

TWR Lighting, Inc.

4300 WINDFERN RD #100 HOUSTON TX 77041-8943

VOICE (713) 973-6905 FAX (713) 973-9852

WEB www.twrlighting.com

IMPORTANT!!!

PLEASE TAKE THE TIME TO FILL OUT THIS FORM COMPLETELY. FILE IT IN A SAFE PLACE. IN THE EVENT YOU EXPERIENCE PROBLEMS WITH OR HAVE QUESTIONS CONCERNING YOUR CONTROLLER, THE FOLLOWING INFORMATION IS NECESSARY TO OBTAIN PROPER SERVICE AND PARTS.

MODEL # AA1-TSS

SERIAL # _____

PURCHASE DATE _____

PURCHASED FROM _____

AA1-TSS CONTROLLER

TABLE OF CONTENTS

1.0	GENERAL INFORMATION	1
2.0	INSTALLATION INSTRUCTIONS	2
2.1	MOUNTING THE CONTROL CABINET	2
2.2	EXTERNAL PHOTOCELL WIRING	3
2.3	POWER WIRING	3
2.4	RED BEACON AND SIDELIGHT WIRING.....	3
3.0	THEORY OF OPERATION.....	4
3.1	POWER SUPPLY	4
3.2	SIDELIGHTS.....	4
3.3	BEACONS	4
4.0	TROUBLE SHOOTING GUIDE	5
4.1	SYMPTON – BEACON NOT FLASHING.....	5
4.2	SYMPTON – SIDELIGHT OUT	5
4.3	SYMPTON – CONTROLLER ALWAYS “ON”	5
5.0	MAINTENANCE GUIDE	6
5.1	RED OBSTRUCTION LIGHTING	6
5.2	L-864 LAMP REPLACEMENT	6
5.3	L-810 LAMP REPLACEMENT	6
5.4	L-864 CONTROLLER	7
5.5	PHOTOCELL	7
6.0	MAJOR COMPONENTS PARTS LIST	8
7.0	SUGGESTED SPARE PARTS LIST	9
	WARRANTY & RETURN POLICY	10
	RETURN GOODS AUTHORIZATION FORM (RGA)	12

AA1-TSS CONTROLLER

APPENDIX

CHASSIS COMPONENT LAYOUT	202-R
SCHEMATIC LAYOUT	202-S
TROUBLE SHOOTING FLOW CHART	202-F
PHOTOCELL HOUSING DETAIL	100239
TOWER LIGHTING KIT 151' TO 200'	260-13
TOWER LIGHTING KIT 201' TO 350'	260-14
OL-1 LIGHT LEVEL DETAIL	100188
L-810 OL-1 SINGLE OBSTRUCTION LIGHT	FM100018
L-810 OL-1 SINGLE OBSTRUCTION LIGHT DETAIL	279-OL
L-810 OL-1 SINGLE OBSTRUCTION WIRING DETAIL	274 S
L-864 FB 300 MM BEACON	FM100017
L-864 FB 300 MM BEACON DETAIL	275-B
L-864 FB 300 MM BEACON WIRING DETAIL	273 B
JUNCTION BOX DETAIL	100089

AA1-TSS CONTROLLER

1.0 GENERAL INFORMATION

The TWR Model AA1-TSS Controller is for A1 lighting of towers 151' to 350' AGL (above ground level) in accordance with the Federal Aviation Advisory Circular 70/7460-1J. One (1) beacon should be placed at the top of the structure. Three (3) obstruction lights should be placed at the mid-point with respect to overall tower height.

The flash rate of the beacon is 30 per minute. The sidelights burn steady.

A by-pass switch (SW1) allows the controller to be turned on during daylight hours without covering the photocell. This is particularly helpful since the controller can be mounted indoors while the photocell is outdoors. SW1 can be operated by flipping the switch to "ON."

The beacon requires two (2) 620 watt or two (2) 700 watt, 120V bulbs. TWR recommends that you use only these bulbs. Each sidelight requires one (1) 116 watt, 120V bulb (620PS40P, 700PS40P, and 116A21TS).

The photocell is the three (3) blades, twist to lock, type.

Power supplied to the controller shall be 120V AC 50/60 Hz.

The controller housing is rated at NEMA 4X. It is suitable for indoor or outdoor mounting.

AA1-TSS CONTROLLER

2.0 INSTALLATION INSTRUCTIONS

2.1 MOUNTING THE CONTROL CABINET

(Refer to Drawing 202-R)

The power supply control cabinet can be located at the base of the structure or in an equipment building. Mounting footprints are shown on Drawing 202-R. Power wiring to the control cabinet should be in accordance with local methods and National Electrical Codes (NEC).

2.1.1 If the control cabinet is mounted inside an equipment building, the photocell should be mounted vertically on ½" conduit outside the building above the eaves facing north. Wiring from the photocell socket to the control cabinet should consist of one (1) each, red, black, and white wires. The white wire is connected to the socket terminal marked "COM," the black wire is connected to the socket terminal marked "B," and the red wire is connected to the socket terminal marked "R." These socket connections are made by using .25" quick connect terminals, which must be crimped to the wires. The photocell should be positioned so that it does not "see" ambient light, which would prevent it from switching to the nightmode.

2.1.2 If the control cabinet is mounted outside an equipment building, the photocell should be mounted vertically on ½" conduit so the photocell is above the control cabinet. Care must be taken to assure that the photocell does not "see" any ambient light that would prevent it from switching into the nightmode. The photocell wiring is the same as in 2.1.1.

2.1.3 The wiring from the photocell, the service breaker, the red incandescent beacon, and the sidelights should enter the control cabinet through the watertight connectors in the bottom of the cabinet. Inside the cabinet, the connections will be made on the terminal strips and circuit breakers located at the bottom of the chassis. These connections are made as follows:

AA1-TSS CONTROLLER

2.2 **EXTERNAL PHOTOCELL WIRING**

(Refer to Drawing 202-R)

2.2.1 Connect the **BLACK** wire from the photocell to terminal block TB2 marked "L."

2.2.2 Connect the **RED** wire from the photocell to terminal block TB2 marked "SSR."

2.2.3 Connect the **WHITE** wire from the photocell to terminal block TB2 marked "N."

2.3 **POWER WIRING**

(Refer to Drawing 202-R)

2.3.1 Power wiring to the control cabinet should be in accordance with local methods and National Electrical Codes (NEC).

2.3.2 Circuit breaker needs to be rated at 20 amps.

2.3.3 Connect incoming 120V AC to terminal block TB1 marked "L."

2.3.4 Connect the neutral wire(s) to one (1) of the terminal blocks on TB1 marked "N."

2.3.5 Connect the AC ground to the aluminum mounting plate.

2.4 **RED BEACON AND SIDELIGHT WIRING**

(Refer to Drawings 202-R, 260-13, and 260-14)

2.4.1 Connect the **BLACK** wire from the beacon to the circuit breaker marked "B."

2.4.2 Connect the **RED** wire from the sidelight group to the circuit breaker marked "S."

2.4.3 Connect the **WHITE** neutral wire(s) to one (1) or more of the terminals on TB1 marked "N."

AA1-TSS CONTROLLER

3.0 THEORY OF OPERATION

3.1 POWER SUPPLY

120V AC enters the controller from the circuit breaker panel. Line sits at the PRD, waiting to be switched on. When the 102FAA photocell is activated, line energizes the coil of the PRD relay. This also can be accomplished by using the photocell by-pass switch (SW1).

3.2 SIDELIGHTS

Line S is sent to the circuit breaker marked "S" which powers the sidelight circuit.

3.3 BEACONS

Line LD is sent to Module M1. Module M1 is a solid state flasher which its output is sent to circuit breaker "B" which then powers the beacon at 30 fpm with a duration of 2/3 on 1/3 off.

AA1-TSS CONTROLLER

4.0 TROUBLE SHOOTING GUIDE

4.1 SYMPTOM – BEACON NOT FLASHING

Check for pulsing 120V AC at circuit breaker “B.” If the circuit breaker is tripped, there may have been a surge or could be a short in the tower wiring. This can be checked by looking for a short between circuit breaker “B” and the ground. If okay, and 120V AC is not present, then check the FS155-30T flasher to see if there is voltage on the input (pin #2). If okay, the flasher module has probably failed and needs to be replaced. If everything appears to be correct, but the beacon still does not work, check the tower wiring and the lamps within the beacon.

4.2 SYMPTOM – SIDELIGHT OUT

Check for constant 120V AC at circuit breaker “S.” If tripped, check for a short in the tower wiring. If not, and voltage is present, check the tower wiring and the lamp within the sidelights.

4.3 SYMPTOM – CONTROLLER ALWAYS “ON”

If the tower lights stay on in the daytime, check to see that switch SW1 is off. If the switch is off, then remove the photocell out of the socket. If the lights go out, replace the photocell. If not, check for welded contacts on the PRD. Replace if necessary.

AA1-TSS CONTROLLER

5.0 MAINTENANCE GUIDE

5.1 RED OBSTRUCTION LIGHTING

The only required maintenance needed to be performed is replacement of the lamps in the L-864 and L-810 fixtures. Lamps should be replaced after being operated for not more than 75% of the rated life or immediately upon failure as per Advisory Circular 70/7460-1J. By following these instructions, maximum safety and performance can be achieved.

