



Advancing the Asphalt Pavement Industry

Audrey Copeland, PhD, PE
President & CEO

86th Annual Illinois APA Annual Meeting
March 28, 2023
Springfield, IL



Pillar of Success: MEMBER ENGAGEMENT

Workforce Development



CAREER OPPORTUNITIES

Learn more about the asphalt pavement industry's career opportunities including qualifications, physical requirements, average national salary, and length of time before promotion by selecting your skill level below and learning more.



OFFICE



ENTRY-LEVEL



SEMI-SKILLED



ENTRY-LEVEL SKILLED



MID-LEVEL SKILLED



UPPER-LEVEL SKILLED



NATIONAL ASPHALT
PAVEMENT ASSOCIATION

PROFESSIONAL STAFF



Nile Elam
VP Government Affairs



Jean-Paul Fort
Director
Pavement Innovation & Technology



Our mission:

To advance the asphalt pavement industry through leadership, stewardship, and member engagement.

Our vision:

Sustainable transportation infrastructure that paves the way for thriving communities and commerce.

Industry Pillars of Success

2023-25 NAPA Strategic Plan

LEADERSHIP

Foster increased Federal investment

Advocate for and achieve fair, competitive, science-based legislation and policies

Be the trusted, go-to organization for members, decision makers, and stakeholders

STEWARDSHIP

Champion the advantages of asphalt pavements

Shepherd the industry's commitment to net zero carbon emissions pavement

Demonstrate members' commitment to value and excellence

MEMBERSHIP

Engage and grow membership

Facilitate member advancement

Improve and streamline association governance and operations

ADVISORY COUNCIL REGIONS



Rob Kuehborn
Martin Marietta



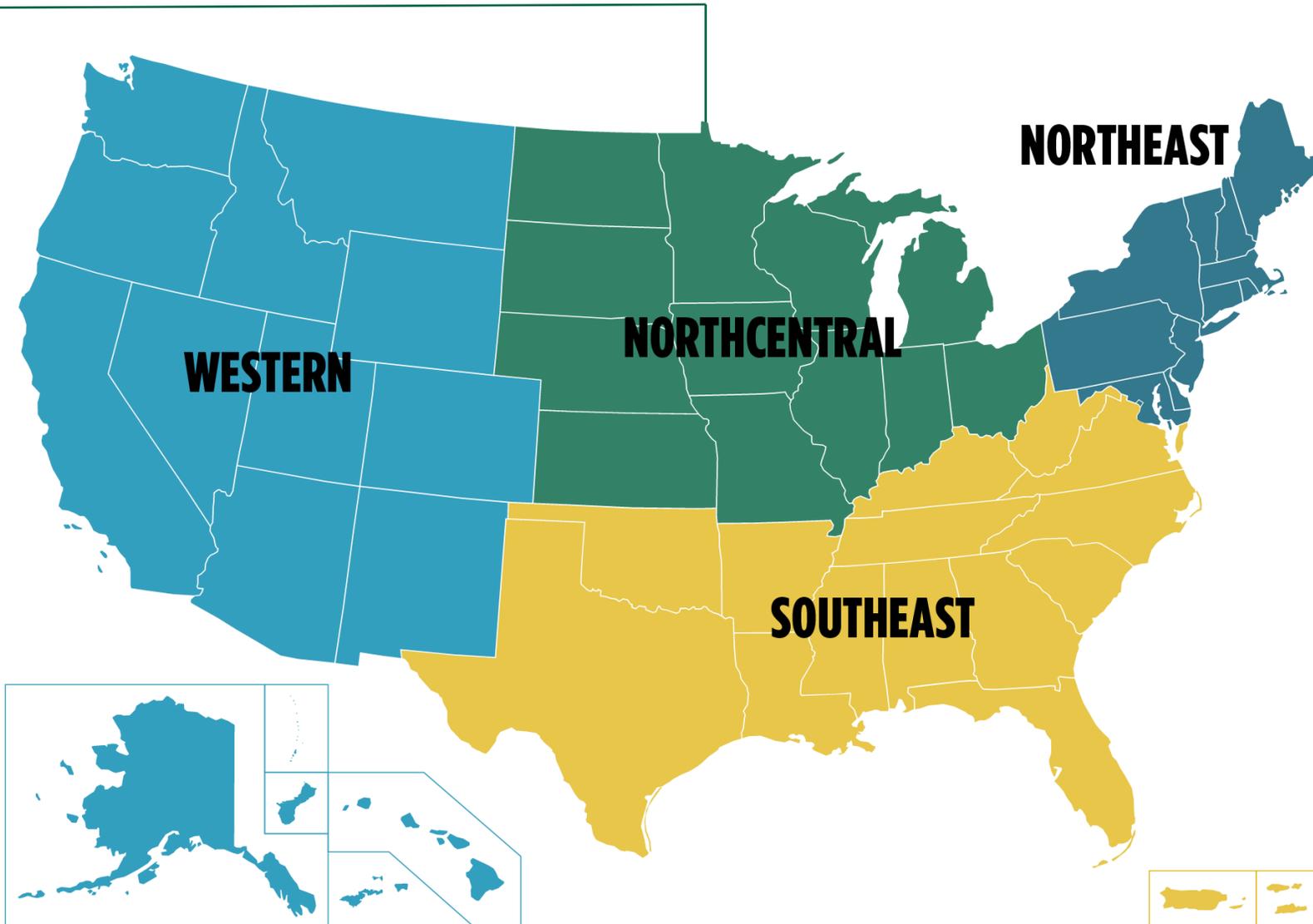
Jordan Reed
George Reed Inc.



