

## Flexible Pavement Committee Meeting

March 21, 2018  
State Materials Office  
Gainesville, FL  
10:00 am to finish

Jim Warren and Howie Moseley (Co-chairs) welcomed everyone to the meeting. Self-introductions were made. Sign-in sheet passed around.

1. Work Zone safety initiatives and recommendations to improve safety on the job sites.

*Mark Marine reviewed projects underway by the Florida Work Zone Safety Coalition, including April 9<sup>th</sup> Work Zone Safety Awareness week, Truck Magnets and Tailgate Wraps, Blue lights on projects, New equipment for Active Work Zone notification. Biggest emphasis on defining an "active" work zone and internal traffic control plans. ITC plans to be published on ACAF and FTBA.*

2. Work Zone Safety:

*Discussed voluntary increasing the use of retro-reflective gear, Class 3 gear during the day, gators, leg wraps, pants, improving communications on the job site (radios). Consider doing more than the minimum and assure visitors adhere to safety standards.*

3. Night Paving hours - Status of increasing hours.

*May seek to balance both restriction and production to make sure we do it safely as well as getting it done. Examples of short time projects and projects with unrealistic lane closures should be sent to Rich Hewitt and Jim Warren. If you see it prior to bidding, submit a bid question. Maybe look at ½ hour intervals instead of hourly intervals for determining lane closures. ½ hour per shift adds up to more production and faster job delivery. Contractors are looking for every opportunity to increase hours of paving – even directional based on commuter traffic.*

***Follow-up: Get a small group together (Rich/Jim).***

4. Smoothness Rodeo update: April 4, 2018 in Gainesville.

*Demos of available IRI equipment, information on specification being rolled out in 2018. Highly recommended for all contractors to attend. Vendors will calibrate equipment on April 3<sup>rd</sup>, April 4<sup>th</sup> will be for everyone. Reports by contractor. Rich to provide a list of projects to be let this year with new IRI spec. Need to address IRI in 338 spec. Need to release projects to be let this year (limited access only)*

*to industry. TP to use on all projects let this year. Highly recommended every contractor have someone attend this meeting.*

5. High polymer (HP) binder: How many have been let? How many will be let this year? Can we get a list? Supply issues.

*DOT committed to the use of HP binder in the right place (extreme rutting / full depth alligator cracking). Many projects originally designed to be let with PG82-22 switched automatically to HP binder with the specification change. Some of these projects did not need HP binder. New procedures in place to verify projects (SMO). Seven HP binder projects let between September 2017 and February 2018 (few more to be let). In 4-6 weeks, an accurate forecast will be available for rest of 2018. Communication is very important between the contractor and supplier. This is not a standard product and needs to be made to order. There are shelf life issues, but we need to be open about its use. Suppliers can provide more specific storage and handling information about their product. Constructability concerns were discussed. Industry offered help with constructability reviews on projects.*

6. Long term bond strength data.

*Greg Sholar – discussed two projects that were evaluated for long-term bond strength. How does pavement age affect bond strength? Presentation attached in minutes. US 90 and SR 222. US90 data showed good strength over time and bond strength initially increases in first 30 days or so. SR-222 evaluated conventional versus trackless tack. Over time, both products showed good strength over time. Discussion on paving on a tacked wet surface that has been broomed adequately (and with due diligence) – shouldn't be a problem if the spec is followed.*

LUNCH BREAK 11:30-12:45

7. Current tack coat concerns.

- a. Truck calibrations: *Wayne Rilko: Reviewed current specifications. Discussed calibration frequency and procedure. Undiluted emulsions. Should there be any changes?*

***Follow-up: Looking to develop a small team to consider: Wayne Rilko, Greg Sholar, Braxton Gray, Kevin Wall, Kevin Price, Jamie Hill, Jim Warren. Need an equipment supplier as well.***

- b. Irregular tack shots: *Need to work on consistent shots and correcting/addressing issues quickly.*
- c. Other concerns

8. Tack coat / distributor operation best practices
  - a. Maximum manufacturer recommended time for storing in a distributor truck without agitation. *Circulate the tanker weekly. There isn't a set storage time. Follow supplier/manufacturer's recommendations.*
  - b. Maximum number of fill-ups before distributor truck needs to be cleaned out (every fill-up?). *Empty between products. Clean out if polar charges are different. Follow supplier/manufacturer's recommendations.*
  - c. Others.

9. Overbuild / tapering to zero thickness:

*Try to minimize where possible. If thickness is less than 2-3 times of the maximum aggregate size - you can start to see pulling.*

10. Scabbing during milling.

*Address these issues as they come up. Don't cover it up. Needs to be addressed at Pre-paving meeting as a routine item. Get a procedure/process in place before it occurs and document area (get pictures) when it happens. Recommend adding some language in the spec to address – so it is consistent across the state. Issue seems to be increasing, maybe less cores being taken. Is variable depth milling/paving a contributor? Regardless: don't leave it in place.*

11. Tolerances of base rock, curb, and asphalt.

*The asphalt industry is concerned because asphalt subcontractors are having to eat overruns on new construction and widening projects due to larger tolerances for base and curb work. JW; Is there a cross slope tolerance on Base? No. Should be. Base spec hasn't change since before 1977. Tolerances don't match on different materials. Asphalt limited on over tolerance. Need greater emphasis on Curb and Base. If base and curb are accepted, asphalt tolerances need to be expanded to account for difference. Davis Bacon has highest rates for materials with greatest tolerances.*

