Asphalt Pavement Alliance Overview

Amy Miller, P.E.

National Director



Research & Technology

Market Research & Communications

Deployment Activities

Pavement Economics Committee

• Six Task Groups

Other Research

- Asphalt Institute
- NCAT

Future Research





Deployment Task Group









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Pavement Economics Committee

THE PEC TEAMS





Pavement Design



Pavement Type Selection



Best Quality and Competitiveness



Pavement Preservation



Environmental Sustainability



Legislative



Private Sector

Markets & Local

Roads





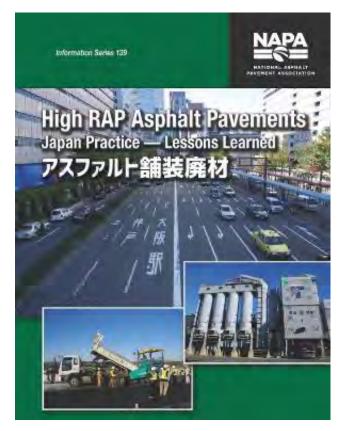
Over 13,000 Users

www.PaveXpressDesign.com

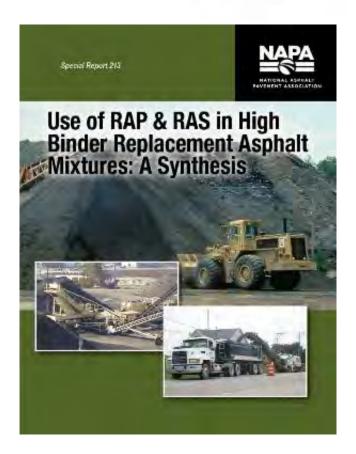
FREE WEBINAR ON UPDATE Nov. 4th at www.asphaltpavements.org/webinar

Recycled Materials









Rapid Highway Construction





Takeaways:

- Isolate work zone from traffic
- Use in-place material as much as possible
- Lane closures improve productivity
- Contractor control over work zone
- Innovative approaches for moving traffic in and around work zones.

PAVEMENT HEALTH ANALYSIS TOOL



www.IRIExplorer.com

- Utilizes LTPP Data
- Free
- Web Based,
 Customizable
- Life-Cycle Emission Benchmarking

Why Should Customers Use **IRI** Explorer?

- Bit basiness is then well second that his examining ITPP date in well as separated by the typic association to condens projects.
- Road rought on our conversely road amprior and a crook to which had efficiency may end had or can and on the act to glove, marked on a chick had the PE Code on a bod to exploring the most trends in most orange one date.
- III is a propie resource of the broad least of a medium, but as an elevated teast core can inflicate a faulth problems a high RI can indicate an along made ay
- Int Equation helps (b) from the great from the great from the control of the contro
- Ear pare pasement types and the performance to post state or similar stream regions
- The supply 21 years of does from 2.00 passing of the dustrial field as dustrial to the Factorial figures (Administration Long Term Factorial Factorials (TPF) projects
- Audit data from Sport State could respect for gradeous.

IR Explains analysis monway data, and provides customized reports to sulf your reads

FOR MORE INFORMATION RESources core





Pavement-Vehicle Interaction

PAVEMENT ASSOCIATION



When it comes to America's roads, americant si support fuel efficiency. Rivement amostiness is critical to achieve Federal Highway Administration (FHWA) accently determined that on naticfaction for road users."

Thanks to advanced materials and construction techniques, asphasurface that meets dimers' standards while adding to pavement lange. then rougher roads and lowering vehicle operating costs."

As drivers, automakers and regulators grow increasingly concerned smoothness on vehicle officiency is receiving greater attention. These p thought to affect fuel consumption





Smoothness have rough the road leels to a driver

No study has grasped how all three povement properties simultaneo However, the current scientific consensus is that pavement smoothness and that the effect of texture is smaller on well-maintained payerre mached as to the effect of pavence of stiffness.1

All told, Americans burn nearly 120 billion gallons of fuel driving ap-If roads across the nation were built and maintained to ensure a sn approximately 4.5 percent decrease in fuel comumption" - the exgallon." Smilerly, rough and poorly maintained roads increase year a per year for the average driver."

