

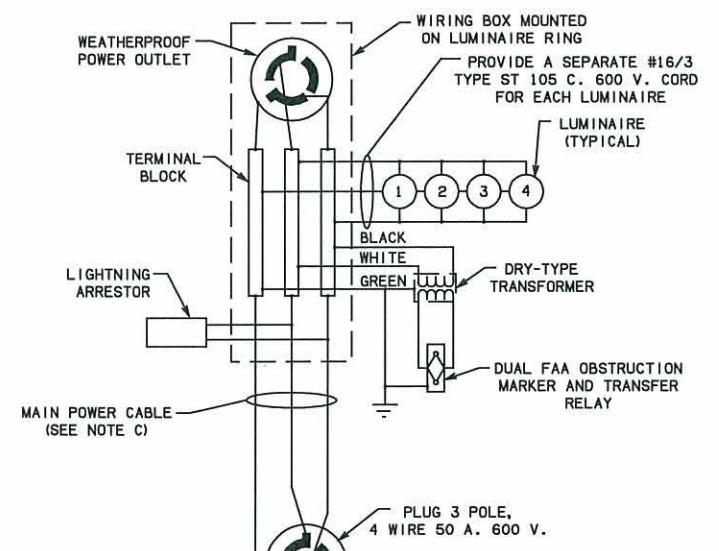
DESCRIPTION	REVISIONS	DATE
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MATERIAL SPECIFICATIONS

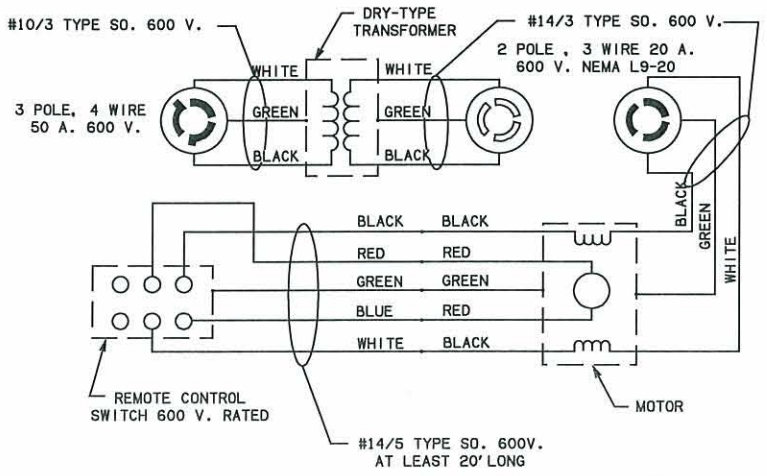
- (A) ALL ELECTRICAL COMPONENTS, PLUGS, CONNECTORS, WIRE TERMINALS, BREAKERS, ETC., CARRYING 480 VOLTS SHALL BE RATED AT 600 VOLTS A.C. AND ALL COMPONENTS CARRYING 120 VOLTS SHALL BE RATED AT 120/240 VOLTS, UNLESS OTHERWISE NOTED.
- (B) THE CIRCUIT BREAKER LOCATED IN THE BASE OF THE TOWER SHALL BE A MOLDED CASE, 2-POLE 600 VOLT A.C. RATED, IN NEMA 1 ENCLOSURE.
- (C) THE MAIN POWER CABLE SHALL BE ROUND, 3 CONDUCTOR STRANDED COPPER WITH TYPE SO, W OR G; 75 DEG. C. MIN. 600 VOLT INSULATION. SEE TABLE FOR SIZE OF CONDUCTORS.
- (D) THE LUMINAIRE RING JUNCTION BOX SHALL BE NEMA TYPE 3R ENCLOSURE.
- (E) THE OBSTRUCTION MARKER LIGHT SHALL BE FAA APPROVED, DOUBLE FIXTURE WITH A 3/4" BOTTOM HUB, A TRANSFER RELAY ASSEMBLY, AND EQUIPPED WITH (2) 69 WATT, 130 VOLT TRAFFIC SIGNAL LAMPS. THE DRY-TYPE TRANSFORMER TO OPERATE THE FAA LIGHTS SHALL BE A SINGLE PHASE 480 VOLT PRIMARY, 120/240 VOLT SECONDARY, 50/60 HZ, .15 KVA, OUTDOOR TYPE.
- (F) WIRE ROPE CABLES SHALL BE AIRCRAFT-GRADE STAINLESS STEEL OR GALVANIZED STEEL OF 7 X 19 CONSTRUCTION MEETING ONE OF THE FOLLOWING: MIL-W-83420B-2, MIL-W5424B OR MIL-W-1515A. WINCH CABLE SHALL BE 1/4" DIAM. MINIMUM AND THE HOISTING CABLES SHALL BE 3/16" DIAM. MINIMUM.
- (G) THE PORTABLE POWER UNIT SHALL BE A HEAVY DUTY REVERSIBLE DRILL MOTOR, 1" CAPACITY WITH BALL BEARINGS, 120 V. AT APPROXIMATELY 350 RPM., SIMILAR TO A BLACK & DECKER MODEL 1425. THE PORTABLE POWER UNIT SHALL BE DESIGNED TO BE COMPATIBLE, MECHANICALLY AND ELECTRICALLY WITH EXISTING HIGH MAST LOWERING DEVICES LOCATED WITHIN THE LOCAL AREA. THE TORQUE LIMITER FOR THE PORTABLE POWER UNIT SHALL BE SET AT 30 FT.-LBS, UNLESS OTHERWISE APPROVED BY THE ENGINEER. THE DRY-TAPE TRANSFORMER TO OPERATE THE PORTABLE POWER UNIT SHALL BE A SINGLE-PHASE, 480 VOLT PRIMARY 120/240 VOLT SECONDARY, 50/60 HZ. 1.5 KVA. OUTDOOR TYPE.
- (H) THE REMOTE CONTROL SWITCH SHALL BE A REVERSING DRUM SWITCH MOMENTARY CONTACT CENTER OFF, RATED 600 VOLT A.C. MAX. FOR ACROSS-THE-LINE STARTING OF SINGLE PHASE A.C. MOTOR RATED 1-1/2 H.P. AT 115 VOLT AND 2 H.P. AT 230 VOLT, MOUNTED IN A NEMA 1 ENCLOSURE. THE REMOTE CONTROL CABLE SHALL BE #14/5 TYPE SO 600 VOLT, AT LEAST 20' LONG.
- (J) THE LIGHTNING ROD SHALL BE SOLID COPPER WITH A NICKEL CHROMIUM PLATING.
- (K) THE WINCH SHALL BE A DIRECT DRIVE, WORM GEAR, SELF-LOCKING AND HAVE A GEAR RATIO OF 30 TO 1. THE WINCH SHALL COME EQUIPPED WITH AN OUTBOARD SUPPORT.
- (L) LIGHTNING ARRESTOR SHALL BE A 1-POLE, RATED 600 OR 650 VOLT WITH A 3/4" NPT PIPE NIPPLE, LOCKNUT, BUSHING WASHER AND 18" LONG LEADS.

