CITY OF
TREASURE ISLAND, FLORIDA

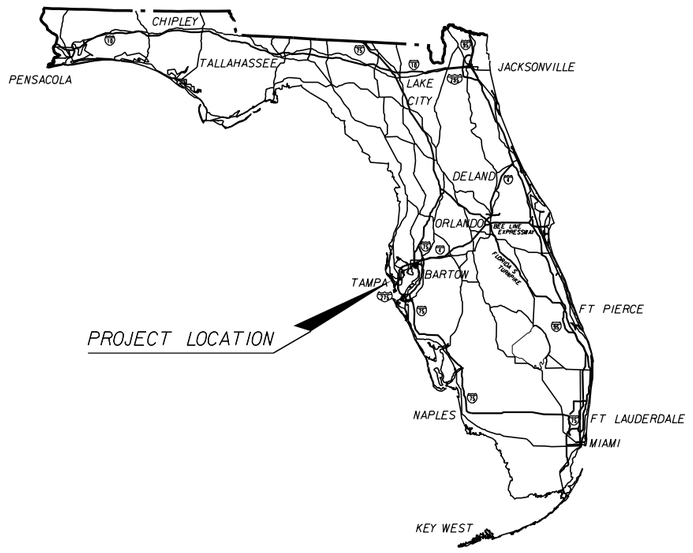
CONTRACT PLANS

PROJECT NO. ITB 1718-11

PINELLAS COUNTY

LIGHTING PLANS

TREASURE ISLAND CAUSEWAY
BRIDGE LIGHTING



INDEX OF LIGHTING PLANS

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY 2018-19 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road Construction and associated IRs are available at the following website: http://www.fdot.gov/design/standardplans

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, July 2018 Standard Specifications for Road and Bridge Construction at the following website: http://www.fdot.gov/programmanagement/Implemented/SpecBooks

PROJECT MANAGER: HAL BRUCE

AECOM

CARLOS TURCIOS LICENSE No 64578 STATE OF FLORIDA PROFESSIONAL ENGINEER

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Turcios, Carlos
Digitally signed by Turcios, Carlos
Date: 2018.07.20 08:41:05 -04'00'

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

AECOM Technical Services, Inc.
7650 WEST COURTNEY
CAMPBELL CAUSEWAY
TAMPA, FL 33607-1462
CERTIFICATE OF AUTHORIZATION NO. 8115
813-286-1711

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

KEY SHEET REVISIONS		
DATE	BY	DESCRIPTION

LIGHTING PLANS
ENGINEER OF RECORD: CARLOS TURCIOS, P.E.

P.E. NO.: 64578

FISCAL YEAR	SHEET NO.
18	L-1

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

BID ITEM NO.	DESCRIPTION	UNIT	DRAWING NUMBER										TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			L-7		L-8		L-9		L-10		L-11						
			ORIG.	FINAL	ORIG.	FINAL	ORIG.	FINAL	ORIG.	FINAL	ORIG.	FINAL	ORIG.	FINAL	ORIG.	FINAL	
715-11-000	BARRIER RAIL FLOODLIGHTS (REMOVE)	EA	–		–		–		–		48		48				
715-11-115	LUMINAIRE (MONUMENT LIGHT)	EA	–		–		6		–		–		6				
715-11-118	LUMINAIRE (LINEAR LED BAR)	EA	–		–		–		–		24		24				
715-11-119	LUMINAIRE (SIDEWALK)	EA	11		4		7		–		5		27				
715-11-129	LUMINAIRE (TRELLIS)	EA	8		10		8				–		26				
101-1	MOBILIZATION	LS											1				
102-1	MAINTENANCE OF TRAFFIC	LS											1				
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, CONVENTIONAL	EA	6		4		4		5		–		19				
715-527-120	LIGHT POLE COMPLETE – SPECIAL DESIGN, FURNISH, DOUBLE ARM BRIDGE MOUNT, ALUMINUM, 20'	EA	6		4		4		5		–		19				
715-537-120	LIGHT POLE COMPLETE – SPECIAL DESIGN, INSTALL, DOUBLE ARM BRIDGE MOUNT, ALUMINUM, 20'	EA	6		4		4		5		–		19				
715-550-000	LIGHTING POLE COMPLETE (REMOVE)	EA	6		4		4		5		–		19				

N.I.C.

PAY ITEM NOTES

715-11-115 MONUMENT LIGHT: SUBMERSIBLE INGROUND FIXTURE. INCLUDES REMOVAL OF EXISTING FIXTURE, FURNISHING AND INSTALLING, AND CONCRETE REPAIRS

715-11-118 BASCULE ROADWAY LUMINAIRE – PAY ITEM INCLUDES COST OF HOUSING, INTEGRAL LED DRIVER, LED CIRCUIT BOARDS, INTERCONNECTING CABLES, COVER AND CORROSION RESISTANT FASTENERS.

715-11-119 SIDEWALK LUMINAIRE – PAY ITEM INCLUDES COST OF LED RETRO FIT KIT LENS, GASKET, LENS COVER AND 316 STAINLESS STEEL FASTENERS.

715-11-129 TRELLIS LUMINAIRE – PAY ITEM INCLUDES COST OF LED RETRO FIT KIT LENS, GASKET, LENS COVER AND 316 STAINLESS STEEL FASTENERS.

102-1 MAINTENANCE OF TRAFFIC – PAY ITEM INCLUDES ALL WORK AND ITEMS REQUIRED TO MAINTAIN TRAFFIC DURING CONSTRUCTION.

715-500-1 POLE CABLE DISTRIBUTION SYSTEM – PAY ITEM INCLUDES SURGE PROTECTOR, FUSE HOLDERS WITH FUSES, WATERPROOF CONNECTORS, AND WATERPROOF WIRING CONNECTIONS TO THE LUMINAIRE.

715-527-120 LIGHT POLE COMPLETE (FURNISH) – PAY ITEM INCLUDES COST OF ALUMINUM POLE, DOUBLE ARM ASSEMBLY, LUMINAIRES, AND POLE BASE COVER.

715-537-120 LIGHT POLE COMPLETE (INSTALL)– POLES UNDER THIS PAY ITEM SHALL BE INSTALLED ON EXISTING ANCHOR BOLTS.

715-550-000 LIGHTING POLE COMPLETE (REMOVE) – PAY ITEM INCLUDES THE REMOVAL AND DISPOSAL OF ENTIRE POLE ASSEMBLY AND ALL ASSOCIATED COMPONENTS. INCLUDING LUMINAIRES AND MOUNTING ARMS. EXISTING FOUNDATIONS AND ANCHOR BOLTS TO REMAIN. MAINTAIN CIRCUIT CONTINUITY FOR OTHER LIGHT POLES THAT ARE REQUIRED TO BE ACTIVE.

LEGEND:

NOT IN CONTRACT (N.I.C.)

CONTRACT A
BRIDGE NO. 157801

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAMES	DATES
DRAWN BY	JMC	4/18
CHECKED BY	CT	5/18
DESIGNED BY	JMC	4/18
CHECKED BY	CT	5/18
APPROVED BY	Carlos Turcios	

AECOM
7650 West Courtney Campbell Causeway
Tampa, Florida 33607
Engineer of Record:
Carlos Turcios, P.E.
P.E. No: 64578

PROJECT NO.
ITB 1718-11

SHEET TITLE: TABULATION OF QUANTITIES
PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING
SHEET NO. –
DRAWING NO. L-2

SIDEWALK LUMINAIRE DATA

LUM. NO.	CKT.	STATION	LUM. WATTAGE	SETBACK AND NOTES	FINAL
1	B-4	129+20.00	35	Note 2	
2	B-4	129+70.00	35	Note 2	
3	B-4	130+20.00	35	Note 2	
4	B-4	130+70.00	35	Note 2	
5	B-4	131+14.00	35	Note 2	
6	B-4	131+60.70	35	Note 2	
7	B-4	132+07.30	35	Note 2	
8	B-4	132+60.70	35	Note 2	
9	B-4	133+14.00	35	Note 2	
10	B-4	133+60.50	35	Note 2	
11	B-4	134+07.30	35	Note 2	
12	B-4	134+55.00	35	Note 2	
13	B-4	135+02.50	35	Note 2	
14	B-5	135+42.50	35	Note 2	
15	B-5	135+82.50	35	Note 2	
16	B-5	136+18.00	35	Note 2	
17	A-8	136+60.00	35	Note 2	
18	A-8	137+00.50	35	Note 2	
19	A-6	137+40.50	35	Note 2	
20	A-6	137+87.50	35	Note 2	
21	A-6	138+34.00	35	Note 2	
22	A-6	138+81.00	35	Note 2	
23	A-6	139+28.00	35	Note 2	
24	A-6	139+81.50	35	Note 2	
25	A-6	140+35.00	35	Note 2	
26	A-6	140+81.50	35	Note 2	
27	A-6	141+28.00	35	Note 2	
28	A-6	141+80.00	35	Note 2	
29	A-6	142+25.00	35	Note 2	
30	A-6	142+70.00	35	Note 2	

TRELLIS LUMINAIRE DATA

LUM. NO.	CKT.	STATION	LUM. WATTAGE	SETBACK AND NOTES	FINAL
1	B-2	131+13.95	22	NOTE 3	
2	B-3	131+13.95	22	NOTE 3	
3	B-2	132+07.29	22	NOTE 3	
4	B-3	132+07.29	22	NOTE 3	
5	B-2	133+13.96	22	NOTE 3	
6	B-3	133+13.96	22	NOTE 3	
7	B-2	134+07.29	22	NOTE 3	
8	B-3	134+07.29	22	NOTE 3	
9	B-2	134+98.60	22	NOTE 3	
10	B-3	134+98.60	22	NOTE 3	
11	B-2	135+10.60	22	NOTE 3	
12	B-3	135+10.60	22	NOTE 3	
13	B-2	135+14.60	22	NOTE 3	
14	B-3	135+14.60	22	NOTE 3	
15	B-3	135+48.00	22	NOTE 3	
16	A-3	137+27.30	22	NOTE 3	
17	A-4	137+27.30	22	NOTE 3	
18	A-3	137+31.30	22	NOTE 3	
19	A-4	137+31.30	22	NOTE 3	
20	A-3	137+43.30	22	NOTE 3	
21	A-4	137+43.30	22	NOTE 3	
22	A-3	138+34.63	22	NOTE 3	
23	A-4	138+34.63	22	NOTE 3	
24	A-3	139+27.96	22	NOTE 3	
25	A-4	139+27.96	22	NOTE 3	
26	A-3	140+34.63	22	NOTE 3	
27	A-4	140+34.63	22	NOTE 3	
28	A-3	141+27.96	22	NOTE 3	
29	A-4	141+27.96	22	NOTE 3	

BASC. ROADWAY LUM. DATA

LUM. NO.	CKT.	STATION	LUM. WATTAGE	SETBACK AND NOTES	FINAL
1	B-5	135+52.50	80W	Note 1	
2	B-5	135+52.50	80W	Note 1	
3		135+65.00		Remove	
4		135+65.00		Remove	
5	B-5	135+77.50	80W	Note 1	
6	B-5	135+77.50	80W	Note 1	
7		135+90.00		Remove	
8		135+90.00		Remove	
9	B-5	136+02.50	80W	Note 1	
10	B-5	136+02.50	80W	Note 1	
11		136+15.00		Remove	
12		136+15.00		Remove	
13		136+27.50		Note 6	
14		136+27.50		Note 6	
15	A-8	136+40.00	80W	Note 1	
16	A-8	136+40.00	80W	Note 1	
17		136+52.50		Remove	
18		136+52.50		Remove	
19	A-8	136+65.00	80W	Note 1	
20	A-8	136+65.00	80W	Note 1	
21		136+77.50		Remove	
22		136+77.50		Remove	
23	A-8	136+90.00	80W	Note 1	
24	A-8	136+90.00	80W	Note 1	
25	B-7	135+52.50	80W	Note 1	
26	B-7	135+52.50	80W	Note 1	
27		135+65.00		Remove	
28		135+65.00		Remove	
29	B-7	135+77.50	80W	Note 1	
30	B-7	135+77.50	80W	Note 1	
31		135+90.00		Remove	
32		135+90.00		Remove	
33	B-7	136+02.50	80W	Note 1	
34	B-7	136+02.50	80W	Note 1	
35		136+15.00		Remove	
36		136+15.00		Remove	
37		136+27.50		Note 6	
38		136+27.50		Note 6	
39	A-7	136+40.00	80W	Note 1	
40	A-7	136+40.00	80W	Note 1	
41		136+52.50		Remove	
42		136+52.50		Remove	
43	A-7	136+65.00	80W	Note 1	
44	A-7	136+65.00	80W	Note 1	
45		136+77.50		Remove	
46		136+77.50		Remove	
47	A-7	136+90.00	80W	Note 1	
48	A-7	136+90.00	80W	Note 1	

N.I.C.

