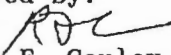



MATERIALS & RESEARCH DIVISION

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September 3, 1991

RESEARCH UPDATE

Number U91-13

SAFE HIT FLEXIBLE DELINEATORS

HISTORY: Impact testing of Safe Hit Flexible Delineators was successfully conducted in August 1989 and 12 Safe Hit units were subsequently installed on the north bound ramp of Exit 8 (Montpelier Interchange), I-89.

The units consist of a metal soil anchor and the flexible post with reflective sheeting. The sheeting is available in several colors and configurations. The units tested were white with 3M Hi Intensity silver/white sheeting.

Observations during the winter of 1989-90 revealed that snow banked by plowing caused the posts to lean slightly up to an estimated maximum of 10 degrees from vertical. An inspection on May 2, 1990 revealed that one of the posts had sustained several vertical cracks, most likely from snow plow impact, but was still vertical and performing as a delineator. Replacement of the damaged post was quick and easy, taking only 5 minutes. Two other anchors which had been thrust upward by frost action were redriven.

The units remain under observation and are still in place, performing as delineators and in excellent condition. It was found that the white posts provided significantly higher visibility during the day than did the standard metal posts.

COST: As of July 30, 1991, the list price of the complete units for a minimum order of 100 was \$15.70, minus a 5% discount. A replacement anchor was \$4.00 and replacement posts were \$13.70.

Depending upon volume, the manufacturer offers larger discounts as well as a free driver with a first order of 300 or more.

CONCLUSIONS: The Safe Hit Flexible Delineator system performs well as a nighttime delineator due to the Hi Intensity sheeting used. During the daytime its wider profile and white color provide superior visibility.

Impact testing and field evaluation indicate they are less susceptible to total destruction by vehicles or snow plow impact than the standard steel post/plastic button delineators.

This product was placed on the list of approved products for Item 676.20 Delineators with Flexible Posts, on July 16, 1991.



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