

NOTES:

- ① 3/4" NMC SCHEDULE 80 WITH (3) *10 & (1) *10 GND
- ② 2" NMC SCHEDULE 80 WITH (6) *4 & (1) *4 GND
- ③ 2" NMC SCHEDULE 80 WITH (3) *2 & (1) *6 GND. PROVIDE 2" RSC RISER AND WEATHERHEAD.

LEGEND

- 15' LIGHTING POLE - COOPER TRIBUTE SERIES WITH 250W METAL HALIDE LAMP AND MULTI-TAP BALLAST.
- LIGHTING BOLLARD - KIM VRB1 WITH 70W PULSE START METAL HALIDE LAMP AND 120V BALLAST.
- NMC SCHEDULE 80, SIZE AS SCHEDULED
- HAND HOLE
- LIGHTING SERVICE CABINET. MNDOT CABINET TYPE L1. SEE SHEET R-L122.

DATE: 7/17/2008 TIME: 7:53:12 AM FILENAME: K:\a-f\199\Eng\G\p\N401600N\hwy-brdg\hwy\p\tr-sht\cd2783120_r-1127.dgn

0	7/14/08	JEB	FOR ACCEPTANCE
NO.	DATE	BY	DESCRIPTION OF REVISIONS

DES: JEB
 DRW: SFH
 CHK: JEB

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: *[Signature]*
 PRINTED NAME: J. E. BUDKE
 DATE: 7/17/2008

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RELEASED FOR CONSTRUCTION

MN/00T

DATE:

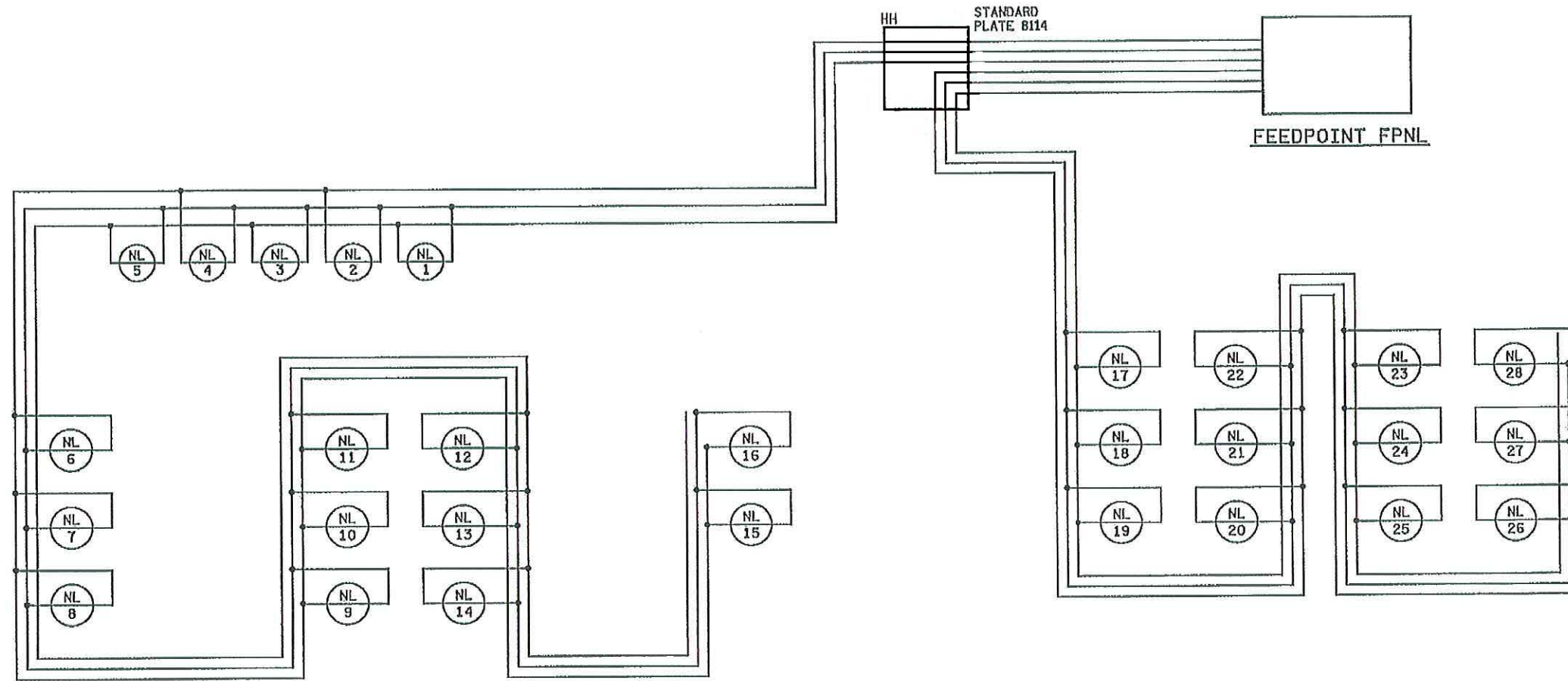
MINNESOTA
 DEPARTMENT OF TRANSPORTATION

PATHWAY LIGHTING PLANS
 NORTH PLAZA AND WALKWAY

SAINT ANTHONY FALLS (35W) BRIDGE
 DESIGN BUILD PROJECT
 S.P. 2783-120 (I-35W)

Sheet No. R-L127 of Sheets

DATE: 6/30/2008 TIME: 3:21:25 PM
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NORTH PLAZA AND WALKWAY WIRING DIAGRAM

