

ENGINEERING DIRECTIVE

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CHIEF ENGINEER

Ornamental Traffic Signal and Highway Lighting Structures

The purpose of this Engineering Directive is to establish a formal procedure for the use and funding of ornamental traffic signal posts, traffic signal mast arms, and highway lighting structures on MassDOT Highway Division projects. For the purpose of this Directive, ornamental traffic signal and highway lighting structures are any structures that do not meet the standard designs for these structures, as indicated below.

This Engineering Directive is effective immediately and applies to all projects not yet advertised for construction or not yet issued a State Highway Access Permit.

Standard Designs

The standard designs for MassDOT traffic signal and highway lighting structures are as follows:

- Traffic Signal Posts: Aluminum poles with a spun finish and square case aluminum bases
- Traffic Signal Mast Arms: Steel pole upright and arm with a galvanized finish
- Highway Lighting Structures: Steel pole upright and arm with a galvanized finish

Traffic Signals

Traffic signals installed within the State Highway Layout shall conform to the standard designs.

Traffic signals installed on municipal ways shall conform to the standard designs unless an alternate design style or finish has been requested by the Chief Executive or Administrator of the municipality and determined acceptable by MassDOT. MassDOT shall not approve designs that will not meet performance requirements or that will not conform with other system components or construction standards.

Any additional construction costs associated with non-standard designs shall be considered part of the normal project costs and shall be borne by MassDOT.

Highway Lighting

Highway lighting structures installed within the State Highway Layout shall conform to the standard designs.

Highway lighting structures installed on municipal ways shall conform to the standard designs unless an alternate design style or finish has been requested by the Chief Executive or Administrator of the municipality and determined acceptable by MassDOT. MassDOT shall not approve designs that will not meet performance requirements or that will not conform with other system components or construction standards.

Any additional construction costs associated with non-standard designs shall be considered part of the normal project costs and shall be borne by MassDOT.

Other Considerations

MassDOT may be required to meet certain design criteria for traffic signal and highway lighting structures due to a Section 106 Adverse Effect finding or other environmental and/or historic regulations for some projects. In these cases, ornamental-style structures may be installed on State Highways.

For State Highway locations where they are not otherwise required, ornamental traffic signals and/or highway lighting structures may be installed only if approved by the District Highway Director. Any additional costs associated with non-standard designs shall be considered part of the normal project costs and shall be borne by the project proponent.

A painted finish on standard traffic signal and highway lighting structures may also be considered as an alternative to standard or ornamental designs.

The municipality shall submit any requests for the use of ornamental structures to MassDOT prior to the 75% Design Submission.

The use of proprietary structures or proprietary traffic signal or highway lighting system components on projects advertised by MassDOT must be approved in accordance with Department SOPs for the use of proprietary items.

Appropriate design costs for the use of non-standard structures shall be included in the scope of work for the project designer. Additional or unknown costs associated with this work are the responsibility of the project proponent for design.

The project designer is responsible for designing any non-standard traffic signal or highway lighting structure and foundation to ensure that it meets or exceeds the latest edition of AASHTO's *Standard Specifications for the Structural Supports for Highway Signs, Luminaires, and Traffic Signals* using the Wind Zone Map shown in the Standard Drawings; non-conformance with these structural design standards will not be allowed. In the case of

proprietary designs, it is acceptable to include calculations provided by the manufacturer in lieu of calculations from the project designer.

The project designer is responsible for all Shop Drawing and load calculation review and approval and all other construction phase services, as needed.

MassDOT shall not approve designs that will not meet performance requirements or that will not conform with other system components or construction standards.

The system owner is responsible for any and all operational, maintenance and replacement costs and for providing traffic signal and highway lighting systems that satisfy operational requirements.