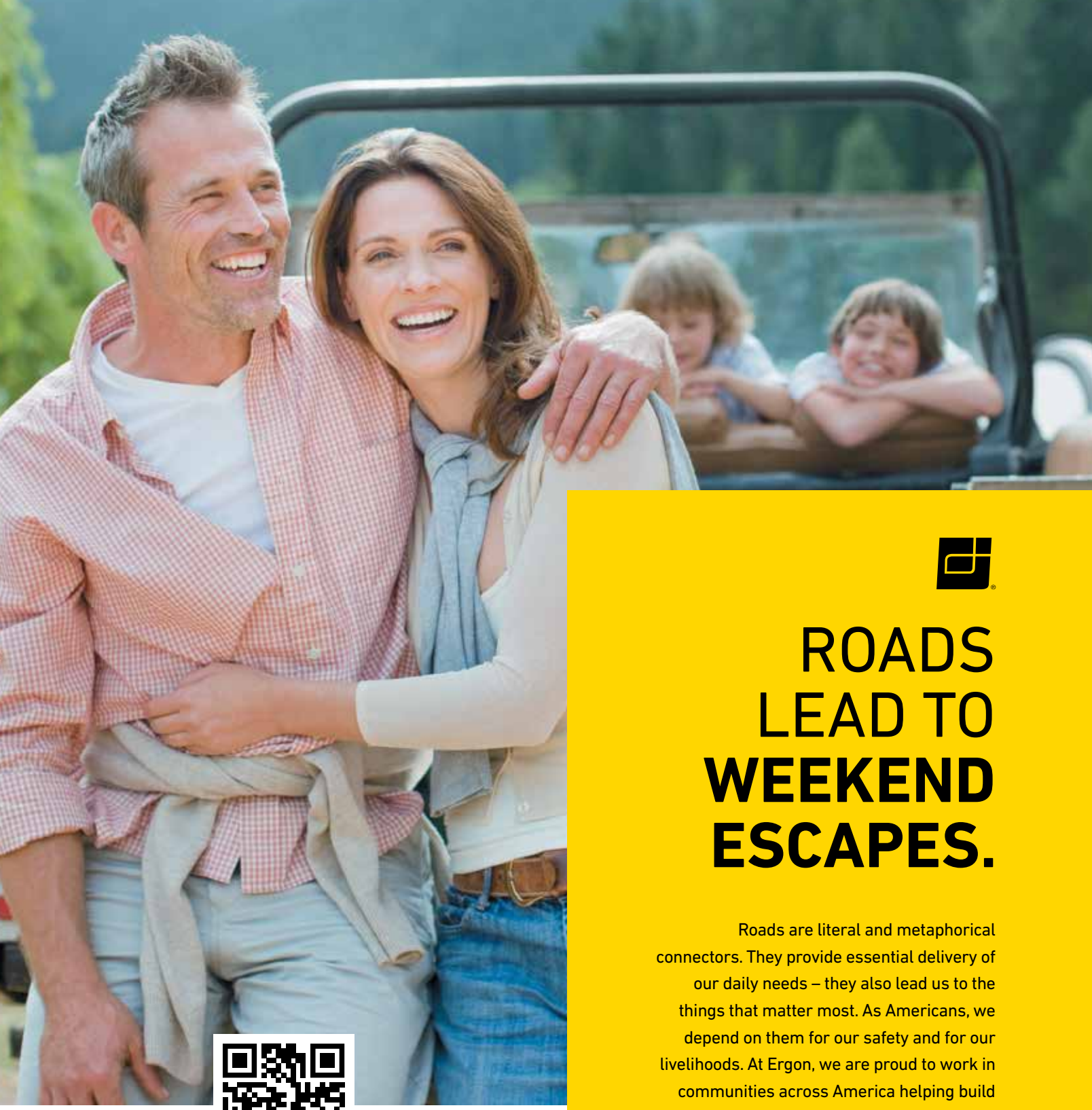
A PUBLICATION OF FP2 INC.

WINTER 2025

PAVEMENT PRESERVATION JOURNAL

INSIDE:



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On the Cover: Ultrathin Bonded Wearing Course (UBWC) is placed in one pass in City of Las Vegas by specialized Spray Paver. See article on urban pavement preservation pp 24–27.

IMAGE CREDIT: TOM KUENNEN

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ABOUT FP² INC.

FP² Inc. is a non-profit trade association organized under the Internal Revenue Code Section 501(c)6, and is supported by the pavement preservation industry, contractors, material suppliers and equipment manufacturers.

Formerly known as the Foundation for Pavement Preservation, FP² supports the adoption of pavement preservation at all levels of government, and works to ensure that pavement preservation becomes a part of road programs from coast-to-coast. It also supports valuable research in pavement preservation, and works in close cooperation with the Federal Highway Administration (FHWA), the National Center for Pavement Preservation (NCPP), and regional pavement preservation partnerships and state-based pavement preservation centers.

FP² also sponsors key promotional activity events, such as international and national pavement preservation conferences. It supports distribution of promotional information to support pavement preservation, such as brochures and the quarterly magazine *Pavement Preservation Journal*.

Please consider joining the leading-edge businesses and national associations above in making a financial commitment to the future of pavement preservation by supporting FP². For more information, contact FP² executive director Rick Church, (630) 230-1397, rickc@cmservices.com.

*Displayed organizations and businesses are limited to those contributing in the last six months of 2015

From Capitol Hill to Local Level: FP² Advocates for Sustainable Infrastructure

BY DAVE HENDERSON
President, FP² Inc.

In September, most of the FP² Board of Directors participated in visits to Capitol Hill, where we met with **Jimmy Ballard** from the House Transportation and Infrastructure Committee, **Rep. David Taylor** (R-Ohio), and the team of **Rep. Jefferson Shreve** (R-Ind.), among others. Discussions were very positive, and the energy to move forward quickly was palpable.

That said, with more than 10,000 comments submitted to the committee for consideration, there is still significant work ahead. Our conversations focused on our shared interest in advancing pavement preservation and recycling as key strategies to improve our nation's infrastructure.

We reiterated that pavement preservation is crucial for several reasons. Preservation improves life-cycle costs and stretches limited budget dollars, making it a cost-effective solution for maintaining infrastructure. By extending the service life of pavements through efficient and effective methods, preservation ensures roads remain in good condition for longer periods. Ultimately, this leads to safer, smoother roads for the traveling public.

ADVOCATING FOR LOCAL AGENCIES

On Capitol Hill, we advocated for **increased access to preservation and recycling knowledge, techniques, and resources for local agencies.** We emphasized the importance of this "technology transfer" given that 80 percent of roads are locally or county-owned, and 68 percent are classified as "rural." These smaller agencies often lack the staff, technical resources, first-hand experience, and funding to implement new pavement preservation and recycling technologies.

By increasing matching funds to Local Technology Assistance Programs (LTAPs), FP² aims to "de-risk" the evaluation of new technologies, critical steps toward improving the overall condition of the nation's transportation network.

Read more about our Capitol Hill visits in an article beginning on p 16.

SAVING HIGHWAY TRUST FUND

The Highway Trust Fund remains another significant concern for FP². With the insolvency date looming, ensuring stable funding is essential. Federal gas taxes have remained unchanged since 1993, while inflation has increased by 100 percent during this period. Additionally, fuel efficiency improvements mean vehicles contribute less per mile traveled.

FP² advocates for equity for all users, noting that the fees paid by electric vehicle owners do not match the standard requirements typically collected through gas taxes. FP² aligns with the American Highway Users Alliance (AHUA) in seeking a fair and easily implementable system based on centrally collected registration fees.

FP² also has been active in sharing updates at the regional Pavement Preservation Partnership meetings. These gatherings are rich with information exchange on best practices and innovative approaches. It is refreshing to see our agency partners focused on maintaining their network viability to support the continued movement of goods and people, all critical to our economy.

REMEMBERING JIM MOULTHROP

In closing, I want to recognize the passing of our friend and industry champion, **Jim Moulthrop**. Jim was an internationally recognized leader in pavement preservation and asphalt technology. He began his career in 1963 with the Pennsylvania DOT, where he worked for 20 years. He later joined Lubrizol Corp. and Exxon Chemical Americas, and then the University of Texas as program manager for the Strategic Highway Research Program (SHRP, 1987–1993).

Jim then joined Koch Materials Company promoting new pavement systems in eight southern states, where we worked closely together. In 2009, he became executive director of FP² and served as a senior consultant for Fugro. Jim was active in numerous professional committees and received many awards, including a tribute in the U.S. House of Representatives; see our article p 10 for an industry retrospective of his life and impact.

Jim will be greatly missed by all who had the privilege to work with him and learn from him. He will be remembered for his kindness, integrity, love of God, family, and country. Rest in peace Jim.

REMEMBERING JIM MOULTHROP 1939-2025

Long-time pavement preservation and recycling champion, and former FP² executive director, ***James S. Moulthrop, P.E.****, passed away Friday, Aug. 15. A full obituary appears on p 8 of our Fall 2025 issue and also may be viewed at https://fp2.org/jim-moulthrop/*

He retired in January 2022 after having served since 2009 as executive director of FP² Inc. For decades he was a pioneer in promoting environmentally sustainable pavement preservation and recycling, and played a national role in developing, promoting, and supporting initiatives that preserve America's pavements.

He is survived by his spouse, Martha "Marty" Moulthrop, and children Jamie, Meg, and Molly, but also leaves behind an important legacy, with deep impact on the industry pros with whom he worked. Here's a retrospective from individuals who remember Mr. Moulthrop's influence on their lives and the pavement preservation industry.


Congressional Record

PROCEEDINGS AND DEBATES OF THE 117th CONGRESS, SECOND SESSION

Vol. 168 WASHINGTON, TUESDAY, JANUARY 18, 2022 No. 11

House of Representatives

HONORING THE RETIREMENT OF JAMES S. MOULTHROP, P.E.

(Mr. THOMPSON of Pennsylvania asked and was given permission to address the House for 1 minute and to revise and extend his remarks.)

Mr. THOMPSON of Pennsylvania. Madam Speaker, I rise today to honor the retirement of James S. Moulthrop, P.E., a western Pennsylvania native and long-time Pennsylvania Department of Transportation professional whose impact has traveled well beyond the Keystone State.

Jim was born and raised in DuBois, Pennsylvania. He worked for two decades as a registered professional engineer with the Pennsylvania Department of Transportation in various positions, including district and regional soils engineer, chief field materials control engineer, chief of the Materials and Testing Division, and director of highway maintenance.

