

**SUBCOMMITTEE ON MATERIALS**

**2016 Annual Meeting – Greenville, SC**

**Thursday, August 4, 2016**

**8:00 – 10:00 AM EDT**

**TECHNICAL SECTION 2a**

**Emulsified Asphalt**

Items requiring vote will be documented as such (In favor-opposed- abstentions)

**I. Call to Order and Opening Remarks**

Chairman Ron Horner of North Dakota opened the meeting at 8:02 a.m. Roll will be taken using i-Pad attendance sheet.

**II. Roll Call**

Ron	Horner	ND
Allen	Myers	KY
William	Bailey	VA
Lyndi	Blackburn	AL
Denis	Boisvert	NH
Joe	Feller	SD
Colin	Franco	RI
Darren	Hazlett	TX
Becca	Lane	ON
Cole	Mullis	OR
Tanya	Nash	FL
Christopher	Peoples	NC
Timothy	Ramirez	PA
Michael	Santi	ID
Scott	Seiter	OK
Eileen	Sheehy	NJ
Temple	Short	SC
Michael	Voth	DC
James	Williams, III	MS
Peter	Wu	GA
Robert	Horan	Asphalt Institute
Delmar	Salomon	Pavement Preservations Systems

### III. Approval of Technical Section Minutes from Mid-Year

NC (Chris Peoples) moves to accept minutes, PA<sup>2nd</sup> (Tim Ramirez), Discussion: none.  
Vote: ALL-0-0. Motion carries.

### IV. Old Business

A. SOM Ballot Items

B. TS Ballots June 2016 – Chairman Horner noted that consideration of the recent technical section ballot would consume most of the meeting.

i. M 81 **Cutback Asphalt (Rapid-Curing Type)**, Reconfirmation, 15-Yes, 0-No, 4-No Vote

1. No comments

ii. M 82 **Cutback Asphalt (Medium-Curing Type)**, Confirmation, 15-Yes, 0-No, 4-No Vote

1. No comment

iii. R 5 **Selection and Use of Emulsified Asphalts**, Confirmation or numerous changes to change to AASHTO standard. 15-Yes, 0-No, 4-No Vote

1. Comments:

Short (SC) - Table 2: MS-2h, HFMS-2h (M140) and CMS-2, CMS-2h (M208) - if there are no typical uses noted for these emulsions should they even be listed in the table? An "x" does not appear in the columns pertaining to these emulsions.

*Response: Task force to evaluate the Types of Construction listed in the first column of each table. Uses may be added or the types of emulsion removed.*

Timothy Ramirez (PA) – Numerous editorial comments will be included as appropriate.

In Section 3.3.3, consider revising from "Working cracks are defined as those that experience significant horizontal movements, generally greater than about 2 mm (0.1 in.)." to "Non-working cracks are defined as those that experience minor horizontal movements, generally less than about 2 mm (0.1 in.)." since this section is talking about filling of non-working cracks.

*Response: Agreed. The change will be made.*

Wu (GA) - Tables 1 and 2 do not have a place for "scrub seal", which is listed under Section 3.3.10.

**Response: This will be removed from Section 3.3.10. Chair asked GA if this was acceptable. GA confirmed that this was acceptable.**

Williams (MS) - Section 3.2 and Tables 1 and 2 - There is widespread use of various less-tracking and non-tracking emulsions for tack coat. While these products are proprietary in nature, many states specify their use either through a performance based specification or an Approved Products Listing. I would characterize these materials as Special Purpose or High Performing Tack Coats. Should this be discussed in Section 3.2 and or a note placed in the tables pointing out the widespread use of Special Purpose Tack Materials.

**Response: This statement is listed in this and the proposed Tack Coat standards.**

Also, with the increased use of thin-lift asphalt mixtures and Permeable Friction Course (PFC) or Open Graded Friction Course (OGFC), many states use Special Purpose emulsions and/or hot applied tack materials that yield much higher bond strengths and can be applied at higher rates. Because the intent of this specification is to give guidance on the application of emulsions in various applications, I believe this is worth a footnote or note in the standard even though there are not "Standard Specifications" for many of these Special Purpose tack materials.

The task force is not prepared to recommend proprietary products or specifications for such materials. **MS (James Williams)** - there are other materials that are available. Trying to avoid proprietary issues. Could a note be added to indicate that other types of products are available for use? **Chair- TF (Mike Voth from FHWA)** will look to add this statement.

**Response:**

Lane (Ontario) – General? Were in situ recycling methods excluded on purpose?

**Response: This will also be reviewed by the task force**

3.3.3 "placement is to reduce the infiltration of water to reinforce the adjacent pavement" is confusing.

**Response: will address this with editorial change to clarify**

3.3.7 Refers to a paved surface. Can it be done on a surface treatment/chip seal surface?

*Response: May be changed to "roadway" surface.*

Chair- TF will look at this

**Chair** called for concurrent ballot. The task force will complete the changes prior to the fall ballot. **MS** (James Williams) makes motion to add this as concurrent ballot item., **Mike Voth (FHWA) 2<sup>nd</sup>**, **Discussion: None. Vote: All-0-0. Motion carries.**

iv. **T 295 Specific Gravity or API Gravity of Liquid Asphalts by Hydrometer Method**, Reconfirmation, , 15-Yes, 0-No, 4-No Vote

1. Comments

Santi (ID) – recommend defining API

*Response: This will be added editorially.*

v. **T 301 Elastic Recovery Test of Asphalt Materials by Means of a Ductilometer**, Reconfirmation, , 15-Yes, 0-No, 4-No Vote

1. Comments:

Lane (Ontario) – Figure 1 middle picture, "K" is not tied to the dimension shown in the blow-up, i.e. not referenced.

*Response: This will be added editorially.*

vi. **MP 28 Materials for Micro Surfacing, Confirmation**, 15-Yes, 0-No, 4-No Vote

1. Comments:

Ramirez (PA) - In Section 6.1, it states "Mineral aggregate shall be 100 percent crushed" but that is all the standard says about this. Is this "100 percent crushed" for the coarse aggregate fraction only? If only coarse aggregate, is the requirement for 1-face crush or 2-face crush? Is natural fine aggregate permitted or is only manufactured fine aggregate permitted? In addition, the standard does not reference any test methods to determine if the aggregate meets this "100 percent crushed" requirement. Consider providing more detail as to what is meant by "100 percent crushed" and also referencing a test method(s) to determine if the aggregate meets this requirement, such as, T 304 and/or T 335 and specifying the number of faces (1-face or 2 face or both). If T 304 or T 335 are included, add them to Section 2.1 also.

**Response: The following changes will be made to Section 6.1: 100% crushed is for the coarse aggregate fraction and is 2-face crushed.**

**Only manufactured fine aggregate is permitted.**

**T-335 will be referenced in the section and also Section 2.1.**

Tim Ramirez (Pennsylvania) agreed with these modifications in response to his comments.

