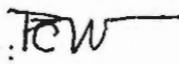


MATERIALS & RESEARCH DIVISION

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April 17, 1990

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RESEARCH UPDATE

NUMBER U90-5

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3M 350 TAPE ON OPEN GRADED PAVEMENT - I 91 LYNDON-BARTON

(FINAL)

REFERENCE: Work Plan 88-R-3, Update U88-10, Update U90-1

HISTORY:

During repaving of a section of I 91 (Project Lyndon-Barton IR 091-3(10)), an experimental durable pavement marking, 3M 350 Tape, was specified for 8" white gore markings and 4" white lanelines on the accel/decel lanes at interchanges 23, 24, 25, and at a rest area and two scenic turnouts on this resurfacing project.

APPLICATION:

The experimental product was installed during a six week period ending on August 17, 1989.

As a control, durable markings of an approved thermoplastic material were installed at interchange 25 NB off ramp, and the two scenic turnouts.

A total of 2430 LF of 8" and 2545 LF of 4" white tape markings was installed.

A total of 2499 LF of 8" and 1152 LF of 4" white thermoplastic markings was installed.

COST:

The price for 4" white line Tape was \$1.50 per LF.

The price for 4" white thermoplastic line was \$0.50 per LF.

The price for 8" white line Tape was \$3.00 per LF.

The price for 8" white thermoplastic line was \$1.00 per LF.

STATUS:

The project was inspected on January 3, 1990. Substantial loss of product had occurred as shown below.

8" White tape lines - 48% loss.

4" Laneline dashes - 52% loss.

STATUS:continued

A final inspection was conducted on April 16, 1990. The loss of 3M 350 tape had increased to the following:

8" White tape lines - 64% overall (40% to 100%)  
4" Laneline dashes - 99% loss.

The thermoplastic gore markings showed no loss and only minor scuffing at some locations.

The painted edgelines and centerline dashes on this project were all severely worn and must be rated poor to "faint".

CONCLUSIONS:

The percentage of 3M 350 pavement marking tape lost after only seven months is unacceptable. Further use of 3M 350 Tape on open graded friction courses is not recommended.

FOLLOW UP: No further evaluations are expected.



Typical Gore Area as of January 1990

Distribution A,B,C,D,E