TOOLS REQUIRED: NONE

5.2 L-864 LAMP REPLACEMENT

5.2.1 Loosen the one (1) wing nut on the latch pin so that it can recline.

5.2.2 Open the lens and tilt it back.

5.2.3 To remove each lamp, depress down while rotating the lamp counter-clockwise 90°.

5.2.4 Install the new lamps by depressing down while rotating the lamp clockwise 90°.

5.2.5 Close the lens and let the latch pin drop in the recessed slot.

5.2.6 Tighten the wing nut snug, then ¼ turn more.

5.3 L-810 LAMP REPLACEMENT

5.3.1 Unclasp the two (2) latches and let the bails recline back.

5.3.2 Lift the lens up and over the lamp, letting the lens hang from the safety cable.

5.3.3 Unscrew the lamp counter-clockwise and remove.

5.3.4 Install the new lamp by screwing the lamp clockwise.

5.3.5 Reinstall the lens, making sure it is seated properly on the base.

5.3.6 Reclasp the two (2) latches.

AA1-TSS CONTROLLER

5.4 L-864 CONTROLLER

No scheduled maintenance is required. Perform on an “as needed” basis only.

5.5 PHOTOCELL

The photocell is a sealed unit. No maintenance is needed or required other than replacement as necessary.

AA1-TSS CONTROLLER

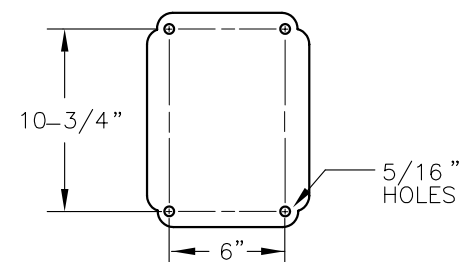
6.0 MAJOR COMPONENTS PARTS LIST

QUANTITY	PART NUMBER	DESCRIPTION
1	102FAA	Photocell
1	FS15530T	Solid State Flasher (M1)
1	PRD7AG0	Mechanical Load Contactor (PRD)
1	VJ1008HWPL1	Enclosure
2	8WA1808	End Stop
2	5Sx2120-8	20 amp Circuit Breaker (B, S)
6	8WA1204	Single Pole Terminal (TB1, TB2)
1	MOV524V15	Metal Oxide Varistor (MOV)
1	SSPIGTAIL	20' Photocell Pigtail
1	STJ01002	SPDT Switch (SW1)

AA1-TSS CONTROLLER

7.0 SUGGESTED SPARE PARTS LIST

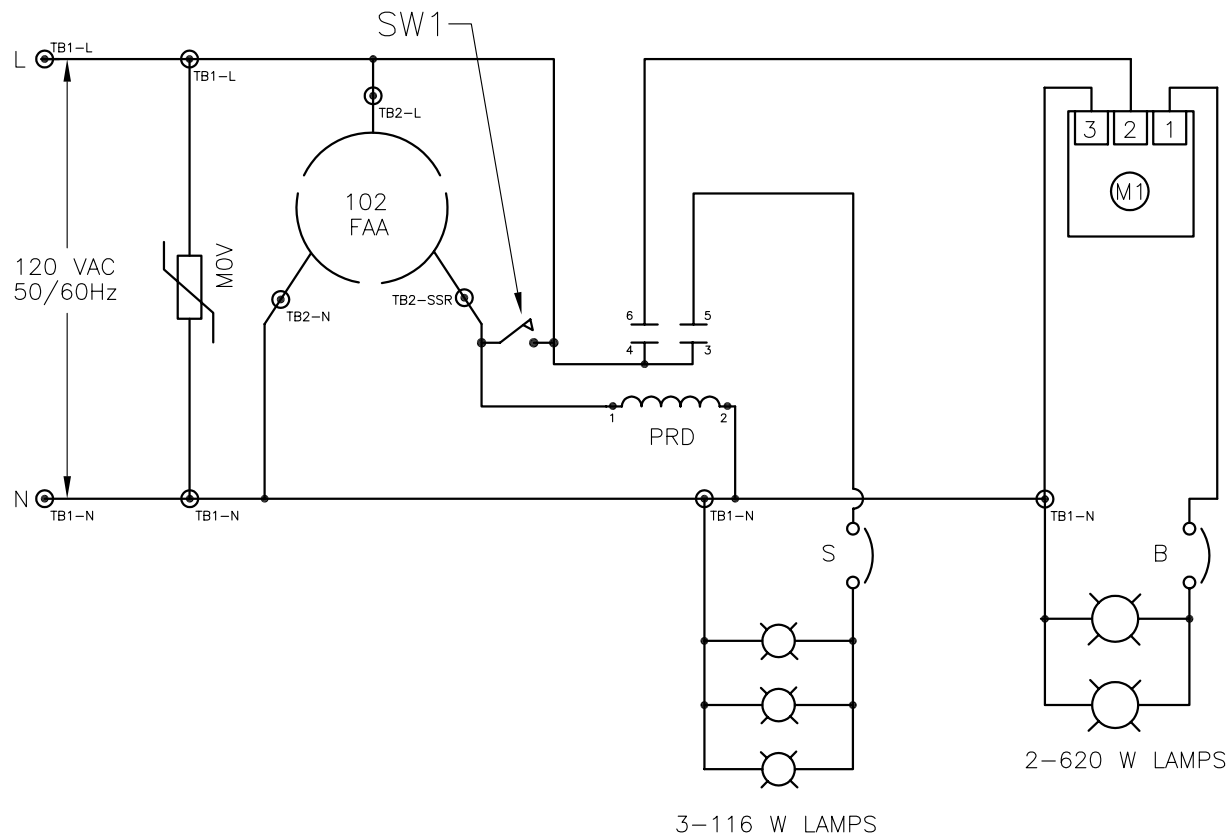
QUANTITY	PART NUMBER	DESCRIPTION
1	102FAA	Photocell
1	FS15530T	Solid State Flasher (M1)



NOTES:

1. WHEN REPLACING METAL BASE MODULES USE HEAT SINK COMPOUND BETWEEN MODULE AND ALUMINUM PLATE.
2. WIRES ARE CONNECTED LETTER TO LETTER. (EXAMPLE) L TO L TO L...

AA1-TSS CONTROLLER			
TWR Lighting, Inc.			
APP'D	ENGINEER	CHK'D BY	
DRAWN BY	SHEET SIZE		SHEET QTY.
E.A. SALAZAR	B		1 OF 1
DATE	SCALE	DRAWING NO.	
5/8/91	N.T.S.	202-R	
NOTE: This drawing is the property of TWR Lighting, Inc. All information contained herein that is not generally known shall be confidential except to the extent the information has been previously established. This drawing may not be reproduced, copied or used as the basis for manufacture or sale without written permission.			

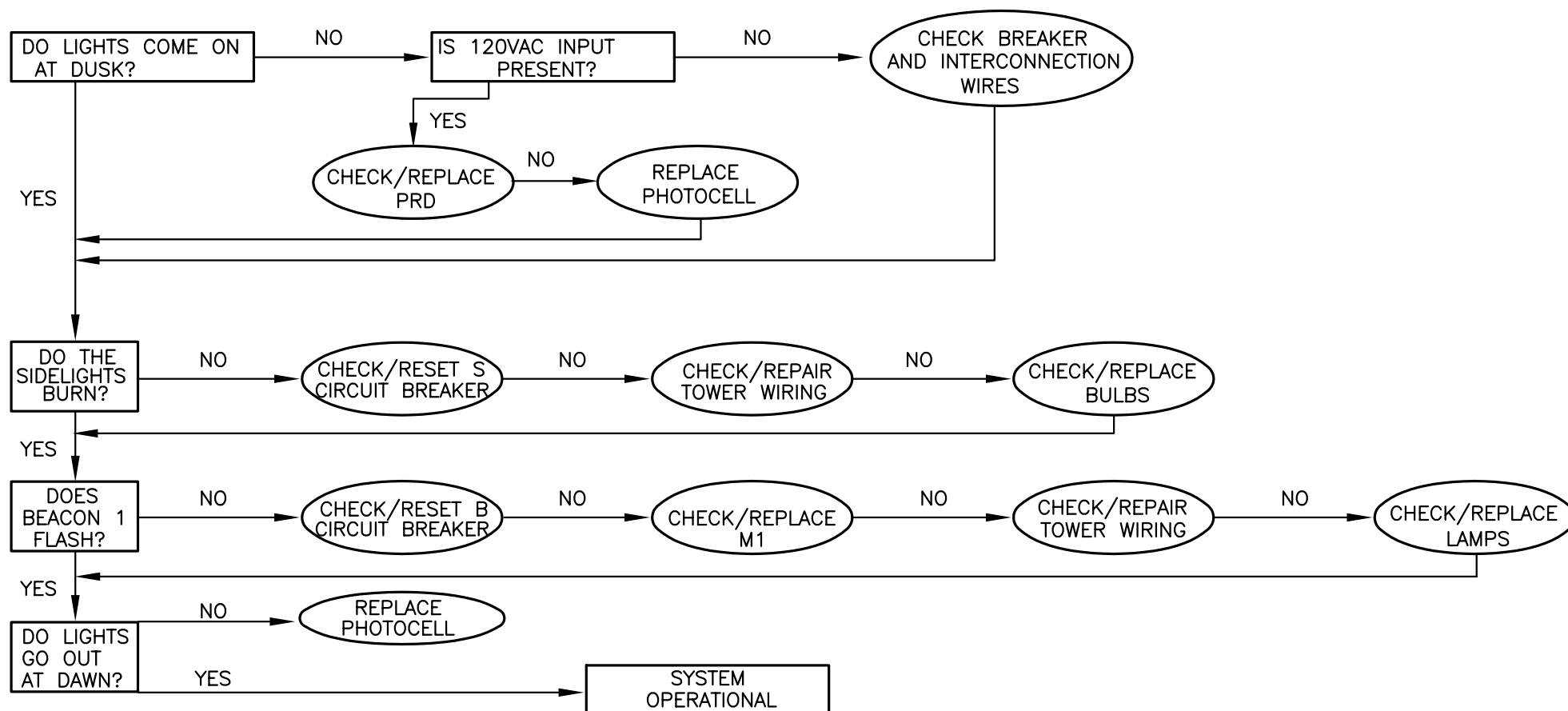


AA1-TSS SCHEMATIC

TWR Lighting, Inc.

