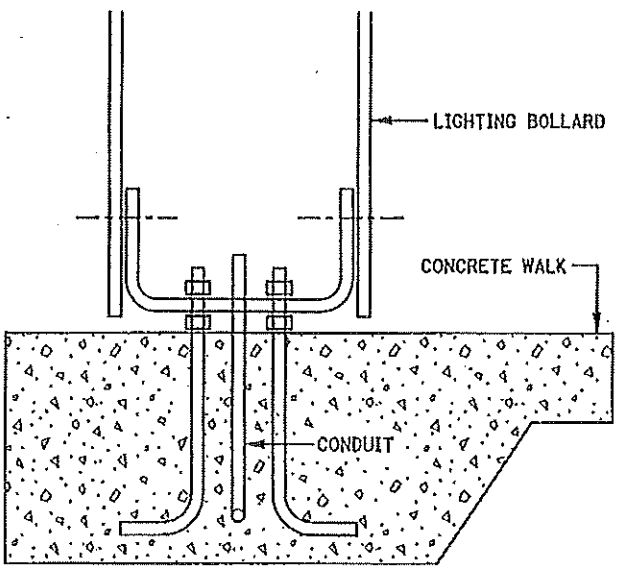


- NOTES:**
- ① 3/4" NMC SCHEDULE 80 WITH (3) *10 & (1) *10 GND
 - ② 2" NMC SCHEDULE 80 WITH (9) *10 & (1) *10 GND LIGHTING (2) *10 & (1) *10 GND HEALTH MONITORING
 - ③ 2-2" NMC SCHEDULE 80 1-WITH (6) *10 & (1) *10 GND LIGHTING 1-WITH (9) *10 & (1) *10 GND LIGHTING (2) *10 & (1) *10 GND HEALTH MONITORING
 - ④ 3/4" NMC SCHEDULE 80 WITH (2) *10 & (1) *10 GND
 - ⑤ 2" NMC SCHEDULE 80 WITH (3) *2 & (1) *6 GND

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-LI22.

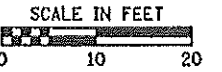


BOLLARD MOUNTING DETAIL
NO SCALE

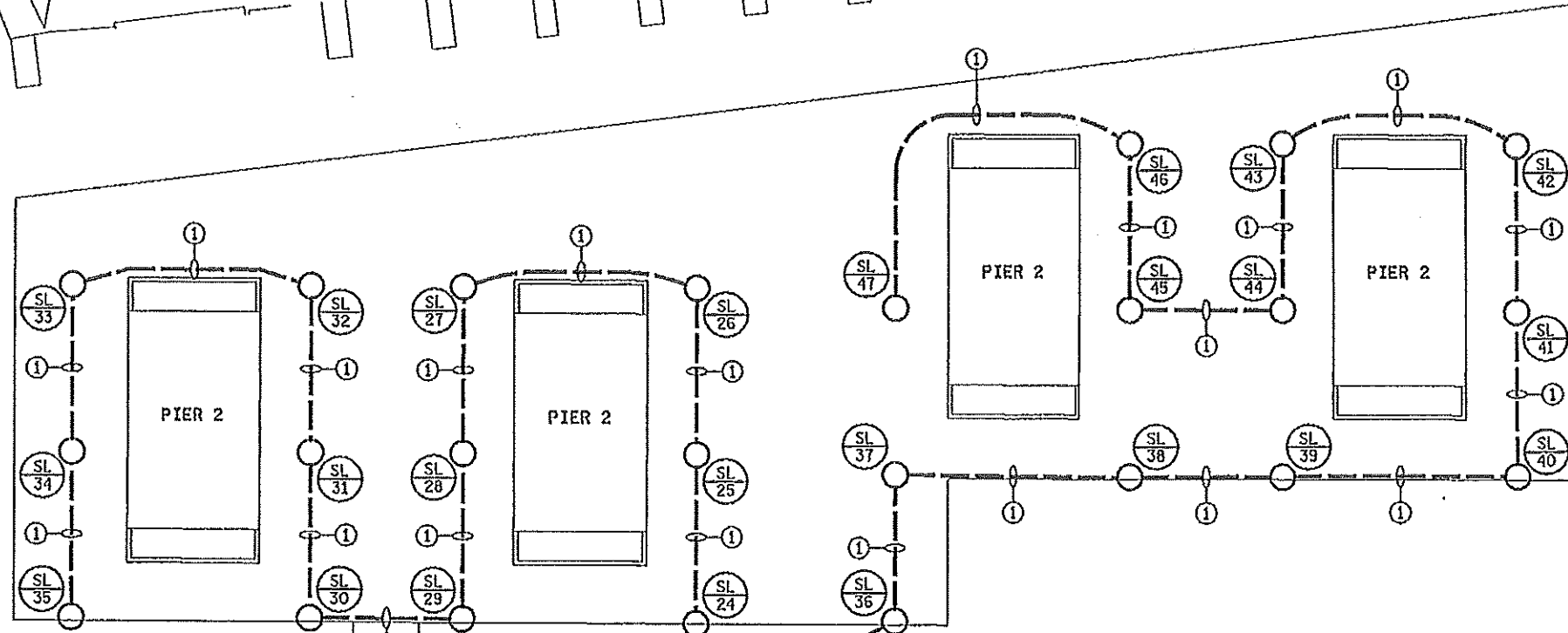
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0	7/14/08	JEB	FOR ACCEPTANCE	DES: JEB	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE: PRINTED NAME: J. E. BUDKE DATE: 7/15/2008 LIC. NO. 8943	TKDA ENGINEERS-ARCHITECTS-PLANNERS	RELEASED FOR CONSTRUCTION		PATHWAY LIGHTING PLANS SOUTH PLAZA AND WALKWAY 1 OF 2	SAINT ANTHONY FALLS (35W) BRIDGE DESIGN BUILD PROJECT S.P. 2783-120 (I-35W)	
				DRW: SFH			MR/DOY				Sheet No. R-LI25 of Sheets
NO.	DATE	BY	DESCRIPTION OF REVISIONS	CHK: JEB			DATE:				

