



10810 W. LITTLE YORK RD., #130 - HOUSTON, TX 77041-4051
VOICE (713) 973-6905 - FAX (713) 973-9352
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 # AA0MTSS/F

SERIAL # _____

PURCHASE DATE _____

PURCHASED FROM _____

TWR Lighting, Inc. **MARK**

Enlightened Technology®

AA0MTSS/F CONTROLLER

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WARRANTY & RETURN POLICY

RETURN MERCHANDISE AUTHORIZATION (RMA) FORMS

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APPENDIX

CHASSIS COMPONENT LAYOUT	1247-R (REV A)
SCHEMATIC LAYOUT	1247-S (REV A)
TROUBLESHOOTING FLOW CHART	1247-F
PHOTOCELL HOUSING DETAIL	100239 (REV H)
TOWER LIGHTING KITS 21' TO 100'	258-01 (REV D)
TOWER LIGHTING KITS 101' TO 150'	258-02 (REV E)
L-810 OL-1 SINGLE OBSTRUCTION LIGHT DETAIL	279-OL (REV C)
L-810 OL-2 DOUBLE OBSTRUCTION LIGHT DETAIL	310 (REV B)
L-810 OBSTRUCTION WIRING DETAIL	274 S (REV A)
JUNCTION BOX DETAIL	100089 (REV A)
WRAPLOCK FASTENING DETAIL	100984

TWR Lighting[®], Inc. **MARK[®]**

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AA0MTSS/F CONTROLLER

1.0 GENERAL INFORMATION

The TWR Lighting[®], Inc. (TWR[®]) Model AA0MTSS/F Controller is for applications of two (2) through nine (9) L-810 single obstruction light fixtures.

The obstruction lights will flash 30 times per minute. Each fixture requires two (2) 116W, 120V bulbs (116A21TS).

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 turning “on” the toggle switch mounted on the panel of the controller.

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

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

Controller functions that are monitored by remote alarms in the form of dry contact closures (Form C) are as follows:

POWER FAILURE	Monitors 120V AC to the controller. Alarms in the event of power failure, or tripped circuit breaker.
LIGHTS “ON”	Gives an indication whenever the controller is activated.
OBSTRUCTION LIGHTS	Will give an alarm when one (1) of the group of sidelights fail.

AA0MTSS/F CONTROLLER

2.0 INSTALLATION

2.1 MOUNTING THE CONTROL CABINET

(Refer to Drawing 1247-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 1247-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 "N," the black wire is connected to the socket terminal marked "Li," and the red wire is connected to the socket terminal marked "Lo." 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.

The wiring from the photocell, the service breaker, 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 breaker located at the bottom of the chassis. These connections are made as follows:

2.2 EXTERNAL PHOTOCELL WIRING

(Refer to Drawing 1247-R)

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

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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 1247-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 15 amps.

2.3.3 Connect incoming 120V AC line 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 SIDELIGHT WIRING

(Refer to Drawing 1247-R)

2.4.1 Connect the **RED** from the sidelight group to the circuit breaker marked “SL.”

2.4.2 Connect the **WHITE** neutral wire(s) to the terminal block TB1 marked “N.”

2.5 SIDELIGHT ALARM WIRING

(Refer to Drawings 1247-R and 1247-S)

2.5.1 Alarm relays K1, K2, and Module M2 are provided for independent contact closures for: Power Failure, Lights “ON,” and Sidelight Lamp Burnout.

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2.5.2 Alarm wiring: To utilize all of the red light alarms, the customer will need three (3) pairs of wires to interface with the alarm device. One (1) wire from each of the three (3) pair will terminate at the points marking common (C). The remaining wire from each pair will terminate as follows:

Sidelight Lamp Burnout: Connect to Module M2, terminal T5, for normally open (or) terminal T6, for normally closed monitoring.

Power Failure Alarm: Connect to relay K1, terminal #3, for normally open (or) terminal #6, for normally closed monitoring.

Lights “ON” Alarm: Connect to relay K2, terminal #3, for normally open (or) terminal #6, for normally closed monitoring.

2.5.3 Testing: To test alarms, follow the procedures using the “ohm” meter between alarm common and alarm points.

Power Failure Pull circuit breaker at electrical panel.

Lights “ON” Operate photocell by-pass switch (SW1) or cover the photocell.

Sidelights Trip circuit breaker on the controller panel.

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3.0 THEORY OF OPERATION

3.1 POWER SUPPLY

120V AC enters the controller from the circuit breaker panel. Line sits at the 6390-FAA photocell waiting to be switched and also keeps the power failure relay K1 energized. When the 6390-FAA photocell is activated, line SSR energizes K2 “Lights On” relay. This can also be accomplished by using the photocell by-pass switch (SW1).

3.2 SIDELIGHTS

Line (SSR) is also being sent to Modules M1, and M2. M1 is the primary flasher. The output of this Module is then sent through the toridal sensing coil on Module M2, then to circuit breaker marked “SL.” Module M2 is the current sensor for all of the sidelights. If one (1) sidelight within the group burns out, then Module M2 will send 120V to the on board relay coil, which will cause a contact closure for sidelight alarm.

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4.0 MAINTENANCE GUIDE

4.1 RED OBSTRUCTION LIGHTING

The only required maintenance needed to be performed is replacement of the lamps in the 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 FAA Advisory Circular 70/7460-1K. By following these instructions, maximum safety and performance can be achieved.

TOOLS REQUIRED: NONE

4.2 L-810 LAMP REPLACEMENT

4.2.1 Unclasp the two (2) latches and let the bail recline back.

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

4.2.3 Unscrew the lamp counter-clockwise and remove.

4.2.4 Install the new lamp by screwing the lamp clockwise.

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

4.2.6 Reclasp the two (2) latches.

4.3 CONTROLLER

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

4.4 PHOTOCELL

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

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5.0 MAJOR COMPONENTS PARTS LIST

QTY	PART NUMBER	DESCRIPTION
1	6390-FAA	120 – 240V Photocell
1	VJ1008HPL2X004	Enclosure
2	PB27E122	Octal Sockets (K1 & K2)
6	8WA1204	Terminal Blocks (TB1 & TB2)
1	S261D20	20 amp Circuit Breaker (SL)
2	8WA1808	End Stop
1	KRPA5AG120V	SPDT Relay (K1 & K2)
1	SSPIGTAIL	20' Photocell Pigtail
1	STJ01002	15 amp SPDT Switch (SW1)
1	CM-250	Current Sensor (M2)
1	PF-250	Flasher Solid State (M1)

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6.0 SUGGESTED SPARE PARTS LIST

QTY	PART NUMBER	DESCRIPTION
1	6390-FAA	120 – 240V Photocell
1	KRPA5AG120V	SPDT Relay (K1 & K2)

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Warranty & Return Policy

TWR Lighting[®], Inc. (“TWR[®]”) warrants its products (other than “LED Product”) against defects in design, material (excluding incandescent bulbs) and workmanship for a period ending on the earlier of two (2) years from the date of shipment or one (1) year from the date of installation.

TWR Lighting[®], Inc. (“TWR[®]”) warrants its “LED Product” against defects in design, material and workmanship for a period of five (5) years from the date of shipment. TWR[®], at its sole option, will, itself, or through others, repair, replace or refund the purchase price paid for “LED Product” that TWR[®] verifies as being inoperable due to original design, material, or workmanship. All warranty replacement “LED Product” is warranted only for the remainder of the original warranty of the “LED Product” replaced. Replacement “LED Product” will be equivalent in function, but not necessarily identical, to the replaced “LED Product.”

TWR Lighting[®], Inc. (“TWR[®]”) warrants its “LED Product” against light degradation for a period of five (5) years from the date of installation. TWR[®], at its sole option, will, itself, or through others, repair, replace, or refund the purchase price paid for “LED Product” that TWR[®] verifies as failing to meet 75% of the minimum intensity requirements as defined in the FAA Advisory Circular 150/5345-43G dated 09/26/12. All warranty replacement “LED Product” is warranted only for the remainder of the original warranty of the “LED Product” replaced. Replacement “LED Product” will be equivalent in function, but not necessarily identical, to the replaced “LED Product.”

Replacement parts (other than “LED Product”) are warranted for 90 days from the date of shipment.

Conditions not covered by this Warranty, or which might **void** this Warranty are as follows:

- x Improper Installation or Operation
- x Misuse
- x Abuse
- x Unauthorized or Improper Repair or Alteration
- x Accident or Negligence in Use, Storage, Transportation, or Handling
- x Any Acts of God or Nature
- x **Non-OEM Parts**

The use of Non-OEM parts or modifications to original equipment design will void the manufacturer warranty and could invalidate the assurance of complying with FAA requirements as published in Advisory Circular 150/5345-43.

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Warranty & Return Policy (continued)

Field Service – Labor, Travel, and Tower Climb are not covered under warranty. Customer shall be obligated to pay for all incurred charges. An extensive network of certified and insured Service Representatives is available if requested.