GENERAL NOTES

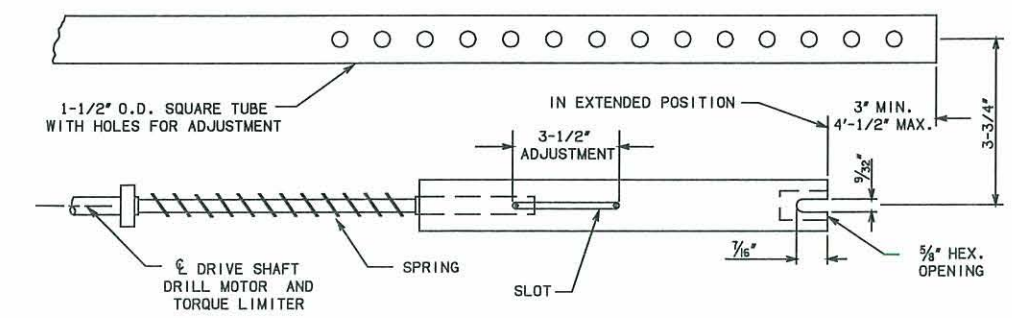
1. THE INCOMING POWER TO THE TERMINAL BLOCKS IN THE JUNCTION BOX LOCATED ON THE LUMINAIRE RING SHALL BE WIRED IN DIRECTLY.
2. FOR TYPICAL LUMINAIRE DETAILS, SEE STANDARD HLD1-1, AND HLD2-1 (LATEST REVISION).
3. THE LOWERING DEVICE SHOWN ON THIS SHEET IS TYPICAL AND MAY VARY WITH MANUFACTURER. THE LOWERING DEVICE SUPPLIED SHALL BE APPROVED BY THE ENGINEER AND FABRICATED IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS.
4. PRIOR TO ERECTING THE TOWER WITH LOWERING DEVICE, THE CONTRACTOR SHALL REQUEST AN INSPECTION BY THE TRAFFIC ENGINEERING DIVISION OF THE FULLY RIGGED LOWERING DEVICE.
5. THE PORTABLE POWER UNIT SHALL BE COMPATIBLE BOTH MECHANICALLY AND ELECTRICALLY WITH EXISTING ELECTRIC POWER UNITS IN THE LOCAL AREA, UNLESS OTHERWISE SPECIFIED OR APPROVED BY THE ENGINEER. THE QUANTITY OF POWER UNITS REQUIRED FOR THIS PROJECT WILL BE AS SHOWN ON THE PLANS. IF NO POWER UNIT IS REQUIRED, THE CONTRACTOR SHALL TEMPORARILY FURNISH A POWER UNIT TO BE USED DURING CONSTRUCTION AND FINAL INSPECTION.
6. COUNTER BALANCE WEIGHTS SHALL BE SUPPLIED ON ALL POLES AS NECESSARY TO GUARANTEE THE PROPER OPERATION OF THE LOWERING DEVICE LATCHING SYSTEM. THE COUNTER BALANCE WEIGHT SHALL BE DESIGNED TO OVERCOME THE WEIGHT OF THE POWER CABLE AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE LOWERING DEVICE.
7. THE HEAD FRAME AND LUMINAIRE RING SHALL BE DESIGNED SO AS TO KEEP BIRDS FROM ENTERING THE ASSEMBLIES.
8. THE FAA OBSTRUCTION MARKER SHALL EXTEND APPROX. 24' ABOVE THE LOWERING DEVICE RING.



