STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION
NASHVILLE, TENNESSEE 37243-0348

INSTRUCTIONAL BULLETIN NO. 11-04

Regarding Traffic Signal Support Poles Used on Metro Nashville Public Works Projects

Previously, roadway plans for Metro Nashville projects that included traffic signal support poles with mast arms required the contractor to follow Metro standard drawings when fabricating the poles. Due to changes in the current edition of the Standard Specifications for Signs, Luminairies and Signals requiring a more extensive fatigue design on cantilevered traffic signal supports, reference to Metro Public Works Standards will no longer be allowed until at such time the standards have been revised to comply with current code.

Effective immediately, following note shall be added to the roadway plans for all Metro Nashville projects that include traffic signal support poles with mast arms or as specified by the ITS, Signals, and Standards Section .

The Traffic Signal Support Poles shall be designed in accordance with the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminairies, and Traffic Signals (Current Edition with Addenda). Wind Loads shall be based on a Basic Wind Speed of 90 mph with a Recurrence Interval of 50 years. Use the Fatigue Category as noted on each Proposed Signal Layout. Fatigue Loads are based on the Requirements of Section 11.7 and the following loads:

- ***Galloping*** **– No design necessary. Vibration Dampeners shall be used on all Mast-Arms that are 50' or longer.**
- ***Vortex Shedding*** **– Not applicable on Traffic Signal Supports with a tape of at least 0.14 in/ft.**
- ***Natural Wind Gusts*** **– The Yearly Mean Wind Speed for Natural Wind Gusts shall be 11.2 mph.**
- ***Truck-Induced Gust*** **– Traffic Signal Support Poles shall be designed to include Truck-Induced Gusts. The Average Truck Speed is noted on each Proposed Signal Layout.**

The Traffic Signal Support Poles shall be Poles with Curved Mast-Arm(s) in accordance with Metro Public Works. For Pole and Arm Details, contact Mike Hirtzer at 615-880-3261.

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