SUBCOMMITTEE ON MATERIALS

2016 Mid-Year Meeting – Webinar
Thursday November 10th, 2016
10:00 – 12:00 PM CST

TECHNICAL SECTION 3b
Concrete Materials and Fresh Concrete Properties

I. Call to Order and Opening Remarks

II. Roll Call

AZ, CT, HI, ID, IL, KS, KY, MD, MI, MN, NE, NV, NH, OH, OK, ON, SD, TN, UT, VA, WA

III. Approval of Technical Section Minutes (Page 2-5)

Move to approve minutes- **OK, Second -MN; Discussion:** none**. Vote: (All-0-0) Motion carries.**

IV. Old Business

- Review of Fall Ballots
  - R 064, Sampling and Fabrication of 50-mm (2-in.) Cube Specimens Using Grout (Non-Shrink) or Mortar
    - 44 Affirmative and 1 Negative
      Negative was resolved and editorial changes were made in 7.6.1 and 7.6.2. Clarification was made on initial, standard, or field curing. The words "After initial curing" was added to the first sentence on Sections 7.6.1 and 7.6.2. No action is needed since these items are editorial.
  - T 121m-t121, Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
    - 45 Affirmative and 0 Negatives
    - Revisions were mostly editorial in nature to take care of comments in ballot. One of the comments was about the tapping of the sides of the measure in Section 7.4 self-consolidated concrete. The words "tapping the sides of the measure was added.
      OK is fine. PA- does continuous mean vessel has to be larger? Can you scoop? NE- Should be poured as continuous flow. Not added incrementally.
  - T 152, Air Content of Freshly Mixed Concrete by the Pressure Method
    - 45 Affirmative and 0 Negatives
      Comments were similar to T 121 with tapping the measure. Reference was added to prohibit rodding, vibrating, or tapping. Updated to reference ASTMs. Garth Newman- How do you continuously pour material into these types of molds? WAQTC is very specific. Should tech be dumping directly from wheel barrow or into a bucket, then into the mold.
      NE- intent is for one continuous pour.
      Garth Newman- the more clarification the better. Garth will take comments back to group and pass response /correspondence to TS.
      IL- updates to ASTM reference noticed ASTM sections are incorrectly referenced. NE – AASTHTO will check the formatting prior to print.

- TP 118, Characterization of the Air-Void System of Freshly Mixed Concrete by the Sequential Pressure Method
  - 45 Affirmative and 0 Negatives

    Review may indicate that statement is redundant in Section 4.1, "Digital gauges with maximum pressures of 50.0 psi (344.7kPa) have been used satisfactorily.". MI and OK agree. IL- is it implied that a minimum "max-pressure" is required.
    NE- will add a note indicating that the gauge needs to have a minimum pressure of 50 psi.
    SC- does there need to be a tolerance for the depth of rodding Section 7.3? MI- it would be appropriate to keep it as is to maintain consistency with other standards.
    NE- will need to update verbiage in TP118. This will be treated as an editorial.
    KY- ASTM guidance will permit multiple fillings of container. Does not require continuous pour.
    AZ- probably need to change from "continuous lift" to "continuous pour".
    Chair- We will make this change.

- AASHTO webinar on the Super Air Meter was held on October 20, 2016.
  Intent was to educate individuals who were not familiar with SAM. Does this need to be repeated or has it been broadcast accordingly? This needs to stay on the RADAR.
- Update on Task Force on Flyash Standards.
  National outreach Task Force was created to gage the availably of fly ash. What else is out there? What are states running into? The report was finalized on November 4th. Contact chair for a copy if needed. Georgene has sent this out.
  TX, NE, NY, ID- Task Force will start now. Looking for implementation and review documents as a group. Prioritize tasks. VA-did this get sent out to Task Force or SOM-TS? NE- it appears that it only went to the TF. AASHTO (K. Malusky)- this will be uploaded to the SOM website; link will also be sent to NE (Heyen). AASHTO (K. Malusky)- Information will also be shared with Chief Engineers at SCOH meeting this weekend.

