

OFFICE MEMORANDUM



MICHIGAN

STATE HIGHWAY DEPARTMENT

JOHN C. MACKIE, COMMISSIONER

September 22, 1964

To: E. A. Finney, Director
Research Laboratory Division

From: D. F. Simmons

Subject: Experimental Use of Goodyear "Pliopave" L-170 Latex Additive in Single Seal of Existing Sealed Shoulders on I 96 near Ionia (Construction Project Group MR-4 SC-5A, Control Section 34044). Research Project R-64 G-136. Research Report No. R-475.

As requested by R. L. Greenman in his memorandum of May 27, 1964, the construction phase of the subject project was observed by the author on August 10, 1964. Also present during the installation were F. B. Gale of the Office of Construction, Wm. O'Connor, the project engineer, and K. Bachman for the contractor, Spartan Asphalt Co. The inspection on the project was John LaRose.

Several miles of shoulder were being single-sealed in this area, but Goodyear "Pliopave" latex additive was used only between Stations 997+00 (near the 77 mile marker) and 1051+80 (near the 78 mile marker) on the 9-ft wide outer shoulder of the eastbound roadway. Two tank trucks equipped with the proper spray bars and each filled with 1000 gal of AE-3 asphalt emulsion and 25 gal of "Pliopave" latex additive were used in covering this shoulder area (Fig. 1).

Other equipment used included a 31-B gravel spreader (Fig. 2), an offset nine-wheel pneumatic-type roller (Fig. 3), and a power-brush set at an angle for removal of excess gravel from the pavement (Fig. 4).

The only difference in appearance of sprayed emulsion with and without latex additive, prior to spreading of 31-B gravel, was that less free water formed on the surface of the latex-treated material.

Typical appearance of the surface prepared using non-rubberized, regular AE-3 emulsion is shown in Fig. 5, and with latex added in Fig. 6. At present, there is little difference in appearance, but changes from this initial similarity will be noted in future periodic inspections.

OFFICE OF TESTING AND RESEARCH

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DFS:nl



Figure 1. Tanker and spray-bar in operation. Applying AE-3 emulsion over 9-ft wide outer shoulder on I 96.

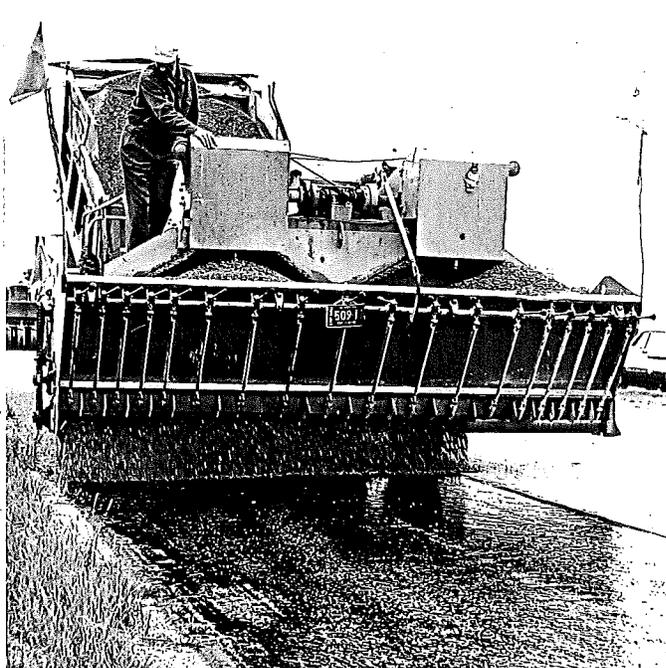


Figure 2. Aggregate spreader in operation.



Figure 3. Pneumatic finishing roller in operation.



Figure 4. Angle power-brush for cleaning aggregate off pavement.

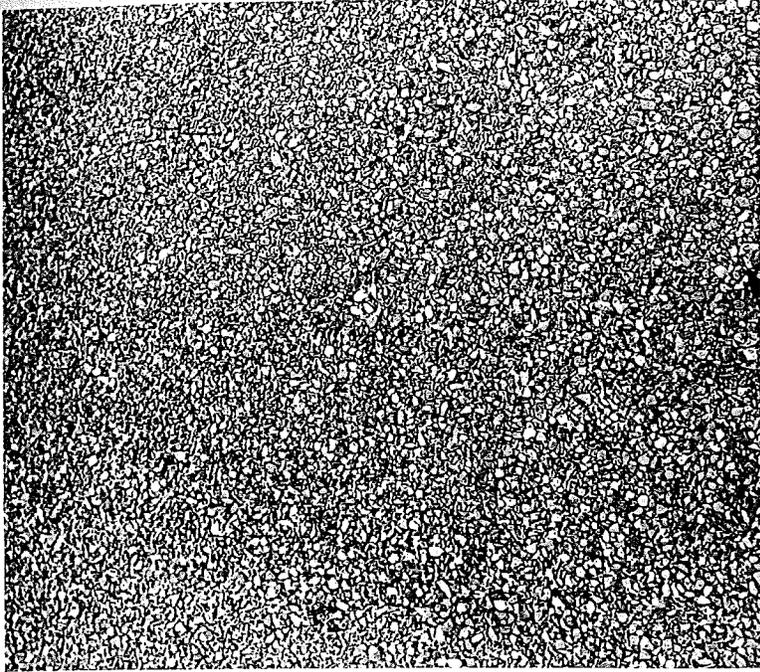


Figure 5. General view and close-up of single-sealed shoulder using regular, non-rubberized AE-3 emulsion with 31B gravel cover (Sta 957+00 EB).



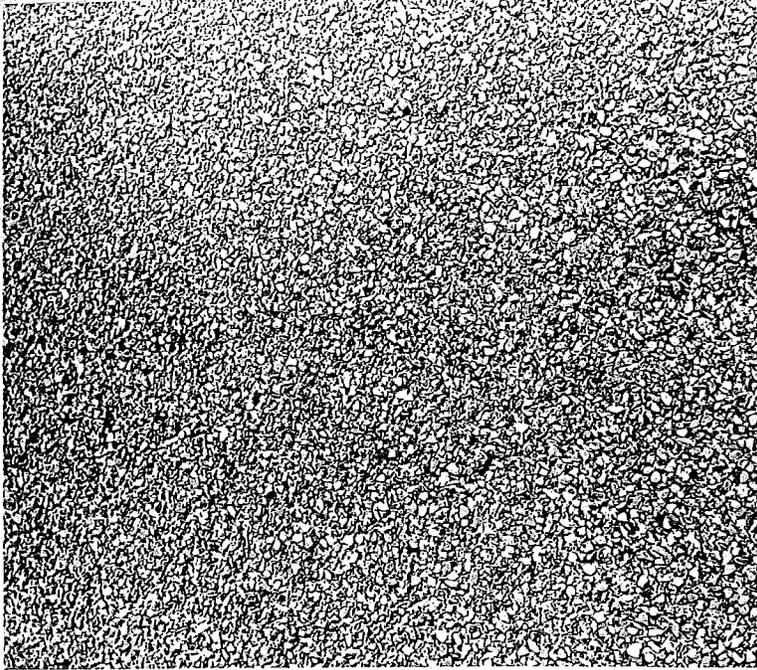


Figure 6. General view and close-up of single-sealed shoulder using AE-3 emulsion with "Pliopave" latex additive and 31B gravel cover (Sta 1005+00 EB).