10/21/98	(C)	CHG. FUSE TO BREAKER	APP'D	ENGINEER	CHK'D BY
2/06/96	(B)	ADDED SW1	DRAWN BY	E.A.SALAZAR	SHEET SIZE B SHEET QTY. 1 OF 1
5/25/95	(A)	ADDED MOV	DATE	6/5/91	SCALE N.T.S. DRAWING NO. 202-S
DATE:	LTR.	REVISION			

NOTICE: This drawing is the property of TWR Lighting, Inc. All information contained herein that is not generally known shall be confidential except to the extent the information has been previously established. This drawing may not be reproduced, copied or used as the basis for manufacture or sale without written permission.

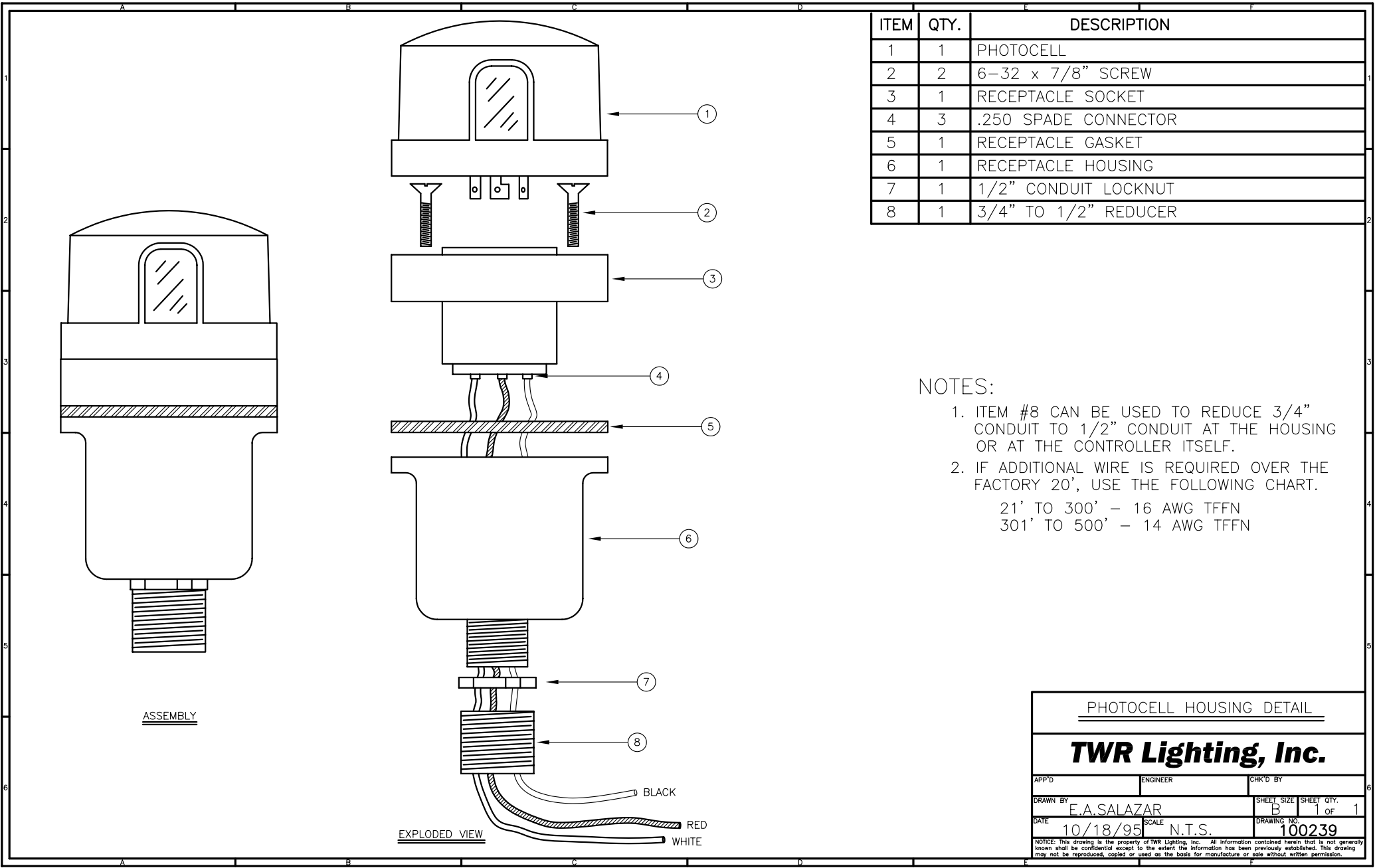


TROUBLESHOOTING FLOW CHART
AA1-TSS DWG.#202-R

TWR Lighting, Inc.

APP'D	ENGINEER	CHK'D BY
DRAWN BY	E.A.SALAZAR	SHEET SIZE
DATE	10/21/98	SCALE
	N.T.S.	DRAWING NO.
		202-F

NOTICE: This drawing is the property of TWR Lighting, Inc. All information contained herein that is not generally known shall be confidential except to the extent the information has been previously established. This drawing may not be reproduced, copied or used as the basis for manufacture or sale without written permission.



ITEM	QTY.	DESCRIPTION
1	1	PHOTOCELL
2	2	6-32 x 7/8" SCREW
3	1	RECEPTACLE SOCKET
4	3	.250 SPADE CONNECTOR
5	1	RECEPTACLE GASKET
6	1	RECEPTACLE HOUSING
7	1	1/2" CONDUIT LOCKNUT
8	1	3/4" TO 1/2" REDUCER

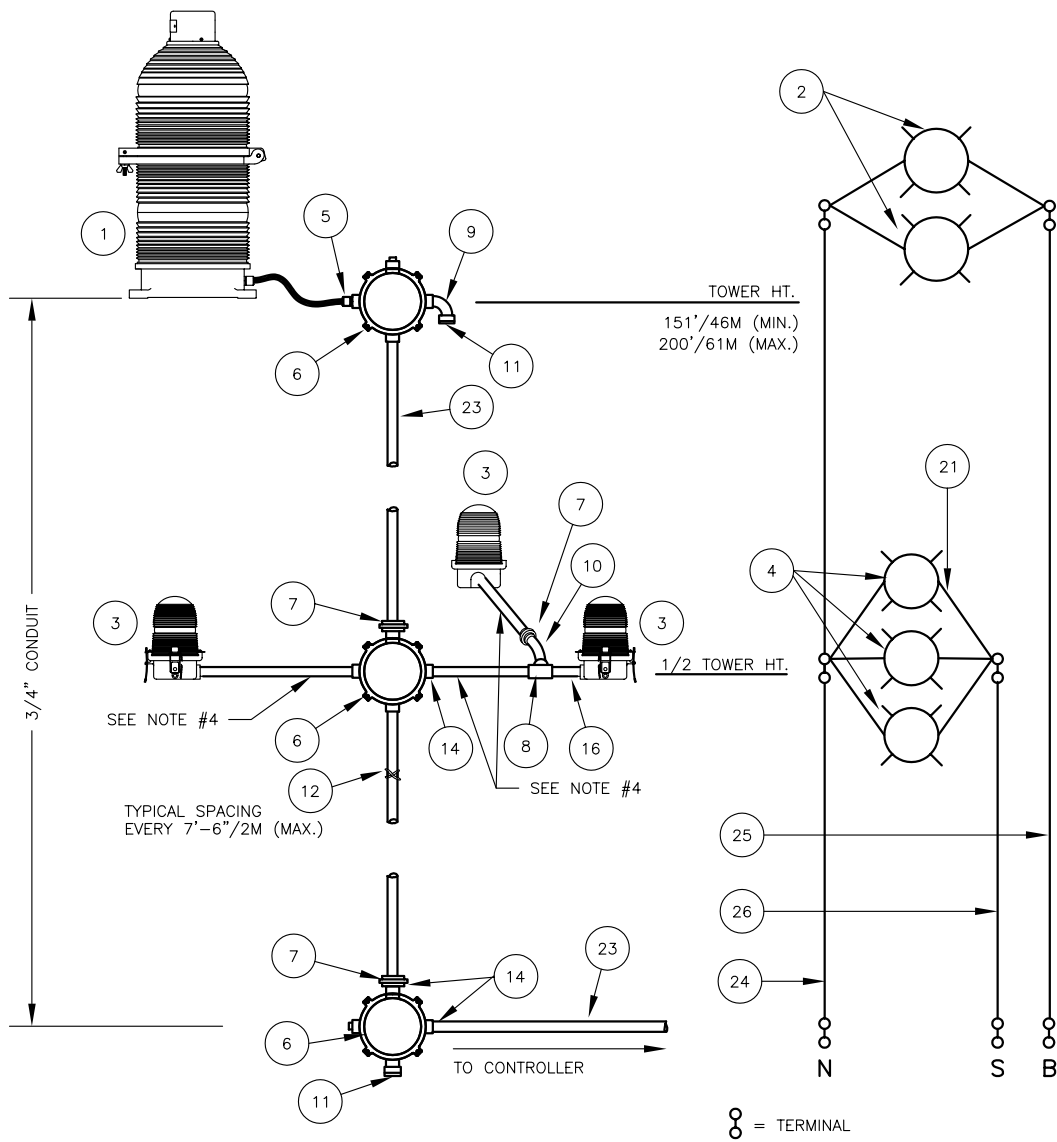
- NOTES:
- 1. ITEM #8 CAN BE USED TO REDUCE 3/4" CONDUIT TO 1/2" CONDUIT AT THE HOUSING OR AT THE CONTROLLER ITSELF.
 - 2. IF ADDITIONAL WIRE IS REQUIRED OVER THE FACTORY 20', USE THE FOLLOWING CHART.
21' TO 300' - 16 AWG TFFN
301' TO 500' - 14 AWG TFFN

