AASHTO Joint Task Force on Pavements
December 3 - 5, 2003
St. Louis, MO

AGENDA

December 3

3:00 – 3:20 p.m. Introductions and Welcome
Gary Sharpe/Dave Nichols (MO DOT)

3:20 – 4:30 p.m. Old Committee Business
Gary Sharpe/Dan Dawood

4:30 – 5:00 p.m. Presentation on FHWA Draft Technical
Advisory on Pavement Texture
Mark Swanlund

5:00 – 5:30 p.m. NCHRP Pavement Research Overview
Amir Hanna

5:30 – 7:00 p.m. Break

7:00 – 8:00 p.m. Liaison Comments
Ken Kobetsky, Dave Newcomb

8:00 – 8:30 p.m. Presentation on Reauthorization
Tommy Beatty

December 4

8:00 – 9:00 a.m. Discussion of NCHRP 1-37A by Panel Members:
Linda Pierce             Dan Dawood
Andy Gisi                Gary Sharpe

9:00 – 10:15 a.m. Discussion of 1-37A Review Comments
Task Force Members

10:15 – 10:30 a.m. Break

10:30 – 11:30 a.m. Presentation on FHWA Implementation Plan
John D’Angelo

11:30 – 1:00 p.m. Break

1:00 – 3:00 p.m. Demonstration of 1-37A Design Software
Linda Pierce & Mike Pologruto

3:00 – 4:00 p.m. Presentation of 1-37A Training Materials
Leslie Myers

4:00 – 5:30 p.m. Discussion of Plans for NCHRP 1-40

December 5

8:00 – 10:15 a.m. Continued discussion of NCHRP 1-37A Implementation
Gary Sharpe

10:15 – 10:30 a.m. JTF Action Items & Next Meeting

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Welcoming remarks by Dave Nichols, MO DOT

Dave Nichols gave one State’s perspective on why the new design guide is important. The pavement type selection process is a major issue in Missouri. Missouri still uses the 1986 AASHTO pavement design guide. For Missouri, there will be a stress on quality of pavement management data.

Introductions and Welcome by Gary Sharpe

Old Business

The minutes from the November 12-13, 2002 meeting were approved. Presentations from the last meeting that were posted on the FHWA FTP site were not accessible. FHWA will address the problem and provide passwords to Joint Task Force (JTF) members so they can access the last and current years’ presentations.

Ken Fults was presented with a plaque of recognition from the JTF for his many years of hard work, participation, and support.

Research Needs Statements

Research Needs Statements (RNS) are needed to generate additional research since NCHRP 1-37A project is finishing up in March 2004. The process for submitting RNS are as follows:

- The Standing Committee on Research (SCOR) is responsible for RNS and in April-May timeframe, they will solicit the States for problem statements in the necessary required format.
- The deadline for problem statements is September 15.
- By October 15, the comments from the panels, FHWA and NCHRP, are collected and by the end of October, panels are formed from AASHTO and the committees will review problem statements (only after the NCHRP team screens them).
- The authors of the problem statements have until December 1 to address the comments.
- All information on problem statements should be sent to SCOR by December 22.
- In the end of March, the SCOR meets for three days and makes selection of projects.
- Projects are then approved by the AASHTO Board of Directors.

Action Item: Dan Dawood will chair the Research and Development task force within the JTF with support from Linda Pierce, Jay Bledsoe, Richard Zamora, Andy Johnson, Andy
Mergenmeier, and a representative from FHWA. Tommy Beatty agreed that FHWA will fund travel for the R&D task force team.

**Position Paper on Pavement Smoothness**

A position paper regarding pavement smoothness and IRI was sent to Gary Hoffman at AASHTO, but there was only one comment. The JTF agreed that a paper coming from their group will help establish where the group stands on the issue of how to measure IRI.

