

Flexible Pavement Committee -- Meeting Minutes

May 1, 2003 - 9:30 a.m. to 3:00 p.m. Turnpike Turkey Lake Facility Milepost 263

Welcome: Meeting started at 9:32 a.m. Gale Page welcomed everyone and started the meeting and laid out the purpose and objectives of the meeting. Introductions were made and a sign in sheet was passed. Jim Warren asked those to check their email addresses and update as necessary.

1. University Of Florida - Cracking Research Update (Dr. Roque - U F)
 - a. Dr. Roque presented a detailed review of the currently FDOT sponsored research on mitigating top-down cracking in asphalt pavements. Jim Musselman indicated it is the goal of the Department to implement the results of this research as soon as is reasonably possible since the potential benefits are significant. The majority of pavements targeted for resurfacing in Florida are deficient due to cracking, specifically top-down cracking. The research is looking at field sections and lab work. UF feels confident that they are now reasonably able to predict the cracking potential of a mix in a typical pavement structure. Mix Energy Ratio is the material characteristic, and a Ratio of 1.0 or greater is the key. This is accomplished by measuring the stiffness, flow properties, and strength on the same standard SGC sample (3 needed). Dr. Roque described the testing procedure, and the effect of binder characteristics, aggregate gradation, mix thickness, and base condition. These appear to have much more impact on Mix Energy Ratio than conventional volumetric properties such as film thickness and VMA. Implementation initiative was discussed by all parties - simpler equipment and field-testing need to be developed. Open discussion ensued. Recommendation for an implementation team to look at all the variables involved in implementing (rutting, structure, mix properties, etc.). Stay tuned for future developments. A copy of the presentation is attached to the minutes.
2. FDOT Research Update (Howie Mosley- SMO).
 - a. Discussed NCAT Test track and FDOT's decision for the second round of testing. Will leave the coarse and fine mix test sections in place for another 10 million ESALS to allow for further distress. Two new fine-graded mix test sections, one modified, one unmodified will be constructed this summer - these mixes are the same mixes placed at the HVS in Gainesville. HVS project number 2 has been constructed and trafficking has begun. The new sections include: coarse mixes, one modified, one unmodified, and a drop-off study.
 - b. Shear strength bond test for tack between layers. Study included 3 mix types, effect of water and application rate. Results: water reduced strength, and the application rate was significant. Using a modification of the Pine Marshall testing equipment for the loading. There are too many variables involved to develop a spec, but may be good for a mix failure analysis. Proper bond strength is maintained when using good construction practices.
 - c. Friction Test sections. 3 projects, various sections based on FC-6 designs. Looking at the effect of varying the % of granite on the resulting skid resistance of the mixes. Generally, friction increases with % of granite. No final results yet, testing continues over time as pavements age, but eventually the results of this research will be the basis for specification changes - if needed.
 - d. Bonded Asphalt Concrete Friction Course (Koch Novachip): Test project on US 27 in Highlands County being constructed this summer and includes FC-5 as control sections. Paver places thick polymer modified tack coat just prior to mix being placed, which is unique to this process.
 - e. Corelok research: This is essentially a vacuum sealing device. Not recommended at this time. Significant effects due to absorptive aggregates. Too much variation. Report will be made available on SMO website.
 - f. Dynamic Angle Verification (DAV) kit. New device is coming online that will allow use in all compactors without the use of hot mix and can significantly speed up the calibration

in adjustments of bid prices. Savings are in the final estimates stage. ACTION ITEM: Sadler to send link for inclusion in minutes.

