Materials Specifications & Virginia Test Methods (VTM’s)

2016 VAA Fall Conference

October 4, 2016
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Overview

• Predominantly unchanged Materials specifications for all FY17 paving

• There are, though, some minor corrections & changes to be aware of.
Changes for 2017 contracts

• **Section 210 - Asphalt Materials (liquid)**

  – Adding softening point temperature requirement for polymer modified emulsions (a min. of 100°F).

  – Adding a penetration test requirement for Non-Tracking tack

  – Clarifying that testing for asphalt residue for CRS-2L is tested using the “Evaporation method”, and adding a Ductility test (AASHTO M316)
Changes for 2017 contracts

- **Section 211.05 – Asphalt Concrete (mix requirements)**
  - Eliminating permeability test requirements for production run materials
  - Now only required during mix design.

For surface mixes, permeability test data shall be submitted in accordance with VTM 120 using either single point verification or the regression method for each surface mix having a different gradation. A minimum of one permeability samples will be taken and test run in the first lot, and every other lot thereafter, and results submitted to the District Materials Engineer.
Changes for 2017 contracts

• **Special Pr. for Section 315 (SP315) – 4.75 mm mixes**

  1. **Establishing tack as a pay item in this Special Provision as well**
     - In accordance with Section 310 and changes made in 2016.

  2. **Establishing min. temp. & MTV requirements**
     - Placement only when ambient *and* surface temperatures are 50°F or above.

     - MTV required for placement when ambient *and/or* surface temperatures are 50°F – 60°F. *(MTV not required > 60°F)*
Changes for 2017 contracts

- Section 317.06 - Asphalt Concrete Placement (SMA)

- Establishing min. temperature for SMA – both ambient and surface temperatures must be 50°F.

SMA mixture shall be placed only when the ambient and surface temperatures are 50 degrees F or above, unless a warm mix additive or process approved by the Department is used to produce the SMA in which case the surface temperature must be 40 degrees F or above.
Chief Engineer
Quality initiatives & 2017 specs
From 2016 contracts

Staying the same – requirements for all 2017 contracts:

• Milling time requirements (and penalties)

• Permanent pavement marking requirements (and bonuses)

• 50 gyratory surface mix design requirements
From 2016 contracts

*Expanding application of requirements for all 2017 contracts:*

- Minimum asphalt contents and variability controls
- Field density acceptance using cores (selected routes)
Chief Engineer
Quality initiatives & 2017 specs

Minimum asphalt contents and variability controls
Section 211 – Asphalt Mix Design

1. **Minimum AC requirements:**
   - SM-9.5 = 5.5%
   - SM-12.5 = 5.3%
   - NOTE – adjustments for specific gravity may allow lower %AC

2. **Incentive of up to 5% - consistency of AC content**
   - % of unit bid price, per ton, for consistency - *no sieves w/ st. dev. adjustment points to receive bonus.*

3. **Increase of negative adjustment points for being out-of-spec:**
   - from 1% to 3% on process tolerance(s)
   - from 0.5% to 1.0% for standard deviation
Field density acceptance using plugs/cores (selected routes)
### 2016 Pilot Projects for density (total of 13)

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<thead>
<tr>
<th>District</th>
<th># of Project</th>
<th>Project</th>
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<tr>
<td>Bristol</td>
<td>1</td>
<td>PM1F-961-F17</td>
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Section 315 – Asphalt Placement

1. **Field compaction requirements:**
   - Slight increase in field density control strip requirements (all Superpave surfaces now 92.5%)
   - QC by contractor – still requires roller pattern, control strips
   - QA / acceptance – now with plugs/cores (similar to SMA)

2. **Incentive of up to 5% - meeting minimum density requirements with consistency**
   - *must be 100% pay, and have 80% of plugs from each sub-lot be 92.5 -96.5 % of TMD to receive bonus*
Density Comparison: Regular vs Pilot

Comparison between Non-pilot and Pilot in 2016

Reduction in low density readings in the field for pilot projects!
Expanding application of requirements for all 2017 contracts:

- **Field density acceptance using cores (selected routes)**

  Potential breakdown (specifications not yet officially adopted):
  - Interstates acceptance by cores*
  - Primary /Secondary >10,000 ADT acceptance by cores*
  - Primary/Secondary < 10,000 ADT acceptance by nuclear

*all roadways for core acceptance must be 20’or wider
Questions?