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RELEASED

JAN 20 1976

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The Honorable Jim Wright, Chairman
Subcommittee on Investigations and Review
Committee on Public Works and Transportation
House of Representatives

The Honorable Lloyd M. Bentsen, Chairman
Subcommittee on Transportation
Committee on Public Works
United States Senate

Enclosed is a summary of information developed to date on our current review of the highway safety improvement program of the Federal Highway Administration (FHWA) and our comments on certain sections of the proposed 1975 highway legislation.

On December 18, 1975, the House of Representatives passed H.R. 8235, which, if enacted, will be cited as the Federal-Aid Highway Act of 1975. On December 12, 1975, the Senate passed S. 2711, which, if enacted, will also be cited as the Federal-Aid Highway Act of 1975. Both bills have been referred to a joint conference committee to resolve differences.

Our representatives were told that you were particularly interested in our current review of the highway safety improvement program being administered by FHWA. Although our review is not yet complete and our conclusions are tentative, the information we have obtained to date may be helpful to your Subcommittee in considering H.R. 8235 and S.2711. We will send our final report to the Congress after we complete our review.

We are making our review in eight States--California, Idaho, Louisiana, Maryland, Nevada, Pennsylvania, Texas, and Washington. At least six of the States have made progress

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since 1973 in carrying out their highway safety improvement programs. Some States, however, have not taken a systematic approach to selecting safety projects. Without such an approach, there is no reasonable assurance that the States will select the projects with the greatest accident reduction potential for each dollar spent.

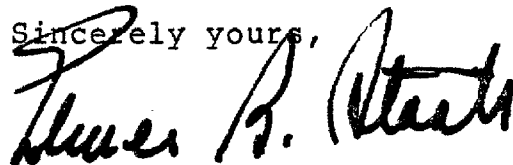
The 1973 Highway Safety Act, although specifically authorizing funds for safety improvements, provided that the funds be spent for several safety categories. Authorizing funds by safety category sometimes has prevented States from selecting the most cost-beneficial projects.

Funding authority provided for highway safety program standards (23 U.S.C. 402) to assist States in developing systematic approaches for selecting the most cost-beneficial safety projects has lapsed because the Department of Transportation did not insure that States obligated available funds in the ratio of the original authorizations.

Legislation the Congress is considering would change the way highway safety funds will be made available to the States. These bills differ in many respects. Our comments, based on our review, on the effect of the proposed legislation are set forth on page 10 of the enclosure.

Because of time limitations, we did not obtain comments on this report from the Department of Transportation or the various States included in our review. We plan to obtain such comments before finalizing our report to the Congress.

Sincerely yours,



Comptroller General
of the United States

Enclosure

SUMMARY OF INFORMATION ON
FHWA'S HIGHWAY SAFETY IMPROVEMENT PROGRAM
AND COMMENTS ON PROPOSED 1975 HIGHWAY LEGISLATION

INTRODUCTION

The Highway Safety Act of 1966 (Public Law 89-564) required the States to establish a highway safety improvement program for reducing traffic accidents, deaths, injuries, and property damage.

FHWA said that it was well known that accidents occurred more often at certain highway locations or on certain short sections of highways and that locations or sections where large numbers of accidents occurred logically were prime targets for accident prevention efforts by highway and traffic engineers. Therefore, FHWA required States to establish safety improvement programs and recommended that they systematically select cost-beneficial projects by following these sequential steps.

- Accumulate accident data by location.
- Identify, by number and severity of accidents, the most hazardous locations.
- Determine the cost of corrective actions and the expected benefits in terms of accident, injury, and fatality reductions.
- Rank the studied locations, giving the highest priority to those locations with the greatest expected benefits in relation to the costs of corrective actions.
- Select the highest priority locations that can be corrected with the funds available.

The 1966 act authorized funds to aid the States in developing and carrying out a system to identify hazardous locations, but did not specifically provide funds to correct the identified locations. The States were encouraged to finance the correction of hazardous locations from funds provided as part of the Federal-aid highway construction program.

Generally the States chose to spend the Federal-aid funds for new highway construction instead of correcting hazardous locations and did not concentrate on a systematic program to select safety projects.