Jean Azoury
All States Materials Group



Vince Hafeli
Ajax Paving Industries of Florida





Pillar of Success: LEADERSHIP

Advocacy & Technical Expertise

YOUR VOICE ON CAPITOL HILL



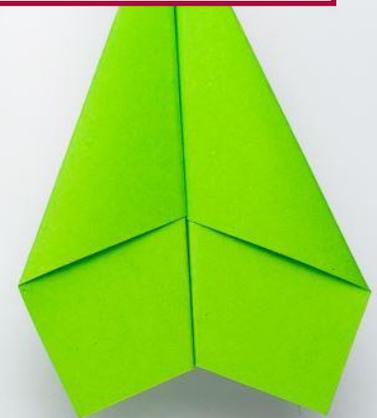
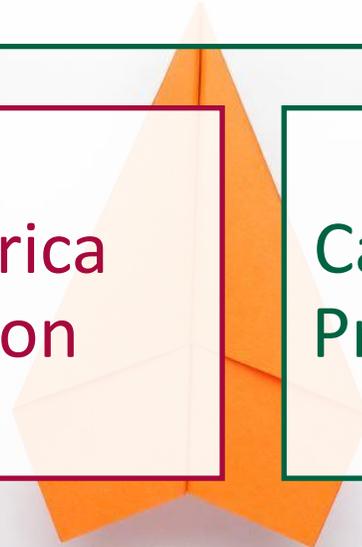
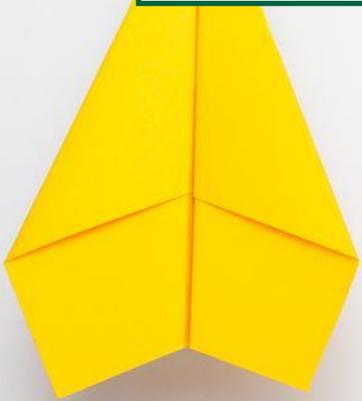
Infrastructure
Funding

