

MOUNTING ASSEMBLIES REQUIREMENTS

NOTES:

1. All materials and constructions shall conform to the requirements of the Specifications.
2. All proprietary parts of the traffic signal mounting assemblies provided at any one intersection shall of the same manufacturer. The exception to this is the Type II plumbizer mount if it comes pre-assembled with the traffic signal face assembly, or any part of the mounting assembly which is common (e.g. 1-1/2 pipe, flat washers, misc. nuts and bolts). All painted finishes shall match.
3. All signal framework or mounting assemblies shall meet or exceed the applicable requirements the ITE Equipment and Material Standards Chapter 2 Vehicle Traffic Control Signal Heads (VTCSH) Section 6.00 Mounting Assemblies.
4. The mounting assemblies shall consist of the parts shown per T.S. 9 and 10 Series drawings. See the project plan pole summary for the mountings and signals specified. All mountings shall be designed and fabricated so they are compatible and interchangeable for all traffic signal face assemblies and pedestrian signal products commonly used and approved by ADOT (e.g. McCain, Eagle, Econolite). Interchangeable means they can be readily adjusted without physical alternation or addition to account for variations between manufacturers.
5. All mounting assemblies shall be suitable for use for the poles and mast arms specified herein per the T.S. 4 Series. Also, see T.S. 4 Series for pole drilling details for mounting bolts and electrical wire and cable access. All holes drilled for wire and cable access shall be reamed, filed, rounded and de-burred to prevent any insulation or jacket damage. As an alternative a rubber grommet can be installed in the wire and cable access hole that is drilled into the pole.
6. Prior to fabrication of the mounting assemblies the contractor shall check the project pole summary plans to ensure that the mounting assemblies specified meet plan and field needs. This includes the correct mounts for the signals specified and the number of signals specified. The configurational differences between the make and type of signal shall also be accounted for. Attention shall be given to the needed orientation and aiming of each signal as it relates to the proposed pole locations, roadway / crosswalk and traffic signal control phase assignment and the MUTCD required "cone of vision" and minimum visibility distances. A pedestrian signal shall be visible at the beginning of the crosswalk all the way across the street till 10 feet or less from end of the crosswalk. The contractor, per the Engineers approval, shall make adjustments as necessary.
7. The orientations and associated mounting arm pipe lengths shown on these T.S. 9 series drawings are typically and may not match field conditions. Adjustments and changes to pipe lengths shall be made to enable that all signals can be properly aimed without physical or visual conflict or overlap of the signals themselves or their backplates (as applicable) and visors. The contractor shall make field adjustments if directed to do so by the Engineer. This includes relocation of the mount and change of mounting pipes. In these cases it is acceptable to custom cut, thread and paint pipes in the field, if standard length do not work.
8. When required the mount assemblies shall include the necessary gaskets, gasket washers and physical features to make all connections weather-proof. The gasket material shall be neoprene or similar suitable synthetic rubber gasket material which is rated for outdoor use. The use of "neoprene" on all the T.S. 9 Series drawings shall be regarded as a brand name or equal specification.
9. The terminal blocks shall be rated to operate and 120 VAC as a minimum. The terminal compartment shall be fitted with at least a 12-position, 24-terminal block. Larger terminal blocks shall be provided if needed to support the cabling plan for the intersection. The terminal compartment shall be manufactured of appropriate bronze or steel alloy and shall have a rain-tight weather-proof cover.
10. Terminal block units shall come pre-assembled and shall have the required wiring harness with spade type crimp on connectors. The individual conductors shall be # 16 or #14 AWG stranded copper conductors with Type TFFN, THW, XHHW-2 or similar insulation. The lengths of conductors supplied shall be sufficient to extend from the terminal block to the signal terminal block with some slack. The basic color code of the conductors' insulation shall be as specified per the tables on sheet 2.
11. All mounting assemblies shall be powder coated or painted a minimum of two coats of black paint. The finish achieved shall have a minimum outdoor weathering rating of 12 or more years. The standard dull black color is Federal Standard (FS) 595A or b 37038. Any field damage shall be repainted with a matching color. All painted surfaces shall match.
12. The lock nipple length for the 8-inch indication signal face assembly will vary from the 12-inch indication signal face assembly. Typically it is 1-1/8" for the 8-inch and 1-3/4" for the 12-inch. This applies to all mounts except the Type I, II and XI.
13. The configuration of the ornamental cap or end piece can vary. The seal which the ornamental cap or end piece forms with the top of the traffic signal face assembly shall be rain-tight or weather-proof. The seal when it is on the bottom of the signal shall be such that it allows water to drain if it gets inside the traffic signal face assembly.
14. All wiring and cables shall be installed in a manner that does not result in damage. All wires and cables shall be inspected to ensure there are no chafed wires. All electrical connections shall be made in a proper manner that matches the terminal block. Crimp connectors shall be made with a calibrated crimping tool. Solder ends for connecting to terminal strips. Connections shall be checked and tested to ensure they are not loose. All unused signal cable wires or individual conductors shall be capped or terminated in a proper and safe fashion.
15. All mounting hardware shall be properly set and tightened.
16. Once installed traffic signal face assemblies not in use (dormant) shall be covered with an approved re-usable traffic signal face assembly bag. The bag shall be sized to fit the signal it is covering. The item used to "bag" or cover the signals shall be one that is specifically designed and manufactured for this purpose. The use of tied or duct taped burlap, cloth, or plastic is not acceptable. The signal bag shall be made with a durable nylon that shall slip over the signal assembly and can be secured on the back with snaps and/or buckles. The front of the signal back shall include holes or a mess that enables the signal indication to be visually checked from the ground when the intersection is tested.

NOT TO SCALE

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