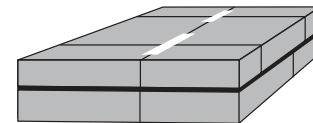# Targeted Overlay Pavement Solutions (TOPS)

Targeted overlays fit the treatment to the condition of the existing pavement.

U.S. Department of Transportation

Federal Highway Administration

Unbonded Concrete on Concrete

Illinois

An innovative project constructed in 2015 on a 3.2-mile-long section of I-72 just east of Springfield, Illinois, was the **first structural fiber-reinforced unbonded concrete overlay in the State**. This section of I-72 is a main east-west corridor that links Springfield with Decatur and Champaign, Illinois, as it winds east to connect I-74 to Indianapolis, Indiana. Due to the nature of the route, it carries a moderate amount of semitruck traffic transporting local cargo loads. The average daily traffic as noted in the project plans is 14,000 vehicles per day with 21 percent trucks.

The project incorporated a "big-block" design featuring a 6-inch-thick overlay section and 6-by-6-foot joint spacing. The eastbound roadway and shoulders used a classic 1⅜-inch hot-mix asphalt (HMA) separation layer. The westbound section incorporated a geotextile separation layer fastened in place by a simple adhesive system consisting of an emulsion tack coat and concrete fasteners where needed. Cost savings were seen for the westbound geotextile-separated section relative to the eastbound HMA layer section.

Placing overlay on geotextile
(ACPA)

I-72 open to traffic
(ACPA)

North Carolina

In March 2007, work began on a **design-build** project on a section of I-77 in Yadkin County, North Carolina. The project involved constructing an unbonded concrete overlay over an existing concrete pavement. The overlay design consisted of a 1½-inch asphalt separation layer and 11 inches of doweled jointed concrete pavement. This design used existing reinforced concrete roadway, thereby maximizing the original pavement investment of the North Carolina Department of Transportation.

Placing 11-inch overlay pavement *(ACPA)*

I-77 open to traffic
(ACPA)

Visit our website for more information on Targeted Overlay Pavement Solutions.