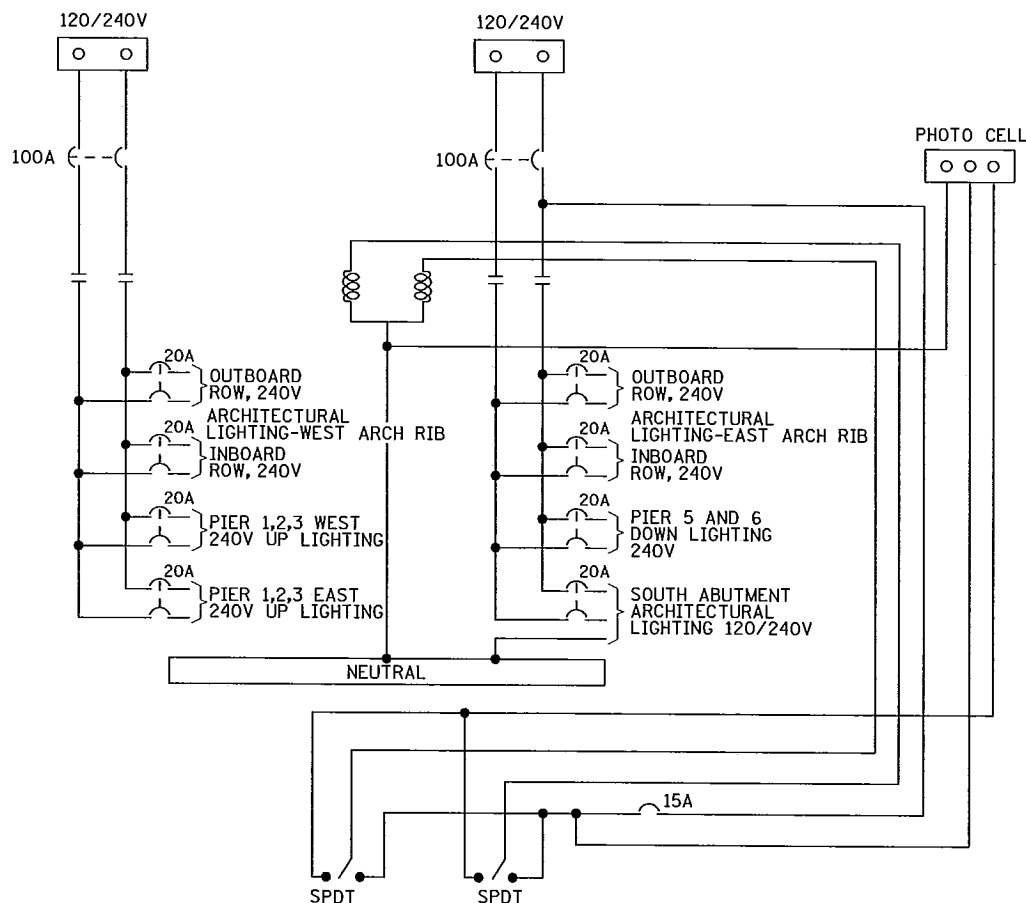
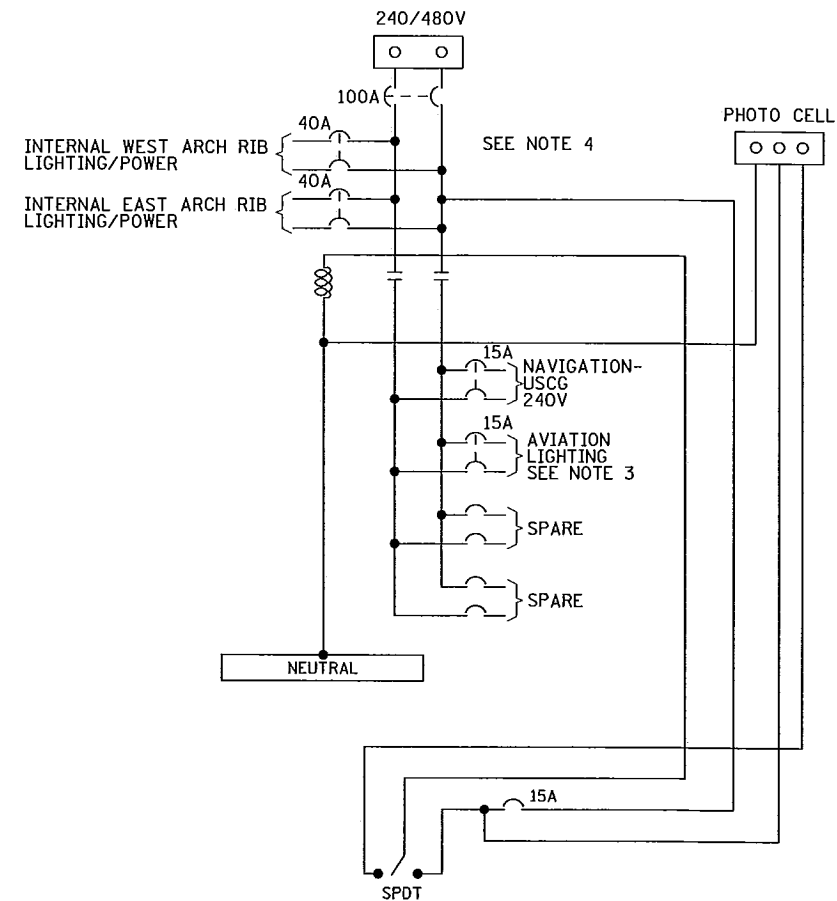


**DETAIL A**

POWER SUPPLY (LED DRIVER PACKAGE)  
SEE NOTE 1.



