



Asphalt Pavement Alliance Overview

February, 2017

Amy Miller, P.E.

National Director, APA

Research & Technology

Pavement Economics Committee

- Seven Task Groups

Other Research

- Asphalt Institute
- NCAT

Future Research

Market Research & Communications

Go-To-Market Task Group



Deployment Activities

Deployment Task Group



NATIONAL ASPHALT



ASPHALT PAVEMENT ALLIANCE

Research & Technology

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Go-To-Market Task Group



Deployment Activities

Deployment Task Group



Pavement Economics Committee



**Best Quality &
Competitiveness**



**Pavement Type
Selection**



**Environmental
Sustainability**



**Pavement
Design**



Legislative



**Pavement
Preservation**



**Private Sector Markets
& Local Roads**

Pavement Economics Committee

Technology & Innovation



Best Quality &
Competitiveness



Pavement
Design



Pavement
Type
Selection

PaveXpress



Pavement
Preservation

THINLAY
SAFE. SMOOTH. DURABLE.



Environmental
Sustainability



Legislative





- Reports and Synopses Posted on:
www.ncat.us**



Pavement Design & Materials Selection

Research & Technology

**Pavement Economics
Committee**
Six Task Groups

Other Research

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- NCAT

Future Research

Market Research & Communications

**Go-To-Market
Task Group**



Deployment Activities

**Deployment
Task Group**



Go-To-Market Task Group

Factsheets

Infographics

Videos

Presentations

Advertisements

Media Outreach

More



PAVEMENT DESIGN Simplified



Designing the right pavement for the job just got easier thanks to PaveXpress, a free web-based pavement design tool for roadway and parking lot pavements.

PaveXpressDesign.com



GTM Support

Go To Market Effort



The Challenges

Grow Market Share

Competitive Materials

Road Owner Perceptions

Make Asphalt Sexy

The Strategy

Focus on Human Concerns

Leverage Market Research

Connect What Drivers Want
With What Road Owners
Know Asphalt Delivers

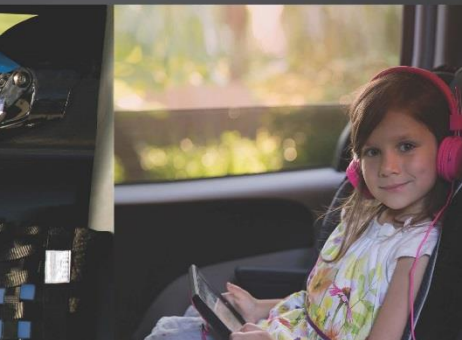
GETTING THERE ON TIME IS ALL ABOUT
DRIVABILITY

BECAUSE SUSTAINABILITY IS A PART OF THE JOURNEY
DRIVABILITY

NOISE IS ONE PASSENGER TO AVOID
DRIVABILITY

SAFETY AND CONTROL ARE ESSENTIAL
DRIVABILITY

SMOOTH ROADS ARE SAFER ROADS
DRIVABILITY MATTERS



"It doesn't matter if you're driving in a race, or taking your daughter to school; smoother roads are safer for you and your family. That's why almost all NASCAR tracks are asphalt, and why I prefer 'em no matter my speed."

-Brian Scott | Richard Petty Motorsports #14 | Father



The Asphalt Pavement Alliance is a partnership of the



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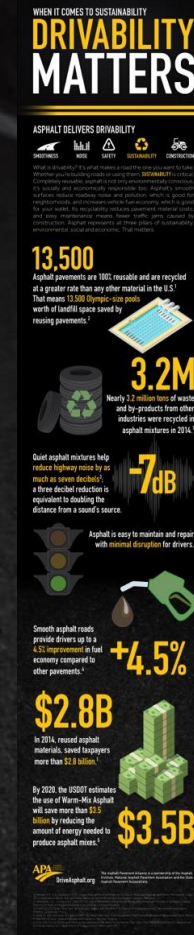
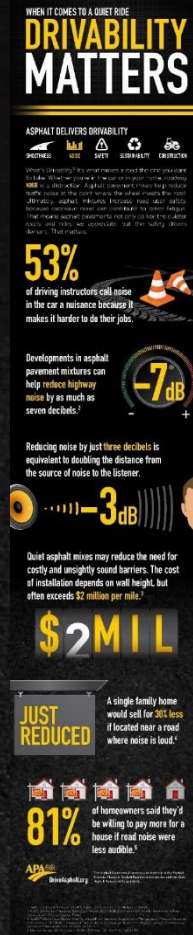
A SMOOTH RIDE
It's just one of the ways asphalt delivers drivability.



