

OFFICE MEMORANDUM



MICHIGAN

DEPARTMENT OF STATE HIGHWAYS

March 26, 1973

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To: M. N. Clyde
Engineer of Testing and Research

From: L. T. Oehler

Subject: Random Observations on Performance of Highway Striping in Lansing during 1972-73 winter. Research Project 47 G-36(25a): Research Report No. R-855

The following observations were supplied by A. J. Permoda, Materials Research Unit head.

In the Recommendations section of Research Report R-813, we suggested combining, in a test application, an occasional thermoplastic segment with the standard broken-line lane striping of Fast-Dry paint. The thermoplastic segments would serve as a long-term guide for traffic, especially in the February to April period when paint striping is often worn away in urban areas, due to winter conditions and use of studded tires.

The Traffic Division did follow these recommendations in striping M 43 (Saginaw St) in a section from Pennsylvania Ave eastward to the junction with Grand River Ave in East Lansing. This comparatively new bituminous surface was applied in 1970. The performance of the combination striping over the winter is shown in Figures 1 and 2.

For comparison purposes, the performance of uncombined Fast-Dry striping in two other areas in Lansing is shown in Figures 3 and 4.

Figures 5 and 6 show that the 2-ft lengths of temporary pavement marking tape, required on new blacktop construction, are apt to outperform the paint striping. Confirming test data were presented in Research Report R-760 covering the 1970 Performance Tests.

To our knowledge all paint striping shown in the photographs was applied in the fall of 1972.

Recommendations:

- 1) Because of the good performance in this initial test, we recommend extending evaluation of the combination of thermoplastic striping with paint striping in urban areas.

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2) Hopefully, the performance of the Fast-Dry striping can be economically improved by incorporating Paint Additive No. 21 into the paint, as suggested in Research Report R-846. Evaluation in longitudinal roadway striping was postponed from last fall to this spring.

3) Currently, we have no recommendation regarding more extensive use of the fairly expensive pavement marking tape in place of paint striping.

4) Hopefully, Michigan will soon ban the use of studded tires which will improve the service life of all pavement markings.

TESTING AND RESEARCH DIVISION



Engineer of Research

LTO:AJP:bf

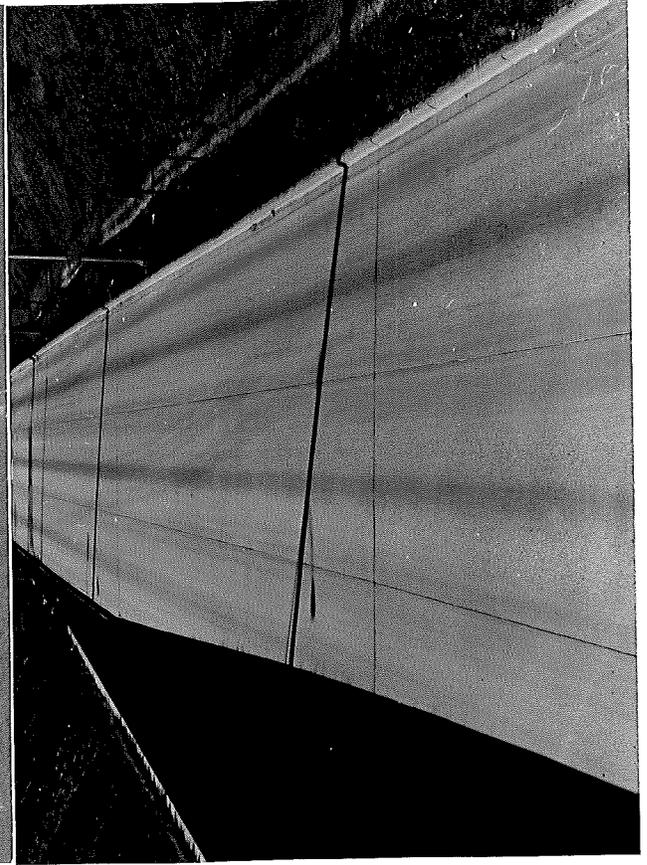
cc: H. H. Cooper
F. G. Annis
F. W. Gillespie
W. A. Sawyer

Figure 1. Condition of combination striping after overwinter service on EB M-43 E of Pennsylvania Ave, looking east. Additional 20-ft long thermoplastic segments were applied every 200 ft (3/15/73).



