A PUBLICATION OF THE FOUNDATION FOR PAVEMENT PRESERVATION

pavement preservation journal

SUMMER 2008

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contents

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By Bill O'Leary
President
Foundation
for Pavement
Preservation

In an Era of Reduced Funding, Pavement Preservation Shines

AS road construction and maintenance budgets shrink due to reduced agency funding—and buying power losses due to inflation—pavement preservation techniques as advocated by the Foundation for Pavement Preservation (FP²) and its members help those scarce dollars go further by preserving pavements well past their initial life spans.

Time and again we have seen that when an agency pavement preservation program is managed via a computerized pavement management system (PMS), the agency is able to best allocate where scarce dollars should be spent toward prolonging riding surface longevity.

Classic pavement preservation will start with a pavement inventory and condition database, which will be used to establish which road surfaces are near the point at which they will begin to fail rapidly. Those pavements—not the worst pavements favored by politicians—are the ones that should be targeted with whatever funds are available, prolonging their service life to a degree not possible otherwise.

But this puts the road manager in a bind. To spend money where it will do the most good, pavements that are falling apart should not receive maintenance dollars, but should be allowed to fail, and then be rebuilt. That's why adhering to a pavement preservation program may put a road administrator in conflict with elected officials, who may demand quick fixes for failing pavements.

At that point the pavement inventory and PMS can be brought out to show that the road administrator is doing the right thing. The inventory and PMS provide cover for both the administrator and elected official in supporting pavement preservation principles. That's in contrast to the policy of "worst first," which is the most expensive maintenance strategy of all, despite its appeal to politicians who get kudos from voters for having rebuilt streets.

To best spend limited maintenance dollars, each road agency faces different challenges in applying pavement preservation treatments and establishing an effective preservation program supporting the "right treatment for the right pavement at the right time." Preventive maintenance treatments include **crack sealing, fog seals, chip seals, thin cold mix seals, surface recycling,** and **hot-mix-asphalt (HMA) thin overlays,** including dense-, open- and gap-graded mixes that will bolster ride quality, provide surface drainage and friction, and correct surface irregularities.

Sometimes cash flow problems mean a road agency has no choice but to incorporate pavement preservation principles into its program. That's what the city of Los Angeles found as it launched a long-term pavement preservation program in recent years following California's Proposition 13, which dramatically cut taxes, including resources used for street repairs and paving.

And as recognized by FP² last year with its *Pavement Preservation Excellence Award,* the combined city-county of Metro Nashville has gone full-throttle in adopting and justifying to the public its pavement preservation program (see *Administrative Buy-In Key to Nashville's Award-Winning Pavement Preservation,* Spring 2008, p 11).

Nashville goes the extra mile by informing its citizens of just what a PMS is and why it's essential for wise expenditures of funds. "Decisions are based on pavement condition, ride quality, costs of treatment, benefits to the road, and benefits to the road system. Because maintenance funds are always limited, the management system recommends the optimum sequence of repairs to make the best use of taxpayer dollars. The system provides a fair and equitable way to compare repair needs in all the city's neighborhoods to ensure the decisions are in the community's overall best interests," Metro Nashville said on its web site.

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New Chip Seal Training Courses at TPPC

By Dr. Yetkin Yildirim, P.E.
Director, Texas Pavement Preservation Center

As part of a continuing mission to advance the field of pavement preservation, in February 2008 the Texas Pavement Preservation Center (TPPC) began two new training courses on seal coats (the Texas term for chip seals).

The courses are intended to serve two main groups, engineers and inspectors. The course designed for inspectors, entitled *Seal Coat Inspection and Applications*, focuses on proper inspection methods and the equipment used during chip seal construction. The other, *Seal Coat Planning and Design*, is intended to instruct engineers on planning, designing, and constructing chip seals.

The purpose of both courses is to increase the awareness and understanding of pavement preservation by providing instruction on a common preservative maintenance treatment. Therefore, the initial chapters of the courses explain the key concepts of pavement preservation and the importance of having a consistent preservation strategy to optimize the use of chip seal treatments. The remainder of each course is designed to provide those enrolled with a deep understanding of chip seals and how they fit into the overall scheme of pavement preservation.

Participating in the development of the new courses are (l-r) Tammy Sims, TxDOT; Joe Graff, Halcrof; Cindy Estakhri, TPPC; Gerald Peterson, TxDOT; and Yetkin Yildirim, TPPC.

The purpose of both courses is to increase the awareness and understanding of pavement preservation by providing instruction on a common preservative maintenance treatment.

Seal Coat Inspection and Applications, the course designed primarily for industry inspectors, covers six different chapters: *Pavement Preservation Concepts, General Principles, Duties of Inspector or Crew Chief, Pre-Seal Coat Activities, Equipment Inspection*, and *Seal Coat/Surface Treatment Application Process*.

The first chapter relates the basic principles behind pavement preservation, such as the importance of "the right treatment on the right road at the right time" to the course attendees. Chapter 2 explains chip seal terminology, functional characteristics, limitations, and factors that affect performance.

The most common defects found in chip seals are described, as well as ways to prevent or mitigate these faults. From there, the course moves to an explanation of the authority of the inspector on a project, the duties of the inspector and chief crew, and the specifications and plans with which a project must comply.

In the fourth chapter, attendees learn about pre-chip seal activities, such as repairs and patching, aggregate stockpiling, and preconstruction meetings. The next chapter discusses techniques for equipment inspection, emphasizing the importance of safety in relation to all the pieces of equipment explored in this course: rotary brooms, asphalt distributors, aggregate spreaders, haul trucks, rollers, front-end loaders, and heater and storage units.