Advertisements

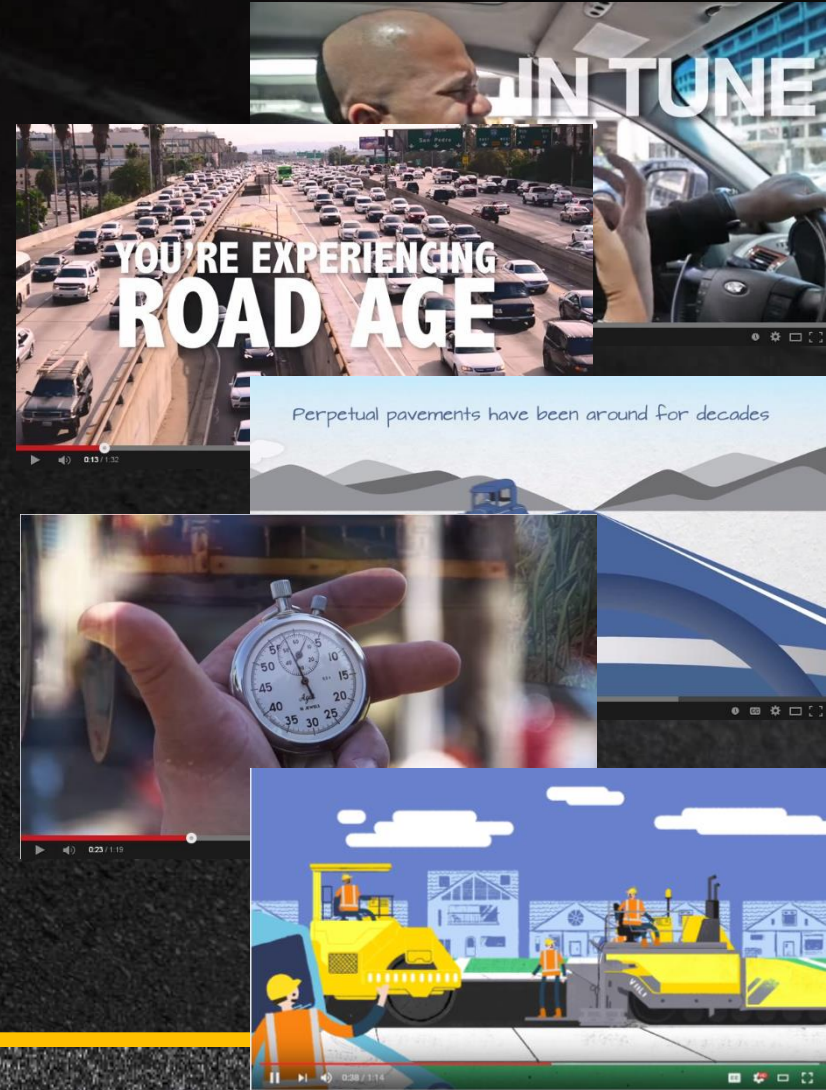
- Speed of Construction
- Noise
- Smoothness
- Sustainability
- Safety

Print & Web Formats



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

ASPHALT MAINTENANCE CAN BE DONE OUTSIDE OF RUSH HOUR

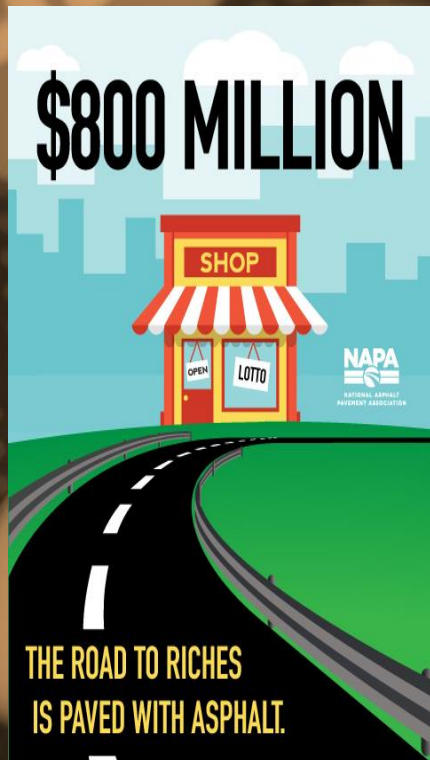


Asphalt.

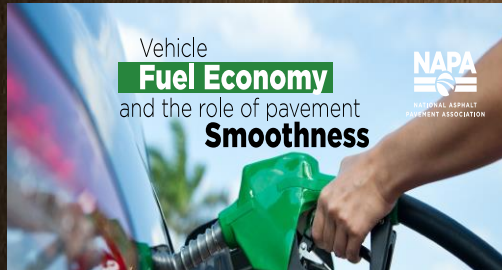
AMERICA RIDES ON US



Digital



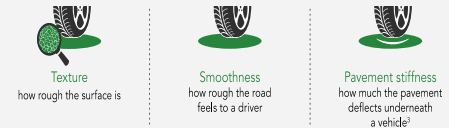
Fact Sheets



When it comes to America's roads, drivers want surfaces that are safe, durable and support fuel efficiency. Pavement smoothness is critical to achieving each of these goals, and the Federal Highway Administration (FHWA) recently determined that smoothness is a key factor in ensuring satisfaction for road users.¹

Thanks to advanced materials and construction techniques, asphalt provides a smooth, continuous surface that meets drivers' standards while adding to pavement longevity and requiring less maintenance than rougher roads² and lowering vehicle operating costs.³