Figure 2. Condition of combination striping after overwinter service on EB M-43 W of Marshall St, looking west. The standard Fast-Dry is performing well here on bituminous applied in 1970 (3/15/73).

Figure 3. WB M-43 (Oakland Ave concrete) is again a difficult area to keep striped with Fast-Dry paint over winter. Area is just E of NB US-27 looking W from RR overpass (3/9/73).



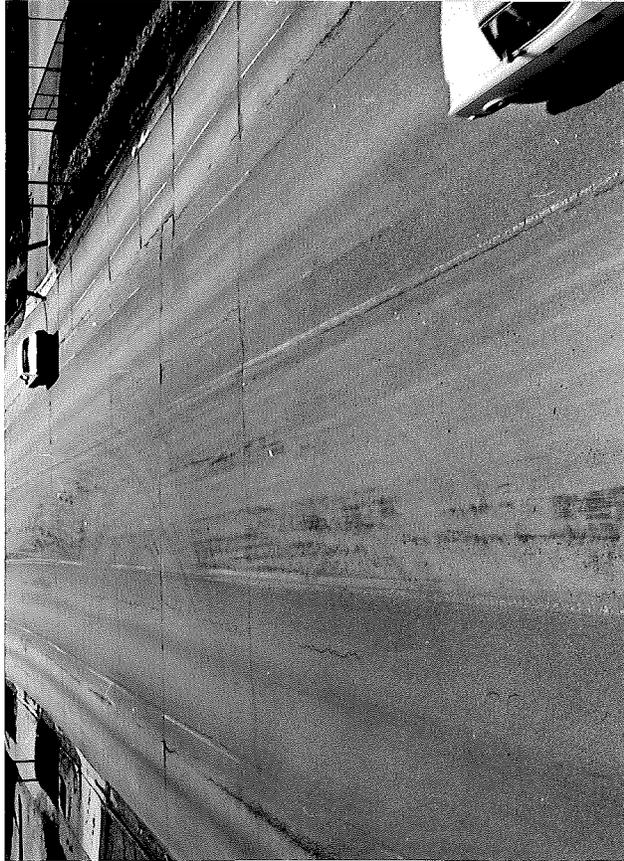


Figure 4. US-27 in north Lansing looking S from C. W. Otto pedestrian overpass shows faint residue of paint striping after over-winter service on bituminous applied in 1968 (3/9/73).

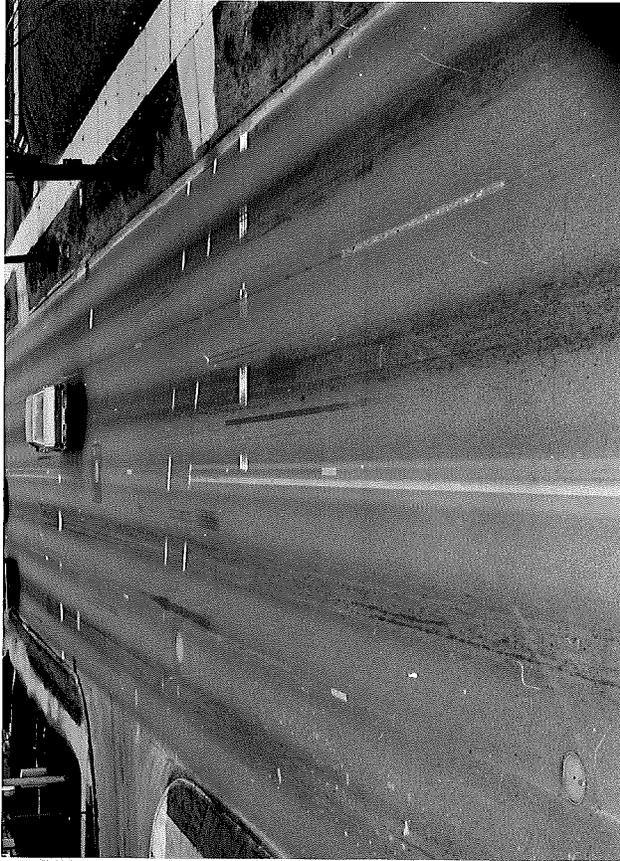


Figure 5. Striping on resurfaced Cedar St shows 2-ft lengths of temporary pavement tape outperforming paint lane striping. (Taken from Maplewood School overpass, looking south (3/9/73)).



Figure 6. Close-up of Figure 5 site.