**CITY LIGHTING - SERVICE CABINET - Y - TYPE L2**



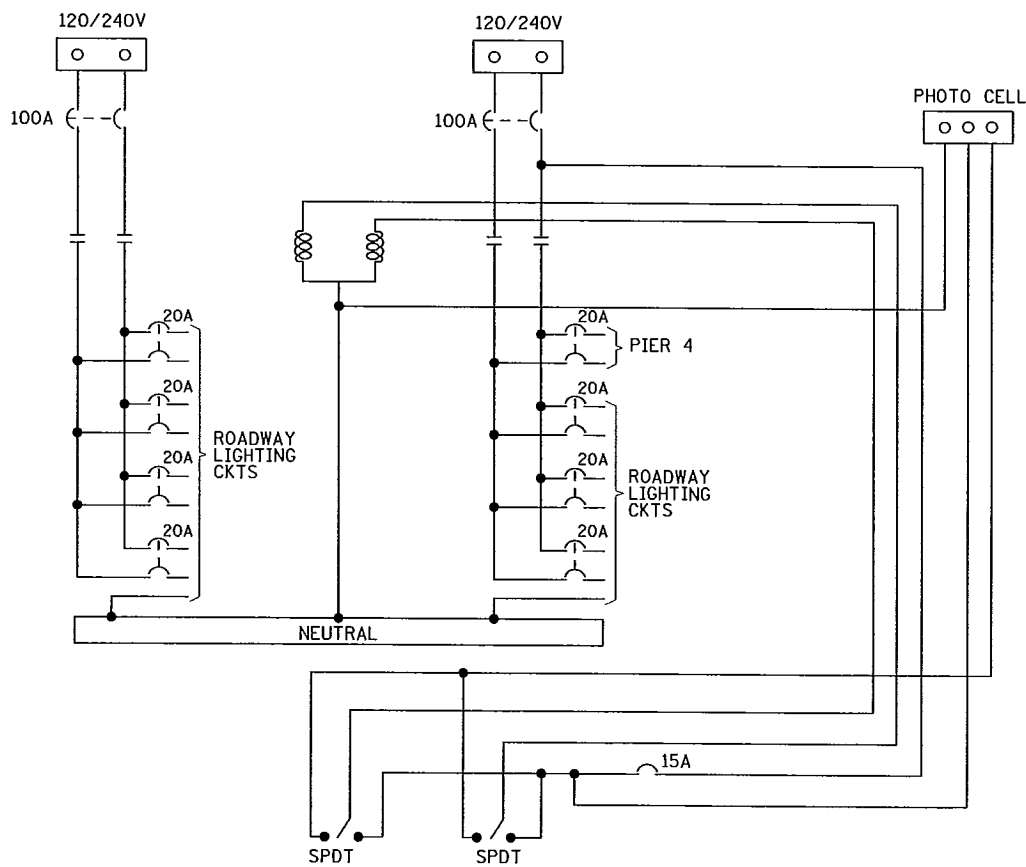
**STATE - SERVICE CABINET 19C3 - TYPE L1 - MODIFIED**

**NOTES:**

- 1 FABRICATED OEM PACKAGE CONSISTING OF THREE POWER SUPPLIES SPECIFIED AS PART OF ILIGHT TECHNOLOGIES ARCH RIB LIGHTING TYPE LE EQUIPMENT. SEE ALSO SPECIAL PROVISIONS DBSB-2544.
- 2 EACH POWER SUPPLY (PS) IS RATED FOR A 32' SECTION (4-8' SECTIONS) OF TYPE LE LIGHT BARS (MAX.)
- 3 AVIATION LIGHTING AND WIRING NOT IN CONTRACT, RUN CONDUIT ONLY.
- 4 MODIFY SERVICE CABINET TO INCLUDE 24/7 BRANCH CIRCUITS. MATCH CIRCUIT BREAKER A.I.C. WITH 100A MAIN A.I.C.

**BILL OF MATERIAL:**

- 1 NEMA 12 ENCLOSURE, 24" Wx20" Hx8" D 304 SS, WINDOW-IN-DOOR, WALL-MOUNT.
- 2 FUSE HOLDER TERMINAL BLOCKS: PHOENIX CONTACT UK5-HES1 BUSSMANN GMD, 630mA, 250V (5x20mm).
- 3 POWER SUPPLY (PS): ILIGHT TECHNOLOGIES P/N ADV100W24V.
- 4 TERMINAL BLOCK: PHOENIX CONTACT UK5N.
- 5 TERMINAL BLOCK, PHOENIX CONTACT UK3N.
- 5A UNIVERSAL GROUND USLKG 2.5N.
- 6 SURGE PROTECTIVE DEVICE (SPD): PHOENIX CONTACT 2858357 PT2-PE/S-230AC/FM.
- 7 DISCONNECT SWITCH, TWO POLE 16A ABB OT16E3.
- 8 FUSE WITH FUSE HOLDER: CURRENT LIMITING CLASS CC BUSSMANN FNQ-R-3A.