Asphalt Pavement
Research

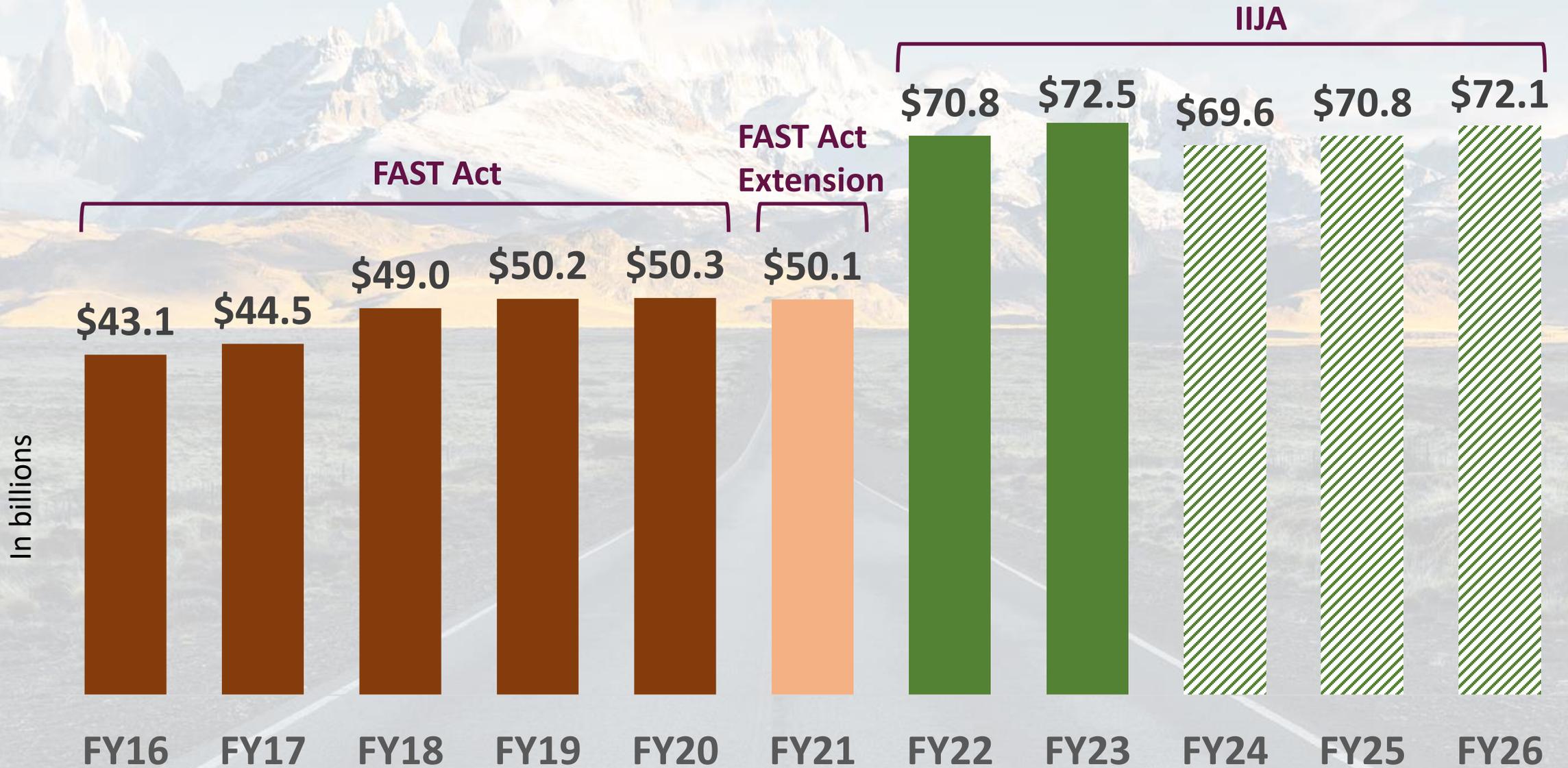
Defeated
Pavement
Mandates

Buy America
Exemption

Carbon Reduction
Program Eligibility



Federal Highway Funding Boost



Highway & Pavement Contract Awards Up!



