ABSTRACT

The Electro-Reflective Measuring Apparatus (ERMA) was developed by the Minnesota Department of Highways in 1974 to measure the retro-reflective characteristics of pavement marking materials. Minnesota researchers recommended that due to the increased cost of pavement marking materials and reduced availability of these materials, ERMA can and should be used as a maintenance management tool to determine when painting is necessary rather than according to a fixed time schedule.

The Iowa DOT Office of Materials built an ERMA device patterned after Minnesota's design in 1976. Subsequent efforts to calibrate and correlate this ERMA device to District Paint Foremen ratings proved unsuccessful, and ERMA modification or abandonment was recommended in 1979.

Lyman Moothart, Materials Lab. Tech. 4, modified the ERMA device in 1980 and correlation attempts to District Paint Foremen ratings conducted in November 1980 have been moderately successful. A Paint/No Paint ERMA value has been established which will identify about 90% of the painting needs but will also include about 40% of the marking lines not needing repainting.

The Office of Maintenance should establish a trial ERMA program to study the accuracy and potential cost savings of using ERMA to identify pavement marking needs.

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E.R.M.A. A RETRO-REFLECTIVITY DEVICE
Materials, Research And Standards Division, Minnesota Department of Highways, Special Study 276, Preliminary Report 1974, MECHANICS Prepared by H. J. Gillis, Research Assistant