**CITY - SERVICE CABINET - X - TYPE L2**

(PART OF - SEE PACKAGE CP-01, SHEET 121)

Plotted By: p0007740  
 Date & Time: 03-NOV-2011 11:41:11  
 Pen Table: HasTrIngsDBPlot.pen  
 File Path: E:\Electr\loc\PowerSupply\_sys.dgn

Mn/D07 RELEASE FOR CONSTRUCTION  
 SIGNATURE: *[Signature]*  
 DATE: 11/20/11

DATE	REVISION DESCRIPTION	DR.	CHK.	APPROVED



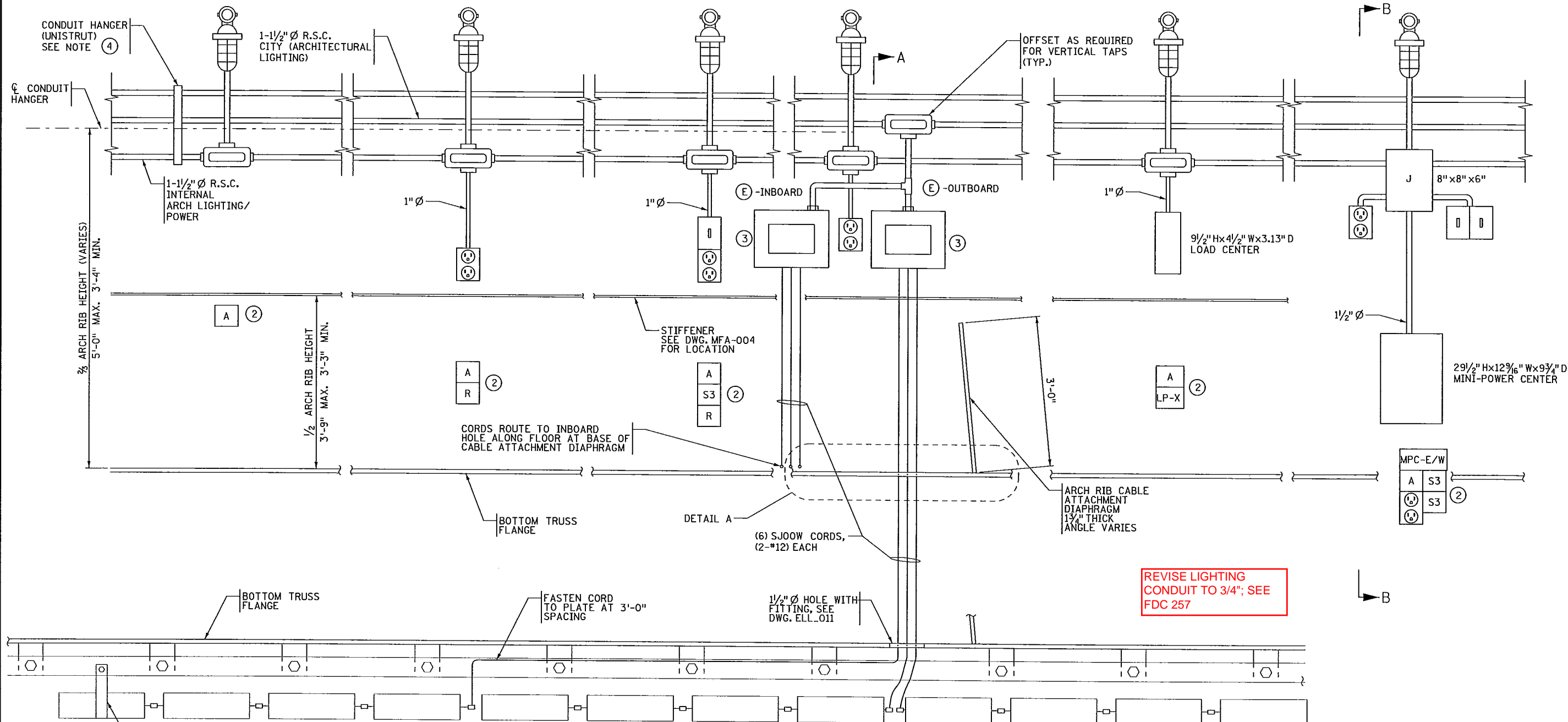
CERTIFIED BY *Burton Dryden* 11/14/11  
 LICENSED PROFESSIONAL ENGINEER  
 NAME: BURTON E. DRYDEN LIC. NO. 48372