  Link for AASHTO Subcommittee on Materials (SOM) 2016 Fly Ash Task Force Report – http://materials.transportation.org/Documents/Announcements/AASHTO_SOM_FA_Report_11_04_2016-under%20announcement.pdf

- Update on Reconfirmation of Standards.
  Reconfirmation ballot will be sent out on Monday (11/14/16).

V. New Business

- M 302, Slag Cement for Use in Concrete and Mortars
  Work was done by John Melander. There are 3 areas that will be changed, 10.1.3 on flow range, Appendix X3 ASR, and ILS on SAI – common reference cement used from NIST. This information was included in Section 1.7. This will be taken to TS ballot.
- AMRL/CCRL - Observations from Assessments?
  AMRL is now AASHTO re:source. Please continue to work with the transition and feel free to contact re:source with any questions.
- Standards Requiring Reconfirmation -AASHTO PUBS
- Research Proposals
- NCHRP Issues
  Amir- No problem statements came from any of the TS3. Project on durability is a bit behind. Please look for research needs and submit problem statements. No problem statements from concrete materials for CY 2018.

VI. Open Discussion

VII. Adjourn

AASHTO THE VOICE OF TRANSPORTATION
SUBCOMMITTEE ON MATERIALS

SUBCOMMITTEE ON MATERIALS

2016 Annual Meeting – Greenville, SC
Monday August 1, 2016
10:15 – 11:15 PM EST

TECHNICAL SECTION 3b
Concrete Materials and Fresh Concrete Properties

VIII. Call to Order and Opening Remarks

IX. Roll Call

X. Approval of Technical Section Minutes

- Motion to accept minutes: UT; RI second. Motion carries.

XI. Old Business

- Review of Spring Ballots
  - R 064 Sampling and Fabrication of 50-mm (2-in.) Cube Specimens Using Grout (Non-Shrink) or Mortar – Passed with no negatives
    2. Motion passed to bring to full ballot: OK; second UT
  - The following methods were addressed together because of their similarities in comments. The notes that follow apply to both T 121 and T 152
    1. Comments made detailed reference to specifications (both AASHTO and ASTM). Since both are not used directly for the tests, should they then be removed from the standards?
       - It was proposed that it's nice to have a quick reference within the method so they would like to maintain the references within the standard. Is there more discussion?
       - AL asked if making a reference to the documents rather than including the specifications themselves would be more appropriate.
  - T 121m-t121 Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete – Negatives Addressed
    2. Motion to take to full ballot: UT; second MI
  - T 152 Air Content of Freshly Mixed Concrete by the Pressure Method – Negatives Addressed **(Appendix E)**
    3. Motion passed to take to full ballot; AZ; second DC

XII. New Business

- AMRL/CCRL - Observations from Assessments?
  1. CCRL finished their 36th inspection tour. Jan reminded to check the CCRL website for a summary of findings.
  2. No updates from AMRL

