cd Accidents, Traffic - Prevention
Turner, Francis C.

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sity Women, and Catholic, Jewish and Negro women's councils, and university economists.

Margolius points out that such consumer groups will be attending consumer developments in the current State Constitutional Convention now working on a draft to revise and up date basic laws for New York.

The convention's committee on health, housing, and social services has designated a special subcommittee to shape recommendations for new State codes on consumer protection.

Consumer experts like Sidney Margolius will be in the thick of the battle for consumer protection as New York revamps its constitution. It is from such a wealth of experience that Margolius will carry on the fight in a book to be called "The Innocent Consumer."

The story of the working man and woman throughout history has been like the story of the team that got behind early in the game and spent the rest of the afternoon trying to catch up. Through their unions, working people have made strides in catching up economically.

But as a consumer, the working man and woman are still playing catch up, trying to match wits in the market place with sharpies, out-and-out frauds, financial tricks and fine print, and simple economic circumstance.

Consumer education is slowly helping to wipe out market place illiteracy, but the progress is slow. Through unions and other groups, consumers are learning to maneuver the obstacle course in the market place with a minimum amount of economic cuts and bruises.

But, until Mr. American Consumer receives his PhD in Marketplace Skullduggery, chances are that much of his buying power will be syphoned away by those who consider consumer exploitation just another slick business practice.

Ohio Victory

A majority of the 24 production workers at Harter Corp., an office furniture manufacturer in Van Wert, Ohio, recently voted for representation by Teamster Local 908 of Lima, Ohio, in a National Labor Relations Board election, according to M. G. Redinbo, secretary-treasurer of the local union.

Along Highways

Would Cost $1 Billion To Correct Death Traps

Congressmen were told by the director of public roads recently that it would cost more than $1 billion to eliminate roadside death traps built into the federal highway system.

F. C. Turner made the estimate while testifying before a House public works subcommittee on the federal-aid highway system. The committee has been holding hearings on the thousands of deaths that occur when cars leave the road and hit hazardously-placed signposts, trees, ditches, and guard rails.

Turner first described the cost of correcting the mistakes as "very substantial." When pressed for a figure, he said it would take more than $1 billion to correct the hazards alongside federal aid highways other than the interstate system. He said eliminating hazards on the interstate system would cost less.

The extent of roadside hazards had come to light only recently, Turner said, and in many cases were an unfortunate counterpart of safety features built into new highways.

For example, he said, overpasses designed to eliminate the dangers of grade crossings presented new dangers of bridge abutments near the road, while large signs designed to be readable to the motorist passing at fast speeds required heavier supports which could be fatal to the motorist hitting them.

"The principal cause," Turner pointed out, "is clearly that our previous judgment . . . did not anticipate the degree and frequency with which drivers would run off these new roads."

He added, "It took some time to observe that a dismaying pattern of run-off-the-road accidents was occurring and an equally long time to develop appropriate corrective measures."

Both Turner and Lowell K. Bridwell, federal highway administrator, told the congressmen that programs are underway to eliminate such now-recognized hazards from future construction.

Subcommittee Chairman John A. Blatnik (D-Minn.) commented that the hearings had brought to light an incredible story of mistakes that should have been corrected sooner.

As a result of a communications gap, he said, "the knowledge we have gained from experience and research over the years has often been ignored in practice." He also criticized "inertia" resulting in needless resistance to change on the part of highway builders and administrators.

"We can safely predict that each year thousands of vehicles undoubtedly will hurtle off our highways out of control, as they have done each year in the past," Blatnik said. "Reasons will range all the way from bee stings, sideswipes or blowouts, to driver error or fatigue."

Blatnik concluded: "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."

Seventeen congressmen have introduced legislation aimed at requiring the Secretary of Transportation to withhold federal highway money from states failing to comply in the future with strict federal roadside safety standards.

The Department of Transportation and the Bureau of Public Roads can do much the same thing now under existing authority, but they are not doing it. The proposed legislation would make it mandatory that states comply or else forfeit federal highway funds because of ineligibility.

On Consumers

"It is the individual consumer—not the average consumer—who shops, who engages in boycotts, who gets disillusioned and deceived and who comes to put the blame for all the ills and shortcomings of the individual service men, retailers and manufacturers on something called 'business' "—Mary Gardiner Jones, only woman member of the Federal Trade Commission.

