Future of the National Highway Safety Program

SPECIAL REPORT 178

Transportation Research Board

National Academy of Sciences



TRANSPORTATION RESEARCH BOARD 1977

Officers

ROBERT N. HUNTER, Chairman A. SCHEFFER LANG, Vice Chairman W. N. CAREY, JR., Executive Director

Executive Committee

CHARLES F. BINGMAN, Acting Urban Mass Transportation Administrator, U.S. Department of Transportation (ex officio)
HARVEY BROOKS, Chairman, Commission on Sociotechnical Systems, National Research Council (ex officio)
WILLIAM N. COX, Federal Highway Administrator, U.S. Department of Transportation (ex officio)
BRUCE M. FLOHR, Acting Federal Railroad Administrator, U.S. Department of Transportation (ex officio)
HAROLD L. MICHAEL, Professor, School of Civil Engineering, Purdue University (ex officio, Past Chairman, 1976)
MILTON PIKARSKY, Chairman of the Board, Chicago Regional Transportation Authority (ex officio, Past Chairman, 1975)
HENRIK E. STAFSETH, Executive Director, American Association of State Highway and Transportation Officials (ex officio)

WARREN E. ALBERTS, Vice President, System Operations Services, United Airlines GEORGE H. ANDREWS, Vice President for Transportation Marketing, Sverdrup and Parcel GRANT BASTIAN, State Highway Engineer, Nevada Department of Highways KURT W. BAUER, Executive Director, Southeastern Wisconsin Regional Planning Commission MANUEL CARBALLO, Secretary, Wisconsin Department of Health and Social Services B. L. DeBERRY, Engineer-Director, Texas State Department of Highways and Public Transportation LOUIS J. GAMBACCINI, Vice President and General Manager, Port Authority Trans-Hudson Corporation HOWARD L. GAUTHIER, Professor, Department of Geography, Ohio State University FRANK C. HERRINGER, General Manager, San Francisco Bay Area Rapid Transit District ARTHUR J. HOLLAND, Mayor, city of Trenton, New Jersey ANN R. HULL, Speaker Pro Tem, Maryland House of Delegates ROBERT N. HUNTER, Chief Engineer, Missouri State Highway Department PETER G. KOLTNOW, President, Highway Users Federation for Safety and Mobility THOMAS J. LAMPHIER, President, Transportation Division, Burlington Northern, Inc. A. SCHEFFER LANG, Assistant to the President, Staff Studies Group, Association of American Railroads DANIEL McFADDEN, Professor of Economics, Institute of Transportation Studies, University of California, Berkeley ROBERT S. MICHAEL, Director of Aviation, city and county of Denver THOMAS D. MORELAND, Commissioner and State Highway Engineer, Georgia Department of Transportation GEORGE E. PAKE, Vice President, Xerox Corporation, and, Manager, Xerox Palo Alto Research Center DOUGLAS N. SCHNEIDER, JR., Director, District of Columbia Department of Transportation WILLIAM K. SMITH, Vice President-Transportation, General Mills, Inc. HERB TESKE, Secretary, South Dakota Department of Transportation

The Transportation Research Board is an agency of the National Research Council, which serves the National Academy of Sciences and the National Academy of Engineering. The Board's purpose is to stimulate research concerning the nature and performance of transportation systems, to disseminate information that the research produces, and to encourage the application of appropriate research findings. The Board's program is carried out by more than 150 committees and task forces composed of more than 1800 administrators, engineers, social scientists, and educators who serve without compensation. The program is supported by state transportation and highway departments, the U.S. Department of Transportation, and other organizations interested in the development of transportation.

The Transportation Research Board operates within the Commission on Sociotechnical Systems of the National Research Council. The Council was organized in 1916 at the request of President Woodrow Wilson as an agency of the National Academy of Sciences to enable the broad community of scientists and engineers to associate their efforts with those of the Academy membership. Members of the Council are appointed by the president of the Academy and are drawn from academic, industrial, and governmental organizations throughout the United States.

The National Academy of Sciences was established by a congressional act of incorporation signed by President Abraham Lincoln on March 3, 1863, to further science and its use for the general welfare by bringing together the most qualified individuals to deal with scientific and technological problems of broad significance. It is a private, honorary organization of more than 1000 scientists elected on the basis of outstanding contributions to knowledge and is supported by private and public funds. Under the terms of its congressional charter, the Academy is called upon to act as an official—yet independent—advisor to the federal government in any matter of science and technology, although it is not a government agency and its activities are not limited to those on behalf of the government.

To share in the task of furthering science and engineering and of advising the federal government, the National Academy of Engineering was established on December 5, 1964, under the authority of the act of incorporation of the National Academy of Sciences. Its advisory activities are closely coordinated with those of the National Academy of Sciences, but it is independent and autonomous in its organization and election of members.

Future of the National Highway Safety Program

Proceedings of a conference sponsored by the National Highway Traffic Safety Administration and the Federal Highway Administration, U.S. Department of Transportation, conducted by the Transportation Research Board, and held March 6-9, 1977, at Airlie House, Warrenton, Virginia

TRANSPORTATION RESEARCH BOARD
COMMISSION ON SOCIOTECHNICAL SYSTEMS
NATIONAL RESEARCH COUNCIL

Transportation Research Board Special Report 178 Price \$2.20

Edited for TRB by Amy E. Shaughnessy

subject area 51 highway safety

Transportation Research Board publications are available by ordering directly from the board. They may also be obtained on a regular basis through organizational or individual supporting membership in the board; members or library subscribers are eligible for substantial discounts. For further information, write to the Transportation Research Board, National Academy of Sciences, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.