Mark Swanlund pointed out that FHWA will be putting together a Technical Advisory soon on pavement smoothness. The Technical Advisory will include discussion on equipment and methods for measuring smoothness, test methods, how to set up a process or approach for a smoothness program, where to set full pay, certification programs, costs of achieving or not achieving smoothness, and how to provide a method for determining what the smoothness numbers should be. A position paper from the JTF on Pavements will help to support the FHWA Technical Advisory.

Ken Kobetsky suggested that the name of the paper be changed to “recommendation paper” rather than position paper.

**Action Item**: Andy Mergenmeier will work with Ken Fults, Andy Gisi, Rick Harvey, and Richard Zamora (who will incorporate the issue of tining) to get the “recommendation paper” document revised and recirculated to the JTF. Then, the document will be sent to FHWA and/or the Subcommittee on Materials.

**Presentation on FHWA Technical Advisory on Pavement Texture**

Mark Swanlund delivered a presentation to the JTF on the proposed FHWA Technical Advisory on pavement texture. The presentation is available through the FHWA ftp site. The presentation generated a multitude of discussion from the JTF and led to the following:

**Action Item**: Jay Bledsoe will work with Mark Swanlund on the Draft Technical Advisory on pavement texture and Andy Mergenmeier will work with Mark Swanlund on the Draft Technical Advisory on pavement smoothness.

**NAPA Perspective: Dave Newcomb**

David Newcomb gave the NAPA perspective and discussed the industry needs for mechanistic pavement design. He announced the formation of a position paper by NAPA on pavement type selection. In addition, he talked to the JTF about perpetual pavements design, which is not currently addressed in the 1-37A guide.
The World of Asphalt trade show and conference will be held on March 16-18, 2004 in Nashville, Tennessee. This year, construction will be the theme of the conference. Other announcements include:

- ISAP Long-Life Asphalt Pavements conference will be held at NCAT in Auburn, AL, in June 2004.
- A Best Practice Manual on HMA will soon be available.
- A research needs document is currently getting updated.
- A perpetual pavements design software is anticipated in January 2004 (through a joint venture with the Asphalt Pavements Alliance).
- A publication on Tack Coats is coming soon.
- A Superpave “virtual laboratory” online course is being completed by Joe Mahoney at University of Washington.

ACPA Perspective: Gerry Voigt

Gerry Voigt was not in attendance at this meeting.

AASHTO Update: Ken Kobetsky

Ken Kobetsky from AASHTO introduced a new member of his staff, Jeremy Fissel, who will be working with the JTF on materials issues. He also talked about AASHTO’s reauthorization. Standing Committee on Research (SCOR) has some new members and leaders. There is an AASHTO scanning tour planned for summer and the topic is “quiet pavement technology.” He discussed AASHTO’s stance on the 1-37A design guide and formulated the following two questions: How do we provide funding to get the new guide out in circulation?, and How can we use what we have been given by NCHRP?

Reauthorization Update

Tommy Beatty delivered a presentation on reauthorization, as requested by the JTF on Pavements. He discussed the formation of the FHWA Highways For Life team, who will be working in areas such as innovative materials and advanced or intelligent construction. Also, the FHWA Research & Technology office has reorganized and an “Advanced Modeling and Design” team has been created, which further evidences FHWA’s commitment to support the new design guide. The formation of the FHWA Design Guide Implementation Team (DGIT) was also announced and is made up of Monte Symons (Resource Center), Katherine Petros (R&T), Leslie Myers (HQ), and Sam Tyson (HQ).

In terms of reauthorization, the TEA-21 baseline amount was $199 million. The Senate plan for transportation reauthorization, entitled SAFE-TEA, totaled $211 million over five years; however, it does not include funding for F-SHRP. The House of Representatives plan TEA-LU for reauthorization called for $360 million over five years. The current five-month extension of TEA-21 will expire on February 29, 2004. The presentation is available through the FHWA ftp site.
NCHRP Update: Amir Hanna

Amir Hanna gave an overview of the NCHRP project status and expected completion date. The NCHRP 1-37A panel review comments are expected on December 15, 2003. The final product is due to NCHRP by March 2004 and the deliverables will be handed over to the AASHTO JTF on Pavements at that time.

