**TPF (5)135 Annual Meeting**

**Meeting Minutes**

Sunday, July 28, 2013, 1200-1700

The Lodge at Santa Fe, Santa Fe, NM, Board Room

# Attendees

1. Paul Donavan, Illingworth & Rodkin
2. Tim Sexton, WSDOT
3. Ray Ulmschield, TxDOT
4. Jill Schlaefer, Colorado DOT
5. Bruce Rymer, Caltrans
6. Dana Lodico, Lodico & Associates
7. John Wirth, TxDOT
8. Roger Wayson, FHWA Volpe Center (on behalf of Florida DOT)
9. Adam Alexander, FHWA
10. Greg Smith, NCDOT
11. Teak Kim, NCDOT
12. Bernard Izevbekhai, MnDOT (via GoToMeeting)
13. Rich Sohaney, The Transtec Group, Inc. (A/V Facilitator)
14. Robert Rasmussen, The Transtec Group, Inc. (Secretary)

Sign-in sheet available from WSDOT.

# Minutes

Meeting Agenda in Appendix

### Introductions and Updates

* TS: Will be releasing 3 summary reports shortly on quieter pavements. Will be abandoning quieter asphalt due to high failure rates. Recently changed from transverse to longitudinal tining. Installation temperatures may contribute to failure rates on asphalt pavements, but chains and studs are the biggest issue.
<http://www.wsdot.wa.gov/Business/MaterialsLab/QuieterPavement/QuieterPavementsReports.htm>
<http://www.wsdot.wa.gov/research/reports/fullreports/814.1.pdf>
* RU: Holding steady in terms of QP and waiting to find out more.
* JS: Bob Mero says hi, and wishes he was here. Says they are thinking of running some additional noise measurements. Looking for funding for that. RR commented on acoustical durability results. Final report available on CDOT website:
<http://www.coloradodot.info/programs/research/pdfs/2012/tirepavement.pdf>
* BR: NGCS being used now, calling it the groove & grind (G&G). Am interested in collecting data first hand on it. Also wants to collect more data on long-term sites including I-80 Davis (before they repave it). Tim said that some of the NGCS in Washington had aggregates raveling from NGCS surfaces. Paul said that grooved sections in Mohave have also exhibited spalling.
* JW: TxDOT just launched a new project – looking at several pavements in one test section at TTI annex. 101-107 dBA levels measured by TxDOT. Does not appear to be a benefit of longitudinal tining in this case compared to transverse tining. Chip seals, inverted prime, Ty D (1/2”) mix. Possible location for future rodeo. Segments are 550’ or longer. All testing done at same time (for comparison). John has pictures and some preliminary data. 4-channel NI system used and has been recently calibrated.
* RW: Volpe has been involved a lot with OBSI, and he has done work with UCF and FDOT. Trying to get Florida into pooled fund. 60 sites with numerous textures – ranging from 99 to 108 dBA. 40 sites have matched wayside data. Florida planning rodeo this fall on US 19 with 3 x ½-mile test sections + normal pavement on either side. Mariano is the host of the rodeo. Gainesville FL FDOT pavements person: Charles Holzschuker. No funding for rodeo. Second week of October are likely dates. West of Gainesville. Final stages on 40 measurements (20 locations) – this is out. Hoped to get TRB paper on remaining section, but didn’t meet deadline.
<http://www.dot.state.fl.us/research-center/Completed_Proj/Summary_EMO/FDOT_BD550_09_rpt.pdf>
* GS: NCDOT had problem near Chapel Hill – chip seal with high-dollar condos adjacent. Chip seal was 4 dBA higher than old pavement – 25’ wayside. TNM values at condos was 61 dBA. Can pave more with the chipseal than HMA. 1200 ADT – mostly peak hour. Have done some diamond grinding on older roads – this has been well received (e.g. Durham Freeway). Staff has been cut and workload increased, so there has been little OBSI data collected. Good baseline collected 2-3 years ago, but difficult to get buy-in for additional measurements. 60-70% of work is going to consultants. Will hire consultants to do OBSI.
* JW: Chip seal issues in Texas too:
<http://ntl.bts.gov/lib/45000/45600/45628/0-6496-1.pdf>
* BR: Has similar story in California.
* TS: WSDOT has chip seal problem too – probably more challenges in the future with greater use due to the cost.
* JW: CMHB-F has been used as a quiet alternative as well. 13 miles on I-35 N of Georgetown is an example.
* TS: should look at thin lay overlays.
* TK: Worked under Lou Conn, new to NCDOT.
* BI: Sent a doc with various links to projects underway and recently completed. 5 different configurations for NGCS before they found the best one. Looking to improve process of conventional grinding to improve process. Will be grinding pervious concrete sample in near future (in next couple of weeks). Rolling resistance study – assisted by Transtec. New OBSI device did not meet their needs well. Does not allow for enough cells at one time – need more than 15 runs capability – went back to old system. Chip seal outcry in one district... report for this available from Bernard. Regarding differences between longitudinal and transverse tining, it is likely that the CRCP is a factor.

