

# Targeted Overlay Pavement Solutions (TOPS)

*Targeted overlays match treatments to high-priority, high-need locations.*

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U.S. Department  
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## Crack Attenuating Mix

Crack attenuating mix (CAM) was originally designed by the Texas Department of Transportation (TxDOT) in 2007. CAM is a fine-graded mixture with a high-binder content that is placed as an 0.5 to 1 inch thick interlayer between the existing pavement and a thin asphalt layer to reduce the reflective cracking without jeopardizing rutting resistance. CAM design relies on the traditional volumetric approach and performance tests (Hamburg Wheel Tracking and Texas Overlay Test). The use of quality aggregate, as well as around 7 percent polymer-modified binder results in an expensive mix; however, there are overall life cycle cost benefits when considering the increased service life and reduced maintenance costs.

The key considerations when using CAM interlayers are to pair them with a suitable surface mix and use best construction practices for thin lift applications. Proper bonding between layers and adequate compaction to ensure impermeability are key. A successfully placed CAM interlayer can significantly delay reflective cracking and increase the surface life of pavements. CAM has been used extensively in the Houston and Dallas districts on top of old concrete pavements. TxDOT reported having successfully used CAM on U.S., interstate, and State highways, as well as farm-to-market roadways, loops, and business highways as an interlayer.

There are several State DOTs including Arizona, California, Florida, Massachusetts, Nevada, Utah, Iowa, and Minnesota that specify the use of specialty mixtures, referred to as stress relief course, to mitigate reflective cracking in asphalt overlays. These mixtures are not necessarily rut-resistant and therefore, they are placed as interlayer mixtures. Cost analysis shows that even though such mixtures have a higher initial cost of materials as compared to conventional dense-graded hot-mix asphalt overlays, the agency and user life cycle costs per lane mile are lower and could result in about 20 percent cost savings.



**Crack attenuating mix on Houston's IH-69 project.**  
*Source: Tom Scullion, Texas A&M Transportation Institute*

[Visit our website](#) for more information on Targeted Overlay Pavement Solutions.

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