PHOTOCELL HOUSING DETAIL

TWR Lighting, Inc.

APP'D	ENGINEER	CHK'D BY
DRAWN BY E.A.SALAZAR		SHEET SIZE B
DATE 10/18/95		SHEET QTY. 1 OF 1
SCALE N.T.S.		DRAWING NO. 100239

NOTICE: This drawing is the property of TWR Lighting, Inc. All information contained herein that is not generally known shall be confidential except to the extent the information has been previously established. This drawing may not be reproduced, copied or used as the basis for manufacture or sale without written permission.



BILL OF MATERIALS

ITEM NO.	QTY.	TWR PART NO.	DESCRIPTION
1	1	BEACON	300 MM BEACON RED
2	2	620PS40P	620 WATT 120 VOLT LAMP
3	3	OL1	3/4" OBSTRUCTION LIGHT
4	3	116A21TS	116 WATT 120 VOLT LAMP
5	1	CGB295SA	3/4" CORD CONNECTOR
6	3	JB5	3/4" JUNCTION BOX
7	4	UNY205	3/4" UNION
8	2	T27CG	3/4" CONDULET W/COVER AND GASKET
9	2	EL3490	3/4" 90° SHORT ELBOW
10	1	EL3430	3/4" 30° ELBOW
11	2	5012902	3/4" BREATHER
12	1	SS10012	WRAPLOCK
* 13	1	PIPDOP	4 oz. PIPE DOPE
14	12	A314	3/4" CONDUIT LOCKNUTS
* 15	8	CPIG34	3/4" GALVANIZED COUPLING
16	4	N34T3	3/4" x 3" NIPPLE
17	3	N34T6	3/4" x 6" NIPPLE
18	3	N34T12	3/4" x 12" NIPPLE
19	3	N34T24	3/4" x 24" NIPPLE
20	2	N34T36	3/4" x 36" NIPPLE
21	3	SLPIGTAIL25	25' SIDELIGHT PIGTAIL
* 22	1	AA1	AA1 CONTROLLER

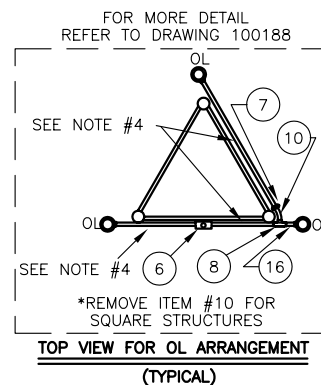
ITEM NUMBERS #23-#26 ARE NOT INCLUDED IN THE KIT BUT ARE AVAILABLE UPON REQUEST, AND REQUIRED FOR INSTALLATION.

23	-	CONDUIT34	3/4" CONDUIT (TOWER HT. + 30' / 9M)
24	-	8THHNWHT	#8 THHN WHT. WIRE (TOWER HT.+40' / 12M)
25	-	8THHNBK	#8 THHN BLK. WIRE (TOWER HT.+40' / 12M)
26	-	12THHNRD	#12 THHN RED WIRE (1/2 TWR HT.+40' / 12M)

* = ITEMS NOT SHOWN

NOTES:

- 1) CONDUIT SIZE BASED ON USING TYPE THHN WIRE.
- 2) USE RIGID GALVANIZED STEEL CONDUIT.
- 3) BREATHERS ALLOW FOR CIRCULATION OF AIR TO PREVENT CONDENSATION.
- 4) ITEMS #16-#20 TO BE USED IN VARIOUS COMBINATIONS FOR OL1 RUN. EXTRA NIPPLES TO BE CUT TO FIT IF FACE WIDTH IS LARGER THAN 6'.
- 5) USE ITEM #15 TO COUPLE CONDUIT NIPPLES. APPROPRIATE OL1 EXTENSION IS 12".

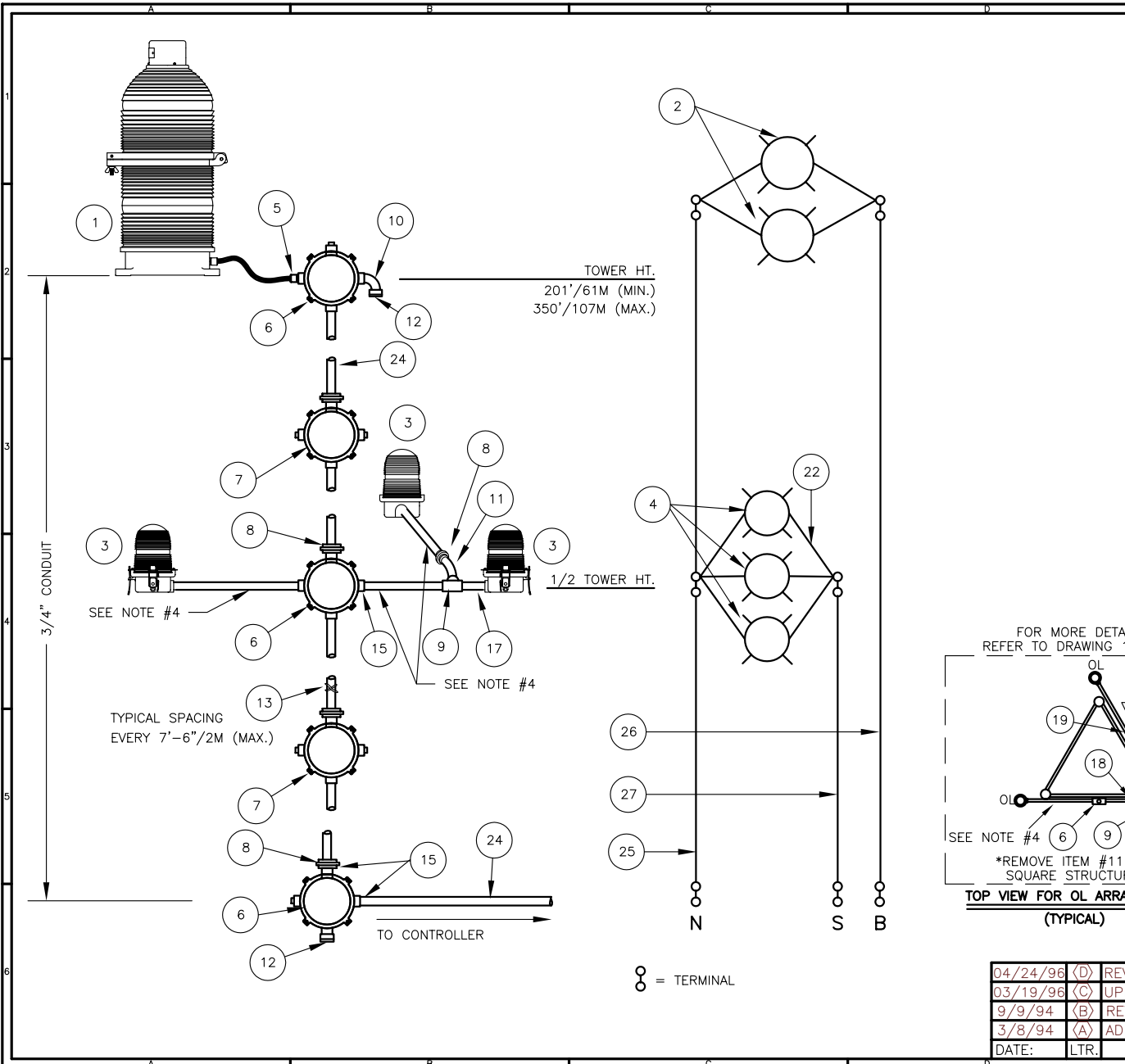


LK3A1 TOWER LIGHTING KIT W/NO BOOST
(TOWERS 151' / 46M TO 200' / 61M)

TWR Lighting, Inc.

