ITEM L-150 INSTALLATION OF L-852G LED IN-PAVEMENT LIGHTS

DESCRIPTION

150-1.1 This item shall consist of furnishing and installing the L-852G LED in-pavement runway guard lights in accordance with this specification and the applicable FAA Advisory Circular. The fixtures shall be installed at the specified location and in accordance with the dimensions, design, and details shown in the plans.

This item shall include the furnishing of all equipment, materials, services and incidentals necessary to place the fixtures in operation as completed units to the satisfaction of the Engineer.

EQUIPMENT AND MATERIALS

150-2.1 L-852G LED IN-PAVEMENT RUNWAY GUARD LIGHTS.


b. EQUIPMENT SUPPLIED. The L-852G LED in-pavement runway guard lights shall be supplied for the total quantity as shown on the plans. The manufacturer shall have a downloadable electronic version of the manual available on their web site.

c. LIGHT SOURCE REQUIREMENTS. The L-852G LED in-pavement fixture light source shall be a Light Emitting Diode (LED) assembly. To minimize energy consumption, the fixture shall use only two light emitting windows. The average lifetime of the LEDs shall be a minimum of 50,000 hours at full intensity. The color emitted by the fixtures shall be unidirectional traffic signal yellow and obtained without the use of a color filter. It shall be possible to install the fixtures on existing series circuits in replacement of conventional quartz/incandescent lights without having to change the constant current regulator (CCR) or series circuit primary wiring.

d. POWER REQUIREMENTS. An option for a heater shall be available for the fixture. To reduce overall energy consumption, the heater shall be thermostatically controlled. The L-852G LED in-pavement fixture load shall be no more than 63VA without a heater kit and no more than 92.2VA with a heater kit. The fixture shall operate on either a 2.8A to 6.6A or 8.5A to 20A series circuit at 60Hz or 50Hz using 65W (without heater) or 100W (with heater) isolation transformer. The fixture shall operate on any 3- or 5-step ferroresonant or thyristor CCR that is designed in compliance with FAA AC 150/5345-10 (current edition).
e. **OTHER REQUIREMENTS.** The L-852G LED fixture shall be Style 3 (≤ ¼ inch above grade). The fixture top cover shall be a 12-inch, single-piece construction and made from forged aluminum alloy. All components shall be corrosion proof without the use of environmentally hazardous metal protective coatings. The prisms shall be field-replaceable without the use of epoxy or other sealing compounds. Remke liquid-tight stainless steel connectors shall be used for the entry and sealing of L-823 cord set wire cables to the base, allowing for cord set replacement without the use of epoxy or other sealing compounds. A Schrader valve with removable cap shall be provided at the base of the fixture to allow for pressure testing after fixture overhaul.

### CONSTRUCTION METHODS

**150-3.1 PLACING THE L-852G LED IN-PAVEMENT RUNWAY GUARD LIGHTS.** The contractor shall furnish and install each L-852G LED in-pavement fixture as specified in the proposal and shown in the plans. Each L-852G LED in-pavement fixture shall be mounted on the appropriate base can.

**150-3.2 TESTS.** Each L-852G LED fixture shall be connected to the series circuit using the manufacturer’s recommended isolation transformer. The CCR shall then be tested to verify the correct output current is present at each step. The output current shall be checked with a True RMS meter using the CCR manufacturer’s instructions. The entire circuit shall then be fully tested by continuous operation for not less than 24 hours prior to acceptance. The test shall include operating the CCR in each step (Local and Remote) not less than 10 times at the beginning and end of the 24-hour test.

### METHOD OF MEASUREMENT

**150-4.1 MEASUREMENT.** The quantity of lights to be paid for under this item shall be for the total quantity of L-852G LED in-pavement runway guard lights installed and accepted as completed units, in place, ready for operation and accepted by the Engineer.

### BASIS FOR PAYMENT

**150-5.1 PAYMENT.** Payment will be made at the contract unit price for the completed total quantity of L-852G LED in-pavement runway guard lights installed, in place by the Contractor, and accepted by the Engineer. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

- Item L-150-5.1 L-852G LED In-pavement Runway Guard Lights, in Place—per each

**END OF ITEM L-150**