Current Federal Highway Goals

By Francis C. Turner
Director
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IF I WERE to set one all-encompassing goal for 1967-68, it would be this: to plan, locate, design, construct and maintain highways with an enlightened view toward their total impact on society. You have heard a lot about human and social values in the past few years, and it must be obvious to everyone by now that it's not just talk. If there ever was a time when roads were built only to move people and goods, the time is long gone and there are many observers looking over our shoulders to make sure that it doesn't come back.

Certainly, mobility is the basic purpose of highways or of any other means of transportation, and this in itself is a human value of high order. But one of the principal ends toward which our efforts must be more vigorously applied this year and every year is the preservation of human life and limb, an end transcending all other human values.

Those of you who followed the recent hearings in Washington on highway safety must have been dismayed at the testimony. Quite naturally, the sessions have generated a great deal of publicity, and some of the news reports would indicate that highway designers and builders haven't learned a thing about safety in more than a half-century.

This, of course, is refuted by the generally downward trend of the traffic fatality toll in terms of miles of travel. In 1934, for example, the death rate was 16.7 per 100 million vehicle miles of travel. Last year the rate was 5.7. In other words, had the 1934 rate continued, we probably would have counted some 150,000 traffic fatalities in 1966 instead of the 52,500 we actually had. This improvement has not *all* been due to refinements in the motor vehicle or in better driver performance.

On the other hand, *one* traffic death is too many. Also, while the general trend has been downward over the years, the fatality rate has edged up slightly every year since 1961. During about the same period, there has been an alarming increase, especially on high-speed highways, in the number of vehicles running off the road and hitting a roadside obstruction, frequently with fatal results.

We have both a legal and a moral obligation to use all of the expertise we have gained and are gaining to protect the life, limb and property of the motoring public. The moral obligation is implicit in the statistics which show that last year highway accidents injured 10,000 people *every day,* killed 1,000 *every week* and cost well over $800 million *every month* in senseless economic waste.

We all know that there can be no such thing as a perfectly safe highway, any more than there can be a perfectly safe driver or a perfectly safe vehicle. Granting that, we have to assume there is going to be an irreducible minimum of traffic accidents, injuries and deaths. Nevertheless, we must proceed with all the means at our command to dip down to that bare, irreducible minimum.

We took a long stride toward this goal in devising and continually updating the design standards for the Interstate system. The result has been that the traffic fatality rate on the open sections is about one-third of that on the older, conventional highways. We are incorporating into the ABC roads as many of these standards as are justified by traffic volumes and possible within the limitations of available funds.

On the older highways the spot improvement program has a very promising potential and the re-

sponse of the states, while not uniform, has been encouraging. As of April 30, the state highway departments had programed a total of 2,651 highway safety improvement projects. Of these, 118 have now been completed, some of them for enough time to pay substantial dividends in accident reduction with a relatively small investment of funds.

That leaves the matter of roadside hazards remaining as a principal problem to be dealt with aggressively and imaginatively—beginning at once and continuing on a large scale for as long as necessary to provide the highest possible level of roadway and roadside safety on the federal aid highway system.

We consider that available federal aid funds can be put to no better or more urgent use today than in the very prompt initiation of a broad program to increase the safety of public highways. For that reason, BPR division engineers have been instructed to take a broad and liberal viewpoint with regard to approving programs proposed by the state highway departments for work in this area.

We are requiring that all aspects of location, design, traffic control, drainage features and roadside appurtenances be examined during all phases of the development of the plans, specifications and estimates for highway projects beginning with the location survey, and to the maximum extent possible in the construction and post-construction stages, to ensure that hazards arising from vehicles leaving the roadway out of control will receive primary consideration.

Some of the highway departments, as well as the highway construction industry, have expressed concern that the federal aid highway program will grind to a virtual halt because of the new safety measures set forth by the Bureau of Public Roads. This is not true.

Actually, the contract lettings need not be diminished and, where there is some delay, it will be negligible and for the best possible reason. Let us remember that these measures to increase traffic safety are not something imposed on us from outside They are our own recommendations, arrived at by our own people on the basis of careful and extensive observation, and adopted voluntarily by both partners in the federal-state road building program. So let's get on with the job.

The other end toward which major effort must be directed this year, and for many years into the future, is to accommodate the federal aid program to the problems of increasing urbanization. By 1990, it is forecast that 219 million people will be living in urban areas. This is more people in urban areas than we now have in all 50 states. Obviously, it is better to anticipate problems or, in this case, to prepare defenses against a "time bomb" rather than to just wait around for it to explode.

