



Florida Department of Transportation

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ANANTH PRASAD, P.E.
SECRETARY

July 31, 2014

Khoa Nguyen
Director, Office of Technical Services
Federal Highway Administration
545 John Knox Road, Suite 200
Tallahassee, Florida 32303

Re: State Specifications and Estimates Office
Section **971**
Proposed Specification: **9710701 Traffic Marking Materials.**

Dear Mr. Nguyen:

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

This change is proposed by Chester Henson of the State Roadway Design Office to delete language for wet weather markings, as these markings have been removed from the Standard Specifications. The Department is moving to a developmental specification which will require continuous wet weather pavement marking retroreflectivity requirements and testing.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to SP965DS or daniel.scheer@dot.state.fl.us.

If you have any questions relating to this specification change, please call me at 414-4130.

Sincerely,

Signature on file

Daniel Scheer, P.E.
State Specifications Engineer

DS/dt

Attachment

cc: Florida Transportation Builders' Assoc.
State Construction Engineer

TRAFFIC MARKING MATERIALS.
(REV 6-26-14)

SUBARTICLE 971-7.1 is deleted and the following substituted:

971-7.1 General: The materials for pavement stripes and markings shall consist of white or yellow weather-resistant reflective film as specified herein. ~~The markings are classified as High Performance.~~ The pigment, glass spheres, and filler shall be well dispersed in the resin. However, the requirements delineated in this Specification and Section 713 shall apply. The material shall be free from all skins, dirt and foreign objects.

ARTICLE 971-10 is deleted.

~~**971-10 Thermoplastic Material for Wet Weather Pavement Markings.**~~

~~**971-10.1 General:** Upon cooling to normal pavement temperature, the thermoplastic material shall produce an adherent, reflective pavement marking capable of resisting deformation by traffic. The manufacturer shall utilize alkyd based materials only and shall have the option of formulating the material according to their specifications. However, the requirements delineated in this specification shall apply regardless of the type of formulation used. The pigment, reflective elements, and filler shall be well dispersed in the resin. The material shall be free from all skins, dirt and foreign objects.~~

~~**971-10.2 Composition:**~~

Component	Test Method	White	Yellow
Binder		20.0% minimum	20.0% minimum
TiO ₂ , Type II Ructile	ASTM D476	10.0% minimum	N/A
Reflective Elements (intermix)	AASHTO T250	% minimum per manufacturer	% minimum per manufacturer
Yellow Pigment		N/A	% minimum per manufacturer
Calcium Carbonate and Inert Filler (-200 mesh sieve)		% minimum per manufacturer	% minimum per manufacturer

~~Percentages are by weight.~~

~~**971-10.3 Retroreflective Elements:** The reflective elements in the intermix shall be determined by the manufacturer and identified for the QPL System.~~

~~**971-10.4 Physical Requirements:** Laboratory samples shall be prepared in accordance with ASTM D4960 and shall meet the following criteria:~~

Property	Test Method	Minimum	Maximum
Water Absorption	ASTM D570	-	0.5%
Softening Point	ASTM D36	200°F	-
Low Temperature Stress Resistance	AASHTO T250	Pass	-
Specific Gravity	Water displacement	1.9	2.3
Indentation Resistance	ASTM D7735* Type A Durometer	40	-
Impact Resistance	ASTM D256, Method A	1.0 N-m	-
Flash Point	ASTM D92	475°F	-

*The durometer and panel shall be at 90°F with a 1000 g load applied. Instrument measurement shall be taken after 15 seconds.

~~**971-10.4.1 Set To Bear Traffic Time:** When applied at the temperatures and thickness specified by Section 702, the baseline material shall set to bear traffic in not more than two minutes. When the audible bump is required, the bump shall set to bear traffic in not more than 10 minutes at ambient air temperatures of 80°F or less and in not more than 15 minutes for ambient air temperatures exceeding 80°F.~~

~~**971-10.4.2 Retroreflectivity:** The white and yellow pavement markings shall attain an initial dry retroreflectivity of not less than 300 mcd/lx-m² and not less than 250 mcd/lx-m², respectively, and also attain an initial wet recovery retroreflectivity of not less than 150 mcd/lx-m² and not less than 125 mcd/lx-m², respectively. The dry retroreflectance of the white and yellow pavement markings at the end of the three year service life shall not be less than 150 mcd/lx-m², and also the wet recovery retroreflectivity at the end of the service life shall not be less than 75 mcd/lx-m². The retroreflectivity will be determined in accordance with FM 5-541 for dry and ASTM E2177 (Bucket Method) for wet recovery.~~

~~**971-10.4.3 Durability:** When an audible bump is required, durability shall include flattening of the profile or raised portions of the line. The flattening of the profile or raised portion of the line shall not exceed 25% at the end of the three year service life.~~

~~**971-10.5 Application Properties:** Application properties shall meet the requirements of Section 702.~~

~~**971-10.6 Packing and Labeling:** The thermoplastic material shall be packaged in suitable biodegradable or thermo-degradable containers which will not adhere to the product during shipment and storage. The container of thermoplastic material shall weigh approximately 50 pounds. The label shall warn the user that the material shall be heated in the range as recommended by the manufacturer.~~

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