> NOON ASPARAGEMENT OF THE PARKET. PARTY AND INVESTIGATION OF PERSONS ASSESSED.



Almost 75 percent of the oil consumed within livined States is used as we increases in vehicle fuel economy over the past few decades, fuel costs remain a sen for the public and businesses alike. Numerous factors influence the fuel econd to sendynamic properties, engine, tim premire, and air temperature; however, just impact fuel economy, whicle internal fraction, and drag, and leiting resistance. While always affect fuel economy, they very in importance based on the vehicle speed, fin factors only truly have an impact on rolling recutance.

The volling resistance forces a vehicle must overcome to maintain speed are linker system, bearings, transmission, tim pressure, and in part, the properties of the powerse properties are commonly understood to influence rolling resistance.







Specialization surface unavenness that affects perceived nde quality.

Page how the

under

Research has been conducted over the cost 40 years to determine how each of the affects rolling resistance. Pavernent texture influences fuel economy through the vit and the contacted area of the paverners. As the tim deforms, energy converts into 6 the rest of the tire and the atmosphere. Povement of Phress may influence tolling resist. lies and pavements intends the pavement comprehen causing the tale to continu Smoothness, influences the funt consumption through energy lost by the shock absorb which moves down the roadway and these systems work to the make the rice move.

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About 75 percent of the oil consumed in the United States is used as vehicle fuel. Despite increases in vehicle feel economy over the past few decades, fuel costs remain a significant budget item for the public and businesses at lie. Numerous factors influence the fueleconomy of a whicle from its serodynamic properties, engine, tire pressure, and air temperature; however, just three basic forces impact fuel economy: vehicle internal friction, air drag, and rolling resistance. While these three forces always affect fuel economy, they vary in importance based on the vehicle speed.² For example, when a whicle is traveling at 30 miles per hour, 45 percent of the energy needed to move the car is used to overcome rolling resistance, but at 70 miles per hour, the rolling resistance only comprises about 20. percent of the energy requirement.

Vehicle Energy Consumption by Speed

securing many \$5 and another out of abound			
		30 mph	70-ph
Rolling Resistance		145%	20%
Internal Friction		30%	129
Au edynamic Dusy		2.8%	10%





The rolling resistance forces a vehicle must overcome to maintain speed are Inked to its suspension system, bearings, transmission, tire pressure, and in part, the properties of the pavement. Three pavement properties are commonly understood to influence rolling resistance:



the roughness of the aggregate materials in A payement



Smoothnies. surface unevenness that affects perceived ride quality



Pavernest stiffpets. fow the pavement defects under a vehicle's weight

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Go-To-Market
Task Group

Factsheets

Infographics

Videos

Presentations

Advertisements

Media Outreach

More











GTM Support

DRIN SMOOTH ROAD

DRI

SAFETY AND CONT

DRIV.

GETTING THERE ON TIME IS ALWAYS IMPORTANT

DRIVABILITY MATTERS

















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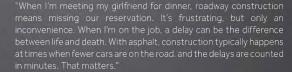




The Asphalt Pavement Alliance







-Lee Look | Fireman | Boyfriend

SPEED OF CONSTRUCTION

It's just one of the ways asphalt delivers drivability











The Asphalt Psycment Alliance is a partnership of the Asphalt Institute, National Asphalt Psycment Association, and the State Asphalt Psycment Associations.

WHEN IT COMES

WHEN IT COMES

WHEN IT COMES 1 WHEN IT COMES T

WHEN IT COMES TO ROADWAY CONSTRUCTION

DRIVABILITY MATTERS

ASPHALT DELIVE

What is drivability? I surface \$MOOTHNESS is and high performan fatigue and diminish and tear, saving drive and bank accounts.