Repair, Replacement or Product Return RMA Terms – You must first contact our Customer Service Department at **713-973-6905** to acquire a Return Merchandise Authorization (RMA) number in order to return the product(s). Please have the following information available when requesting an RMA number:

- x The contact name and phone number of the tower owner or
- x The contact name and phone number of the contractor
- x The site name and number
- x The part number(s)
- x The serial number(s) (if any)
- x A description of the problem
- x The billing information
- x The Ship To address

This RMA number must be clearly visible on the outside of the box. If the RMA number is not clearly labeled on the outside of the box, your shipment will be refused. Please ensure the material you are returning is packaged carefully. **The warranty is null and void if the product(s) are damaged in the return shipment.**

All RMAs must be received by TWR LIGHTING®, INC., 10810 W. LITTLE YORK RD. #130, HOUSTON, TX 77041-4051, within 30 days of issuance.

Upon full compliance with the Return Terms, TWR® will replace, repair and return, or credit product(s) returned by the customer. It is TWR®'s sole discretion to determine the disposition of the returned item(s).

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Warranty & Return Policy (continued)

RMA Replacements – Replacement part(s) will be shipped and billed to the customer for product(s) considered as Warranty, pending return of defective product(s). When available, a certified reconditioned part is shipped as warranty replacement with a Return Merchandise Authorization (RMA) number attached. Upon receipt of returned product(s), inspection, testing, and evaluation will be performed to determine the cause of defect. The customer is then notified of the determination of the testing.

- x Product(s) that is deemed defective and/or unrepairable and covered under warranty - a credit will be issued to the customer's account.
- x Product(s) found to have no defect will be subject to a **\$75.00 per hour testing charge (1 hour minimum), which will be invoiced to the customer.** At this time the customer may decide to have the tested part(s) returned and is responsible for the return charges.
- x Product(s) under warranty, which the customer does not wish returned, the customer will be issued a credit against the replacement invoice.

RMA Repair & Return – A Return Merchandise Authorization (RMA) will be issued for all part(s) returned to TWR® for repair. Upon receipt of returned product(s), inspection, testing, and evaluation will be performed to determine the cause of defect. The customer is then notified of the determination of the testing. If the returned part(s) is deemed unrepairable, or the returned part(s) is found to have no defect, the customer will be subject to a **\$75.00 per hour testing charge (1 hour minimum), which will be invoiced to the customer.** Should the returned parts be determined to be repairable, a written estimated cost of repair will be sent to the customer for their written approval prior to any work being performed. In order to have the tested part(s) repaired and/or returned, the customer must issue a purchase order and is responsible for the return shipping charges.

RMA Return to Stock – Any product order that is returned to TWR® for part(s) ordered incorrectly or found to be unneeded upon receipt by the customer, the customer may be required to pay a minimum **20% restocking fee.** Product returned for credit must be returned within 60-days of original purchase, be in new and resalable condition, and in original packaging. Once the product is received by TWR it's condition will be evaluated and a credit will be issued only once it is determined that the RMA Return Terms have been met.

Credits – Credits are issued once it is determined that all of the Warranty and Return Terms are met. All credits are processed on Fridays. In the event a Friday falls on a Holiday, the credit will be issued on the following Friday.

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Warranty & Return Policy (continued)

Freight – All warranty replacement part(s) will be shipped via ground delivery and paid for by TWR®. Delivery other than ground is the responsibility of the customer.

REMEDIES UNDER THIS WARRANTY ARE LIMITED TO PROVISIONS OF REPLACEMENT PARTS AND REPAIRS AS SPECIFICALLY PROVIDED. IN NO EVENT SHALL TWR® BE LIABLE FOR ANY OTHER LOSSES, DAMAGES, COSTS, OR EXPENSES INCURRED BY THE CUSTOMER, INCLUDING, BUT NOT LIMITED TO, LOSS FROM FAILURE OF THE PRODUCT(S) TO OPERATE FOR ANY TIME, AND ALL OTHER DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING ALL PERSONAL INJURY OR PROPERTY DAMAGE DUE TO ALLEGED NEGLIGENCE, OR ANY OTHER LEGAL THEORY WHATSOEVER. THIS WARRANTY IS MADE BY TWR® EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED. WITHOUT LIMITING THE GENERALITY OF THE FORGOING, TWR® MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS OF THE PRODUCT(S) FOR ANY PARTICULAR PURPOSE. TWR® EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES.



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RETURN MERCHANDISE AUTHORIZATION (RMA) FORM

RMA#: _____ **DATE:** _____

CUSTOMER: _____

CONTACT: _____ **PHONE NO.:** _____

ITEM DESCRIPTION (PART NO.): _____

MODEL NO.: _____ **SERIAL NO.:** _____

ORIGINAL TWR INVOICE NO.: _____ **DATED:** _____

DESCRIPTION OF PROBLEM: _____

SIGNED _____ **DATE NEEDED** _____

RETURN ADDRESS: _____

PLEASE RETURN PRODUCT TO: 10810 W. LITTLE YORK RD., #130 HOUSTON, TX 77041-4051



Enlightened Technology®

AA0MTSS/F CONTROLLER

RETURN MERCHANDISE AUTHORIZATION (RMA) FORM

RMA#: _____ **DATE:** _____

CUSTOMER: _____

CONTACT: _____ **PHONE NO.:** _____

ITEM DESCRIPTION (PART NO.): _____

MODEL NO.: _____ **SERIAL NO.:** _____

ORIGINAL TWR INVOICE NO.: _____ **DATED:** _____

DESCRIPTION OF PROBLEM: _____

SIGNED _____ **DATE NEEDED** _____

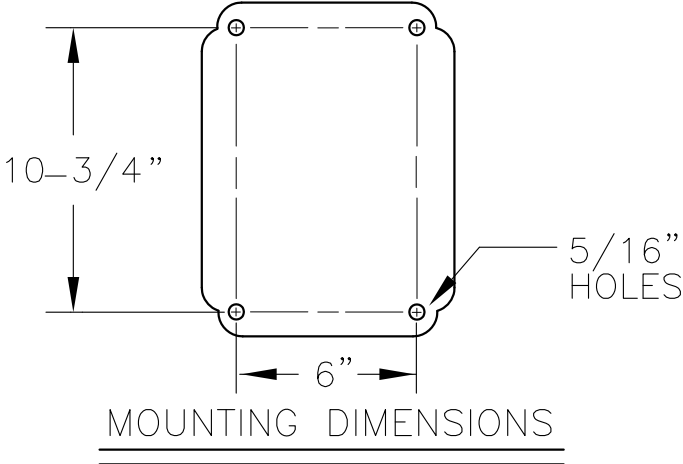
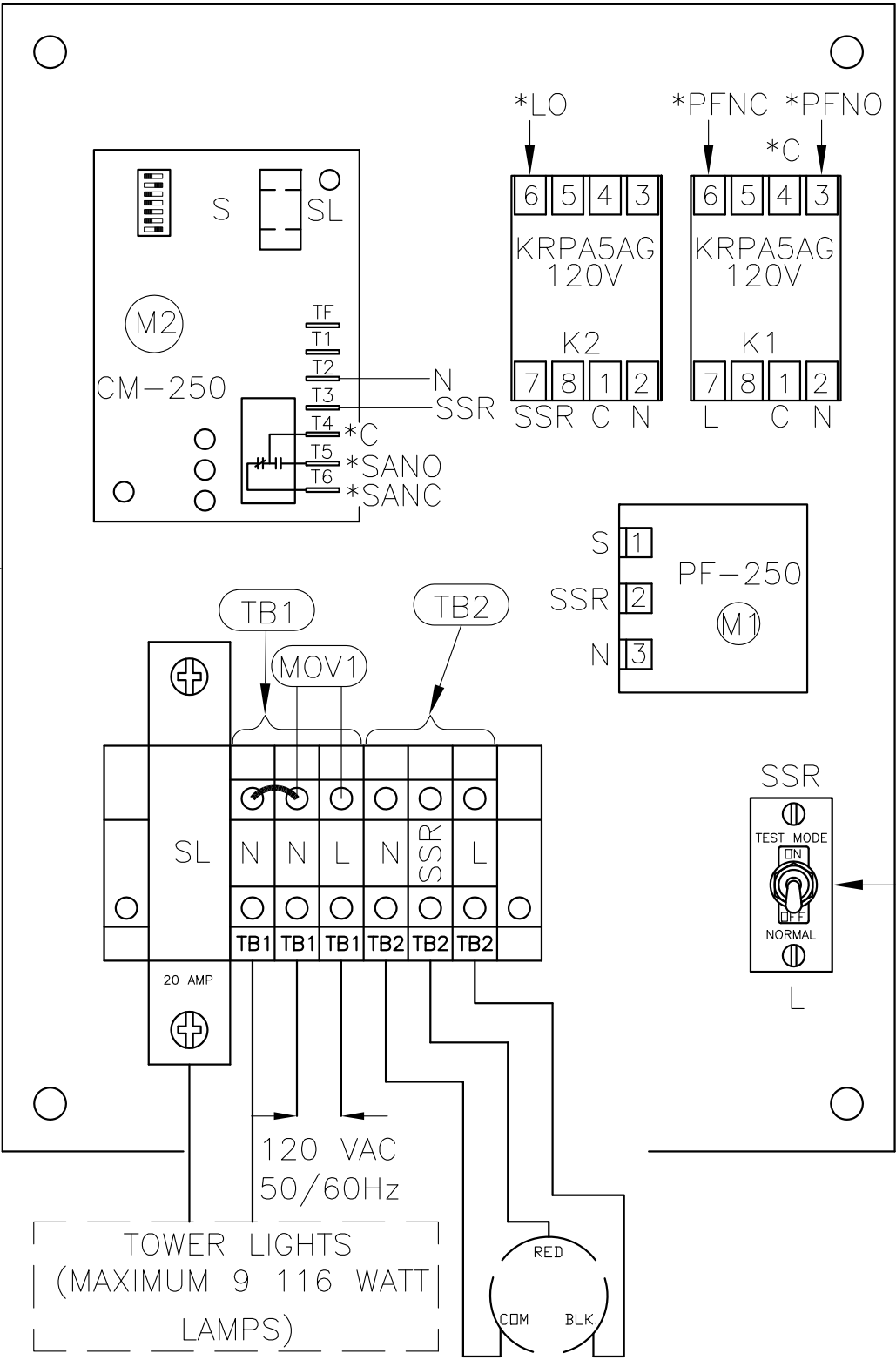
RETURN ADDRESS: _____