Notice

The project that is the subject of this report was approved by the Governing Board of the National Research Council, whose members are drawn from the councils of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine. The members of the committee responsible for the report were chosen for their special competence and with regard for appropriate balance.

This report has been reviewed by a group other than the authors according to procedures approved by a Report Review Committee consisting of members of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine.

Library of Congress Cataloging in Publication Data

Conference on the Future of the National Highway Safety Program, Airlie House, 1977.

Future of the national highway safety program.

(Special report-Transportation Research Board, National Research Council; 178)

1. Traffic safety – United States – Congresses. 2. Traffic safety – Research – United States – Congresses. I. National Research Council. Transportation Research Board. II. United States. Federal Highway Administration. III. United States. National Highway Traffic Safety Administration. IV. Title. V. Series: National Research Council. Transportation Research Board. Special report – Transportation Research Board, National Research Council; 178. HE5614.2.C57 1977 614.8'62 77-21819 ISBN 0-309-02593-1

Sponsorship of This Special Report

Committee on the Conference on the Future of the National Highway Safety Program Noel C. Bufe, *chairman* Donald J. Bardell, B. J. Campbell, Francis X. Colleton, Norman Darwick, Rupert A. Doan, Alvord C. Estep, Patricia Hause Ehrlich, Charles H. Hartman, Mati Koiva, Robert L. Lewis, Nils A. Lofgren, Robert L. Marshall, Joseph Murphy, Victor J. Perini, Jr., C. Albert

Liaison Members:

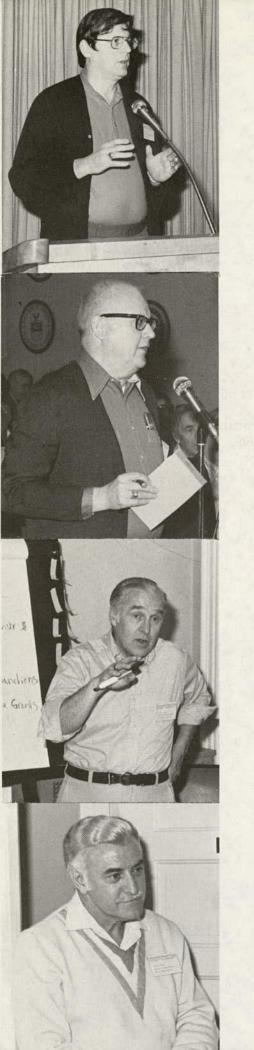
Howard Anderson, Federal Highway Safety Administration Michael Finkelstein, National Highway Traffic Safety Administra-

Transportation Research Board staff: James K. Williams

Conference Recorder: Charlene Semer

Contents

Summary of Recommendations	1
Conference Plan	3
Perspective	4
Introduction to the Highway Safety Act of 1966	
Federal Role in Highway Safety	9
Workshops: Discussion and Recommendations	11
Text of the Highway Safety Act of 1966	24
Discussion of the Issues and Alternatives	27
Participants	41











Summary of Recommendations

The deliberations and conclusions of the six workshops of the Conference on the Future of the National Highway Safety Program are detailed in the final section of this report. The following summaries abstract the major elements of these recommendations.

HIGHWAY SAFETY STANDARDS AND THEIR USE

The present 18 highway safety standards should be replaced by two types of requirements for state program approval. The first set of requirements would deal with features in which national uniformity is considered essential: rules of the road; driver licensing; registration and titling; traffic control devices; highway design, construction, and maintenance; and traffic records systems. The second condition for federal funding of state safety programs would require approval of the procedures used by a state to plan and evaluate its program efforts. Program elements, such as driver education, school bus safety, and traffic law enforcement, would not be subject to federal approval and would be considered acceptable as long as the process by which the elements were selected had been approved in advance.

FEDERAL-STATE PROGRAM MANAGEMENT

State governors should be responsible for the administration and performance of state highway safety programs. States should be encouraged to concentrate program planning and administration within a single highway safety agency, which would be held to certain minimum standards of competency in planning and administration; this agency would also coordinate state-supported highway safety activities.

On the federal level, the National Highway Safety Program should be administered as a single program.

If the Department of Transportation is reorganized, highway and traffic safety should be administered by a single agency.

STATE-LOCAL RELATIONSHIPS

The federal government should continue to rely on the states to aid the highway safety efforts of local jurisdictions and to require that a minimum of 40 percent of a state's highway safety grant funded under section 402 of the Highway Safety Act of 1966 be expended by local jurisdictions. Where it is possible, states should be encouraged to increase the expenditure of both safety and highway-construction funds at the local level. The selection of local projects to be funded should be a cooperative effort between state and local governments, but these projects should remain subject to state approval.

A highway safety construction-grant program should be developed for all public roads, and these funds should be distributed according to criteria developed by the states in consultation with local officials and approved by the Secretary of Transportation.

RESEARCH AND MANPOWER DEVELOPMENT

The federal government, in cooperation with the states and the private sector, should plan and coordinate a national highway safety research program and should set priorities for research in certain areas. Funds, including section 402 funds, should be available for basic research as well as development. The commitment of research funds should be designed to improve the quality of research proposals and of research personnel. The federal government should take measures to encourage the dissemination and expedite the implementation of research results.

