WIRED FOR 240 VOLT OPERATION (ANALYZED USING STREETWORKS' INFRASTRUCTURE FLOOD SERIES LARGE (IFLD-L) AT 13,051 LUMENS AND 5000K CCT).
	CAP MOUNTED LUMINAIRE, 25 WATT LED, TYPE IV DISTRIBUTION EQUIPPED WITH LED DRIVER WIRED FOR 240 VOLT OPERATION (ANALYZED USING COOPER LIGHTING SOLUTIONS STREETWORKS' VALET PHOTOMETRIC FILE VAL-E01-LED-E1-GL4. IES AT 2,882 LUMENS AND 3000K CCT).
	CONCRETE SLAB WITH PULL BOX. COST OF CONCRETE SLAB IS INCLUDED IN LIGHT POLE PAY ITEM, AND PULL BOX TO BE PAID FOR UNDER PAY ITEM 625-2-11.
	SPREAD FOOTING FOUNDATION. REFER TO INDEX 715-002 FOR DETAILS. FOUNDATION COST TO BE INCLUDED WITH LIGHT POLE PAY ITEM.
	GREEN CHANNEL LIGHT (GCL) WIRED FOR 240 VOLT OPERATION. REFER TO STANDARD PLANS FOR ROAD AND BRIDGE, INDEX NO. 510-001.
	EXISTING LUMINAIRE AND POLE TO REMAIN
	EXISTING LUMINAIRE AND POLE TO BE REMOVED

REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LEGEND	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		L-7

LIGHTING DATA TABLE

ALL STATIONS BASED ON C/L CONST. S.R. 684 UNLESS NOTED OTHERWISE

	POLE NO.	CIRCUIT	STATION	DIST. OR ARM	LUMINAIRE WATTAGE	MOUNTING HEIGHT	POLE OFFSET	PAY ITEM
	8A101	8A-1	193+83.85 $\mathcal{Q}$ CONST. SR 789	111	321	NA	EXISTING	715-11-211
	8A111	8A-1	192+14.45 $\mathcal{Q}$ CONST. SR 789	111	321	NA	EXISTING	715-11-211
(1)	8A1	8A-1	205+40.63	IV	321	30'	19.0' RT	715-61-100
	8A2	8A-1	205+96.82	111	321	25'	38.2' RT	715-61-811
(1)	8A3	8A-1	205+45.53	IV	321	25'	54.9' LT	715-61-811
	8A4		NOT USED					
(1)	8A5	8A-1	206+40.10	111	321	25'	54.1' LT	715-61-811
	8A6	8A-1	207+21.82	111	70	25'	43.2' RT	715-516-125
(1)	8A7	8A-1	207+19.47	111	70	25'	51.1' LT	715-516-125
(1)	8A8	8A-2	208+09.41	111	70	25'	55.1' RT	715-516-125
(1)	8A9	8A-1	208+05.08	111	70	25'	50.1' LT	715-516-125
	8A10	8A-2	208+89.05	111	70	25'	PILASTER MOUNTED	715-516-125
	8A11	8A-3	208+83.59	111	70	25'	PILASTER MOUNTED	715-516-125
(1)	8A12	8A-2	209+69.60	111	70	25'	48.7' RT	715-516-125
	8A13	8A-3	209+64.10	111	70	25'	PILASTER MOUNTED	715-516-125
	8A14	8A-2	210+44.16	111	70	25'	PILASTER MOUNTED	715-516-125
	8A15	8A-3	210+43.65	111	70	25'	PILASTER MOUNTED	715-516-125
	8A16	8A-2	211+25.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A17	8A-3	211+25.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A18	8A-2	212+08.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A19	8A-3	212+08.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A20	8A-2	212+90.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A21	8A-3	212+90.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A22	8A-2	213+71.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A23	8A-3	213+71.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A24	8A-2	214+51.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A25	8A-3	214+51.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A26	8A-2	215+32.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A27	8A-3	215+32.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A28	8A-2	216+12.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A29	8A-3	216+12.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A30	8A-2	216+93.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A31	8A-3	216+93.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A32	8A-2	217+74.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A33	8A-3	217+74.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A34	8A-4	218+57.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A35	8A-5	218+57.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A36	8A-4	219+39.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A37	8A-5	219+39.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A38	8A-4	220+22.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A39	8A-5	220+22.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A40	8A-4	221+04.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A41	8A-5	221+04.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A42	8A-4	221+87.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A43	8A-5	221+87.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A44	8A-4	222+69.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A45	8A-5	222+69.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A46	8A-4	223+52.00	111	70	25'	PILASTER MOUNTED	715-516-125

(1) - REQUIRES SPREAD FOOTING FOUNDATION

	POLE NO.	CIRCUIT	STATION	DIST. OR ARM	LUMINAIRE WATTAGE	MOUNTING HEIGHT	POLE OFFSET	PAY ITEM
	8A47	8A-5	223+52.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A48	8A-4	224+34.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A49	8A-5	224+34.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A50	8A-4	225+17.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A51	8A-5	225+17.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A52	8A-4	225+99.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A53	8A-5	225+99.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A54	8A-4	226+82.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A55	8A-5	226+82.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A56	8A-4	227+64.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A57	8A-5	227+64.50	111	70	25'	PILASTER MOUNTED	715-516-125
	8A58	8A-4	228+47.00	111	70	25'	PILASTER MOUNTED	715-516-125
	8A59	8A-5	228+47.00	111	70	25'	PILASTER MOUNTED	715-516-125
	7A1	7A-1	229+29.50	111	70	25'	PILASTER MOUNTED	715-516-125
	7A2	7A-2	229+29.50	111	70	25'	PILASTER MOUNTED	715-516-125
	7A3	7A-1	230+12.00	111	70	25'	PILASTER MOUNTED	715-516-125
	7A4	7A-2	230+12.00	111	70	25'	PILASTER MOUNTED	715-516-125
	7A5	7A-1	230+95.50	111	70	25'	PILASTER MOUNTED	715-516-125
	7A6	7A-2	230+95.50	111	70	25'	PILASTER MOUNTED	715-516-125
	7A7	7A-1	231+76.00	111	70	25'	PILASTER MOUNTED	715-516-125
	7A8	7A-2	231+76.00	111	70	25'	PILASTER MOUNTED	715-516-125
	7A9	7A-1	232+56.50	111	70	25'	PILASTER MOUNTED	715-516-125
	7A10	7A-2	232+56.50	111	70	25'	PILASTER MOUNTED	715-516-125
	7A11	7A-1	233+37.00	111	70	25'	PILASTER MOUNTED	715-516-125
	7A12	7A-2	233+37.00	111	70	25'	PILASTER MOUNTED	715-516-125
	7A13	7A-1	234+17.50	111	70	25'	PILASTER MOUNTED	715-516-125
	7A14	7A-2	234+17.50	111	70	25'	PILASTER MOUNTED	715-516-125
	7A15	7A-1	234+98.00	111	70	25'	PILASTER MOUNTED	715-516-125
	7A16	7A-2	234+98.00	111	70	25'	PILASTER MOUNTED	715-516-125
	7A17	7A-1	235+78.50	111	70	25'	PILASTER MOUNTED	715-516-125
	7A18	7A-2	235+78.50	111	70	25'	PILASTER MOUNTED	715-516-125
	7A19	7A-1	236+59.00	111	70	25'	PILASTER MOUNTED	715-516-125
	7A20	7A-2	236+59.00	111	70	25'	PILASTER MOUNTED	715-516-125
	7A21	7A-1	237+39.50	111	70	25'	PILASTER MOUNTED	715-516-125
	7A22	7A-2	237+39.50	111	70	25'	PILASTER MOUNTED	715-516-125
	7A23	7A-1	238+20.00	111	70	25'	PILASTER MOUNTED	715-516-125
	7A24	7A-2	238+20.00	111	70	25'	PILASTER MOUNTED	715-516-125
	7A25	7A-1	239+00.50	111	70	25'	PILASTER MOUNTED	715-516-125
	7A26	7A-2	239+00.50	111	70	25'	PILASTER MOUNTED	715-516-125
	7A27	7A-1	239+80.00	111	70	25'	PILASTER MOUNTED	715-516-125
	7A28	7A-2	239+80.00	111	70	25'	PILASTER MOUNTED	715-516-125
	7A29	7A-1	240+59.50	111	70	25'	PILASTER MOUNTED	715-516-125
	7A30	7A-2	240+59.50	111	70	25'	PILASTER MOUNTED	715-516-125
	7A31	7A-3	241+38.61	111	70	25'	PILASTER MOUNTED	715-516-125
	7A32	7A-4	241+39.69	111	70	25'	PILASTER MOUNTED	715-516-125
	7A33	7A-3	242+19.16	111	70	25'	PILASTER MOUNTED	715-516-125
(3)	7A34	7A-4	242+19.41	111	70	25'	BARRIER MOUNTED	715-516-125
(1)	7A35	7A-3	242+99.25	111	70	25'	41.6' LT	715-516-125

(3) - OBLONG POLE REQUIRED FOR BARRIER MOUNT (SEE STRUCTURE WALL PLANS FOR MOUNTING DETAILS).

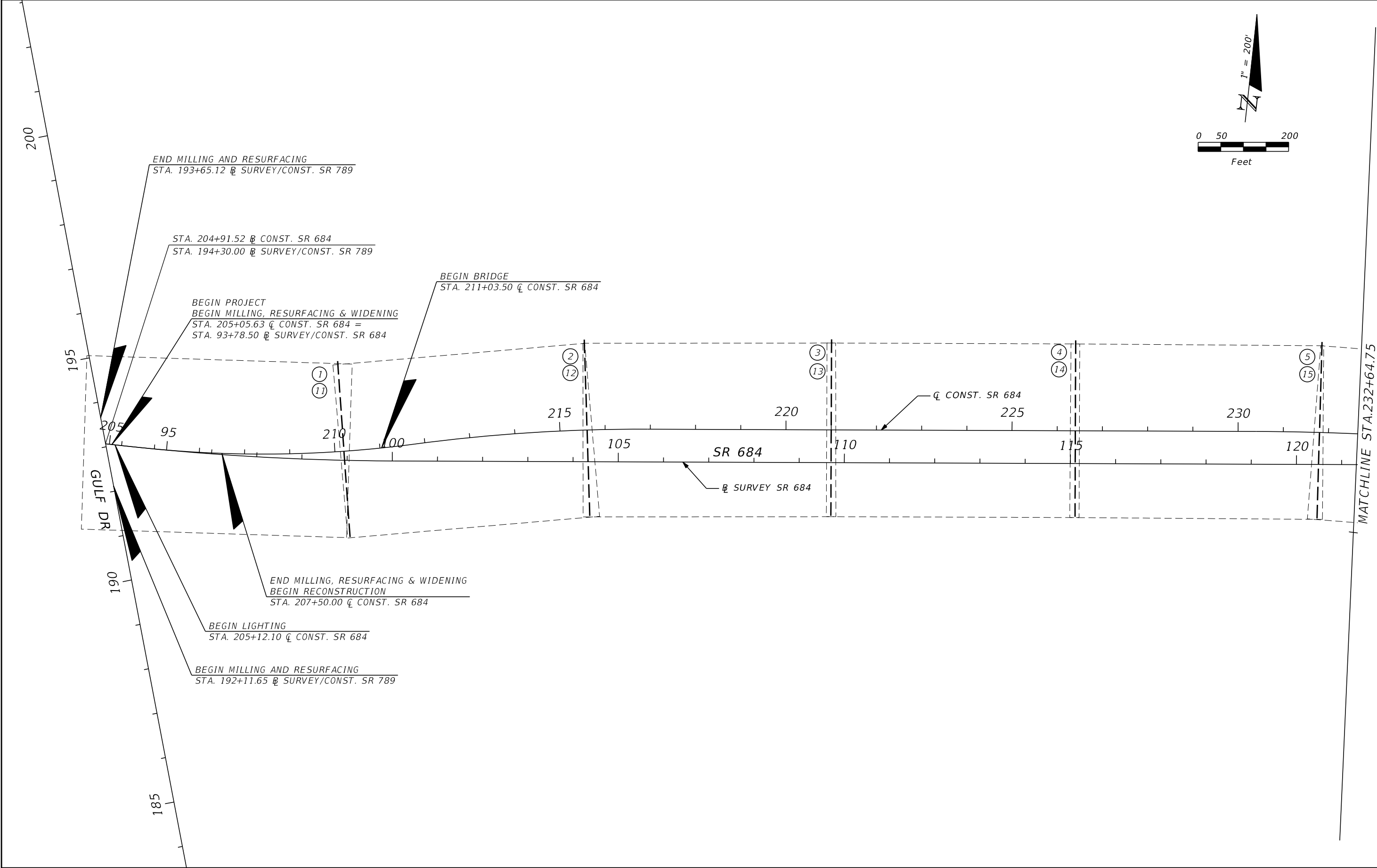
REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LIGHTING DATA TABLE	SHEET NO.
DATE	DESCRIPTION		DATE		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		
									L-8

ALL STATIONS BASED ON C/L CONST. S.R. 684 UNLESS NOTED OTHERWISE

(1) - REQUIRES SPREAD FOOTING FOUNDATION
(2) - Q_c CONST. HUNTERS POINT WAY

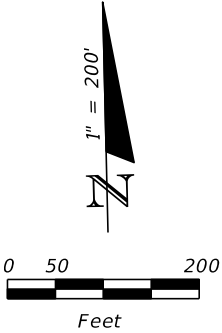
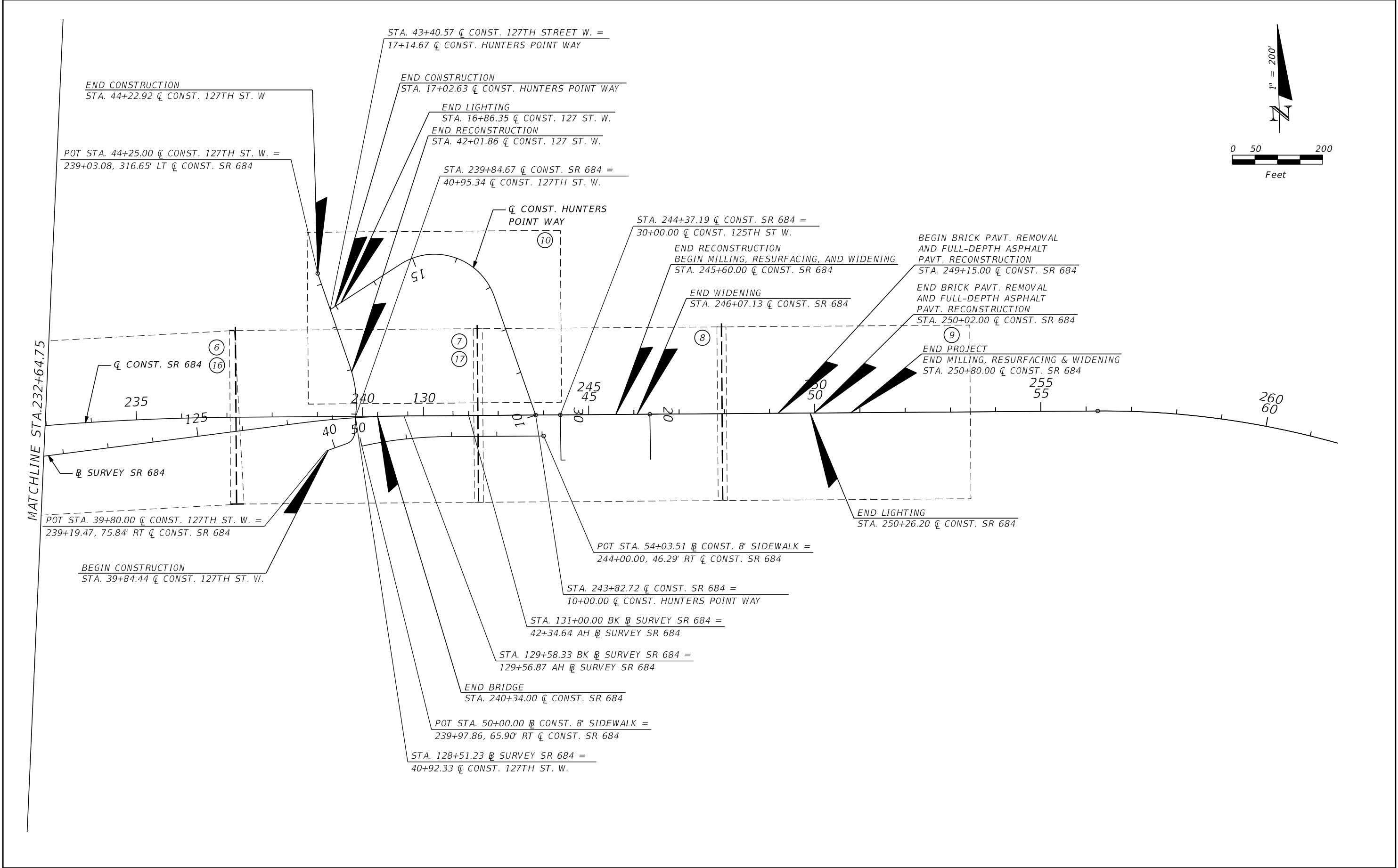
(3) - OBLONG POLE REQUIRED FOR BARRIER MOUNT (SEE STRUCTURE WALL PLANS FOR MOUNTING DETAILS).
C - UTILITY CONFLICT POLE