PLEASE RETURN PRODUCT TO: 10810 W. LITTLE YORK RD., #130 HOUSTON, TX 77041-4051

*CUSTOMER ALARM POINTS

SANC = SIDELIGHT ALARM (NORMALLY CLOSED)
SANO = SIDELIGHT ALARM (NORMALLY OPEN)
C = ALARM COMMON
LO = LIGHTS "ON" INDICATOR
PFNC = POWERFAIL (NORMALLY CLOSED)
PFNO = POWERFAIL (NORMALLY OPENED)

9"x7" PLATE

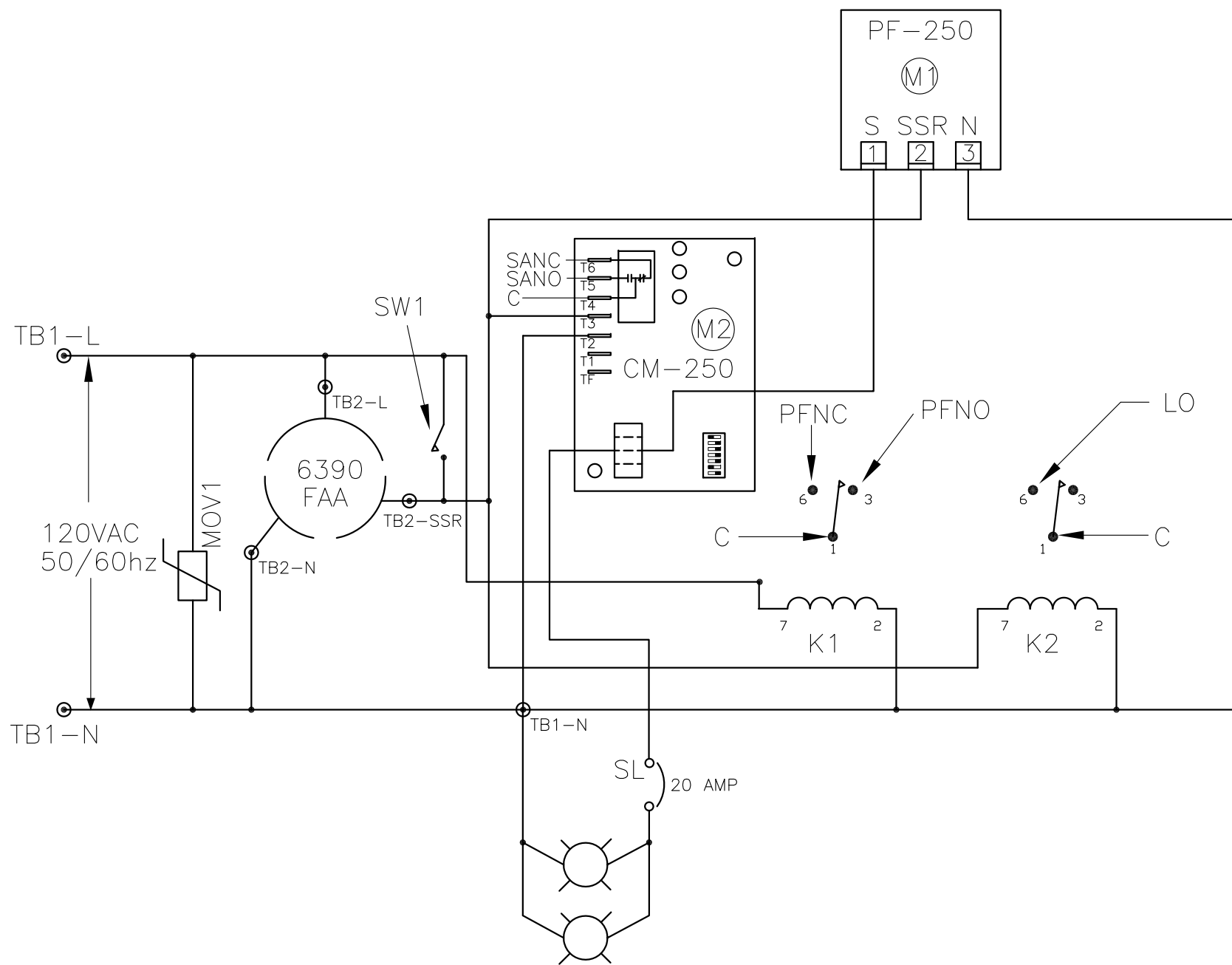


- NOTES:
1. PLUG 6390-FAA PHOTOCELL INTO 43109 TWIST LOCK RECEPTACLE AND TWIST TO LOCK.
 2. WIRES ARE CONNECTED LETTER TO LETTER. (EXAMPLE) N TO N...
 3. CURRENT SENSOR MODULE M2 CAN MONITOR TWO THROUGH NINE LAMPS. USE THE FOLLOWING GUIDE TO CALIBRATE TO YOUR PARTICULAR NEEDS.

FLASH	NO FLASH	TOTAL NO. OF LAMPS	SWITCHES "ON"
700W/620W	116W	1	NO SWITCHES
120V	230V	2	D
A		3	C
B		4	B
C		5	B + C
D		6	A
ON		7	A + C
		8	A + B
		9	A + B + C

AAOMTSS/F			
PROD DEPT		TWR Lighting, Inc. Enlightened Technology® WARK®	
SERV DEPT			
ENGINEER			
DRAWN BY J.L.BUSTAMANTE		SHEET SIZE B	SHEET QTY. 1 OF 1
DATE 09/11/07		SCALE N.T.S.	DWG. NO. 1247-R
<small>The use of non-OEM parts or modifications to original equipment design will void the manufacturer warranty and could invalidate the assurance of complying with FAA requirements as published in Advisory Circular 150/5345-43.</small>			
<small>NOTICE: The drawings and photographic images contained herein are the sole property of TWR Lighting, Inc. All information contained herein that is not generally known shall be considered confidential except to the extent the information has been previously established. The drawings and photographic images contained herein may not be reproduced, copied or used as the basis for manufacture or sale or promotion or any other purpose without the expressed written permission of TWR Lighting, Inc.</small>			