POLE DATA

POLE NO.	CKT.	STATION	DIST. OR ARM	LUM. WATTAGE	M.H.	SETBACK AND NOTES	FINAL
1	B-1	129+20.00	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
2	B-1	130+10.00	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
3	B-1	131+00.00	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
4	B-1	131+90.00	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
5	B-1	132+70.00	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
6	B-1	133+50.00	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
7	B-1	134+30.00	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
8	B-1	135+02.50	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
9	A-1	137+40.00	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
10	A-1	138+22.50	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
11	A-1	138+97.50	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
12	A-1	139+72.50	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
13	A-1	140+52.50	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
14	A-1	141+32.50	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
15	A-2	142+12.50	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
16	A-2	142+92.50	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
17	A-2	143+72.50	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
18	A-2	144+52.50	2 @ 2.75'	2 @ 75	20'	Median, Note 4	
19	A-2	145+32.50	2 @ 2.75'	2 @ 75	20'	Median, Note 4	

LEGEND

SYMBOL	DESCRIPTION
	Remove and replace existing luminiares and pole. Verify dimensions and mount on existing anchor bolts. See sheet L-5 for additional details.
	Existing barrier mounted sidewalk luminaire. Remove all internal components and replace with an LED retro fit kit with integral 120 volt drive. LED light source shall be 4,000° K, with an output of 2,800 lumens. Replace gasket and machine screws (use 316 S.S.).
	Existing bascule leaf luminaire. Remove and repair concrete.
	Wall wash type linear LED lighting fixture. Fixture shall be 48" long with 4,000° K, LED lighting modules to provide an output of 1575 lumens per foot. LED driver shall be dimmable and operate on 120 volts. Provide one controller for each leaf. Fixtures shall be provided with cable sockets for daisy chain circuiting.
A,B,or C	Existing Embedded Trellis Luminaire. Remove all internal components and replace with an LED retro fit kit with integral 120 volt drive. 22W LED light source shall be 4,500° K, with an output of 2,800 lumens. Replace gasket and machine screws (use 316 S.S.).
	Monument Light. Remove existing in ground fixture and replace with submersible 22W LED, 4,000°K, wet/dry fixture.
	Existing Lighting Panel
	Existing roadside pull box
	Existing embedded pull box.
	NOT IN CONTRACT (N.I.C.)

N.I.C.

CONVENTIONAL ROADWAY LIGHTING DESIGN CRITERIA

AVERAGE INITIAL INTENSITY	1.5 F.C.
UNIFORMITY RATIO AVG./MIN.	4:1 OR LESS
MAX./MIN	10:1 OR LESS
WIND SPEED	140 M.P.H.

NOTES

1. Remove and patch concrete.
2. Retro fit with 35W LED Light
3. Retro fit with 22W LED Light
4. Mount on existing anchor bolts.
5. Replace with submersible LED fixture.
6. Remove and cover hole.

CONTRACT A
BRIDGE NO. 157801

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAMES	DATES
DRAWN BY	JMC	4/18
CHECKED BY	CT	5/18
DESIGNED BY	JMC	4/18
CHECKED BY	CT	5/18
APPROVED BY	Carlos Turcios	

AECOM
7650 West Courtney Campbell Causeway
Tampa, Florida 33607
Engineer of Record:
Carlos Turcios, P.E.
P.E. No: 64578

PROJECT NO.
ITB 1718-11

SHEET TITLE: POLE DATA AND LEGEND
SHEET NO.: -
PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING
DRAWING NO.: L-3

GENERAL NOTES

1. Scope of work includes replacement of light poles and luminaires, replacement of bascule floodlights, retrofit of existing sidewalk and trellis luminaires, and replacement of in ground monument lights.
2. Prior to any equipment order, the Contractor shall submit for approval seven (7) copies of equipment specification and design data for all material proposed for the project. These must specifically include:
   A. Luminaire Photometrics
   B. Pole strength calculations
   C. Coordination with existing anchor bolt and bolt circle diameter
   D. Pole and Luminaire shop drawings
3. All lighting circuits belong to the City of Treasure Island. Panelboards are located in the bascule piers as shown in the plans.
4. Poles, luminaires and bases shall be fabricated in accordance with AASHTO "Standard Specifications for Structural Support 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.
5. Submittal data shall include computer printout showing horizontal footcandle levels to be obtained using the submitted luminaires on this project. At final inspection the Contractor shall verify the horizontal footcandle levels on the roadway with an approved, calibrated light meter and make adjustments as directed by the Engineer at no extra cost to the City.
6. 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 DOT Standard Specifications for Road and Bridge Construction. All components shall be properly grounded and bonded per the NEC requirements.
7. Furnish and install an aluminum identification tag on each roadway light pole. Tags shall be 2" x 12" in size with black letters on yellow background, attached with rivets (not screws). Numbers shall be as shown on the Pole Data Sheet. See Pole Identification Tag Detail. Cost of tags shall be included in the Pay Item for Light Pole Complete.
8. Pulling Instructions: Connect pulling devices to new copper wire and not to jacket and meet manufacturer's requirements. Use pulling compound per manufacturer's requirements. All bends shall be less than recommended by the NEC for cable used.
9. All poles mounted on bridges shall have handholes not located on the mast arm side at the bottom of the pole. Poles mounted on bridge structures, retaining walls or barrier walls shall be non-frangible.
10. All electrical equipment shall be new, of current model, from a single manufacturer. UL listed or labeled, suitable for the intended application and installed in accordance with NFPA 70 (NEC).
11. Splices and connections made in pull boxes shall be limited to the service point and conduit junction with multiple-directional conduits as indicated on the Plans. The connection made at these points shall be properly taped and heat-shrink tubes or caps shall be used to waterproof these connections. Ends of conduits shall be sealed with polyurethane foam after wiring completed.
12. Underground conduit and conductors between light poles are existing to remain, the Contractor shall field verify that existing conductors are properly sized per NEC requirements to accommodate new lighting loads. Inform the construction manager of any improper conductor sizes.
13. Make all conductor splices in the bases of the light poles, or in pull boxes designed for the purpose. Do not make underground splices unless specifically authorized by the Engineer, and then only as directed by him. Refer to FDOT index 17500.
14. Poles are to be placed on existing foundations or bases with anchor bolts in place, furnish poles with a base which fits the anchor bolt spacing. Previous to bidding, field verify the existing anchor bolt spacing and include the cost of any necessary extension of existing anchor bolts in the price bid.
15. Install light pole luminaire on mounting arm in accordance with the manufacturer's instructions, and place it so that the light pattern is evenly distributed along the roadway
16. Make primary ballast connections in accordance with manufacturer's instructions. Install sufficient cable to allow all connections to be made outside the light pole base. Connect the ground conductor to the ground stud provided.
17. Upon completion of the work, test the installation to ensure that the installation is entirely free of ground faults, short circuits, and open circuits and that it is in satisfactory working condition. Furnish all labor, materials, and apparatus necessary for making the required tests. Remove and replace any defective material or workmanship discovered as a result of these tests at no expense to the Owner, and make subsequent re-tests to the satisfaction of the Engineer.
18. The Engineer may make partial acceptance of the Bridge lighting based on satisfactory performance of all Bridge lighting for seven consecutive days. The seven day evaluation period may commence upon written authorization by the Engineer that Bridge lighting is considered ready for acceptance evaluation. Contract Time will be charged during the entire Bridge lighting evaluation period. Correct any defects in materials or workmanship which might appear during the evaluation period at no expense to the Owner.
19. Maintenance of Traffic:
   A. Single lane closures shall be implemented in accordance with FDOT Design Standards Index Nos. 600 and 613. Utilize Index No. 612 for work greater than 2 feet from the travel lane.
   B. Sidewalk Closures shall utilize Index No. 660.
   C. Existing posted speed shall be maintained.
   D. All lane closures shall be reported to the local emergency agencies, the media, and the City of Treasure Island Public Works Office.
   E. All lanes must be opened for traffic during an evacuation notice of a hurricane or other catastrophic event and must remain open for the duration of the evacuation. (If on the evacuation route).
   F. Lane closures shall not occur between 6:00 AM - 9:00 AM and 4:00 PM - 7:00 PM.

VOLTAGE: 240V/120V, 1Ø, 3W
RATING: 100A
FEEDER:

PANEL: RDL-N (A)

MFGR:
CAT#:
TYPE:

CKT	AMPS	POLE	DESCRIPTION	VOLTAMPERES		A	B	VOLTAMPERES		DESCRIPTION	POLE	AMPS	CKT
1	20*	1	(A-1) NEAR Poles	1125		X		938		(A-2) NEAR Poles	1	20*	2
3	20	1	(A-3) Trellis North		154		X		154	(A-4) Trellis South	1	20	4
5	20	1	Spare			X		420		(A-6) Sidewalk	1	20	6
7	20	1	NO-BR (LED)		570		X		570	NA-BR (LED)	1	20	8
9	30*	1	Spare			X				Spare	1	30*	10
11	30	1	Spare				X						12
13						X							14
15							X						16
17						X							18
TOTALS				1125	724	S/N		1358	724	TOTALS			

BUS A 2483VA
BUS B 1448VA
LOAD 3931VA

3.9 KVA DEMAND
16.38 LINE AMPS
100 TRIP MAIN
100 FRAME MAIN

*RDL-N (A) NOTE: Swap existing 30A circuit breakers at circuits 1 and 2 with existing 20A circuit breakers at circuits 9 and 10.

PANEL SCHEDULE RDL-N (LOAD CENTER A)

VOLTAGE: 240V/120V, 1Ø, 3W
RATING: 100A
FEEDER:

PANEL: RDL-F (B)

MFGR:
CAT#:
TYPE:

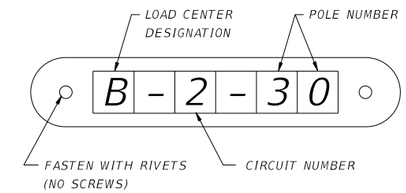
CKT	AMPS	POLE	DESCRIPTION	VOLTAMPERES		A	B	VOLTAMPERES		DESCRIPTION	POLE	AMPS	CKT
1	20*	1	(B-1) FAR Poles	1500		X		154		(B-2) Trellis	1	20	2
3	20	1	(B-3) Trellis		176		X		455	(B-4) Sidewalk	1	20	4
5	30	1	(B-5) FA-BR	585		X				Spare	1	20	6
7	20	1	(B-7) FO-BR		480		X			Spare	1	30	8
9	40*	1	Spare			X				Spare	1	20	10
11							X						12
13						X							14
15							X						16
17						X							18
TOTALS				2085	656	S/N		154	455	TOTALS			

BUS A 2239 VA
BUS B 1111 VA
LOAD 3350 VA

3.35 KVA DEMAND
13.96 LINE AMPS
100 TRIP MAIN
100 FRAME MAIN

*RDL-N (B) NOTE: Swap existing 40A circuit breaker at circuit 1 with the existing 20A circuit breaker at circuit 9.

PANEL SCHEDULE RDL-F (LOAD CENTER B)



POLE IDENTIFICATION TAG DETAIL
See Note 7
N.T.S.

LEGEND:

NOT IN CONTRACT (N.I.C.)

CONTRACT A
BRIDGE NO. 157801

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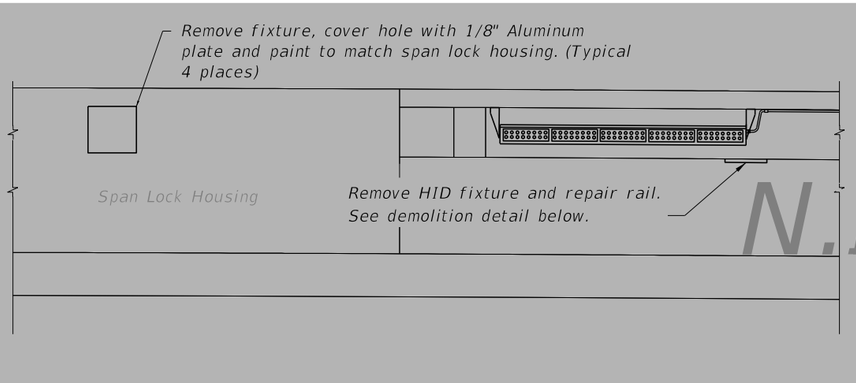
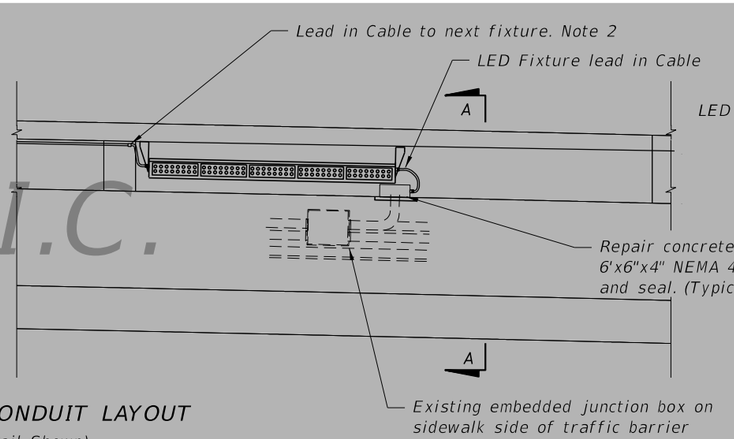
Engineer of Record:
Carlos Turcios, P.E.
P.E. No: 64578

PROJECT NO.
ITB 1718-11

SHEET TITLE: LIGHTING GENERAL NOTES
PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING

SHEET NO. -
DRAWING NO. L-4

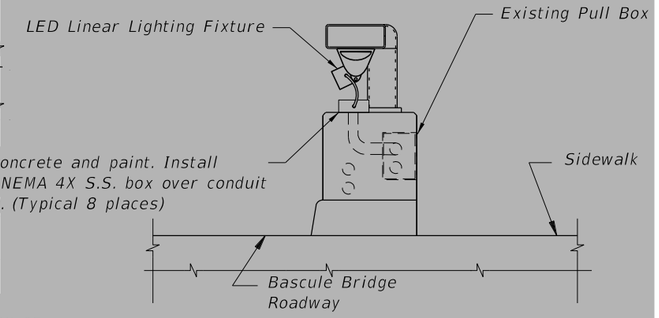




N.I.C.

