



**INDIANA DEPARTMENT OF TRANSPORTATION  
DIVISION OF MATERIALS AND TESTS**

**CERTIFIED HOT MIX ASPHALT  
PRODUCER PROGRAM  
ITM No. 583-21**

**1.0 SCOPE.**

- 1.1** This procedure covers the requirements for a HMA plant to become a Certified Hot Mix Asphalt Producer. Mixtures produced shall be QC/QA HMA in accordance with 401, HMA in accordance with 402, and Stone Matrix Asphalt (SMA) in accordance with 410.
- 1.2** This procedure may involve hazardous materials, operations and equipment and may not address all of the safety problems associated with the use of the test method. The user of this ITM is responsible for establishing the appropriate safety and health practices and determining the applicability of regulatory limitations prior to use.

**2.0 REFERENCES.** Documents required by the Program may be maintained electronically or by hard copy.

**2.1 AASHTO Standards.**

- R 30 Mixture Conditioning of Hot Mix Asphalt
- R 35 Superpave Volumetric Design for Hot Mix Asphalt (HMA)
- R 46 Designing Stone Matrix Asphalt (SMA)
- R 66 Sampling Bituminous Materials
- R 76 Reducing Samples of Aggregate to Testing Size
- T 2 Sampling of Aggregates
- T 11 Materials Finer Than 75- $\mu\text{m}$  (No. 200) Sieve in Mineral Aggregates by Washing
- T 27 Sieve Analysis of Fine and Coarse Aggregates
- T 30 Mechanical Analysis of Extracted Aggregate
- T 166 Bulk Specific Gravity of Compacted Hot Mix Asphalt (HMA) Using Saturated Surface-Dry Specimens.
- T 209 Theoretical Maximum Specific Gravity and Density of Hot Mix Asphalt Paving Mixtures
- T 255 Total Evaporable Moisture Content of Aggregate by Drying
- T 269 Percent Air Voids in Compacted Dense and Open Asphalt Mixtures
- T 275 Bulk Specific Gravity of Compacted Hot Mix Asphalt (HMA) Using Paraffin-Coated Specimens
- T 305 Determination of Draindown Characteristics in Uncompacted Asphalt Mixtures

- T 312 Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor
- T 331 Bulk Specific Gravity and Density of Compacted Asphalt Mixtures Using Automatic Vacuum Sealing Method
- T 344 Evaluation of Superpave Gyratory Compactor (SGC) Internal Angle of Gyration Using Simulated Loading

## 2.2 ASTM Standards.

- D5821 Determining the Percentage of Fractured Particles in Coarse Aggregate

## 2.3 ITM Standards.

- 207 Sampling Stockpiled Aggregates
- 220 Class AS Aggregate for Use in SMA Mixture
- 571 Quantitative Extraction of Asphalt/Binder and Gradation of Extracted Aggregate from HMA Mixtures
- 572 Drying HMA Mixtures
- 580 Sampling HMA
- 581 Performance Graded Binder Approved Supplier Certification (ASC) Program
- 584 Bulk Specific Gravity of Aggregate Blends with Recycled Aggregate
- 586 Binder Content by Ignition
- 587 Reducing HMA Samples to Testing Size
- 588 Percent Within Limits (PWL)
- 590 Total Aggregate Bulk Specific Gravity Determination from Extracted HMA or SMA Mixture
- 591 Delta Pb ( $\Delta Pb$ ) Determination for Dense Graded HMA or SMA Mixture
- 902 Verifying Sieves
- 903 Verifying Ovens
- 905 Verifying Vacuum Systems
- 906 Verifying Mechanical Shakers
- 908 Verifying Calibrations Settings for Superpave Gyratory Compactors
- 909 Verifying Thermometers
- 910 Verifying Balances
- 916 Verification of Calipers

## 2.4 A Certified HMA plant laboratory shall have the following current documents on file and shall provide to the Department upon request:

- 2.4.1** Indiana Department of Transportation Standard Specifications (Includes applicable Supplemental Specifications)

