

ORIGINATION FORM

THE INFORMATION BELOW IS TO BE PROVIDED BY THE ORIGINATOR (The person who receives or originates the issue and needs to forward the issue for action.)

Specification: SECTION 715

Subject: 715 Highway Lighting System.

Origination date: August 17, 2010

Originator: Andre Pavlov

Office/Phone: 850-414-4293

Problem statement:

1. The specification does not mention fabricator quality control requirements.
2. Qualified Product List Requirements for standard roadway aluminum lighting (Design Standard 17515) and high mast lighting (Design Standard 17502) are identical to the Design Standard.
3. FDOT alternate foundation design and construction requirements are insufficient.

Proposed solution:

1. Add a requirement to the Section 715-1 of the specifications requiring the fabricator to be listed on the Department's list of metal producers with an accepted quality control program.
2. Remove the QPL requirements for standard roadway aluminum lighting and high mast lighting from Section 715-1 of the Specifications. A note will be added to Design Standard 17502 and 17515 stating "In accordance with Specification 5-1.4.2, shop drawings are only required for additions, deletions, or modifications to this Design Standard". The QPL requirements for these two items were initiated when the Department's list of metal producers with an accepted quality control program did not exist.
3. Remove the FDOT specification for alternate foundations. Alternate foundations can be proposed for consideration on a project specific basis.

Information source: Structures Design Office, District Structures Design Engineers

Recommended Usage Note:

Estimated fiscal impact, if implemented: None

Implementation of these changes, if and when approved, will begin with July 2011 lettings.

For State Specifications Office Use Only

Begin date: 9-27-10

File Number: 7150100

Scheduled completion date: 12-31-10

Implementation date: 7-11

Implementation team member: Frances Thomas

Usage Note: All Jobs

Notes: When approved, roll into current SS7150100.



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M E M O R A N D U M

DATE: October 8, 2010
TO: Specification Review Distribution List
FROM: Rudy Powell, Jr., P.E., State Specifications Engineer
SUBJECT: Proposed Specification: 7150100 Highway Lighting

In accordance with Specification Development Procedures, we are sending you a copy of a proposed specification change.

The changes are proposed by Andre Pavlov to:

1. Add a requirement that the fabricator is to be listed on the Department's list of metal producers with an accepted quality control program.
2. Remove the Qualified Products List requirements for standard roadway lighting and high mast lighting because the Design Standards can be used for fabrication.
3. Remove alternate foundations. Alternate foundations may be proposed for consideration on a project specific basis.

Please share this proposal with others within your responsibility. Review comments are due within four weeks and should be sent to Mail Station 75 or to my attention via e-mail at ST986RP or rudy.powell@dot.state.fl.us. Comments received after **November 5, 2010** may not be considered. Your input is encouraged.

RP/ft
Attachment

HIGHWAY LIGHTING SYSTEMS.
(REV 8-17-10)

ARTICLE 715-1 (Page 808) is deleted and the following substituted:

715-1 Description.

Install a highway lighting system in accordance with the details shown in the plans. Include in the system the light poles, bases, luminaires, ballasts, pull boxes, cable, conduit, substations, expansion joints, protective devices, transformers and control devices; all as specified or required for the complete facility.

Obtain aluminum pole and high mast light pole assemblies from a fabrication facility that is listed on the Department's list of metal producers with an accepted quality control program, meeting the requirements of 105-3. Use pole assemblies listed on the Department's Qualified Products List (QPL) when standard aluminum pole assemblies or standard high mast light assemblies are required by the Contract Documents.

Provide metal lighting poles, excluding high mast lighting, with internal vibration damping devices in accordance with Design Standard 17515 in all installations on bridges, walls and concrete median barriers.

SUBARTICLE 715-6.4 (Pages 809 – 810) is deleted.

~~———— **715-6.4 Alternate Foundation:** The Contractor may use screw type foundations which are listed on the Qualified Products List, as an alternate foundation. Screw type foundations must be in accordance with the following requirements:~~

~~———— (a) Design: For steel screw type foundations, meet the latest edition of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals and the requirements herein. Provide steel equaling or exceeding the requirements of ASTM A 53, Type E, Grade B for the pipe and ASTM A 36 for the plates and bars. Design the screw type foundation with the soil properties listed on Design Standards, Index No. 17515 or the actual properties of the in-situ soil, accounting for the presence of the water table. Take into account the variability of the soil strata above and below the water table which may result in deeper foundations, larger diameter pipe, or both.~~

~~———— Design screw type foundations to be installed by auguring into the ground using a right hand turning movement with a working installation torque of up to 20,000 ft lb. Provide a minimum base plate thickness of 1 3/8 inches. Provide base plates with holes to match the number and location of the light pole anchor bolts. Make the holes 1/16 inch larger in diameter than the light pole anchor bolts. Use base plates of sufficient size to provide the required bolt edge distances. Notch the base plates to indicate the orientation of the shaft cableways. Provide pipes for these screw type foundations having a minimum of 10.75 inches outside diameter and a minimum wall thickness of 0.365 inch. Provide an opening at the bottom of the pipe for drainage purposes. Hot dip galvanize the whole foundation after fabrication in accordance to ASTM A 123.~~

~~———— (b) Installation: Prior to installation, submit pole reaction, screw foundation shop drawings and soil property data to the Engineer for approval.~~

~~Install by auguring into undisturbed ground. Use only sufficient downward pressure to ensure engagement of the augers. The Engineer will not allow installation into pre-excavated hole. Ensure that the pole manufacturer provides bolts for connecting the pole to the foundation, and install bolts complete with nuts and lockwashers. Do not allow the top of the installed base plate to protrude more than 2 inches above the ground surface.~~