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REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			PROJECT LAYOUT SR 684 (CORTEZ ROAD W)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01	L-10	

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



REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			PROJECT LAYOUT SR 684 (CORTEZ ROAD W)		SHEET NO. L-11
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID			
					SR 684	MANATEE	430204-2-52-01			

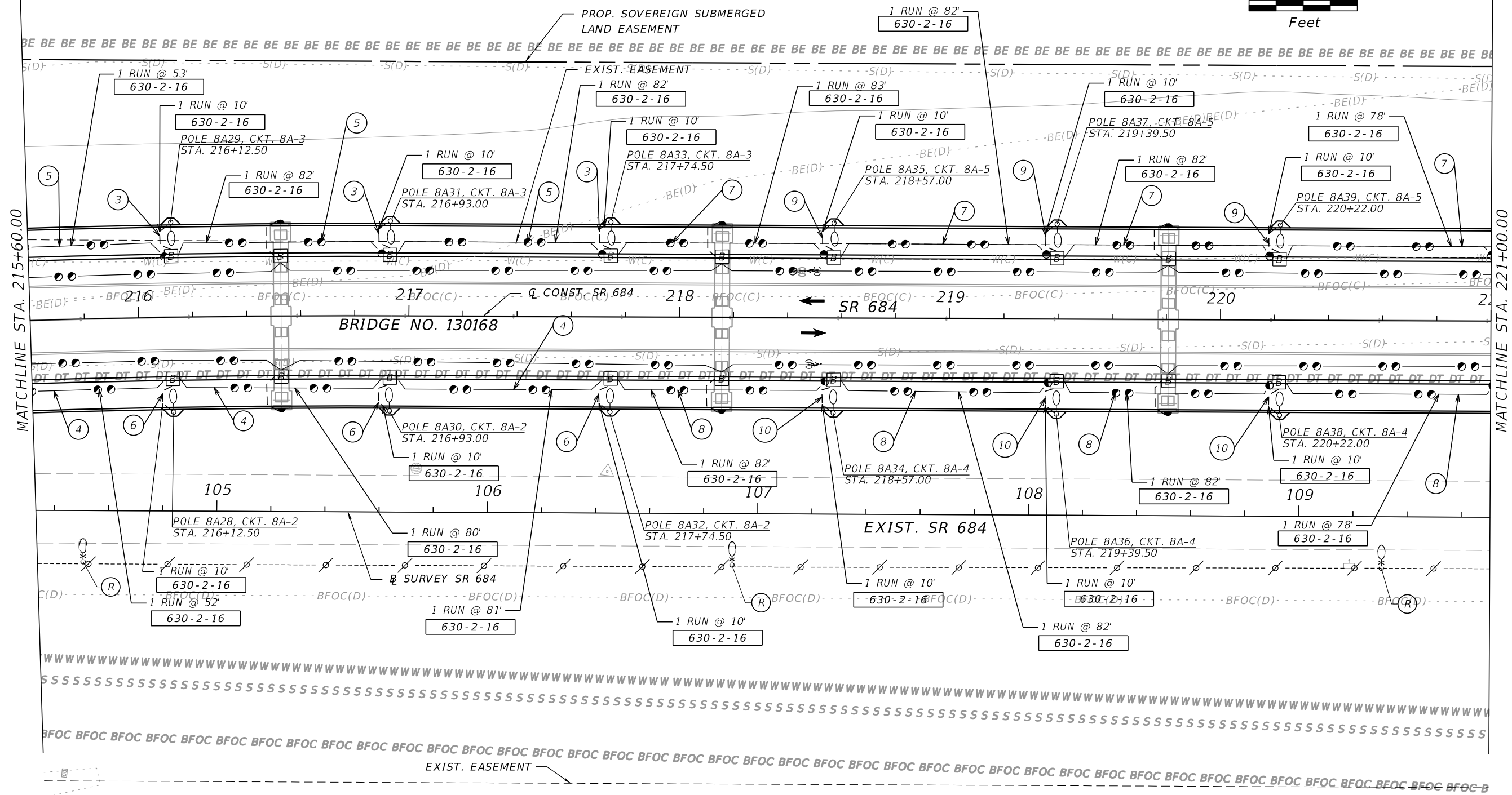
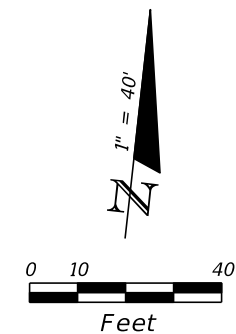
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

(3) CKT. 8A-3: 2#10, 1#10 GRD. (7) CKT. 8A-5: 2#6, 1 #6 GRD. (R) EXISTING POLE AND LUMINAIRE TO BE REMOVED

(4) CKT. 8A-2: 2#6
CKT. 8A-4: 2#6
1 #6 GRD. (8) CKT. 8A-4: 2#6, 1 #6 GRD.

(5) CKT. 8A-3: 2#6
CKT. 8A-5: 2#6
1 #6 GRD. (9) CKT. 8A-5: 2#10, 1#10 GRD.

(6) CKT. 8A-2: 2#10, 1#10 GRD. (10) CKT. 8A-4: 2#10, 1#10 GRD.



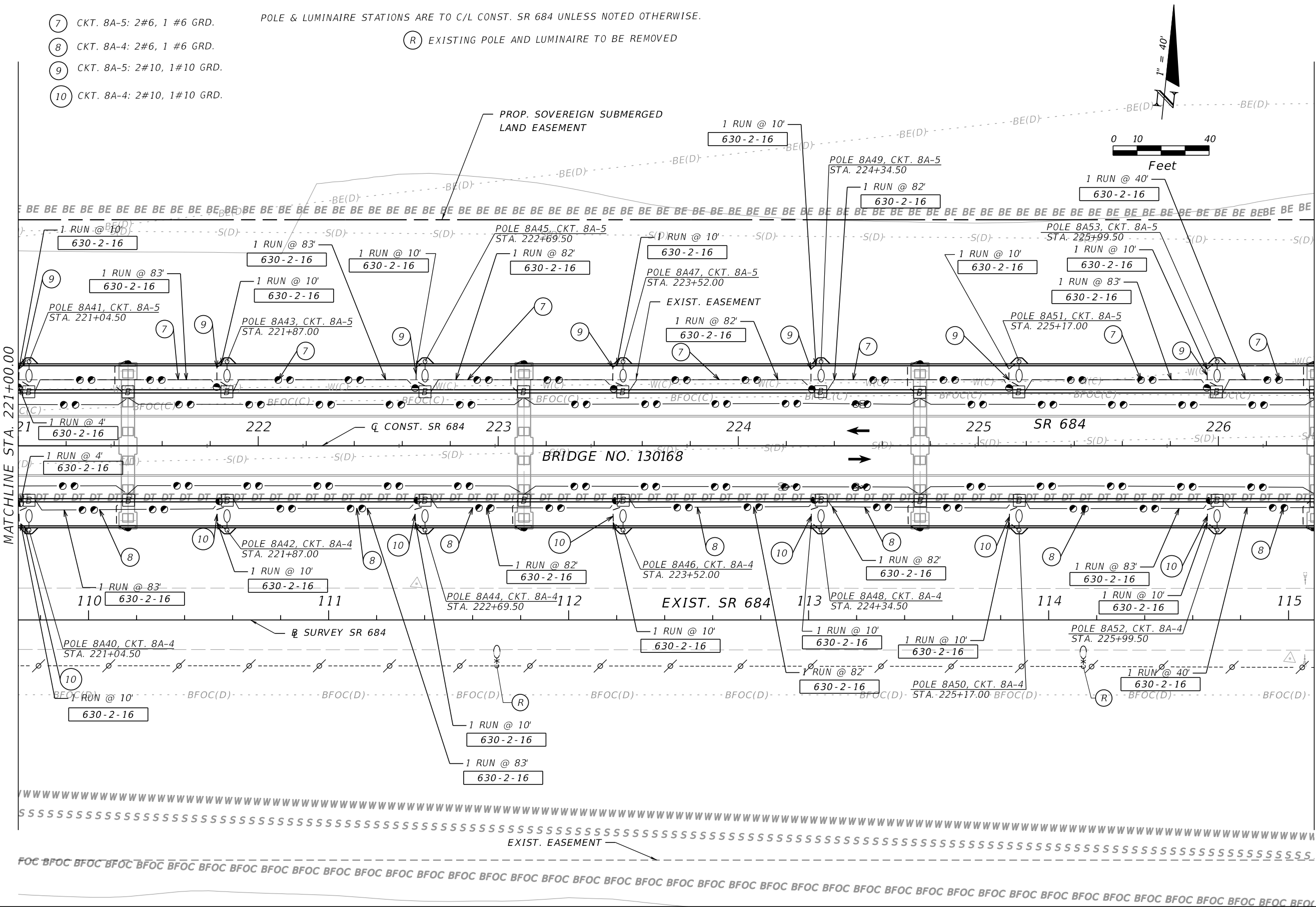
REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LIGHTING PLAN (3) SR 684 (CORTEZ ROAD W)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		L-14
					SR 684	MANATEE	430204-2-52-01		

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

- 7 CKT. 8A-5: 2#6, 1 #6 GRD.
- 8 CKT. 8A-4: 2#6, 1 #6 GRD.
- 9 CKT. 8A-5: 2#10, 1#10 GRD.
- 10 CKT. 8A-4: 2#10, 1#10 GRD.

POLE & LUMINAIRE STATIONS ARE TO C/L CONST. SR 684 UNLESS NOTED OTHERWISE.

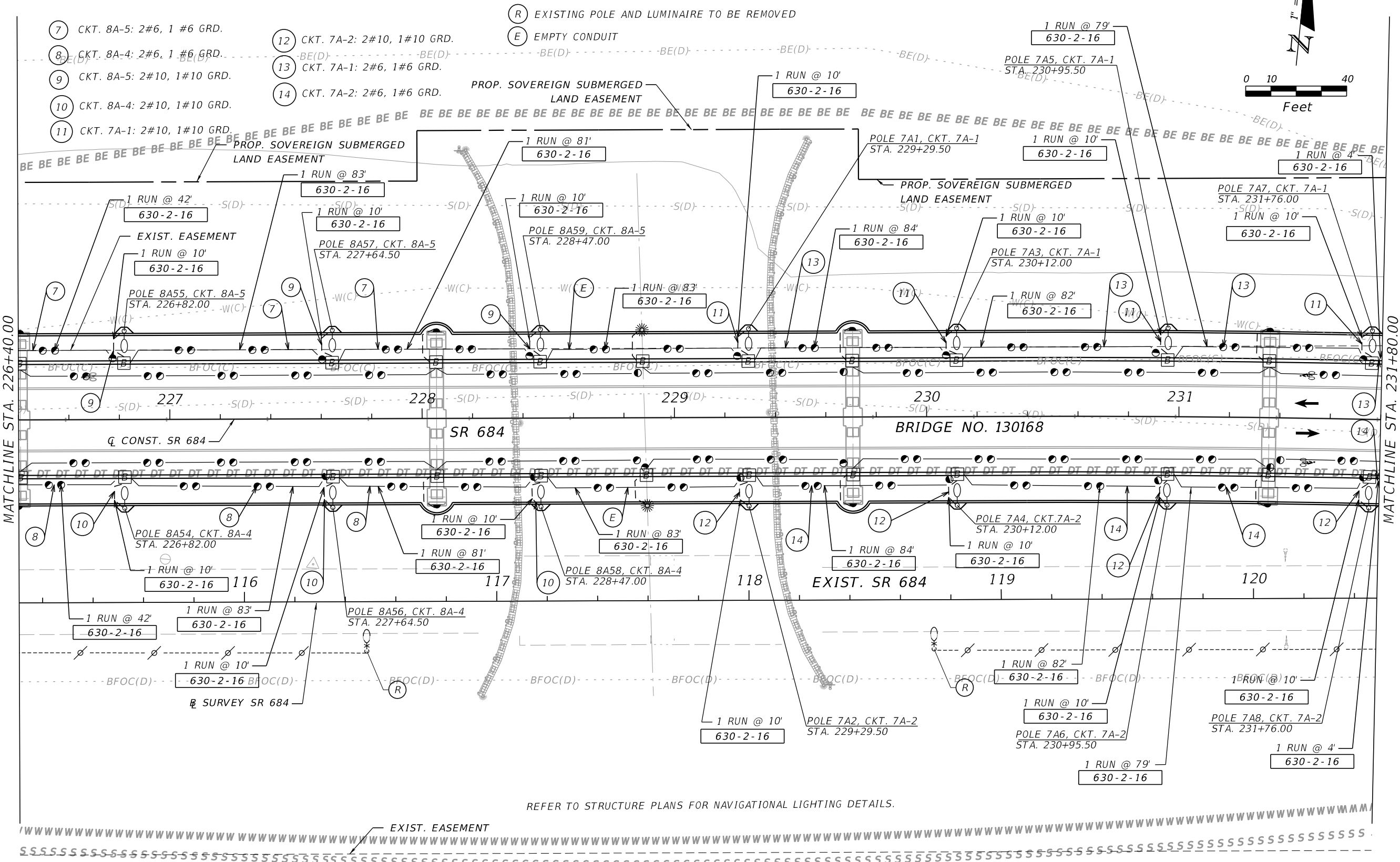
R EXISTING POLE AND LUMINAIRE TO BE REMOVED



REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LIGHTING PLAN (4) SR 684 (CORTEZ ROAD W)	SHEET NO. L-15
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		

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REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LIGHTING PLAN (5) SR 684 (CORTEZ ROAD W)	SHEET NO. L-16
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		

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(R) EXISTING POLE AND LUMINAIRE TO BE REMOVED

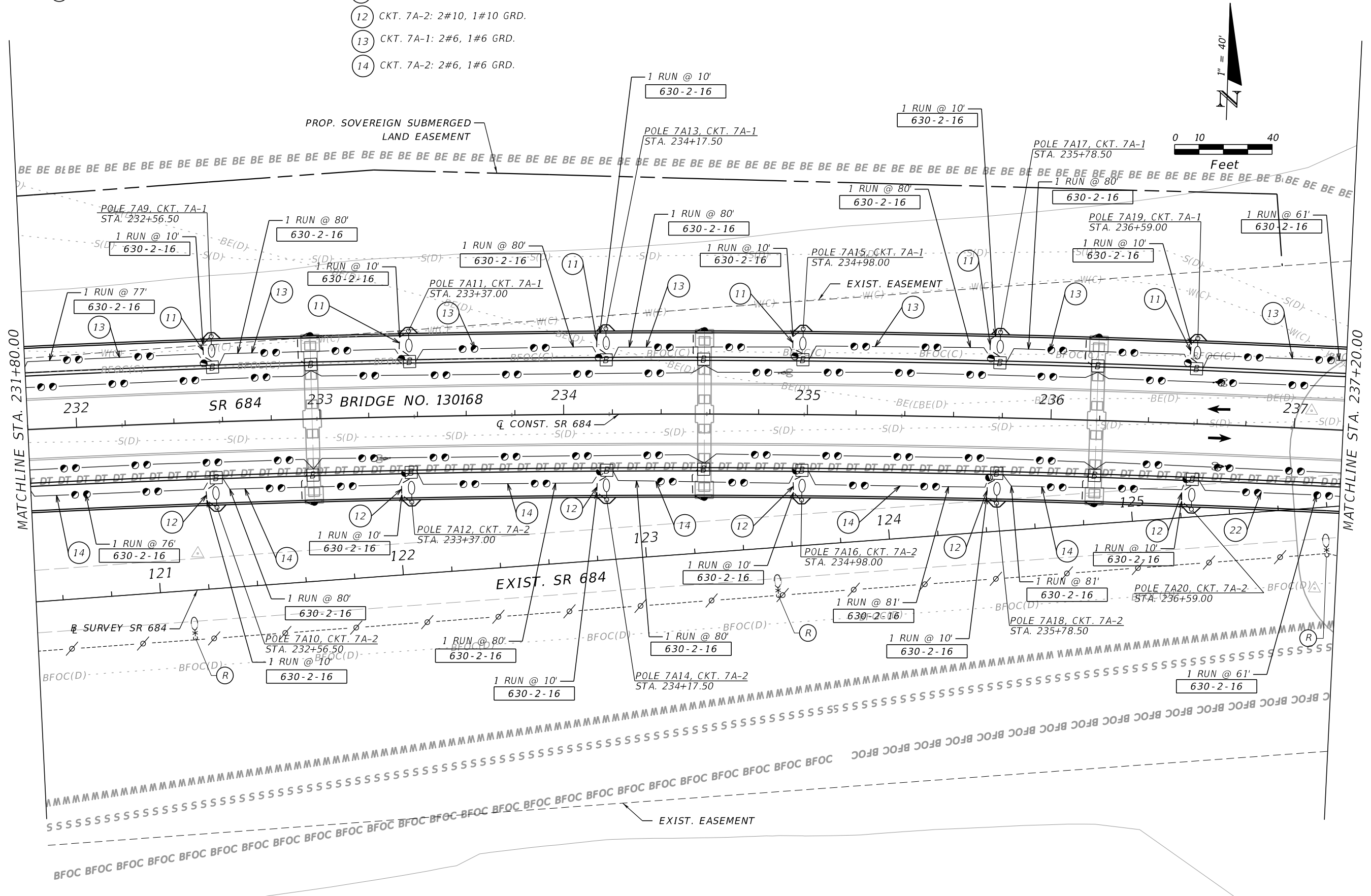
(11) CKT. 7A-1: 2#10, 1#10 GRD.