**VA (Bill Bailey) - How will two crushed faces be determined on the finer aggregates (filler)? Chair- only coarse aggregate fraction is required to have one or two crushed faces. Material retained on the No. 4 sieve could occur in some microsurfacing mixes. John D'Angelo- Task force may want to consider fine aggregate angularity and add a specification for it.**

In Section 6.1, Table 1, is there a particular reason that the number of cycles for the Magnesium Sulfate and Sodium Sulfate Soundness tests are specified at 4 cycles rather than the typical 5 cycles (e.g., M 80)? It is probably common that agencies are determining and reporting these soundness test results using 5 cycles and not 4 cycles. These potentially could require states to report soundness test results for both 4 cycle and 5 cycle or to report them differently when being used for micro-surfacing applications. Consider revising to require a standard soundness test at 5 cycles and, if need be, adjust the max loss requirement to account for this extra cycle.

**Response: The following changes will be made to Section 6.1, Table 1: Revision to require 5 cycles and adjustment for max loss.** Again, Tim Ramirez agreed with these changes.

In Section 6.1, Table 1, both the Magnesium Sulfate Soundness and Sodium Sulfate Soundness tests include an asterisk "\*", but there is no table footnote to explain this asterisk. If there should be a Table footnote, revise the asterisk "\*" to a "superscript b".

**Response: The following changes will be made to Section 6.1, Table 1: Remove the asterisk after the soundness tests.**

Williams (MS) - The Magnesium Sulfate Soundness and Sodium Sulfate Soundness values should be labeled as "max" consistent with the LA Abrasion requirement.

**Response: The max label for the soundness tests will be changed to be consistent with the LA Abrasion requirement.**

The requirement of 25% maximum loss at 4 cycles for the magnesium sulfate soundness seems high. In Mississippi we use a maximum of 20% at 5 cycles for magnesium sulfate for this type of aggregate.

**Response:** *The following change will be made to Section 6.1, Table 1 Change MgSO<sub>4</sub> loss to 20% at 5 cycles.*

Feller (SD) - Section 6, table 1:

Cannot find footnote for the asterisk denoted after 4 cycles.

Also, this test typically specifies five cycles-not four.

**Response:** *See responses above to the same issues.*

Lane (Ontario) - Table 1 Is parent aggregate defined elsewhere?

**Response:** *No. It is proposed the following addition will be made to footnote a, "i.e., limestone, sandstone, etc. from which it was derived."* Anne Holt (Ontario) agreed with this response.

What is the reference for the \* after 4" cycles"

**Response:** *See responses above to the same issues.*

7.1 Is usage level by mass or volume?

**Response:** *Chairman Horner replied that "Mass" is correct.*

*A number of changes will be made prior to fall ballot. Chair to entertain a motion to move this to concurrent ballot. RI (Colin Franco) makes motion to move this item to concurrent ballot. TX<sup>2nd</sup> (Darren Hazlett). Discussion: none. Vote: All-0-0. Motion carries.*

- vii. **PP XX Determination of Optimum Emulsified Asphalt Content of Cold Recycled Mixtures**, Confirmation new proposed standard, 15-Yes, 0-No, 4-No Vote Chairman Horner noted that five to six pages of comments were submitted for this item. Colin Franco (Rhode Island) expressed his preference that a concurrent ballot be selected to advance this standard.
1. Comments:

Short (SC) - 9.3 - fix the beginning of the sentence. Constant weight should be defined as shown except add that it's "no more than a 0.05% change in weight in 2 hours."

***Response: Changed as recommended here and elsewhere in the document.***

Ramirez (PA) – In Section 6.1, revise from "on materials" to "on two representative samples" to match up with Section 5.3.2 and to match up with Section 6.2 where "the average asphalt content" is referenced.

***Response: Changed as recommended.***

In Section 6.2, is there or should there be consideration of an asphalt content correction factor or aggregate correction factor for the T 308 test results? There is absolutely no discussion of correction factors here and there probably should be something. Possibly consider adding that an asphalt content and/or aggregate correction factor should be applied if the original RAP materials is known or based on experience of local aggregate materials.

***Response: Added a note stating "Note 1—It is not possible to determine an asphalt content and/or aggregate correction factor for RAP materials. One may be applied if the correction factor of the original RAP materials is known or can be based on experience with local aggregate materials."*** Tim Ramirez (Pennsylvania) agreed with this addition in response to his comments.

In Section 8.5.2, 4th line, revise from "0.05% change in weight in 2 hours" to "0.05 percent change in mass or less in 2 h" as the 0.05% is not defined as a minimum or maximum mass change here and to be consistent with use of word "percent" and "h" for "hours" as is done in Section 9.3.

***Response: Changed as recommended here and elsewhere in the document.***

In Section 9.3, last line, revise from "0.05 percent change in weight in 2 h" to "0.05 percent change in mass or less in 2 h" as the 0.05% is not defined as a minimum or maximum here.

***Response: Changed as recommended here and elsewhere in the document.***

In Section 10, Note 11, is it possible to identify the specific combinations of tests with the raveling test that are covered by the patents? If a patented combination is desired and specified, are there then royalty payments required? Suggest adding more information here regarding these patents if it is possible.

***Response: ARRA and others have had discussions with the current patent holders and were not able to get a specific response to this question. The raveling test is a part of many agencies mix design procedures and these procedures have been used successfully for many years. Several suppliers are licensed by the patent holder. We are not aware of anyone being asked to make royalty payments after the fact.*** Tim Ramirez (Pennsylvania) was satisfied with this response.

In Section 11.1, 1st line and 2nd line, revise from "CR" to "CIR" to be consistent with Section 3.1. Also, suggest adding "CCPR" in both locations where "CR" is included as this standard applies to both.

***Response: Changed as recommended.***

In Section 12, there are 21 items to include in a report. This seems excessive and there are some reportable items that are not really necessary to report for a standard that is for "Determination of Optimum Emulsified Asphalt Content...". If all these items are required by some agencies, consider making some optional if specifically specified by the purchasing agency to be reported. Consider requiring only the item listed in Section 12.1.14 (Optimum emulsified asphalt content with a range) and having all other items as optional per requirement of the purchasing agency. There are also some items that seem to go well beyond this standard including Section 12.1.7 (penetration of residue) and Section 12.1.21 (Certificates of compliance). Also, Section 12.1.6 seems redundant with Section 12.1.14. Most items seem to be part of the full mix design, not necessarily the "Determination of the Optimum Emulsified Asphalt Content" that seems to be the focus of this standard practice.

***Response: Reorganized to make five of the reportable items optional and removed two of the reportable items.*** Tim Ramirez (Pennsylvania) agreed with this change in response to his comments.