NO.	DATE	BY	DESCRIPTION OF REVISIONS
0	7/1/08	JEB	FOR ACCEPTANCE

DES: JEB
 DRW: SFH
 CHK: JEB
 I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 SIGNATURE: _____
 PRINTED NAME: J. E. BUDKE
 DATE: 6/30/2008 LIC. NO. 8943

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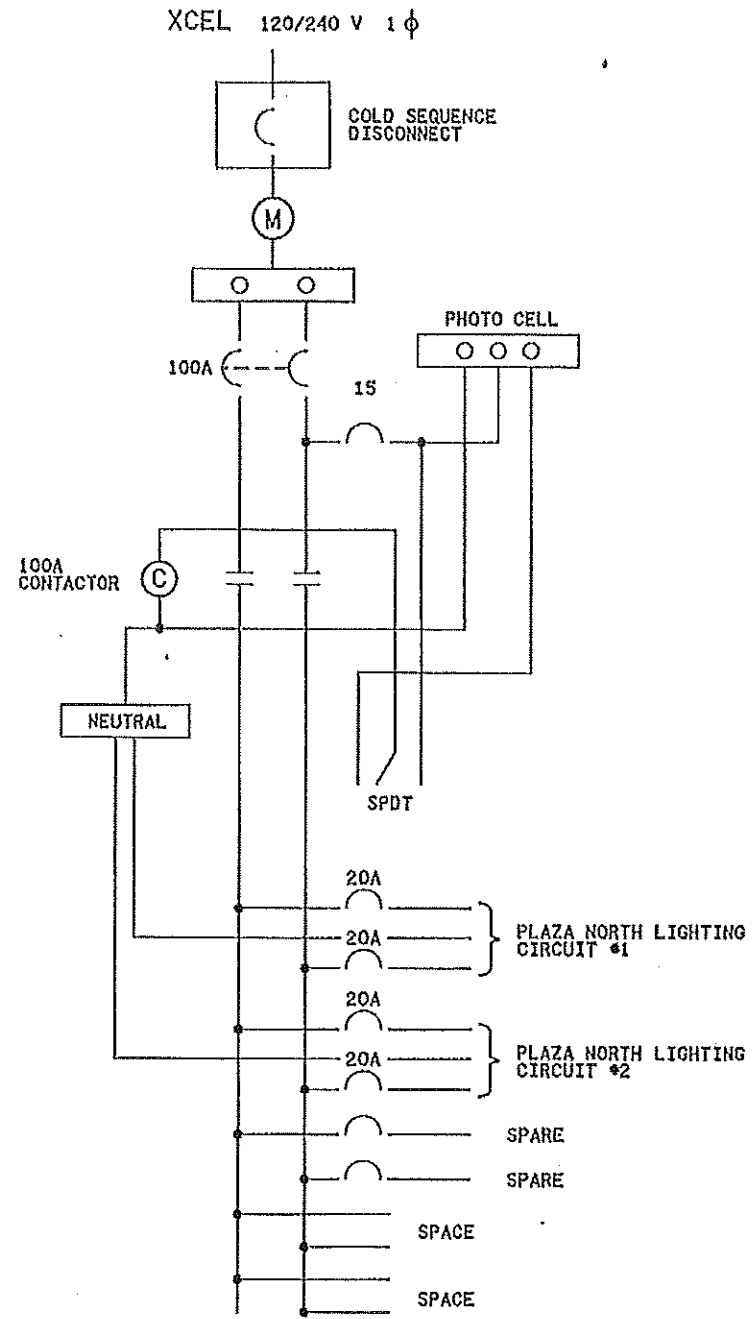
RELEASED FOR CONSTRUCTION
 MR/DDT
 DATE: _____