POLE & LUMINAIRE STATIONS ARE TO C/L CONST. SR 684 UNLESS NOTED OTHERWISE.

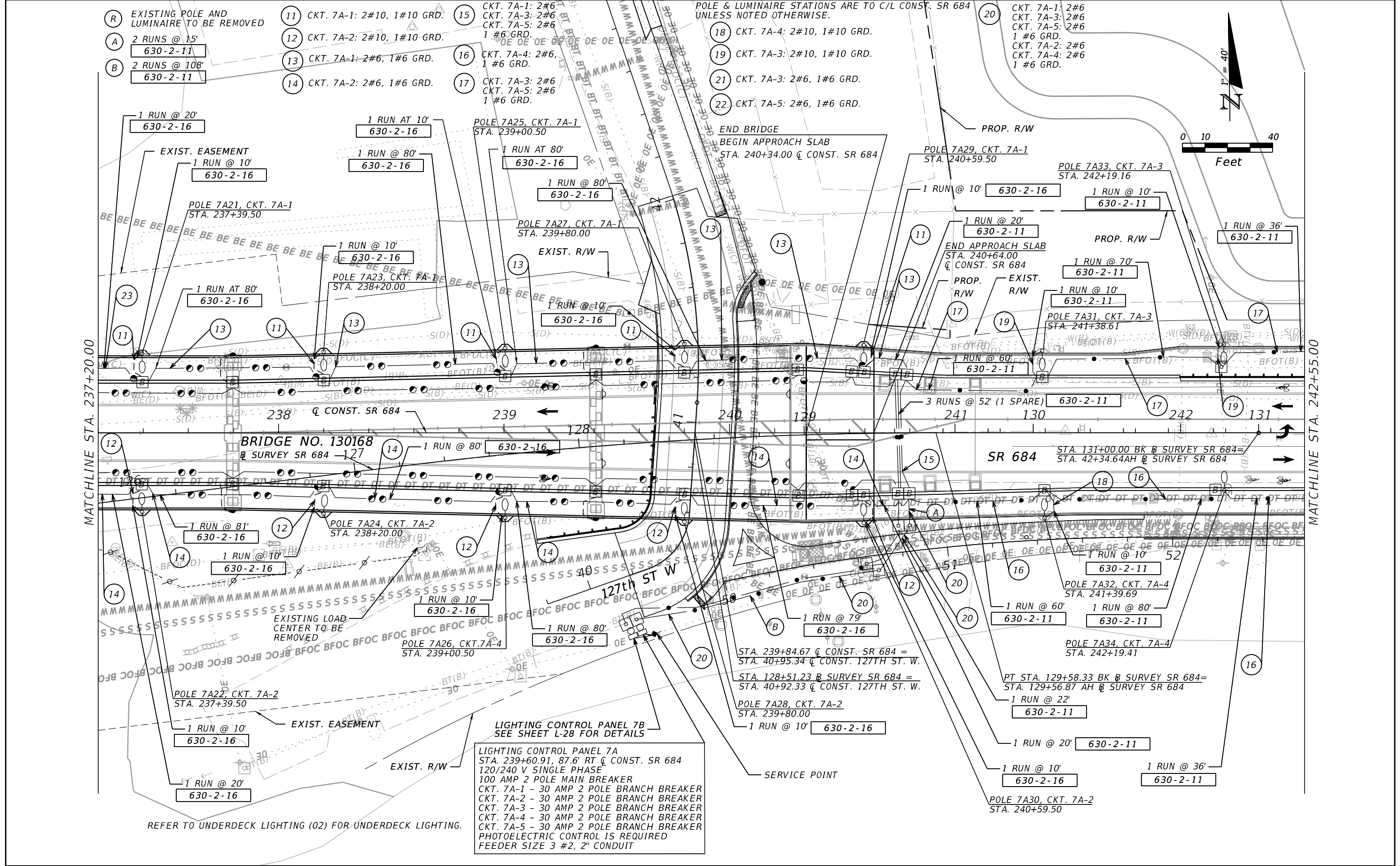
(12) CKT. 7A-2: 2#10, 1#10 GRD.

(13) CKT. 7A-1: 2#6, 1#6 GRD.

(14) CKT. 7A-2: 2#6, 1#6 GRD.



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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		

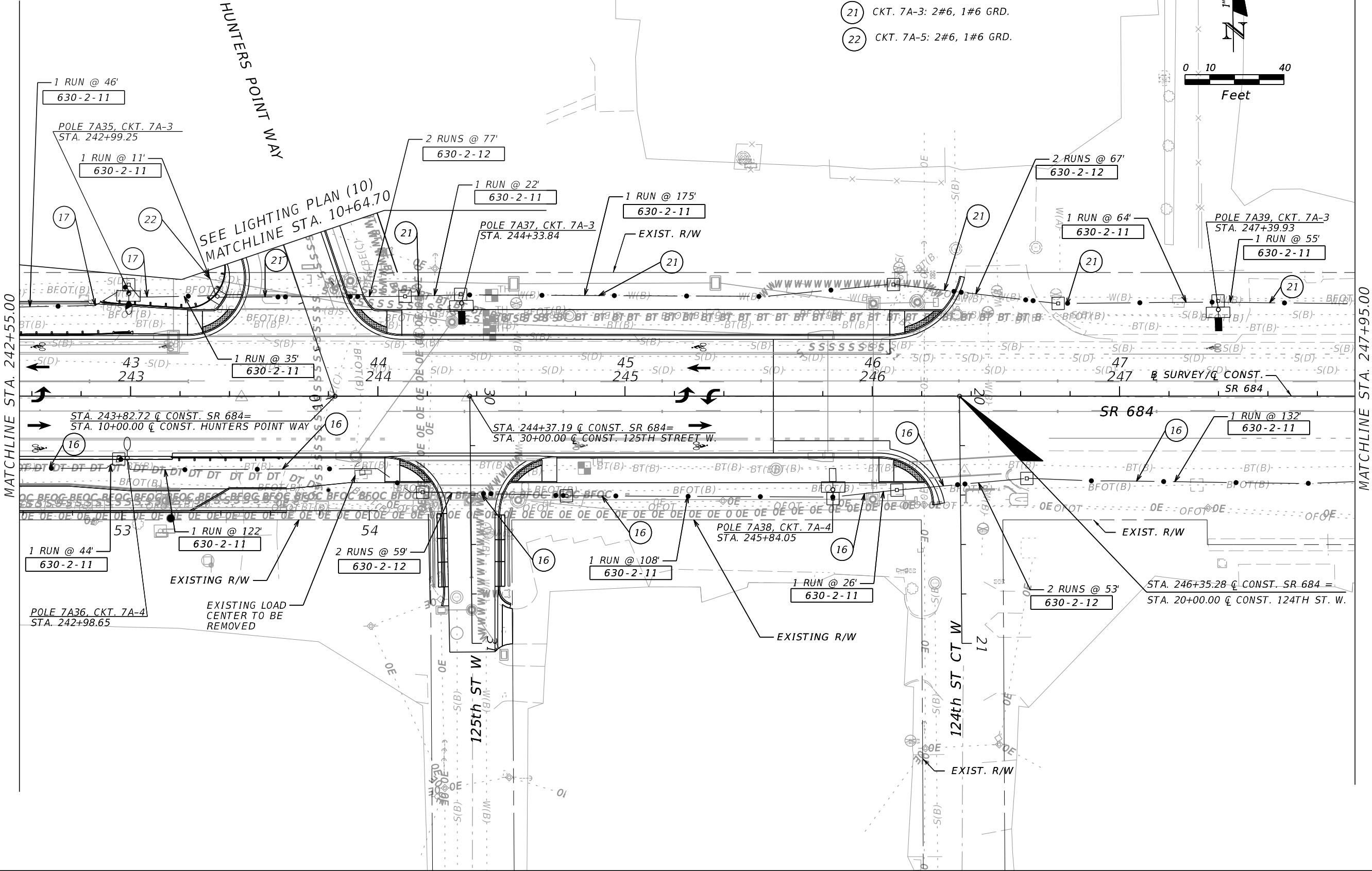
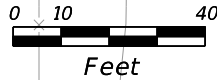


REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LIGHTING PLAN (7) SR 684 (CORTEZ ROAD W)	SHEET NO. L-18
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		

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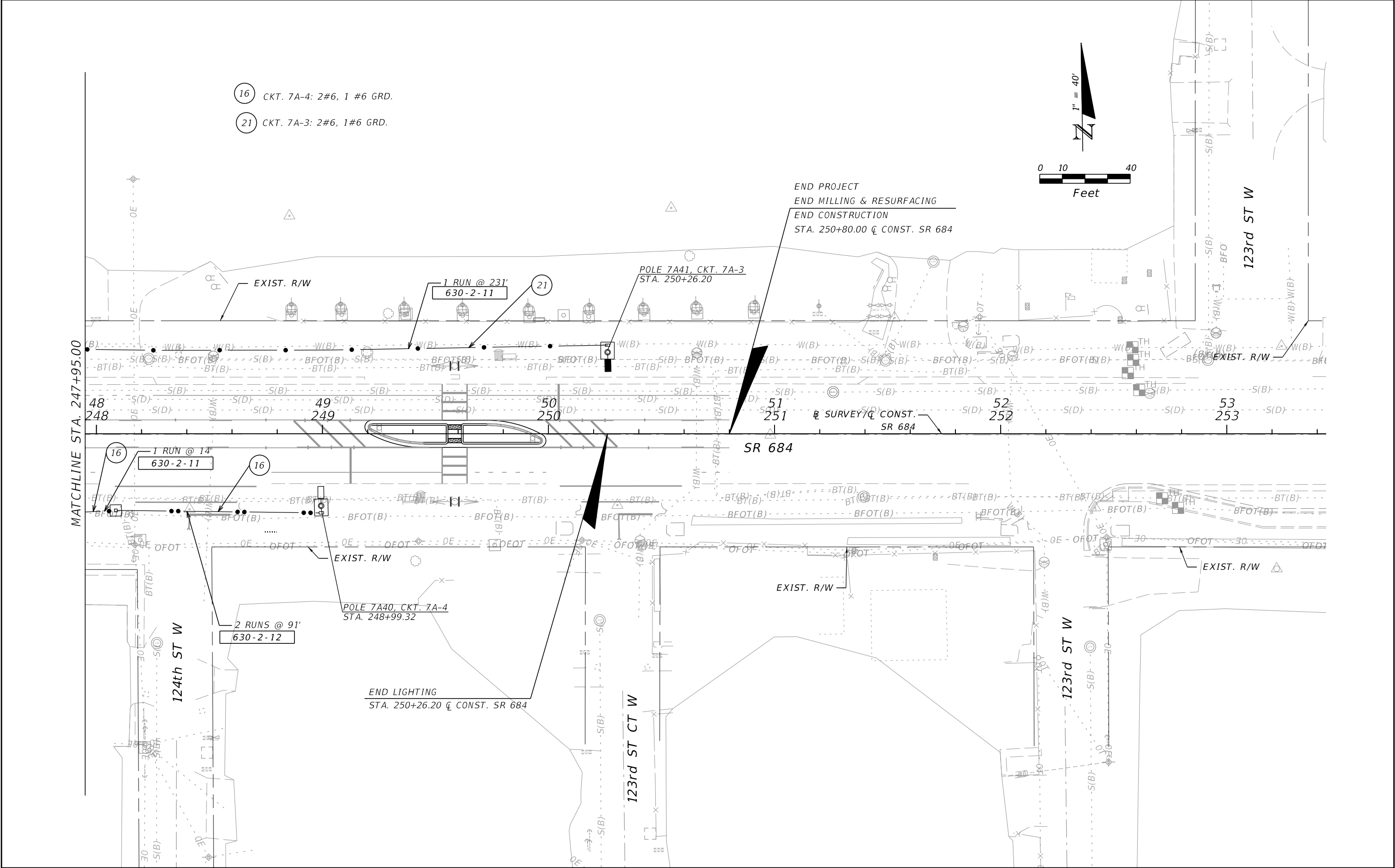
POLE & LUMINAIRE STATIONS ARE TO C/L CONST. SR 684 UNLESS NOTED OTHERWISE.

- 16 CKT. 7A-4: 2#6, 1 #6 GRD.
- 17 CKT. 7A-3: 2#6
CKT. 7A-5: 2#6
1 #6 GRD.
- 21 CKT. 7A-3: 2#6, 1#6 GRD.
- 22 CKT. 7A-5: 2#6, 1#6 GRD.

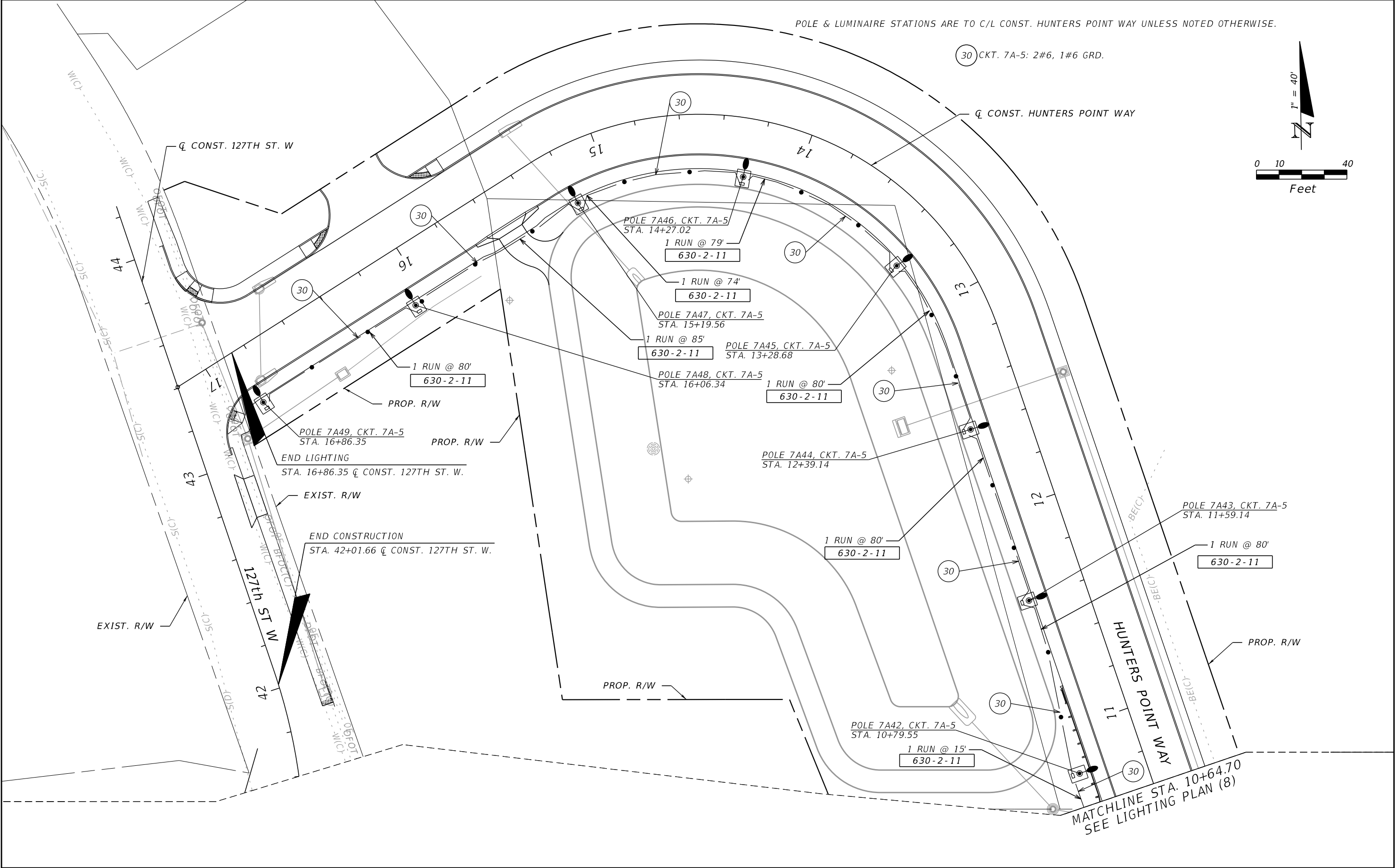


REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LIGHTING PLAN (8) SR 684 (CORTEZ ROAD W)	SHEET NO. L-19
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		

