



“No Surprises” Material Specification Changes for 2012

**Tommy Schinkel, P.E.
Asphalt Program Manager
October 4, 2011**

New and Updated Specifications

- **Asphalt**

- **SM 4.75**
- **Section 211 Table II-14a**
- **SMA**
- **Recycled Asphalt Shingles (RAS) Tear Offs / Tabs**
- **BM-25.0D with Increased Asphalt Content**
- **Asphalt Patching**
- **VST Cores**
- **Non Tracking Tack Coat**

New and Updated Specifications

- **Pavement Marking**
 - **Type B, Class VI Tape**
 - **Polyurea**

SM 4.75

- ✓ *New tool for pavement maintenance*
- ✓ **Approved by FHWA**
- ✓ **$\frac{3}{4}$ " to 1" thick pavement**
- ✓ **Potential for over 10,000 Tons in 2012**

SM 4.75

- **Mix Requirements**

- 100% passes the 1/2" Sieve
- VTM 3 to 6 %, VFA prod. 70 to 80 %, VMA minimum of 16.5 %

- **Acceptance Requirements**

- Cores/plugs not taken for density
- Permeability of less than 150×10^{-5} cm/sec at 7.5 percent voids

- **Field Requirements**

- Minimum of 3 Breakdown roller passes with a steel wheel roller of at least 10 tons

Not Acceptable for SM 4.75

Moderate to Severe Alligator Cracking



Acceptable for Preventative Maintenance Treatment

Low Severity Alligator Cracking – Less Than 1/4"



