

The vehicle passes on through the support safely but the tortional effects on the sign cause failure of the other support and the sign collapses.

Now observe this behavior without interruption.

Again note that damage to the vehicle was minor.

Dr. HIRSCH (interpolating). Obviously the maintenance of that sign would be quite high.

VOICE (continuing). Has been adopted as design standards in the State of Texas.

The first signs of this type were installed in 1965. Since that time they have been installed on several hundred miles of the Interstate System.

Not only have lives been saved by adopting the breakaway sign, but this has been accomplished without additional cost to the public.

These sign supports cost no more than fixed base supports.

Modification of an existing sign in Texas costs something about \$150.

VOICE (continuing). The deforming A-frame design is now being used in Minnesota. It is very economical and accident experience has indicated satisfactory performance.

The joint failure A-design is commercially available.

As a result of this research, the Policy Committee of the highway sign support research project recommends that the sign support designs presented in this film be considered for use as a means of making our highways safer.

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(End of film.)

Dr. HIRSCH. Just as a few comments, this principle is also used on smaller signs, such single-post signs, or where the two posts are very close together and the vehicle can strike both posts at the same time.

And I mentioned before, one of the desirable things, we think, about the cantilever post is that it can easily be applied to modify existing sign supports.

Mr. BLATNIK. Would you repeat that, Professor? You say this technique, shear-type or breakaway supports, can easily be applied to existing installations.

Dr. HIRSCH. The existing signs, that is right.

This has been done in Texas and the cost experience data to modify one of these roadside signs is approximately \$150. It depends on the size of the sign, whether it is a small one or big one, but it is in this neighborhood.

Mr. W. MAY. Do I understand, Doctor, the Texas Highway Department has underway a program of going back and modifying some of the existing rigid supports?

Dr. HIRSCH. Yes. A number of the districts are going back and modifying them. Some of them had modified all the existing signs in several stretches of the Interstate System. On Interstate 10 between Houston and Beaumont, all of the existing signs have been modified, and of course all the new signs are the breakaway concept. They also have a policy, where any of the existing signs with rigid supports are struck by a vehicle, when they go out and maintain it or repair it, they install the breakaway concept.

Mr. W. MAY. Would the Northern States have to worry about freezing conditions or rusting?

Dr. HIRSCH. This question has been brought up by the policy committee from States like Minnesota. We feel that the corrosion problem,