His work in the pavement preservation industry has transcended his professional role at PennDOT, Koch Materials, and as executive director at FPT, Incorporated. He has also furthered transportation policy as chairman of the Transportation Research Board's Committee on Pavement Maintenance and on the Executive Committee of Road and Paving Materials.

Mr. Moulthrop has spent his career encouraging comprehensive pavement preservation practices as not only a cost-effective approach to maintaining and preserving our roads, which stretches the Federal budget, but also because they benefit drivers each and every day by improving the quality and safety of our roads.

Madam Speaker, I will conclude by recognizing the impact Mr. Moulthrop's career has had in increasing the awareness of the value and importance of pavement preservation in the Commonwealth of Pennsylvania and States nationwide.

Presented at the 2022 AEMA · AERA · ISSA Annual Meeting
February 24, 2022 | La Jolla, California

Congressional Record recognition of Mr. Moulthrop on floor of U.S. House was presented to him on occasion of his retirement

Jim was many things to me: a trusted advisor, an advocate for advances in pavement preservation and for infrastructure in general, a man who understood the points of view of industry, agencies, and academia, and a fun-loving gentleman.

When I became director of the National Center for Pavement Preservation, Jim was the chairman of the NCPP Executive Committee. Jim understood industry's needs and challenges from his years leading the Foundation for Pavement Preservation (FP²). He helped me by sharing those insights so that NCPP could better include industry perspectives in our work with state agencies through the regional Pavement Preservation Partnerships.

Jim and I wrote several proposals together and Jim truly believed in collaboration. He was open to my comments and ideas, and gentle with his suggestions. They always led to a better product, and he made the work fun!

Mostly, I will remember Jim for his smile, for his laugh, and for all the ways he shared with all of us.

Judy-Corley Lay, P.E.
Retired Director, NCPP
formerly of North Carolina DOT

Honoring the passing of an industry friend, mentor, and lifelong spokesman for asphalt and pavement preservation. It has been a pleasure working with Jim for the last 25 plus years. He was always willing to help and support his colleagues and friends. His resume reads like a Who's Who and covers decades of achievements and awards. Thank you for your service my friend, you will be missed. Prayers for you and your family.

Don Weathers, J. Don Weathers, LLC
Former Executive Director,
Louisiana Asphalt Pavement Association

Jim was in many ways the pioneer of pavement preservation through the National Center for Pavement Preservation and FP². He was real great friend with whom we are able to develop international cooperations since the 1990s. A great and smart guy! I express all my sincere condolences to Marty and his family.

Jean-Claude Roffe
European Union Road Federation

Jim was a respected and compassionate individual who made significant contributions to our industry and touched the lives of many. His presence will be greatly missed. My heartfelt condolences go out to his family.

Stephane Charmot
Ingevity Corporation

Jim Moulthrop was one of the stars on our pavement preservation team and did great work to help us [at FHWA] to enable the use of federal funds for preservation projects. I was fortunate to serve with a number of stars in the private sector and the governmental

sectors who knew the truth about the economic and environmental benefits of pavement preservation, and the need for good engineering throughout the entire design and construction process. We all worked hard to share the mantra's of our movement: "Good Roads Cost Less; and the need to select "The Right Treatment on the Right Road at the Right Time."

I am privileged to have worked with Jim. Condolences to Marty and all of Jim's family and friends.

Steve Mueller, P.E., Industry Consultant
Former Pavement and Materials Engineer, FHWA

I remember the valuable insights and timely support Jim provided during our Transportation Research Board (TRB) meetings. His leadership and expertise in pavement preservation inspired me, and I'll miss his guidance. Though Jim is gone, his legacy lives on through the countless lives he touched professionally.

DingXin Cheng, Ph.D., P.E.
Director, California Pavement Preservation Center
California State University-Chico

Jim was an incredible mentor to me. He always took the time to pause and chat with me, and to share his experiences as I continued to develop my thoughts and perspectives on pavement preservation. He was never rushed and always welcoming.

I specifically remember him working with Judy Corley-Lay and me on the TR News 339 https://onlinepubs.trb.org/onlinepubs/trnews/trnews339toc.pdf), which had a series of articles on pavement preservation, maintenance, and rehabilitation. It was a no brainer to ask them to write the article, *The Preserved Road Ahead,* as they are both titans of all things pavement preservation (https://nap.nationalacademies.org/read/28220/chapter/12). With everything he did, he was prompt and thorough with all deadlines.

Dr. Andrew Braham, P.E.
Professor of Civil Engineering
University of Arkansas-Fayetteville

Jim Moulthrop was deeply committed to the advancement of pavement preservation. I considered him a mentor and dear friend. Over the years he was instrumental in the support and encouragement of the National Center for Pavement Preservation, and served on the Advisory Board from its founding in 2003. Jim personified honesty and strong moral principles, but also enjoyed a fun time. Though Jim is no longer with us, his legacy of love for the profession, unwavering compassion, respect for others, and friendship will continue to inspire us each day.

Larry Galehouse, P.E., Director Emeritus
National Center for Pavement Preservation

With the passing of Jim Moulthrop, we've lost a fine proponent for our industry; a person who was willing to stand up and speak his mind clearly about the preservation of infrastructure. He truly believed in 'the right treatment on the right pavement at the right time' and wasn't afraid to drill that mantra into every member of every agency he worked with. I can hear his voice saying it to me

At FP²'s annual hospitality suite at the Transportation Research Board meeting in D.C. are John Casola, Netzsch Instruments North America, and Jim and Marty Moulthrop

even now and I know we'll continue educating newcomers to our industry on his behalf to keep our roadways and paving systems strong, as he'd want us to do.

Sandy Lender
Editor, *AsphaltPro* Magazine

I thoroughly enjoyed my time working with Jim Moulthrop during my tenure on the FP² Board. He was a gentleman at all times, extremely knowledgeable on the pavement preservation world, and simply a joy to be around. Jim always had a smile on his face, and I always looked forward to talking to him. I often wondered how Jim knew so many people, and noticed they were always willing to help Jim advance the cause of pavement preservation. He will truly be missed.

Scott Bergkamp,
President, Bergkamp Inc.
FP² President 2019-2021

I first met Jim at my D.C. office circa 2000. He wanted to form a new trade association for pavement preservation that could do lobbying (as well as research). We quickly became good friends, talked regularly and I enjoyed dining with him whenever he came to D.C.

Jim was a lion of a man, both literally and figuratively. He could eat more and drink more than me any night! And he was known far and wide across the U.S., in Europe, and even in China, as the foremost expert on pavement preservation. Whenever

In 2012, FP² executive director James Moulthrop is flanked by FP² director Peter Grass, P.E., then-president of The Asphalt Institute, and FP² president Mike Buckingham, as he is inducted into the FP² Pavement Preservation Hall of Fame

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someone "new" came into an FP^2 meeting, they knew Jim and greatly respected him. Jim was also a great husband and a great father. My wife Mary and I enjoyed many wonderful times with Jim and Marty, and meeting their children, during their annual visits to Bethany Beach, Del.

Jim, I hope that you are up there beyond those heavenly gates and enjoying a good martini!

David Baker, David H. Baker LLC
Legal Counsel to FP^2/AEMA/ARRA/ISSA

I met Jim in 2000 when I was a contractor and he was an important asphalt researcher and leader in the pavements industry. I was trying to push forward a research foundation for pavement preservation.

Jim Sorensen at FHWA told me I needed to get together with Mr. Moulthrop. To my surprise Jim was easy to communicate with and receptive to pavement preservation. **Bill Ballou** and I nudged Jim to help us with the Foundation for Pavement Preservation [FP^2's predecessor].

Jim was working for Fugro shortly after that and Fugro took over the management of the foundation. **Gerry Eller** was hired to run the foundation as executive director. Jim's involvement gave the foundation immediate credibility, more than it ever had, and people began to pay attention to what was going on.

In 2009 at a foundation board meeting Jim told us that Gerry was leaving his post, and the board needed to find a new executive director. There was only one person for the job, and that was you, Mr. Moulthrop, much to his surprise, I think! That's when the foundation took off. His leadership and credibility made all the difference.

We worked closely together for some time. He was my leader and my mentor, in addition to becoming a great friend. He made my wife and I go to a "white-out" Penn State football game, which was bad enough, but then he made me drive half the night in the mountains of Pennsylvania back to his hunting camp. I will miss him more than I can express.

Mike Buckingham, Consultant
Formerly of Strawser Inc. and COLAS
FP^2 President 1993–1995 and 2009–2011

Jim Moulthrop was instrumental in the launch and execution of groundbreaking preservation research at the National Center for Asphalt Technology at Auburn University. He and I were fast friends, as he was with many people in our industry, and we shared a passion for safe and sustainable asphalt pavement at the lowest possible life cycle cost. His commitment to infrastructure was only exceeded by his commitment to his family and friends. Jim was a friend, a mentor, and one of my favorite people. He will be missed by many. Godspeed to you!

Buzz Powell, P.E.
Technical Director, Asphalt Pavement Alliance
Former NCAT Associate Director

It's very difficult to describe Jim without calling him a great person. He was ethical, honest, and respected by everyone who knew him. His career path from his beginning at PennDOT to

In January 2022, FP^2 founding associations honored FP^2 executive director emeritus Jim Moulthrop in their own way; from left, ISSA president Chuck Ingram with ISSA Special Recognition Award; AEMA president Bob Huitt with AEMA Hall of Fame plaque; Mr. Moulthrop with framed excerpt from Congressional Record; ARRA president Jonathan Pease with ARRA Special Recognition Award; and FP^2 president Tim Harrawood

SHRP to Koch Materials gave him the perfect background to be the executive director of FP^2.

He was one of the most well-known and respected people in the entire highway pavement industry. His involvement AASHTO, ASTM, AAPT, TRB, SHRP, and FP^2 led to his incredible network of friends and colleagues.

It was an honor for me to be on the board of FP^2 and be president for three years. Working with Jim directly, and promoting FP^2 and its mission of communication, technical advancement and advocacy was exciting. He molded FP^2 and pavement preservation into what it is today by leading the relationships with agencies, industry, and government relationships.

His relationship and respect with NCAT, along with participating states, were keys in developing the work plans and execution of the test sections in Alabama and Minnesota. The results will forever define the value of the treatments and the life extension value of pavement preservation. His work and leadership will always be a part of pavement preservation and FP^2. I will be forever grateful to have known and worked with Jim.