Not Acceptable for SM 4.75

Moderate to Severe Block Cracking

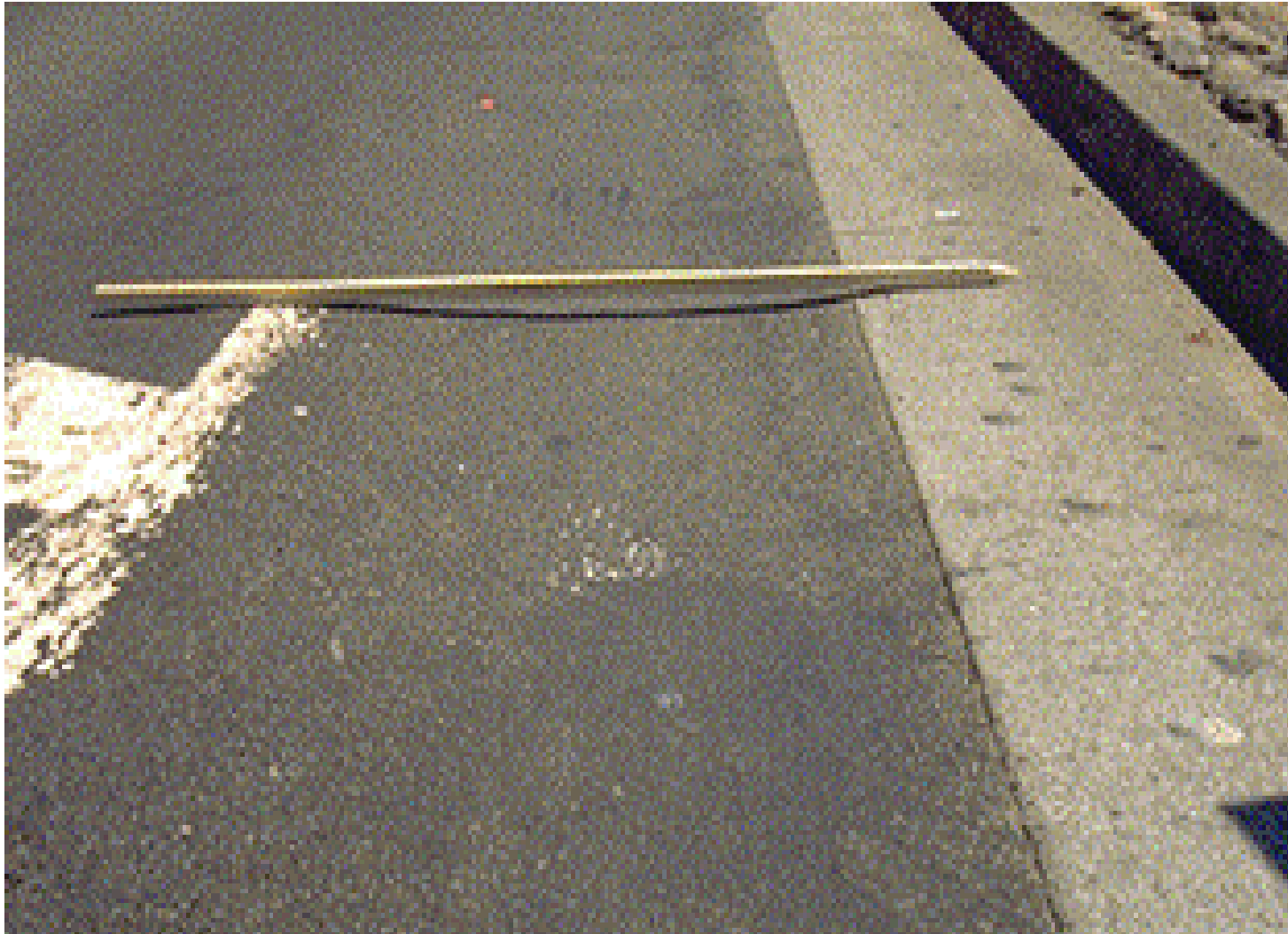


Acceptable for Preventative Maintenance Treatment Low Severity Block Cracking



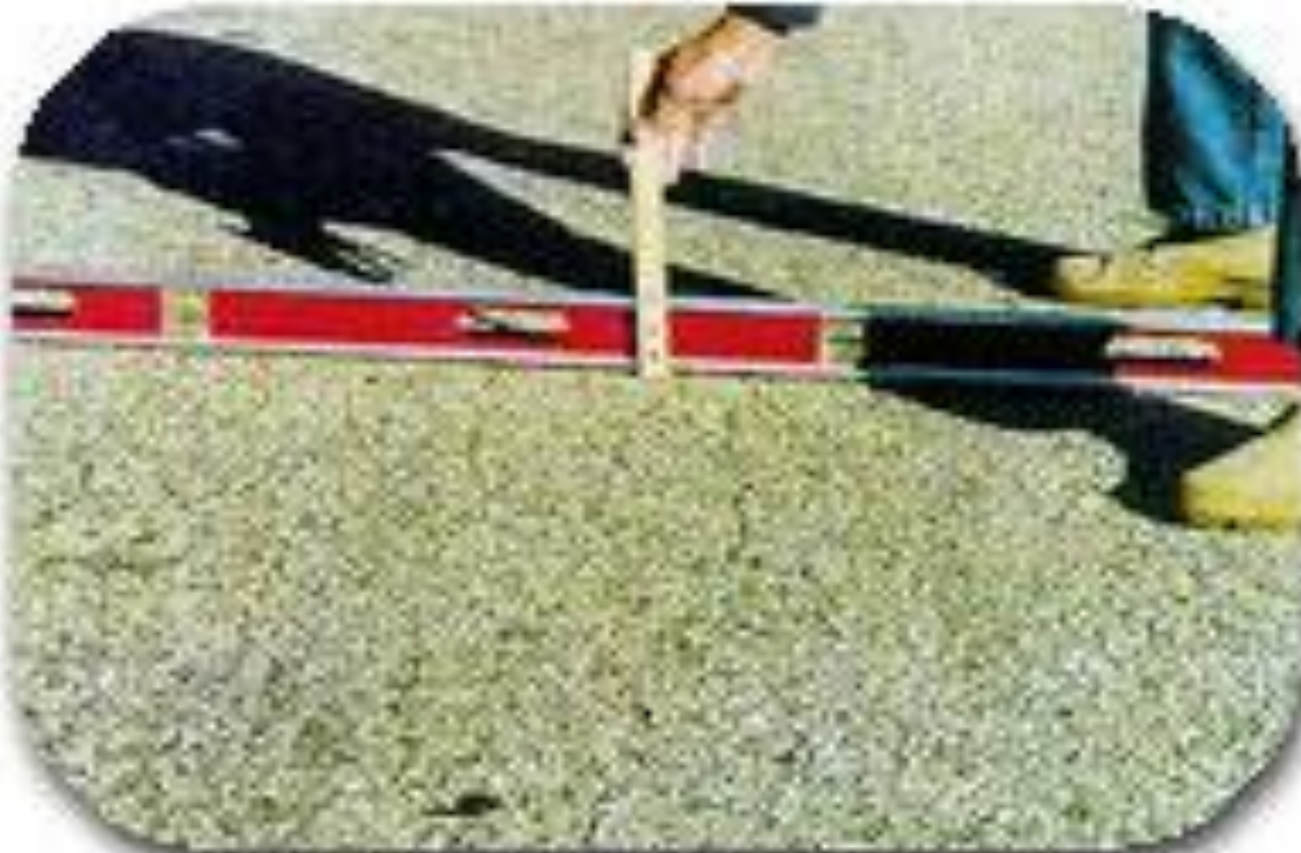
Not Acceptable for SM 4.75

Moderate to Severe Rutting



Acceptable for Preventative Maintenance Treatment

Low Severity Rutting – less than 1/4”



Not Acceptable for SM 4.75

Non Structurally Sound Pavement



Acceptable for Preventative Maintenance Treatment Structurally Sound Pavement

6 504270 00SR00002N CAROLINE 5 2010/03/17 35.700 20.470 42.1



Section 211 Table II – 14a

Recommended Performance Grade of Asphalt Cement

Percentage of Reclaimed Asphalt Pavement (RAP) in Mix

Mix Type	%RAP ≤ 25.0%	25.0% < %RAP ≤ 30%	25.0% < %RAP ≤ 35%
	SM-4.75A, SM-9.0A, SM-9.5A, SM-12.5A	PG 64-22	PG 64-22
SM-4.75D, SM-9.0D, SM-9.5D, SM-12.5D	PG 70-22	PG 64-22	

SMA

- ***Coarse Aggregate***

- **Must contain two or more coarse aggregate sizes.**
- **At least two aggregate sizes each must comprise a minimum of 10% of the total mix composition.**
- **At least one cold feed bin shall be used for each aggregate size.**

SMA

- ***Adjustments on Sieves***
 - **SMA 12.5 adjusted ½” and No. 200**
 - **SMA 9.5 adjusted No. 200**

Recycled Asphalt Shingles (RAS) Tear Offs / Tabs

- **Both**
 - **Mixed mechanically in a plant specifically designed for asphalt concrete productions**
 - **PG binder bumping guide**
 - 5% RAS and 0% RAP
 - 4% RAS and 5% RAP
 - 3% RAS and 10% RAP
 - 2% RAS and 20% RAP

Recycled Asphalt Shingles (RAS)

Tear offs / Tabs