MISSISSIPPI RIVER



MOUNT JUNCTION BOX IN BURIED VAULT FOR POWER TO FOUNDATION HEALTH MONITORING EQUIPMENT



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-LI22.

NOTES:

- ① 3/4" NMC SCHEDULE 80 WITH (3) #10 & (1) #10 GND
- ② 3/4" NMC SCHEDULE 80 WITH (2) #10 & (1) #10 GND

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MATCH LINE - SEE SHEET R-LI25

C.O.E. DRIVEWAY

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 FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: *J. E. Budke*
 PRINTED NAME: J. E. BUDKE
 DATE: 7/15/2008 LIC. NO. 8943

RELEASED FOR CONSTRUCTION

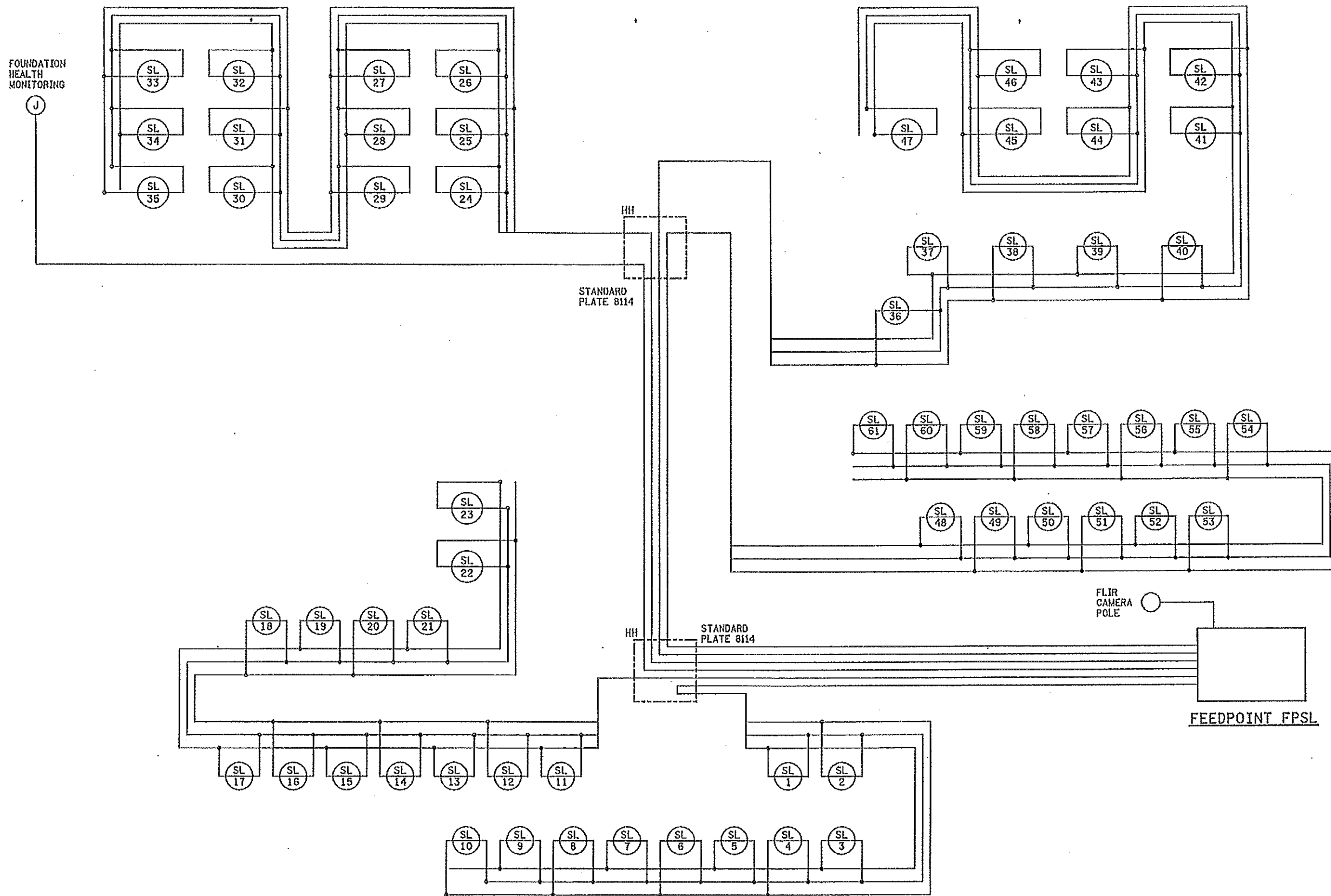
TKDA
 ENGINEERS • ARCHITECTS • PLANNERS

MINNESOTA
 DEPARTMENT OF TRANSPORTATION

PATHWAY LIGHTING PLANS
