

OUTDOOR LIGHTING

15

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1.0 General

General information concerning outdoor lighting installations is covered in this section.

2.0 Standard Luminaires2.1 Bracket Mount (Area) Luminaires

All new installations will be made using Light Emitting Diode (LED) equivalent bracket mount luminaires. The existing High Pressure Sodium (HPS), Pulse-start Metal Halide (PMH), probe-start Metal Halide (MH) and Mercury Vapor (MV) luminaires are no longer available, and may remain in-service until the Luminaire, Lamp or Photocontrol failure.

2.1 Directional (Flood) Luminaires

All new installations will be made using LED equivalent directional (flood) luminaires. The existing HPS, PMH, MH and MV luminaires are no longer available, and may remain in-service until the Luminaire, Lamp or Photocontrol failure.

2.2 Decorative (Post-Top) Luminaires

In Missouri all new lighting installations will be made using LED luminaires. The existing HPS, PMH, MH and MV luminaires are no longer available, and may remain in-service until the Luminaire failure.

Illinois all new lighting installations will be made using HPS and PMH luminaires. The existing MH and MV luminaires are no longer available, and may remain in-service until the Luminaire failure.

The list of available Luminaires:

| TABLE 1. AVAILABLE LUMINAIRES | | | | | | | | | | | |
|---|---------------|-------|------|-------|-------------------|----------------------|---|--------|----------------|---------------------|------|
| STOCK NUMBER | STYLE | STATE | LAMP | WATTS | IES LIGHT PATTERN | VOLTS | CORRAL. COLOR TEMP. ⁽³⁾ (KELVIN) | LUMENS | START/ OP AMPS | VOLTAGE INPUT RANGE | PF % |
| LED 100 W EQUIVALENT BRACKET MOUNT LUMINAIRE | | | | | | | | | | | |
| 38 51 619 | Bracket Mount | MO | LED | 39 | II, FIG. 1 | 120V/208V/ 240V/277V | 4000 | 4,850 | 0.400 | ±5% | 99% |
| 38 51 641 | Bracket Mount | MO | LED | 39 | V, FIG. 3 | 120V/208V/ 240V/277V | 4000 | 4,850 | 0.400 | ±5% | 99% |
| 38 51 643 | Bracket Mount | IL | LED | 39 | II, FIG. 1 | 120V/208V/ 240V/277V | 3000 | 4,470 | 0.400 | ±5% | 99% |
| 38 51 644 | Bracket Mount | IL | LED | 39 | V, FIG. 3 | 120V/208V/ 240V/277V | 3000 | 4,470 | 0.400 | ±5% | 99% |
| LED 250 W EQUIVALENT BRACKET MOUNT LUMINAIRE | | | | | | | | | | | |
| 38 51 618 | Bracket Mount | MO | LED | 137 | III, FIG. 2 | 120V/208V/ 240V/277V | 4000 | 12,000 | 1.170 | ±5% | 99% |
| 38 51 617 | Bracket Mount | MO | LED | 137 | III, FIG. 2 | 347-480V | 4000 | 12,000 | 1.170 | ±5% | 99% |
| 38 51 645 | Bracket Mount | IL | LED | 107 | III, FIG. 2 | 120V/208V/ 240V/277V | 3000 | 11,960 | 1.170 | ±5% | 99% |
| 38 51 646 | Bracket Mount | IL | LED | 107 | III, FIG. 2 | 347-480V | 3000 | 11,960 | 1.170 | ±5% | 99% |
| LED 400 W EQUIVALENT BRACKET MOUNT LUMINAIRE | | | | | | | | | | | |
| 38 51 616 | Bracket Mount | MO | LED | 195 | III, FIG. 2 | 120V/208V/ 240V/277V | 4000 | 19,800 | 1.600 | ±5% | 100% |
| 38 51 615 | Bracket Mount | MO | LED | 195 | III, FIG. 2 | 347-480V | 4000 | 19,800 | 1.600 | ±5% | 100% |

TABLE 1. AVAILABLE LUMINAIRES (CONTINUED)

| STOCK NUMBER | STYLE | STATE | LAMP | WATTS | IES LIGHT PATTERN | VOLTS | CORRAL. COLOR TEMP. ⁽³⁾ (KELVIN) | LUMENS | START/ OP AMPS | VOLTAGE INPUT RANGE | PF % |
|--|----------------|---------|------|-------|-------------------|----------------------|---|--------|----------------|---------------------|------|
| 38 51 647 | Bracket Mount | IL | LED | 190 | III, FIG. 2 | 120V/208V/ 240V/277V | 3000 | 20,400 | 1.600 | ±5% | 100% |
| 38 51 648 | Bracket Mount | IL | LED | 190 | III, FIG. 2 | 347-480V | 3000 | 20,400 | 1.600 | ±5% | 100% |
| LED 250W EQUIVALENT DIRECTIONAL/FLOOD LUMINAIRE | | | | | | | | | | | |
| 38 51 626 | Directional | MO | LED | 98 | 6X6 | 120/208/ 240/277V | 4000 | 13,400 | 0.475 | ±10% | 90% |
| 38 51 625 | Directional | MO | LED | 98 | 6X6 | 347-480V | 4000 | 13,400 | 0.475 | ±10% | 90% |
| 38 51 649 | Directional | IL | LED | 98 | 6X6 | 120/208/ 240/277V | 3000 | 12,600 | 0.475 | ±10% | 90% |
| 38 51 650 | Directional | IL | LED | 98 | 6X6 | 347-480V | 3000 | 12,600 | 0.475 | ±10% | 90% |
| LED 400W EQUIVALENT DIRECTIONAL/FLOOD LUMINAIRE | | | | | | | | | | | |
| 38 51 624 | Directional | MO | LED | 150 | 6X6 | 120/208/ 240/277V | 4000 | 18,600 | 0.875 | ±10% | 90% |
| 38 51 627 | Directional | MO | LED | 150 | 6X6 | 347-480V | 4000 | 18,600 | 0.875 | ±10% | 90% |
| 38 51 651 | Directional | IL | LED | 150 | 6X6 | 120/208/ 240/277V | 3000 | 18,200 | 0.875 | ±10% | 90% |
| 38 51 652 | Directional | IL | LED | 150 | 6X6 | 347-480V | 3000 | 18,200 | 0.875 | ±10% | 90% |
| LED 1000W EQUIVALENT DIRECTIONAL/FLOOD LUMINAIRE | | | | | | | | | | | |
| 38 51 628 | Directional | MO | LED | 297 | 6X6 | 120/208/ 240/277V | 4000 | 37,400 | 0.875 | ±10% | 90% |
| LED 100W EQUIVALENT RECTANGULAR (SHOEBOX) LUMINAIRE | | | | | | | | | | | |
| 3851637 | Rectangular | IL | LED | 44 | III, FIG. 2 | 120/208/ 240/277V | 3000 | 4,600 | 0.475 | ±10% | 90% |
| LED 250W EQUIVALENT RECTANGULAR (SHOEBOX) LUMINAIRE | | | | | | | | | | | |
| 3851640 | Rectangular | IL | LED | 136 | III, FIG. 2 | 120/208/ 240/277V | 3000 | 16,000 | 0.610 | ±10% | 90% |
| LED 400W EQUIVALENT RECTANGULAR (SHOEBOX) LUMINAIRE | | | | | | | | | | | |
| 3851638 | Rectangular | IL | LED | 183 | III, FIG. 2 | 120/208/ 240/277V | 3000 | 21,300 | 0.610 | ±10% | 90% |
| 3851639 | Rectangular | IL | LED | 183 | III, FIG. 2 | 347-480V | 3000 | 21,300 | 0.610 | ±10% | 90% |
| HID DECORATIVE/POST-TOP LUMINAIRE | | | | | | | | | | | |
| 3801517 | Early American | IL / MO | HPS | 100 | III, FIG. 2 | 120V | 1,900K | 9,500 | 3.2/2.1 | ±5% | 45% |
| 3801518 | Early American | IL / MO | HPS | 100 | V, FIG. 3 | 120V | 1,900K | 9,500 | 3.2/2.1 | ±5% | 45% |
| 3801942 ^(1,2) | Early American | IL | MH | 175 | III, FIG. 2 | 120V | 4,100K | 14,400 | 1.0/1.75 | ±10% | 45% |
| 3801961 ⁽²⁾ | Early American | IL | PMH | 150 | III, FIG. 2 | 120V | 4,100K | 12,900 | - | ±10% | 45% |
| 3801624 | Acorn | IL | HPS | 100 | V, FIG. 3 | 120V | 1,900K | 9,500 | 3.2/2.1 | ±5% | 45% |
| 3801625 ^(1,2) | Acorn | IL | MH | 175 | V, FIG. 3 | 120V | 4,100K | 14,400 | 1.0/1.75 | ±10% | 45% |
| 3801960 ⁽²⁾ | Acorn | IL | PMH | 150 | V, FIG. 3 | 120V | 4,100K | 12,900 | 1.9/0.9 | ±10% | 45% |

TABLE 1. AVAILABLE LUMINAIRES (CONTINUED)

| STOCK NUMBER | STYLE | STATE | LAMP | WATTS | IES LIGHT PATTERN | VOLTS | CORRAL. COLOR TEMP. ⁽³⁾ (KELVIN) | LUMENS | START/ OP AMPS | VOLTAGE INPUT RANGE | PF % |
|--|-----------------------------|-------|------|-------|-------------------|------------------|---|--------|----------------|---------------------|------|
| 3801524 | Colonial | MO | HPS | 100 | III, FIG. 2 | 120V | 1,900K | 9,500 | 3.2/2.1 | ±5% | 45% |
| 3801525 | Colonial | MO | HPS | 100 | V, FIG. 3 | 120V | 1,900K | 9,500 | 3.2/2.1 | ±5% | 45% |
| 3801513 | Contemporary or Traditional | MO | HPS | 100 | III, FIG. 2 | 120V | 1,900K | 9,500 | 3.2/2.1 | ±5% | 45% |
| 3801514 | Contemporary or Traditional | MO | HPS | 100 | V, FIG. 3 | 120V | 1,900K | 9,500 | 3.2/2.1 | ±5% | 45% |
| 3801584 | Aspen | MO | HPS | 100 | III, FIG. 2 | 120V | 1,900K | 9,500 | 3.2/2.1 | ±5% | 45% |
| 3801585 | Aspen | MO | HPS | 100 | V, FIG. 3 | 120V | 1,900K | 9,500 | 3.2/2.1 | ±5% | 45% |
| LED 100W EQUIVALENT DECORATIVE/POST-TOP LUMINAIRE | | | | | | | | | | | |
| 3851620 | Early American | MO | LED | 52 | III, FIG. 2 | 120/208/240/277V | 3000 | 5,290 | 0.700 | ±10% | 88% |
| 3851622 | Early American | MO | LED | 52 | V, FIG. 3 | 120/208/240/277V | 3000 | 4,939 | 0.700 | ±10% | 88% |
| 3851632 | Colonial | MO | LED | 44 | III, FIG. 2 | 120/208/240/277V | 3000 | 3,023 | 0.700 | ±10% | 88% |
| 3851631 | Colonial | MO | LED | 44 | V, FIG. 3 | 120/208/240/277V | 3000 | 3,210 | 0.700 | ±10% | 88% |
| 3851621 | Contemporary or Traditional | MO | LED | 50 | III, FIG. 2 | 120/208/240/277V | 3000 | 4,511 | 0.350 | ±10% | 94% |
| 3851623 | Contemporary or Traditional | MO | LED | 50 | V, FIG. 3 | 120/208/240/277V | 3000 | 4,511 | 0.350 | ±10% | 94% |
| 3851633 | Aspen | MO | LED | 39 | III, FIG. 2 | 120/208/240/277V | 3000 | 4,990 | 1.000 | ±10% | 96% |
| 3851634 | Aspen | MO | LED | 39 | V, FIG. 3 | 120/208/240/277V | 3000 | 4,988 | 1.000 | ±10% | 96% |

NOTES:

1. Probe-start Metal Halide (MH) luminaires with solid red identification tag are obsolete. These luminaires require MH lamp and may remain in service until Luminaire failure.
2. Pulse-start Metal halide (PMH) Lamps are NOT interchangeable with probe-start Metal Halide (MH) Lamps. If a PMH lamp is installed in the MH luminaire, the lamp will not ignite or will not start. If a MH lamp is installed in the PMH luminaire, the lamp will ignite or start very quickly. The MH lamp is not designed to run on the PMH ballast and will experience a very short lamp life. Because of the high startup voltage that is delivered across the ballast by the ignitor to the lamp, the lamp is subject to a non-passive end of life and could rupture the lamp arch tube. It is very important to always close the luminaire optical before testing the lamp or starting the MH/PMH luminaire.
3. Correlated Color Temperature (CCT) is the measure of light source color appearance in degrees Kelvin.

3.0 Lighting Patterns

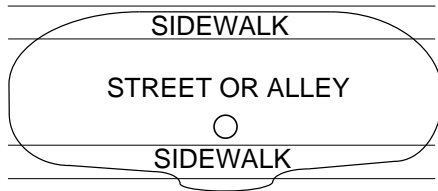


FIGURE 1

Type II - The type II distribution is used for lighting alleys and smaller streets. The light beam is narrow and long.

LED 100W EQUIVALENT BRACKET MOUNT
TYPE II LUMINAIRE

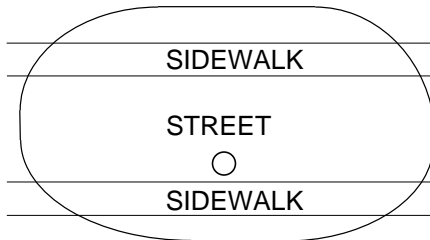


FIGURE 2

Type III - The type III distribution is used for lighting the larger roadways, general parking areas and other areas where a larger area of lighting is required.

LED 250W & 400W EQUIVALENT
BRACKET MOUNT
TYPE III LUMINAIRE

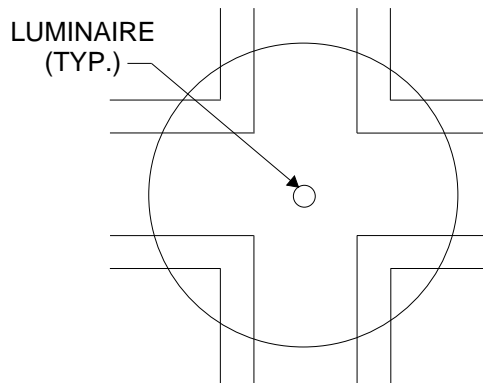


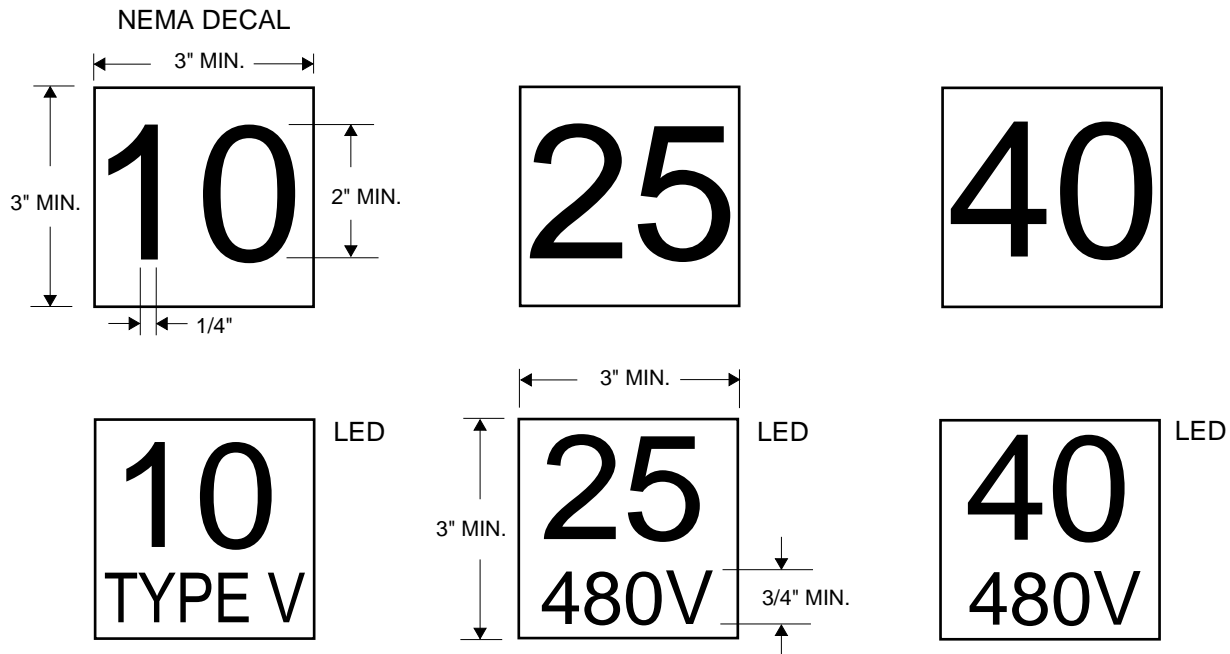
FIGURE 3

Type V - The type V distribution is used for lighting intersections, center islands of parkway, cul-de-sacs, and fields. The light beam has even intensity at all angles.

LED 100W EQUIVALENT
BRACKET MOUNT
TYPE V LUMINAIRE

4.0 Identification

All luminaires are shipped with the appropriate NEMA identification decal. If the decal is not installed it should be re-applied on the fixture so that it can be seen from the ground.

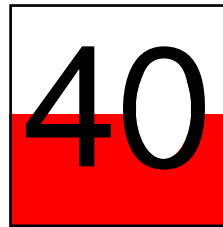


| TABLE 2. IDENTIFYING CODE | | | |
|---------------------------|---------------------------------|----------------------|--------------------------------|
| IDENTIFYING NUMERAL | LAMP WATTAGE AND LED EQUIVALENT | BACKGROUND COLOR | LAMP TYPE |
| 10 | 100 W | GOLD | HIGH PRESSURE SODIUM (HPS) |
| 15 | 150 W | *HALF RED/HALF WHITE | PULSE-START METAL HALIDE (PMH) |
| 17 | 175 W | BLUE | MERCURY VAPOR (MV) |
| 25 | 250W | RED | PROBE-START METAL HALIDE (MH) |
| 40 | 400 W | GOLD | HIGH PRESSURE SODIUM (HPS) |
| X1 | 1000 W | RED | PROBE-START METAL HALIDE (MH) |
| 10 | 100 W EQV. | WHITE | LIGHT EMITTING DIODE (LED) |
| 10 TYPE V | 100 W EQV. | WHITE | LIGHT EMITTING DIODE (LED) |
| 25 | 250 W EQV. | WHITE | LIGHT EMITTING DIODE (LED) |
| 25 480 V | 250 W EQV. | WHITE | LIGHT EMITTING DIODE (LED) |
| 40 | 400 W EQV. | WHITE | LIGHT EMITTING DIODE (LED) |
| 40 480 V | 400 W EQV. | WHITE | LIGHT EMITTING DIODE (LED) |
| X1 | 1000 W EQV. | WHITE | LIGHT EMITTING DIODE (LED) |

PROBE START
METAL HALIDE
MH



*HORIZONTAL BURN
PULSE START
METAL HALIDE
PMH



*VERTICAL BURN
PULSE START
METAL HALIDE
PMH



* PMH Luminaires label with wattage identification code.

The first label on the left is horizontal burn PMH luminaire such as horizontal non-cutoff, horizontal cutoff, and directional flood luminaires. The label on the right is for vertical burn PMH luminaire such as post-top luminaires.

5.0 Luminaire Mounting Heights

Post-top luminaires shall be mounted only on fiberglass poles purchased specifically for that purpose.

All other types of luminaires shall be mounted in accordance with the following table. The preferred height should be maintained whenever possible but the minimum heights may be used if this avoids a pole replacement.

Mounting height is defined as the height from ground to the bottom of the refractor (glassware) on glass enclosed reflectors and to the bottom of the lamp on open type reflectors.

TABLE 3. LUMINAIRE MOUNTING HEIGHTS

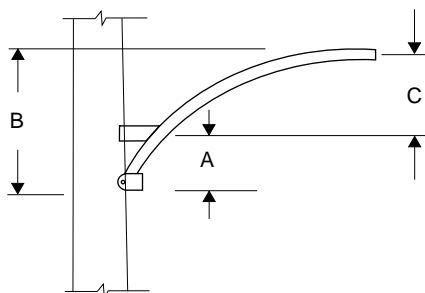
| LIGHT EMITTING DIODE (LED) | HIGH PRESSURE SODIUM (HPS) | PROBE-START (MH) AND PULSE-START (PMH) METAL HALIDE | MIN. MTG. HEIGHT [FT.] | PREF. MTG. HEIGHT [FT.] |
|--|--|--|------------------------|-------------------------|
| - | 100 W HPS POST-TOP | 150 W PMH POST-TOP 175 W MH POST-TOP | 14 | 14 |
| LED 100 W EQUIVALENT BRACKET MOUNT | 100 W HPS OPEN BOTTOM 100 W HPS HORIZ. COBRA HEAD | - | 20 | 20 |
| LED 250 W EQUIV. DIRECT. LED 400 W EQUIV. DIRECT. | 250 W HPS DIRECTIONAL 400 W HPS DIRECTIONAL | 250 W MH & PMH DIRECTIONAL 400 W MH & PMH DIRECTIONAL | 25 | 30 |
| LED 250 W EQUIVALENT BRACKET MOUNT | - | 250 W MH & PMH HORIZONTAL COBRA HEAD | 30 | 30 |
| LED 250 W EQUIVALENT BRACKET MOUNT | 250 W HPS HORIZONTAL COBRA HEAD | - | 35 | 35 |
| LED 400 W EQUIVALENT BRACKET MOUNT | 400 W HPS HORIZONTAL COBRA HEAD | - | 30 | 35 |
| LED 400 W EQUIVALENT BRACKET MOUNT | - | 400 W MH & PMH HORIZONTAL COBRA HEAD | 30 | 35 |
| LED 1000 W EQUIV. DIRECT. | - | 1000 W MH DIRECTIONAL | | |

6.0 Brackets

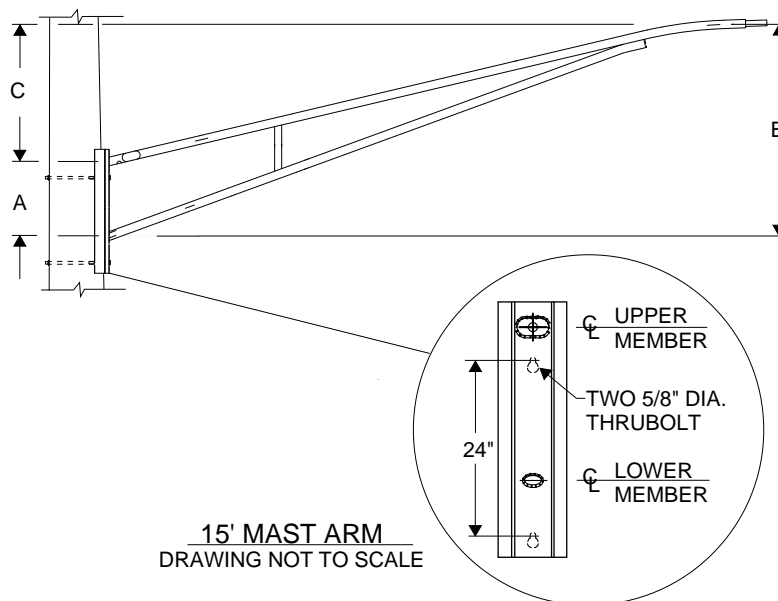
Standard installations for area lights shall use the 30" bracket. Standard installations for street lights shall use the 6' bracket. Brackets must be ordered as a separate item along with the luminaire and all other components and hardware.

