

Flexible Pavement Committee Meeting

March 8, 2016 Minutes

Time: 10:00 a.m. and will conclude no later than when the last agenda item is covered. Break for lunch (on your own).

Location: Turkey Lake Service Plaza, Florida's Turnpike Headquarters Turnpike Mile Post 263 Bldg. 5315 Ocoee, Florida 34761 (407) 532-3999 Directions: From Orlando head north on the Turnpike to Mile Post 263. This is north of I-4 and south of Ocoee Road exits (a combination of the E-W Toll Road, Ocoee Road). All are welcome.

1. FDOT Research update.

- Jamie Green provided an update on FDOT research activities. PowerPoint handout is attached. The update included current APT (HVS track), Experimental (30 active projects), NCAT (4 new sections in 2015 – different binder types and RAP sections), and Contracted Research activities.

2. MAC Status.

- Tanya Nash: May 2 is the turn on date for MAC. After May 2, all new lots must be started in MAC. On June 1st all open lots in LIMS must be closed. You must get people set up to enter data and get mix designs visible in the system. Companies need to follow-up now to make sure they are ready to go. Training is scheduled for April 2016. Train the trainer will be at the end of March; all training will generally be computer-based. For specific questions, contact Tanya Nash (352) 955-2903 or Susan Musselman (352) 955-6669.

3. New QC Plan requirements.

- Rich Hewitt: Beginning with the July 2015 letting, Specifications Section 105 no longer requires the Contractor QC Plan to include narrative information. The specification requires certain information (ex: inspector TIN's, producer plants, qualified labs, etc.) to be entered into the Department's database. The Department's database is essentially MAC. Since MAC has not been rolled out yet, DCE Memo 14-15 identifies a spreadsheet on the SMO's website (link below) that should be filled out and submitted. If there are requests for the narrative on projects let July 2015 and later, let Rich know.

<http://www.dot.state.fl.us/statematerialsoffice/mac/worksheets/modelplanproject.xlsx>.

4. Why is the contracting industry not using warm mix asphalt?

- Jim Musselman showed the SMO website information on Warm Mix, which was taken from LIMS reports. WMA usage dropped significantly in 2015. Educating the private market is one key. FDOT has sent letters to local agencies

(all 67 counties and the 10 largest cities). It was noted that some of the problem may be under-reporting. Some contractors are using the technology as a compaction aid, but are not reducing their target mix temperatures completely to warm mix levels. Some agencies may be open to using WMA. Since burner fuel is cheaper, there isn't as much of an economic advantage to use WMA. Rafik Darji: To address the Local Agency and private customer mindset – FHWA offers help. Several contractors indicated they run foamers everyday on non-DOT mixes. South Florida contractors don't like foaming on limestone mixes as there are issues with adequately drying the aggregate. Some run WMA above the 285°F bar. ACAF and FDOT will be speaking on WMA at an upcoming APWA meeting in Tampa.

5. GTR status & FDOT plan with 76-22 (ARB).

- In January 2017 the Department is going to allow either PMA or ARB 76-22 binders with a market driven approach. Plans would call for a PG 76-22. Specs would allow either PMA or ARB binders. Change on existing projects in July 2016: process to be determined. Discussed recent ARB Binder meeting held with representatives of the GTR and ARB industries, as well as ACAF and FDOT, to discuss problems with ARB and make it more usable.

6. Proposed spec change discussion 320/334

- Discuss tolerance for RAP and Sand component in mix designs during production.

- Discussed a new proposed specification change, which limits the allowable changes to RAP and sand components during production to 5%. The limits are just for RAP and Sand only. For fractionated RAP, the intent is that the total amount of RAP in the mix is not changed by more than +/- 5%.

- Discuss implementation of 76-22 spec (January 2017) relative to mix designs and changing mixes during production. During production, switching from one type of binder to another (i.e., 76-22 (PMA) to 76-22 (ARB)) would be permitted. A separate mix design will be required for each binder type (primarily for tracking purposes), which will also require a new lot. However, it will not count against the number of mix designs used on a project.

