May 20, 2025
Meeting – HMA Tech Team

Location: Teams Meeting / In-Person (Galena Room – Truax, Madison)

Date: 05-20-2025

Time: 9:00AM – 12:00PM

Attendance

- Albert Kilger
- Dan Kopacz
- Andrew Hanz
- Deb Schwerman
- Chad Hayes
- Erik Lyngdal
- Brain Jandrin
- Matt Andreini
- Matt Bertuci
- Cheng Thao
- Taylor Christianson
- Bryce Cibulka
- Derek Frederickson
- Devin Harings
- Jeremy Barron
- Joe Kyle
- Jon Wixom
- Justin Hoffman
- Neil Atanasoff
- Paul Eggen
- Scott Syron
- Travis Kurey
- Lucas Ward
- Zach Lemke
- Jim Boggs

Agenda Items

1. Research Updates
    i. WHRP
        - Benchmarking Delta Tc
            - Completed, final report to be published soon.
            - Concluded that Delta Tc is one of many different parameters to consider between many different “point” and “shape” parameters.
        - Design Requirements for HT Mixes

        - Currently testing mixes. Scheduled for October completion.
    - Investigation of Reflective Cracking in Wisconsin
        - Currently collecting aggregates and mixes.
- ii. NRRA
    - There was a workshop April 22-23. The website has what was presented at the conference.
- iii. CAPRI
    - Recently held a conference in Texas.
    - Different approaches to BMD coming out in the future.
        - Replaces Approaches A-D with a new standard for BMD implementation.
        - Cheng T.: Does WisDOT plan to do anything when this happens?
            - Dan K.: Yes, we are moving forward with BMD and the changes will help with implementation.
            - **Action Item:** Department will hold BMD subcommittee meeting soon to discuss these topics and an updated SPV.
    - Presentation on binder availability.
    - Webinar on warm mix asphalt.

2. Updates on Subcommittee Progress
    - i. Coring for Small Tonnages
        - Albert K.: In summary, the main issue being discussed is how to accept smaller tonnages since coring may be burdensome for lower risk areas that were previously accepted with uncorrelated nuclear gauges. There may be some situations where an uncorrelated gauge would be appropriate still.
    - ii. PWL for SMA (Spec-Density)
        - The committee will meet again on May 30 to discuss how to move forward on this topic (and coring for small tonnages).
        - Albert K.: Presented analysis of results from 2022-2023 for air voids and density. Proposed upper and lower limits and specification limits. Will look to pilot PWL for SMA in the next year.
        - Debbie S.: Industry hopes to have a few more meetings to discuss these things to come to an agreement.
            - Dan K.: We could put together an SPV to do PWL sooner on PWL.
            - Albert K.: We can do this, we just need to decide on the limits and longitudinal joint testing.
            - Erik L.: We will want to have decisions for SMA made by

next year so we can do pilots in 2027.

- Albert K.: We are looking to reduce the workload for SMA by potentially reducing the number of replicates needed. There are two statistical methods that would be acceptable for reducing the number of replicates. The first is by using the absolute difference, if two replicates are less than 0.035 apart, we can average them. The other option is the average 3 values based on the margin of error from the true mean, 0.015, the standard deviation provided by the AASHTO, and a confidence interval of 95%.
    - **Action Item:** Department will shadow SMA projects this year using these methods to compare.
    - Cheng T.: Are you looking at whether or not we should include outliers in an average?
        - Albert K.: Not specifically. We are looking at reducing the number of required replicates to be tested by comparing different methods of determining the average and whether or not those are acceptable.
            - Cheng T.: There are several reasons why there are outliers with SMA such as segregation, and it may not actually be an outlier and omitted. There may be variables with the mix that we aren't accounting for if we toss the outlier.
                - Albert K.: This process could change if it makes sense after we analyze the results this year. No changes will be coming this year, we are just going to shadow the data.
- Dan K.: Another issue is the amount of work for drying samples all the samples twice for the department when the department will only verify 20% of them on core only projects. Currently the contractor is drying all the cores twice, initially for the result, then another time for the department to optionally test them. The department may allow for randomly selecting the verification cores at the contractor lab then only drying those cores to reduce the workload.
    - Taylor C.: We do this in our region. We assign a random number to the cores and after QC is done testing them, we let them know which ones they have to dry for us.
- Dan K.: The other question that came up is can the non-SMA specimens be tested according to T331 so they are bagged and don't require a second drying. The southeast region is going to trial

this method on some of their verification cores after testing them according to T166 so they can compare.

- Deb S.: We've been trying testing by doing submerged testing first and skipping the initial dry cycle and haven't seen big differences. Maybe we can consider this method again.
    - Dan K.: There were some labs that had differences when we allowed this initially 5-7 years ago. So, then we went to requiring drying first. If you can provide us data this isn't an issue anymore, we can reconsider.
    - Deb S.: We also were having issues with the core dry damaging samples back then when it was new.
    - Cheng T.: Has the department talked to other states that are testing submerged weights first?
        - Albert K. & Dan K.: No. If you know of any states doing that, let us know and we will reach out to them.
            - Cheng T.: Michigan DOT might.
                - Joe K.: They allow either oven or core dry methods. They cut independent cores for the contractor and department. They do submerged testing first, then SDD, then dry each core once. We compare our results to see if there is a dispute.
                    - Dan L. What is the dispute process?
                        - Jo K.: Recore.
    - Andrew H.: It will be good to get these processes determined for next year since we have some QC managers that are worried about having enough core dryers and wants to know if it will be worth purchasing more.
    - **Action Item:** Department will look into equipping the regions with core dryers to do the testing.
- Deb S.: Industry is hoping the double core drying is a one season type of thing. We are collecting data to show the equipment is already accounting for the constant mass.

3. Tack Coat
    - Dan K.: We are seeing some issue with tracking tack again. We wanted to remind industry this is something that needs to be done properly. Continued tracking is justification to stop production.
        - Jim B.: It's not just making sure its broken and cured, its also

about application at the butt joints and consistency throughout the area. We are seeing tack poured out of a jug and not getting all the areas.

- Dan K.: It should be uniform like a black sheet of paper and overlapping the joint. It's ok to have some tack leftover after the second pass is placed.
    - Taylor C.: Usually goes out on paving projects on the first day and has seen some good progress on getting an even application of tack but then the equipment is peeling it up. So, either its not clean or broken or something, but a lot of times the sprayers aren't on on the tires and she has to say something. One project was so bad the tires had a skirt from peeling up the material. Chunks were falling off and getting paved over. So, there are some issues.

4. MOTP
    i. WTM T331 - Bag Verification
        i. Section 8.2 - Re-add, mistakenly removed.
    ii. WTM R97 - "Pre-printed" Labels
        - Albert K.: In late 2023, we presented an update to the MOTP that required a preprinted label that was either printed and stuck on the box or printed directly on the box. The requirement was meant to ensure that all the required information for the sample was not missed. We've received some feedback so we are reopening the issue.
            - Dan K.: It was also meant for new technicians working in the lab so they don't miss the required information. Just looking at the lab in central office, there are 3 types of labels, printed on a piece of paper and taped on, preprinted boxes, and some completely handwritten.
            - Deb S.: Has experience with labels falling off when the material is hot in the box. If the information isn't correct when the department collects the sample the department could identify the mistake.
                - Dan K.: If project staff have to check every box to make sure everything is on there, it's just another thing they have to do. If we can ensure that all the information is there without examining every box, that helps reduce the workload.

        - Jim B.: The difficulty is that in some cases samples are being obtained and need to be transferred later. Also, the people collecting the samples are often not the people testing them. We don't have the manpower of well-trained people getting the samples [to make sure they know what to check for].
        - Scott S.: QV staff already have a lot of responsibilities. It's important the lab has all the information for the sample. Even things like whether the mix is a warm mix should be listed, even though it's not a requirement.
    - Albert K.: What do the regions want?
        - Taylor C.: We've been getting totally printed labels which are nice because you can read them easily and don't have to interpret handwriting. We also take pictures of the labels for reference.
        - Scott S.: We like printed labels. We just want to make sure all the information is there.
        - Bryce C.: The printed ones are nice especially when they are fully typed and legible.
    - Dan K.: Label can be found in R97.
    - Cheng T.: Binder designation should be on the label as well for BMD.
        - Dan K.: The mixture type should be there on the label. Maybe we need to be clearer and say bid item.
            - Taylor C.: If the mixture is high RAM, the mix might have a different binder grade than what the item says.
        - **Action Item:** Department will review and update label requirements to add virgin binder grade and WMA/compaction temperature (if other than 275°) to label.

iii. WTM R30

i. BMD Sample Preparation / Handling

- **Action Item:** The department will add BMD test modifications and procedures to the 2026 MOTP.

ii. IDEAL-RT

- Cheng T.: Has the department decided to use the IDEAL-RT?
    - Dan K.: Not yet. We are currently researching it through CAPRI and NCAT. We are looking to potentially use it as a surrogate for the Hamburg.

iv. Others?

- Deb S.: Will the MOTP be aligned with the bidding cycles?
  - Albert K.: Yes, this will be the first year where the manual will be ready for 2026 projects.
- Adam A.: There is a typo in H-001 for the allowable difference for the Gsb. Should be 0.025 not “0.0°”.
  - **Action Item:** Department will correct typo.
- Adam A.: MOTP updates will be published in November 2025. So, updates need to be completed by August 1.
  - **Action Item:** HMA updates will be prepared and reviewed by this date.

5. Asphalt Analyzers

- The department is still working on getting region labs into compliance but also preparing ignition ovens if labs cannot meet compliance by the deadline.
  - Erik L.: There is an EPA deadline in August to meet exposure limits for Methylene chloride. Some region labs are teetertottering on compliance. There are HVAC upgrades planned for the Madison lab.
  - Matt A.: Will get a Mini-Ray 3000+ to monitor emissions to regularly check the machine so that problems aren’t found only during annual maintenance.
  - Matt A.: One of the main concerns is the exposure to the technician when a test is completed and there are still trapped gasses in the different chambers. We are looking at adding a snorkel so when the machine is opened the fumes can be removed.
  - Cheng T.: Infratest has a vacuum checker that is on backorder.
- Andrew H.: We should look at moving away from solvents, these solutions may only be short-term. IDEAL-CT for BMD could be used as an alternative – it doesn’t tell you how much binder there is, but whether the mix will crack.
  - Jim B.: You can use the same amount of a brittle or pliable cement and get different results.
  - Erik L.: We think all the mitigation measures are worth it since the cost of the asphalt is much higher than everything else related to the product.
- Deb S.: What is the timeline on this, are projects going to potentially change how to measure in August.
  - Erik L.: Yes, if we are noncompliant, the department labs will no longer run analyzers and will go back to ignition ovens.

- Taylor C.: In our region, for any project that doesn't have paving completed by August 1st, we will be switching to ignition ovens for those projects when they start paving. Will discuss more during pre-con meetings.
  - Jon W.: Is that deadline for Methylene Chloride?
    - Erik L.: Yes.

6. Aggregate Gradation Correction Factors for Ignition Ovens
   - Dan K.: Reminder that the contractor needs to perform the aggregate gradation correction factors as part of the ignition oven correction factor procedure.
7. Other Topics Brought Up During Meeting
   i. PWL Subcommittee
      - Deb S.: Industry would like to hold another PWL subcommittee meeting.
        - **Action Item:** Department will look into scheduling a PWL subcommittee meeting.
          - **Action Item:** Industry will send list of topics to discuss.
8. Next Meeting
   - Invitation has already been sent for 2025-3 meeting on August 26, 2025.
     - Invite will be updated with room and agenda closer to the meeting date.