For special applications, other brackets are available but their usage should be limited as much as possible.

The following data is for use in determining bracket locations to provide luminaire mounting heights as specified in the proceeding section. All upsweep brackets and mast arms are equipped for 1-1/4" slip-fitter mounting of luminaires.



30" AND 6' BRACKETS
DRAWING NOT TO SCALE



15' MAST ARM
DRAWING NOT TO SCALE

TABLE 4. BRACKET AND MAST ARM LENGTH/DIMENSIONS

| BRACKET LENGTH | A | B | C |
|----------------|-----|-----|-----|
| 30" | 11" | 18" | 7" |
| 6' | 11" | 30" | 19" |
| 15' | 21" | 60" | 39" |

6.1 Ornamental concrete pole are no longer Ameren's standards and they are replaced with fiberglass poles for maintenance. Ornamental concrete pole have a set bracket mounting point. For these concrete poles the height above ground level at the luminaire end of the bracket is per following table:

TABLE 5. LUMINAIRE HEIGHT ABOVE GROUND LEVEL - CONCRETE POLES

| CONCRETE POLES STOCK NUMBER | POLE HIGHT ABOVE THE GROUND | LUMINAIRE HEIGHT AT THE END OF THE 6 FT. BRACKETS |
|-----------------------------|-----------------------------|---|
| EXISTING - MAINTENANCE ONLY | 23' | 25'-3" |
| EXISTING - MAINTENANCE ONLY | 28' | 30'-3" |

6.2 For both horizontal and vertical burning luminaires, the distance from the mounting point to the bottom of the luminaire is approximately 12". For fiberglass mast arm poles per material spec 2.1.264, the height above ground level, at the luminaire end of the bracket is per following table:

TABLE 6. LUMINAIRE HEIGHT ABOVE GROUND LEVEL - FIBERGLASS POLES

| FIBERGLASS POLES STOCK NUMBER | POLE HIGHT ABOVE THE GROUND | LUMINAIRE HEIGHT AT THE END OF THE 6 FT. BRACKETS |
|-------------------------------|-----------------------------|---|
| 38 01 555 | 30' | 26'-3" |
| 38 01 916 | 33' | 28'-3" |
| 38 01 554 | 35' | 31'-3" |
| 38 01 917 | 38' | 33'-3" |

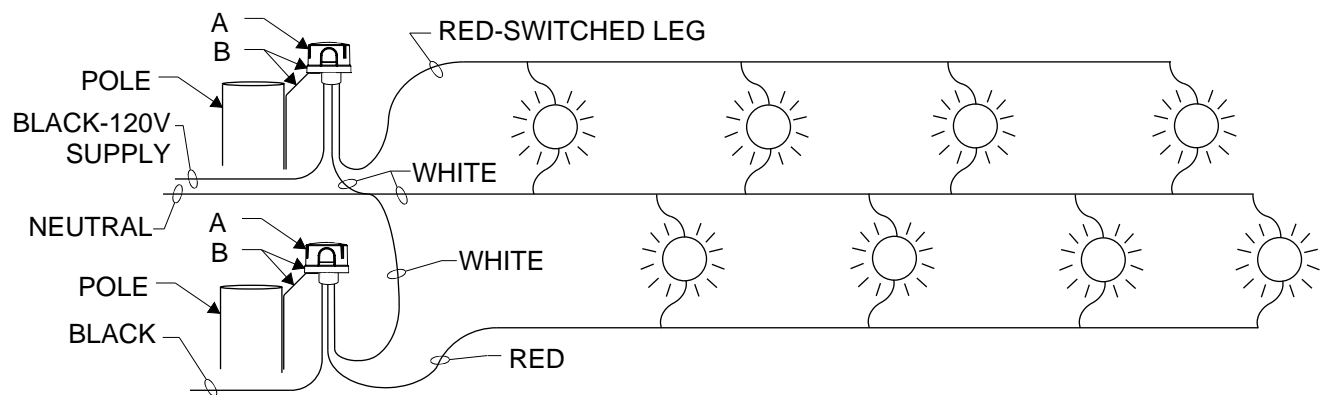
7.0 Remote Operated and Multiple Light Control

Periodically, light from one luminaire will activate the photocell and shut off another light. For these circumstances, when simply re-aiming the photocell does not resolve the problem, a remote photocell mounting bracket is used.

In some circumstances, it is beneficial to operate multiple luminaires from one control. For these circumstances a remote photocell mounting bracket or relay is used.

In both of the above situations, the photocell on the luminaire is replaced with a shorting plug. The photocell is rated at 15A while the relay is rated at 30A. See Table 1 of this document, for current draw information in order to determine how many luminaires can be controlled by either the photocell or the relay.

If multiple luminaires are used on 3-wire, single phase circuits, care should be taken to balance the load between the two phases in order to have the lights operated at the same time.



MULTIPLE LIGHT CONTROL DIAGRAM

TABLE 7. MULTIPLE LIGHT CONTROL MATERIAL

| | STOCK NUMBER | STATE | DESCRIPTION |
|----|--------------|-------|---|
| A* | 38 51 630 | MO/IL | PHOTOCELL, 120-277 V, 1000 W FAIL ON, BLACK, NORTH ORIENTED, HEAVY DUTY (LONG LIFE, 20+ YEARS) |
| | 38 01 394 | MO/IL | PLUG, SHORTING, PHOTOELECTRIC CELL |
| B | 38 01 376 | MO/IL | PHOTOCELL BRACKET AND PHOTOCELL RECEPTACLE ASSEMBLY MOUNTING ON POLE OR CROSSARM W/RECEPTACLE |
| | 38 01 275 | MO/IL | RELAY, 120 V, 30 A MULTIPLE STREETLIGHTS |

*For more information on photocontrol see DCS 15 00 01 01.

8.0. References Chart Missouri

TABLE 8. LUMINAIRE EQUIVALENT WATTAGES - BRACKET MOUNT LUMINAIRES - MISSOURI

| STOCK NUMBER LED LUMINAIRE | | LUMINAIRE I.D. | LIGHT EMITTING DIODE (LED) | HID FIXTURE WATTAGE | | | VOLTAGE |
|-------------------------------|----|-------------------|----------------------------------|-----------------------|--|-----------------------------|-------------------|
| | | | | MERCURY VAPOR (MV) | METAL HALIDE (MH) PULSE-START (PMH) | HIGH PRESS. SODIUM (HPS) | |
| 38 51 619 | MO | 10 | 39 W | 100/150/175/250 W | 150 W & 175 W | 70 W & 100 W | 120/208/240/277 V |
| 38 51 641 | MO | 10 TYPE V | 39 W | 100/150/175/250 W | 150 W & 175 W | 70 W & 100 W | 120/208/240/277 V |
| 38 51 618 | MO | 25 | 140 W | 400 W | 250 W | 250 W | 120/208/240/277 V |
| 38 51 617 | MO | 25 480 V | 140 W | 400 W | 250 W | 250 W | 480 V |
| 38 51 616 | MO | 40 | 195 W | 1000 W | 400 W | 400 W | 120/208/240/277 V |
| 38 51 615 | MO | 40 480 V | 195 W | 1000 W | 400 W | 400 W | 480 V |

TABLE 9. LUMINAIRE EQUIVALENT WATTAGES - DIRECTIONAL (FLOOD) LUMINAIRES - MISSOURI

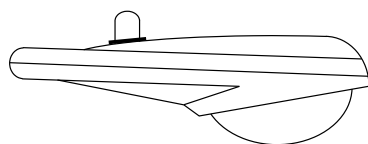
| STOCK NUMBER LED LUMINAIRE | | LUMINAIRE I.D. | WATTAGE LIGHT EMITTING DIODE (LED) | HID FIXTURE WATTAGE | | | VOLTAGE |
|-------------------------------|----|-------------------|---|-----------------------|--|-----------------------------|-------------------|
| | | | | MERCURY VAPOR (MV) | METAL HALIDE (MH) PULSE-START (PMH) | HIGH PRESS. SODIUM (HPS) | |
| 38 51 626 | MO | 25 | 98 W | 400 W | 250 W & 400 W ⁽¹⁾ | 250 W | 120/208/240/277 V |
| 38 51 625 | MO | 25 480 V | 98 W | 400 W | 250 W & 400 W ⁽¹⁾ | 250 W | 480 V |
| 38 51 624 | MO | 40 | 150 W | 1000 W | - ⁽¹⁾ | 400 W | 120/208/240/277 V |
| 38 51 627 | MO | 40 480 V | 150 W | 1000 W | - ⁽¹⁾ | 400 W | 480 V |
| 38 51 628 | MO | X1 | 300 W | - | 1000 W | 1000 W | 120/208/240/277 V |

NOTES:

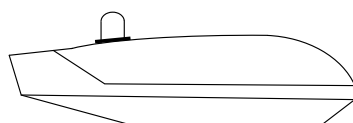
1. In Missouri only the 400 W Pulse Start Metal Halide (PMH) and probe start Metal Halide (MH) directional (flood) luminaires will be replaced with the LED 250 W equivalent luminaire.

9.0. References Chart Illinois

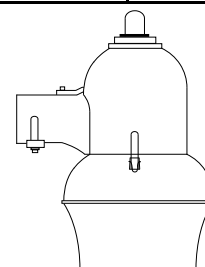
| TABLE 10. LUMINAIRE EQUIVALENT WATTAGES - BRACKET MOUNT LUMINAIRES - ILLINOIS | | | | | | | |
|---|----|-------------------|----------------------------------|-----------------------|--|-----------------------------|-------------------|
| STOCK NUMBER LED LUMINAIRE | | LUMINAIRE I.D. | LIGHT EMITTING DIODE (LED) | HID FIXTURE WATTAGE | | | VOLTAGE |
| | | | | MERCURY VAPOR (MV) | METAL HALIDE (MH) PULSE-START (PMH) | HIGH PRESS. SODIUM (HPS) | |
| 38 51 643 | IL | 10 | 39 W | 100/150/175/250 W | 150 W & 175 W | 70 W & 100 W | 120/208/240/277 V |
| 38 51 644 | IL | 10 TYPE V | 39 W | 100/150/175/250 W | 150 W & 175 W | 70 W & 100 W | 120/208/240/277 V |
| 38 51 645 | IL | 25 | 107 W | 400 W | 250 W | 250 W | 120/208/240/277 V |
| 38 51 646 | IL | 25 480 V | 107 W | 400 W | 250 W | 250 W | 480 V |
| 38 51 647 | IL | 40 | 190 W | 1000 W | 400 W | 400 W | 120/208/240/277 V |
| 38 51 648 | IL | 40 480 V | 190 W | 1000 W | 400 W | 400 W | 480 V |



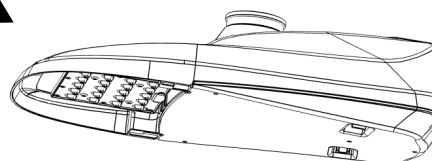
ENCLOSED
COBRA HEAD, SEMI CUTOFF
120 V, 120-277 V AND 480 V



ENCLOSED
COBRA HEAD, CUTOFF
120 V, 120-277 V AND 480 V



OPEN BOTTOM/NEMA HEAD
120 V



LED 100 W, 250 W AND 400 W EQUIVALENT
BRACKET MOUNT LUMINAIRE

| TABLE 11. LUMINAIRE EQUIVALENT WATTAGES - DIRECTIONAL (FLOOD) LUMINAIRES - ILLINOIS | | | | | | | |
|---|----|-------------------|---|-----------------------|--|-----------------------------|-------------------|
| STOCK NUMBER LED LUMINAIRE | | LUMINAIRE I.D. | WATTAGE LIGHT EMITTING DIODE (LED) | HID FIXTURE WATTAGE | | | VOLTAGE |
| | | | | MERCURY VAPOR (MV) | METAL HALIDE (MH) PULSE-START (PMH) | HIGH PRESS. SODIUM (HPS) | |
| 38 51 649 | IL | 25 | 98 W | 400 W | 250 W | 250 W | 120/208/240/277 V |
| 38 51 650 | IL | 25 480 V | 98 W | 400 W | 250 W | 250 W | 480 V |
| 38 51 651 | IL | 40 | 150 W | 1000 W | 400 W | 400 W | 120/208/240/277 V |
| 38 51 652 | IL | 40 480 V | 150 W | 1000 W | 400 W | 400 W | 480 V |

OUTDOOR LIGHTING

HID LAMPS

15 00 02 01

Sheet 1 of 2

1. High Pressure Sodium (HPS) Lamps – CLEAR

HPS lamps must be used only in luminaires with ballasts designed for HPS lamps. HPS lamps require at least 1 minute to restrike after a power interruption.

Standard lamp sizes and types are as follows:

| Stock No. | Lamp Watts | Lamp Type | Avg. Rated Life (HRS) | Approx. Initial Lumens | Lamp Base |
|-----------|------------|-----------|-----------------------|------------------------|-----------|
| 26-06-257 | 70 | HPS | 24,000+ | 6,300 | Mogul |
| 26-55-260 | 100 | HPS | 24,000+ | 9,500 | Mogul |
| 26-06-740 | 150 | HPS | 24,000+ | 16,000 | Mogul |
| 26-55-067 | 250 | HPS | 24,000+ | 29,000 | Mogul |
| 26-55-061 | 400 | HPS | 24,000+ | 50,000 | Mogul |
| 26-55-072 | 1000 | HPS | 24,000+ | 130,000 | Mogul |

2. Probe-Start Metal Halide (MH) Lamps (Replacement for the existing probe-start metal halide (MH) luminaires)

MH lamps must be used only in luminaires ballasts designed for MH lamps. MH lamps require approximately 7 to 12 minutes to restrike after a power interruption.

Standard lamp sizes and types are as follows:

| Stock No. | Lamp Watts | Lamp Type | Avg. Rated Life (HRS) | Approx. Initial Lumens | Lamp Base |
|-----------|------------|-----------|-----------------------|------------------------|-----------|
| 26-56-260 | 175 | MH | 10,000 | 14,400 | Mogul |
| 26-56-251 | 250 | MH | 7,500 | 20,000 | Mogul |
| 26-56-261 | 400 | MH | 15,000 | 32,000 | Mogul |
| 26-56-244 | 1000 | MH | 12,000 | 107,800 | Mogul |

3. Pulse-Start Metal Halide Lamps (PMH) (Use in Pulse-start metal halide (PMH) luminaire)

PMH lamps must be used only in luminaires ballasts designed for PMH lamps. PMH lamps require approximately 5 to 7 minutes to restrike after a power interruption.

Standard lamp sizes and types are as follows:

| Stock No. | Lamp Watts | Lamp Type | Avg. Rated Life (HRS) | Approx. Initial Lumens | Lamp Base |
|-----------|------------|-----------|-----------------------|------------------------|-----------|
| 26-06-418 | 100 | PMH | 16,000 | 9,000 | Medium |
| 26-05-087 | 150 | PMH | 12,000 | 12,900 | Medium |
| 26-55-277 | 250 | PMH | 12,000 | 19,000 | Mogul |
| 26-55-278 | 400 | PMH | 20,000 | 40,000 | Mogul |

OUTDOOR LIGHTING

HID LAMPS

15 00 02 01

Sheet 2 of 2

4. Mercury Vapor (MV) Lamps (Replacement for existing mercury vapor luminaires only)

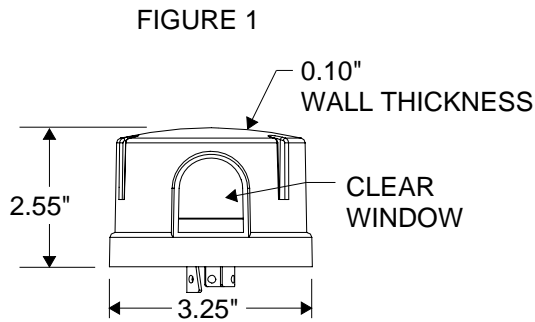
MV lamps must be used only in luminaires with ballasts designed for MV lamps. MV lamps require at least 6 minutes to restrike after a power interruption.

Standard lamp sizes and types are as follows:

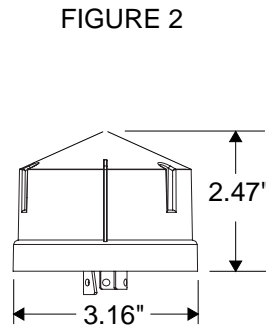
| Stock No. | Lamp Watts | Lamp Type | Avg. Rated Life (HRS) | Approx Initial Lumens | Lamp Base |
|-----------|------------|-----------|-----------------------|-----------------------|-----------|
| 26-55-045 | 175 | MV | 24,000+ | 8,500 | Mogul |
| 26-55-066 | 250 | MV | 24,000+ | 13,000 | Mogul |
| 26-55-060 | 400 | MV | 24,000+ | 22,000 | Mogul |
| 26-55-048 | 1000 | MV | 24,000+ | 61,000 | Mogul |

IMPORTANT

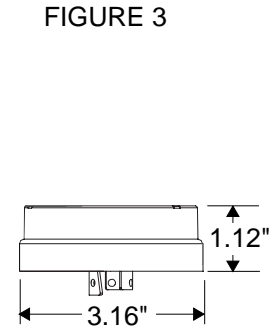
1. PMH lamps are not interchangeable with MH lamps.
2. If a PMH lamp is placed inside of a MH luminaire, the lamp will not ignite or will not start.
3. If a MH lamp is placed inside of a PMH luminaire, the lamp will ignite or start very quickly. The MH lamp is not designed to run on the PMH ballast and will experience a very short lamp life. Because of the high start up voltage that is delivered across the ballast by the ignitor to the lamp, the lamp is subject to a non passive end of life and could rupture the lamp arc tube. It is very important to always close the fixture optical before testing the lamp or starting the MH/PMH luminaire.
4. MV and MH/PMH lamps may continue to operate for some time even though the out glass envelope is missing. These lamps should be removed from service as soon as possible since they are a source of ultraviolet radiation when operating in this condition.
5. All PMH lamps and HPS lamps (not LU/plus) cycle at end of life.



**HEAVY DUTY
LONG LIFE**



**STANDARD DUTY
UPWARD LOOKING
ILLINOIS ONLY**



SHORTING COVER

TABLE 1. LIGHT CONTROL MATERIAL

| STOCK NUMBER | STATE | VOLTAGE | DESCRIPTION | HOUSING COLOR | WINDOW | TYPE | HOUSING STYLE FIG. NO. |
|------------------------------|-------|----------|---|---------------|----------------|-----------------------------------|------------------------|
| 38 51 630 ^(1,3,4) | MO/IL | 120-277V | PHOTOCELL, 1000W; FAIL ON | BLACK | NORTH ORIENTED | HEAVY DUTY (LONG LIFE, 20+ YEARS) | FIG. 1 |
| 38 51 629 ^(1,3,4) | MO/IL | 480V | PHOTOCELL, 1000W; FAIL ON | YELLOW | NORTH ORIENTED | HEAVY DUTY (LONG LIFE, 20+ YEARS) | FIG. 1 |
| 54 14 312 ^(2,3,4) | IL | 120V | PHOTOCELL, UPWARD LOOKING, 1000W; FAIL ON | CLEAR | UPWARD | STANDARD DUTY (10+ YEARS) | FIG. 2 |
| 38 01 394 | MO/IL | - | PLUG, SHORTING, PHOTOELECTRIC CELL | - | - | TWISTLOCK RECEPTACLE | FIG. 3 |

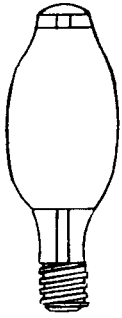
NOTES:

1. Long life-heavy duty photocell must be used with Light Emitting Diode (LED) luminaire.
2. Upward looking photocontrol to be used **ONLY** when necessary to prevent mis-operation due to a point source of ambient light entering the photocontrol window. May be needed in area with a large number of lights where the light from one luminaire causes another to turn off.
3. Photocontrol must have instantaneous turn on and 3-5 second turn off delay.
4. See Material Specification 2.1.298 for more information.