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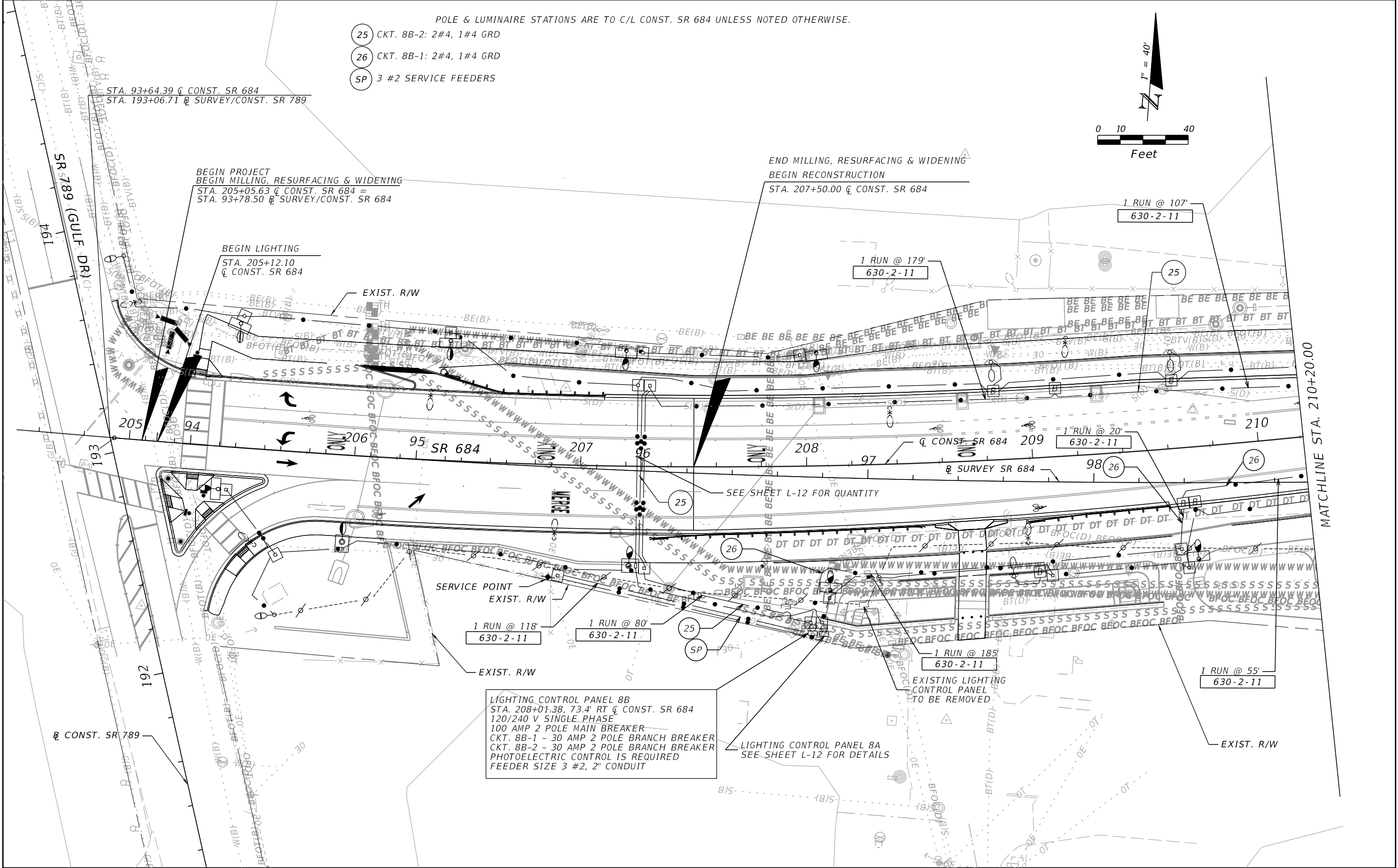
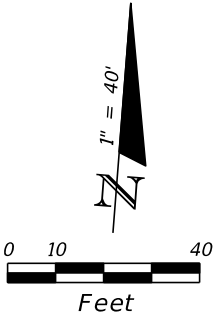
REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LIGHTING PLAN (9) SR 684 (CORTEZ ROAD W)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01	L-20	



REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LIGHTING PLAN (10) HUNTERS POINT WAY	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		L-21

POLE & LUMINAIRE STATIONS ARE TO C/L CONST. SR 684 UNLESS NOTED OTHERWISE.

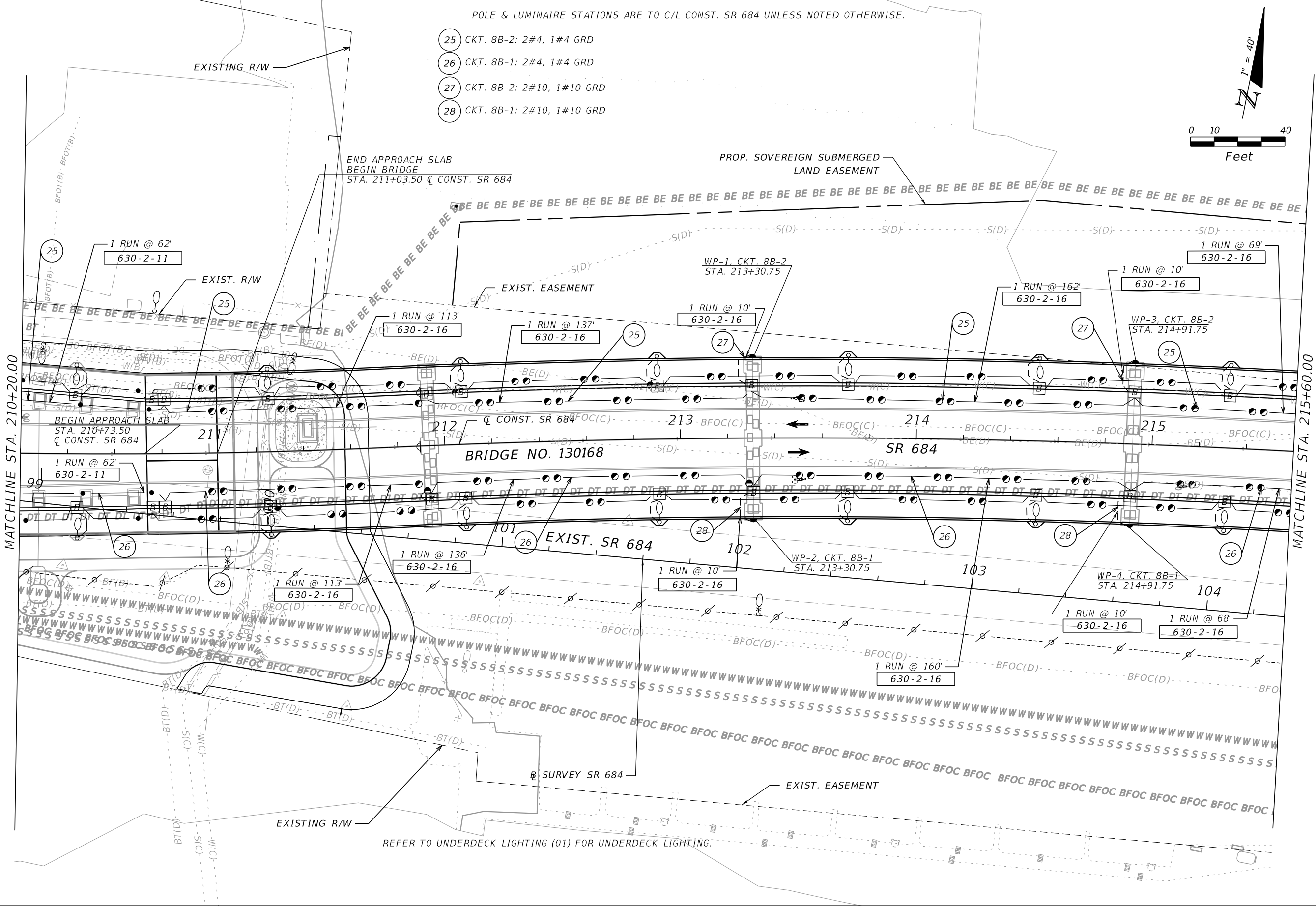
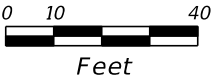
- 25 CKT. 8B-2: 2#4, 1#4 GRD
- 26 CKT. 8B-1: 2#4, 1#4 GRD
- SP 3 #2 SERVICE FEEDERS



REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LIGHTING PLAN (11) SR 684 (CORTEZ ROAD W)	SHEET NO. L-22
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		

POLE & LUMINAIRE STATIONS ARE TO C/L CONST. SR 684 UNLESS NOTED OTHERWISE.

- 25 CKT. 8B-2: 2#4, 1#4 GRD
- 26 CKT. 8B-1: 2#4, 1#4 GRD
- 27 CKT. 8B-2: 2#10, 1#10 GRD
- 28 CKT. 8B-1: 2#10, 1#10 GRD

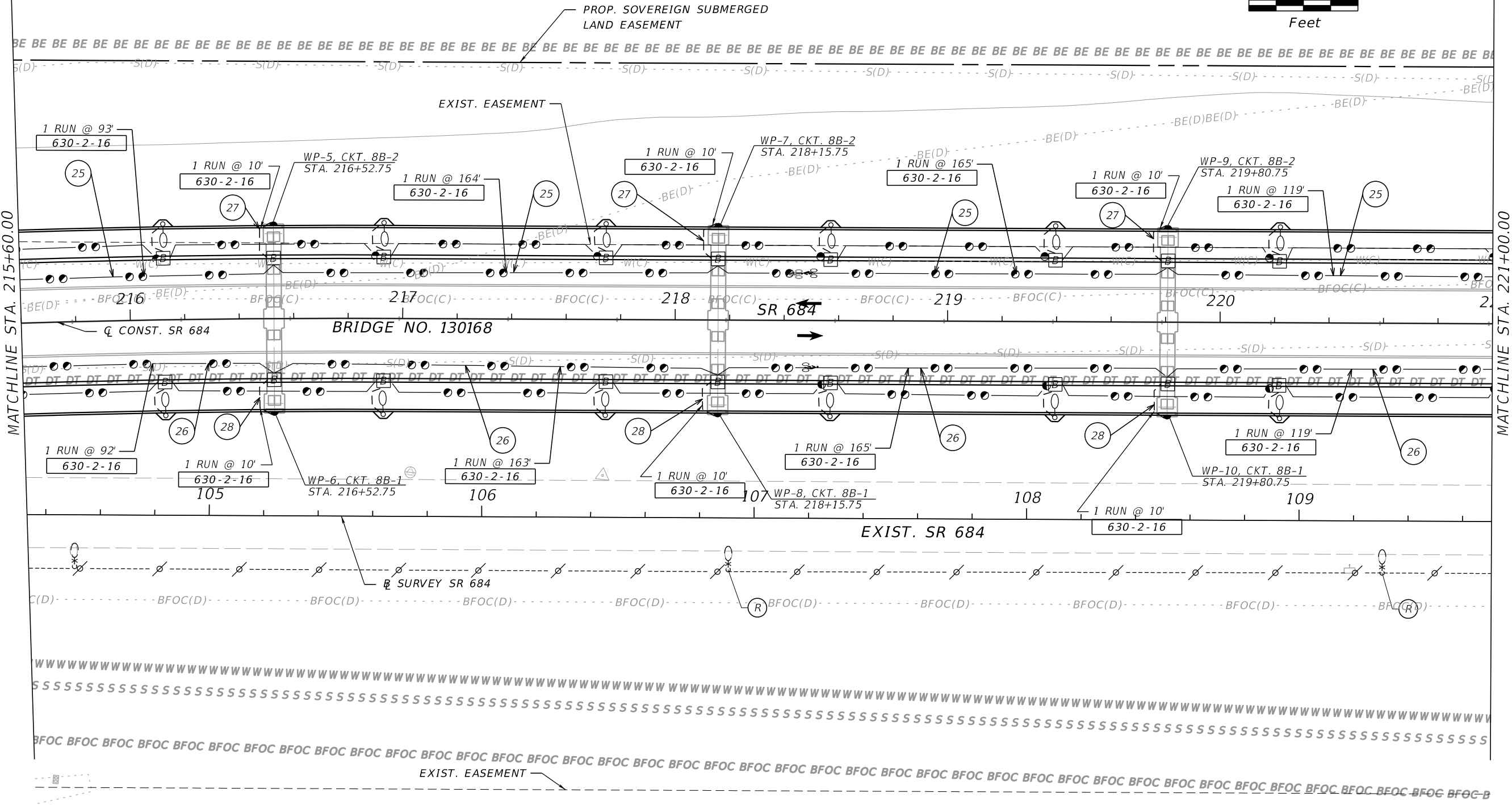
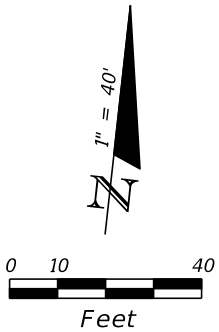


REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LIGHTING PLAN (12) SR 684 (CORTEZ ROAD W)	SHEET NO. L-23
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		

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- 25 CKT. 8B-2: 2#4, 1#4 GRD
- 26 CKT. 8B-1: 2#4, 1#4 GRD
- 27 CKT. 8B-2: 2#10, 1#10 GRD
- 28 CKT. 8B-1: 2#10, 1#10 GRD

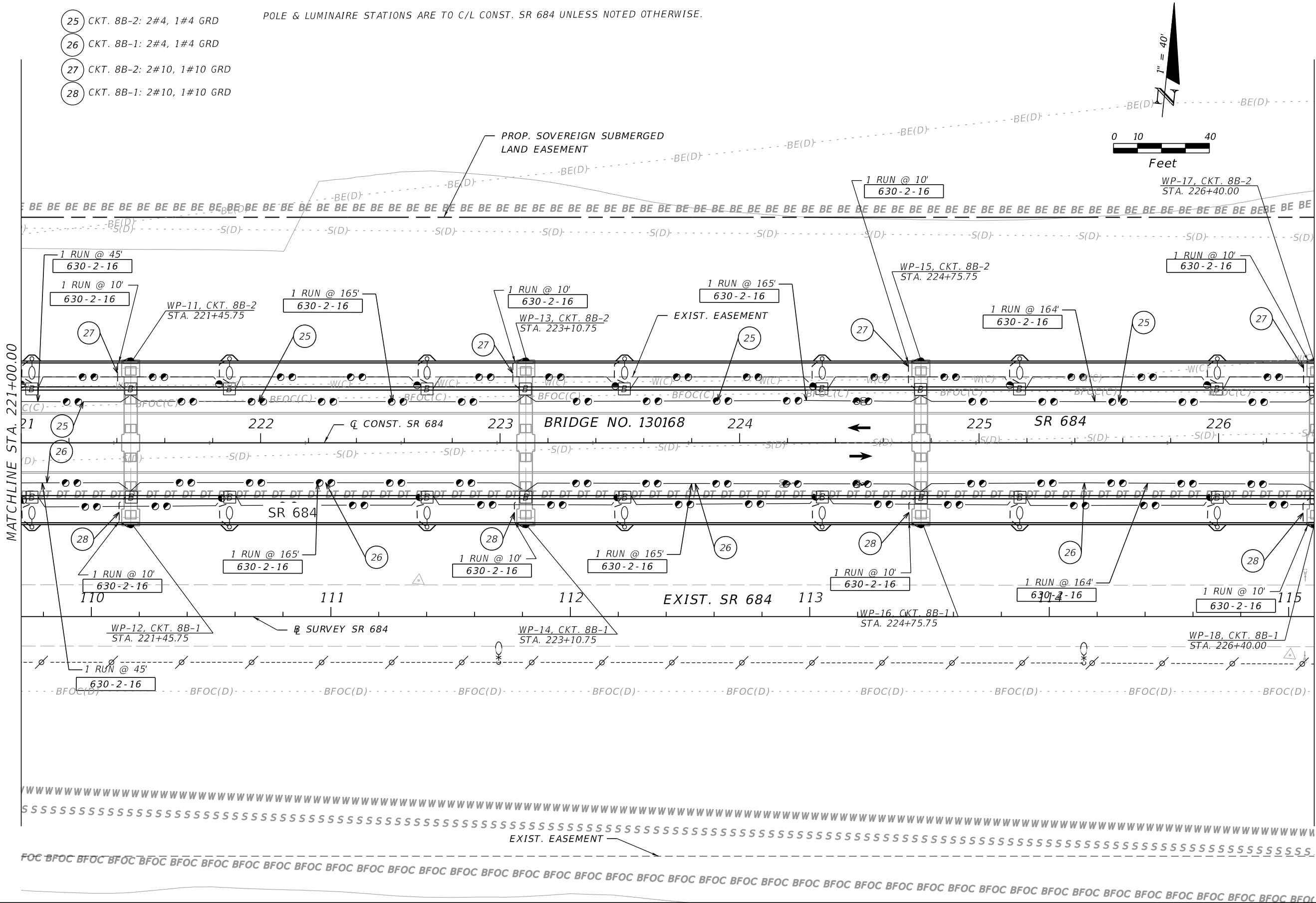


REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LIGHTING PLAN (13) SR 684 (CORTEZ ROAD W)	SHEET NO. L-24
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		

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- 25 CKT. 8B-2: 2#4, 1#4 GRD
- 26 CKT. 8B-1: 2#4, 1#4 GRD
- 27 CKT. 8B-2: 2#10, 1#10 GRD
- 28 CKT. 8B-1: 2#10, 1#10 GRD

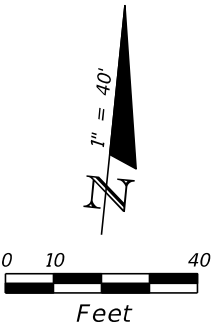
POLE & LUMINAIRE STATIONS ARE TO C/L CONST. SR 684 UNLESS NOTED OTHERWISE.



REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LIGHTING PLAN (14) SR 684 (CORTEZ ROAD W)	SHEET NO. L-25
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		

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- 25

CKT. 8B-2: 2#4, 1#4 GRD
- 26

CKT. 8B-1: 2#4, 1#4 GRD
- 27

CKT. 8B-2: 2#10, 1#10 GRD
- 28

CKT. 8B-1: 2#10, 1#10 GRD
- 29

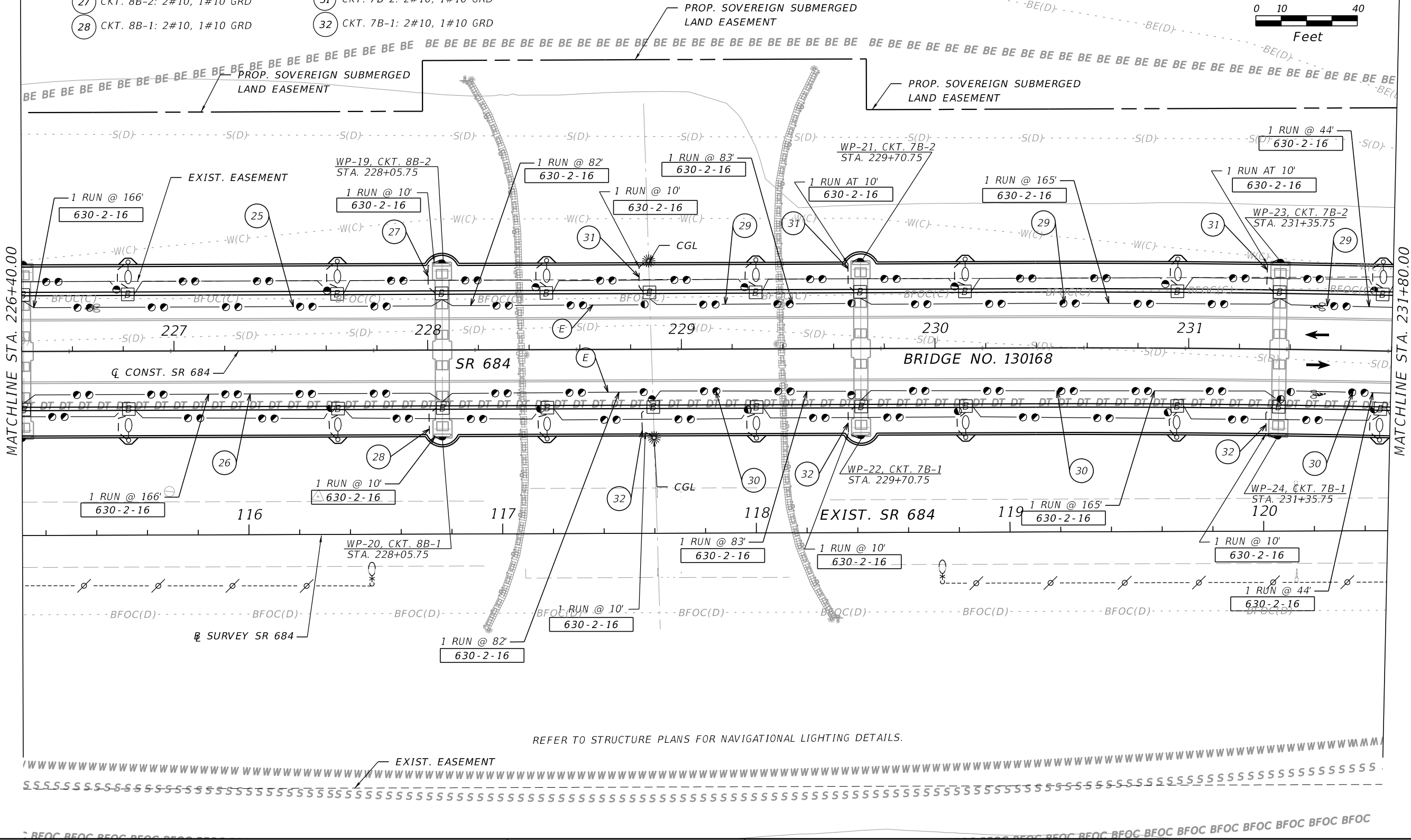
CKT. 7B-2: 2#6, 1#6 GRD
- 30

CKT. 7B-1: 2#6, 1#6 GRD
- 31

CKT. 7B-2: 2#10, 1#10 GRD
- 32

CKT. 7B-1: 2#10, 1#10 GRD
- E

EMPTY CONDUIT



REFER TO STRUCTURE PLANS FOR NAVIGATIONAL LIGHTING DETAILS.

REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LIGHTING PLAN (15) SR 684 (CORTEZ ROAD W)	SHEET NO. L-26
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		

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POLE & LUMINAIRE STATIONS ARE TO C/L CONST. SR 684 UNLESS NOTED OTHERWISE.

- 29

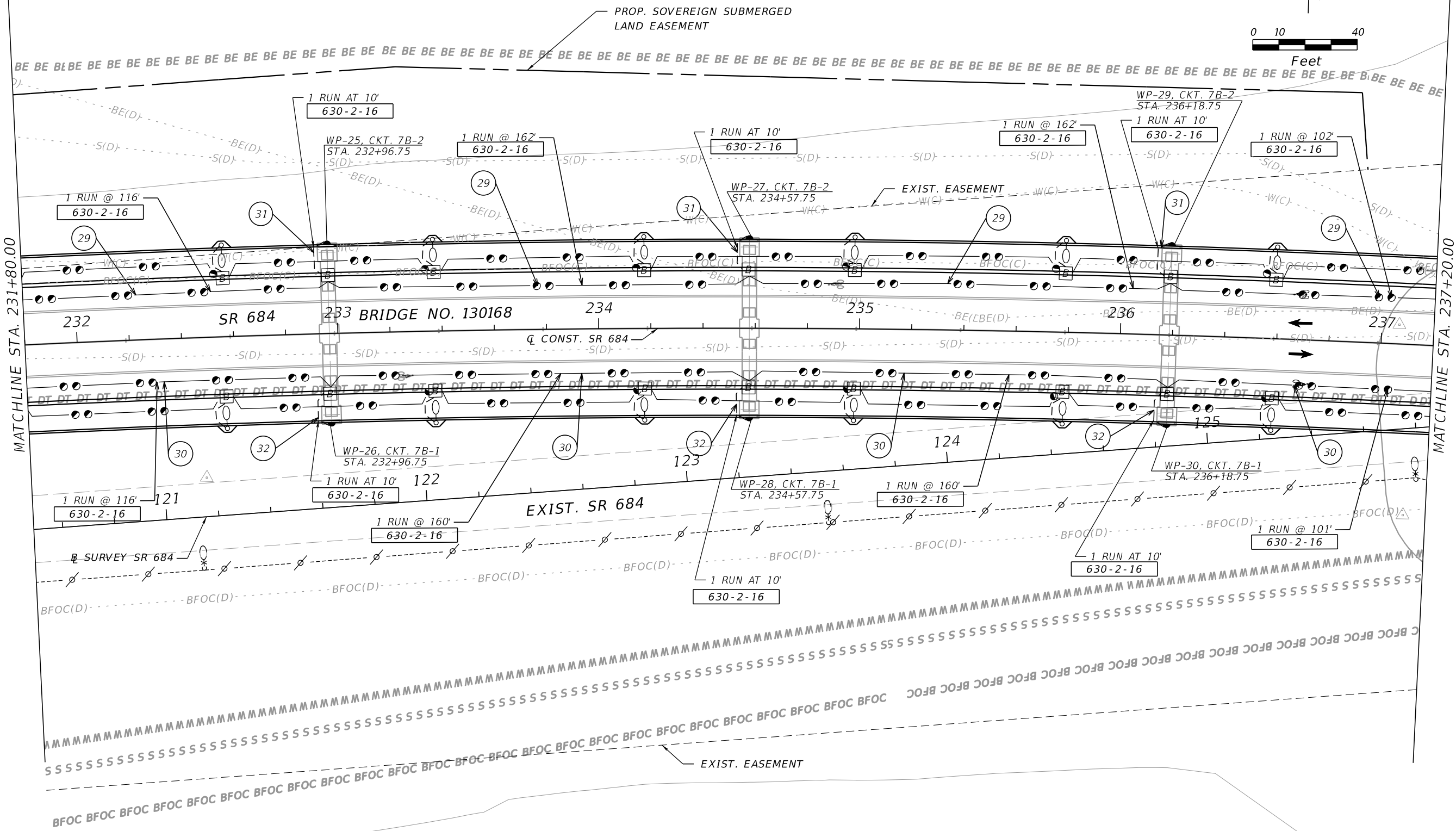
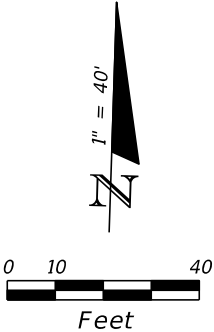
CKT. 7B-2: 2#6, 1#6 GRD
- 30

CKT. 7B-1: 2#6, 1#6 GRD
- 31

CKT. 7B-2: 2#10, 1#10 GRD
- 32

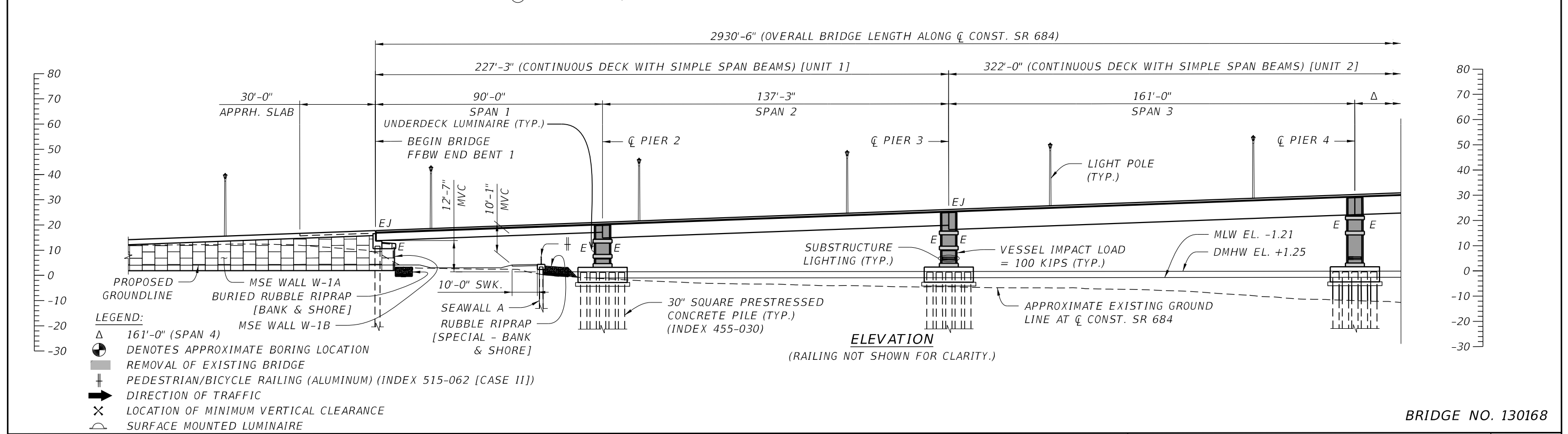
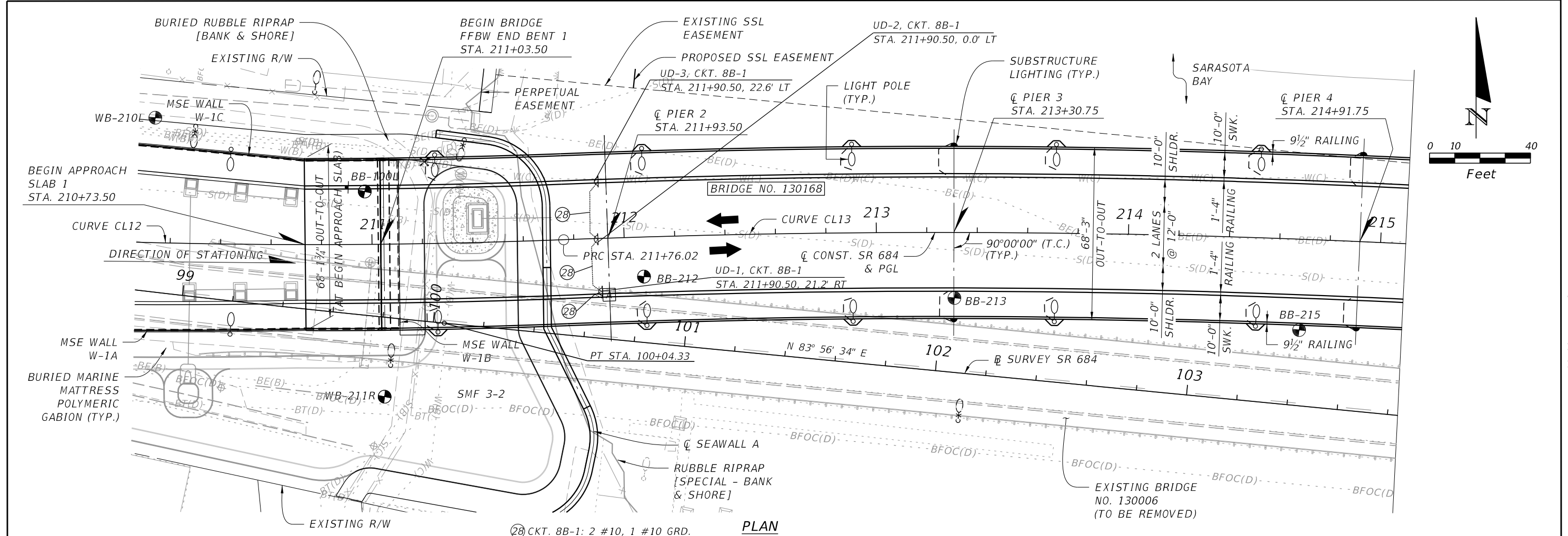
CKT. 7B-1: 2#10, 1#10 GRD

R

EXISTING POLE AND LUMINAIRE TO BE REMOVED

REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LIGHTING PLAN (16) SR 684 (CORTEZ ROAD W)	SHEET NO. L-27
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		