Finally, the course offers a detailed description of the chip seal and surface treatment application processes. Some aspects of the process covered include weather, traffic control, placing paper joints, intersections and irregular shapes, and cleanup.

The course intended mainly for engineers, *Seal Coat Planning and Design*, has five chapters, the first

two of which are similar to the inspection course's first chapters. The remaining three are *Guidelines for Treatment Selection, Material Selection and Plan Preparation*, and *Public Perception and Complaints*.

Chapter 3 discusses chip seal project selection methods, including the distress types that chip seals effectively treat, acceptable traffic volumes, and issues of tire noise. The design method covered in this chapter is the *Modified Kearby Design Method*, based on the original method still commonly used by TxDOT today.

The fourth chapter instructs attendees on communication and coordination during a project, binder and other materials selection, materials testing, and planning and contracting a project. The final chapter deals with handling complaints and improving public perception of the agency and pavement preservation program. As chip seals sometimes damage vehicles with loose aggregate or extra asphalt, learning what to say in these situations can be crucial to maintaining customer satisfaction.

Both courses are approximately eight hours in length and offer attendees 0.8 Continuing Education Units. To receive a certificate of completion for the course, all students must score a passing grade on a series of quizzes over the material covered. These courses are available upon request and can be tailored to specific regions. For more information on this and other continuing education courses, or to request a course in your area, please contact the director of the Texas Pavement Preservation Center, Dr. Yetkin Yildirim, P.E., at yetkin@mail.utexas.edu.

Contribute Your Technical Paper to *Pavement Preservation Journal*

Prospective authors are invited to present articles on original research on any topic relevant to pavement preservation, such as preservation techniques, materials, construction, testing, performance, recycling, and pavement management to *Pavement Preservation Journal*.

Papers discussing best practices for pavement preservation treatments, including asphalt overlays, scrub and fog seals, crack sealing, chip seal, hot in-place recycling, microsurfacing, and slurry seals, would be welcome as well.

Authors must prepare their manuscripts in accordance with the guidelines outlined by the *Pavement Preservation Journal*. All articles should be submitted as an email attachment to Dr. Yetkin Yildirim, P.E., at yetkin@mail.utexas.edu.

For more information, including style guidelines, please visit the *Pavement Preservation Journal's* home page at www.fp2.org/.

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Preseal Surface Texture Can Be Chip Seal Performance Predictor

By Douglas D. Gransberg, Ph.D., P.E.
University of Oklahoma

The preseal condition of the substrate has a significant impact on new seal performance, new research from Texas shows.

The research was sponsored by the Asphalt Emulsion Manufacturers Association (AEMA), which delegated research oversight to Ergon, Inc.

One objective of the research was to evaluate Transit New Zealand's chip seal performance specification TNZ P/17, which is based on a surface macrotexture deterioration model that sets failure at 0.9 millimeters, and establishes a formula for allowable surface texture after 12 months.

This specification has been in use in New Zealand for several decades and the research intended to determine its applicability to pavement preservation treatments in the United States. TNZ P/17 utilizes the TNZ T/3 sand circle test procedure to measure macrotexture. This procedure is similar to the ASTM E965 sand patch test in that it is a volumetric method, but TNZ T/3 uses coarser sand and nearly twice the volume as ASTM E965.

In fact, the researchers found that it was nearly impossible to obtain a reasonable level of reproducibility with the ASTM E965 test in the field, where windy conditions literally blew away a significant portion of the test sample. The TNZ T/3 did not suffer this problem, proving itself to be more robust than the ASTM test.

Twelve rural roads with average daily traffic of around 600 vehicles per day, that were scheduled to receive a new chip seal in 2005, were selected in the San Antonio District of the Texas Department of Transportation.

Each road's preseal macrotexture was measured and compared to the TNZ P/17 failure standard of 0.9 mm. Tests were then taken each quarter for the first 12 months of the new seal's life, and the 12-month surface texture was compared to that calculated by the TNZ P/17 model.

In every case where the preseal surface texture was less than 0.9 mm, the road's 12-month surface texture was less than the allowable calculated texture. In two cases, the 12-month texture was less than 0.9 mm.

This performance clearly points to the value of the TNZ P/17 performance specification as a method to quantitatively evaluate U.S. chip seal performance. It also quantitatively confirms the conclusion that the preseal condition of the substrate has a significant impact on new seal performance.

The research recommends that the TNZ P/17 performance specification and the TNZ T/3 sand circle test be used for pavement preservation operations in the United States.

In a nutshell, this research predicted that on one third of the sample roads, a new chip seal was **not** the "right treatment, on the right road, at the right time." With the knowledge gained from the preseal sand circle testing, the pavement preservation engineer in those cases should have used a different treatment to restore skid resistance lost due to flushing.

This research is continuing for a total period of three years (see Fig. 1 for current status) and will eventually have the necessary data to develop a relationship for chip seal surface texture over time. This will be checked against the TNZ P/17 model to determine if that model can be directly imported for United States' use, or if a Texas model needs to be developed to better reflect the materials, environment, and traffic loads found on rural Texas highways.