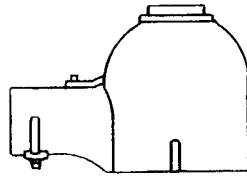
OUTDOOR LIGHTING
Luminaire Components,
NEMA Head

15 70 10 **

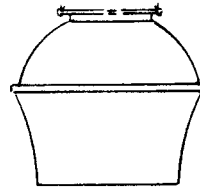
Sheet 1 of 1



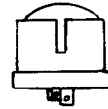
A



B



C



D

| | | Std. / Stk. No. | Description | 157010 | 01 | 02 | 09 | 10 |
|--|---|-----------------|--------------------------|--------|----|----|----|----|
| | A | 26 06 257 | Lamp HPS 70W | | 1 | 1 | | |
| | | 26 55 260 | Lamp HPS 100W | | | | 1 | 1 |
| | B | 38 01 710 | Hood HPS 70W | | 1 | 1 | | |
| | | 38 01 534 | Hood HPS 100W | | | | 1 | 1 |
| | C | 38 01 883 | Refl. W/OB Acrylic (III) | | 1 | | 1 | |
| | | 38 51 368 | Refl. W/OB Acrylic (V) | | | 1 | | 1 |
| | D | 38 51 366 | Switch 100W PE Cell | | 1 | 1 | 1 | 1 |
| | | | | | | | | |

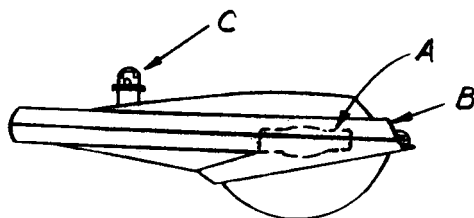
OUTDOOR LIGHTING

Luminaire Components

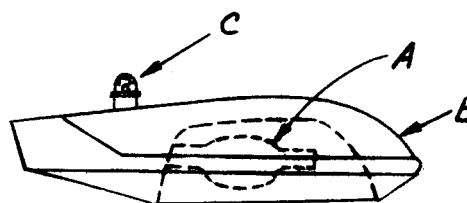
Horizontal

15 70 12 **

Sheet 1 of 3



NON-CUTOFF



CUTOFF

HPS

100W, 120V, Type III, Non-Cutoff

100W, 120V, Type III, Cutoff

250W, 120V, Type III, Non-Cutoff

250W, 120V, Type III, Cutoff

400W, 120V, Type III, Non-Cutoff

400W, 120V, Type III, Cutoff

Metal Halide Probe-Start (MH) (1) (4)

250W, 120V, Type III, Cutoff

250W, 120V, Type III, Non-Cutoff

400W, 120V, Type III, Cutoff

400W, 120V, Type III, Non-Cutoff

Standard

15 70 12 01

15 70 12 02

15 70 12 03

15 70 12 04

15 70 12 05

15 70 12 06

Standard

15 70 12 07

15 70 12 08

15 70 12 09

15 70 12 10

| | | Std. / Stk. No. | Description | 15 70 12 ** | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 |
|--------------------------|---|--------------------|---|-------------|----|----|----|----|----|----|----|----|----|----|
| 1,4 1,4 1,4 1,4 | A | 26 55 260 | Lamp HPS 100W | | 1 | 1 | | | | | | | | |
| | | 26 55 067 | Lamp, HPS, 250W | | | | 1 | 1 | | | | | | |
| | | 26 56 251 | Lamp, MH, 250W | | | | | | | | 1 | 1 | | |
| | | 26 55 061 | Lamp, HPS, 400W | | | | | | 1 | 1 | | | | |
| | | 26 56 261 | Lamp, MH, 400W | | | | | | | | | | 1 | 1 |
| | B | 38 01 531 | Luminaire, 100W, 120V, HPS, NCO | | 1 | | | | | | | | | |
| | | 38 01 528 | Luminaire, 100W, 120V, HPS, CO | | | 1 | | | | | | | | |
| | | 38 01 532 | Luminaire, 250W, 120V, HPS, NCO | | | | 1 | | | | | | | |
| | | 38 01 495 | Luminaire, 250W, 120V, HPS, CO | | | | | 1 | | | | | | |
| | | 38 01 628 | Luminaire, 250W, 120V, MH, CO | | | | | | | | 1 | | | |
| | | 38 01 627 | Luminaire, 250W, 120V, MH, NCO | | | | | | | | | 1 | | |
| | | 38 01 530 | Luminaire, 400W, 120V, HPS, NCO | | | | | | 1 | | | | | |
| | | 38 01 496 | Luminaire, 400W, 120V, HPS, CO | | | | | | | 1 | | | | |
| | | 38 01 630 | Luminaire, 400W, 120V, MH, CO | | | | | | | | | | 1 | |
| | | 38 01 629 | Luminaire, 400W, 120V, MH, NCO | | | | | | | | | | | 1 |
| | C | 38 51 366 | Switch, St. Lt., 1000W, 120/240/277V, P.E. | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

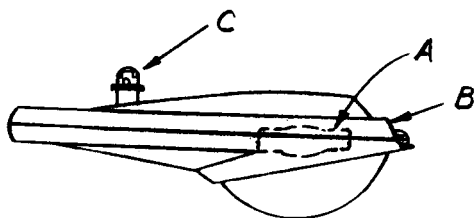
OUTDOOR LIGHTING

Luminaire Components

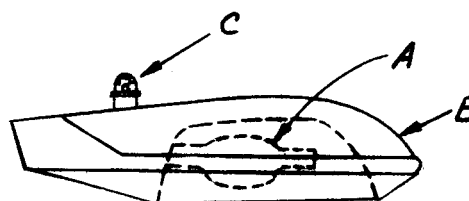
Horizontal

15 70 12 **

Sheet 2 of 3



NON-CUTOFF



CUTOFF

HPS (4)

250W, 480V, Type III, Cutoff

250W, 480V, Type III, Non-Cutoff

250W, 120/208/240/277, Non-Cutoff

400W, 480V, Type III, Non-Cutoff

400W, 480V, Type III, Cutoff

400W, 120/208/240/277V, Type III, Type III, Non-Cutoff

Standard

15 70 12 11

15 70 12 12

15 70 12 13

15 70 12 14

15 70 12 15

15 70 12 16

Metal Halide Pulse Start (PMH) (2) (4)

250W, 120V, Type III, Cutoff

250W, 120V, Type III, Non-Cutoff

400W, 120V, Type III, Cutoff

400W, 120V, Type III, Non-Cutoff

Standard

15 70 12 17

15 70 12 18

15 70 12 19

15 70 12 20

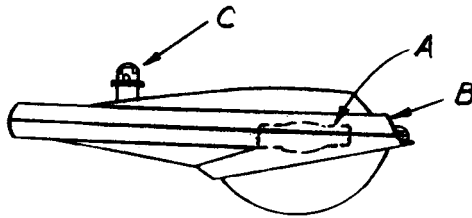
| | | Std. / Stk. No. | Description | 15 70 12 ** | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|-----|---|--------------------|---|-------------|----|----|----|----|----|----|----|----|----|----|
| 4 | A | 26 55 067 | Lamp HPS 250W | | 1 | 1 | 1 | | | | | | | |
| | | 26 55 061 | Lamp, HPS, 400W | | | | | 1 | 1 | 1 | | | | |
| | | 26 55 277 | Lamp PMH 250W | | | | | | | | 1 | 1 | | |
| | | 26 55 278 | Lamp PMH 400W | | | | | | | | | | 1 | 1 |
| 4 | B | 38 01 828 | Luminaire, 250W, 480V,HPS, CO | | 1 | | | | | | | | | |
| 4 | | 38 01 578 | Luminaire, 250W, 480V,HPS, NCO | | | 1 | | | | | | | | |
| | | 38 01 574 | Luminaire, 250W, 120/208/240/277V, HPS, NCO | | | | 1 | | | | | | | |
| 4 | | 38 01 577 | Luminaire, 400W, HPS, SCO, 480V | | | | | 1 | | | | | | |
| 4 | | 38 01 830 | Luminaire, 400W, HPS, CO, 480V | | | | | | 1 | | | | | |
| | | 38 01 573 | Luminaire, 400W, 120/208/240/277V, HPS, NCO | | | | | | | 1 | | | | |
| 2,4 | | 38 01 963 | Luminaire, 250W, 120V, PMH, CO | | | | | | | | 1 | | | |
| 2,4 | | 38 01 958 | Luminaire, 250W, 120V, PMH, NCO | | | | | | | | | 1 | | |
| 2,4 | C | 38 01 965 | Luminaire, 400W, 120V, PMH, CO | | | | | | | | | | 1 | |
| 2,4 | | 38 01 959 | Luminaire, 400W, 120V, PMH, NCO | | | | | | | | | | | 1 |
| 4 | | 38 51 366 | Switch, St. Lt., 1000W, 120/240/277V, P.E. | | | | 1 | | | 1 | 1 | 1 | 1 | 1 |
| | | 54 14 313 | Switch, St. Lt., 1000W, 480V, P.E. | | 1 | 1 | | 1 | 1 | | | | | |

OUTDOOR LIGHTING

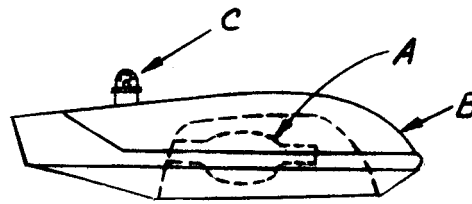
Luminaire Components

Horizontal

15 70 12 **
Sheet 3 of 3



NON CUTOFF



CUTOFF

HPS (Black) (3)

250W, 120V, Type III, Cutoff

250W, 120V, Type III, Non-Cutoff

Standard

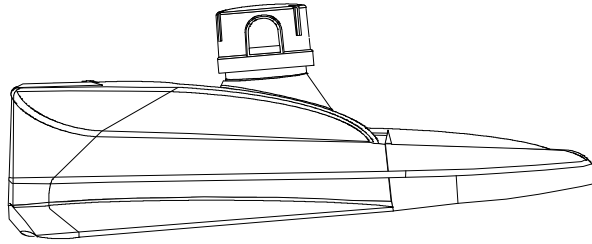
15 70 12 21

15 70 12 22

| | | Std. / Stk. No. | Description | 15 70 12 ** | 21 | 22 |
|---|---|-----------------|--|-------------|----|----|
| 3 | A | 26 55 067 | Lamp HPS 250W | | 1 | 1 |
| | | 26 55 061 | Lamp, HPS, 400W | | | |
| 3 | B | 38 01 969 | Luminaire, 250, 120V,HPS, CO | | 1 | |
| | | 38 01 971 | Luminaire, 250, 120V,HPS, NCO | | | 1 |
| | C | 38 51 366 | Switch, St. Lt., 1000W, 120/240/277V, P.E. | | 1 | 1 |

Notes:

1. Metal Halide–Probe start (MH) Luminaires are no longer available from supplier.
2. Metal Halide–Pulse start (PMH) Luminaires are to replace the obsolete MH Luminaires.
3. Stock items are available in MO only.
4. Stock item is available in IL only.



LED 100W, 250W AND 400W
EQUIVALENT BRACKET MOUNT LUMINAIRE

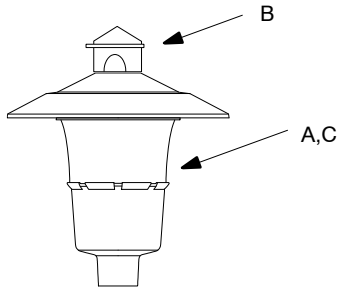
| DESCRIPTION: AMEREN MO, 4000K | STANDARD | DESCRIPTION: AMEREN IL, 3000K | STANDARD |
|-----------------------------------|-------------|-----------------------------------|-------------|
| LED 100W EQ., 120V-277V, TYPE II | 15 70 13 01 | LED 100W EQ., 120V-277V, TYPE II | 15 70 13 07 |
| LED 100W EQ., 120V-277V, TYPE V | 15 70 13 02 | LED 100W EQ., 120V-277V, TYPE V | 15 70 13 08 |
| LED 250W EQ., 120V-277V, TYPE III | 15 70 13 03 | LED 250W EQ., 120V-277V, TYPE III | 15 70 13 09 |
| LED 250W EQ., 480V, TYPE III | 15 70 13 04 | LED 250W EQ., 480V, TYPE III | 15 70 13 10 |
| LED 400W EQ., 120V-277V, TYPE III | 15 70 13 05 | LED 400W EQ., 120V-277V, TYPE III | 15 70 13 11 |
| LED 400W EQ., 480V, TYPE III | 15 70 13 06 | LED 400W EQ., 480V, TYPE III | 15 70 13 12 |

| | STOCK NUMBER | STATE | DESCRIPTION | 15 70 13 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
|---|--------------|-------|--|----------|----|----|----|----|----|----|----|----|----|----|----|----|
| A | 38 51 619 | MO | LUMINAIRE, LED 100W EQUIV., 120V-277V, TYPE II, 4000K | 1 | | | | | | | | | | | | |
| | 38 51 641 | MO | LUMINAIRE, LED 100W EQUIV., 120V-277V, TYPE V, 4000K | | 1 | | | | | | | | | | | |
| | 38 51 618 | MO | LUMINAIRE, LED 250W EQUIV., 120V-277V, TYPE III, 4000K | | | | 1 | | | | | | | | | |
| | 38 51 617 | MO | LUMINAIRE, LED 250W EQUIV., 480V, TYPE III, 4000K | | | | | 1 | | | | | | | | |
| | 38 51 616 | MO | LUMINAIRE, LED 400W EQUIV., 120V-277V, TYPE III, 4000K | | | | | | 1 | | | | | | | |
| | 38 51 615 | MO | LUMINAIRE, LED 400W EQUIV., 480V, TYPE III, 4000K | | | | | | | 1 | | | | | | |
| | 38 51 643 | IL | LUMINAIRE, LED 100W EQUIV., 120V-277V, TYPE II, 3000K | | | | | | | | 1 | | | | | |
| | 38 51 644 | IL | LUMINAIRE, LED 100W EQUIV., 120V-277V, TYPE V, 3000K | | | | | | | | | 1 | | | | |
| | 38 51 645 | IL | LUMINAIRE, LED 250W EQUIV., 120V-277V, TYPE III, 3000K | | | | | | | | | | 1 | | | |
| | 38 51 646 | IL | LUMINAIRE, LED 250W EQUIV., 480V, TYPE III, 3000K | | | | | | | | | | | 1 | | |
| | 38 51 647 | IL | LUMINAIRE, LED 400W EQUIV., 120V-277V, TYPE III, 3000K | | | | | | | | | | | | 1 | |
| B | 38 51 630 | MO/IL | SWITCH, LOAD RATING 1000W, 120V-277V, BLACK, PE | 1 | 1 | 1 | | | 1 | | 1 | 1 | 1 | | 1 | |
| | 38 51 629 | MO/IL | SWITCH, LOAD RATING 1000W, 480V, YELLOW, PE | | | | | 1 | | 1 | | | | 1 | | 1 |

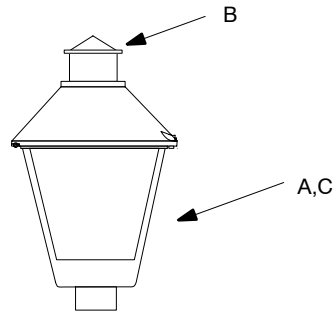
| | | | | | | | | | | | | | | | |
|----|-----------|-------|--|---|---|---|---|---|---|---|---|---|---|---|---|
| @C | 38 51 675 | MO/IL | Light Shield (J Series) – Back and Side (CUL DE SAC) | 1 | 1 | 2 | 2 | 4 | 4 | 1 | 1 | 2 | 2 | 4 | 4 |
| | 38 51 676 | MO/IL | Light Shield (J Series) – Back Side (House Side) | 1 | 1 | 2 | 2 | 4 | 4 | 1 | 1 | 2 | 2 | 4 | 4 |
| | 38 51 635 | MO/IL | Light Shield (G Series) – Back and Side (CUL DE SAC) | 1 | 1 | 2 | 2 | 4 | 4 | 1 | 1 | 2 | 2 | 4 | 4 |
| | 38 51 636 | MO/IL | Light Shield (G Series) – Back Side (House Side) | 1 | 1 | 2 | 2 | 4 | 4 | 1 | 1 | 2 | 2 | 4 | 4 |

NOTE:

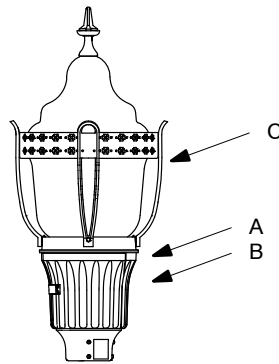
1. Order Light shield if there is a complaint of light trespass. Stock #3851675 (Block Back and Side) and Stock #3851676 (Block Back Light) are setup for the “J” series LED. The “J” series LED is labeled with additional identification decal “J” next to the wattage identification decal.
2. Stock #3851635 and stock #3851636 work only on the LED without identification decal “J”.



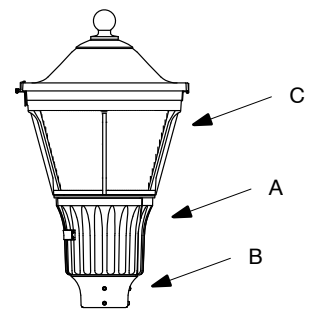
COLONIAL



EARLY AMERICAN



ASPEN



CONTEMPORARY

Notes:

1. Stk # 38 01 942 is no longer available from supplier
2. Stk # 38 01 961 is to replace Stk # 38 01 942.
3. Stock item is available in MO only.
4. Stock item is available in IL only.
5. Position luminaire to facilitate service from the street.
6. Type III, align refractor with street side.
7. Face eye of photo-electric cell north.

OUTDOOR LIGHTING

Luminaire Components – Post Top Installation

15 70 14 **

Sheet 2 of 2

| | | Std. / Stk. No. | Description | 15 70 14 ** | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 |
|-----|---|--------------------|-------------------------------------|-------------|----|----|----|----|----|----|----|----|----|----|
| 3 | A | 38 01 524 | Colonial, 100W, HPS, Type III | (MO) | 1 | | | | | | | | | |
| 3 | | 38 01 525 | Colonial, 100W, HPS, Type V | (MO) | | 1 | | | | | | | | |
| | | 38 01 517 | Early American, 100W, HPS, Type III | (ALL) | | | 1 | | | | | | | |
| 3 | | 38 01 518 | Early American, 100W, HPS, Type V | (MO) | | | | 1 | | | | | | |
| 1,4 | | 38 01 942 | Early American, 175W, MH, Type III | (IL) | | | | | | | | | 1 | |
| 2,4 | | 38 01 961 | Early American, 150W, PMH, Type II | (IL) | | | | | | | | | | 1 |
| 3 | | 38 01 513 | Contemporary, 100W, HPS, Type III | (MO) | | | | | 1 | | | | | |
| 3 | | 38 01 514 | Contemporary, 100W, HPS, Type V | (MO) | | | | | | 1 | | | | |
| 3 | | 38 01 584 | Aspen, 100W, HPS, Type III | (MO) | | | | | | | 1 | | | |
| 3 | | 38 01 585 | Aspen, 100W, HPS, Type V | (MO) | | | | | | | | 1 | | |
| | B | 38 51 630 | Switch, Photo Electric Cell | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | C | 26 55 260 | Lamp, 100W, HPS | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | | 26 56 260 | Lamp, 175W, MH | | | | | | | | | | 1 | |
| | | 26 05 087 | Lamp, 150W, PMH | | | | | | | | | | | 1 |

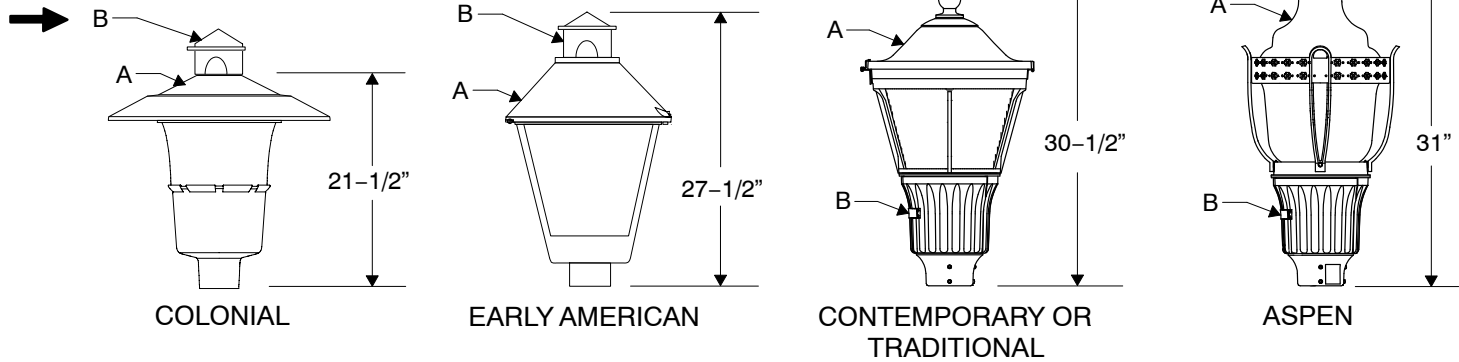
OUTDOOR LIGHTING

Luminaire Components – LED Decorative (Post Top) Luminaires

15 70 15 **

Sheet 1 of 1

MISSOURI ONLY AND NEW CONSTRUCTION ONLY



LED 100W EQUIVALENT DECORATIVE (POST TOP) LUMINAIRES

| DESCRIPTION | STANDARD |
|---|-------------|
| LED 100W EQUIVALENT EARLY AMERICAN, 120V-277V, TYPE III, 3000K | 15 70 15 01 |
| LED 100W EQUIVALENT EARLY AMERICAN, 120V-277V, TYPE V, 3000K | 15 70 15 02 |
| LED 100W EQUIVALENT COLONIAL, 120V-277V, TYPE III, 3000K | 15 70 15 03 |
| LED 100W EQUIVALENT COLONIAL, 120V-277V, TYPE V, 3000K | 15 70 15 04 |
| LED 100W EQUIVALENT CONTEMPO/TRADITIONAL, 120-277V, TYPE III, 3000K | 15 70 15 05 |
| LED 100W EQUIVALENT CONTEMPO/TRADITIONAL, 120-277V, TYPE V, 3000K | 15 70 15 06 |
| LED 100W EQUIVALENT ASPEN, 120V-277V, TYPE III, 3000K | 15 70 15 07 |
| LED 100W EQUIVALENT ASPEN, 120V-277V, TYPE V, 3000K | 15 70 15 08 |

| | STOCK NUMBER | STATE | DESCRIPTION | 15 70 15 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|--------------------------|-------|--|----------|----|----|----|----|----|----|----|----|
| A | 3851620 ⁽¹⁾ | MO | EARLY AMERICAN, LED 100W EQUIV., 120V-277V, TYPE III, 3000K | | 1 | | | | | | | |
| | 3851622 | MO | EARLY AMERICAN, LED 100W EQUIV., 120V-277V, TYPE V, 3000K | | | 1 | | | | | | |
| | 3851632 ⁽¹⁾ | MO | COLONIAL, LED 100W EQUIVALENT, 120V-277V, TYPE III, 3000K | | | | 1 | | | | | |
| | 3851631 | MO | COLONIAL, LED 100W EQUIVALENT, 120V-277V, TYPE V, 3000K | | | | | 1 | | | | |
| | 3851621 ⁽¹⁾ | MO | CONTEMPORARY OR TRADITIONAL, LED 100W EQUIV., 120V-277V, TYPE III, 3000K | | | | | | 1 | | | |
| | 3851623 | MO | CONTEMPORARY OR TRADITIONAL, LED 100W EQUIV., 120V-277V, TYPE V, 3000K | | | | | | | 1 | | |
| | 3851633 ⁽¹⁾ | MO | ASPEN, LED 100W EQUIVALENT, 120-277V, TYPE III, 3000K | | | | | | | | 1 | |
| | 3851634 | MO | ASPEN, LED 100W EQUIVALENT, 120-277V, TYPE V, 3000K | | | | | | | | | 1 |
| B | 38 51 630 ⁽²⁾ | MO/IL | PHOTOCONTROL / SWITCH, LOAD RATING 1000W, 120V-277V, BLACK, PE | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

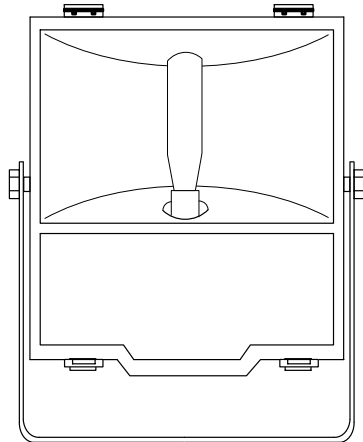
NOTES:

- Align distribution light pattern TYPE III refractor with street side.
- Face the eye of the photocell to the north.

