

Mr. CONSTANDY. In the interest of saving time, Mr. Chairman, I would ask that the statement of Mr. Womack be printed in the record at this point.

Mr. EDMONDSON. So ordered.

Mr. CONSTANDY. It is a very fine statement, and as a matter of fact adds another dimension to the question of installing guardrails. It is something to which careful consideration should be given. They find that you increase the incident of injury if the median barriers are installed at the wrong place.

Mr. BEATON. This is right.

Mr. CONSTANDY. I ask the paper be printed at this point in the transcript.

Mr. EDMONDSON. It will be printed.

Mr. CONSTANDY. Thank you.

(The statement, "Median Barriers and Accident Prevention," by J. C. Womack, State highway engineer, is as follows:)

Median barriers were conceived and are installed to prevent cross-median head-on accidents. Accident data show that median barriers are very effective in accomplishing their purpose.

Back in the late 1950's, before the median barrier program was initiated in California, cross-median head-on accidents accounted for approximately 20 per cent of the freeway fatal accidents. At present, with 400 miles of median barrier in place on 2,000 miles of freeways, only one-twentieth of the total freeway fatal accidents are of this type. The 400 miles of median barrier were installed first at locations where accident records and traffic conditions indicated they would do the most good in preventing cross-median accidents, and subsequently have been installed on all freeways where the median is less than 46 feet wide and average daily traffic exceeds 40,000 vehicles, and on all freeways with narrow medians (less than 12 feet) where the average daily traffic exceeds 20,000.

Since the barriers have proved their effectiveness in preventing one of the most vicious types of accident that takes place on California highways, the question quite naturally arises as to why they are not installed everywhere, and this question is very forcibly brought to the attention of highway officials whenever an accident of this type occurs and is reported in the press.

Highway officials are just as concerned—probably much more concerned than most people—by reports of fatal cross-median accidents. Here in California and throughout the nation they have given careful research and study to this most serious matter. The study, based on years of experience, shows that the solution is not as simple as it first seems to be.

The problem is that the installation of such barriers causes approximately a 25 per cent increase in injury accidents and can most definitely cause fatalities.

In 1965 there were 3,800 head-on accidents on California State highways. Of these, only 33 were fatal accidents caused by cars crossing over the center dividing strip on freeways. Thirty-three such accidents are too many, but they also must be viewed in perspective by those in charge of State highways in California who are confronted with a yearly toll of more than 100,000 accidents and more than 2,000 persons killed. In the light of this, the State Highway Engineer must decide whether an all-out program designed to prevent such a small fraction of all fatal accidents is worth the cost, not in dollars, but in the increased suffering caused by accidents that would not otherwise occur, as well as a reduction in other safety programs designed to prevent a much larger number of accidents.

The general increase in total accidents as a result of median barrier installation is due to the fact that the barrier cuts in half the space available for emergency maneuvers in the median. Drivers who might use the median to avoid an accident in an emergency have less room; they may strike the barrier or they may strike another car. In either event they have an accident, often involving "innocent bystanders" on the same side of the freeway. These accidents that might never have happened also cause injuries and deaths.

A median barrier or guardrail can prove just as deadly as another vehicle if you run into it with enough force. One hundred sixty-nine fatal accidents oc-