We reviewed the highway safety program in 1971 to see what progress had been made. Our report entitled "Problems in Implementing the Highway Safety Improvement Program" (B-164497(3)), to the Subcommittee on Investigations and Oversight, House Public Works Committee, issued in May 1972, pointed out that only 2 percent of the Federal-aid highway construction funds had been obligated for safety improvement program projects, even though such projects showed greater benefits in terms of accident reduction than did regular highway construction work.

The report concluded that the program had not achieved the status of a fully implemented major national program. To promote greater efforts by the States to improve highway safety, we recommended that a specific part of the highway trust funds be used annually to eliminate or correct hazardous locations.

The 1973 Highway Safety Act (Public Law 93-87) authorized using specific funds for safety improvement projects and emphasized that the States develop a systematic approach for selecting projects. Accordingly, our current review is concerned mainly with the progress made since 1973.

Funds obligated for highway safety

According to FHWA information, the level of Federal funds obligated for safety improvements increased greatly in fiscal year 1975 compared with the 2 preceding fiscal years.

The following table shows the amount of Federal funds obligated for safety during fiscal years 1973 through 1975.

<u>Fund</u>	<u>Fiscal year</u>		
	<u>1973</u>	<u>1974</u>	<u>1975</u>
	(millions)		
Categorical, 1973 act	\$ -	\$ 25.2	\$ 262.9
Bridge replacement	53.0	38.2	181.3
TOPICS	52.0	13.8	^a 11.0
Federal-aid construction	<u>160.1</u>	<u>215.9</u>	^b <u>621.9</u>
Total	<u>\$265.1</u>	<u>\$293.1</u>	<u>\$1,077.1</u>

a

Fiscal year 1973 was the last year for which the Congress authorized funds for the Traffic Operations to Increase Capacity and Safety (TOPICS) program. Fiscal year 1975 was the last year that these funds were eligible for obligation.

b

In an October 7, 1975, memorandum, FHWA cautioned that projects funded from regular construction programs should be coded as safety work only if the project was identified through the systematic procedures developed for selecting projects to be accomplished with categorical safety program funds.

The amount of State funds obligated for similar safety work during the same period was not available.

A SYSTEMATIC PROGRAM APPROACH TO SELECTION OF
HIGHWAY SAFETY PROJECTS NOT FULLY IMPLEMENTED

The 1973 Highway Safety Act added new impetus to the Highway Safety Program, and some progress has been made in identifying and correcting hazardous highway locations. The States, however, have not fully implemented highway safety

programs that provide systematic program approaches to project selection. Without such systems, there is no reasonable assurance that the States will select the projects with the greatest accident reduction potential for each dollar spent.

The FHWA Administrator emphasized the importance of developing a systematic approach to the Highway Safety Program in October 1975 when he said that "Because sound safety programs cannot be developed on hunches, improved accident data collection and analysis systems are vital."

Some of the specific weaknesses in the States approach to selecting safety projects are discussed below.

Collection and use of accident data

The key to the success of the Highway Safety Program is to identify accident locations on all roads and highways. Accident experience provides the basis for determining which hazardous locations or sections of highways should be corrected. FHWA's guidelines for a systematic approach require analyzing accident data to determine the prime target locations for safety improvement work.

Analysis of accident reports involves:

- Summarizing all accidents by location.
- Identifying the most hazardous locations--those which have a large number of accidents weighted for severity in terms of fatalities, injuries, and property damages and which can be improved by physical changes in the highways.

At least six of the States included in our review have accident reporting systems. In some cases, however, not all the information required for determining the most hazardous locations is gathered. In other cases the information is gathered but is not used to identify high-hazard locations. These situations exist more on highways under local jurisdiction than on State highways, although there are some gaps in the information acquired on State highways.