State & Local Government Highway & Pavement Contract Awards

Source: American Road & Transportation Builders Association

Short-Term Challenges

New Congress, New Priorities

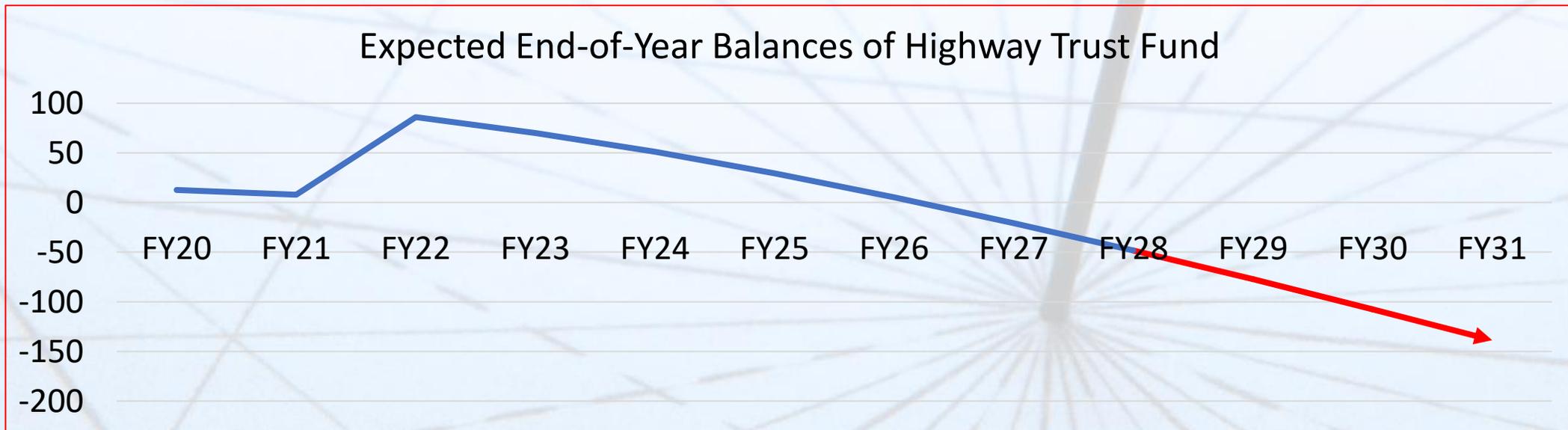
- Few House GOP Members voted for IIJA
- House rules call for 50-year budget freeze
- Threats to cut gas tax continue

How Will New House GOP Majority Deal with Important Legislative Agenda?

- Debt-limit increase
- Annual appropriation bills
- Reauthorize FAA Programs

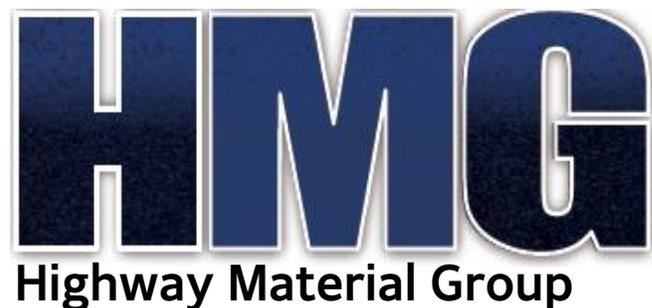
Long-Term Risks

- The \$9.5 billion in annual advanced appropriations from the general fund authorized in IJA ends in FY 2026
- Highway Trust Fund will be running on fumes at the end of IJA