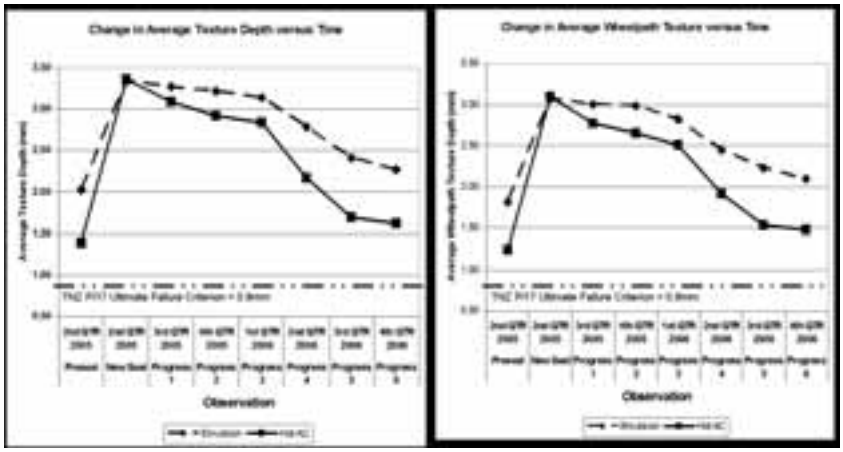

Fig. 1. Change in Total Average Texture Depth and Wheelpath Texture Depth Over Time

Economics Creating Even Stronger Interest in Asphalt Pavement Recycling

By Gregory S. Brown, Brown & Brown, Inc., Salina, Kan.
President, Asphalt Recycling & Reclaiming Association

The asphalt recycling and reclaiming industry has been evolving steadily for several decades, and the Asphalt Recycling & Reclaiming Association (ARRA) has been the leader in advancement of this industry.

But never before has there been so much interest in, and so many questions asked of, our trade association and members. Agencies ranging from the Federal Highway Administration (FHWA), to state DOTs, to city and county groups, are searching for new and different answers to the same pavement preservation and rehabilitation questions. The world is changing quickly, so what are the megatrends driving these changes and what will the asphalt pavement industry look like 10 years from now?

The world now consumes more oil than it can produce. Demand for fuel continues to skyrocket, creating fewer available tons of liquid asphalt. Consequently, liquid asphalt prices have soared as have those of hot-mix asphalt. The end result is even greater price benefits for every form of asphalt pavement recycling.

Still, despite the large and ever-increasing cost savings, with a relative reduction in government spending on transportation infrastructure, less than 5 percent of our asphalt pavements are being recycled.

One exception is the state of Nevada. The Nevada DOT, under the leadership of Sohila Bemanian, P.E., cold in-place recycled 770 miles of pavement from 1997-2005. All projects are performing well and will exceed preservation and rehabilitation needs.

But our friends around the world are beginning to study the environmental impact of their pavement decisions, and a few states are as well. That will change over the next decade. Politicians have become very involved in environmental issues, with presumed global warming becoming a major issue in the 2008 presidential campaign. In Kansas, for example, applications for two new coal-fired power plants were denied by politicians, not regulatory agencies. Once decision makers start understanding the enormous environmental savings recycling provides, things will change.

The Missouri DOT, for example, has developed an "Environmental Team" which is studying new and different ways to be good stewards of the environment. Many states have put environmental or recycling task groups together. Where Missouri differentiates itself is that it is truly considering environmental impact when making pavement management decisions. MoDOT is determined to build "Green Roads."

In 2005, the Canadian Industry Program for Energy Conservation, along with the Canadian Construction Association, published a report documenting energy usage in various pavement practices on a life cycle basis. The report

Today, we are recycling materials that are better than ever, with mixes consisting of outstanding aggregates and asphalt material.

THE PRICE IS RIGHT!

Asphalt is already the most recycled product in the world. More asphalt is recycled on an annual basis than all other waste products ... combined! In the past, the reason we recycled asphalt was not environmental, nor was it government mandates or subsidies. It was purely economical.

Even when hot-mix asphalt was relatively inexpensive, it could easily be milled, pulverized and reused in a variety of cost-effective ways. But in the last couple of years, the economics have changed dramatically.

GREEN ROADS A WORLD TREND

Unfortunately, there have not been a lot of studies conducted documenting the environmental benefits of asphalt pavement recycling. In the United States, it is clear that environmental concerns are not yet at the top of the list when considering pavement their 20-year life expectancy. Cost savings on the 30-plus projects ranged from 23 to 56 percent. Nevada's forward thinking has saved the taxpayers millions of dollars and is one example of the direction we are headed.

references a study conducted by the Colas Group called the *Environmental Road of the Future*.

The Colas study provides a breakdown of energy used by activity:

- To manufacture the binder material
- To produce the aggregates
- Material manufacturing
- Transportation of the road materials, and
- Laydown.

Concrete was the largest consumer of energy per ton, followed by hot-mix asphalt. But in-place methods of asphalt pavement recycling, such as full-depth reclamation and cold in-place recycling, were by far the lowest consumers of energy. This interesting study further documents the environmental benefits of in-place recycling and our need to consider recycling first!

BUILD WITH THE BEST MATERIALS

We all know that aggregate sources are being depleted. The cost to mine sand and rock continues to increase due to accessibility, regulatory problems and inflation. Aggregates have to be hauled farther, which increases the stresses on our existing road system and our environment. High-quality aggregates are harder and more expensive to come by than ever.

Where has all the good material gone? The answer lies in the roadways we drive on every day. The best aggregates are in the roadway. We have already paid for them and our vast pavement system has become one of this country's greatest assets/resources. The key to success is to treat it like the asset it is, and reuse it to its greatest value.

When asphalt recycling first started several decades ago, it was inferior and not technically advanced. Since those days the equipment has become larger and very sophisticated. Additives have been designed for specific recycling applications. Today, we are recycling materials that are better than ever, with mixes consisting of outstanding aggregates and asphalt material.