For example:

- In at least six of the eight States traffic volume data is not gathered for local highways. This data is needed to determine the prime target locations for accident prevention work.
- Accident information for the entire city of Baltimore, Maryland, is not analyzed even though the city accounts for about 34 percent of the State's accidents. From 1965 to 1972, Baltimore had its own accident identification system. In 1972 the State required the city to adopt its State-wide uniform accident-reporting form. However, because the city's location-coding system is not compatible with the State's computer program, there has been no accident analysis in the city for the last 3 years, except for occasional manual searches of the data. Without such an analysis, the most hazardous locations are not known.
- California, Maryland, and Pennsylvania furnish local governments with computer printout listings of accidents within the local governments' jurisdictions, including accidents on Federal-aid highways. The listings include all accidents but do not pinpoint the most hazardous locations. A San Francisco city official said that the unanalyzed listing was discarded because it was too voluminous to be useful in selecting safety projects.
- The State of Washington has accident data available for all accidents, but has not developed a State-wide list of the most hazardous locations. The traffic volume information for all locally controlled highways, which is needed to prepare such an analysis, is not available. Local jurisdictions are responsible for preparing their own analyses of accidents and developing their own lists of the most hazardous locations. However, State officials estimate that only a few of the largest cities in the State actually make such analyses.

Federal-aid highways under local jurisdictions
are not being considered for funds

The 1973 Highway Safety Act authorized funds for safety projects on Federal-aid highways, and, although the funds were apportioned to the State governments, not all States implemented

safety improvement projects on Federal-aid highways under local jurisdictions. The act did not specifically require funds to be allocated to local governments but did allow the funds to be used on all Federal-aid highways except Interstate System highways. We believe, however, that high-hazard locations on Federal-aid highways under local jurisdictions should have been considered for safety improvement projects.

For example,

--California has 29,300 miles of Federal-aid highways-- 16,800 miles under State jurisdiction and 12,500 miles under local jurisdictions. The State did not use high-hazard location or roadside obstacle funds for Federal-aid highways under local jurisdictions even though many miles of local Federal-aid highways are in high-traffic-volume areas, such as Los Angeles and San Francisco. Most of the main streets of San Francisco are Federal-aid highways under local jurisdiction, yet a city official told us the city was not aware that funds were available for improving high-hazard locations or removing roadside obstacles.

Cost-benefit ratio of projects
not always determined

FHWA regulations require that safety improvement projects be ranked in priority order and recommend that this be done by computing a cost-benefit ratio for each planned project. The ratio can be used to develop the relative ranking of the various projects in inventory so that the most cost-beneficial projects are ranked highest. Many States, however, do not compute cost-benefit ratios but use some other basis to select projects.

For example,

--Maryland does not compute a cost-benefit ratio for use in project selection, because the safety improvement funds available to the State are sufficient for all the State's planned projects. Maryland has not developed an inventory of safety improvement projects from which cost-benefit ratios can be developed. The State's 1975 funds for high-hazard locations were used mainly on one project--a \$2.6 million project to build an

overpass at an intersection. The intersection did not rank high on the State's accident listing nor did the State make a cost-benefit analysis. The project was selected because the engineering plans and specifications were "on the shelf" at the time funds became available and there were some safety benefits involved.

--California does not compute cost-benefit ratios for use in selecting rail-highway grade-crossing projects. California is using \$2.8 million of its grade-crossing funds for grade separations at two rail-highway crossings. The State selected these two projects because it felt their hazard potential was increasing. In September 1975 FHWA told the State that future grade separation projects would require justifications based on their potential to reduce existing or potential hazards.

CATEGORICAL FUNDING CAUSES
STATES SOME PROBLEMS

The 1973 Highway Safety Act (87 Stat. 283, 286, 287) established several categorical safety improvement programs for correcting safety problems, such as rail-highway grade crossings, high-hazard locations, and roadside obstacles. Although the categorical programs have resulted in the States initiating improvement projects in these safety areas, they also have caused some problems.

The projects which would offer the greatest potential of safety benefits for each dollar spent often cannot be selected because the projects are in safety categories for which no funds are available. At the same time projects with less potential benefits in other safety categories are selected solely because funds are available. For example:

--Pennsylvania, Washington, and Idaho have programmed all of their high-hazard-location funds, but many cost-beneficial projects cannot be undertaken because of the lack of funds. However, at the same time funds for roadside obstacles and rail-highway crossings are programmed for projects that the States consider less cost beneficial. Idaho officials said that they had funded one rail-highway project which had no train-car accidents in the past and which had an expected

accident potential of one accident every 100 years. At that time Idaho had many high-accident locations that were not being corrected, because all the funds apportioned for the high-hazard-location category had been obligated.