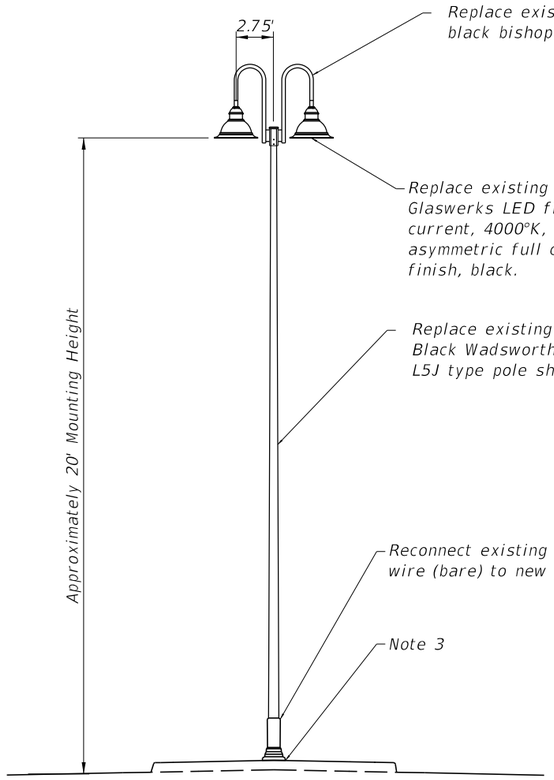
BARRIER RAIL CONDUIT LAYOUT

(NE Barrier Rail Shown)
No Scale



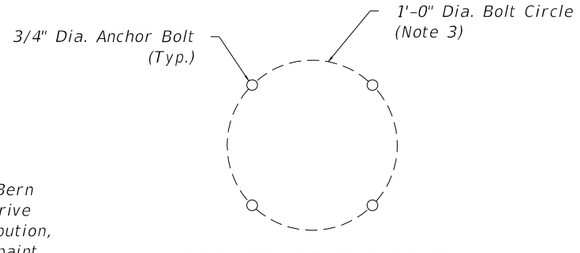
SECTION A-A

(Bascule Spans)
No Scale



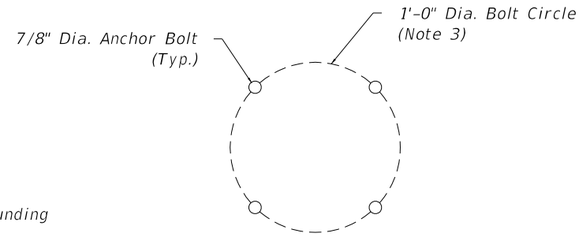
TYPICAL ROADWAY LIGHTING POLE

N.T.S.



ANCHOR BOLT CIRCLE DRILLED SHAFT MOUNTED

N.T.S.

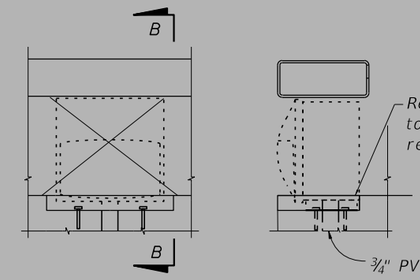


ANCHOR BOLT CIRCLE MAIN BRIDGE MOUNTED

N.T.S.

LEGEND:

NOT IN CONTRACT (N.I.C.)



SECTION B-B

BARRIER FLOOD LIGHT - DEMOLITION DETAILS

No Scale

N.I.C.

NOTES:

1. Mount fixture with 3/8-16 316 S.S. Bolts. Drill and tap rail. Seal threads with urethane caulk.
2. Secure lead in cable to underside of rail with one hole S.S. clamp and 1/4-20 316 S.S. bolts. Seal threads with urethane caulk.
3. Verify existing bolt pattern and mount new pole on exisitng anchor bolts. Contractor to field verify all dimensions.

CONTRACT A
BRIDGE NO. 157801

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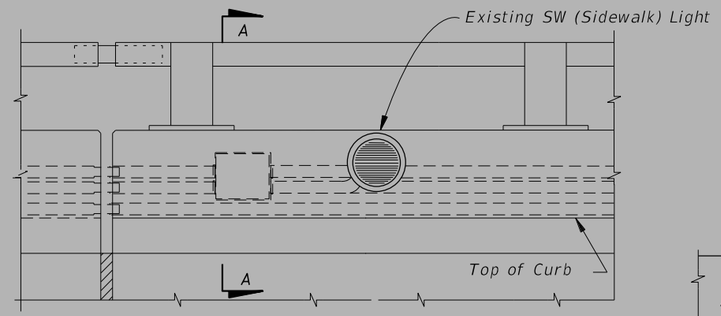
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAMES	DATES
DRAWN BY	JMC	4/18
CHECKED BY	CT	5/18
DESIGNED BY	JMC	4/18
CHECKED BY	CT	5/18
APPROVED BY	Carlos Turcios	

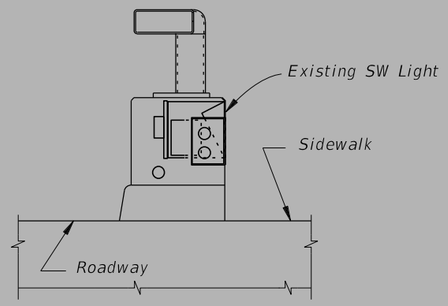
AECOM
7650 West Courtney Campbell Causeway
Tampa, Florida 33607
Engineer of Record:
Carlos Turcios, P.E.
P.E. No: 64578

PROJECT NO.
ITB 1718-11

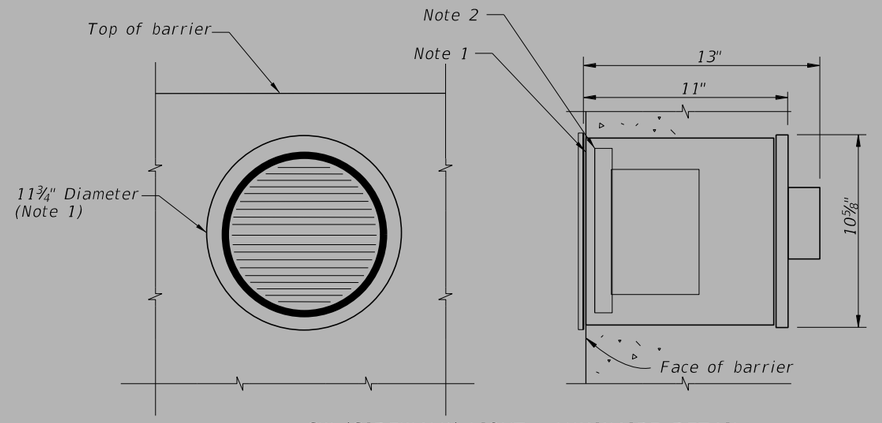
SHEET TITLE: LIGHTING DETAILS (1 OF 2)
SHEET NO. –
PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING
DRAWING NO. L-5



RAIL ELEVATION
(Pedestrian Side)

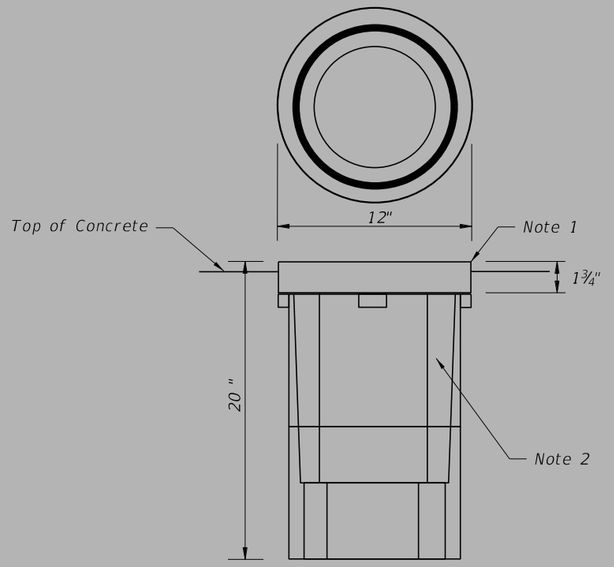


SECTION A-A
(Approach and Bascule Spans)

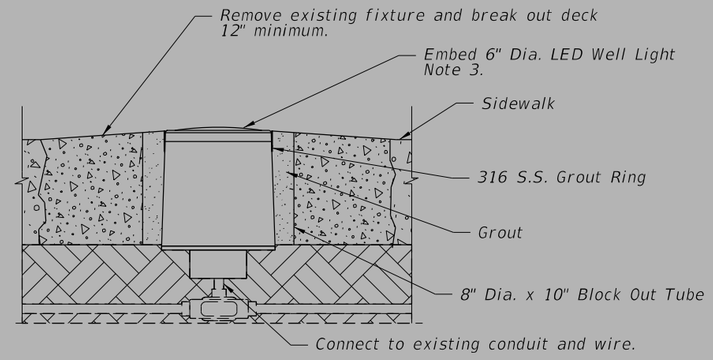


SW (SIDEWALK) LIGHT – LUMINAIRE DETAIL

N.I.C.



TRELLIS LIGHT
SPECIAL LUMINAIRE DETAIL



IN GROUND MONUMENT LIGHT

NOTES:

1. Detail shown for reference. Contractor shall verify dimensions to assure proper lens, gasket, and fastener replacements.
2. Remove all internal components and install LED board and driver. See L-3 for ratings. Connect to existing feeder conductors.
3. Install block out and pour repair concrete to creat a 1/4" slope. Install fixture with grout ring, pour grout and slope to repair.

LEGEND:

NOT IN CONTRACT (N.I.C.)

CONTRACT A
BRIDGE NO. 157801

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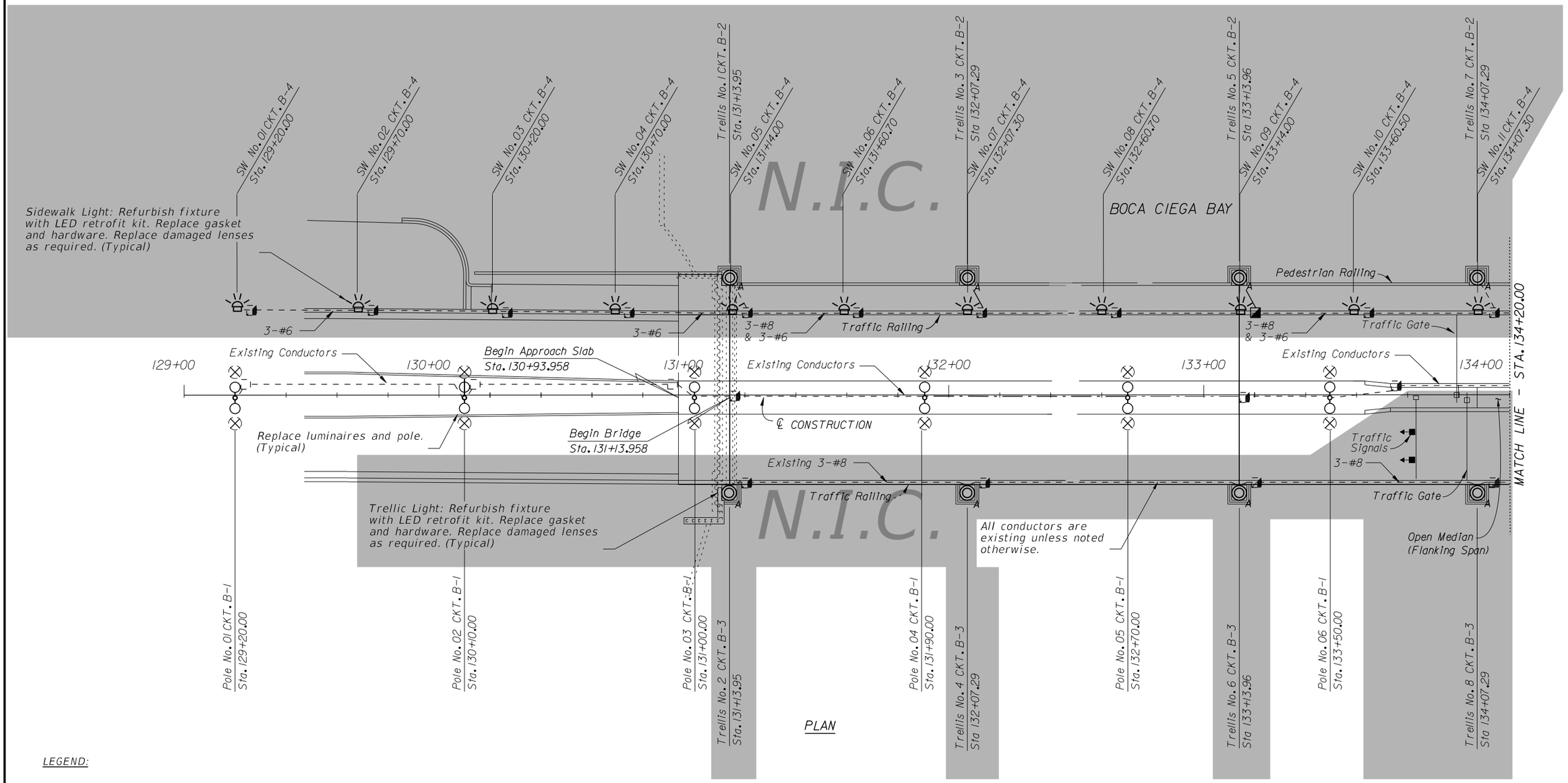
Engineer of Record:
Carlos Turcios, P.E.
P.E. No: 64578

PROJECT NO.
ITB 1718-11

SHEET TITLE: LIGHTING DETAILS (2 OF 2)
PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING
SHEET NO. –
DRAWING NO. L-6



PLAN

LEGEND:

NOT IN CONTRACT (N.I.C.)