In-place recycling techniques such as hot in-place, cold in-place and full depth reclamation can reuse these outstanding materials quickly, with minimal traffic disturbance and lane closures, and produce recycled mixes of a quality that has never been achieved before. Several recent studies have documented the long-term performance and mix characteristics of these mixes. One recent study in Iowa documented the life cycle of recycled pavement is in excess of 25 years.

RECYCLING IS THE SOLUTION

As we look into the future, it becomes clear that asphalt pavement recycling provides us with the solution we need for environmentally sustainable pavements built at reasonable cost.

The price difference between virgin mix and recycled mixes will continue to grow. Environmental pressures to reduce the burning of fossil fuels and the creation of greenhouse gases will mount. The industry will continue to advance recycling technology to carry greater loads and last even longer.

In summary, these megatrends will cause every responsible pavement manager when deciding how to preserve or rehabilitate a pavement to ask "How can I recycle this pavement?"

ARRA members are there to help provide the answer.

To learn more about asphalt recycling or to join this exciting, expanding and important industry, visit our web site at www.arra.org, or call us at (410) 267-0023.

AEMA, ARRA, ISSA Delegates Ponder

'Sustainable Solutions' at Joint Meeting


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The pavement preservation industry went "south of the border" in February when over 400 delegates from the pavement preservation and rehabilitation industries—representing nearly 125 of the world's leading companies in that sector—met for the fifth combined annual meeting of the Asphalt Emulsion Manufacturers Association, the Asphalt Recycling & Reclaiming Association, and the International Slurry Surfacing Association.

Delegates heard over 40 speakers during the four-day period of the joint meeting, held in San Jose del Cabo, Mexico. The meeting was a concentrated assembly of industry promotion and technological advancement, as industry leaders and innovators joined together in a unique opportunity to discuss subjects of common interest and to share news of accomplishments in their related fields in pavement preservation.

Themed *Preservation & Rehabilitation: Sustainable Solutions,* the meeting highlighted advancements in technology and the application of asphalt emulsions and other additives, asphalt recycling and reclaiming, and slurry and Micro Surfacing, chip seal and crack treatments.

In addition to the usual working and technical committee sessions that are always part of each association's annual meeting, delegates heard presentations from numerous industry experts and leaders on a wide variety of subjects. During a period of generally subdued discretionary travel, those who chose to attend this mid-winter event were richly rewarded. Copies of most presentations will be posted to the associations' web sites at www.aema.org, www.arra.org, and www.slurry.org.

Meeting activities also included the respective elections of new officers and directors of the associations, as well as awards presentations, and numerous committee, technical committee, and task force sessions during the four-day program.

AEMA HONORS TEXAS, FARIS, ERGON

The Asphalt Emulsion Manufacturers Association is an international non-profit trade association of asphalt emulsion producers, suppliers, users, research personnel, public officials, consulting engineers, and contractors working together to promote the increased and more efficient use of asphalt emulsions.

AEMA presented its 2008 *Past Presidents' Award for Emulsion Excellence* to Texas Department of Transportation (agency), Ray Faris, Inc. (Texas contractor), and Ergon

1. *Jim Sorenson (right), Construction and System Preservation Team leader, Office of Asset Management, FHWA, is named an honorary member of ISSA by immediate past president Don Kaiden.* **2.** *ARRA Award for Excellence in Soil Stabilization is presented to Tim Antley, construction services manager, Dennis Corporation, by Greg Brown (left) and John Harvey Edwards (right).* **3.** *AEMA Past President's Award recipients are gathered; from left, AEMA president Bob Koleas of Western Emulsions, Inc.; Myles McKemie, Ergon Asphalt & Emulsions, Inc., holds the agency award on behalf of Texas DOT; Pat Garrett (Ergon) holds emulsion supplier award, and Gerald Gold, Ray Faris, Inc. accepts the contractor award for Ray Faris, Inc. Don Sjogren, SemMaterials L.P. (far right) also assisted with the project.* **4.** *ARRA immediate past president Greg Brown presents Ed Kearney with ARRA's highest honor, the Richard E. Lowell President's Award for his long-time service to asphalt recycling.*

Asphalt & Emulsions, Inc./SemMaterials (emulsion supplier), for FM 3240, San Antonio District. The project was commended because of its innovative use of emulsion for base stabilization, the challenges encountered due to severe flooding, and the strategic alliances demonstrated by contractor, agency and emulsion supplier.

During the 35th annual meeting held in San Jose del Cabo, AEMA membership elected Barry Baughman president for the 2008-2009 term. Baughman is technical director of ULTRAPAVE Corp., Inc., based in Dalton, Ga. A member of the AEMA board of directors since 2000, Baughman has previously served in the positions of secretary/treasurer, vice president, and annual meeting program chairman.

Other 2008-2009 officers elected were: vice president Francois Chaignon, Colas, Inc., Morristown, NJ; and secretary/treasurer, Bucky Brooks, Asphalt Materials, Inc., Oregon, Ohio. AEMA's immediate past president is Bob Koleas, of Western Emulsions, Inc., Dana Point, Calif.

ARRA

CANNON NEW ARRA PRESIDENT

The Asphalt Recycling & Reclaiming Association is an international non-profit trade association of contractors, equipment manufacturers, suppliers, public officials, and engineers engaged in the recycling and reclaiming of asphalt, using the positive economies of recycling to rebuild a stronger and safer network of highways, streets and roads across the country and around the world.

