

Bit. Team & MAPA Spec Updates

July 2026

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Sec 1015 – Bituminous Material

1015.3.1 Certification. The supplier shall furnish the truck driver a copy of the bill of lading, manifest or truck ticket to be available to MoDOT at the destination prior to unloading. The engineer at the source shall be furnished a copy. The bill of lading, manifest or truck ticket shall provide the following information regarding the shipment: type and grade of material, chemical additives, such as polyphosphoric acid (PPA), used in modification or for cross-linking, specific gravity at 60 F, net gallons, consignee, truck number, identification number, weight of truck before and after loading, destination, date loaded, name and location of the source, and a certification statement. The certification statement shall be signed by an authorized representative of the supplier and shall be substantially as follows:

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SECTION 1015.10 PERFORMANCE GRADED ASPHALT BINDER.

1015.10.1 General. Performance graded asphalt binder shall be an asphalt-based binder produced from petroleum residue either with or without the addition of non-particulate organic modifiers, except Re-refined Engine Oil Bottoms (REOB), and Vacuum Tower Asphalt Extenders (VTAE), ~~and Polyphosphoric Acid (PPA)~~ shall not be used as modifiers. Polyphosphoric Acid (PPA) may be used- at a maximum dosage of 0.25% by weight of binder to promote polymer cross-linking and interaction. Higher PPA dosages or other types of modifiers used for cross-linking shall be approved by the engineer. The asphalt binder grade shall be as specified in the contract.

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Sec 406 – Paver-Mounted Thermal Profilers

SECTION 406 PAVER-MOUNTED THERMAL PROFILES

406.1 Description. This work shall consist of continuous thermal profiling of the asphalt mat temperature behind the trailing edge of the paver screed plate during placement operations using a Paver-Mounted Thermal Profile System (PMTPS). This work shall be completed in accordance with the general principles set forth in AASHTO R 110 "Standard Practice for Continuous Thermal Profile of Asphalt Mixture Construction", and specifically as stated in the following sections.

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Sec 403 – Asphaltic Concrete Pavement

- BMD on SP095 and SP125 mixes only
- No FAA, CAA, Clay Content, or T&E Requirement for BMD mixes
- Added requirement for anti-strip on all mixtures containing flint chat, gravel, fractions with greater than 5% chert, and poor performing mixtures due to stripping
- Allow use of chert, gravel, or flint chat in porphyry mixes with anti-strip and HWT testing
- Removed N_{initial} and N_{max} in mix design
- SM/SMR $N_{\text{design}} = 100$ and BMD (095 & 125) $N_{\text{design}} = 60$

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— Sec 403 – Asphaltic Concrete Pavement

- Design Air Voids:
 - BMD between 3.0 and 5.0%
 - SMA and SP048 mixes = 4.0%
 - SP190 and SP250 mixes = 3.0% *
- VMA table
 - V_{be} for SP095 = 12.0%
 - V_{be} for SP125 = 11.0%
- VFA
 - SP095, SP125, SP190, SP250 minimum 72%
 - SMA & SP048 minimum 75%

Mixture	VMA Minimum (percent)
SP250	12.0
SP190	13.0
BMD SP125	$V_{be} \text{ Minimum} + V_{a\text{Design}}$
BMD SP095	$V_{be} \text{ Minimum} + V_{a\text{Design}}$
SP048	16.0
SMA	17.0

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Sec 403 – Asphaltic Concrete Pavement

- TSR
 - greater than 85%
 - greater than 80% with anti-strip
 - For BMD mixes HWT moisture susceptibility tests may be used
- BMD Testing
 - CT_{index} minimum 50
 - CT_{index} (Long-term aged) minimum 15
 - RT_{index} no change, but allows HWT to govern if RT doesn't meet minimum
 - HWT max depth 10mm in design, 12.5 in production
 - HWT design include data for 20,000 passes

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Sec 403 – Asphaltic Concrete Pavement