Are there agencies using Marshall stability to perform the strength ratio rather than T 283? Why is Marshall stability included in this standard for the strength ratio?

**Response:** *The mix design evolved from the old Task Force 38 report on CIR mix designs. The TF 38 report presented mix design methods using both Marshall and Hveem and used retained stability for moisture sensitivity. Indirect tensile strength testing (T 283) was added later knowing that with the introduction of Superpave many agencies would no longer have Marshall equipment. I do not have an exact number on the agencies that still use Marshall but I see numerous mix designs using Marshall and retained Marshall stability.*

**VA (Bill Bailey) and ND (Chairman Horner)** reported that their states still use Marshall stability as part of the specification. No changes will be made to the standard.

Wu (GA)- Section 8.1.1.2: has any study been conducted to demonstrate that >5 blows of Marshall Hammer is equivalent to 30 gyrations of Superpave Compactor in terms of density or degree of compaction? **GA (Peter Wu)** - believes that there is a mismatch when comparing SGC and Marshall compaction. 30 gyrations and 75 blow Marshall do not have similar compaction effort. Mr. Wu further believes that 75 blows with the Marshall hammer is the best option. **Chairman Horner** agreed with this comment. Colin Franco (Rhode Island) remarked that research by Stephen Cross is the best information currently available. Chairman Horner decided that the question will be sent back to TF for evaluation.

**Response:** *The use of 30 gyrations is documented in the literature. Wirtgen, Europe, South Africa and a few others have historically used 75 blow Marshall. I have not seen a study comparing the two for cold mixes.*

*For references on the Ndes of CR mixtures, refer to two papers:*

- **Cross, Stephen A.** “Determination of Superpave Gyratory Compactor Design Compactive Effort for Cold In-Place Recycled Mixtures.” *8th International Conference on Low Volume Roads, Transportation Research Record: Journal of the Transportation Research Board, No. 1819, Volume 2, Transportation Research Board, National Research Council, Reno, Nevada, June 2003, pp. 152-160.*
- **Cross, Stephen A.** “Determination of Ndesign for CIR Mixtures.” *Beneficial Use of Recycled Materials in Transportation Applications, Taylor Eighmy, Ed. Air &*

Williams (MS) - Section 6 - When performing T 308, how are the asphalt binder and aggregate correction factors determined? Considering that this process differs from a new asphalt mixture, is guidance needed in the performance of T 308 for CIR and CCPR?

***Response: Added a note stating “Note 2—It is not possible to determine an asphalt content and/or aggregate correction factor for RAP materials. One may be applied if the correction factor of the original RAP materials is known or can be based on experience with local aggregate materials.”*** James Williams (Mississippi) agreed with this addition in response to his comments.

Section 8.4 - Should guidance be given on the gyration levels and how that could affect the emulsified asphalt content? There is no mention of design air voids as it relates to the chosen emulsified asphalt content. Realizing that the mixture must meet the performance testing requirements, the gyration level could have a significant effect on the performance test results and could differ significantly from the in-place material which is be compacted to a target density.

***Response: Cold mix designs are not based on air voids and the emulsion content should not be adjusted to meet an air void requirement. The use of 30 gyrations is documented in the literature. Wirtgen, Europe, South Africa and a few others have historically used 75 blow Marshall. I have not seen a study comparing the two for cold mixes. The procedure does recommend compacting at elevated temperatures rather than higher gyrations if higher temperatures are expected during construction as this will effect optimum emulsion content. See the above two references for gyration level, which verifies at about 30 gyrations.***

***Thirty gyrations was originally based on a level that was equivalent to what very heavy compaction equipment could obtain on nearly 100% RAP for CR mixes that is coarse and is at ambient temperature. There is not much that can be adjusted to achieve a design void level.***

**MS (James Williams) – comes back to discussion with GA. How would we handle these issues? How do we correlate mixes**

between the laboratory and field? How do gyratory compaction levels correspond to field control? MS's plan is to continue to use traditional field controls. Chairman Horner recommended returning these comments to the task force for consideration.

Section 8.6.1 - If I read this correctly, the specimens should be cured in accordance with Section 8.5. At this point the specimen should be dry. Then in Section 8.6.1 the standard says to determine the bulk gravity of each specimen in accordance with T 166, Method A. The curing regimen is different than the drying procedure in T 166. If the intent is to cure the specimen and then cool it to determine the bulk specific gravity, it should be clearly stated that drying of the specimen (T 166, Section 6.1) is not necessary. The same would apply for T 331 if required due to the specimen absorption.

***Response: T 166 in section 6.1 says "recently compacted laboratory samples, which have not been exposed to moisture, do not require drying." We thought this was sufficient but can add your comment if required.***

**MS (James Williams) - the simple reference to T166 may not have been enough guidance.**

Lane (Ontario) - 5.1.2 Varied temperature for core crushing may produce different aggregate gradations and would affect the mix design. Consider including this information in the notes.

***Response: The statement is true but we do not believe a comment is necessary. The procedure says to crush to the gradation expected in the field or to the gradations in table 1.***  
Anne Holt (Ontario) was satisfied with this response.

8.1.1.2 Uncommon to use 4 inch mold for gyratory compactor. Also, the particles size above 25 mm should be removed from samples if 4 inch mold is used.

***Response: I use a 100-mm gyratory mold but it is not that common. That is why we have added indirect tensile strength testing (T 283) as an option. I have added comment about removing > 25 mm particles from 4-inch mold.*** Anne Holt (Ontario) agreed with this addition in response to her comments.

8.3.2 The temperatures for the materials (RAP, water, additives, emulsified asphalt) are all varied, and just specify mixing at room temperature will not produce a consistent temperature mix.

Suggest adding preconditioning materials to stabilize temperature before mixing.

**Response:** *Room temperature was replaced with just the RAP being conditioned to a temperature range of 68 to 77F and the emulsion temperature at the expected delivery temperature.*

Anne Holt (Ontario) agreed with this change in response to her comments.

**Chair-** A number of changes will be made prior to fall ballot. Should this be moved to concurrent ballot? **RI** (Colin Franco) – only two major items need investigation (gyratory/Marshall compaction effort comparison and T166 issue). Mr. Franco expressed his preference for a concurrent ballot. He pledged his attention to ensure that answers from the task force would be provided quickly. **VA** (Bill Bailey) stated a preference for a concurrent ballot as well. **TX** (Darren Hazlett) - hardly any negative votes were cast. Comments can be added as revisions and move to concurrent ballot. **FHWA** (Mike Voth) noted that he would expect little new information to surface on these issues within the next year. **Chair** asked to entertain a motion to move this to concurrent ballot. **VA** (Bill Bailey) makes motion to move this item to concurrent ballot. **TX<sup>2nd</sup>** (Darren Hazlett). **Discussion:** None. **Vote: All-0-0. Motion carries.**

viii. **MP XX Cold Recycled Mixture with Emulsified Asphalt**, Confirmation new proposed standard, 15-Yes, 0-No, 4-No Vote

1. Comments

Ramirez (PA) – Editorial comments will be included as appropriate. Also, comments from Troy Lehigh (PennDOT Asphalt Lab Manager):

1. In Table 2, there is a requirement for "Retained Marshall". I don't think that the Marshall test (T245) is used in a similar fashion as the TSR (T283). It doesn't compare the results of a control set of sample to a conditioned set. I have an idea of how to calculate the "retained Marshall", but I am not aware of any specification or test method that contains this.