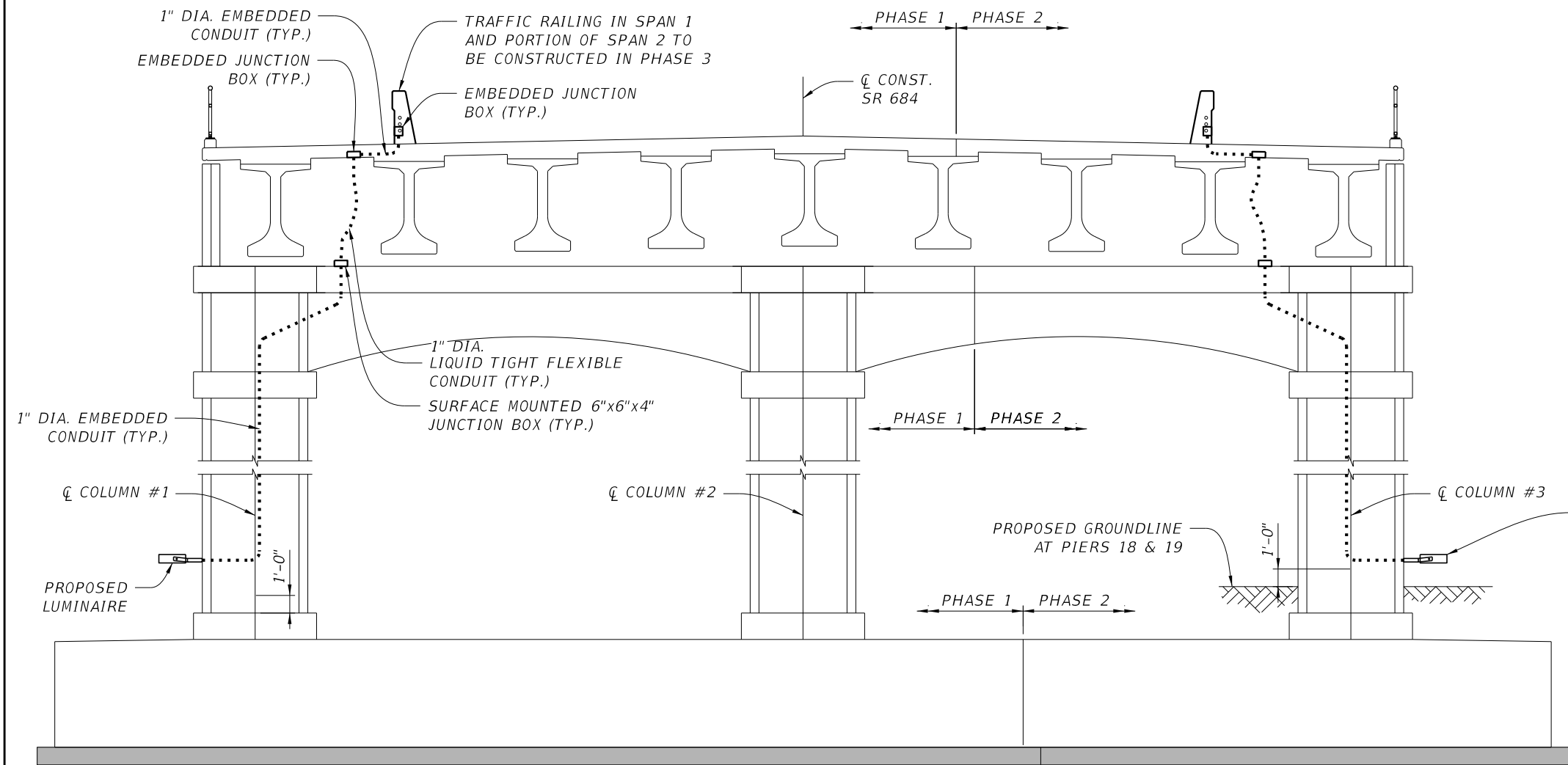
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REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			UNDERDECK LIGHTING (01)	SHEET NO. L-29
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		

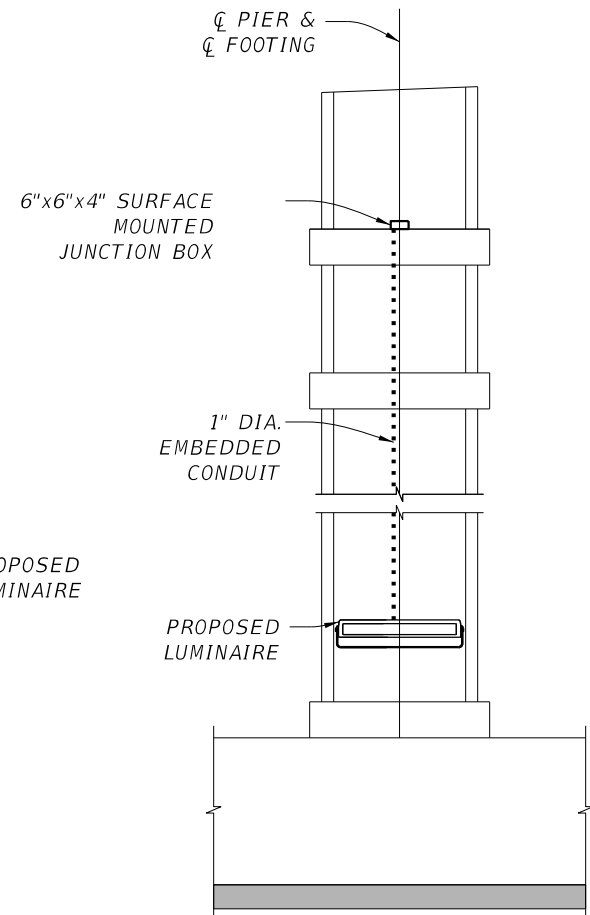
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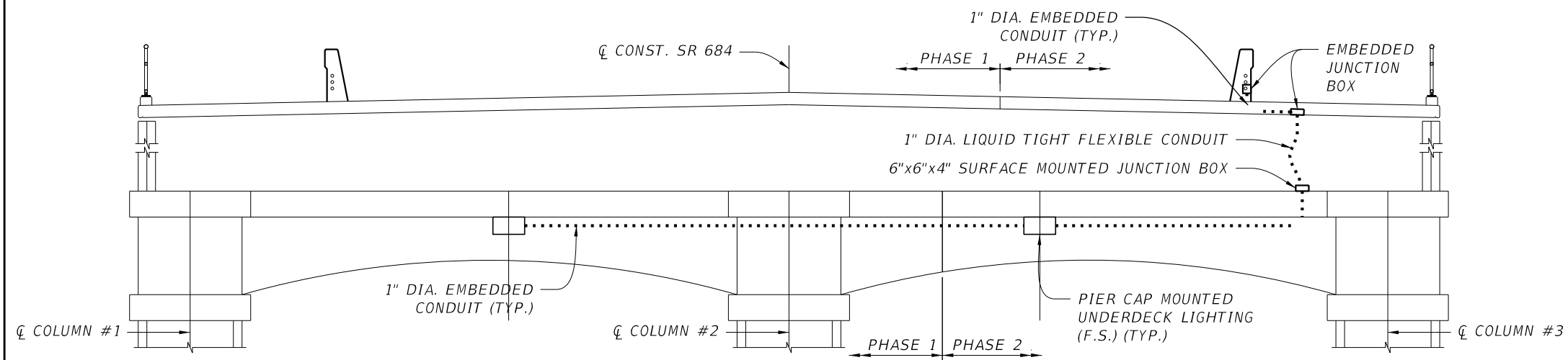


ELEVATION

(PIER 4 & SPAN 3 SHOWN, OTHER PIERS SIMILAR)



SIDE VIEW



PIER 19 PARTIAL ELEVATION

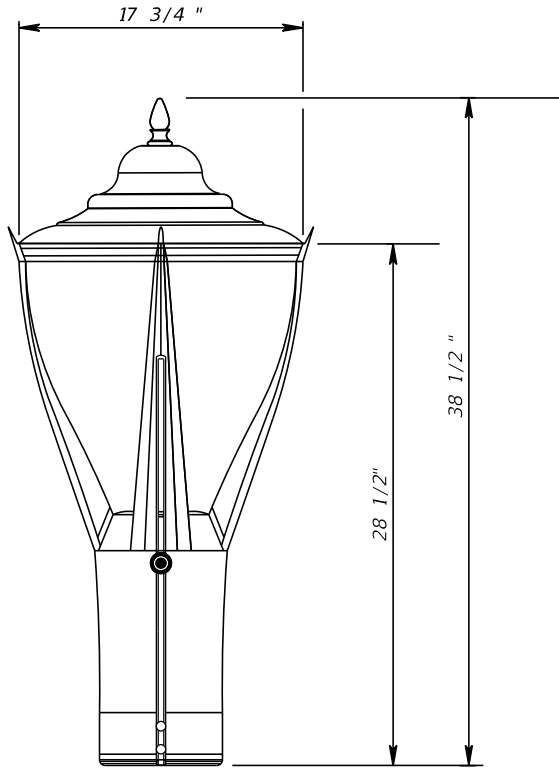
(BEAMS NOT SHOWN FOR CLARITY)

NOTE:

1. SEE STRUCTURE PLANS FOR ADDITIONAL DETAILS.

REVISIONS				ROB R. SWANN, P.E. P.E. LICENSE NUMBER 59517 H. W. LOCHNER, INC. 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA, 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LIGHTING DETAILS (01)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		L-31

POST TOP PARAMETERS



POST TOP LUMINAIRE DETAIL
N.T.S.

FINAL: DECORATIVE CAST 356 ALUMINUM MECHANICALLY ASSEMBLED.

HOOD: DIE CAST A360.1 ALUMINUM ALLOY 0.100 (2.5MM) MINIMUM THICKNESS, MECHANICALLY ASSEMBLED TO THE CAST ALUMINUM HEAT SINK.

GUARD: SHALL BE ROUND SHAPED WITH 4 ARMS AND A BUILT-IN MECHANICAL RING. GUARD SHALL BE A ONE PIECE DIE CAST A360 ALUMINUM ALLOY, 0.100 (2.5MM) MINIMUM THICKNESS. MECHANICALLY ASSEMBLED TO THE FITTER.

ACCESS MECHANISM: DIE CAST A360.1 ALUMINUM ALLOY, 0.100 (2.5MM) MINIMUM THICKNESS, TECHNICAL RING WITH LATCH AND HINGE.

LIGHT ENGINE: LED ENGINE COMPOSED OF 4 MAIN COMPONENTS: LED LAMP, OPTICAL SYSTEM, HEAT SINK, AND DRIVER ELECTRICAL COMPONENTS SHALL BE ROHS COMPLIANT. MAXIMUM AMBIENT OPERATING TEMPERATURE UP TO 40C(104F) DEGREES.

LENS: SODA-LIME TEMPERED GLASS LENS, MECHANICALLY ASSEMBLED AND SEALED ONTO THE RING OF THE ACCESS MECHANISM.

LAMP: LED MODULE (INCLUDED), LED TYPE PHILLIPS LUMILEDS LEXEON R. COMPOSED OF 16 HIGH- PERFORMANCE WHITE LEDS. COLOR TEMPERATURE OF 4000 KELVIN NOMINAL, 70 CRI. OPERATING LIFESPAN BASED ON TM-21 EXTRAPOLATION TO GET RESULTS AFTER WHICH 50% OF LEDS STILL EMITS OVER 70% (L70) OF ITS ORIGINAL LUMEN OUTPUT. LED CIRCUIT BOARD SHALL BE INCLUDED WITH A QUICK DISCONNECT WIRING CONNECTION.

OPTICAL SYSTEM: LUMINAIRE TYPE A SHALL BE (LE4), IES TYPE IV (ASYMMETRICAL). COMPOSED OF HIGH- PERFORMANCE OPTICAL GRADE PMMA ACRYLIC REFRACTOR LENSES. OPTICAL SYSTEM SHALL BE RATED IP66. PERFORMANCE SHALL BE TESTED PER LM-63, LM-79 AND TM-15 (IESNA). STREET SIDE INDICATED, DARK SKY COMPLIANT WITH 0% UPLIGHT PER IESNA TM-15.

HEAT SINK: MADE OF CAST ALUMINUM OPTIMIZING THE LEDS EFFICIENCY AND LIFE. PRODUCT SHALL NOT USE ANY COOLING DEVICE WITH MOVING PARTS (ONLY PASSIVE COOLING DEVICE).

DRIVER: HIGH POWER FACTOR OF 95%. ELECTRONIC DRIVER, OPERATING RANGE 50/60 HZ. AUTO-ADJUSTING UNIVERSAL VOLTAGE INPUT FROM 120 TO 277 VAC RATED FOR BOTH APPLICATION LINE TO LINE OR LINE TO NEUTRAL, CLASS I, THD OF 20% MAX. MAXIMUM AMBIENT OPERATING TEMPERATURE FROM -40F (-40C) TO 130F (55C) DEGREES. CERTIFIED IN COMPLIANCE TO UL1310 CULUS REQUIREMENT. DRY AND DAMP LOCATION. ASSEMBLED ON A UNITIZED REMOVABLE TRAY WITH TYCO QUICK DISCONNECT PLUG RESISTING TO 221F (105C) DEGREES.

THE CURRENT SUPPLYING THE LED'S SHALL BE REDUCED BY THE DRIVER IF THE DRIVER EXPERIENCES INTERNAL OVERHEATING AS A PROTECTION TO THE LED'S AND THE ELECTRICAL COMPONENTS. OUTPUT SHALL BE PROTECTED FROM SHORT CIRCUITS, VOLTAGE OVERLOAD AND CURRENT OVERLOAD. AUTOMATIC RECOVERY AFTER CORRECTION. STANDARD BUILT-IN DRIVER SURGE PROTECTION OF 2.5KV (MIN).

SURGE PROTECTOR: SURGE PROTECTOR SHALL BE TESTED IN ACCORDANCE WITH ANSI/IEEE C62.45 PER ANSI/IEEE C62.41.2 SCENARIO I CATEGORY C HIGH EXPOSURE 10KV/10KA WAVEFORMS FOR LINE-GROUND, LINE-NEUTRAL AND NEUTRAL-GROUND, AND IN ACCORDANCE WITH U.S. DOE (DEPARTMENT OF ENERGY) MSSLC (MUNICIPAL SOLID-STATE STREET LIGHTING CONSORTIUM) MODEL SPECIFICATION FOR LED ROADWAY LUMINAIRES ELECTRICAL IMMUNITY REQUIREMENTS FOR HIGH TEST LEVEL 10KV/10KA.

EXPOSURE 10KV/10KA WAVEFORMS FOR LINE-GROUND, LINE NEUTRAL AND NEUTRAL-GROUND, AND IN ACCORDANCE WITH U.S. DOE (DEPARTMENT OF ENERGY) MSSLC (MUNICIPAL SOLID-STATE STREET LIGHTING CONSORTIUM) MODEL SPECIFICATION FOR LED ROADWAY LUMINAIRES ELECTRICAL IMMUNITY REQUIREMENTS FOR HIGH TEST LEVEL 10KV/10KA.

FITTER: DIE CAST A360.1 ALUMINUM ALLY 0.100 (2.5MM) MINIMUM THICKNESS. THE FITTER SHALL BE COMPLETE WITH A WATERTIGHT ACCESS DOOR GIVING ACCESS TO THE DRIVER RATED IP66, AND TERMINAL BLOCK THAT ACCEPTS (#2 MAX.) WIRES FROM THE PRIMARY CIRCUIT. SHALL COME WITH AN EASY SELF ADJUSTING SYSTEM WITH TWO (2) SET SCREWS 3/8 16 UNC FOR EASE OF MAINTENANCE AND INSTALLATION. SHALL FIT A 3" (102MM) OUTSIDE DIAMETER BY 4" (102MM) LONG TENON.

LUMINAIRE OPTIONS: (BO) BRIDGE AND OVERPASS APPLICATION.

DRIVER OPTIONS: (CLO), CONSTANT LIGHT OUTPUT, DRIVER PRE-PROGRAMMED TO ACHIEVE THE SAME LIGHT INTENSITY FOR THE DURATION OF THE LIFE OF THE LAMP.

LUMINAIRE RECYCLABLE MATERIAL: 80% OF THE MATERIALS USED IN THIS PRODUCT SHALL BE RECYCLED. THE CALCULATION SHALL BE BASED ON THE WEIGHT OF CONTENTS.

WIRING: THE CONNECTION OF THE LUMINAIRE SHALL BE DONE USING A TERMINAL BLOCK CONNECTOR 600V, 85A FOR USE WITH BARE (#2 MAX.) WIRES FROM THE PRIMARY CIRCUIT, LOCATED INSIDE THE FITTER.

HARDWARE: ALL EXPOSED SCREWS SHALL BE STAINLESS STEEL WITH CERAMIC PRIMER-SEAL BASECOAT TO REDUCE SEIZING OF THE PARTS. ALL SEALS AND SEALING DEVICES SHALL BE MADE AND/OR LINED WITH EPDM AND/OR SILICONE AND/OR RUBBER.

FINISH: COLOR SHALL BE BLACK (RAL 9011).

LED PRODUCTS MANUFACTURING STANDARD: THE ELECTRONIC COMPONENTS SENSITIVE TO ELECTROSTATIC DISCHARGE (ESD) SUCH AS LIGHT EMITTING DIODES (LED'S) SHALL BE ASSEMBLED IN COMPLIANCE WITH IEC61340-5-1 AND ANSI/ESD S20.20 STANDARDS SO AS TO ELIMINATE ESD EVENTS THAT COULD DECREASE THE USEFUL LIFE OF THE PRODUCT.

QUALITY CONTROL: THE MANUFACTURER MUST PROVIDE A WRITTEN CONFIRMATION OF ITS ISO 9001-2015 AND ISO 14001-2015 INTERNATIONAL QUALITY STANDARDS CERTIFICATION.

VIBRATION RESISTANCE: SHALL MEET THE ANSI C136.31, AMERICAN NATIONAL STANDARD FOR ROADWAY LUMINAIRE VIBRATION SPECIFICATIONS FOR BRIDGE/OVERPASS APPLICATIONS. (TESTED FOR 3G OVER 100,000 CYCLES BY AN INDEPENDENT LAB).