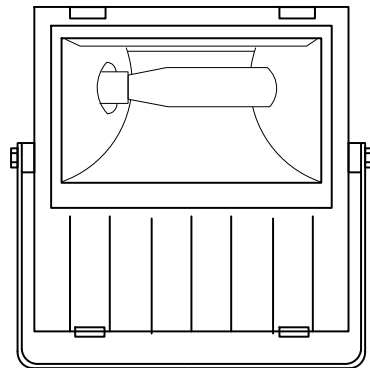
**DISTRIBUTION
CONSTRUCTION STANDARDS**



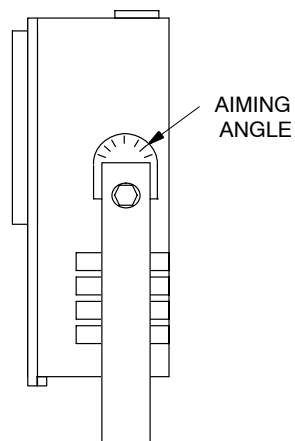
ENG:WYW
REV. NO: 1
REV. DATE: 09/29/17



1000 WATT



250 - 400 WATT



PROFILE

HPS

250W, 120V, 6x6 Directional
 400W, 120V, 7x6 Directional
 250W, 480V, 6x6 Directional
 400W, 480V, 7x6 Directional

Standard

15 70 16 01
 15 70 16 02
 15 70 16 06
 15 70 16 08

MH(1)

250W, 120V, 6x6 Directional
 400W, 120V, 6x5 Directional
 400W, 480V, 6x5 Directional
 1000W, 120V, 7x6 Directional

15 70 16 03
 15 70 16 04
 15 70 16 07
 15 70 16 05

PMH(2)

250W, 120V, 6x6 Directional
 400W, 120V, 6x5 Directional
 400W, 480V, 6x5 Directional

15 70 16 09
 15 70 16 11
 15 70 16 10

OUTDOOR LIGHTING
Luminaire Components
Directional Flood

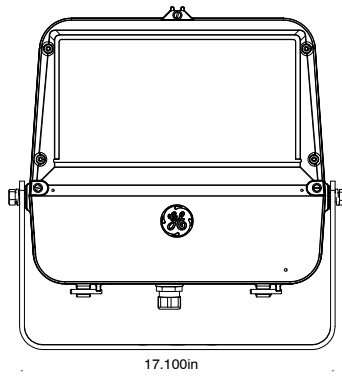
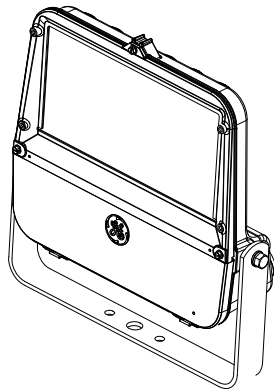
15 70 16 **

Sheet 2 of 2

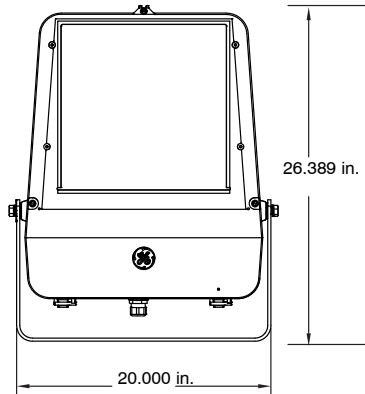
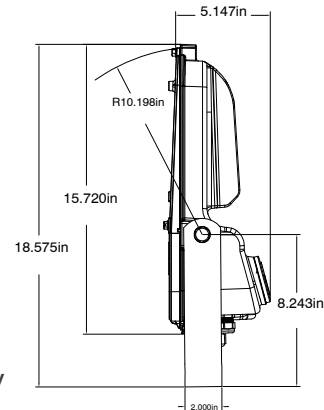
| | | Std. / Stk. No. | Description 16 ** | 15 70 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
|------|---|--------------------|-------------------------------------|-----------|----|----|----|----|----|----|----|----|----|----|----|
| | A | 38 01 521 | Floodlight, HPS 250W, 120V | All | 1 | | | | | | | | | | |
| | B | 38 01 522 | Floodlight, HPS 400W, 120V | All | | 1 | | | | | | | | | |
| 1, 4 | C | 38 01 626 | Floodlight, MH, 250W, 120V | IL | | | 1 | | | | | | | | |
| 1 | D | 38 01 542 | Floodlight, MH, 400W, 120V | All | | | | 1 | | | | | | | |
| 2, 4 | E | 38 01 964 | Floodlight, PMH, 250W, multi | IL | | | | | | | | | 1 | | |
| 2 | F | 38 01 962 | Floodlight, PMH, 400W, 120V | All | | | | | | | | | | | 1 |
| 3 | G | 38 01 541 | Floodlight, MH, 1000W, 120V | (MO ONLY) | | | | | 1 | | | | | | |
| | H | 26 55 067 | Lamp, HPS, 250W | | 1 | | | | | | | | | | |
| | I | 26 55 061 | Lamp, HPS, 400W | | | 1 | | | | | | 1 | | | |
| | J | 26 56 251 | Lamp, MH, 250W | | | | 1 | | | 1 | | | | | |
| | K | 26 56 261 | Lamp, MH, 400W | | | | | 1 | | | 1 | | | | |
| | L | 26 55 277 | Lamp, PMH 250W | | | | | | | | | | 1 | | |
| | M | 26 55 278 | Lamp, PMH 400W | | | | | | | | | | | 1 | 1 |
| | N | 26 56 244 | Lamp, MH, 1000W | | | | | | 1 | | | | | | |
| | O | 38 51 366 | Switch, Photoelectric, 120/240/277V | | 1 | 1 | 1 | 1 | 1 | | | | 1 | | 1 |
| 4 | P | 38 01 755 | Floodlight, HPS 250W, 480V | IL | | | | | | 1 | | | | | |
| 1, 4 | Q | 38 01 768 | Floodlight, MH 400W, 480V | IL | | | | | | | 1 | | | | |
| 2, 4 | R | 38 01 966 | Floodlight, PMH, 400W, 480V | IL | | | | | | | | | | 1 | |
| 4 | S | 38 01 759 | Floodlight, HPS 400W, 480V | IL | | | | | | | | 1 | | | |
| | T | 54 14 313 | Switch, Photoelectric, 480V | | | | | | | 1 | 1 | 1 | | 1 | |

Notes:

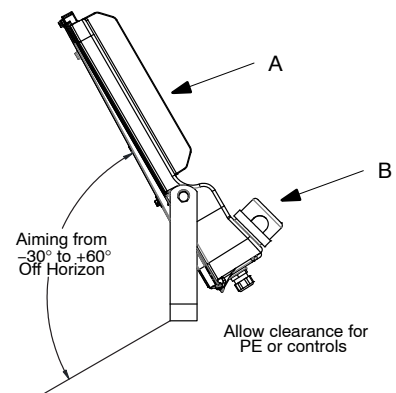
1. Metal Halide–Probe start (MH) Luminaires are no longer available from supplier.
2. Metal Halide–Pulse start (PMH) Luminaires are to replace the obsolete MH Luminaires with equal wattage.
3. Stock No. 3801541 is available for new installation in MO only.
4. Stock item is available in IL only.



LED 250W & 400W Equiv



LED 1000W Equiv



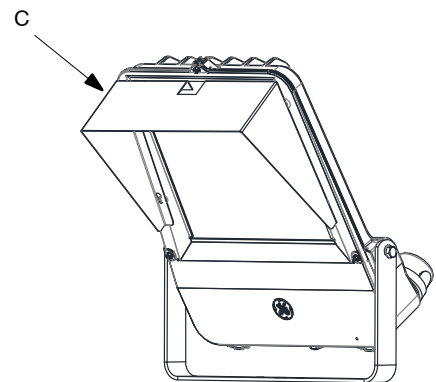
Trunnion Mount

Description: Ameren MO 4000KCCT
LED 250W Equiv, 120–277V
LED 250W Equiv, 480V
LED 400W Equiv, 120–277V
LED 400W Equiv, 480V
LED 1000W Equiv, 120–277V

Standards
15 70 17 01
15 70 17 02
15 70 17 03
15 70 17 04
15 70 17 05

Description: Ameren IL 3000KCCT
LED 250W Equiv, 120–277V
LED 250W Equiv, 480V
LED 400W Equiv, 120–277V
LED 400W Equiv, 480V
LED 1000W Equiv, 120–277V
LED 1000W Equiv, 480V

Standards
15 70 17 06
15 70 17 07
15 70 17 08
15 70 17 09
15 70 17 10
15 70 17 11



Light Shield is needed
based on request

OUTDOOR LIGHTING
Luminaire Components
LED Directional (Flood)

15 70 17 **

Sheet 2 of 2

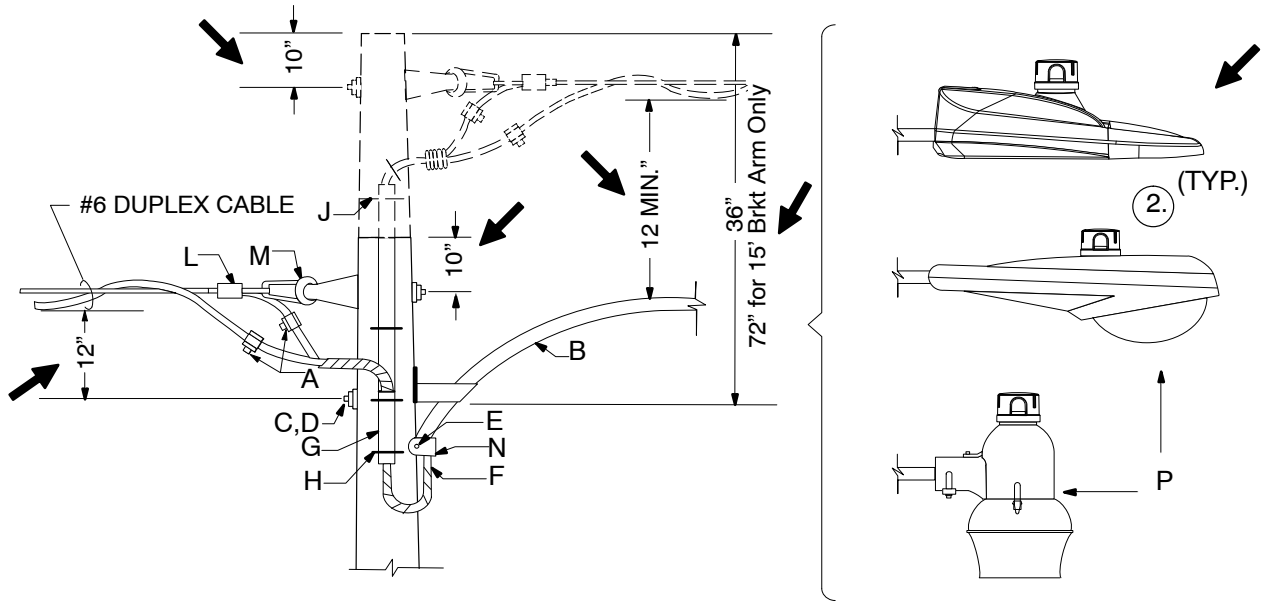
| | STOCK NUMBER | STATE | DESCRIPTION | 15 | 70 | 17 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
|----|-----------------|-------|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| A | 38 51 626 | MO | LUMINAIRE, LED 250W EQUIVALENT, 120V-277V, 6X6, 4000K CCT | 1 | | | | | | | | | | | | | |
| | 38 51 625 | MO | LUMINAIRE, LED 250W EQUIVALENT, 480V, 6X6, 4000K CCT | | 1 | | | | | | | | | | | | |
| | 38 51 624 | MO | LUMINAIRE, LED 400W EQUIVALENT, 120V-277V, 6X6, 4000K CCT | | | 1 | | | | | | | | | | | |
| | 38 51 627 | MO | LUMINAIRE, LED 400W EQUIVALENT, 480V, 6X6, 4000K CCT | | | | 1 | | | | | | | | | | |
| | 38 51 628 | MO | LUMINAIRE, LED 1000W EQUIVALENT, 120V-277V, 6X6, 4000K CCT | | | | | 1 | | | | | | | | | |
| | 38 51 649 | IL | LUMINAIRE, LED 250W EQUIVALENT, 120V-277V, 6X6, 3000K CCT | | | | | | | 1 | | | | | | | |
| | 38 51 650 | IL | LUMINAIRE, LED 250W EQUIVALENT, 480V, 6X6, 3000K CCT | | | | | | | | | 1 | | | | | |
| | 38 51 651 | IL | LUMINAIRE, LED 400W EQUIVALENT, 120V-277V, 6X6, 3000K CCT | | | | | | | | | | | 1 | | | |
| | 38 51 652 | IL | LUMINAIRE, LED 400W EQUIVALENT, 480V, 6X6, 3000K CCT | | | | | | | | | | | | 1 | | |
| | 38 51 653 | IL | LUMINAIRE, LED 1000W EQUIVALENT, 120-277V, 6X6, 3000K CCT | | | | | | | | | | | | | 1 | |
| | 38 51 669 | IL | LUMINAIRE, LED 1000W EQUIVALENT, 480V, 6x6, 3000K CCT | | | | | | | | | | | | | | 1 |
| B | 38 51 630 | MO/IL | PHOTOCONTROL / SWITCH, LOAD RATING 1000W, 120V-277V, BLACK, PE | 1 | | | 1 | | | 1 | 1 | | | 1 | | 1 | |
| | 38 51 629 | MO/IL | PHOTOCONTROL / SWITCH, LOAD RATING 1000W, 480V, YELLOW, PE | | | 1 | | | 1 | | | | 1 | | 1 | | 1 |
| @C | 38 51 656 | MO/IL | Light Shield GE 1000W LED EQUV | | | | | | | 1 | | | | | | 1 | 1 |
| | 38 51 657 | MO/IL | Light Shield WORKS ONLY ON GE EFM Model 250W or 400W LED EQUV | 1 | 1 | 1 | 1 | | | | 1 | 1 | 1 | 1 | | | |

OUTDOOR LIGHTING

Multiple Installation On Wood Pole

15 74 01 **

Sheet 1 of 1



DRAWING NOT TO SCALE

| | | |
|--------------|-------|-------------|
| 1-1/4" x 30" | Brkt. | 15 74 01 01 |
| 1-1/4" x 6" | Brkt. | 15 74 01 02 |
| 1-1/4" x 15" | Brkt. | 15 74 01 03 |

Notes:

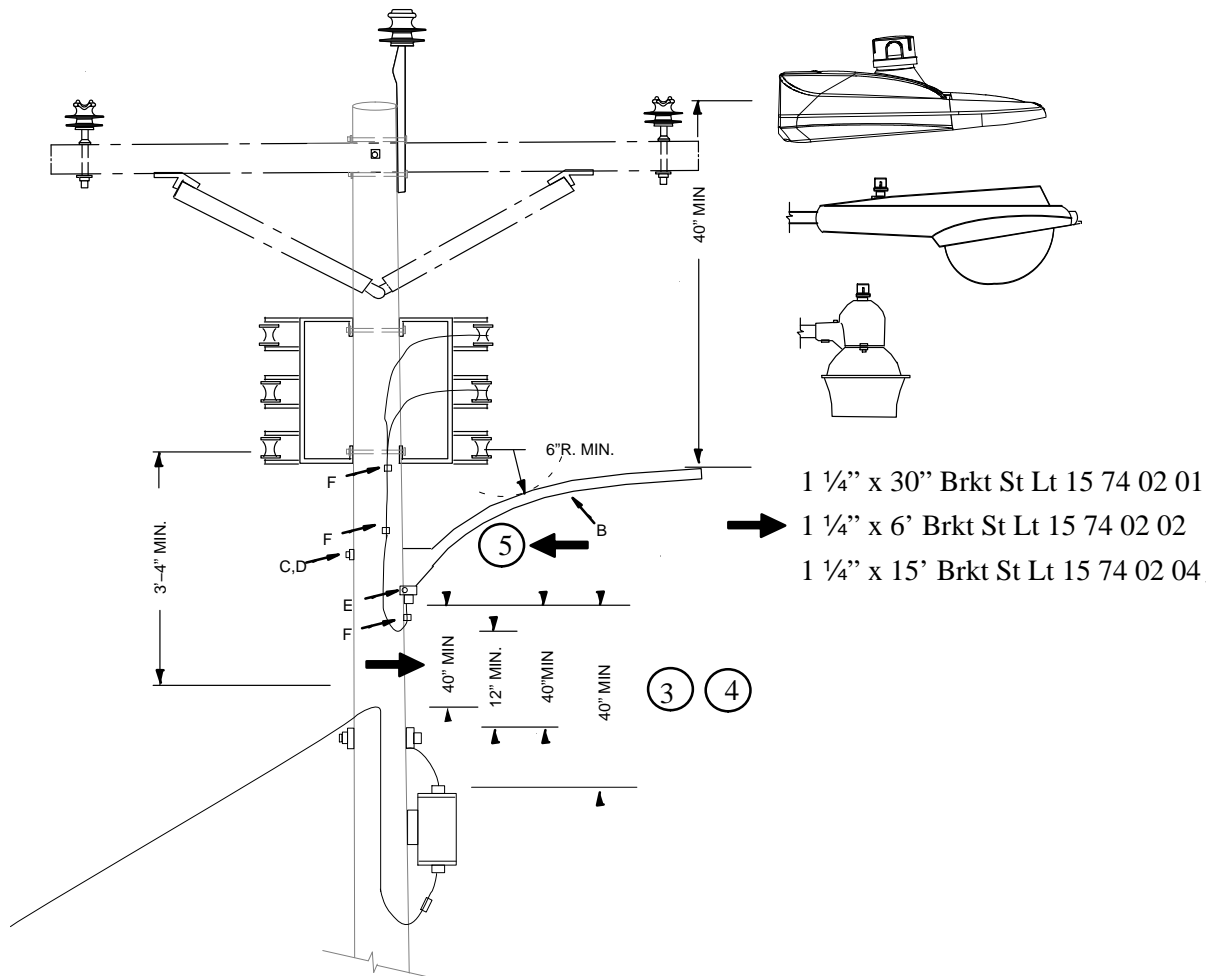
1. See DCS 15 00 01 01 for correct bracket use.
2. Face photocontrol north.

| @ | | Std. / Stk. No. | Description | 15 74 01 ** | 01 | 02 | 03 |
|---|---|-----------------|---|-------------|----|----|----|
| | | | | | | | |
| @ | A | 17 51 146 | Connector, PG, #6-#10 AWG Main/Tap | | 2 | 2 | 2 |
| | | 15 54 373 | Connector, Split, #6 AWG Al Main/#14 AWG Cu Tap | | 2 | 2 | 2 |
| | B | 38 01 417 | Brkt., St. Lt., 1-1/4" x 30" | | 1 | | |
| | | 38 01 249 | Brkt., St. Lt., 1-1/4" x 6'-0" | | | 1 | |
| | | 38 01 705 | Brkt., St. Lt., 1-1/4" x 15'-0" | | | | 1 |
| | C | 23 52 063 | Bolt, Mach., 5/8" x 10" | | 1 | 1 | 2 |
| | D | 23 66 027 | Washer, Square - 2-1/4" | | 1 | 1 | 2 |
| | E | 23 60 007 | Screw, Lag 1/2" x 4" | | 2 | 2 | 0 |
| | F | 18 57 104 | Cable, St. Lt., Twisted (ft.) | | 6 | 12 | 22 |
| | G | 41 56 106 | Moulding, 1/2" | | 1 | 1 | 1 |
| | H | 23 64 027 | Staple, 5/8" x 2" | | 3 | 3 | 3 |
| | J | 23 64 001 | Staple, 3/8" x 1-3/4" C.W. | | 1 | 1 | 1 |
| | L | 17 51 123 | Clamp, D.E., Wedge Type | | 1 | 1 | 1 |
| | M | 06 01 01 01 | Clevis, Secondary | | 1 | 1 | 1 |
| | N | 25 54 074 | Guard, Cable, 1/2" Poly | | | 1 | 1 |
| @ | P | 15 70 ** ** | St. Lt. Assembly | | 1 | 1 | 1 |

OUTDOOR LIGHTING
Multiple Installation
On Wood Line Pole Above Communications

15 74 02 **

Sheet 1 of 2



Notes:

1. Refer to DCS 15 00 01 01 for correct bracket to use.
2. Face eye of photocell north.
3. If street light bracket is grounded, the vertical spacing between the bracket and communication attachments can be reduced to 20". However, street light brackets may be grounded ONLY IF:
 - A. When adding a light to a pole where none previously exists, there is no space available to install the light with the 40" bracket-to-communications attachment spacing without replacing the pole, or
 - B. When replacing a pole with an existing light on it, there is no space available to install the light with the 40" bracket-to-communications attachment clearance and installing a taller pole would create up-lift on adjacent poles.
4. The 40" bracket-to-communications attachment clearance applies to all new lighting installations, all new communication attachments where lighting already exists, AND ON ALL POLES REPLACED FOR ANY REASON THAT HAVE EXISTING LIGHTING AND COMMUNICATION ATTACHMENTS. This is per NESC Rules 13A1 and 13B2 Exception 2.
5. If the light bracket needs to be grounded but the bracket is without ground provision, the ground clamp, stock #40 59 318 needs to be ordered.

