

EXPECTED IMPLEMENTATION (FY 2023-24)

676 TRAFFIC CABINETS (REV 10-24-22) (FA 10-24-22) (FY2023-24)

SECTION 676 is deleted and the following substituted:

676-1 Description.

Furnish and install traffic cabinets as shown in the Plans. Meet the requirements of Section 603.

676-2 Materials.

676-2.1 General: Use traffic signal controller cabinets, ITS cabinets, and small equipment enclosures that meet the requirements of Section 995-11 and are listed on the Department's Approved Product List (APL). Provide the cabinet with an automatic transfer switch if shown in the Plans. New signal installations must include controller cabinets that will interface with the dimming circuit of LED street lighting with an auxiliary relay if shown in the Plans. Provide cabinets with No. 2 locks unless otherwise shown in the Plans.

676-3 Installation Requirements.

676-3.1 General: Ground all cabinets in accordance with the requirements of Section 620. Keep the ground wire from the cabinet ground busbar to the ground rod assembly or array as short as possible. Ensure the ground wire is not in contact with any other part of the cabinet. Controller cabinets shall be wired in accordance with the signal operating plan specified in the Contract Documents. If phases are omitted for future use, the cabinet must be wired for these future phases. However, the load switches for the future phases do not have to be furnished. All field drilled conduit entrance holes or other holes must be reamed and free of burrs. All conduit connections to cabinets and small equipment enclosures must be weatherproof.

676-3.2 Traffic Signal Controller Cabinet Installation: Install traffic signal controller cabinets in accordance with Standard Plans, Index 676-010.

676-3.2.1 Pole Mounted Cabinets:

(a) Fasten the pole mounted hardware furnished with the cabinet to the cabinet using bolts no less than 1/2 inch threaded diameter. Ensure all connections are watertight.

(b) Use stainless steel bands for mounting cabinets onto steel strain poles.

(c) Use stainless steel bands or lead anchors (or equivalent) for mounting cabinets onto concrete strain poles.

(d) Use stainless steel bands or lag bolts for mounting cabinets onto wood poles.

676-3.2.2 Base Mounted Cabinets:

(a) Use anchor bolts to fasten base mounted cabinets to the concrete base.

(b) Seal the joint between the bottom of the cabinet and the concrete base (inside and outside of cabinet) with a clear silicone rubber sealant.

EXPECTED IMPLEMENTATION (FY 2023-24)

(c) Construct the base for the cabinets with concrete in accordance with Section 347. Make the concrete base for the cabinet level, free of honeycombs and as smooth as possible. Temporarily seal the end of conduit risers located in the base before placing the concrete. Position the end of the conduit risers a minimum of 2 inches above the finished surface of the concrete base.

676-3.2.3 Field Wiring:

(a) Terminate signal cable, interconnect cable, and loop lead-in wires on the appropriate terminal strips in the controller cabinet with insulated terminal lugs. Use a calibrated ratchet type crimping tool to install the insulated terminal lugs onto the field wires.

(b) Label spare circuits of the signal and interconnect cables and connect them to the cabinet ground busbar.

(c) Neatly bundle and identify all field wiring cables in the controller cabinet.

676-3.3 Intelligent Transportation System Cabinet Installation: Mount the cabinet as shown in the Plans and provide the cabinet with the necessary base or pole mount hardware. Ensure that pole and structure-mounted field cabinets have mounting brackets on the side so that both cabinet doors are fully functional. Provide an adapter bracket for pole mounted cabinets that is designed to allow banding straps to be installed without obstructing pole handholes.

Make provisions for all data, control, and confirmation connections between the ITS device and field cabinet and for any required wiring harnesses and connectors.

Place a heavy-duty resealable plastic bag on the backside of the main cabinet door for storing a list of terminal block connections and other cabinet documentation.

Place all equipment in the cabinet according to the recommendations of the manufacturer. Maintain a minimum clearance of 6 inches between the top of the cabinet and the top of any equipment placed on the top shelf of the cabinet and a minimum clearance of 2 inches between each side of the cabinet and any equipment placed on the cabinet shelves.

Construct a maintenance service slab as shown in Standard Plan 676-010 or as shown in the Plans. Construct the maintenance service slab with concrete in accordance with Section 347.

676-3.4 Small Enclosure Installation: Mount the enclosure on a pole or support structure as shown in the Plans and provide any hardware necessary for a complete and accepted installation.

676-4 Warranty.

Ensure cabinets and enclosures have a manufacturer's warranty covering defects for a minimum of two years from the date of final acceptance in accordance with 5-11 and Section 608. The warranty must include providing replacements, within 10 calendar days of notification, for defective parts and equipment during the warranty period at no cost to the Department or maintaining agency.

676-5 Method of Measurement.

The Contract unit price each for cabinet or enclosure, furnished and installed, will include all materials specified in the Contract Documents, and all labor, equipment, and miscellaneous materials necessary for a complete and acceptable installation.

EXPECTED IMPLEMENTATION (FY 2023-24)

No separate payment will be made for a traffic signal controller cabinet when included with the controller assembly as per Section 670.

676-6 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section.

Payment will be made under:

- Item No. 676- 1- Traffic Signal Controller Cabinet - each.
- Item No. 676- 2- ITS Cabinet - each.
- Item No. 676- 3- Small Equipment Enclosure - each.