Higher priority and increased support should be

given to programs to develop technical and administrative skills in highway safety. Development funds should be authorized under sections 402 and 403; these should cover recipients' indirect costs as well as their education costs.

PRIVATE-SECTOR INVOLVEMENT

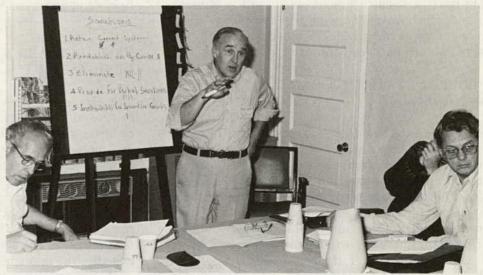
The federal government should acknowledge the role of and work more effectively with the private sector as a third partner in the national highway safety effort. This partnership should be active from the research and development stages through the implementation and evaluation phases of safety projects. An effective working relationship will require an information-exchange network and the development of mechanisms for private-sector review of and ad-

vice on highway safety programs and directions.

FUNDING, INCENTIVES, AND SANCTIONS

Federal funding should continue at its present level pending estimates of funding requirements necessary to achieve specified objectives. The Highway Trust Fund is the most appropriate source of federal highway safety funds. Sanctions should be eliminated because they are detrimental to good federal-state relationships and because they distort state responses to national objectives. Incentives should also be discontinued since they are of questionable value in stimulating program improvement and their distribution under the present system is inequitable.





Conference Plan

Under section 208b of the Highway Safety Act of 1976, Congress required that

The Secretary of Transportation shall, in cooperation with the States, conduct an evaluation of the adequacy and appropriateness of all uniform safety standards established under Section 402 of Title 23 of the United States Code which are in effect on the date of enactment of this Act. The Secretary shall report his findings, together with his recommendations, including but not limited to the need for revision or consolidation of existing standards and the establishment of new standards, to Congress on or before July 1, 1977....

The Department of Transportation (DOT), choosing to meet this mandate in its broadest scope, has undertaken to reevaluate the essentials—including the safety standards—of the present national highway safety program. As part of this effort, DOT asked the Transportation Research Board to hold a conference for the purpose of making the experience, expertise, and advice of key members of the nation's highway safety community available to the Secretary of Transportation. The 140 conference participants represented a nearly complete cross section of professional, organizational, jurisdictional, and geographic interests and backgrounds in the field of highway safety.

The Conference on the Future of the National Highway Safety Program used both workshops and plenary sessions as forums for discussion of major issues. In the opening meeting of the conference, participants were greeted by W. N. Carey, Executive Director of TRB, and by Mortimer L. Downey III, Deputy Undersecretary of Transportation, who explained DOT's interest in this conference. The first working plenary session was addressed by Michael Finkelstein of the National Highway Traffic Safety

Administration (NHTSA) and by Howard Anderson of the Federal Highway Administration (FHWA), who summarized the issues that DOT hoped would be discussed. The federal role and current problems in highway safety were reviewed by James K. Williams of TRB, and the future prospects of the national highway safety effort were previewed by Noel Bufe, the conference chairman.

The intent of this conference was not to address specific highway safety problems, such as alcohol or use of safety belts, but to share ideas about the structure, management, and financing of a national program to improve highway safety. This broad arena was divided into six issues:

- 1. Standards, guides, and goals;
- 2. Federal-state program management;
- 3. State-local relationships;
- 4. Research and manpower development;
- 5. Private-sector involvement; and
- 6. Funding, incentives, and sanctions.

Each of these issues was assigned as a separate workshop topic, and each conferee participated in one of the six parallel workshops. Representatives of FHWA and NHTSA acted as resource persons both in the workshops and in the plenary sessions.

Although each workshop explored a different facet, the core question in all was how the federal government, in cooperation with state and local governments and with the private sector, could act most effectively and efficiently to reduce both the frequency and the severity of accidents associated with the operation of motor vehicles on the nation's roadways. Does the present highway safety program fulfill this objective? If not, how can the program be improved?

Perspective

As the incidence of death and injury on the highways has grown over the years, the role of the federal government in reducing the number and severity of accidents has evolved from a passive, advisory capacity into one of active program direction and support. Although the federal executive branch was concerned about highway safety as early as 1924, when Secretary of Commerce Herbert Hoover held a National Conference on Street and Highway Safety, until the mid-1960s program initiatives rested largely with the individual states.

EARLY HIGHWAY SAFETY EFFORTS

Programs such as motor vehicle inspection; driver education; driver licensing; traffic courts; emergency medical services; highway design, construction, and maintenance; traffic engineering; high-frequency accident location, identification, and correction; pupil transportation; and pedestrian safety were developed in the states, although not all states were active in all areas. In addition, state governments were significantly involved with the private sector in promoting safer driving practices among the motoring public. With very few exceptions, however, there was no central coordination of this substantial state commitment to highway safety.

The federal government's highway safety efforts were equally fragmented during this period. The Bureau of Public Roads, then in the Department of Commerce, had a major responsibility for the safety of the highways, but many other departments also had programs that touched directly or indirectly on highway safety. The Public Health Service had a Division of Accident Prevention, which had an interest in traffic accidents, and its National Center for Health Statistics collected traffic accident data. The Food and Drug Administration, the Vocational Rehabilitation Administration, the Office of Education,

and the Office of Aging had traffic safety programs aimed at particular problems or groups of drivers. The Interstate Commerce Commission supervised the operation of commercial interstate vehicles. The Department of Labor was concerned with motor vehicle accidents among workers. All departments, but particularly those with large fleets of motor vehicles, regulated their own internal vehicle-safety problems.

