

necessary and desired change. But change comes slowly, even with the impetus of such things as these hearings.

However, I would say that while the necessary actions have already been taken, communication, implementation of, and compliance with these actions must still be pursued diligently.

The most tangible of these actions has been a joint endeavor of the Bureau of Public Roads and the American Association of State Highway Officials described in a report of the Special AASHO Traffic Safety Committee—"Highway Design and Operational Practices Related to Highway Safety," February 1967, and being generally referred to as the "Yellow Book."

This particular undertaking was formally begun about a year and a half ago when the Bureau of Public Roads proposed to AASHO that a special study of the traffic and safety characteristics of the Interstate System and other highways be made. The purpose of the study was to develop guidelines for treating the problem of run-off-the-road accidents in which fatal or serious injury resulted when roadside obstructions were hit. We were thus taking action based on the study and continued observation of the accident trends which I referred to.

The proposal contemplated a review of traffic safety conditions at locations where accident and operational problems existed.

AASHO enthusiastically agreed to the undertaking and the assignment was given to the AASHO Special Traffic Safety Committee.

This committee had been created in 1964. As a top level group, it was composed of the president of AASHO and the chairmen of several of its major standing committees. The membership included the chief engineers of the California, Colorado, Connecticut, and Kansas departments and the Commissioner of Public Works and Highways of New Hampshire. The committee was assisted by four State traffic engineers and several representatives of the Bureau of Public Roads.

During the period of June 14 to August 18 of last year, the committee visited 10 State, seven major metropolitan areas and numerous other cities and towns, observing actual highway traffic operations in a critical vein, and discussing with State and local police, traffic engineers, and local officials possible ways of increasing safety on the highway.

The report's findings, conclusions, and recommendations are covered in detail in the report which I understand has already been supplied to this committee. It clearly brings out that much can be accomplished by removing hazards that currently exist on and along our roads and streets, and by improving design and operational practices so that similar or other hazards will not be built into highways of the future. Considerable space is devoted by the report to how this can be accomplished.

On May 8, I wrote personally to each State highway department expressing the Bureau of Public Roads full concurrence in the report's recommendations and conclusions. We in the Bureau consider it to be one of the most important documents ever developed by the joint efforts of AASHO and Public Roads. We have pledged and demonstrated our active interest in seeing that every State applies the report's findings beginning immediately and continuing on a large scale for as long as is necessary to provide the highest possible level of

safety on the Federal-aid highway systems. A copy of my letter is submitted for the record.

This study and report, the yellow book, confirmed a policy established last year by the Bureau of Public Roads, and covered in our Instructional Memorandum 21-6-66, August 1, 1966. It also is attached to my statement for the record. The policy required that all aspects of location, design, traffic control, drainage features, and roadside appurtenances are to be examined during development of the plans, specifications and estimates beginning with the location survey, and to the maximum extent possible in the construction and postconstruction stages, to insure that hazards arising from vehicles leaving the roadway out of control will receive primary consideration.

The memorandum specifically calls for the elimination of all unnecessary sign supports, light standards, drainage structure obstructions, and other appurtenances. Where the need for such features does not permit complete elimination, they are to be located, if possible, in unexposed positions. Where this is not feasible, adequate protection for the out-of-control vehicle is to be provided in the form of impact-absorbing guardrail, special grading of the surrounding area, or other means which will reduce the severity of accidents.

In addition to the various memorandums on the subject, I have made a number of speeches to the regional associations of State highway officials and held numerous personal conferences stressing the urgency of action toward the removal of all potentially lethal roadside appurtenances.

To assist the States in expediting the correction of existing hazards as recommended in the previously described AASHO report, we have streamlined our project procedures. This is covered in the letter sent to each State highway department to which I made reference and in more detail in a following set of instructions to our field offices. A copy of those instructions is included for the record.

I believe it is important at this point to mention that in following up on the letter and the instructional memorandums, our regional highway administrators have been carrying out careful analyses of pending State plans and instructing our division engineers to work with the States toward bringing these plans into conformance with the AASHO Yellow Book.

In fact, our stand on the implementation of the AASHO Yellow Book has been so firm that there have been some protests from the highway construction industry that we are stopping the program. What minor delays are necessary will be negligible, and certainly for the best possible reason. For the most part, adjustments in design can be made which will either eliminate completely any unnecessary obstacles, or relocate those which cannot be eliminated, or protect the motorist with well-designed, impact-absorbing devices from those roadside elements which cannot be either eliminated or feasibly relocated.

For the sake of clarity and emphasis, I might spell out here that which I indicated earlier: that the AASHO recommendations will be applied to the Interstate System throughout, and will have particular application to the older sections already built. We have asked the States to calculate the cost of the additional work required to bring previously constructed sections of the Interstate System into conformity with the AASHO safety recommendations, in connection

with the new estimate of cost of completing the system due to be presented to Congress and this committee next January, so that this work will be included in our report to you at that time along with the request for its financing.

Another Federal-State effort which has important applications in the field of highway safety is the work of the so-called design review teams which the Bureau of Public Roads has been promoting. I am including for the record copies of memorandums we have issued on this subject. In recent years a number of States have established functioning committees or teams to review completed projects and make recommendations as to their safety and other design features. These teams function under various names, such as operational surveillance teams, freeway operation review committees, design review teams, and others, but all have the same purpose—to insure the utilization of proven superior design practices and the elimination or correction of those which have proven unsatisfactory.

The Bureau of Public Roads has urged the establishment of these teams in all States along with effective review and reporting procedures to accomplish their purpose. To date 36 States have reported the establishment of such review teams, with others in prospect in four additional States. The typical team consists of several members, including representatives from such disciplines as design, construction, maintenance, traffic operations, police, and Bureau of Public Roads.

The findings and recommendations of existing teams have been consistent with those outlined in the AASHO Yellow Book. Our planned design manual, already referred to and described by Mr. Bridwell, will add considerably to this consistency.

We have underway an intensive amount of research and investigation into various highway safety matters, including the development in as short a time as possible of new structural systems to replace or eliminate fixed objects along the roadway. The program also includes the development of several new devices for vehicle impact cushioning and deflection to prevent or reduce the severity of "run off the road" type accidents. The guardrail now available and in general use is not entirely satisfactory because the guardrail itself is often a formidable obstacle and actually creates a roadside obstruction while providing protection from some other hazard.

Devices such as a "bumper" in front of fixed roadside hazards are flowing from the research effort, which is in addition to our continuing effort and longer range research and development activities in the areas of traffic operations and communications, all of which also have strong highway safety connotations. The types of research and investigation I have mentioned are indicative of what is underway but it is important to remember that a great deal of study and leadtime is necessary before any new design developments can be actually incorporated into a highway construction project.

The Bureau also has recently engaged in a number of activities designed to provide and to assist in the development of basic information on the scope of the traffic accident problem. In July 1966 we completed arrangements for obtaining copies of police investigation reports on fatal accidents which occur on completed sections of the Interstate System.

Our initial reasons for this undertaking were exploration and staff development. We are not satisfied that adequate analytical procedures are being applied to the mass of accident information presently available, nor in fact are we satisfied that fully adequate analytical procedures have even been developed. This, then, has been a special study to develop staff competence in accident data analysis and to explore and devise analytical procedures that will effectively equip us to assist the State highway departments in establishing data analysis activities which we think must be undertaken.

I believe the subcommittee is aware of our activities under Bureau programs, additional to those I have discussed, having a high degree of impact on highway safety. For the record, however, I would like to mention three of these: The Interstate System program, the spot improvement program initiated in 1966, and our new TOPICS program.

The National System of Interstate and Defense Highways, as you well know, is being constructed to the highest design standards ever developed for roads in this country or any other country. The danger of head-on collisions is substantially reduced by separation of roadways for opposing lanes of traffic. The elimination of all at-grade intersections has completely removed the serious accident potential at cross-roads. Private driveway connections are also prohibited, thus further reducing or eliminating this possibility of a collision between vehicles.

At the present time, almost 25,000 miles of the system are open to traffic, providing us sufficient experience with traffic operations under these standards to know that the fatality rate on the Interstate System runs substantially less than a third of that on the older, more conventional highways.

It must be borne in mind, however, that substantial portions of this system were constructed some years ago and that this construction was based on engineering designs developed even several years earlier. Consequently, some sections of the system were designed without the benefit of important knowledge gained in the intervening years, particularly in the causes of various types of highway accidents on this system. The Bureau has provided recent authority that these older sections of the system can be modified in the light of current knowledge of improved safety procedures. The outlook, therefore, is that the safety record of the Interstate System will be still further improved with the incorporation of additional safety features on the older segments.

On the older highways, the so-called spot improvement program is potentially one of the most important of all developments in the field of highway safety. It has directed the attention of the Bureau and the State highway departments to the possibilities of reducing accidents through particular attention to the removal of specific highway hazards. In terms of money invested, the benefits are expected to be quite large by the careful selection of future safety projects on the basis of both actual accident experience and advanced identification of potential hazards. This will become standard procedure as the States are able to develop their capabilities in this area. The most significant and far-reaching aspect of this program is that the procedures required to carry it forward will result in the comprehensive and continuing surveillance system which is so sorely needed as a basis for further

safety improvements. A breakdown in the smooth operation of a highway manifests itself in accidents. Thus, a system or procedure which identifies and locates accidents is at the same time a pulse-taker of highway operational efficiency.

As a corollary to the spot improvement program, I mention the TOPICS program, which has the purpose of making existing streets and highways in urban areas more useful by increasing their traffic carrying ability, reducing congestion, and improving their safety. To achieve these objectives, the program involves the application of modern traffic engineering and operational techniques to a selected network of the major traffic-carrying streets in the urban areas. While many improvements of this type are primarily generated by the need to move traffic efficiently, they add up in fact to a kind of spot improvement safety program for the urban areas, and in that context can be considered part of the Bureau's and the State's overall highway safety effort.

The present annual toll of traffic deaths and injuries on our highways presents a grim picture. But before we become overawed by grimness in assessing the situation which exists, we should interpret and place in proper perspective the statistical information available to us. To be realistic about it, there are factors involved in the problem which can never be cured by any amount of highway improvement.

This is not to say that we shouldn't try to improve on the other factors. But, in trying, we must recognize that there is probably an irreducible minimum of traffic accidents and deaths and we should proceed by all means at our disposal to reach that minimum. Included in that minimum most certainly are an unknown number of deaths from natural causes. Furthermore, it is useless to talk seriously about reducing fatalities until we are also willing as a society to take serious steps to eliminate the socially accepted mixture of alcohol and driving because a majority of the annual victims result from this cause rather than any deficiency in highway design or construction.

It is quite obvious that the accident problem must be attacked on many fronts and your subcommittee has correctly selected as one of these fronts the design of the roadway and the location of its roadside appurtenances.

While the manner of handling these appurtenances is an important area for consideration, it must be kept in proper perspective. It should be recognized that accidents and fatalities involving features such as those which have been so amply and frequently presented to the subcommittee are far less in number than those which have been prevented by appropriate standard design which has not been discussed. Likewise the total number of accidents of the kind covered extensively in the hearings constitutes only a small fraction of all highway fatalities, in connection with the Interstate System. Any fatality is too many, and we must work diligently to avoid all of them. In so doing, however, we must always keep at the forefront of our emphasis these items which produce the largest measure of benefit for the effort and dollars which are available to us.

Actually, the total of all fatal accidents of the general type being discussed in these hearings constituted a very small percentage of the total fatalities last year—a figure about equal to those occurring between railroad and highway vehicles—or the number of fatalities

from bicycles, motorcycles, and similar nonauto vehicle types. The figure is actually about 3 percent of the 53,000 fatalities of last year. The question is immediately posed then as to which one of these accident groups to focus special attention on, if a choice must be made among them. The obvious manner is to treat all three at the same time, but the practical and real limits of money and other factors in the past prevented such a desirable choice.

Your chairman quite properly wants to be assured mistakes of the past are not carried over into our new roads, particularly the Interstate System. A related question is whether the design of highways is being done in such a manner as to make use of the fruits of research and experience.

The answer to both of these questions is an unqualified "yes" and I offer my previous remarks in support of this.

I emphasize that highway safety has been a principal objective of the Bureau of Public Roads since the first Federal-aid road legislation of 1916. It is in fact a specifically stated requirement governing our approval of Federal-aid projects and is contained in the basic act of 1921 and continued in every amendment to the act since that date.

Substantial research in design and operation has been conducted or sponsored and implemented by the Bureau of Public Roads and the State highway departments.

While highway safety has been of primary concern over the years, the practical limitation of available funds at both State and Federal levels has historically restricted the extent to which all of the objectives of highway engineers and administrators could be achieved, over and above the mere movement of people and goods.

Even where the additional achievements were possible, it has generally happened in the past that advanced design features intended to enhance safety or esthetics or both, have been frequently assailed as "frills" by some public officials as well as by private individuals and groups who demanded more miles of road improvement as the principal product of the highway departments.

