

Mr. CONSTANDY. That is an area which is to a large extent ignored by many highway departments in the representative samples we have been shown.

Mr. BEATON. This is an area that needs a great deal of work, actually, because you are working in relatively small areas with very short deceleration distances. So it is a real problem.

At the present time, we are considering the use of the New York box beam median barrier and also the New Jersey design of concrete median barrier for us in areas where each would be especially effective, and we have tested both of these designs so as to obtain firsthand dynamic knowledge to supplement the information that we have already obtained from the other States.

At this time, I would like to show another picture, which indicates some of the design features that we had been concerned with and have tested. This is a silent film which I will narrate as we go along.

(Narrating film.)

The first series of clips I am going to show here indicate the four general classes of median barriers. This first is what we call a flexible system. These terms, by the way, are our own, they are not accepted by any national body. This flexible system is a cable barrier with an expanded metal light screen, or glare screen, in this particular case.

Here is the New York box beam which we termed as a semiflexible system. It is a steel box beam on collapsible posts.

We term our blocked-out metal beam as a semirigid system. This is our standard median barrier design.

This is one of our new bridge rails and we term it also as a semirigid system. And this we term as a rigid system, and it is the same as any other concrete wall barrier.

Here we are testing at 90-mile-an-hour speed our flexible system cable barrier.

Mr. CONSTANDY. Ninety miles an hour?

Mr. BEATON. Ninety miles an hour.

[Narration continued:] Here we are riding Sam through the 90-mile-an-hour collision. You note the energy is eaten up by the collapse of the posts and stripping of the cable. You can see the posts going down in the front of the car, starting pretty soon. We are just now out of the full arc of the deflection and now we are coming back and you can see the posts going down in front of the car.

Mr. CONSTANDY. You were satisfied with the result itself?

Mr. BEATON. Yes. The decelerations on Sam are very low down, in the 1- to 3-g range. There is little or no rebound from this. The car stays in the median area. Damage to the car, actually, is relatively slight, amounting primarily to the cutting up of the sheet metal.

[Still narrating:] Here is a test on semiflexible system, the New York box beam as you can see, the deflection is somewhat less. This is at 65 miles an hour, by the way, and the rest of the tests will be at 65 miles per hour and 25° angle collision. The deflection is 6 feet. There is low exit angle, only 5°.

In all of the interior shots you will see of Sam going through these tests he has a seat belt on. You can see his sideward movement and rebounds somewhat heavier than it was as we went through the cable or flexible system tests.