**PA** (Tim Ramirez) - consider adding language with better explanation for the "retained Marshall". AASHTO T 283 explains the calculation for retained strength, but the Marshall method does not.

**Response:** *Retained Marshall stability is in the AASHTO AGC Task Force 38 report on CIR mix design. There were procedures for Marshall and Hveem. Both had retained stability for moisture*

*sensitivity testing. The PP standard explains how to perform the test. The procedure has been used successfully for many years with CIR and CCPR mix designs.*

Wu (GA) - Table 2 should note 1250 lbs. Marshall Stability, T245 is for 4" samples or 2,500 lbs for 6" samples.

*Response: AASHTO T 245-13 does not have a provision for 6 inch Marshall samples. Therefore, we do not believe that a comment is necessary.* Peter Wu (Georgia) noted that specifications from other states include 6-in. samples.

Lane (Ontario) - Table 2 No mention that the strength criteria (310kPa) is for dry subset or for conditioned subset samples. The strength criteria would be too high if it is for conditioned subset samples.

*Response: We added "dry subset" to the table for indirect tensile strength and Marshall Stability.* Anne Holt (Ontario) agreed with this addition in response to her comments.

**Chair** asked to entertain a motion to move this to concurrent ballot. **VA** (Bill Bailey) makes motion to move this item to concurrent ballot. **TX<sup>2nd</sup>** (Darren Hazlett), **Discussion: None. Vote: All-0-0. Motion carries.**

- ix. **MP XX Materials for Asphalt Tack Coat**, Confirmation new proposed standard, 14-Yes, 1-No, 4-No Vote. *Negative – Ramirez (PA)*
1. Comments

Short (SC) - 3.1.2 What about alternative products like less or non tracking tack coats (emulsified and hot applied)? i.e. - trackless, efog, ultrafuse, etc.

*Response: Two patents control the use of harder-pen residues as typically used for trackless tack. The ETF is not prepared to recommend specifications that could be perceived as proprietary. The ETF hopes to develop performance specifications in the future that would control bond strength and tracking rather than patented residue properties, but no such tests are currently published as AASHTO standards. As discussed previously, the task force is not prepared to recommend proprietary products or specifications for such materials.*

Williams (MS) - This standard addresses traditional tack materials. With the increased use of thin-lift asphalt mixtures and Permeable

Friction Course (PFC) or Open Graded Friction Course (OGFC), many states use Special Purpose emulsions and/or hot applied tack materials that yield much higher bond strengths and can be applied at higher rates. Because the intent of this specification is to give guidance on the application of emulsions in various applications, I believe this is worth a footnote or note in the standard even though there are not "Standard Specifications" for many of these Special Purpose tack materials.

***Response: As stated above is the reason why we left out special emulsions due to patents that restrict completion, proprietary specifications, cost of these products to the DOT's, etc.***

See MS comments below about note for using alternate products: **MS** (James Williams) - there are other materials that are available. Trying to avoid proprietary issues. States are using proprietary materials very often, and these materials are specified in state-developed requirements. Could a note be added to indicate that other types of products are available for use? **Chair**- TF will look to add this statement. Chairman Horner expressed his preference to include a note as suggested by Mississippi.

Sheehy (NJ) - Should tack coat be taken out of R 5 if there is a separate standard?

***Response: No, because this specification doesn't cover the specific testing requirements.***

Lane (Ontario) - 1.1 Not necessarily followed by a surface layer, should consider using the wording from PPXX Asphalt tack Coat Design Practice.

***Response: Depends on how soon the surface layer was applied. However, for the low cost it's recommended to include tack coat.***

**John D'Angelo**- Studies have been done and recommendations were made indicating that you should tack every time regardless of the paving schedule. It acts as a safety factor if there were issues with dust on the underlying surface.

Hazlett (TX) - The terminology and the recommendations for asphalts to be used are very much conflated here. The guidance in general is very straightforward, but the typical materials used I think ought to be separated from the terminology. Viscosity grades are left out of the options for materials, and although the design standard lists specialty materials in the table, there is no

discussion in this spec or the standard of what the specialty materials may be.

***Response: We left that up to the DOTs for the specialty materials requirements and other AASHTO specifications can go more in depth for the specific testing requirement (i.e. viscosity, and etc.)***

**TX** (Darren Hazlett) – Does this specification cover items other than emulsion tack coats? We use specialty materials that are used as tack that are applied hot. They are not emulsified materials. Should we include other materials besides emulsions? A generic comment may be added similar to MS comments.

**RI** (Colin Franco) - does this standard need a title change?

“Asphalt and Emulsion” to be added? **FHWA** (Mike Voth) – PG

binder is included in the “terminology” section. **AL** (Lyndi Blackburn) - it should be revised for asphalt emulsions, otherwise it will be split between two TS. **MS** (James Williams) - does not separate liquid asphalt vs. emulsion. May call out PG grade for binder used as tack. Referencing asphalt binder in the terminology section is adequate. **Add a note that hot-applied tacks and other materials may be used.**

Ramirez (PA) - Primary reason for negative is that there is little "specification", if any, within this proposed standard specification. What is the purpose of this specification that indicates in Section 4.1 "The contractor has the option of using any emulsified asphalt or asphalt binder that conforms to the Agency Standard Specifications for tack coat."? If agency tack coat specifications are so diverse that an AASHTO standard specification cannot specify something, or some minimum, why have this standard specification?

***Response: We needed to start with something and yes specifications are diverse pending on the region of the country you're in but there are more than just options of emulsified asphalt or asphalt binder that needs to be addressed. In particular, trackless tack coat emulsions are now specified by many agencies. Due to existing proprietary specifications, AASHTO may not be in a position to develop appropriate specifications, but should not preclude the use of materials that the marketplace has found to be important tools for creating better adhesion between AC layers.*** Tim Ramirez (Pennsylvania) attempted to clarify his negative vote. Given that AASHTO M 140 and M 208 are already in use, how should this specification be used? After further discussion, Mr. Ramirez withdrew the negative vote from Pennsylvania.

