

ORINATION FORM

Proposed Revisions to the Specifications

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

Date: Specification Section:

Originator: Articles/Subarticles:

Telephone:

email:

Will the proposed revision involve Design Standard Index changes? Yes No

Roadway Design staff contacted (name):

Structures Design staff contacted (name):

Will the proposed revision involve PPM changes? Yes No

Roadway Design staff contacted (name):

Will the proposed revision involve CPAM changes? Yes No

Construction staff contacted (name):

Will the proposed revision involve Pay Item changes? Yes No

Estimates staff contacted (name):

Will the proposed revision involve SDG changes? Yes No

Structures staff contacted (name):

Will the proposed revision involve APL changes? Yes No

Product Evaluation staff contacted (name):

Will the proposed revision involve Material Manual changes? Yes No

State Materials Office staff contacted (name):

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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JIM BOXOLD
SECRETARY

MEMORANDUM

DATE: November 13, 2015

TO: Specification Review Distribution List

FROM: Daniel Scheer, P.E., State Specifications Engineer

SUBJECT: Proposed Specification: **9710605 Pavement Marking Materials.**

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

The changes are proposed by Chester Henson of the State Roadway Design Office to add a specification for the black material used in contrast markings and add high skid thermoplastic to the specification.

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://www2.dot.state.fl.us/ProgramManagement/Development/IndustryReview.aspx> .

Comments received after **December 11, 2015**, may not be considered. Your input is encouraged.

DS/ot
Attachment

PAVEMENT MARKING MATERIALS.
(REV 11-2-15)

SUBARTICLE 971-6.5.1 is deleted and the following substituted:

971-6.5.1 Retroreflectivity: The white pavement markings other than crosswalks and bicycle markings shall attain an initial retroreflectance of not less than 300 mcd/lx·m². Crosswalks and bicycle markings shall attain initial retroreflectivity of not less than 275 mcd/lx·m². *Black pavement markings ~~must~~ shall have a retroreflectance of less than 5 mcd/lx m².* The retroreflectance of the white pavement markings at the end of the three year period shall not be less than 150 mcd/lx·m².

The following new Subarticle is added after Subarticle 971-9:

971-10 High Skid Thermoplastic Material.

971-10.1 General: *The manufacturer shall utilize alkyd based materials only and ~~shall~~ have the option of formulating the material according to his own specifications. However, the requirements ~~delineated in~~ of this Specification shall apply regardless of the ~~type of~~ formulation used. The pigment, reflective elements, and filler shall be well dispersed in the resin.*

971-10.2 Composition:

<i>Component</i>	<i>Test Method</i>	<i>White</i>
<i>Binder</i>		<i>18.0% minimum</i>
<i>TiO₂, Type Rutile</i>	<i>ASTM- D476</i>	<i>10.0% minimum</i>
<i>Reflective Elements</i>	<i>AASHTO- T250</i>	<i>30% minimum per manufacturer</i>
<i>Skid Resistant Elements</i>		<i>10% minimum per manufacturer</i>

Note: Percentages are by weight.

The alkyd/maleic binder ~~must~~ shall consist of a mixture of synthetic resins (at least one synthetic resin must be solid at room temperature) and high boiling point plasticizers. At least one-half of the binder composition must be 100% maleic-modified glycerol of rosin and be no less than 15% by weight of the entire material formulation.

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

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

<i>Property</i>	<i>Test Method</i>	<i>Minimum</i>	<i>Maximum</i>
<i>Softening Point</i>	<i>ASTM- D36</i>	<i>195°F</i>	<i>-</i>
<i>Hardness of Skid Elements</i>	<i>Moh's Scale</i>	<i>9</i>	<i>-</i>
<i>Indentation Resistance</i>	<i>ASTM -D7735* Type A Durometer</i>	<i>65</i>	<i>85</i>
<i>Impact Resistance</i>	<i>ASTM- D256, Method A</i>	<i>1.0 N·m</i>	<i>-</i>
<i>Flash Point</i>	<i>ASTM- D92</i>	<i>475°F</i>	<i>-</i>

**The durometer and panel shall be at 80°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 thicknesses specified by Section- 711, the material shall set to bear traffic in not more than two minutes.

971-10.4.2 Retroreflectivity: The white pavement markings shall attain an initial retroreflectance of not less than 275- mcd/lx·m². The retroreflectance of the white pavement markings at the end of the three year period shall not be less than 150- mcd/lx·m².

971-10.4.3 Skid Resistance: The surface of the pavement markings shall provide a minimum initial skid resistance value of 55- BPN-(~~British Pendulum Number~~) when tested in accordance to ASTM -E303.

971-10.5 Application Properties: Application properties shall meet the requirements of Section- 711.

971-10.6 Packaging 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~~is to be heated in the range as recommended by the manufacturer.