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P.E. No: 64578

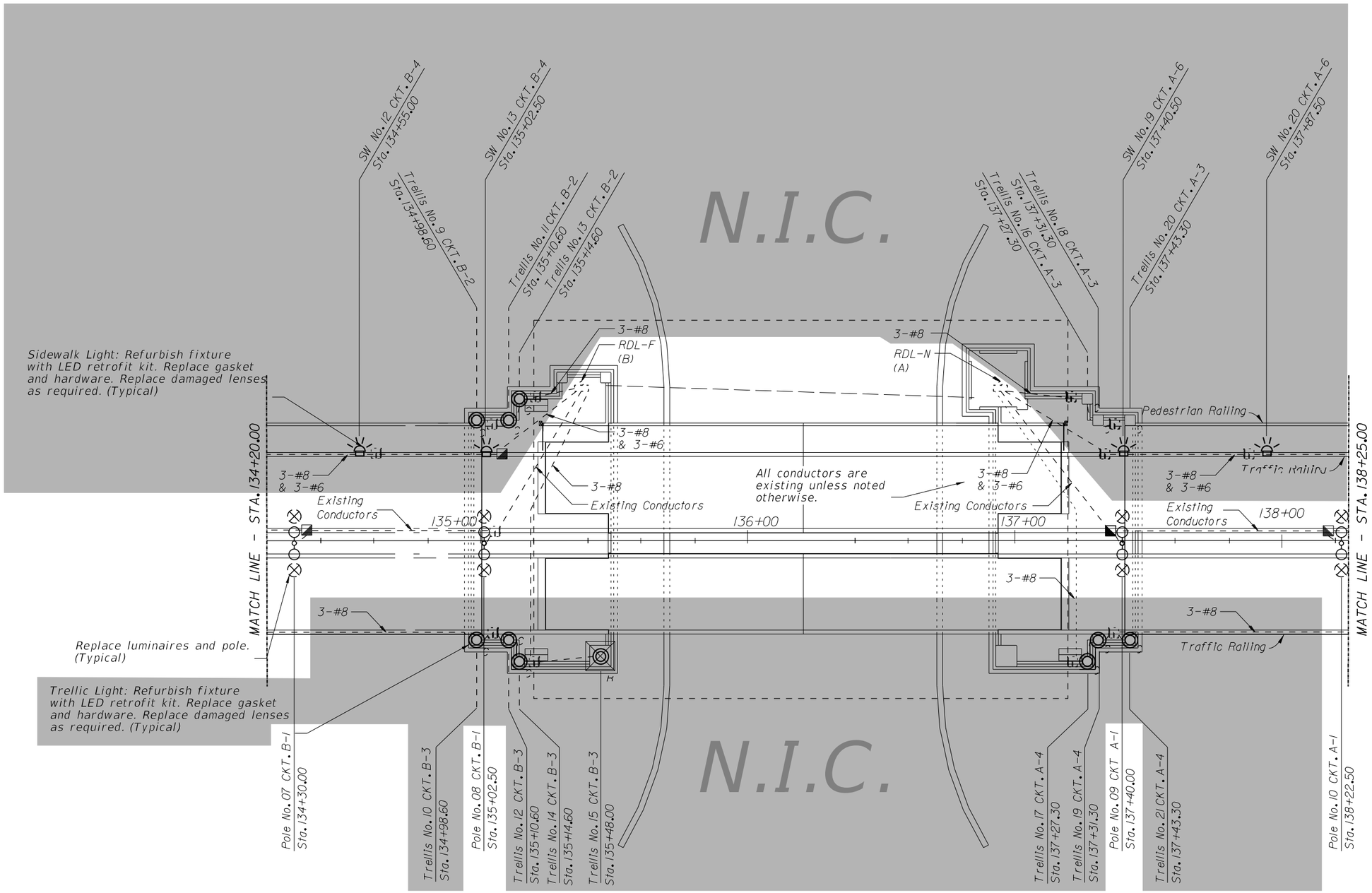
PROJECT NO.
ITB 1718-11

SHEET TITLE: LIGHTING PLAN (STA. 129+00 TO STA. 134+20)

PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING

SHEET NO. -

DRAWING NO. L-7



PLAN

LEGEND:

NOT IN CONTRACT (N.I.C.)

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P.E. No: 64578

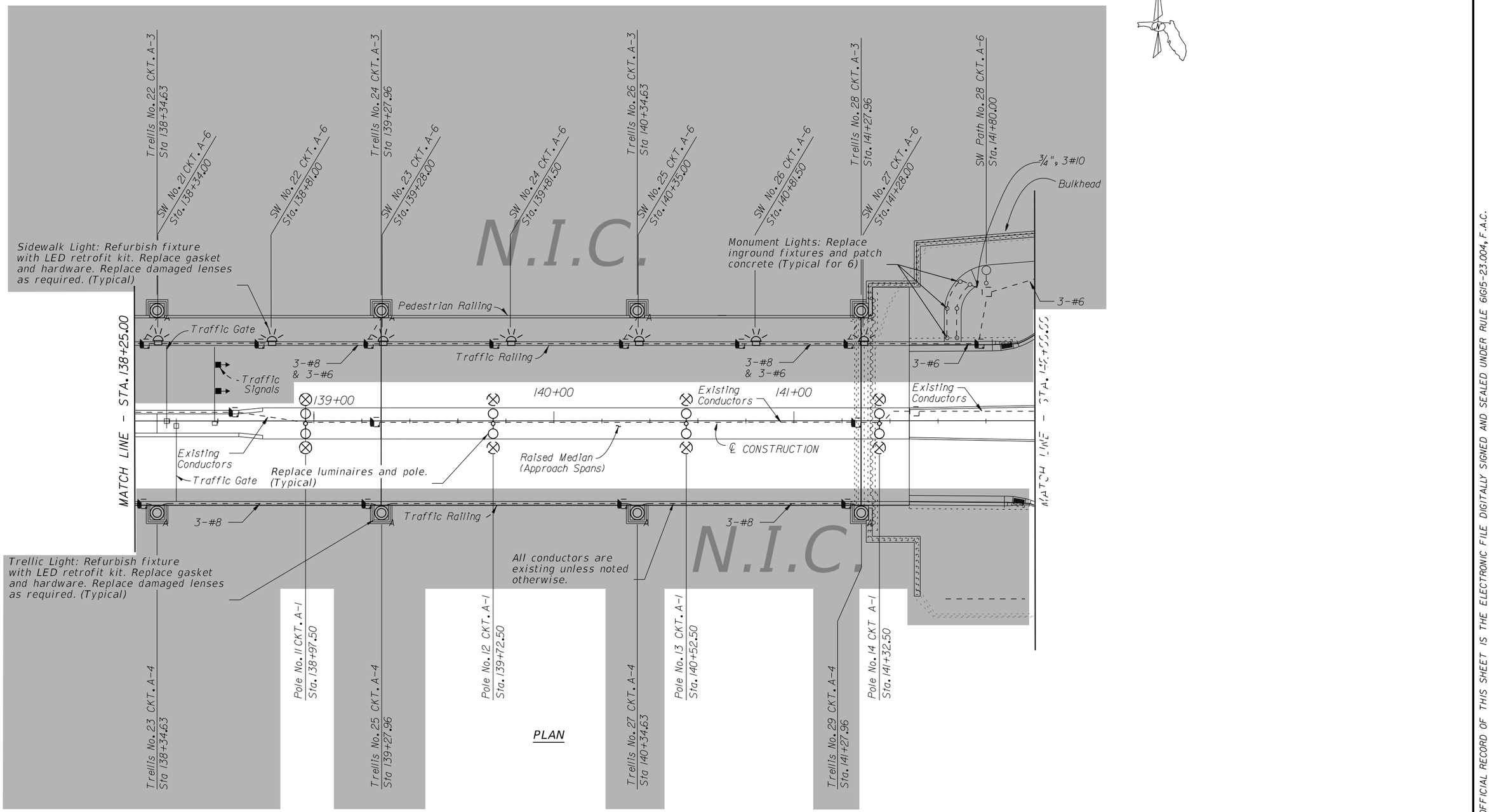
PROJECT NO.
ITB 1718-11

SHEET TITLE: LIGHTING PLAN (STA. 134+20 TO 138+25)

PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING

SHEET NO. -

DRAWING NO. L-8



PLAN

CONTRACT A
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P.E. No: 64578

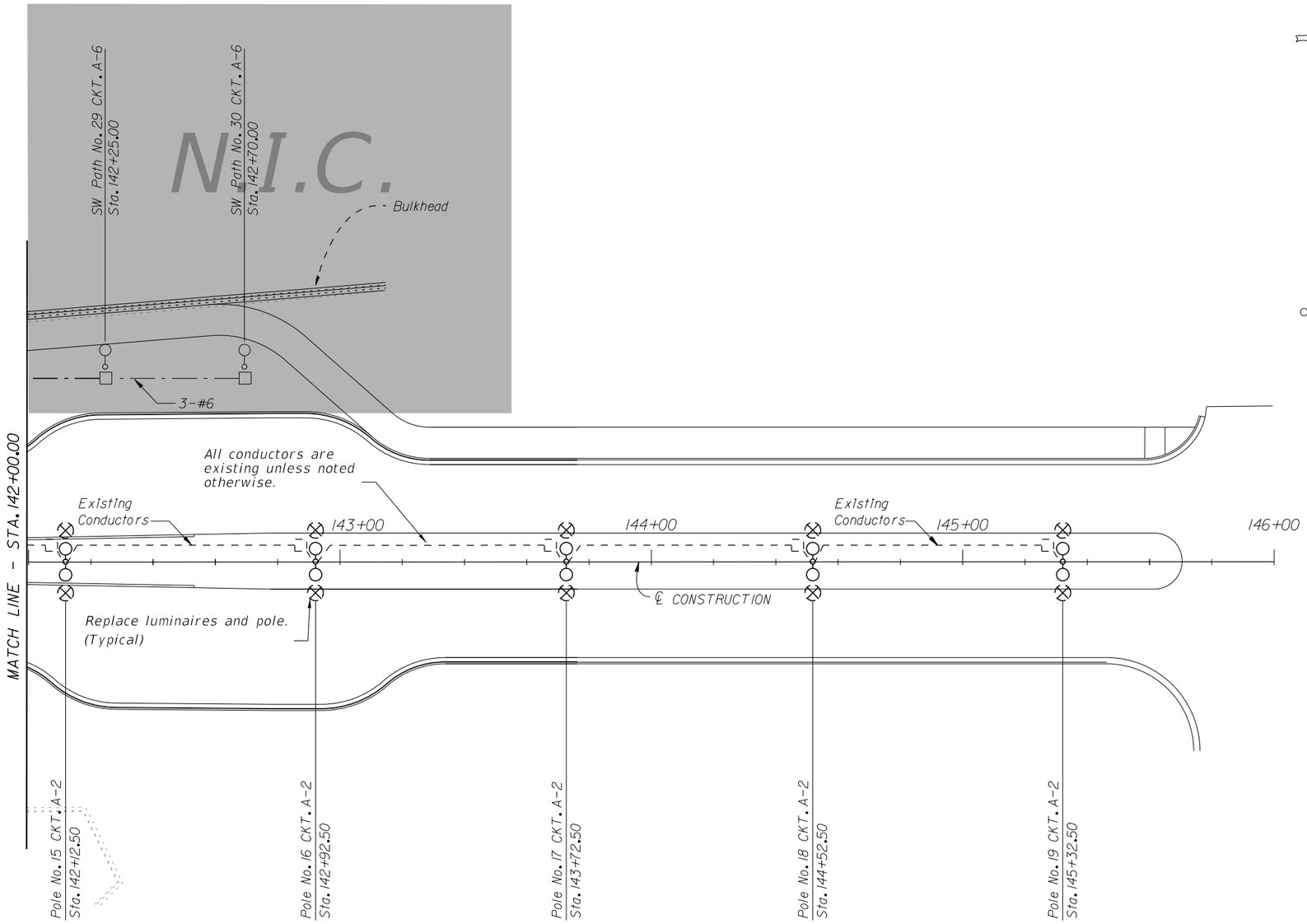
PROJECT NO.
ITB 1718-11

SHEET TITLE: LIGHTING PLAN (STA. 138+25 TO STA. 142+00)

PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING

SHEET NO. -

DRAWING NO. L-9



PLAN

LEGEND:

NOT IN CONTRACT (N.I.C.)