### FHWA Update, Adam Alexander

* High profile is the Federal Register notices about surveying the states. When those came back, they took a “Request for Comments” approach to avoid complications with OMB approach. There are no preconceived notions about if or how to integrate pavement effects into TNM. Responses from 25 parties including mostly state DOTs and asphalt industry. No concrete industry input. Can still provide comments. Adam said comments were polarized. Can go onto Federal Docket site to review all of them. In September, these will be addressed – responses provided and a plan of action prepared.
[http://www.regulations.gov/#!documentDetail;D=FHWA-2013-0014-0001](http://www.regulations.gov/%23%21documentDetail;D=FHWA-2013-0014-0001)
* Bruce: On the feedback form, there was mention of Type 1 – how is chip seal considered?
* There was an EIS on 23CFR772 back in 1972. One of the items addressed in there, pavement noise was identified as a potential item once technology was mature. The recent action was, in part, to respond to this. Not sure if the definition of Type 1 will be expanded. Comments are still welcome!
* EIS is available from Adam upon request.

### 2012 Meeting Review, Paul Donavan

* Reviewed minutes from last meeting.
* Rumble strips: Report from Caltrans not available yet. Adam said FHWA has rumble strip marketing team – bicycle, pavement maintenance and construction, noise. Been to WA, MO, SC. Look for design that addresses each Office of Safety, Kathy Satterfield. Started meeting a year or so ago. Paul said Caltrans has been addressing these issues in Northern CA. Been struggling to get information on “virtual rumble strips” – maybe Paul can get information from GM. They have checked with NHTSA. Also looking for information about type of vibration to alert drowsy driver. Honda has a lane departure system that they were marketing recently – audible. Rumble strip report coming out of WSDOT in next couple of months. Compared NCHRP 641 to their SIP measurements. WSDOT has a recommended design that seems to be ideal. 15 dB differences in exterior noise levels. Differences among vehicle types. WSDOT developed spreadsheet of NCHRP 641 model. Looking for best practices of existing designs.
* Bruce: structures people at Caltrans are looking now at quieter decks:

<http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-memo-to-designer/page/Section%208/8-8.pdf>

* Greg asked about knowledge base of OBSI testing – a how-to manual. Volpe has a manual. Get copy from Mike Lau. Roger said it is available.

### Work Plan Update, Paul Donavan

* Contract started in 2009, one extension in 2011, and second extension just signed through June 2014.
* JW mentioned new Avec OBSI system.
* PD showed PULSE exporter – works with specific template settings. – TxDOT, MnDOT, Volpe using this
* If there is interest, an updated version can be developed that works with third-octave data instead of narrow band.
* NI software – have made numerous bug fix changes.
* Lots of discussion and about the need for certification of OBSI systems. TPF-5(135) is not going to certify. There will be a driver for this need once higher dollar decisions are made with OBSI results.
* TPF-5(135) should discuss the best way to do this. Probably the biggest problem with rodeos is state funding for travel.
* Some middle ground in terms of certification.
* BI said lessons learned for the certification of profilers in Minnesota. Need to look at weighting factors for frequencies that are relevant.