TITLE: ELECTRICAL POWER SUPPLIES & SERVICE CABINETS

DES: BED	DR: AK	APPROVED:
CHK: MAM	CHK: MAM	
ELL_009	SHEET NO. 266 OF 324	

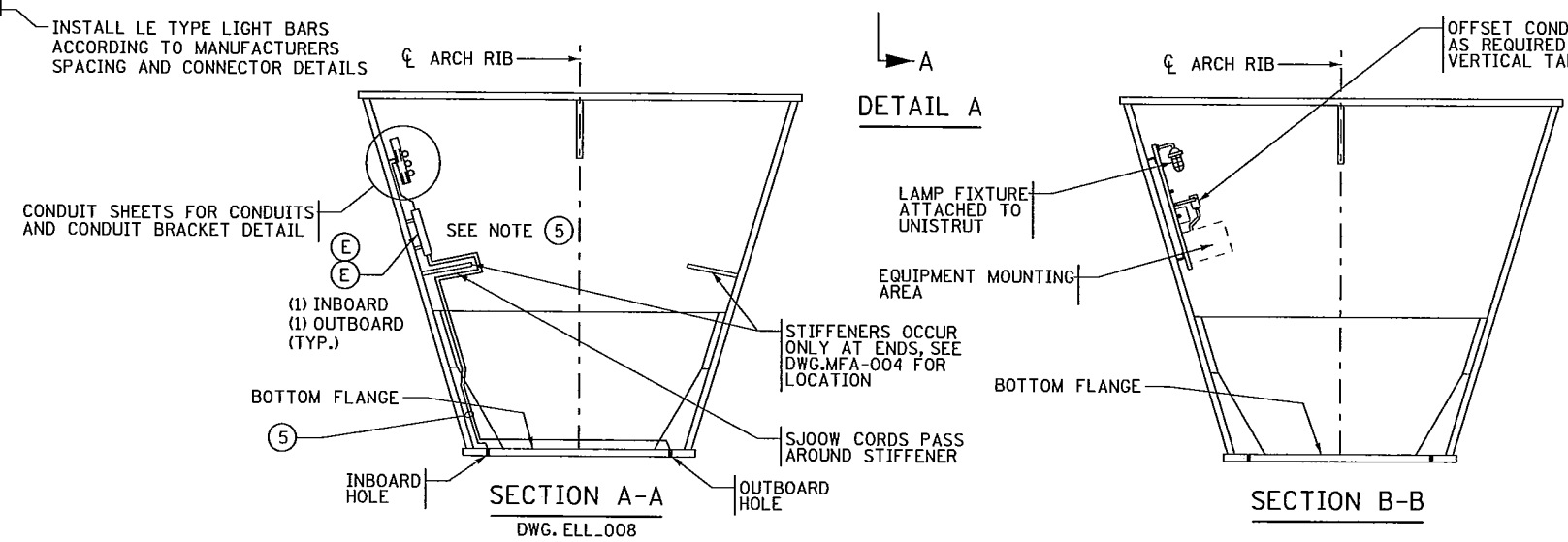
BRIDGE NO. 19004

RELEASED FOR CONSTRUCTION  
 LUNDA/MAMES JOINT VENTURE



REVISE LIGHTING  
CONDUIT TO 3/4"; SEE  
FDC 257

- NOTES:**  
SEE DWGS. DET.018 TO DET.020 FOR CONDUIT DETAILS.
- ① SECURE L-CLIPS TO CONT.  $\phi$  WITH STAINLESS STEEL SELF-TAPPING SCREWS INSTALLED IN FIELD PER MANUFACTURER'S RECOMMENDATIONS.
  - ② ELECTRICAL EQUIPMENT GROUPS, SEE DWG. ELL.007 FOR LOCATIONS.
  - ③ TYPICAL DRIVER ENCLOSURE (24" Wx20" Hx8" D), SEE DWG. ELL.008 AND ELL.009 FOR WIRING AND LE FIXTURES DETAILS. LOCATE DRIVER ENCLOSURES TO PROVIDE FREE ACCESS AND AVOID INTERFERENCE IN THE VICINITY.
  - ④ ATTACH SUPPORT STRUTS ONLY TO BRACKETS PROVIDED BY THE FABRICATOR. NO FIELD DRILLING IS ALLOWED IN ANY PART OF THE STRUCTURE INCLUDING STIFFENERS.
  - ⑤ USE BEAM CLAMPS OR OTHER SUITABLE CLIPS TO PROTECT AND FASTEN CORDS AROUND STIFFENERS.