04/24/96 (D)	REVISE B.O.M.	APP'D	ENGINEER	CHK'D BY
03/19/96 (C)	UPDATED B.O.M.	DRAWN BY	G.D.SFBEK	SHEET SIZE B
9/9/94 (B)	REWORK KIT PARTS	DATE	3/5/94	SHEET QTY. 1 OF 1
3/8/94 (A)	ADDED MATERIALS	SCALE	N.T.S.	DRAWING NO. 260-13
DATE:	LTR.	REVISION		

NOTICE: This drawing is the property of TWR Lighting, Inc. All information contained herein that is not generally known shall be confidential except to the extent the information has been previously established. This drawing may not be reproduced, copied or used as the basis for manufacture or sale without written permission.



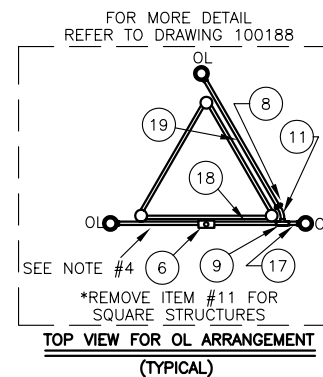
BILL OF MATERIALS

ITEM NO.	QTY.	TWR PART NO.	DESCRIPTION
1	1	BEACON	300 MM BEACON RED
2	2	620PS40P	620 WATT 120 VOLT LAMP
3	3	OL1	3/4" OBSTRUCTION LIGHT
4	3	116A21TS	116 WATT 120 VOLT LAMP
5	1	CGB295SA	3/4" CORD CONNECTOR
6	3	JB5	3/4" JUNCTION BOX
7	2	JB0	3/4" STRAIN RELIEF BOX
8	6	UNY205	3/4" UNION
9	2	T27CG	3/4" CONDULET W/COVER AND GASKET
10	2	EL3490	3/4" 90° SHORT ELBOW
11	1	EL3430	3/4" 30° ELBOW
12	2	5012902	3/4" BREATHER
13	1	SS10012	WRAPLOCK
14	1	PIPDOP	4 oz. PIPE DOPE
15	16	A314	3/4" CONDUIT LOCKNUTS
16	8	CPLG34	3/4" GALVANIZED COUPLING
17	4	N34T3	3/4" x 3" NIPPLE
18	3	N34T6	3/4" x 6" NIPPLE
19	3	N34T12	3/4" x 12" NIPPLE
20	3	N34T24	3/4" x 24" NIPPLE
21	2	N34T36	3/4" x 36" NIPPLE
22	3	SLPIGTAIL25	25' SIDELIGHT PIGTAIL
23	1	AA1	AA1 CONTROLLER
ITEM NUMBERS #24-#27 ARE NOT INCLUDED IN THE KIT BUT ARE AVAILABLE UPON REQUEST, AND REQUIRED FOR INSTALLATION.			
24	-	CONDUIT34	3/4" CONDUIT (TOWER HT. + 30'/9M)
25	-	6THHNWHT	#6 THHN WHT. WIRE (TOWER HT.+40'/12M)
26	-	6THHNBLK	#6 THHN BLK. WIRE (TOWER HT.+40'/12M)
27	-	12THHNRED	#12 THHN RED WIRE (1/2 TWR HT.+40'/12M)

* = ITEMS NOT SHOWN

NOTES:

- 1) CONDUIT SIZE BASED ON USING TYPE THHN WIRE.
- 2) USE RIGID GALVANIZED STEEL CONDUIT.
- 3) BREATHERS ALLOW FOR CIRCULATION OF AIR TO PREVENT CONDENSATION.
- 4) ITEMS #17-#21 TO BE USED IN VARIOUS COMBINATIONS FOR OL1 RUN. EXTRA NIPPLES TO BE CUT TO FIT IF FACE WIDTH IS LARGER THAN 6'.
- 5) USE ITEM #16 TO COUPLE CONDUIT NIPPLES. APPROPRIATE OL1 EXTENSION IS 12".



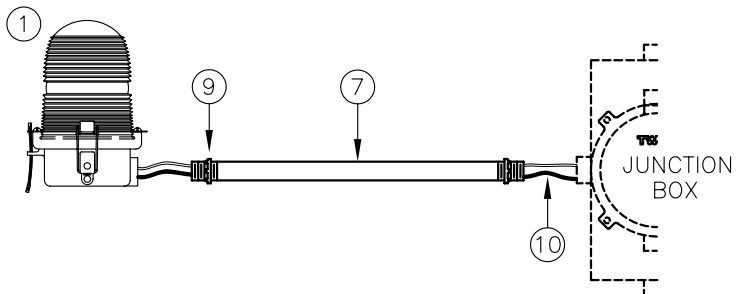
(NO BOOST)

LK4A1 TOWER LIGHTING KIT W/3 OL-1
(TOWERS 201'/61M TO 350'/107M)

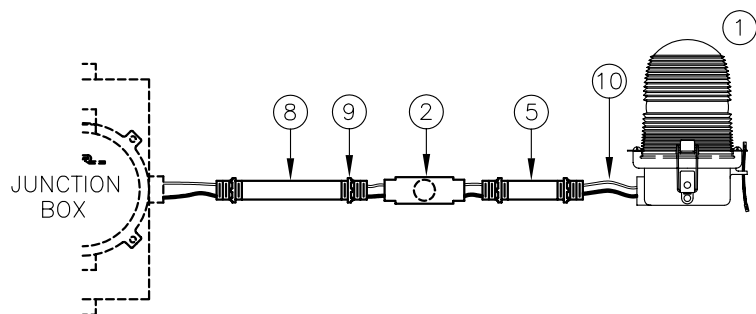
TWR Lighting, Inc.

04/24/96 (D) REVISE B.O.M.	APP'D	ENGINEER	CHK'D BY
03/19/96 (C) UPDATED B.O.M.	DRAWN BY	G.D.SFBEK	SHEET SIZE B SHEET QTY. 1 OF 1
9/9/94 (B) REWORK KIT PARTS	DATE	3/5/94	SCALE N.T.S. DRAWING NO. 260-14
3/8/94 (A) ADDED MATERIALS	DATE:	LTR.	REVISION

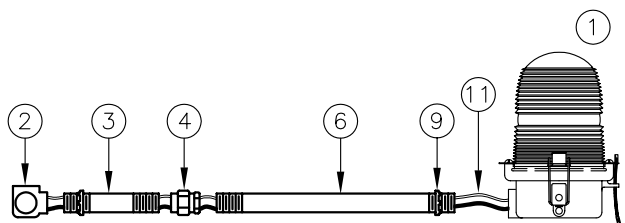
NOTICE: This drawing is the property of TWR Lighting, Inc. All information contained herein that is not generally known shall be confidential except to the extent the information has been previously established. This drawing may not be reproduced, copied or used as the basis for manufacture or sale without written permission.



VIEW A



VIEW B



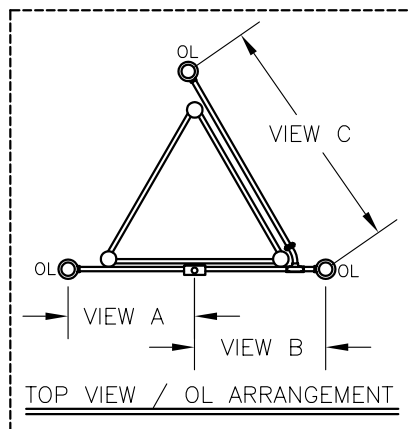
VIEW C

BILL OF MATERIALS

ITEM NO.	QTY.	TWR PART NO.	DESCRIPTION
1	3	OL1	3/4" OBSTRUCTION LIGHT
2	1	T27	3/4" CONDULET W/COVER AND GASKET
3	1	EL3430	3/4" 30° ELBOW
4	1	UNY205	3/4" UNION
5	1	N34T3	3/4" x 3" NIPPLE
6	1	---	3/4" NIPPLE = (FACE + 6")
7	1	---	3/4" NIPPLE = (FACE ÷ 2 + 36)
8	1	---	3/4" NIPPLE = (FACE ÷ 2)
9	5	A314	3/4" CONDUIT LOCKNUTS
10	2	---	#14 RED & WHT. WIRE (FACE - 2 + 36")
11	1	---	#14 RED & WHT. WIRE (FACE x 1.5 + 24")

NOTES:

1. THIS DRAWING IS A TYPICAL INSTALLATION DETAIL FOR 3 OL-1 PER LEVEL SYSTEM.
2. IN VIEW C ITEM NUMBER 3 MAY BE OMITTED WHEN ARRANGING FOUR LEG TOWERS.
3. LENGTHS FOR SIDELIGHT RUNS MAY BE ACHIEVED BY MULTIPLE PIECES OF ITEM NUMBERS 6-8.
4. ITEMS 10 & 11 MAY COME IN BULK LENGTHS.



3-OL-1 LIGHT LEVEL DETAIL (EACH)

TWR Lighting, Inc.

APP'D	ENGINEER	CHK'D BY
DRAWN BY	E.A.SALAZAR	SHEET SIZE
DATE	06/06/96	SCALE
6/06/96	(A)	ADDED NOTES (GDS)
DATE:	LTR.	REVISION

NOTICE: This drawing is the property of TWR Lighting, Inc. All information contained herein that is not generally known shall be confidential except to the extent the information has been previously established. This drawing may not be reproduced, copied or used as the basis for manufacture or sale without written permission.