You have all heard much about the Traffic Operations Program to Increase Capacity and Safety and the joint development concept. These are convenient terms referring to two current programs which the Bureau is pushing not only in the interests of efficient and safe traffic movement, but in the larger areas of human values. The TOPICS program involves an expansion of the federal aid primary system to permit the selection of principal streets and downtown grids (in areas of 5,000 or more population) to receive federal aid for certain kinds of engineering improvements. These do not involve major construction work but improvements of traffic operations which can step up speeds on urban traffic arteries as much as 25 per cent, as a result of a relatively modest investment.

We are going to continue to push this program hard. What we are striving for, of course, is greater utilization of existing highways. This would provide a great deal of additional traffic service at minimum cost. Obviously, it is no substitute for the needed new freeways and other urban arterials that must continue to be built to catch up to and then keep pace with the gravitation of people to our metropolitan areas.

But we must continue to take the fullest advantage of what we have. Low cost improvements to existing streets and the use of the latest traffic engineering techniques and traffic control devices can double traffic capacity. There is also a great possibility in legislation to make federal aid funds available for parking or terminal facilities on the outskirts of large cities. The study leading to this legislation was another part of the TOPICS program. Also, we must give greater attention to measures which will increase our existing street capacity to move persons, rather than vehicles—in other words, by the addition of more buses.

We are also pushing what we call the joint development concept, which is designed to make the maximum use of both space and funds in locating and building urban freeways. In simplest terms, it involves the use of the freeway to serve the social and economic ends of the community, as well as its transportation needs. The key lies in the acquisition of entire blocks or squares of property, rather than the minimum required for the freeway right of way. In many cases, we have found this can be done at little or no extra cost, and it certainly is much cheaper than buying the same land piecemeal for housing, recreation centers, parks and other community needs. Of the total property acquired by the local authority, the highway department would buy what amounts to an easement for the right of way or "air tunnel." The rest of the property over, under and adjacent to the freeway could be used for any of a number of community purposes.

This is an enlightened concept, permitting the construction of replacement housing while building the freeway, with a minimum of displacement of the dwellers in that area. It makes the most efficient use of both money and space to provide the needed freeway and other facilities as a package development. It also makes possible a rebirth of the downtown area, with its consequent benefit to the city tax rolls.

This program is still mainly a

concept, enthusiastically hailed by planners, but too new to have demonstrated its full potential in actual practice. I personally believe that the potential is great and that the highway people must teach and encourage its development. By so doing, we would demonstrate that we are capable of both imagination and a concern for values other than the shortest line from here to there. Today and as far ahead as we can look, the federal aid highway program must be concerned with the total impact of highways on people—on their environment, housing, recreation, cultural interests and all the other elements and amenities of modern living. It must be accommodated to the wider interests made possible and encouraged by increasing affluence and more leisure time. This is a goal —or an end toward which effort must be increasingly directed.

The traveling public has indicated quite strongly, for example, that it is interested in aesthetics —as well as safety and a smooth, relaxed ride—on the highways for which it is paying. As you know, legislation is now pending in Congress to finance both the beautification and the safety programs out of a new special trust fund, with revenues earmarked for these specific purposes. The proposal would authorize the appropriation of $160 million for Fiscal Year 1968 and $220 million for Fiscal 1969. By far the bulk of both years' appropriations would be for landscaping and scenic enhancement. This is appropriate because these form the true core of the beautification program, rather than billboard and junkyard controls which get the publicity.

The provision of safety rest areas is one feature of the federal aid highway program which is by no means new, but is still in the very elementary stages of development. It is one of the most popular features of the program, as well as one of the most important, since it serves—safety, aesthetics and recreation as well as utility.

If I seem to have soft-pedaled physical progress as a goal for 1967-68, it is largely because quality of construction rather than quantity is of overriding importance in the advancement of the Interstate and other federal aid highway systems. This is always true, but the truth is especially applicable during this Fiscal Year when our performance in enhancing highway safety is under scrutiny, when the future financing of the federal aid program will be up for consideration at the next session of Congress.

