

# OFFICE MEMORANDUM



MICHIGAN  
DEPARTMENT OF STATE HIGHWAYS

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To: K. A. Allemeier  
Acting Engineer of Testing and Research

From: L. T. Oehler

Subject: Specifications for Polyvinylchloride Rumble Strips.  
Research Project 73 TI-143. Research Report No. R-912.

This project was initiated by a request from H. H. Cooper, former Engineer of Traffic and Safety, to M. Rothstein, Engineer of Design, in which a design standard was requested. The Testing and Research Division was requested to consider the available materials and make recommendations.

Traffic and Safety Division Report TSD-RD-216-72 entitled "Three Experiments with Transverse Pavement Stripes and Rumble Bars" was revised along with their drawing "Rumble Strip Design" (December 13, 1972).

We suggest that polyvinylchloride be used because the desired one foot width would require flexibility to conform to uneven surfaces.

Trade journals were reviewed to obtain possible sources of PVC rumble strips without success. The only producer found was the company that furnished the material for the study conducted by Traffic and Safety. Since material from this producer appeared to be satisfactory, information concerning formulation and properties was requested from his representative. After several weeks, further inquiry revealed that the representative had died and we then repeated the request to his successor. Again, after several weeks we contacted the representative by telephone. We were then told that the home office had been requested to send us the information.

Eventually we received a recommended materials specification from the Chief Engineer of the Metal and Plastics Division of Essex International Incorporated. This specification is basically our specification for non-metallic waterstop. Therefore, the attached specification gives the emendations to the waterstop specification along with a paragraph on adhesive requirements.

TESTING AND RESEARCH DIVISION

*L. T. Oehler*

Engineer of Research

LTO:FJB:bf

SUPPLEMENTAL SPECIFICATION  
FOR  
POLYVINYLCHLORIDE RUMBLE STRIPS

The polyvinylchloride rumble strips shall comply with Section 8.16.09 of the Standard Specifications with the following exceptions:

1. The words "waterstops" and "waterstop" shall be deleted and the words "rumble strips" and "rumble strip" substituted.

2. Two samples 1.5 ft long will be required from each lot of material.

3. The supplier need not supply the specific gravity of the finished rumble strip but it shall be  $1.40 \pm 0.10$  as determined by the Department using test method ASTM D 297, Section 15.

4. Dimensions - The rumble strips shall be of the size and shape shown on the plans, including the tolerances. The adhesives for installing the rumble strips shall be "E-Bond 1240 and 1241" for portland cement pavement (E-Bond Epoxies, Inc., P.O. Box 23069, 501 N. E. 33rd St, Fort Lauderdale, Florida 33307) and "Tan-Mastic Neoprene mastic adhesive BC-68822" for bituminous concrete (Technical Adhesives Division of H. B. Fuller Co., 315 South Hicks Rd, Palatine, Illinois 60067) or other adhesives as recommended by the manufacturers of the rumble strips.