Source: *Eno Transportation Weekly*

Coalitions Strengthen NAPA's Advocacy Program



*Act like your
job depends
on it!*



*Join NAPA's
Advocacy
Membership!*



<https://www.asphaltpavement.org/expertise/advocacy>

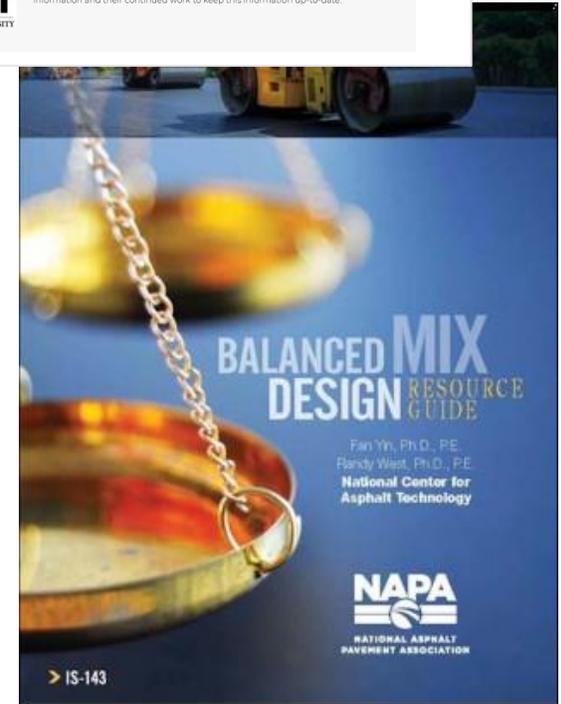
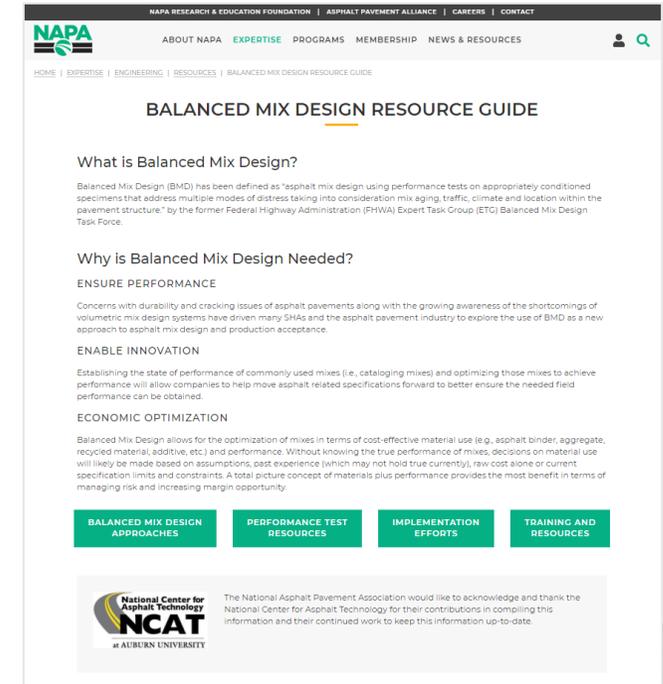


Pillar of Success: LEADERSHIP

Environment, Health & Safety

Balanced Mix Design Resource Guide

- Now web-based
- Interactive Implementation Map
- Mixture Performance Testing Resources
- BMD Approaches
- Training and Additional Resources



Scan to visit
the BMD
Resource Guide



Pillar of Success: STEWARDSHIP

Longevity & Growth

PROMOTING THE INDUSTRY



NAPA RESILIENCE Prepare Adapt Withstand Recover

Planning for Resilient Roads: APPROACHES TO ACCOUNT FOR CLIMATE CHANGE IMPACTS ON FLEXIBLE PAVEMENT DESIGN AND REHABILITATION PRACTICES

As the climate changes, extreme weather events can impact the performance and resiliency of flexible pavement systems. Traditional pavement design relies on historical (stationary) climate data to design and predict future pavement performance, thus changing climate may lead to under-designed pavements and constrained budgets for maintenance and rehabilitation (M&R). **There are three common approaches to incorporate climate change impacts into the decision-making process to help design, build, and maintain resilient pavements.** The three approaches include scenario-based (top-down), asset-based (bottom-up) and hybrid (a combination of both). Regardless of which approach is selected, stakeholder involvement and incorporating future climate projections into the analysis are crucial steps.

