



Florida Department of Transportation

RICK SCOTT
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

ANANTH PRASAD, P.E.
SECRETARY

July 10, 2012

Monica Gourdine
Program Operations Engineer
Federal Highway Administration
545 John Knox Road, Suite 200
Tallahassee, Florida 32303

Re: Office of Design, Specifications
Section **701**
Proposed Specification: **9920102 Highway Lighting Materials**

Dear Ms. Gourdine:

We are submitting, for your approval, two copies of the above referenced Supplemental Specification.

These changes were proposed by Chester Henson of the State Roadway Design Office to update the language to current Department practice.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to SP965TT or trey.tillander@dot.state.fl.us.

If you have any questions relating to this specification change, please call me at 414-4140.

Sincerely,

Signature on file

V. Y. "Trey" Tillander, III, P.E.
State Specifications Engineer

TT/dt

Attachment

cc: Florida Transportation Builders' Assoc.
State Construction Engineer

HIGHWAY LIGHTING MATERIALS.**(REV 5-17-12)**

SUBARTICLE 992-1.2 (of the Supplemental Specifications) is deleted and the following substituted:

992-1.2 Luminaires: Luminaires shall comply with UL 1598 and be listed and labeled for installation in wet locations by an *OSHA recognized* "Nationally Recognized Testing Laboratory" (*NRTL*)-acceptable to the Department.

SUBARTICLE 992-1.4 (of the Supplemental Specifications) is deleted and the following substituted:

992-1.4 Conduit: Conduit shall be used in accordance with the National Electrical Code and as specified in the plans. All conduit shall be UL *or NRTL* listed and meet the following material requirements:

992-1.4.1 Rigid Metal Conduit: Rigid steel conduit shall meet the requirements of UL 6. The steel conduit shall be hot-dip galvanized with a minimum coating of 1.24 oz/ft² on both the inside and outside of the conduit. The weight of the zinc coating shall be determined using ASTM A 90.

992-1.4.2 Polyvinyl-Chloride: Polyvinyl-chloride conduit shall be high impact, Schedule 40 or Schedule 80 conduit meeting the requirements of UL 651.

992-1.4.3 Rigid Aluminum: Rigid aluminum conduit shall meet the requirements of UL 6A.

992-1.4.4 High Density Polyethylene (HDPE): HDPE conduit shall meet the requirements of UL 651A.

992-1.4.5 Liquid tight Flexible Metal: The conduit shall meet the requirements of UL 360.

SUBARTICLE 992-1.9.6 (of the Supplemental Specifications) is deleted and the following substituted:

992-1.9.6 Surge Protection Device: Surge protective device shall be Type 1, UL *or NRTL* listed to 1449, 3rd Edition. Surge current rating on per phase basis shall equal or exceed 50KA. I-nominal rating shall be 10KA or 20KA. Modes of protection shall include L-G and N-G having UL 1449-3 Voltage Protection Ratings of 2000V or lower.

SUBARTICLE 992-3.3 (of the Supplemental Specifications) is deleted and the following substituted:

992-3.3 Surge Protective Devices: Surge Protective Devices (SPD) shall be Type 1 or Type 2. UL *or NRTL* listed to UL 1449 3rd Edition. Surge current rating on a per phase basis shall be equal or exceed 50KA. I-nominal rating shall be 10KA or 20KA.

Modes of protection shall include L-G and N-G having UL 1449-3 Voltage Protection Ratings (VPR's) of 2000V or lower.

SUBARTICLE 992-3.4.4 (of the Supplemental Specifications) is deleted and the following substituted:

992-3.4.4 Modular Power Cable System: The modular cable system shall consist of cables with weathertight connectors. All portions of the cable system shall be rated up to and including 600 V. The plugs and connectors shall be *UL or NRTL listed to UL 498 listed* twist-lock type devices with a NEMA L16-30R configuration for 480V line to neutral systems or for 480V line to line systems. The X designated prong shall be the hot leg for 480V line to neutral systems. The X and Z designated prongs shall be the hot legs for 480V line to line systems. The Z designated prong shall always be treated as a neutral leg. The plugs and connectors shall be equipped with watertight safety shrouds meeting UL 4X enclosure rating. Plugs and connectors when used on cord sets shall be equipped with IP 55 rated waterproof boots.

The power cable shall be a minimum of 10/3 SOOW cable that is wired from distribution cable in the pull box near the base of the pole to the line side of the circuit breaker panel.

The circuit breaker cable shall be an 8 foot length of 10/3 SOOW (minimum) cable that is connected to the load side of the circuit breaker panel and a female receptacle on the other end. This female receptacle shall mate with the male plug on the pole cable, the male flanged receptacle on the luminaire ring and the male plug on the portable step-down transformer.

The pole cable shall be the length of the mounting height of the pole plus 6 feet. The cable shall be a minimum of 10/3 SOOW with a male plug on one end that mates with the female receptacle on the circuit breaker cable. The other end fits under the lugs in the junction box on the luminaire ring. The power cable shall be attached to the luminaire ring with a stainless steel strain relief Kellem's grip capable of withstanding the pull of the weight of the cable. All power cables should be attached to the stainless steel weathertight wiring chamber with weathertight cable connectors

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