Rod Birdsall, P.E.
All States Materials Group
FP^2 President 2013–2015

I first had the pleasure of meeting Jim at the opening of the first hot mix asphalt drum operation in Pennsylvania, when E.J. Breneman Inc. installed that plant at its Sinking Spring, Pa., quarry on July 25, 1979. Jim was Pennsylvania DOT liaison to the hot mix industry at that time. He was instrumental in getting the plant erected and into production.

Later in life, when I was ARRA president, I worked with Jim and ARRA to build FP^2 and helped in establishing the Center for

At January 2018 TRB Standing Committee on Pavement Preservation meeting are, in foreground, then-FP^2 president Rod Birdsall, P.E., All States Materials Group (left), and FP^2 executive director Jim Moulthrop, P.E. (right)

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Pavement Preservation at Michigan State University. Mike Krissoff and I attended the opening of the center in East Lansing.

Mike Polak, President
E.J. Breneman, L.L.C.

My association with Jim spanned the years in which we worked together to advance the pavement preservation industry, and specifically in his role as the FP^2 executive director. Jim excelled as a staunch promoter of pavement preservation, and his experience with transportation agencies and appointed and elected officials not only opened doors, but brought instant credibility. His relationships in Washington helped assure the success of FP^2 while also meeting the needs of agencies at all levels. Jim's passion and commitment are already missed – these will be his legacy.

Pete Grass, P.E.
Former President
The Asphalt Institute

With the passing of Jim on Aug. 15, the pavement community at large, and preservation in particular, lost a stalwart and a recognized leader. In addition to his successful career in a broad range of pavement-related fields, Jim was a well-respected leader in promoting pavement preservation. As such, he was a founding member of the National Center for Pavement Preservation (NCPP) at Michigan State University and chaired its Advisory Panel.

I had personally known Jim for close to 30 years through our common involvement and service on several professional associations, committees and boards such as TRB and ASTM. In all my dealings with him, I found that he was more than an accomplished engineer; he was a friend, mentor, resource, and an inspiration to many who knew him or were privileged to work alongside him. Among his many positive traits, Jim had a warm, caring personality and a positive, outgoing attitude.

While we mourn his loss, we also celebrate the privilege of having known him and we honor his memory by carrying forward the lessons he imparted with the same dedication, passion, and compassion he exemplified every day. He will certainly leave behind a lasting void on both personal and professional levels.

Dr. Bouzid Choubane, P.E., Director
National Center for Pavement Preservation

Jim Moulthrop's wealth of experience in the pavement preservation and recycling industry – coupled with his intellectual curiosity and large Rolodex of contacts from around the country – made him a valuable resource for the industry.

He was diligent in working through issues and moving the ball forward for FP^2, most notably taking a leadership role in ensuring that pavement preservation and recycling was eligible for federal funding everywhere in the nation. In addition to his professional attributes, he was a gracious man with whom it was always a pleasure to spend time. He will be missed by those who called him a friend, which includes a very wide swath of the pavement preservation and recycling industry.

Tracy Taylor, Principal
Alignment Government Strategies
FP^2 Legal Counsel

I first met Jim Moulthrop while he was maintenance engineer for PennDOT and Cutler was introducing hot in-place recycling to the state of Pennsylvania. Back then I knew nothing and nobody, but Jim took the time to educate me about how things worked not only in Pennsylvania, but also in other states. He never once looking at his watch during that first two-hour meeting!

I was able to stay in touch with Jim throughout his career and reconnected during his Koch years, primarily because his wife's sister was and still is the house mom for the Theta sorority at the University of Kansas, and they visited my hometown of Lawrence frequently.

Jim was the quintessential gentlemen, both personally and professionally, and his career reflected a faith-filled life of integrity dedicated first to his family and second to his profession, where everyone he met was better for having known him.

John Rathbun
Vice President, Sales
Cutler Repaving Inc.

I first met Jim when he was with Exxon Chemical Americas. I remember Jim as a man who "got it." He always saw the bigger picture and beyond. He was a voice of reason in an extended industry of individual but related niches, all working toward the same mantra…preserving the right road, with the right treatment, at the right time.

It's been a long time since. When I retired from managing AEMA, ARRA, ISSA, and PPRA in 2016, I pretty much lost touch with an industry with which I'd been involved since 1985. My memory may be a bit fuzzy, but I recall an annual spring board meeting in Annapolis, during which our boards met individually and jointly to discuss and act upon matters of mutual interest.

The future of pavement preservation and, more importantly at the time, the future of the Foundation for Pavement Preservation, were key agenda items. Mike Buckingham and Jim were there, at the Annapolis Yacht Club, and the three of us led the proposal that the foundation, originally FPRMR, had accomplished its mission of making the concept of pavement preservation a household "word" and that the time was right to go in a new direction.

After much consideration, it was unanimously approved to launch FP^2 – for Pavement Preservation – the backbone of which would be a lobbying effort at the federal level. The rest is history, and it wouldn't have happened without the strong work by Jim Moulthrop in the trenches and eventually in his FP^2 leadership role. I was privileged to have known Jim for over 30 years and to have worked with him on what has proven to be a winning strategy.

Mike Krissoff
Cap'n Mike's Full Moon Adventures LLC
Annapolis, Maryland

View the 2022 tribute to Mr. Moulthrop by Rep. Glenn Thompson (R-Pa.) on the floor of the U.S. House via the QR code at right

September Capitol Hill FP² Outreach Focuses on Local Agencies, Trust Fund

BY TRACY TAYLOR

Delegates from FP² and its founding associations the Asphalt Emulsion Manufacturers Association (AEMA), Asphalt Recycling & Reclaiming Association (ARRA), and International Slurry Surfacing Association (ISSA) traveled to Washington D.C. Sept. 10–11 to advocate for pavement preservation on Capitol Hill as the expiration of surface transportation reauthorization legislation looms Sept. 30 of next year.

FP² is advocating for pavement preservation and recycling industry priorities in next year's bill. The delegates met primarily with House Transportation and Infrastructure Committee staff, and offices representing members of Congress who sit on the Transportation and Infrastructure Committee. This is important as nearly half of the members of the Transportation and Infrastructure Committee are new to the committee, and many to Congress, since passage of the IIJA

FP² INSIDE THE BELTWAY

Visiting Washington D.C. on behalf of pavement preservation were FP² president **Dave Henderson**, Asphalt Materials Inc.; **Mitch Baldwin**, National Asphalt Pavement Association (NAPA); FP² vice president and director **Bobby Betsold**, All States Materials Group; **Donna Kwapis**, Nouryon; **Jonathan Pease** and **Diana Gracar**, Rock Solid Stabilization & Reclamation; **Mike Szymborski**, Strawser/Terry Asphalt; and FP² executive director **Rick Church,** and legal counsel **Tracy Taylor**, Alignment Government Strategies.

House and administrative offices visited included **Tony Frye**, associate administrator for policy and external affairs, Federal Highway Administration (FHWA); **Rep. Rob Bresnahan** (R–Pa.); **Rep. Chuy Garcia** (D–Ill.); **Jimmy Ballard**, House Committee on Transportation and Infrastructure; **Rep. Pete Stauber** (R–Minn.); **Rep. Dave Taylor** (R–Ohio); **Rep. Jeff Hurd** (R–Colo.); **Rep. Daniel Webster** (R–Fla.); **Rep. Bruce Westerman** (R–Ark.); **Rep. Brad Knott** (R–N.C.); **Rep. Doug LaMalfa** (R–Calif.); **Rep. Jeff Van Drew** (R–N.J.); and **Rep. Jefferson Shreve** (R–Ind.).

IMPACT OF SHUTDOWN

As 2025 draws to a close, Washington D.C. is settling into a new rhythm with the Trump administration. This is occurring in all substantive areas, including transportation.

Despite the hiccup of a government shutdown on Oct. 1, the seventh shutdown since 1995 and one of only four lasting a week or more, Congress and the administration are beginning the process of working on surface transportation reauthorization legislation which they hope to have signed into law well in advance of the Sept. 30, 2026 deadline when the current highway bill, the Infrastructure Invest and Jobs Act (IIJA), expires.

At the U.S. DOT, 11,322 employees were furloughed out of its total workforce of 44,829. The remaining 33,507 employees would be "excepted" and continue to work throughout a shutdown, as many of these employees were critical Federal Aviation Administration employees such as air traffic controllers.

In addition to the furloughed employees, it's important to remember that approximately 7 percent of staff at the DOT took the administration's deferred resignation offers. For DOT as a whole this resulted in over 4,100 employees taking the offer. Specifically, at FHWA, 760 employees, or about 26 percent, took the deferred resignation. Thus, DOT and FHWA have been operating with fewer employees.

Nonetheless, Trump administration leadership is settling in. Importantly, on Sept. 18, the U.S. Senate confirmed **Sean McMaster** as the 22nd administrator of the FHWA, where he will oversee the agency responsible for supporting state, local, and tribal governments in the design, construction, and maintenance of the nation's highway infrastructure. He has nearly two decades of federal service and transportation policy experience.

McMaster has previously served as deputy chief of staff at U.S. DOT, where he helped manage department-wide priorities and supported secretary-level decision-making. Before that, he was deputy assistant secretary for Congressional affairs at DOT, and also worked on Capitol Hill, serving as professional staff to the U.S. House Committee on Transportation and Infrastructure and with Congressman John L. Mica (R–Fla.) as deputy chief of staff. His

Visiting the Committee on Transportation and Infrastructure on Capitol Hill in September are Tracy Taylor, Jonathan Pease, Bobby Betsold, Donna Kwapis, Dave Henderson, Mike Szymborski, Rick Church, and Mitch Baldwin

At Rep. Dave Taylor's office are Tracy Taylor, Mike Szymborski, Rep. Taylor, Donna Kwapis and Dave Henderson

background should make him an invaluable voice for DOT Secretary Sean Duffy and the president as the reauthorization bill inches forward this year and into 2026.

MOVING REAUTHORIZATION FORWARD

House Transportation and Infrastructure (T&I) Committee Chairman **Rep. Sam Graves** (R–Mo.) and Environment and Public Works Committee Chairwoman **Sen. Shelley Moore Capito** (R–W.V.) are planning to introduce their respective versions of the next surface transportation reauthorization later this year.

Chairman Graves has indicated his goal is to mark a bill up in committee and pass it in the House by the end of the year or in early 2026, with Chairwoman Capito indicating she too would like to introduce and mark-up a bill well in advance of the Sept. 30 deadline.