TWR Lighting, Inc.

FAA Approved L-810

Single Obstruction Light Side Hub

OL1

FM10018_RC.DWG

For use as an obstruction light on towers, building, bridges, cooling towers.
Meets or exceeds all FAA specs as found in AC 150/5345-43 Type L-810.

Our most popular light. The side hub allows for a straight run of conduit from the junction box for hook up.

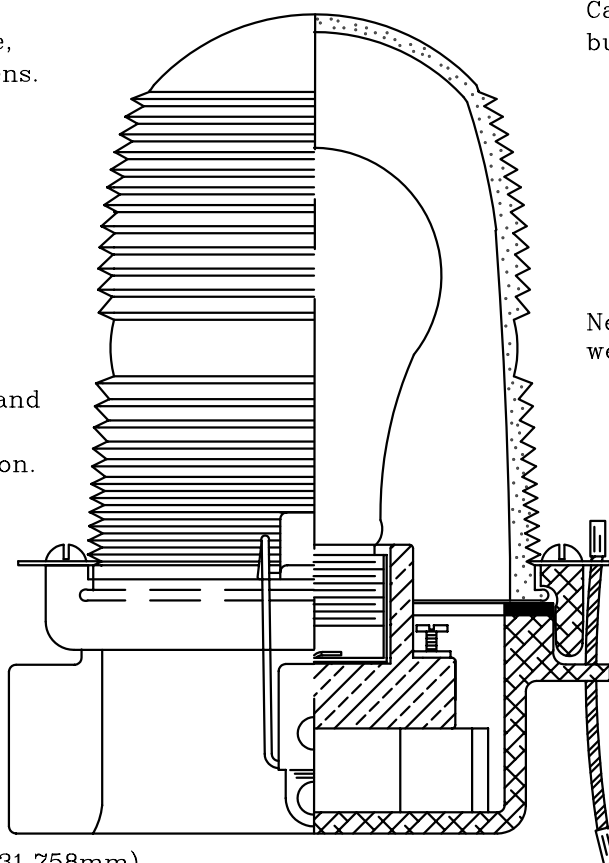
High temperature, ultra pure
FAA approved Aviation red, blue,
yellow, or clear glass fresnel lens.

Can be used steady
burning or flashing.

Copper free aluminum casting and
all stainless steel latches and
hardware for corrosion protection.

Neoprene gasket for
weatherproofing.

Specify conduit size
3/4", 1", 1-1/4" NPT
(19.055mm), (25.407mm), (31.758mm)



High quality porcelain
receptacle.

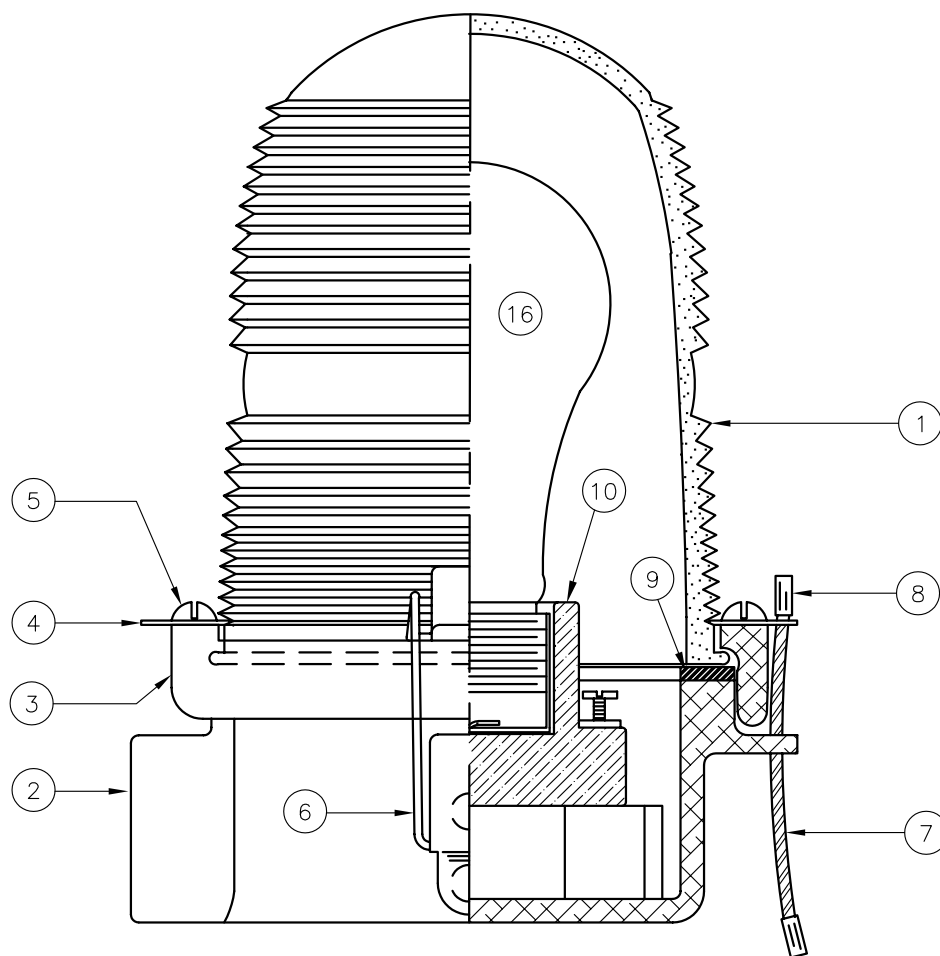
Stainless steel
safety cable.

No special tools required for maintenance.

General Specifications

Height 7.5 inches (19.055 cm)
Weight 3 lbs (13605.442g)
Power 120, 230, or 240 volts AC
Uses 116W, 120V or 240V bulbs
Bulbs sold separately

TWR Lighting, Inc.
4300 Windfern Rd. #100
Houston, Tx., 77041-8943
Phone: (713)973-6905
Fax: (713)973-9352
WEB SITE: <http://www.twrlighting.com>
©2003 TWR Lighting, Inc.



ITEM NO	QTY.	TWR PART NUMBER	DESCRIPTION
1	1	AP35222	RED SIDELIGHT GLASS
2	1	105C	SINGLE SIDELIGHT BODY
3	1	106C	LENS HOLDER RING
4	2	12V245	OL LENS CLIP
5	2	832X14PH	8-32 X 1/4" PH S.S. SLOT
6	2	HC255SS	SIDELIGHT LATCHES
7	1	7X7SS	1/16 7 X 7 S.S. WIRE
8	2	A1A	STAKON CRIMP
9	1	OLG	OL GASKET
10	1	19062	SIDELIGHT RECEPTACLE
* 11	4	18PRSS	1/8 POP RIVETS
* 12	1	A314	3/4" CONDUIT LOCKNUT
* 13	2	104G	WHITE TEFLON WASHER
* 14	2	832X34PH	8-32 X 3/4" S.S. RH SLOT
* 15	1	100327	OL-1 SERIAL NUMBER LABEL
~ 16	1	116A21TS	116W-120V LAMP (TYP.)

*=PART NOT SHOWN
 ~=PART SOLD SEPARATELY

NOTE:
 1. FAA APPROVED LIGHT USES THE 116A21TS LAMP.
 OTHER LAMPS ARE AVAILABLE TO MEET YOUR APPLICATION.

OL1

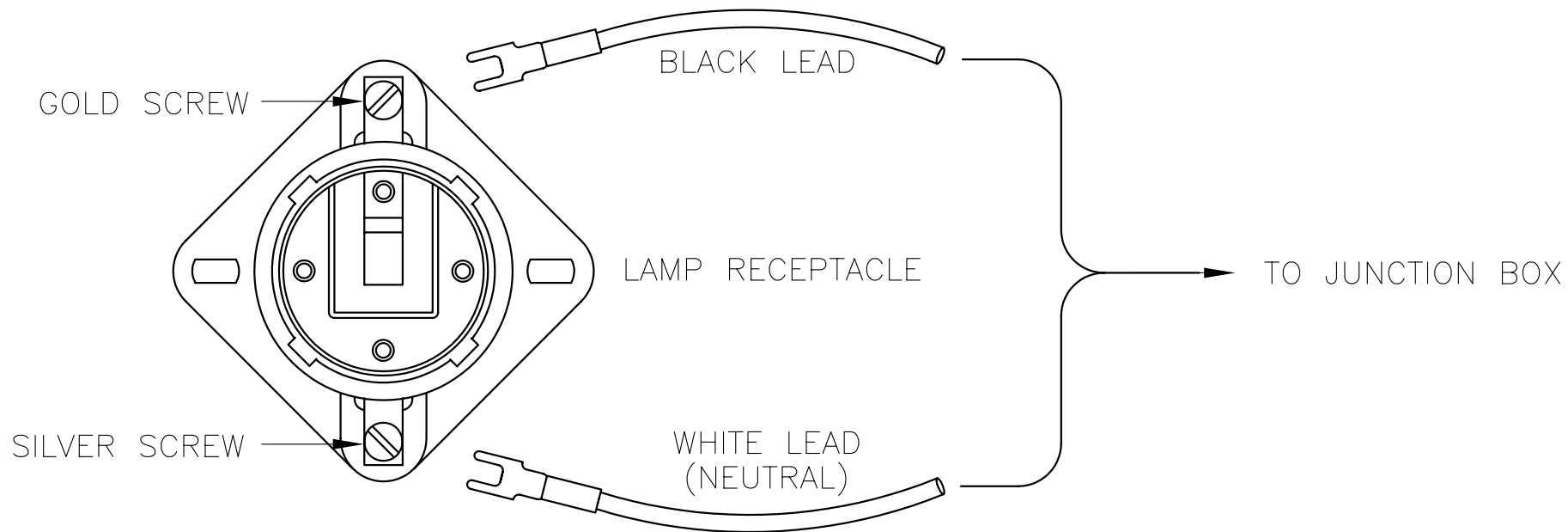
3/4" OL-1 SIDE HUB
ASSEMBLY DETAIL (PART #OL1)

TWR Lighting, Inc.