During its recent 32nd annual meeting held in Cabo, ARRA membership elected Dave Cannon president for the 2008-2009 term. Cannon is president of Cutting Edge Reclamation, LLC, of Murrysville, Pa., a family-owned

company founded in 1946 which specializes in cold in-place recycling, full-depth reclamation and soil stabilization of pavement subgrades and bases. He joined the ARRA board in 2002 after serving five years as the Cold Recycling Committee chair.

Other 2008-2009 officers elected were Billy Garrity, Garrity Asphalt Reclaiming Inc., Bloomfield, Conn., vice president; and Pat Faster, Gallagher Asphalt Corp., Thornton, Ill., secretary/treasurer. ARRA's immediate past president is Greg Brown, Brown & Brown, Inc., Salina, Kan.

ARRA presented its *John A. Miller Award for Excellence in Cold Planing* to Bruce Kolwicz, director of public works, City of Milford, Conn.; the *Charles R. Valentine Award for Excellence in Cold Recycling* to Tom Kazmierowski, P.E., Materials Engineering & Research Office, Ontario Ministry of Transportation; and its *Award for Excellence in Soil Stabilization* to Tim Antley, Construction Services Manager, Dennis Corp., for its work in Fairfield County, S.C.

KEARNEY HONORED WITH PRESIDENT'S AWARD

ARRA's *Richard E. Lowell President's Award,* awarded at the discretion of the president, was presented to Edward J. Kearney, P.E., Loudonville, N.Y., for his long-term involvement and work to advancing the goals of the association and the growth and technological advances of the industry. He recently retired after 44 years in the highway industry, the most recent 20 years involved with recycling of asphalt pavements.

Kearney worked for the NYS DOT for 15 years, eight of them in its Engineering Research and Development Bureau, and seven with the office of chief engineer. His work experience includes nine years with The Asphalt Institute as senior district engineer. He developed cold in-place recycling, NovaChip paving, micropaving and slurry seal processes for Gorman Brothers Inc., a major contractor in the Northeast. And he wrapped up his career as director of engineering/technical services for Wirtgen America Inc.

ISSA NAMES BERGER PRESIDENT

The International Slurry Surfacing Association is an international non-profit trade association comprised of slurry surfacing and Micro Surfacing, chip seal and crack treatment contractors, equipment manufacturers, public officials, research personnel, consulting engineers and associated industry interests, working together to promote the increased and more efficient use of slurry surfacing in roadway pavements.

During its 46th annual convention held at Cabo, ISSA elected Alan Berger, Valley Slurry Seal, West Sacramento, Calif., to the office of president for the 2008-2009 term.

Berger is vice president of Valley Slurry Seal and has been involved in the slurry and Micro Surfacing industry for 25 years. He's been involved in the ISSA Development Committee and on the board of directors for several years. Berger also is past president of the California Slurry Seal Association, and past chair of the California Pavement Preservation Task Group for Micro Surfacing/Slurry Seal.

Other 2007-2008 officers elected are Andrew Crow, MeadWestvaco, Charleston Heights, S.C., vice president; Tim Harrawood, Vance Brothers, Inc., Conway, Ark., secretary; Mike Buckingham, Strawser Inc., Columbus, Ohio, treasurer; and immediate past president is Don Kaiden, Ballou Construction Inc., Salina, Kan.

ISSA presented its 2008 *President's Award for Excellence* to member firm Intermountain Slurry Seal Inc., of Salt Lake City, Utah. The President's Award is presented in recognition of contracting achievements which exemplify the highest quality of workmanship, and compliance with the best standards of practice. Intermountain qualified for the award after completion of its work on the Type III and Type IV Slurry Project, Park City, Utah.

Northeast Pavement Preservation Partnership Now is Reality After December Meeting

By Ed Denehy
New York State Department of Transportation

The Northeast Pavement Preservation Partnership (NEPPP) now is a reality.

The NEPPP—which includes both public and private sector stakeholders—held its first official meeting in Warwick, R.I., at the Crowne Plaza Hotel Dec. 10-12, 2007. At the business session the by-laws were approved and new officers were elected.

NEPPP chair is Ed Denehy, New York State Department of Transportation; agency vice-chair is Ed Block, Connecticut Department of Transportation; industry vice-chair is Rod Birdsall, All States Asphalt, Inc.; and secretary-treasurer is Ed Naras, MassHighway (Massachusetts Highway Department).

The NEPPP also elected directors: two from industry, four from states and provinces, one from the Federal Highway Administration, and an at-large director.

The group held a roundtable discussion to consider focus areas and working group topics. More than 20 ideas were discussed at length before the group settled on the following working groups:

- *Promotion, Marketing, Public Relations and Success Stories*, with chair Rick Stone, Cimline
- *Specifications, QC/QA, Quality Contracting*, with chair Greg Doyle, FHWA
- *Treatment Performance, Cost-Effectiveness*, with chair Ed Naras, MassHighway, and
- *Workforce Development, Training, Education, and Certification*, with chair Rod Birdsall, All States Asphalt.

The NEPPP heard technical presentations from nationally recognized experts in pavement preservation. Topics included *Warm Mix Asphalt and European Scan Tour*, *Hot and Cold-in-Place Recycling of Bituminous Concrete Pavements*, *Concrete Pavement Preservation, Micro Surfacing Pooled Fund Stu*dy, *Crack Sealant Material Study, Thin Lift Overlay Research*, and *Air Quality Issues Relating to the Use of Asphalt Emulsions*. The group also heard presentations from a representative of each of the NEPPP's member states and Canadian provinces on their best practices for pavement preservation.