- 2.4.2** Pertinent contract Special Provisions
- 2.4.3** Indiana Certified Asphalt Technician Program Manual
- 2.4.4** All applicable ITM, AASHTO, and ASTM Test Methods
- 2.4.5** Testing equipment calibrations or verifications
- 2.4.6** Mix design, DMF, for each Mixture
- 2.4.7** Fines correction data for the mixture and recycled materials for each DMF
- 2.4.8** Type A certifications for all binder materials
- 2.4.9** Type A certifications for the SBR polymer latex
- 2.4.10** PG 64-28 and PG 70-22 binder test reports from an AASHTO accredited laboratory whenever PG 58-28 and PG 64-22 are in-line blended with SBR polymer latex
- 2.4.11** Process control test results
- 2.4.12** Type D certifications issued to active Department contracts
- 2.5** A Certified HMA plant shall have the following current documents on file and shall provide to the Department upon request:
  - 2.5.1** The Quality Control Plan (QCP) for the HMA plant
  - 2.5.2** Bill of ladings of the binder from each Supplier for a minimum period of three complete calendar years
  - 2.5.3** Weigh tickets from most current date of production of HMA
  - 2.5.4** Instructions from the Supplier concerning storage and handling of the binder
  - 2.5.5** Flow meter calibration reports and flow computer printouts whenever in-line blending with SBR polymer latex
  - 2.5.6** The IDEM Legitimate Use Approval letter from the post-consumer asphalt shingle processing company
  - 2.5.7** HMA plant calibrations for each DMF

**2.5.8** Daily diary

**2.5.9** Annual calibration of HMA plant scales and verification of meters

**2.5.10** Fiber certification from the manufacturer

**2.5.11** Instructions from the manufacturer concerning storage and handling of fibers

**3.0** **TERMINOLOGY.** Definitions for terms and abbreviations will be in accordance with the Department's Standard Specifications Section 101 and the following:

**3.1** Addenda. Any addition or deletion to the QCP

**3.2** Addenda Summary Sheet. A page of the QCP that is used to record a brief description of addenda until such time that the revisions are incorporated into the QCP

**3.3** Actual Binder Content. The binder content determined in accordance with ITM 586 or the total of the binder content determined in accordance with ITM 571 and the binder absorption percent from the DMF

**3.4** Certified Asphalt Technician. An individual who has successfully completed the requirements of the Indiana Certified Asphalt Technician (ICAT) Program..

**3.5** Certified HMA Plant. A HMA plant that meets the requirements of the Program, continues to be under the same ownership, and is approved by the Department

**3.6** Corrective Action. Corrective action shall include, but is not limited to, investigation for cause, correction of known cause, or re-testing

**3.7** Coarse Aggregate. Aggregate that has a minimum of 20 percent retained on the No. 4 sieve

**3.8** District. The Department District Office responsible for administrating the materials and tests function in a local area of the state

**3.9** Fine Aggregate. Aggregate that is 100 percent passing the 3/8 in. sieve and a minimum of 80 percent passing the No. 4 sieve

**3.10** Level 1 Asphalt Technician. A Technician that is both a Qualified and Certified Asphalt Technician.

**3.11** Mixture. QC/QA HMA, HMA, or SMA produced for the Department's use in accordance with ITM 583 and the Specifications