NCHRP will sponsor training workshops for State Department of Transportation personnel and the National Highway Institute (NHI) will also offer training courses related to the 1-37 design guide.

DECEMBER 4

Discussion of NCHRP 1-37A by Panel Members

The JTF members who are also members of the 1-37A panel were asked to give their perspective on the guide.

Linda Pierce, Washington DOT

The rigid design (concrete) portion of the design guide and software is solid, but the models will need to be calibrated locally. The flexible design (asphalt) portion of the guide is more complex and the equations driving the distress models are not clear. Some of the allowable limits programmed into the 1-37A software for various parameters do not give a State DOT the option to calibrate the models by using their current State criteria. The critical path for a State DOT will be to calibrate the models to their own individual State’s conditions. Washington State DOT plans to calibrate the asphalt models and do a sensitivity study on the traffic portion of the guide, including calibration of the weigh-in-motion (WIM) data. Linda Pierce also mentioned that Dr. Kevin Hall from University of Arkansas has been working with Phil McConnell at Arkansas DOT in conducting a sensitivity analysis of the models in the guide.

Gary Sharpe, Kentucky TC

The reliability portion of the guide was done at the end of the project and the Monte Carlo simulation was not included.

Andy Gisi, Kansas DOT

The industry needs to keep in mind that this guide is still a “work-in-progress” and there is the concern that there was not enough time for the 1-37A panel and the JTF to review the guide and software, in particular the asphalt portion which suffered Contractor delays. The reliability does not appear to be sensitive, due to the process used to compute the reliability. The “black box” approach to presenting the models and equations has made it hard for the reviewers to
understand where the models derive from. Some resistance from industry may result due to the establishment of local calibration criteria, such as level of rutting, amount of cracking, etc., by each State.

Dan Dawood, Pennsylvania DOT

The 1-37A analysis tool is approximately 85-percent complete and doesn’t appear to require much more effort to make it into a design tool. The concrete portion of the guide is in good form, but it is necessary to concentrate further effort on the asphalt portion to make it usable. The AC option should be included in both the HMA and PCC rehabilitation sections. The Contractor should be required to provide supporting materials for all models included in the 1-37A guide. The effects of frost-heave are not included in the guide and the reliability portion is not improved over that which is currently in DarWIN. It is recommended that the JTF meeting in the Spring after the Contractor submits the final documents to NCHRP.

Additional comments

Rick Harvey recommended that the JTF establish a way to gather feedback on each module, in a manner that allows for updating the materials every year, based on clarification of models, new research, and State DOT opinions or examples.

John Tenison suggested that the task force call the 1-37A product as the “provisional AASHTO design guide” and to create a feedback database that addresses the issues with the provisional guide and for some organization to implement those issues or changes.

*Action Item:* The FHWA will work with the JTF to set up a website for the States and JTF members to post comments. FHWA will also furnish someone to organize and compile the comments in order to distribute them to the NCHRP 1-40 contractor.

Presentation on FHWA Implementation Plan

John D’Angelo presented the FHWA implementation plan for the 1-37A product (and eventual AASHTO design guide) and how it relates to the FHWA mission of “Long Life Pavements for the 21st Century.” The presentation is available through the FHWA ftp site.

Demonstration of 1-37A Design Software

Linda Pierce ran through the 1-37A software for the JTF and explained the various traffic, environmental, and material inputs. An example rigid pavement design and concrete rehabilitation design were performed to showcase the entire design process using the software. Mike Pologruto then performed a flexible pavement (new) and flexible pavement rehabilitation design. Because of time constraints, the design examples were not run through an entire analysis, but both Mike and Linda presented the distress calculations from previous examples they had done with the software.
Presentation on 1-37A Training Materials

