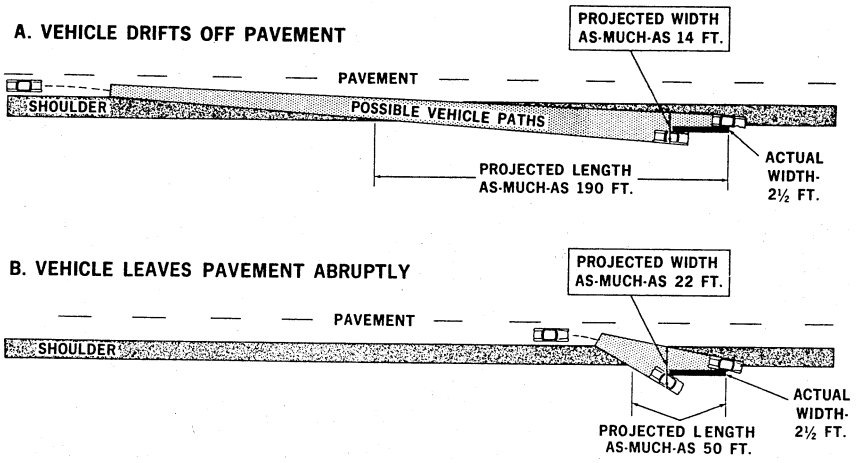
to hit the bridge pier. This is why they are suddenly so much more important than they used to be.

Mr. CONSTANDY. That is a very good observation.

A chart illustrating the foregoing points is inserted in the record at this point:)

POTENTIAL HAZARDS OF TYPICAL ROADSIDE PIERS ~ PROJECTED VERSUS ACTUAL DIMENSIONS



What was your overall impression of the work you have seen on the nine projects we looked at, Mr. Ricker?

Mr. RICKER. I am afraid we have never really faced up to this matter of connections at the end of the bridge. Some people have advocated safety walks, some say eliminate the safety walks. Some say connect the guardrail in directly to the parapet, and so on.

There is no existing standard. I do not think that we can fault individual designers for not complying with the standards that exist. I think we do recognize there is a need for a connection, and we had better hurry up and get a good one.

Mr. CONSTANDY. Thank you. Mr. Prisk, I think we can now turn our attention to lighting. We have had, out of the nine States, only four which have lighting. The other five do not. The four which do have are Rhode Island, Georgia, Montana, and Oklahoma.

Perhaps, Mr. Prisk, you might begin our discussion on lighting.

Mr. PRISK. As you mentioned, Mr. Constandy, not all of the nine projects did have lighting installations. I think the matter of the lighting of a controlled access facility is perhaps still an unsettled matter, because there are bodies of information that suggest the importance of lighting in some situations, and in other cases indicate that on these newer highways where there are fewer obstructions, fewer opportunities to depart from a prescribed alinement, fewer opportunities to meet anyone at an intersection than under the normal city street conditions, that lighting is probably not as necessary and that headlights will do the job adequately. However, in those cases where lighting has been a feature of the projects we have been looking at, we have examined