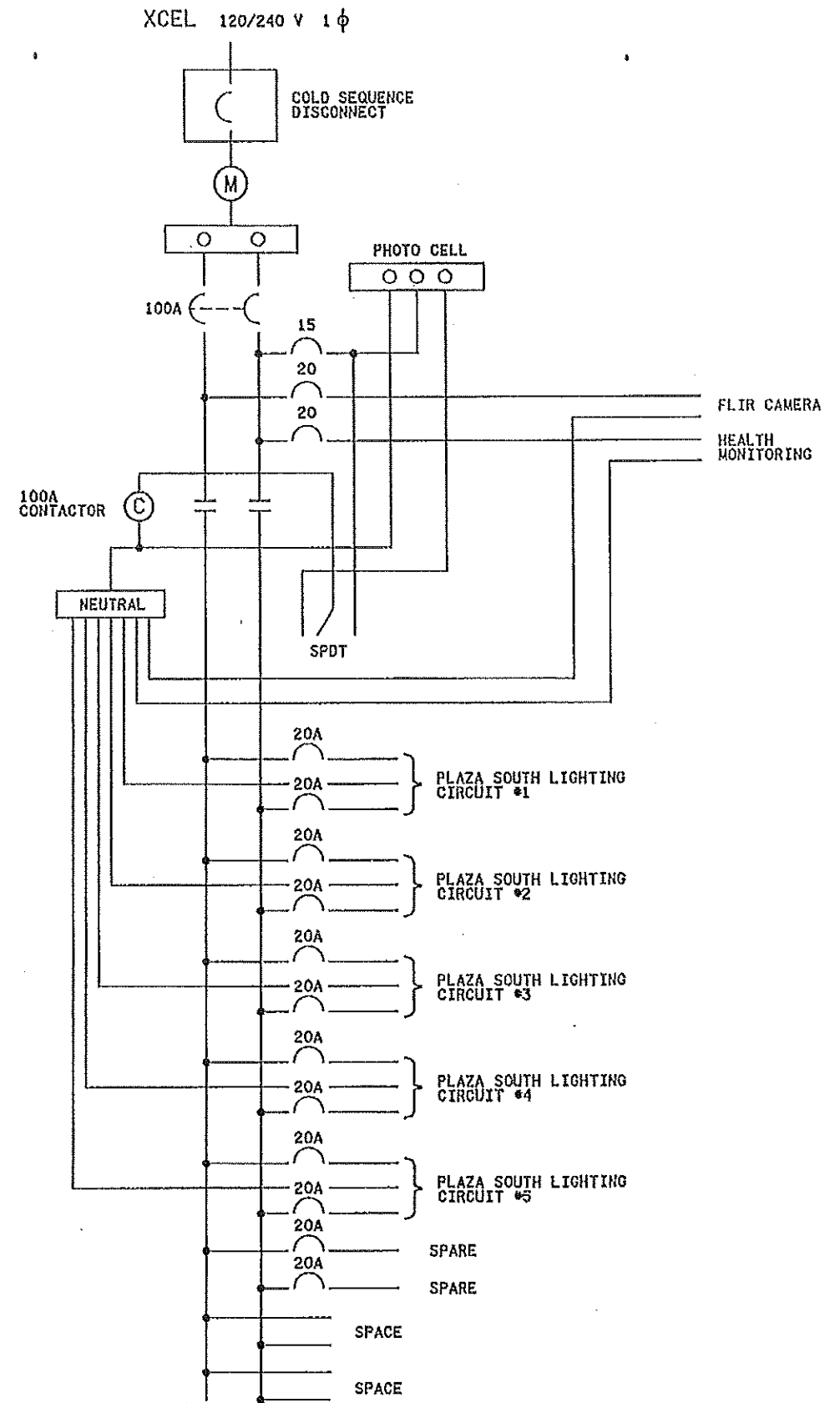
HARDSCAPE LIGHTING PLANS
 WIRE DIAGRAM - NORTH PLAZA AND WALKWAY

SAINT ANTHONY FALLS (35W) BRIDGE
 DESIGN BUILD PROJECT
 S.P. 2783-120 (I-35W)
 Sheet No. R-L127A of _____ Sheets

DATE: 7/17/2008 TIME: 7:53:15 AM
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FEED POINT
FPNL



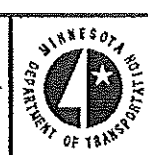
FEED POINT
FPSL

0	7/14/08	JEB	FOR ACCEPTANCE
NO.	DATE	BY	DESCRIPTION OF REVISIONS

DES: JEB
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 SIGNATURE: *J. E. Budke*
 PRINTED NAME: J. E. BUDKE
 DATE: 7/17/2008 LIC. NO. 8943