In Section 1.1, 4th line, suggest revising from "that the new layer will be placed (curbs, gutters, utilities, and construction joints)" to "that the new layer will be placed against or adjacent to, such as, curbs, gutters, utilities, construction joints, etc."

***Response: Will make this change.***

In Section 3.1.1, recommend that this specification not allow dilution for slow setting grades. Issues arise with improper dilution, multiple dilutions, thorough mixing after dilution, and stability issues. Recommend adjustment of application processes or equipment to apply non-diluted slow setting emulsified asphalts using proper distributor spray nozzles, pump pressures, distribution rates, etc.

***Response: I agree with this statement. However, for those DOTs out west of the Mississippi river this maybe a big issues for their contractors but a needed change. Not sure why someone would not dilute SS emulsion for tack. We certainly should not exclude the possibility for doing so, although we could leave the door open for applying in undiluted form if an agency knowingly wants to do so.***

***This would be a large change for many. Personal preference: AASHTO spec should allow for but not require dilution. This section might be written to address changing thought as to whether Tack emulsions should be diluted.*** Chairman Horner remarked that slow-setting emulsions may be diluted, but other types of emulsions should not.

In Section 3.1.3, recommend that this specification not allow dilution for quick setting grades. Issues arise with improper dilution, multiple dilutions, thorough mixing after dilution, and stability issues. Recommend adjustment of application processes or equipment to apply non-diluted quick setting emulsified asphalts using proper distributor spray nozzles, pump pressures, distribution rates, etc.

***Response: I agree and will make the change.***

In Section 3.1.4, 1st line, add a period (".") after the word "coat". Period is missing after end of 1st sentence.

***Response: We will make this change***

In Section 4.1, 1st sentence, refers to "Agency Standard Specifications for tack coat". There is little specification substance

here. Wondering what is the purpose of this standard specification and if it is really needed, or if it will be used by highway agencies as written without more substance?

**Response:**

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Comments from Troy Lehigh (PennDOT Asphalt Lab Manager):  
There doesn't seem to be much information here to justify creating a new AASHTO Specification.

**Response: We need to provide agencies a standard specification that they can go off from and that is the need for this AASHTO Specification.**

I don't like the idea of allowing the emulsion to be diluted (see Sections 3.1.1, 3.1.2, and 3.1.3).

**Response: I agree with not allowing dilution but for those states out west of the Mississippi this will be a big change. Not sure why someone would not dilute SS emulsion for tack. We certainly should not exclude the possibility for doing so, although we could leave the door open for applying in undiluted form if an agency knowingly wants to do so.**

Section 3.1.4 should also refer to MSCR graded PG binders.

**Response: Will make this change.**

Section 5.1 should also refer to AASHTO M 332 in the last sentence. (Section 2.1 should also include M 332).

**Response: Will make this change.**

**Chair** asked to entertain a motion to move this to concurrent ballot. **VA** (Bill Bailey) makes motion to move this item to concurrent ballot. **NC 2<sup>nd</sup>** (Chris Peoples). **Discussion: none. Vote: All-0-0. Motion carries.**

- x. **PP XX Asphalt Tack Coat Design Practice**, Confirmation new proposed standard, 15-Yes, 0-No, 4-No Vote
  - 1. Comments

Short (SC) - 5.1.3 This standard references a the use of PG or "specialty products" to be used on roads over 5000 ADT? Specialty products include...? products with "h products", trackless, etc.?

***Response: Will make this change.***

Assuming an average content of 67% asphalt would only apply to CRS-2.

***Response: This table was changed in the fog seal specification to reflect an SS as manufactured at 60% residue. To be consistent, it should be changed in this table as well.***

5.1.4 - no typically used emulsions at night, so would that mean no micro-surfacing applications at night either?

***Response: No, because not all DOTs allow the use of micro surfacing. However, believe for night paving a particular emulsion would be appropriate.***

**MS (James Williams)** - do not limit night paving. MS does quite a lot of night paving with emulsions. **Chair-** will add item to Table 2 to include "typical emulsions".

Ramirez (PA) - In Section 3.2.2, if dilution is to be maintained in this standard, there are discrepancies between this standard and the proposed MP XX (Materials for Asphalt Tack Coat). This PP XX indicates that only slow setting emulsified asphalt can be diluted with plain water, but MP XX seems to indicate that quick sets may also be diluted with "additional water" (See Section 3.1.3 in MP XX).

***Response: Considering deleting dilution for quick sets. Not sure why someone would not dilute SS emulsion for tack. We certainly should not exclude the possibility for doing so, although we could leave the door open for applying in undiluted form if an agency knowingly wants to do so.***

***Diluting quick set emulsions could be risky. If dilution allowed, prefer to allow water to be used only for SS. Change Tack Coat materials spec accordingly.***

**Chairman Horner** reiterated that dilution should be allowed for slow-setting emulsions only. **MS (James Williams)** - should the amount of dilution be related to the residue left on the road? Some acknowledgement needs to be made of the undiluted residual requirement on the pavement surface. **TX (Darren Hazlett)** - Agreed. The big question is where dilution has occurred. Texas has experienced over-diluted emulsions. **PA (Tim**

Ramirez) – we are moving away from tack coat with low residue. Dilution really cannot be done. **RI** (Colin Franco) - project construction specifications should indicate the minimum residue rate. If that is the construction standard, does it really need to be put in here? **PA**- does dilution need to occur at the plant? **RI**- was this due to the dilution being done on-site (western states). **FHWA** (Mike Voth)- dilution needs to occur at the manufacturer's plant. PA indicates that dilution should be done during the milling process, not just at the plant. **MS** (James Williams) - not concerned with dilution, but just that a general statement is added to keep an eye on the residue. The amount of asphalt residue will obviously affect the bond strength between pavement layers. MS does not allow dilution of any tack materials. **VA** (Bill Bailey) - add a sentence to indicate that dilution does not relieve the contractor of his responsibility to satisfy the residue specification on the roadway. **TX**- agrees that this comment needs to be added.

In Section 3.2.2, if "Dilution of any other emulsified asphalt type must occur at the manufacturer's plant site" why not require that the emulsified asphalt be a produced or colloid milled emulsified asphalt at the desired asphalt residue rate? We have heard about dilution at the manufacturer's plant that is not very controlled (dump extra water/surfactant in distributor truck during load out and have mixing occur during transport to project site or during a circuitous route through the manufacturer's plant site). If at the manufacturer's plant site, they should be able to produce a colloid milled emulsified asphalt at the proper asphalt residue to water ratio.

***Response: This is not an option for the emulsion manufacturer. Emulsion particle size is not uniform if manufactured at low AC concentrations.***

In Section 5.1.4, Table 2, the last column and in the last two rows, it refers to "Specialty Product", but "Specialty Product" is not defined anywhere. Suggest revising both locations from "Specialty Product" to "Polymer Modified Emulsified Asphalt" and/or "specifically formulated Emulsified Asphalt".