- 3.12 Moving Average. Average of the last four or five tests as stated in the QCP
  - 3.13 National Institute of Standards and Technology (NIST). A federal technology agency that develops and applies technology, measurements, and standards
  - 3.14 Division of Materials and Tests. An office of the Indiana Department of Transportation, located at 120 S. Shortridge Rd. in Indianapolis, Indiana 46219-0389
  - 3.15 Producer. A company or owner who shall assume responsibility for a Certified HMA Plant. A Producer, in accordance with ITM 581, may modify a PG binder from a Supplier by in-line blending SBR polymer latex at the HMA plant for immediate use.
  - 3.16 Program. ITM 583, Certified Hot Mix Asphalt Producer Program
  - 3.17 QCP Annex. A page of the QCP, located in the Appendix, that is used to record revisions for HMA Plant major components, Level 1 Asphalt Technicians, Certified Asphalt Technicians, and movement of the HMA Plant
  - 3.18 Qualified Technician. An individual who has successfully completed the written and proficiency testing requirements of the Department Independent Assurance and Qualified Acceptance Personnel Program
  - 3.19 Supplier. A Supplier shall be a refinery or terminal that produces modified or unmodified PG binders in accordance with ITM 581.
  - 3.20 Water-Injection Foaming. Water-injection foaming is a technology that allows a reduction in the temperature at which mixtures are produced and placed.
- 4.0 SIGNIFICANCE AND USE.** The Certified Hot Mix Asphalt Producer Program is a program whereby the Producer takes responsibility for the production of quality mixture in accordance with contract requirements, and the Department monitors the Producers production, sampling, and testing procedures.
- 5.0 PRODUCER PERSONNEL.** The Producer personnel shall include a Management Representative, Level 1 Asphalt Technician, Certified Asphalt Technician, and a Qualified Technician, if applicable.
- 5.1 **Management Representative.** The Management Representative shall be responsible for all aspects of mixture production and control at the HMA plant and on the pavement as required by the Program.
  - 5.2 **Level 1 Asphalt Technician.** The Level 1 Asphalt Technician shall conduct or supervise all sampling and testing of materials, the maintenance of control charts, and the maintenance of the diary.

- 5.3 Certified Asphalt Technician.** The Certified Asphalt Technician may supervise all sampling and testing of materials, the maintenance of control charts, and the maintenance of the diary, however, the Certified Asphalt Technician shall not conduct sampling and testing.
- 5.4 Qualified Technician.** The Qualified Technician may conduct all sampling and testing used for acceptance of materials under the direct supervision of a Certified Asphalt Technician or Level 1 Asphalt Technician until the next opportunity to take the QC/QA HMA Certified Technician exam is available.

## **6.0 LABORATORY.**

- 6.1** Process control testing shall be performed at the HMA Plant or as permitted in 6.3. The Producer shall provide and maintain a laboratory for process control testing. The laboratory shall have the necessary space, equipment, and supplies for the tests to be performed.
- 6.2** The laboratory testing equipment shall meet the requirements of the test methods identified for the required sampling and testing, except that an electronic balance shall be provided. The electronic balance shall be readable to 0.1 g and accurate to 0.2 g or 0.1 percent of the test load, whichever is greater, at any point within the range of use. The gyratory compactor shall tilt the specimen mold at an average internal angle of  $1.16 \pm 0.02^\circ$  as determined in accordance with AASHTO T 344. The gyratory compactor shall be on the Department's List of Approved Superpave Gyratory Compactors.
- 6.3** Performance of process control tests at laboratory facilities other than at the HMA Plant will be permitted provided the laboratory facilities are owned by the Producer, all test procedure criteria are satisfied in accordance with 6.2, and the test results are furnished in writing to the HMA Plant within two working days.
- 6.4** The Engineer shall be permitted access to inspect any laboratory used for process control testing, and witness process control activities during production of mixtures.

## **7.0 TEST EQUIPMENT CALIBRATION.**

- 7.1** The test equipment furnished by the Producer shall be properly calibrated or verified and maintained within the limits described in the applicable test method.
- 7.2** The Producer shall calibrate or verify equipment at the frequency indicated.
- 7.3** The equipment calibration or verification documentation shall be kept on file for a minimum period of three complete calendar years and include:

- 7.3.1 A description of the equipment calibrated or verified including Model and Serial Number
  - 7.3.2 Name of the person performing the calibration or verification
  - 7.3.3 Identification of the calibration equipment used, if any (namely, standard weights, proving rings, thermometers, etc.)
  - 7.3.4 Last date calibration or verification was performed and next due date
  - 7.3.5 A reference to the procedure used
  - 7.3.6 Detailed records showing the results of the calibration or verification performed
- 7.4 The testing equipment shall be calibrated or verified in accordance with the following:

Equipment	Requirement	Minimum Frequency	Procedure
Balances	Standardize	12 mo.	ITM 910
Gyratory Compactor	Verify Ram Pressure, Angle of Gyration, Frequency of Gyration, LVDT	1 mo.	ITM 908
Gyratory Compactor Internal Angle	Verification	12 mo.	AASHTO T 344
Gyratory Mold and Plate Dimensions	Verification	12 mo.	AASHTO T 312
Ignition Oven	Conduct Lift Test	Weekly	Operators Manual
Ignition Oven Balance	Standardize	12 mo.	ITM 910
Mechanical Shakers	Verify Sieving Thoroughness	12 mo.	ITM 906
Ovens	Verify Temperature Settings	12 mo.	ITM 903
Sieves	Verify Physical Condition	12 mo.	ITM 902
Thermometers	Verification	12 mo.	ITM 909
Vacuum Chamber	Verification	3 mo.	ITM 905
Calipers	Verification	12 mo.	ITM 916

- 7.5** The equipment used to calibrate or verify the testing equipment shall be NIST traceable and shall be calibrated or verified in accordance with the following frequencies:

<b>Calibration Equipment</b>	<b>Testing Equipment</b>	<b>Minimum Frequency</b>
Master ring used with the Bore Gauge	Gyratory Compactor Molds – AASHTO T 312	36 mo.
Dynamometer or Load Cell & Proving Ring	Gyratory Compactor – AASHTO T 312	24 mo.
Height Gage Blocks	Gyratory Compactor – AASHTO T 312	24 mo.
Height Billet	Gyratory Compactor – AASHTO T 312	24 mo.
Vacuum Gage	Vacuum Systems – ITM 905	12 mo.
Weights, Min. Class 3	Balances – ITM 910	12 mo.

## **8.0 DIARY**

- 8.1** The Producer shall maintain a diary at the HMA Plant. The diary shall be an open format book with at least one page devoted to each day mixture is produced.
- 8.2** The Producer shall keep the diary on file for a minimum period of three complete calendar years.
- 8.3** Entries in the diary shall as a minimum include:
- 8.3.1** The type of mixture produced and quantity, DMF number, and the contract or purchase order number for each mixture
  - 8.3.2** The time the sample was obtained and the time the test was completed
  - 8.3.3** Non-conforming tests and the resulting corrective action taken
  - 8.3.4** Any significant events or problems
- 8.4** The Level 1 Asphalt Technician, Certified Asphalt Technician or Management Representative shall sign the entry in the diary. On occasion the diary may be signed by another person; however, the diary is required to be counter-signed by the Level 1 Asphalt Technician, Certified Asphalt Technician or Management Representative.

- 9.0 MATERIALS SAMPLING AND TESTING.** The Producer shall designate the sampling and sample reduction procedures, test methods, sampling locations, and size of samples necessary for the quality control. Mixture shall be sampled in accordance with ITM 580. Testing of the samples shall be completed within two working days. Test values shall be reported to the nearest 0.1 percent, except as follows:



- a) Coarse aggregate angularity shall be reported to the nearest 1 percent
- b) Mixture temperature shall be reported to the nearest 1°F
- c) Mixture moisture content and draindown shall be reported to the nearest 0.01 percent

Rounding shall be in accordance with 109.01(a). The Producer shall keep the test results on file for a minimum period of three complete calendar years.

The VMA shall be calculated in accordance with AASHTO R 35 using the actual binder content from the most recent binder content determination. The maximum specific gravity shall be mass determined in water in accordance with AASHTO T 209. Gyratory specimens shall be compacted at  $300 \pm 9^\circ\text{F}$  for dense graded mixtures and SMA, and  $260 \pm 9^\circ\text{F}$  for open graded mixtures. The volume of effective binder,  $V_{be}$ , in the mixture shall be calculated as the mixture VMA minus the mixture Air Voids.