 SOUTH PLAZA AND WALKWAY
 2 OF 2

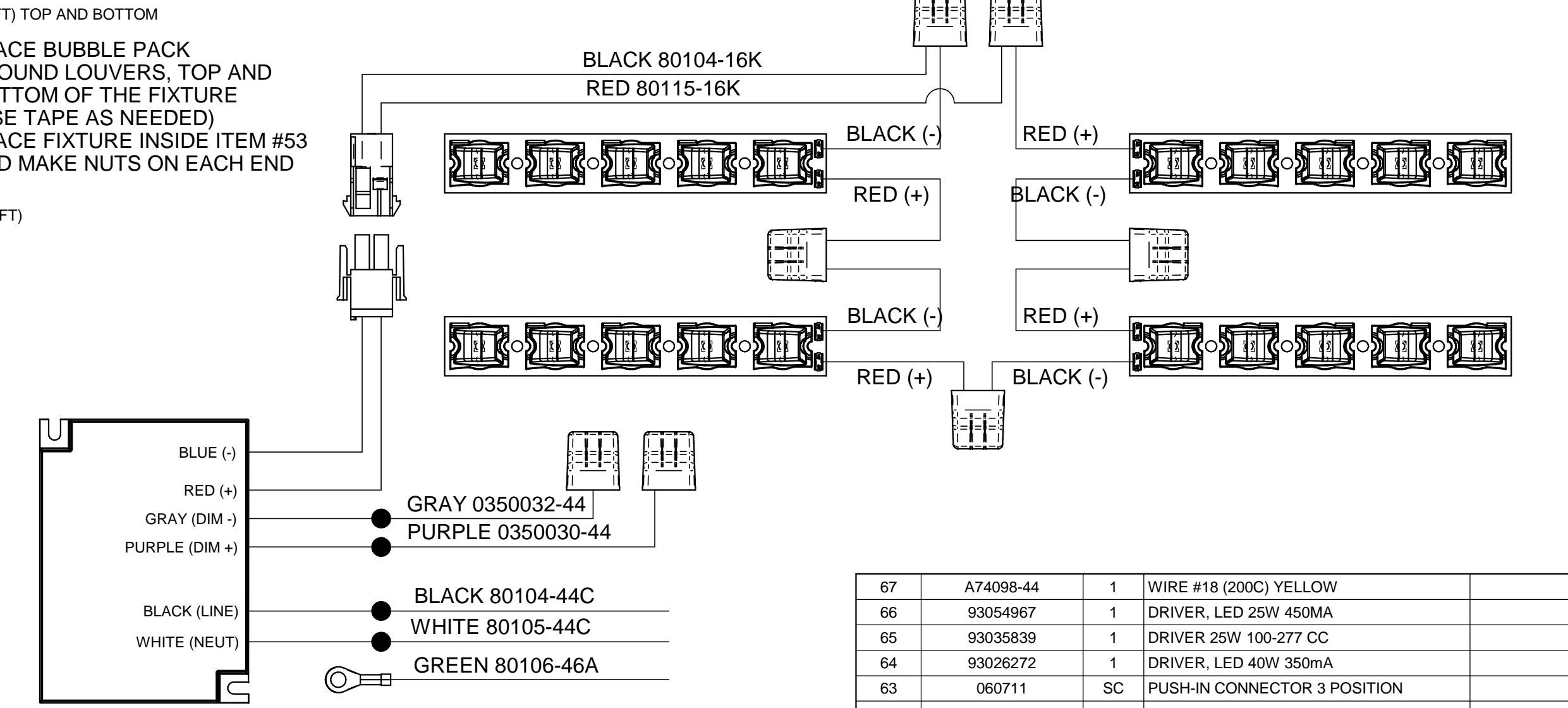
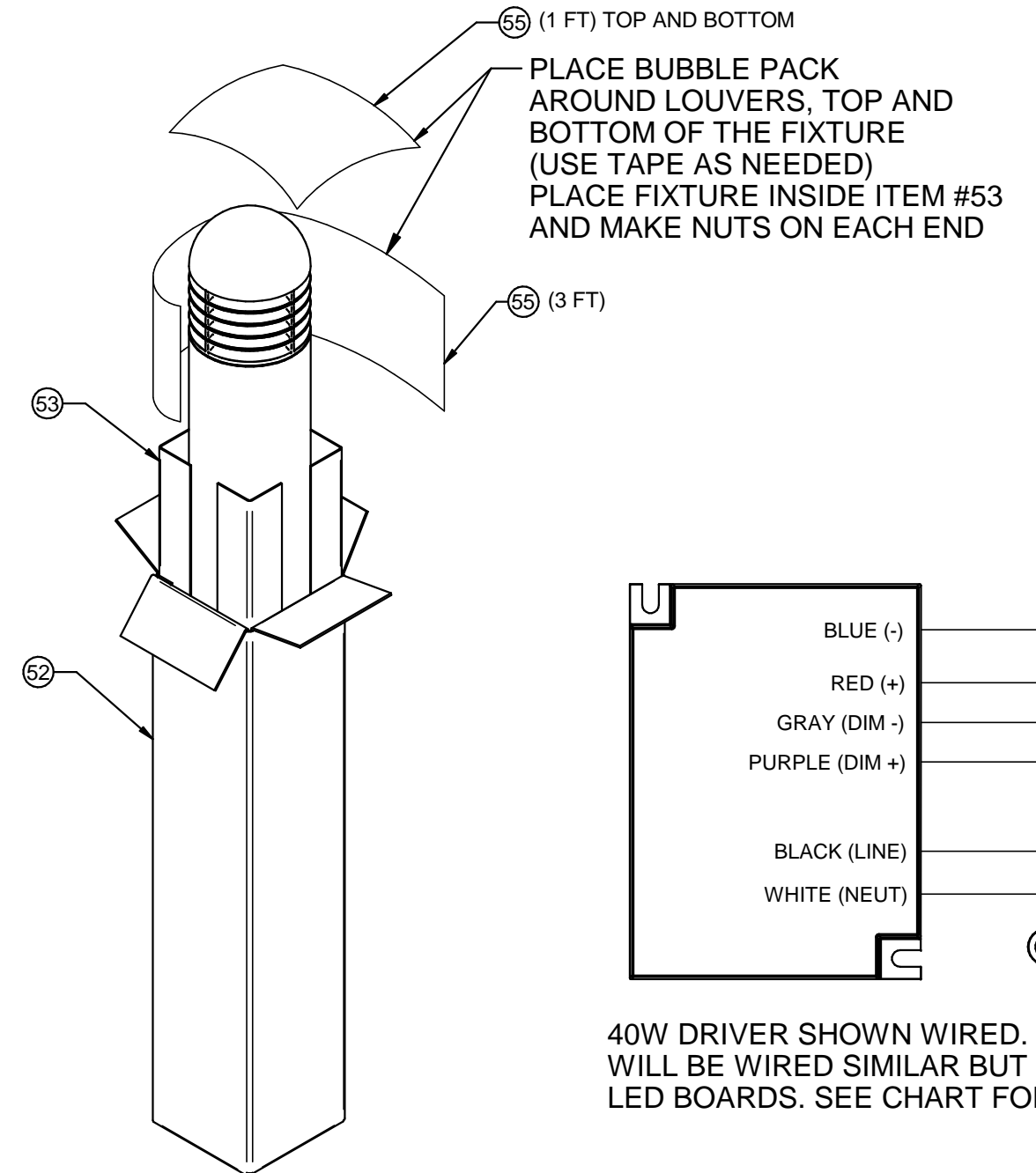
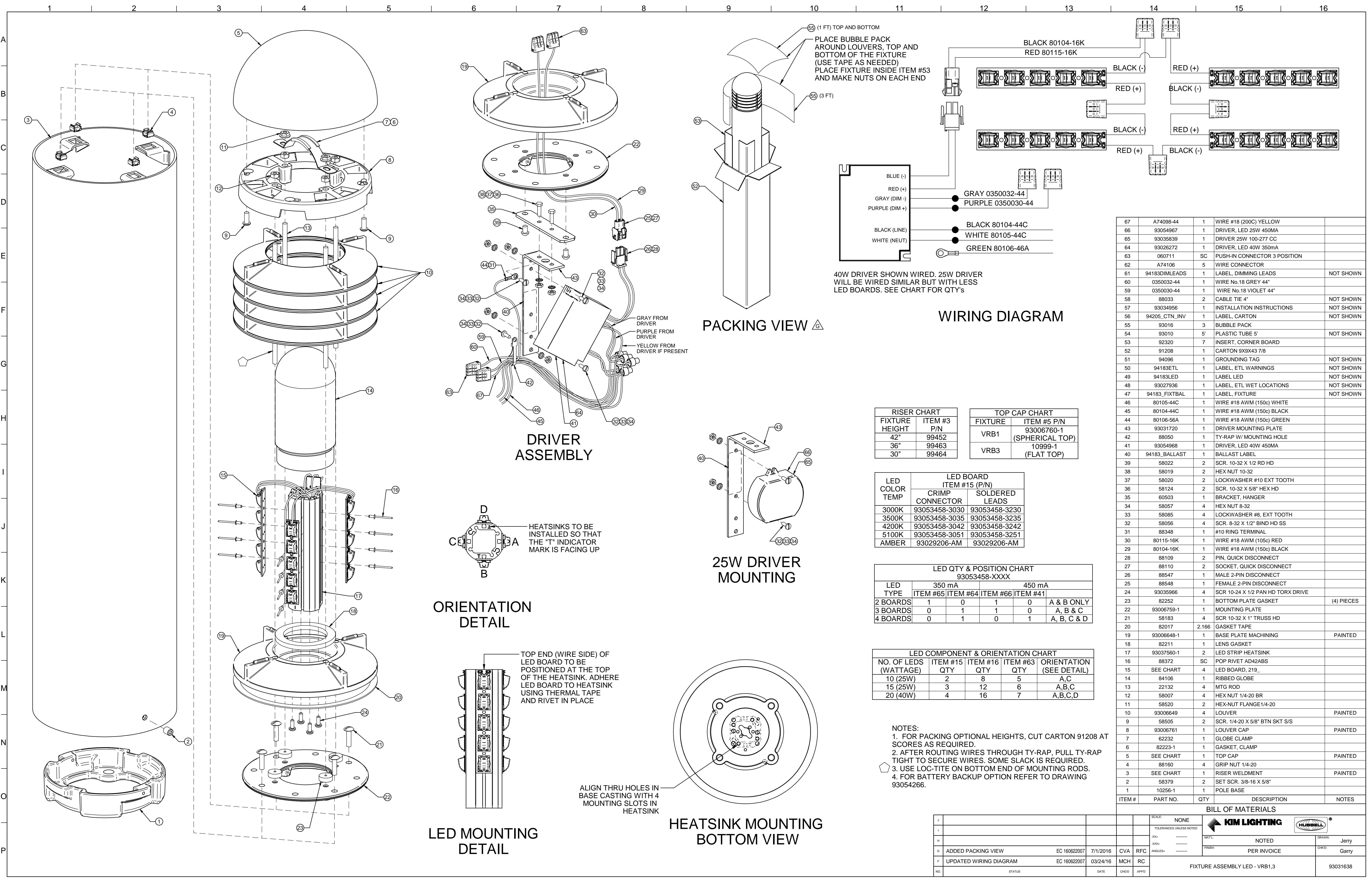
SAINT ANTHONY FALLS (35W) BRIDGE
 DESIGN BUILD PROJECT
 S.P. 2783-120 (I-35W)
 Sheet No. R-LI26 of Sheets