***Response: Will make this change.***

In Section 5.1.4, Table 2, last column and last row, delete the text "or Spray Paver" as this column's header is "Recommended Tack" and most rows list type of tack (emulsified asphalt or PG Asphalt Binder). Spray Paver is an application method not a tack type. Also, it is likely that a spray paver could use either an Emulsified

Asphalt or a PG Asphalt Binder. If it is desired to retain Spray Paver, suggest adding a "superscript a" at end of last column and last row and a "superscript a" at bottom of Table 2 as a footnote indicating that the recommended application of the recommended tack for this paving type is by Spray Paver.

***Response: Will make this change.***

In Section 5.3.2, recommend that this subsection be deleted in its entirety as it is related to construction where this standard practice is to determine the proper residue rate and/or emulsified asphalt application rate based on the pavement type.

***Response: Will make this change.***

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Comments from Troy Lehigh (PennDOT Asphalt Lab Manager):  
Section 5.1.3 should also include AASHTO M 332. (Section 2.1 should also list M 332).

***Response: Will make this change.***

Horner (ND) - The emulsion in this standard is assumed to be 37% water and 63% asphalt. Other standards list 40% water and 60% asphalt. Which is the most common. For consistency some agreement should be made on the percentage of water in emulsion.

***Response: Correct. The new fog seal spec does use 60% residue for SS, which is correct.***

Williams (MS) – Section 5.1.1 - The sentence "Dense and gap-graded hot mix asphalt overlays require less tack coat ..." should be clarified. I believe the intent is that SMA type mixtures that are gap-graded should require less tack coat than OGFC layers. As it is written, OGFC mixtures are gap-graded as well and could lead to confusion. Example wording could be, "Dense graded mixtures including Stone Matrix Asphalt (SMA)"

**VA (Bill Bailey)** - does not think the amount of tack should be reduced. Do SMA and OGFC mixtures require a lower residual amount? At a minimum it should be kept equivalent. **NC- MS** may be saying that OGFCs will act more like a thin lift where as SMAs act like dense graded mix. **MS-** there was a discussion about increasing the rate of application. With an OGFC you would need to increase your tack rate and not be equivalent to SMA tack rate.

***Response: Will make this change.***

Table 1 - The rates listed in Table 1 appear to be typical rates used for normal dense graded type asphalt mixtures. Residual rates in excess of 0.08 gal/yd<sup>2</sup> are routinely used with Special Purpose tack materials to create higher bond strengths resulting in a bonded overlay. This is very important for thin-lifts and PFC/OGFC type mixtures. This is mentioned in 5.1.1, but is not taken into account in Table 1

***Response: Will make this change.***

Lane (Ontario) - 3.3 Consider adding more common usages such as warm mix, in-situ recycled surfaces (such as CIR, CIREAM or FDR) or take out examples. Also applies to Table 1

***Response: Will consider***

5.1.2 Suggest removing "as directed"

***Response: Will make this change.***

5.2.2 What is residual shot rate vs residual application rate?

***Response: Chairman Horner will ask the task force to clarify these terms.***

5.3.2 Report what was used for dilution

***Response: Will make this change.***

Hazlett (TX) - Again, the table shows specialty materials as an option but there is no discussion of specialty materials. Viscosity graded asphalt are not considered. Section 5.1.1 says that measurement and payment is by weight, but 5.3.1 only requires a report of the volume applied.

***Response: Will make this change.***

**Chair** asked to entertain a motion to move this to concurrent ballot. **VA** (Bill Bailey) makes motion to move this item to concurrent ballot. **TX 2<sup>nd</sup>** (Darren Hazlett), **Discussion:** none. **Vote: All-0-0. Motion carries.**

- xi. **MP XX Materials for Slurry Seal**, Confirmation new proposed standard, 15-Yes, 0-No, 4-No Vote

1. Comments

Chair moved to this portion of the agenda after MP-28 discussion. Similar comments were received for Slurry and Micro specifications.

Short (SC) - Does the LA abrasion have to be 35% max? This is pretty low and will eliminate a lot of good aggregate sources.

***Response: This is intended to be a national specification 35% has been standard practice for some time. If local materials that exceed this value have performed satisfactory, it is suggested this value be adjusted in the project documents to reflect this condition.*** Merrill Zwanka (South Carolina) noted that his state simply wanted to present this issue for discussion.

Ramirez (PA) - In Section 1.1 and 1.2, suggest revising both of these subsections completely to result in one subsection 1.1 that reads "This specification covers requirements for emulsified asphalt, aggregate, mineral filler, water, and additive materials used in slurry seals. Slurry seals are mixed and placed on existing pavement surfaces using specially designed paving machines."

***Response: The following change will be made to Sections 1.1 and 1.2***

***These two sections will be revised to include the above comment.*** Tim Ramirez (Pennsylvania) remarked that the wording is inconsistent with other standards. Chairman Horner replied that the affected sections will be changed.

In Section 2, ANSI 60 for aluminum sulfate is not referenced in this materials specification, but ANSI 60 is referenced in the proposed PP XX (Slurry Seal Design). Should ANSI 60 be added to Section 2? Yes.

***Response: The following change will be made to Section 2: The ANSI reference will be added to Section 2, Referenced Documents.***

In Section 6.1, it states "Mineral aggregate shall be 100 percent crushed" but that is all the standard says about this. Is this "100 percent crushed" for the coarse aggregate fraction only? If only for the coarse aggregate, is the requirement for 1-face crush or 2-face crush? Is natural fine aggregate permitted or is only manufactured fine aggregate permitted? In addition, the standard does not reference any test methods to determine if the

aggregate meets this "100 percent crushed" requirement. Consider providing more detail as to what is meant by "100 percent crushed" and also referencing a test method(s) to determine if the aggregate meets this requirement, such as, T 304 and/or T 335 and specifying the number of faces (1-face or 2 face or both). If T 304 or T 335 are included, add them to Section 2.1 also.

***Response: The following change will be made to Section 6.1:  
100% crushed is for the coarse aggregate fraction and is 2-face crushed.  
Only manufactured fine aggregate is permitted.  
T-335 will be referenced in the section and also Section 2.1***

In Section 6.1, Table 1, is there a particular reason that the number of cycles for the Magnesium Sulfate Soundness test is specified at 4 cycles rather than the typical 5 cycles (e.g., M 80)? It is probably common that agencies are determining and reporting this soundness test result using 5 cycles and not 4 cycles. This potentially could require states to report soundness test results for both 4 cycle and 5 cycle or to report them differently when used for slurry seal applications. Consider revising to require a standard soundness test at 5 cycles and, if need be, adjust the max loss requirement to account for this extra cycle.