NOTE:

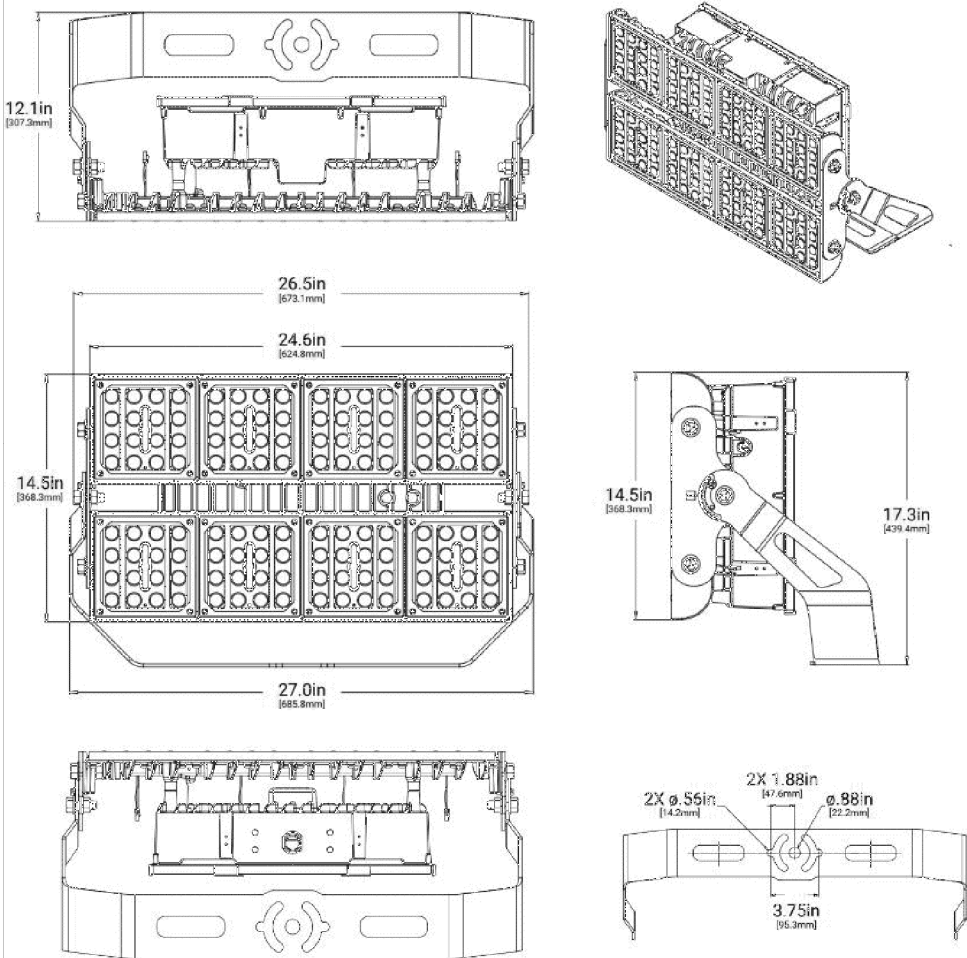
1. LUMEC'S METROSCAPE MPTR POST TOP LUMINAIRE TO BE USED FOR THIS PROJECT.

LED LIGHT ENGINE TECHNICAL INFORMATION

LED = PHILLIPS LUMILEDS LUXEON R, CRI = 70, CCT = 3000K (± 175K)
SYSTEM (LED + DRIVER) RATED LIFE = 100,000 HOURS

LUMINAIRE TYPE	LAMP	TYPICAL DELIVERED LUMENS	TYPICAL SYSTEMS WATTAGE (W)	TYPICAL CURRENT @ 240 V (A)	LED CURRENT (mA)	HID EQUIVALENT	LUMINAIRE EFFICACY RATING (Lm/W)
POST TOP	MPTR-70W64LED3K-G3-LE3W	8028	71	0.3	350	200-250	112
POST TOP	MPTR-70W64LED3K-G3-LE4	8212	71	0.3	350	200-250	114

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		L-32
					SR 684	MANATEE	430204-2-52-01		

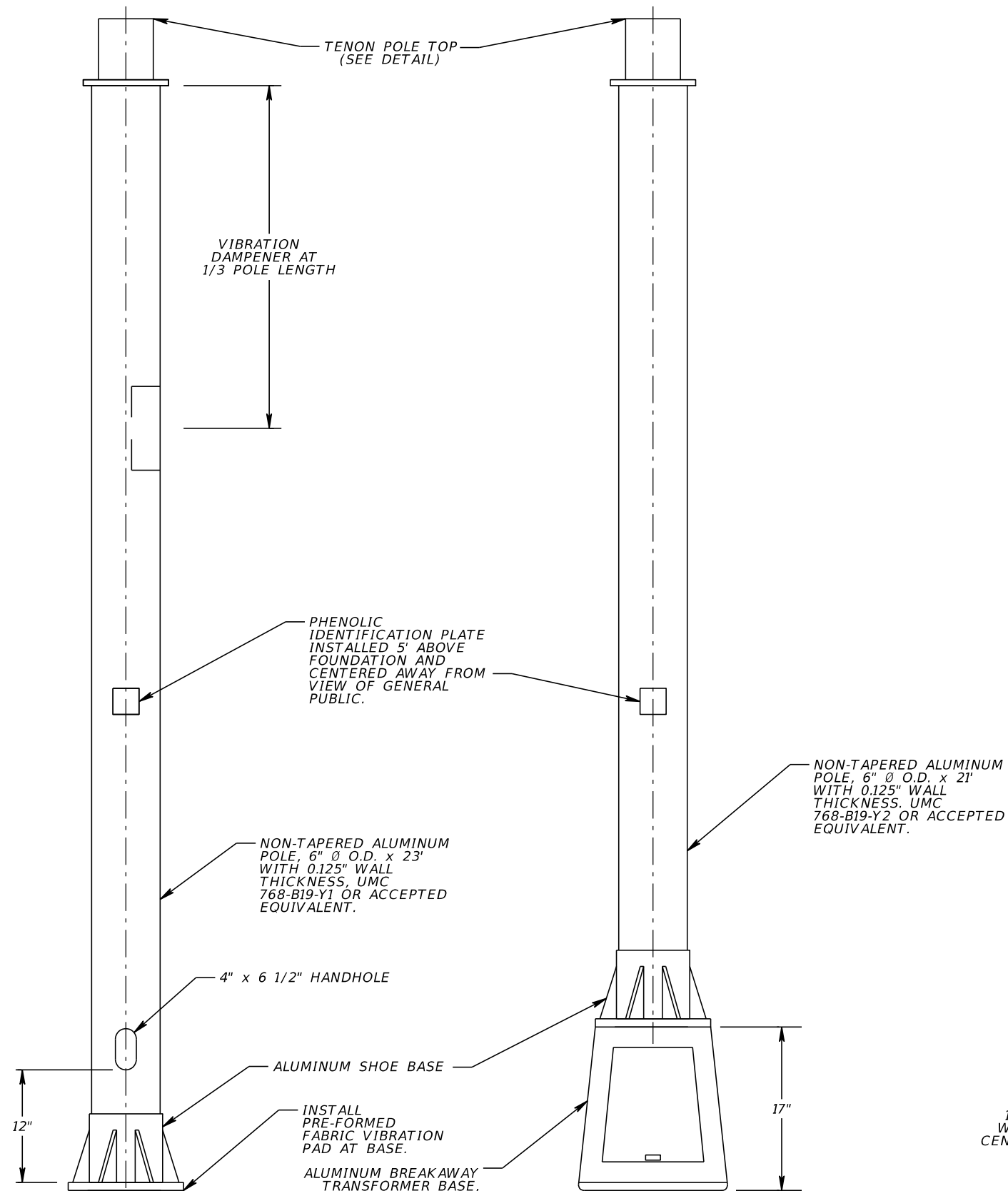


PIER LUMINAIRE DETAIL
N.T.S.

PIER LUMINAIRE SPECIFICATIONS STREETWORKS' IFLD (INFRASTRUCTURE FLOOD)		
ITEM	SPECIFICATION	11 = NEMA 1H x 1V FLOOD
	LUMENS	13,051
	CRI	90
	LUMEN MAINTENANCE (TM-21)	>100,000 HOURS L70 @ 25° C >100,000 HOURS L70 @ 50° C >100,000 HOURS L50 @ 25° C >100,000 HOURS L50 @ 50° C
ELECTRICAL	INPUT VOLTAGE	240 V
	POWER CONSUMPTION	218 W
CONTROL	CONTROL SYSTEM	PHOTOCELL AND ASTRONOMIC TIME CLOCK (ON/OFF)
	DIMENSIONS (HxWxD)	14.5" x 24.6" x 8.9"
PHYSICAL	WEIGHT	51 LB
	EPA	2.78 SQ FT
	HOUSING	DIE-CAST ALUMINUM, POWDER COATED, COASTAL CONSTRUCTION FINISH
	OPTICS	INJECTION-MOLDED ACCUELED OPTICS TECHNOLOGY
	FIXTURE CONNECTIONS	INTEGRAL 16 / 3 STW-A CORD
	TEMPERATURE RANGES	-40° C TO 40° C OPERATIONS
	HUMIDITY	0 - 95% NON CONDENSING
	CERTIFICATION	ISO, FCC CLASS A, IP66, UL, RoHS
SAFETY	ENVIRONMENT	DRY / DAMP / WET LOCATION,

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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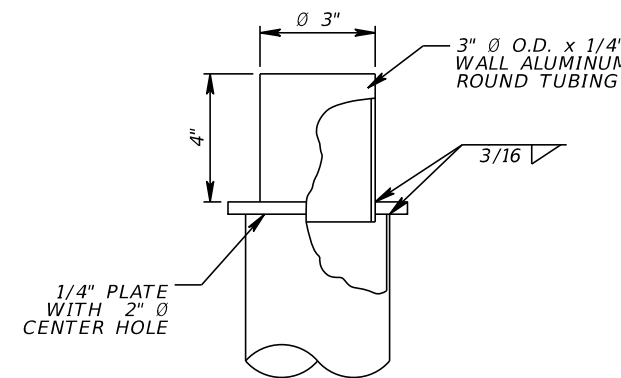
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- NOTES:

1. DESIGNED IN ACCORDANCE WITH THE 2009 AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS," FOR DESIGN WIND SPEEDS OF 150 MPH.
2. ALUMINUM ALLOY 6063 IS TO BE FURNISHED IN T4 CONDITION AND HEAT TREATED IN ACCORDANCE WITH ASTM B597 TO T6.
3. SEE STRUCTURAL DETAILS FOR POLE FOUNDATION INSTALLATION.
4. ALL WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE (ALUMINUM) ANSI/AWS D1.2 (CURRENT EDITION).
5. THE POLE SHALL BE BLACK (RAL 9011).
6. THE POLE SHALL BE FREE OF TRANSVERSE WELDS EXCEPT AT THE BASE.

POLE MATERIAL SPECIFICATIONS	
ALUMINUM ROUND TUBING	ASTM B221 (6063-T6)
HANDHOLE FRAME	ASTM B209 (6063-T52)
HANDHOLE COVER	ASTM B209 (3003)
PLATES	ASTM B221 (6063-T6)
SHOE BASE	ASTM B108 (356-T6)
FRANGIBLE/BREAKAWAY TRANSFORMER BASE	ASTM B26 OR ASTM B108 (356-T6)
WELD MATERIAL	ER4043
ANCHOR BOLTS	ASTM F1554 GR 55
ANCHOR BOLT NUTS	ASTM A563 GR A
BASE CONNECTION BOLTS	ASTM A325 TYPE 1
BASE CONNECTION NUTS	ASTM A563 GR DH
S.S. HARDWARE	AISI-300 SERIES (18-8)
STRUCTURE FINISH	SEE NOTE 5
HARDWARE FINISH	HD GALV TO ASTM F2329



TENON MOUNT POLE TOP
DETAIL
N.T.S.

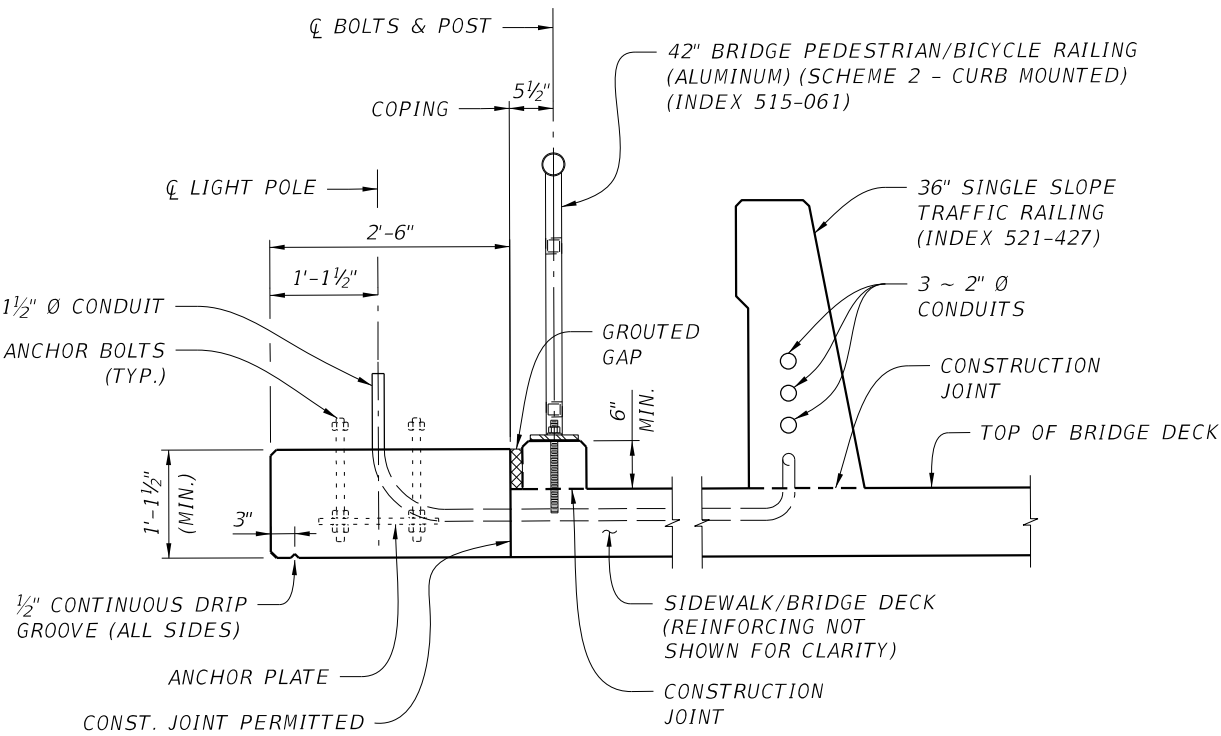
PEDESTAL MOUNTED
POLE DETAIL
N.T.S.

(INSTALL ON PEDESTAL OR BARRIER PER FDOT
INDEXES 521-650 AND 715-002, RESPECTIVELY)

BREAKAWAY BASE
POLE DETAIL
N.T.S.