04/16/10	(A)	M1,M2 PHOTOCELL
DATE:	LTR.	REVISION



*116 WATT 120V LAMPS

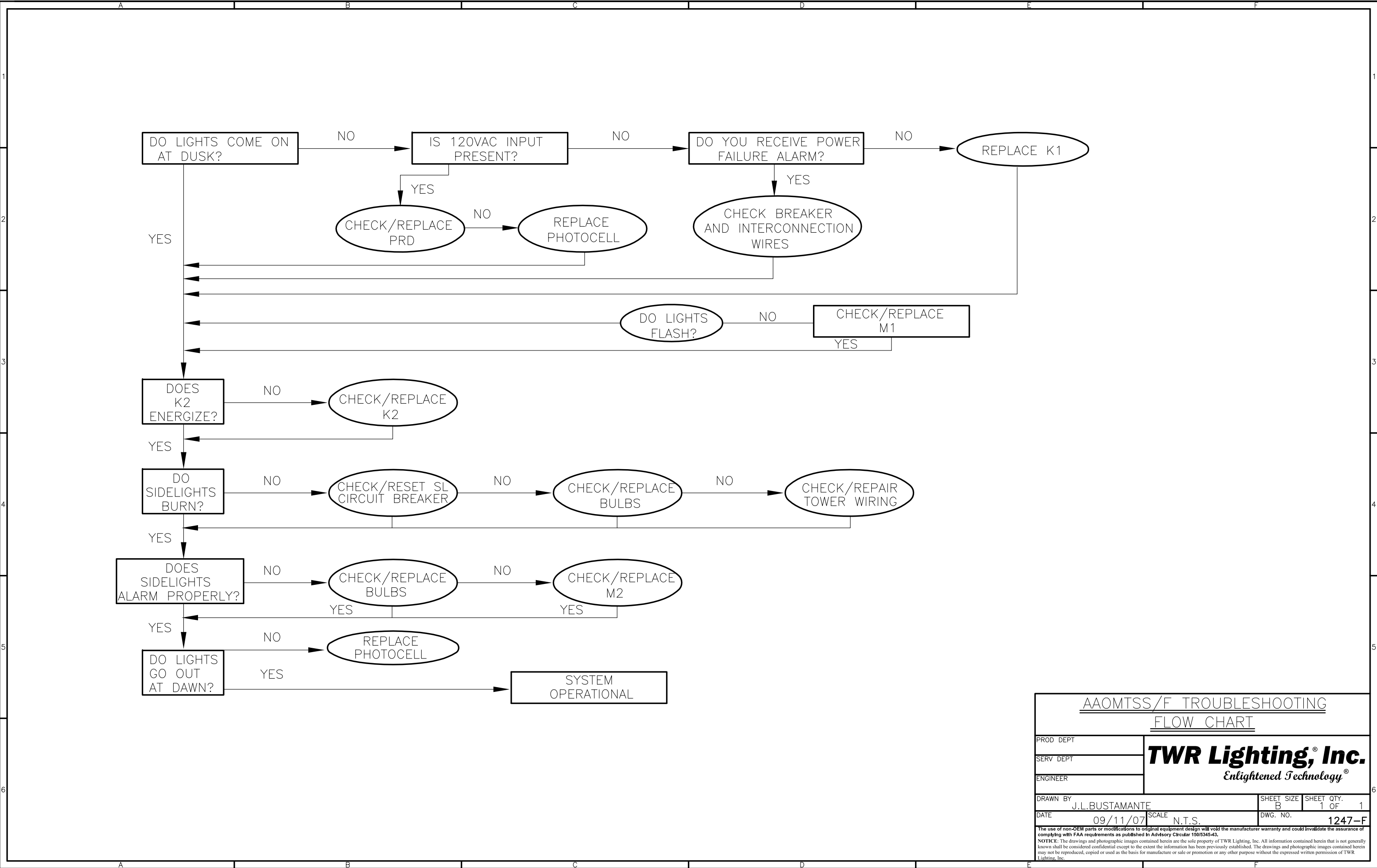
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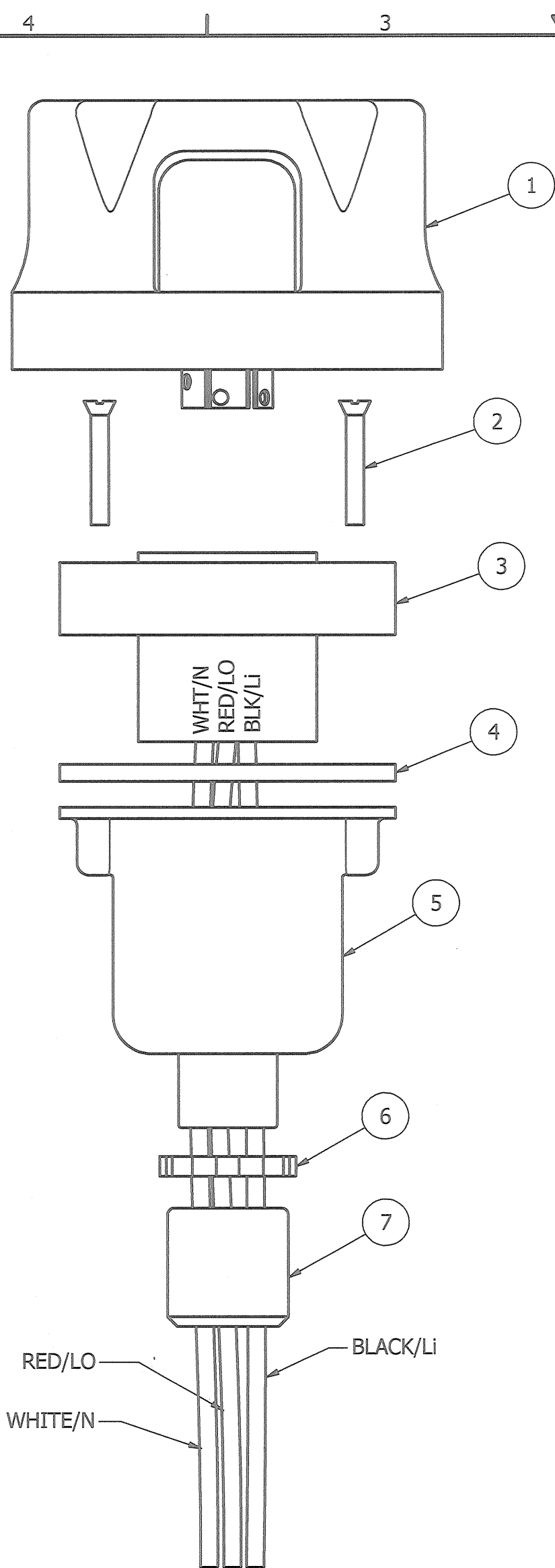
- * 1. NUMBER OF LAMPS MAY VARY FROM 2 TO 9. SEE NOTE 3 ON DWG. 1247-R.

AAOMTSS/F

PROD DEPT	TWR Lighting, Inc. <i>Enlightened Technology®</i>		
SERV DEPT			
ENGINEER			
DRAWN BY J.L.BUSTAMANTE	SHEET SIZE B	SHEET QTY. 1 OF 1	
DATE 07/11/2007	SCALE N.T.S.	DWG. NO. 1247-S	
<small>The use of non-OEM parts or modifications to original equipment design will void the manufacturer warranty and could invalidate the assurance of complying with FAA requirements as published in Advisory Circular 150/5345-43. NOTICE: The drawings and photographic images contained herein are the sole property of TWR Lighting, Inc. All information contained herein that is not generally known shall be considered confidential except to the extent the information has been previously established. The drawings and photographic images contained herein may not be reproduced, copied or used as the basis for manufacture or sale or promotion or any other purpose without the expressed written permission of TWR Lighting, Inc.</small>			

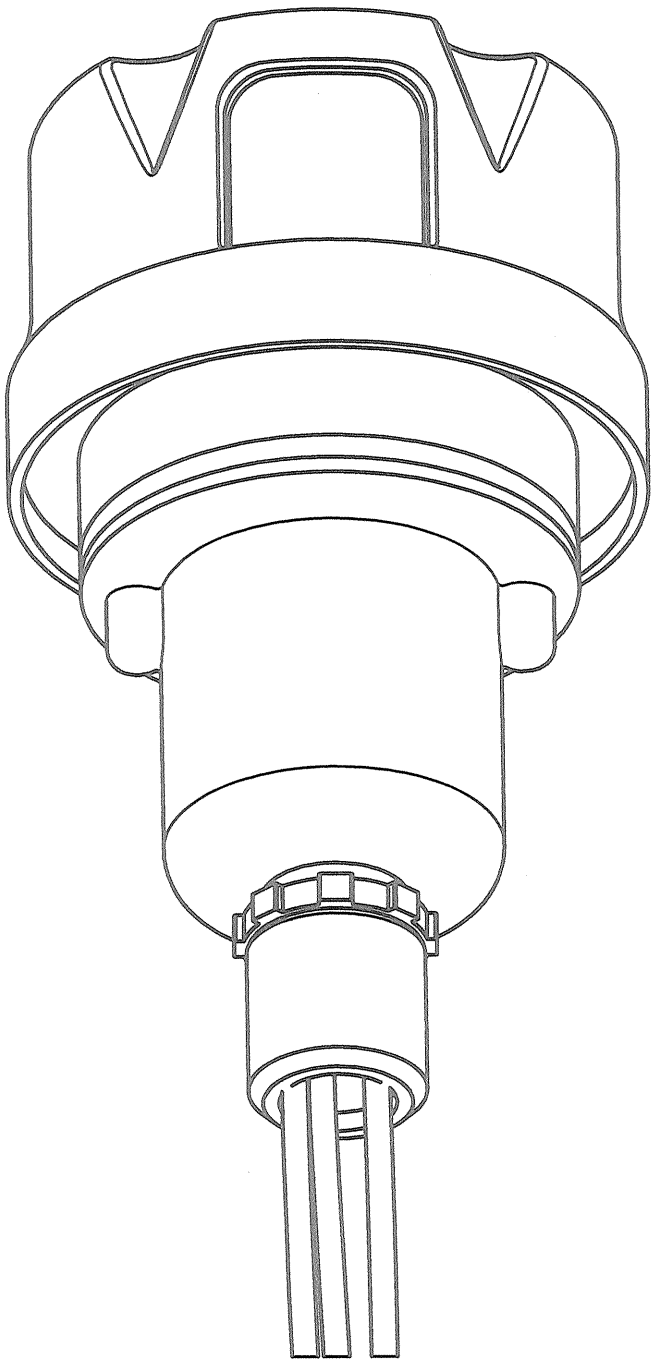
04/16/10	(A)	M1,M2.PHOTOCELL
DATE:	LTR.	REVISION