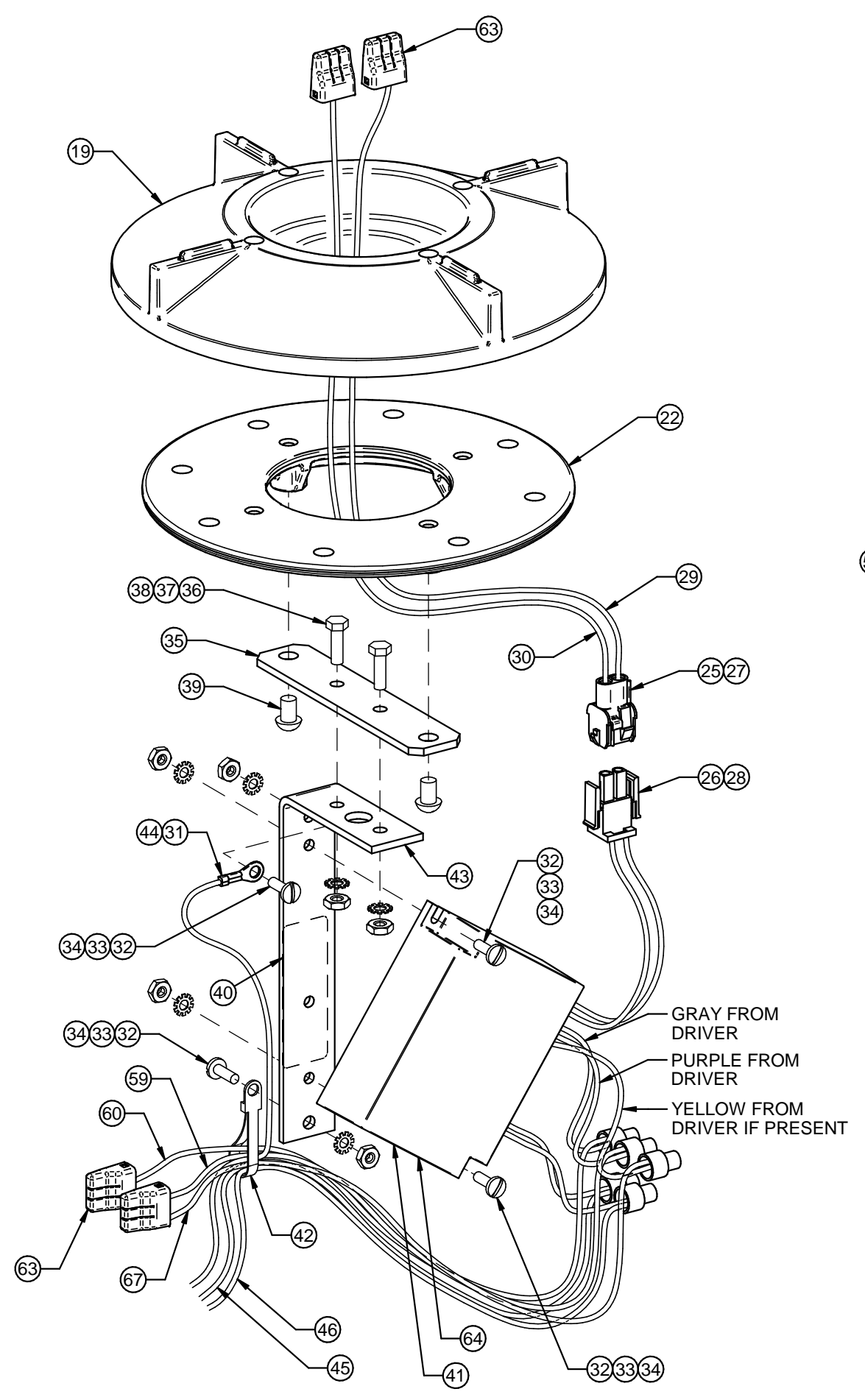
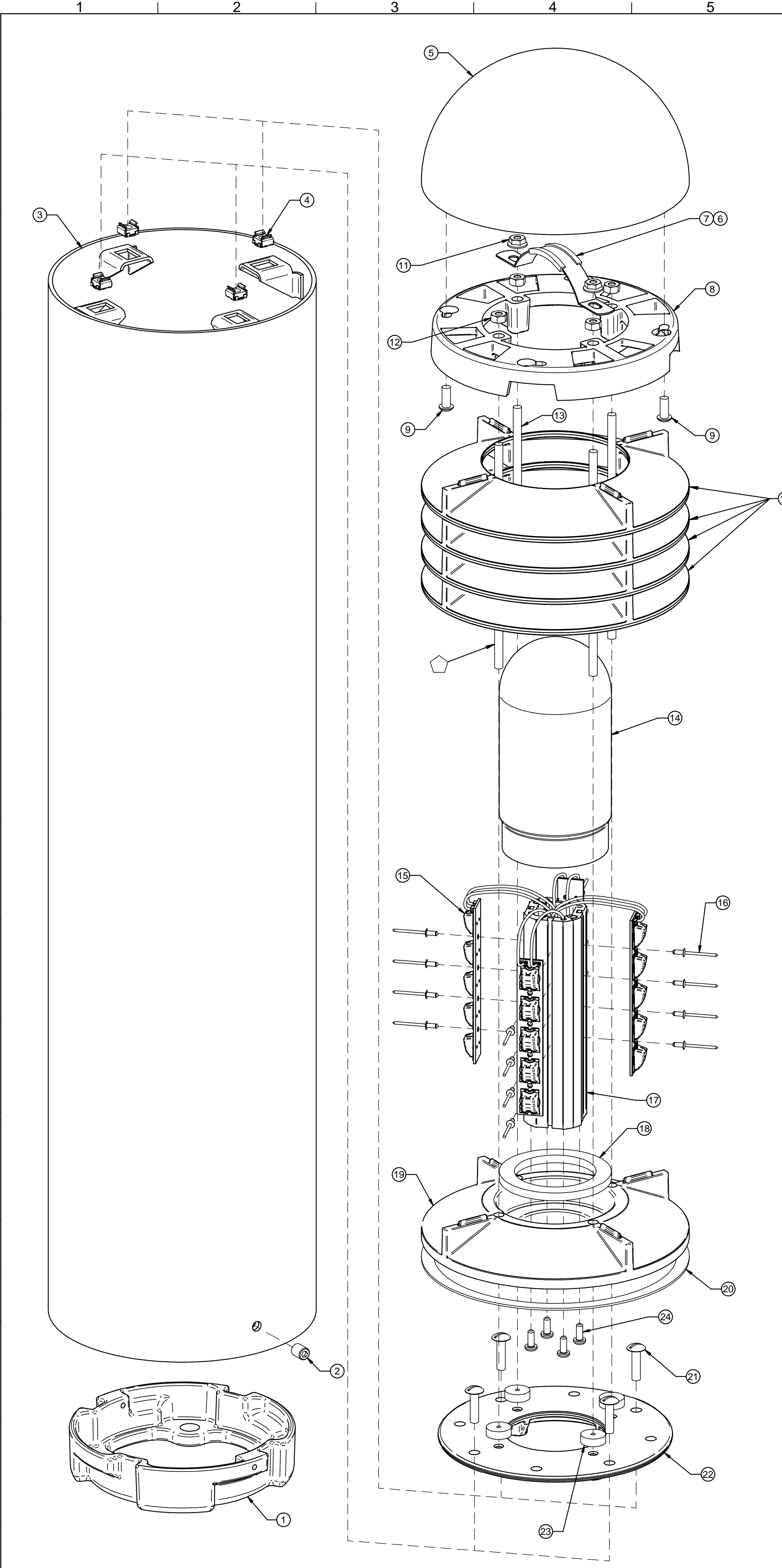
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 MN/DDT
 DATE:

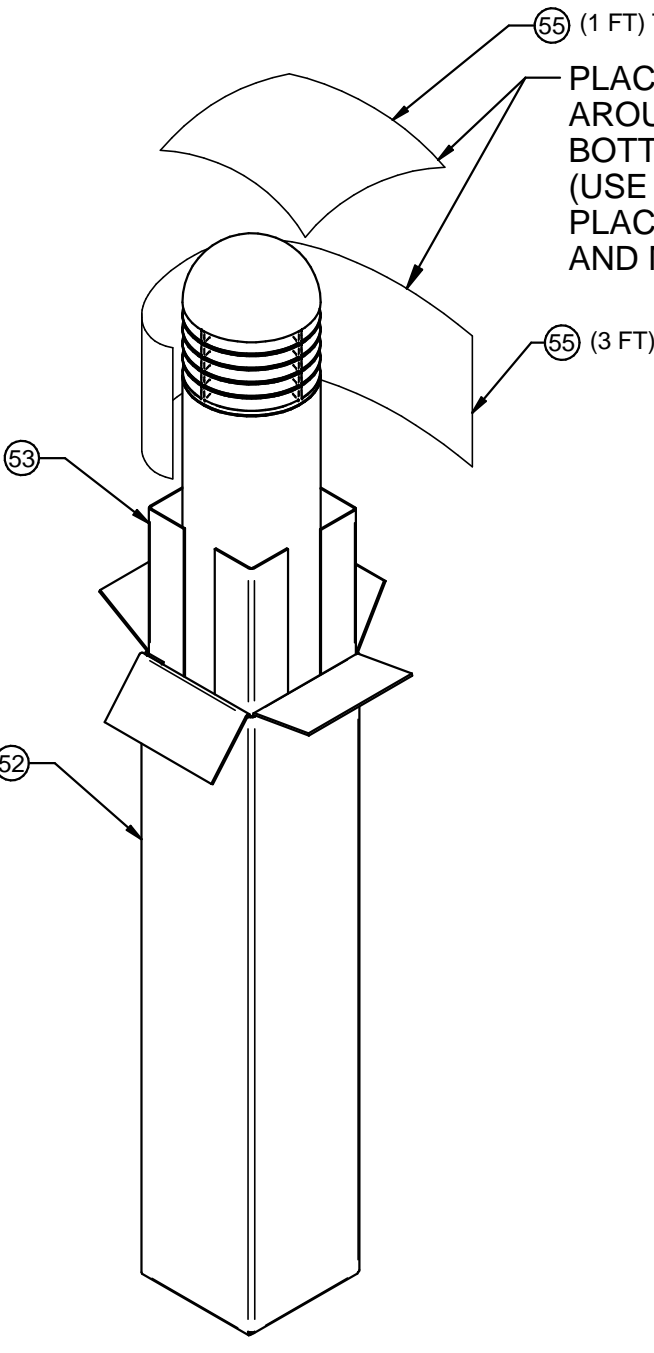


PATHWAY LIGHTING PLANS
 FEED POINT DETAILS

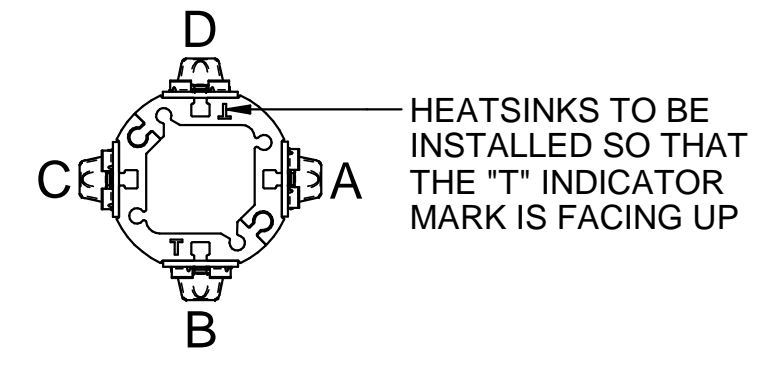
SAINT ANTHONY FALLS (35W) BRIDGE
 DESIGN BUILD PROJECT
 S.P. 2783-120 (I-35W)
 Sheet No. R-L130 of Sheets