CONTRACT A
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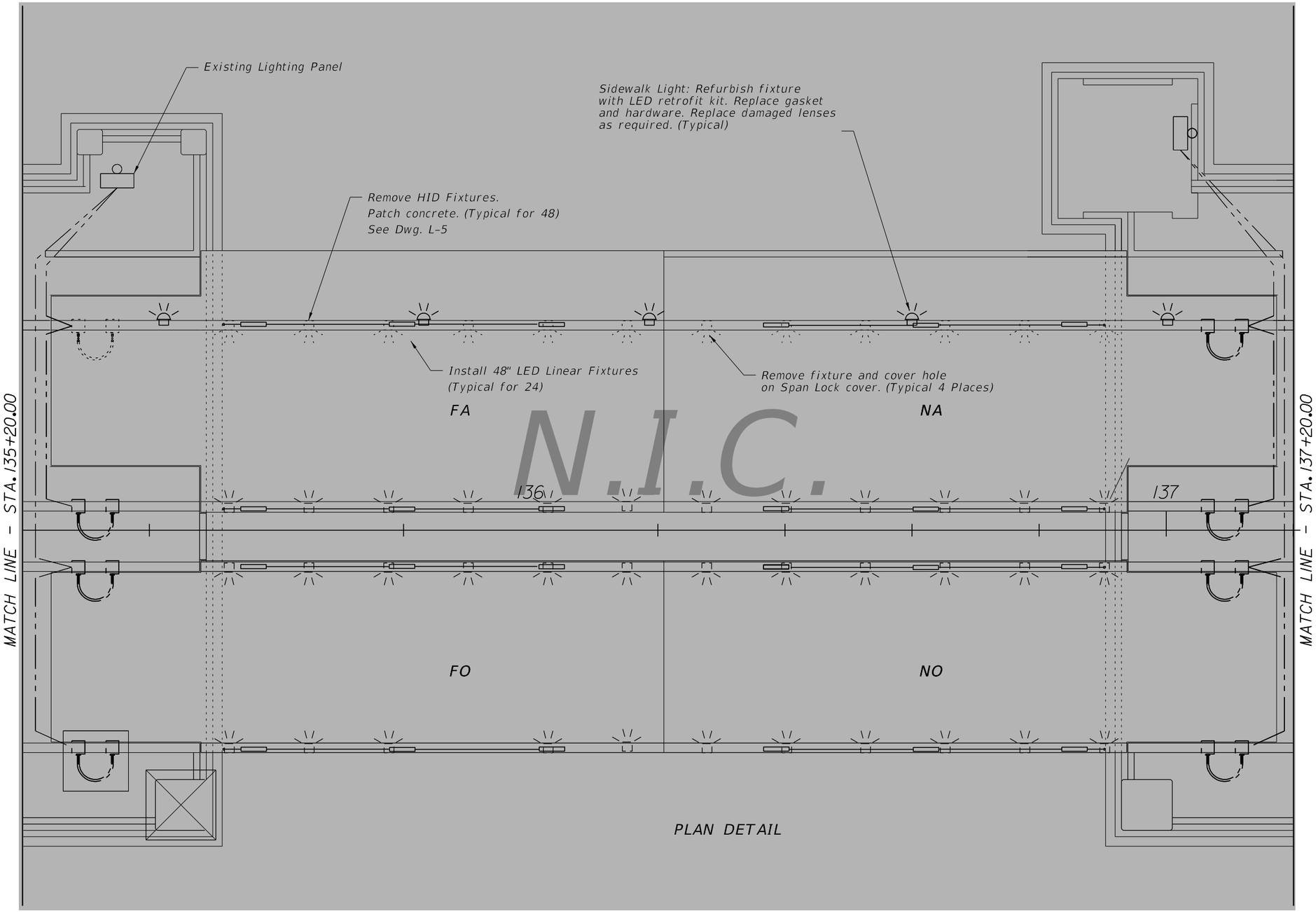
Tampa, Florida 33607
Engineer of Record:
Carlos Turcios, P.E.
P.E. No: 64578

PROJECT NO.
ITB 1718-11

SHEET TITLE: LIGHTING PLAN (STA. 142+00 TO 146+00)
PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING

SHEET NO. –
DRAWING NO. L-10



LEGEND:

NOT IN CONTRACT (N.I.C.)

CONTRACT A
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P.E. No: 64578

PROJECT NO.
ITB 1718-11

SHEET TITLE: BASCULE LEAF LIGHTING PLAN
SHEET NO. –
PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING
DRAWING NO. L-11

TABULATION OF QUANTITIES

BID ITEM NO.	DESCRIPTION	UNIT	BRIDGE WEST LIGHTING ORIG.	BRIDGE WEST LIGHTING FINAL	BRIDGE WEST UTILITIES ORIG.	BRIDGE WEST UTILITIES FINAL	BRIDGE LIGHTING ORIG.	BRIDGE LIGHTING FINAL	BRIDGE UTILITIES ORIG.	BRIDGE UTILITIES FINAL	TOTAL THIS SHEET ORIG.	TOTAL THIS SHEET FINAL	GRAND TOTAL ORIG.	GRAND TOTAL FINAL	REF. SHEET
715-11-119	LUMINAIRE (SIDEWALK)	EA	14								14				
715-11-129	LUMINAIRE (TRELLIS)	EA	4								4				
101-1	MOBILIZATION	LS									1				
102-1	MAINTENANCE OF TRAFFIC	LS									1				
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, CONVENTIONAL	EA	8								8				
715-525-115	LIGHT POLE COMPLETE - SPECIAL DESIGN, FURNISH, SINGLE ARM BRIDGE MOUNT, ALUMINUM, 12'	EA	8								8				
715-535-115	LIGHT POLE COMPLETE - SPECIAL DESIGN, INSTALL, SINGLE ARM BRIDGE MOUNT, ALUMINUM, 12'	EA	8								8				
715-550-000	LIGHTING POLE COMPLETE (REMOVE)	EA	8								8				

N.I.C.

PAY ITEM NOTES

715-11-119 PAY ITEM INCLUDES COST OF REMOVING EXISTING INTERNAL COMPONENTS AND REPLACING WITH LED CIRCUIT BOARD AND DRIVER, GASKET, AND COVER RING HARDWARE.

715-11-129 PAY ITEM INCLUDES COST OF REMOVING EXISTING INTERNAL COMPONENTS AND REPLACING WITH LED CIRCUIT BOARD AND DRIVER, GASKET, AND COVER RING HARDWARE.

102-1 MAINTENANCE OF TRAFFIC - PAY ITEM INCLUDES ALL WORK AND ITEMS REQUIRED TO MAINTAIN TRAFFIC DURING CONSTRUCTION.

715-500-1 POLE CABLE DISTRIBUTION SYSTEM - PAY ITEM INCLUDES SURGE PROTECTOR, FUSE HOLDERS WITH FUSES, WATERPROOF CONNECTORS, AND WATERPROOF WIRING CONNECTIONS TO THE LUMINAIRE.

715-525-115 LIGHT POLE COMPLETE (FURNISH) - PAY ITEM INCLUDES COST OF ALUMINUM POLE, SINGLE ARM ASSEMBLY, LUMINAIRE, AND POLE BASE COVER.

715-535-115 LIGHT POLE COMPLETE (INSTALL)- POLES UNDER THIS PAY ITEM SHALL BE INSTALLED ON EXISTING ANCHOR BOLTS.

715-550-000 LIGHTING POLE COMPLETE (REMOVE) - PAY ITEM INCLUDES THE REMOVAL AND DISPOSAL OF ENTIRE POLE ASSEMBLY AND ALL ASSOCIATED COMPONENTS. INCLUDING LUMINAIRES AND MOUNTING ARMS. EXISTING FOUNDATIONS AND ANCHOR BOLTS TO REMAIN. MAINTAIN CIRCUIT CONTINUITY FOR OTHER LIGHT POLES THAT ARE REQUIRED TO BE ACTIVE.

LEGEND:

NOT IN CONTRACT (N.I.C.)

CONTRACT B
BRIDGE NO. 157821

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APPROVED BY	Carlos Turcios	

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Tampa, Florida 33607
Engineer of Record:
Carlos Turcios, P.E.
P.E. No: 64578

PROJECT NO.
ITB 1718-11

SHEET TITLE: TABULATION OF QUANTITIES
PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING

SHEET NO. -
DRAWING NO. WL-1

POLE DATA

POLE NO.	CKT.	STATION	DIST. OR ARM	LUM. WATTAGE	M.H.	POLE SETBACK AND NOTES	FINAL
1	A-1	97+10.78	2	80	22	EXISTING DO NOT REMOVE	
2	A-1	97+95.78	2	80	22	EXISTING DO NOT REMOVE	
3	A-1	98+81.78	2	80	22	EXISTING DO NOT REMOVE	
4	A-1	99+66.78	2	80	22	EXISTING DO NOT REMOVE	
5	A-2	100+67.12	2.5	75	15	NOTE 1	
6	A-2	101+20.45	2.5	75	15	NOTE 1	
7	A-2	101+73.78	2.5	75	15	NOTE 1	
8	A-2	102+27.12	2.5	75	15	NOTE 1	
9	A-2	102+80.45	2.5	75	15	NOTE 1	
10	A-2	103+33.78	2.5	75	15	NOTE 1	
11	A-2	103+87.12	2.5	75	15	NOTE 1	
12	A-2	104+40.45	2.5	75	15	NOTE 1	
13	A-2	105+20.78	2	80	22	EXISTING DO NOT REMOVE	
14	A-2	106+00.78	2	80	22	EXISTING DO NOT REMOVE	
15	A-3	100+90.78	-	35	2	NOTE 2	
16	A-3	101+44.78	-	35	2	NOTE 2	
17	A-3	101+99.78	-	35	2	NOTE 2	
18	A-3	102+53.78	-	35	2	NOTE 2	
19	A-3	103+08.78	-	35	2	NOTE 2	
20	A-3	103+62.78	-	35	2	NOTE 2	
21	A-3	104+17.78	-	35	2	NOTE 2	
22	A-4	100+90.78	-	35	2	NOTE 2	
23	A-4	101+44.78	-	35	2	NOTE 2	
24	A-4	101+99.78	-	35	2	NOTE 2	
25	A-4	102+53.78	-	35	2	NOTE 2	
26	A-4	103+08.78	-	35	2	NOTE 2	
27	A-4	103+62.78	-	35	2	NOTE 2	
28	A-4	104+17.78	-	35	2	NOTE 2	
29	A-5	100+53.78	-	22	-	NOTE 3	
30	A-5	100+53.78	-	22	-	NOTE 3	
31	A-5	104+53.78	-	22	-	NOTE 3	
32	A-5	104+53.78	-	22	-	NOTE 3	

N.I.C.

N.I.C.

CONVENTIONAL LIGHTING DESIGN CRITERIA

AVERAGE INITIAL INTENSITY	1.5 F.C. (Roadway)
UNIFORMITY RATIO AVG./MIN.	4:1 OR LESS
MAX./MIN	10:1 OR LESS
WIND SPEED	140 M.P.H.

LEGEND

Remove and replace existing luminiare and pole. Verify dimensions and mount on existing anchor bolts. See sheet WL-4 for additional details.

Existing Pole and Luminaire to remain.

Existing barrier mounted sidewalk luminaire. Remove all internal components and replace with an LED retro fit kit with integral 120 volt drive. LED light source shall be 4,000° K, with an output of 2,800 lumens. Replace gasket and machine screws (use 316 S.S.).

Existing Embedded Trellis Luminaire. Remove all internal components and replace with an LED retro fit kit with integral 120 volt drive. 22W LED light source shall be 4,500° K, with an output of 2,800 lumens. Replace gasket and machine screws (use 316 S.S.).

N.I.C.

Existing Lighting Panel

Existing roadside pull box

Existing embedded pull box.

NOTES

1. MOUNTED ON EXISTING ANCHOR BOLTS ON BARRIER RAIL PILASTERS.
2. MOUNTED IN BARRIER (EMBEDDED) FACING SIDEWALK.
3. MOUNTED IN TOP OF PILLAR (EMBEDDED) FACING UP.

N.I.C.

LEGEND:

NOT IN CONTRACT (N.I.C.)

