

ORIGINATION FORM

Proposed Revisions to the Specifications

(Please provide all information - incomplete forms will be returned)

Date:

Office:

Originator:

Specification Section:

Telephone:

Article/Subarticle:

email:

Associated Section(s) Revisions:

Will the proposed revision require changes to:

Publication	Yes	No	Office Staff Contacted
Standard Plans Index			
Traffic Engineering Manual			
FDOT Design Manual			
Construction Project Administration Manual			
Basis of Estimate/Pay Items			
Structures Design Guidelines			
Approved Product List			
Materials Manual			

Will this revision necessitate any of the following:

Design Bulletin

Construction Bulletin

Estimates Bulletin

Materials Bulletin

Are all references to external publications current?

Yes

No

If not, what references need to be updated? (Please include changes in the redline document.)

Why does the existing language need to be changed?

Summary of the changes:

Are these changes applicable to all Department jobs?

Yes

No

If not, what are the restrictions?

Contact the State Specifications Office for assistance in completing this form.

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KEVIN J. THIBAUT, P.E.
SECRETARY

MEMORANDUM

DATE: November 4, 2021
TO: Specification Review Distribution List
FROM: Daniel Strickland, P.E., State Specifications Engineer
SUBJECT: Proposed Specification: **9920205 Highway Lighting Materials.**

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

This change was proposed by Richard Stepp from the Roadway Design Office to clarify the luminaire cable ground wire color, provide a more practical and effective fuse holder connection and slug material.

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 online at <http://fdotwp1.dot.state.fl.us/programmanagement/development/industryreview.aspx> . Comments received after **December 2, 2021**, may not be considered. Your input is encouraged.

DS/ra

Attachment

HIGHWAY LIGHTING MATERIALS (REV 10-13-21)

SUBARTICLE 992-2.5 is deleted and the following substituted:

992-2.5 Luminaire Cable: Pole and bracket cable shall be multi-conductor Type XHHW-2 XLP TC with three No. 10 AWG, where the ground wire has green-colored insulation.

SUBARTICLE 992-2.6 is deleted and the following substituted:

992-2.6 In Line Fuse Holders: In line fuse holders shall provide a breakaway connection and be UL recognized per Guide IZLT2 and rated for 600V. The wire connections in the fuse holders shall be ~~of the~~ copper or equivalent type setscrew ~~type~~. Fused connections shall utilize an ATQ or FNQ 10 amp time delay fuse rated for 500V. Fuses shall be UL listed to Standard 248-14. The rating for the fuse holders shall be water resistant or submersible rated.

SUBARTICLE 992-2.8.2 is deleted and the following substituted:

992-2.8 Pole Cable Distribution System:

992-2.8.1 General: These requirements are applicable for all systems rated up to and including 600V. The installed system shall be in compliance with Standard Plans, Index 715-001.

 Systems installed as alternates to the Standard Plans shall be one of the products listed on the APL. Manufacturers seeking evaluation of their product shall submit an application in accordance with Section 6. Alternate Systems shall meet the following requirements:

A modular color coded cable system consisting of rubber cords with integrally molded watertight submersible connectors, inline fuses, submersible surge arrester and breakaway connectors shall be installed. The cables shall extend from an underground pull box near the base of the pole to the luminaires at the top of the pole. A cable system shall be required at each pole.

The cable system shall consist of the following described components:

1. **Distribution Block:** The red molded body shall contain a three wire female outlet integrally molded to a 24 inch length of 10/3 SOOW cable with an end molded to the body and the other end shall be spliced in the field to the distribution cable that feeds through the underground pull box near the base of the pole. The block shall be watertight and submersible when the integrally fused plug on the power cable is engaged and fully seated. Dimensions shall be approximately 2 inches by 3 inches by 3 inches. The size is important because of limited space.

2. **Surge Arrester Cable:** Provide a 12 inch length of 10/2 SOOW cable with a red male plug to match the red female connector cable extending from the fused plug on the power cable. The other end of the surge arrester cable shall be integrally molded to a MOV waterproof surge arrester. The red male plug shall make a submersible connection when mated to the red female connector on the power cable. A separate 12 inch length of

No. 10 THWN green ground wire shall be provided from the surge arrester to attach to the ground system in the pull box.

3. Power Cable: This cable feeds the luminaire cable and the surge arrester cable from the load side of its integrally fused red male plug end. The red fused plug shall contain 10A 500V fuses (13/32 inch by 1-1/2 inch) or equal. ~~A solid copper slug~~ The fuse holder manufacturer's suggested slug (blank or dummy fuse) ~~shall~~ must be installed on the neutral side for line to neutral service. Both lines shall be fused for line to line service. The section that feeds the luminaire cable shall be a 10 foot section of 10/3 SOOW cable with an orange female connector molded to the end extending up into the base of the pole. This female connector shall pass easily through a standard size 1-1/4 inch PVC elbow and make a submersible connection when mated with the orange male plug on the luminaire cable. The section that feeds the surge arrester cable shall be 12 inches in length of 10/2 SOOW cable with a red female connector on the end. The red female connector shall make a submersible connection when mated to the red male plug on the surge arrester cable.

4. Luminaire Cable: This cable is Type XHHW-2 XLP-TC with three No. 10 AWG an orange male molded plug molded to match the orange female end of the power cable. The connector shall require 25 pounds of force to mate or disengage from the female end. When engaged the connection shall be watertight and submersible. The cable strain relief shall extend approximately 2 inches from the connector.

The distribution block and each connector shall be made of thermosetting synthetic polymer which is non-flame supporting and which remains flexible over a temperature range of minus40°F to plus 190°F. Hardness of the molded rubber shall be 65 durometer.