

Minutes
Expert Task Group on Pavement Preservation
San Diego, California
Lowe's Coronado Bay Resort
Tuesday, February 24, 2004

Introductions and Welcome

The meeting began at 8:06 am. The meeting agenda was reviewed and approved (**Attachment 1**).

Mr. Jim Sorenson, the Expert Task Group on Pavement Preservation (ETG) Co-Chair, welcomed the participants and thanked them for their attendance. The present changes affecting government and industry present an excellent opportunity for the ETG to re-examine the strategic plan for pavement preservation. Mr. Sorenson encouraged all present to use the same enthusiasm displayed in the past in seeking new approaches to address current issues. While the participants have achieved many accomplishments, there are still many serious challenges ahead.

Mr. Sorenson also encouraged ETG members to actively participate in the many technical sessions scheduled for the "Our Roads Lead to Green, AEMA – ARRA – ISSA Annual Meeting" during the next three days.

The attendees then introduced themselves. See participant list (**Attachment 2**).

Five Year Strategic Plan Task Force Reports:

Mr. Sorenson outlined the strategic plan updated in Ashville, North Carolina during the August 2003, meeting (**Attachment 3**), at which the following five task forces were formed:

1. Pavement Preservation Acceptance & Implementation
2. Support Research Programs
3. Identify and Address Customer Needs
4. Support Pavement Preservation Centers, Regional, and State Organizations
5. Integrate Pavement Preservation into Pavement Management Systems

Each task force addresses specific issues relating to activities of the ETG. Task force reports followed.

1. Task Force: Report on Pavement Preservation Acceptance & Implementation.

Mr. Jerry Geib of the Minnesota DOT reported that a draft Technical Advisory (TA) for pavement preservation has been developed using FHWA's basic format. However, in developing the TA, the team encountered some stumbling blocks, of which a major roadblock continues to be the definition of pavement preservation. Mr. Galehouse has developed a proposed pavement preservation definition for consideration by the ETG members. FHWA and the ETG have considered other definitions over the last three to four years and this definition still needs further

committee work. The team will be able to complete the TA as soon as the ETG members and AASHTO adopt an acceptable pavement preservation definition.

The National Center for Pavement Preservation (NCPPI) has contracted to develop and maintain a Pavement Preservation Internet-based Library that will contain and coordinate the definitions, links, and resources available in various organizations within the pavement preservation community. Mr. Galehouse also indicated that there is a survey asking for suggestion on the content of the NCPPI Internet site (**Attachment 4**).

The Team continues to look for information that could be used to develop training on the proper practices for the construction of Pavement Preservation treatments. They are coordinating these efforts with the TCCC.

The ISSA conducts annual workshops covering micro-surfacing and slurry seal treatments. The highly successful format and content used in these workshops could serve as models for developing nationwide contractor and owner training in pavement preservation treatments. We will follow up with ISSA on this possibility.

Mr. Keith Herbold recommended establishing a board or group that could provide independent certification of products and processes used to design and construct pavement preservation treatments.

2. Task Force: Support Research Programs

Mr. Keith Herbold of the FHWA Resource Center reported that the ETG Task Force on Research Programs and the AASHTO Subcommittee on Maintenance are working to increase the support for research activities related to pavement preservation. A “Pavement Preservation Research and Development Initiative” meeting was conducted on February 11, 2003, to focus efforts on research activities. These meetings resulted in the initiation of the NCHRP 20-7(184) project described in **Attachment 5**. The study will focus on synthesizing information about the past and current research activities in the area of pavement preservation and identifying the research needed to improve pavement preservation performance and practices. The National Cooperative Highway Research Program (NCHRP) has contracted with Applied Pavement Technology to conduct the study.

Mr. Herbold expressed concern that NCHRP has yet to inform the panel members overseeing the work of the selection.

There is also a major (\$340,000) TRB research proposal to develop Performance Specifications for Pavement Preservation Treatments. However, there has been no response to a request for inclusion of this research in the list of projects for the next three years. Mr. Herbold plans to continue his efforts to get this project onto the NCHRP project agenda.

Both Mr. Sorenson and Mr. Herbold reiterated the need for research in pavement preservation as part of an ongoing R&D program for all highway agencies.

3. Task Force: Identify and Address Customer Needs

Mr. Sorenson reported on behalf of Mr. Steve Varnedoe of the North Carolina DOT.