OUTDOOR LIGHTING
Multiple Installation
On Wood Line Pole Above Communications

15 74 02 **

Sheet 2 of 2

| | | Std. / Stk. No. | Description | 15 74 02 ** | 01 | 02 | 04 |
|---|---|--------------------|------------------------------------|-------------|----|----|----|
| @ | B | 38 01 417 | Bracket, St. Lt., 1-1/4" x 30" | 1 | | | |
| | | 38 01 249 | Bracket, St. Lt., 1-1/4" x 6'-0" | | 1 | | |
| | | 38 01 705 | Bracket, St. Lt., 1-1/4" x 15'-0". | | | | 1 |
| | C | 23 52 063 | Bolt, Mach., 5/8" x 10" | 1 | 1 | 1 | 1 |
| | D | 23 66 027 | Washer, Square - 2-1/4" | 1 | 1 | 1 | 1 |
| | E | 23 60 007 | Screw, Lag 1/2" x 4" | 2 | 2 | 4 | 4 |
| | F | 23 68 746 | Clip, Street Light Wire | 3 | 3 | 3 | 3 |
| | L | 15 70 ** ** | St. Lt. Assembly | 1 | 1 | 1 | 1 |

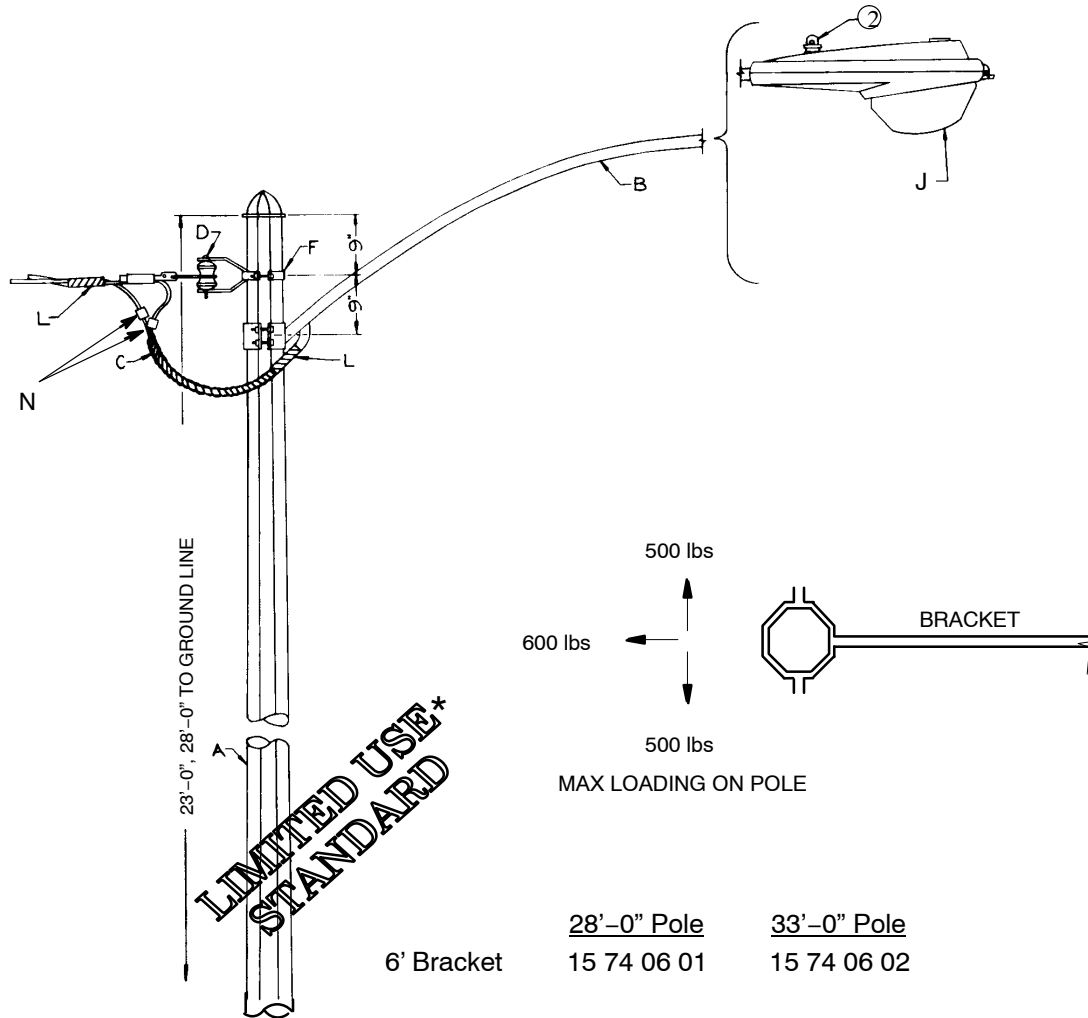
OUTDOOR LIGHTING

Multiple Installation

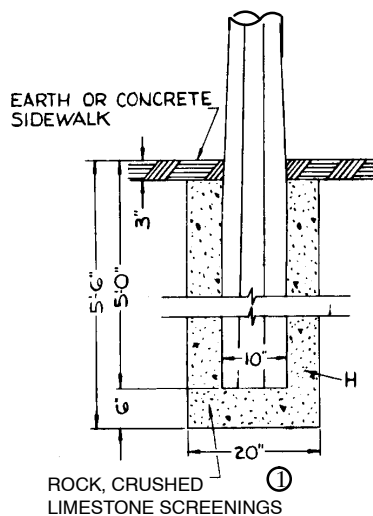
Ornamental Concrete Pole – Overhead Circuit – Deadend

15 74 06 **

Sheet 1 of 2



REINFORCED POLE



NOTE:

*Not standard for new installations and replace with a fiberglass pole for maintenance if applicable.

DISTRIBUTION
CONSTRUCTION STANDARDS



ENG:WYW
REV. NO: 9
REV. DATE: 07/29/14

OUTDOOR LIGHTING
Multiple Installation
Ornamental Concrete Pole – Overhead Circuit – Deadend

15 74 06 **

Sheet 2 of 2

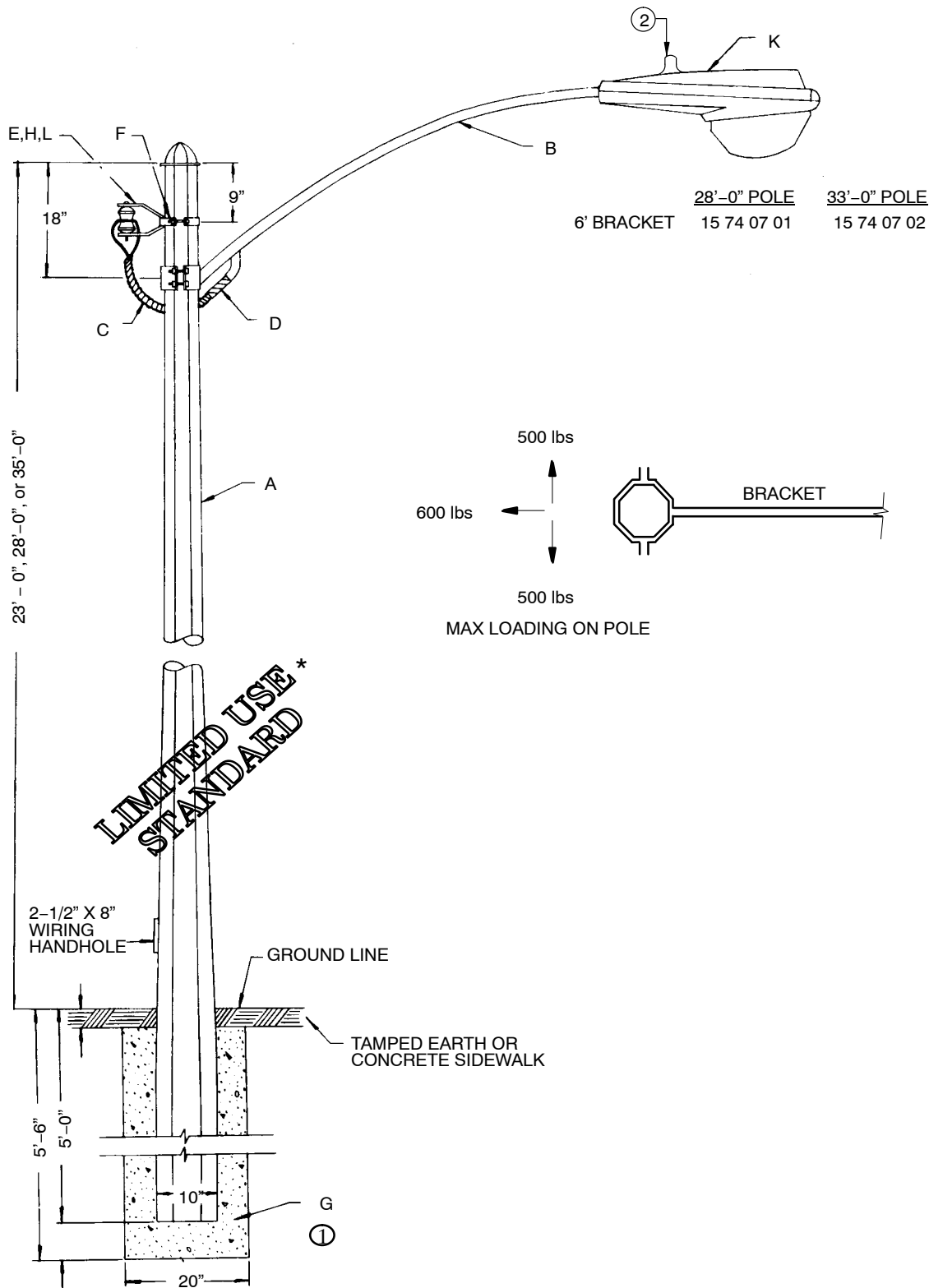
NOTES:

1. Limestone screenings to be wetted and thoroughly tamped to provide solid compaction around pole.
2. Face eye of photo-electric switch north.

| | Std. / Stk. No. | Description | 15 74 06 ** | 01 | 02 |
|---|-----------------|---|-------------|-----|------|
| @ | A 38 01 598* | Pole, St. Lt., Con., 28' 0" O.H./23' M.H. | | 1 | |
| | 38 01 599* | Pole, St. Lt., Con., 33' 0" O.H./28' M.H. | | | 1 |
| | B 38 01 404 | Bracket, St. Lt., 2" x 6' | | 1 | 1 |
| | C 18 57 104 | Cable, St. Lt., Twisted | | 12 | 12 |
| | D 23 06 040 | Clevis, Secondary | | 1 | 1 |
| | E 17 51 123 | Clamp, D.E., Wedge Type | | 1 | 1 |
| | F 23 67 154 | Band, Pole, Steel, Galv. | | 1 | 1 |
| | H | Rock, Crushed Limestone Screnning Lbs | | 850 | 1000 |
| | J 15 70 ** ** | St. Lt. Assembly | | 1 | 1 |
| | L 25 54 074 | Guard, Cable, 1/2", Poly | | 2 | 2 |
| | M 25 59 044 | Insulator, Spool | | 1 | 1 |
| | N 17 51 146 | Connector, PG #6-1/0 AWG Main/Tap | | 2 | 2 |
| | 17 54 373 | Connector, Split, #6 AWG AL Main/#14 AWG Cu Tap | | 2 | 2 |

LIMITED USE STANDARD*

Ornamental Concrete Pole – Overhead Circuit – Tangent or Angle



NOTE:

*Not standards for new installations and replace with a fiberglass pole for maintenance if applicable.

Ornamental Concrete Pole – Overhead Circuit – Tangent or Angle

NOTES:

1. Limestone screenings to be wetted and thoroughly tamped to provide solid compaction around pole.
2. Face eye of photocontrol switch north.
3. Connect twisted pair street light cable to supply line using connector, Stock No. 17-51-146.

| | | Std. / Stk. No. | Description | 15 74 07 ** | 01 | 02 |
|---|---|-----------------|---|-------------|------|----|
| @ | A | 38 01 598* | Pole, St. Lt., Con., 28' 0" O.H./23' M.H. | 1 | | |
| | | 38 01 599* | Pole, St. Lt., Con., 33' 0" O.H./28' M.H. | | | 1 |
| | B | 38 01 404 | Bracket, St. Lt., 2" x 6' | 1 | 1 | |
| | C | 18 57 104 | Cable, St. Lt., Twisted | 12 | 12 | |
| | D | 25 54 074 | Guard – Cable, 1/2", Poly | 1 | 1 | |
| | E | 23 06 040 | Clevis, Secondary | 1 | 1 | |
| | F | 23 67 154 | Band, Pole, Steel, Galv. | 1 | 1 | |
| | G | | Rock, Crushed Limestone Screening Lbs | 850 | 1000 | |
| | H | 18 55 040 | Wire – Tie, #4 Al. Poly. 42" | 1 | 1 | |
| | I | 25 59 044 | Insulator, Spool | 1 | 1 | |
| | K | 15 70 ** ** | St. Lt. Assembly | 1 | 1 | |

LIMITED USE STANDARD*

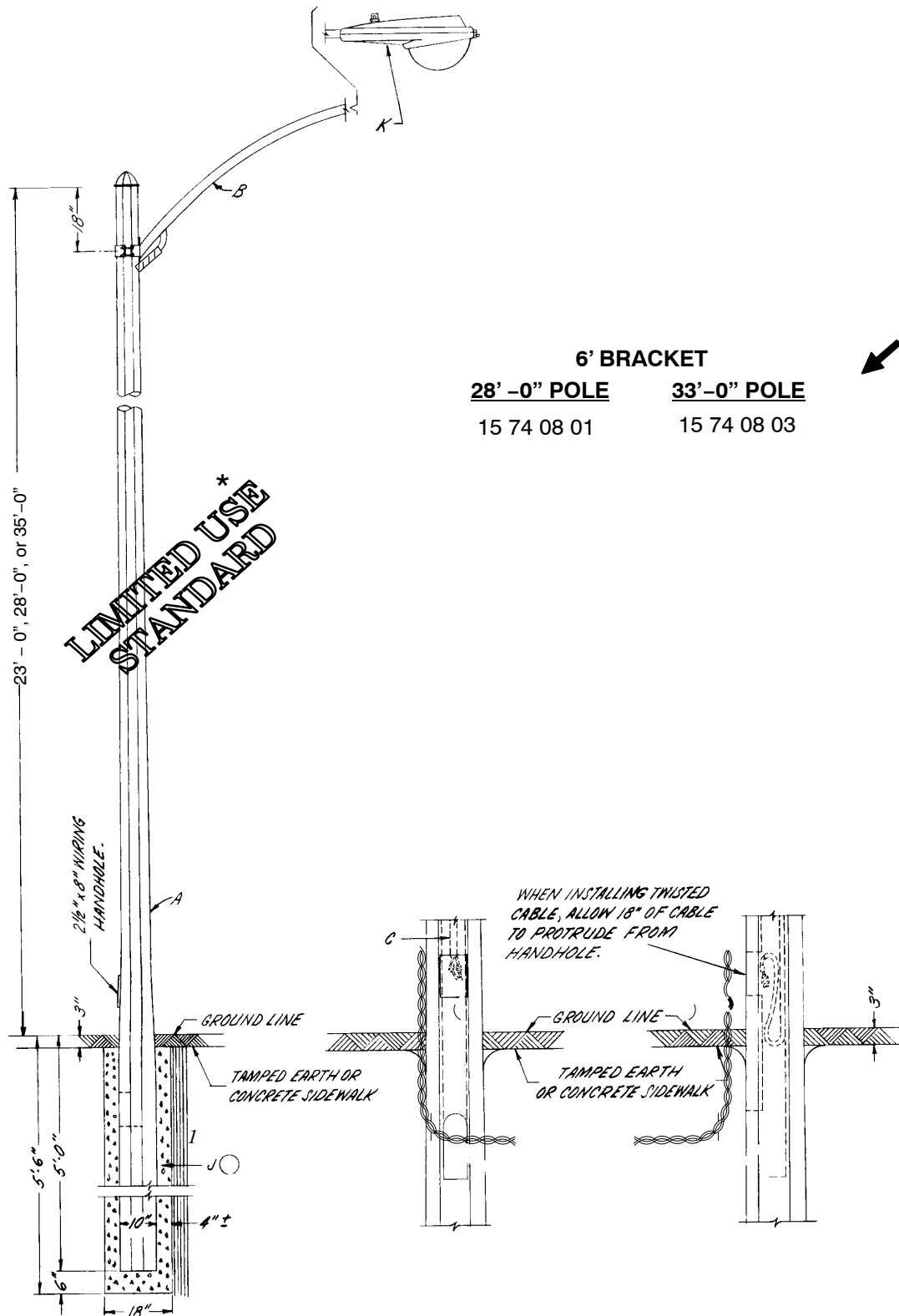
OUTDOOR LIGHTING

Multiple Installation

Ornamental Concrete Pole – Underground Circuit

15 74 08 **

Sheet 1 of 2



NOTE:

*Not standard for new installations and Replace with a fiberglass pole for maintenance if applicable.

DISTRIBUTION
CONSTRUCTION STANDARDS



ENG:WYW
REV. NO: 7
REV. DATE: 12/11/09

OUTDOOR LIGHTING
Multiple Installation
Ornamental Concrete Pole – Underground Circuit

15 74 08 **

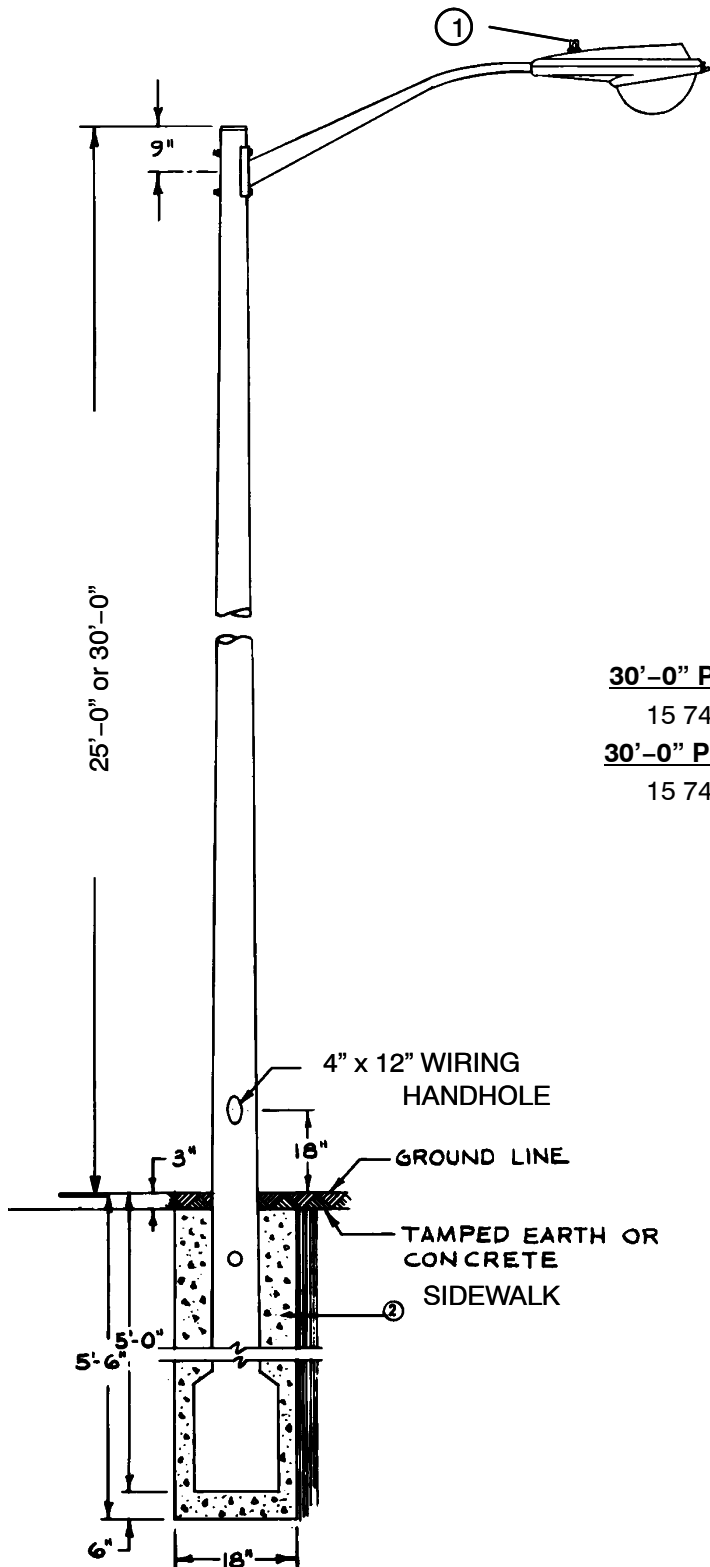
Sheet 2 of 2

NOTES:

1. Limestone screenings shall be wetted and thoroughly tamped as installed.
2. Face eye of photoelectric switch north.

| | | Std. / Stk. No. | Description | 15 74 08 ** | 01 | 02 |
|---|---|--------------------|---|-------------|-----|------|
| @ | A | 38 01 598* | Pole, St. Lt., Con., 28' 0" O.H./23' M.H. | | 1 | |
| | | 38 01 599* | Pole, St. Lt., Con., 33' 0" O.H./28' M.H. | | | 1 |
| | B | 38 01 404 | Bracket, St. Lt., 2" x 6' | | 1 | 1 |
| | C | 18 57 104 | Cable, St. Lt., Twisted (ft.) | | 30 | 36 |
| | D | 30 52 010 | Sealer, Red Pedigree (pint) | | 1 | 1 |
| | F | 17 01 116 | Connector, Bolted/Set Screw #14-2/0, 3 Pos. | | 2 | 2 |
| | J | | Limestone Screenings (lb.) | | 850 | 1000 |
| | K | 15 70 ** ** | St. Lt. Assembly | | 1 | 1 |

LIMITED USE STANDARD*



6' Bracket

30'-0" Pole (Gray)

15 74 09 01

30'-0" Pole (Black)

15 74 09 03

35'-0" Pole (Gray)

15 74 09 02

35'-0" Pole (Black)

15 74 09 04

OUTDOOR LIGHTING
Fiberglass Pole 30' and 35' – U.G. Circuit

15 74 09**
Sheet 2 of 2

Notes:

1. Face photocontrol north.
2. Limestone screenings to be wetted and thoroughly tamped to provide solid compaction around pole
3. OK to install second bracket at 180° if required.
4. * For MO only.



