

Origination Form

Specifications

Submittal Information			
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Date:	2026-05-26T12:33:19Z	Associated Specs:	N/A

Summary:

Added Tables 971-6B and 971-8B to allow AASHTO Test Deck field results for product approval based on performance in lieu of prescriptive formulations, and clarified the paint physical requirements table.

Justification:

To allow performance-based requirements instead of strict compositional ones which will provide greater formulation flexibility for vendors, clarify physical requirements, and align requirements with current best practices overall.

Do the changes affect other types of specifications?

Neither

List Specifications Affected:

Other Affected Documents/Offices	Contacted	Yes/No
Other Standard Plans		No
Florida Design Manual		No
Structures Manual		No
Basis of Estimates Manual		No
Approved Product List		No
Construction Office		No
Maintenance Office		No

Materials Manual		No
Traffic Engineering Manual		No

Are changes in line with promoting and making progress on improving safety, enhancing mobility, inspiring innovation, and fostering talent; explain how?

Yes, these changes promote safety and mobility by aligning pavement marking requirements with current best practices. Also, transitioning to a performance-based specification fosters innovation by allowing vendors flexibility in formulation while still holding them accountable for in-service results.

What financial impact does the change have; project costs, pay item structure, or consultant fees?

N/A

What impact does the change have on production or construction schedules?

N/A

How does this change improve efficiency or quality?

These changes improve both efficiency and quality by clarifying key requirements and aligning testing with proven standards. Establishing clear minimum and maximum density limits removes ambiguity. Updating opacity testing to 15 mils improves reliability and repeatability of results. Efficiency is improved by allowing vendors flexibility in formulation, with approval based on demonstrating performance on a current AASHTO test deck, streamlining evaluation while maintaining consistent, high-quality outcomes.

Which FDOT offices does the change impact?

State Materials Office

What is the impact to districts with this change?

N/A

Does the change shift risk and to who?

Yes, to some extent. By allowing performance-based products, more responsibility shifts to the AASHTO Product Evaluation and Audit Solutions program to maintain rigorous and consistent testing practices, since its results are used for product approval. At the same time, vendors also assume greater accountability for demonstrating sustained in-service performance rather than simply meeting prescriptive requirements.

Provide summary and resolution of any outstanding comments from the districts or industry.

Comments and Responses are available on the Track the Status of Revisions hyperlink located on the Specifications landing page: <https://www.fdot.gov/specifications/default.shtm>

What is the communication plan?

Through the established specification revision process (e.g., Internal and Industry Review)

What is the schedule for implementation?

The Standard Specifications eBook and Workbook are effective July 1st every year.

PAVEMENT MARKING MATERIALS
(REV 5-26-26)

SUBARTICLE 971-3.2 is deleted and the following substituted:

971-3.2 Composition: Standard paints shall meet the compositional requirements of Table 971-6A. Alternatively, standard paints may be approved based on AASHTO Product Evaluation & Audit Solutions field test results in accordance with Table 971-6B. Approval is limited to paints applied at a wet film thickness of 15 mils. In addition, only test deck applications installed within the last 6 years, as measured from the start of the applicable submission cycle, will be considered for approval.

Table 971-6A		
Component	Test Method	Criteria
Total Solids, by weight	ASTM D2369	minimum 75%
Pigments, by weight	ASTM D3723	minimum 57%
Vehicle Solids % of Vehicle*		minimum 40%
TiO ₂ , Type II Rutile (white paint only)	ASTM D476	minimum 1.0 lb/gal
Volatile Organic Compound, (VOC)	ASTM D3960	maximum 150 g/L

*Vehicle Solids % of Vehicle = $\frac{(\% \text{ total solids} - \% \text{ pigment})}{(100 - \% \text{ pigment})}$

Table 971-6B		
Property / Component	Test Method	Criteria
<u>Skip Line Retroreflectivity from AASHTO test deck after 6 months</u>	<u>ASTM E1710</u>	<u>Minimum 150 mcd/m²/lx on both asphalt and concrete</u>
<u>Skip Line Durability from AASHTO test deck after 6 months</u>	<u>ASTM D913</u>	<u>Minimum 8 on both asphalt and concrete</u>
<u>Total Solids, by weight</u>	<u>ASTM D2369</u>	<u>Within ±5% relative to the corresponding AASHTO test deck sample*</u>
<u>Pigments, by weight</u>	<u>ASTM D3723</u>	<u>Within ±5% relative to the corresponding AASHTO test deck sample*</u>
<u>TiO₂, Type II Rutile (white paint only)</u>	<u>ASTM D476</u>	<u>minimum 1.0 lb/gal</u>
<u>Volatile Organic Compound, (VOC)</u>	<u>ASTM D3960</u>	<u>maximum 150 g/L</u>

* Evaluated against the measured value reported in AASHTO Product Evaluation & Audit Solutions database

SUBARTICLE 971-3.3 is deleted and the following substituted:

971-3.3 Physical Requirements: Standard paints shall meet the physical requirements of Table 971-7. For products evaluated under Table 971-6B, the density shall be within ±0.5 lb/gal of the measured density of the corresponding AASHTO test deck sample.