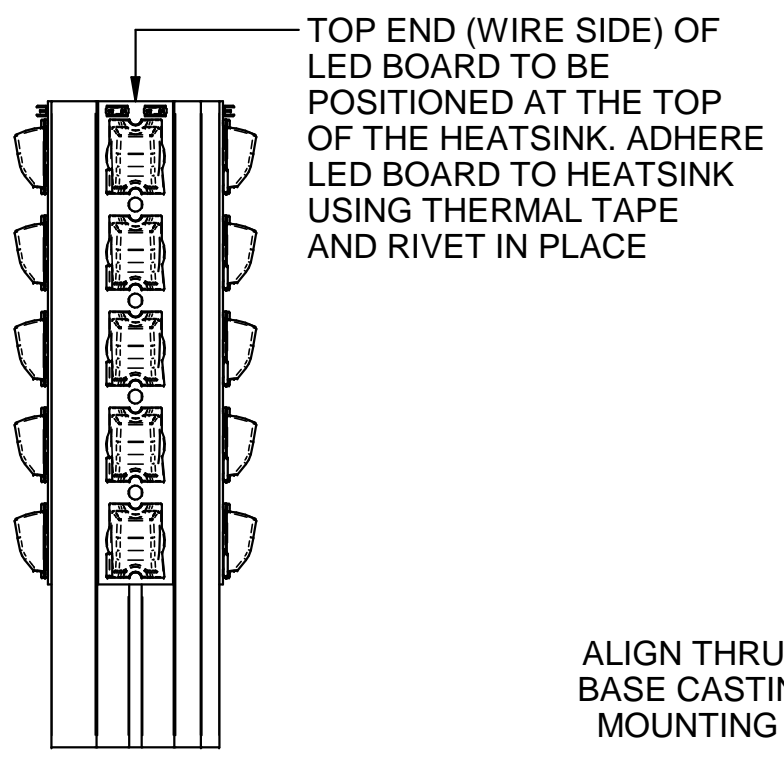
DRIVER ASSEMBLY



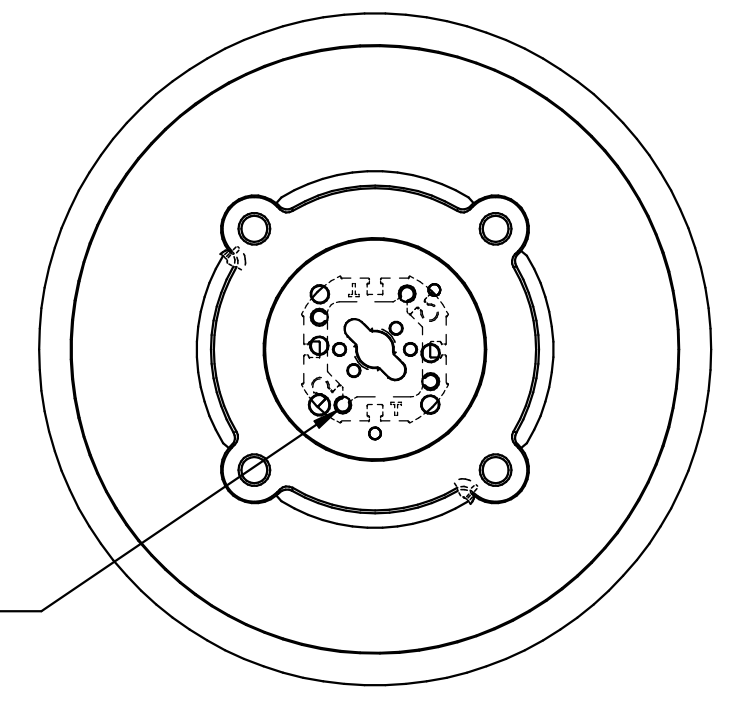
PACKING VIEW



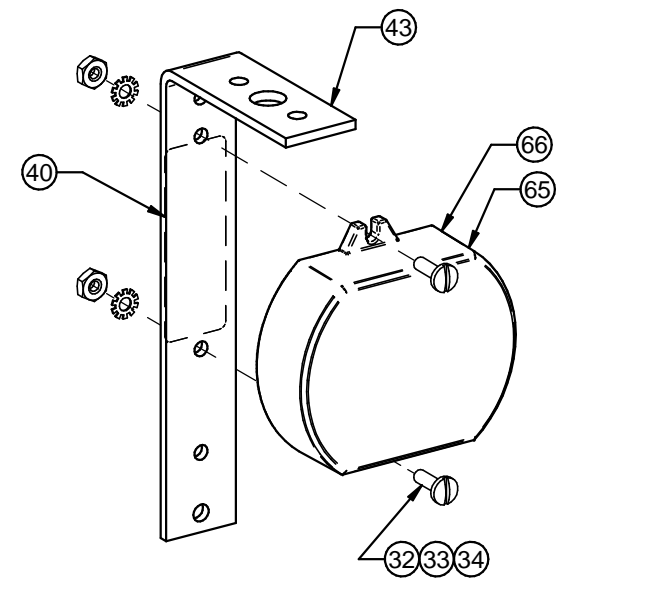
ORIENTATION DETAIL



LED MOUNTING DETAIL

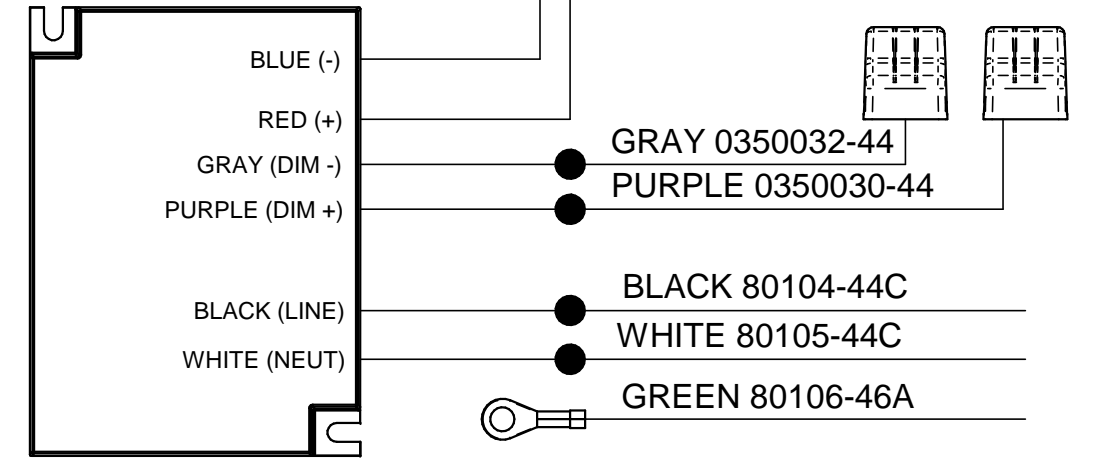


HEATSINK MOUNTING BOTTOM VIEW



25W DRIVER MOUNTING

55 (1 FT) TOP AND BOTTOM
 PLACE BUBBLE PACK AROUND LOUVERS, TOP AND BOTTOM OF THE FIXTURE (USE TAPE AS NEEDED)
 PLACE FIXTURE INSIDE ITEM #53 AND MAKE NUTS ON EACH END



