
Standard Specification for Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures

AASHTO Designation: M 156-13 (2021)

Technically Revised: 2013

Reviewed but Not Updated: 2021

Technical Subcommittee: 2c, Asphalt–Aggregate Mixtures



**American Association of State Highway and Transportation Officials
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1. SCOPE

- 1.1. This specification covers requirements for plants producing hot mix asphalt (HMA) or warm mix asphalt (WMA) paving mixtures. It may be used as a basis for state certification or inclusion of an asphalt mixing plant on an agency's approved list. Additional requirements may also be specified by the agency.

2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standards:*
- R 66, Sampling Asphalt Materials
 - R 97, Sampling Asphalt Mixtures
 - T 19M/T 19, Bulk Density ("Unit Weight") and Voids in Aggregate
 - T 27, Sieve Analysis of Fine and Coarse Aggregates
 - T 30, Mechanical Analysis of Extracted Aggregate
 - T 84, Specific Gravity and Absorption of Fine Aggregate
 - T 166, Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens
 - T 209, Theoretical Maximum Specific Gravity (G_{mm}) and Density of Asphalt Mixtures
 - T 283, Resistance of Compacted Asphalt Mixtures to Moisture-Induced Damage
 - T 308, Determining the Asphalt Binder Content of Asphalt Mixtures by the Ignition Method
 - T 312, Preparing and Determining the Density of Asphalt Mixture Specimens by Means of the Superpave Gyratory Compactor

3. TERMINOLOGY

- 3.1. *batch plant*—a manufacturing facility for producing asphalt paving mixtures in discrete production batches. Each batch includes specific proportions, by weight, of aggregate, asphalt binder, and other chosen additives. Each discrete batch is mixed and then discharged.
- 3.2. *check*—a specific type of inspection or measurement performed on equipment or materials to indicate compliance with the stated criteria. Examples include (a) lime check, and (b) calibration check of cold feed system.

- 3.3. *continuous mix plant*—a manufacturing facility for producing asphalt paving mixtures that continuously proportions the aggregate, asphalt binder, and other chosen additives into the mix by a continuous volumetric proportioning system without definite batch intervals.
- 3.4. *drum mix plant*—a manufacturing facility for producing asphalt paving mixtures that continuously proportions the aggregate, heats and dries it in a rotating drum, adds any chosen additives, and simultaneously mixes the material with a controlled amount of asphalt binder.
- 3.5. *hot mix plant*—any of the plants listed above that produce HMA or WMA.
- 3.6. *interlock*—a system whereby plant production will be interrupted when any one of the interlocked raw material constituents fails to meet the targeted requirements established within the specifications or plant requirements.
- 3.7. *modified batch plant*—a manufacturing facility for producing asphalt paving mixtures that continuously proportions the aggregate, asphalt binder, and other chosen additives into the mix by weighted batches. The modified batch plant will usually have the screen decks removed.

4. PLANT REQUIREMENTS

- 4.1. *Prerequisite for Plant Approval:*
- 4.1.1. *Inspection of Equipment*—The plant owner or manager shall schedule an inspection of the plant facilities to determine compliance with this specification. The equipment shall be maintained in a satisfactory operating condition and be capable of its intended function at all times during production.
- 4.1.2. *Quality Control Program*—Each plant shall have an approved quality control program and have a designated person to administer the program. This program shall include the testing and control of the individual component materials and the final product produced at the plant. Operations shall be conducted in a manner so that a uniform product is produced that will meet specified requirements.
- 4.1.3. *Certified Public Weighers or Certified Public Scales*—State or federal requirements should dictate plant requirements related to Certified Public Weighers or Certified Public Scales.
- 4.1.4. *Uniformity*—The plant must be capable of producing homogenous asphalt mixtures even though the individual components include such diverse materials as various sizes of aggregate from stockpiles, reclaimed asphalt pavement (RAP), reclaimed asphalt shingles (RAS), asphalt binder, and other admixtures, as required by the mix design.
- 4.2. *Weight Measuring Systems:*
- 4.2.1. Furnish (at the contractor's expense) platform scales to weigh bulk asphalt plant mixtures, regardless of the type of weight measuring system used for payment.
- 4.2.2. Ensure that the documentation for platform scales complies with state or federal requirements. Platform scales shall be certified at a minimum every six months, or at a frequency required by state or federal requirements. Platform scales shall be certified if they are moved or relocated.
- 4.2.3. Each platform scale system should be capable of taring truck weights with each load.
- 4.2.4. When not using platform scales, provide calibrated weighing devices that record the mixture's net weight delivered to the truck. Weighing devices shall be calibrated at a frequency specified by the