Route 89, Mansfield CT, Rubberized Chip Seal

Placed in 2011, Rural Major Collector, ADT 4400

Treatment: Crack seal followed by rubberized chip seal (10% rubber)

Route 89, Mansfield CT, Rubberized Chip Seal

Mansfield Connecticut: Just a few miles from the University of CT – Home of the Huskies.

Route 89, Mansfield CT, Rubberized Chip Seal

Good photo of sealed cracks reflecting through the chip seal. This is what you want – all the pavement over the cracks saturated with rubber binder.

Route 89, Mansfield CT, Rubberized Chip Seal

The result – Not one crack reflecting through.

Route 89, Mansfield CT, Rubberized Chip Seal

Close up showing the extra rubberized binder content over the cracks. Notice the excellent texture and chip retention of the surrounding chip seal surface. This is exactly what you want to see with a successful rubberized chip seal.

I-91, New Haven/North Haven CT, Polypatch and Ultra-Thin Bonded HMA

I-91 New Haven/North Haven CT, Interstate ADT- 132,000 VPD. Low severity transverse cracks were sealed with rubberized crack seal and medium to high severity cracks were patched with “PolyPatch.” The patches typically were 1 inch deep by 10-12 inch wide. The roadway was then overlaid with a 5/8 inch thick Ultra-Thin Bonded HMA wearing surface.

I-91, New Haven/North Haven CT, Polypatch and Ultra-Thin Bonded HMA

Here's a photo of the same location one year later. Notice the fat spot where the PolyPatch was placed.

I-91, New Haven/North Haven CT, Polypatch and Ultra-Thin Bonded HMA

Typical photo (after 2 years), showing Polypatch under the Ultra-Thin Bonded HMA overlay.

I-91, New Haven/North Haven CT, Polypatch and Ultra-Thin Bonded HMA

Typical PolyPatch treatment under the Ultra-Thin Bonded HMA overlay after two years.

I-91, New Haven/North Haven CT, Polypatch and Ultra-Thin Bonded HMA

Some patches showing tight reflective cracking along the outside edges of the underlying PolyPatch.

I-91, New Haven/North Haven CT, Polypatch and Ultra-Thin Bonded HMA

Control Section - Milled and paved the same year with two (2) inches of Superpave HMA 0.5 inch.

Route 169 Canterbury/Brooklyn, SAMI topped with an Ultra-Thin Bonded HMA Overlay

Placed in 2012, Rural Major Collector, ADT 2600

Route 169 Canterbury/Brooklyn, SAMI topped with an Ultra-Thin Bonded HMA Overlay

One of Connecticut's Scenic Roads

Route 169 Canterbury/Brooklyn, SAMI topped with an Ultra-Thin Bonded HMA Overlay

Sami and Ultra-Thin placed in 2011 adjacent to 2 inch mill and overlay done in 2012. Cracks take longer to come through and with much less severity compared to conventional mill and overlay with dense graded hot mix asphalt.

Route 169 Canterbury/Brooklyn, SAMI topped with an Ultra-Thin Bonded HMA Overlay

Crack reflection after 2 years. The more aggressive working cracks will reflect through the Ultra-Thin Bonded HMA overlay.

Route 169 Canterbury/Brooklyn, SAMI topped with an Ultra-Thin Bonded HMA Overlay

This road had a significant amount of environmental cracking.

Many of the lesser working cracks haven't reflected through yet.

Route 169 Canterbury/Brooklyn, SAMI topped with an Ultra-Thin Bonded HMA Overlay

Same section as previous slide looking in the opposite direction. A lot of thermal cracking…

Notice the large number of cracks that haven't reflected through yet.

Route 63 Cornwall/Cannan CT, Microsurfacing

Route 63, Rural Major Collector, 2600 ADT, Microsurfaced in 2011. It was surface patched, crack sealed, and tack coated. It then received a leveling scratch coat followed by a final surface application.

Route 63 Cornwall/Cannan CT, Microsurfacing

Nearly all cracks come through, but usually significantly smaller than the underlying cracks.

Route 63 Cornwall/Cannan CT, Microsurfacing

Even high severity cracks don’t come through in their full width due to the aid of crack seal and the ability of the microsurfacing slurry to fill cracks and irregularities and bond well to the existing road surface.

Route 63 Cornwall/Cannan CT, Microsurfacing

Most all the cracks will come through but typically much tighter and with good integrity – meaning they are bonded well to the pavement underneath and are resilient to spalling and delamination

Route 63 Cornwall/Cannan CT, Microsurfacing

Just the right light angle and the underlying crack seal is apparent. Most of these cracks have reflected through but are so tight and full of crack seal that the surface is holding up very well and the cracks are showing no spalling or delamination.

Route 63 Cornwall/Cannan CT, Microsurfacing

Close up of reflective cracking from previous slide. Notice fat spots of asphalt that have migrated up into the crack – likely during the hottest summer days..

Route 63 Cornwall/Cannan CT, Microsurfacing

We took the opportunity to see if microsurfacing would stick well to existing asphaltic plug joints. This project had several small bridges (30-50 feet), all with asphaltic plug joints. The microsurfacing adhered and performed well when placed over existing asphaltic plug joints in that were in fair to good condition.