FP^2 is advocating for pavement preservation and recycling industry priorities in the bill. Both committees have solicited comments from their respective members and stakeholders, as has the administration. During this process, the House committee received over 5,000 comments, and the administration receiving over 10,000 comments. Both Congress and the administration are aligned in their desire that the bill be more strictly transportation-focused, provide states flexibility, and streamline regulatory requirements.

TRUST FUND INSOLVENCY LOOMS

Importantly for the next highway reauthorization, the Highway Trust Fund will become insolvent in 2028. What this means is that in subsequent years, if a substantial change is not made, the fund will be competing for general fund monies, with other critical funds facing shortfall such as Social Security, Medicare and Medicaid.

Finding a long-term sustainable solution to the Highway Trust Fund is critical to ensuring there is an adequate and predictable source of funding for the nation's roads. As one of its top priorities, FP^2 has been advocating for a solution – supported by many in the industry – which would repeal all gas taxes and replace them with an annual registration fee based on vehicle weight. This would ensure all vehicles, regardless of engine type, pay into the fund. It also would increase funding naturally, as the number of cars on the road increases, and is scalable (easily expanded).

The proposal can be implemented relatively quickly and easily, using an existing system called the *International Registration Plan*. The proposal has broad support among the highway construction community and highway users. As the saying goes, a rising tide raises all boats, so finding a sustainable, reliable solution to the HTF shortfall is critical, particularly for an industry, such as preservation and recycling, that relies on road asset owners to plan into the future in order to effectively maintain their roads.

EMPHASIZING LOCAL LEVEL

In addition to discussions about the highway trust fund, on the HIll, FP^2 educated policy makers about its other pavement preservation and recycling priorities.

At the meetings this fall, FP^2 emphasized the importance of pavement preservation and recycling and the need for greater awareness and knowledge of its use and benefits, particularly at the local level.

In particular we discussed:

- **FP^2's proposal to** amend the **Local Technology Assistance Program** to increase exposure to innovative pavement preservation and recycling processes, materials and technologies to all LTAPs with an additional federal share in rural areas
- **Need for pavement** preservation and recycling to be included in the IIJA carbon reduction program, if maintained
- **Importance of maintaining** the *Buy America* exclusion for pavement preservation materials; and
- **The need for better** federal funding for construction work zone safety.

FP^2's advocacy is only as strong as its members. We welcome the opportunity to work with you to increase exposure and understanding of your business and the industry to the policymakers in your locations.

Taylor is principal, Alignment Government Strategies, Washington, D.C., and is legislative counsel to FP^2 Inc.

Preservation-tailored materials for hosting a visit can be found at https://fp2.org/advocacy-tools-talking-points-for-pavement-preservation/ or by using the QR code below.

For more specific information please contact Rick Church or Tracy Taylor and we can discuss the process in more detail.

‘Worst-First’ Takes Back Seat During Two Decades of New Jersey Preservation

BY ROBERT J. BLIGHT

In the early 2000s, the condition of the pavements comprising the New Jersey State Highway System (NJ SHS) – the portions of the roadway network owned and maintained by New Jersey DOT – were in disrepair.

Nearly half of the pavements were in poor condition, a little less than half in fair condition, and a small amount in good condition. The American Society of Civil Engineers (ASCE) annual report ranked New Jersey pavements among some of the worst in the nation.

NJ DOT was using a “worst first” approach to managing the roadway pavement network. Investment in the pavement program was inadequate, inconsistent annually, and very little funding was going into preserving the good pavements.

NJ DOT only awarded a couple of pavement preservation projects each year consisting of some micro surfacing contracts and some concrete pavement repair and diamond grinding contracts, but what little preservation was being done was very successful in restoring the functional condition of the roadways and extending the life of the pavement.

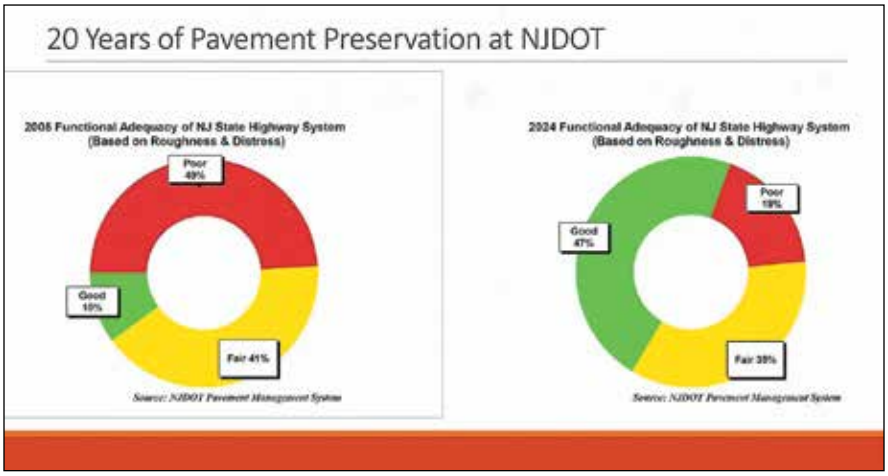
Most of NJ DOT resources were focused on milling and resurfacing, some major rehabilitation, some reconstruction, and a whole lot of reactive maintenance. The SHS pavement network conditions were not getting better but were getting worse.

‘PERFECT STORM’ HALTS DECLINE

Around the mid-2000s, a perfect storm of events took place that altered the declining trend of the NJ SHS pavements.

- **First, the NJ DOT** leadership realized the dire need to make major changes to turn the tide and begin to improve the conditions of the NJ SHS. NJ DOT leadership started by building a comprehensive Pavement Management & Design unit by merging two separate units: the *Pavement Management* unit that resided in Maintenance and Operations which collected all the network pavement condition data, and the *Pavement Design* unit that resided under the Geotechnical Engineering unit, which provided pavement designs and technology implementation for department projects.

  The goal was to focus all the internal pavement resources and expertise into one synergistic team under the same umbrella to maximize interaction and cooperation between the two units to boost pavement project output and efficiency.



Two decades of pavement preservation in New Jersey resulted in substantial increase in ride quality

- **Second, around this time** the Federal Highway Administration (FHWA), in collaboration with the National Center for Pavement Preservation (NCPP), were performing appraisals of each state highway agencies’ pavement preservation programs to assess the effectiveness and efficiency of their pavement preservation efforts.

  NCPP and FHWA did their appraisal for NJ DOT and determined that although our minimal efforts were effective, **we needed a dedicated preservation program and top to bottom buy-in from organization leadership and the public**. This would require a major shift in thinking and funding allocation that supports an asset management approach.

  Additionally, as part of the FHWA strategic focus on preservation, NJ DOT developed an agreement with Rutgers University Center for Advanced Infrastructure and Transportation to provide a **Pavement Support Program** that would assist NJ DOT to integrate research and implementation of practical innovations that enhance pavement and asset management strategies.
- **Third, around the same** time, key NJ DOT leaders and subject matter experts attended and provided presentations at events such as *Alliance for Action* and other forums, to inform on the poor conditions of NJ DOT pavements, the dire situation this presents to our economy, and the steps needed to change the course which would result in improved road conditions and a stronger NJ economy.

Alliance for Action is a non-partisan, non-profit association representing thousands of influential leaders from business, labor, government, utility, education, professional, and other New Jersey leaders whose mission is to improve New Jersey’s economy and create jobs by promoting

environmentally friendly capital construction and infrastructure investment.

This was an important step of securing support from influential decision makers in the state for the appropriate level of increased funding to deliver an annual pavement program that would be robust enough to improve roadway conditions.

ASSET MANAGEMENT ARRIVES

With this increased funding came the **asset management approach** and requirement of **preserving and extending the lives of good roads as well, not only treating the worst roads first**. A balanced programmatic approach to system improvement was implemented that optimizes funding across preservation, resurfacing, rehabilitation, and reconstruction to achieve a desired state of good repair systemically in New Jersey that would set it on the path to success.

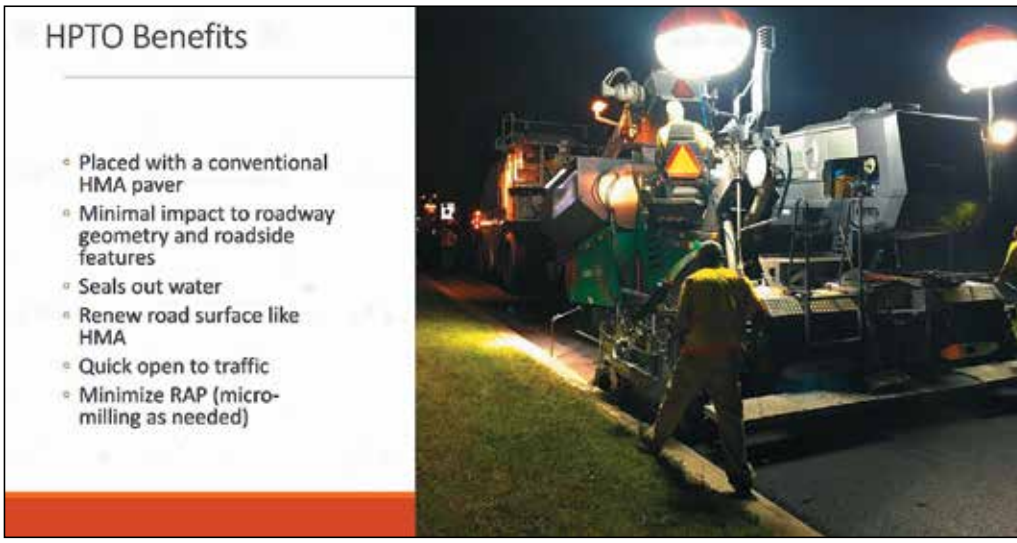
In 2007, NJ DOT adopted an Asset Management approach to maintaining and improving the NJ SHS pavements. As part of this new approach, **a new line item for pavement preservation** was included in the Statewide Transportation Improvement Program (STIP) with dedicated funding to support it.

The STIP serves two purposes. First, it presents a comprehensive, one-volume guide to major transportation improvements planned in the State of New Jersey. Second, it serves as the reference document, required under federal regulations (23 CFR 450.216), for use by the FHWA and the Federal Transit Administration in approving the expenditure of federal funds for transportation projects in New Jersey.

From this point forward NJ DOT began to gradually **increase the number of treatments in its toolbox** for improving poor to fair pavements through resurfacing, rehabilitation, and reconstruction, as well as **growing the preservation toolbox** and preserving more fair and good pavements. With this balanced asset management approach, the NJ SHS began to improve. The lane miles of pavement that could be and were treated with preservation increased, extending pavement life and keeping more good roads in good condition longer.