This, then, Mr. Chairman, is a partial report on Bureau activities in the field of your inquiry. Briefly summarized, the Bureau's principal activities in this area are concerned with these main, closely related efforts:

- (1) A modified and expanded program for identifying and correcting high accident locations, or potentially high-accident locations;
- (2) a concerted effort to provide a uniformly safe environment along our roadsides to substantially reduce hazards to vehicles leaving the road out of control;
- (3) a continuing program of research and experimentation in highway and traffic engineering in its broadest sense.

All things considered, the Bureau and the State highway departments have done a conscientious, constructive job over the years in enhancing highway safety, as is evidenced by a substantial decline in the fatality rate while the exposure and the probability of accidents has increased sharply due to increased travel. We are always willing and eager to learn how to do a better job, and we welcome any additional knowledge and sound suggestions which these hearings or any other source might develop.

The establishment of the Federal Highway Administration in the new Department of Transportation is hoped to be of great help over the long haul in bringing even more expertise to bear on the total problem by assigning specific areas of responsibility to its component agencies. In this reorganization process the Driver Register Service, which has functioned in the Bureau of Public Roads since 1961, has been transferred to the National Highway Safety Bureau. We are proud of its accomplishments under our own direct jurisdiction, and expect that it will be a tool of increasing value in the attack on the highway accident problem.

The subcommittee's own studies, as well as the testimony given during these hearings, will clearly indicate that more money than is presently available or in sight will be required in the effort to make a marked reduction in the role of the roadway and roadside in the highway accident, injury, and death toll rate. While this may not be the proper place to make the point, I believe that it should be strongly made because it is a key consideration in the problem you are attacking and we might as well recognize the fact. The highway engineer is frequently accused of shortsightedness but, as one of them, I honestly think that the problem over the years has been due more to funding deficiencies than to defective vision, lack of knowledge of the problem, or a lack of concern. We have had to make choices on how to spend the funds at our disposal and while safety has always been the paramount consideration, we have had to knowingly forgo some safety items which appeared of least hazard in order to put primary funding emphasis on those believed to represent the larger safety benefits.

That concludes my statement, Mr. McCarthy.

Mr. McCARTHY. Thank you very much, Mr. Turner.

I just have one question. According to your statement at the bottom of page 11, which I would certainly like to endorse, and I think it is an excellent statement overall, it says, "it is useless to talk seriously about reducing fatalities until we are also willing as a society to take serious steps to eliminate the socially accepted mixture of alcohol and driving because the majority of the annual victims result from this cause rather than any deficiency in highway design or construction."

Now you say a majority, which is over 50 percent, based on your own research.

Mr. TURNER. This is based on the research of many groups. And some studies would indicate that the factor may be as high as 75 percent, but it is clearly shown in all of the research in this area that something more than 50 percent, probably considerably more than 50 percent, involve in one form or another alcohol as a contributor to the accident.

Mr. McCARTHY. We have those figures, too. The gentleman from the State of Florida and I were especially interested in this, and as you know this is a result of the study going on.

Now one other point occurred to me. I would like to get your opinion about the current flurry of activity regarding insurance. Now I have sort of a feeling that two congressional committees might even work at cross purposes. There has been a great deal of material appearing in print of late about what is alleged to be precipitous and arbitrary cancellation of insurance.

As I listen to this information that is based on the fact that the drivers had some accidents, so they canceled his insurance or perhaps the rates are increased, and my own view has always been that the insurance companies have every right to do this. And while they have the right, I think they also should reward the safe driver by lowering the rates. I think it is only fair that the rates for those who consistently have accidents, whether through alcohol or other causes, should be higher.

I wonder if you have given any thought to the idea in terms of safety to consider insurance rates as a deterrent to accident prone or drunken or reckless driving?

Mr. TURNER. I think that is being handled in one of the other offices, and I think Mr. Bridwell might want to comment on that, Mr. McCarthy.

Mr. BRIDWELL. Mr. McCarthy, in terms of any kind of definitive study in the area, in the Department of Transportation, the Highway Administration, it has not been undertaken.

As you are probably aware, the House Judiciary Committee has expressed an interest in this subject and has indicated that at least it might go forward with its own study and its own analysis.

In addition to that, the Department of Transportation, Secretary Boyd, was asked by the Senate Commerce Committee or really more appropriately, I should say, was asked by Senator Magnuson, joined by some of his colleagues, to undertake a study of this problem.

His response to the Senators was that we would be glad to undertake it if resources and what we believe to be the necessary legal authority are provided.

So that I think that the situation at this point is fairly fluid, but I am assuming it will be resolved by the respective committees in the near future.

Mr. MCCARTHY. It just strikes me as an imbalance. Mr. Nader and others have taken the vehicle and cited it as a corporate, inanimate object and, of course, we have pursued the road. Now there seems to be almost a reverse process on the way related to the driver.

And as Mr. Turner points out, the majority of the annual victims result from the alcoholic driver.

Mr. BRIDWELL. Mr. McCarthy, I would like to state for the record that we welcome this pursuit of the various aspects of safety. You have mentioned the vehicle on the highway, and I noted in my statement that we are looking forward to the hearings of the Roads Subcommittee of the House Public Works Committee, hearings on the progress of the Highway Safety Act, which, of course, deals with the driver and other elements of the safety system, other than the highway and the vehicle.

Now referring back to your earlier question to Mr. Turner on the alcohol aspect of highway safety, Dr. Haddon is one of the country's leading authorities on this subject, and I would like to ask him, if I may, to supplement the comments of Mr. Turner on this subject.

Mr. MCCARTHY. If you would, Dr. Haddon, I would appreciate it.

Dr. HADDON. Without going into a very complicated subject in great depth, I completely agree with the emphasis that Mr. Turner has placed on the subject. It presents a number of very tough problems.

For example, there is a good deal of recent evidence that a very major part of the drunken driver violation and accident problem, particularly from the fatal accident standpoint, involves not the usual scapegoat of the average drinker, at least light social drinker, but the alcoholic; that is, the man who is deteriorated in his drinking. And he is, literally, sick.

Actually a slogan approach is not appropriate to that kind of problem. This is one of the areas that we are going to be devoting a great deal of attention to.

In fact we have just let contracts with several major research groups—for example, with Baylor University and with the University of Vermont and others—to begin prying into these accidents, particularly fatal accidents, that involve extreme amounts of alcohol—and they are extremely excessive usually—to find out what kind of drinkers these people are.

The preliminary evidence, particularly from the work of the California Health Department and other groups, again is that a good many of them are not ordinary drinkers.

At the same time we know that social drinking is involved to some extent and that this accounts for a good many—probably accounts for a good many thousands of deaths nationwide each year as well.

In addition, of course, there is increasing evidence that teenagers and young college men who have not had, perhaps, as much experience with alcohol as our society leads them to over a period of years are also one of the additional tragic parts of this overall drinking and driving problem.

I suppose the point I would make is that this problem, like most of the others, in fact as far as I know all of the others in highway safety, is a composite of pieces, each of which needs to be identified and handled on its merits, rather than using traditional folklore, traditional wisdom, if I may call it that, or shotgun approaches with which there has been little evidence of success in the past and which are unlikely to pay off in the future.

Mr. McCARTHY. Thank you, Dr. Haddon.

Any questions on the right?

Mr. JOHNSON. Mr. Turner, I want to say you have given us a very fine statement here. As Director of the Bureau of Public Roads, do you have the sufficient staff and the financing to do a good thorough job reviewing these plans that come in, the safety features?

Mr. TURNER. Mr. Johnson, I obviously would answer in this way, that I do not have as many as I would like to have. I think I could do a better job if I had more. Basically we have to depend, as you know, on the capability and soundness of the plans presented by the individual State highway departments to us.

However, it is our function to review those. We could certainly do a better job if we had additional staff, but I think that we still have to go back basically to getting the plans right in the beginning at the State highway department, rather than in our office.

Mr. JOHNSON. I realize that. But the Bureau of Public Roads has the responsibility to approve these plans as submitted, as I understand it?

Mr. TURNER. That is correct.

Mr. JOHNSON. Certainly you should have staff and financing to do this job because this is the all-important job of approval of these plans prior to construction.

Now, another question: In reviewing the highway that is now in operation, do you have enough personnel to go into that in any detail to advise the various States of the Union as to what the deficiencies are; and if you have the staff and make that review, do you have the necessary financing within the trust fund to do the work?

Mr. TURNER. We will have the necessary financing for the ABC System only on the basis of taking funds from something else to do this kind of work.

In the Interstate work we will anticipate an increase in the funding for that system to cover this additional work and do the original construction as well. There will be an increased cost to the trust fund to do both of these programs on the Interstate and the ABC systems.

To go back to the first part of your question with respect to staff, again to review the plans and handle the construction, I would have to answer it the same way. We never have enough staff to go in and completely review every project. We do not organize ourselves on the basis of attempting to duplicate or redo the work that the State highway department did.

We have to take certain samples of the product that they send to us and analyze that, review a set of plans, one out of five such plan sites or one out of 10 something else. We do not have the staff to completely review every set of plans or every project that comes to us from the States.

So we have to work on the basis of using our review procedures, primarily for the establishment of policy and attempting to get that policy then executed by the State, without our having to re-do, duplicate the State's job.

If we did it by reviewing or redoing the State's work, we would have to have a staff that would be 40 or 50 times as big as the staff that we do have.

Mr. JOHNSON. As I understood you to say, you have taken one out of five, one out of 10—

Mr. TURNER. I am using that merely as an example, Mr. Johnson.

Mr. JOHNSON. I thought that all the plans, as submitted by the States, were subject to approval on the part of the Bureau of Public Roads?

Mr. TURNER. They are. And we handle each one individually, but we do not have the staff so that we could take every set of plans and review it in complete detail. We just do not have and could not get a staff of that size.

Mr. JOHNSON. I realize that you have pointed out here that construction was just one phase of the facility and what-have-you means of killing approximately a little over 50,000 a year, and I should think the Bureau of Public Roads would be funded and staffed to do a job on highway safety construction on every project in the Interstate System at least.

Mr. TURNER. It would be a desirable situation, no question about it.

Mr. JOHNSON. That is all, Mr. Chairman.

Mr. CRAMER. I have a couple of questions I would like to ask.

Mr. CLEVELAND. I have some questions, too.

Mr. McCARTHY. Are these germane?

Mr. CRAMER. The Chair can rule on them, but I think they are.

Mr. McCARTHY. The gentleman from Florida.

Mr. CRAMER. I do not want to usurp the prerogatives of the gentleman who is sitting in the first position, and I will yield to him. I think he has a question.

Mr. McCARTHY. Mr. Cleveland.

Mr. CLEVELAND. My first question is addressed to Mr. Turner. When the public becomes very interested in something like safety, as they are now, there is a tendency for everybody to look around to see who is at fault; and as the chairman already pointed out, some people think it may be the car, some people think it may be the road, and some people think it may be the driver.

I was interested in your concluding remarks where you say, "I honestly think that the problem over the years has been due more to funding deficiencies than to defective vision." I interpret this as being a somewhat euphemistic way of including the politicians in the list of villains, and I interpret your remarks correctly, do I not?

Mr. TURNER. Only in the sense that you have attached that twist to it.

Mr. CLEVELAND. Thank you. Now I would like to call to the attention of the panel some statistics that were given to us on Tuesday, prepared, I believe, by our own staff, and I will pass these over to you. These show that when you relate motor vehicle deaths to total vehicle miles traveled that very obviously in the 1942, 1943, and 1944 period there was a sharp decline, not only in travel and in deaths—and this of course was during the war period when people were driving most carefully to preserve gasoline and tires, et cetera. However, in the 1938 and 1939 and 1940 period there was a very noticeable and sharp decline in the number of deaths per traveled mile.

I commented on this Tuesday, and there seemed to be no immediate explanation, and I would like to ask Dr. Haddon if he is aware of that very sharp decline in the 1938, 1939, 1940 period; and if he has any immediate explanations for it.

And if not, I would then like to ask him if he would study these figures and give his observations to the committee in writing at a later date.

It seems to me that there might be some interesting conclusions to be drawn from this very noticeable drop in the number of deaths per traveled mile in that 1938, 1939, and 1940 period.

Are you aware of that particular period, Dr. Haddon?

Dr. HADDON. Yes, I am. And here also a great many things were going on. These involve the drivers, the vehicles, and the road, to mention the usual three.

However, this was also a period of temporary depression, I believe, and many people feel that this substantially influenced the results.

I think the simple answer is that nobody really knows, and we are too many years after the fact for anybody to go back and dig out definitive answers.

Mr. CLEVELAND. In other words, you do not think it would even be rewarding to make that particular study of 3 years?

Dr. HADDON. It might well be rewarding, but I think we should give our priorities to the problem we have in the "here and now," since there are a number of areas in which we think we can reduce the totals.

Mr. CLEVELAND. I have one other question. Mr. Bridwell may answer this. Tuesday I inquired of one of the witnesses from your Department, I believe, or—correction, I inquired from one of the witnesses from AASHO—whether or not, in view of the evidence that we are hearing, that there are some obstacles just off the right-of-way that are contributing to the fatalities, and many of these being on the Interstate System, whether these corrections could be made at the 90-10 participation cost ratio of the Federal Government; and I was informed by that panel, at least, that this could be done.

Is that your understanding? Were they correct? Will your Department or will the Bureau pay for correcting these deficiencies on the Interstate at the 90-10 figure?