The Foundation for Pavement Preservation (FP^2) held its annual meeting and awards banquet in conjunction with the NEPPP meeting. Technical presentations sponsored by FP^2 included: *Sealer Binder Study Results, NHI Training, Research Roadmap for Pavement Preservation*, and reports from The National Center for Pavement Preservation and FP^2. At the awards banquet, FP^2 presented an award to Metro Nashville for its exemplary pavement preservation program (see *Administrative Buy-In Key to Nashville's Award-Winning Pavement Preservation*, Spring 2008, pp 11-12).

Minutes from the meeting are available on the National Center for Pavement Preservation's web site at www.pavementpreservation.org/northeast. The minutes include the complete list of directors, an attendance list with contact information, the NEPPP's by-laws, and information on joining the NEPPP. Alternatively, information on the NEPPP may be obtained by contacting any officer below:

- Ed Denehy, NYS DOT (edenehy@dot.state.ny.us)
- Ed Block, Connecticut DOT (edgardo.block@po.state.ct.us)
- Rod Birdsall, All States Asphalt (rbirdsall@allstatesasphalt.com), and
- Ed Naras, MassHighway (edmund,naras@mhd.state.ma.us), or alternatively
- Patte Hahn, National Center for Pavement Preservation (hahnp@egr.msu.edu).

U.S. Department of Transportation
Federal Highway Administration

FHWA Continues Regional Asset Management Conferences

This summer and fall, the Federal Highway Administration's Office of Asset Management will be hosting the last two of four free Regional Asset Management conferences that will bring the latest asset management technologies, research, and training to regions of the country.

The next conference will be held June 18–19 at the Hilton Garden Inn, Las Vegas, Nev., and the final conference will be held Sept. 10–11 at the Albuquerque Marriott, N.M.

The Regional Asset Management conferences will address a broad scale of asset management topics. They will focus on case studies from various agency implementation efforts, and will provide a venue for sharing ideas and experiences among state and local transportation officials.

These conferences will provide the tools necessary to implement asset management principles for improved decision-making techniques in your highway program.

Each Regional Asset Management conference will be 1 1/2 days long. Day 1 will provide a brief overview of various asset management topics, and a short best practice presentation about asset management.

Day 2 will provide more in-depth information on various asset management topic areas, as well as provide the opportunity to take the *Asset Management 101* course or to participate in training sessions or workshops on a particular subject (also see *Free Internet-Based Training Boost Spread of Preservation Best-Practice*, Spring 2008, pp 18-19).

This conference is being sponsored by FHWA, and there is no cost to attend. To register, please visit www.fhwa.dot.gov/infrastructure/asstmgmt/ramc.cfm.

For more information please contact Francine Shaw-Whitson via email at francine.shaw-whitson@dot.gov, or by phone at (202) 366-8028.

NCPP to Develop New Research Web Site for ETG Emulsions Task Force

By John B. Johnston, Technology Engineer
National Center for Pavement Preservation

Under a recent agreement with the AASHTO Transportation System Preservation Technical Services Program (TSP²) and the Federal Highway Administration (FHWA), the National Center for Pavement Preservation (NCPP) will develop a new web-based research clearinghouse for the Pavement Preservation Expert Task Group (ETG) Emulsions Task Force.

Initially, the new task force section will provide researchers with the ability to catalog their ongoing emulsions-related preservation research on the TSP² Web site. As the collection of ongoing research grows, a search engine will be added to facilitate utilization by preservation practitioners.

The task force web presence will serve as a one-stop clearing house for ongoing research, reference information, news, and discussions related to the use of emulsions in thin surface treatments. Roll-out of the new ETG Task Force section was planned for April-May 2008. Check in at the TSP² web site (www.tsp2.org) for future developments.

PME STUDY LEVERAGES INDUSTRY EXPERTISE

NCPP has been conducting an ongoing survey on the use of polymer-modified emulsions (PME) in thin surface treatments as part of its work with the FHWA Federal Lands Highway Division (FLH) and the FHWA Office of Asset Management.

The goal of the survey is to solicit feedback from industry suppliers, contractors, highway agencies, and other pavement practitioners on testing protocols, application methodologies, and specifications. Information from the survey will be used to develop a PME testing plan to be supported and implemented by a variety of industry participants who have already volunteered materials, funding or testing services.

To take part in the survey, email John Johnston at john1545@egr.msu.edu.

NEWLY FORMED ROCKY MOUNTAIN PARTNERSHIP

Working in conjunction with several Rocky Mountain area states and provinces, the NCPP and AASHTO TSP² are in the process of establishing the Rocky Mountain Pavement Preservation Partnership (RMPPP). The RMPPP marks the fourth regional partnership group formed to facilitate technical exchange between the states, industry, and academia in the area of pavement preservation (joining the Midwest, Northeast, and Southeast partnerships). An organizational meeting of the RMPPP will be held April 29-30, 2008, in Denver. For more information, call (517) 432-8220, or email ncpp@egr.msu.edu.

TSP² HOSTS PRESERVATION RESEARCH ROAD MAP

The FHWA, in partnership with AASHTO TSP² and the pavement preservation industry, has sponsored a study to delineate the most critical knowledge gaps in pavement and bridge preservation, and the research necessary to fill those gaps.

The output of that partnership effort—which was compiled via input received during three regional workshops—includes the development of a broad array of pavement and bridge preservation research needs statements which comprise the TSP² Research Road Map, now available at the TSP² web site (www.tsp2.org/roadmap/). (Also see New *'Road Map' Offers Pavement Preservation Path to Progress*, Spring 2008, p 15.)

