

New Jersey Department of Transportation CORRECTIVE ACTION NOTICE

CAN No.080

CAPITAL PROGRAM SUPPORT

Director: Walt McGrosky

Telephone: (609) 530-5367

Approved: Walt McGrosky

Date: 02/01/2012

Subject: NJDOT Design Criteria for Lighting Standards (with or without mast arm)

Bureau(s) Affected: All Design Consultants, In-house Design Services, Traffic Engineering, Bureau of Roadway Maintenance Engineering & Operations, Structural Engineering

Description of Issue(s):

NJDOT Design Criteria for Lighting Standards installed in various locations throughout the State.

Corrective Action Plan:

Design shall be based on 2009 AASHTO LTS Specifications, NJDOT Design Manual for Bridges and Structures 5th Edition and modifications.

The design requirements are clarified as follows for Lighting Standards:

- Use 2009 AASHTO Appendix C Wind Speed Map based on 50-year mean reoccurrence interval.
- Design life 50 years.
- Minimum design wind speed shall be 80 miles per hour (mph).
For the regions east of the NJ Garden State Parkway in the counties of Cape May, Atlantic, Burlington, Ocean, and Monmouth, the design wind speed shall be 90 mph.
- Use AASHTO Section 3 Group Load Combinations. For wind pressure loads, use AASHTO Appendix C wind pressure equation with all coefficients.
- For the regions east of the NJ Garden State Parkway in the counties of Cape May, Atlantic, Burlington, Ocean, and Monmouth, require fatigue design for all welded and cutout (hand hole) details.
- Deflection requirements: In addition to AASHTO and NJDOT Standard Electrical Detail requirements, the maximum horizontal deflection at the top of the assembled pole with fixtures due to 40 mph (Group II load) shall not exceed 1.25% of total height of pole assembly.
- Anchor bolts shall be designed to meet strength and fatigue requirements.
- Structural Performance and Breakaway Dynamic Performance of the transformer base shall be in accordance with AASHTO LTS Specifications.
- Information on luminaires (height, weight, projected area etc.) shall be based on NJDOT Standard Electrical Details and electrical design requirements.
- On the contract plans, indicate lighting pole base plate height over the natural ground or water.
- All welds shall be made conforming to AWS D1.1 for steel and AWS D1.2 for aluminum.

Implementation: Immediate

Superseded