--Pennsylvania plans to use roadside-obstacle funds for tree-removal and guardrail projects even though the State has determined that these projects are not cost beneficial. It has deferred projects for improvements at hazardous locations because all the funds for high-hazard locations have been obligated.

In addition, restricting the use of safety funds to specific categories may result in a loss of funds because the States funds may not be obligated within the period of fund availability. For example, Maryland was apportioned \$183,150 in fiscal year 1974 for rail-highway crossing protective devices and these funds will lapse if not obligated by June 30, 1976. As of December 31, 1975, Maryland had obligated only about \$31,000. Maryland highway officials said that obligations had been slow because of difficulty in obtaining contracts with the railroads which would permit installing barrier gates and warning devices at rail-highway crossings.

The 1973 act provided some flexibility for transferring up to 30 percent of each year's apportioned funds among several categorical safety programs. To qualify, however, States are required to certify that the purposes of the programs from which such funds are to be transferred have been met. Therefore, if a State makes such a certification, the funds remaining to be obligated after the transfer will either lapse or be used on projects of less benefit than other safety projects.

We obtained the following information on Alaska and Puerto Rico, although they were not included in our review, to illustrate the problem. Both Alaska and Puerto Rico requested, and FHWA approved, transfers of funds from the States rail-highway-crossing apportionments.

--FHWA authorized Alaska to transfer about \$1.4 million of its \$4.6 million apportionment for rail-highway-crossing safety improvements. After the transfer, Alaska still had about \$3.2 million of unobligated funds which it could not use for purposes other than rail-highway-crossing improvements.

--FHWA authorized Puerto Rico to transfer about \$426,000 of its total \$1.4 million apportionment for rail-highway-crossing safety improvements. After the transfer Puerto Rico still had about \$1 million of unobligated funds which it could not use for purposes other than rail-highway-crossing improvements.

LAPSE OF OBLIGATIONAL AUTHORITY

The Highway Safety Act of 1966 required each State to implement a highway safety program approved by the Secretary of Transportation and designed to reduce traffic accidents and resulting deaths, injuries, and property damage. As part of this safety program, the Congress required that the Secretary promulgate uniform safety standards.

Initially the National Highway Safety Bureau administered the States implementation of the safety standards. During 1970 the Secretary of Transportation delegated responsibility for administering those safety standards relating to the driver and the environment to the newly created National Highway Traffic Safety Administration (NHTSA). The remaining standards, which were highway related, were assigned to FHWA. This joint administration of the highway safety program standards by NHTSA and FHWA was later legislated by the Highway Safety Act of 1970 (84 Stat. 1740).

Before program administration was delegated to NHTSA and FHWA, the Congress made one annual obligational authorization for implementing the safety standards. This authority was apportioned to the individual States as one amount available for implementing all the highway safety program standards. With the advent of the jointly administered program in fiscal year 1972, the Congress made separate authorizations for the NHTSA- and FHWA-administered standards at about the ratio of 70 to 30.

The Department, however, on the basis of correspondence with the Chairman of the House Public Works Committee, provided States with a consolidated apportionment available for all safety standards. In agreeing to this consolidation for fiscal year 1972 only, the Chairman advised the Department that problems could be created by this practice and that the Congress intended that specific funds be used for FHWA and NHTSA standards. In December 1971 the Secretary advised the Chairman that the Department was continuing the single apportionment for fiscal year 1973 and subsequent years.

During each of the fiscal years 1972 through 1975, the Congress reduced the total amount of funds that could be obligated for implementing the standards to less-than-originally-authorized levels. The Department's single-apportionment concept and NHTSA's and FHWA's administration of the safety standards program, however, allowed States maximum flexibility in programing funds among the various standards. Using this flexibility, States obligated 84 percent of the available funds for the NHTSA-administered standards.

Because the Department did not take appropriate measures to insure that States obligated available funds in the 70-30 ratio of the original authorizations, \$12.2 million in FHWA's 1972 and 1973 obligational authority lapsed. FHWA estimates that about \$5.5 million of its 1974 obligational authority will lapse on June 30, 1976.