A **scenario-based** approach begins with choosing two or more future climate change scenarios. This approach can be useful in identifying potential future pavement-life reductions and promoting climate resilience through enhanced pavement design. In comparison, the **asset-based** approach seeks to evaluate the pavement's sensitivity to plausible future climate or environmental conditions while designing for future traffic loads. A key difference between the two approaches is that the asset-based approach provides a more complete picture of the pavement's response to incremental environmental change, and the scenario-based approach provides information on the timing of critical environmental change to inform design and M&R. The **hybrid** approach is when an asset's response to incremental environmental changes is investigated first and then the timing of critical pavement impacts for budgeting and planning purposes is predicted.

A case study example of the hybrid adaptation approach was performed for a regional connector in coastal New Hampshire (Knott et al., 2019). First the pavement's response to loading with incremental temperature and groundwater rise is investigated using pavement climate sensitivity catalogs. A climate sensitivity catalog is a tool to assess an asset's response to incremental changes in two or three climate parameters like temperature and groundwater levels, or temperature and precipitation, etc. For example, in this case study pavement performance was explored as a function of incremental changes in temperature on one axis and incremental changes in groundwater levels on the other axis.

The next step is to select different adaptation pathways for additional performance and cost analysis using three emissions and sea-level rise scenarios. An adaptation pathway is a prescribed series of adaptation actions to be taken over time. An adaptation plan consists of several adaptation

William Buttlar
Joseph H. Haslag

A Review of LCCA Literature: KEY FACTORS AND INTERPRETATIONS

NAPA
NATIONAL ASPHALT PAVEMENT ASSOCIATION

IS 144 • July 2022

How **Pavement** influences vehicle **Fuel Economy**

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 always affect 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.

Vehicle Energy Consumption by Speed ²	30 mph	70 mph
Rolling Resistance	45%	20%
Internal Friction	30%	15%
Aerodynamic Drag	25%	65%

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:

- Surface texture** the roughness of the aggregate materials in a pavement
- Smoothness** surface unevenness that affects perceived ride quality
- Pavement stiffness** how the pavement deflects under a vehicle's weight

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 National Asphalt Pavement Institute.



FLEXIBILITY

When It Comes to Flexibility... Asphalt Performs

Asphalt is flexible, adaptable, versatile, customizable, and ready to meet just about any need. With the option of nighttime construction and without the lengthy curing time of concrete, asphalt pavements offer the flexibility needed to handle all levels of traffic volume and be installed or repaired quickly.

DriveAsphalt.org

INNOVATION

Designed for Any Application

The asphalt industry innovations continue to afford asphalt pavement as the most economical, efficient, and environmentally friendly pavement. Asphalt engineers are constantly innovating to make roads perform for today and the future. The asphalt industry is committed to workforce training and to scientifically analyzing pavements to ensure the best products.

[LEARN MORE](#)

SUSTAINABILITY

Asphalt: The Sustainable Material

Asphalt is the pavement of choice for sustainability.

Asphalt is 100 percent reusable and recycled at a higher rate than any other material in America – including soda cans and newspaper. In fact, 94 percent of asphalt reclaimed from old roads and parking lots goes back into new pavements.

[LEARN MORE](#)

VALUE

Asphalt Roads Offer Superior Value

Asphalt's life-cycle costs are low, in part because the structure of asphalt pavement doesn't have to be replaced. Well-maintained asphalt roads can last indefinitely and never need to be reconstructed. Further, it's recently been shown that new asphalt pavements last 18 years on average without maintenance.

[LEARN MORE](#)

ASPHALT DELIVERS

...for your budget, community, and the future

Asphalt pavements deliver the performance that agencies, designers, owners, and drivers demand. A solution for the entire transportation network, asphalt is a completely recyclable material that delivers a safe, smooth, quick-to-construct pavement optimized for costs, community, and environment. Asphalt roads are proven solutions that work for your budget, community, and future. Paving with asphalt delivers immediate benefits today while looking out for tomorrow.





