

Special Specification 6106

LED Bridge Flood Lighting Assembly



1. DESCRIPTION

Furnish, fabricate and install color-changing LED (light emitting diode) bridge flood lighting assemblies. A color-changing LED bridge flood lighting assembly is the complete assembly of light fixture, LED light source, lens, mounting brackets, connectors, drivers, power supplies, visors, components and hardware constituting a complete operational lighting unit.

2. MATERIALS

For the installation of all lighting assemblies, use new materials that meet the requirements of the NEC, UL, CSA, and NEMA. Provide all new materials that comply with the details shown on the plans, the requirements of this Item and to the pertinent requirements for the following items:

- Item 616, "Performance Testing of Lighting Systems"
- Item 618, "Conduit"
- Item 620, "Electrical Conductors"
- Special Specification 6099, "Bridge Lighting DMX Control System"

2.1. **Basis of Design.** Basis of Design specifications for the bridge color-changing LED flood lighting assembly are as follows:

2.1.1. **Option 1:** Winona Lighting PSP-717-6020-RGB-120-277v-A3-WHT-STD-DPI-4-W-120-277v-SCL-1418-*Length*-GV4-WHT-BF4-WHT-CG2;

2.1.2. **Option 2:** Traxon Washer Allegro AC XB-mod; or

2.1.3. **Option 3:** Approved equivalent according to the following specifications:

- LED Flood light IP66 rated with a white glare visor and DMX/Power Integrator (remotely mounted)
- Finish: Textured white paint
- Fixture Dimensions: 8-1/2 in. overall height, 7 in. body height, and 6-1/8 in. diameter
- Beam Distribution: Asymmetric 60° x 20° (mounted for a horizontal distribution to align with bridge trusses)
- Lumens: 792
- Wattage: 17W
- Efficacy: 47.2
- Max Candela: 2,115
- Voltage: 120-277v
- Lumen Maintenance: 50,000 hours L70@ 50°C
- Housing: Die Cast Aluminum
- Finish: Polyester powder coat painted finish, textured white paint
- Lens material: Clear Tempered Glass
- Temperature ranges: -20°C to +50°C (-4°F to +122°F)
- Certification/Compliance: ETL, cETL, IP66, FCC Class A Part 15 subpart B
- Weight: 8 lbs
- Warranty: 5 yrs.

2.1.4. **Submittals.** Provide 2 sets of submittals of fixtures, controls, and mounting provisions to the Lighting Designer at Gandy2 Lighting Design, 1824 Spring Street, Studio 201, Houston, Texas 77007. Provide an

additional 2 sets of submittals to the TxDOT District Engineer at 7600 Washington Avenue, Houston, Texas 77007. Obtain all pertinent approvals on the submittals before purchasing materials and beginning work.

- 2.1.5. **Warranty.** Provide manufacturer's warranty for each bridge lighting assembly that will replace failed components or parts for a period of five years from the purchase date.

3. CONSTRUCTION

Perform work in accordance with the details shown on the plans and the requirements of this Item. Use established industry and utility safety practices when installing luminaires located near overhead or underground utilities. Consult with the proper utility company before beginning work. Prevent scarring or marring of fixtures. Replace damaged components. Repair damaged painted areas of lighting assemblies.

- 3.1. **Installation.** Furnish and install Color-Changing LED Bridge Flood Light. Install each lighting assembly as shown on the plans. The Department may shift an assembly's location, if necessary to secure a more desirable location or to avoid conflict with utilities. Aim fixtures initially as shown on the plans for review. Make provisions for trial lighting of at least one side of the arch for the Lighting Designer to review and adjust fixture angle for final positioning as directed by the Lighting Designer.

Fabricate and install lighting assembly components in accordance with the details, dimensions, and requirements shown on the plans.

Follow NEC and local utility company requirements when installing the lighting assemblies. Coordinate the utility companies' work for providing service.

Complete performance test of all systems per Item 616, "Performance Testing of Lighting Systems."

4. MEASUREMENT

This Item will be measured by each lighting assembly installed.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "LED Bridge Flood Lighting Assembly." This price is full compensation for furnishing; installing; aiming and testing luminaries; LEDs; driver; power supplies; mounting brackets; internal conductors and connections; power cable and connectors from j-box to fixture and between fixtures; system performance testing; equipment; labor; tools; and incidentals.