Visitors to the web site may download the complete report, or view a tabularized list of the final research problem statements. A survey also may be completed, which is designed to gauge interest in each of the research statements through the tabulation of preservation practitioner votes. To participate in the survey, please visit: www.tsp2.org/roadmap/vote.php.

TSP² HELP DESK UPDATE

Activity associated with the TSP² pavement preservation Help Desk during the first quarter of 2008 included numerous requests for technical assistance from state and local agencies, Canadian provinces, and professional associations.

Unique web page views on the TSP² web site rose to over 150,000 during the period January through mid-March, reflecting a usership increase of 20 percent over the full fourth quarter of 2007. Help Desk requests during the period included inquiries into state preservation expenditures, Micro Surfacing and *Novachip* construction issues, the impact of roadway conditions on motorist safety, and technical questions covering fog and slurry seals among others.

NCPP TRAINING

NCPP offers a series of one- and two-day classes on various aspects of pavement preservation and asset management. Current offerings include the newly developed *Slurry Seal and Micro Surfacing* course, *Chip Seal Theory and Practice*, and *Applied Asset Management*. A complete, up-to-date course schedule can be viewed anytime at www.pavementpreservation.org/training/.

California Pavement Maintenance Guides Revised to Include Preservation Methods

By Larry Rouen and Shakir Shatnawi
Caltrans Office of Pavement Preservation
and R. Gary Hicks
California Pavement Preservation Center

The California Department of Transportation (Caltrans) has expanded its asphalt maintenance guide to include more pavement preservation methods, and has created a new guide for rigid portland cement concrete pavements.

The Caltrans Division of Maintenance—with assistance from the Pavement Preservation Task Group (PPTG), consulting engineers MACTEC, Inc., and the California Pavement Preservation (CP²) Center—has revised its *Maintenance Technical Advisory Guide* (MTAG) for flexible pavements with the addition of several new chapters, including chapters on in-place surface recycling and interlayers. Caltrans also has developed a new MTAG for rigid pavements.

Chapter topics for the hot-mix asphalt (HMA) flexible pavements MTAG now include *Materials, Treatment Selection, Crack Sealing and Filling, Patching and Edge Repair, Fog and Rejuvenating Seals, Chip Seals, Slurry Seals, Micro Surfacing, Thin Maintenance Overlays, Bonded Wearing Courses, Interlayers*, and *In-Place Surface Recycling*.

Chapter topics for the new PCC rigid pavements MTAG include *Surface Characteristics, Treatment Selection, Joint Resealing and Crack Sealing, Diamond Grinding and Grooving, Dowel Bar Retrofit, Partial Depth Repair*, and *Full-Depth Concrete Replacement.*

NEW TRAINING MODULES FOR NEW MTAGS

Along with these new chapters, training modules were developed for each topic.

Shakir Shatnawi welcomes training session attendees.

Kirsten Stahl discusses dowel bar retrofit.

Caltrans has expanded its asphalt maintenance guide to include more pavement preservation methods, and has created a new guide for rigid portland cement concrete pavements.

The first training session was held in Lodi, Calif., on March 17-21 for Caltrans and local agency personnel. Over 85 people from agencies and industry participated in the event, which was an intensive seminar that covered all chapters in sufficient detail to provide the participants with a working knowledge of all the pavement preservation techniques.

The training instructors were experts from industry, Caltrans, and the CP² Center. Copies of both the new flexible and rigid MTAGs were presented to the attendees, as well as a CD of all the presentation slides.

The reviews from the training session were very positive. Many of the agency folks said they would take the training materials back to their offices and use them to train their maintenance personnel.

Additional training will be scheduled in Southern California, and then an MTAG overview will be taken to each of the 12 district offices around the state.

If you're interested in receiving information on the MTAG or on future training classes, please contact Larry Rouen via e-mail at larry_rouen@dot.ca.gov.

Calendar of Events

2008

Jun 09-11	6th RILEM International Conference on Cracking in Pavements, Chicago, Ill.
Jun 24-28	7th International Conference on Managing Pavement Assets, Westin Hotel, Calgary
Jul 27-29	1st International Sprayed Sealing Conference, Adelaide, Australia
Sep 14-17	American Public Works Association (APWA) Congress and Exposition, Indianapolis, Ind.
Sep 24-26	International Symposium on Asphalt Emulsion Technology (ISAET 2008), Hyatt Regency, Crystal City, Va.
Nov 11-12	AEMA Asphalt Emulsions: User Focus, Indianapolis, Ind.

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MeadWestvaco
www.meadwestvaco.com 12

Pavement Technology, Inc.
www.pavetechinc.com 26

Scodeller Construction Inc.
N/A 14

SemMaterials, LP
www.semmaterials.com . . . . . .Outside Back Cover

Slurry Pavers Inc.
www.slurrypavers.com 6

Strawser Incorporated
www.roadsavers.com 18

Terry Asphalt Materials, Inc.
www.terryasphalt.com. 16

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www.reclamite.com 12

Ultrapave Corporation
www.ultrapave.com. 20

Western Emulsions
www.WesternEmulsions.com 4

Index to Advertisers

ASPHALT
All States Asphalt. 19
Associated Asphalt 10
Ergon Asphalt & Emulsions Inc. . .Inside Front Cover
Martin Asphalt . . . . . .Inside Back Cover
SemMaterials, LP. . . . . .Outside Back Cover
Terry Asphalt Materials, Inc. 16

ASPHALT ADDITIVES & MODIFIERS
BASF Corporation. 11
Blacklidge Emulsions, Inc. 18
Ultrapave Corporation 20