Mr. BRIDWELL. The answer to the question is "Yes." If I may, I would like to supplement it—

Mr. CLEVELAND. Before you supplement it, let me go on, because I call your attention to the fact that the Comptroller General in 1961 ruled as follows: "An Interstate highway once improved, Interstate Systems standards with the aid of Federal Interstate funds, is not eligible for reconstruction with Federal Interstate funds."

That, as I say, was the 1961 ruling, and, to my knowledge, it is unchanged. You may comment.

Mr. BRIDWELL. Yes, sir. I do not think there is anything inconsistent here. I would like Mr. Turner to address himself to that because he is much more familiar with that GAO ruling in 1961.

Mr. TURNER. The point you are making, Mr. Cleveland, is what I was referring to on page 10 with respect to the new authority that we granted to the States. And as Mr. Bridwell indicated, the answer on whether or not we can use 90-10 funds for correction of these things is yes.

The Comptroller General's ruling that you are referring to had to do with the question of whether or not we could rebuild a piece of flood-damaged Interstate road. It was reconstruction of the road to the same standard, exactly as it had existed prior to the damage.

What we are talking about here is actually additional work of a higher standard. It is not reconstruction. It is, rather, new items that were not included in the original design, but had they been included we would have approved. Or it is revamping and upgrading of items to a new standard different from that which previously existed.

Mr. CLEVELAND. Have you asked GAO whether or not this ruling, which seems rather clear to me, covers reconstruction of Interstate highways for reasons of safety?

Mr. TURNER. We have not asked them for an opinion. We had our own opinion, produced by our own legal counsel, that this was entirely acceptable.

Mr. CLEVELAND. Could we have a copy of your counsel's interpretation for the record?

Mr. Turner. We can produce that; yes, sir.

(The memorandum of law referred to follows:)

U.S. DEPARTMENT OF TRANSPORTATION,
FEDERAL HIGHWAY ADMINISTRATION,
BUREAU OF PUBLIC ROADS,
Washington, D.C., August 29, 1967.

Mr. WALTER R. MAY,
Chief Counsel, Special Subcommittee on the Federal-Aid Highway Program,
Committee on Public Works, House of Representatives, Washington, D.C.

DEAR MR. MAY: Enclosed is a Memorandum of Law concerning the propriety of Interstate fund participation in safety improvements on segments of the Interstate System previously constructed with Interstate funds.

This is furnished pursuant to the Subcommittee's request, for insertion in the record of the hearings before your Subcommittee on highway safety, design and efficiency, at which I testified on July 20, 1967. The insertion would appear at the bottom of page 1294 of the transcript.

Sincerely yours,

F. C. TURNER, *Director of Public Roads.*

MEMORANDUM OF LAW

INTERSTATE FUND PARTICIPATION IN SAFETY IMPROVEMENTS ON SEGMENTS OF
THE INTERSTATE SYSTEM PREVIOUSLY CONSTRUCTED WITH INTERSTATE FUNDS

The question presented is whether Interstate funds are legally eligible to participate in new safety improvement work or in revamping and upgrading existing items to a new or higher standard, as may be deemed necessary to eliminate hazards on segments of the Interstate System previously constructed with Interstate funds.

This question was raised because of the decision of the Comptroller General, B-143075, dated January 5, 1961, 40 Comp. Gen. 404, which modifies his earlier decision of July 19, 1960, 40 Comp. Gen. 21, to the effect that portions of the Interstate System constructed with Interstate funds and later seriously damaged by natural disaster, while eligible for emergency or regular Federal-aid funds, could not be rebuilt with Interstate funds. This decision makes reference to the rationale that, under the Federal-aid legislation and fund authorizations, Congress has provided for a completed Interstate System and the use of Interstate funds to rebuild a portion of the Interstate System previously constructed with Interstate funds to Interstate standards would not accord with the basis upon which Interstate funds were provided.

The situation to which the Comptroller General's decision was directed—that is, the rebuilding or reconstruction of a highway seriously damaged or destroyed by natural disaster—is clearly distinguishable from safety improvement work on the Interstate System to provide maximum safety for the traveling public. In the one case, the work is restorative in character and may involve the complete rebuilding of a destroyed highway. In the other, the work constitutes additive or corrective safety features in accordance with the most modern design standards based on current day experience, for the purpose of saving lives as well as reducing injuries and property damage. In our judgment there is no sound analogy between reconstruction and restoration work attributable to "serious damage as a result of disaster over a wide area" as referred to in section 125 of title 23, United States Code, and safety feature improvements, including corrective work consisting generally of low-cost items, needed to overcome design deficiencies in the light of current knowledge.

The legislative history is clear that Congress intended safety to be a primary objective of the Interstate program. In addition, section 109 of Title 23 expressly states that plans and specifications for all Federal-aid projects shall provide for existing and probable future traffic needs and conditions "in a manner conducive to safety" and that geometric and design standards for the Interstate System shall be applied uniformly throughout the States. The declarations of Congressional intent in section 101 provide that prompt and early completion of the Interstate System is one of the most important objectives of the law and that the System is to be completed as nearly as practicable over the period of availability of funds authorized.

It is recognized that Interstate authorizations and apportionments are based on cost estimates in order to provide for a completed System of specified mileage

over a given period of time. However, to say that the Secretary could not, with respect to an Interstate project constructed some years ago, incorporate new features of added safety, or corrective safety features pertaining to generally low cost items such as guard-rails and sign supports, based on accident experience and most recently developed techniques of design, would defeat the ultimate completion of a System designed to optimum safety. To bar the use of Interstate funds for such purposes is not believed to be the intent of the law. Furthermore it would be an anomalous situation to preclude certain portions of the System from having the latest life-saving and damage-minimizing standards while other segments of later construction may incorporate such features. Such a course would not be consistent with the concept of an integrated System built "in manner conducive to safety."

The Bureau of Public Roads accident prevention program of Federal-aid highway improvements at specific locations which have been identified as hazardous because of a high-accident experience or because of engineering judgment has been in effect for several years. This program for highway safety improvement projects is set forth in several directives, including Policy and Procedure Memorandum 21-16. This memorandum, as modified on January 18, 1966, provides for use of Interstate funds for safety improvement projects on the Interstate System to correct features found hazardous to operating traffic. More recently, Instructional Memorandum 21-11-67, dated May 19, 1967, and a supplement thereto dated June 29, 1967, have been issued on the subject.

Such safety improvement work is being carried out within the limitations of section 109(b) of Title 23, which prescribes that the geometric and construction standards for each Interstate construction project shall be adequate for the type and volumes of traffic anticipated for the 20-year period commencing on the date of approval of the project.

By reason of the foregoing, the incorporation of additional or correctional safety features to eliminate hazards on segments of the Interstate System is considered as qualifying under the provisions of existing law and current policies and procedures governing the expenditure of Interstate funds.

DOWELL H. ANDERS,

Interim Chief Counsel, Federal Highway Administration.

Mr. CLEVELAND. Mr. Chairman, I yield to the gentleman from Florida.

Mr. CRAMER. I want to welcome Mr. Bridwell and Mr. Turner and Dr. Haddon before the committee, and I appreciate their testimony. Of course we have been hearing this matter of safety now for a number of weeks, as I am sure they are aware. I am particularly interested in the comment already referred to by the chairman and others, in Mr. Turner's statement relating to alcoholism.

I have in hand the very fine letter, which I appreciate, from Dr. Haddon, dated June 29, in which he said:

I have been intending to drop you a note since last fall to congratulate you on your authorship of section 204 of the Highway Safety Act, providing for a thorough study of the relationship between the consumption of alcohol and its effect on highway safety and drivers. Its provisions are extremely important in my opinion. The results should help call public attention to the national situation.

And then you, Dr. Haddon, indicate that the July 1 date set out in the 1966 Safety Act, Highway Safety Act, in section 204—you are not able to conform to that specific date—is that correct? But there will be a report?

Dr. HADDON. That is correct. We will be several weeks late.

Mr. CRAMER. We can except it sometime in the month of July or early August?

Dr. HADDON. I think July would be optimistic, but we are hoping for August.

Mr. CRAMER. And that is pursuant to section 204 requirements. And I was interested in Mr. Turner's suggestion, which accords with the evidence we had before us at the time we were considering the Safety Act; and that was that a majority of accidents had some relationship to alcoholism, which he repeats in his statement.

Therefore, it was my belief that if we dealt with highway safety and did not deal with alcoholism, we were not dealing with 50 percent of the problem. Is that your analysis, too?

Dr. HADDON. That is completely our analysis.

Mr. CRAMER. Now I understand further, consistent with your belief in the need for alcoholism research, you made a presentation to the Appropriations Committee.

Dr. HADDON. That is correct.

Mr. CRAMER. Indicating—that is, Mr. Bridwell did—indicating on page 607 of those hearings of the Appropriations Subcommittee on Department of Transportation Appropriations, that \$1.5 million was needed for alcohol safety research. That is the second phase of the program. Right?

Dr. HADDON. That is correct.

Mr. CRAMER. Research on the problem as well as the study as to what the problem is.

Dr. HADDON. Yes.

Mr. CRAMER. And you outline certain aspects of it, which I will not take the time to read at this time, but I would like to place it in the record following my interrogation as to what is being considered in the way of research.

Mr. McCARTHY. Without objection, so ordered.

Mr. CRAMER. I understand that the Committee on Appropriations, and sustained by the House, cut the total appropriation for highway safety from \$100 million to \$20 million for 1968; is that correct?

Dr. HADDON. That is correct.

Mr. BRIDWELL. Mr. Cramer, the additional 5 percent reduction—

Mr. CRAMER. And there was a 5 percent across-the-board reduction.

Mr. BRIDWELL. Yes, sir.

Mr. CRAMER. A reduction which cuts off another \$1 million and leaves you with \$19 million, is that correct?

Mr. BRIDWELL. That is correct.

Mr. CRAMER. As compared to the \$100 million authorized; is that correct?

Mr. BRIDWELL. That is correct.

Mr. CRAMER. My first question is—

Mr. BRIDWELL. Excuse me, if I may, Mr. Cramer, there is one other additional point, too: that, as you are aware, the \$100 million made available through the authorization, starting with this committee, is contract authority, and the Appropriations Committee wrote in an additional provision, section 401, which would have the effect of limiting obligations to the amount of the appropriations.

Mr. CRAMER. That is the second point I wanted to get into and I will develop that.

Mr. BRIDWELL. Excuse me. I am sorry.

Mr. CRAMER. You are correct, and I think that is something we should inquire into, and I am going to get into that in just a minute.

On the question of money: First, is that going to affect the alcohol research, the \$1.5 million you are requesting?

Dr. HADDON. I believe we would have to cut back the amount that we intended to spend.

Mr. CRAMER. By how much? You wanted \$1.5 million. How much do you think it will be cut, assuming the Senate sustains the House position?

Dr. HADDON. I might note first that the reduction from \$100 million to \$20 million does not involve the research moneys, that these are under another cut, which was also passed by the House.

Mr. CRAMER. What cut was that, how much?

Dr. HADDON. This was a cut in our research moneys to carry out the purposes of both acts.

Mr. CRAMER. How much did you ask for and how much was allowed?

Dr. HADDON. We asked for approximately \$31 million to cover several things, including a relatively small percentage for the driver register. We are getting about \$21 million, reduction of about a third.

Mr. BRIDWELL. In the specific item of research, Mr. Cramer, the committee by its report language indicated that it wanted to reduce research funds by what we requested, a little under \$22 million. So the report language would limit the total research effort for both the Highway Safety Act and the Traffic Safety Act to \$15 million.

Mr. CRAMER. All right; \$15 million is for both, is that correct?

Mr. BRIDWELL. Yes, sir. That would apply to all of the research to carry out the provisions of the Highway Safety Act as well as the other act dealing with motor vehicle standards.

Mr. CRAMER. I see. Now, a statement on page 12, "In so doing, however, we must always keep at the forefront of our emphasis these items which produce the largest measure of benefit for the effort and dollars which are available to us." The dollars available are going to be a little less than one-fifth of those authorized, so far as the safety program is concerned, not talking about construction; right?

Mr. BRIDWELL. Yes, sir. Actually, it is even greater than that, Mr. Cramer, because the authorization carries over 1967 funds, whereas the section 401 limits a total authorization of almost \$165 million, limits it to \$19 million.

Mr. CRAMER. Therefore you cannot use the carryover of unexpended appropriations?

Mr. BRIDWELL. Unobligated authorizations, yes, sir.

Mr. CRAMER. Right. My own comment is, and you do not necessarily have to comment on it unless you wish to do so, is that we have a highway beauty program, also, for which the administration is asking for full authorization, \$160 million in 1968, \$220 million in 1969. In view of the cut of some four-fifths of the safety money, it would seem to me the chances of funding that are rather bleak; it being my view that certainly safety has a higher priority than beauty.

Mr. BRIDWELL. The Appropriations Committee, as I expect you are aware, Mr. Cramer, also cut the beauty money down to \$1.2 million.

Mr. CRAMER. That is for administration.

Mr. BRIDWELL. Yes, sir.

Mr. CRAMER. Not for the funding of the program itself.