Many of these federal units conducted safety-related research programs, specified regulations and guidelines intended to promote traffic safety, and maintained some contact with state, private, and other federal groups with similar interests. Until the 1960s, however, these efforts—like those of the state governments—were not formally coordinated, and there was no systematic federal approach to the problem of highway safety.

EVOLUTION OF FEDERAL HIGHWAY SAFETY POLICY

The first congressional highway safety effort came in 1956. That year, the House Committee on Interstate and Foreign Commerce Subcommittee on Health and Safety conducted hearings on the national highway safety problem. The Federal-Aid Highway Act of 1956 instructed the Secretary of Commerce to study possible federal actions to increase highway safety in the United States.

While this study was under way, Congressman John Beamer, in 1958, introduced a joint resolution that is considered landmark legislation in highway safety. The Beamer Resolution proposed that Congress give approval to interstate compacts for the advancement of highway safety. Notably, the resolution relied on the states for the development of safety programs.

In 1959, the Bureau of Public Roads completed the study mandated by the 1956 Federal-Aid Highway Act, and a comprehensive report was submitted to Congress. The report concluded that federal action should be directed toward establishing a favorable environment for the highway safety activities conducted by state and local governments. The role envisioned for the federal government included establishing two new safety-related units: a drivers' records clearance center that could identify drivers with records of license suspensions and revocations and an interdepartmental safety board to coordinate all federal highway safety programs.

Adoption of the first recommendation established the National Driver Register Service in the Office of Highway Safety, a major organizational unit of the Bureau of Public Roads. The second recommendation was fulfilled in 1960, when the Interdepartmental Highway Safety Board was created by executive order.

PRELUDE TO THE HIGHWAY SAFETY ACT

The federal government's quickening interest in promoting the cause of highway safety accompanied an alarming increase in traffic accidents and death rates. The annual number of traffic deaths had reached 50 000 by the mid-1960s; the death rate, which had declined from 11.3/100 000 000 vehicle-kilometers (18.2/100 000 000 vehicle-miles) in the late 1920s to 3.2 (5.2) in the early 1960s, had leveled off and started upward to 3.7 (6.0) by 1966. This reversal in trend emphasized the national dimensions of the highway safety problem and accelerated the federal response.

In March 1965, the Interdepartmental Highway Safety Board submitted to the President its Special Report on Federal Policy and Programs for Highway Safety. The report declared that the incidence of traffic accidents was not related to state or local boundaries but rather was a national problem of major proportions. Although state and local governments traditionally had been responsible for virtually every aspect of highway safety, the report concluded

that "the failure of these jurisdictions to perform adequately is a major reason for the current (traffic accident) crisis." The board recommended the establishment of a single, focal unit for the highway safety efforts of the federal government. This unit was to have an organizational structure that would provide for participation by state and local governments in working aggressively toward more effective solutions to the national highway safety problem.

During the same year, Congressman John Baldwin proposed an amendment to the Federal-Aid Highway Act of 1965 that would require each state to set up a highway safety program aimed at reducing property damage, injuries, and deaths from traffic accidents on highways within the federal-aid system. Standards for the state programs would have to be approved by the Secretary of Commerce, but the amendment did not provide for federal funds to help the states meet these standards. The Baldwin Amendment was eventually incorporated in the Highway Safety Act of 1966.

In 1966, the Senate Committee on Governmental Operations Subcommittee on Executive Reorganization held hearings on the Highway Safety Act. The subcommittee concluded that the federal government did not have a clearly defined national safety policy and that meaningful progress in highway safety could be achieved through an expanded federal role.

The report on the act of the congressional conference committee articulated the underlying philosophy of the new federal role in highway safety. The conference committee applauded the efforts of some states to develop comprehensive highway safety programs, but it concluded that these programs "are insufficient and there are too few of them." In broad scope, the conference report set forth as ground rules for federal-state management of highway safety that "the federal government can and must assume a position of leadership in this field. The actual working programs must remain in the hands of the states."

Introduction to the Highway Safety Act of 1966

The basic features of the Highway Safety Act of 1966 cast the mold for national highway safety policy, and this policy has retained essentially the same shape. The federal government did not so much usurp the role of the states in highway safety as it superimposed uniformity on some aspects of state programs and offered a source of financial assistance for state efforts.

NATIONAL SAFETY STANDARDS

The heart of the act is section 402, which calls for the promulgation of uniform national standards that state programs must meet in order to qualify for federal highway safety grants. The statute requires that the standards be expressed in terms of performance, but over the years they have tended increasingly to specify required means of achieving this performance. At present, there are 18 such standards, which may be divided into three categories:

- 1. Standards intended to provide infrastructure for a highway safety program, such as traffic records systems, accident location reporting, registration, and driver licensing;
- 2. Standards that provide operational guidelines for managing specific activities, such as highway design requirements, uniform signing, uniform rules of the road, and driver education; and
- 3. Standards specific to certain problem areas common to all states, such as alcohol consumption and school bus safety.