CONTRACT B
BRIDGE NO. 157821

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REVISIONS

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APPROVED BY	Carlos Turcios	

AECOM
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Tampa, Florida 33607
Engineer of Record:
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P.E. No: 64578

PROJECT NO.
ITB 1718-11

SHEET TITLE: POLE DATA AND LEGEND

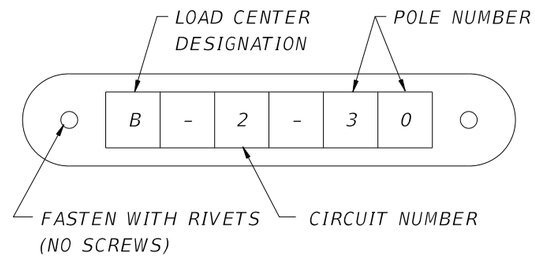
PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING

SHEET NO. -

DRAWING NO. WL-2

GENERAL NOTES

1. Scope of work includes replacement of light poles and luminaires, replacement of bascule floodlights, retrofit of existing sidewalk and trellis luminaires, and replacement of in ground monument lights.
2. Prior to any equipment order, the Contractor shall submit for approval seven (7) copies of equipment specification and design data for all material proposed for the project. These must specifically include:
   A. Luminaire Photometrics
   B. Pole strength calculations
   C. Coordination with existing anchor bolt and bolt circle diameter
   D. Pole and Luminaire shop drawings
3. All lighting circuits belong to the City of Treasure Island. Panelboards are located in the bascule piers as shown in the plans.
4. Poles, luminaires and bases shall be fabricated in accordance with AASHTO "Standard Specifications for Structural Support 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.
5. Submittal data shall include computer printout showing horizontal footcandle levels to be obtained using the submitted luminaires on this project. At final inspection the Contractor shall verify the horizontal footcandle levels on the roadway with an approved, calibrated light meter and make adjustments as directed by the Engineer at no extra cost to the City.
6. 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 DOT Standard Specifications for Road and Bridge Construction. All components shall be properly grounded and bonded per the NEC requirements.
7. Furnish and install an aluminum identification tag on each roadway light pole. Tags shall be 2" x 12" in size with black letters on yellow background, attached with rivets (not screws). Numbers shall be as shown on the Pole Data Sheet. See Pole Identification Tag Detail. Cost of tags shall be included in the Pay Item for Light Pole Complete.
8. Pulling Instructions: Connect pulling devices to new copper wire and not to jacket and meet manufacturer's requirements. Use pulling compound per manufacturer's requirements. All bends shall be less than recommended by the NEC for cable used.
9. All poles mounted on bridges shall have handholes not located on the mast arm side at the bottom of the pole. Poles mounted on bridge structures, retaining walls or barrier walls shall be non-frangible.
10. All electrical equipment shall be new, of current model, from a single manufacturer. UL listed or labeled, suitable for the intended application and installed in accordance with NFPA 70 (NEC).
11. Splices and connections made in pull boxes shall be limited to the service point and conduit junction with multiple-directional conduits as indicated on the Plans. The connection made at these points shall be properly taped and heat-shrink tubes or caps shall be used to waterproof these connections. Ends of conduits shall be sealed with polyurethane foam after wiring completed.
12. Underground conduit and conductors between light poles are existing to remain, the Contractor shall field verify that existing conductors are properly sized per NEC requirements to accommodate new lighting loads. Inform the construction manager of any improper conductor sizes.
13. Make all conductor splices in the bases of the light poles, or in pull boxes designed for the purpose. Do not make underground splices unless specifically authorized by the Engineer, and then only as directed by him. Refer to FDOT index 17500.
14. Poles are to be placed on existing foundations or bases with anchor bolts in place, furnish poles with a base which fits the anchor bolt spacing. Previous to bidding, field verify the existing anchor bolt spacing and include the cost of any necessary extension of existing anchor bolts in the price bid.
15. Install light pole luminaire on mounting arm in accordance with the manufacturer's instructions, and place it so that the light pattern is evenly distributed along the roadway
16. Make primary ballast connections in accordance with manufacturer's instructions. Install sufficient cable to allow all connections to be made outside the light pole base. Connect the ground conductor to the ground stud provided.
17. Upon completion of the work, test the installation to ensure that the installation is entirely free of ground faults, short circuits, and open circuits and that it is in satisfactory working condition. Furnish all labor, materials, and apparatus necessary for making the required tests. Remove and replace any defective material or workmanship discovered as a result of these tests at no expense to the Owner, and make subsequent re-tests to the satisfaction of the Engineer.
18. The Engineer may make partial acceptance of the Bridge lighting based on satisfactory performance of all Bridge lighting for seven consecutive days. The seven day evaluation period may commence upon written authorization by the Engineer that Bridge lighting is considered ready for acceptance evaluation. Contract Time will be charged during the entire Bridge lighting evaluation period. Correct any defects in materials or workmanship which might appear during the evaluation period at no expense to the Owner.
19. Maintenance of Traffic:
   A. Single lane closures shall be implemented in accordance with FDOT Design Standards Index Nos. 600 and 613. Utilize Index No. 612 for work greater than 2 feet from the travel lane.
   B. Sidewalk closures shall utilize Index No. 660.
   C. Existing posted speed shall be maintained.
   D. All lane closures shall be reported to the local emergency agencies, the media, and the City of Treasure Island Public Works Office.
   E. All lanes must be opened for traffic during an evacuation notice of a hurricane or other catastrophic event and must remain open for the duration of the evacuation. (If on the evacuation route).
   F. Lane closures shall not occur between 6:00 AM – 9:00 AM and 4:00 PM – 7:00 PM.



POLE IDENTIFICATION TAG DETAIL
See Note 7
N.T.S.

LEGEND:

NOT IN CONTRACT (N.I.C.)

CONTRACT B
BRIDGE NO. 157821

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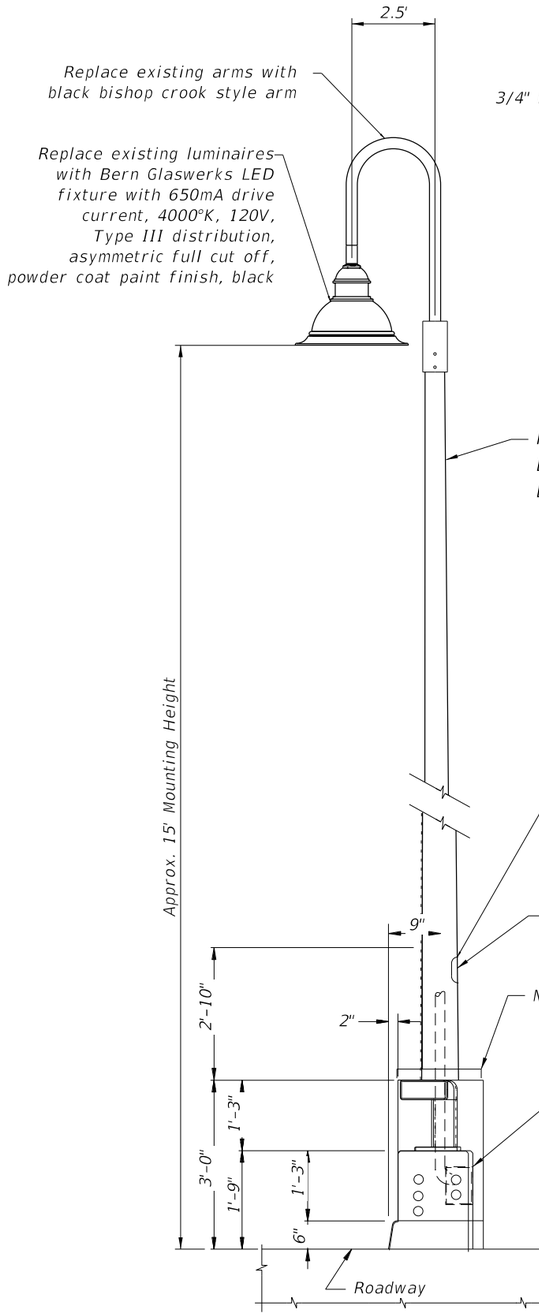
CHECKED BY	CT	5/18
DESIGNED BY	JMC	4/18
CHECKED BY	CT	5/18
APPROVED BY	Carlos Turcios	

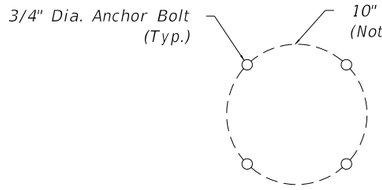
AECOM
7650 West Courtney Campbell Causeway
Tampa, Florida 33607
Engineer of Record:
Carlos Turcios, P.E.
P.E. No: 64578

PROJECT NO.
ITB 1718-11

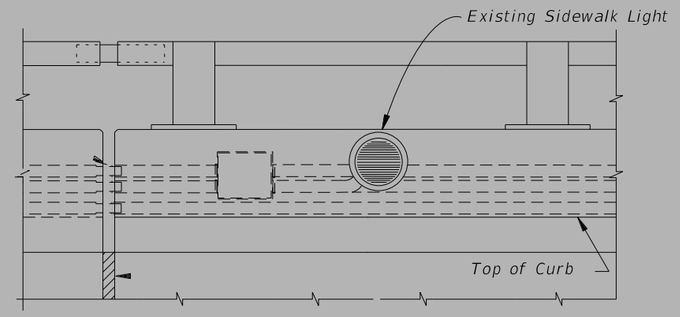
SHEET TITLE: LIGHTING GENERAL NOTES
SHEET NO. –
PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING
DRAWING NO. WL-3



TYPICAL POLE MOUNT SECTION
N.T.S.

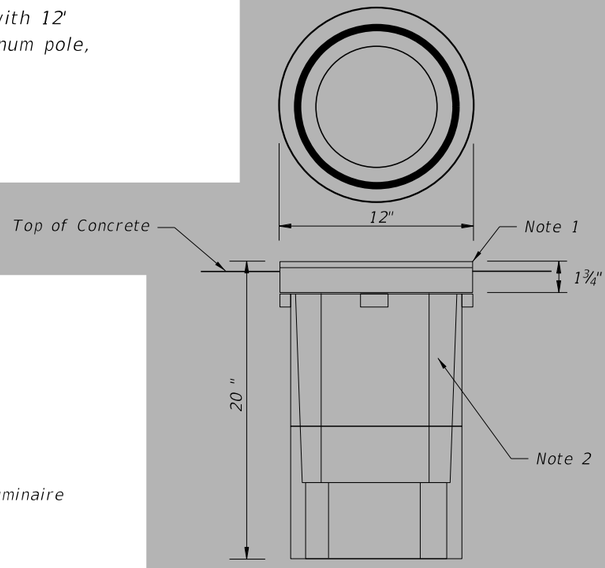


ANCHOR BOLT CIRCLE
PILASTER MOUNTED
N.T.S.

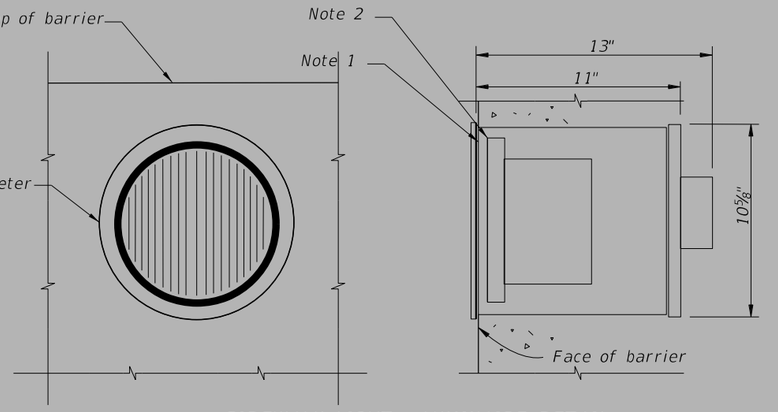


RAIL ELEVATION
(Pedestrian Side)

N.I.C.



TRELLIS LIGHT
SPECIAL LUMINAIRE DETAIL



SIDEWALK LIGHT - LUMINAIRE DETAIL

NOTES:

1. Detail shown for reference. Contractor shall verify dimensions to assure proper lens, gasket, and fastener replacements.
2. Remove all internal components and install LED board and driver. See WL-2 for ratings. Connect to existing feeder conductors.
3. Verify existing bolt pattern and mount new pole on exisitng anchor bolts. Contractor to field verify all dimensions.

LEGEND:

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PROJECT NO.
ITB 1718-11

SHEET TITLE: LIGHTING DETAILS
SHEET NO. –
PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING
DRAWING NO. WL-4

N

N.I.C.

108TH AVE.

104TH AVE.

MATCHLINE SHEET WL-6
STA. 100+80.00

Trellis Light: Refurbish fixture with LED retrofit kit. Replace gasket and hardware. Replace damaged lenses as required. (Typical)

Existing Light Poles to remain

96 97 98 99 100

CURVE "1"

3-#6

See Note 2

2 @ 3-#6
See Note 1

4 @ 3-#6

Existing Conductors

Replace luminaire and pole.

Conductors are existing unless otherwise noted.

3-#6

Existing Light Pole to remain

Existing Light Pole to remain

Existing Light Pole to remain

Existing Light Pole to remain

Ckt. A-1 #1
Sta. 97+10.78

Ckt. A-1 #2
Sta. 97+95.78

Ckt. A-1 #3
Sta. 98+81.78

Ckt. A-1 #4
Sta. 99+66.78

Ckt. A-5 #29
Sta. 100+53.78

Ckt. A-2 #5
Sta. 100+67.12

Existing Load Center "A",
120V Phase to Ground
100A, 2P Main Breaker
Ckt. A-1 20A, 1P
Ckt. A-2 30A, 1P
Ckt. A-3 20A, 1P
Ckt. A-4 20A, 1P
Ckt. A-5 20A, 1P
Ckt. A-6 20A, 1P (Spare)

LEGEND:

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P.E. No: 64578

PROJECT NO.
ITB 1718-11

SHEET TITLE: LIGHTING PLAN WEST BRIDGE (1 OF 2)
SHEET NO. –

PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING
DRAWING NO. WL-5

MATCHLINE SHEET WL-5
STA. 100+80.00

N

PROJECT LIMITS
STA. 106+20.00

N.I.C.