Leslie Myers delivered a presentation as an overview on the 1-37A design guide training and implementation materials produced by the contractor. The training materials were in the form of Powerpoint slides and most slides included notes for the trainer to utilize while delivering a course on the guide. The modules were split into an overview of the design guide: procedure and software, agency implementation issues, rigid pavement design, flexible pavement design, rehabilitated rigid pavement design, rehabilitated flexible pavement design, low-volume road design features, subsurface drainage, consideration of alternative strategies and LCCA, and standard test procedures. Overall, the training and implementation materials are very well-done and appear to be ready for utilization in delivering a training course on the guide. A few items should be addressed to make the materials closer to 100% complete. For example, specific examples of LCCA as it applies to the guide are needed. In the rigid pavement design module, both design examples are Level 1 and a reliability and sensitivity analysis are presented. However, in the flexible design module, there is no presentation of a sensitivity analysis, limited discussion on reliability analysis, and the design examples do not include a Level 1 design (only Level 2 and 3). Also, some modules did not include notes (pavement rehabilitation, LCCA, standard test procedures) which would strengthen the materials. The presentation is available through the FHWA ftp site.

Discussion of Plans for NCHRP 1-40

Amir Hanna and Tommy Beatty discussed the options for NCHRP 1-40 Facilitating the Implementation of the 2002 Guide for the Design of New and Reconstructed Pavement Structures which is at a funding level of $300,000.

Ken Kobetsky suggested that the JTF may consider requesting to put the design guide on the agenda for the next meeting (May 2004) of the AASHTO Standing Committee on Highways (SCOH), and then plan on going later to the AASHTO Standing Committee on Research (SCOR).

Tommy Beatty suggested that the JTF put together a Roadmap on how they will go forward with revision and implementation of the design guide. The Roadmap could be used to lay out a plan to fill in gaps in the guide and software, plan out time schedules, etc., prior to marketing the design guide. They can later use this Roadmap to go forward to the SCOH.
Presentation of JTF Action Items

Gary Sharpe, Linda Pierce, Dan Dawood, Andy Gisi, Amir Hanna, Katherine Petros, and Monte Symons met on December 4 to pull together an action plan for the JTF in near future. Some of the steps which they presented to the JTF are as follow:

- Members of the JTF would like to meet with the 1-37A research team vis-à-vis to discuss the panel comments.

- Evaluation teams will be developed to review and edit chapters of the 1-37 deliverables and also hire an independent consultant to conduct a technical review of the documents.

- The 1-37A deliverables will be handed off (including comments) to the NCHRP 1-40 panel. The proposed plan is to invite an integral portion of the 1-37A team to meet with the 1-40 panel to discuss residual issues. The research team will be paid for their time and travel.

- The 1-40 project will address primarily editorial changes to the 1-37A deliverables, which informs the panel of the deficiencies and will indicate the level of future work effort. However, the project will still include training for each State on the 1-37A guide and software.

- The recommendation for the 1-37A product is to introduce it as an interim or provisional guide and for the time being, it will be a JTF document which may advance to the SCOH, but will wait until it is more complete before going to SCOR.

- The JTF determined a need for periodic assessment of progress of the 1-40 project and feedback from product users for comparison purposes.

The proposed timeline of events for JTF activities is as follows:

- JTF plans to form a White Paper that will accompany NCHRP 1-37A guide when it goes out to the States in March 2004.
- JTF on Pavements 2.5-day meeting in April or May 2004.
- JTF plans to establish a Roll-out Plan for the SCOH meeting in May 2004.
- NCHRP 1-40 independent review done A.S.A.P.
- Based on NCHRP 1-40 results:
  - Pooled-fund established for addressing deficiencies in product,
  - Additional FHWA efforts in RD&T and implementation support,
  - Additional NCHRP studies
• After completion of the above, turn materials over to AASHTO.

The FHWA also offered to assist in training customers in implementation of the guide, as consistent with JTF decisions and following the recommendations of the JTF white paper.

The meeting was adjourned at 10 AM on Friday, December 5, 2003.
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