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

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

August 27, 1999

Refer to: HMHS-CC61

Mr. Kaddo Kothmann
President
ROAD SYSTEMS, INC.
P.O. Box 2163
Big Spring, Texas 79721

Dear Mr. Kothmann:

In your July 30 letter, you requested the Federal Highway Administration's (FHWA) acceptance of a steel breakaway post as an alternative to the weakened timber posts that are currently used in your SKT-350 and FLEAT-350 w-beam guardrail terminals. These breakaway posts are comprised of a lower stub post connected to an upper post by splice plates welded to the flanges of the stub post along the bottom and sides of the plates and connected to the upper post with two 31-mm diameter plug welds. This design causes the plug welds to yield at relatively low loads when the posts are struck head on and the welds are loaded in torsion, but the connection can sustain loads as high as 89 KN when loaded laterally in shear. Enclosure 1 shows the breakaway end posts, the breakaway line posts, and the splice weld details. All other features of the SKT-350 and the FLEAT-350 remain unchanged from the original designs.

To show that the steel breakaway posts functioned as desired, you ran three tests on the alternative design, and provided me with copies of the test reports for staff review. Summaries of each of the tests are shown in Enclosure 2.

We believe that the tests you ran satisfactorily demonstrate that the steel breakaway posts are an acceptable alternative to the original wood post designs for the SKT-350 and the FLEAT-350 and may be used as such on the National Highway System when requested by a transportation agency.

Sincerely yours,

Dwight A. Horne
Director, Office of Highway Safety Infrastructure

2 Enclosures