Sample project special: 613tnl

02-03-11

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REVISION OF SECTION 613

TUNNEL LIGHTING

Section 613 of the Standard Specifications is hereby revised for this project as follows:

Subsection 613.01 shall include the following:

This work consists of furnishing and installing luminaires, lamps, conduit, cable wiring and incidental materials for lighting of the tunnel interiors in accordance with these specifications and in conformance with the details, lines, grades, and locations shown on the plans or established.

Subsection 613.06 shall include the following:

The tunnel luminaires shall be bracket mounted, suitable for being securely mounted as shown on the underside of the concrete arch of each tunnel lining.

The luminaires in both tunnels shall be controlled by a photoelectric cell located on the Power Distribution Enclosure as shown on the plans, exterior to the tunnels. The photoelectric control shall be positioned northward to minimize sun interference.

Prior to the completion of the job, each reflector and lens shall be cleaned to provide maximum lumen output.

Luminaires shall be mounted as shown on the plans. Beam angle setting shall be adjusted to meet illumination requirements.

Subsection 613.07 shall include the following:

Conduit terminations at NEMA 4 watertight boxes and enclosures shall be made with cadmium‑plated hubs providing a watertight seal and positive grounding continuity.

Expansion/deflection fittings, OZ/Gedney Type DX or approved equal, shall be used at construction joints in tunnel construction. Expansion fittings, OZ/Gedney Type AX or approved equal, shall be used where indicated on the plans, with conduit supports fixed at the boxes and allowing for expansion and contraction throughout the run by use of conduit one‑hole pipe straps and clamp backs installed to provide a slip fit.

Conduits entering Power Distribution Enclosure shall be sealed by the use of paraffin or other approved sealing compound.

Pull box locations will be as approved by the Engineer. Pull boxes shall be spaced at not over 60 m (200 feet) from each other.

Subsection 613.10 shall include the following:

The Contractor shall operate the tunnel lighting system continuously for ten consecutive days.

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REVISION OF SECTION 613

TUNNEL LIGHTING

Subsection 613.11 shall include the following:

Tunnel lighting will not be measured, but will be paid for on a lump sum basis for the entire lighting system for both tunnels, installed, complete, and operable. The system shall include all materials, equipment, and labor required for the entire lighting system, including but not limited to: luminaires, lamps, ballasts, conduit and fittings, anchors and fasteners, junction boxes, wiring, pull wire, photoelectric control, grounding, and Power Distribution Enclosure with circuit breaker panel boards, lighting contactors, control and relay devices, stepping switch, dry type transformer, terminal blocks, fuse and holder, wiring channels, toggle switch, duplex receptacle, and enclosure light fixture.

Subsection 613.12 shall include the following:

**Pay Item Pay Unit**

Tunnel Lighting System Lump Sum