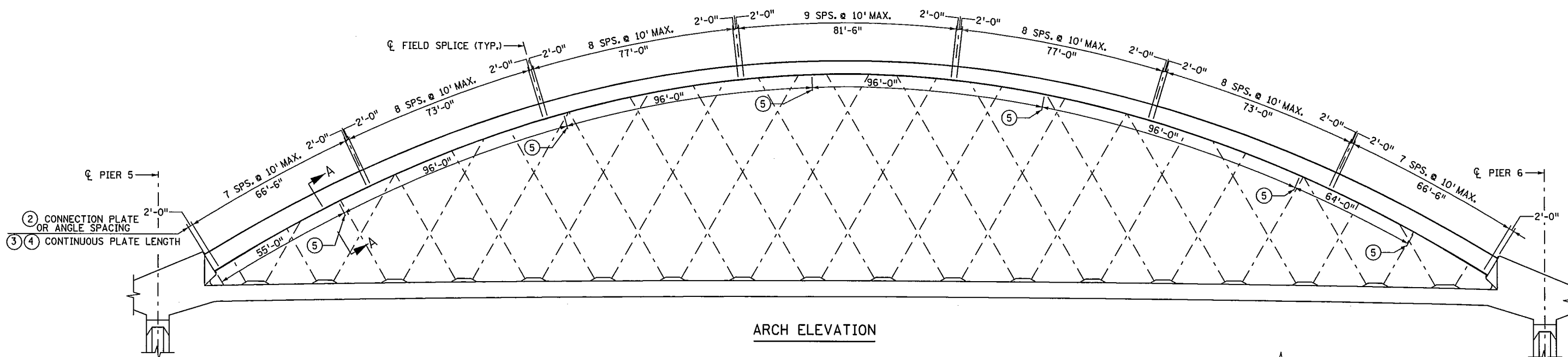


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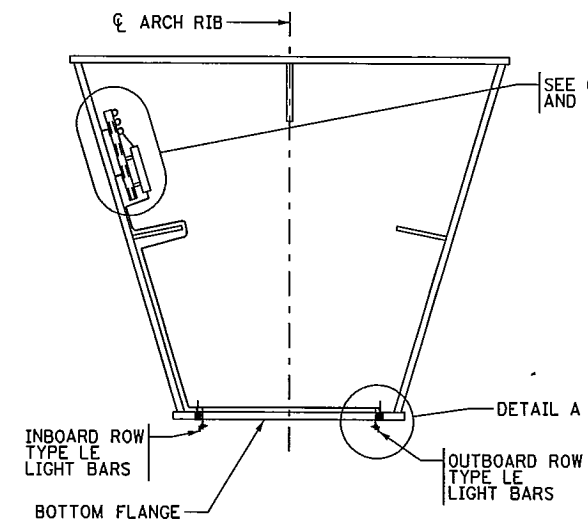
Mn/DOT RELEASE FOR CONSTRUCTION		REVISION		DATE		DESCRIPTION		DR. CHK. APPROVED		DATE		DATE		DATE		DATE		DATE		DATE	
SIGNATURE		11/30/11 DATE																			
LUNDA JAMES		PARSONS		CERTIFIED BY BURTON E. DRYDEN LICENSED PROFESSIONAL ENGINEER NAME: BURTON E. DRYDEN L.C. NO. 48372		11/4/11 DATE		TITLE: ELECTRICAL EQUIPMENT GROUPS		DES: BED CHK: MAM		DR: AK CHK: MAM		APPROVED:		BRIDGE NO. 19004		SHEET NO. 267 OF 324 ELL_010			

RELEASED FOR CONSTRUCTION  
 LUNDA/JAMES JOINT VENTURE

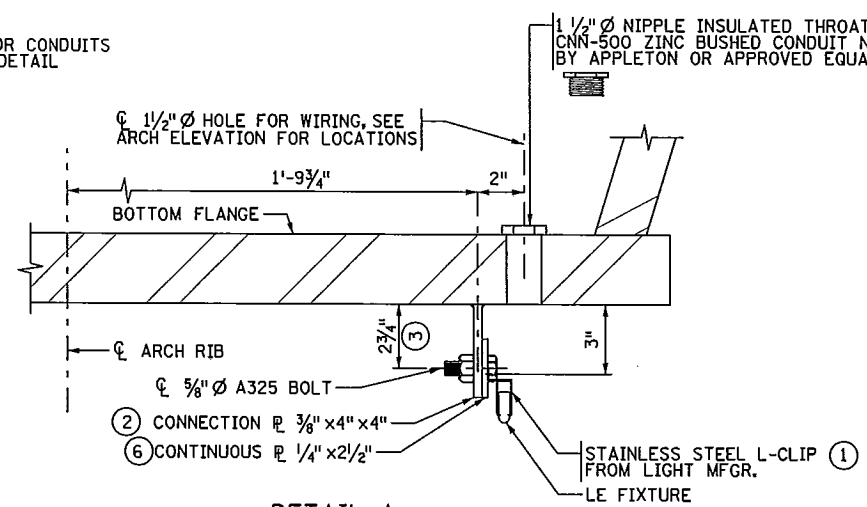
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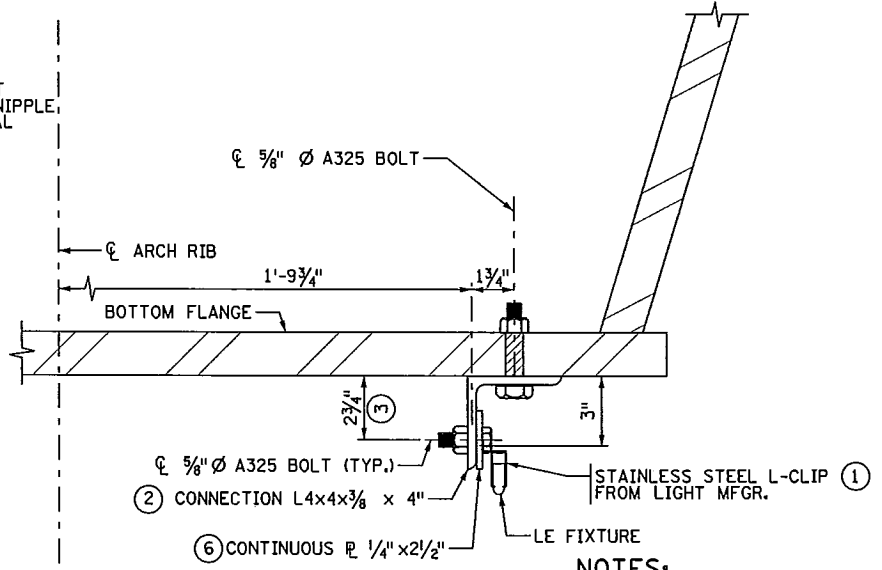
ARCH ELEVATION



SECTION A-A



DETAIL A  
 WELDED OPTION DETAIL  
 (NOT ALLOWED AT FIELD SECTIONS  
 FS1A, FS1B, FS7A & FS7B)



DETAIL A  
 BOLTED OPTION DETAIL

NOTES:

- SEE SHEETS DET\_017 TO DET\_020 FOR CONDUIT DETAILS.
- SEE SHEETS ELL\_007 AND ELL\_010 FOR WIRING AND FIXTURES DETAILS.
- ▲ GALVANIZE BOLTS, NUTS AND WASHERS PER Mn/DOT SPEC. 3392.**
- ① SECURE L-CLIPS TO CONT. PLATE WITH STAINLESS STEEL SELF-TAPPING SCREWS INSTALLED IN FIELD PER MANUFACTURER'S RECOMMENDATIONS.
- ② CONNECTION PLATES SHALL BE SPACED AT 10' MAX. SPACE TO MISS SPLICE LOCATIONS. SEE ARCH ELEVATION FOR APPROXIMATE SPACINGS.
- ③ CONTINUOUS PLATE TO BE 2 3/4" FROM BOTTOM OF ARCH AT ALL LOCATIONS EXCEPT AT SPLICE PLATES.
- ④ CONTINUOUS PLATE LENGTHS GIVEN APPROXIMATE ALONG FIELD SECTIONS. CONTRACTOR MAY FURNISH CONTINUOUS PLATES IN SHORTER LENGTHS, EACH PLATE MUST BE CONNECTED TO A MIN. OF 3 CONNECTIONS PLATES OR ANGLES.
- ⑤ LOCATION OF 1/2" Ø HOLE FOR WIRING.
- ⑥ CONTINUOUS PLATE TO BE GALVANIZED PER Mn/DOT SPEC. 3394, AND TO BE PAINTED PER DBSB 2402.6E METAL RAILING, PAINT COLOR TO MATCH REST OF ARCH. HOLES FOR 5/8" Ø BOLT IN CONTINUOUS PLATE TO BE LONG SLOTTED ALONG THE LENGTH OF THE PLATE TO FACILITATE CONSTRUCTION.

Mn/DOT RELEASE FOR CONSTRUCTION  
 SIGNATURE: *[Signature]*  
 DATE: 7/28/2011

DATE	DESCRIPTION	DR.	CHK.	APPROVED
07/07/11	REV. 1 - SLOTTED HOLES IN CONTINUOUS PLATE - FDC T8	BJB	OLS	MRF



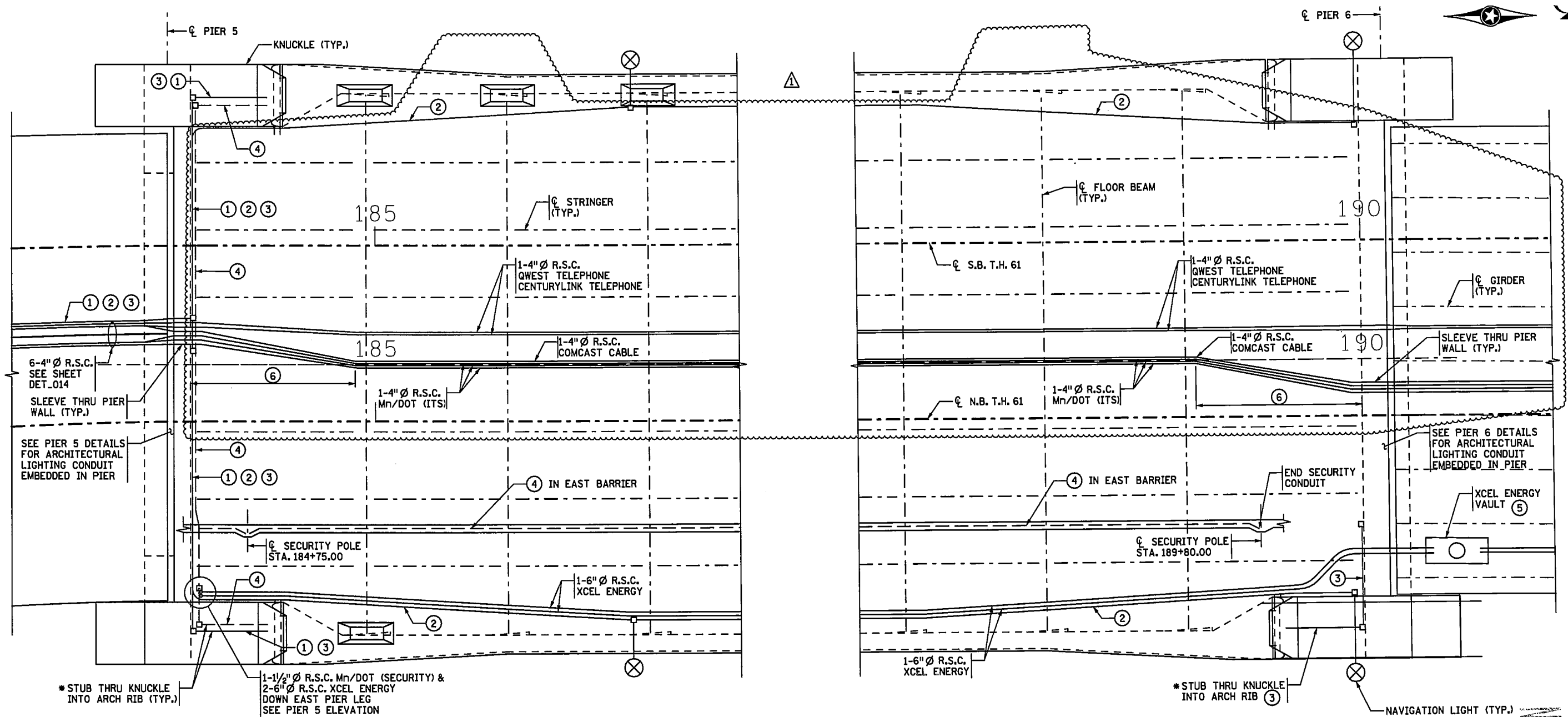
CERTIFIED BY: *[Signature]* 7/25/11  
 LICENSED PROFESSIONAL ENGINEER  
 NAME: MARTIN R. FURRER LIC. NO. 47849

TITLE: MAIN SPAN ARCHITECTURAL LIGHTING CONNECTION

DES: DLS  
 CHK: MAM  
 DR: BJB  
 CHK: MRF  
 APPROVED:  
 SHEET NO. 268 OF 324

BRIDGE NO. 19004

RELEASED FOR CONSTRUCTION  
 LUNDA/MAMES JOINT VENTURE



PLAN  
SPAN 6

**NOTES:**  
 ROADWAY LIGHTING CONDUIT AND ANTI-ICING CONDUIT NOT SHOWN.  
 PROVIDE 60" MINIMUM BEND RADIUS ON ALL 6" Ø XCEL ENERGY CONDUITS.  
 MINIMUM BEND RADIUS OF 4" ITS CONDUIT SHALL BE 18".  
 SEE SHEET DET\_019, CONDUIT DETAILS 6, FOR CONDUIT AT PIER 5.  
 SEE SHEET DET\_020, CONDUIT DETAILS 7, FOR CONDUIT AT PIER 6.