Monitoring state compliance with the standards was originally the province of the National Highway Safety Bureau, a part of FHWA. In 1970, the responsibility for driver- and vehicle-related standards was separated from that for highway construction and signing standards. The National Highway Safety Bureau was replaced with a new organizational unit,

NHTSA, which assumed supervision of the driverand vehicle-related standards; the highway-related standards remained under the jurisdiction of FHWA. Both units administer the standard related to pedestrian safety.

State safety programs that are in compliance or are attempting to comply with the federal standards are eligible for federal highway safety grants; a portion of each state's grant must be passed through the state program to local areas. FHWA and NHTSA have jointly administered the highway safety grant program. Recent legislation and administrative action are tending toward separate management, and Congress now funds activities of the two agencies separately.

Grants are used as both carrot and stick to encourage compliance with the standards. States that have not made reasonable progress or that have failed to implement an approved program might have their highway safety grants withheld; originally, noncomplying states might also lose 10 percent of their federal-aid highway construction funds. On the other hand, the Secretary of Transportation may award additional funds to states that pass safety-belt legislation or that achieve certain reductions in highway fatalities or fatality rates.

STATE ADMINISTRATION OF SAFETY ACTIVITIES

The 1966 Highway Safety Act designated state governors as the officials ultimately responsible to the federal government for the highway safety programs of their states. Intrastate administrative structures were left to the discretion of each state. As a result, state organization to implement highway safety programs is quite diverse.

States have been asked to designate a governor's representative to deal with the federal agencies, to administer grants within the state, and to coordinate

intrastate highway safety activities. Governors' representatives also maintain contact with their counterparts in other states in order to compare notes on state programs.

The governor's representative may report directly to the governor or may be part of the state highway, transportation, motor vehicle, or police office. The influence of this official within the state may depend on his or her place in the administrative or political structure of the state, on the relative amount of funds available for safety purposes, or on factors peculiar to any individual state.

Many highway safety activities are actually carried out by local jurisdictions, and at least 40 percent of the funds a state receives under section 402 must be spent in the local jurisdictions. Local expenditures are subject to state approval, but they do not always conform with the comprehensive state safety plan. In many cases, funds are passed along to localities upon application rather than as a component part of a problem-oriented statewide approach to highway safety.

Almost every aspect of the federal highway research program is undertaken at the federal level under the auspices of NHTSA or FHWA. Section 403 of the Highway Safety Act of 1966 provides funds for cooperative efforts with state and local agencies, institutions, and individuals for the purposes of training or educating highway safety personnel, granting fellowships in highway safety, improving accident investigation procedures, developing emergency medical service plans, producing demonstration projects, and furthering other safety-related research or manpower development purposes. These funds are budgeted and administered separately by NHTSA and FHWA along the same lines that divide their responsibility for the safety standards.

In addition to the funds provided under section 403, states may use part of the grants they receive under section 402 to support research projects related to safety problems. Apart from the funds provided under the Highway Safety Act, state safety research efforts may receive some support from the percentage of highway construction funds that is earmarked for planning and research.

THE 1966 HIGHWAY SAFETY ACT IN 1977

The 1966 act was a departure from the leave-it-to-the-states approach of previous years; it carved out a niche for the federal government in the nation's highway safety efforts, providing unity, direction, and financial and technical assistance to state and local programs. The act was a response to the times—a high and rising accident rate, ineffective efforts in some states to control this rate, lack of coordination

among state programs, and the emergence of truly national safety problems.

But times are changing. Despite greater use of motor vehicles, traffic fatalities have fallen from 53 000 in 1966 to 46 000; the death rate is down from nearly 3.7 per hundred million vehicle-kilometers (6 per hundred million vehicle-miles) to 2.2 (3.5) in 1975. Although this decline is partly due to energy conservation measures, some part may also be due to the success of the Highway Safety Act. Whatever the distribution of causality, the downward trend in accidents is not conclusive evidence that the 1966 act is the best approach to highway safety more than a decade later.

It is evident that the Congress, reflecting the mood of state and local governments, has become increasingly restless about the prescriptive and punitive aspects of the federal-state relationship in highway safety. In 1973, for instance, Congress amended the Highway Safety Act so that new standards cannot be added, nor existing standards revised, without the approval of Congress. In 1976, the Secretary of Transportation's authority to impose sanctions and penalties for noncompliance with the standards was severely restricted. The legislative mandate calling for reevaluation of the act, which prompted the TRB conference, is perhaps the culmination of this uneasiness about how the federal-state partnership is managing the national highway safety problem.

Although the congressional mandate provided the immediate impetus, there are ample reasons that taking stock of present patterns and programs for managing highway safety problems is in order at this time.

- 1. Highway traffic conditions have changed, altering the nature of the problem to be dealt with. For instance, there has been considerable technological improvement in vehicles, in highway construction and marking, in emergency medical care, and in many other factors that affect accident and death rates; there are more "educated" drivers; speed limits are generally lower; daily commuting distances have increased; there are more cars on the road, and more of these are small cars. Although the net effect of these changes cannot be calculated, there is no doubt that highway conditions today are different from those in 1966. Further, these changes have affected different states in different degrees and patterns.
- 2. Highway safety programs have matured. Legislation designed to stimulate and direct state highway safety efforts in their fledgling form may unduly restrict mature state programs. Now that many states have set up the administrative machinery for confronting their traffic problems, they may need more latitude in solving them. Conversely, some types of federal assistance—for research and training programs, for instance—that might have been premature in the

context of the state safety programs of 10 years ago may be highly fruitful now.

