



U.S. Department
of Transportation
**Federal Highway
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

May 21, 1999

Refer to: HMHS

Mr. Kaddo Kothmann
President, Road Systems, Inc.
1507 E. 4th
P.O. Box 2163
Big Spring, TX 79721

Dear Mr. Kothmann:

In your April 8 letter to Mr. Henry Rentz, which was forwarded to me for action, you requested the Federal Highway Administration (FHWA) to accept a modified version of your FLEAT guardrail terminal as meeting test level 2 (TL-2) evaluation criteria contained in the National Cooperative Highway Research Program Report 350 (NCHRP). To support your request, you included a copy of a January 30 report prepared by the Midwest Roadside Safety Facility, entitled "FULL-SCALE CRASH EVALUATION OF A TL-2 FLARED ENERGY ABSORBING TERMINAL (FLEAT-TL2)" and a video tape of the additional test that was run to verify acceptable performance of the modified design.

As noted in your letter and in the test report, the FHWA has previously accepted the 11.4-m long TL-3 FLEAT with permissible end offsets from 762 mm to 1219 mm. The modified or TL-2 FLEAT is only 7.62-m long, but with the same flare rates as the TL-3 design. Thus, the end offsets for the TL-2 FLEAT will range from 508 mm to 813 mm. The TL-2 FLEAT uses two fewer CRT posts (three vs. five) than the TL-3 design. Line posts may be either steel posts with timber or recycled blocks, or wood posts and blocks, since the system was tested with more critical steel line posts.

After analyzing the results of tests conducted at 100 k/hr on the TL-3 designs with either the full 1219 mm offset or with the reduced 762 mm offset, you concluded that the NCHRP Report 350 tests 2-30, 2-31, 2-34, and 2-39 need not be conducted at the reduced impact speed of 70 k/hr. We concur. Test 2-35 was ran and is described in the above-referenced report. Appropriate evaluation criteria were met. A summary of that test is shown in Enclosure 2.

Based on our review of the information you provided, we find the TL-2 FLEAT acceptable for use on the National Highway System (NHS) when such use is requested by a transportation agency. This acceptance assumes that the modified FLEAT will be installed as tested and at locations where anticipated impact speeds will not exceed 70 k/hr. Because it remains a proprietary device, its use on Federal-aid projects, except exempt, non-NHS projects, is subject to the conditions listed in Title 23, Code of Federal Regulations, Section 635.411.

Sincerely yours,



Dwight A. Horne
Director, Office of Highway Safety
Infrastructure

Enclosures