As drivers, automakers and regulators grow increasingly concerned with fuel economy, the impact of smoothness on vehicle efficiency is receiving greater attention. Three pavement properties are commonly thought to affect fuel consumption:



No study has grasped how all three pavement properties simultaneously impact vehicle fuel economy.⁴ However, the current scientific consensus is that pavement smoothness typically has the greatest influence and that the effect of texture is smaller on well-maintained pavements. No real agreement has been reached as to the effect of pavement stiffness.⁵

All told, Americans burn nearly 170 billion gallons of fuel driving approximately 3 trillion miles a year.⁶ If roads across the nation were built and maintained to ensure a smoother ride, drivers could see an approximately 4.5 percent decrease in fuel consumption⁷ — the equivalent of saving about 13¢ per gallon.⁸ Similarly, rough and poorly maintained roads increase wear and tear on vehicles — about \$377 per year for the average driver.⁹

National Asphalt Pavement Association | 5100 Forbes Blvd., Lanham, MD 20706 | Phone: 301-751-4168 | Toll Free: 888-468-6499 | Fax: 301-731-4621 | AsphaltPavement.org



About 75 percent of the oil consumed in the United States is used as vehicle fuel.¹ Despite increases in vehicle fuel economy over the past few decades, fuel costs remain a significant budget item for the public and businesses alike. Numerous factors influence the fuel economy of a vehicle from its aerodynamic 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 vehicle 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.



The rolling resistance forces a vehicle must overcome to maintain speed are linked 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:

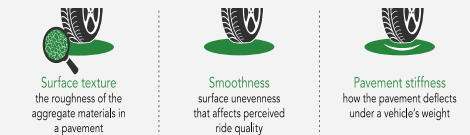


Asphalt Pavement Alliance | 5100 Forbes Blvd., Lanham, MD 20706 | Phone: 301-918-8391 | Toll Free: 877-APA-0077 | DriveAsphalt.org
The Asphalt Pavement Alliance is a partnership of the Asphalt Institute, National Asphalt Pavement Association, and the State Asphalt Pavement Associations



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The rolling resistance forces a vehicle must overcome to maintain speed are linked 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:

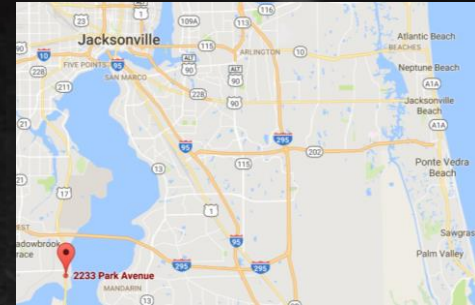


Research has been conducted over the past 40 years to determine how each of these three properties affects rolling resistance. Pavement texture influences fuel economy through the interaction of the tire and the contacted area of the pavement. As the tire deforms, energy converts into heat, which is lost to the rest of the tire and the atmosphere. Pavement stiffness may influence rolling resistance because when tires and pavements interact the pavement compresses causing the tire to continually drive "uphill."³ Smoothness influences the fuel consumption through energy lost by the shock absorbers and tires as the vehicle moves down the roadway and these systems work to make the ride more comfortable.