***Response: The following change will be made to Section 6.1  
Revision to require 5 cycles and adjustment for max loss. The changes will match the corresponding sections in AASHTO MP 28.***

In Section 6.1, Table 1, consider adding an alternative Sodium Sulfate Soundness test for those states using Sodium Sulfate Soundness and not Magnesium Sulfate Soundness. Consider adding similarly to the proposed revision to MP 28 (Materials for Micro-Surfacing) in ballot item #6 above. Consider adding the Sodium Sulfate Soundness at 5 cycles.

***Response: The following revisions to Section 6.1, Table 1 will be made  
Add NaSO<sub>4</sub> to the Table with 5 cycles.***

In Section 6.3, the 1st sentence is a little confusing especially the last part of the sentence which reads "while also remaining within

the gradation's specification band". Which "gradation's" is being referred to here? Is it the mix design's gradation band or is it the aggregate's size gradation band? If it is intended to be the aggregate's size gradation band, the specified grading requirements in Table 2 may not fall within a specific aggregate size (e.g., No. 8 aggregate size).

***Response: The following revision to the first sentence in Section 6.3 will be made.***

***The word "specification" will be inserted before the word "gradation" in the sentence so as to read "...while also remaining with the specification gradation's band". The intent is to always remain within the specification gradation band.***

In Section 9.1, are these additives different than the mineral filler specified in Section 7? Wording about adjusting mixture breaking, curing or set time is similar. Is there an example or, a "such as", additive that could be specifically included here to show what the difference is between Section 9 and Section 7?

***Response: After Additives at the beginning of the first sentence, the words "such as emulsifier chemicals" will be added.*** Tim Ramirez (Pennsylvania) was satisfied with this change in response to his comments.

Williams (MS) - Table 1 - Should the Aggregate Quality Requirements be consistent with MP 28? Also, Item No. 6 in this ballot adds Sodium Sulfate Soundness as an option. Wouldn't this addition be applicable to slurry seals as well?

***Response: The following revisions to Table 1 will be made: Add NaSO<sub>4</sub> and change the cycles to correspond to MP-28.*** James Williams (Mississippi) agreed with this modification.

The Soundness requirements should be listed as maximum values.

***Response: The following revisions to Table 1 will be made: The maximum values will noted.***

Table 2, Subscript b - It is recommended that "maximum friction resistance" be changed to "higher friction resistance."

**Response: Agree. The following revision to Table 2, Subscript b: The word "maximum" will be changed to "higher".**

Because Frictional Resistance is noted, it should be pointed out that there are no angularity requirements for the aggregates specified in this standard. Because of that, the resulting frictional resistance of the finished surface could vary drastically based on the finished surface texture and the angularity of the aggregate.

**Response: The following revisions will be made to Section 6.1 indicating that the crush count should be 2 face crushed and T-335 will be added to Section 2.1**

**MS (James Williams) - Changes that we made to the microsurfacing requirements should also be made to the slurry seal specifications. One option would be to specify manufactured fines.**

Lane (Ontario) – Table 1, Is parent aggregate defined elsewhere?

**Response: No. It is proposed the following addition will be made to footnote a, "i.e., limestone, sandstone, etc. from which it was derived.**

7.1 Is usage level by mass or volume?

**Response: Mass**

**Chair** entertains motion to move to concurrent ballot. **RI (Colin Franco)** makes motion to move this item to concurrent ballot. **2<sup>nd</sup> TX (Darren Hazlett).** **Discussion: None. Vote ALL-0-0. Motion carries.**

- xii. **PP XX Slurry Seal Design**, Confirmation new proposed standard, 15-Yes, 0-No, 4-No Vote
  - 1. Comments

Ramirez (PA) - In Section 2.1, consider adding M 17 if applicable for slurry seal.

**Response: The following revision will be made to Section 2.1: Reference to M 17 will be added.**

In Section 4.3, consider revising from "with M 85" to "with M 17 for bituminous mineral filler, M 85" if M 17 is applicable for slurry seal.

***Response: The following revision will be made to Section 2.1:  
Reference to M 17 will be added.***

In Section 4.3, 'ANSI 60 for aluminum sulfate' is referenced for slurry seal, but this type of mineral filler was not referenced in MP 28 (Materials for Micro-Surfacing), is there a difference between Slurry Seal and Micro-Surfacing where ANSI 60 is not applicable to Micro-Surfacing, but is applicable for Slurry Seal?

***Response: The following change will be made to MP 28, add reference to ANSI 60 for Aluminum Sulfate.***

***Aluminum Sulfate is used in both slurry and micro surfacing mixtures.***

In Section 4.3, ANSI 60 for aluminum sulfate is not referenced in the proposed MP XX (Materials for Slurry Seal). Should ANSI 60 remain here in Section 4.3?

***Response: The following change will be made to Section 4.3 of the proposed MP XX (Materials for Slurry Seal).***

In Section 9.1, consider revising the first sentence to add "by max loss of Wet Track Abrasion" after the word "determined" as the title of ISSA TB 100 does not reference anything about minimum binder content.

***Response: The following revision is suggested for Section 9.1: The minimum binder content is determined by excessive mixture loss in accordance with ISSA TB 100 and the requirements of Table 1. In general, select 1 percent more emulsion (at 62 percent residue) from TB 100 with a tolerance of ± 0.5 percent emulsion during placement.*** Tim Ramirez (Pennsylvania) agreed with this change in response to his comments.

***Chair to entertain motion to move to concurrent ballot. RI (Colin Franco) makes motion to move this item to concurrent ballot.***

***TX<sup>2nd</sup> (Darren Hazlett). Discussion: None. Vote: All-0-0***

- xiii. **PP XX Emulsified Asphalt Fog Seal Design**, Confirmation new proposed standard, 15-Yes, 0-No, 4-No Vote
  - 1. Comments

Ramirez (PA) - In Section 2.1, "M XXX, Emulsified Asphalt Fog Seal Construction" is listed, but this standard does not exist as either a

proposed standard or an existing standard. Recommend deleting this from the list of referenced documents.

***Response: Will make this change. This reference was intended to refer to the Division 400 specification, Section 40X: Emulsified Asphalt Fog Seal***

In Section 3, consider revising the order of terms from existing order to "3.1 Slow Setting", 3.2 Medium Setting", "3.3 Rapid Setting", and finally "3.4 Quick Setting" to match order of how these are listed in Tables of M 140 and M 208.

***Response: Will make this change***

In Section 5.1 and Section 5.2, reconsider allowing dilution and specifying an emulsified asphalt having the required asphalt residue that will be produced by manufacturer's at their plant site by colloid milling.

***Response: Do not allow emulsion manufacturing at lower residue contents. If application is to be made at lower residue contents, require dilution.*** Tim Ramirez (Pennsylvania) was satisfied with the task force response on this comment.