ASPHALT CEMENT & PRODUCTS
Terry Asphalt Materials, Inc. 16

ASPHALT EMULSIONS OR EMULSIFYING AGENTS
Cleveland Asphalt Products 25
Colas, Inc. 8
MeadWestvaco 12
Slurry Pavers Inc.. 6
Terry Asphalt Materials, Inc. 16
TRICOR Refining, LLC. 12
Western Emulsions 4

DATA COLLECTION
Fugro Consultants LP. 25

LAYDOWN CONTRACTORS
Illinois Pavement Preservation Management & Maintenance Association. 22
Scodeller Construction Inc. 14
Strawser Incorporated 18
Terry Asphalt Materials, Inc. 16

MAINTENANCE & REPAIR SERVICES
Corrective Asphalt Materials 20

PAINTS, STRIPING SERVICES & EQUIPMENT
Corrective Asphalt Materials 20

PATCHING
Deery American Corporation 14

PAVEMENT MANAGEMENT SYSTEMS
Corrective Asphalt Materials 20
Terry Asphalt Materials, Inc. 16

PAVEMENT PRESERVATION
Gee Asphalt. 20
Intermountain Slurry Seal Inc. 22
Pavement Technology, Inc. 26
TRICOR Refining, LLC. 12

PAVEMENT PRESERVATION PRODUCTS
Crafco, Inc. 3

REPAVING
Cutler Repaving, Inc. 14

TESTING LABORATORIES
H G Meigs, LLC 21

WATERPROOFING & DAMPPROOFING MATERIALS
Terry Asphalt Materials, Inc. 16

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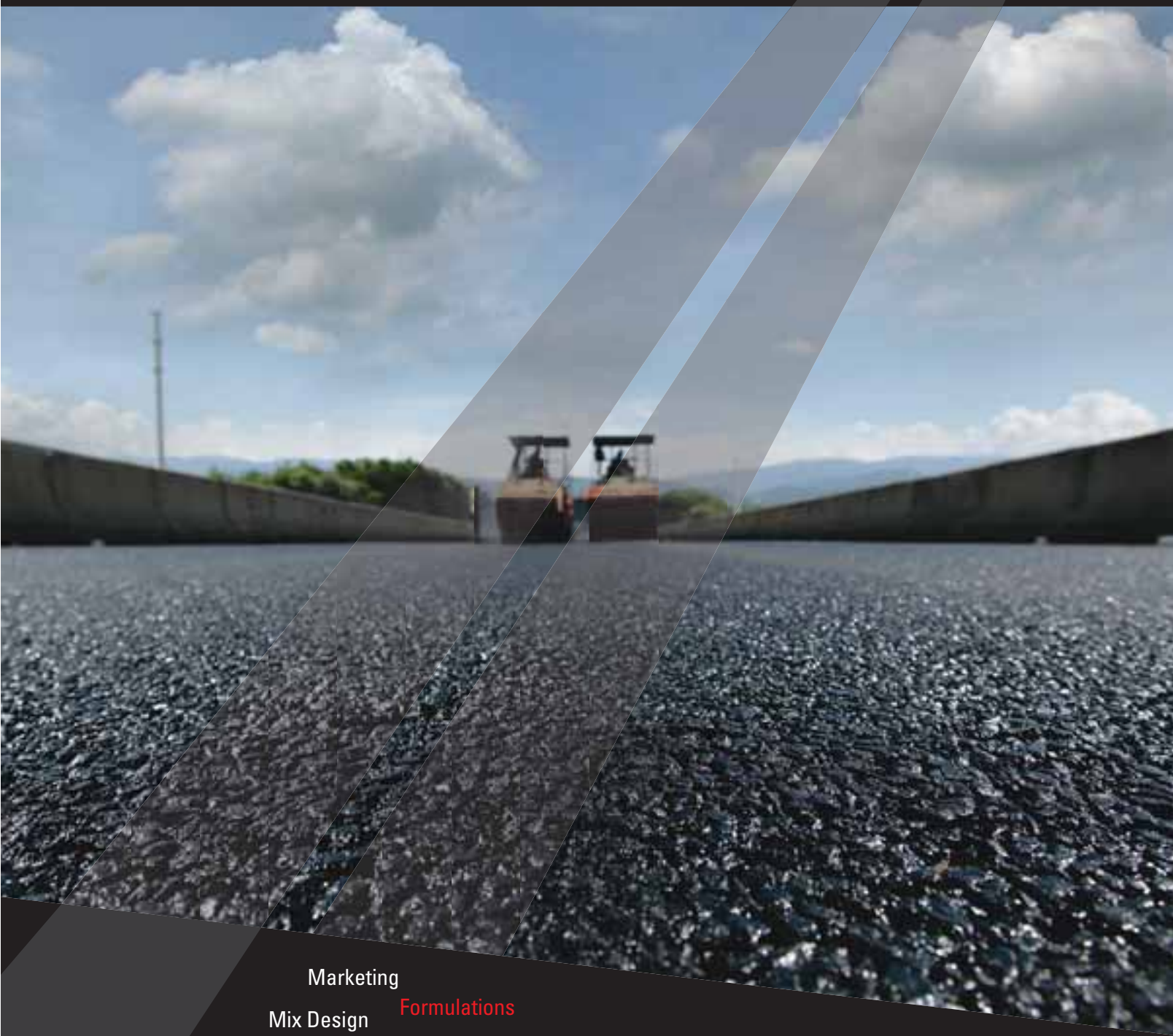

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