EXPLODED VIEW

PARTS LIST		
ITEM	QTY	PART NUMBER
1	1	PHOTOCELL
2	2	6-32 x 1" SCREW
3	1	RECEPTACLE SOCKET
4	1	RECEPTACLE GASKET
5	1	RECEPTACLE HOUSING
6	1	1/2" CONDUIT LOCKNUT
7	1	3/4" TO 1/2" REDUCER

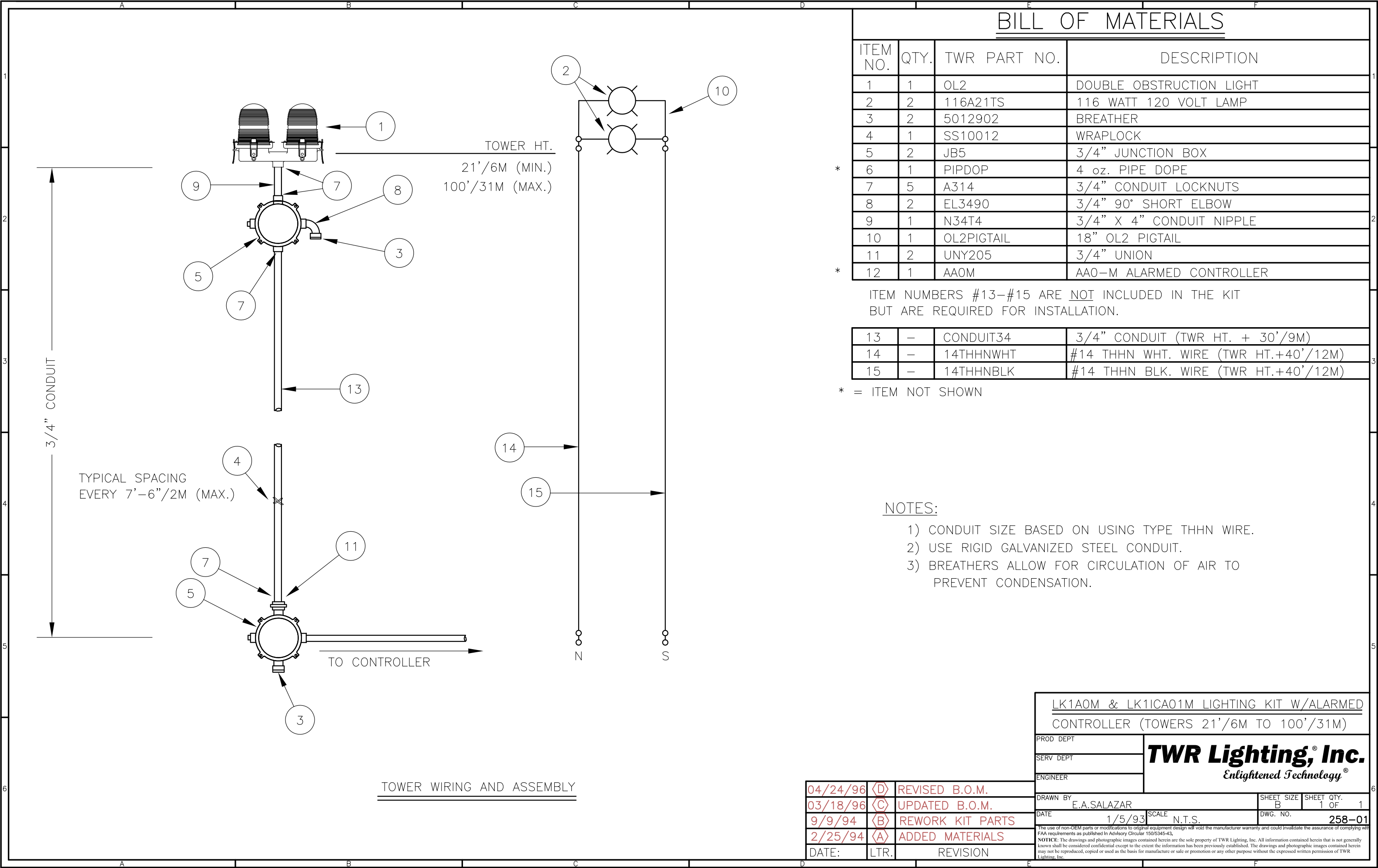


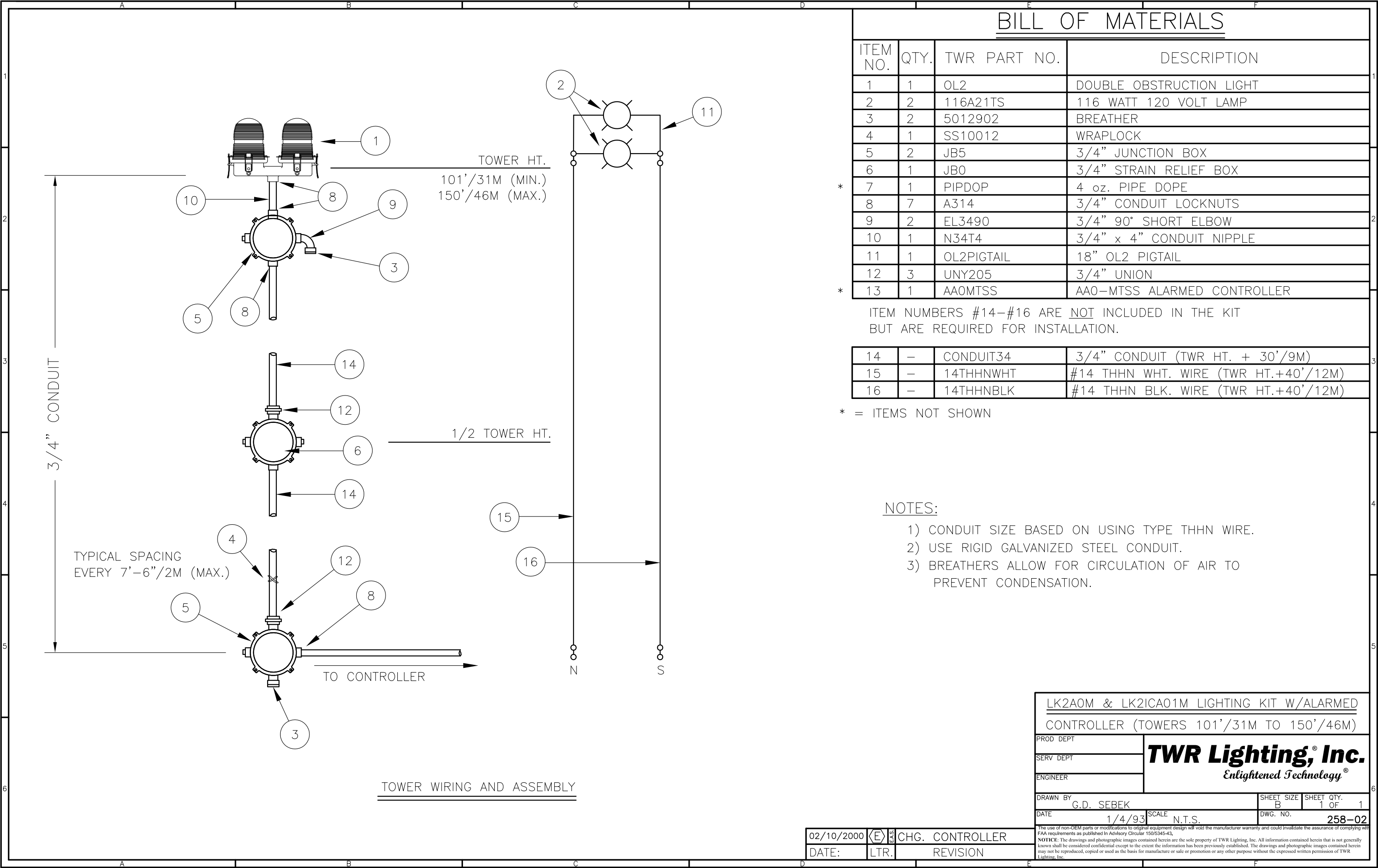
ASSEMBLY

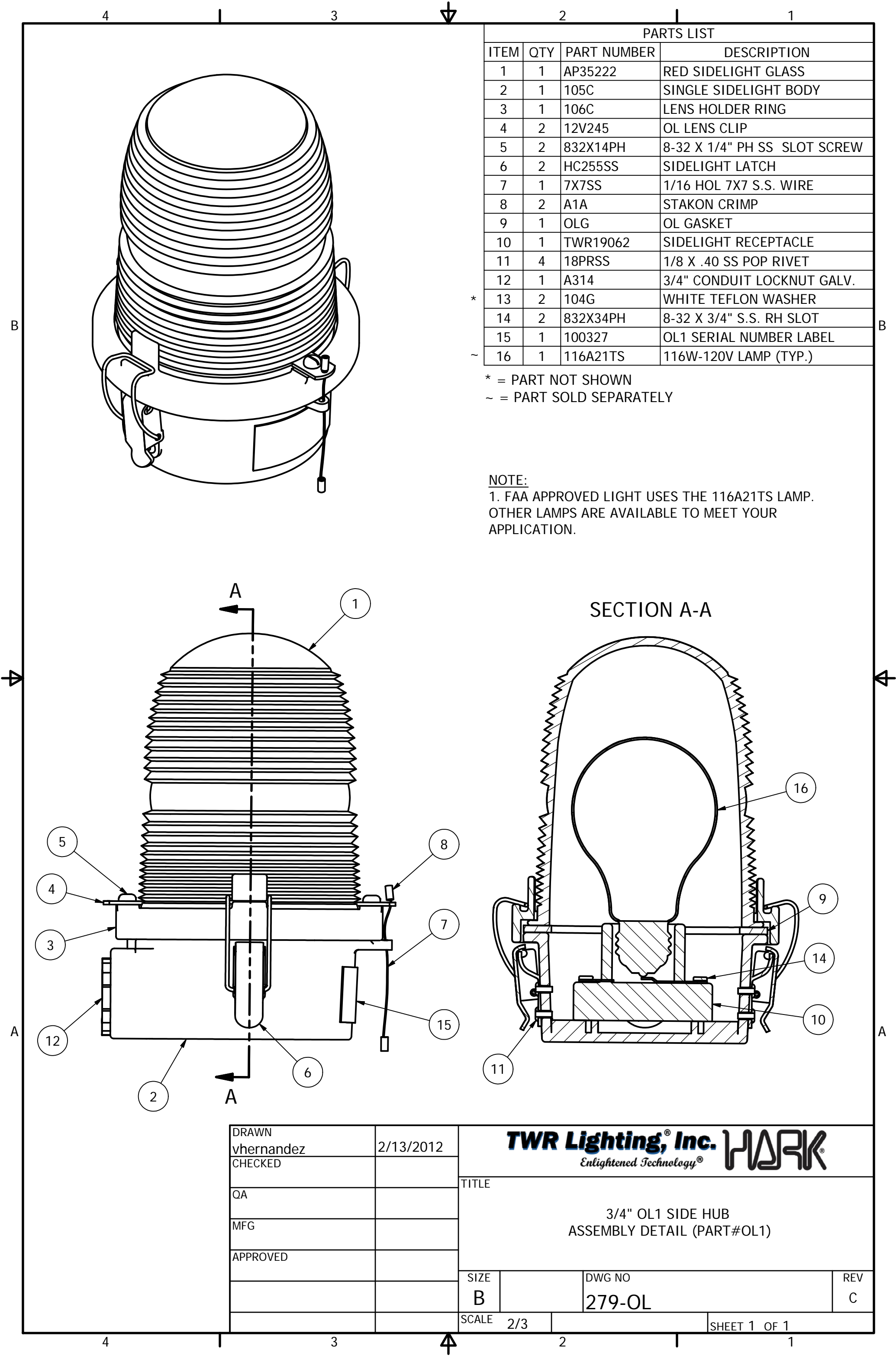
NOTES:
1. ITEM #7 CAN BE USED TO REDUCE 3/4" CONDUIT TO 1/2" CONDUIT AT THE HOUSING OR AT THE CONTROLLER ITSELF.
2. IF ADDITIONAL WIRE IS REQUIRED OVER THE FACTORY 20', USE THE FOLLOWING CHART.
21' TO 300'- 16 AWG TFFN
301' TO 500' - 14 AWG TFFN

PHOTOCELL HOUSING DETAIL			
PROD. DEPT SERV. DEPT ENGINEER		TWR Lighting, Inc. HARK <i>Enlightened Technology®</i>	
DRAWN BY vhernandez		SHEET SIZE B	SHEET QTY. 1 OF 1
DATE 10/18/1995	SCALE 1/1	DWG. NO. 100239i	
<small>The use of non-OEM parts or modifications to original equipment design will void the manufacturer warranty and could invalidate the assurance of complying with FAA requirements as published in Advisory Circular 150/5345-43. NOTICE: The drawings and photographic images contained herein are the sole