### Potential Needs, Tim Sexton

* $130k state fund remaining, $17k of FHWA remaining –almost $150k remaining before this meeting – probably $130k is a good working number.
* List of potential needs:
* Rodeos
* Send state people? CA site or maybe TTI?
* Goal is to maintain that they are getting similar numbers. Need for a synthesis of all OBSI rodeos? Can maybe be linked to certification. Guidelines for a rodeo – best practices are needed. Lessons learned from previous rodeos. Greg asked about combining the various Rodeo data to help rank order pavements. A lot of variables though... would be difficult to do this without normalization. Paul is the constant. Paul said that the 1-44 project relied heavily on the Rodeo data. If there is an outlier, then that system is identified. Are the published data comparing equipment helpful to anyone other than the participants?
* Maybe the best way long term is to publish best management practices?
* Do we have strategic direction about where the industry is going?
* Can we compare pavements – can we modify mixtures and learn from each other? Europe can be looked to for what they have done along these lines. The OBSI database is already larger than the TNM database. Judy has been working with database for 10-76 project. Maybe we can use this instead of going out to a larger program.
* If we do additional rodeos, can we do it in a better way? Maybe segue into certification?
* OBSI Certification.
* White paper about how to proceed with this.
* Road Map
* Synthesis of QP research – Volpe clearinghouse – may be needed before Workshop
* NI software improvements
* #1 deliverable – this is priority!
* PULSE macro/template improvements
* Update OBSI database
* Compile all data into single storage and bin it properly. Need to also recognize that this is source data, and that we need wayside data in the end. Can sort these into distributions and use averages in TNM. We need national models, and not be biased due to local variants of materials. The next step of how this can be done with TNM will be flushed out of FR process.
* Add rodeo data.
* Judy has spreadsheet that takes OBSI and converts it into TNM-ready data.
* Analysis of database. Could be done to complement REMEL Lite.
* Chip seal research
* Specialized OBSI jig for rumble strip measurements.
* OBSI jig for measuring tire-pavement noise for trucks (suggestion by BI).
* Are these our top priorities?:
* NI and PULSE Software updates
* White Paper on Certification of OBSI
* Adding data to PaveNoise database
* Chip Seal synthesis

### Road Map, Paul Donavan and Rob Rasmussen

* PD provided background of old Road Maps.
* Showed tentative agenda for upcoming workshop.
* We need time to show the gaps from the Old Roadmap – move to front.
* One spokesperson can talk about all State DOTs (Greg)
* See if we can do all background before lunch.
* Don’t call out just Rutgers, since there’s many other universities doing work too.
* Is FHWA Pavements still supporting work in this area?
* Maybe send information to attendees in advance, and ask if they want time to share their perspectives.
* Maybe a panel session?
* Some discussion about location.
* Maybe increase time to allow more for breakout groups?
* Connection with TQA?
* Discussion about date? – March 31-April 4
* Need to check industry calendar for conflicts on proposed days.
* Alternatives include Dallas (1.5 day), Beckmann Center (2 days), Denver (1.5 days).
* Some overlap of Policy and Education/Public Involvement – maybe 3 groups is better – give break between breakout session.
* Have participants rank order their interests upon responding to invitation.
* 2nd day – they can build off of breakout from 1st day reports
* Time: States 30, FHWA 30, Ongoing Research 10
* Two 1-hour sessions on day 1.

### Sponsor Executive Session, and Recap

* We need a smaller group than previous workshops.
* Should not be holding hands of people, we shouldn’t invite people that need fundamentals.
* Focus on 25-30 people.
* Outside sponsorship possible?

# Appendix 1 – Agenda

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| Time | Topic | Speaker |
| *11 – 11:45 AM* | *Optional - Lunch in hotel restaurant* | *All* |
| 12 – 12:30 PM | Welcome and Introductions *(state QP updates)* | All |
| 12:30 – 1 PM | FHWA updates and discussion*(Including pavement in TNM)* | Adam Alexander |
| 1 – 1:15 PM | Review from 2012 Meeting | Paul Donavan and Rob Rasmussen |
| 1:15 – 1:45 PM | Update on TPF work in 2012/13*(summary of work to date w focus on recent products)* | Paul Donavan |
| 1:45 – 2 PM | TPF funding *(present and future)* | Tim Sexton |
| 2 – 2:30 PM | Future needs | Bruce Rymer |
| 2:30 – 2:40 PM | Break (chips and salsa) | All  |
| 2:40 – 3:30 PM | Roadmap Discussion 1: Background on previous efforts | Rob Rasmussen |
| 3:30 – 4:30 PM | Roadmap Discussion 2: Review DRAFT agenda, scope, etc. | Paul Donavan and Rob Rasmussen |
| 4:30 – 4:45 PM | State DOT time | State DOT reps |
| 4:45 – 5 PM | Next steps and action items | Tim Sexton |