

## SECTION 702 – BITUMINOUS MATERIALS

Make the following amendments to said Section:

(I) Amend **Subsection 702.01** by replacing lines 4 to 5 to read:

**“702.01 Asphalt Cement.**

(A) **PG 64-16.** Performance graded (PG) asphalt binder (neat or unmodified) shall conform to AASHTO M 320.

(B) **PG 64E-22.** Performance graded binder (polymer modified) shall conform to AASHTO M 332 and meet the following additional requirement:

AASHTO T 315 Determining the Rheological Properties of Asphalt Binder Using a Dynamic Shear Rheometer (DSR). Phase angle on original binder shall be less than 77 degrees.

(C) **Submittals.** Submit, before usage, a Certificate of Compliance, accompanied by substantiating test data, showing conformance with Performance Graded Asphalt Binder Specification. The Engineer will not accept the PG binder without adequate documentation.”

(II) Amend **Subsection 702.04** to add under line 17 to read:

Polymer modified asphalt shall conform to AASHTO M 316, except cationic type CQS-1P or CQS-1hP used for micro surfacing shall meet the requirements in Table 702.04-1.

**TABLE 702.04-1 – Polymer Modified Emulsion for Micro Surfacing Requirements**

| Property                                            | Test Procedure (AASHTO) | Specification            |      |
|-----------------------------------------------------|-------------------------|--------------------------|------|
|                                                     |                         | Min                      | Max  |
| Emulsion Properties                                 |                         |                          |      |
| Viscosity, Saybolt-Furol, @ 122°F, SFS              | T59                     | 15                       | 150  |
| Sieve Test, %                                       | T59                     |                          | 0.1  |
| Residue by Evaporation, %                           | T59                     | 62                       |      |
| Residue Properties From Low Temperature Evaporation |                         | AASHTO R-78 <sup>b</sup> |      |
| MSCR @ 70° C, Recovery @ 3.2 kPa, %                 | T350                    | 80                       |      |
| MSCR @ 70°C, J <sub>nr</sub> @3.2, 1/kPa            | T350                    |                          | 0.50 |

Notes:

- (a) Maintain the test temperature at 350°F (177°C) for 20 minutes.
- (b) After recovering the residue from AASHTO R-78, the sample may be annealed prior to testing to remove any excess moisture and provide for a consistent sample. The annealing can be accomplished by placing 20 grams of residue in a 6 oz. metal container (approx. 3-inch diameter) and heating to 163°C for no more than 15 minutes. The sample should be stirred with a spatula every 5 minutes. The sample can then be poured directly into a 25mm DSR silicone mold for evaluation.

30 (III) Amend **Subsection 702.06 (Unassigned)** by replacing line 23 to read:  
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32 **"702.06 Warm Mix Asphalt (WMA) Additive.** Additives for WMA shall be  
33 approved by the Engineer."  
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35 **END OF SECTION 702**