

Some Things Are as Simple as Black and White

There are no shades of gray on a resurfacing project of a high-volume highway in the Crawfordsville District. Everything is black and white.

In a rarity for INDOT, traditional hot mix asphalt (HMA) and concrete are being used for lane pavement in the same project — the eight-mile resurfacing of U.S. 52 from South 30th Street in Lafayette to East Tippecanoe County Road 900 South, approximately seven miles southeast of Lafayette. The four-mile northern section of the project is being resurfaced with asphalt. The four-mile southern portion is concrete work.

HMA is black, and concrete is white. The twain shall meet when the project is finished early this fall.

“It was a joint decision between our district’s Capital Program Management and Construction divisions during project development to use both materials,” said Crawfordsville District Area Engineer Erik Seef. “Typically, projects aren’t split between different pavement types, but in this case, it made perfect sense.”

Thin concrete overlay, sometimes called white topping, is a relatively new process at INDOT. The practice involves milling down some of the existing asphalt or composite roadway and then installing a new — but thin — concrete overlay, which measures between 4 and 6 inches thick (conventional pavement thickness is more than 6 inches).



Until this U.S. 52 project and one other current project, thin concrete overlays had not been used in the Crawfordsville District. Personnel had to keep in mind that thin concrete overlays must be installed in a continuous concrete pour, and then control joints must be saw-cut into 5½-by-6-foot squares. The concrete must cure before vehicles can be driven on the roadway.

“As our district had not undertaken a thin concrete overlay, the maintenance of traffic (MOT) was an unknown,” said Seef. “The northern portion of the project is near the Tippecanoe Mall and in a dense urban section. It was deemed too risky to place the concrete there due

At the southern portion of the U.S. 52 project, new asphalt proves to be a marked contrast to new concrete; new asphalt will be installed and abut new concrete at the northern interface by early October.

to unknowns in MOT, such as how quickly vehicles can cross it and if it should be opened for tractor-trailers. These issues could have major impacts to company delivery schedules. By using HMA in the northern section, we could guarantee that the roadway could be opened within hours upon cooling after the placement of HMA.”

The U.S. 52 project, which also includes patching, began in April. The color contrast between new concrete and new asphalt could be seen immediately at the southern juncture, where a short section of new asphalt was added to tie the existing asphalt into the new concrete to transition the elevation difference between the two. On the northern interface of the project, the thin concrete overlay and new asphalt are to meet in late September or early October, with the overall project wrapping up soon after.

Thin concrete overlays are an ongoing learning process. Purdue University’s Indiana Local Technical Assistance Program, in conjunction with Indiana’s concrete paving industry and INDOT, hosted two one-day workshops in mid-September. The workshops, in Huntingburg and Lafayette, included field visits to project sites in progress and thin concrete overlay best practices for MOT and construction.

Seymour District HMA-Concrete Project Set

In the Seymour District, new HMA eventually will meet new concrete along U.S. 50 under two separate contracts to resurface and repair a 22-mile stretch.

HMA is being used to resurface a 17½-mile route from the Jennings-Ripley county line east to State Road 101. A 4½-inch thin concrete overlay will be installed on an 11½-mile stretch from State Road 101 to just west of Aurora.

The HMA project is to be completed by mid-November.

A thin concrete overlay was placed atop the existing asphalt base on westbound lanes of U.S. 50 in mid-September. Next spring, workers will return to the project site to “white top” the two eastbound lanes, with work expected to be completed by July.