



ENHANCING THE SUSTAINABILITY OF ROADS AND HIGHWAYS USING RUBBER-MODIFIED ASPHALT

Rubber-modified asphalt (RMA) is an ideal material to enhance the sustainability and resiliency of U.S. infrastructure. The recent *Summary of State Specifications for Rubber Modified Asphalt* report highlights the need for states to include RMA in their material specifications for roadway construction in order to scale up the use of RMA across the United States.

WHAT IS RUBBER-MODIFIED ASPHALT?

Rubber-modified asphalt (RMA) is a mixture of asphalt and ground tire rubber from recycled tires. This paving solution provides proven economic, environmental and performance benefits in building better, longer lasting roads and highways.

RMA is a **promising end-of-life market** for the 270 million recycled tires generated annually in the U.S., as each lane mile paved with RMA uses up to **2,000 recycled tires**.

RUBBER MODIFIED ASPHALT PROVIDES...

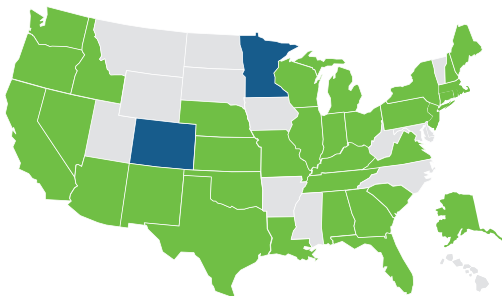
Increased pavement service life



Reduced road maintenance

= Significant cost savings

A sustainable asphalt option



RMA modified asphalt use, by state
■ Using or testing ■ Projects pending

32% reduction

of CO₂ emissions and lower energy consumption over the lifetime of pavement



Smoother + Stiffer Pavement

=

Less Fuel Consumption



Road performance benefits:

- A longer service life
- Less road spray in wet conditions
- Increased skid resistance
- Significant noise reduction
- Better ride quality
- Reduced tire wear



RMA has been shown to create smoother pavements and therefore **better ride quality for motorists**.



In wet conditions, RMA's permeability **reduces water spray and increases road safety**.



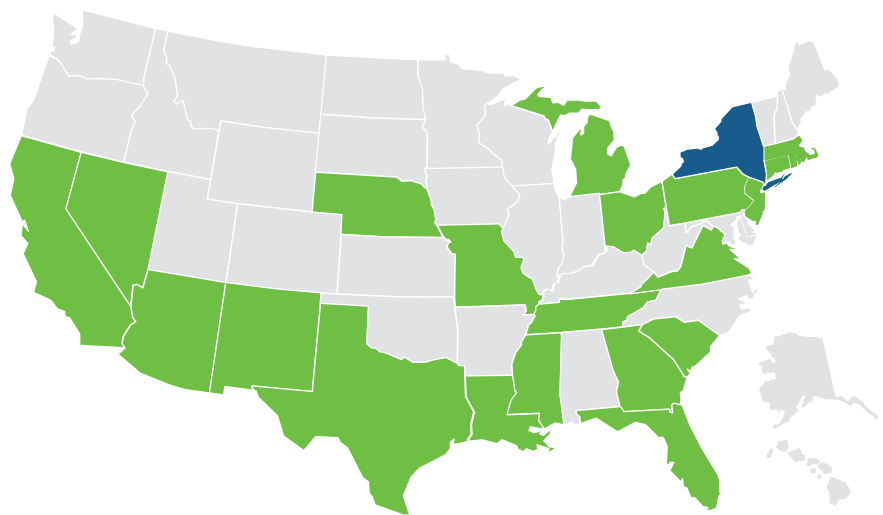
OPPORTUNITIES FOR STATES TO GET INVOLVED



- **Utilize new federal funds** available for sustainable engineering projects
- **Prioritize investment and RMA usage** in:
 - Regional demonstration projects
 - RMA production facilities and equipment
 - Developing material specifications for roadways to standardize the use of RMA
- **Develop national standardization** to decrease knowledge gaps about RMA performance testing, modern performance specifications and integrated pavement/materials design
- **Develop a national clearinghouse** of test results, field performance data, improved performance prediction models and templates for new RMA construction and materials specifications
- **Establish a national steering group** to develop and coordinate national research priorities and studies for RMA and provide oversight to a center of excellence for RMA research
- **Share best practices** at regional asphalt user-produced group meetings

CURRENT OUTLOOK OF RMA USAGE IN STATES

RMA is widely used throughout the United States; however, **only 21 states** have some form of published RMA specification. By including RMA in state specifications, it alleviates administrative hurdles and thus increases the likelihood of RMA's use in projects.



RMA included in state specification
■ No ■ Yes ■ Restricted (curbs only)



Learn more about the *Summary of State Specifications for Rubber Modified Asphalt* report here:

