Update on Lab Assesments for HOLA

PAPA 2017

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Brief Update on 2016

Standard Special Provision for HOLA

"For testing of LA samples by the Department, identify a laboratory testing facility where the local testing is to be performed. Identify either the laboratory located at the asphalt mixture production plant or where the plant production mixture is being tested for QC if a laboratory does not exist at the production plant. Identify a laboratory testing facility which has demonstrated testing proficiency through an AASHTO Materials Reference Laboratory (AMRL) On-Site Laboratory Assessment performed within the last 2 years prior to the start of LA sample testing."

Lab Assessments Conducted by District

District #	Number of Assessments Conducted
District 1	2
District 2	1
District 3	1
District 4	0
District 5	1
District 6	3
District 8	2
District 9	5
District 10	1
District 11	2
District 12	0
Total	18

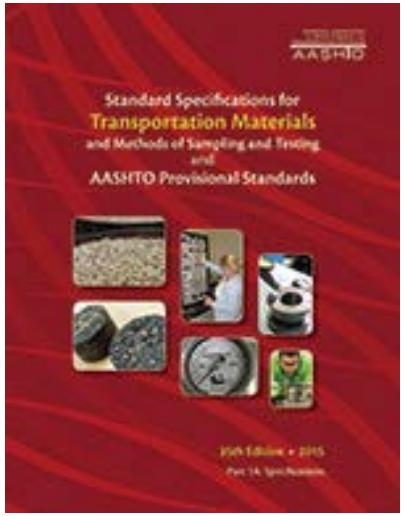
Tests That Must Be Performed / Assessed

- **Either** PTM 702 (*Quantitative Extraction of Bitumen from Bituminous Paving Mixtures*) and PTM 739 (*Sieve Analysis of Extracted Aggregate*) **or** PTM 757 (*Determination of Asphalt Content and Gradation of Bituminous Mixtures by the Ignition Method*) and AASHTO T 30 (*Mechanical Analysis of Extracted Aggregate*)
- PTM 715 (*Determination of Bulk Specific Gravity of Compacted Bituminous Mixtures*)
- PTM 716 (*Determination of Bulk Specific Gravity of Compacted Bituminous Mixtures That Absorb More Than 3 Percent Water by Volume*)
- PTM T209m (*Theoretical Maximum Specific Gravity (Gmm) of Hot Mix Asphalt*)
- AASHTO R 47 (*Reducing Samples of Hot Mix Asphalt to Testing Size*)

Common Assessment Findings

Common Assessment Findings (General)

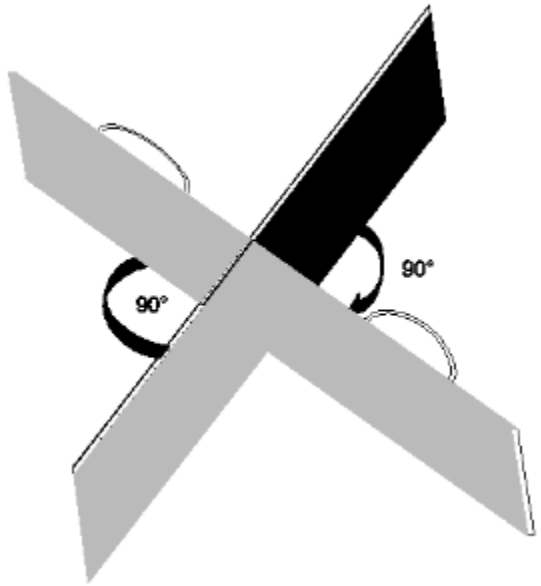
- Standards: Current AASHTO Standards not available.



- Ovens: Not enough ovens for the different temperature requirements.

Common Assessment Findings for AASHTO R 47 (Reducing Samples of HMA)

- A quartering template in the form of a cross, with side of sufficient length to be 1.1 times the diameter of a flattened cone of the hot mix sample, was not presen for use with Method B (Quartering). A spatula was used to quarter the sample. A quartering template is recommended for use with Method B.
- After the material was initially quartered, two diagonally-opposite quarters were not selected and th quartering process was not repeated until the desired sample size was obtained. The material was quartered once and one quarter was selected as the representative sample.



Common Assessment Findings for AASHTO T 30 (Mechanical Analysis of HMA)

- A wetting agent was not used during the washing procedure to ensure a thorough separation of the material finer than the 75-µm (No. 200) sieve from the coarser particles.
- The Rainhart mechanical shaker was not operated for the length of time indicated on the most current standardization record. The mechanical shaker was set for 10 minutes but ran for 12 minutes.
- Records were not presented to indicate that the oven, sieve shaker, and sieve stack used for this method had been standardized or checked according to the intervals listed in AASHTO R 18.

Common Assessment Findings for PTM 715 (Bulk Specific Gravity of Compacted HMA)

- The water used to fill the volumeter before its final mass (D) was determined was not distilled water. The water used was taken from the water bath, which had been filled with distilled water at some point.

Distilled water is water purified by boiling the water and collecting the steam. The steam is recovered by condensing the cleaner water vapor into a fresh container. The distillation process removes most impurities, so it is an effective method of water treatment.

Common Assessment Findings for PTM 716 (Bulk Specific Gravity Using Coated Specimens)

- Specimens not coated well.
  - Wax too hot.
  - Specimen not refrigerated prior to being coated.

Common Assessment Findings for PTM 716 (Bulk Specific Gravity Using Coated Specimens)

- Specific gravity of paraffin estimated or determined by somebody else, probably not done by AASHTO T 228.
- Trouble with calculations.

PTM 716		AASHTO T 275
WSm	3013.0	A
VVO	4237.7	
PWSm	3116.0	C
(PWSm+WWa+MVm)	9284.5	E
MVm	7587.4	D
	3349.7	
(PWSm+WWa)	1697.1	
GP	**0.82**	F
GSm	**2.330**	**2.330**

PTM 716		AASHTO T 275
WSm	3013.0	A
VVO	4237.7	
PWSm	3116.0	C
(PWSm+WWa+MVm)	9284.5	E
MVm	7587.4	D
	3349.7	
(PWSm+WWa)	1697.1	
GP	**0.96**	F
GSm	**2.297**	**2.297**

Common Assessment Findings for PTM T209m (Maximum Specific Gravity of Paving Mixtures)

- The residual pressure inside the vacuum container was not maintained at 27.5 ± 2.5 mm Hg (3.7 ± 0.3 kPa) residual pressure. The residual pressure was maintained at 4 mm Hg residual pressure. (Too much vacuum.)
- The vacuum system presented did not maintain a partial vacuum of 3.7 ± 0.3 kPa (27.5 ± 2.5 mm Hg) of absolute pressure. The vacuum system could only achieve a partial vacuum of 9.2 kPa (68.8 mm Hg). (Too little vacuum.)
- Records were not presented to indicate that the vacuum measurement device had been standardized every 12 months.

Common Assessment Findings for PTM T209m (Maximum Specific Gravity of Paving Mixtures)

- The hose opening was not covered with a small piece of fine wire mesh to minimize the loss of fine material.

- The thermometer used in the immersion bath had not been calibrated.

The Assessment Process

Signing Up

- Go to the AASHTO re:source website (www.aashtoresource.org) and click the “Request Services” button.
- From there click the “Register Your Laboratory With AASHTO re:source” link.
- Complete the form to register for an online account.
- After that, click the “Request a Laboratory Assessment” link to formally request an on-site laboratory assessment.

Scheduling the Assessment

- After we receive your request we will contact you and schedule a mutually-agreeable date.
- We will send an assessor to your laboratory. The assessment will last ½ to 1 day.

The Assessment

- You need to have material (HMA) and your technician(s) available.
- The assessor will a) check your testing equipment for conformance to specifications and b) observe your technician(s) run the required tests to determine whether the Pennsylvania Test Methods and AASHTO methods are being properly performed.
- The assessor will also look at calibration and verification records for:
  - Balances
  - Thermometers
  - Mechanical Shakers
  - Vacuum gauges

After the Assessment

- We issue you a report.
- You develop corrective action for each nonconformity.
- After everything is resolved we will issue a summary report to the DME/DMM.

We're also reviewing the PTMs.

PTM 739 (Mechanical Analysis of Extracted Aggregate)

- The method should reference PTM 608 (Calibration of Mechanical Shaker).
- Is hand sieving acceptable? The method is not clear.
- Note 1 implies that only 8-inch sieves are acceptable.
- Section 3.2: Define "constant Mass." (Time, temperature, etc.)

Technical Exchange

March 27 – 29, 2017

AASHTO re:source Technical Exchange

Coming in March 2017
to Annapolis, Maryland

SAVE THE DATE

AASHTO re:source (formerly AMRL)

www.aashtoresource.org

2017 AASHTO re:source Technical Exchange

March 27 through 29, 2017

The Westin Annapolis, Annapolis, MD

Registration Opens Fall 2016

American Association of State Highway and Transportation Officials

AASHTO

Technical Exchange Tentative Agenda

Time	Tuesday (March 28, 2017)		
7:00-8:00 am	**Continental breakfast, Conference registration**		
8:00-8:45 am	**Opening remarks** – Steve Lenker (10 minutes) **Keynote speaker** (James Williams, MS DOT) (30 minutes) ALL ATTENDEES		
8:45-10:15 am	**AAP overview/Q&A** (Brian Johnson) ALL ATTENDEES		
10:15-10:30 am	**BREAK**		
10:30-noon	**LAP & PSP overview/Q&A** (Maria Knake, John Malusky) ALL ATTENDEES		
Noon – 1:00 pm	**LUNCH**		
1:00-2:45 pm	**Introduction to Measurement uncertainty** (Henrik Nielsen)	**Making the Most of Your QMS** (Tracy Barnhart)	**Common Errors in Asphalt Mix Design** (Asphalt Institute)
2:45-3:00 pm	**BREAK**		
3:00 - 5:00 pm	**Introduction to Measurement uncertainty** (cont.)	**Internal Audits, Management Review, & Corrective Action** (Tracy Barnhart)	**Common Errors in Concrete Mix Design**

Time	Wednesday (March 29, 2017)		
7:00-8:00 am	**Continental breakfast, Conference registration**		
8:00-9:45 am	**Application of Calibration Data** (Bob Lutz, Maria Knake)	**Technician Certification** (Amy Ridenour & another QA)	**Lab Manager 101**
9:45 – 10 am	**BREAK**		
10:00-noon	**Thermometry** (Maria Knake)	**AASHTO R 18** (Brian)	**Quality Manager 101** (Benjamin Trujillo)
Noon – 1:00 pm	**LUNCH**		
1:00 – 3:00 pm	**Customer Roundtable / Q&A** (moderated by AASHTO re:source staff)		

Monday (March 27, 2017):

Conference registration and booth set-up (1 p.m. - 7 p.m.?)
AASHTO Executive Council meeting (8 a.m. – noon)
AASHTO ATG meeting (1 p.m. – 4 p.m.)
AASHTO re:source Customer Council meeting (4 p.m. – 5 p.m.)
Evening reception/icebreaker (5:30 p.m. – 7 p.m.)

Questions?

AASHTO re:source

www.AASHTOresource.org

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