EMBRACING NEW TREATMENTS

Working with research partners at Rutgers-CAIT and the asphalt industry, new treatments like *High Performance Thin Overlay* (HPTO) were adopted that really improved the return on the investment in preservation.



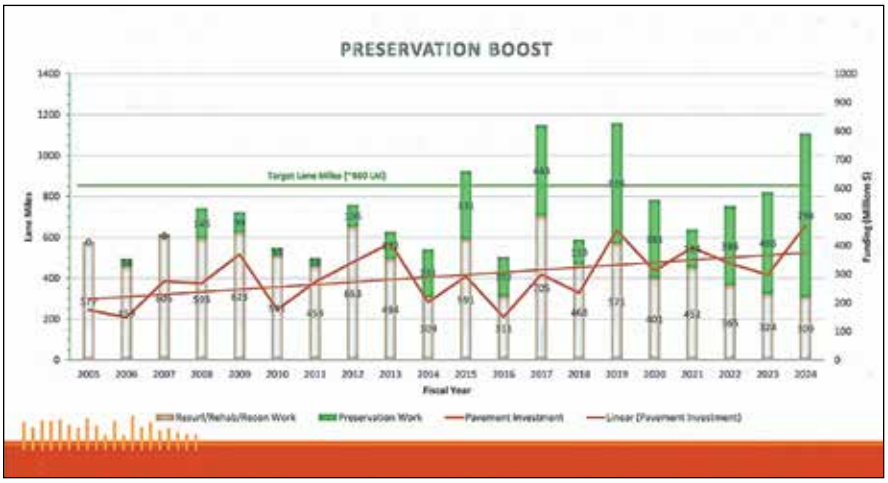
High performance thin overlay (HPTO) treatments have improved pavement ROI in New Jersey

HPTO is a thin asphalt overlay that is produced using high quality aggregate and polymer modified asphalt binder that's constructed using conventional asphalt paving equipment and compaction.

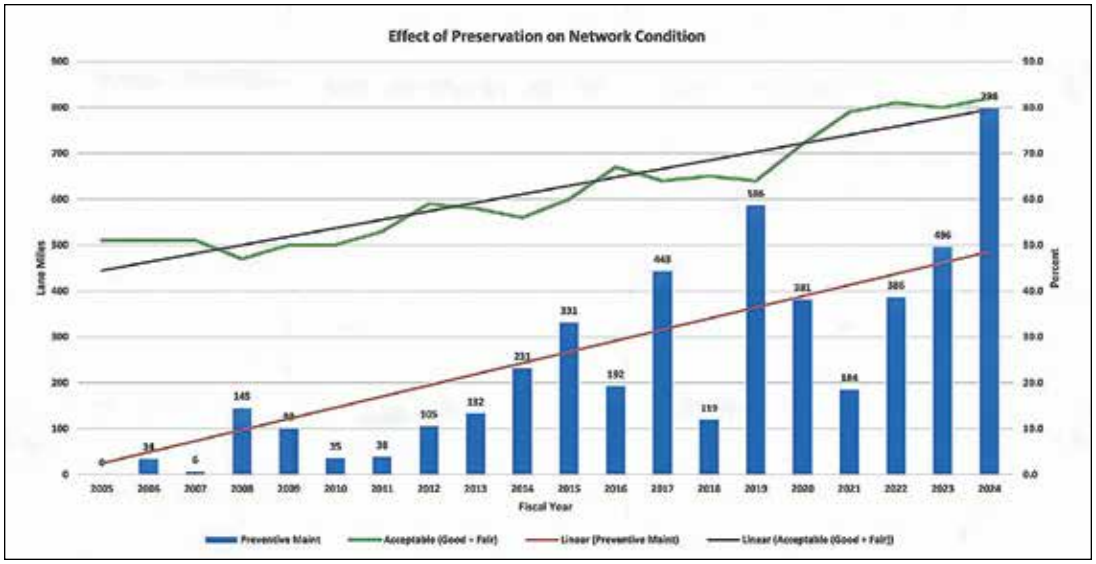
The material is produced like other hot mix asphalt with properties like a fine-graded mixture, but has some additional mixture design and production requirements: The HPTO material must be rut resistant as tested by APA Rut Tester, and the HPTO material must be crack resistant as tested by the Overlay Crack Test.

This improvement in mixture testing requirements results in better performance, a very durable and effective thin asphalt overlay treatment. When NJ DOT compared HPTO to the standard resurfacing – which involves cold milling to remove 2 in. of deteriorated asphalt and repaving with 2 in. of new hot mix asphalt, a 1-in.-thick HPTO treatment lasted at least 50 percent longer and improved the smoothness by 30 to 60 percent, while still providing skid resistance like standard hot mix asphalt. This was a game changer for New Jersey roads and resulted in many miles of smoother, more durable roads.

HPTO is just one example of a new treatment developed, but many other treatments and technologies have been reviewed, researched, applied, improved, and implemented over the years to build a robust, effective, and efficient pavement



Preservation has been increasing its share of resurfacing/rehabilitation/reconstruction budget in New Jersey



In New Jersey, increased preservation spending boosts overall network condition

management program with many tools that increasingly implemented preservation to optimize the NJ SHS needs.

The collaborative relationship with the new Pavement Management and Design unit and Rutgers-CAIT, as well as the continued support from NJ DOT leadership and the focus on pavement preservation, performance-based planning and asset management was highly successful in making NJ SHS improvements.

'GOOD' PAVEMENTS MORE THAN TRIPLE

By 2010, the percentage of good pavements on NJ SHS had more than doubled. In 2012, the US DOT initiated Asset Management under MAP-21 codifying into federal law.

In 2015, US DOT refined Asset Management under the FAST Act and NJ DOT increased pavement preservation funding due to the continued success of the Pavement Program, and the opportunity preservation provided to treat more lane miles on the NJ SHS. By 2016, the percent of good pavements had more than tripled and the percentage of poor pavements went down by nearly 40 percent.

In 2017, US DOT finalized the Transportation Asset Management Plan (TAMP) requirements and Performance Management rules under the FAST ACT, while NJ DOT added an official Asset Management policy and continued building the pavement preservation toolbox with new and improved treatments like chip seal and cape seal.

In 2018, NJ DOT completed and submitted its first TAMP as required by federal law and approved by FHWA. In 2019 and 2024, NJ DOT recorded record high lane miles treated with robust pavement programs employing preservation as a major component accounting for 50 and 70 percent, respectively.

By 2024, the NJ DOT had increased good pavements by from 10 percent (low in 2005) to 47 percent and reduced poor pavements from 53 percent (high in 2008) to 18 percent.

This improvement of the NJ SHS pavement conditions was realized through the work of many key individuals within NJ DOT, academia, industry, and state leadership using asset management principles and preservation as a major component. We hope that it can serve as a good example of what others can do with their roadway systems.

Robert J. Blight is a materials project engineer and is executive manager, Pavement & Drainage Management & Technology Bureau, New Jersey DOT. This article is based on his presentation the Northeast Pavement Preservation Partnership meeting in May 2025 in Somerset, N.J. Learn more about our Pavement Preservation Program at NJ DOT Pavement Design & Technology unit website at https://www.nj.gov/transportation/eng/pavement/technologies.shtm

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Urban Pavement Preservation Needs Special Considerations vs. Rural Sites

Adapted from a live June webinar, Pavement Preservation in Urban Settings*, conducted by Travis Walbeck, P.E., assistant director, training and outreach, National Center for Asphalt Technology (NCAT); with Dr. Adriana Vargas, associate research director, NCAT; Nathan Moore, P.E., assistant director for test track research, NCAT; and Bobby Betsold, FP² vice president and technical marketing director, All States Materials Group. An article summarizing Betsold's presentation appears in our Fall 2025 issue pp 24–25. This article is based on Vargas' presentation. See the entire webinar by utilizing the QR code at the end of this article.*

BY DR. ADRIANA VARGAS

Urban pavement preservation is a complex endeavor that demands a tailored approach different from rural or open highway projects. Unlike these, urban environments are dense with infrastructure: curbs, gutters, sidewalks, ADA ramps, signal loops, and a high density of utilities. These elements, while essential to city life, pose unique challenges for pavement preservation efforts.

A Federal Highway Administration-sponsored initiative titled *Pavement Preservation in Urban Environments: Materials, Technologies, Methods, and Applications* is shedding light on these challenges. Led by a research team composed of Applied Research Associates, the National Center for Asphalt Technology, the California Pavement Preservation Center at CSU–Chico, and The Transtec Group, the project aims to provide guidance for agencies navigating the intricacies of urban pavement preservation.

URBAN ROADS ARE DIFFERENT

Urban roads are more than just conduits for vehicles; they are shared spaces used by cyclists, pedestrians, public transit, and residents. Preservation work in these areas can disrupt daily life, affect businesses, and raise environmental concerns.

Unique features like cul-de-sacs or narrow lanes can limit equipment maneuverability, requiring specialized approaches or increased handwork

Urban projects must account for factors such as ADA compliance, traffic control in dense areas, access to residences and businesses, environmental impacts, and interaction with the public. These factors influence everything from treatment selection to scheduling and communication strategies.

To better understand current practices, the research team conducted over 20 interviews with stakeholders, including agencies, contractors, regional Pavement Preservation Partnerships, FP² Inc., Metropolitan Planning Organizations, and members of the TRB Committee on Pavement Preservation. The interviews revealed several recurring challenges that arise when implementing pavement preservation in urban environments.

STAKEHOLDERS SPEAK OUT

The most cited issue was communication. Ensuring that residents, businesses, and other stakeholders are well-informed throughout the project lifecycle is critical.

Poor communication can lead to confusion, complaints, and delays. **Traffic control** is another major concern, particularly in densely populated areas where lane closures and detours can significantly disrupt mobility. **ADA compliance** also emerged as a key issue, as certain treatments may require upgrades to curb ramps, increasing project complexity and cost.

Although not exclusive to urban preservation, many reported **shortages in personnel and resources**, which can hinder productivity and scheduling. Interestingly, while factors such as noise, air quality, stormwater management, and cost were acknowledged, they were not considered prohibitive. Instead, these were viewed as manageable aspects of urban work that require thoughtful planning and mitigation.

Stakeholders did not report any treatments as being outright banned in urban settings. Instead, they emphasized adaptation, that is, modifying practices to suit the environment.