property of TWR Lighting, Inc. All information contained herein that is not generally known shall be considered confidential except to the extent the information has been previously established. The drawings and photographic images contained herein may not be reproduced, copied or used as the basis for manufacture or sale or promotion or any other purpose without the expressed written permission of TWR Lighting, Inc.</small>			

DATE	REV	AUTHOR	DESCRIPTION
02/03/2015	H	JZAMORANO	UPDATED NOTES







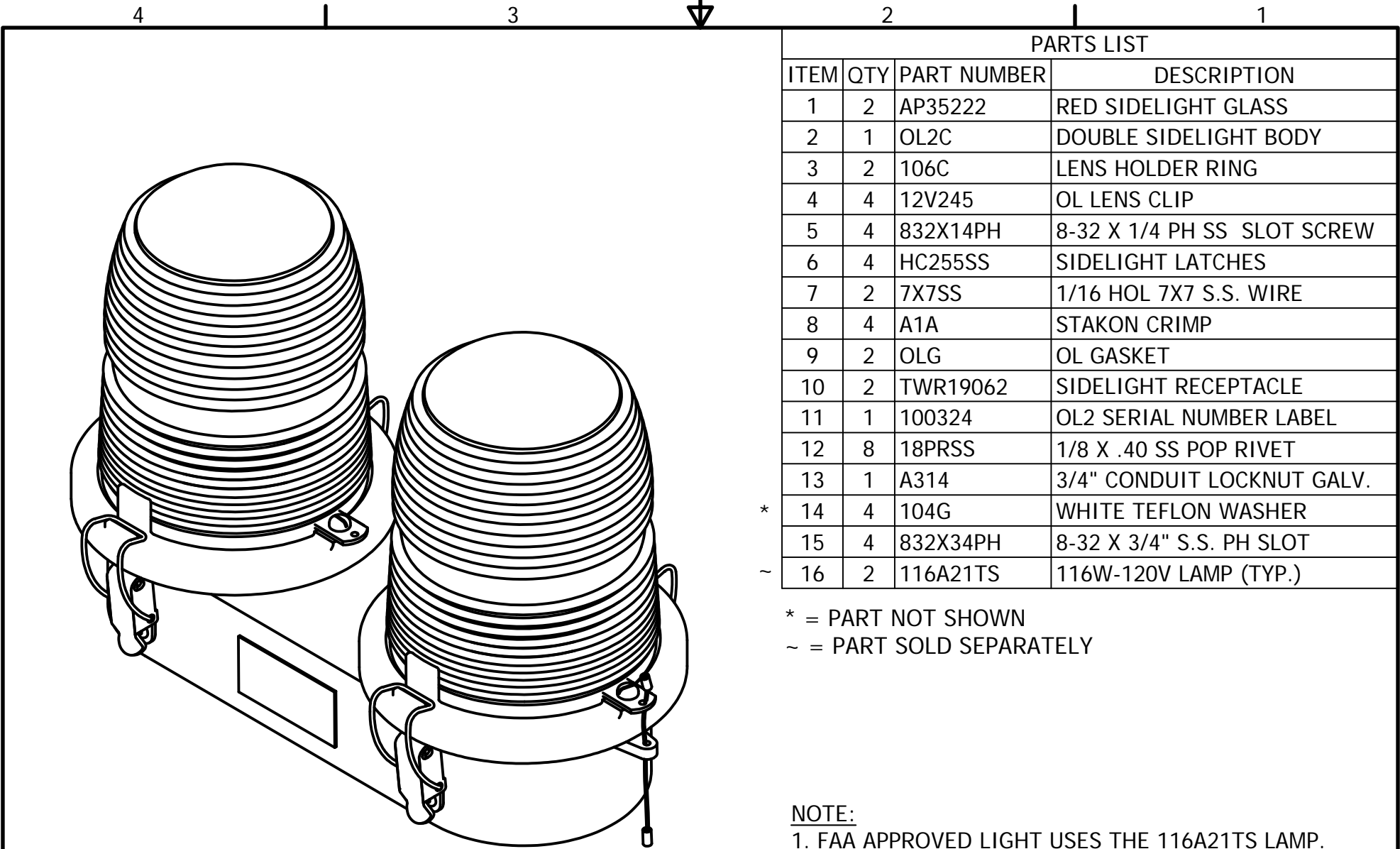
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	AP35222	RED SIDELIGHT GLASS
2	1	105C	SINGLE SIDELIGHT BODY
3	1	106C	LENS HOLDER RING
4	2	12V245	OL LENS CLIP
5	2	832X14PH	8-32 X 1/4" PH SS SLOT SCREW
6	2	HC255SS	SIDELIGHT LATCH
7	1	7X7SS	1/16 HOL 7X7 S.S. WIRE
8	2	A1A	STAKON CRIMP
9	1	OLG	OL GASKET
10	1	TWR19062	SIDELIGHT RECEPTACLE
11	4	18PRSS	1/8 X .40 SS POP RIVET
12	1	A314	3/4" CONDUIT LOCKNUT GALV.
* 13	2	104G	WHITE TEFLON WASHER
14	2	832X34PH	8-32 X 3/4" S.S. RH SLOT
15	1	100327	OL1 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.