**9.1 QC/QA HMA and SMA Mixtures.** The following items shall be addressed in the QCP as a minimum:

**9.1.1** Aggregates

- a) Stockpile
- b) Blended

**9.1.2** Binder

**9.1.3** Recycled Materials

- a) Actual Binder Content
- b) Gradation
- c) Moisture Content
- d) Coarse Aggregate Angularity
- e) Bulk Specific Gravity of Recycled Aggregate

**9.1.4** Mixture Sampled at the HMA plant

- a) Actual Binder Content
- b) Gradation

- c) Aggregate degradation value (for SMA mixtures only) – once per lot
- d) Moisture Content
- e) Temperature
- f) Draindown (for open graded and SMA mixtures only)

#### 9.1.5 Mixture Sampled from the Pavement

- a) Air Voids
- b) VMA
- c) Actual Binder Content
- d) Gradation
- e) Dust/calculated effective binder ratio
- f) Moisture Content (for surface mixtures only)
- g) Bulk Specific Gravity
- h) Maximum Specific Gravity
- i) Volume of Effective Binder,  $V_{be}$

**9.2 HMA Mixtures.** HMA mixture produced concurrently with QC/QA HMA mixture shall be sampled and tested in accordance with 9.1. All other HMA mixture shall be sampled at the HMA plant or the roadway at the Contractor's option and tested for Binder Content, Coarse Aggregate Angularity (mixtures containing gravel), Gradation, and Air Voids in accordance with the following minimum frequency:

**9.2.1** The first 250 t and each subsequent 1000 t of each DMF in a construction season for base and intermediate mixtures

**9.2.2** The first 250 t and each subsequent 600 t of each DMF in a construction season for surface mixtures

**10.0 CONTROL LIMITS.** The control limits shall only apply to QC/QA HMA and SMA mixtures.

**10.1** Target mean values shall be as follows:

**10.1.1** The target value for the air void content shall be as designated by the Producer.

**10.1.2** The target values for the binder content of the mixture and the VMA shall be as indicated on the DMF.

**10.2** Control limits for single test values shall be as follows:

Parameter	Maximum % Passing, Control Limits ( $\pm$ )		
	Aggregate Stockpiles	Blended Aggregate Base and Intermediate Mixtures	Blended Aggregate Surface Mixture
3/4 in	10.0	10.0	
1/2 in.	10.0	10.0	10.0
No.4	10.0	10.0	10.0
No.8	10.0	10.0	8.0
No.16	8.0	8.0	8.0
No.30	6.0	6.0	4.0
No.50	6.0	6.0	4.0
No.100	6.0	6.0	3.0
No.200	2.0	2.0	2.0
Parameter			Control Limits
<b>Binder Content of Mixture and RAP, %</b>			$\pm 0.7$
<b>Binder Content of RAS, %</b>			$\pm 3.0$
<b>Vbe, %, above design minimum (QC/QA HMA, SMA)</b>			+ 2.0
<b>VMA @ Ndes, % (QC/QA HMA)</b>			$\pm 1.0$
<b>VMA @ N<sub>75</sub>, Minimum % (9.5 mm SMA)</b>			17.0
<b>VMA @ N<sub>75</sub>, Minimum % (12.5 mm SMA)</b>			16.0
<b>Target Air Voids % (Dense Graded Mixtures, SMA)</b>			$\pm 1.0$
<b>Target Air Voids % (Open Graded Mixtures)</b>			$\pm 3.0$
<b>2.36mm (No. 8) sieve % passing (9.5mm Surface Mixtures Only)</b>			+ 4.0

## 11.0 RESPONSE TO TEST RESULTS.

**11.1** The Producer shall take corrective action when the control limits for QC/QA HMA and SMA or specification limits for HMA Mixtures are exceeded for the appropriate properties of Mixture Binder Content, Air Voids, or VMA.

**11.2** The Producer shall document the action taken to restore the 2.36 mm sieve % passing gradation for a 9.5 mm HMA surface mixture when it is determined to be greater than the PCS control point value of 47%.

**11.3** The Producer shall document the action taken to restore the aggregate degradation value for SMA mixture in accordance with ITM 220 when it is determined to be greater than 3.0%.