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APA Deployment Team



Dan Staebell
Northcentral Regional Director



Amy Miller, P.E.
National Director



Sandy Hagar
Deployment Coordinator

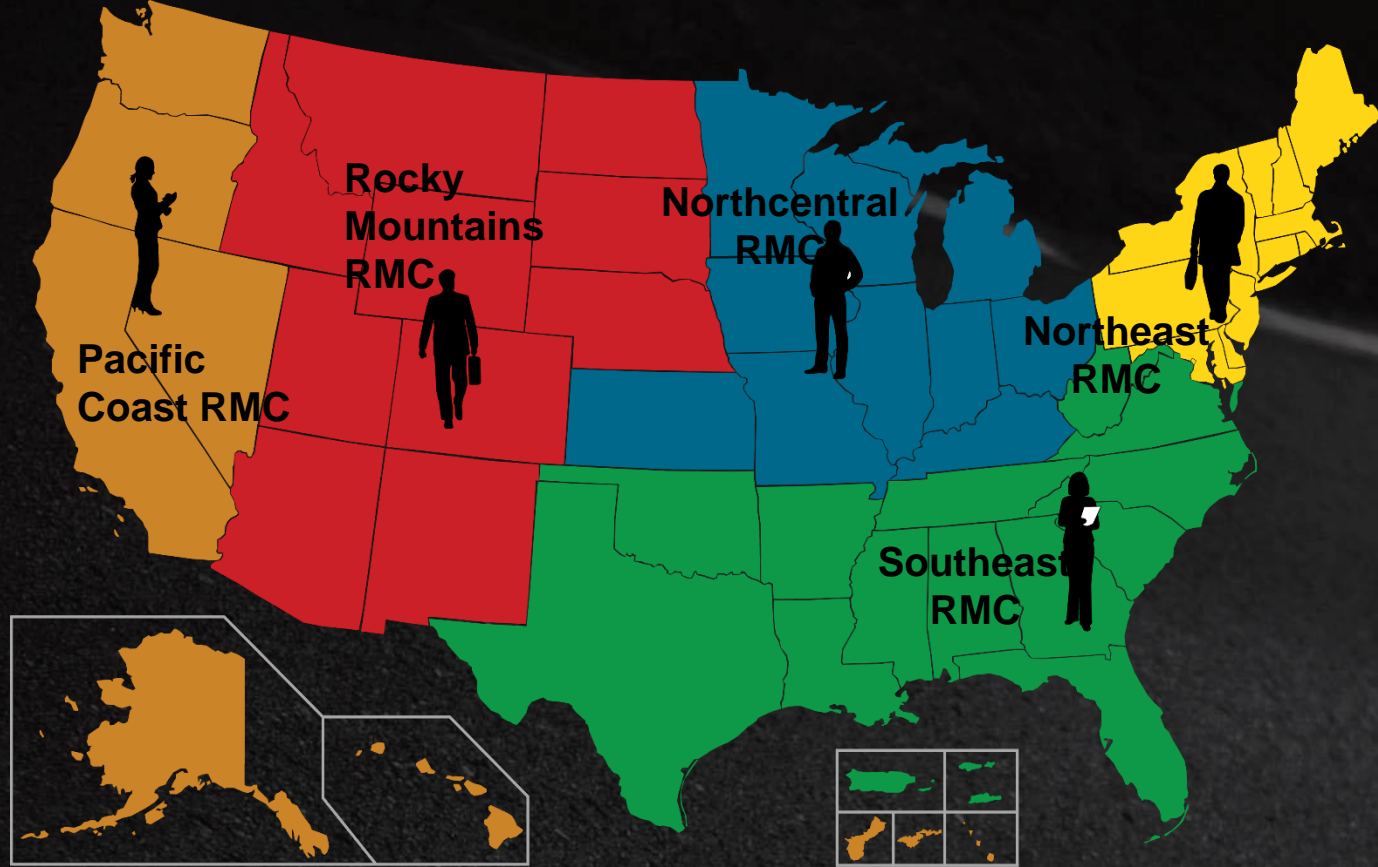
APA Regional Scope

Asphalt.

AMERICA RIDES ON US



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



Regional Councils

APA Northeast

- Meeting held in March, 2016 – Wilkes-barre, PA
- 50+ attendees
- Developed 3 Initiatives and Action Items
- Regional Council Created
- Con-calls and NAPA Annual Meeting
- Working Through Initiatives

Top 3 Initiatives

- Durability
- Pavement Preservation
- Regional Promotional Activity

Northeast Update

DURABILITY

Goal: To protect market share by enhancing and promoting long-life asphalt pavements.

Action Items - short term:

- Presentation to promote what our states have done to enhance durability. Need to compile what each state has done. Also, describe what is coming....what we are working on for continuous improvement.
- Develop list of key speaking opportunities to present above industry presentation: LTAP, TRB, AASHTO, ACEC, NACE, etc.

- Develop presentations and opportunities to present to design engineers and municipality engineers on mix design opportunities (RAP – move them away from always requiring DOT specs on private work).

Goals - Long term:

- Track research on performance based specifications and tests and keep states updated.
- Put together a consortium to determine if there is an interim step between current state and long-term goal.

PAVEMENT PRESERVATION

Goal: To protect and recover plant mix asphalt market share.

Action Items:

- Promote Thinlay to key stakeholders. Develop competitive message focused on northeast states. Develop simple marketing documentation that describes: process, equipment, list improvements, etc.

REGIONAL PROMOTION ACTIVITY

Goal: Give recognition to key projects and the associated designers, contractors and owners to endorse the use of asphalt.

- Annual showcase award from each state to be celebrated at NEAUPG.
- Develop University Asphalt Competition

Northeast Regional Council

Asphalt Pavement Alliance Northeast Regional Council – 9/7/16

Amy Miller	APA		(904) 591-3333
Greg Harder	Asphalt Institute		(315) 238-7000
Bruce Barkevich	<u>NYMaterials</u>	NY	(518) 783-0909
Chris Suttmeier	Peckham Materials	NY	(914) 403-6827
Charles Goodhart	PAPA	PA	(717) 657-1881
Dan Bauman	G.O. Hawbaker	PA	(814) 404-7823
Jim Purcell	NJAPA	NJ	(609) 838-1867
Scott <u>Laudone</u>	<u>Tilcon NY</u>	NJ	(973) 888-7689
Jim Reger	Mass <u>Agg & APA</u>	Mass	(781) 762-2367
Mike Barry	Palmer Paving	Mass	(413) 283-8354
Ron <u>Simbari</u>	All-states Material Co.	Maine	(207) 249-8378
Marshall Klinefelter	<u>MdAsphalt</u>	Maryland	(443) 220-4954
Jeff Graf	Maryland Paving	Maryland	
Jim Clendaniel	Del APA	Delaware	(302) 422-3197
Tim Pepper	Allan Myers, Inc.	Delaware	(717) 442-6113
Don Shubert	Conn Asphalt & <u>Agg</u>	Connecticut	(860) 529-6855
Brad <u>Oneglia</u>	O & G	Connecticut	(203) 522-2259
Alex Phelps	Pike Industries	Vermont/N.H	(603) 530-2237

APA Northcentral

- Meeting held in July, 2016 – Chicago
- 50+ attendees
- Developed 4 Initiatives and Action Items
- Regional Council Created
- Con-calls & NAPA Annual Meeting

Initial NC Discussion

LCCA	Proper Design Thickness
PaveXpress Implementation	IRI Explorer database
Rehab Options	EPD's and Life Cycle Assessment
Perpetual Pavement	Commercial Market
HMA Recycling & Utilization	Common Technical Initiatives
Roller Compacted Concrete	Fractured Slab Technologies

Life Cycle Costing

GOAL: Adapting standard procedure for LCCA analysis that can incorporate state specific input.

