

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRAFFIC AND PARKING SERVICES

MAY 2010

SPECIFICATION FOR SEMI CUT-OFF DECORATIVE
WASHINGTON GLOBE STYLE LUMINAIRE

1) PURPOSE

The purpose of these specifications is to provide minimum requirements for the design, manufacture, finishing and delivery of the Washington Globe luminaire. The Washington Globe is intended to be mounted on decorative pole as specified, along roadways throughout Montgomery County. Any manufacturer, distributor or vendor who submits bid shall agree with these specifications

2) DESCRIPTION

The luminaire shall be an outdoor decorative post top fixture, cylindrical in shape with an overall height between 42.5 +/- 2.0 inches and a overall width between 16.5 +/- 0.5 inches for the globe (see attached drawing). All exterior and structural parts shall consist of aluminum alloy or cast iron. Exterior castings shall be cast in one piece having a smooth surface finish and free of mold lines. A separate cover for a ballast drawer/tray is permitted if the ballast drawer cover is secured to the luminaire body with captive fasteners. All components shall fit together snugly and shall be fitted with continuous neoprene gaskets so as to weather proof joints between metal interfaces. Visible metal surfaces shall have raised decorations integrally molded in the base piece. All metal parts shall be corrosion resistant. The luminaire shall come ready for quick an easy field assembly or fully assembled:

Each luminaire shall include the following components:

- 1) Lamp and ballast, as specified;
- 2) 120 volt ballast
- 3) Button type photocell installed on the metal body of the luminaire or ballast tray cover;
- 4) All necessary hardware and fasteners to assemble and secure on post tenon.

The luminaire must be able to accommodate 70, 100, and 150 watt, High Pressure Sodium Vapor (HPSV) or 100, 175, and 250 watt Metal Halide (MH) lamps and ballast's. The luminaire shall be either Antique "W" Series, Model WA25F, Spring City Washington 118 Globe with finial, King "Washington Globe," or an approved equal.

3) DESIGN CRITERIA

3.1) AASHTO Standards

The luminaire shall meet the requirements of the American Association of State Highway and Transportation Officials (AASHTO), Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals” latest edition.

3.2) Wind Load

All components of the luminaire shall be designed to resist (at yield strength of the materials without permanent deflection or destruction), test loads equivalent to the calculated loads developed by the velocity pressure of at least an 80 MPH wind. A minimum safety factor of 1.82 on the yield strength shall be maintained.

4) GLOBE AND REFRACTOR

The globe should be supplied in one piece, or may be made of a maximum of two pieces, of optically and chemically matching material as a unit and permanently sealed together with a chemical bonding process. The globe shall be alabaster rippled and made of UV stabilized acrylic. The globe shall be of a traditional “Washington Globe” (acorn) shape and shall contain an internal IES Type III metal louver assembly reflector designed to achieve the photometric performance specified by Illumination Engineering Society (IES). The entire globe shall be luminous without evident darkening of the top section. The bottom surface of the globe shall interface closely with the metal body of the fixture so as to provide a weather, dust, and insect proof interface. The globe or its mounting ring shall be fastened with three or more recessed set screws to the body of the fixture.

5) BALLAST

The ballast shall be securely fastened into the base of the luminaire and have quick release electrical connections. The ballast shall be a high power factor ballast of at least 90% to supply power for the specified HPSV lamp from 120 volt power supply. The space for the ballast shall have sufficient space to accommodate ballasts for 70, 100, or 150 watt HPSV and 100, 175, or 250 watt Metal Halide lamps.

6) LAMP

The luminaire may be used with wattage of lamps and are as follows:

ANSI Code - 70 watt (HPSV), with Mogul base socket
ANSI Code - 100 watt (HPSV), with Mogul base socket

ANSI Code - 150 watt (HPSV), with Mogul base socket
ANSI Code – 100 watt (MH), with Mogal base socket
ANSI Code – 175 watt (MH), with Mogal base socket
ANSI Code – 250 watt (MH), with Mogal base socket

7) PHOTOCELL

The photocell shall be a “Button type”, 3,000 tork or equal, mounted on the metal body of the luminaire or the cover of the ballast tray drawer.

8) METAL BODY

The body shall be cast in one piece and shall have raised surface decorations. The body shall taper smoothly between the slip fitter to the base of the globe. The body shall be constructed with weep holes or channels to prevent rainwater from collecting at the top of the body.

9) SLIP FITTER

The slip fitter shall have a nominal inside diameter of 3.375 inches +/- 0.25 and shall be secured to the lamp post tenon with three of four evenly spaced set screws. The slip fitter shall accommodate a tenon 3.0 inches long.

10) FINIAL

The finial shall be made of cast aluminum, and securely fastened to the top of the globe.

11) SOCKET

The lamp socket shall be a four K.V. pulse rated porcelain mogul socket.

12) FINISH

The exterior surface of the finial and luminaire body shall be factory finished with a dark green electrostatically applied polyester powder coat. The color shall be “Federal Green”, federal color 595a, #14036.