Ckt. A-4 #22
Sta. 100+90.78

Ckt. A-4 #23
Sta. 101+44.78

Ckt. A-4 #24
Sta. 101+99.78

Ckt. A-4 #25
Sta. 102+53.78

Ckt. A-4 #26
Sta. 103+08.78

Ckt. A-4 #27
Sta. 103+62.78

Ckt. A-4 #28
Sta. 104+17.78

Ckt. A-5 #32
Sta. 104+53.78

Sidewalk Light: Refurbish fixture with LED retrofit kit. Replace gasket and hardware. Replace damaged lenses as required. (Typical)

Trellis Light: Refurbish fixture with LED retrofit kit. Replace gasket and hardware. Replace damaged lenses as required. (Typical)

See Note 2

3-#6

101 102 103 104 105 106

Replace luminaires and poles. (Typical)

Conductors are existing unless otherwise noted.

Existing Pole. Do Not Remove.

Existing Conductors

Existing Conductors

Existing Conductors

3-#6
See Note 1

3-#6

Ckt. A-3 #15
Sta. 100+90.78

Ckt. A-3 #16
Sta. 101+44.78

Ckt. A-2 #6
Sta. 101+20.45

Ckt. A-3 #17
Sta. 101+99.78

Ckt. A-2 #7
Sta. 101+73.78

Ckt. A-3 #18
Sta. 102+53.78

Ckt. A-2 #8
Sta. 102+27.12

Ckt. A-3 #19
Sta. 103+08.78

Ckt. A-2 #9
Sta. 102+80.45

Ckt. A-3 #20
Sta. 103+62.78

Ckt. A-2 #10
Sta. 103+33.78

Ckt. A-3 #21
Sta. 104+17.78

Ckt. A-2 #11
Sta. 103+87.12

Ckt. A-5 #31
Sta. 104+53.78

Ckt. A-2 #12
Sta. 104+40.45

Ckt. A-2 #13
Sta. 105+20.78

Ckt. A-2 #14
Sta. 106+00.78

PLAN

LEGEND:

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PROJECT NO.
ITB 1718-11

SHEET TITLE:
LIGHTING PLAN WEST BRIDGE (2 OF 2)

PROJECT NAME:
TREASURE ISLAND CAUSEWAY
BRIDGE LIGHTING

SHEET NO.
–

DRAWING NO.
WL-6

TABULATION OF QUANTITIES

BID ITEM NO.	DESCRIPTION	UNIT	BRIDGE																TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			EAST																				
			LIGHTING		UTILITIES		LIGHTING		UTILITIES														
			ORIG.	FINAL	ORIG.	FINAL	ORIG.	FINAL	ORIG.	FINAL	ORIG.	FINAL	ORIG.	FINAL	ORIG.	FINAL	ORIG.	FINAL	ORIG.	FINAL	ORIG.	FINAL	
715-11-119	LUMINAIRE (SIDEWALK)	EA	4																4				
715-11-115	LUMINAIRE (MONUMENT LIGHT)	EA	6																6				
715-11-129	LUMINAIRE (TRELLIS)	EA	4																4				
101-1	MOBILIZATION	LS																	1				
102-1	MAINTENANCE OF TRAFFIC	LS																	1				
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, CONVENTIONAL	EA	5																5				
715-525-115	LIGHT POLE COMPLETE - SPECIAL DESIGN, FURNISH, SINGLE ARM BRIDGE MOUNT, ALUMINUM, 12'	EA	5																5				
715-535-115	LIGHT POLE COMPLETE - SPECIAL DESIGN, INSTALL, SINGLE ARM BRIDGE MOUNT, ALUMINUM, 12'	EA	5																5				
715-550-000	LIGHTING POLE COMPLETE (REMOVE)	EA	5																5				

N.I.C.

PAY ITEM NOTES

715-11-115	MONUMENT LIGHT: SUBMERSIBLE INGROUND FIXTURE. INCLUDES REMOVAL OF EXISTING FIXTURE, FURNISHING AND INSTALLING, AND CONCRETE REPAIRS.
715-11-119	PAY ITEM INCLUDES COST OF REMOVING EXISTING INTERNAL COMPONENTS AND REPLACING WITH LED CIRCUIT BOARD AND DRIVER, GASKET, AND COVER RING HARDWARE.
715-11-129	PAY ITEM INCLUDES COST OF REMOVING EXISTING INTERNAL COMPONENTS AND REPLACING WITH LED CIRCUIT BOARD AND DRIVER, GASKET, AND COVER RING HARDWARE.
102-1	MAINTENANCE OF TRAFFIC - PAY ITEM INCLUDES ALL WORK AND ITEMS REQUIRED TO MAINTAIN TRAFFIC DURING CONSTRUCTION.
715-500-1	POLE CABLE DISTRIBUTION SYSTEM - PAY ITEM INCLUDES SURGE PROTECTOR, FUSE HOLDERS WITH FUSES, WATERPROOF CONNECTORS, AND WATERPROOF WIRING CONNECTIONS TO THE LUMINAIRE.
715-525-115	LIGHT POLE COMPLETE (FURNISH) - PAY ITEM INCLUDES COST OF ALUMINUM POLE, SINGLE ARM ASSEMBLY, LUMINAIRE, AND POLE BASE COVER.
715-535-115	LIGHT POLE COMPLETE (INSTALL)- POLES UNDER THIS PAY ITEM SHALL BE INSTALLED ON EXISTING ANCHOR BOLTS.
715-550-000	LIGHTING POLE COMPLETE (REMOVE) - PAY ITEM INCLUDES THE REMOVAL AND DISPOSAL OF ENTIRE POLE ASSEMBLY AND ALL ASSOCIATED COMPONENTS. INCLUDING LUMINAIRES AND MOUNTING ARMS. EXISTING FOUNDATIONS AND ANCHOR BOLTS TO REMAIN. MAINTAIN CIRCUIT CONTINUITY FOR OTHER LIGHT POLES THAT ARE REQUIRED TO BE ACTIVE.

LEGEND:

NOT IN CONTRACT (N.I.C.)

CONTRACT C
BRIDGE NO. 157841

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P.E. No: 64578

PROJECT NO.
ITB 1718-11

SHEET TITLE: TABULATION OF QUANTITIES
SHEET NO. -
PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING
DRAWING NO. EL-1

POLE DATA

POLE NO.	CKT.	STATION	DIST. OR ARM	LUM. WATTAGE	M.H.	POLE SETBACK AND NOTES	FINAL
33	B-1	166+53.99	2	90	22	EXISTING DO NOT REMOVE	
34	B-1	167+28.99	2	90	22	EXISTING DO NOT REMOVE	
35	B-1	168+07.33	2.5	75	15	NOTE 1	
36	B-1	168+60.66	2.5	75	15	NOTE 1	
37	B-1	169+13.99	2.5	75	15	NOTE 1	
38	B-1	169+67.33	2.5	75	15	NOTE 1	
39	B-1	170+20.66	2.5	75	15	NOTE 1	
40	B-1	171+03.99	2	90	22	EXISTING DO NOT REMOVE	
41	B-2	168+31.99	-	35	2	NOTE 2	
42	B-2	168+86.99	-	35	2	NOTE 2	
43	B-2	169+41.99	-	35	2	NOTE 2	
44	B-2	169+95.99	-	35	2	NOTE 2	
45	B-3	170+33.99	-	22	-	NOTE 3	
46	B-3	170+33.99	-	22	-	NOTE 3	
47	B-3	167+93.99	-	22	-	NOTE 3	
48	B-3	167+93.99	-	22	-	NOTE 3	

N.I.C.

CONVENTIONAL LIGHTING DESIGN CRITERIA

AVERAGE INITIAL INTENSITY 1.5 F.C. (Roadway)

UNIFORMITY RATIO AVG./MIN. 4:1 OR LESS
MAX./MIN 10:1 OR LESS

WIND SPEED 140 M.P.H.

LEGEND

Remove and replace existing luminiare and pole. Verify dimensions and mount on existing anchor bolts. See sheet EL-4 for additional details.

Existing Pole and Luminaire to remain.

Existing barrier mounted sidewalk luminaire. Remove all internal components and replace with an LED retro fit kit with integral 120 volt drive. LED light source shall be 4,000° K, with an output of 2,800 lumens. Replace gasket and machine screws (use 316 S.S.).

Existing Embedded Trellis Luminaire. Remove all internal components and replace with an LED retro fit kit with integral 120 volt drive. 22W LED light source shall be 4,500° K, with an output of 2,800 lumens. Replace gasket and machine screws (use 316 S.S.).

N.I.C.

Existing Lighting Panel

Existing roadside pull box

Existing embedded pull box.

NOTES

1. MOUNTED ON EXISTING ANCHOR BOLTS ON BARRIER RAIL PILASTERS.
2. MOUNTED IN BARRIER (EMBEDDED) FACING SIDEWALK.
3. MOUNTED IN TOP OF PILLAR (EMBEDDED) FACING UP.

N.I.C.

LEGEND:

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PROJECT NO.
ITB 1718-11

SHEET TITLE: POLE DATA AND LEGEND

PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING

SHEET NO. -

DRAWING NO. EL-2

GENERAL NOTES

1. Scope of work includes replacement of light poles and luminaires, replacement of bascule floodlights, retrofit of existing sidewalk and trellis luminaires, and replacement of in ground monument lights.
2. Prior to any equipment order, the Contractor shall submit for approval seven (7) copies of equipment specification and design data for all material proposed for the project. These must specifically include:
   A. Luminaire Photometrics
   B. Pole strength calculations
   C. Coordination with existing anchor bolt and bolt circle diameter
   D. Pole and Luminaire shop drawings
3. All lighting circuits belong to the City of Treasure Island. Panelboards are located in the bascule piers as shown in the plans.
4. Poles, luminaires and bases shall be fabricated in accordance with AASHTO "Standard Specifications for Structural Support 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.
5. Submittal data shall include computer printout showing horizontal footcandle levels to be obtained using the submitted luminaires on this project. At final inspection the Contractor shall verify the horizontal footcandle levels on the roadway with an approved, calibrated light meter and make adjustments as directed by the Engineer at no extra cost to the City.
6. 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 DOT Standard Specifications for Road and Bridge Construction. All components shall be properly grounded and bonded per the NEC requirements.
7. Furnish and install an aluminum identification tag on each roadway light pole. Tags shall be 2" x 12" in size with black letters on yellow background, attached with rivets (not screws). Numbers shall be as shown on the Pole Data Sheet. See Pole Identification Tag Detail. Cost of tags shall be included in the Pay Item for Light Pole Complete.
8. Pulling Instructions: Connect pulling devices to new copper wire and not to jacket and meet manufacturer's requirements. Use pulling compound per manufacturer's requirements. All bends shall be less than recommended by the NEC for cable used.
9. All poles mounted on bridges shall have handholes not located on the mast arm side at the bottom of the pole. Poles mounted on bridge structures, retaining walls or barrier walls shall be non-frangible.
10. All electrical equipment shall be new, of current model, from a single manufacturer. UL listed or labeled, suitable for the intended application and installed in accordance with NFPA 70 (NEC).
11. Splices and connections made in pull boxes shall be limited to the service point and conduit junction with multiple-directional conduits as indicated on the Plans. The connection made at these points shall be properly taped and heat-shrink tubes or caps shall be used to waterproof these connections. Ends of conduits shall be sealed with polyurethane foam after wiring completed.
12. Underground conduit and conductors between light poles are existing to remain, the Contractor shall field verify that existing conductors are properly sized per NEC requirements to accommodate new lighting loads. Inform the construction manager of any improper conductor sizes.
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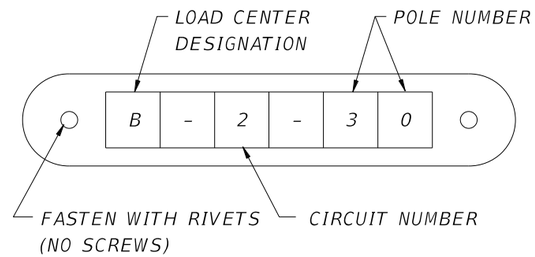
   C. Existing posted speed shall be maintained.
   D. All lane closures shall be reported to the local emergency agencies, the media, and the City of Treasure Island Public Works Office.
   E. All lanes must be opened for traffic during an evacuation notice of a hurricane or other catastrophic event and must remain open for the duration of the evacuation. (If on the evacuation route).
   F. Lane closures shall not occur between 6:00 AM – 9:00 AM and 4:00 PM – 7:00 PM.



POLE IDENTIFICATION TAG DETAIL
See Note 7
N.T.S.

