

NEW AND SPECIALTY MATERIALS

2018 VDOT/VAA Asphalt Seminar

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Overview

- Sub-Division Mixes**
- Cold Central Plant Recycling Mix (CCPRM)**
- THMACO (Thin Hot Mix Asphalt Concrete Overlay)**
- High Polymer (HP) Binder**
- Asphalt Mastic Crack Sealing**

Sub-Division Mixes

- ❑ To have a better performance mix for Subdivisions
- ❑ Subdivision Mix Subcommittee: VDOT/VAA
- ❑ Trial Sections (Richmond)
 - ❑ Control: SM 9.0A (65 gyration)
 - ❑ TS 1: SM 9.0A (50 gyration)
 - ❑ TS 2: SM 9.0A with Natural Sand (20%)
 - ❑ TS 3: SM 9.0A with Forta-Fi fiber

Sub-Division Mixes

❑ Other Options

- ❑ SM 9.0 (50 gyration): VMA 17%

- ❑ SM 4.75



CCPRM

- ❑ **SP315: Cold Central Plant Recycling Material**
- ❑ **Spec & Testing Requirement still evolving**
- ❑ **Testing is not Easy and Usual**
- ❑ **Discuss and Have a Plan between Contractor & VDOT at Pre-Construction or Pre-Paving Meeting**

THMACO

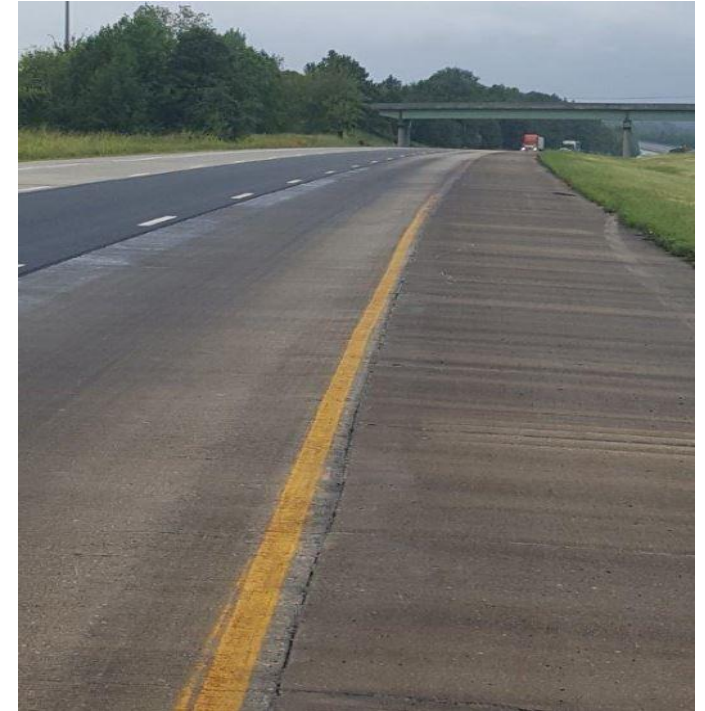
❑ SP Thin Hot Mix Asphalt Concrete Overlay

- Acceptance Testing: Gradation, AC
- 1 year Warranty

❑ Asphalt Binder for Mix: PG 64V-28

❑ Tack Coat

- Option 1: Spray-bar paver (also called Nova Chip)
- Option 2: Hot Applied Tack with regular paver



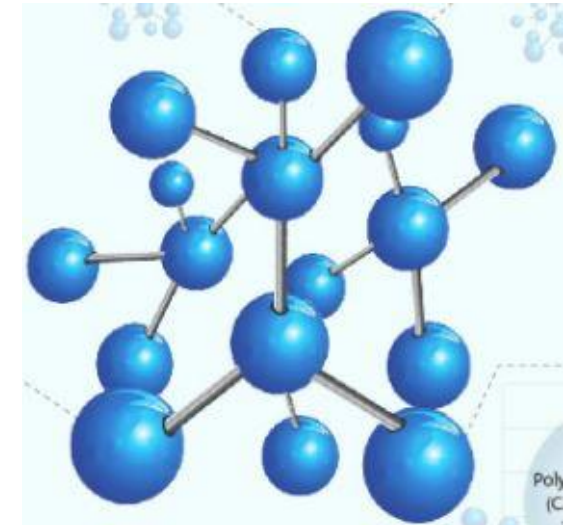
THMACO

- ❑ Tack for Option 1: Not in Stock at Binder Terminal
- ❑ Need to be tested properly ahead
- ❑ Pay Attention & Sampling from Field as Needed



High Polymer (HP) Binder

- ❑ SS211, Type E(HP) Asphalt Mixture
- ❑ Polymer Content : about 7.5%
- ❑ PG 76E-28 (HP): Recovery 90% @ 76°C, Viscosity
 - Recovery \equiv Performance / Viscosity \equiv Workability
- ❑ Recommended Storage Temperature: 320~330°F
- ❑ Storage Life: about a week (from 90% recovery)
- ❑ Mix Placement Temperature: above 300°F



High Polymer (HP) Binder

❑ Higher Temp Storage will expedite curing

- Not having well spread Polymers
- Workability issue: pumping, mixing, placing

❑ Sampling for Approval and Monitoring

- Supplier needs to send a sample to CO Asphalt Lab (Project based approval)
- Field (Plant) samples by VDOT

❑ New HP Binder Coming: Double the storage life

Asphalt Mastic Crack Sealing

- ❑ SP315 Issued
- ❑ Hot Applied Polymer Modified Asphalt Mastic
- ❑ Mainly for Sealing Cracks Wider than 1 in
 - Possible for a small skin patching before overlaid
- ❑ Don't Overuse for Patching