3. After a decade-long learning period, the nuts and bolts of the national program may need adjusting so that it will achieve its highway safety objectives to a greater degree and more efficiently. Now that the new approach of 1966 has been road tested, it should be possible to sort out its long-term deficiencies and strengths and to alter the act accordingly.

The Conference on the Future of the National Highway Safety Program provided a forum for weighing the significance of these changes. Each participant's experience under the program and in the field was brought to bear on designing a "best" approach for 1977 and beyond. Although each workshop took a different avenue, the common ground for all was defined by two questions:

- 1. How should the federal government participate in the effort to improve highway safety, and how does its role differ from state and local roles?
- 2. How should a national (as opposed to federal) program be structured to achieve best the goal of reducing traffic accidents and their severity?







Federal Role in Highway Safety

Both the resource paper DOT provided for the conference (Discussion of the Issues and Alternatives) and the keynote speakers asked the conferees to consider their assigned topics against the broad backdrop of defining what highway safety actions are appropriate to the federal government. This implied that any changes the workshops might recommend should be more than modernizations of the 1966 Highway Safety Act to meet current conditions; they should also be part of a new basic foundation on which adjustments for future conditions might rest.

Narrow, program-oriented recommendations are necessarily predicated on specific assumptions about the program's environment. Such recommendations can be obviated by the future failure or drastic alteration of these assumptions. For instance, a reorganization of DOT, a decision by Congress to eliminate all categorical assistance programs, or a severe energy crisis might make today's conclusions irrelevant tomorrow.

For this reason, the chairman of the Conference on the Future of the National Highway Safety Program suggested that the workshops couch their recommendations in terms of functional relationships, which are more likely to withstand the institutional. statutory, and circumstantial changes that will inevitably occur over the next few years. A very valid example of such a change might be a reduction in highway safety funds. The success of the Highway Safety Act, as much as or more than its deficiencies, may inspire this result; Congress may feel that the act has now fulfilled its purpose and that the federal effort could now be relaxed in favor of other, less robust programs. Further, if diminishing energy supplies and increasing gas and oil prices reduce the number and the speed of automobiles using the highways, one by-product could be fewer traffic accidents and less pressure to increase or even to maintain the present scale of highway safety commitments.

If a reduction in federal funding should occur, the

national highway safety effort may have to strip down to its essentials. The question of what in the federal role is truly essential and truly unique then becomes very important. Should the reduction in effort take the form of lesser support for all programs? Should some programs be terminated? If so, which should survive? Can some parts of the federal effort be accomplished as well as state or local levels? Could some be carried out by the private sector?

The shape of the highway safety program's future may be affected not only by the level of funding but also by the form in which that funding is forwarded to the states. Different grant-in-aid delivery systems produce very different program management results. The principal difference lies in the degree of federal control over state and local programs; this control is a very important aspect that must be considered in defining the proper federal role in highway safety. Several approaches to grant-in-aid delivery may be distinguished in terms of the program control each allows.

- 1. The prescriptive approach emphasizes what the federal money is spent for, but it offers little organizational guidance. Program requirements each jurisdiction must satisfy are defined precisely, and explicit approval at the federal level is required for every expenditure.
- 2. In the process approach, the principal emphasis is on how decisions are made rather than on the substance of the decisions themselves. The prescriptions of the preceding approach are replaced by general guidelines with relatively few explicit program requirements and no sanctions for noncompliance. There are, however, more stringent organizational and program planning and evaluation requirements.
- 3. Under the block grant approach, a wide range of eligible uses for federal funds is defined. State expenditures are not prescribed but are postaudited to ensure that funds were in fact spent on permitted

activities. There could be an additional requirement that states maintain their previous level of effort in order to avoid the straight substitution of federal dollars for state and local dollars.

4. The revenue-sharing approach would make federal funds generally available for state use without any restriction on the nature of their use. Untagged tax dollars are simply redistributed from federal to state and local jurisdictions.

Quite often, the selection of a particular approach is dictated by precisely how federal objectives are defined and by how nearly federal and state priorities match. Obviously, narrowly defined federal objectives that differ from those of the states would invite the use of stringent categorical grant programs—the prescriptive approach.

The 1966 Highway Safety Act took a strong prescriptive stance that may no longer be necessary. The dimensions of the highway safety problem are now generally viewed as national rather than state or local or even solely federal in scope, and there is a better understanding of program objectives and priorities. At least some identity of purpose and approach has emerged among the states. It may now be time to allow the states greater latitude in program management, leaving to the federal government those functions that can only be managed at the federal level and those that can best be managed at the federal level.

The definition of what to include in this distinctively federal role in highway safety is quite different today from what it was in 1966. The Congress, DOT, and the states have in various ways asked for redefinition. Some of their concerns were enumerated for the TRB conference by its chairman, Noel Bufe:

- 1. Patterns of funding—whether federal assistance should be delivered in the form of categorical grants, block grants, or revenue sharing;
- 2. Top-down versus bottom-up problem definition and planning—whether program initiatives should come from the federal, state, or local level;
- 3. Whether federal standards and goals should be standards, guidelines, advice, or some combination of these:
- 4. Diversity among patterns of state organization to carry out highway safety programs and whether some state highway safety officials are less influential than they should be in their state governments;
- 5. Coordination of highway safety planning with highway construction expenditures;
- 6. Development of planning, evaluation, and statistical analysis at the state level;
- 7. Reduction in federal funding and how state agencies can be institutionalized to ensure their sur-

vival without federal assistance;

- 8. Organization of the federal effort and whether the program should be managed by a single agency rather than two agencies;
- 9. Distribution of effort between state and local problems and which should have primacy; and
- 10. Sanctions and incentives to encourage state programs to adhere to national goals and standards.