Mr. BRIDWELL. No, sir.

Mr. CRAMER. There is no money for funding itself?

Mr. BRIDWELL. None.

Mr. CRAMER. Right. Congress will have to act on an authorization to provide that at some later date if it is going to be provided; is that correct?

Mr. BRIDWELL. That is correct, sir.

Mr. CRAMER. The second question relating to money is, the administration sent up a request that both beauty and safety be paid out of a separate trust fund.

Mr. BRIDWELL. Yes, sir.

Mr. CRAMER. Earmarking for beauty and safety, 1 percentage point of the automobile excise tax which is now 7 percent of the sales price, but scheduled to drop to 2 percent March 31, 1968. Is that correct, sir?

Mr. BRIDWELL. That is correct.

Mr. CRAMER. Now, it is my view that in view of money problems otherwise, and in view of the basic policy questions, the Ways and Means Committee probably is not going to act favorably on that. They have not shown any inclination to even hold hearings as yet; is that not correct?

Mr. BRIDWELL. They have not commanded me to appear to present the case.

Mr. CRAMER. Do not hold your breath.

In any event, the money that is going to be available for safety and beauty will have to come out of the general fund?

Mr. BRIDWELL. Yes, sir; from existing tax revenues regardless of where they are placed, in which particular pot.

Mr. CRAMER. Right. Now, of course, that brings us into the basic general problem of: Where is the money coming from for any of these things, in view of the President's announced intention to ask for 10 percent minimum surtax charge. Secondly, the chairman of Ways and Means has stated that it looks like the deficit next year is going to be about \$29 billion unless we do increase taxes. I think the whole question of beautification, to bring it into focus, must be considered in view of all of our financial obligations, including the war in South Vietnam.

This of course is presenting a most serious problem, as it relates to safety which should have high priority.

Mr. BRIDWELL. There is no question about the high priority of safety, Mr. Cramer. I am sure the Congress in the course of enacting substantive legislation as well as appropriation bills, will have its overall judgment on priorities, and of course the administration exercises that same kind of establishment of priorities by the legislation and the budget requests it sends to the Congress.

Mr. CRAMER. Now, the department has already apportioned to the States, as I understand it, 75 percent of funds authorized for fiscal 1967 and 1968 under the safety program; right?

Mr. BRIDWELL. Yes, sir.

Mr. CRAMER. Under the apportionment authority which you just referred to, which the Appropriations Committee saw fit to attempt to repeal in effect—

Mr. BRIDWELL. It certainly has that effect, although there is no change in the statute.

Mr. CRAMER. Florida was apportioned \$1.4 million for 1967, \$2.1 million for 1968. I assume they are in the process of getting ready to spend that money. What happens to Florida? As a matter of fact,

Florida passed, did it not, and frankly I am the one who helped encourage the State legislature to pass, what I consider to be one of the most farsighted safety programs anywhere in the United States of America. As a matter of fact, my former assistant and now State senator and minority leader of the senate was chairman of the senate committee and went all the way to provide a safety program for Florida.

Florida is now committed by legislation to that program. But now you see the Federal Government is reneging on its money, so what is Florida going to do? They did what we asked them to do. They passed the legislation. But now we are going to take the money out from under them.

Mr. BRIDWELL. Mr. Chairman, you are quite correct in your statement about what the State of Florida has done. It has passed enacting legislation, comprehensive in nature, clearly giving the executive branch of the Florida Government the authority to carry out a comprehensive safety program, to fully comply with the 13 standards announced by Secretary Boyd.

So without any question the State of Florida is to be complimented on the enthusiasm with which it has tackled this program.

Mr. CRAMER. It also provided the money to pay its share in anticipation of Federal matching funds to go along with it.

Mr. BRIDWELL. Yes, sir; and I hope that as the appropriation measure winds its way through Congress that the Congress will see fit to change its mind on the relative priority of dollars for this program.

Mr. CRAMER. Assuming it did, I doubt if it is going to give you the full amount or the amount apportioned to the State. That is just my comment.

So we have a pretty serious problem in this committee, the authorizing committee. The Congress gave the Secretary authority to apportion funds to the States, and the Secretary did apportion funds, upon which the States rely for the future year, upon the basis of which it passed its legislation, upon the basis of which it funds its share. And then we yank the rug out from under them by reducing the Federal funds available and, in effect, repealing the apportionment authority written into the basic act; is that not the effect of it?

Mr. BRIDWELL. I believe that is what the action of the House has done.

Mr. CRAMER. Here is what is of concern to me. I am one who wants to reduce spending as much as anybody else. I think there are other programs that could be reduced that have less priority. If the Committee on Appropriations can prevent the implementation of contract authority by denying the use of appropriated funds for the making of obligations with respect to the highway safety program, which it has done so far, it would appear to me that the Federal-aid highway construction program can be subjected to the same treatment.

Mr. BRIDWELL. I would assume so, Mr. Cramer, because, as you are aware, the Highway Safety Act of 1966 specifically states that it uses the same statutory language of chapter 1 of title 23, which contains all the provisions relating to apportionment and contract authority. So it is precisely the same statutory language involved in both the safety program and the Federal-aid construction program.

The presumption would have to be if they can limit contract authority under identical statutory language for one program, they certainly can do it for another; yes, sir.

Mr. CRAMER. So we are getting into the realm of affecting the continuity of the program, and without continuity the job cannot be done, with the long lagtime involved, either in safety or construction; is that true?

Mr. BRIDWELL. That is my opinion.

Mr. CRAMER. Now you have \$19 million. How are you going to apportion this \$19 million, having already advised the States as to what you thought their apportionment was going to be? Is it going to be on a first-come, first-served basis, or will you spread the reduction proportionately among the States?

Mr. BRIDWELL. It will have to be spread proportionately among the States, at the same ratio as the apportionments were made.

Mr. CRAMER. If that is the case——

Mr. CLEVELAND. Would the gentleman yield?

Mr. CRAMER. Instead of getting \$2.1 million, Florida might get a half million or less?

Mr. BRIDWELL. Mr. Cramer, I would be glad to supply for the record the amount that each State would receive on its proportionate ratio of the \$19 million.

(The material referred to follows:)

<i>State</i>	<i>Limiting amount available</i>	<i>State</i>	<i>Limiting amount available</i>
Alabama -----	\$371, 564	Nevada -----	\$48, 241
Alaska -----	24, 661	New Hampshire -----	62, 151
Arizona -----	162, 178	New Jersey -----	601, 199
Arkansas -----	203, 723	New Mexico -----	114, 032
California -----	1, 806, 999	New York -----	1, 590, 454
Colorado -----	192, 153	North Carolina -----	515, 194
Connecticut -----	247, 444	North Dakota -----	64, 351
Delaware -----	46, 976	Ohio -----	970, 877
Florida -----	580, 695	Oklahoma -----	249, 519
Georgia -----	452, 309	Oregon -----	204, 387
Hawaii -----	60, 327	Pennsylvania -----	1, 060, 592
Idaho -----	72, 127	Rhode Island -----	75, 516
Illinois -----	995, 976	South Carolina -----	266, 816
Indiana -----	502, 348	South Dakota -----	73, 187
Iowa -----	277, 790	Tennessee -----	389, 054
Kansas -----	227, 170	Texas -----	1, 065, 056
Kentucky -----	313, 678	Utah -----	99, 549
Louisiana -----	361, 450	Vermont -----	41, 852
Maine -----	91, 913	Virginia -----	420, 509
Maryland -----	327, 717	Washington -----	293, 486
Massachusetts -----	476, 331	West Virginia -----	178, 316
Michigan -----	821, 007	Wisconsin -----	400, 979
Minnesota -----	346, 015	Wyoming -----	36, 385
Mississippi -----	236, 397	District of Columbia -----	71, 607
Missouri -----	455, 227	Puerto Rico -----	232, 662
Montana -----	77, 164		
Nebraska -----	142, 690	Total -----	19, 000, 000

Mr. CLEVELAND. Would the gentleman yield?

Mr. CRAMER. Yes.

Mr. CLEVELAND. I want to be sure I correctly understand the witness. Are you saying that, assuming only \$20 million is available, that you are going to apportion that \$20 million among the States on a pro

rata basis even if some of the States do not even have an ongoing program to be supported?

Mr. BRIDWELL. No, not quite, sir. It is \$19 million, when you take out the \$1 million for administrative costs. Then what we would do would be to say to each State that you can obligate up to your proportionate share of \$19 million.

Now, later on in the year, if some State did not exercise its use of that authority, then this would be turned over to a State which did want to exercise that authority.

Mr. BLATNIK. Our time is running out, and I would like to have the staff ask questions. We shall also go further into the area of inquiry that the gentleman from Florida raised on the floor yesterday, suggested by a member of the Subcommittee on Appropriations, Mr. McFall of California.

We do get information and inform ourselves and the Members of the House of how the safety funds will be utilized, so we shall have more opportunity to get into that.

Mr. CRAMER. I am making my questions as brief as possible, maybe 3 minutes longer.

Mr. BLATNIK. All right.

Mr. CRAMER. We have been holding hearings now for about 4 or 5 weeks, and I did not think 15 minutes was too long to ask questions.

Mr. BRIDWELL. Mr. Chairman, may I ask your indulgence in excusing myself for a moment? I have a call that it is necessary for me to answer.

Mr. MCCARTHY. Yes.

Mr. CRAMER. Then if Mr. Turner is able to answer, I will try to get through with the other two or three questions.

Money was mentioned again. The gentleman from New Hampshire suggested one possible problem. Isn't the basic problem, as it relates to building in these safety features in existing highways, where the money is going to come from?

Mr. TURNER. It will have to come from some other work that would otherwise—funds that would otherwise go for initial construction. We now have to divert it from initial construction and further improvement of mileage roads to this purpose.

Mr. CRAMER. In your view there is no question but what you have authority to permit a State to go back and redo highway construction to accomplish, hopefully, maximum safety, using presently authorized and allocated funds, which ordinarily would be used for future construction; is that correct?

Mr. TURNER. That is our opinion; yes, sir.

Mr. CRAMER. So any money spent now, under present law, for going back and doing this safety rebuilding on even the Interstate System, some of which the evidence shows has built-in death traps, that money is going to have to come out of what otherwise would be new construction money; right?

Mr. TURNER. That is correct.

Mr. CRAMER. Most of the States, I would assume, are going to be reluctant to go back and spend what they could otherwise spend for new construction for redoing old construction; are they not?

Mr. TURNER. That is right. It becomes a tradeoff, of whether you expend the amount of funds that you have for correcting hazards on

existing construction, or whether you leave those hazards alone and go on and build new mileage.

Mr. CRAMER. I understand you are making a survey now as to what the cost will be to bring Federal-aid highways up to your new prescribed safety standards; is that correct?

Mr. TURNER. Yes.

Mr. CRAMER. Any estimate yet as to what that figure might be?

Mr. TURNER. It is substantial, and I do not know the final figure; but that is fairly substantial. The inventory is not completed.

Mr. CRAMER. What do you mean by substantial?

Mr. TURNER. It is more than \$1 billion, at least.

Mr. CRAMER. So if we go back to existing highways and build in safety features, we will have \$1 billion less of new construction. How much of that relates to the Interstate?

Mr. TURNER. Relatively small amount of that. We are making at the present time a detailed study of the cost for corrections on the Interstate System, that is to be included as a separate item in the cost estimate that we present to you next January.

We are not far enough along on that—

Mr. CRAMER. Are the States mandatorily going to have to do this?

Mr. TURNER. Under present instructions, policies that we have set, they would have to, yes.

Mr. CRAMER. Have you given consideration to any possible alternative methods of financing specific safety features in existing highways and future construction? I want it understood that there is no money in the safety bill for building safety features into the highways; is that not right?

Mr. TURNER. That is correct.

Mr. CRAMER. Any money for that has to come out of regular Federal-aid construction money, right?

Mr. TURNER. Correct.

Mr. CRAMER. Is any consideration being given or has any been given, to providing some type of program for that specific purpose, as was done for highway beautification?

Mr. TURNER. There is considerable discussion going on within our agencies with respect to the possibility of a financing proposal for this specific purpose. We do not have anything yet developed or ready for presentation.

Mr. CRAMER. It seems to me that with the States obviously wanting to spend money largely on new construction, with the Interstate System as far behind financially as it is, the probable effect on the interstate highway program is going to be a further stretchout of construction, in time, to completion.

Mr. TURNER. That is right. This will increase the total cost of the Interstate System to 1972.

Mr. CRAMER. There may be some reluctance on the part of the States to comply with the full thrust of your safety regulations, knowing they will have to pay the cost out of construction money. They are likely to cut some corners, if they have to pay the cost out of construction funds. They are going to take as little of that as possible.

Mr. TURNER. I think that is true in connection with the ABC. But on the Interstate, certainly they and we are anticipating that there will

be the additional funding made available to cover this particular purpose.

Mr. CRAMER. So I think basically your problem is money, right?

Mr. TURNER. We think so.

Mr. CRAMER. Thank you, Mr. Chairman.

Mr. MCCARTHY. Mr. May.

Mr. W. MAY. Mr. Chairman, I think we should clarify one very important matter. This subcommittee is in the process of conducting an inquiry into highway safety design and efficiency.