FHWA estimated that, had available funds been obligated in the ratio authorized by the Congress, the loss of obligational authority could have been deferred for several years.

PROPOSED LEGISLATION DEALING WITH HIGHWAY SAFETY

The Congress is considering two bills dealing with the highway safety program. The two bills--S. 2711 and H.R. 8235--have been passed by their respective houses and have been referred to a joint conference committee to resolve differences. The following comments refer to specific highway safety provisions of the two bills.

BLOCK GRANTS VERSUS CATEGORICAL FUNDING

The House- and Senate-passed bills differ considerably in the way highway safety funds will be made available to the States. Section 104(a)(3) of S. 2711 provides lump-sum funding for all safety planning and construction activities. Title II of H.R. 8235 continues the categorical safety program approach with increased flexibility for transferring funds among categorical programs.

Our discussions with State officials administering the current categorical programs revealed that they favored block grants, because of the increased flexibility that would be provided.

The States are now required to spend available funds in each of the categories for which funds have been provided. Some flexibility is provided in that up to 30 percent of the funds in any given category can be transferred to another category if the States certify that needed safety work under a specific program has been completed.

State officials told us that safety projects aimed at high-hazard locations yielded, for each dollar spent, higher potential safety benefits than other types of safety work, such as eliminating roadside obstacles and rail-highway grade-crossing projects. However, all the higher cost-beneficial projects cannot be done, because funds available for high-hazard-location programs have been obligated.

The current funding proposals would either eliminate or considerably reduce this problem. The Senate bill eliminates the categorical-funding concept by consolidating all categorical safety programs, except the Special Bridge Replacement Program, and authorizes the funds to be used for safety improvements on both Federal-aid and non-Federal-aid highways. Although the House bill retains categorical funding for safety improvements, it allows transfer of 40 percent of several programs' funds without any justification and total transfer if a State can certify that all the safety work within a specific category has been completed.

Authorizing one fund for all safety improvements on all highways may give States the greatest opportunity for maximizing safety benefits for each dollar spent. To make this approach operable, S. 2711 will require that States implement systematic highway safety programs. We believe that each program should identify a large inventory of potential safety projects, assign priorities to them on the basis of cost-benefit analyses, and select those projects which should best reduce fatalities, injuries, and property damage.

An alternative approach to authorizing one fund for safety improvement projects on all highways would be consolidating those categorical safety programs which provide funds for safety construction on Federal-aid highways only--correcting high-hazard locations, eliminating roadside obstacles, and improving rail-highway crossings. This would give States the opportunity to realize the greatest safety benefits for projects on Federal-aid highways and would require implementing a systematic highway safety program as described above.

If the Congress wishes to retain the categorical approach of the safety program, we recommend adopting the House provision which would allow the States to transfer all of their remaining funds within categorical safety programs upon certifying that the purposes for which the funds were authorized had been achieved.

RAIL-HIGHWAY CROSSINGS

Analysis of H.R. 8235 indicates that the House is placing more emphasis on rail-highway crossings than did the Highway Safety Act of 1973. Some States were experiencing difficulty in securing agreements with railroad companies to complete this type work. Generally, this type work was not the highest cost-beneficial-type safety project.

HIGHWAY SAFETY STANDARDS FUNDING

The two bills present widely divergent approaches to administering and providing funds for the highway safety standards established in accordance with the Highway Safety Act of 1966. H.R. 8235 retains the concept of a jointly administered program with specifically authorized funding for implementing FHWA- and NHTSA-administered safety standards. S. 2711 provides for independent administration of FHWA and NHTSA standards, but it does not set aside any specific funds to implement the FHWA-administered highway safety standards.

We believe that specific funding should be provided for implementing FHWA's highway safety program standards. Such funding would emphasize encouraging States to implement systematic approaches to project selection. This is particularly important in view of the magnitude of the overall safety construction program, approximately \$1 billion in fiscal year 1975. Unless States develop systematic approaches for project selection, FHWA has no assurance that the maximum potential safety benefits will be achieved.