- ① 1-1/2" Ø R.S.C. Mn/DOT (AVIATION)  
1-1/2" Ø R.S.C. INTERNAL ARCH LIGHTING/POWER
- ② 1-1/2" Ø R.S.C. Mn/DOT (NAVIGATION-USCG)
- ③ 1-1/2" Ø R.S.C. CITY (ARCHITECTURAL LIGHTING)
- ④ 1-1/2" Ø R.S.C. Mn/DOT (SECURITY)
- ⑤ SEE SHEET DET\_020 FOR DETAILS OF XCEL ENERGY VAULT.  
SEE NORTH APPROACH DECK DETAILS FOR VAULT ACCESS DETAILS.
- ⑥ SUPPORT CONDUIT FROM DECK, SEE TYPICAL CONDUIT RACK  
DETAIL, SHEET DET\_021.

\* SEE KNUCKLE DETAILS FOR EXACT  
LOCATIONS OF CONDUITS.

\* STUB THRU KNUCKLE  
INTO ARCH RIB (TYP.)  
1-1/2" Ø R.S.C. Mn/DOT (SECURITY) &  
2-6" Ø R.S.C. XCEL ENERGY  
DOWN EAST PIER LEG  
SEE PIER 5 ELEVATION

\* STUB THRU KNUCKLE  
INTO ARCH RIB (TYP.)  
NAVIGATION LIGHT (TYP.)

Plotted By: P0043638  
 Date & Time: 28-FEB-2012 10:51:13  
 Pen Table: HasyTngsdbbip1ot.pen  
 File Path: Conduitt\_Detail11s4.dgn

FOR: DAVE DAHLBERG

Mn/DOT RELEASE FOR CONSTRUCTION  
 4/10/12  
 SIGNATURE DATE

DATE	REVISION	DR.	CHK.	APPROVED
01/20/12	REV. 1 - REVISED PER RFI 930, HQC - 44 & CHANGE ORDER	S.B.	D.L.S.	M.F.



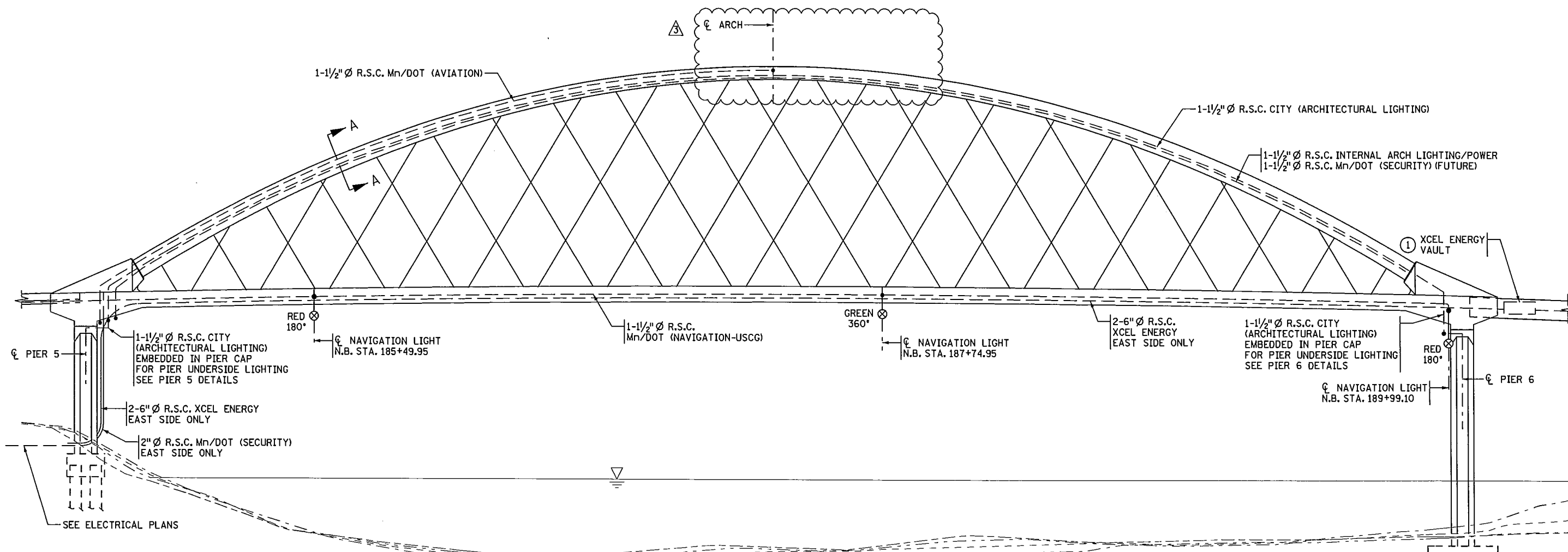
CERTIFIED BY *Martin R. Furrer* 2/28/12  
 LICENSED PROFESSIONAL ENGINEER DATE  
 NAME: MARTIN R. FURRER LIC. NO. 47849