***Follow-up: Coordinate with to FTBA. Need to develop new specification language and procedures for building base and curb. Submit for changes.***

12. Segregation study update/Call for projects. *Rilko: looking for projects to compare densities in segregated/non-segregated areas in the field to do some research on. Cores versus density gauges.*

***Follow-up: If you have projects that exhibit segregation, please contact Wayne Rilko.***

13. Anyone seeing increased issues with 1-1/2" FC-12.5 segregation and density issues?

*Could Contractor use a FC-9.5 for 1-1/2" friction course lift instead of FC-12.5? Differ to districts, it would need to be specified in the plans under current procedures. Could be used in a traffic level (TL) B or C. 9.5mm mixtures are not allowed in TL D or E.*

***Follow-up: FDOT to discuss further.***

*Segregation in FC-5? How to address? Can it be tested? SMO has equipment to quantify the level of segregation in FC-5 or you can core and look at AC content and gradation. Is the fix worse than the original issue? Depends on circumstances. Could there be an option to do a surface fix including heavier tack on surface to fill voids?*

14. Research update: Wayne Allick provided an update on current research activities at SMO. *See attached PPT.*

15. Diluting prime coats. *Wayne Rilko discussed Dilution of Prime. Prime can be diluted. Tack coat can not be. What about products used for both prime and tack and how can we prevent this diluted material being used as tack? Need a focus on residual rate.*

16. SP/FC-9.5 mm Mixes:

*The industry would like to change the minimum thickness of 9.5mm mixtures from 1" to 1-1/4". The Flexible Pavement Design Manual was changed to allow thicknesses to 1/4". Issues of temperature, density, slippage, activation of Tack with enough heat. The extra 1/4" would address these issues. Design standards changed to allow 1/4" instead of 1/2".*

17. FC-5: Multi-lane posted 45 MPH should be dense graded, not an open-graded surface.

*Industry is concerned with placing FC-5 in areas where there are repetitive stopping/turning movements and around signalized intersections. FC-5 is raveling prematurely. Need to address this as a 338 issue in U-turns and crossovers into lanes affected in this area. Raveling is occurring in the FC-5 of travel lanes adjacent to median crossovers that have repetitive U-turns.*

18. Discussion on use of SMA as final friction course as alternative to FC-5.

*Jim Warren discussed the need to have another tool in the toolbox to be used in high shear applications like U turns which are damaging FC-5 in the mainline. There maybe other options to help this situation but something needs to be done, or the contractor should not be held liable (338) for damage to pavements in these areas.*

19. Can lime be used as antistrip in FC-5? Can liquid antistrip be used in FC-5?

*DOT tried it on a field project and they saw poor performance (raveling). Possibly need to re-consider newer antistrips in the lab, but there are concerns about taking a step backward.*

20. "Warm Mix Technologies". Increasing the placement lift thickness and decreasing the ambient air temperature. I'm seeing where other states are having success laying thicker lifts and in colder temperatures than currently allowed here in Florida.

*Discussed current specifications, which allow the contractor to pave at lower temperatures (up to 5°F lower) when an approved warm mix technology is used.*

21. Increasing the straightedge edge exception from 250' to 500'. To go along with the new 500' density requirement.

*The issue is specific to a turn lane. You may be tying into something you have no control over. Rich said they won't be held to something they can't control.*

22. Use Newer Cross Slope Form (700-010-99). This is the form developed by Doug Moseley (D2) that automatically calculates the individual cross slope differences (as well as the average of 10 differences, required since 2010) and checks them against Spec tolerances. Many folks are using it, but not everyone. The old form (700-010-98) will be removed soon from the FDOT forms website.

*Hewitt: a spreadsheet form is now available to use which calculates the match.*

23. Open Forum

- *Why do we still allow to work inside the DOT right-a-way without all the DOT certifications and qualifications and equipment requirements? Maintenance rules are different. Why??*
  - o *Follow-up: Need to discuss with Maintenance (Rudy Powell)/discuss at next meeting with DOT Management.*
- Raising manholes before Friction Course. *Discussion. No action.*
- Rolling straightedge: Can we incorporate the manual when RS indicates is out? *Discussion. No action.*

- Balanced Mix design: *NCAT is evaluating different cracking tests. DOT is waiting on results. Consideration for a more go/no-go test. Still work to be done.*
- PG 82-22 in plant left over – wanted to use on a PG76-22 for no charge. Denied. Needs to be discussed and have a policy in place to deal with in future.
  - o ***Follow-up: Look at spec changes/CPAM changes to allow.***
- Time of construction/constraints: *Skip paving in marginal weather. Need to escalate up chain of command.*
- Why don't materials people have more weight in decisions due to quality issues? DBE need more teeth and leeway in decision making on projects. *Contracts are administered through construction, who consults with Materials. If a contractor does not agree with a decision, they need to escalate the issue according to their project escalation matrix.*
- Possibly combine a FC-12.5 with a SP12.5 to have the same design number for some mixes for ease of use. *Discussion: SMO to look at.*
- Look at thick lift rehab done in single shift.
  - o *Follow-up: Jim Warren to gather info from NCAT and South Carolina.*

Meeting ended at 3:45pm