LEGEND:

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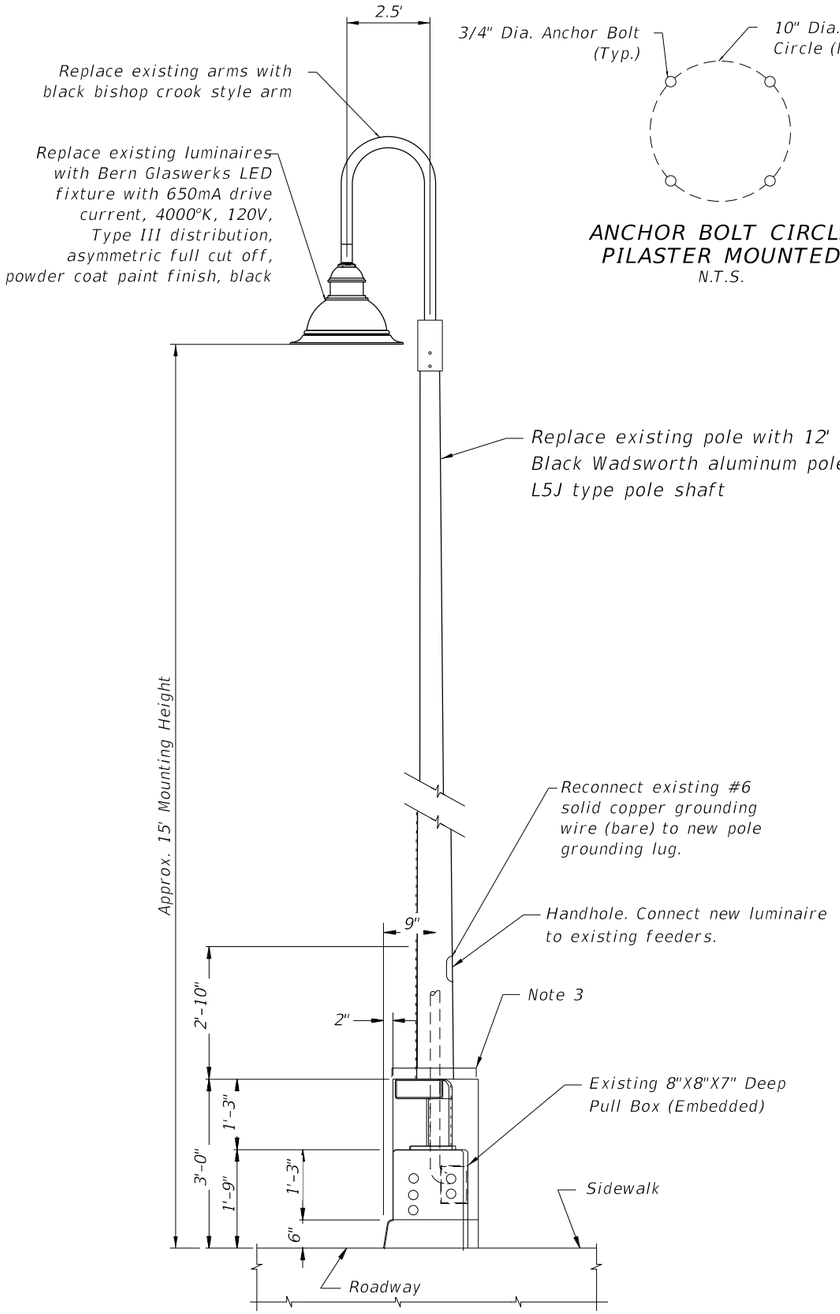
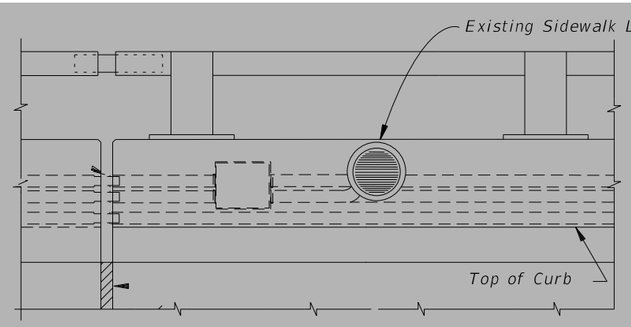
SHEET TITLE: LIGHTING GENERAL NOTES
SHEET NO. –
PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING
DRAWING NO. EL-3



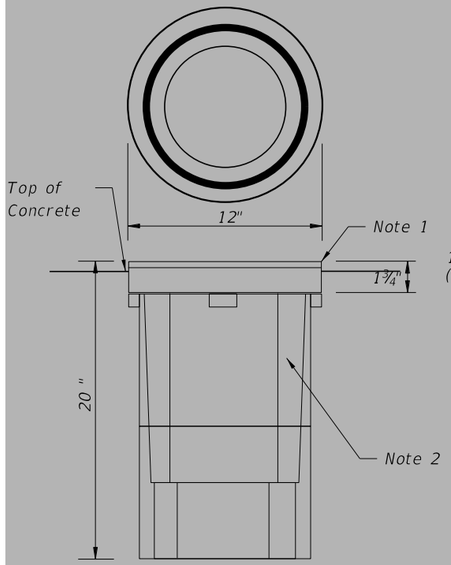
TYPICAL POLE MOUNT SECTION
N.T.S.

ANCHOR BOLT CIRCLE
PILASTER MOUNTED
N.T.S.

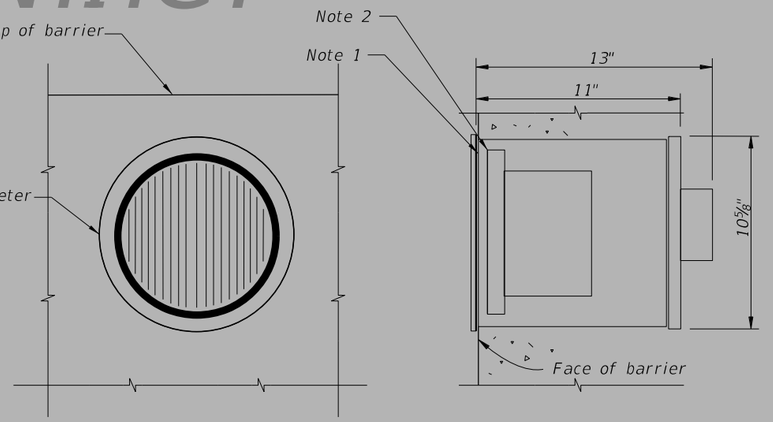


RAIL ELEVATION
(Pedestrian Side)

N.I.C.



TRELLIS LIGHT
SPECIAL LUMINAIRE DETAIL



SIDEWALK LIGHT – LUMINAIRE DETAIL

NOTES:

1. Detail shown for reference. Contractor shall verify dimensions to assure proper lens, gasket, and fastener replacements.
2. Remove all internal components and install LED board and driver. See EL-2 for ratings. Connect to existing feeder conductors.
3. Verify existing bolt pattern and mount new pole on exisitng anchor bolts. Contractor to field verify all dimensions.

LEGEND:

NOT IN CONTRACT (N.I.C.)

CONTRACT C
BRIDGE NO. 157841

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAMES	DATES
DRAWN BY	JMC	4/18
CHECKED BY	CT	5/18
DESIGNED BY	JMC	4/18
CHECKED BY	CT	5/18
APPROVED BY	Carlos Turcios	

AECOM
7650 West Courtney Campbell Causeway
Tampa, Florida 33607
Engineer of Record:
Carlos Turcios, P.E.
P.E. No: 64578

PROJECT NO.
ITB 1718-11

SHEET TITLE: LIGHTING DETAILS
SHEET NO. –
PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING
DRAWING NO. EL-4

N

CAUSEWAY BLVD. NORTH

N.I.C.

Sidewalk Light: Refurbish fixture with LED retrofit kit. Replace gasket and hardware. Replace damaged lenses as required. (Typical)

Ckt. B-1 #33
Sta. 166+53.99

Ckt. B-1 #34
Sta. 167+28.99

Ckt. B-1 #35
Sta. 168+07.33

Ckt. B-3 #47
Sta. 167+93.99

Ckt. B-2 #41
Sta. 168+31.99

Existing Light Poles to remain.

Existing Pole to remain

164

165

166

167

168

Replace luminaire and pole.

Existing Conductors

All conductors are existing unless otherwise noted.

Trellic Light: Refurbish fixture with LED retrofit kit. Replace gasket and hardware. Replace damaged lenses as required. (Typical)

FOC

Ckt. B-3 #48
Sta. 167+93.99

MATCHLINE SHEET L-10
STA 168+40.00

CAUSEWAY BLVD. SOUTH

LEGEND:

NOT IN CONTRACT (N.I.C.)

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P.E. No: 64578

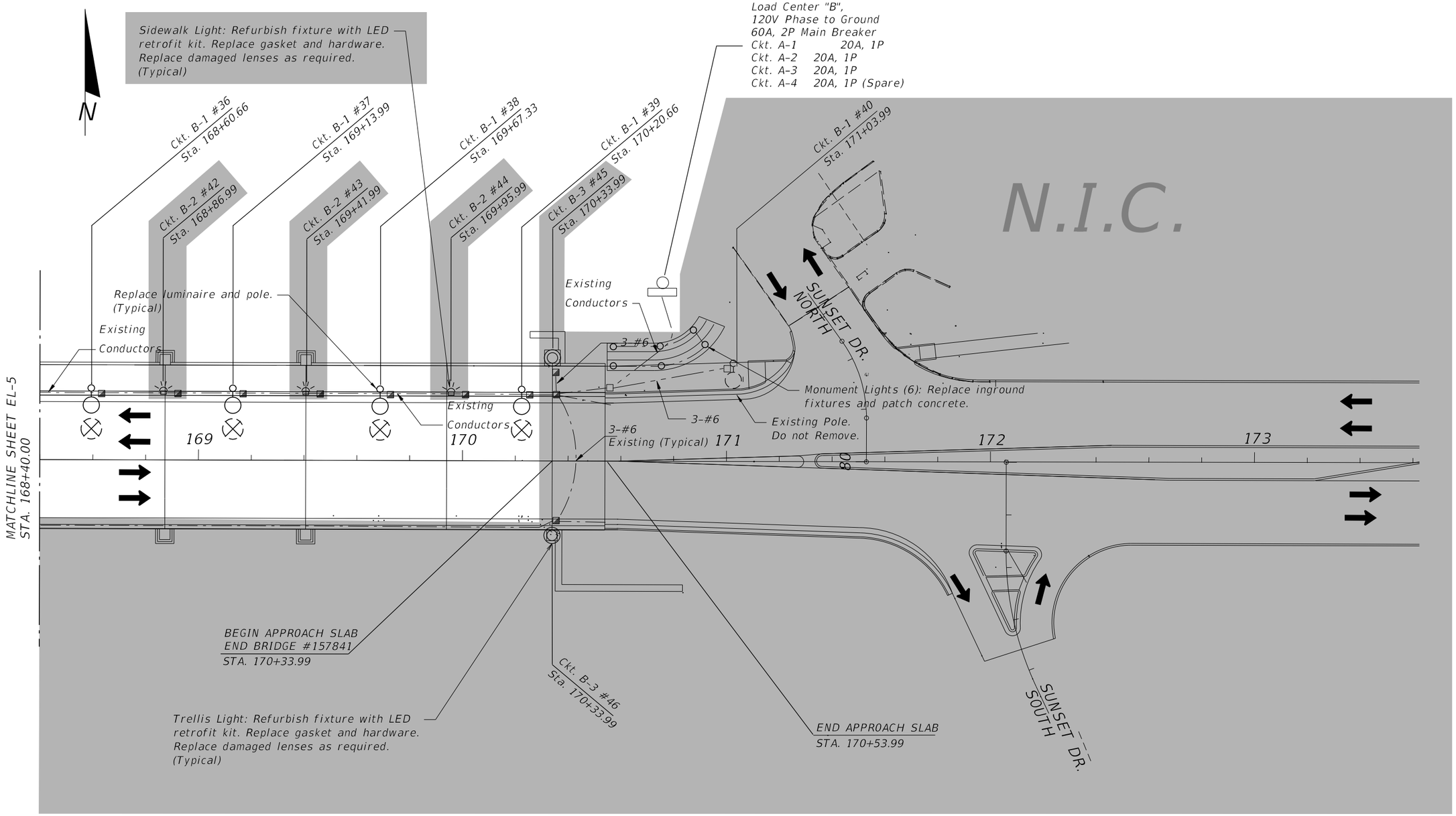
PROJECT NO.
ITB 1718-11

SHEET TITLE: LIGHTING PLAN EAST BRIDGE (1 OF 2)

SHEET NO. -

PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING

DRAWING NO. EL-5



LEGEND:

NOT IN CONTRACT (N.I.C.)

CONTRACT C
BRIDGE NO. 157841

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REVISIONS

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	NAMES	DATES
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Tampa, Florida 33607
Engineer of Record:
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P.E. No: 64578

PROJECT NO.
ITB 1718-11

SHEET TITLE: LIGHTING PLAN EAST BRIDGE (2 OF 2)
SHEET NO. -
PROJECT NAME: TREASURE ISLAND CAUSEWAY BRIDGE LIGHTING
DRAWING NO. EL-6