10. Smoothness Committee Update: David Wang updated the group on the status of the specification being implemented on a selected basis now. Also, looking at transverse joint smoothness including best construction practice, enforcement of existing specs, design issues, and potential for bonus on joints to improve smoothness. 330-12.6 – implemented January 1, 2003 on limited access facilities for pavement smoothness acceptance. 330-12.7 ride incentive - being evaluated on selected projects and with the final implementation TBD.
11. Value Added Asphalt Pavement Program (3 year Materials and Workmanship Warranty) Update: David Wang - specification is completed and is now out for industry review. Specification covers 3 years following construction and has threshold values for distress (ride, rut, cracking, bleeding, slippage, segregation, etc.) to identify "poor quality" pavements. Will be implemented next year beginning in January 2004.
12. CQC Implementation Issues:
 - a. Random numbers, minimum cores in subplot if remainder of subplot doesn't require testing. Question on how to handle. Randomly locate at least a 3rd core. New spec. change requires a minimum of 3 (July 03 version). On ongoing projects, you can refer to the new spec or force 5 cores in the area.
 - b. FAQ on common issues, clarifications published on web. Question on location, promotion, authority level statewide. DOT to work on a central location to post common questions and answers for all to see and use.
 - c. VT/RT buckets: Handling technique (what's being done versus what's being taught) to transfer to 3 boxes. Dump entire bucket into boxes, don't scoop. Don't fill boxes at sampling stands, use the buckets.
 - d. IA on production testing. Dings. IV should not be used as an IA. IA should also be using some common sense. Clarification of different roles and responsibilities needs to occur. There needs to be consistency from District to District. QC manager should get a copy of IA reports even where IA passed.
 - e. Hand sieving on mechanically extracted aggregate AASHTO T30 sections 6.5, 6.6, 6.7. Clarification is needed on method and FDOT checklists that this is not necessary for each test. Will be resolved and removed from CTQP and IA checklists.
 - f. IA samples comparing but DOT results exceed 334-5 - used to require EAR. IV - Yes, –based on current wording of 334-4.7. Using same sample for both IA and IV can create confusion. ACTION ITEM: Need to look at 334-4.7 and clarify.
 - g. Confusion between IVT, IA, comparison testing. ACTION ITEM: See above
 - h. Automatically requiring EAR and additional testing versus using engineering judgment on existing data. CQC should not eliminate common sense. Going to 334-9 and EAR on #8 sieve does not seem reasonable especially when all other data is fine. Field clarification is needed. ACTION ITEM: JAM to review and clarify spec language, or post FAQ wording (EAR by engineer without additional testing or additional penalty). Handle on case-by-case for now and spec change for future 334-9.4. Contractor and Department need to establish the type of tests, locations of samples, and "yardstick" for acceptance of the EAR ahead of time.

- i. QC2000 projects - Lot termination. What do we do for verification /resolution? Verify one of the previous sublots in the LOT (flip a coin where there are only 2 sublots) before redefining LOT if necessary for determining pay factor. Additional "what if" comment: If a mix design "sunset" within a Lot, what do you do? Wait until end of a Lot to "sunset" the mix design.
 - j. Roles and responsibilities of the Plant VT Inspector - Random Numbers. Needs to be some flexibility on both sides, especially if loading from a silo (mix already made). Contractor does not get a copy of random numbers ahead of time but should be given some notice when the sample comes up in order to get ready to sample, unless the process is suspect. Need to guard against abuses on both sides. Random numbers need to be provided by the Engineer. There have been FDOT staffing issues where there was no FDOT inspector on the job. Tickets show cumulative tonnage and roadway technicians can monitor random numbers as well. FDOT is open to suggestions on how to handle this situation, even to sampling mix at the roadway.
 - k. Feedback on QC Plans, QC Manuals, Forms, CQR. Still problems with CQR access and passwords. Contractor writes Daily reports, CEI reviews, contractor enters into CQR. Timeframe needs some flexibility as long as the progress is being made don't panic. No one has time to do this paperwork over again. Questions on 30-day password expiration; getting and maintaining access. Discussion of replacement LIMS program. It is prettier but slower. What we need is a one stop shopping for data input and determine specification acceptance and pay factors, populate data bases for reports, material tests, quantities for estimates, etc. Monthly certification of compliance - what needs to be listed as exceptions?
 - l. Feedback on Field Issues or implementation problems. Paperwork is the biggie as well as lack of experience (first timers).
 - m. Feedback on Lab Qualification procedure. None... Multiplicity of boxes (IA, CMEC) - any possibility of combining of these? Suggest adding a 3rd box to the letter when the proficiency sample is out of range rather than just pass/fail.
 - n. Feedback on IA (personnel reviews) Already discussed...
 - o. Other Questions, Concerns, etc. on CQC.
14. Other Business
Overbuild with TL D or E - needs to be a fine mix. ACTION ITEM: New language.
15. Next Meeting Date tentatively set for Friday August 15, 2003 in Orlando

Adjourned at 3:35 p.m.