WIRING DIAGRAM

40W DRIVER SHOWN WIRED. 25W DRIVER WILL BE WIRED SIMILAR BUT WITH LESS LED BOARDS. SEE CHART FOR QTY'S

RISER CHART	
FIXTURE HEIGHT	ITEM #3 P/N
42"	99452
36"	99463
30"	99464

TOP CAP CHART	
FIXTURE	ITEM #5 P/N
VRB1	93006760-1 (SPHERICAL TOP)
VRB3	10999-1 (FLAT TOP)

LED COLOR TEMP	LED BOARD ITEM #15 (P/N)	
	CRIMP CONNECTOR	SOLDERED LEADS
3000K	93053458-3030	93053458-3230
3500K	93053458-3035	93053458-3235
4200K	93053458-3042	93053458-3242
5100K	93053458-3051	93053458-3251
AMBER	93029206-AM	93029206-AM

LED QTY & POSITION CHART				
93053458-XXXX				
LED TYPE	350 mA	450 mA		
	ITEM #65	ITEM #64	ITEM #66	ITEM #41
2 BOARDS	1	0	1	0
3 BOARDS	0	1	1	0
4 BOARDS	0	1	0	1

LED COMPONENT & ORIENTATION CHART				
NO. OF LEDS (WATTAGE)	ITEM #15 QTY	ITEM #16 QTY	ITEM #63 QTY	ORIENTATION (SEE DETAIL)
10 (25W)	2	8	5	A,C
15 (25W)	3	12	6	A,B,C
20 (40W)	4	16	7	A,B,C,D

- NOTES:**
- FOR PACKING OPTIONAL HEIGHTS, CUT CARTON 91208 AT SCORES AS REQUIRED.
 - AFTER ROUTING WIRES THROUGH TY-RAP, PULL TY-RAP TIGHT TO SECURE WIRES. SOME SLACK IS REQUIRED.
 - USE LOC-TITE ON BOTTOM END OF MOUNTING RODS.
 - FOR BATTERY BACKUP OPTION REFER TO DRAWING 93054266.

67	A74098-44	1	WIRE #18 (200C) YELLOW	
66	93054967	1	DRIVER, LED 25W 450MA	
65	93035839	1	DRIVER 25W 100-277 CC	
64	93026272	1	DRIVER, LED 40W 350mA	
63	060711	SC	PUSH-IN CONNECTOR 3 POSITION	
62	A74106	5	WIRE CONNECTOR	
61	94183DIMLEADS	1	LABEL, DIMMING LEADS	NOT SHOWN
60	0350032-44	1	WIRE No.18 GREY 44"	
59	0350030-44	1	WIRE No.18 VIOLET 44"	
58	88033	2	CABLE TIE 4"	NOT SHOWN
57	93034956	1	INSTALLATION INSTRUCTIONS	NOT SHOWN
56	94205_CTN_INV	1	LABEL, CARTON	NOT SHOWN
55	93016	3	BUBBLE PACK	
54	93010	5	PLASTIC TUBE 5"	NOT SHOWN
53	92320	7	INSERT, CORNER BOARD	
52	91208	1	CARTON 9X9X43 7/8	
51	94096	1	GROUNDING TAG	NOT SHOWN
50	94183ETL	1	LABEL, ETL WARNINGS	NOT SHOWN
49	94183LED	1	LABEL LED	NOT SHOWN
48	93027936	1	LABEL, ETL WET LOCATIONS	NOT SHOWN
47	94183_FIXTBAL	1	LABEL, FIXTURE	NOT SHOWN
46	80105-44C	1	WIRE #18 AWM (150c) WHITE	
45	80104-44C	1	WIRE #18 AWM (150c) BLACK	
44	80106-56A	1	WIRE #18 AWM (150c) GREEN	
43	93031720	1	DRIVER MOUNTING PLATE	
42	88050	1	TY-RAP W/ MOUNTING HOLE	
41	93054968	1	DRIVER, LED 40W 450MA	
40	94183_BALLAST	1	BALLAST LABEL	
39	58022	2	SCR. 10-32 X 1/2 RD HD	
38	58019	2	HEX NUT 10-32	
37	58020	2	LOCKWASHER #10 EXT TOOTH	
36	58124	2	SCR. 10-32 X 5/8" HEX HD	
35	60503	1	BRACKET, HANGER	
34	58057	4	HEX NUT 8-32	
33	58085	4	LOCKWASHER #8, EXT TOOTH	
32	58056	4	SCR. 8-32 X 1/2" BIND HD SS	
31	88348	1	#10 RING TERMINAL	
30	80115-16K	1	WIRE #18 AWM (105c) RED	
29	80104-16K	1	WIRE #18 AWM (150c) BLACK	
28	88109	2	PIN, QUICK DISCONNECT	
27	88110	2	SOCKET, QUICK DISCONNECT	
26	88547	1	MALE 2-PIN DISCONNECT	
25	88548	1	FEMALE 2-PIN DISCONNECT	
24	93035966	4	SCR 10-24 X 1/2 PAN HD TORX DRIVE	
23	82252	1	BOTTOM PLATE GASKET	(4) PIECES
22	93006759-1	1	MOUNTING PLATE	
21	58183	4	SCR 10-32 X 1" TRUSS HD	
20	82017	2.166	GASKET TAPE	
19	93006648-1	1	BASE PLATE MACHINING	PAINTED
18	82211	1	LENS GASKET	
17	93037560-1	2	LED STRIP HEATSINK	
16	88372	SC	POP RIVET AD42ABS	
15	SEE CHART	4	LED BOARD, 219_	
14	84106	1	RIBBED GLOBE	
13	22132	4	MTG ROD	
12	58007	4	HEX NUT 1/4-20 BR	
11	58520	2	HEX-NUT FLANGE 1/4-20	
10	93006649	4	LOUVER	PAINTED
9	58505	2	SCR. 1/4-20 X 5/8" BTN SKT S/S	
8	93006761	1	LOUVER CAP	PAINTED
7	62232	1	GLOBE CLAMP	
6	82223-1	1	GASKET, CLAMP	
5	SEE CHART	1	TOP CAP	PAINTED
4	88160	4	GRIP NUT 1/4-20	
3	SEE CHART	1	RISER WELDMENT	PAINTED
2	58379	2	SET SCR. 3/8-16 X 5/8"	
1	10256-1	1	POLE BASE	