A final, and more comprehensive, concern expressed by the chairman was that the federal role should be defined in the context of change; it should provide a viable future platform for highway safety efforts. To this end, some possible ways that the federal highway safety program might be changed to meet contemporary and potential future problems were presented as a point of departure for workshop discussions. These suggestions included

- 1. Placing greater emphasis on technical assistance to state and local highway safety programs;
- 2. Placing greater emphasis on research and evaluation;
- 3. Funding state programs on a competitive basis as a means of encouraging the development of planning, quantitative analysis, and evaluation expertise on state and local levels;
- 4. Encouraging greater use of mass transportation, including both private car pools and public systems;
- 5. Considering the health aspects of traffic stress and environmental pollution;
- 6. Considering the economical use of land resources for highway construction;
- 7. Developing and maintaining a national repository for highway safety data that would be available for research and analytical purposes;
- 8. Combining supervision of construction and safety efforts in a single agency within DOT; and
- 9. Encouraging stronger influence and greater activity in the government's highway safety effort by private-sector organizations.

Although it was not within the purpose of individual workshops to confront the entire range of concerns, the workshops did address their assigned subjects from the viewpoint of "What should the federal government do?" The implicit approach was to isolate and reserve for action on a national level only those functions that are unique to or could best be performed by the federal government; all other functions would be left to the discretion of the states or, at the option of each state, to local jurisdictions. The workshop recommendations that developed generally viewed the new federal role as more advisory, supportive, coordinative, and less prescriptive than it has been under existing legislation.

Workshops: Discussion and Recommendations

Most participants in the Conference on the Future of the National Highway Safety Program were assigned to a workshop on the basis of their own stated preferences. However, in arranging the workshops, some effort was made to select a mix of backgrounds and viewpoints that would enhance the balance of the whole and provide DOT with a full range of responses. Thus, although each workshop adopted a series of recommendations by majority vote, unanimity was seldom reached, nor was it particularly sought. Discussion was the keynote and the real contribution of each workshop.

Although each of the six workshops had a different focus, their areas of interest often overlapped—particularly as discussion ranged over the implications of their recommendations. In some cases, the discussion or recommendations were highly dependent on those of another workshop; for example, questions of program management, jurisdictional relationships, and sanctions and incentives were closely related to the recommendations of the workshop on standards. For this reason, the conference met in plenary session on the evening of the first full day so that all participants might be informed of the direction taken and the progress made by all workshops.

The presentation of workshop reports to the final plenary sessions widened the exchange of ideas and viewpoints and, in some cases, resulted in minor alterations of or additions to the initial recommendations of the workshops. As in the workshops themselves, the objective of the plenary endorsements was not unanimity; comments, additions, and differences were heard and discussed, and many of the exceptions to the workshop reports have been noted here. Because of the general emphasis on discussion, the workshop summaries, which follow, attempt to report on the route the workshops took to arrive at their findings as well as on the conclusions themselves.

HIGHWAY SAFETY STANDARDS AND THEIR USE

Chairman: Charles H. Hartman Vice Chairman: William H. Franey

Recorder: Cordell Smith

Participants: James E. Aaron, John P. Anderson, Gerald P. Balcar, Joseph F. Banks, Jr., Donald J. Bardell, R. Clarke Bennett, Elmer N. Burns, Joseph E. Cameron, Doris N. Carroll, Edward B. Cohen, Robert R. Coleman, William D. Cushman, James E. Forrester, Sandra W. Gerson, Edward F. Kearney, Robert Lazarewicz, Charles G. Livingston, Joseph P. Murphy, Carl Nash, Thomas O. Reel, James L. Rummel, Mark Steinbach, Patricia F. Waller, James E. Wilson, Paul Yates

Background

The present national highway safety program is structured around the 18 highway safety standards detailed by DOT. These standards spell out specific countermeasures designed to alleviate problems that have been identified as national or at least as common to all states. State programs must meet these standards in order to receive highway safety grants from the federal government. Thus, the standards prescribed are requirements, rather than guides or goals, for state highway safety programs.

Although keeping the present standards in their present form would have the advantage of familiarity—state program managers know what is expected of them, and states are generally in compliance with these standards—there are problems with this system. For instance, mandatory standards that require certain measures to be included in state programs allow little latitude for solving the unique problems of each state and its local jurisdictions. In addition, the flexibility of program managers is limited by these standards, and innovation may be inhibited by the stan-

dards' concentration on detail. A wide variety of alternatives to the present system could be considered.

- 1. The number of standards could be reduced by eliminating or combining some of the present standards.
- 2. Standards could be based on the achievement of performance criteria specified in section 402 of the 1966 act, so that the federal interest would lie in the results of state programs, rather than in the means of achieving these results.
- 3. Standards could be classified into two types—those in which national uniformity is essential and those in which states must have a program that meets minimum requirements or specifications but leaves program content to the states.
- 4. Standards could be set forth as guidance principles only.
 - 5. All standards could be eliminated.
- 6. Standards could relate only to activities carried out with federal funds.
- 7. National standards, guidelines, and priorities could be determined by a commission that represents various constituencies of the highway safety community.

