

And from the ground line up they have made an effort to make a curb return designed to transition from the roadway cross section of the safety walk, back to the full shoulder. In plan view, that looks like a generous radius; but when viewed from the approach roadway, it does give a very abrupt change.

Some States have provided longer radius. Other means have been to have a longer transition of approach guardrail.

Mr. CONSTANDY. That would be a means of eliminating a hazard. I would like to get more directly to the function of that parapet as it extends above the rail.

Does it perform any function?

Mr. WILKES. The function it performs here, it does mask the metal handrail, whether that is aluminum or steel.

Mr. CONSTANDY. For what purpose?

Mr. WILKES. Well, you do not have the exposed end of the guardrail that you saw on the earlier photographs.

Mr. CONSTANDY. You cannot be serious. This thing will kill you before you ever get to the exposed handrail. It is putting a more lethal thing in front of one that already is lethal.

I have heard that from other people. I do not mean to sound so incredulous. It has been spoken of before.

Mr. WILKES. Well, the height of the rail is necessary for pedestrian traffic that you would have on the bridge, and from that pedestrian rail there should be some transition down to a roadway section. And this is the solution that was developed, I am sure, by the highways department.

Mr. CONSTANDY. But by itself it bears no relation to the strength of the bridge; does it?

Mr. WILKES. That is correct.

Mr. CONSTANDY. If it performs any function, it is to kill you before you get killed by the end of the handrail. In fact, here is an example—

Mr. WILKES. It certainly would depend on the angle of attack. It does have a feature of a radius—was built on a radius to flare out; and there are just as many or perhaps more wing walls that are built parallel to the railing.

Mr. CONSTANDY. I suspect from our earlier conversations that you are not pleased with this type of design itself. You do not care for the existence of that lethal mass of concrete; is that true?

Mr. WILKES. I cannot say that I necessarily agree. There has been an attempt to flare the bridge railing, which is restrictive, out to the full shoulder width. The criticism that I would have is that the radius is too short, that you need a longer transition.

Mr. CONSTANDY. So it would be possible to design and build something which would achieve the result that you desire?

Mr. WILKES. Definitely.

Mr. CONSTANDY. And at the same time eliminate the hazard that is produced by the existence of this form?

Mr. WILKES. Yes.

Mr. CONSTANDY. We do see these all over the country.

Mr. WILKES. Where you do not carry the full shoulder across the bridge, some appropriate transition must be provided. I can agree that this is certainly massive; and if you hit it head on, it is a lethal weapon.