MATCHING URBAN REALITIES

Selecting the right pavement preservation project in an urban environment is a strategic process that goes beyond evaluating surface conditions. It requires a comprehensive understanding of pavement distress, traffic patterns, community needs, and logistical constraints.

The process begins with a detailed condition evaluation, using tools like visual surveys and nondestructive testing (NDT) to assess the type, severity, and extent of pavement distress. Agencies often rely on standardized indices such as the **Pavement Condition Index** (PCI) or custom metrics to guide decision-making.

Once the pavement's condition is understood, a preliminary list of feasible treatments is developed. These treatments must address current issues while aligning with long-term performance goals. In urban settings, additional factors such as **cure time, street geometry, public perception,** and **cost-effectiveness** play a critical role in narrowing down the options.

For example, high-traffic corridors may require treatments with rapid curing to minimize disruption, while residential streets might demand quieter, more aesthetically pleasing solutions. Unique features like cul-de-sacs or narrow lanes can limit equipment maneuverability, requiring specialized approaches or increased handwork.

RIGHT MATERIALS FOR URBAN USE

Choosing the right materials for pavement preservation in urban environments requires careful consideration of traffic levels, climate conditions and user comfort.

Urban streets often experience frequent stopping, turning and high traffic volumes, which demand durable, abrasion-resistant aggregates. Areas with a RAP surplus can benefit from incorporating this material as an aggregate source. When properly processed and stored, RAP can effectively replace virgin aggregates in treatments like **chip seals, slurry seals,** and **micro surfacing**. It offers several benefits, including reduced binder demand, neutral charge, and improved coating properties.

While RAP is widely used in hot mix applications, including thin overlays, its use in surface treatments still lacks standardized guidance, though some agencies have successfully substituted up to 100 percent of virgin aggregate.

Refuse pick-up schedules can clash with preservation treatment placement

Material selection must also balance durability with user experience. **Coarser aggregates in surface treatments are ideal for heavy traffic but can result in rougher, noisier surfaces**, which are particularly problematic for cyclists and pedestrians. To mitigate these effects, agencies can aim to limit macrotexture to less than 2.5 mm. Thin overlay designs must maintain appropriate lift thickness-to-NMAS ratios to ensure performance and longevity. Open-graded mixes, while beneficial for noise reduction in sensitive areas, are generally avoided in high-shear zones like intersections or areas prone to water retention near curbs and gutters.

Binder selection is equally critical. High-stress urban locations may require **hot-applied or polymer-modified binders** in surface treatments to enhance durability and allow for quicker reopening to traffic. The use of high-polymer modified emulsions in slurry surfacing systems can increase durability in areas susceptible to scuffing, such as cul-de-sacs.

Additionally, **warm mix asphalt** (WMA) technologies are increasingly used to improve compaction and workability in thin overlays and around previously sealed cracks. These material choices, when tailored to the specific demands of urban environments, help ensure that preservation treatments perform effectively while minimizing disruption to road users.

COMMUNICATION BUILDS TRUST

Effective communication is the cornerstone of successful pavement preservation in urban environments. Because these projects often impact residents, businesses, and public services, agencies must engage stakeholders early and consistently throughout the project lifecycle.

Public outreach should begin during the planning phase to build awareness and support. This includes educating elected officials and the community about the goals of the preservation program, the current state of the pavement network, and the benefits of proactive maintenance.

As construction approaches, outreach becomes more targeted, focusing on specific neighborhoods and corridors. Agencies and contractors typically use **flyers, door hangers, yard signs, variable video boards**, and **emails** to homeowner associations, along with social media posts and press releases, to share detailed information about project locations, treatment types, schedules, traffic and parking restrictions, and contact details.

"No Parking" signs should be placed two to three days before work begins, with dates updated as needed to reflect weather-related delays. Notices may also include practical tips, such as **adjusting sprinkler systems, keeping pets**

In San Francisco, overhead wires, storm sewer inlets and uneven curbs complicate asphalt milling

indoors, and avoiding sharp turns while vehicles are stationary to prevent surface damage.

During construction, real-time updates help manage expectations and minimize complaints. After the work is completed, communication should continue by informing residents about temporary **changes in appearance, loose rock, changes to trash pickup schedules**, and **striping timelines**. These efforts not only reduce confusion and frustration, but also foster public trust and satisfaction with the preservation program.

TIMING IS EVERYTHING

The time needed before traffic can resume depends on several factors, including the type of treatment applied, surface and weather conditions, and the specific traffic patterns of the area. Treatments such as **thin asphalt overlays** can often be reopened once the surface has cooled, while emulsion-based treatments like **fog seals, chip seals**, and **slurry surfacing systems** require a curing period to allow water to evaporate and the binder to set properly. In urban environments, where stop-and-go traffic, turning movements, and cul-de-sacs are common, **additional curing time may be necessary** to prevent premature damage such as scuffing, raveling, or bleeding.

To accelerate reopening and minimize disruption, agencies may use **precoated aggregates in chip seals**, which reduce curing time and help prevent aggregate loss. In areas with high turning movements – such as intersections and driveways – blotter materials like sand can be applied to fog seals and slurry surfacing systems to protect the surface if early access is unavoidable.

Sweeping is also essential to remove excess aggregate and prevent it from accumulating in gutters or becoming a hazard to the driving public. Vacuum sweepers are particularly effective in these settings. Ultimately, reopening should only occur once the surface has stabilized and meets performance and safety standards. Rushing this step can compromise the treatment's effectiveness and lead to costly repairs or public dissatisfaction.

Pavement preservation in urban environments is a multifaceted challenge, but one that can be successfully managed with the right strategies, tools, and mindset. From selecting appropriate treatments and materials to navigating logistical constraints and engaging the public, every phase of the process demands thoughtful planning and coordination.

Urban settings introduce complexities such as limited space, high traffic volumes, ADA compliance, and heightened public scrutiny, but these are not barriers; instead, they are opportunities to innovate and improve.

The key to success lies in proactive communication, data-driven decision-making, and a commitment to minimizing disruption while maximizing long-term value. Agencies that embrace preservation not only extend the life of their pavements but also build public trust, improve safety, and enhance the overall quality of life in their communities. As demonstrated by cities across the country, urban pavement preservation is not just feasible, it's essential. With every challenge comes a solution, and with every project comes the chance to make our streets more resilient, accessible, and sustainable.

You may view the complete panel on urban pavement preservation via the adjacent QR code

PPRA Horizon Award Winners Share Clues to Superior Preservation Practice

BY LINDSAY MATUSH

*The new **Horizon Award** from the **Pavement Preservation & Recycling Alliance** (PPRA) recognizes forward-thinking leaders who put network health at the center of their decisions. Award winners demonstrate how smart planning, a willingness to innovate, and an embrace of preservation and recycling techniques can reverse deterioration trends and create sustainable systems. In the previous Fall 2025 issue, we highlighted Horizon winners **Bryan Dhume** and **Jorge Duran** (see Fall 2025, pp 30–31).*

*In this edition, we highlight the remaining 2024 recipients: **Tyler Lawrason** of the Municipal District of Provost in Alberta, and **Bradley Klinger** of Fayette County, Ga. Despite operating in vastly different environments – one rural and industrial, the other suburban and rapidly urbanizing, both in climates – both men have reshaped their networks and inspired others through their leadership.*

TYLER LAWRASON: FROM POLITICAL OVERSIGHT TO SCIENTIFIC STEWARDSHIP

As chief administrative officer (CAO) of the Municipal District (MD) of Provost in Alberta, Canada, **Tyler Lawrason** oversees a jurisdiction with about 2,000 residents spread across 4,000 sq. miles. The network includes nearly 1,500 miles of roads, most of them gravel, that **support the nation's largest crude oil storage and distribution hub.** The combination of extreme industrial traffic and Alberta's punishing climate – where temperatures can swing 80 deg in a single week – creates daunting challenges.

When Lawrason began his tenure, the county's road management **practices were often dictated by politics**, with decisions focused on short-term fixes instead of long-term sustainability. He since has spearheaded a complete shift toward scientific, data-driven management, a change rooted in the belief that "it costs more to let a road degrade than it does to maintain it."

Lindsay Matush presents Tyler Lawrason with PPRA Horizon Award in March

By reframing the conversation this way, he has successfully built support for preservation-first planning.

Prior to 2018, roads in Lawrason's network had an average life of five to eight years. Using a systematic approach and a diverse treatment toolbox, Lawrason has been able to **extend the life of his roads to 10 to 15 years**. Since 2018 he extended the depth of cement from 8 to 10 in. to 12 in.

He also launched a proactive **fog sealing** program, sealing the entire network every 2 years. He relies heavily on **cement-treated base stabilization** paired with **micro surfacing** or **cape seals with fiber reinforcement**, a method proven to withstand the area's heavy traffic and freeze-thaw cycles. His team also runs an extensive **pothole repair and crack sealing** program. His efforts have been significant in cutting long-term costs and improving reliability.

Equally important has been his role as an educator and regional leader. Recognizing that 69 rural municipalities in Alberta and Saskatchewan face similar conditions, Lawrason has hosted workshops for 30 to 40 agencies at a time, demonstrating best practices and building momentum for preservation across Western Canada. His leadership has not only transformed his own network, but also influenced policy and practice on a much broader scale.

Upcoming initiatives in Provost include micro surfacing pilots for airport preservation, full life-cycle costing for the district's asphalt inventory, and codifying procedures into policy to ensure continuity for future leaders. These forward-looking plans reinforce Lawrason's commitment to sustainability and succession, ensuring his impact will last well beyond his tenure.

The Horizon Award recognizes Tyler Lawrason for turning political challenges into a blueprint for scientific stewardship, proving that rural jurisdictions with unique conditions and forward-thinking leadership can set an entire region on a path toward stronger, more resilient infrastructure.

Bradley Klinger

BRADLEY KLINGER: EXPANDING TOOLBOX AND RAISING THE BAR IN GEORGIA

In Fayette County, Ga. – a metro Atlanta county with 515 paved miles, 48 gravel roads, and $6.6 million in annual road funding – assistant director **Bradley Klinger** has transformed how pavement preservation and asphalt recycling are practiced. Since joining the county in 2011, Klinger has shifted Fayette from relying almost exclusively on overlays and reconstruction to deploying a full range of preservation and recycling techniques.

Klinger's toolbox expansion is impressive. Fayette County now **employs chip seals, micro surfacing, asphalt rejuvenation, crack sealing, resurfacing, scrub seals, HA5 mineral bond applications, Reclamite**, and **full-depth reclamation**. In 2024, he introduced **hot in-place recycling (HIR)** and plans to pilot mastics and new rejuvenators in 2025. This approach has allowed the

county to impact more pavements each year, addressing 30 to 40 centerline miles annually compared to 15 to 25 before 2020.