In Section 5.5, delete this subsection in its entirety as the referenced M XXX (Fog Seal - Construction) does not exist as a proposed standard or as an existing standard.

***Response: Will make this change. Again, this refers to the Fog Seal section in Div 400.***

Horner (ND) - The emulsion in this standard is assumed to be 40% water and 60% asphalt. Other standards list 33% water and 67% asphalt. Which is the most common. For consistency some agreement should be made on the percentage of water in emulsion.

***Response: We agree and will make this change. SS usually manufactured around 60% residue.***

Williams (MS) - A note should be added as a disclaimer related to the Fog Seal Application Rate. It is extremely important that the Fog Seal not be applied "too heavy" due to the effects to the surface friction. Care should be taken to ensure that the Fog Seal

Application Rate is not such that there is a significant reduction in the surface texture of the pavement.

***Response: Will make this change and add a note as suggested above.***

Becca (Ontario) - SI units missing from some sections

***Response: This is a US document and it uses English units***

**Chair** to entertain motion to move to concurrent ballot. **VA** (Bill Bailey) makes motion to move this item to concurrent ballot. **TX<sup>2nd</sup>** (Darren Hazlett). **Discussion:** None. **Vote: All-0-0. Motion carries.**

xiv. **MP XX Materials for Emulsified Asphalt Fog Seal**, Confirmation new proposed standard, 15-Yes, 0-No, 4-No Vote

1. Comments

Ramirez (PA) – Editorial comments will be included as appropriate.

Is dilution necessary if all dilution is to occur at the manufacturer's plant site? Why not require produced or colloid milled material for emulsified asphalt for fog seals since it must already come from the manufacturer's plant site?

**PA-** Language does not prevent this. **VA** (Bill Bailey) - we've made comment to include recommendation about keeping the residue at the specification minimum. Similar to the practice for asphalt tack coat considered earlier, the residue requirements must be satisfied regardless of the amount of dilution.

***Response: Emulsion quality will be poor if manufactured at low asphalt contents typical of diluted materials.***

In Section 4.1, the minimum fine aggregate angularity of 45 by T 304 is a specification requirement. This requirement should be in MP XX (Materials for Fog Seals), not here in the standard practice. Consider deleting this requirement from this PP XX standard and adding it to the MP XX (Materials for Fog Seals) proposed standard.

***Response: Will make this change***

In Section 4.4, is the Ring Test practical for chip seals, especially those with a high macro-texture? Can the volume of emulsified asphalt poured into the 6-inch circles be evenly distributed within the circle with a small brush?

**PA (Tim Ramirez)** - can the task force response be added as a note? Chairman Horner agrees that a note is a good idea.

***Response: Fog seals for chip seals can be applied at a higher content. Normally the ring test is used only when the pavement is tight and a slippery pavement can result for the application of the treatment.***

Horner (ND) - The information in Section 5.3 should be presented in a table similar to the Design standard for consistency.

***Response: We will make that change***

Wu (GA) - Should polymer modified emulsion, such as CMS-18, be included in this spec?

***Response: We are not prepared to include proprietary specifications that are not widely used. Their use is not precluded by not being listed in AASHTO standards.*** Peter Wu (Georgia) was satisfied with the task force response to his comment.

Williams (MS) - Should polymer modified emulsion, such as CMS-18, be included in this spec?

***Response: We are not prepared to include proprietary specifications that are not widely used. Their use is precluded by not being listed in AASHTO standards.***

Lane (Ontario) - 3.2 QS and CQS listed but not included in M208?

**Response: CQS emulsions are included in M208 for cationic emulsions. QS is not included in M-140 for anionic emulsions. CQS should remain as possible choice for fog seals, especially for use on open-graded mixes.** Anne Holt (Ontario) was satisfied with the task force response to this comment.

Hazlett (TX) - This is very minimal guidance, and there is some redundancy with the fog seal practice. I sort of see this as a place keeper for future development of a more rigorous selection.

**Response: It is needed now, but should be updated later.**

**Chair** to entertain motion to move to concurrent ballot. **VA** (Bill Bailey) makes motion to move this item to concurrent ballot. **NC<sup>2nd</sup>** (Chris Peoples). **Discussion: None. Vote: All-0-0. Motion carries.**

- C. Task Force Reports
  - i. No current task force

## V. New Business

- A. Research Proposals
  - 1. 20-7 RPS
  - 2. Full NCHRP RPS
- B. AMRL/CCRL - Observations from Assessments?
  - i. T 59 Section 13.4.2 states to **“heat the pan and sieve for 2 h in a 163°C (325°F) drying oven”**. The solder in the sieve is melting at this high temperature. (J. Malusky - I called Humboldt Mfg. (800.544.7220) and their technical data states that the solder begins to soften at 260°F.)  
**Should we lower the temperature or see what else happens? Chair-** we may want to wait and see if this happens again. We will table this for now.
- C. NCHRP Issues **Amir Hanna-** finished NCHRP 9-50 PG specs for binders used in chip seals and other preservation treatments. Results were sent to TS chair to be added into standards in the future. Chairman Horner will consider the report. **TX-** has also performed some work and will re-send the information to the TS chair.
- D. Correspondence, calls, meetings
- E. Presentation by Industry/Academia
  - i. Delmar Salomon, Pavement Preservation Systems. Converting viscosity results from TP 121 Determining the Viscosity of Emulsified Asphalt by a Rotational Paddle Viscometer to saybolt viscosity standard (sfs) to compare to emulsion specifications.  
**TX (Darren Hazlett)** - how do we want to handle this? Once more data is gathered, can we use the equation developed if a good correlation was

found? Can we end the use of the Saybolt in favor of the paddle viscometer? **Chair-** we will take a look at this but probably want to keep use/implementation up to the states.

- F. Proposed New Standards
  - i. Performance-Graded Emulsions Used in Chip Seal Surface Treatments
  - ii. Performance-Graded Emulsions Used in Micro Surfacing Treatments
  - iii. Performance-Graded Emulsions Used in Spray Seal Treatments
- G. Proposed New Task Forces
  - i. Reconvene Task Force 2a-2015-02, members included: Voth (FHWA), Peoples (NC), Horner (ND) and Georgene Geary, GGFG.
- H. Standards Requiring Reconfirmation
  - i. T 50-14 Float Test for Bituminous Materials
- I. SOM Ballot Items (including any ASTM changes/equivalencies)

**VI. Open Discussion – Darren Hazlett (Texas) questioned the status of a proposed standard for performance-graded asphalt material used in surface treatments. Chairman Horner agreed to investigate this issue.**

**VII. Adjourn**

**MS (James Williams) makes motion to adjourn. FL 2<sup>nd</sup> (Tim Ruelke). Discussion: none. Vote: All-0-0. Motion carries. Meeting adjourned at 10:00am.**