



**REVISED**

**COVID-19 Pandemic Temporary Guidelines for**

**HMA and PCC Acceptance and Independent Assurance (IA)**

**Independent Assurance**

1. Independent Assurance Sampling and Testing for Concrete and Soils
  - Continue operating at the job site, maintain social distance during IA sampling and testing until told otherwise.
2. Independent Assurance Sampling and Testing for Hot Mix Asphalt (Plant)
  - Suspend all HMA IA's performed at the Plant until further notice.

**Concrete (PCC)**

1. Precast Consultant Inspection Companies service will continue operating as usual, until told otherwise.
2. New Mix Designs Requiring Trial Batch Testing (Ready Mix Producers Only)
  - a. Suspend all Trial Batch Testing Requirements for Ready Mixed Producers until further notice.
  - b. Allow for temporary approval with the following language:  
MassDOT has temporarily suspended all ready-mixed concrete trial batch testing requirements on new mix designs until further notice. As a result, the following cement concrete mix designs shall be granted "Provisional" approval, contingent on acceptance testing performed at the job site, in lieu of trial batch testing requirements. Conforming acceptance test results shall be granted "full" approval for the duration of the annual approval cycle, and will expire on April 1, 2021. "Provisional" approval of the following mix designs shall be rescinded if acceptance test results are not in conformance with the specifications requirements. Any changes will require new mix design submittals.
3. Cement Concrete Verification Sampling and Testing Program of Constituent Materials of Cement Concrete performed by Research and Materials (RMS)
  - a. Cancel all remaining "Phase I" Verification Sampling and Testing requirements that were to be performed by RMS staff (Was scheduled to take place from January 1 through June 30).
  - b. Begin "Phase II" Verification Sampling and Testing as scheduled (Tentatively scheduled to begin June 1 through December 1).
4. All other Verification Sampling and Testing Programs performed by RMS
  - a. Cancel all remaining Verification Sampling and Testing requirements that were to be performed by MassDOT staff
  - b. Resume Verification Sampling and Testing tentatively beginning in June 1 through December 1.
5. All District inspectors will no longer perform any inspection and testing at the concrete producer's plant prior to concrete shipment until further notice. Concrete producers shall email copies of the batch tickets to the District

Materials Engineer for each truck load delivered. Concrete testing at the project (slump, air and temperature) and cylinder breaks will be used for acceptance.

### Hot Mix Asphalt (HMA)

The following are temporary modifications to established MassDOT HMA policies as well as Sections 450 and M3.

1. Plant and Lab Prequalification - For those plants that have not been inspected by RMS in 2020.
  - a. RMS will send each HMA plant and lab the 2020 checklist used by RMS.
  - b. The Contractor's QC Manager will perform their own internal audit of the plant and lab.
  - c. The Contractor will email a completed checklist and all Quality System documents to RMS.
  - d. RMS will perform a phone interview to go over the results of the audit. RMS will then notify NETTCP to provide an interim lab qualification.
  - e. Once regular operations resume the RMS OA Unit will verify plant and labs for conformance with MassDOT specs and requirements.
  
2. Mix Design Verification – District verification of HMA mix designs will be suspended until further notice.
  - a. The Contractor will submit their mix designs with all required information on the HMA Mix Design Workbook.
  - b. Contractor will deliver aggregate to the District lab to determine consensus properties. *The District may also request cans of binder if they are able to perform mix verification in their lab.*
  - c. The District will complete the verification portion of the mix design workbook using District aggregate results and the Contractor's volumetric results.
  - d. If a mix requires performance testing (i.e. hamburgs, SCBs, or beams) the Contractor will fabricate the samples, complete the fabrication checklists, and deliver the samples to RMS for testing. *The District will not be required to witness sample fabrication.*
  - e. Mix design submissions that meet MassDOT requirements will be approved (the approval letter will note that the mix design was not verified by the District) and the mixture approval is dependent on mix testing during production.
  
3. Production HMA Testing – Acceptance testing performed by MassDOT during HMA paving production and placement will continue as follows:
  - a. HMA pavement cores will continue to be cut by Contractor QC on the job site and submitted to the District inspector for testing at the District lab.
  - b. HMA loose mix testing will be modified as such:
    - i. Loose mix sampled by District inspector at the HMA plant will be discontinued until further notice.
    - ii. The day before paving the Contractor will notify the DME with

