

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING AND OPERATIONS

JUNE 2016

BETHESDA LED GLOBE LUMINAIRE

1) PURPOSE

The purpose of these specifications is to prescribe the minimum requirements for the design, manufacture, fabrication, finishing and delivery of Bethesda LED Globe luminaire. The Bethesda Globe luminaires are intended for use in urban streetscape areas. Any manufacturer, distributor or vendor who submits a bid shall agree to comply with these specifications and attached drawings.

2) DESCRIPTION

This luminaire shall be an outdoor decorative post top fixture, cylindrical in shape with and overall height of 42 +/- 1 inches and a maximum width of 19 +/- ½ inches at top (see attached drawings). All exterior and structural parts shall be cast of aluminum alloy. Exterior castings shall be cast in two pieces, have a smooth surface finish, and be free of mold lines. All components shall fit together snugly so as to provide weather-proof joints in the luminaire top. All visible metal components shall have raised surface decorations or ribs, as shown on the attached drawings, which are molded integrally with the base piece. Likewise, the hinges between the top and main body as well as between the driver cover and the base shall be cast integrally with the piece or bolted through the base piece. All metal parts shall be corrosion-proof. The luminaire shall come ready for quick and easy field assembly or fully assembled and shall include the following components:

- a) Lamp;
- b) Twist-Lock type photoelectric cell installed on the ballast cover;
- c) 120 Volt Driver with 10KV surge protection
- c) All necessary hardware and fasteners to assemble and secure on a 2 7/8 inch nominal diameter cast iron or aluminum tenon.

The luminaire must be able to accommodate a 120 volt drive and surge protector.

3) LENS

The lens shall consist of a seamless flat glass, not subject to deterioration by natural light. The lens shall have a continuous neoprene waterproof gasket at top. The gaskets shall fit into grooves molded into the top or over retaining rings molded inside the top plate.

4) METAL CAGE

The metal cage shall be constructed of die-cast A360 aluminum alloy. The metal cage shall have 4 legs each with a square decorative block with solid rectangular band around the top of the cage between each decorative block. The support columns shall consist of four (4) dual columns connecting the top and bottom of the fixture

5) HINGED LUMINAIRE TOP & OPTICAL SYSTEM

The hinged luminaire top shall consist of an LED optic assembly and all exterior components visible in plain view above the lens. The optical system shall be located in the top cover of the fixture. A gasket between the cover and the ring along with a flat glass plate and gasket beneath the LED panel and create a sealed optical compartment that will meet IP rating. The top must have an attached, removable brace to support the top when open. The optical system shall provide an IES asymmetric or symmetric full cut off distribution.

6) ELECTRICAL MODULE

The electrical components shall be mounted on a steel plate that is removable without use of tools. All components shall be plug-in. The housing door shall be hinged and be latched to provide east access to the electrical module. The housing door shall be fastened by a captive fastener.

7) DRIVER and SURGE PROTECTOR

The driver shall be mounted to facilitate easy removal for maintenance operations. The driver shall be equipped with a 10KV Surge Protection and suppression system. All electrical connections shall be polarized and of plug-in design. The driver shall be wired to receive 120 volt AC current. The driver shall reliably start and operate the lamp in ambient temperatures down to minus 30 degrees. The terminal block shall be capable of accepting up to a #6 AWG wire.

8) LED Color Temperature (CCT) and Rendering Index (CRI)

The Correlated Color Temperature (CCT) shall be a nominal Kelvin Temperature of 3500K ± 200 K with a minimum Color Rendering Index (CRI) of 70.

9) PHOTOCELL

The photocell shall be a twist-lock and shall be mounted inside the fixture.

10) UNDERWRITERS LABORATORY LISTING

The entire luminaire assembly shall be U.L. listed and suitable for wet locations.

11) EXTERIOR FINISH

The exterior finish shall be "Federal Green" Federal Standard 595B Color # 14036 or Tiger Drylac #RAL6009 electrostatically-applied thermoset polyester powder coat.

SPECIFICATIONS FOR STREETLIGHT HARDWARE

IFB # 1063092