This is going to be a continuing inquiry. We are going to analyze design features as we progress. These particular hearings have dealt with roadside hazard aspects.

Mr. CRAMER. Mr. Chairman, I am sorry, I have one more question. May I just briefly—I do not want to interrupt counsel. But we were told by the Deputy Director of the Office of Highway Safety within your Bureau, Mr. Turner, that he had lost, as I recall, 32 of his 53 personnel, including many that had the job of administering safety in the highway construction program. Is that a correct statement?

Mr. TURNER. There has been—

Mr. CRAMER. Due to reorganization, with some of them going to Dr. Haddon and other people.

Mr. TURNER. That is right. Our Office of Highway Safety was used to a large extent as a nucleus or recruiting area for a number of people who were initially transferred to the Highway Safety Bureau.

Mr. CRAMER. So they recruited employees out of your operational bureau to prepare the safety standards, the Highway Safety Bureau was obligated to promulgate. So how are you going to administer all these safety requirements if you do not have the personnel?

You are reduced from 53 to 21, was it not, something like that?

Mr. TURNER. There was some transfers. I do not believe it is to the extent you have indicated. We have since replaced some of those and are in the process of restaffing that former Office of Highway Safety under the new name of Office of Traffic Operations.

We have at the present time a request for 51 positions, 41 of which I believe we have funding for. And we do have about 30 on board at the present time.

Mr. CRAMER. You are going to have all of these new responsibilities relating to safety in administering the highway program, going back and redoing all existing highways in view of these safety requirements, building in these safety features to new highway construction; and you are going to have fewer personnel than you had without these requirements, prior to the Safety Act. Even if you get the full allocation of personnel, how many did you say, 41?

Mr. TURNER. 51.

Mr. CRAMER. 51?

Mr. TURNER. We have 41 funded.

Mr. CRAMER. Forty-one funded, that is what I am talking about. How are you going to do the job?

This is a major, tremendous, important job. How are you going to do it? You end up with 12 less people than you had before in the organization?

Mr. TURNER. We will do the best we can. That is all we can do.

Mr. CRAMER. You cannot do the job; let's be honest about it.

Mr. TURNER. We have to divert people from other activities, just as we would have to divert funds from other activities to permit us to do the job.

Mr. CRAMER. Well, I made the suggestion on the floor of the House that I felt this reorganization, if not properly carried out, would have the effect of downgrading and taking away personnel from the Bureau of Public Roads operational agency, and transplanting them to these planning groups in the standards groups, which is exactly what has happened. I cannot see how you are going to administer the Highway Safety Act of 1966, or the new standards established under the act, with a cutback of 12 people out of the 53 that you had before the standards were in effect.

If you are going to do it, it would seem to me you would need an increase in personnel, and in addition to that, the people you are getting are not experienced people. What happens to all your know-how? Where did your experience go?

Mr. TURNER. It obviously went with the people.

Mr. CRAMER. Yes. Well, that is all.

Mr. McCARTHY. Mr. May.

Mr. W. MAY. Mr. Chairman, I was emphasizing the fact that these particular hearings deal with roadside hazards wherever they exist, not simply on the Interstate System.

We did analyze some new Interstate System projects simply so we would understand what the state of the art was recently.

The Interstate projects are supposed to represent the latest in the thinking.

So, Mr. Turner, on page 12 of your statement when you mentioned, talking about very small percentage, you were referring to fatalities on the existing Interstate System; is that true?

Mr. TURNER. That is correct, and I believe I indicated that in the first page of my statement, the preamble did indicate that I was referring, in these remarks, to the Interstate System, but we are aware that you are considering the other systems as well.

And we have followed suit with you, and we are applying all the findings here, and I have related the things I have described to the ABC System as well.

Mr. W. MAY. Yes. I think it is important to recognize that when we talk roadside hazard, we are not talking of a minor phase of highway design. We have had various analyses made during the hearings. We have had testimony indicating that some 60 percent of freeway fatalities are the run-of-the-road type of accident.

The truth is that nobody in the country knows how many people were injured or killed last year because of roadside hazards. Nobody knows.

The indications are that many thousands were injured and killed in such accidents, maybe as low as 10,000 or 12,000, maybe as high as 18,000 or 20,000.

Nobody knows. As a matter of fact, throughout the last 8 years of this subcommittee's experience the subcommittee has been concerned about the communication problem. I think the record should reflect some of these items.

According to the General Services Administration, 835 directives were issued by the Bureau or revised by the Bureau during 1965. Does that sound plausible, Mr. Turner?

Mr. TURNER. Probably is low.

Mr. W. MAY. And that included 607 circular memos and an unknown number of other temporary memorandums containing directive type information or instructions.

Mr. TURNER. Mr. May, a great many of those are really revisions and reissues of the old memorandums, though, and should not be construed that the picture is as bad as that would imply.

Mr. W. MAY. When they come into the office, somebody has to take a look at them, because they may be very important or they may be a little less important.

Mr. TURNER. That is right. And it is so indicated, and those that are merely rephrasings, new issues, new dates, things of that nature, we indicate on the cover sheet the items that have been revised.

Mr. W. MAY. Yes. I think it is apparent from the evidence that these memoranda and directives are not always completely effective. Back in December 1965, December 22, you, Mr. Turner, sent out a circular memorandum to your regional and division engineers, setting forth the latest thinking relative to design and construction concerning sign foundations, overhead signs, information signs, exit signs, unnecessary signs, signs on guardrail installations, lighting standards, roadside design, and, toward the latter part of your memo, you said, "I urge each of you to discuss these safety considerations with the highway department for incorporating not only the designs being prepared for future contracts, but wherever feasible on existing construction contracts."

Again, August 1, 1966, you sent out another instructional memorandum relating to safety provisions for roadside features and appurtenances, and again you mentioned clear roadside cross sections and elimination of nonessential supports and appurtenances, placement of these supports and appurtenances, design of supports and protection for out-of-control vehicles, provision for protective guardrail. And again you said, "On all new work every P.S. & E. shall be carefully checked prior to approval of the four areas of concern identified in paragraphs A, B, C, and D above. Current projects which are not completed shall be similarly examined and field changes made to conform wherever practical."

And yet when Mr. Prisk and Mr. Constandy went out and analyzed projects opened after December of 1965 and August of 1966, they found many, many features that could have been corrected during construction.

Speaking of communication, we are faced with this fact. In 1960 the Red Book [indicating]—this is the report of the Special Freeway Study and Analysis Committee to the executive committee of AASHO, published February 1960.

This came about in a fashion not too dissimilar to the new Yellow Book.

Mr. TURNER. It is the other way around. The "Yellow Book" came into being as a revision of the "Red Book" procedure.

Mr. W. MAY. Yes. The evidence would suggest that the "Red Book" was not followed to a sufficient extent over the last few years.

There was a black book in 1961, and that was "Freeway Operations" prepared by the Institute of Traffic Engineers, published in 1961, and was available to the highway builder.

Mr. McCARTHY. What will be the color of the new manual, green? [Laughter.]

Maybe it is the color.

Mr. W. MAY. Well, there was a dark brown book, "Traffic Control Roadway Elements, Their Relationship to Highway Safety," prepared by the Automotive Safety Foundation in conjunction with the Bureau of Public Roads, published in 1963.

There was a light brown book, that is the "Highway Research Bulletin 81, Highway Guardrail," published in 1964.

The evidence shows that these publications were not followed to a sufficient extent, and now we do have the "Yellow Book."

Mr. Turner, are the States allowed to open to traffic a Federal-aid project without Bureau approval?

Mr. TURNER. Yes. Are you going to start on a new line of questioning? I would like to respond to those colored books you were talking about.

Mr. W. MAY. Do you have some comments on the colored books?

Mr. TURNER. I think the colored books indicate that we are well aware of the things that you are talking about, and have been working on them. But the problem of communications that you refer to is the nub of the problem, and it is to that that I was trying to allude in my statement when I said that progress, good intentions, no matter how good, are difficult to get applied.

This I think is the reason why I think you find these conditions still existing.

Mr. W. MAY. I do not think there is any question. We agree with you. They have been sent out, all kinds of directives, bulletins, pamphlets, and publications, but they have not been followed.

Mr. TURNER. How do we get them followed?

Mr. McCARTHY. Could I ask something on that? Could we pursue this particular point of communications? This used to be my line of work. I was with a big corporation, 78 plants all over the United States, and one of my jobs was to get the word down to the troops, because we found frequently it got garbled. It can be done with the modern techniques of communication.

Have you given some thought to this specific problem, and to develop some improved methods of communication?

Mr. TURNER. A great deal, Mr. McCarthy; and I think we have had some success. You must put all of this in the light, however, of the relationship that the Bureau and the States have in this program.

The responsibility initially for getting these things done rests with the State, and the State has money of its own in connection with these, and they may evaluate the proposals and suggestions there. And, as I indicated earlier, decide that something else than that might be the more desirable thing to do. And, as a result, they might knowingly disregard some of the suggestions in those varicolored books there, using their judgment to do so.

Now this explains a whole lot of why some of these things were not done.

Mr. McCARTHY. You mean if the Federal Government puts in 90 percent of the money?

Mr. TURNER. You are talking about the Interstate only. I am referring also to the A-B-C system, in which they put up 50 percent of the money.

Mr. McCARTHY. Let's just for this specific point stay with Interstate where the Federal Government puts up 90 percent of the funds, and the States can still, if they wish, ignore your recommendations?

Mr. TURNER. No; they cannot ignore them if we choose to disagree with their judgment. But we have to give respect to their views on these matters, too. They may be right in some of their judgments, just the same as we think we are.

I think we have to work jointly in achieving this objective. We have to recognize that they have some responsibility and some integrity in the program, just as we do.

We do not have the authority nor the right, and I am not sure that we should have it, to impose our will on the States regardless of their feelings in the matter.

The program does not operate that way.

Mr. McCARTHY. Mr. May.

Mr. W. MAY. In the final analysis you are faced with a problem where the Bureau differs with the State as to hazardousness of a particular item. Whose judgment must prevail?

Mr. TURNER. If they get the Federal-aid money, ours does.

Mr. W. MAY. If we reach a situation where in the Bureau's judgment a project is not safe enough to be opened to traffic, if a State desires to open it, are they allowed to open it?

Mr. TURNER. I am sure in a situation like that we could convey our feelings to the State and ask that they not open it. And I am quite sure the State would comply with that request. Ordinarily we do not enter into the question about opening dates of projects.

Mr. W. MAY. Mr. Chairman, may we make those publications that I mentioned exhibits 19-A, B, C, and D, in the order that I mentioned?

Mr. McCARTHY. Without objection, so ordered.

(Publications were marked exhibits 19-A through D and are retained in subcommittee files.)

Mr. W. MAY. We have some representative slides showing deficiencies as they existed on some of these interstate projects analyzed by Mr. Prisk and the staff. I would like to show those. Mr. Bridwell and Mr. Turner, perhaps you can help us in explaining what type of correction the Bureau will anticipate.

There is a guardrail that we have had explained to us. It is on steel supports, no washer. Experts would suggest there should be washers. It is not blocked out. It should be blocked out. No transition was made overlapping the bridge pier, and it is too short.

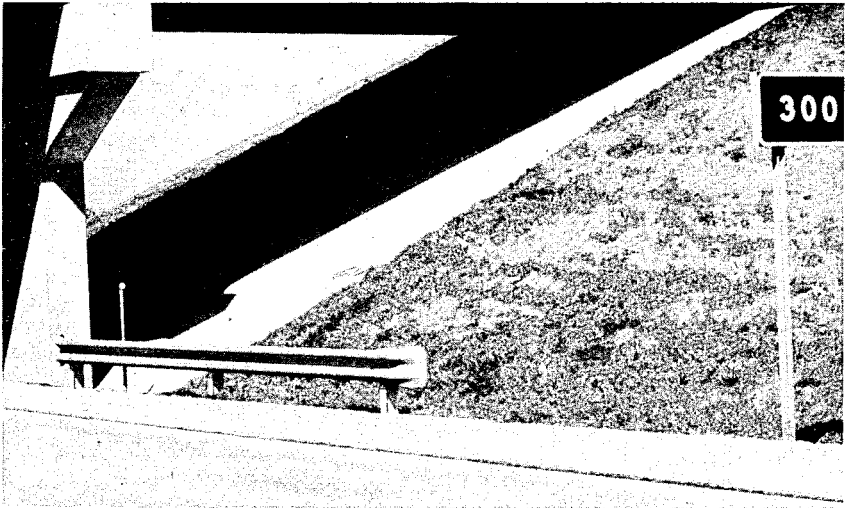
Mr. Turner, is that the type of installation that would be corrected on existing Interstate projects?

Mr. TURNER. Yes.

Mr. W. MAY. And if it calls for extending that rail and overlapping properly, the Bureau would participate 90 to 10?

Mr. TURNER. That is correct, on the Interstate.

Mr. W. MAY. You are concerned that the Bureau has already paid for that installation and you are going to lose some of the work?



Mr. TURNER. That is correct, because this is a different installation from the newer one that we are talking about. We are certainly extending and enlarging on a different standard the design that we originally approved and paid for.

