

SUBCOMMITTEE ON MATERIALS (SOM)

2016 Annual Meeting – Greenville, South Carolina

Wednesday, August 3, 2016

1:00 pm – 3:00 pm EDT

TECHNICAL SECTION (TS) 2c

Asphalt-Aggregate Mixtures

- I. **Call to Order and Opening Remarks** **Allen Myers gave opening remarks.**
- II. **Roll Call**
 - A. Signify attendance on tablet computer
- III. **Approval of TS 2c Minutes from Mid-Year Web Meeting (February 11, 2016) – ATTACHMENT 1 (pp. 5-10)** **Motion by Maine, second by Montana: motion passes unanimously**
- IV. **Old Business**
 - A. 2015 SOM ballot items (SOM Ballot 15-04, Rolling Ballot 3, November 2015-January 2016)
 1. Item 50, AASHTO PP 75 (*Vacuum Drying Compacted Asphalt Specimens*)
 - a. Practice promoted to full standard (now AASHTO R 79)
 - b. Practice revised according to ballot comments – **ATTACHMENT 2 (pp. 11-14)** **Chair checked with states that submitted comments, and they were in agreement with adopting changes. Motion made to accept changes and forward to concurrent ballot. Motion by Wisconsin, second by Maine: motion passes unanimously. Concurrent ballot item #1.**
 2. Item 51, AASHTO R 67 [*Sampling Asphalt Mixtures after Compaction (Obtaining Cores)*]
 - a. Practice revised according to ballot comments – **ATTACHMENT 3 (pp. 15-18)** **Incorporated comment from Kansas (see new Note 2). Kansas has accepted wording. Motion made to forward to concurrent ballot. Motion by Mississippi, second by Maine: motion passes unanimously. Concurrent ballot item #2.**
 3. Item 52, AASHTO T 166 [*Bulk Specific Gravity (G_{mb}) of Compacted Hot Mix Asphalt (HMA) Using Saturated Surface-Dry Specimens*] **Negative vote from FHWA was considered persuasive. Changes were not published.**
 4. Item 53, AASHTO T 308 [*Determining the Asphalt Binder Content of Hot Mix Asphalt (HMA) by the Ignition Method*] **Editorial comments incorporated and revised standard published.**
 5. Item 54, AASHTO T 324 [*Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA)*] **Negative vote from Washington State found non-persuasive. Standard revised and published.**
 6. Item 55, AASHTO T 355 [*In-Place Density of Asphalt Mixtures by Nuclear Methods*] **Editorial comments incorporated and revised standard published.**
 7. Item 56, AASHTO TP 72 [*Quantitative Determination of the Percentage of Lime in Hot Mix Asphalt (HMA)*] **Standard appeared on ballot twice due to confusion about extension/adoption deadlines. Comments from Arkansas.**
 - a. Method revised according to ballot comments – **ATTACHMENT 4 (pp. 19-22)** **Arkansas has reviewed proposed changes. Motion made to accept changes and forward to concurrent ballot. Motion by Pennsylvania, second by Georgia: motion passes unanimously. Concurrent ballot item #3.**
 8. Item 57, AASHTO TP 114 [*Determining the Interlayer Shear Strength (ISS) of Asphalt Pavement Layers*]

- a. Method revised according to ballot comments – **ATTACHMENT 5 (pp. 23-29) Incorporated comments from Oklahoma. Oklahoma has accepted proposed changes. Motion made to forward to concurrent ballot. Motion by Maine, second by Oklahoma: motion passes unanimously. Concurrent ballot item #4.**
9. Item 58, AASHTO TP 115 (*Determining the Quality of Tack Coat Adhesion to the Surface of an Asphalt Pavement in the Field or Laboratory*) **Companion standard to AASHTO TP 114. Editorial comments incorporated and revised standard published.**
10. Item 59, AASHTO T 37 [*Sieve Analysis of Mineral Filler for Hot Mix Asphalt (HMA)*] **Standard reconfirmed.**
11. Item 60, AASHTO T 110 [*Moisture or Volatile Distillates in Hot Mix Asphalt (HMA)*]
 - a. Latest ASTM version (D1461-11) remains “similar but not identical to” T 110
 - b. Method needs to indicate ASTM D1461-11 as corresponding version
 - c. Is ballot necessary just to change ASTM designation? **No need to ballot. Updated ASTM reference will be added editorially.**
12. Item 61, AASHTO T 168 (*Sampling Bituminous Paving Mixtures*)
 - a. Method needs revision to a “practice” instead of a “test.” **Standard was reconfirmed, but it needs to be modified to be a practice. Efforts to modify T 168 to a practice will be initiated by Chair.**
13. Item 62, AASHTO T 343 [*Density of In-Place Hot Mix Asphalt (HMA) Pavement by Electronic Surface Contact Devices*] **Standard reconfirmed.**
14. Item 63, AASHTO TP 72 [*Quantitative Determination of the Percentage of Lime in Hot Mix Asphalt (HMA)*] **Standard was extended and then promoted to full standard.**
 - a. Method promoted to full standard as AASHTO T 362 **Concurrent ballot to incorporate comments from Arkansas. See Item IV. A. 7. above.**
15. Item 64, AASHTO TP 82 [*Bulk Specific Gravity (G_{mb}) of Compacted Bituminous Mixtures Using Water Displacement Measured by Pressure Sensor*]
 - a. Ballot comments referred to Task Force 2c-2010-01 **Standard extended. Method has existed for a while, but it is not widely used.**
- B. 2016 TS 2c ballots
 1. Ballot # 1 (January – February 2016)
 - a. Item 1, AASHTO TP XYZ (*Evaluation of Oxidation Level of Asphalt Mixtures by a Portable Infrared Spectrometer: A Field Quality Control Procedure*)
 - i. Two negative votes (Arizona and Maine) considered persuasive
 - ii. Method revised according to ballot comments **Standard revised and reballoted in May 2016.**
 2. Ballot # 2 (May – June 2016)
 - a. Item 1, AASHTO TP XYZ (*Evaluation of Oxidation Level of Asphalt Mixtures by a Portable Infrared Spectrometer*) – **ATTACHMENTS 6 (pp. 30-36) and 6a (pp. 37-49)**
 - i. Ballot results – 27 affirmative/2 negative/6 not returned
 - ii. Negative votes from Mississippi and New Hampshire
 - iii. Comments from Arizona, Kansas, Maryland, Missouri, Oklahoma, Ontario, Pennsylvania, Tennessee, Virginia, Washington, and Delmar Salomon (Pavement Preservation Systems)
 - iv. Update from Delmar Salomon (Pavement Preservation Systems) **Delmar has consulted with negative voters and those that submitted comments. He gave presentation summarizing ballot comments with his responses and changes made to draft standard. Delmar made substantial changes since previous ballot. Negative votes from Mississippi and New Hampshire were found persuasive, and revisions made based on these comments. Mississippi feels that latest revision is much improved and supports proposed changes. New Hampshire expresses similar opinion. NCAT commented that more detail is needed within apparatus section in order for user to determine which manufacturer’s device will satisfy requirements. Motion made to advance latest provisional standard changes described by Delmar in response to ballot negatives and comments to concurrent ballot. Motion by Virginia, second by Pennsylvania: motion passes unanimously. Concurrent ballot item #5.**
- C. Task Force Reports

1. Task Force 2c-2008-02
 - a. Rick Kreider, Chair (Kansas), Matthew Corrigan (FHWA), Oak Metcalfe (Montana), and Tim Ramirez (Pennsylvania)
 - b. Provide recommendations for amplitude and frequency for mechanical agitation devices in AASHTO T 209 [*Theoretical Maximum Specific Gravity (G_{mm}) and Density of Hot Mix Asphalt (HMA)*]
 - c. NCHRP 20-07 research submittal, *Develop criteria that establish the amount of energy required to maintain fully-animated particles of loose asphalt within the test procedure AASHTO T 209*, selected for funding in September 2015 (NCHRP 20-07, Task 391)
 - d. Task force awaiting results of research project for incorporation into AASHTO T 209 as appropriate
 - e. Need new chair to replace Rick Kreider (Kansas) **Rick Kreider (Kansas) and Matt Corrigan (FHWA) wrote NCHRP 20-07 research proposal. Work will be needed once NCHRP 20-07, Task 391, research is completed to incorporate results into AASHTO T 209. Rich Barezinsky (Kansas) volunteered to replace Rick Kreider as task force chair.**
 2. Task Force 2c-2010-01
 - a. Matthew Corrigan, Chair (FHWA) and Jim Bibler (Gilson Company)
 - b. Incorporate comments from 2009 SOM ballot into AASHTO TP 82 [*Bulk Specific Gravity (G_{mb}) of Compacted Bituminous Mixtures Using Water Displacement Measured by Pressure Sensor*]. Provide more details on water displacement measurement equipment.
 - c. Any additional members or activity? **Inform Matthew Corrigan (FHWA) if you have one of these devices and you are interested in being member of task force.**
 3. Task Force 2c-2012-01
 - a. Scott Andrus, Chair (Utah), Bill Schiebel (Colorado), Matthew Corrigan (FHWA), Oak Metcalfe (Montana), Tim Ramirez (Pennsylvania), and Darren Hazlett (Texas)
 - b. Implement findings from NCHRP 20-07, Task 361, study into AASHTO T 324 [*Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA)*]
 - c. Generally maintain AASHTO T 324 to reflect latest features and ideas
 - d. Update from Scott Andrus (Utah) – **ATTACHMENT 7 (p. 50) Scott Andrus (Utah), task force chair, provided update on activities of this group. Scott briefly discussed NCHRP 20-07 report recommendations and changes initiated to this standard for ballot. A red-lined standard incorporating NCHRP and Task Force 2c-2012-01 recommendations will be submitted for Fall ballot. Task Force will also consider drafting another needs statement for additional phase of Hamburg research on specimen fabrication. Motion made to advance revised standard to concurrent ballot. Motion by Maine, second by Texas: motion passes unanimously. Concurrent ballot item #6.**
 4. Task Force 2c-2015-01
 - a. Garth Newman, Chair (Idaho), Mike San Angelo (Alaska), Matthew Corrigan (FHWA), Rick Kreider (Kansas), Rick Bradbury (Maine), James Williams (Mississippi), Oak Metcalfe (Montana), Cole Mullis (Oregon), Tim Ramirez (Pennsylvania), and Kurt Williams (Washington)
 - b. Address negative votes and incorporate comments from 2014 SOM ballot into AASHTO T 209 [*Theoretical Maximum Specific Gravity (G_{mm}) and Density of Hot Mix Asphalt (HMA)*]
 - c. Update from Garth Newman (Idaho) **Garth Newman (Idaho) noted that Alaska provided recommended improvements to drawings in T 209. In addition to original charge of task force, more recommended changes from Alaska will be considered for potential inclusion on future technical section ballot.**
- D. Standards Pending Revision
1. AASHTO T 195 (*Determining Degree of Particle Coating of Asphalt Mixtures*)
 - a. Issues discovered by Ontario and Oregon during 2015 reconfirmation ballot
 - b. TS 2c Chair arranging for AASHTO resources to modify T 195 **Georgene Geary, consultant, will assist with this effort.**
 2. AASHTO T 269 (*Percent Air Voids in Compacted Dense and Open Asphalt Mixtures*)
 - a. Asphalt Institute-suggested changes to air voids nomenclature
 - b. Change from V_a to P_a will be performed editorially
- E. Previous Correspondence

1. Tennessee-suggested practice for preparing pavement cores for asphalt binder content or gradation testing
 - a. Include in AASHTO R 67 [*Sampling Asphalt Mixtures after Compaction (Obtaining Cores)*]
 - b. Query SOM for existing practices (Tennessee is developing survey) **Survey will be distributed in month or so.**
2. Montana suggestion to reference AASHTO PP 75 (now R 79) (*Vacuum Drying Compacted Asphalt Specimens*) rather than ASTM D7227 (*Standard Practice for Rapid Drying of Compacted Asphalt Specimens Using Vacuum Drying Apparatus*) in AASHTO T 166 [*Bulk Specific Gravity (G_{mb}) of Compacted Hot Mix Asphalt (HMA) Using Saturated Surface-Dry Specimens*]
 - a. ASTM D7227 was developed with specific manufacturer in mind, while AASHTO PP 75 (R 79) is more general?
 - b. Review by Oak Metcalfe (Montana)
 - c. Change in reference to be performed editorially since no significant differences were identified
 - d. Also reference AASHTO PP 75 (R 79) rather than ASTM D7227 in AASHTO T 331 [*Bulk Specific Gravity (G_{mb}) and Density of Compacted Hot Mix Asphalt (HMA) Using Automatic Vacuum Sealing Method*] **Chair proposed to editorially replace reference to ASTM version with reference to AASHTO version in T 166 and T 331. No opposition expressed by technical section. Chair will make changes editorially.**
3. All AASHTO standards related to measuring or calculating specific gravity
 - a. Issue resulting from FHWA negative vote on AASHTO T 166 [*Bulk Specific Gravity (G_{mb}) of Compacted Hot Mix Asphalt (HMA) Using Saturated Surface-Dry Specimens*] as presented on 2015 SOM ballot
 - b. Add “gas-free distilled water” to Apparatus section
 - c. Concern about availability of distilled water in remote laboratories
 - d. Richard Giessel (Alaska) provided guidance for using non-distilled water and correction factors – **ATTACHMENT 8 (pp. 51-57)**
 - e. Matthew Corrigan (FHWA) and Brian Johnson (AMRL) will research this issue and provide recommendations. **Matt Corrigan (FHWA) gave update. Discussion occurred concerning feasibility of using gas-free distilled water in all locations. Recognizing no consensus within technical section, Chair will await recommendations from Western Alliance for Quality Transportation Construction (WAQTC) for future technical section ballot.**

V. New Business

- A. Research proposals **Allen Myers is research liaison for Technical Section 2c. No research proposals have been submitted this year.**
- B. AMRL/CCRL issues **No issues reported.**
- C. NCHRP issues
 1. Update from Amir Hanna (NCHRP) **Amir gave update. Deadline for research needs statements is October 14, 2016.**
- D. Correspondence, calls, meetings
 1. Question from Thomas Zehr (Illinois), about AASHTO T 324 [*Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA)*] – **ATTACHMENT 9 (pp. 58-59)**
 - a. “6 in.” versus “5.91 in.” diameter specimens
 - b. Issue referred to Task Force 2c-2012-01 **Task force will address this issue on upcoming ballot item for AASHTO T 324.**
 2. Question from Ali Regimand (InstroTek) about AASHTO T 275 [*Bulk Specific Gravity (G_{mb}) of Compacted Hot Mix Asphalt (HMA) Using Paraffin-Coated Specimens*] – **ATTACHMENT 10 (pp. 60-64)** **In response to Chair’s question, it was determined that a few states still use T 275.**
 - a. Allow vacuum-drying of specimens as option to oven-drying **Motion made to forward this change to concurrent ballot. Motion by Maine, second by Wisconsin: motion passes unanimously. Concurrent ballot item #7.**
 - b. Consistent with other test methods for G_{mb} determination: AASHTO T 166 [*Bulk Specific Gravity (G_{mb}) of Compacted Hot Mix Asphalt (HMA) Using Saturated Surface-Dry Specimens*] and AASHTO T 331 [*Bulk Specific Gravity (G_{mb}) and Density of Compacted Hot Mix Asphalt (HMA) Using Automatic Vacuum Sealing Method*]