APP'D	ENGINEER	CHK'D BY
DRAWN BY E.A.SALAZAR		SHEET SIZE B
DATE 1/7/92		SHEET QTY. 1 OF 1
SCALE FULL		DRAWING NO. 279-OL

NOTICE: This drawing is the property of TWR Lighting, Inc. All information contained herein that is not generally known shall be confidential except to the extent the information has been previously established. This drawing may not be reproduced, copied or used as the basis for manufacture or sale without written permission.

05/13/02 (B)	UPDATED B.O.M.
DATE:	LTR. REVISION



SIDELIGHT RECEPTACLE WIRING

TWR Lighting, Inc.

APP'D	ENGINEER	CHK'D BY
DRAWN BY G.D.SEBEK	SHEET SIZE A	SHEET QTY. 1 OF 1
DATE 6/8/91	SCALE N.T.S.	DRAWING NO. 274-S

7/2/98		CDL	CHANGED LABEL
DATE:	LTR.		REVISION

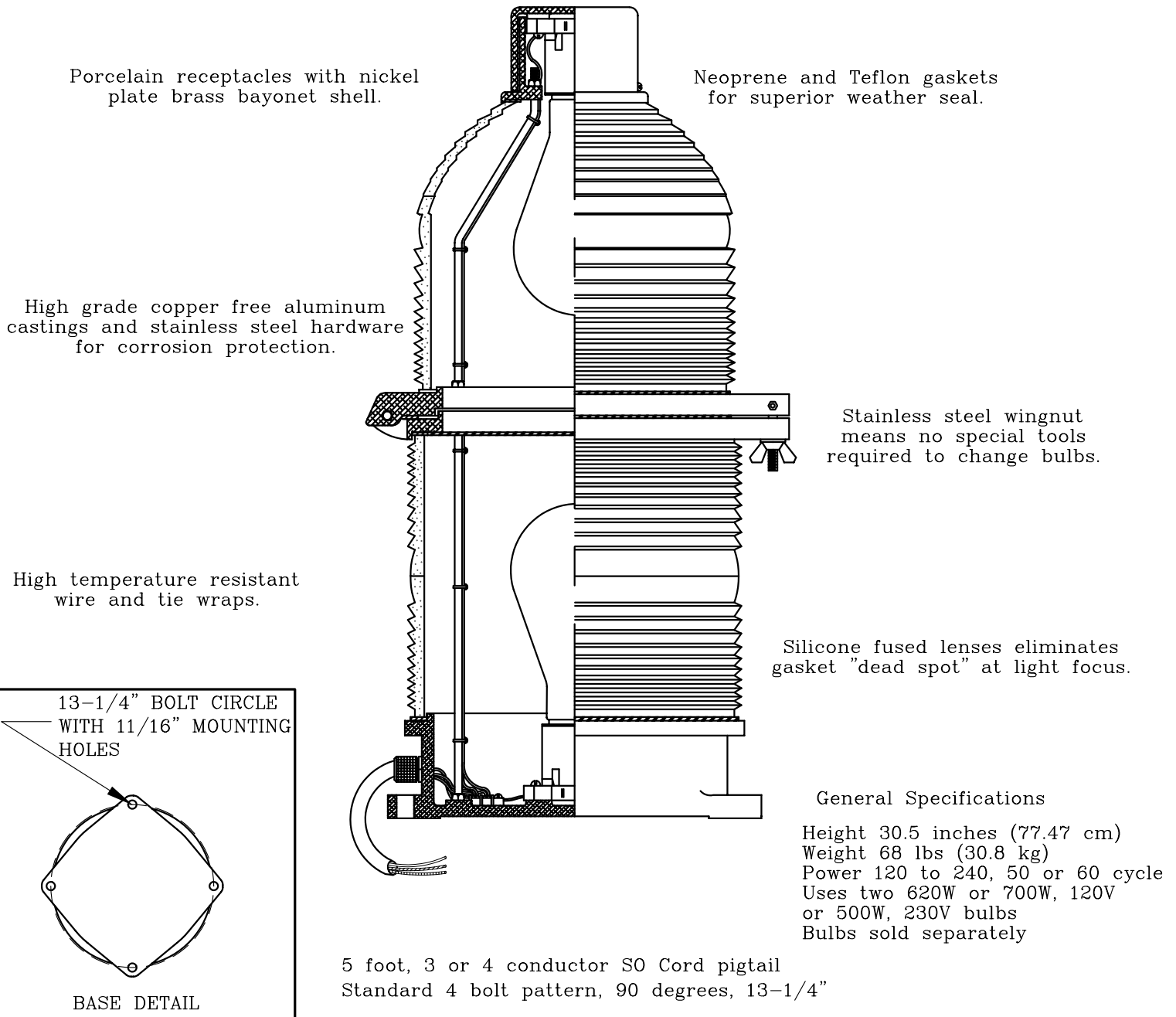
NOTICE: This drawing is the property of TWR Lighting, Inc. All information contained herein that is not generally known shall be confidential except to the extent the information has been previously established. This drawing may not be reproduced, copied or used as the basis for manufacture or sale without written permission.

TWR Lighting, Inc.

FAA Approved L-864 300 mm BEACON

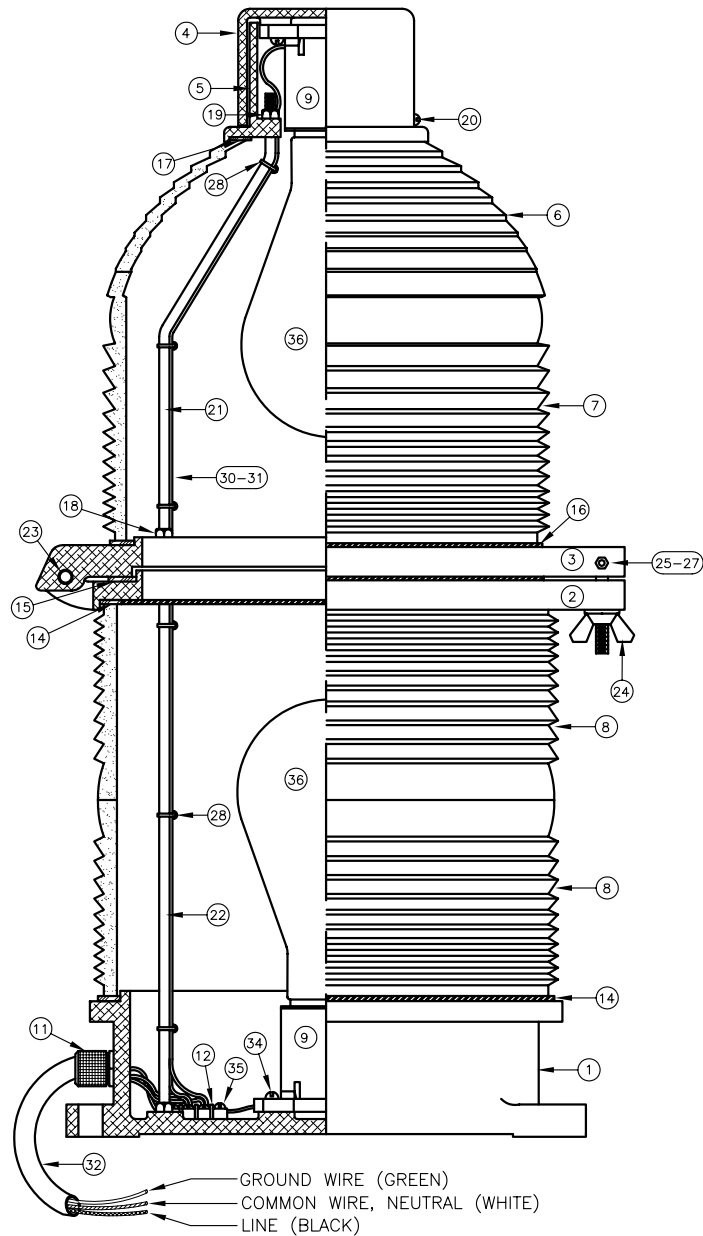
FM10017RB.DWG

Flashing 300 mm Code Red Beacon is used to light aviation obstructions taller than 150 feet AGL. ETL approved to meet or exceed all FAA specifications as found in AC 150/5345-43 Type L-864.



TWR Lighting, Inc.
4300 Windfern Rd. #100
Houston, Tx., 77041-8943
Phone: (713)973-6905
Fax: (713)973-9352

WEB SITE: <http://www.twrlighting.com>
©2003 TWR Lighting, Inc.