Accomplishments:

Mr. Varnedoe, who worked with AASHTO, FHWA and Industry to establish the NCPP, is now working through AASHTO to establish a public agency Help Desk in the pavement preservation area. This would be an ideal task for NCPP. Mr. Varnedoe will continue to work with AASHTO to develop activities promoting the use of Pavement Preservation strategies nationwide.

Mr. Sorenson reported that Mrs. Emily McGraw will replace Mr. Varnedoe in the ETG following Mr. Varnedoe's promotion to Deputy Chief Engineer of NCDOT.

4. Task Force: Support Pavement Preservation Centers, Regional, and State Organizations

Lita Davis, San Diego, reported for the task force.

Accomplishments:

The team has established a permanent link to the Foundation for Pavement Preservation (FP2) Internet site with a list of conferences, projects and Internet sites related to pavement preservation. The team has also produced two CD-ROMs with a list of conferences, projects, trade magazines, Internet sites, and pavement preservation showcases from CALTRANS and Florida. They will provide the CD-ROMs to the FP2 and the NCPP for safekeeping and inclusion in their Internet sites.

Mr. Sorenson reported that the FP2 Internet site has now been activated, joining the NCPP and FHWA as the third website dealing with pavement preservation. While the NCPP site is more technically oriented, the FP2 covers pavement preservation from the industry's perspective and, with FHWA, should provide the basic information, policy, and guidance as well as links to other related sites.

Mr. Steve Mueller of the FHWA recommended establishing a committee to help coordinate the information shown in the subject Internet sites. The participants agreed that this subcommittee should review each site monthly and send comments to FHWA (Newman), NCPP (Hahn) and FP2 (Jackson).

5. Task Force: Integrate Pavement Preservation into Pavement Management Systems

David Peshkin, Applied Pavement Technology.

Accomplishments:

The committee's first goal was to complete the preparation of materials for the NHI training course entitled "Integration of Pavement Performance and Pavement Management Systems". These materials were delivered to NHI toward the end of last year (2003). As yet, there has been no indication from NHI as to when the course will be available for hosting by interested agencies. If NHI follows its typical procedures, the course may be available by the middle of this year (2004). The committee's second goal was to identify agencies that have integrated pavement preservation into their pavement management procedures. The committee is collecting this information informally.

The committee has two long-term goals, viz:

- To develop guidelines for selecting and implementing pavement preservation treatments using pavement management systems, and
- To review the analysis tool developed as part of NCHRP 14-14 and to complete an implementation strategy for this project. A one-day workshop will be developed to showcase the analytical tool produced by the project.

The committee allocated time that afternoon to discuss and update the status of each of its goals and activities. The updated strategic plan is included in **Attachment 6**.

Ancillary Business:

Messrs. Bill O'Leary, Jim Sorenson, and Myles McKemie (President of the Asphalt Emulsion Manufacturers Association), discussed the participation of AEMA in ETG and FP2 activities and Mr. McKemie expressed his appreciation for the support provided by the ETG to AEMA and FP2.

Mr. O'Leary indicated the potential for great benefits to be derived from proposed research by the pavement preservation industry involving chip seals and micro-surfacing treatments. The industry and transportation agencies will need to work together to succeed in these efforts both during the research and the follow up implementation.

At the invitation of Mr. Sorenson, Mr. D.R. Leach of Koch Materials conducted an open conversation with the ETG members on the status of Koch Materials and their future activities. Mr. Leach re-emphasized Koch's support for the Foundation for Pavement Preservation and pavement preservation programs nationwide.

Mr. McKemie expressed his complete support and participation for the ETG and the FP2 and said he is looking forward to continuing to work with these groups in advancing pavement preservation efforts in the US.

Old Business

Research Activities

1. **Preservation Research R&D NCHRP 20-7(184) – James Sorenson, FHWA**

Mr. Sorenson reported that a problem statement was available and that the project contractor will continue to refine both the statement and project scope of work with the help of the NCHRP panel members (**Attachment 5**).

2. **NCHRP 14-14 – David Peshkin, APT**

Mr. Peshkin made a presentation on the objective and key features of the NCHRP 14-14 project, including the proposed procedure to define the benefits and optimal timing of applying pavement preservation treatments. Mr. Peshkin demonstrated the procedure by using data from five highway agencies to quantify the benefits and determine the optimal treatment application timings. More data will be needed to validate the model developed as part of the project. The ETG will evaluate various options involving the use of data from other research activities to evaluate the benefits and optimal timing models produced by this project. This work will be part of the follow up implementation effort.