TITLE: CONDUIT DETAILS 4

DES: DLS	DR: MLS	APPROVED:
CHK: VMG	CHK: VMG	
DET_017		SHEET NO. 272 OF 324

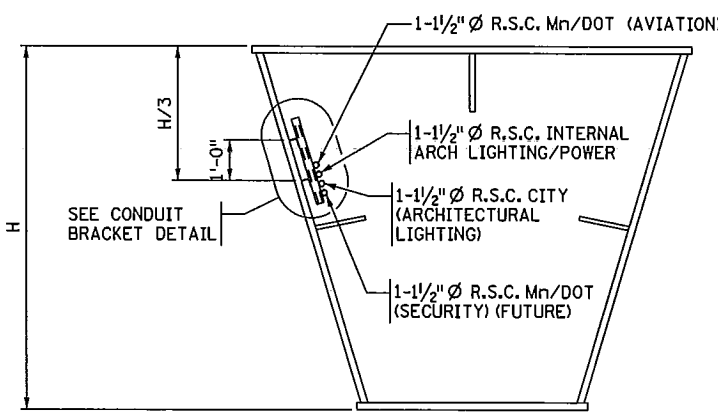
BRIDGE NO.  
19004

RELEASED FOR CONSTRUCTION  
 LUNDA/AMES JOINT VENTURE

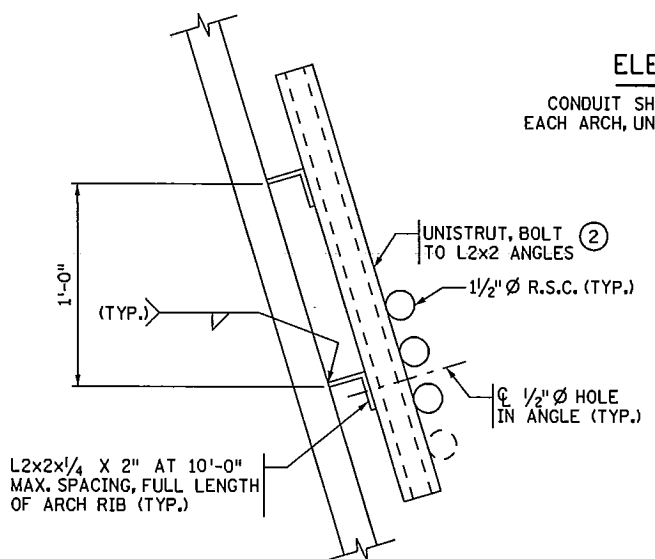


**ELEVATION**  
CONDUIT SHOWN IS TYPICAL FOR EACH ARCH, UNLESS OTHERWISE NOTED

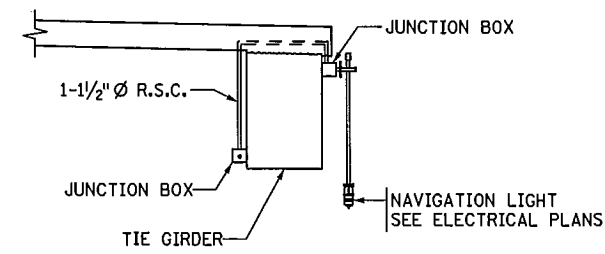
REDUCE CONDUIT SIZE FOR NAVIGATION LIGHTING TO 3/4"; SEE FDC 305



**SECTION A-A**



**CONDUIT BRACKET DETAIL**  
SEE ARCH RIB STRUCTURAL DETAILS FOR EXACT MOUNTING HEIGHTS



**NAVIGATION LIGHTING CONDUIT**  
OTHER CONDUIT NOT SHOWN

- NOTE:**
- SEE NAVIGATION CLEARANCES SHEET FOR REQUIRED NAVIGATION LIGHT ELEVATIONS.
  - SEE ELECTRICAL PLANS FOR ADDITIONAL CONDUIT AND FOR ELECTRICAL EQUIPMENT LOCATIONS AND CONNECTIVITY DETAILS.
  - NOT ALL CONDUIT SHOWN FOR CLARITY.
  - ① SEE SHEET DET\_020, CONDUIT DETAILS 7, FOR DETAILS OF XCEL ENERGY VAULT.
  - ② UNISTRUT & MOUNTING DETAILS SHOWN FOR TYPICAL CONDUIT LOCATIONS. SEE ELECTRICAL SHEETS FOR ELECTRICAL EQUIPMENT MOUNTING DETAILS.

Plotted By: p0007740  
Date & Time: 07-JUL-2011  
Pen Table: HestIngs081plot.pen  
File Path: ConduIT\_Details5.sys.dgn

Mn/DOT RELEASE FOR CONSTRUCTION <i>[Signature]</i> SIGNATURE	REVISION				CERTIFIED BY <i>Martin R. Furrer</i> 7/7/11 LICENSED PROFESSIONAL ENGINEER NAME: MARTIN R. FURRER LIC. NO. 47849	TITLE: CONDUIT DETAILS 5	DES: DLS	DR: MLS	APPROVED:	BRIDGE NO. 19004
	DATE: 7/28/2011	DESCRIPTION: REV. 1 - DETAILS UPDATE - HDC 19	DR: BJB				CHK: DLS	APPROVED: VMG		

RELEASED FOR CONSTRUCTION  
 LUNDA/AMES JOINT VENTURE