– Action Items:

- Put together strategy that will incorporate PEC LCCA guidance document or build on MnDOT LCCA report expected out this year.
- Determine where in NC Region where we are winning LCCA and understand why? Can this transfer to other states?
- Square up and balance the misinformation.
- APA discovers best practices and shares amongst SAPA's.
- Create a Consumer based simplified LccXpress Tool

Rehab Competition

GOAL: Create a competitive industry message combatting concrete overlays and promoting best HMA practices.

– Action Items

- Develop comparison and state reports that articulate current performance shortcomings of Whitetopping.
- Utilize PCC research being done by Iowa DOT which will be completed in near term. It is believed to show shorter than expected life.
- Find successes of HMA current best practices for pavement rehab.
- Create Powerpoint to tell Positive and Offense driven message.

Proper Design Thickness

GOAL: Promote initiatives designed to teach designers how to optimize pavement design while ensuring performance.

– **Action Items:**

- Build off NCAT SN values and utilize this as potential retooling of current design practices.
- Positive and Offense driven Powerpoint on thickness design incorporating PaveXpress and Perpetual Pavement design options.
- Build a design workshop to use best in class alternatives and use real world examples of poor designs.
 - Incorporate cost efficiencies

Commercial Market Strategy

GOAL: Implement tools designed to protect and increase market share in private sector market.

– **Action Items:**

- Work with PEC Private Sector TG
- Develop handout and marketing tools best showing asphalt advantages.
- Determine value proposition and economic benefit package for commercial owners to see hard truth and facts.
- Develop easy bid and specification package for owner simplification and understanding.
- Create message literature and workshop driven powerpoint to support message.

Northcentral Regional Market Council

Regional Council

Name

Organization

Kevin Burke	IAPA
Scott House	BP
CJ Potts	Milestone
Noel Schultz	Jebro
Bill Rosener	APAI
Eric Levenson	Oldcastle
	Research to Roads/Superior
Grant Wollenhaupt	Bowen
Brian Wood	PAIKY
Keith Rose	Rieth-Riley.
John Becsey	APAM
Rob Kuehborn	Commercial Asphalt
Konn Wilson	Fred Weber Inc.
Ester Magorka	NAPA
Rod Russell	Barrett Industries
Tim Murphy	Pave Tech
Wayne Jones	Asphalt Institute
Brandon Strand	WAPA

1	Advisor
1	AI Staff
2	AI Supplier
7	HMA Industry
5	SAPA
1	NAPA Staff
17	



Southeast Regional Meeting

Feb.
15-16;
Atlanta

If you do business in the Southeast, we need your help in protecting and increasing demand for asphalt pavements. **Please join the Asphalt Pavement Alliance for a Southeastern Regional Marketing and Deployment Meeting** to discuss the regional and state-specific needs and challenges we face, and to help in crafting our path forward. The meeting is open to NAPA, AI, and/or SAPA members active in AL, AR, FL, GA, LA, MS, NC, OK, SC, TN, TX, VA, and WV who are involved with strategy, marketing, and oversight for their organization.

**February
15-16, 2017**
**Renaissance
Concourse
Atlanta Airport
Hotel**



Click here to register

**Deadline to register
is February 9, 2017**

WHO SHOULD ATTEND

Contractors, Producers, State Association Executives as well as NAPA and AI staff. Based on the goals of this meeting, personnel involved with organizational strategy and oversight are highly encouraged to attend, particularly contractor members.

REGISTER

Meeting cost is \$150

SCHEDULE OF EVENTS

Wednesday, February 15, 2017

1:00 pm - 5:00 pm Meeting in the Narita Room.
6:00 pm - 7:00 pm Cocktail reception at the Renaissance Concourse
7:00 pm Dinner at the Renaissance Concourse

Thursday, February 16, 2017

7:30 am Breakfast buffet in the Narita Room
8:00 am - 12 noon Meeting in the Narita Room

Asphalt.

AMERICA RIDES

APA National Scope

Asphalt.

