



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

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

March 10, 1988

Refer to: HNG-14/SS-06

Mr. Albert M. Moreno, Sr.
Board Chairman
Minute Man Anchors, Inc.
305 West Walker Street
East Flat Rock, North Carolina 25726

Dear Mr. Moore:

Your December 28, 1987, letter requested Federal Highway Administration (FHWA) approval of a modified breakaway device for use with flanged steel sign supports. My January 29th reply expressed concern that the modified device was substantially different from a previously accepted design and that crash testing the new device was recommended to verify its impact performance.

On February 26 you sent a copy of a report showing that the new device performed acceptably in a 20 m.p.h pendulum test conducted by Southwest Research Institute. When extrapolated to 60 m.p.h using the procedure currently endorsed by FHWA, the results were also satisfactory. The changes in velocity for the 1,800 pendulum were 5.8 and 2.7 feet per second for the 20 m.p.h. (actual) and 60 m.p.h. (extrapolated) conditions, respectively. These results are below the current AASHTO breakaway specifications of 10 feet per second (desirable) and 15 feet per second (acceptable).

Based on the above information, the breakaway device shown on Drawing No. MMB-1 (copy enclosed) with revisions dated 12/15/87 and 1/26/88 is acceptable for use on Federal-aid projects if proposed by a State highway agency. Our calculations indicate that two such breakaway devices within an 8-foot path would produce a 13.8 feet per second change in velocity, thus meeting the maximum acceptable value of 15 feet per second.

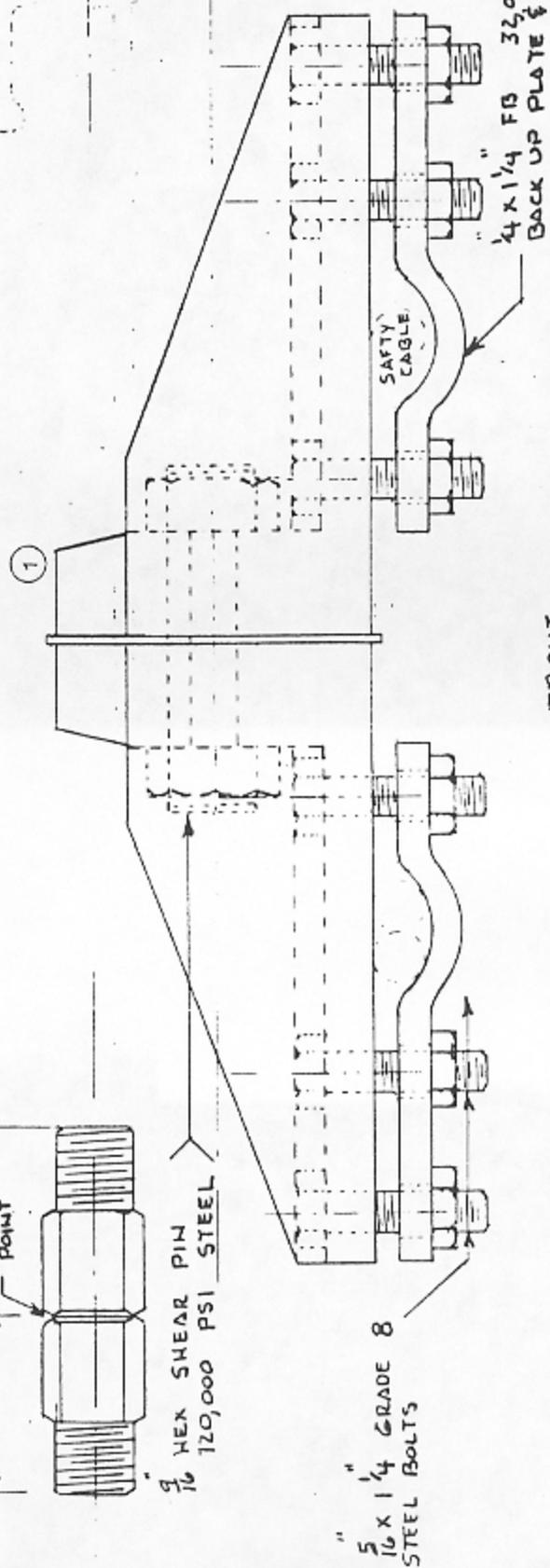
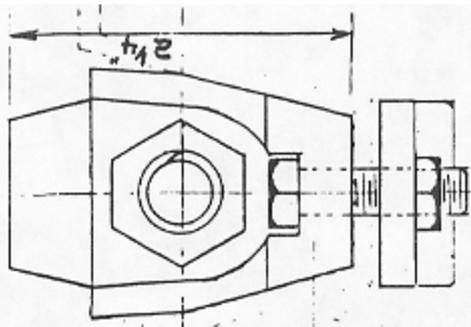
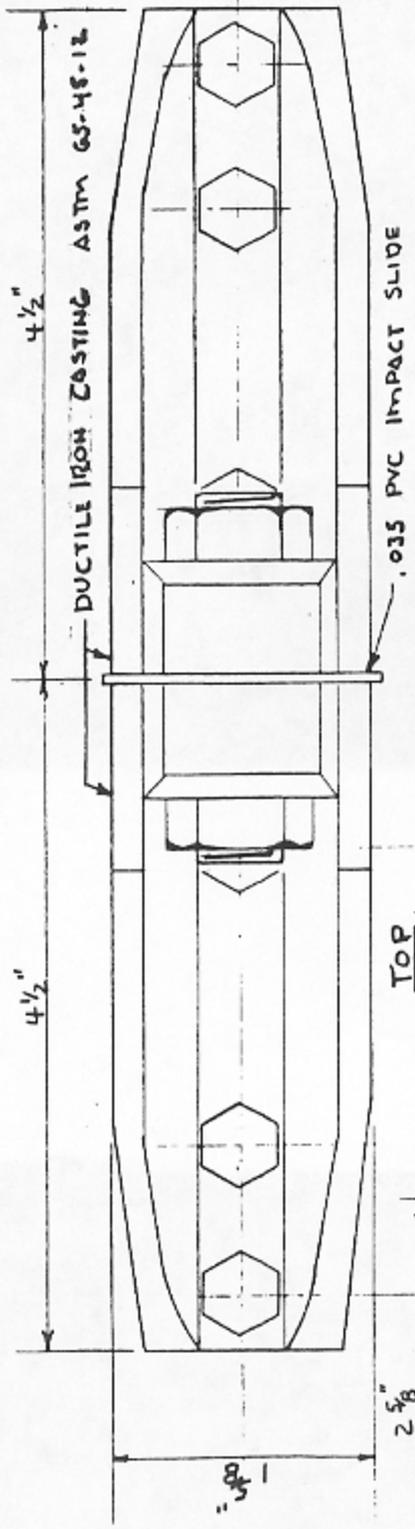
The FHWA acceptance is limited to the breakaway characteristics of the system and does not cover its structural features. We assume that you will provide potential users with sufficient information on structural design and installation requirements to ensure proper support performance.

Sincerely yours,

L. A. Staron, Chief
Federal-Aid and Design Division

Enclosure

Copies to: Regional Federal Highway Administrators, w/enclosure



MINUTE MAN BREAKAWAY DEVICE

DRW # MMB-1

12-14-87
 1 REV. 12-15-87

PAT PENDING

MINUTE MAN BREAKAWAYS
 NUMBER ONE MORENO PLACE
 EAST FLAT ROCK NC 28726
 704-692-7423 AMMB 12-14-87
 1 REV. 12-15-87

SS-
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