NAPA 

RESEARCH AND EDUCATION
FOUNDATION

501c3



Asphalt Industry Scholarships



NAPA



NATIONAL ASPHALT
PAVEMENT ASSOCIATION

501c6



NAPA PAC

NATIONAL ASPHALT PAVEMENT ASSOCIATION
POLITICAL ACTION COMMITTEE

Segregated fund

APA ASPHALT
PAVEMENT
ALLIANCE



NATIONAL ASPHALT
PAVEMENT ASSOCIATION



SAPA

State Asphalt Pavement Associations



ASPHALT INSTITUTE

Partners fund,
led & managed by NAPA



A forum that engages all stakeholders to advance asphalt pavement technologies through the development of **national research needs** and **implementation strategies**.

Current CAPRI Members





NAPA

RESEARCH AND EDUCATION
FOUNDATION

2022
SCHOLARSHIPS



\$314,100

113 Students



\$7,500

BENEFIT

2 Families

HELPED IN 2022

45 Families

SUPPORTED SINCE
THE PROGRAM BEGAN

NAPA Membership = Value

ENGAGEMENT OPPORTUNITIES

Meet your peers at
NAPA meetings +
World of Asphalt

Attend open
committee meetings

EDUCATION & EXPERTISE

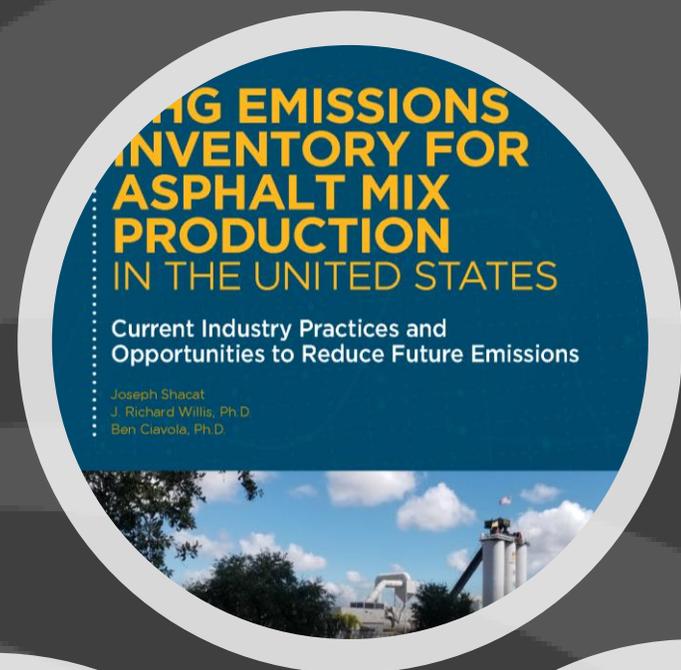
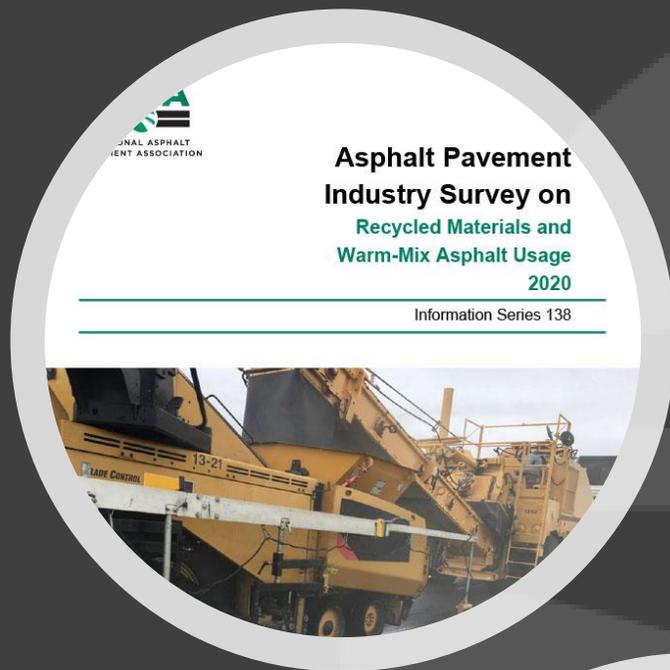
Technical publications
+ expert staff

