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RESEARCH UPDATE

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PAVEPREP CRACK REDUCTION INTERLAYER (INITIAL REPORT)

REFERENCE: WP 94-R-19

HISTORY: In 1990, PavePrep Crack Reduction Interlayer was applied on VT Route 62, in three test sites, as part of the Berlin M6200(3)S project. Two 100 foot test sites were used as control, with one being in an overlay section, while the other was milled and repaved without the product. When the evaluation was complete, the PavePrep sites appeared to be marginally successful in reducing the occurrence of reflective cracking. The product was expensive, however, and further testing was not recommended.

In May 1994, a representative of CONTECH Construction Products contacted the Agency seeking permission to apply the PavePrep Crack Reduction Interlayer on a current project. Three projects were selected, Lowell/Westfield F029-2(11), Hartford, on US 5 (three separate contracts), and Highgate STP 9214.

PRODUCT DESCRIPTION: PavePrep is a high density mastic, laminated for extra strength and flexibility. This tough, synthetic combination is capable of surviving installation stresses and loads encountered on highways and airports. PavePrep retains 95% of its original thickness, even when directly exposed to traffic for up to six months. The material is available in 102 foot roll lengths for widths of 12" and 20", as well as 48 foot roll lengths for 36" and 40" widths.

FIELD LOCATIONS: The product was applied, over a shoulder to shoulder transverse crack, in the following locations:

ROUTE/ PROJECT	SITE	WIDTH OF CRACK	DATE INSTALLED	DATE PAVED
VT 100 Lowell/ Westfield	MM 3.26	1/2"	6/15/94	6/21/94
	MM 6.13	1/2"	6/15/94	6/21/94
US 7 Highgate	MM 3.6	1 1/4"	7/15/94	7/18/94
	MM 3.6*	1 1/4"	7/15/94	7/18/94

*Placed over a longitudinal crack at the center line

ROUTE	SITE	WIDTH OF CRACK	DATE INSTALLED	DATE PAVED
US 5 Hartford	MM 3.13	3/4"	10/4/94	10/4/94

The VT 100 site consisted of several courses of bituminous pavement, while the US 7 location consisted of bituminous pavement over a portland cement concrete base. Installation on these first two projects posed little or no problems during the application, or when the pavement was placed.

On September 28, 1994 in Hartford, the strip of PavePrep was placed at the intersection of US 5 and Sykes Avenue in White River Jct on a milled surface. During an inspection on the following day it was found to have detached itself from the road surface. The loss of bond was probably due to the rough textured pavement surface and the condition was furthered aggravated by rain showers which followed the installation.

On October 4, 1994 a new 24 foot strip was placed at MM 3.13 near where the previous installation had been. Emulsified asphalt was applied on the milled surface just prior to the PavePrep installation. One lane was paved within five to ten minutes of application. The fabric was picked up by the shoes on the paver's automatic grading and slope equipment. The problem was corrected by lifting up each pad as it passed over the PavePrep.

COST: The current cost of 20 inch wide PavePrep is $1.00 to $1.20 a linear foot.

PERFORMANCE: Performance will be monitored throughout the life of the project as part of the Pavement Life and Annualized Cost Study currently being conducted by the Agency.