



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

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

Refer to: HSA-10/CC-61A

Dean L. Sicking, PhD., P.E.
Director, Midwest Roadside safety Facility
W. 328.1 Nebraska Hall
P.O. Box 880529
Lincoln, Nebraska 68588-0529

Dear Dr. Sicking:

In your July 24 letter to Mr. Richard Powers of my staff, you requested formal acceptance of a two-piece bolted breakaway post for use with the SKT and FLEAT w-beam guardrail terminals. The breakaway posts originally tested and accepted for use with these terminals used a one-piece post with a plug welded breakaway design. You presented both static analyses of the bolted design vs. the original plug welded design as well as the results of low-speed bogie tests on individual posts. The layout of the SKT terminal using the modified posts is shown on Enclosure 1. Details for posts 1 and 2 and for the line posts (posts 3-8) are shown on Enclosure 2.

Although your analyses and component testing showed comparable strong- and weak-axis performance of individual posts, I remain concerned about the posts' equivalency in a redirective impact into the side of the system where the posts are not hit at right angles to either axis and the bolts may not be loaded equally or uniformly. Consequently, I will allow *conditional* use of the bolted post design with the SKT terminal, but will withhold acceptance of its use with the FLEAT (with its greater flare angle) until successful completion of NCHRP Report 350 test 3-35 on a FLEAT with its full 4-foot offset. I understand you plan to conduct this test in early 2003. In the interim, the field performance of any SKT terminals using the bolted post design should be monitored to verify acceptable crash performance.

Sincerely yours,

Carol H. Jacoby

Carol H. Jacoby, P.E.
Director, Office of Safety Design

2 Enclosures