The outlook for the current Fiscal Year is very encouraging, barring a return of the same type pressures that were so prevalent during the early part of this past year. It is expected that federal aid highway funds totaling $4.4 billion will be released for obligation during the year, together with the additional release of the remaining half of the frozen balances carried forward on June 30, 1966. Additional funds may be released for obligation during the year if the economic situation warrants.

Progress in advancing the Interstate is good. The latest status report, as of June 30, showed 24,070 miles or 59 per cent of the Interstate system in use. Progress on the ABC program (primary and secondary routes and their urban extensions) has also been good.

As to the immediate future, the Bureau will be presenting to Congress next January a revised and more realistic estimate of the cost of completing the Interstate system. This will take into account not only increased costs, but changed conditions and revised concepts as to the functions of the system. It will then be a decision by Congress whether to provide additional financing to complete the system on time, to stretch out the program as long as is necessary to complete the 41,000 miles, to build as much as possible with available financing, or to adopt some combination of these alternatives.

Your guess as to the action of Congress is probably as good as mine at this point. The only thing I'm sure of is that we must design, locate and build the remainder of the system with intensified concentration on safety, aesthetics and other human values, as well as utility and efficiency. If a choice had to be made, I believe it would be better to sacrifice some small amount of mileage than to build any remaining sections without the fullest consideration to these human values.

As to the more distant future, we also will be submitting the initial report on the future highway needs of the Nation. Similar reports will be made every two years, so that the needs may be regularly reassessed and updated in the light of changing demands and conditions.

Without predicting the findings of the highway needs study or studies, I believe it is safe to assume a continuing high level of highway construction activities as far ahead into the future as we can reasonably look. I believe it will include many thousands of miles of urban freeways, serving many purposes, and closely integrated with other transportation modes. I believe, also, that there will be many thousands of miles of scenic highways, complete with all the various types of recreational facilities that go with them.

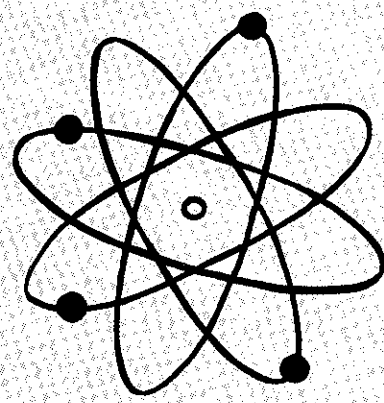
There is no doubt in my mind that public demand will compel a continuing program on something like the scale of the present one. Certainly the motoring public has consistently shown its willingness to pay for safety, ease and convenience of travel.

That is the enlightened point of view, the public service point of view that we public officials have a moral obligation to maintain. Nevertheless, if we don't build the highway systems right—with meticulous attention to safety, aesthetics and the enhancement of other human and social values, then we face the very real prospect of new legislation, new controls, which I know America's road builders would not welcome.

So in considering our highway goals for 1967-68, let us not forget to count among them the preservation of the federal-state partnership as we know it. Together, we can go forward in building the world's finest highways.

The Surprising Little Black Box

The use of nuclear gages in determining earthwork compaction in California has introduced the Atomic Age into highway construction in that State.



By William G. Weber, Jr.
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and

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THE INCREASED rate of earthwork production by highway contracts in the last 20 years has been common knowledge to all concerned. However, the testing of compaction has not kept pace with this increased production rate. The California Division of Highways has been working on this problem for many years and this has resulted in the development of a new compaction test method using an area concept utilizing nuclear gages.

The previous standard method was the same as most compaction control throughout the country. A field density was taken, the material at that location tested for maximum density, and the ratio or relative compaction reported to the engineer who informed the contractor if it met the minimum requirement.

Extensive studies were made by the Division of Highways which examined statistically much smaller increments of fill than were represented by any single control test. These studies show that in compacted fills, acceptable by our present compaction testing procedure, a large volume of soil is generally below the specified minimum relative compaction. Thus, in specifying a minimum relative compaction requirement we were "kidding ourselves" unless we were able to test all of the soil.

The problem then was to devise a method of testing which would more correctly disclose the overall state of density of the soil mass being tested and accommodate the *acceptable* variations of both optimum and in-place densities. It would have to do so in a manner which would cause a minimum interference with the contractor's operations and, at the same time, make the results available as soon as possible. The "area concept," a statistical approach, was developed to meet these requirements.

In the area concept test method, an area of embankment is selected to be tested for acceptance, with this area varying from a few hundred feet in length to a few thousand feet in length. Six or more in-place density determina-