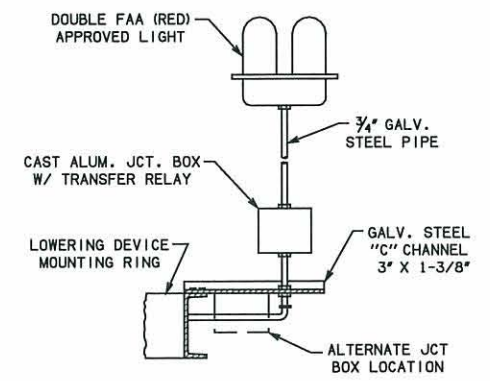
TYPICAL WIRING DIAGRAM FOR LOWERING DEVICE 480 VOLT



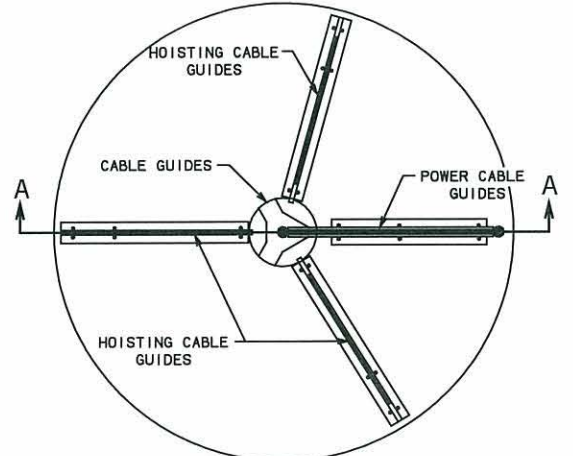
TYPICAL WIRING DIAGRAM FOR PORTABLE POWER UNIT



DETAIL "A"