(INSTALL ON FOUNDATION
PER FDOT INDEX 715-002)

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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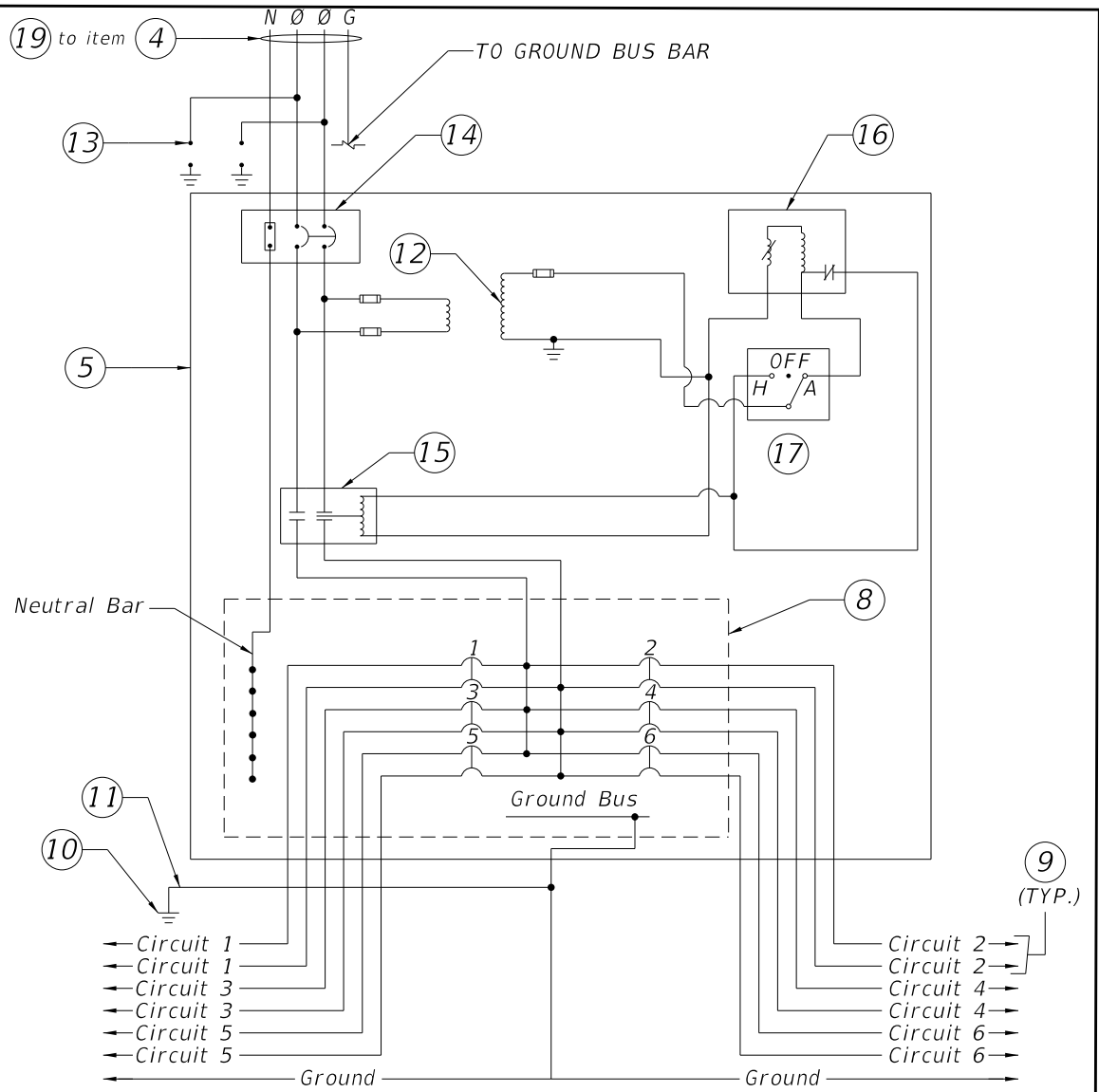
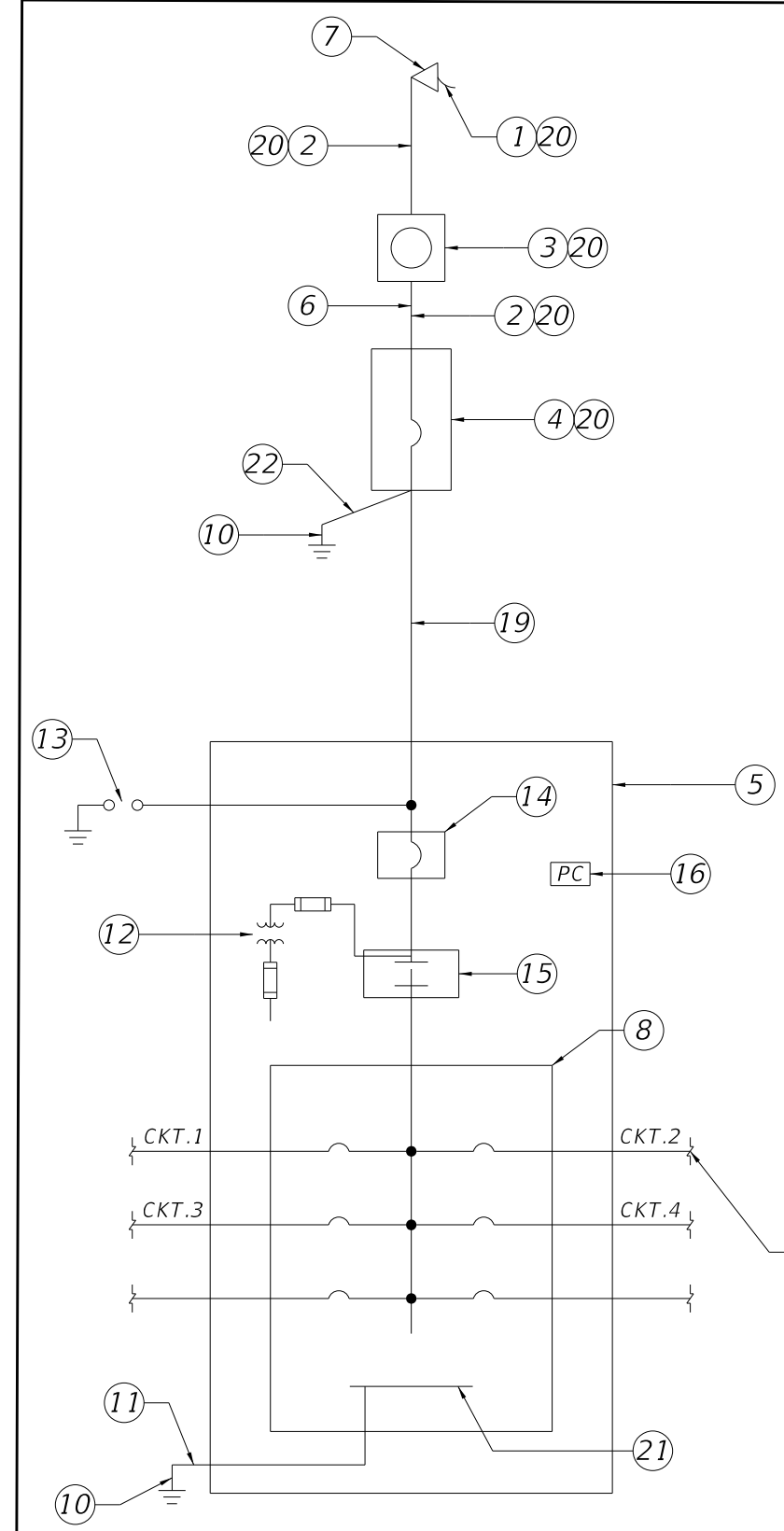


TYPICAL SECTION AT LIGHT POLE PEDESTAL
(WITH GAP BETWEEN BARRIER AND PEDESTAL)

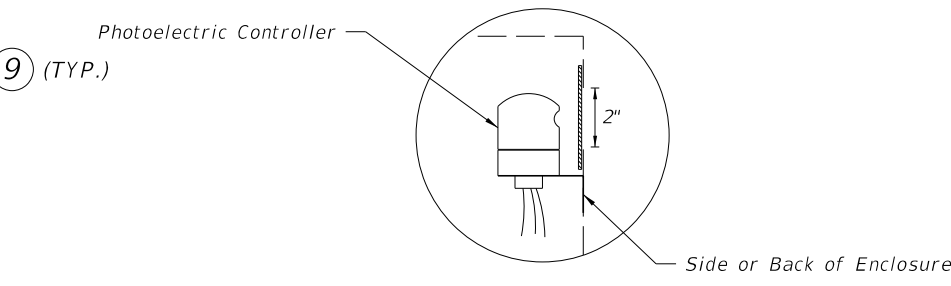
REFER TO STRUCTURE PLANS FOR ADDITIONAL DETAILS.

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- KEYED NOTES:
- 1. 240/120, SINGLE PHASE 3-WIRE FLORIDA POWER AND LIGHT UNDERGROUND POWER SERVICE.
 - 2. 2 #2 & 1 #2 (GND) IN RIGID GALVANIZED STEEL CONDUIT.
 - 3. METER SOCKET BY CONTRACTOR. METER BY FLORIDA POWER AND LIGHT.
 - 4. 100 AMP, 240V SOLID NEUTRAL HEAVY DUTY NEMA 4X SST FUSED SAFETY SWITCH
 - 5. LIGHTING CONTROL CABINET NEMA 4X SST ENCLOSURE. DIMENSIONS AS NECESSARY FOR EQUIPMENT INSIDE. ALL WIRING BETWEEN ENCLOSURES SHALL BE IN RIGID GALVANIZED STEEL CONDUIT. GROUND MOUNTED CABINET PER INDEX 639-002 AND 676-010.
 - 6. CONCRETE RISER POLE.
 - 7. FLORIDA POWER AND LIGHT SERVICE PEDESTAL AT BASE OF FLORIDA POWER AND LIGHT POLE.
 - 8. ELECTRICAL PANEL. NUMBER & RATING OF BRANCH CIRCUIT BREAKERS SHALL BE AS INDICATED ON DISTRIBUTION POINT DESCRIPTION ON LIGHTING PLAN SHEETS.
 - 9. BRANCH CIRCUIT TO ROADWAY LUMINAIRES (FOR THE SIZE OF THE CIRCUIT BREAKER SEE LIGHTING PLANS).
 - 10. TWO COPPER CLAD GROUND ROD $\frac{5}{8}$ " DIA. 20 FT LONG, PLACED 20' APART.
 - 11. #2 INSULATED COPPER GROUND WIRE IN $\frac{3}{4}$ " RIGID GALVANIZED STEEL CONDUIT.
 - 12. FUSED CONTROL POWER TRANSFORMER 0.5 KVA, SINGLE PHASE, 240V PRIMARY, 120V SECONDARY (PART OF LIGHTING CONTACTOR, SHOWN OUTSIDE FOR CLARITY)
 - 13. LIGHTNING ARRESTER MOUNTED ON OUTSIDE OF ENCLOSURE.
 - 14. LIGHTING CONTROL CABINET MAIN BREAKER, 100 AMP, 2P, 240V, 35,000 AIC IN NEMA 1 ENCLOSURE.
 - 15. 2P ELECTRICALLY HELD LIGHTING CONTACTOR IN NEMA 1 ENCLOSURE WITH SAME STANDARD SIZE AS MAIN CIRCUIT BREAKER OR GREATER.
 - 16. 120V PHOTOELECTRIC CELL, 1800VA WITH 2000V PEAK SURGE PROTECTION.
 - 17. HAND-OFF AUTOMATIC SELECTOR SWITCH (PART OF LIGHTING CONTACTOR, SHOWN OUTSIDE FOR CLARITY).
 - 18. CONCRETE PAD.
 - 19. 2 #2, 1 #2 (N) & 1 #2 (GND) IN RIGID GALVANIZED STEEL UNDERGROUND FEEDER CONDUIT.
 - 20. MOUNT ON RISER POLE.
 - 21. GROUND BUS.
 - 22. #2 INSULATED COPPER GROUND WIRE IN $\frac{3}{4}$ " RIGID GALVANIZED STEEL CONDUIT. CONNECT NEUTRAL TO GROUND AND TO METAL ENCLOSURE AS PER NEC.

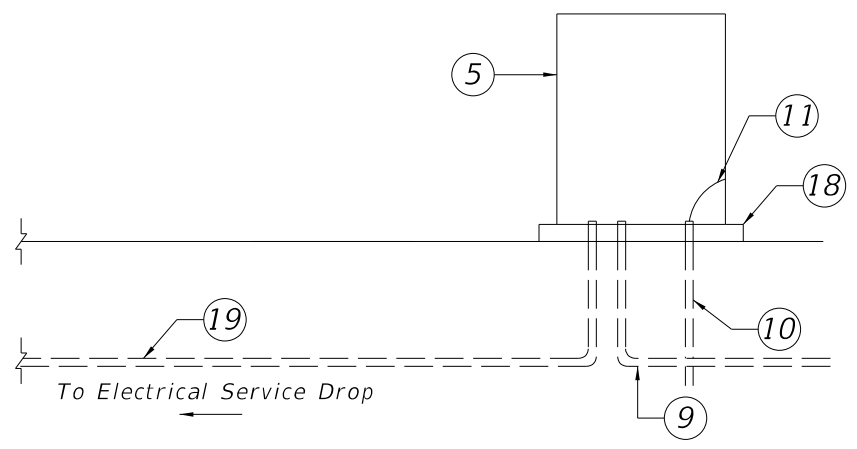


TYPICAL DISTRIBUTION POINT SCHEMATIC DETAIL



Cut a 2" hole in the side of the Lighting Control Panel enclosure for the operation and mounting of the Photo Electric controller. Use plexiglass and a clear silicone sealant to cover hole, install Photo Electric Controller.

PHOTOELECTRIC CONTROLLER DETAIL



RISER DIAGRAM - TYPICAL DISTRIBUTION POINT

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 684	MANATEE	430204-2-52-01		

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Name: Panel 8A - 120/240V Location: STA. 208+06 C/L CONST. SR 684, 73.0' RT														1 PH 3W 100A Main CB TYPE: Panelboard AIC: 35,000			
NO.	DESCRIPTION	LOAD	CB	*	A	B		CB	*	LOAD	DESCRIPTION	NO.					
1	Lighting Circuit 8A-1	2376.7	30/2	CB	X			30/2	CB	1025.6	Lighting Circuit 8A-2	2					
3						X						4					
5	Lighting Circuit 8A-3	946.7	30/2	CB	X			30/2	CB	1025.6	Lighting Circuit 8A-4	6					
7						X						8					
9	Lighting Circuit 8A-5	1025.6	30/2	CB	X			30/2	CB		SPARE	10					
11						X						12					
13	SPARE		30/2	CB	X			30/2	CB		SPARE	14					
15						X						16					
17	SPARE		30/2		X						SPACE	18					
19						X						20					
21	SPACE				X						SPACE	22					
23	SPACE					X					SPACE	24					
				PH. A		PH. B											
		Connected VA		3200.0		3200.0											
Notes:																	
Load Type:		Conn. KVA		NEC Demand Factor		NEC KVA											
Lighting		6.4001		x 125		8.0001											
		6.4001		26.7 amps		8.0001 33.3 amps											
Name: Panel 7A - 120/240V Location: STA. 239+61 C/L CONST. SR 684, 87.6' RT														1 PH 3W 100A Main CB TYPE: Panelboard AIC: 35,000			
NO.	DESCRIPTION	LOAD	CB	*	A	B		CB	*	LOAD	DESCRIPTION	NO.					
1	Lighting Circuit 7A-1	1183.3	30/2	CB	X			30/2	CB	1183.3	Lighting Circuit 7A-2	2					
3						X						4					
5	Lighting Circuit 7A-3	820.0	30/2	CB	X			30/2	CB	622.2	Lighting Circuit 7A-4	6					
7						X						8					
9	Lighting Circuit 7A-5	631.1	30/2	CB	X			30/2	CB		SPARE	10					
11						X						12					
13	SPARE		30/2	CB	X			30/2	CB		SPARE	14					
15						X						16					
17	SPARE		30/2		X						SPACE	18					
19						X						20					
21	SPACE				X						SPACE	22					
23	SPACE					X					SPACE	24					
				PH. A		PH. B											
		Connected VA		2220.0		2220.0											
Notes:																	
Load Type:		Conn. KVA		NEC Demand Factor		NEC KVA											
Lighting		4.4400		x 125		5.5500											
		4.44		18.5 amps		5.5500 23.1 amps											

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Name: Panel 8B - 120/240V Location: STA. 208+01 C/L CONST. SR 684, 73.4' RT														1 PH 3W 100A Main CB				TYPE: Panelboard AIC: 35,000													
NO.	DESCRIPTION							LOAD	CB	*	A	B		CB	*	LOAD	DESCRIPTION							NO.							
1	Lighting Circuit 8B-1							2527.8	30/2	CB	X			30/2	CB	2444.4	Lighting Circuit 8B-2							2							
3												X														4					
5	SPARE								30/2	CB	X			30/2	CB		SPARE							6							
7												X														8					
9	SPARE								30/2	CB	X			30/2	CB		SPARE							10							
11												X														12					
13	SPACE									CB	X				CB		SPACE							14							
15												X														16					
17	SPACE										X						SPACE							18							
19												X														20					
21	SPACE										X						SPACE							22							
23	SPACE											X					SPACE							24							
												PH. A		PH. B																	
								Connected VA				2486.1		2486.1																	
Notes:																															
Load Type:								Conn. KVA				NEC Demand Factor				NEC KVA															
Lighting								4.9722				x 125				6.2153															
								4.9722				20.7 amps				6.2153 25.9 amps															
Name: Panel 7B - 120/240V Location: STA. 239+57 C/L CONST. SR 684, 89.2' RT																								1 PH 3W 100A Main CB				TYPE: Panelboard AIC: 35,000			
NO.	DESCRIPTION							LOAD	CB	*	A	B		CB	*	LOAD	DESCRIPTION							NO.							
1	Lighting Circuit 7B-1							1933.3	30/2	CB	X			30/2	CB	1822.2	Lighting Circuit 7B-2							2							
3												X														4					
5	SPARE								30/2	CB	X			30/2	CB		SPARE							6							
7												X														8					
9	SPARE								30/2	CB	X			30/2	CB		SPARE							10							
11												X														12					
13	SPACE									CB	X				CB		SPACE							14							
15												X														16					
17	SPACE										X						SPACE							18							
19												X														20					
21	SPACE										X						SPACE							22							
23	SPACE											X					SPACE							24							
												PH. A		PH. B																	
								Connected VA				1877.8		1877.8																	
Notes:																															
Load Type:								Conn. KVA				NEC Demand Factor				NEC KVA															
Lighting								3.7555				x 125				4.7															
								3.76				15.6 amps				4.7 19.6 amps															

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DATE	DESCRIPTION		DATE		DESCRIPTION				
					ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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