Nearly 7 out of 10 amater road racers say a smoot pavement enhances their performance.1





The Asphalt Pavement Alliance is a p Asphalt Pavement Association, and the

ASPHALT DELIVE

What's Drivability? It home, roadway NOISE the wheel meets the can contribute to di rides we appreciate,

> of driving instructo noise in the car a n because it makes it do their jobs.1

Developments in as pavement mixtures help reduce highwa noise by as much a seven decibels.2

Reducing noise by j to doubling the dist to the listener.





The Asphall Pavement Atlance is a

ASPHALT DELIVE

What's drivability? It's top priority. It should asphalt is smoother. roads safe, especially in the safe condition 1.50



Half of "for hire" drivers emergency response dri public safety should be t important factor when it building new roads.2



Well maintained roads as of crash severity. Aspha maintain and repair with

ASPHALT DELIVER

What is drivability? It's them. SUSTAINABILITY is socially and economic which is good for nei recyclability reduces ; construction. Asphal That matters.

are recycled at a greater rat other material in the U.S.1 Th 13,500 Olympic-size pools w landfill space are saved each

by-products from other indu recycled in asphalt mixtures

Quiet asphalt mixtures help highway noise by as much a decibels3; a three decibel re equivalent to doubling the di a sound's source.



The Asphalt Pavement Altiance is a par Apphalt Pavement Aspociation, and the

ASPHALT DELIVERS DRIVABILITY











What's drivability? It's what makes a road the one you want to take.

Roadway construction and maintenance keep pavements safe and comfortable for road users. Whether you're driving for leisure or work, a safe on-time arrival is vital. Asphalt's SPEED OF CONSTRUCTION makes it easier to build and maintain roads, resulting in minimal delays for the public. Fewer delays minimizes congestion and saves the U.S. economy billions of dollars each year in wasted fuel, time, and productivity.







improvements that help traffic flow freely

are made quickly outside of rush hour.

DriveAsphalt.org

The Asphalt Pavement Alliance is a partnership of the Asphalt Institute. National

more lane-miles can be reconstructed during a single road closure with asphalt's crack seat and overlay process compared to reconstruction with concrete.5



construction can be up to 70% faster.4



Construction and maintenance of an asphalt Perpetual Pavement costs 48% less and takes 14% less time than other comparable pavement types over 55 years.4

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on, Note.

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Exp. 1.2. Clin 1.3. The Vol. (2011) Reported True Selection for Highway BringStation Sead-and UNC Cycle Co morph. Violations of College Internation 7.0 Project Than 6.1 Highway BringStation Sead-and UNC Cycle Co morph. Violations of College International College Int



Six videos currently available Viewed 109,638 Times

Feel-good positive messages about asphalt, others focus on specific attributes or work to educate viewers about asphalt.