ITEM NO.	QTY.	TWR PART NO.	DESCRIPTION
1	1	100C	BEACON BASE
2	1	101C	LOWER HINGE
3	1	102C	UPPER HINGE
4	1	103C	CANOPY CAP
5	1	104C	CANOPY FLANGE
6	1	AP3557	CAP LENS RED
7	1	AP3556	MIDDLE LENS RED
8	2	AP3555	BOTTOM LENS RED
9	2	23X546	BEACON LAMP RECEPTACLE
* 10	4	104G	WHITE TEFLON WASHER 5K MIN.
11	1	CGB295SA	CORD CONNECTOR 3/4 50 - 62
12	1	TERMBLK3	TERMINAL BLOCK 3-PART
13	1	832X38PH	8-32 X 3/8 SS PH SCREW
14	2	100G	GASKET, BEACON BASE
* 15	1	101G	GASKET, MIDDLE BEACON
16	1	102G	GASKET, TOP HINGE
17	1	103G	GASKET TEFLON, TOP
18	6	516NUT	5/16-18 HEX NUT
19	6	516NUTIN	5/16-18 NUT W/NYLON INSERT
20	3	1420X58RH	1/4-20 X 5/8" SS RH SCREW
21	3	BTRB	BEACON TIE RODS BENT
22	3	BTRS-1	BEACON TIE ROD STRAIGHT
23	1	BHP	BEACON HINGE PIN W/COTTER PIN
24	1	BLP	BEACON LATCH PIN
25	1	632X2RH	6-32 X 2 SS RH SCREW
26	1	632NUT	6-32 NUT HEX
27	1	632LW	6-32 LOCK WASHER
28	7	TY223M	HI-TEMP TY WRAPS
* 29	1	100328	BEACON SERIAL NUMBER LABEL
30	4	16HTWH	#16 HI-TEMP WHITE WIRE
31	4	16HTBL	#16 HI-TEMP BLACK WIRE
32	5	CS014/3	S.O. CORD 3 WIRE, #14
* 33	11	YAV14-H34F	(STAKON) BURNDY HEAVY DUTY
34	4	1032X1RH	10-32 X 1 SS RH SCREW
35	2	1032X38BH	10-32 x 3/8 BH
36	2	-	BEACON LAMP
37	1	1032X58PH	10-32 x 5/8 PH

* = ITEM NOT SHOWN
~ = PART SOLD SEPARATELY

300MM BEACON

300 MM BEACON
ASSEMBLY DETAIL (PART #BEACON)

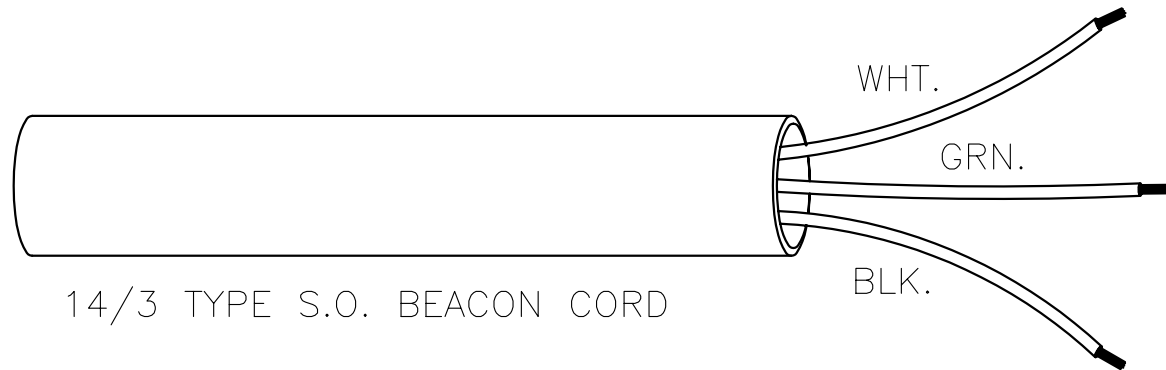
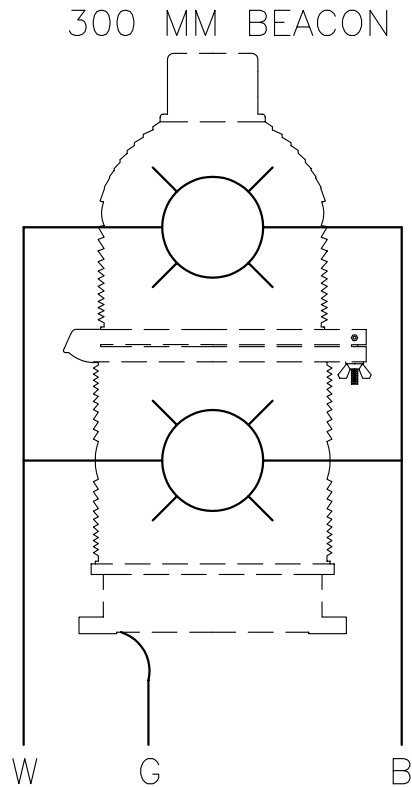
TWR Lighting, Inc.

APP'D	ENGINEER	CHK'D BY
DRAWN BY	G.D.SFBEK	SHEET SIZE
DATE	6/3/91	SCALE
	N.T.S.	DRAWING NO.
		275-B

05/18/00(D) 4 UPDATED B.O.M.
DATE: LTR. REVISION

NOTICE: This drawing is the property of TWR Lighting, Inc. All information contained herein that is not generally known shall be confidential except to the extent the information has been previously established. This drawing may not be reproduced, copied or used as the basis for manufacture or sale without written permission.

- 1) WHITE WIRE IS NEUTRAL TO BOTH LAMPS.
- 2) BLACK WIRE IS LINE TO BOTH LAMPS.
- 3) GREEN WIRE IS EARTH GROUND.

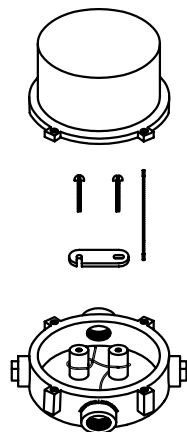
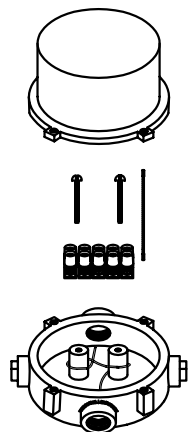


300 MM BEACON WIRE

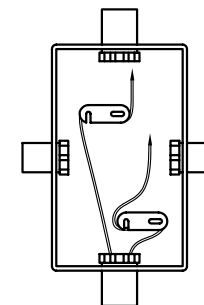
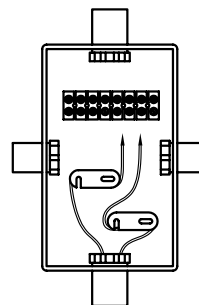
TWR Lighting, Inc.

APP'D	ENGINEER	CHK'D BY	
DRAWN BY	G.D.SEBEK		SHEET SIZE
DATE	6/10/91	SCALE	N.T.S.
		DRAWING NO.	273-B

NOTICE: This drawing is the property of TWR Lighting, Inc. All information contained herein that is not generally known shall be confidential except to the extent the information has been previously established. This drawing may not be reproduced, copied or used as the basis for manufacture or sale without written permission.



JB-5 AND JB-O
3/4" JUNCTION BOX



JB-8 AND JB-8SR
1" JUNCTION BOX

NOTES:

- 1) DRAWING ILLUSTRATES METHOD OF STRAIN RELIEVING WIRE. USE THIS METHOD ON ALL JUNCTION BOXES.
- 2) THE NATIONAL ELECTRICAL CODE-ARTICLE 300-19-B3 REQUIRES CONDUCTORS IN A VERTICAL CONDUIT BE SUPPORTED TO RELIEVE STRAIN ON TERMINAL BLOCK CONNECTIONS.
- 3) SKETCH ILLUSTRATES METHOD OF STRAIN RELIEVING A SINGLE CONDUCTOR. SEVERAL CONDUCTORS MAY BE GROUPED TOGETHER.
- 4) CONDUCTORS MAY BE MIXED BUT SHOULD NOT TAKE UP MORE THAN 40% OF CONDUIT'S INSIDE AREA.

USING THIS JUNCTION BOX METHOD SPACING IS 100 FEET MAXIMUM.

AWG WIRE SIZE	MAX. NUMBER WIRES IN 3/4" CONDUIT	MAX. NUMBER WIRES IN 1" CONDUIT	WIRE AREA SQ. INCHES	WEIGHT PER 100 FEET
12 THHN	16	26	0.0117	2.50
10 THHN	10	17	0.0184	4.10
8 THHN	6	9	0.0373	6.70
6 THHN	4	7	0.0519	10.30
4 THHN	2	4	0.0845	16.20

JUNCTION AND STRAIN RELIEF BOXES

TWR Lighting, Inc.

APP'D	ENGINEER	CHK'D BY
DRAWN BY G.D.SEBEK		SHEET SIZE B
DATE 7/26/93	SCALE N.T.S.	SHEET QTY. 1 OF 1
		DRAWING NO. 100089

9/29/00 (A) 8 UPDATED NOTES

DATE: LTR. REVISION

NOTICE: This drawing is the property of TWR Lighting, Inc. All information contained herein that is not generally known shall be confidential except to the extent the information has been previously established. This drawing may not be reproduced, copied or used as the basis for manufacture or sale without written permission.