

## SECTION 422—NAVIGATION LIGHTS

### 422.01—Description

This work shall include furnishing, installing, and wiring navigation lights complete and ready for service on structures shown on the plans or as directed by the Engineer.

### 422.02—Materials

- (a) **Conduit, boxes, and fittings** shall conform to the requirements of Section 238.
- (b) **Conductors and electrical components** shall conform to the requirements of Section 238. No. 8 single-conductor wire shall be used from the connection at the service pole to the first junction box on the structure, and No. 10 single-conductor wire shall be used for other wiring.

### 422.03—Procedures

- (a) **Electrical Service:** Power will be furnished within 100 feet of the end of the bridge by 120/240-volt single-phase, 60-hertz, three-wire service. The Contractor shall furnish and install a wood pole on which the power company will terminate its service lines. The Contractor shall install service entrance equipment on the wood pole in accordance with the requirements of Standard SE-8. Safety switch shall be rated at 30 amp, 240 volts, two pole, solid neutral 120 volt AC and fused for 15 amps.
- (b) **Conduit, Boxes, and Fittings** shall be installed in accordance with the requirements of Section 700.
- (c) **Lights:** Lights shall be furnished and installed in accordance with the latest rules and regulations for lighting bridges furnished by the U. S. Coast Guard and shall be subject to their approval. Materials and workmanship shall conform to the standards of NEC and the requirements of the local power company. Lights shall be equipped with an automatic lamp changer with a capacity of four lamps and a step-down transformer to operate standard low-voltage prefocused lamps. Lights shall be arranged to be turned on and off automatically so that they will burn continuously from sunset to sunrise.

Lights shall be controlled by a photoelectric control. The control shall operate a two-pole, 30 – ampere, normally open, magnetic relay mounted in a NEMA 3R control center cabinet. The control for the lights shall be mounted on the service pole.

**422.04—Measurement and Payment**

**Navigation lights** will be paid for at the contract lump sum price, wherein no measurement will be made. This price shall include furnishing and installing conduit, conductor cable, service entrance equipment, junction boxes, navigation lights, lamp changer, photoelectric control and step down transformer, control center cabinet and safety switch.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Navigation lights	Lump sum