

Mr. PRISK. This is a closeup of this recessed line of the abutment wall, this particular structure. This is paving underneath the bridge at this point.

Mr. RICKER. I would raise the question whether additional protection it still not needed for that vertical wall. Having observed accidents where a vehicle out of control will go up entirely over, this is still a hazard. Perhaps this can be protected by other means. You may not need to erect a guardrail, but planting of some small bushes and so on to protect that area would be desirable.

Mr. PRISK. With the rigid frame-type construction shown on one of these photos, one directly behind Mr. Huff—

Mr. CONSTANDY. The lower right-hand panel.

Mr. PRISK. The two-span rigid frame, that is possible of course, to completely eliminate that abutment wall.

This is, it might be said, a step in the right direction.

Mr. WILSON. Prior to 1963, we found that piers located next to shoulders and things of this nature here were being struck more often than we would like to have them struck, and instructions went out to our design sections in the bridge department in January 1963 to, in the future, design all structures similar to what is shown on the bottom right-hand side here, a two-span structure.

This can be done with a modest increase in cost. And since that time, our designs have had that feature.

This also included going back on the shelf and pulling out design plans that have been completed years in advance and changing these.

Mr. CONSTANDY. I am glad you said that, Mr. Wilson, because the initial reaction of a number of people we have talked to who have not had the experience your state has had, and who have not worked up the estimates, is that the better design would be rather costly. Your own experience in California has shown that has not been true.

Mr. WILSON. That is right. In fact, I could quote our chief bridge engineer, Mr. Elliot, in many cases where, if you can start a design from scratch from the very beginning and plan it on the basis of a two-span structure, there is no increase in cost.

Mr. CONSTANDY. Mr. Skeels?

Mr. SKEELS. For three bridges recently constructed at the GM Proving Ground we adopted this approach and the increase in cost is negligible.

Mr. CONSTANDY. Thank you. Mr. Prisk?