AMERICA RIDES ON US



Trade Shows 2017

- ConAgg/ConExpo: Waiting List; March 7-11, 2017; Las Vegas, Nevada
- National Association of County Engineers: April 9-13, 2017; Cincinnati, Ohio
- RECON – International Council of Shopping Centers: May 21-24, 2017; Las Vegas, Nevada
- American Society of Highway Engineers; June 14-18, 2017; New York, New York
- AASHTO Materials Conference: July 30-August 4, 2017; Phoenix, Arizona
- American Public Works Association: August 27-30, 2017; Orlando, FL
- Greenbuild: November 8-9, 2017; Boston, Massachusetts

Perpetual Pavement Award



- Eight states received in 2016: Alabama, Arkansas, Florida, Michigan, Minnesota, Pennsylvania, South Carolina and Tennessee.



ON US



Deployment Communication



New Asset of the Month

Fresh from the Go-to-Market Task Group

Asset: Smoothness Advertisement
Intended Audience: Pavement-type selection decision makers, asphalt pavement industry, and drivers.

Format: Available in full- and half-page versions, as well as several sizes for use on the Internet.

Where: The Asphalt Vault, available in APA and customizable "add your logo" versions. Usage recommendations: Share on social media, use in print or electronic newsletters and publications, as well as in emails geared to reach state DOT officials, public works agencies, consulting engineers, and design-build firms.

Why Smoothness? FHWA has determined that pavement smoothness is a key factor in ensuring driver satisfaction. Also, a [May 2016 report](#) from the International Grooving and Grinding Association notes, "research



Designing the right pavement for the job just got easier thanks to PaveXpress, a free web-based pavement design tool for roadway and parking lot pavements.

PaveXpressDesign.com

What is Old is New Again...

Don't forget this oldie but goodie

Focus: Proper Pavement Design
Intended Audience: Pavement designers, consulting engineers, students, local agencies

Format: Free, web-based pavement design tool

Where: www.pavexpressdesign.com, support materials (instructional PowerPoint, advertisements, brochure, etc.) are available via the Asphalt Vault Usage Recommendations: Put together a lunch-and-learn with local agencies — cities, municipalities, consulting firms, DOTs, DPWs, etc. — to highlight the tool. If you can, offer free CEU/PDH credits to help encourage attendance. A customizable PowerPoint file is available for such a presentation. To understand all the features, view a free, training webinar, found here: [PaveXpress Webinar](#). You can also demo the program at local trade shows or when meeting with local engineers or



Story of the Month

Recently, Jim Warren, Executive Director for the Asphalt Contractors Association of Florida used the "When It Comes to Sustainability, Drivability Matters" infographic and ad as to sponsor a part of a packet of information distributed to engineers at the Florida Association of Counties Annual Meeting in Orlando, FL. These documents were merged to become a two-sided document. This was a perfect fit as Florida cities and green codes are looking for ways to use pavements as an opportunity to meet local and county sustainability requirements. Way to go, Jim!

REMEMBER:
Next APA
Deployment Webinar
November 15, 2016



Asphalt.

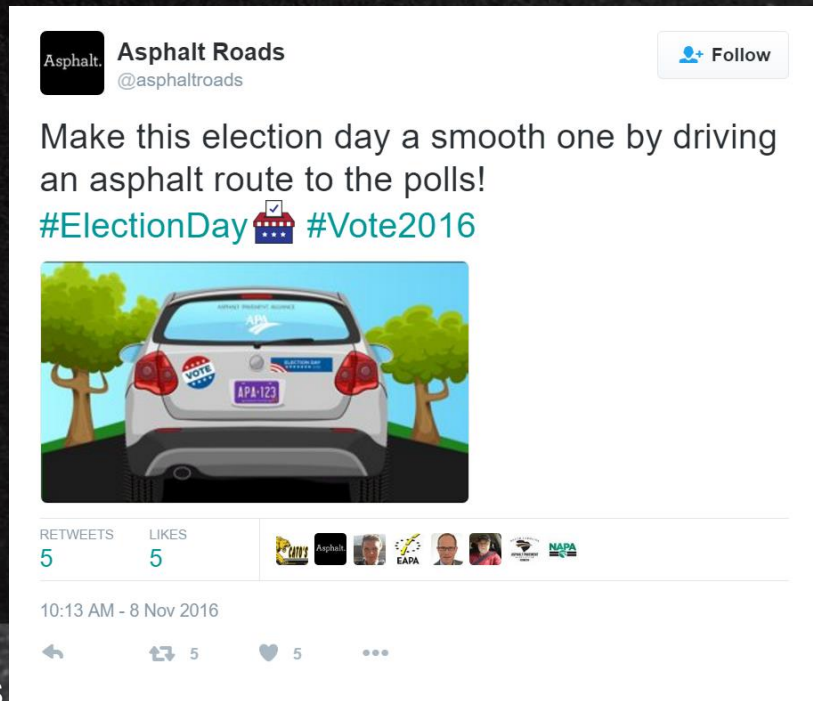
AMERI

Deployment Communication

- Monthly Con-call – 3rd Tuesday Monthly
 - 20-40 Attendees
 - Standard items: PEC/GTM Update, APA Regional Effort Update, Competition Issues, Legislative Issues, Asphalt Institute Regional Engineer Update
 - Featured Speaker

