

MATERIALS & RESEARCH DIVISION

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RESEARCH UPDATE

NUMBER 87-12

"Bonifibers" Polyester Modified Pavement

REFERENCE:

Research Report 87-3, Dtd January 1987

HISTORY:

In late June-early July of 1984 approximately 1000 tons of pavement modified with "Bonifibers B", a polyester fiber, were produced and placed on Route US 2 as part of the Berlin-Barre-East Montpelier FO28-3(23)S paving project. The production, application and early performance of this project were reported in detail in Initial Research Report 87-3 in January of 1987. Reflective cracking in December of 1986, averaged 32% in the standard mix and 19% in the modified mix. Other than the addition of the Bonifibers and necessary additional asphalt, the two mixes were the same and only slight differences were noted in the December 1986 rutting measurements.

STATUS

A crack survey was taken in April of 1987 following the 1986-87 winter. Reflective cracking had increased to 48% in the standard mix and to 25% in the modified mix. Results of rutting measurements taken the same day revealed only slight differences between the mixes.

Mays (rideability) metering on 10-26-1987 produced averages for the project area of 88 vertical inches per mile (V.I./M.) in the eastbound and 100 in the westbound. Both are in the "good" category. Averages by pavement type for the four test sections were 106 V.I./M. for the modified and 92 V.I./M for the standard mix. While the difference in rideability is slight, the rating* for standard mix was good and the rating* for the Bonifibers modified mix was fair.

SUMMARY:

To date the Bonifiber modified pavement has outperformed the standard mix in reflective crack prevention, but has not improved rideability.

The pavements will remain under evaluation to determine long term effectiveness over the pavement life cycle.

* 70 - 100 V.I./M.=Good, 100 - 130 V.I./M.=Fair

Distribution A,B,D,E,F,DTA 6