- 11.4** The Producer shall document the action taken to restore the dust/calculated effective binder ratio when it is determined to be outside specification limits as defined in 401.05.
- 11.5** The Producer shall document the action taken to restore the volume of effective binder,  $V_{be}$ , when it is determined to be less than the design minimum or more than the design maximum as follows:

Mixture Designation	Minimum $V_{be}$ , %	Maximum $V_{be}$ %
9.5 mm SMA	13.0	16.0
12.5 mm SMA	12.0	15.0
19.0 mm SMA	11.0	14.0
4.75 mm	13.0	16.0
9.5 mm	11.0	14.0
12.5 mm	10.0	13.0
19.0 mm	9.0	12.0
25.0 mm	8.0	11.0

- 11.6 Moisture Content.** The Producer shall take corrective action when the moisture content of the mixture sampled at the HMA Plant exceeds 0.30 percent or when the moisture content of the surface mixture sampled from the pavement exceeds 0.10 percent.
- 11.7** The Producer in-line blending SBR latex at the HMA plant shall take corrective action if the latex solids content is more than 0.2% below the lower target limit for more than 15 minutes of production.
- 11.8 Documentation.** All corrective action shall be documented in the diary.

## **12.0 QUALITY CONTROL PLAN.**

- 12.1** Each Producer providing mixture under the Program shall have a written QCP which shall be HMA plant specific and be the basis of control. The QCP shall contain, but not be limited to, the methods of sampling, testing, calibration, verification, inspection, and anticipated frequencies.
- 12.2** If applicable, the QCP shall include the following information for each HMA Plant:
- 12.2.1** The location of the HMA Plant site, including the county and reference to the nearest identifiable points such as highways and towns.
- 12.2.2** The name, telephone number, fax number, email address, duties, and employer of the Management Representative, Level 1 Asphalt Technician(s), Certified Asphalt Technician(s), and Qualified

Technician(s), if applicable. The duties of all other personnel responsible for implementation of the QCP shall be included.

- 12.2.3** A list of test equipment that is calibrated or verified, the test methods and frequency of calibration or verification of the equipment, and a statement of accessibility of the laboratory to Department personnel.
- If the laboratory is not located at the HMA Plant, the location of the laboratory shall be designated, and the procedure for transporting the mixture to the laboratory included.
- 12.2.4** A HMA plant site layout diagram which shall include the location of the stockpile area, binder tanks, fuel tank, fiber supply, anti-adhesive supply, field laboratory, visitor parking area, and major components of the mixing HMA plant.
- 12.2.5** A plan for controls of the aggregate and recycled material stockpiles. Controls for identification of stockpiles by signing or other acceptable methods, techniques for construction of proper stockpiles, and cold bin loading procedures to prevent overflow of material from one bin into another shall be included.
- 12.2.6** A plan for the identification of the grade of binder in each storage tank and the use of more than one binder grade in a binder tank. The sampling location shall be indicated.
- 12.2.7** A plan for in-line blending SBR polymer latex at the HMA plant to include a QCP in accordance with ITM 581 as an addendum to the plant QCP
- 12.2.8** A plan for the production of HMA produced with a water-injection foaming device. The necessary plant modifications, plant production start-up process, planned mixture production temperature ranges, and moisture testing on mixtures sampled at the plant for each DMF shall be included.
- 12.2.9** The procedure for the consistent uniform addition of baghouse fines when returned into the HMA plant.
- 12.2.10** The procedure for the consistent uniform addition of fibers into the HMA plant.
- 12.2.11** The procedure for using an anti-adhesive agent for the truck bed, and a statement that the agent is on the Department's List of Approved Anti-Adhesive Materials.

