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RESEARCH UPDATE

Update U96-5

DURABLE FLUORESCENT DIAMOND GRADE SHEETING

(Initial Report)

HISTORY: In March 1995, construction warning signs with 3M Scotchlite® Durable Fluorescent Diamond Grade Sheeting as the main application were installed as part of the Montpelier NH 9530(1)S and NH 9550(1)S projects. The signs were placed at two locations approaching the project: US Rte. 302, near Midas Muffler in Berlin, and US Rte. 2 near Gallison Hill Road in East Montpelier.

PRODUCT: 3M Scotchlite® Durable Fluorescent Diamond Grade Sheeting.

INSTALLATION: The signs were installed during the month of March 1995. For the purposes of comparison, one 3M Engineering Grade sign was installed directly across US Rte. 302 from a Fluorescent Diamond Grade sign.

STATUS: Retroreflectivity readings were taken during April 1995; however, these values are questionable. The retroreflectometer (manufactured by Advanced Retro Technology, Inc.), used by the AOT, was not calibrated. Even so, the Engineering Grade sign was significantly less reflective than the Fluorescent Diamond Grade, averaging 106 mccl vs. 724 mccl.

The Berlin location was also observed numerous times under both day and night conditions. The Fluorescent Grade signs were significantly brighter than the Engineering Grade sign in both conditions.

COST: The price of the Fluorescent Diamond Grade is \$4.75/ sq ft. For comparison, Diamond Grade is also \$4.75/sq ft., Super Engineering Grade is \$2.50/sq ft, and Hi-Intensity is \$3.80 sq/ft.



FOLLOW UP: The material should continue to be used on signs relating to construction. Additional data should be collected, and further evaluated to determine the overall effectiveness of the Fluorescent Diamond Grade material.