

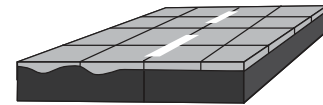
Targeted Overlay Pavement Solutions (TOPS)

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



U.S. Department
of Transportation
**Federal Highway
Administration**

Bonded Concrete on Asphalt



Oklahoma

In 2016, the Oklahoma Department of Transportation (ODOT) designed a 3-inch asphalt overlay to resurface a 5.52-mile section of SH-51 in Blaine County. The project went to bid two times, but because high asphalt oil prices inflated the bid costs and only one bid was received for each letting, ODOT did not accept the bids. Since concrete pavement may last longer than asphalt, and the cost of concrete with fiber may be competitive with the cost of asphalt, ODOT decided to redesign the project as a 5-inch portland cement concrete overlay. Let with the new design, ODOT received four competitive bids. Moreover, by changing this project from an asphalt to a concrete overlay, ODOT received a **pavement that was 2 inches thicker with a projected 20-year lifespan at a more competitive price.**

The final design for the SH-51 Blaine County project called for the placement of a 5-inch bonded concrete overlay with fiber mesh over an existing milled asphalt pavement. The contractor was able to use a trimmer capable of milling or trimming off at least 1 inch of asphalt over a width of 16 feet on a single pass, thus tightly controlling the product yield to a minimal percentage. The project was let and bid on, and contracts were awarded. Construction was completed in roughly 90 days.



Placing concrete on milled surface (ACPA)



SH-51, November 2020
(Brent Burwell, OK/AR ACPA)

Illinois

East Carroll Street, a highly traveled one-way street through a residential neighborhood in Macomb, Illinois, is a common route to schools, stores, and restaurants. After years of maintenance, East Carroll Street was in need of serious rehabilitation or reconstruction. In 2013, **to reduce costs and provide a sustainable solution**, a bonded 4-inch composite concrete overlay system was selected for East Carroll Street as an alternative to removing and replacing the pavement. The street width was increased to 23 feet to provide for on-street parking and a bicycle lane. The existing surface was milled at a variable depth to adjust the profile and fix existing cross slopes where possible. The new pavement was structural fiber-reinforced concrete (4 pounds of fiber per cubic yard of concrete) with a 4-foot square saw cut pattern.



Placing 4-inch concrete pavement (ACPA)



East Carroll Street open to traffic (ACPA)

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

Concrete Materials

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