7. Need feedback on the implementation of trackless tack.

- Greg Sholar: The Department is looking for feedback on trackless tack. Kevin Price: We would like to have options to use whatever is available, including conventional tack. Scott Fowler: They like trackless tack. DBE feedback: So far so good. D3 seems to have some issues, especially at night. Some slippage. Kevin Price: There are also issues with limited production areas – it's not good to reheat the material multiple times. Dan Weekly – they are seeing more issues. Mickey Cox: They have seen more slippage. Scott Fowler: You should limit the amount of material loaded in the distributor to just what you need, otherwise you'll have to reheat it, which can damage the material. Please contact the SMO (Greg Sholar) if you are having issues. It was noted that there seems to be more pickup with an MTV in cooler weather. Higher humidity can also be a problem.

Need to make sure all manufacturer recommended application guidelines are followed and good construction practices are also followed. FDOT: Industry needs to sort this out, as the Department is limited in what they can do to solve the problem – they just want the layers stuck together, without tack material being tracked onto adjacent roads. To be discussed at the FDOT/Industry Binder meeting.

8. Can we do away with aging of samples at the plant?

*- SMO received a call about this from a contractor and discussed it at a recent DBE teleconference. If your mix has a minimum of 60% granite, it is not necessary to do one hour aging **for PC samples** (still have to age QC, IV, VT and RT samples). Back in the early days of Superpave implementation, FDOT did an aging study to better represent what's on the roadway. Study helped to reduce air void variability. If we open up the aging variability, we could see more variable test results.*

9. Developmental specs for ticketless asphalt.

- Rich Hewitt/Christopher Nesmith: The Department is looking to go paperless. Need capability to upload from the Contractor's plant the plant information and also a ruggedized tablet to capture data in the field from trucks. Discussed who can enter data, does it have to be a qualified technician? Taking temperatures still requires paperwork. The application requires a windows based machine to run. Stay tuned.

10. Developmental specs on fiber reinforcement.

- The Turnpike is going to try an experimental project where an aramid fiber will be used in the FC-5 instead of the traditional stabilizing fiber. The fiber requires a special blower at the plant. This is a single project.

11. Discussion on Paving in cool weather, Minimum Air Temps, Minimum Thickness.

- Jim Warren provided background information. Looking for input. Danny Weekley: it can be an issue in South Florida as well. Jim Musselman demonstrated the Multi-Cool software and showed the effects of thickness on the Time Available for Compaction (TAC) as well changing ambient temperatures. Should there be two different paving zones in Florida? Should we use thicker layers? Is the contractor doing everything they can to resolve the problems? An extended discussion followed. One solution is to address the layer thickness in design, as generally thicker layers have a greater TAC. Another idea is to make an administrative call to address the issues. What if the paving contractor is a subcontractor? The issue needs to be addressed. Do we need to finally give up on 9.5 mm mixes placed 1 inch thick? Can we use both balanced production rates and multi-cool to establish parameters on a particular mix on a particular project? Texture and segregation are affected by cool weather. Several options were discussed:

1. Thickness

Commented [MJ1]: Please reword – I don't understand this...

2. Guidelines for cold weather paving. (ACAF)

3. Contractual: When or when not should we be paving – can we use tools such as Multi-Cool to establish the TAC for a layer/project on a daily basis and if it is less than X minutes grant a weather day?

12. Warranty claims.

- Tim Ruelke: will be polling the districts on asphalt warranty incident statistics (frequency of events per year). Tim Fox: suggest taking the contractor along when doing the evaluation. Beetle: There is variability between districts in how warranties are handled. Musselman: The CPR issue was discussed at a recent DCE/DMRE meeting. FDOT is trying to standardize districts efforts. The intent of the specification is NOT for the Department to do a forensic investigation every time – only when the potential cause is uncertain. Danny Weekley: Dedicated people full time are maybe “over exuberant” and the focus should be more on utility patches, etc. Kevin Price: Should there be an evaluation for projects destined to be rehabbed?