- HWT Moisture Susceptibility
 - MoDOT TM-100

Parameter	Stripping Criteria	Outcome
Total Rut Depth	Less Than or Equal to 4 mm	Passes Stripping Test
Slope Ratio (SR)	Less Than 2.0	Passes Stripping Test
Stripping Inflection Point (SIP)	Greater Than 15,000 passes	Passes Stripping Test

- Removed daily RAP gradation requirement
- Density requirement 92.5 to 98.5, no change to SMA
- Incorporated shoulder density and other non-traffic area changes as previously discussed

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— Sec 403 – Asphaltic Concrete Pavement

- Consensus properties for BMD waived
- Clarified lift thicknesses as previously discussed
- PMTP required for all BMD mixes.
- All non-BMD mixes require MTV
- QC Plan to include where samples are taken and PMTP requirements

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— Sec 403 – Asphaltic Concrete Pavement

- Lots & Sublots
 - No more than 6000 tons
 - Max subplot size 1000 tons
 - Minimum of 4 sublots per lot
- Testing (see each chart)

• PWL	QC – 1 per subplot	QA – 1 per lot
• CT & RT	QC – 1 per 6000 tons	QA – 1 per 12,000 tons
• TSR	QC – 1 per 12,000 tons	QA – 1 per 48,000 tons
• Gradation	QC – 1 per 2 sublots	QA – 1 per lot
• Consensus	QC – 1 per 12,000 tons	QA – 1 per project

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Sec 403 – Asphaltic Concrete Pavement

- Perform CT_{index} on 5 samples
 - Report all 5 results
 - Average the middle 3
- May use an RT_{index} correlation to HWT results *
- Small quantity same as max lot size – 6,000 tons
 - Performance testing not required
 - QC testing to at least 1/day if not exceeding 1,000 tons
 - QC testing to at least 2/day if exceeds 1,000 tons (from 750 tons)
- Dispute resolution for RT_{index} is HWT by third party

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Sec 403 – Asphaltic Concrete Pavement

- Pay
 - Non-BMD TSR -> 3%
 - BMD TSR -> no adjustment for TSR
 - Unless Small Quantity – if selected
 - BMD Perf. Testing -> 3% (RT, CT, TSR/HWT)
 - Non-BMD PWL -> 5% (Density, Air Voids, VMA, %AC)
 - BMD PWL -> 3% (Density, Air Voids, %AC)
 - BMD PMTP -> \$40 / 150 ft (approximately 2%)

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Sec 403 – Asphaltic Concrete Pavement

- TSR

TSR	Percent of Contract Price
Greater than 85%	103
80-85%	100
70-79%	97
Less than 70%	Remove

- BMD –

- Must meet RT or HWT to get CT incentives

BMD SP095 and SP125 SuperPave Mixtures		
Cracking Tolerance Index (CT _{Index})	Tensile Strength Ratio (TSR)	Percent of Contract Price ^a
100 or Greater	Greater than 85% ^{b,c}	103%
50-99	80-85%	100%
40-49	70-79%	97%

^aThe CT_{Index} adjustment only applies if the RT_{Index} or HWT results meet the specification.

^bThe HWT moisture susceptibility testing may be used in lieu of TSR in accordance with MoDOT TM-100. Passing HWT results will equate to a TSR greater than 85 percent.

^cIf an approved liquid anti-strip is used, the TSR shall be greater than or equal to 80 percent to receive full incentive.

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Sec 403 – Asphaltic Concrete Pavement

- Comparison tolerances clarified
- Removal limits
 - Non-SMA mixes with Air Voids less than 1.5%
 - SMA mixes with Air Voids less than 2.5%
 - Any mix with TSR below 70%
 - BMD mixes with HWT rut greater than 12.5 mm
 - BMD mixes with CT_{index} less than 40

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Sec 403 – Asphaltic Concrete Pavement

- Small Quantities

- TSR available for non-BMD mixes
- 3% incentive available for BMD mixes using HWT for stripping, if identified in QC Plan
- Field Density table removed disincentives and replaced with Correction by RPE

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