3. Suggestions from Richard Giessel (Alaska) for AASHTO T 209 [*Theoretical Maximum Specific Gravity (G_{mm}) and Density of Hot Mix Asphalt (HMA)*] – **ATTACHMENT 11 (pp. 65-69)**
 - a. Clarify application of vacuum in method summary
 - b. Improve figure depicting arrangement of testing apparatus
 - c. Modify and add notes concerning removal of water vapor
 - d. Refer suggestions to Task Force 2c-2015-01? **Garth Newman (Idaho), task force chair, agreed to review these suggestions. He has some other changes to consider as well.**
 4. Suggestions from Richard Giessel (Alaska) for AASHTO T 275 [*Bulk Specific Gravity (G_{mb}) of Compacted Hot Mix Asphalt (HMA) Using Paraffin-Coated Specimens*] – **ATTACHMENT 12 (pp. 70-75)**
 - a. Clarify “dipping” versus “surface coating” of specimens with paraffin **In his correspondence, Richard Giessel (Alaska) indicated that thickness of paraffin can affect test results. He also suggested use of beeswax rather than paraffin. Concerns expressed by technical section about difference in specific gravity between paraffin and beeswax. Many states are moving away from paraffin coating. Chair decided not to take any action on AASHTO T 275 at this time. Technical section can reconsider these suggestions next time that T 275 is due for reconfirmation.**
 - b. Provide instructions for determining specific gravity of materials that float in water
 5. Question from Maria Knake (AMRL) about AASHTO T 324 [*Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA)*] – **ATTACHMENT 13 (pp. 76-77)**
 - a. Path of loaded wheel is not centered over specimen in Hamburg Wheel-Track device
 - b. Issue referred to Task Force 2c-2012-01 **Task force will address this issue on upcoming ballot item for AASHTO T 324.**
- E. Proposed new standards **None.**
- F. Proposed new task forces **None.**
- G. Standards requiring reconfirmation or extension
1. AASHTO M 156-13 (*Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures*) **Standard is due for reconfirmation next year.**
 2. AASHTO T 331-13 [*Bulk Specific Gravity (G_{mb}) and Density of Compacted Hot Mix Asphalt (HMA) Using Automatic Vacuum Sealing Method*] **Standard is due for reconfirmation next year.**
 3. AASHTO TP 82-10 [*Bulk Specific Gravity (G_{mb}) of Compacted Bituminous Mixtures Using Water Displacement Measured by Pressure Sensor*] **Standard is due for one-year extension by full subcommittee next year.**
 4. AASHTO TP 114-16 [*Determining the Interlayer Shear Strength (ISS) of Asphalt Pavement Layers*] is due for two-year extension by TS 2c (voice vote) **Motion made for two-year extension by technical section voice vote. Motion by Maine, second by Texas: motion passes unanimously. Standard is extended for two years.**
 5. AASHTO TP 115-16 (*Determining the Quality of Tack Coat Adhesion to the Surface of an Asphalt Pavement in the Field or Laboratory*) is due for two-year extension by TS 2c (voice vote) **Motion made for two-year extension by technical section voice vote. Motion by Maine, second by Texas: motion passes unanimously. Standard is extended for two years.**
- H. SOM ballot items (including any ASTM changes/equivalencies)
- VI. **Open Discussion Maurice Arbelaez (InstroTek) is seeking state transportation agencies to evaluate new test equipment. Please see him if you are interested.**
- VII. **Adjourn Chair accepted motion by Maine, second by Wisconsin, to adjourn meeting. Motion passes unanimously at 2:42 p.m.**

Technical Section (TS) 2c Meeting Summary

Meeting Date:	8/3/2016	
Items approved by the TS for Subcommittee Ballot:		
Standard Designation	Summary of Proposed Changes	Subcommittee Only or Concurrent?
AASHTO R 67, Sampling Asphalt Mixtures after Compaction (Obtaining Cores)	Incorporate changes from comments on 2015 Subcommittee ballot	Concurrent
AASHTO R 79 (formerly PP 75), Vacuum Drying Compacted Asphalt Specimens	Incorporate changes from comments on 2015 Subcommittee ballot	Concurrent
AASHTO T 275, Bulk Specific Gravity (Gmb) of Compacted Hot Mix Asphalt (HMA) Using Paraffin-Coated Specimens	Incorporate changes to allow vacuum-drying of specimens as option to oven-drying	Concurrent
AASHTO T 324, Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA)	Incorporate findings from NCHRP 20-07, Task 361, study and other recommendations from Task Force 2c-2012-01	Concurrent
AASHTO T 362 (formerly TP 72), Quantitative Determination of the Percentage of Lime in Hot Mix Asphalt (HMA)	Incorporate changes from comments on 2015 Subcommittee ballot	Concurrent
TP 114, Determining the Interlayer Shear Strength (ISS) of Asphalt Pavement Layers	Incorporate changes from comments on 2015 Subcommittee ballot	Concurrent
AASHTO TP XYZ, Evaluation of Oxidation Level of Asphalt Mixtures by a Portable Infrared Spectrometer	Adopt new provisional standard	Concurrent
Task Force Changes:		
Task Force Name	Summary of Task	Names of TF Members
2c-2008-02	New task force chair	Rich Barezinsky (Kansas) replaces Rick Kreider
Research Liaison:	Allen Myers	
Other Action Items:		
AASHTO M 156, T 331, and TP 82 are due for reconfirmation/extension in 2017.		
AASHTO T 110 will be revised to update reference to latest ASTM D1461 version editorially.		
AASHTO T 166 and T 331 will be revised editorially to replace references to ASTM D7227 with AASHTO R 79.		
TS chair will pursue revision of AASHTO T 168 to a practice ("R" standard).		
AASHTO T 269 will be revised to replace V_a with P_a editorially.		
AASHTO TP 114 and TP 115 were extended for two years by voice vote.		
TS 2c will distribute survey to solicit information about preparing pavement cores for asphalt binder/gradation testing.		