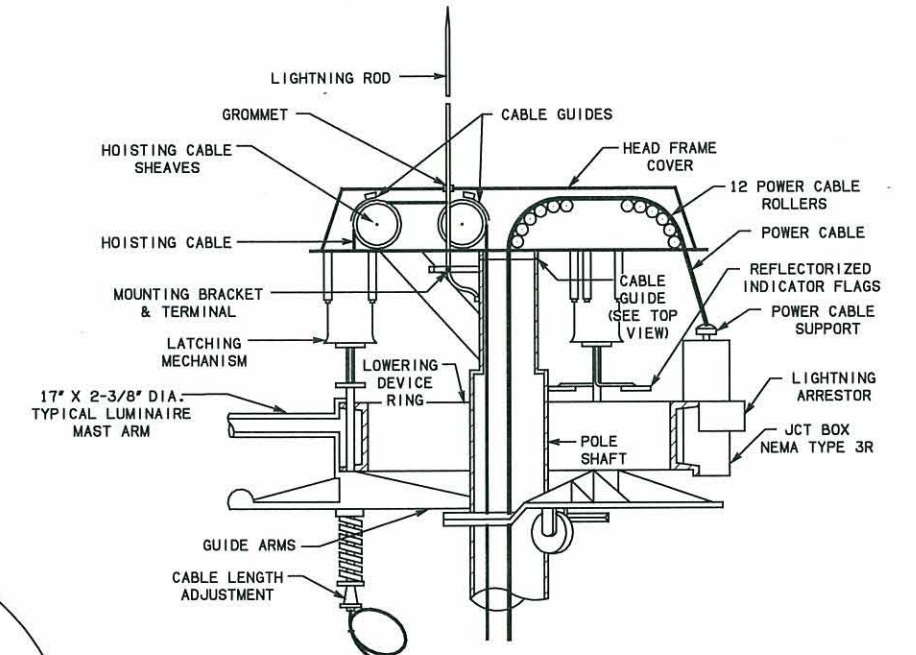


TYPICAL FAA AIRCRAFT OBSTRUCTION LIGHT

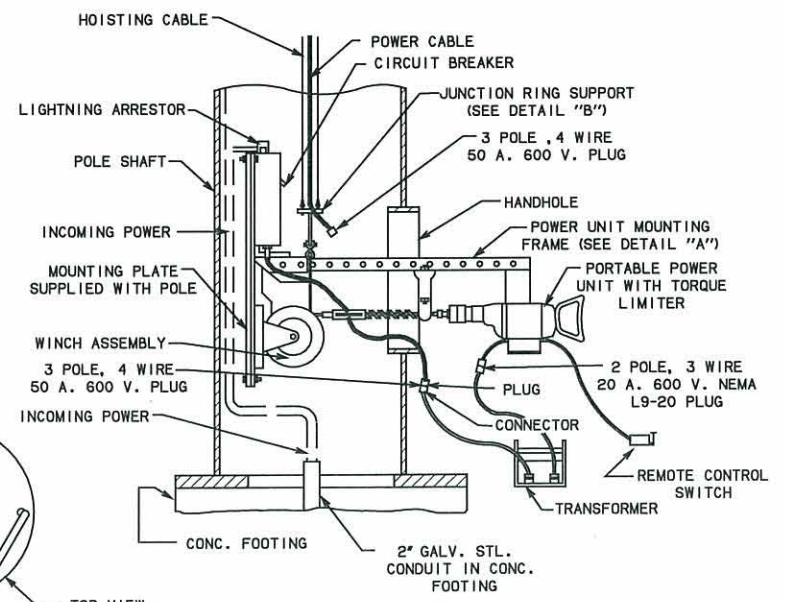


TYPICAL HEAD FRAME ASSEMBLY (TOP VIEW)

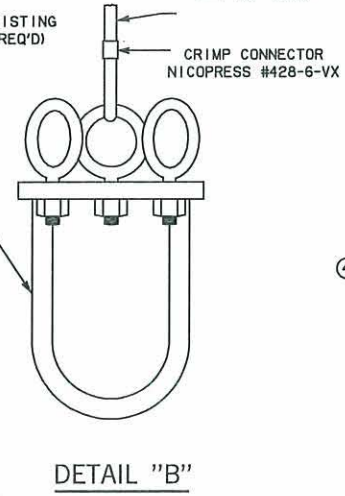
MAIN POWER CABLE SIZE (LUMINAIRE WATTAGE AT 480 V.)		
NO. OF LUMINAIRES	400 W (1.2 MAX AMP. EA.)	1000 W (2.5 MAX AMP. EA.)
1 TO 6	NO. 10 AWG	NO. 10 AWG
7 TO 10	NO. 10 AWG	NO. 8 AWG
11 TO 12	NO. 10 AWG	NO. 6 AWG



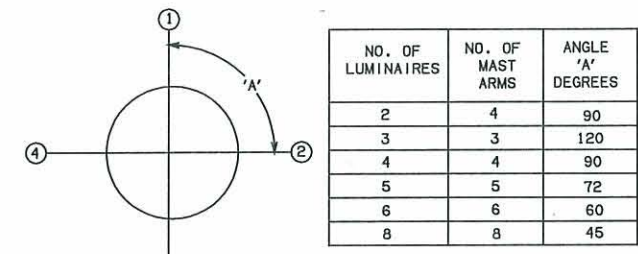
SECTION "A-A"



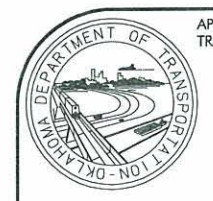
TYPICAL WINCH ASSEMBLY AND PORTABLE POWER UNIT



DETAIL "B"



TYPICAL MAST ARM LAYOUT



APPROVED BY TRAFFIC ENGINEER: *David Smith* DATE: 8/15/10

TRAFFIC STANDARD
TYPICAL HIGH MAST LOWERING DEVICE DETAILS