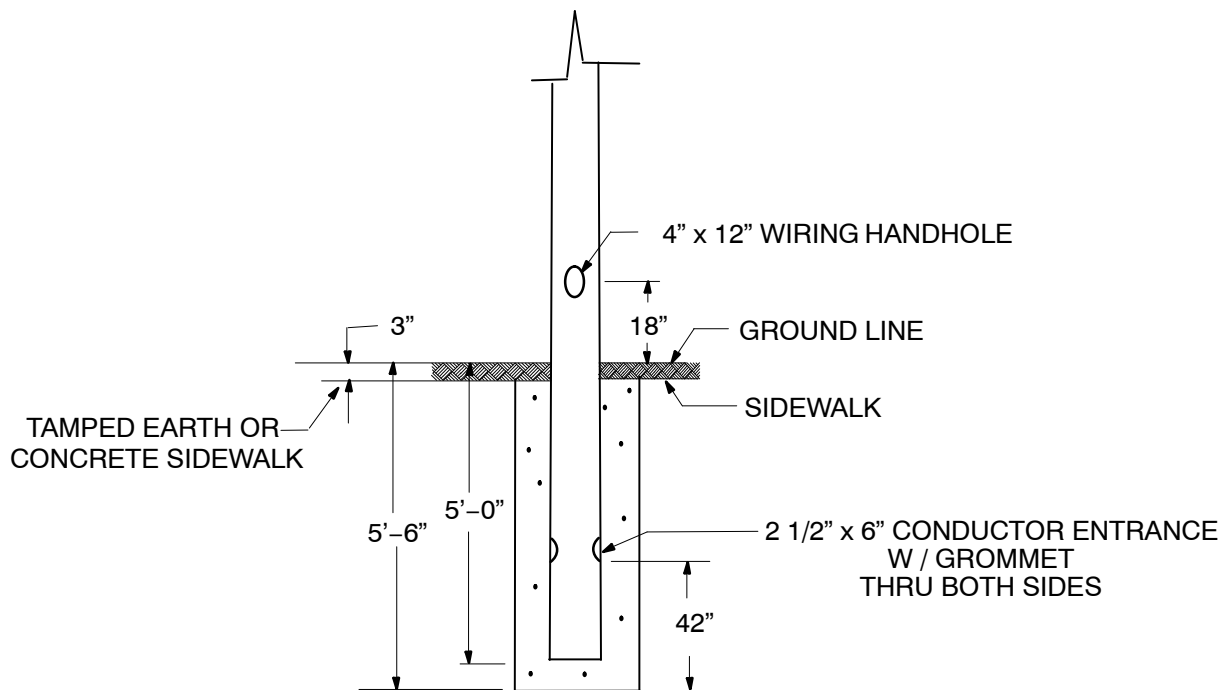
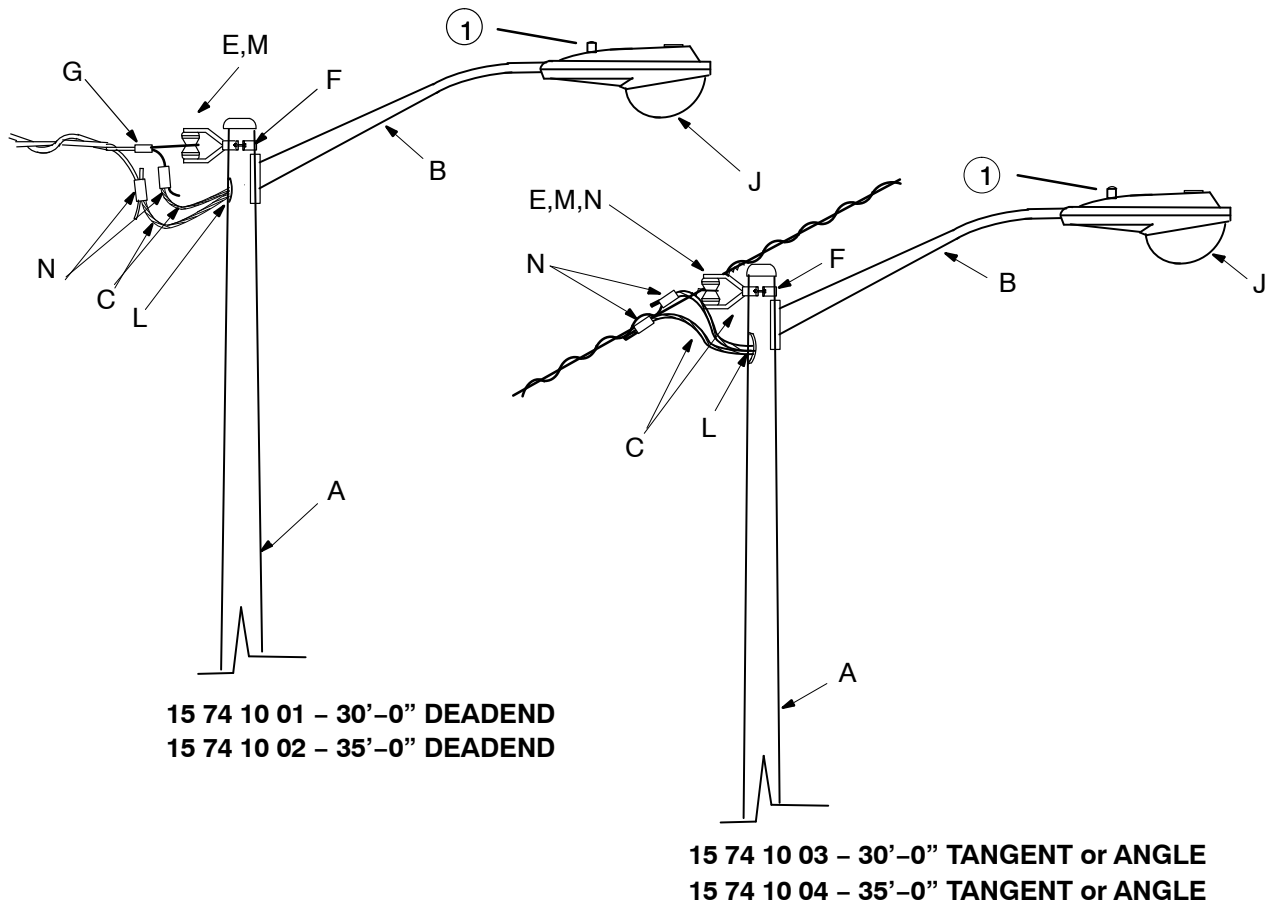
| | Std. / Stk. No. | Description | 15 74 09 ** | 01 | 02 | 03 | 04 |
|---|-----------------|--|-------------|-----|----|-----|----|
| A | 38 01 555 | Pole, St. Lt., Fiberglass, 30' O.H. | | 1 | | | |
| | 38 01 554 | Pole, St. Lt., Fiberglass, 35' O.H. | | | 1 | | |
| | 38 01 970* | Pole, St. Lt., Fiberglass, Black, 30' O.H. | | | | 1 | |
| | 38 01 967* | Pole, St. Lt., Fiberglass, Black, 35' O.H. | | | | | 1 |
| B | 38 01 556 | Bracket, AL. 6' | | 1 | 1 | | |
| | 38 01 968* | Bracket, AL. Black, 6' | | | | 1 | 1 |
| C | 18 57 104 | Cable, St. Lt., #10-2 Conductor – Ft. | | 35 | 40 | 35 | 40 |
| E | 17 01 116 | Connector, Bolted/Set Screw #14-2/0. 3 Pos | | 2 | 2 | 2 | 2 |
| F | 25 53 053 | Tape, Rubber 3/4" | | 1 | 1 | 1 | 1 |
| G | | Rock, crushed, limestone screenings | | 850 | | 850 | |
| H | 15 70 ** ** | Street light assembly | | 1 | 1 | 1 | 1 |

OUTDOOR LIGHTING

Fiberglass Pole 30' and 35' – O.H. Circuit
Tangent, Angle, or Deadend

15 74 10**

Sheet 1 of 2



OUTDOOR LIGHTING
Fiberglass Pole 30' and 35' – O.H. Circuit
Tangent, Angle, or Deadend

15 74 10**

Sheet 2 of 2

Notes:

1. Face photocontrol north.
2. Limestone screenings to be wetted and thoroughly tamped to provide solid compaction around pole
3. OK to install second bracket at 180 degree if required.

| | | Std. / Stk. No. | Description | 15 74 10 ** | 01 | 02 | 03 | 04 |
|---|---|-----------------|---|-------------|-----|-----|-----|-----|
| @ | A | 38 01 916 | Pole, St. Lt., Fiberglass, 33' | | 1 | | 1 | |
| | | 38 01 917 | Pole, St. Lt., Fiberglass, 38' | | | 1 | | 1 |
| | B | 38 01 556 | Bracket, AL 6' | | 1 | 1 | 1 | 1 |
| | C | 18 57 104 | Cable, St. Lt #10-2 Conductor – ft | | 12 | 12 | 12 | 12 |
| | E | 23 06 040 | Clevis, Secondary | | 1 | 1 | 1 | 1 |
| | F | 23 67 154 | Band, Pole, Steel, Galv | | 1 | 1 | 1 | 1 |
| | G | 17 51 123 | Clamp, DE Wedge Type | | 1 | 1 | | |
| | N | 17 51 146 | Connector, PG, #6-#10AWG Main/Tap | | 2 | 2 | 2 | 2 |
| | | 17 54 382 | Connector, Split, #2-#6AWG AL Main/#14 AWG Cu Tap | | 2 | 2 | 2 | 2 |
| | L | 25 54 074 | Guard, Cable, 1/2", Poly | | 2 | 2 | 2 | 2 |
| | M | 25 59 044 | Insulator, Spool | | 1 | 1 | 1 | 1 |
| | J | 15 70 ** ** | St. Lt. Assembly | | 1 | 1 | 1 | 1 |
| | H | | Rock, Crushed Limestone Screening lbs | | 850 | 850 | 850 | 850 |
| | O | 18 55 040 | Wire-Tie, #4Al. Poly 42" | | | | 1 | 1 |

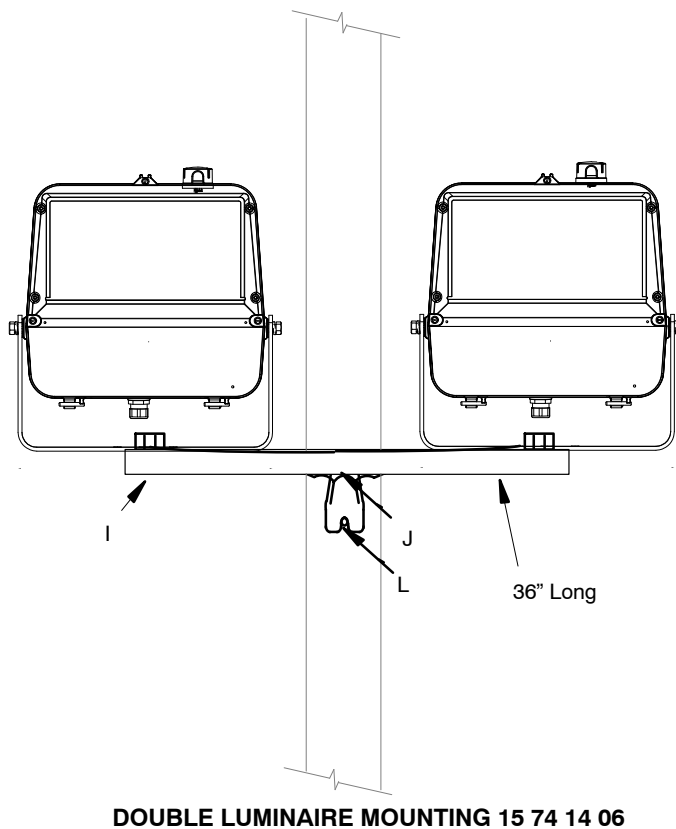
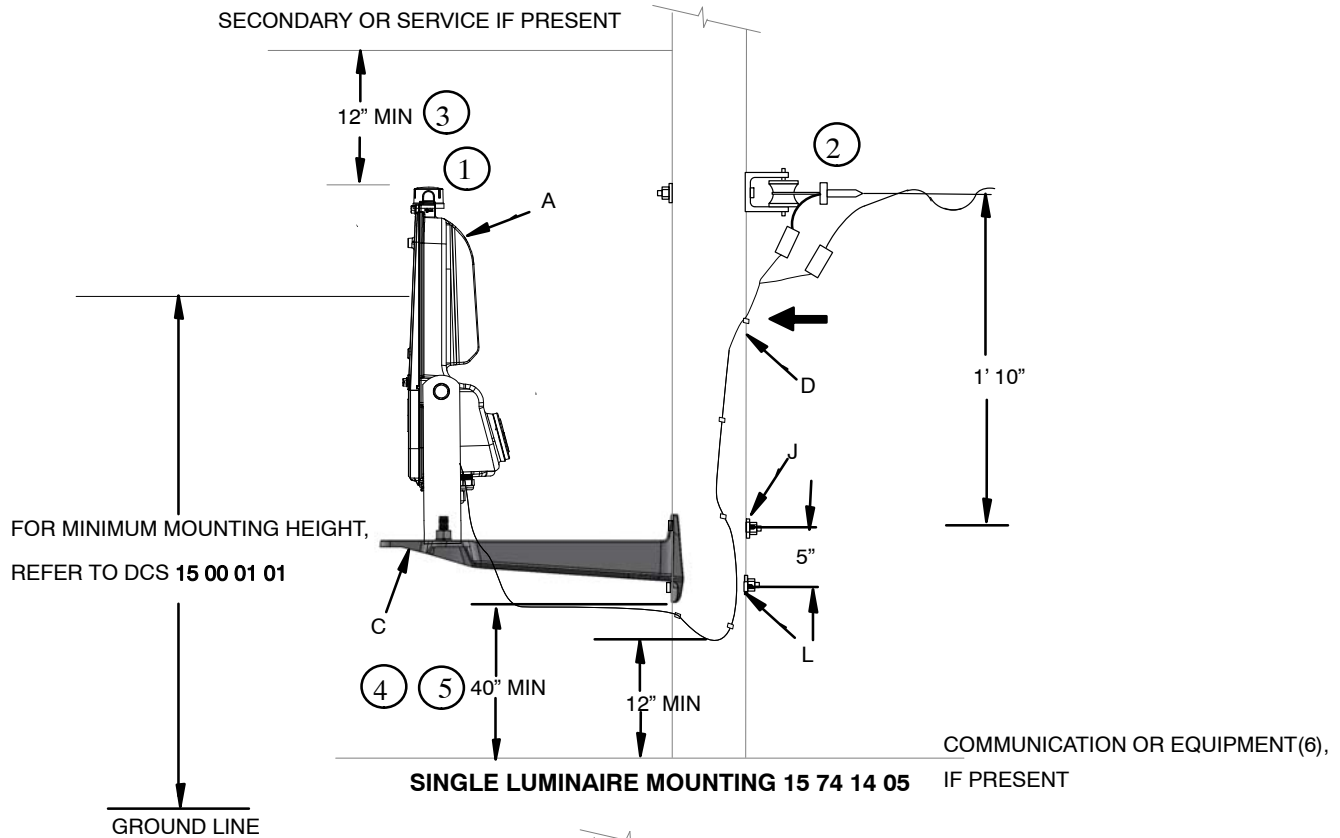
DIRECTIONAL OUTDOOR LIGHTING

On Wood Pole

Directional Flood

15 74 14 **

Sheet 1 of 2



DIRECTIONAL OUTDOOR LIGHTING
On Wood Pole
Directional Flood

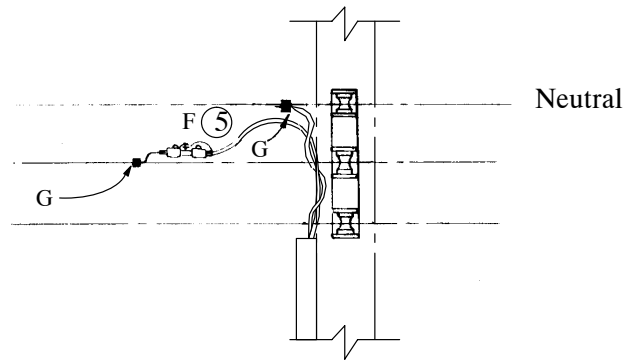
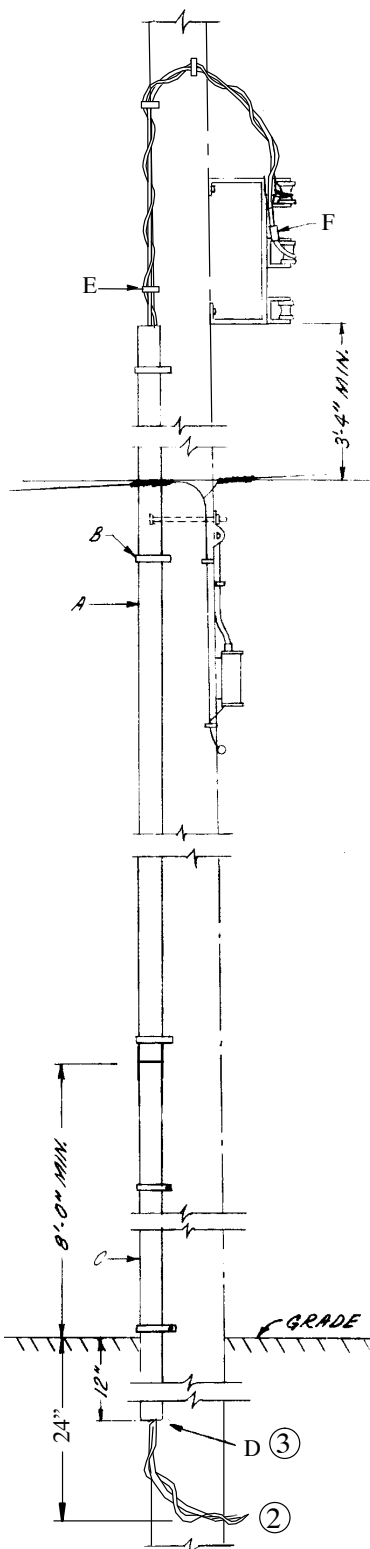
15 74 14 **

Sheet 2 of 2

NOTES:

1. Face photocontrol north, but multiple luminaires at the same location, adjust photocell socket to face control away from nearby light sources.
2. Connect the phase and neutral correctly to the terminal inside of the luminaires.
3. Increase this dimension by 4" if open service wires extend directly out over photocell.
4. If street light bracket is grounded, the vertical spacing between the bracket and communication attachments can be reduced to 20". However, street light brackets may be grounded **ONLY IF**:
 - A. When adding a light to a pole where none previously exists, there is no space available to install the light with the 40" bracket-to-communications attachment spacing without replacing the pole, or
 - B. When replacing a pole with an existing light on it, there is no space available to install the light with the 40" bracket-to-communications attachment clearance and installing a taller pole would create up-lift on adjacent poles.
5. The 40" bracket-to-communications attachment clearance applies to all new lighting installations, all new communication attachments where lighting already exists, **AND ON ALL POLES REPLACED FOR ANY REASON THAT HAVE EXISTING LIGHTING AND COMMUNICATION ATTACHMENTS.** This is per NESC Rules 13A1 and 13B2 Exception 2.
6. Equipment means non current-carrying metal parts of equipment, including metal supports for cables or conductors, metal support braces that are attached to metal supports or are less than 1 inch from transformer cases or hangers that are not effectively grounded, and metal or nonmetallic supports or braces associated with communication cables or conductors. Antennas, photovoltaic panels, power supplies, loading coils, etc., shall also be considered equipment for the purpose of measuring clearances under this rule.

| | | Std. / Stk. No. | Description | 15 74 14 ** | 05 | 06 |
|---|---|-----------------|--------------------------------|-------------|----|----|
| @ | A | 15 70 16 ** | Luminaire, Directional Flood | 1 | 2 | |
| | C | 38 01 683 | Bracket, Floodlight, 18" | 1 | | |
| | D | 23 64 027 | Staple – 5/8" x 2" | 5 | 5 | |
| | I | 38 01 726 | Bracket, Double Flood Mounting | | | 1 |
| | J | 23 52 063 | Bolt, Mach. 5/8" x 10", Galv. | 1 | 1 | |
| | L | 23 60 011 | Screw, Lag 5/8" x 5" | 1 | 1 | |



NOTES:

1. If the customer furnishes the cable, it must be approved by the National Electric Code for direct burial and exposure to sunlight. The customer cable should extend to the base of the pole or to a point designated by Ameren. (normally 2'-0" inside the customer's property line). The customer must provide enough cable to allow the connections to be made on the pole.
2. It is recommended that direct buried cable be installed in conduit under driveways and parking areas.
3. Drive the lag screw into the pole so that the schedule 80 conduit will rest on the head; thus preventing the conduit from sliding down.
4. If triplex cable is used, two fuses are required.
Additional fuse sizes are available:
15 AMP Stock #20 76 138
60 AMP Stock #20 76 142
100 AMP Stock #20 76 143
5. Install the fuse parallel to the wire so that the spring loaded indicator can flip open to show that the fuse has blown.
6. Cut the poly strap into one foot lengths. Wrap each section of the strap around the cable and secure the ends to the pole.

| | | Std. / Stk. No. | Description | 15 74 50 01 | Quantity |
|------------------------|---|-----------------|-------------------------------|-------------|----------|
| 3 6 4,5 --► @ | A | 12 01 178 | Conduit - Plastic, 2" | | 15 Ft. |
| | B | 27 60 035 | Iron - Hanger | | 10 Ft. |
| | C | 12 01 275 | Conduit - Plastic, Sch 80, 2" | | 10 Ft. |
| | D | 23 60 007 | Screw - Lag, 1/2" x 4" | | 1 |
| | E | 49 17 181 | Strap - Poly, 2" x 36" | | 1 |
| | F | 20 76 139 | Fuse - Secondary, 30 Amp | | 1 |
| | G | PG* | See Std. 07 00 25 00 | | 3 |
| | | | Operation Code 278 | | 1 |

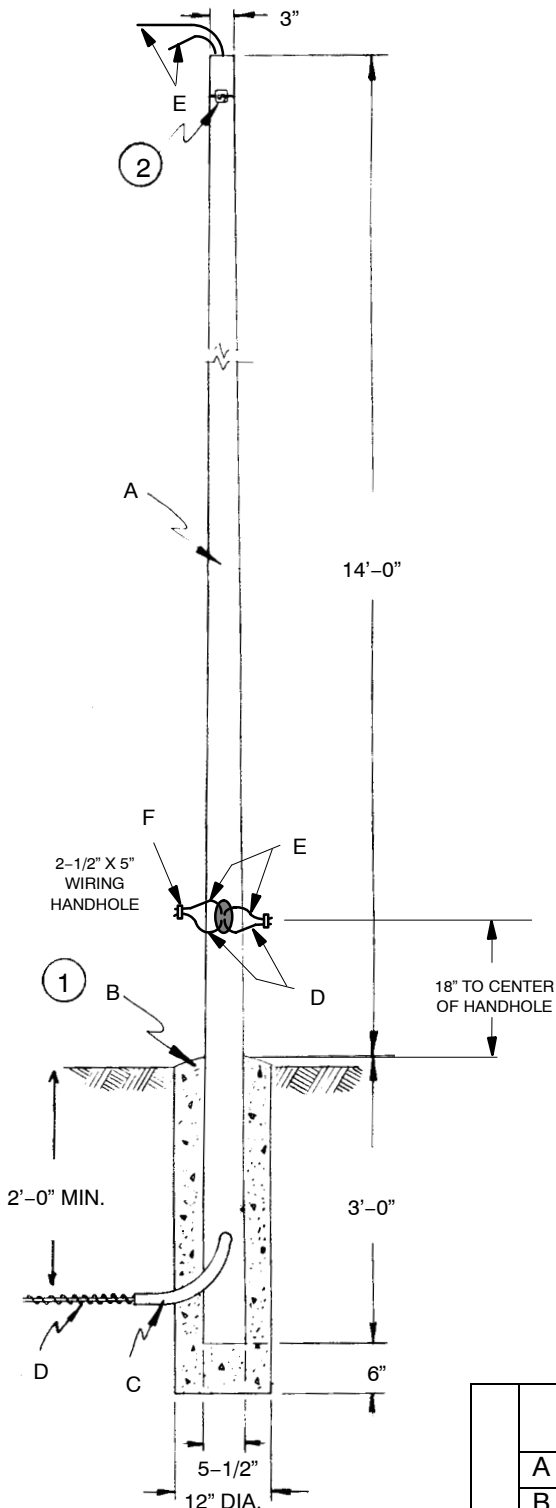
OUTDOOR LIGHTING

Post Top Installation Fiberglass Pole

14 Foot Mounting Height

15 75 05 01

Sheet 1 of 1



NOTES:

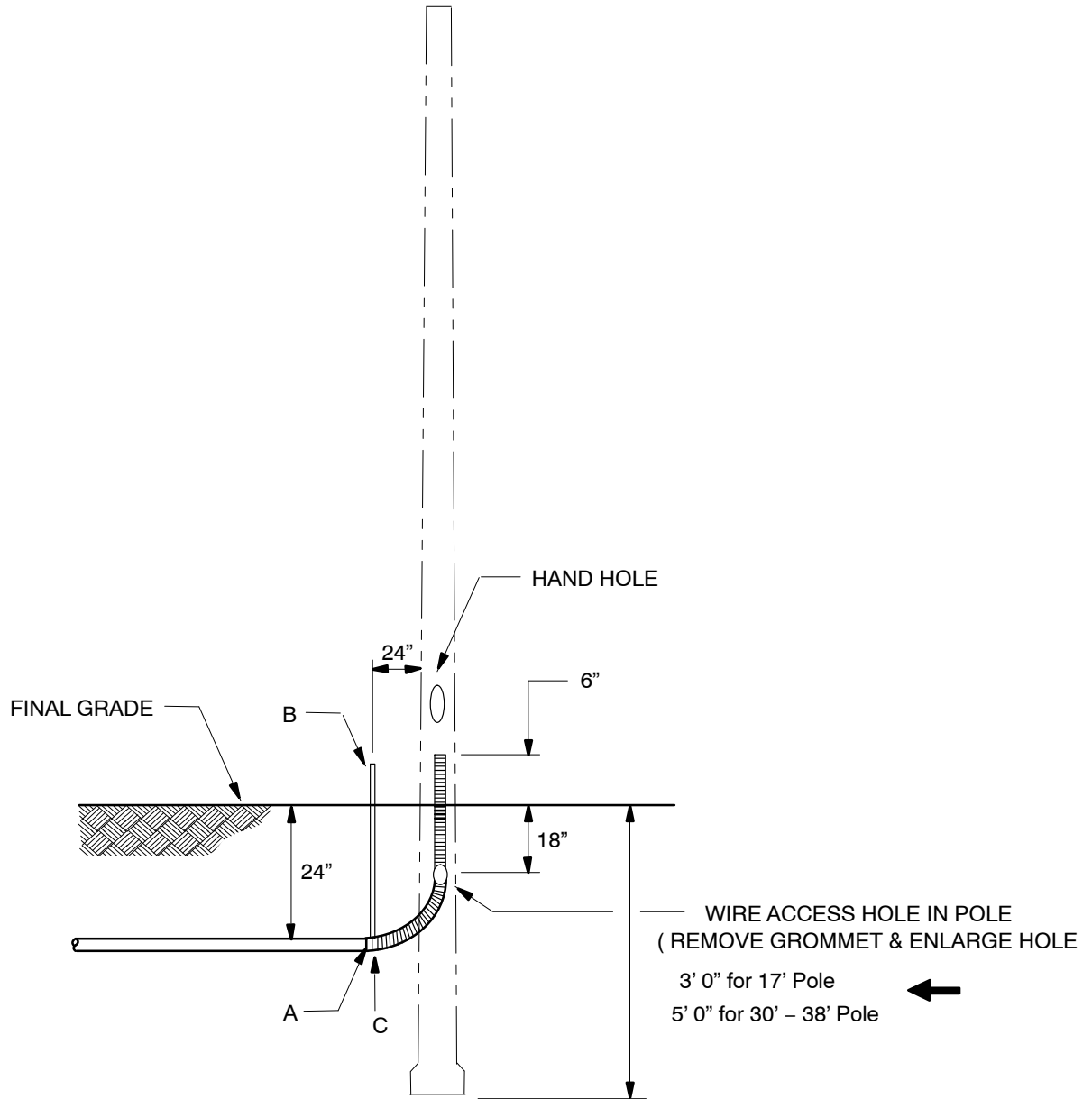
1. Limestone screenings to be wetted and thoroughly tamped to provide solid compaction around the pole.
2. Generally only one tag per street light shall be installed. If more than one street light installed on the same pole, one tag per street light is required, and each tag should be installed on the same quadrant of the light. The tag should be installed visibly from the ground level but not reachable from public. See Dist. Std. 15 90 01 01 for more details.
3. In Missouri residential developments, the contractor will install 1-1/2 inch conduit to the pole site. Ameren will install the pole and the cable.
4. For fuse underground streetlight cable at pad mount transformer or pedestal, See Dist. Std. 52 00 01 **.

| | | Std. / Stk. No. | Description | 15 75 05 01 | Qty. |
|---|---|--------------------|---|-------------|------|
| | A | 38 01 526 | Pole - FG, Black, w/hand hole | | 1 |
| | B | | Rock, Crushed Limestone Screening | | 200 |
| | C | 12 51 148 | Conduit Poly 1" | | 2 |
| @ | D | 18 07 252 | Cable - Duplex #6 Al. | | |
| | E | 18 57 104 | Cable, St. Lt., #10-2 conductor-Ft. | | 17 |
| | F | 17 01 116 | Connector, Bolt/Set Screw, #4-2/0,3Pos. | | 2 |

DISTRIBUTION
CONSTRUCTION STANDARDS

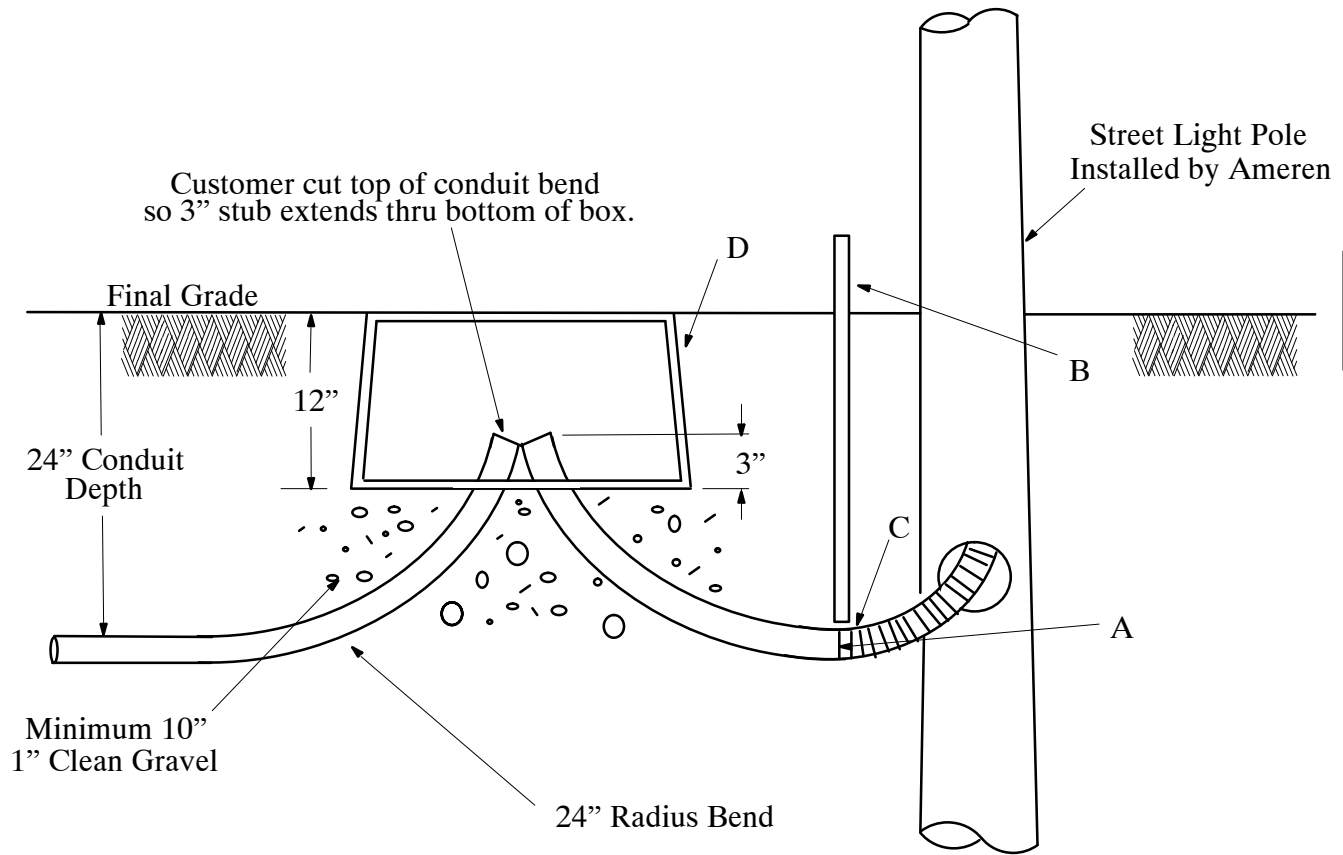


ENG:WYW
REV. NO: 8
REV. DATE: 01/21/10



MATERIAL INSTALLED BY CONTRACTOR

| | Std. / Stk. No. | Description | 15 75 05 02 | Qty. |
|---|-----------------|------------------------------|-------------|------|
| A | 12 51 330 | Plug - Conduit 1-1/2" | | 1 |
| B | 49 55 520 | Marker - Buried Conduit | | 1 |
| C | 12 51 329 | Conduit Reducer 2" to 1-1/2" | | 1 |

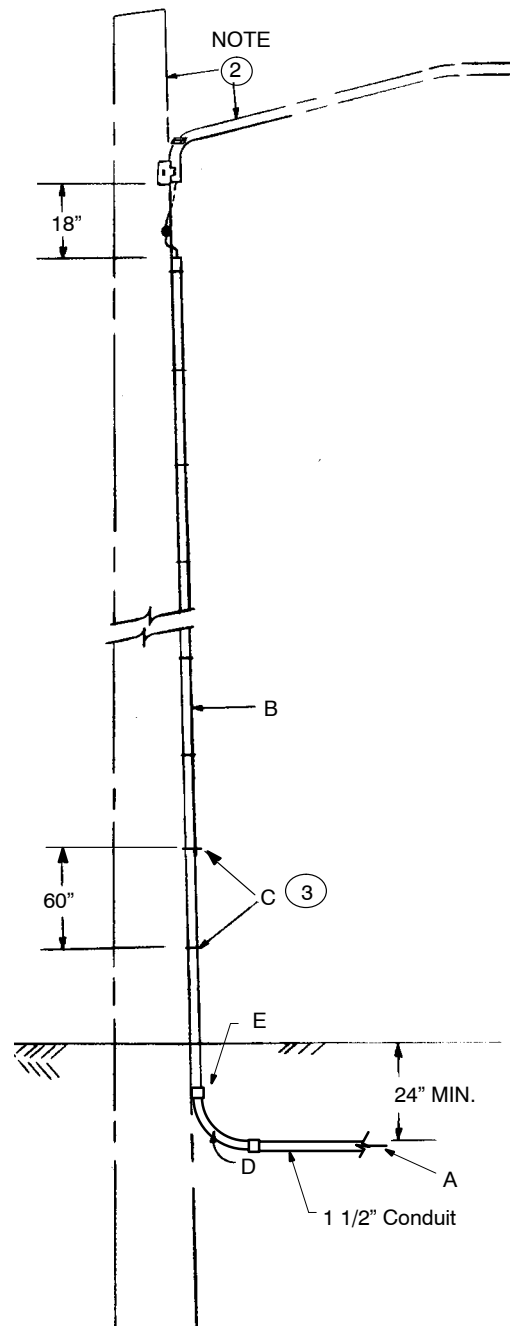


NOTES:

- Customer installs Ameren supplied box.

| | | Std. / Stk. No. | Description | 15 75 05 03 | Qty. |
|---|---|-----------------|--|-------------|------|
| | A | 12 51 330 | Plug – Conduit, 1 1/2" | | 1 |
| | B | 49 55 520 | Marker – Buried Conduit | | 1 |
| | C | 12 51 329 | Conduit Reducer – 2" to 1 1/2" | | 1 |
| 1 | D | 12 06 106 | Poly Splice Box 9 3/4" (W) x 14" (L) x 12" (D) | | 1 |

Sheet 1 of 2



In Conduit (subject to physical damage)
15 77 01 04

OUTDOOR LIGHTING
Installation of Underground Street Light
Cable on a Wood Pole

15 77 01 **

Sheet 2 of 2

NOTES:

1. As an underground alternative, where multiple lights are being installed direct bury a "T" splice per Dist. Std. 41 15 31 00 to avoid running the cable up and down the pole.
2. Pole, bracket, and luminaire must be listed separately.
3. If pole is subject to physical damage, use schedule 80 conduit for the first 10 ft. section up to the pole.

| | | Std./Stk. No. | Description | 15 77 01 ** | 01 | 02 | 03 | 04 |
|---|---|---------------|-------------------------------------|-------------|---------|---------|---------|---------|
| @ | A | 18 07 252 | Cable – URD, St. Lt. #6 Duplex, Al. | | As Req. | As Req. | As Req. | As Req. |
| @ | B | 12 51 197 | Conduit – Plastic, 1" Sch. 40 | | As Req. | As Req. | | |
| | | 12 01 332 | Conduit – Plastic, 1" Sch. 80 | | | | As Req. | As Req. |
| @ | C | 23 67 490 | Strap Conduit, 1-1/2 in. 2 Hole | | As Req. | As Req. | As Req. | As Req. |
| | D | 12 51 331 | Bend 1-1/2", 24" Rad. | | | 1 | | 1 |
| | E | 40 83 425 | Reducer 1-1/2" to 1" | | | 1 | | 1 |

OUTDOOR LIGHTING
Multiple Installation
30' Breakaway Pole – Underground Circuit

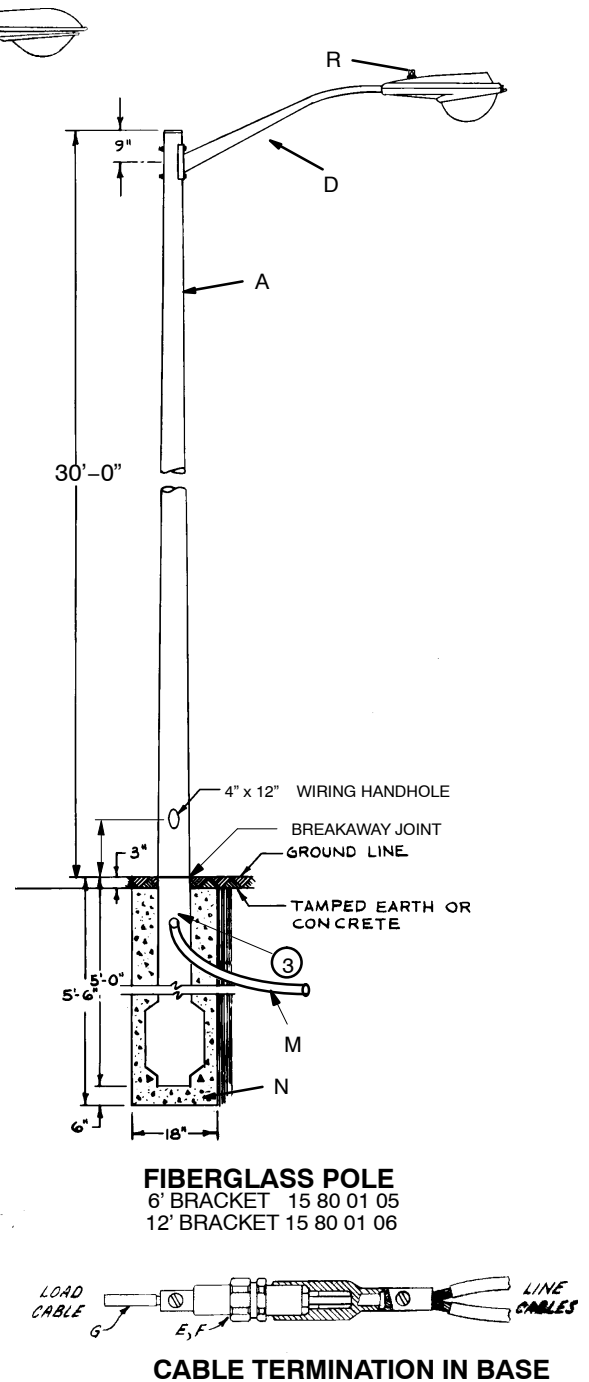
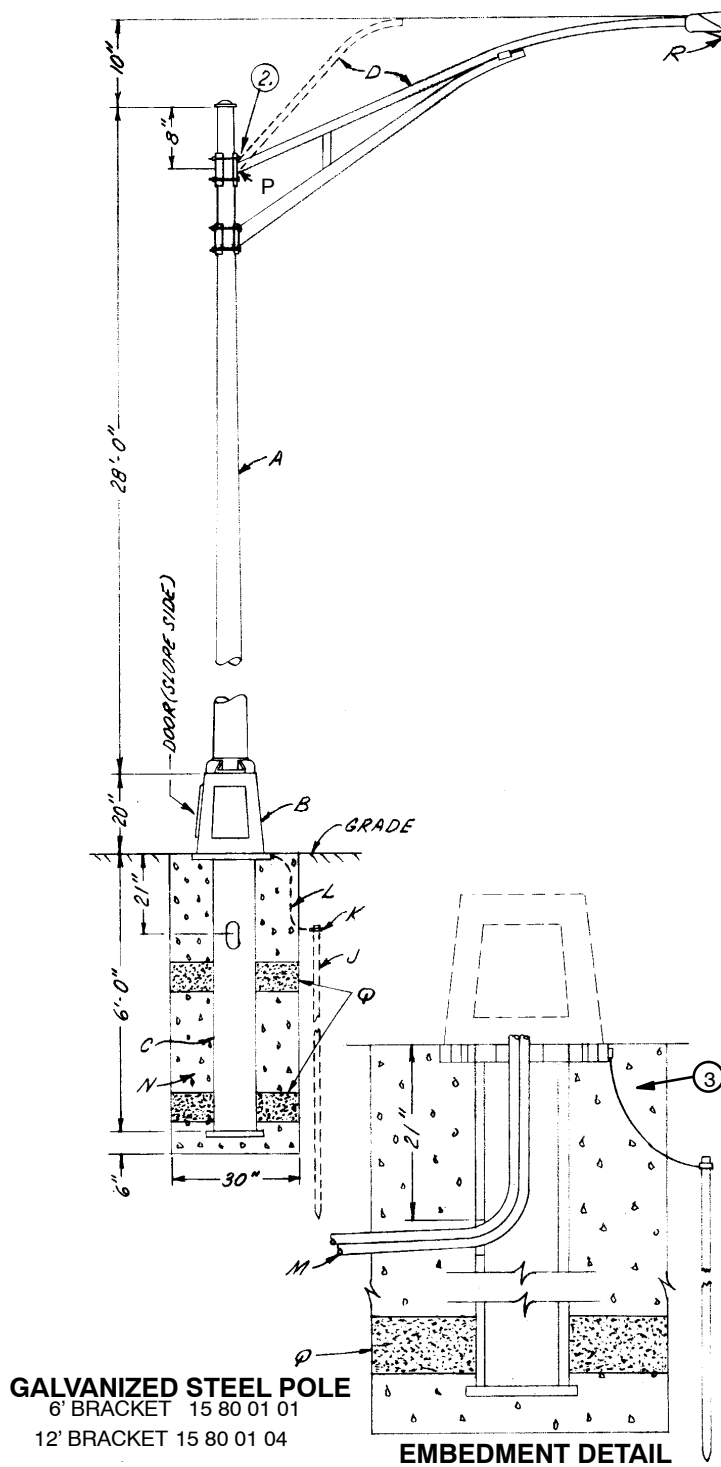
15 80 01 **

Sheet 1 of 2

MO ONLY

MO ONLY

MO ONLY



OUTDOOR LIGHTING
Multiple Installation
30' Breakaway Pole – Underground Circuit

15 80 01 **

Sheet 2 of 2

NOTES:

1. For U.E. 120 Volt circuit use one fuse in energized line and one fuse slug (#38 01 507) in neutral.
2. Wrap plastic tie around wires where they enter bracket.
3. Screenings to be wetted and thoroughly tamped.