Importantly, Klinger has reshaped the budget conversation. As of 2024, **40 percent of Fayette County's road budget is dedicated to preservation,** a figure that continues to climb each year. By reframing preservation as a cost-saving investment, he has ensured **consistent PCI scores between 77 and 78** since 2016, a remarkable achievement for a suburban county facing heavy commuter traffic.

Klinger is also a powerful advocate for preservation beyond his own county. He has presented to senior leadership teams in neighboring counties, hosted live demonstrations of multiple treatments at APWA's PWX expo in Atlanta, and produced educational videos like *Avoid Sky High Asphalt Costs*. These outreach efforts have helped increase preservation and recycling activity regionally, helping to lower unit prices as more agencies adopt similar strategies and contractors adapt to the demand.

His approach to pilot programs is another hallmark of his leadership. By testing new treatments in real-world conditions, then documenting and sharing results, Fayette County has become a **proving ground for innovation**. Suppliers, agencies, and neighboring governments all benefit from the county's transparent and data-driven experiments.

Looking forward, Klinger is preparing bids for FY26 treatments that include HIR, eFlex micro surfacing, FDR, crack sealing, and new asphalt rejuvenators. He's also collaborating with suppliers on emerging products. Importantly, he plans to expand documentation of preservation's impact, ensuring that future decisions are backed by both data and demonstrated results.

The Horizon Award celebrates Bradley Klinger's success in reshaping Fayette County's program into one of the Southeast's most progressive, while also raising awareness and inspiring network-first thinking throughout the region.

MINDSET OF MANAGEMENT

From the oil fields of Alberta to the suburbs of Atlanta, Tyler Lawrason and Bradley Klinger have shown that network management is more than a set of tools; it's a mindset. Both leaders faced entrenched mentalities and structural challenges, yet each has demonstrated how science, data, innovation and education can transform entire networks.

As 2024 Horizon Award winners, Lawrason and Klinger stand as reminders that the future of pavement management is already here, driven by leaders willing to innovate, educate, and champion preservation for the good of their communities.

Matush is CEO of Vario Consulting, manager of the essential RoadResource.org for the Pavement Preservation & Recycling Alliance (PPRA)

For more information on all of the Horizon and Network Hero Award winners, see PPRA's past webinars at the adjacent QR code.

PG3: New Paths for Idaho, Minnesota

BY ADRIENNE WOODS, JOHN ARAMBARRI, P.E., JOEL ULRING, P.E. AND TODD SHIELDS

Phase 3 of the *National Partnership to Improve the Quality of Pavement Preservation Treatment Construction & Data Collection Practices*, commonly referred to as PG3, is a pooled fund of currently 19 state DOTs.

The project provides technical assistance with specifications, training, and on site expertise during project construction. More information on PG3 can be found on the project's website: https://pg3study.org/

Two more projects were built over the summer: **Idaho's SH 77**, where 100 percent RAP chip seal was put down in late July **and Minnesota's U.S. 71** cape scrub seal was constructed in August.

ALL-RAP CHIP SEAL

The Idaho Transportation Department's (ITD) project was in the south central part of the state, just west of the small town of Malta. Kloepfer, Inc. constructed the chip seal, which included fractionating the RAP, while Idaho Asphalt provided the asphalt emulsion and mix design.

The project will compare the performance of polymer-modified rejuvenated emulsion (PMRE) to ITD's standard CRS-2P. FP² Inc. and the National Center for Pavement Preservation (NCPP) provided onsite support during construction. NCPP provided training for both ITD and contractor staff a few weeks prior to construction.

This was ITD's first ever RAP chip seal. "The project gave us a chance to try some innovative approaches, work closely with our contractor and industry partners, and see firsthand how these treatments perform in the field," said John Arambarri, Idaho's pavements engineer. "Most importantly, they provide a path to documenting the performance of the chip seal coat.

"Using recycled asphalt pavement as a chip seal cover coat is exactly the kind of innovation needed as aggregate sources become more limited. This project shows what is possible when ITD, contractors, and industry partners work together," Arambarri said.

"We carefully dialed in our emulsion and aggregate application rates, and the early results look very promising," he added. "I'm eager to see how this surface holds up through an Idaho winter."

"We put up signs for the traveling public to inform them of this new chip process," said District 4's Adrienne Woods. "The public finds the pavement very aesthetic as it looks like new pavement, with no

IMAGE CREDIT: NCPP

Idaho RAP chip seal under construction

'reported' broken windshields. Also, the lack of dust is a big bonus, and less road noise is generated. The noise aspect needs to be quantified. We've already identified the next project for a RAP chip seal, this time within city limits."

MINNESOTA SCRUB CAPE SEAL

Later in summer, Minnesota DOT opted to do a scrub cape seal. The project is on U.S. 71 near Northome. Construction was completed by Asphalt Surface Technologies Corp. (Astech). The project will compare a scrub seal only to a scrub seal with a micro surface wearing course.

Minnesota has many miles of low-volume highways that service the rural parts of the state. Maintaining these roadways in good condition is a goal that is difficult to achieve, with demand on transportation funding to keep the higher volume roadways in good condition.

That's why there's a need to provide cost-effective, long-life preventive maintenance (PM) treatments for these roadway pavements. Through research by NCAT and MnDOT's MnROAD pavement research facility, the cape seal is one treatment that showed these qualities.

Historically, MnDOT hasn't used cape seals on pavements. Chip seals and micro surfacing have been used extensively around the state, but never together as a cape seal.

With the development of PG3, MnDOT selected a cape seal treatment for their part of the study. It is hoped this treatment will prove to be cost effective and provide extended service life of low-volume highway pavements.

As part of the study, preconstruction training was provided by NCPP to MnDOT staff as well as the contractor who placed the treatment. In addition, at the time of construction, NCPP staff was on-site the first day of construction of the scrub seal portion of the treatment to train MnDOT staff on equipment calibration and inspection. Support from FP[2] also was provided throughout the process.

Anyone interested in joining the study is welcome. More information on joining the pooled fund may be found on the Transportation Pooled Fund website: https://www.pooledfund.org/Details/Study/754

Edited by Pavement Preservation Journal from material provided by NCPP. Woods is professional geologist, ITD mineral manager District 4; Arambarri is ITD pavements engineer; Ulring is MnDOT pavement preservation engineer; and Shields is transportation asset preservation engineer, NCPP

FP² Supporter Bergkamp Describes Payoff of Preservation at APWA Expo

Pavement preservation equipment manufacturer and FP² supporter Bergkamp Inc. gave a wide-ranging educational session on the benefits of pavement preservation to government agency delegates to the American Public Works Association's (APWA) *PDX Public Works Expo* in Chicago in August.

Company president **Scott Bergkamp** led a classroom session on pavement preservation on the expo floor, using FP² Sorenson Award winners from recent years as exemplary preservation programs to emulate. The *James B. Sorenson Award for Excellence in Pavement Preservation* is presented by FP² Inc. to recognize superior pavement preservation practice, usually to a city, township, county, or state agency.

Bergkamp's session was named *Asset Management for Agencies: Success Stories in Pavement Preservation*. In it, he highlighted the value of pavement preservation to three Sorenson Award–winning public agencies, and shared insights about the backstories, transformative thinking, and successes from their approaches taken to maximize budgets, while addressing different sets of conditions in different parts of the country.

Scott Bergkamp introduces pavement preservation to PDX local agency delegates

ELMORE COUNTY, ALABAMA

In 2004, only 45 percent of this Southeastern county's roads were in "Good" condition. The agency was primarily repaving, but distresses showed up after only two years. To help address the issues, the team sought input from **Larry Galehouse**, then of the Michigan DOT and National Center for Pavement Preservation, in addition to a local emulsified asphalt supplier, a micro surfacing contractor, and a cement association representative.

"Elmore County conducted an inventory of its roads, implemented trial projects across a broader range of scenarios and under optimal conditions, and strategically allocated funds," Bergkamp said. "Most importantly, it spent the necessary efforts to keep the public abreast of the situation to gain buy-in from residents."

By 2021, 75 percent of its roads were graded "Good," a 30 percent improvement. They found that asphalt roads could potentially last 40 years with proper preservation. Commissioners became more willing to try new treatments and roll them out broadly after demonstrated success.

For more information, see *Elmore County Preservation Highlighted by 2021 FP² Sorenson Award*, Spring 2022, pp 10–13.

SHEBOYGAN COUNTY, WISCONSIN

In years past, the public works team for this upper Midwestern county was paving 30 miles of its 450-mile road network each year. Despite crowning their roads properly and regular chip sealing, conditions were not improving.

Instead of saying, "We've always done it that way," the team asked, "Why have we done it that way?" The agency spent a lot of time looking at written materials, talking with experts in their various roles, and doing due diligence on new practices, equipment and training.

"The team took a closer look at chip seal treatments, and realized the aggregate they were sourcing locally wasn't holding up to the abuse from snowplows," Bergkamp said. "A stronger aggregate was sourced to alleviate the problem."

Next, the agency partnered with the National Road Research Alliance to look into water collection issues. Together, they created a "test track" on a county road to study surface treatments with centerline rumble strips and paid close attention to preventing vegetation growth along road edges. Under these real-world conditions, the testing led to pavements lasting six years while appearing brand new.

Chip seal is placed in Sheboygan County, Wis.

And finally, they implemented "pre-preservation" activities to extend pavement life, such as using void-reducing asphalt membrane treatments (VRAMs) for longitudinal joints.

Now, its new goal is a 30-year life cycle for overlays. They found that "little things lead to big things," and neighboring counties look to them for guidance on how to improve their road networks.

For more information, *Vertical Integration, Test Track, Help Earn Sheboygan County FP²'s Sorenson Award*, Spring 2025, pp 12–15.

TOWN OF LEXINGTON, MASS.

In 2010, the road conditions in the New England Town of Lexington, Mass., had a Pavement Condition Index (PCI) of 68. However, projections were gloomy based on their current practices.

Agency members agreed, "If we keep doing what we're doing with the same dollars we've always been…our PCI is going to be 41 ten years from now. That's not acceptable." Further complicating matters, the town had a $20 million backlog of necessary work.

Part of the issue was habit. The town was relying on only three different approaches to address its challenges: **crack seal, milling overlay**, and **full-depth reclamation**.

