

Case Study

application | Asphalt Pavement Restoration - Chip Seal
location | District of Columbia
product | Mirafi® MPV & Chip Seal

job owner | District of Columbia
Department of Transportation
contractor | American Paving Fabrics

TenCate develops and produces materials that function to increase performance, reduce costs and deliver measurable results by working with our customers to provide advanced solutions.

THE CHALLENGE

This street is a heavily traveled arterial in a residential area of Washington DC. The existing pavement was a deteriorated, full depth asphalt pavement with a PCI rating estimated at less than 25.

Included in this street rehabilitation project was a 2000 ft test section with a side by side comparison of three combinations of seal coat applications. The first section is a slurry seal on top of a chip seal. The second section is Mirafi® MPV500 paving fabric under a chip seal and slurry seal. The third section is slurry seal only. The Mirafi® MPV paving fabric section composed half the street width in the first 1000 ft of the test section. Mirafi® MPV paving fabric was used prior to the application of the chip seal to prevent moisture from deteriorating the chips and to increase chip adherence.

THE DESIGN

CRS-2 latex modified asphalt emulsion was applied at a rate of 0.35 gals per yd² on the fabric surface, then the chip surface, composed of a single layer of 3/8 in. chip, was installed at a rate of 25 lbs per yd². Some field modifications were made to the application rate based on site specific conditions of the existing pavement. The slurry seal was applied with a Type I seal, shot at a rate of 0.16 gal/yd². The fabric and chip seal installations were completed in one day. It required two days to complete the slurry seal.

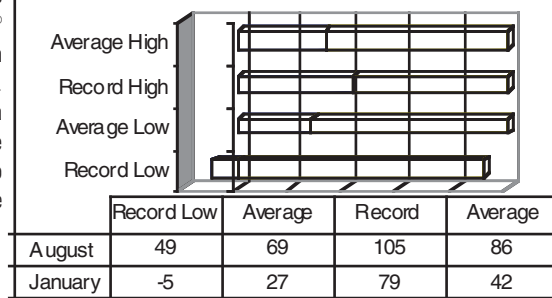


Installation of the fabric.

THE CONSTRUCTION

Shawn McGrath, President of American Paving Fabric, installed the Mirafi® MPV paving fabric, chip seal, and slurry seal. The construction operation went very smoothly despite interruptions by rain. The Mirafi® MPV500 paving fabric was applied in accordance with standard practice. The fabric tack coat was spread at a rate of greater than .20 gal per square yard using liquid asphalt PG 64-22. No problems were indicated while spreading the tack coat.

Washington DC Area Temperatures F



THE PERFORMANCE

Mirafi® MPV paving fabric was installed easily and in a timely manner. The performance of this project is monitored by the governing agency on an annual basis. The Mirafi® MPV paving fabric section is showing improved performance over the control section after just one winter. Mirafi® MPV paving fabric with a chip seal has been found by many agencies to last up to three times longer than a chip seal alone. Fabric with chip seal applications have performed very well in lower temperature regions.



Chip seal over Mirafi® MPV500 paving fabric.



Revisit in the fall of 2006, after one winter and summer in service.

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