13. Segregation/texture.

- Jim Warren gave some background on the issue. Morphed from End of Load Segregation to Texture. Need to get texture committee back together to develop some better training tools and protocols. Need a time frame for evaluation (timeliness of inspection), people are struggling with this - we need better direction. Industry will be very proactive. Jim Musselman polled the DBEs: D2 Getting better, the problem is with issues that are repetitive. D5 getting better, D1/7 same or worse, D4/6 no big issue, D3 sporadic, D8 same. Industry: Poll - Better/worse/same: no real consensus but it looks like it's not getting worse.

14. Calibration of distributor trucks.

- Tanya Nash: background on SEAUPG presentation. Nationally there is more focus on tack coat materials. Do we need more emphasis on calibration? Is it good enough to do what are already doing? No desire to have a massive program, encourage contractors to use best practices. Gale Page: Should at least be looking at inventory control and compare to actual usage. Danny Gierhart: background on other states practices – varied. Kevin Price: generally use computer control and tank sticking.

15. In recent years, FDOT has improved Section 916 by reducing the number of asphalt binder grades included within the specification. Has there been any consideration for further consolidation, such as to select one of either PG52-28 or PG58-22 for use with mixtures containing significant proportions of RAP? Most mix producers are providing mixtures for multiple projects and/or specifiers, so having a single “high RAP” PG grade could greatly simplify operations.

- There is some thought about changing number of grades currently in use. Possibly eliminate 58-22 and the 52-28 and go to a 58-28, plus a 76-22 and a 76-22 (HP). Norman McAlister: No real need to change. Other binders still used in municipal and private work

16. When the RA grades were converted to PG grades, it was on the basis of how the various RA grades were characterized according to the PG specification. Has any testing been performed on mixtures using different RAP proportions with different PG grades? If so, was there any real difference observed in test results that would relate to pavement performance? This would seem to be a simple enough laboratory experiment to perform, using tests such as the SCB or Texas Overlay Tester and/or Cantabro to compare durability/crack resistance and wheel tracking tests (Hamburg or APA) to evaluate rut resistance on mixtures with similar volumetric qualities using different RAP proportions (say 15%, 25% and 35%) and different binder grades (PG67-22, PG58-22 and PG52-28).

- SMO evaluated material through the plant to bracket binders. Looking at recovered binders. Still waiting on a reliable cracking test. Barlow: Suppliers still need a 67. A PG 58-28 will have to be blended. A number of viewpoints opposing reducing the number of binders. Some mixed views. Stay tuned.

17. Balanced Mix Design approach discussion.

- Jim Musselman: discussed using performance tests (for example APA or Hamburg for rutting and Texas Overlay or Semi-Circular Bend (SCB) for cracking) to use to design mixes - beyond the traditional volumetric basis. Some of this is trending nationally. It may be 5-10 years away, but it is something to think about.

18. 76-22 HP discussion.

- Jim Musselman: The Department had some good success in D3. Good potential for resolving severe pavement distresses without going to PCC. The 76-22 (HP) has more polymer than 82-22. Norman McAlister: Alabama has minimum polymer contents. Joe Meier: Disney uses 82-10 12.5 mm mix placed 3 inches thick in high traffic areas. Jim Warren: Need to properly design sections to give the 76-22 (HP) a chance to work. Gary Fitts: Need to have enough thickness. Bob Kluttz: Need to look at designs – have to be careful that the pavement isn't too thin and that it is the right application for the scenario.

19. FHWA Increased Density Initiative

- Rafik Darji: The FHWA is sponsoring a Demonstration Project to increase the service life of pavements through increased in-place density (roughly 1-2% higher), which will hopefully increase the pavement's service life 5% or more. Deadline submission is in the next week. Looking for candidate projects.

20. Other Issues – Open Forum

- None.

Meeting adjourned at 2:58 pm