DRAWN	2/13/2012
vhernandez	
CHECKED	
QA	
MFG	
APPROVED	

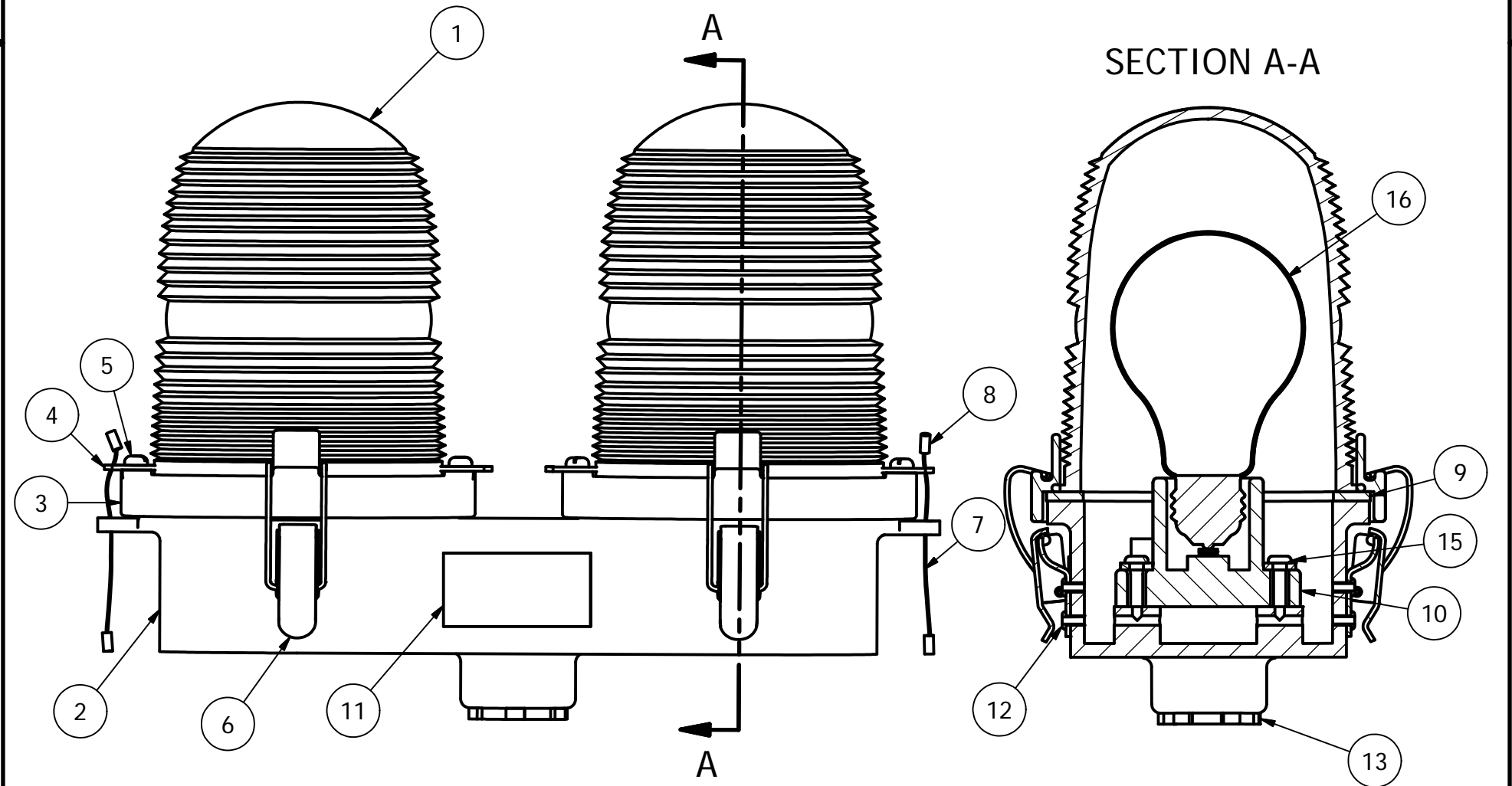
TWR Lighting, Inc. <i>Enlightened Technology®</i> WARK®			
TITLE			
3/4" OL1 SIDE HUB ASSEMBLY DETAIL (PART#OL1)			
SIZE	DWG NO	REV	
B	279-OL	C	
SCALE	2/3	SHEET 1 OF 1	



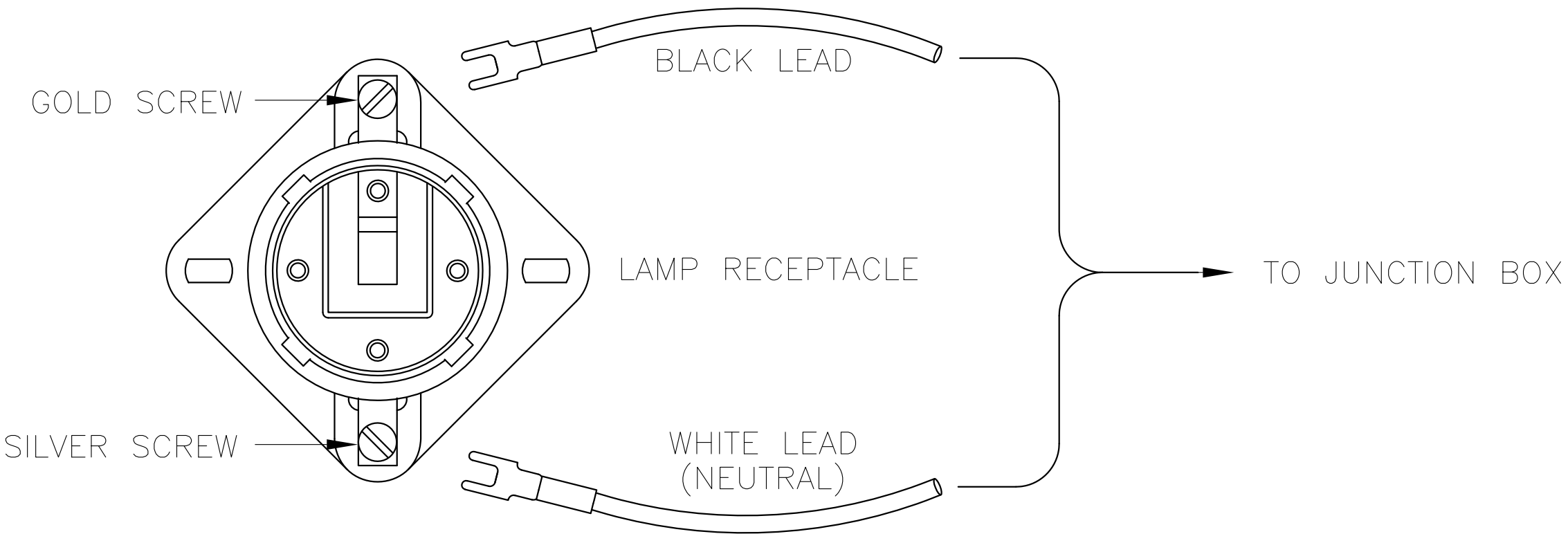
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	AP35222	RED SIDELIGHT GLASS
2	1	OL2C	DOUBLE SIDELIGHT BODY
3	2	106C	LENS HOLDER RING
4	4	12V245	OL LENS CLIP
5	4	832X14PH	8-32 X 1/4 PH SS SLOT SCREW
6	4	HC255SS	SIDELIGHT LATCHES
7	2	7X7SS	1/16 HOL 7X7 S.S. WIRE
8	4	A1A	STAKON CRIMP
9	2	OLG	OL GASKET
10	2	TWR19062	SIDELIGHT RECEPTACLE
11	1	100324	OL2 SERIAL NUMBER LABEL
12	8	18PRSS	1/8 X .40 SS POP RIVET
13	1	A314	3/4" CONDUIT LOCKNUT GALV.
* 14	4	104G	WHITE TEFLON WASHER
15	4	832X34PH	8-32 X 3/4" S.S. PH SLOT
~ 16	2	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.