- the anticipated quantity of mix to be produced. The DME will determine the random numbers for Acceptance sampling.
- iii. During HMA production the Contractor QC personnel will perform the following additional duties:
    1. Collect a can of binder from the in-line sample at the usual sampling frequency of one can per 12,000 tons of Superpave mix.
    2. Collect all plant production slips and PG binder bill of ladings for that day's production.
    3. Contractor QC will then deliver the production slips, BOLs, and a copy of all QC results to the District lab.
      - a. If the District lab is unable to accept delivery the Contractor will store the boxed samples and documentation at their facility. Once testing can resume, the District lab will obtain the samples, prioritize, and test them accordingly.
  - iv. Loose mix sampled by the District inspector will take place at the project sight in accordance with the "MassDOT Temporary HMA Field Sampling Policy" found below.
  - v. District lab will reheat boxed samples in *their lab* and perform testing as they normally would at the HMA plant. Lab testing will be performed at:
    1. District 1 – in the District lab.
    2. District 2 – in the District lab.
    3. District 3 – in RMS HMA lab or District 2 lab.
    4. District 4 – in the District lab.
    5. District 5 – in the District lab.
    6. District 6 – in RMS HMA lab or Districts 4 or 5 lab. *Third party inspection companies under contract by MassDOT will not be allowed to perform HMA testing for District 6 since these companies may also perform HMA QC testing.*
  - vi. Control Strip shall be modified as follows.
    1. Contractor is still required to sample and test in accordance with Section 450.
    2. District labs will only be required to test one sample of loose mix from the control strip.
    3. Control strip cores and IRI will continue per Section 450.
  - vii. Ride Quality – Both Contractor QC and MassDOT Acceptance will continue performing ride testing per Section 450 as the situation permits.

## MassDOT Temporary Loose HMA Field Sampling Policy

### Sampling Equipment:

- Square ended shovel (side extensions recommended; if available)
- HMA mix thermometer 50 - 500 °F
- 3 - HMA sample boxes per sample
- Non-stick wax paper (to line sample boxes when sampling mixtures with polymer modified or asphalt rubber binders)

Note: Sampling shovel should be clean and free from any contaminants that may compromise the HMA sample. If cleaned or coated with release agent, allow excess to drain off and work back and forth through mix prior to sampling. The use of petroleum-based products to clean the sampling tools will not be permitted in accordance with Section 450.44.

In modification to Section 450.74C, the Department paving inspector may request that the Contractor's QC technician assist in the sampling process, where the Contractor's safety policies allow.

### Procedure: Sampling Preparation

- Random samples shall be determined by tonnage.
- All random sample locations are to be determined prior to HMA production and placement.
- The procedure for notifying the Contractors representative of "intent to sample" should be discussed at the pre-paving meeting.
  - o Verify the random location or tonnage is approaching.
  - o Notify the Contractors representative of the intent to sample, making sure that the haul truck is on-site prior to notification.
  - o Identify the haul unit to be sampled from.
  - o Notify the Contractor's QC technician of the intent to take a sample from the haul unit.
- Insert thermometer into haul unit (or in HMA material if already in hopper).
- Record truck ticket number, time of sampling, temperature of mix, and station/lane.
- Sample the loose material from either the paver auger or paver/MTV hopper. Sampling method shall be agreed upon by the Engineer and Contractor.

### Sampling: Paver auger

- Sampling from the paver auger shall be in accordance with AASHTO R 97.
  1. Obtain samples from the end of the auger using a square head shovel.
  2. Place the shovel in front of the auger extension, with the shovel blade flat upon the surface to be paved over.
  3. Allow the front face of the auger stream to cover the shovel with asphalt

- mixture, remove the shovel before the auger reaches it by lifting as vertically as possible. Place asphalt mixture in a sample container.
4. Combine the sample increments to fill three sample boxes.

#### Sampling: Paver/MTV Hopper

1. Discharge the HMA pavement so the material flows into the hopper in one continuous mass.
2. The sample should be taken from the center (middle 1/3) of the overall load.
3. Make sure the hopper is full of mix at time of sampling.
4. Have the Contractor lower the truck body in a manner to minimize spillage.
5. Have the truck move out and away from the hopper.
  - a. The truck should be moved away a minimum of 30 feet and parked. The driver shall shut down the engine as a safety precaution.
6. Have the paver stop, apply brakes, and /or shut down engine.
7. For safety, the Contractor's person controlling the truck should remain in full view of the driver to ensure that the truck does not back towards the paver while others are sampling.
8. When all equipment is secured, the sampling process may begin.
9. Remove the top 8 - 10" of mix across the center of the paver hopper, being careful not to sample within 1.5 feet of the hopper sides.
10. Trim the front of the area to be sampled to form an 8-inch vertical face.
11. Obtain a sample by digging into the vertical face horizontally until the shovel is full, being careful not to overfill the shovel.
12. Fill three sample boxes, being careful to minimize spillage.
13. Record the required information on the front side of the sample container.
14. All samples should be secured immediately in the transport vehicle. The sample shall be transported to the appropriate MassDOT laboratory. The sample shall be stored in a secure and dry location until and during transport to the laboratory.