MO ONLY

| | | Std. / Stk. No. | Description | 15 80 01 ** | 01 | 04 | 05 | 06 |
|---|---|------------------------|--|--------------------|-----------|-----------|-----------|-----------|
| @ | A | 38 01 506 | Pole, Steel, Galv. – 28' – 0" | 1 | 1 | | | |
| | | 38 01 686 | Pole, Fiberglass, Breakaway, 35' | | | 1 | 1 | |
| | B | 38 01 499 | Base, Transf. – Al. | 1 | 1 | | | |
| | C | 38 01 505 | Foundation, Steel Pile | 1 | 1 | | | |
| | D | 38 01 500 | Brkt., St. Lt. – 2" x 6' – 0" | 1 | | | | |
| | | 38 01 503 | Brkt., St. Lt. – 2" x 12' – 0" | | 1 | | | |
| | | 38 01 556 | Brkt., St. Lt. – Fbrgl. Mtg., 6' | | | 1 | | |
| | | 38 01 690 | Brkt. St. Lt. – Fbrgl. Mtg., 12' | | | | | 1 |
| | E | 38 01 504 | Connector, Fusible | 2 | 2 | 2 | 2 | |
| | F | 38 01 509 | Fusetron – Cart., 10 Amp | 2 | 2 | 2 | 2 | |
| | G | 18 57 104 | Cable, St. Lt. – #10 (ft.) | 38 | 44 | 38 | 44 | |
| | J | 23 13 069 | Rod, Ground – 5/8" x 8' – 0" | 1 | 1 | | | |
| | K | 17 52 032 | Clamp, Ground Rod – 5/8" | 1 | 1 | | | |
| | L | 18 52 019 | Wire, S.D., #6 B.C. (ft.) | 10 | 10 | | | |
| | M | 12 51 148 | Conduit, Poly. – 1" (ft.) | 10 | 10 | 2 | 2 | |
| | N | | Rock, Crushed, Limestone, 1/2", Clean (lb) | | 2430 | 850 | 850 | |
| | P | 25 54 074 | Tie, Cable – 1/2" x 6" Poly. | 2 | 2 | | | |
| | Q | 11 04 105 | Concrete Premix 90# | 2 | 2 | | | |
| | R | 15 70 ** ** | St. Lt. Assembly | 1 | 1 | 1 | 1 | |

1.0 General

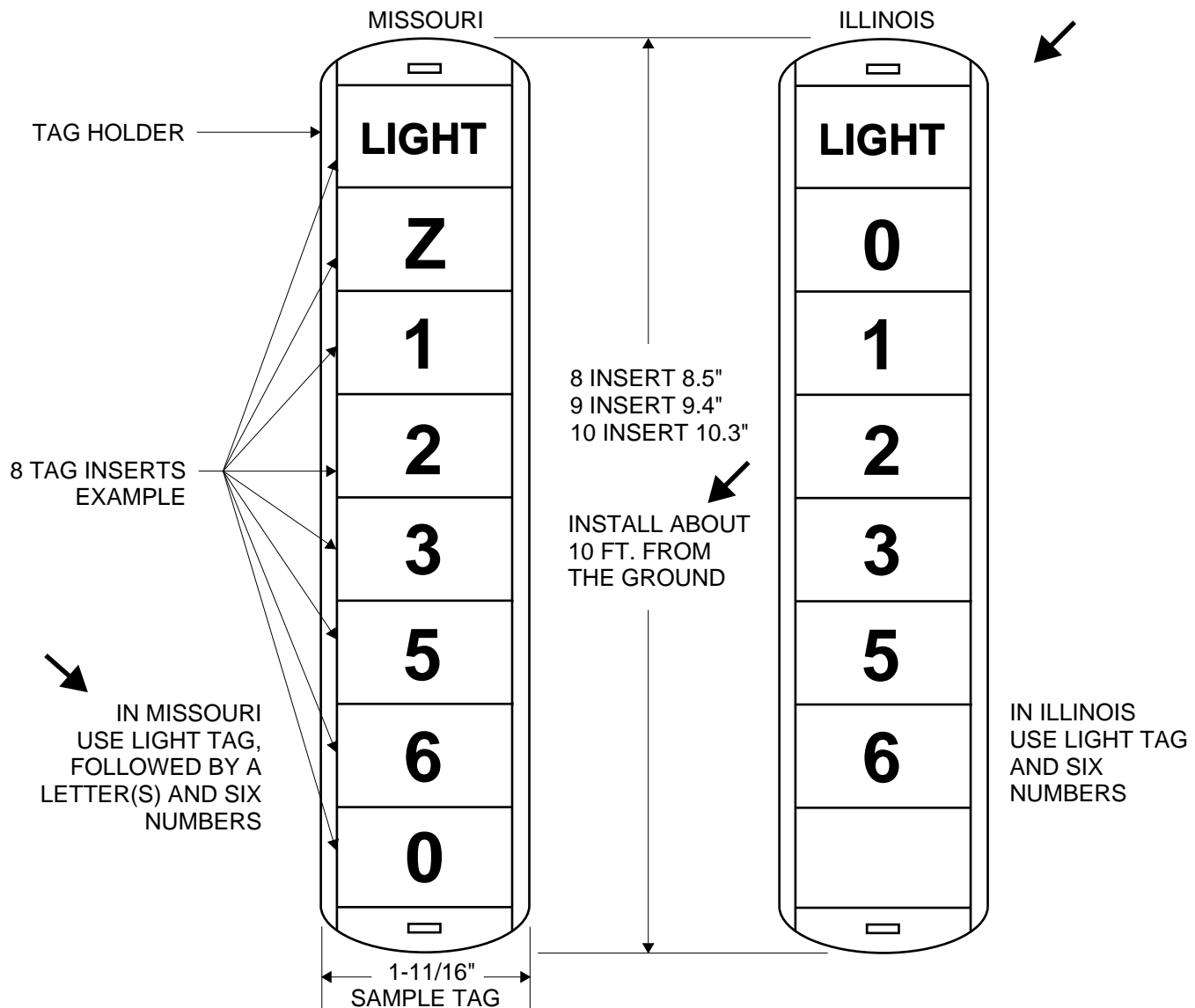
This specification covers the basic information and materials required to produce tags for street lighting poles. The street lighting tags will be produced by construction district personnel after obtaining the proper designation and abbreviation from the appropriate authority.

2.0 Street Lighting Tag Construction

The street lighting tags will consist of a holder and various inserts. The holder will accommodate a maximum of eight, nine, and ten inserts. It is necessary to crimp each end of the holder to prevent the number from sliding out. A sample tag with eight inserts is shown.

3.0 Typical Tag Locations

Install a street light number about 10 ft. from the ground, so that is visible for general public, but still out of reach. Generally only one tag per street light shall be installed. If more than one street light is installed on the same street lighting pole, one tag per street light is required, and each tag should be installed on the same quadrant as the light. The tag should be installed visibly from the ground level but not reachable from public.



4.0 Tag Attachment Methods4.1 Tie Wire - Stock Number 40-59-197

Whenever a tag is attached directly to a non-wood street lighting pole, tie wire shall be used for the attachment.

4.2 Galvanized Nails - Stock Number 21-57-047

Whenever a tag is attached directly to a wood pole; two galvanized nails shall be used for the attachment.

5.0 Tag Holder and Inserts

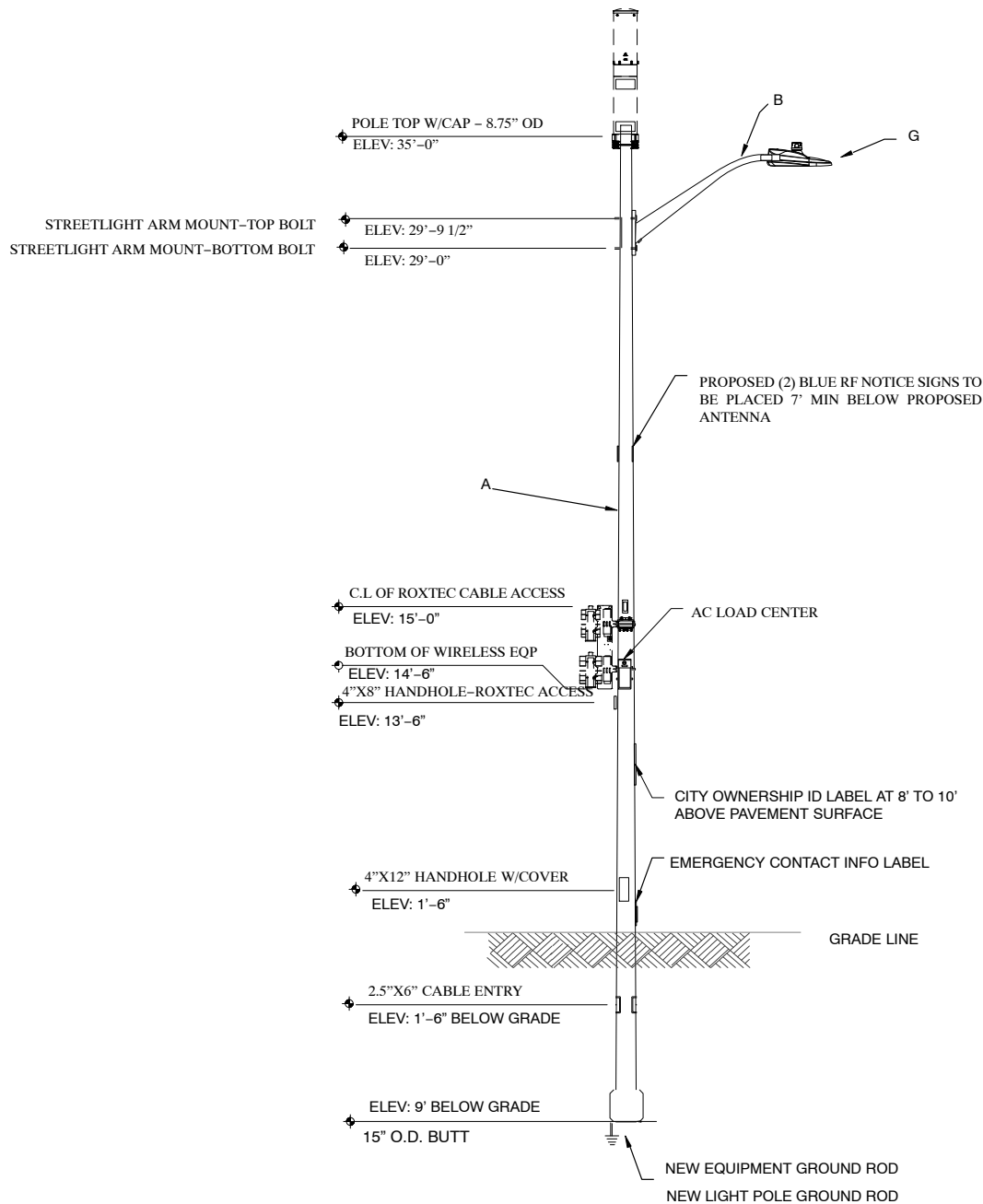
Street lighting tags will be produced using the following stock items.

| <u>Stock Number</u> | <u>Description</u> | <u>Stock Number</u> | <u>Description</u> |
|---------------------|----------------------------------|---------------------|--------------------|
| 16-16-047 | Holder, Tag, Aluminum, 8 inserts | 16-01-211 | Tag, "H" |
| 16-16-048 | Holder, Tag, Aluminum, 9 inserts | 16-01-303 | Tag, "I" |
| 16-16-049 | Holder, Tag Aluminum, 10 inserts | 16-01-304 | Tag, "J" |
| 16-16-050 | Tag, "LIGHT" | 16-01-305 | Tag, "K" |
| 16-01-195 | Tag, "0" * | 16-01-306 | Tag, "L" |
| 16-01-196 | Tag, "1" | 16-01-307 | Tag, "M" |
| 16-01-197 | Tag, "2" | 16-01-308 | Tag, "N" |
| 16-01-198 | Tag, "3" | 16-01-309 | Tag, "O" |
| 16-01-199 | Tag, "4" | 16-01-212 | Tag, "P" |
| 16-01-200 | Tag, "5" | 16-01-310 | Tag, "Q" |
| 16-01-201 | Tag, "6 or 9" | 16-01-311 | Tag, "R" |
| 16-01-202 | Tag, "7" | 16-01-213 | Tag, "S" |
| 16-01-203 | Tag, "8" | 16-01-214 | Tag, "T" |
| 16-01-204 | Tag, "A" | 16-01-312 | Tag, "U" |
| 16-01-205 | Tag, "B" | 16-01-313 | Tag, "V" |
| 16-01-206 | Tag, "C" | 16-01-314 | Tag, "W" |
| 16-01-207 | Tag, "D" | 16-01-215 | Tag, "X" |
| 16-01-208 | Tag, "E" | 16-01-216 | Tag, "Y" |
| 16-01-209 | Tag, "F" | 16-01-217 | Tag, "Z" |
| 16-01-210 | Tag, "G" | | |

* The zero tag is a phase symbol that has been rotated 90 deg. to appear as a zero with a line through it. This is to help distinguish between "zero" and the letter "O".

OUTDOOR LIGHTING
4G/5G ATTACHMENT
FG STLT POLE DIRECT BURIAL- 44FT OH/35FT MH

15 91 00
Sheet 1 of 2



OUTDOOR LIGHTING
4G/5G ATTACHMENT
FG STLT POLE DIRECT BURIAL- 44FT OH/35FT MH

15 91 00
Sheet 2 of 2

NOTES:

1. Limestone or native soil backfill must be tamped to provide solid compaction around the pole.
2. Generally only one tag per streetlight shall be installed. If more than one streetlight installed on the same pole, one tag per streetlight is required, and each tag shall be installed on the same quadrant of the light. The tag shall be installed visibly from the ground level but not reachable from public. See DCS 15 90 01 01 for more details.
3. Fusing underground streetlight cable is at padmount transformer or pedestal. See DCS 52 00 01**.

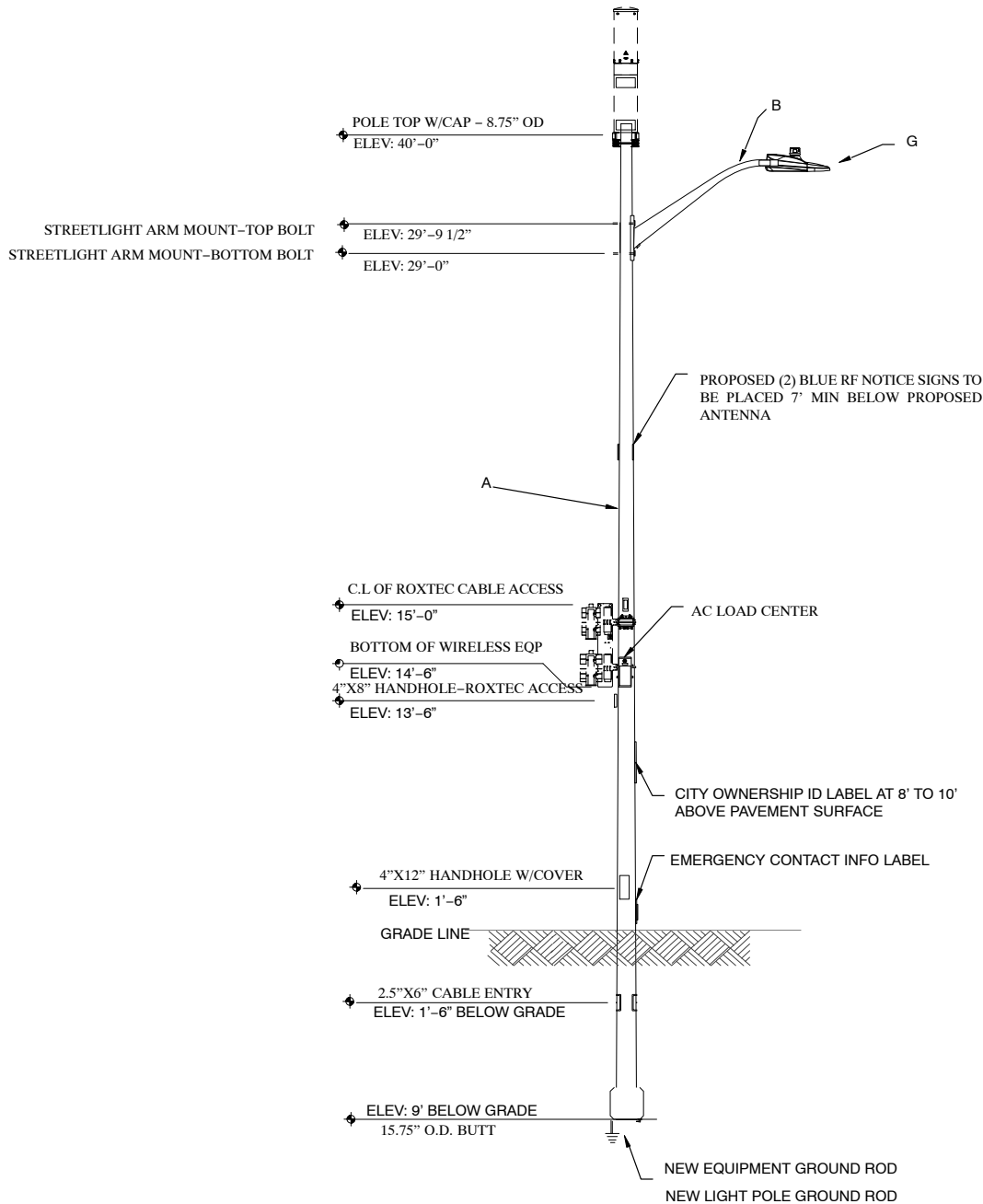
| | | Std. / Stk. No. | Description | 15 91 00 | QTY |
|---|---|-----------------|---|----------|--------|
| | A | 38 51 678 | Pole, St. Lt., Con., 44' 0" O.H./ 35' M.H., Limited to 40 EPA | | 1 |
| | B | 38 01 556 | Bracket, St. Lt., 2" x 6' | | 1 |
| | C | 18 57 104 | Cable, St. Lt., Twisted - FT | | 40 |
| | D | 25 53 053 | Tape, Rubber 3/4" | | 1 |
| | E | 17 01 116 | Connector, Bolted/Set Screw #14-2/0, 3 Pos. | | 2 |
| @ | F | | Rock, Crushed, Limestone - LB | | As Req |
| @ | G | 15 70 ** ** | St. Lt. Assembly | | 1 |

OUTDOOR LIGHTING

4G/5G ATTACHMENT

FG STLT POLE DIRECT BURIAL – 49FT OH/40FT MH

15 91 01
Sheet 1 of 2



NOTES:

1. Limestone or native soil backfill must be tamped to provide solid compaction around the pole.
2. Generally only one tag per streetlight shall be installed. If more than one streetlight installed on the same pole, one tag per streetlight is required, and each tag shall be installed on the same quadrant of the light. The tag shall be installed visibly from the ground level but not reachable from public. See DCS 15 90 01 01 for more details.
3. Fusing underground streetlight cable is at padmount transformer or pedestal. See DCS 52 00 01**.Limestone screenings shall be wetted and thoroughly tamped as installed.

OUTDOOR LIGHTING
4G/5G ATTACHMENT
FG STLT POLE DIRECT BURIAL – 49FT OH/40FT MH

15 91 01
Sheet 2 of 2

| @ @ | | Std. / Stk. No. | Description | 15 91 01 | QTY |
|--------|---|-----------------|---|----------|--------|
| | A | 38 51 679 | Pole, St. Lt., Con., 49' O.H. / 40' M.H. Limited 40 EPA | | 1 |
| | B | 38 01 556 | Bracket, St. Lt., 2" x 6' | | 1 |
| | C | 18 57 104 | Cable, St. Lt., Twisted – Ft | | 45 |
| | D | 17 01 116 | Connector, Bolted/Set Screw #14-2/0 3 Pos | | 2 |
| | E | 25 53 053 | Tape, Rubber 3/4" | | 1 |
| | F | | Rock, Crushed, Limestone –LB | | As Req |
| | G | 15 70 ** ** | St. Lt. Assembly | | 1 |



NOTES