

734 TRAFFIC CONTROLLER ASSEMBLY

The traffic control assembly which includes the controller unit, auxiliary equipment, controller cabinet, foundation, conduit, anchor bolts, and clearance pad must conform to the requirements of the Project Plans and specifications. The unit must be fully inspected and accepted by the Electrical Inspector before incorporation into the project. The Contractor's material proposal shall include all required documentation related to the controller assembly. The specifications provide a list of the required documentation.

All traffic signal controller units require testing and pre-approval by the Department. The Contractor must deliver a complete controller assembly to the Department for testing. In the event the project falls under a local government jurisdiction, the unit should be delivered to that local government's traffic operations facility for their testing and approval.

734-2 Materials

734-2.03 Control Cabinets

The traffic control cabinets listed in the Project Plans and in the specifications are used to house pretimed and actuated signal controller assemblies. This includes intersection and auxiliary control cabinets. Housings must be NEMA approved, Type 3, weather resistant, and properly painted to meet specification requirements. The cabinets should be manufactured to meet the specific requirements of the plan details or specifications including the standard security measures. The specifications provide a list of individual components that should be considered as part of the cabinets and the Inspector should be satisfied that these are being furnished complete-in-place.

734-3 Construction Requirements

It is the responsibility of the Inspector to ensure that the Contractor installs all equipment according to the Project Plans, Special Provisions, and the Standard Specifications. This includes the correct wiring of all equipment, labeling of wiring, furnishing wiring diagrams, signal phase layout, and any other incidental work called for in the contract documents.

On construction projects involving intergovernmental agreements, the Inspector may have to coordinate his efforts with representatives of the local jurisdiction and obtain their approval prior to accepting any portion of the work as being complete.

Construction and Inspection Requirements

- Were signal control cabinets and equipment delivered to the Department (Phoenix Traffic Operations) or local government agency's facility for testing approval?
- Was a 5/8-inch (16-millimeter) by 10-foot (3-meter) ground rod installed through the 1-inch (25-millimeter) sleeve in the foundation before the cabinet was set?
- Was the bottom of the cabinet sealed between the cabinet and foundation with a good quality caulk?
- Was the photocell oriented to the north?
- Service load center cabinets and service entrance equipment will be checked by the Electrical Inspector to verify:
 - A. Were all cabinets checked for conformity with the approved shop drawing and/or Standard Drawing?
 - B. Were all components in a 240/480 volt circuit rated for 600 volt operation and all other components rated for 250 volt operation?

- C. Did the Contractor consult with the utility company to establish and install the proper amperage interruption capacity breaker?
- D. Was the meter socket approved by the utility company?
- E. Did the Contractor and Inspector meet with the utility company in the field to verify the exact location of the service run?
- F. Were all live electrical components protected by a dead-front panel?
- G. Were all circuit breakers labeled for correct circuit number?
- H. Is there a wiring diagram placed in the cabinet?
- I. Did the Inspector approve all equipment and wiring before the Contractor contacted the utility company for hook-up?
- J. Was a ground resistance test performed and recorded in the presence of the Electrical Inspector on each ground rod at the service entrance equipment before being energized?
- K. Was the ground resistance test reading 25 ohms or less?
- L. If the ground resistance test reading was over 25 ohms, were additional ground rods installed and retested to achieve proper grounding below 25 ohms?
- M. After the electrical service was energized, was a voltage and amperage reading taken on each circuit?
- N. Were padlocks furnished and installed? Have plans been made for key transfer?