

As mentioned before, this can be enhanced even further by correcting some relatively minor and inexpensive things such as improving the design, use and placement of guardrail, protecting bridge ends and bridge piers, moving sign assemblies further from the edge of the shoulder, removing trees that are too close to the traveled way, using breakaway sign supports and light standards, changing the design of highway components, such as drop inlets, bridge turnouts and culvert headwalls and, in general, carrying on a program of eliminating or providing protection around obstructions that cannot be eliminated or moved out of critical areas.

We have found that cars going out of control on high-speed Interstate highways travel rather fantastic distances after they leave the road and even though there are a relatively few obstructions on those roads, as compared to older conventional highways, they can become lethal, for a vehicle very often proceeds until it collides with one or more of such objects.

Substantial additional expenditures on the Interstate System could fast reach the point of diminishing returns and such moneys could better be spent on the improvement of roads and streets having higher fatality rates. I am talking about urban streets, the vast mileage of our older rural primary highways and correcting "booby trap" situations on our secondary roads.

We do believe, however, that the AASHO work in improving and upgrading design standards and operational practices has been responsible to a marked degree for the dramatic decrease in highway fatality rates during the past 30 years.

Much of our early highway practice was inherited from railroad practice following the slowdown of the great railroad expansion programs. The first generation of highway engineers came from the railroads so it is natural that the evolution of highway engineering started from that point. It was during this time that much of our existing highway system was constructed. The then current practice dictated the slopes, ditch sections, major and minor structure configuration and right-of-way widths.

It was also at a time when we had much less highway traffic, lower speeds, and much smaller trucks to consider. In fact, very few people, if any, anticipated the extent of the unprecedented growth that has occurred in motor vehicle traffic.

The high cost of moving earth and making rock excavations, together with the relatively light traffic needs, dictated the grades, alignments, sight distances, and the like. Consequently, these existing facilities are incompatible with present-day traffic densities and speeds. We are speaking of the typical rural two-lane highway yet in use and built 30 to 40 years ago on narrow rights-of-way. Extremely limited budgets, limited bridge widths to very little in excess of the width of the pavement, and because of the continued shortage of funds, thousands of these structures are still in service.

The State highway departments could not get full support for increasing the widths of right-of-way for many years. We encountered strong resistance against moving any sizable trees along the roads during construction or in maintenance operations, and during the great expansions of the utility services many pole lines were constructed along these highways in close proximity to the traveled way. In fact,