- 12.2.12** The procedure for sealing the surge bin when used for extended storage of the mixture up to one working day, and the method to prevent the discharge when the mixture falls below the top of the cone.
- 12.2.13** The procedure for loading mixture into the trucks.
- 12.2.14** A sampling plan that includes locations, test methods, devices, techniques, frequencies, and sample reduction procedures.
- 12.2.15** A testing plan that includes the types of tests, and test methods.
- 12.2.16** A description of any other process control techniques that may be used. These controls may include, but are not limited to:
  - a)** Different types of material testing
  - b)** Visual checks, and monitoring of HMA plant production
- 12.2.17** A statement of the procedure for handling addenda to the QCP including a time schedule for submittal.
- 12.2.18** A documentation plan with details on control charting, test data, and the diary. Copies of the forms may be included.
- 12.3** The last page of the QCP shall contain two signatures. One signature shall be the Producer Management Representative. The date of submittal and the corporate title of the Producer Management Representative making the signature shall be included. The other signature shall be for approval by the State Materials Engineer, Division of Materials and Tests.
- 12.4** Production of mixture shall not begin before the QCP has been approved. The Producer shall submit two copies of the QCP to the Department for review. One copy shall be submitted to the District Testing Engineer, and one copy to the Division of Materials and Tests. Acceptance or rejection of the QCP will be made within 15 days of receipt of the QCP. One approved copy will be returned to the Producer.
- 12.5** The Producer shall transmit all applicable process control changes to the District Testing Engineer for approval. This shall be done in the format of addenda to the QCP. Each page of the QCP that is revised shall include the HMA plant number, date of revision, and means of identifying the revision. The addenda shall be signed and dated by the Management Representative and subsequently signed and dated when approved by the District Testing Engineer.

Revisions for HMA plant major components, Level 1 Asphalt Technicians, Certified Asphalt Technicians, and movement of the HMA plant shall be

submitted in the format of a QCP Annex as they occur, and upon approval by the District Testing Engineer shall be included in the Appendix of the QCP. Revisions, other than items on the QCP Annex, shall be maintained on the Addenda Summary sheet in the QCP Appendix.

Addenda may be submitted at the audit close-out meeting or anytime during the calendar year. The addenda shall include items on the QCP Annex, items on the Addenda Summary Sheet, and any other necessary revisions at the time of submittal. Upon incorporation into the QCP as addenda, the QCP Annex and items on the Addenda Summary Sheet shall be removed from the QCP Appendix.

- 12.6** Movement of the HMA Plant to a new location will require an addendum to the QCP. Verification of the calibration of all meters, scales and other measuring devices in accordance with 14.3 shall be completed.

### **13.0 CERTIFICATION.**

- 13.1** Each Producer requesting to establish a Certified Plant shall do so in writing to the State Materials Engineer, Division of Materials and Tests.
- 13.2** Upon receipt of the request for certification, the District Testing Engineer will be notified to inspect the plant and laboratory.
- 13.3** A plant inspection, including the correction of any deficiencies and calibration of all meters, scales and other measuring devices to an accuracy within 0.5% throughout their range, shall be completed prior to certification.
- 13.4** Each HMA plant meeting the requirements of the Program will be certified upon the approval of the QCP.
- 13.5** The Producer, in accordance with ITM 581, shall submit a written request to the Asphalt Engineer, Division of Materials and Tests, to in-line blend SBR polymer latex at the HMA plant.
- 13.6** In the event of a change in ownership of the Certified HMA Plant, the certification shall expire on the date of such change. The new ownership may avoid expiration by submitting a statement to the State Materials Engineer, Division of Materials and Tests indicating recognition of the details of the Program, the existing QCP, and a clear pronouncement of intent to operate in accordance with the requirements of both documents prior to providing mixture for the Program.

### **14.0 DEPARTMENT RESPONSIBILITIES.**

- 14.1** The Department will conduct annual audits on a random basis of each HMA Plant.