- **Tear Offs**

- Material must be tested every 100 tons and be free of ACM
- Removed requirement that material come from residential buildings

- **Tabs**

- Asphalt binder of the asphalt concrete mixture shall be Performance Grade of asphalt conforming to Section 211

BM-25.0D with Increased Asphalt Content

- **Confusion at what void level to add additional asphalt**
 - **2.5 or 3.5**
- **Initial AC content will be selected using the 3.5% air voids.**
- **Volumetric adjustments are made to VFA, VMA and VTM for increased asphalt content base mixes.**

Asphalt Patching

- Reinserting acceptance requirements
- One set of plugs/cores in first 20 tons then every 500 tons thereafter

Non Tracking Tack Coat Use Dates

- Must be used May 1st through October 1st

VST Cores

- **Revising Specification to follow current practice**
- **Will be based off percentage of the control strip bulk density**

Type B Class VI Pavement Marking Tape

- **Added initial approval requirements**
 - **reflectivity**
 - **color**
- **Placed warranty requirements in Specification**
 - **6 years**
 - **Warranty through Manufacturer**
- **Post installation evaluation by VDOT, Contractor and Manufacturer's Representative**

Type B, Class VII – Polyurea Pavement Marking

- **New Pavement Marking Material Option similar in durability to Thermoplastic or Epoxy.**
- **Includes initial approval requirements**
 - **reflectivity**
 - **color**
- **Post installation evaluation by VDOT, Contractor and Manufacturer's Representative**



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