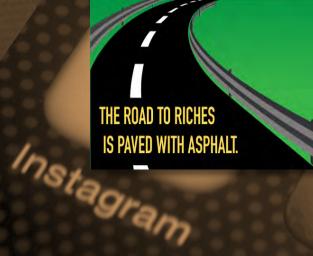




Videos

Digital





ROUGH ROADS WORSE FOR PIZZA THAN ANCHOVIES DRIVE ASPHALT







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APA Deployment Team



Amy Miller, P.E. National Director



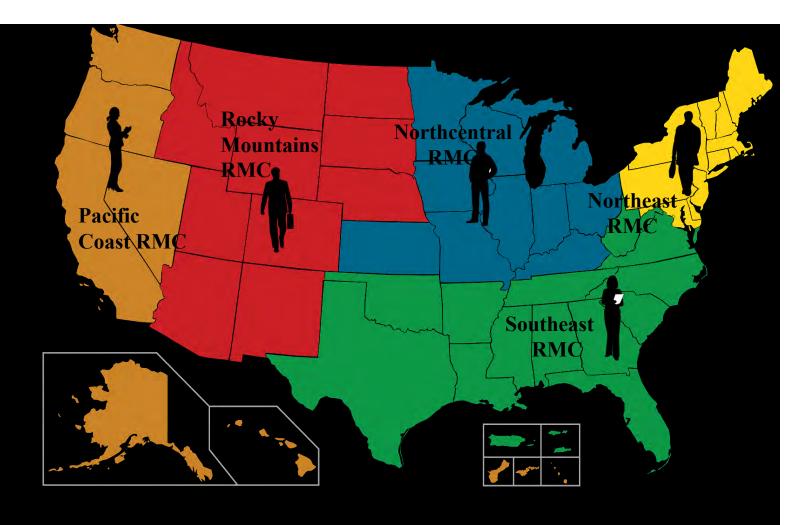


Sandy Hagar Deployment Coordinator



Dan Staebell Northcentral Regional Director

Five regional councils focused on what works in the field to the benefit of the asphalt pavement industry locally and nationally.





Regional Marketing Councils

APA Northeast Regional Meeting

- Tuesday, March 29 Wednesday, March 30
- The Woodlands Inn in Wilkes-Barre, Pa.

Contact Amy Miller (AMiller@AsphaltRoads.org)







APA Northeast Meeting

APA NORTHEAST REGIONAL COUNCIL

• Connecticut: SAPA Don Shuber

Brad Oneglia, O & G

Delaware: SAPA Jim Clendaniel

Tim Peffer, Allan Myers, Inc.

• Maine: Ron Simbari, All-states Material Co.

Maryland: SAPA Marsall Klinefelter

Jeff Graf, Maryland Paving

• Massachusetts: SAPA Jim Reger

Mike Barry, Palmer Paving

New Hampshire: Alex Phelps, Pike Industries

• New Jersey: SAPA Jim Purcell

Scott Laudone, Tilcon NY

• New York: SAPA Bruce Barkevich

Chris Suttmeier, Peckham Materials

C indy Lafleur, Callanan Industries

• Pennsylvania: SAPA Charlie Goodhart

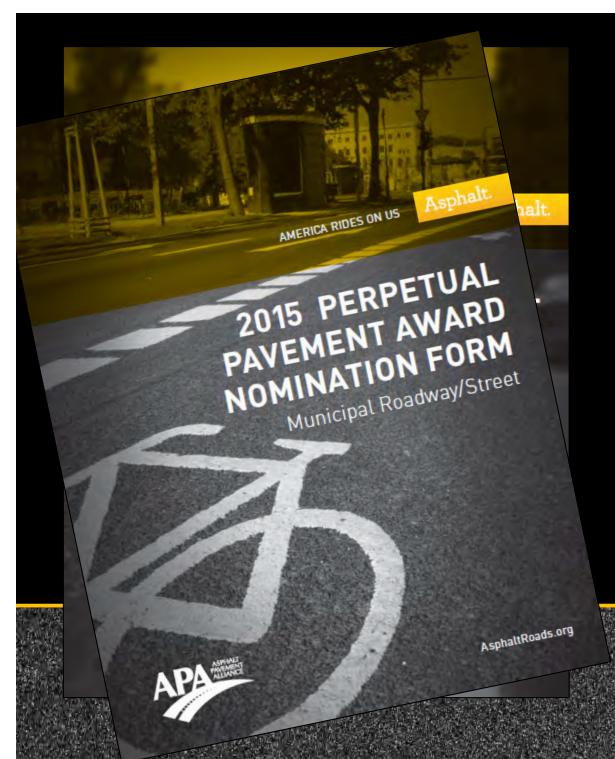
Dan Bauman, G.O. Hawbaker

• Rhode Island: None

• Vermont: Alex Phelps – Pike Industries

• Washington, DC: None

Asphalt Institute: Greg Harder
 NAPA: Ester Magorka
 APA: Amy Miller





Criteria:

- 35+ years old
- 13+ years between overlays (average)
- No increase > 4"





Any Questions?

Amy Miller amiller@asphaltroads.org