

Department of Legislative Services
Maryland General Assembly
2024 Session

FISCAL AND POLICY NOTE
First Reader

House Bill 781 (Delegate Hornberger, *et al.*)
Environment and Transportation

Transportation – State Highways – Rubber Modified Asphalt

This bill requires the State Highway Administration (SHA) to use rubber modified asphalt in the construction, reconstruction, and repair of State highways. In addition, SHA must consider the use of various types of rubber modified asphalt, including those produced by the wet process and dry process, when planning for the construction, reconstruction, and repair of State highways. SHA must adopt regulations to implement the bill.

Fiscal Summary

State Effect: Because the Maryland Department of Transportation’s (MDOT) capital program is fully subscribed, to account for the increased costs associated with using rubber modified asphalt instead of conventional asphalt, MDOT must either redirect as much as \$102.6 million in fiscal 2025 and as much as \$136.8 million annually thereafter from other projects or reduce the amount of State highways rehabilitated each year, as discussed below. Revenues are not affected.

Local Effect: The bill does not directly affect local government operations or finances.

Small Business Effect: Minimal.

Analysis

Bill Summary: “Crumb rubber” means the granules that result from grinding up whole scrap tires from automobiles, trucks, and buses. “Dry process” means the addition of crumb rubber as aggregate during mixing to produce rubber modified asphalt. “Rubber modified asphalt” means an alternative road pavement material produced by mixing crumb rubber

with conventional asphalt. “Wet process” means the addition of crumb rubber to the asphalt binder before mixing to produce rubber modified asphalt.

Current Law: SHA is responsible for more than 5,200 miles or approximately 16,800 lane miles of road, 2,500 bridges, 3,500 small stream crossing structures, and 80 miles of sound/noise barriers in the State. It also has responsibility for planning, designing, constructing, and maintaining these roads and bridges to safety and performance standards while considering sociological, ecological, and economic concerns. SHA must construct, reconstruct, and repair State highways as necessary and maintain them in good condition.

State Expenditures: SHA advises that it performs direct maintenance and rehabilitation work on approximately 1,200 miles of asphalt on its roads each year. SHA is often required to replace the asphalt and did so for an average of 720 miles of road each year over the last five years.

SHA advises that rubber modified asphalt is expected to be more expensive than conventional asphalt; the increased cost is primarily due to special equipment needed to work with rubber modified asphalt, additional energy needed during the heating process for rubber modified asphalt, and additional asphalt binder needed for the asphalt mix to ensure the mix remains cohesive. Using conventional asphalt, SHA is able to replace asphalt at a cost of approximately \$310,000 per mile. However, a preliminary evaluation by SHA estimates a cost of approximately \$500,000 per mile to replace asphalt if it must use rubber modified asphalt instead.

Thus, using rubber modified asphalt instead of conventional asphalt to rehabilitate an estimated 720 miles of asphalt annually increases SHA’s costs by an estimated \$102.6 million in fiscal 2025 (due to the bill’s October 1, 2024 effective date) and \$136.8 million annually thereafter. Because MDOT’s capital program is fully subscribed, to account for this increased cost, MDOT must redirect funding from other projects in its capital program and/or SHA must reduce the number of miles of asphalt it rehabilitates each year.

Because much of SHA’s work involves reconstruction/repair of existing highways, this estimate does not include any costs related to the construction of new State highways.

Additional Information

Recent Prior Introductions: Similar legislation has not been introduced within the last three years.

Designated Cross File: None.

Information Source(s): Maryland Department of Transportation; Department of Legislative Services

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km/lgc

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