3. **Performance Guidelines for the Selection of Hot-Poured Crack Sealants - Pool-Funded Study – Jim Chehovitz, CRAFTCO, Inc.**

The Virginia Tech Transportation Institute (Roadway Infrastructure Group) and the National Research Council of Canada (University of Calgary) are developing Performance Guidelines for the Selection of Hot-Poured Crack Sealants (**Attachment 7**). Seven states, including Michigan, Minnesota, Texas, and Virginia are also working in cooperation with various Canadian Provinces on this project whose tasks include the development of:

- Short term aging test procedures.
- Long term aging test procedures.
- Low temperature testing to determine sealants performance.
- An adhesion test procedure.

The study should be completed within the next three years.

4. **Slurry Seal and Micro-Surfacing Pooled Fund Mix Design – Jim Moulthrop, Fugro-BRE, Inc. and Shakir Shatnawi, CALTRANS**

This is a four and a half year study involving Fugro-Bre South, APTECH, CALTRANS, MACTEC. Fourteen States are participating in the study covering most of the climatic zones in the US. The project is divided in three phases as described below.

Phase 1 - State of the Art / Practice

The objective of this phase is to assess the state of the art / practice related to project selection, material testing, design, and construction of slurry seals and micro-surfacing treatments. A survey of states and industry produced 21 state responses and 21 industry responses.

The survey revealed inconsistencies in material testing quality control and the methods used by the agencies to evaluate the treatments that are part of this project.

The project team prepared a draft report of the findings in Phase 1, and a work plan for Phases 2 and 3. A panel meeting was scheduled to discuss the preliminary report and completion of the work plan for Phases 2 and 3.

Phase 2 - Develop Design and Laboratory Test Methods (24 months)

This phase includes a worldwide evaluation of existing test methods and design procedures and will produce procedures for different parameters and a work plan with an experiment design for slurry seals and micro-surfacing treatments.

Phase 3 - Validate Design Procedures with Field Trials

This phase includes the development of guidelines and specifications and a training program for agencies, contractors, and material suppliers.

This phase will also include working with contractors to assure that the products are placed properly to eliminate placement variability from the experiment. Included will be a series of field tests to validate specifications and test procedures during construction and for various years after construction.

The pooled fund is still open if other states wish to join.

5. Pavement Surface Texture, Friction, Splash and Sprav and the Benefits of an Effective Preservation Program – Larry Scofield, ADOT; Shakir Shatnawi, CALTRANS

The TRB news article written by Larry Scofield and Roger Larson has excellent information about the testing of and issues related to surface texture, friction, splash, spray and noise, but there is still a need for research in the area of splash and spray.

Mr. Shatnawi distributed and explained the results of a study conducted by CALTRANS and AZDOT on Tire/Pavement Noise Sound Intensity that covered different types of pavement surfaces.

The PMS pavement condition database should also include noise data.

FHWA's Offices of Infrastructure and Safety are working to release a new Technical Advisory (TA) on noise and friction that was scheduled for release two years ago. This TA does not cover the issues of wet weather or night visibility.

6. "Evaluation of Emulsified Sealer/Binders for Extending the Life of Asphalt Pavements" – Jim Sorenson, FHWA

Larry Scofield, AZDOT is conducting this evaluation (sponsored by FHWA and FP2) in AZ, MN, MI and CA (**Attachment 8**). He has completed the first phase of study and has started the second phase which includes non-destructive testing to measure friction, texture and roadway profile. The University of Wyoming in Laramie is providing technical assistance in this project to evaluate properties of the binders being used in the study. An interim report will be available in March, 2004.

Status of Pavement Preservation Products – Steve Mueller, FHWA

Mr. Mueller reported the availability of the following information:

1. Six pavement preservation checklists, five of which cover preventive maintenance treatments for flexible pavements and one which covers rigid pavements.
2. Two CD-ROM's covering the "Pavement Preservation State of the Practice #2" and "The Forum for Pavement Preservation"
3. A New Pavement Preservation Compendium.
4. Nineteen Pavement Preservation Fact Sheets. (The FHWA is looking to highway agencies or industry for case studies that can be used as the basis for future fact sheets.)
5. Articles in TRB News, Public Roads Magazine and FHWA-FOCUS
6. Pavement Preservation presentations conducted in various conferences and workshops.
7. Technology Implementation
 - Upcoming NHI Courses on Pavement Preservation
 - Upcoming International SCAN Implementation Activities
 - Potential Industry and NCPP courses
8. New materials
 - Four new checklists covering preventive maintenance treatments on rigid pavements (available soon.)
 - Pavement Preservation Toolbox CD
 - Video Reprints

Status of Glossary of Terms for Maintenance Field Workers – Jim Sorenson

Steve Varnedoe will continue his efforts to have the AASHTO Subcommittee on Maintenance approve the supplemental glossary and to publish it this summer.

Proposed Pavement Preservation Definition – Jerry Geib, MN DOT, and Larry Galehouse, NCPP

Mr. Galehouse emphasized the difference between pavement preservation and preventive maintenance (**Attachment 9 and 10**). He is concerned that some highway agencies are using preventive maintenance as their pavement preservation definition. He reiterated that pavement preservation should be considered as a long-term Asset Management strategy that integrates treatments and repair techniques.

Status of Pavement Preservation Training Courses – Steve Mueller, FHWA and David Peshkin, APT

Course 1 – NHI 131054, “Pavement Preservation: The Preventive Maintenance Concept” 40 presentations have been made since 2000.

Course 2 – NHI 131058, “Pavement Preservation: Selecting Pavements for Preventive Maintenance” 43 presentations have been made since 2001. Mr. Peshkin reported a sharp decrease in customer demand for courses 1 and 2. FHWA is considering revising these courses.

Course 3 – NHI 131103, “Pavement Preservation: Design and Construction of Quality Preventive Maintenance -Treatments” A pilot was presented in Mississippi in September 2003. AP Tech is working to add videos of different preventive maintenance treatments to the course presentations. Course material should be completed by June 2004.

Course 4 – NHI 131104, “Pavement Preservation: Integrating Pavement Maintenance w/ PMS” A pilot was conducted in North Carolina in August 2003. The course material was delivered to NHI in January 2004 and the NHI is in the process of awarding the longer term teaching contract.

Activities Updates

Foundation for Pavement Preservation – Bill O’Leary, FPP

The balance sheet and budget for FP2 are healthy and available for inspection. FP2 needs an executive director. The job announcement will be released soon. An accounting firm in Michigan is doing an excellent job monitoring the operation and accounting for the FP2.

ETG Contract – Chris Newman, FHWA

The old ETG contract with the FP2 has already expired and Mr. Newman is preparing a new five-year contract with the FP2 to provide administrative services for the ETG.

Center for Pavement Preservation, Upcoming Activities and PP ETG Role – Larry Galehouse, NCPP

Attachment 11 lists all the activities in the areas of research, outreach and training to be included in the technical resource library that is part of the NCPP Internet site. A draft paper entitled “Sustaining Our Valuable Highway Assets by Preservation – How to Get Started” has been prepared to educate transportation executives about pavement preservation. Mr. Sorenson asked for comments from the ETG.

AASHTO Subcommittee on Maintenance - Pavements Task Force – Jim Sorenson-FHWA

There are various unfinished tasks for this subcommittee including clarifying AASHTO’s role in research for pavement preservation. ETG members will continue to discuss this issue with AASHTO representatives during upcoming meetings this summer.

Midwestern States Pavement Preservation Partnership – Keith Herbold, FHWA and Jerry Geib, MN DOT

Mr. Herbold reported that the partnership is awaiting approval of a pooled fund study (**Attachment 12**) before scheduling the next meeting. The pooled funds could be used to pay for state representatives to attend the meeting. The official pooled fund request should be available very soon.

Mr. Galehouse reported that Mac Roberts (former ALDOT Chief Engineer) and Steve Varnedoe, NCDOT are leading an effort to establish a Southeastern States Pavement Preservation Partnership covering 13 States. This will be announced as a regional pooled fund strategy.

Transportation Curriculum Coordination Council (TCCC) – Chris Newman, FHWA

Mr. Newman explained the available training courses and courses under development. See **Attachment 13** for training courses details.

FHWA PP International Scouting Tour – Luis Rodriguez, FHWA

TXDOT has chosen June 2004 for the construction of geo-textile reinforced surface treatments using hot oil and emulsified asphalt binders in the Waco District. Mr. Michael Voth of the FHWA Central Division of FLHD is working with their lab technicians to develop a correlation between the Australian Specifications for Surface Treatments and the AASHTO and ASTM Specification. A professional editor has reviewed the draft report from the follow up trip to Australia in December 2002. The report should be available for printing in three months. FHWA currently has \$40,000 committed to this project. Up to \$40,000 additional dollars may be obtained through AASHTO.