CEU credits for
attending webinars +
educational meetings

ALWAYS IN-THE-KNOW

Regulatory, funding,
environmental issues
+ their impact on you

Hear diverse voices:
newsletter, magazine,
podcast

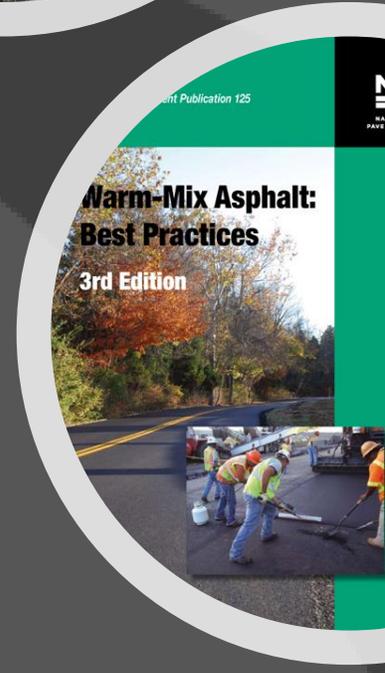


Expertise at Your Fingertips

Publications: Member.AsphaltPavement.org/Shop

Webinars: AsphaltPavement.org/Webinars

Staff & More: AsphaltPavement.org/Expertise





Illinois Members

Gold Club (50+ Years)

- BP
- E.D. Etnyre & Co.
- Gallagher Asphalt
- Geneva Construction
- Gunther Construction Co.
- Howell Asphalt Co.
- Kankakee Valley Construction
- Open Road Paving Co.
- S.G. Hayes & Company

Members

- Allied-Locke Industries
- Applied Research Associates, Inc.
- Arrow Road Construction Co.
- Asphalt Plus LLC
- Asphalt Sales & Products Inc.

- ASTEC
- Bigane Paving Co.
- Captive Resources
- Chicago Testing Laboratory
- Curran Contracting Co.

30-Plus Club

- Advanced Asphalt Co.
- BLS Enterprises, Inc.
- Charles E. Mahoney
- Diamond Construction Co.
- E.T. Simonds Materials Co.
- Iroquois Paving Corp.
- Litchfield Bituminous Corp.
- Monmouth Asphalt
- Truman L. Flatt & Sons Co. Inc.
- William Charles Construction Co. LLC

- ECF Inc.
- Elite Paving & Sealcoating
- Everlast Blacktop, Inc.
- Global Track Warehouse
- Helm Civil



Illinois Members

Members

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- Holcim US
- Humboldt Mfg. Co.
- Interstate Asphalt
- K-Five Construction Corp.
- Keyesport Asphalt LLC
- MAT Asphalt LLC
- Murphy Pavement Technology Inc.
- Nouryon
- Ogden Avenue Materials
- OMI Industries
- Organizational Trainers & Consultants
- Peter Baker & Son Co.
- Phillips 66
- Southern Illinois Asphalt Co. Inc.
- Southwest Oil
- T&T Cartage
- Tri-State Asphalt LLC
- United Contractors Midwest
- Vulcan Materials Co. Central Division
- W.L. Miller Co.

State Advisor

Dan Gallagher, Gallagher Asphalt Corp.



ENGAGED FOR SUCCESS

2022 ANNUAL REPORT

[NAPAAnnualReport.org](https://www.napaannualreport.org)



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PAVEMENT ASSOCIATION**