Mr. W. MAY. Mention was made of Highway Research Bulletin 81; did that not make all sorts of recommendations that were not followed here?

Mr. TURNER. That is correct. But it was not a part of the official original standard. It was a research report with recommendations in it.

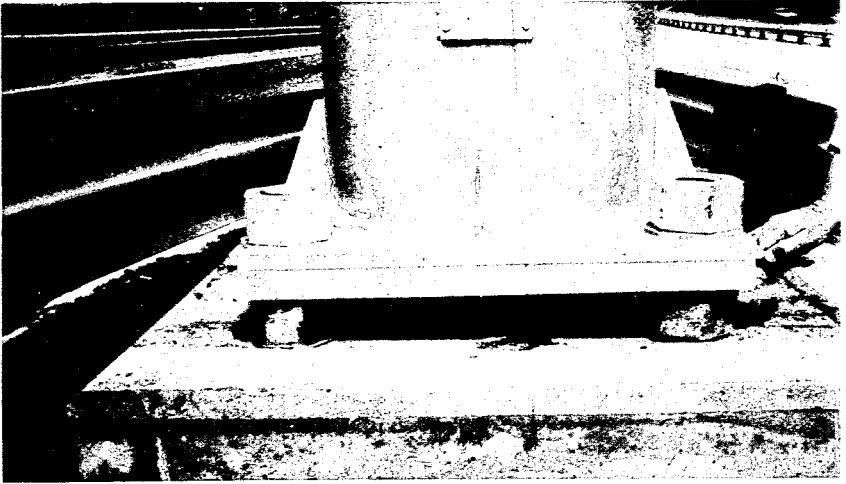
Mr. W. MAY. Yes.

There is a large sign in a gore area and the experts have suggested that this is a hazardous installation, guardrail plus the sign. It is a massive support.



You can see here. That is the type of installation that might now be corrected?

Mr. TURNER. Yes. The correction there would be some sort of impact absorbing device, bumper or some other device in front of that post.



Mr. W. MAY. Suppose the State suggested that we move back down this way and start an overhead bridge sign, and suppose that bridge sign cost \$20,000, would the Bureau participate 90 to 10?

Mr. TURNER. We might if we did decide the bridge sign was really the necessary correction for that place.

Mr. W. MAY. And if that installation we are looking at cost \$8,000 or \$10,000, we might lose the value of that?

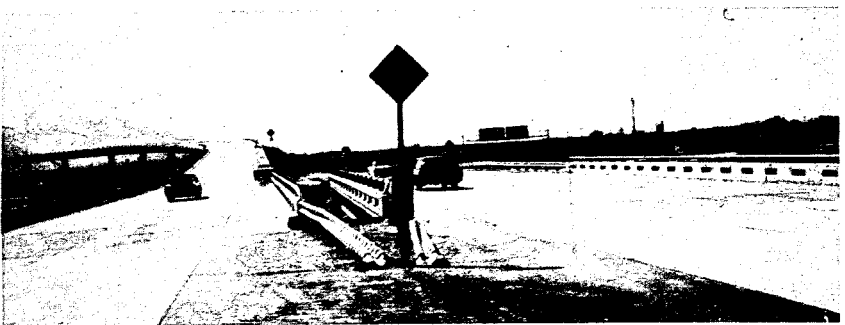
Mr. TURNER. I am sure that much of that material can be salvaged and used in some other location; but I believe in a typical situation of the kind you are looking at here, that we can correct it by using these impact-absorbing devices that I am talking about.

Mr. W. MAY. Have we used any of those impact-absorbing devices?

Mr. TURNER. Only on experimental basis in the laboratory.

Mr. W. MAY. Here is a twin bridge problem. That could probably be paved over, but that might be expensive now. If it is not paved over, it is hard to visualize what the correction might be. Will the Bureau participate in the paving over of that?

Mr. TURNER. I would say we would; yes.



Mr. W. MAY. That green pole we see in the next slide is a steel light pole, steel transformer base. We heard from the Texas people that these can be corrected in some fashion now by lifting the pole up and installing a flexible type base for \$25. The Bureau would certainly participate in that?

Mr. TURNER. Yes.

Mr. W. MAY. And that guardrail end points directly parallel to the shoulder. If it was decided they ought to make other arrangements, will the Bureau participate?

Mr. TURNER. That is the kind of thing we are getting the States to do, and we are willing to participate.



Mr. W. MAY. Again they have installed one, two, three different types of barriers because of this median, because of this construction of the bridge.

Mr. BRIDWELL. They wanted to make sure, Mr. May.

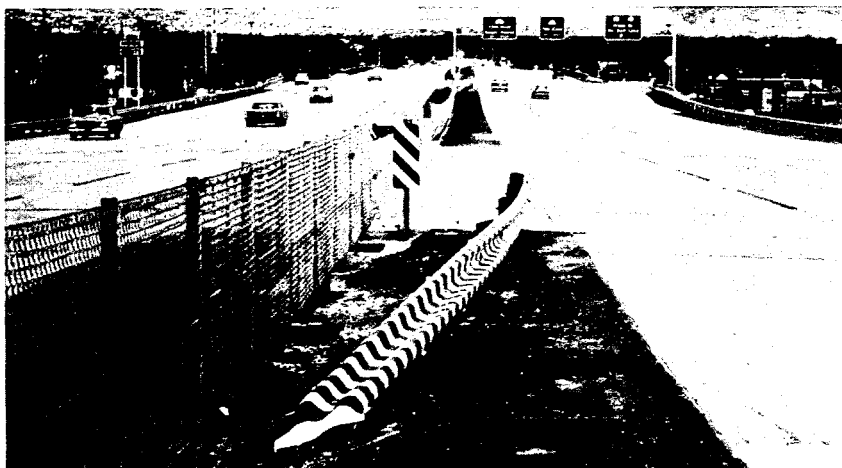
Mr. W. MAY. I am sure. That represents real hazardous location the way it exists.

Perhaps they could level that concrete parapet or median barrier and carry the cable barrier through the structure and remove this small piece of guardrail we see in the right. Again, the Bureau would participate in this?

Mr. TURNER. I would think it should.

Mr. W. MAY. What do you think of my suggested correction?

Mr. TURNER. That would be one I would want to look at.



Mr. W. MAY. This is a typical sign installation right along the shoulder. Again, if that sign were to be moved elsewhere, the Bureau would participate?



Mr. TURNER. Yes. That sign should either be moved back up on the slopes there where it cannot be hit, or it should be moved to some other location. It is not essential that you put that distance to destination sign at exactly those mileposts. It could be 2 miles, 3 miles, or 17 miles; it would make little difference.

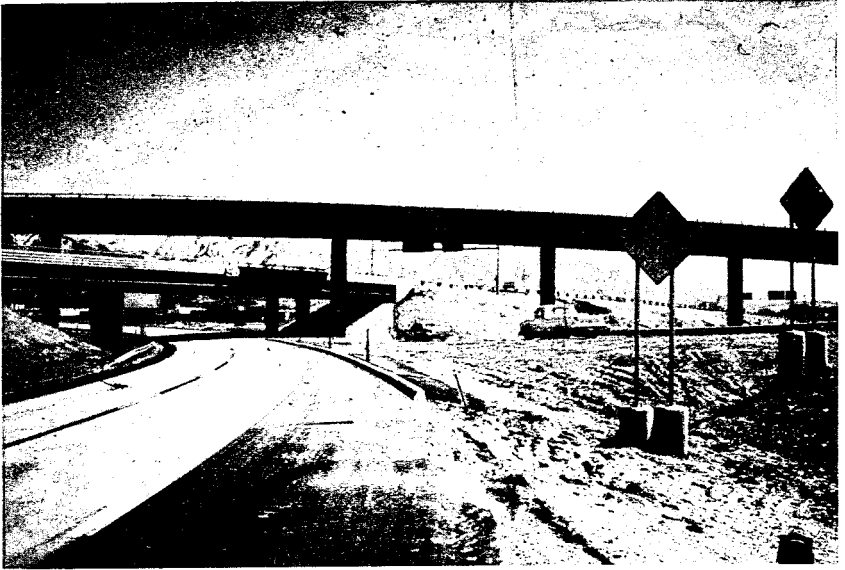
Mr. W. MAY. Yes, sir.

That is a similar type problem.



And I guess another similar type problem. These could be at least placed on breakaway supports.

Mr. TURNER. They should be placed on wooden posts that would break when hit.



Mr. W. MAY. Apparently those guardrail installations were designed to protect the motorist from striking the center pier, and it appears it won't quite do it, but this could be corrected easily with not too much expense.



Mr. TURNER. That is the kind of items that we are promoting in the States. And this is the kind of treatment that in many cases will suffice, and this is why I say the cost of correction on the Interstate System in my opinion will be relatively small in amount.

Mr. W. MAY. One of the real primary reasons why we selected the roadside hazard phase as the first phase of this continuing inquiry was the fact that immediate change could be brought about so it wouldn't be incorporated into new projects, and it would be relatively inexpensive to go back and correct some of the existing projects.

A better transition of the rail could be made to the bridge here.

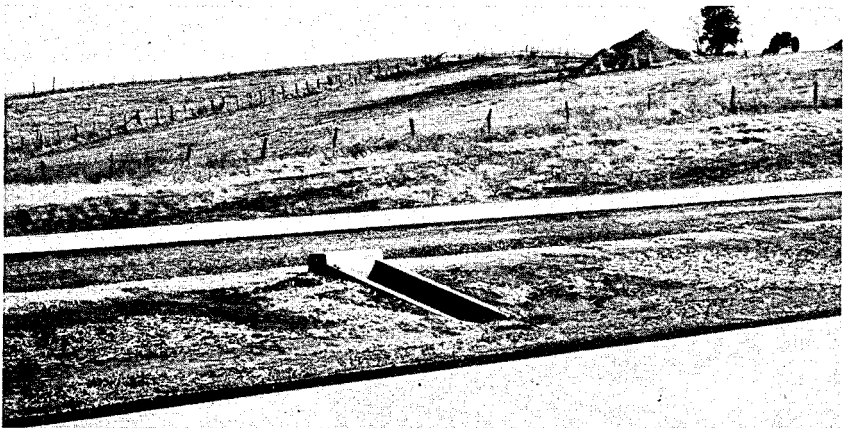


This is a culvert headwall. What could be done with this?

Mr. TURNER. Knock off the headwall and put a grate over the open space there.

Mr. W. MAY. Relatively simple matter to correct?

Mr. TURNER. Take some work and a little bit of material; yes, sir.





Mr. W. MAY. We see quite a bit of this on some of the projects—
isolated rock.

Mr. TURNER. A great many people, though, would advocate that as
being esthetically helpful to the scene.

Mr. W. MAY. They apparently did on this project. But what would
be the Bureau's position?

Mr. TURNER. In a case like that one, nicely laid out, I would leave it
alone.

Mr. W. MAY. Leave it alone?

Mr. TURNER. Yes, sir.

Mr. W. MAY. If the State wanted to do something about it, would
the Bureau participate?

Mr. TURNER. I think I would want to reserve judgment on that and
see what else might be along in the same package.

Mr. W. MAY. We have another group of slides, just a sampling, to
show how important it is when we go back to correct initial mistakes,
that we do it in the proper fashion.

Mr. Constandy, would you help us with these slides?

Mr. CONSTANDY. Yes.

This is the initial installation of guardrail in the gore area. You will
notice the gore is relatively flat and can question the need for guard-



rail. In this situation they have placed the guardrail there at a point between the two legs of the sign, and the sign legs I believe are 8-inch steel beams.

This is the installation that was made initially.



And thereafter there was a program to correct the deficiency. This is at a different location, but the same type of situation, wherein, under a program to bury and lead into the ground the approaching end of the guardrail, you find this type of situation. Here a motorist, striking in that area, probably has the same chance of being seriously injured or killed as he did in the preceding situation.

In other words, the corrective effort here actually did not correct anything. This is, incidentally, under a program of \$800,000 to improve the existing guardrail on the circumferential route that has been open so little time.

This was the older standard used on a project in Utah with speed limit signs mounted as you see, each with two steel pipes embedded in

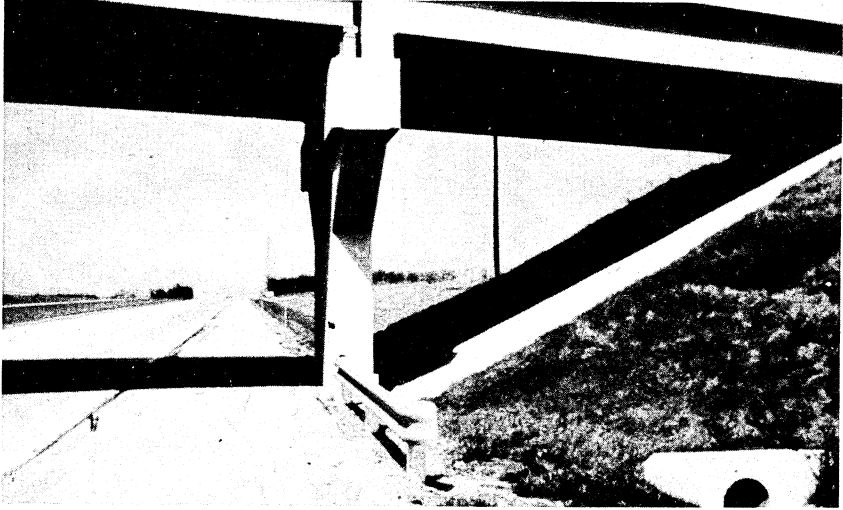


concrete footings. They upgraded the standards on the new project, which is the one we visited.