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SOUTH PLAZA AND WALKWAY WIRING DIAGRAM

0	7/14/08	JEB	FOR ACCEPTANCE	DES: JEB	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE: <i>J. E. Budke</i> PRINTED NAME: J. E. BUDKE DATE: 7/15/2008 LIC. NO. 8943	TKDA ENGINEERS • ARCHITECTS • PLANNERS	RELEASED FOR CONSTRUCTION		PATHWAY LIGHTING PLANS WIRE DIAGRAM - SOUTH PLAZA AND WALKWAY	SAINT ANTHONY FALLS (35W) BRIDGE DESIGN BUILD PROJECT S.P. 2783-120 (I-35W)
			DRW: SFH	MM/DD/YY						
			CHK: JEB	DATE:						
NO.	DATE	BY	DESCRIPTION OF REVISIONS							Sheet No. R-LI26A of



WIRING DIAGRAM

RISER CHART		TOP CAP CHART	
FIXTURE HEIGHT	ITEM #3 P/N	FIXTURE	ITEM #5 P/N
42"	99452	VRB1	93006760-1 (SPHERICAL TOP)
36"	99463	VRB3	10999-1 (FLAT TOP)
30"	99464		

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	A & B ONLY
3 BOARDS	0	1	1	0	A, B & C
4 BOARDS	0	1	0	1	A, B, C & D

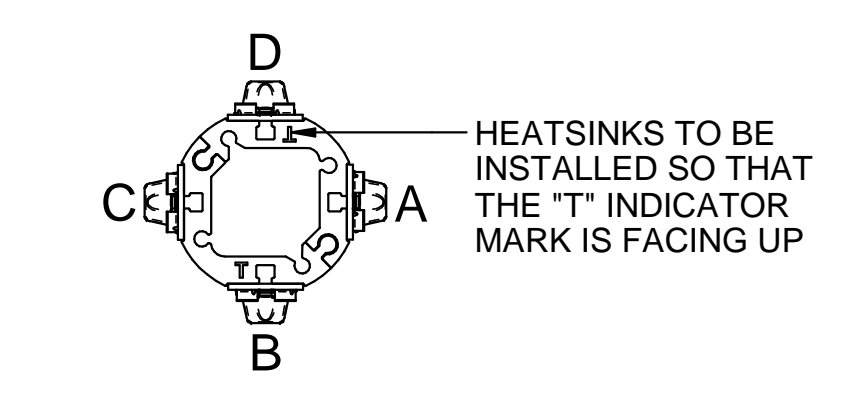
LED COMPONENT & ORIENTATION CHART				
NO. OF LEDS (WATTAGE)	ITEM #15 QTY	ITEM #16 QTY	ITEM #63 QTY	ORIENTATION (SEE DETAIL)
10 (25W)	2	8	5	A,C
15 (25W)	3	12	6	A,B,C
20 (40W)	4	16	7	A,B,C,D