BILL OF MATERIALS

NO.	STATUS	DATE	CHGD	APPD	DESCRIPTION	QTY	REVISION
J							
I							
H							
G	ADDED PACKING VIEW	EC 160622007	7/1/2016	CVA	RFC		
F	UPDATED WIRING DIAGRAM	EC 160622007	03/24/16	MCH	RC		
E							
D							
C							
B							
A							

SCALE: NONE
 TOLERANCES UNLESS NOTED:
 .XX" - .0005"
 .XXX" - .0010"
 ANGLES - .0001"

KIM LIGHTING

MATERIAL: NOTED
 FINISH: PER INVOICE
 DRAWN: Jerry
 CHECKED: Garry

FIXTURE ASSEMBLY LED - VRB1.3
 93031638



BORDER STATES

Supply Chain Solutions™

Border States Electric Supply
Shealy Electrical Wholesalers | Kriz-Davis
K-D Chapman Metering

Border States Electric - MPL
9100 Wyoming Ave N Suite 550
Brooklyn Park MN 55445-1862
Phone: 763-425-5500

Total Construction-MN
10195 Inver Grove Trl
Inver Grove Heights MN 55076-3830

Cust Item	BSE Item	Material MFG - Description	Quantity
	000010	- 40256-1 POLE BASE Type: FIXTURE 1	1 EA
	000020	- 90009 ANCHOR BOLT ASSEMBLY Type: FIXTURE 1 3/8 X 10" X 2" Zinc Plated L Hooks, Nuts, Washers (Set of 4)	1 EA
	000030	- 96041 ANCHOR BOLT TEMPLATE Type: FIXTURE 1 Rigid Pressed Board Template	1 EA
	000040	- VRB-LED-KIT/20L3KUV LED RETROFIT KIT Type: FIXTURE 1	1 EA
	000050	- 40256-1 POLE BASE Type: FIXTURE 2	1 EA
	000060	- VRB-LED-KIT/20L3KUV LED RETROFIT KIT Type: FIXTURE 2	1 EA
	000070	- 90009 ANCHOR BOLT ASSEMBLY Type: FIXTURE 2 3/8 X 10" X 2" Zinc Plated L Hooks, Nuts, Washers (Set of 4)	1 EA
	000080	- 40256-1 POLE BASE Type: FIXTURE 3	1 EA
	000090	- VRB-LED-KIT/20L3KUV LED RETROFIT KIT Type: FIXTURE 3	1 EA
	000100	- VRB3/20L3KUV/LG NEW LED FIXTURE Type: FIXTURE 4 NOTE: Anchor bolts and template ship with new fixture.	1 EA
	000110	- 40256-1 POLE BASE Type: FIXTURE 5	1 EA

Border States Electric - MPL
9100 Wyoming Ave N Suite 550
Brooklyn Park MN 55445-1862
Phone: 763-425-5500

Cust Item	BSE Item	Material MFG - Description	Quantity
	000120	- VRB-LED-KIT/20L3KUV LED RETROFIT KIT Type: FIXTURE 5	1 EA
	000130	- 90009 ANCHOR BOLT ASSEMBLY Type: FIXTURE 5 3/8 X 10" X 2" Zinc Plated L Hooks, Nuts, Washers (Set of 4)	1 EA
	000140	- 96041 ANCHOR BOLT TEMPLATE Type: FIXTURE 5 Rigid Pressed Board Template	1 EA
	000150	- VRB3/20L3KUV/LG NEW LED FIXTURE Type: FIXTURE 6 NOTE: Anchor bolts and template ship with new fixture.	1 EA
	000160	- 10999-1 LG-P TOP CAP LG-P VRB3/4 Type: FIXTURE 7	1 EA
	000170	- VRB-LED-KIT/20L3KUV LED RETROFIT KIT Type: FIXTURE 7	1 EA
	000180	- VRB3/20L3KUV/LG NEW LED FIXTURE Type: FIXTURE 8 NOTE: Anchor bolts and template ship with new fixture.	1 EA
	000190	- 10999-1 LG-P TOP CAP LG-P VRB3/4 Type: FIXTURE 9	1 EA
	000200	- VRB-LED-KIT/20L3KUV LED RETROFIT KIT Type: FIXTURE 9	1 EA
	000210	- 10999-1 LG-P TOP CAP LG-P VRB3/4 Type: FIXTURE 10	1 EA
	000220	- 84106 LENS RIBBED GLOBE 7IN TMPD Type: FIXTURE 10	1 EA
	000230	- VRB-LED-KIT/20L3KUV LED RETROFIT KIT Type: FIXTURE 10	1 EA