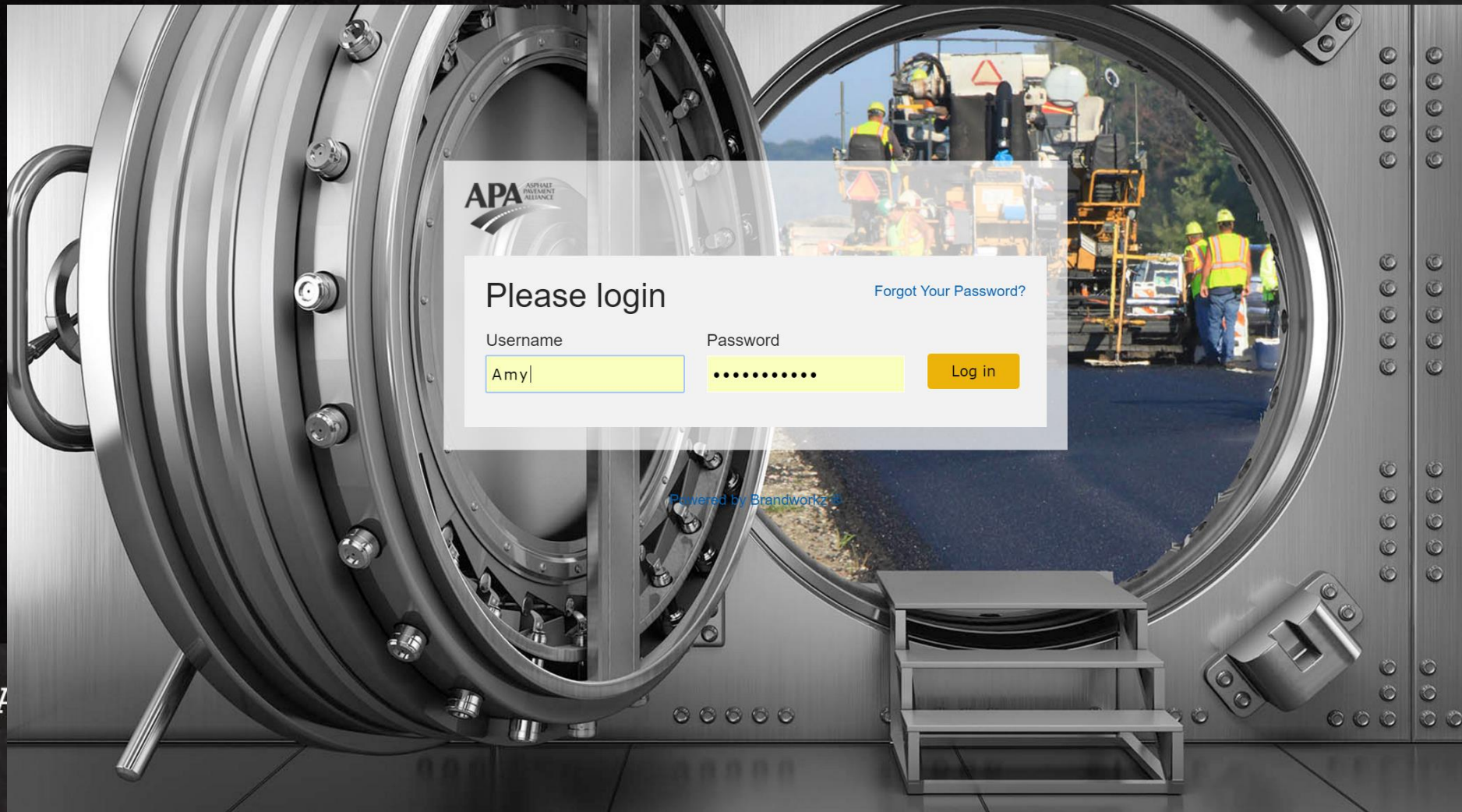
Deployment of GTM Assets

- Social media webinars for SAPAs
- Monthly social media calendar



Asphalt Vault

- Repository for State Execs





How Can You Get Involved? Any Questions?

Amy Miller
amiller@asphaltroads.org

Asphalt Pavement Alliance
presents

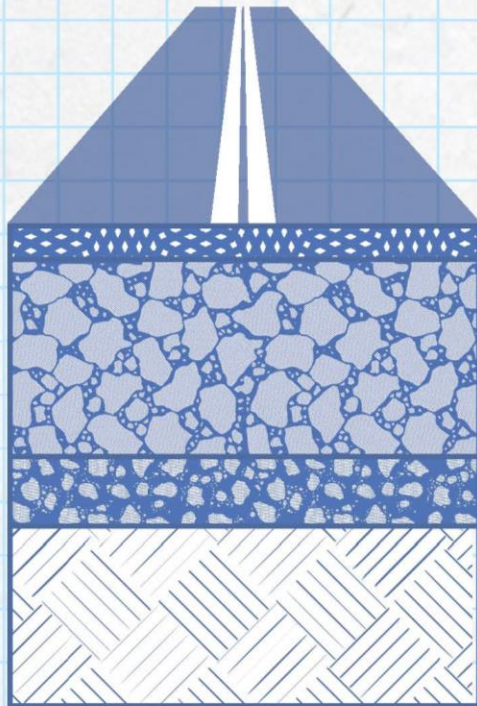


Perpetual Pavement Award
Interstate 180



How To Design A Road To Withstand Time, Traffic, and Taxpayers

Perpetual Pavement Design



Asphalt Surface

Renewed periodically. Maintained to ensure a high level of drivability. Surface type can be customized depending upon needs: open-graded friction courses for safety, stone-matrix asphalt for added durability, Thinlays™ for pavement preservation, etc.