- Presentation by Industry/Academia
    1. Tyler Ley
        - Update on SAM
            - Presentation was given with updates.
        - Update to tp 118 - Characterization of the Air-Void System of Freshly Mixed Concrete by the Sequential Pressure Method
            - A proposal was made to include test result parameters within TP 118. This would help the user identify a problem with their testing and be able to troubleshoot more timely and effectively.
                i. Motion passed by OK; MI second. RI: discussion asked about whether to make this a concurrent or separate ballot.
                ii. This is a TP so won't be taken to ballot yet.
            - Dr. Ley would like to do an AASHTO webinar about SAM to spread the word and help answer questions.
                i. Is it typical to hold a webinar for just one test method or would it be more appropriate to have a webinar on freeze/thaw in general, and include SAM as part of that?
                ii. AL thinks it would be a great idea. 2b has done something similar with a very focused webinar topic.
                iii. PA said something about an offer made to them regarding a free update to the lid for the device from the concrete consortium.
    2. Lawrence Sutter
        - Update on NCHRP Research presentation (*Directions for M 295 and C618*)
        - This presentation will be made available for detailed review for those not present or wishing to review
        - The two standards for fly ash are very similar, some differences
        - The specifications don't list *total* alkali, only *available* alkali… How do we get this information into the standards?
        - Current standards do not provide enough assurance of consistent performance with respect to air entrainment, reactivity/strength development & ptcl size distribution, ASR mitigation
        - Moving forward wants to harmonize M 295 and C618
        - Considerations for changes to C 618 were discussed
        - Moving forward ASTM may develop a stand-alone standard for Natural Pozzolan
        - The Foam Index Test was discussed
        - Adsorption based tests were discussed along with the importance of the Freundlich Isotherm equation as well as other key aspects that go into adsorption isotherms
        - Discussed Fly Ash Iodine test, Keil Hydraulic Index, other strength tests
        - Using CCRL standard cement was briefly discussed as a tool for consistent evaluations moving into further research
        - Reiterated the need to harmonize the specifications, how to classify recovered ash, how to propose new research and identify research needs
    3. Discussion
        - Discussion from RI: the existing TF has a different objective than what Larry is proposing. Do we want to set up a new TF to harmonize/begin to work on new standards moving forward? NE, TX, ID, NY
- Standards Requiring Reconfirmation (AMRL)
        - M 157-13 Ready-Mixed Concrete
        - M 182-05 (2012) Burlap Cloth Made from Jute or Kenaf and Cotton Mats

- M 194M/M 194-13 Chemical Admixtures for Concrete
- M 241M/M 241-13 Concrete Made by Volumetric Batching and Continous Mixing
- M 307-13 Silica Fume Used in Cementitious Mixtures
- M 321-04 (2012) High-Reactivity Pozzolans for Use in Hydraulic-Cement, Motar, and Grout
- T 119M/T 119-13 Slump of Hydraulic Cement Concrete
- T 155-13 Water Retention by Liquid Membrane-Forming Curing Compound for Concrete
- T 188-05 (2012) Evaluation by Freezing and Thawing of Air-Entraining Additions to Hydraulic Cement
- T 347-13 Slump Flow of Self-Consolidating Concrete (SCC)T 347
- T 348-13 Air-Void Characteristics of Freshly Mixed Concrete by Buoyancy Change
- T 349-13 Filling Capacity of Self-Consolidating Concrete Using the Caisson Test

- Research Proposals
  - 20-7 RPS
  - Full NCHRP RPS
    1. No new research proprosed
- NCHRP Issues
    1. Amir reminded the group to look for more research areas

XIII. Open Discussion

- Colin Lobo updates C 94 parallels M 157 – we need to harmonize these standards.
    1. Colin Lobo is generally referenced in building codes and private construction as opposed to M 157 is written from a State POV
    2. There is a big difference as to where the sampling comes from. C 94 is at the chute, M 157 is at the point of placement.
- John Melander updates with Slag – M 302 and C 989 going to ASTM C9 committee to the SAI to clarify some items
    1. A revision to the language of Section 10.1.3 on flow range for the slag activity index (SAI) test. The ballot item does not change the existing specified flow range 105% to 115%, but slightly modifies language to avoid possible interpretation of the existing provision as defining a flow range of 104.5% to 115.5%
    2. A revision to Appendix X3 on Alkali Silica Reaction to replace existing references and discussion of specific test methods for use in mitigating ASR with a reference to ASTM C1778, the parallel standard to AASHTO PP 65. The intent is to avoid conflicting information.
    3. A revision to Section 10.1.7 to update the precision and bias statement for the slag activity index (SAI) test to reflect information from the recent interlaboratory study conducted using a NIST common reference cement.
- Moe is looking for more people for the existing TF. The purpose of this TF is to address the shortage of fly ash and how to mitigate that shortage moving forward. Contact Moe (NE) directly to pursue this opportunity.

XIV. Adjourn 11:18

Action Items

- **Concurrent ballot → R064, T 121m-t121, T 152 and TP 118**
- **Reconfirmation of Standards (See Paragraph V. C.)**
- **Schedule an AASHTO webinar about the SAM to spread the word and help answer questions to be hosted by Dr. Tyler Ley.**
- **Task force created to write a new Standard for flyash. Volunteers where NE, TX, ID, NY**