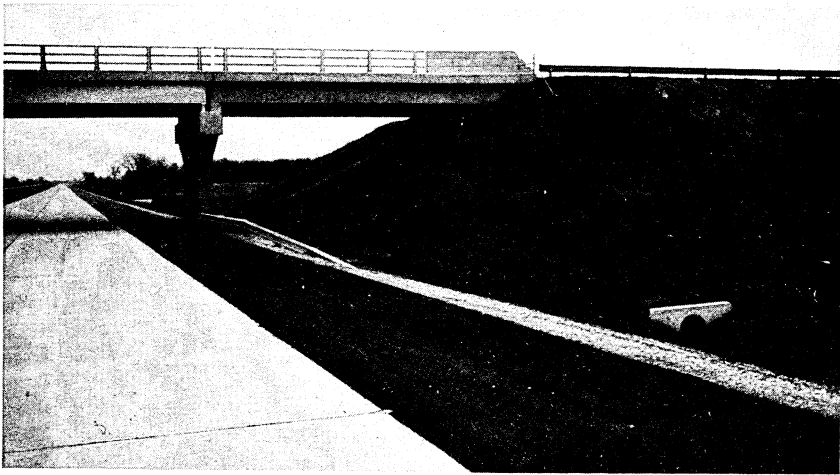
They replaced it with this standard, with the same signs now held up by a thicker steel pole, again mounted in concrete, as you see. This still leaves something to be desired, particularly by the person who hits it.



This is another view of the same piece of guardrail which you saw earlier. It is 25 feet in length, aimed directly at the car, aside from the other deficiencies. It is not blocked out, isn't anchored, certainly is not long enough, has 12-foot spacing on the posts, and leads directly into the pier.

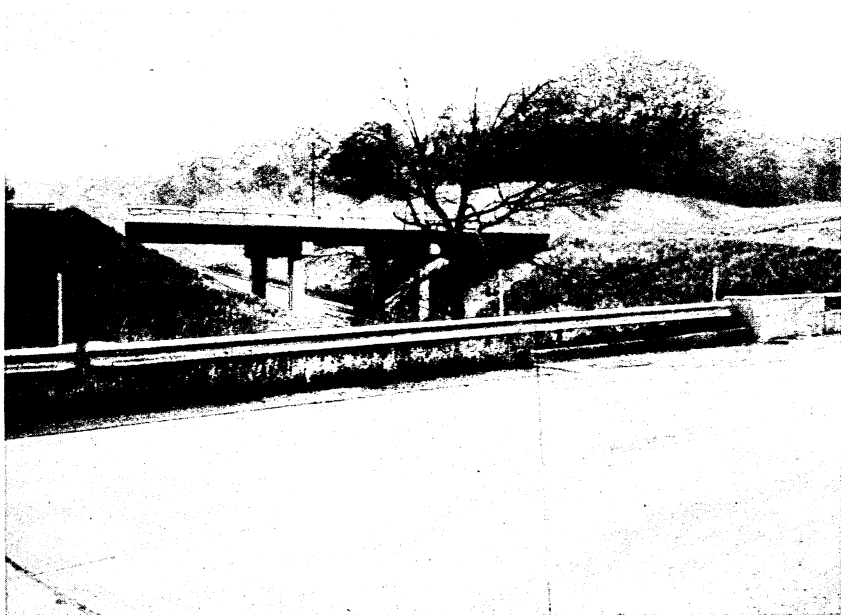


On a newer project we found this situation. The same 25-foot section of guardrail now has an added 25-foot section, which slopes down and is buried into the ground. The other end of the guardrail, however, still ends at and leads into the pier. I question the adequacy of the improved standards here and the expenditure of additional sums of money which doesn't accomplish the purpose.

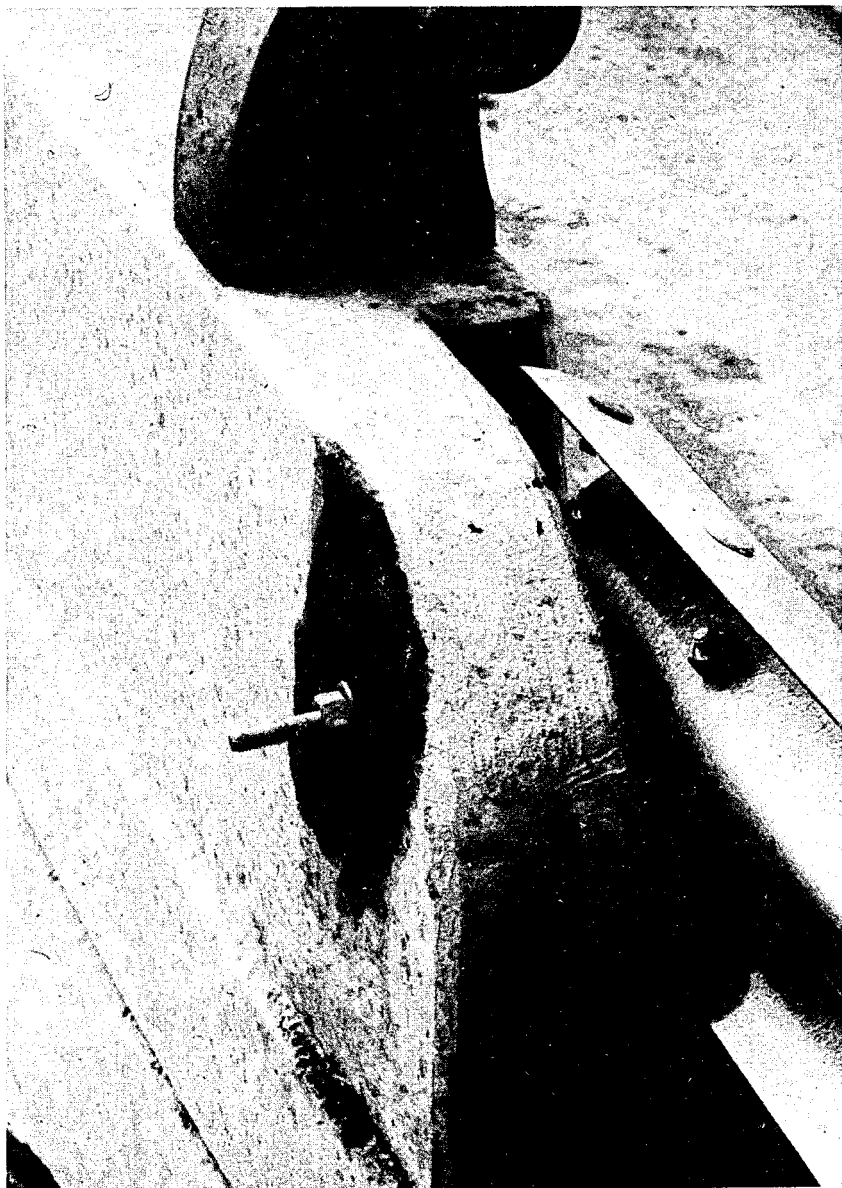


This section, 50-foot section, of guardrail approaches and ends just before the concrete abutment of the bridge. It was installed initially. Thereafter the State highway department concluded this should be a longer approach section for greater protection to the motorist and added a separate 50-foot section without joining them. The car could still impact the end of the new guardrail or if it struck the face of new guardrail, would displace it and cause it to strike the same end of the old one.

I call your attention to that other end of it where it simply goes up to the concrete parapet without any transition to the bridge rail. This is a situation which not only existed on all of the nine projects we visited, but it is commonplace throughout the country. It is perhaps the most typical installation that we saw. No protection in that transition from the guardrail to the bridge parapet.



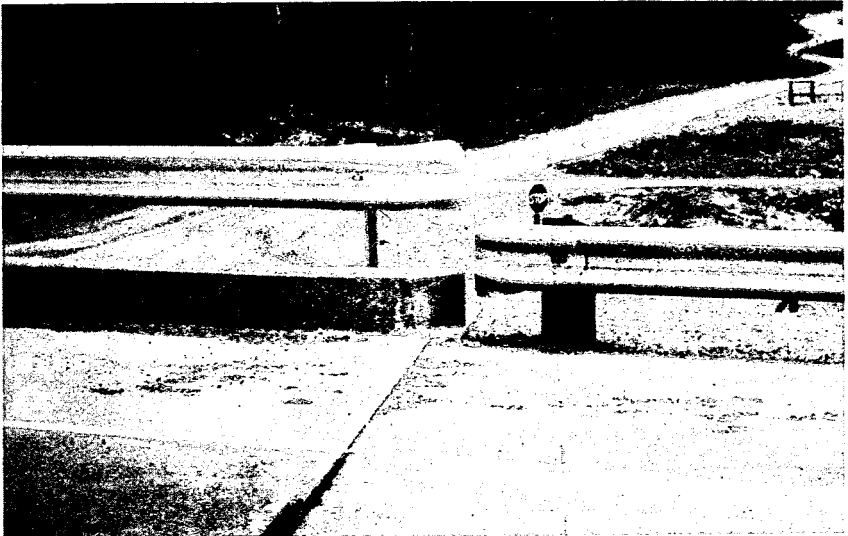
This was one of the exceptions. On one bridge on the project in Oklahoma City, there was an attempt to make the transition by setting the guardrail into the concrete parapet for a short distance and securing it with a $\frac{5}{8}$ -inch bolt. We question the value of this installation.



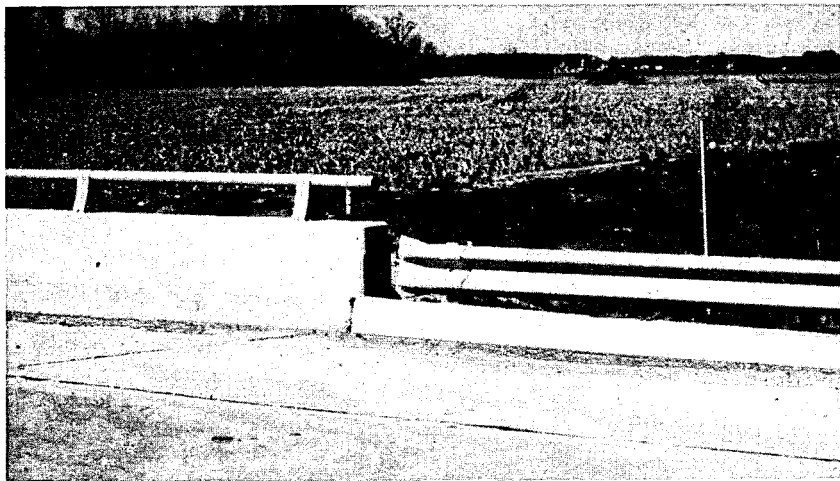
Here is what we saw on some of the bridges in Utah, where a similar type of situation produced this result when it was struck. I would say roughly half of the installations on the project in Utah were this way, and I think six or eight of them had been hit with a result similar to this. At times the bolt pulled through the slot in the guardrail. At other times the bolt sheared. But, basically, it came out to the same result.



This represents a new design standard. Both bridge and guardrail W-beam, but there was no transition from one piece to the other. Again an attempt to improve the standard. They did carry the shoulder through the bridge and did change the bridge railing.

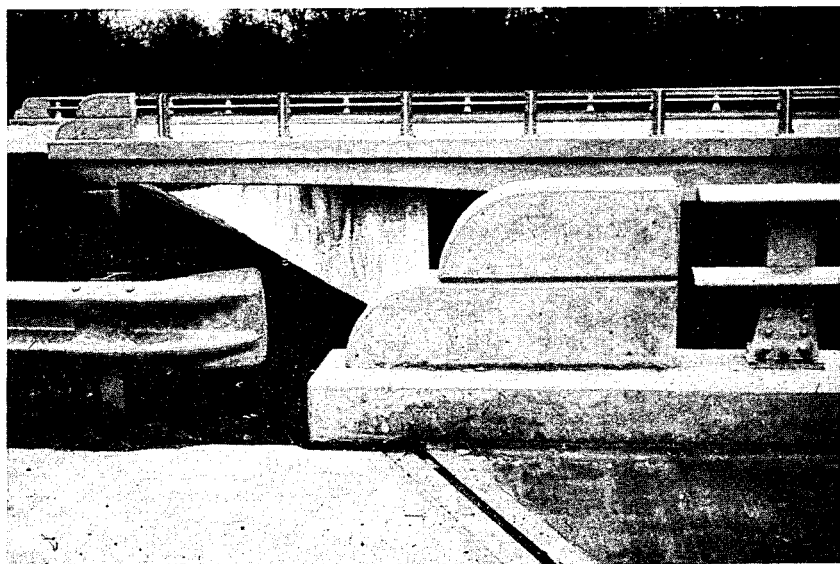


This is another bridge which carries the shoulders through the structure. No transition from the guardrail, in this case to a concrete parapet bridge railing.