- 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	

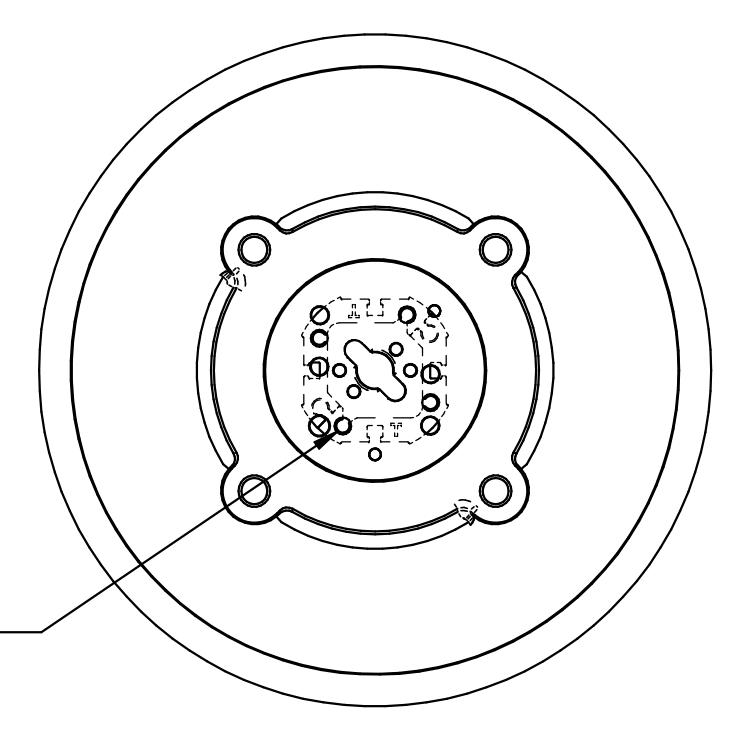
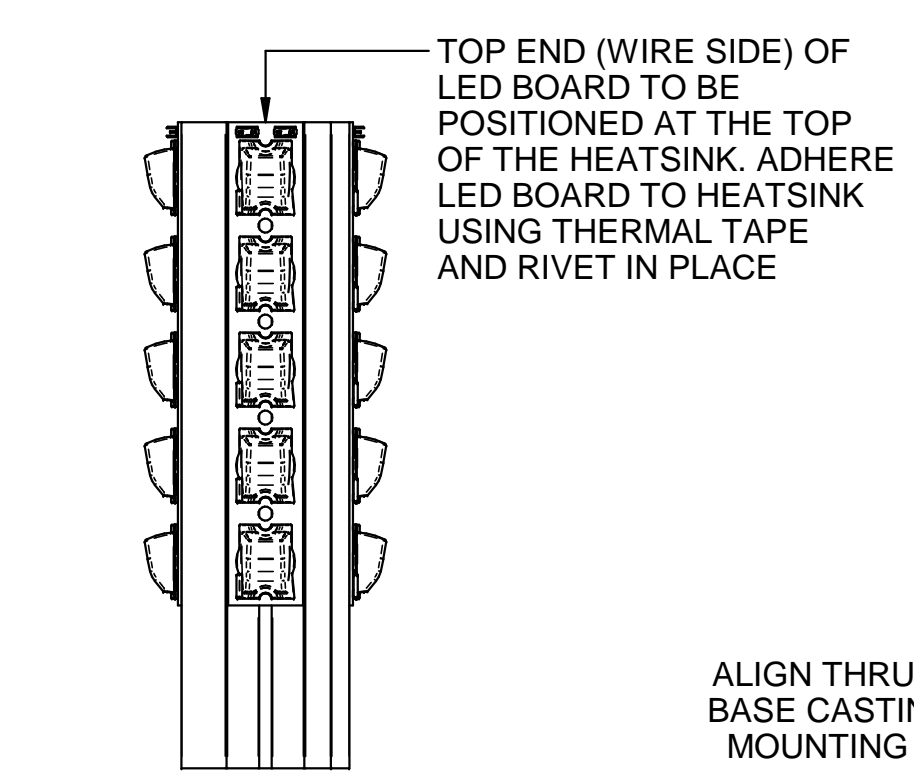
DRIVER ASSEMBLY

PACKING VIEW



25W DRIVER MOUNTING

ORIENTATION DETAIL



LED MOUNTING DETAIL

HEATSINK MOUNTING BOTTOM VIEW

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							

ITEM #	PART NO.	QTY	DESCRIPTION	NOTES
BILL OF MATERIALS				
SCALE: NONE				
TOLERANCES UNLESS NOTED				
MATERIAL: NOTED				
FINISH: PER INVOICE				
DRAWN: Jerry				
CHKD: 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