College Preventive Maintenance Course – Larry Galehouse, NCPP

Mr. Galehouse pointed out that a basic course on pavement preservation should be developed for transportation agency executives (planners, administrators, etc.).

Mr. Denehy, NYDOT considers that a pavement preservation course for college students would help provide an early education on the basic concepts and benefits of pavement preservation for the future leaders of highway agencies. There was a general discussion regarding the University Short Course under development with FPP and University of Illinois.

Performance Specification on Thin Surface Overlays Working Group – Jim Moulthrop, Fugro-BRE, Inc. and Steve Mueller, FHWA

Pavement Preservation Definition and Eligibility – Chris Newman, FHWA

See **Attachment 14** for definition.

Strategic Working Group Plans and Development

The four Strategic Working Groups met to discuss the Revised Strategic Working Group Plans and Development. The revised ETG Work Plan is in **Attachment 6**.

New Business

Integrating Pavement Preservation in AASHTO mechanistic/empirical design (AASHTO 2004) – Jim Sorenson, FHWA

FHWA has developed an implementation workshop for the AASHTO Design Guide. We need to ensure it includes a module to cover pavement preservation integration into the AASHTO Design Guide. Chris Newman will work with FHWA task group to incorporate pavement preservation into the guide and its implementation outreach.

Additional Aggregate Needed for HIR and CIR. (Included in the May 27 E-mail from Mr. Sorenson, Subject: Research partnership agreement – Todd Thomas, Koch Pavement Solutions

The original intent of this topic had more to do with ARRA's support of pavement preservation, although not all of ARRA's activities, e.g. full depth reclamation (FDR), are supported by FPP and NCPP. Although ARRA would prefer that all of its activities and membership be represented, ARRA still supports these pavement preservation organizations.

Update on CIR Research Proposals

Mix Designs - Todd Thomas, Koch Pavement Solutions.

Todd Thomas submitted this proposal as a potential 2003 TRB project through Roger Olsen, MnDOT. The proposal, which focused on mixture design, was probably received too late, so Mr. Olsen was preparing to re-submit it. Mr. Sorenson recommended that fundamental testing be added to the proposal, similar to what is being looked at for the new AASHTO Design Guide characterization.

Pavement Design – Ken Damgaard, AZDOT

This proposal, submitted to TRB by Ken Damgaard, focused on pavement design, but was not accepted. It was not being considered for alternative funding.

CALTRANS TAG Success Story– Shakir Shatnowi, CALTRANS

This is a maintenance technical advisory containing technical guidelines covering project selection, design, construction, troubleshooting, and project acceptance of pavement preservation treatments for CALTRANS personnel. It has a web site and a CD. The web site for this excellent document is: <http://www.dot.ca.gov/hq/maint/roadway.htm> CALTRANS is developing various training modules using the information in the TAG.

NHI PP#3 – New Innovations Module - Gary Hildebrand, Bill Ballou, FP2

AASHTO SOM Pavement Task Force Update – Steve Varnedoe, NCDOT

NCHRP 35-02 – Chip Seal Best Practices – Steve Mueller, FHWA

Nomination of New ETG Members – Jim Sorenson, FHWA

Mr. Basem Muallem, CALTRANS was added as a State/County Member. Mr. Muallem works at CALTRANS District 8. He developed a PMS for the Riverside and San Bernardino Counties, using the information to establish a pavement preservation program. The FHWA should send a letter to CALTRANS management confirming Mr. Muallem's participation and availability.

Mrs. Lita Davis' membership was revised from City/County to Friend of the Committee. This was done to eliminate any perception of conflict of interest on the part of Mrs. Davis' employer. It is intended that Mrs. Davis will continue to be a major contributor to the ETG, as her free time permits. She will also be invited to attend all meetings. This will leave a Local Agency position open on the ETG for occupancy by an APWA or NACE representative.

AASHTO SOM Resolutions – Mr. Sorenson, FHWA
See **attachments 15, 16 and 17**.

Upcoming Conferences/Events

May 23-26 -- SE States Pavement Management and Design Conference – Biloxi, MS.
More information at: <http://www.fhwa.dot.gov/resourcecenter/sespmmdconf.htm>

Future Activities – ETG Members

Next ETG Meeting will be the 2nd week in September in Lansing, MI. or Saratoga, NY.

The meeting adjourned at 5:20 pm.