- 14.2** The Department will maintain the List of Approved Certified Hot Mix Asphalt Producers. Producers meeting the requirements of the ASC program for in-line blending of SBR polymer latex will be indicated as a Performance-Graded Asphalt Binder Approved Supplier on the List.
- 14.3** The Department will administer a Certified Asphalt Technician Training Program (ICAT). Certification of the Technicians will be provided by the Department upon passing a certification test. The Department will maintain a list of test methods requiring Qualification in the ICAT Policies and Procedures Manual.
- 14.4** The removal of a Producer from the Department's List of Approved Certified Hot Mix Asphalt Producers will be the responsibility of the Division of Materials and Tests. The Producer shall have the right to appeal the removal from the Department's List of Approved Certified Hot Mix Asphalt Producers to the Director, Construction Management Division.
- 15.0 ADJUSTMENT PERIOD.** The adjustment period shall only apply to QC/QA SMA mixtures.
- 15.1** The Producer will be allowed an adjustment period for each DMF in which changes may be made. The adjustment period shall be from the beginning of production and extending until 4000 t of base or intermediate mixtures or 2400 t of surface mixture has been produced. A reduced adjustment period may be allowed.
- 15.2** The aggregate and recycled materials blend percentage and the amount passing all sieves on the DMF may be adjusted provided the gradation limits do not exceed the requirements of 410.05. Adjustments to the aggregate and recycled materials blend percentage, gradation and the new combined aggregate bulk specific gravity shall be included on the JMF.
- 15.3** The total binder content on the JMF may be determined by adjusting the DMF a maximum of  $\pm 0.3$  percent. The recycled materials binder content may be adjusted as part of the total binder content provided the binder replacement percentage is in accordance with 410.06.
- 15.4** The JMF shall be submitted for **acceptance** to the District Testing Engineer one working day after the receipt of the original test results for the binder content and gradation of the adjustment period.
- 15.5** A DMF will be allowed one adjustment period in a construction season. A new adjustment period will not be allowed for only a binder source change.



**HMA QCP ANNEX**

Company \_\_\_\_\_

Plant No. \_\_\_\_\_

**PLANT MAJOR COMPONENT REVISION**

Revision: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**LEVEL 1/CERTIFIED ASPHALT TECHNICIAN REVISION**

Delete Technician from QCP \_\_\_\_\_

Add Technician to QCP \_\_\_\_\_

**PLANT MOVEMENT**

Existing Location: \_\_\_\_\_

\_\_\_\_\_  
New Location: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
District Testing Engineer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Management Representative

\_\_\_\_\_  
Date

**INDIANA DEPARTMENT OF TRANSPORTATION  
HOT MIX ASPHALT (HMA) TYPE D CERTIFICATION**

CONTRACT NUMBER \_\_\_\_\_  
DATE \_\_\_\_\_

CERTIFIED \_\_\_\_\_ HMA \_\_\_\_\_ PRODUCER \_\_\_\_\_

CERTIFIED HMA PLANT NUMBER \_\_\_\_\_ DMF \_\_\_\_\_ NUMBER \_\_\_\_\_

PG BINDER SOURCE \_\_\_\_\_ PG BINDER GRADE \_\_\_\_\_

MIXTURE \_\_\_\_\_ TYPE \_\_\_\_\_ AND \_\_\_\_\_ SIZE \_\_\_\_\_

DESIGN ESAL \_\_\_\_\_

Air Voids \_\_\_\_\_ (from DMF) Binder Content \_\_\_\_\_ (from DMF)

This is to certify that the test results for Air Voids and Binder Content represent the HMA mixture supplied to this contract.

Air Voids \_\_\_\_\_ ( $\pm 2.0\%$  from DMF) Binder Content \_\_\_\_\_ ( $\pm 0.7\%$  from DMF)

\* [ ] Test results are not available for submittal. A production sample shall be taken within the first 250 t (250 Mg) and each subsequent 1000 t (1000 Mg) for base and intermediate mixtures and each subsequent 600 t (600 Mg) for surface mixtures.

\*  If Applicable

\_\_\_\_\_  
Technician

Signature of Level 1 or Certified Asphalt

\_\_\_\_\_

Printed Name

**FOR PE/PS USE ONLY**

PAY ITEM(S) \_\_\_\_\_  
SM9003

ACCEPTANCE METHOD:

SPECIFICATION REFERENCE

___ 304.04 - Patching	___ 402.07(c) - Temporary HMA	___ 610 - Approaches
___ 304.05 - Widening	___ 503.03(e) - Terminal Joints	___ 610 - Crossovers
___ 402.04 - HMA Pavements	___ 507.05(b) - Partial Depth Patching	___ 718.04 -
Underdrains		
___ 402.07(a) - Rumble Strips	___ 604.07(c) - Sidewalk	___ 801.11- Temp.
Crossovers		
___ 402.07(b) - Wedge & Leveling	___ 605.07(c) - Curbing	