

## **TRAFFIC MONITORING SITE CABINET.**

**(REV 6-21-99) (FA 7-20-99) (7-02)**

PAGE 797. The following new Section is inserted after Section 715:

### **SECTION 746 TRAFFIC MONITORING SITE CABINET**

#### **746-1 Description.**

Install Types III, IV or V Traffic Monitoring Site (TMS) Cabinet as shown in the plans.

#### **746-2 Materials.**

**746-2.1 General:** Only use Traffic Monitoring Site Cabinet and/or components currently listed on the Department's Approved Products List (APL). Ensure that the cabinet and components are compatible with the other components installed at the location. Ensure that the Traffic Monitoring Site Cabinet is marked in accordance with Section 748 and that the markings are visible after installation.

The approval process for equipment and/or material(s) used at a Traffic Monitoring Site is covered in Section 748.

**746-2.2 Cabinet:** Provide a cabinet constructed of 0.125 inch [3.18 mm] sheet aluminum Type 5052-H32. Ensure that all exterior seams are continuously welded, smooth, free of cracks, blow holes or other irregularities and the inside and outside edges are free of burrs. Ensure that the outside surface of the cabinet has a smooth, uniform, and natural finish and the cabinet top has a sloped surface to prevent accumulation of water.

Provide a vent between the top of the door and the top of the cabinet, covered by screen material with a maximum opening of 0.125 inch [3.18 mm].

**746-2.3 Cabinet Door:** Equip the cabinet with a continuously hinged door constructed of 14 gauge stainless steel or 0.125 inch [3.18 mm] aluminum that occupies 80% of the front surface area of the cabinet and is rain and dust tight. Install the door such that it is hinged on the right side of the cabinet. Ensure that the hinge pin is stainless steel and capped at the top and bottom to deter tampering. Construct the door double flanged on all four sides and equip it with a restraint that will hold the door open in the 90 degree and 120 degree position.

Use a three point latching system, consisting of the following latch points:

- (1) Center of the cabinet - latching handle with provisions for a padlock in the center position;
- (2) Top of the cabinet - controlled by the door handle; and
- (3) Bottom of the cabinet - controlled by the door handle.

Ensure that latching points (2) and (3) remain in the locked position until the latching handle is rotated to the unlocked position.

Provide the cabinet door with louvered vents meeting the NEMA rod entry test for 3R enclosures. Ensure that the louvers are covered by a replaceable air filter mounted inside the cabinet door with either brackets or clamps that will allow easy removal and replacement.

**746-2.4 Shelf:** Ensure that the cabinet has an adjustable shelf, constructed of 0.08 inch [2 mm] thick aluminum, that is adjustable to within 15 inches [380 mm] of the top of the cabinet and to within 26 inches [650 mm] of the bottom of the cabinet in 2 inches [50 mm] increments.

**746-2.5 Cabinet Sizes:** Minimum dimensions for cabinets are:

Type III – 32 inches high, 25 inches wide 14 inches deep [0.81 m high, 0.63 m wide, 0.36 m deep];

Type IV – 48 inches high, 29 inches wide, 16 inches deep [1.22 m high, 0.74 m wide, 0.41 m deep]; and

Type V – 67 inches high, 24 inches wide, 30 inches deep [1.70 m high, 0.60 m wide, 0.76 m deep]. (CalDOT Type 334).

**746-2.6 Backplane and Cabinet Cable:** Furnish and Install as specified in the Contract Documents.

### **746-3 Installation Requirements.**

**746-3.1 General:** Install the Traffic Monitoring Site Cabinet in accordance with the plans, Design Standards and manufacturer's recommended installation procedure. Ensure that all conduit entrance holes or other holes which are field drilled are reamed and free of burrs. Make all conduit connections to the cabinet watertight by the use of clear silicone rubber sealant. Perform all excavation and/or backfill in accordance with 125-4 and 125-8.2.

**746-3.2 Pole Mounted Traffic Monitoring Site Cabinets (Types III and IV):** Fasten the pole-mounted hardware to the cabinet, making all connections watertight. Use stainless steel bands or lead anchors (or equivalent) for mounting cabinets onto concrete strain poles.

**746-3.3 Base Mounted (Type IV and V) and Pedestal Mounted (Type III) Traffic Monitoring Site Cabinets:** Construct the base for the cabinet with Class I Concrete and finish the surface smooth and level.

Temporarily seal the ends of the conduit risers located in the base before placing concrete. Ensure that the end of the conduit riser(s) is a minimum of 2 inches [50 mm] above the finished surface of the concrete base.

Use anchor bolts to fasten base mounted cabinet to the concrete base. Seal the joint between the bottom of the cabinet and the concrete base (inside and outside of cabinet) with a clear silicone rubber sealant.

**746-3.4 Grounding:** Ground the Traffic Monitoring Site Cabinet in accordance with the requirements of Section 620.

Keep the ground wire from the cabinet ground bussbar to the ground rod assembly or array as short as possible.

### **746-4 Guaranty Provisions.**

**746-4.1 Contractor's Responsibility:** Secure all guaranties that are customarily issued by the equipment manufacturers for the specific equipment included in the Contract. Ensure that

the form in which such guaranties are delivered includes the provision that they are subject to transfer to the Department, and is accompanied by proper validation of such fact. Transfer guaranties at final acceptance of the work (or equipment) by the Department.

**746-4.2 Terms:** Ensure that the manufacturers of the equipment stipulate the terms of guaranties when submitting a request to the Department for certification and for equipment submittal for construction projects. Include terms for a specified service performance with provisions for repair parts and labor, or for replacement. Provisions shall define the equipment “installation date” as the date for such guaranty to be in effect. For construction projects, the “installation date” is the first day of equipment “burn-in”. For warehouse purchases, the “installation date” is the date of visual inspection approval, not to exceed 10 days after delivery date.

**746-4.3 Conditions:** When guaranty is available, ensure that a written and signed guaranty accompanies the manufacturer’s billing invoice. The Engineer will sign and retain the original and provide a copy to the manufacturer. If the Contractor does not comply with the terms of the guaranty, the Department may suspend the certification. Comply with additional terms and conditions as stated in purchasing agreements.

#### **746-5 Method of Measurement.**

**746-5.1 General:** Measurement for payment will be in accordance with the following tasks.

**746-5.2 Furnish and Install:** The Contract unit price each for Traffic Monitoring Site Cabinet, furnished and installed, includes the Traffic Monitoring Site Cabinet and/or components as specified in the Contract Documents, all equipment, materials, and labor necessary for a complete and accepted installation.

**746-5.3 Furnish:** The Contract unit price each for Traffic Monitoring Site Cabinet, furnished, includes the Traffic Monitoring Site Cabinet and/or components as specified in the Contract Documents, plus all shipping and handling costs involved in the delivery as specified in the Contract Documents.

**746-5.4 Install:** The Contract unit price each for Traffic Monitoring Site Cabinet, installed, will include all materials and labor necessary for a complete and accepted installation. The Engineer will supply the Traffic Monitoring Site Cabinet and/or components as specified in the Contract Documents.

#### **746-6 Basis of Payment.**

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

Payment will be made under:

- Item No. 746- 7- TMS Cabinet - each.
- Item No. 2746- 7- TMS Cabinet - each.