On the newest project here they used a new standard to upgrade their work. You find that they used here a rather nice aluminum bridge railing which appears to be effective from the tests. But again we have no transition from the guardrail to the bridge rail, and at the point of transition we still have remaining that ever-present concrete parapet at the end of the bridge.

Does that have to be there, Mr. Turner, that concrete parapet?



Mr. TURNER. Not in the situation we are looking at; no.

Mr. CONSTANDY. It does not add to the strength of the bridge?

Mr. TURNER. No; not in this case.

Mr. CONSTANDY. Thank you.

Mr. W. MAY. I think, Mr. Turner, that that last group of slides emphasizes the Bureau's problem when it comes to spending money, going back to correct some of the built-in deficiencies.

The Bureau would have to guard closely to see that the money is properly spent. Do you have a comment?

Mr. TURNER. The illustrations that you have shown are exactly the kind that I was referring to in my paper, being the deficiencies that we want to correct and the treatment that you have shown here is obviously as unsatisfactory as the original, and we would hope that that would be corrected satisfactorily in all of the projects.

Mr. W. MAY. Mr. Bridwell.

Mr. BRIDWELL. Mr. May, I would like to interject at this point that at this stage of the game I have no idea how well it would work, but I am hoping that this kind of situation can be prevented by the manual that I spoke of in my testimony, which Mr. Turner referred to, and to an earlier comment that I made: That while we have the very fortunate privilege of sitting here and having the opportunity to talk about this and see specific examples of the State highway department maintenance men or maintenance crew that is sent out to make one of these corrections—he is a lost individual unless he is given very, very clear directions and hopefully illustrations of the kind of thing that he is to achieve.

So I am not at all critical of any particular highway department. We just plain—all of us—have not done a good enough job of stating definitely what we want to do and how you go about accomplishing it.

Mr. MCCARTHY. Have you given any thought to a slide film to supplement the manual? For instance, some of these slides could be incorporated into, I think, an effective slide film.

Mr. BRIDWELL. I have given some thought to it, to this extent, Mr. McCarthy, that I would hope that the manual itself would be liberally illustrated; but one of the things that I have underway now is how we can upgrade and make more effective use of the graphic facilities of the Highway Administration, not only for the purposes here, but also in the highway safety program and a number of other areas.

I am personally a very great fan of graphics used to illustrate any number of different program policies and objectives.

Mr. W. MAY. Mr. Chairman, at our Chairman's direction, we work very closely with the new department and with the Bureau, and we have always gotten the utmost cooperation from them.

We have sat in at their original design meeting. We get an awful lot out of it. We think at times we are able to contribute something, and we would hope, with Mr. Bridwell's and Mr. Turner's permission, we might continue to do something.

Maybe we can help spread the word.

Mr. BRIDWELL. By all means.

Mr. TURNER. You already have the invitation, and I understand from Mr. Kopecky, I believe it was, that there was already one meeting set up, in one State, where you have been invited to come out and show

slides and make such other presentations as you wish to try to get the message across to the lower echelons of the State highway department organization.

I think that would be extremely helpful.

Mr. W. MAY. We appreciate that. Dr. Haddon, the other day AASHO representatives testified here and they seemed to be upset concerning the new standards that were recently issued. I quote from Mr. Eugene Johnson's statement:

We make brief reference to the new highway safety standards issued on June 27 by the Department of Transportation. Only a week ago most of the State highway departments had not yet seen these standards, and could not comment on them. As a result, we requested sufficient copies from the National Highway Safety Bureau to send to the State highway departments.

It seems they were late in getting the standards, and it seems that they were not consulted with respect to the final draft of the standards. Do you have some comment to make?

Mr. BRIDWELL. Mr. May, I wonder if I may respond to that?

Mr. W. MAY. Surely.

Mr. BRIDWELL. I think several points need to be made here. One is that following the instructions of the Congress, under the Highway Safety Act of 1966, our statutory lines of communication with the State is through the Governor or his designated representative.

In terms of the overall content of the highway safety program, a number of State agencies, in addition to highway departments, are involved.

So that we do not work with State highway departments in the highway safety program in the same way that we do in the Federal highway construction program. Notwithstanding that fact, AASHO as an organization in highway departments in the individual States, was consulted at length, as well as many other organizations, in the development of the standards.

The report which was submitted to the Congress on July 1 and made available to this committee has in the front of it a chronology of principal events since the Highway Safety Act was passed. And I would call to your attention that on September 15, in the old Department of Commerce, the Under Secretary of Commerce met with selected State officials concerned with highway safety and representatives of State governments.

On October 7 the Secretary wrote to each Governor requesting appointment of a liaison individual to work with the National Highway Safety Agency. In a number of instances, Governors designated the State highway department of the individual State for this responsibility.

On December 5 and 6 the Governors' representatives, the Department of Commerce, and the Highway Safety Bureau met with the Governors' liaison representatives for a 2-day meeting to discuss preliminarily draft or material to go into draft standards, and, of course, in many instances the State highway departments were represented.

On February 16 there was another meeting with the Governors' liaison representatives and a long discussion was held on the detailed proposals for the highway safety program standards.

Another meeting was held on February 21 with various national associations interested in the highway safety program, including AASHO.

Then on March 16 the President appointed the National Highway Safety Advisory Committee which had to be consulted under the statute on the safety standards, and one of the members appointed was a prominent official of AASHO.

On September 7 of this year letters were sent to all of the Governors by the Highway Administrator requesting once again comments on the draft standards that had been supplied to them in February.

And on April 25 and again on June 6 and 7, the Highway Safety Advisory Committee met to consider the standards and AASHO was represented at that time.

Now, I could go on and detail some others, but I would like to specifically comment that AASHO as an organization participated in a meeting on December 6.

AASHO as an organization was requested to supply their comments, suggestions, and so forth, on the draft standards issued in February.

AASHO was invited, as an organization, to attend a meeting of the Governors' representatives in February.

And because we are not getting comments in from the States as rapidly as we thought we should on the draft standards, we work through the regional highway administrators and the Bureau of Public Roads division engineers with the highway departments, to get in their comments individually.

So I guess in terms of consultation with AASHO as an organization and with the individual highway departments, there were just many, many instances and certainly many, many opportunities.

Now, relating to the specific point of their inability to get the standards, the standards were adopted by the Secretary on June 27. The same day or the following day two copies were mailed to each of the Governors, and the Governors' liaison men in these States, with the presumption obviously that they would let each of the individual State agencies interested in the program know what the standards said.

In addition to that, we started over the next several days to mail 50 additional copies to each of the States for distribution among the interested State agencies, and State officials, and that mailing was completed on July 11.

In addition to that we supplied copies of the standards to a number of organizations, including the motor vehicle administrators, and upon the request of AASHO, furnished them enough copies for individual mailings to the State highway departments.

Mr. W. MAY. I gather that you consider that AASHO and the individual State highway departments were consulted sufficiently in the drawing up of these standards?

Mr. BRIDWELL. As thoroughly as it was possible to do between the time that the Highway Safety Agency was organized, essentially in November, and December, until the actual standards were promulgated by the Secretary in June; yes, sir.

Mr. W. MAY. Is it your intention that they will be consulted in the future when any other standards are drawn up or revisions are made?

Mr. BRIDWELL. By all means. As a matter of fact, at the AASHO executive committee last month in Biloxi, Miss., AASHO was kind enough to invite the Federal Highway Administration to continue its participation in the AASHO Design Policy Committee through a representative of both the Bureau of Public Roads and the National Highway Safety Agency, so that the coordination and the cooperation, which has been traditional with the Bureau of Public Roads and AASHO, will be extended to the Highway Safety Agency.

Mr. W. MAY. Thank you, Mr. Bridwell.

Mr. Chairman, I have no additional questions. We have one matter with Mr. Kopecky which will just take a moment.

Mr. KOPECKY. Just one point. On Tuesday we discussed and introduced a chart which was entitled, "Motor Vehicle Deaths Compared to Total Estimated Vehicle-Miles Traveled."

In that chart it was noted during the testimony, during the 6-year period from 1961 to 1966, miles of travel increased 22 percent while the deaths increased 39 percent.

Since then we have received additional information as to the travel estimate and the result of this new estimate is that during the same 6-year period the travel increased 28 percent while fatalities increased 39 percent.

This additional data is incorporated in the chart as it appears in the record.

Mr. BLATNIK. Mr. Bridwell and Dr. Haddon and my good friend, Mr. Turner, I know I speak for the full committee in expressing our appreciation for the most informative statement presented here, and for the facts and the splendid cooperation which we have received from all the agencies throughout the course of the preliminary work done by the staff, and the attitude as expressed—the positive and straightforward attitudes.

The important thing from now on is to move forward to correct things and to keep to a minimum, as Mr. Turner has stated, keep to a realistic minimum the unnecessary hazards, potentially accident-prone aspects that somehow or other have crept far too long into the construction of this system.

I have a concluding statement I would like to read this morning.

Today we conclude the first phase of our public hearings on highway safety, design, and operational efficiency.

This opening phase has been principally concerned with the problem of roadside hazards. The testimony has been explicit and far reaching. Frankly, it is an incredible story. It has established beyond any doubt that, despite an available store of knowledge from research and experience, even our new roads have continued to incorporate into their design and construction deficiencies from the past. The result has been that our roadsides generally are a conglomeration of hazards that are a danger to the life and limb of the motoring public.

It would be repetitious to recite here the nature and extent of the deficiencies that have been identified by the testimony. They are serious, they are varied, and they are widespread.

We are cognizant of some basic and significant changes in design which have occurred over the years and which have enhanced the safety of the motorists. There is no question that divided highways with controlled access and no intersections at grade, together with

improved sight distances and flatter grades have done much to make our roads safer.

However, at this hearing we have been concerned with another thing; an aspect of design which has not had that same emphasis and which offers considerable room for improvement.

No rational person could be unaware that the driver, whether as an innocent victim or through errors of omission or commission, is frequently a contributing cause to the accident. As a human being subject to all of the usual human failings, he is sometimes careless and frequently unpredictable.

In any case, we can safely predict that each year thousands of vehicles undoubtedly will continue to hurtle off our highways out of control, as they have done each year in the past. Reasons will range all the way from bee stings, sideswipes, or blowouts to driver error or fatigue. Whatever the reason, they are entitled to a second chance to recover control, without being smashed against some massive concrete or steel object which in too many cases should not have been there at all.

No one can challenge the fact that thousands of the deaths and serious, permanently crippling injuries result from a vehicle leaving the road and overturning or impacting an object which is without adequate protection to the motorist. Too often the object has been placed in his path by the same people who built the highway.

We must restrain ourselves from clutching for excuses which might make our own role in the whole accident picture tend to appear less culpable. It is not enough to point to the faults of the other fellow or to take comfort in what good things we have accomplished. If we are sincere and honest in our purpose; if we really want to reduce the ever-increasing high accident toll, often needless, on our highways, then we must face up to the realities of the situation, accept the facts, and be willing to change. We must look up and broaden the scope of our vision.

One of the significant problems that has been identified is a communication gap between those who know and those who are responsible for the design and construction of the roads. As a result of that gap, the knowledge we have gained from experience and research over the years has often been ignored in practice. Certainly it has been available; much has been set forth in a veritable stream of bulletins, memorandums, and other papers that have issued each year from the Bureau of Public Roads, AASHO, the Highway Research Board, and other sources. The information simply did not reach all the right people. This communication gap is serious; it must be bridged.

Another problem is how to overcome inertia, or resistance to change. Old designs of the type long discarded by progressive highway research and construction people as inadequate, cannot be justified on the basis that, "We have always done it this way." Last year's standard plans must not be blindly relied upon for the design of next year's road.

I think one of the major changes which must take place before there can be hope of lasting improvement in this whole field of highway transportation, is a reevaluation by highway departments of their primary mission.

It is true that most of the effort and money spent by a State highway department is for design and construction of new work and physical maintenance of old work. In spite of this, the basic role of the State highway department is not to construct highways. Highway departments are, in the final analysis, in the business of operating a physical plant of highways.

If this philosophy of an operational concept of a total system can clearly be understood, it would permit one to look at the highway in a new light and more readily identify the needs of the motorists. "Operation" means just that; it is not the twin of "maintenance."

I have the utmost confidence that there exists the imaginative professional capability to attack these problems effectively, if an attack is indeed mounted.

If the minds of as few as, let us say, 200 of the appropriate State highway department people could be imbued with the wisdom of the operational concept, the seed would be planted and could be cultivated in the tens of thousands of minds whose efforts can result in drastic reduction of highway accidents. This should be a challenge to the personnel of the Bureau of Public Roads AASHO, and the various State highway departments; their participation in the lessening of human tragedy, grief, and suffering should be exciting and gratifying.

We have the opportunity to save many lives. Inaction or delay in immediately taking full advantage of it cannot be tolerated. This matter will be closely followed by the subcommittee while in addition, during the months ahead, we continue to explore other important facets of safe highway design.

Mr. McCARTHY. The committee will stand adjourned, subject to the call of the Chair.

(Whereupon, at 12:55 p.m., the hearings were concluded.)