Asphalt Base

Stiff structural layer designed to distribute loads and resist structural rutting. Optimizes materials and costs with use of RAP, RAS, and other recycled materials.

Fatigue-Resistant Asphalt Layer

Flexible layer designed to prevent fatigue cracking and bottom-up cracking. The overall thickness of the structure and the materials of this layer help limit the maximum tensile strain to below the fatigue endurance limit.

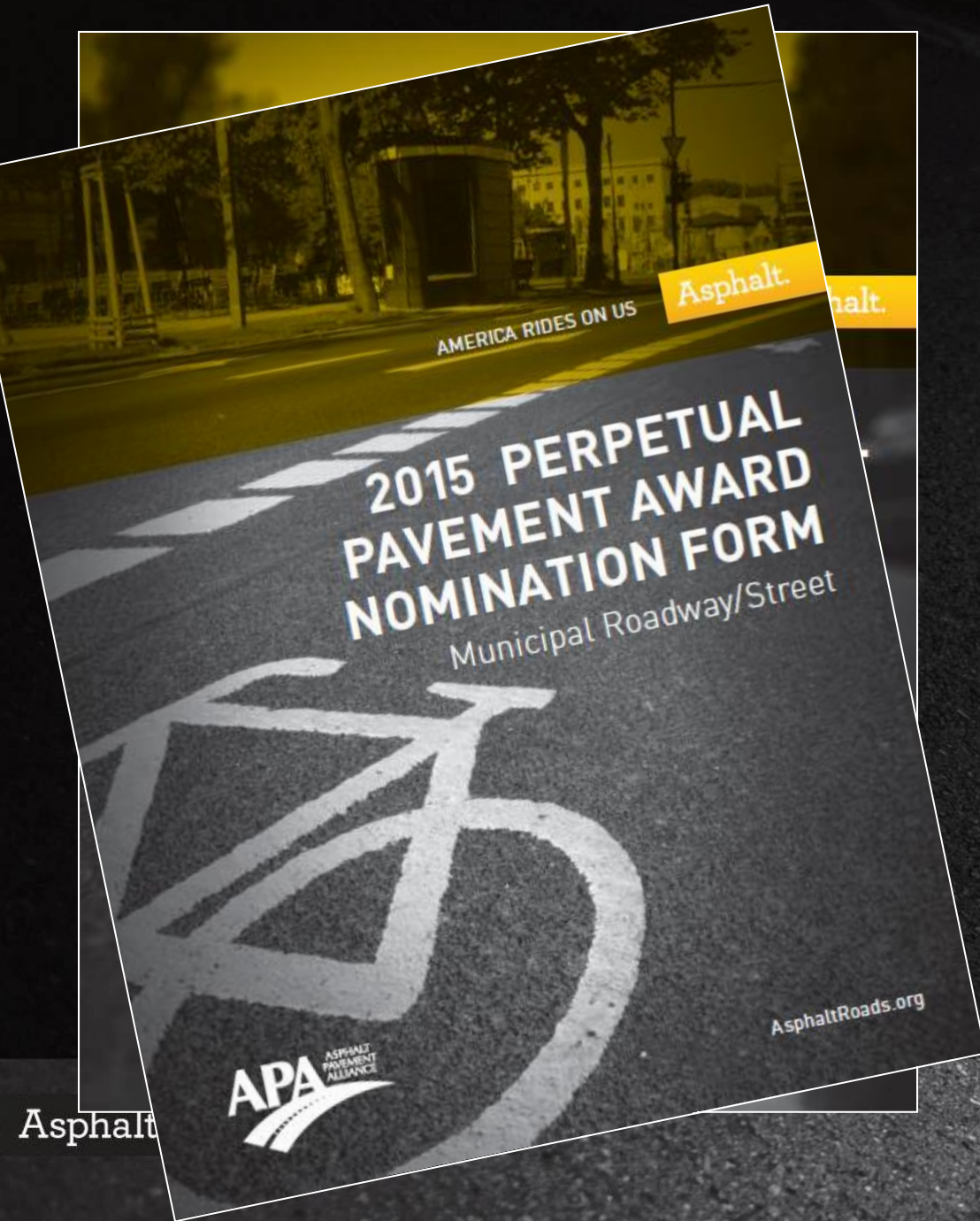
Pavement Foundation

The subgrade may be stabilized or unstabilized.

Perpetual Pavements

Asphalt. AMERICA RIDES ON US





Criteria:

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



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Congratulations!



pennsylvania

DEPARTMENT OF TRANSPORTATION



Interstate 180 MM1.5-MM4.5



THANK YOU!

Asphalt.

AMERICA RIDES ON US

