

**9920001-HIGHWAY LIGHTING MATERIALS
RESPONSE TO COMMENTS FROM INTERNAL & INDUSTRY REVIEW**

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One comment:

If the intent is too require aluminum bracket arms the spec needs to be revised. As written, aluminum bracket arms must meet the criteria included but there is no clear direction for steel arms.

Use ~~Steel or~~ aluminum bracket arms ~~shall be~~ of truss-type construction, consisting of upper and lower members with vertical struts, and ~~shall have with~~ the luminaire end formed to accommodate a 2 inch pipe slipfitter. The bracket arms shall meet the design requirements of 992-1. Bracket arms shall be attached to ~~either steel or~~ aluminum poles, with machine bolts and pole adapters, unless approved otherwise.

If mixing active voice is a problem there should be a statement that other materials are not allowed.

Response:

Bracket arms are only used on conventional lighting, and all conventional lighting poles are required to be aluminum. The wording will be revised to specify only aluminum.

Alan Lafferty
Gulf Industries, Inc.
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Comments:

Thank you for the opportunity of allowing Gulf Industries, Incorporated and Transpo Industries, Incorporated the opportunity of commenting on the subject proposed specification revision.

992-2.4 Bases: Anchor base poles shall have a wiring hand hole with a weatherproof metal cover near the base, with a grounding lug located inside the pole near the hand hole. Transformer base poles shall have a grounding lug in the transformer base. A heavy cast base shall be attached to the lower end of each shaft by a continuous arc weld, inside and outside of the shaft, or by a combination of arc welding and a press fit, subject to the approval of the Engineer. The base shall be arranged for anchoring to a transformer base or a concrete foundation with four anchor bolts 1 inch (minimum size), unless otherwise shown in the plans. The Department list Omni-directional couplers on the Qualified Products List (QPL) meeting the requirements of the AASHTO Standard

Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals.

992-2.5 General: The lighting pole assembly shall conform to the applicable requirements of IES, EEI and NEMA. The base shall be provided with the necessary anchorage, hardware, and bolt covers. An ornamental cap shall be provided to fit over the top of the pole to exclude moisture. All poles not located behind guardrail or bridge rail, or that are not wall mounted, shall be frangible, except as shown in the plans. Attach the pole to the foundation using hardware meeting the manufacturer’s requirements specified on the QPL drawings when omni directional supports are selected.

Response:

All conventional lighting is to be installed on a transformer base. Anchor base poles are only allowed for custom designs. The section on anchor bases should have been deleted.

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Comments:

1. Page 1, 2nd paragraph:

Comment – Memorandum indicates intent of proposed specification change was to “specify criteria for concrete foundations and bases as well as alternate foundations for light poles”. Review of enclosed proposed specification & criteria finds no mention of foundation features.

Suggestion – Revisit intent of Proposed Specification Review.

2. Page 2, Section 992-1.2.1:

Comment – Reconsider use of words “High Mast”. Appears Department is trying to provide distinction for these specific material elements. However, in doing so scope of specification now “reasonably appears” to been changed to High Mast elements only or homogenized high High Mast & Light Pole (i.e. “conventional”??). Review of entire specification language finds this distinction between High Mast and Light Poles is not clear or had been lost. Inconsistency/lack of clarity in body of specification and element reference may lead to erroneous bids, interpretation/ambiguity disputes and/or weakening provision’s intent and enforceability.

Suggestion – Revisit intent of specification change. Provide consistency & differentiate, if necessary, based on intent.

Response:

High mast was added to galvanized steel poles to help clarify. Design Standards refer to use of aluminum poles as standard roadway lighting, so there is some distinction. I agree with your comments completely and Section 715 and Section 992 will be rewritten this year to distinguish between the requirements for the different types of lighting.

Debbie Toole
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Comments:

992-2.1: ... (add an a) formed in a continuous tapered tube...

992-2.2: ... (add the index number for the Design Standard) ... requirements of Index No. 17515 in the Design Standards.

Response:

Added the "a" to the sentence. We try not to refer to the specific Design Standard Index number to prevent problems when indexes are renumbered.

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Comments:

Recommendation # 1: Clarify when the designer is to use PVC 40, or PVC 80 or rigid conduit. This will improve quality of the installation and reduce the cost significantly.

Recommendation # 2: The FDOT should create a standard procedure for testing roadway lighting witch should be initiated before the load center is energized. This would require that the contractor take measurements of the grounding system needed before connecting to the utilities neutral and ground of the power lines system.

Recommendation # 3: The FDOT shall introduce the use of lighting poles of 24 ft of mounting height using luminaries 250 watts to be locate under overhead power utilities lines, if it is comply with OSHA clearance requirements, this would be an affordable solution for FDOT when overhead utility lines are located on one side of the roadway. This solution could achieve better levels of illumination and uniformity, as well as esthetic. In addition, it provide lower maintenance in comparison with solutions using 20 ft arms locate in utility poles, or

flood lights, and in many cases the spacing between utilities poles or span is not consistency, therefore, not meeting FDOT lighting design criteria

Using lighting on both sides of the roadway could be the best solution for many of the Floridians roadways to meet FDOT lighting design criteria, due to palm trees locating in the median. However in many cases conflict with utilities power lines locate in one side of roadway does not allow for this alternative.

Recommendation # 4:

The FDOT could consider introducing the use of electronic ballast for roadway lighting in the near future. It will provide significant cost saving, reduce maintenance, noise, magnetic interference and other problems.

Recommendation # 5.

The FDOT standards could allow let the opportunity to introduce wireless new technologies that can improve maintenance, and provide an evaluation of damages after disasters such as hurricanes.

Please, do not hesitate to call if you have any questions about the recommendations that I have provided.

Response:

We intend to totally rewrite Section 715 and Section 992 this year to better address the different types of lighting requirements. We will consider these comments in the rewriting of the specification.