

Mr. McEWEN. A couple of the slides previous you had your new box beam coming into that abutment. Is that not also a flexible barrier?

Mr. GRAHAM. With the box beam, and with posts at 4 feet, we can restrict the deflection to about 2 feet. We do need 2 feet between the abutment and the rail.

Mr. McEWEN. Now are you using W-beams at all in New York now?

Mr. GRAHAM. Yes, sir. We need 8 feet but for a normal side road installation, where we do not have fixed objects close to the roadway, both the cable system and the W-beam system work very satisfactorily.

Mr. McEWEN. Well, now, what would be the best type of guardrail here, W-beam, box beam, or cable? (refer fig. 6-26).

Mr. GRAHAM. The box beam is the best thing we have for this type of installation. I presume this is a fairly old highway, judging from the type of abutment that is in there. And I believe the box beam was installed to improve a bad situation to the greatest extent possible. Of course, we are not building the abutments like that and we have not for many, many years.

Mr. McEWEN. Would that be considered also too short an installation now under your standard?

Mr. GRAHAM. We would extend it all the way through, and we would extend it back farther, and attach it down to the ground, to avoid any possibility of striking the end.

Mr. McCARTHY. Is it fairly tricky to install this? I have a little sample here. I think, from what we have seen here, the evidence will indicate that this is the best system. But I am wondering if it requires quite a bit of attention to see that it is installed properly. Would that be true?

Mr. GRAHAM. No, sir; I would not say so, any more than any other system. I have observed them putting it in. They drive their posts 6 feet normally. The little paddles that go on top of the posts are bolted on, and the beam, of course, is fabricated in the shop and it is lowered over the posts. Where there are splices, we must insure that those are snug, otherwise we would get more deflection than we wanted. But I would say by comparison with other types of barriers, it is not a difficult or tricky thing to install.

Mr. McCARTHY. Is it inspected before it is accepted by the State, by a qualified inspector?

Mr. McALPIN. As to structural soundness in conformance with existing plans and specifications; yes, in all cases.

Mr. McCARTHY. How about the application, do they check to see that it is properly installed?

Mr. McALPIN. I qualified my other statement to the effect that it would be installed as the directions were indicated on the plans and specifications. If you mean whether we have a review group that would go out to check whether the original indicated design was correct, in the early instances, certainly, as exhibited here with these slides, this was not being done. We are paying considerable attention to this now, and trying to bring our house in order, especially on these transition situations.

Mr. W. MAY. I think that is the last photograph.

I think what we have seen here, Mr. McAlpin and Mr. Graham, is a real excellent concept; a new concept, of highway barriers. There is