DRAWN vhernandez	2/13/2012	TWR Lighting, Inc. WARK <i>Enlightened Technology®</i>		
CHECKED				
QA		TITLE 3/4" OL2 SIDELIGHT ASSEMBLY DETAIL (PART#OL2)		
MFG				
APPROVED		SIZE B	DWG NO 310	REV B
		SCALE 2/3	SHEET 1 OF 1	

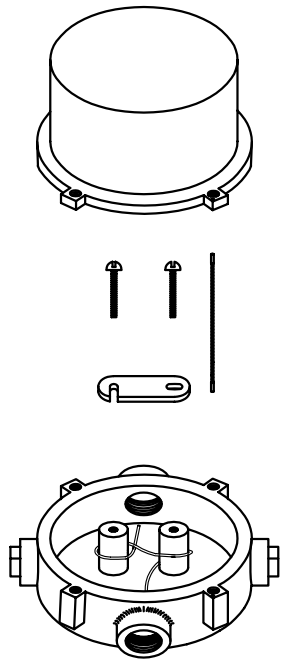
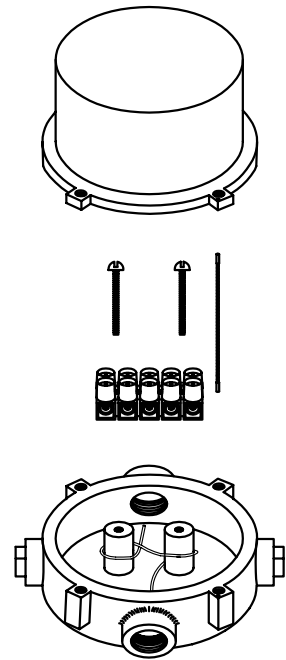


SIDELIGHT RECEPTACLE WIRING

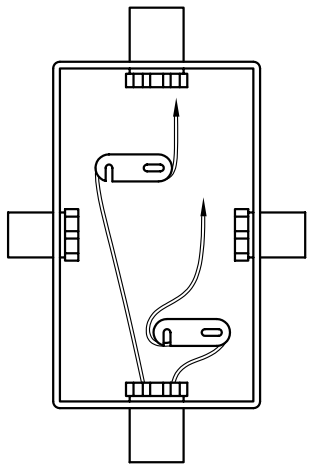
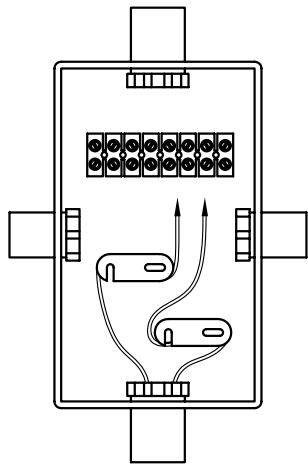
PROD DEPT	TWR Lighting, Inc. <i>Enlightened Technology®</i> WARK®		
SERV DEPT			
ENGINEER			
DRAWN BY G.D. SEBEK		SHEET SIZE B	SHEET QTY. 1 OF 1
DATE 06/08/91	SCALE N.T.S.	DWG. NO.	274-S

7/2/98	<div><div>A</div><div>G.D.S.</div></div>	CHANGED LABEL
DATE:	LTR.	REVISION

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JB-5 AND JB-0
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

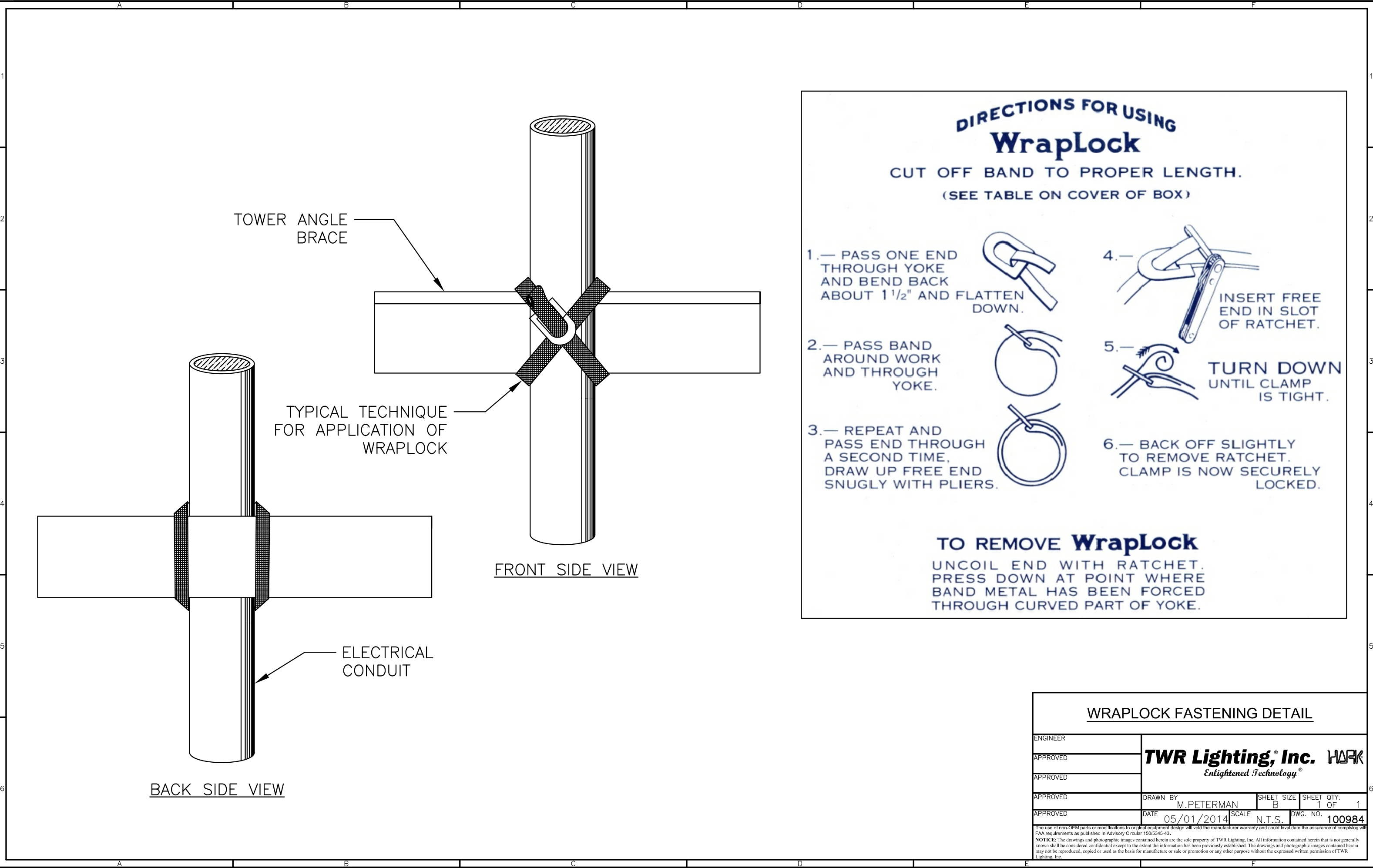
JUNCTION AND STRAIN RELIEF BOXES

TWR Lighting, Inc.

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


9/29/00	(A)	UPDATED NOTES
DATE:	LTR.	REVISION


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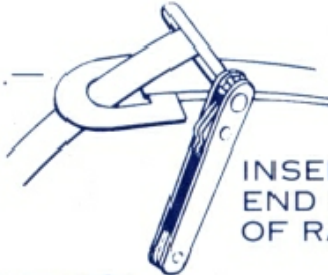
DIRECTIONS FOR USING
WrapLock
CUT OFF BAND TO PROPER LENGTH.
(SEE TABLE ON COVER OF BOX)


- 1.— PASS ONE END THROUGH YOKE AND BEND BACK ABOUT 1 1/2" AND FLATTEN DOWN.



- 2.— PASS BAND AROUND WORK AND THROUGH YOKE.


- 3.— REPEAT AND PASS END THROUGH A SECOND TIME, DRAW UP FREE END SNUGLY WITH PLIERS.



- 4.— INSERT FREE END IN SLOT OF RATCHET.


- 5.— TURN DOWN UNTIL CLAMP IS TIGHT.


- 6.— BACK OFF SLIGHTLY TO REMOVE RATCHET. CLAMP IS NOW SECURELY LOCKED.



TO REMOVE WrapLock
UNCOIL END WITH RATCHET. PRESS DOWN AT POINT WHERE BAND METAL HAS BEEN FORCED THROUGH CURVED PART OF YOKE.

WRAPLOCK FASTENING DETAIL				
ENGINEER	TWR Lighting, Inc.  <i>Enlightened Technology®</i>			
APPROVED				
APPROVED				
APPROVED	DRAWN BY M.PETERMAN	SHEET SIZE B	SHEET QTY. 1 OF 1	
APPROVED	DATE 05/01/2014	SCALE N.T.S.	DWG. NO. 100984	
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