Property	Test Method	Minimum	Maximum
Density	ASTM D1475	13.5 ± 1.4 lb/gal <u>12.1 lb/gal</u>	-14.9 lb/gal
Viscosity at 77°F	ASTM D562	80 KU	100 KU
Fineness of Grind	ASTM D1210	3(HS)	
Dry Opacity at <u>15</u> mils WFT	ASTM D2805	0.92 <u>8</u>	-
Bleed Ratio	ASTM D868	0.95	-
Flexibility	ASTM D522 Method B	Pass	-
Abrasion Resistance	ASTM D4060	Pass	-

971-3.3.1 Set To Bear Traffic Time: The paint shall set to bear traffic in not more than two minutes.

971-3.3.2 Abrasion Resistance: Test four samples using a Taber Abrader. The paint shall be applied to specimen plates using a drawdown blade having a clearance of 20 mils. Clean with a soft brush and weigh each sample. Abrade samples for 1,000 cycles with a combined load of 500 g (arm plus auxiliary weight) on each arm and CS-10 wheels. Clean the samples with a soft brush and weigh again. The average weight loss for the four plates shall not exceed 75 mg per plate.

971-3.3.3 Retroreflectivity: The white and yellow pavement markings shall attain an initial retroreflectance of not less than 300 mcd/m²/lx and 250 mcd/m²/lx, respectively. Black pavement markings shall have a retroreflectance of less than 20 mcd/m²/lx. The retroreflectance of the white and yellow pavement markings at the end of the six-month period shall not be less than 150 mcd/m²/lx.

SUBARTICLE 971-4.2 is deleted and the following substituted:

971-4.2 Composition: Durable paints shall meet the compositional requirements of Table 971-8A. Alternatively, durable paints may be approved based on AASHTO Product Evaluation & Audit Solutions field test results in accordance with Table 971-8B. Approval is limited to paints applied at a wet film thickness of 20-30 mils. In addition, only test deck applications installed within the last 6 years, as measured from the start of the applicable submission cycle, will be considered for approval.

Component	Test Method	Criteria
Total Solids, by weight	ASTM D2369	75% minimum
Pigments, by weight	ASTM D3723	57% minimum
Vehicle Solids, % on Vehicle*	-	40% minimum
TiO ₂ , Type II Rutile (white paint only)	ASTM D476	1.0 lb/gal minimum
Volatile Organic Compound, (VOC)	ASTM D3960	150 g/L maximum

*Vehicle Solids % of Vehicle = $\frac{(\% \text{ total solids} - \% \text{ pigment})}{(100 - \% \text{ pigment})}$

Vehicle solids shall be 100% acrylic emulsion polymer.

<u>Property / Component</u>	<u>Test Method</u>	<u>Criteria</u>
<u>Skip Line Retroreflectivity from AASHTO test deck after 18 months</u>	<u>ASTM E1710</u>	<u>Minimum 150 mcd/m²/lx on both asphalt and concrete</u>
<u>Skip Line Durability from AASHTO test deck after 18 months</u>	<u>ASTM D913</u>	<u>Minimum 8 on both asphalt and concrete</u>
<u>Total Solids, by weight</u>	<u>ASTM D2369</u>	<u>Within ±5% relative to the corresponding AASHTO test deck sample*</u>
<u>Pigments, by weight</u>	<u>ASTM D3723</u>	<u>Within ±5% relative to the corresponding AASHTO test deck sample*</u>
<u>TiO₂, Type II Rutile (white paint only)</u>	<u>ASTM D476</u>	<u>minimum 1.0 lb/gal</u>
<u>Volatile Organic Compound, (VOC)</u>	<u>ASTM D3960</u>	<u>maximum 150 g/L</u>
<u>* Evaluated against the measured value reported in AASHTO Product Evaluation & Audit Solutions database</u>		

SUBARTICLE 971-4.3 is deleted and the following substituted:

971-4.3 Physical Requirements: Durable paints shall meet the physical requirements of Table 971-9. For products evaluated under Table 971-8B, the density shall be within ±0.5 lb/gal of the measured density of the corresponding AASHTO test deck sample.

Property	Test Method	Minimum	Maximum
Density	ASTM D1475	13.5 ± 1.4 lb/gal <u>12.1 lb/gal</u>	N/A <u>14.9 lb/gal</u>
Viscosity at 77°F	ASTM D562	80 KU	100 KU
Fineness of Grind	ASTM D1210	3(HS)	-
Dry Opacity at <u>15</u> mils WFT	ASTM D2805	0.92 <u>8</u>	-
Bleed Ratio	ASTM D868	0.95	-
Flexibility	ASTM D522 Method B	Pass	-
Abrasion Resistance	ASTM D4060	Pass	-

971-4.3.1 Set to Bear Traffic Time: The paint shall set to bear traffic in not more than ten minutes.

971-4.3.2 Abrasion Resistance: Test four samples using a Taber Abrader. The paint shall be applied to specimen plates using a drawdown blade having a clearance of 20 mils. Air dry each sample until fully cured based on the manufacturer's product recommendation. Clean with a soft brush and weigh each sample. Abrade samples for 1,000 cycles with a combined load of 500 g (arm plus auxiliary weight) on each arm and CS-10 wheels. Clean the

samples with a soft brush and weigh again. The average weight loss for the four plates shall not exceed 75 mg per plate.

971-4.3.3 Retroreflectivity: The white and yellow pavement markings shall attain an initial retroreflectance of not less than 450 mcd/m²/lx and 300 mcd/m²/lx, respectively. The retroreflectance of the white and yellow pavement markings at the end of the 18 month period shall not be less than 150 mcd/m²/lx.