"To expand their knowledge set, team members looked to roadresource.org," Bergkamp told the delegates. "They collaborated with local vendors and contractors and visited projects with years of age to quantify long-term treatment performance."

This led to an understanding of the importance of a full "toolbox" of treatments. They learned that by maintaining assets in good condition rather than only focusing on those that need complete rebuilds, you can extend the life and optimize budgets.

Over time, the town employed eight different preservation treatments. Lexington's PCI reached 85 in 2020 and 90 in 2024, achieved with a relatively flat budget. Meanwhile, the backlog for rehabilitation or reconstruction dropped from 39 to 10 percent.

"Now, staff can provide data to the town board to demonstrate the cost of maintaining different PCI levels," Bergkamp said. "In addition, public complaints have significantly decreased, and their budget proposals now receive unanimous approval from the town board." Now, other road agencies seek Lexington's advice on pavement preservation.

For more information, see *Town of Lexington Preservation Success Merits FP² Sorenson Award for Excellence*, Winter 2020, pp 10–13.

Bergkamp encouraged attendees to consider how they can learn from these examples to approach change in an open-minded yet methodical way, learn from the resources available, show a willingness to learn from trying new things, and implement proven strategies to improve their agency's pavement networks. "When you do, the technical and financial benefits speak for themselves," he added, "and that's a language agency members, elected officials and citizens all can agree on."

Benefits of Preservation Fill Floor at APWA PDX Expo in Chicago

Reflecting its importance among county, municipal and local government agencies, pavement preservation was an important component of the American Public Works Association's PWX Public Works Expo, held in Chicago in mid-August.

PDX national sponsors reflected this, with FP² supporters Crafco, Bergkamp, Ergon Asphalt & Emulsions, Asphalt Materials Inc., Pavement Technology Inc., and Unique Paving Materials helping underwrite the event. Scott Bergkamp, president of Bergkamp Inc., presented one of dozens of educational sessions (see related article p 32).

Over 5,000 delegates crowded Chicago's McCormick Place for PDX, including Pavement Preservation Journal. Here's a pictorial overview of exhibits important to pavement preservation and recycling at PDX 2025.

At the Ergon stand are, from left, Renato Ceccovilli, David Vendemia, Scott Metcalf, Mo Rahman, Amy Blaida, Stan Williams and Katelyn Strong

E.D. Etnyre & Co. shows its distributor rig and crack sealer

J-Band void-reducing asphalt membrane (VRAM) gets attention from PDX delegates

Unique Paving Materials' proprietary Cold Mix solves seasonal patching woes

CemenTech shows its versatile volumetric concrete mixer for site-tailored mixes

Pavement Technology Inc. (PTI) emphasizes surfacing carbon capture

EZ Street asphalt patching connects with potential agency customer

With so many preservation products offered, Crafco stand always is busy

Gee Asphalt Systems promoted its GSB-88 product which penetrates into the pavement matrix and becomes part of the surface of asphalt

Todd Hendricks Jr. and Sr., and Adam Gray promoted RMV's robotic crack sealer at APWA PDX

Cutler Repaving hot in-place recycling contractor staff includes John Rathbun, vice president; Jim King, Texas area sales manager; presenter Kimberly Dall, assistant city engineer, Littleton, Colo.; and Todd Gonser, Western states regional sales manager

Research: Studying Spray-On Rejuvenators

Editor's Note: *This is the 33rd of a series of profiles of civil engineering students who are undertaking pavement preservation and recycling as a course of study. These students bring their own perspective of why a young civil engineer would pursue pavement preservation and recycling study. This issue, we profile* ***Tanzila Islam,*** *Ph.D candidate, Civil and Environmental Engineering, Michigan State University. Thanks to* ***Dr. M. Emin Kutay****, MSU, and* ***Dr. Andrew Braham, P.E.,*** *University of Arkansas, for their assistance with this article.*

WHAT GOT YOU INTERESTED IN PAVEMENT PRESERVATION?

I completed my bachelor's and master's degrees in geotechnical engineering at the Bangladesh University of Engineering and Technology (BUET). During my master's research I visited many sites, including remote areas where simply getting there was a major challenge. Those trips made one thing clear: well-maintained road networks change everything. When the route is smooth, work is safer, faster, and more convenient; when it is not, progress slows for everyone.

That insight drew me toward pavements and, later, pavement preservation. In Fall 2022, I joined Dr. M. Emin Kutay's lab at Michigan State University as a Ph.D student to advance my training in geotechnical and pavement engineering under his mentorship. As part of the research work, I focused on pavement preservation, and I learned firsthand why it matters: timely, preventive treatments keep good roads good.

In the long run, preservation extends pavement life, improves ride quality, and cuts public and construction costs, with less material waste. The field still has many open questions: choosing the right treatment at the right time, linking lab results to real performance, and using data for network-level decisions. Working on these challenges and pursuing these research questions, with the aim of helping agencies improve dependable access for remote communities, keeps me motivated.

HOW IS YOUR RESEARCH RELATED TO PAVEMENT PRESERVATION?

My research contributes to pavement preservation, with emphasis on asphalt spray-on rejuvenators, geogrid-stabilized bases, and flood resilience. I worked on projects funded by the Local Road Research Board (LRRB) and the Minnesota Department of Transportation (MnDOT).

Spray-on rejuvenators are surface-applied treatments that reduce brittleness and slow down oxidation, helping to control cracking and extend pavement life. I have evaluated 12 different products by measuring the low-temperature creep stiffness of asphalt concrete beams, and comparing treated and untreated mixes across products, aging levels and temperatures.

I have also worked on the **resilient modulus and permanent deformation of pavement base materials**, with and without geogrid reinforcement. In the studies, geogrids improved aggregate confinement, increased resilient modulus, and reduced permanent deformation (rutting). A stiffer base lowers strain in the asphalt layer, slows the growth of surface distress, and reduces maintenance needs.

I am also working on the determination of the **behavior and performance of crushed and shaped materials**, an in-place recycling technique that transforms existing HMA pavement into a compacted aggregate base.

Overall, the aim of my research is to extend pavement life, reduce the necessity for major repairs, and make day-to-day maintenance decisions more straightforward.

HOW HAS YOUR PERSPECTIVE CHANGED ABOUT OUR ROAD INFRASTRUCTURE SINCE BEGINNING RESEARCH?

When I started my research journey, I thought pavement preservation was mainly about caring for the surface. Through research, I learned that pavement is a system; and each part needs different attention. Preservation choices also depend on local factors such as climate, groundwater, traffic, and site conditions. The timing is just as important: choosing the right treatment at the right time often prevents larger problems and saves costs over the life of the road.

My perspective also changed on **distress mechanisms**. Coming from a place without severe winters, I did not expect the range of cracking that occurs in cold regions. I learned how low temperatures drive different cracking patterns, why materials age differently, and how tests can help predict and limit damage. This moved my thinking from "fix what you see" to "understand the cause and act early."

DO YOU HAVE PLANS TO CONTINUE IN THE FIELD OF PAVEMENT PRESERVATION UPON GRADUATION?

Yes, of course. I will continue in pavement preservation upon graduation, focusing on applied research, field trials, and practical guidance for the industries. I am also interested in advancing sustainable rehabilitation techniques. My goal is to contribute to cost-effective strategies that extend pavement life, optimize resource use, and support long-term infrastructure resilience.

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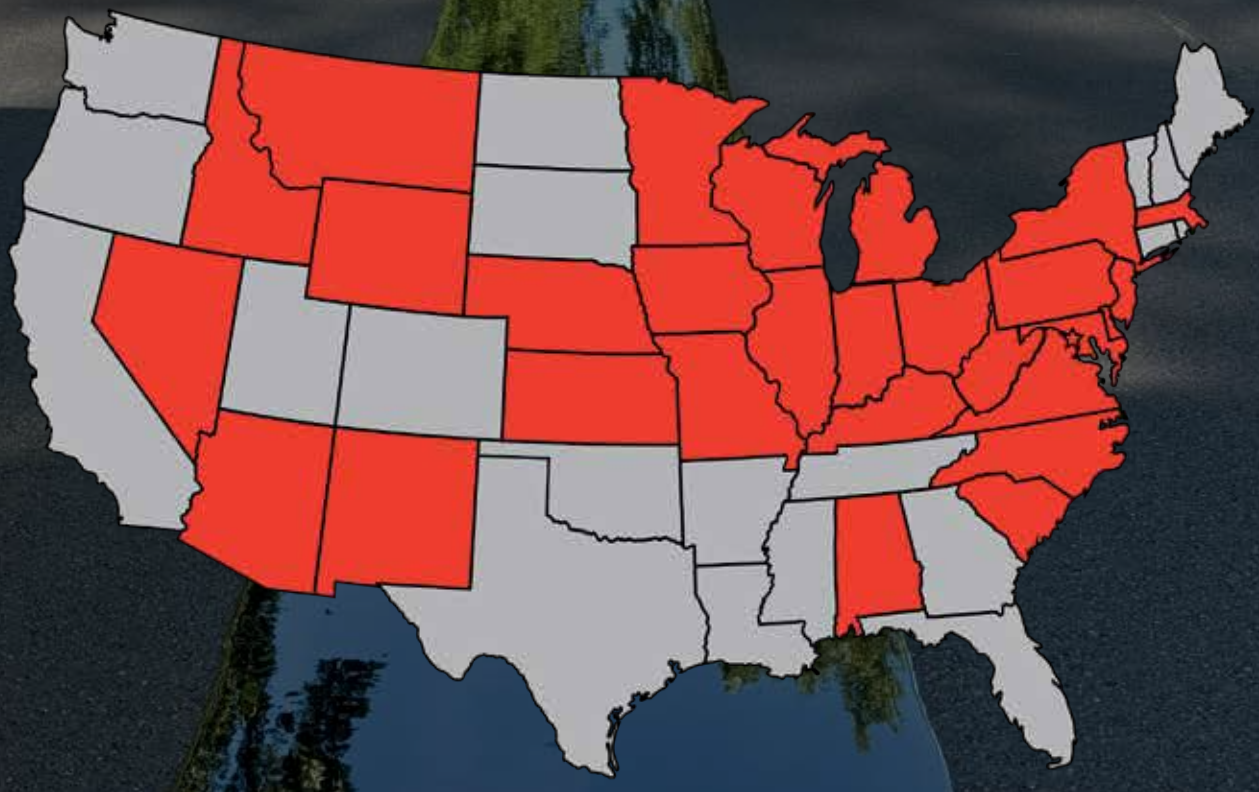

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