Discussion

The first issue the workshop addressed was how to define the work standards—as mandatory requirements, as guidelines, or as advisories. It was noted that the definition of standards is symbolic of the relationships that exist among federal, state, and local jurisdictions, that is, whether standards are intended as a control device. It was agreed that national uniformity is essential in some aspects of highway safety, such as traffic signals. On other points, accident situations or resources to meet them may vary widely from state to state; here, national uniformity seems less important than giving states latitude to identify their own major problems and priorities and to develop their own solutions.

A two-part approach to the question of standards evolved from this discussion. The first would require compliance with certain nationwide traffic safety practices; the second would require that any procedures a state might use to develop other measures to combat its safety problems be approved by DOT.

The workshop's task was then to list the areas in which national uniformity is both feasible and desirable. Those identified initially were (a) rules of the road; (b) driver licensing; (c) signs, signals, and markings—including school bus color and markings; (d) motor vehicle registration and titling; and (e) traffic records data and the criteria for their collection. Two additional items were considered for inclusion: highway-user education and highway design, construction, and maintenance.

The adoption of highway-user education as a uniform requirement was discussed at some length. Those in favor of including it in the list argued that, just as drivers should be assured of uniformity in highways and markings, they should also be assured of equal driver capabilities in each state. Opponents felt that uniformity in drivers, in contrast to inanimate objects, would be impossible to achieve, even if uniform driver-education techniques were in use. In a formal vote, 8 workshop members favored including driver education, 11 were against it, and 5 abstained. The suggestion that highway design, construction, and maintenance be among the uniform requirements was favorably received and adopted by the workshop.

Parallel to the six mandatory requirements would be a program process requirement. This would impose uniformity on the way states approach their problems, but it would not specify what their problems are or what countermeasures they should apply to any given problem. Process approval would hold states to certain basic criteria for problem identification, to serious consideration of a full range of potentially effective countermeasures, and to future evaluation of the effectiveness of the countermeasures chosen.

Those of the present 18 standards that are not in the list of six uniform requirements could be among the possible countermeasures states consider, but the countermeasures states propose need not be limited to the present standards. States would be free to innovate in designing solutions to fit their own situations and to call on any source of technical assistance. The federal government, in turn, would supply research findings or other information that might help state personnel analyze their problems, design and apply countermeasures, or evaluate results. The particular countermeasure selected would not be subject to review and approval by the federal government; federal oversight would extend only to the procedures a state uses to arrive at the chosen countermeasure.

Recommendations

In its final report to the conference as a whole, the workshop on Highway Safety Standards and Their Use recommended the following:

1. A list of uniform national requirements should be developed. These would be based on but not necessarily limited to given reference documents or programs, such as the Uniform Vehicle Code, the Manual on Uniform Traffic Control Devices, and current FHWA safety and construction design standards. The national requirements would extend to (a) rules of the road; (b) driver licensing; (c) registration and titling; (d) traffic control devices; (e) highway design,

construction, and maintenance; and (f) traffic records systems.

2. Approval of the planning and evaluation process should be required of all federally funded state safety programs. States could use technical assistance from any source in carrying out these approved procedures. The federal government would review and approve the procedures proposed before a countermeasure is actually selected and put into use, but the countermeasure itself would not require approval. The required process would consist of three major steps: (a) Problem identification procedures would include development of a goal statement, data synthesis, data analysis, and preparation of a problem statement based on the data analysis; (b) countermeasure selection procedures would include identification of alternative countermeasures (which might entail one or more of the present elements of the highway safety program or parts thereof), determination of the likely impact of individual countermeasures and sets of countermeasures, selection of countermeasures to be used in the program, and development of an implementation and evaluation plan; and (c) effectiveness evaluation would occur 2 or 3 years after implementation of the program detailed above and would include measuring the results of the program, using accident and injury reduction as measures where appropriate, and comparing actual results with projected or anticipated results.

Conference Response

Most of the questions and comments from the floor during the plenary session dealt with one of three categories: (a) the identification of some, but not all, existing standards; (b) the need to clarify the intent of certain aspects of the report; and (c) the apparent shift of control from federal to state governments.

There was some concern that failure to specify certain of the present standards diminished the importance of these standards. Assurance was given that none of the existing 18 standards would necessarily be eliminated or unfunded merely because it would not be specifically required of state programs. Any existing standard could be included in state programs and funded if the standard were considered an effective countermeasure to the identified problems of a specific state.

Questions about certain aspects of the report, such as the acceptability of private technical assistance or the use of particular effectiveness-evaluation techniques, were resolved by the workshop chairman. It was also questioned whether reducing required program elements to six might not leave the states with an area of program discretion too wide for their present level of experience and competence. Whether the states could capably respond to greater program

responsibility was debated, but there was no motion to amend the workshop report.

The workshop's recommendations were accepted by a majority of the conference participants. Two exceptions to the recommendations were filed with the conference committee. One expressed the view that basic issues, such as weaknesses in the present standards and the concepts underlying various management alternatives, had not been adequately addressed in workshop discussions. It also underscored the opinion that the final workshop recommendations gave the states program flexibility beyond their present levels of competence and experience.

The second exception pointed to the comparative importance of the behavior of highway users as a cause of traffic accidents and suggested that the list of federal requirements for state programs include standards in program administration and evaluation, traffic laws or regulations, vehicle requirements, traffic-safety education, driver licensing, police traffic services, traffic courts and adjudication, and emergency medical services.

FEDERAL-STATE PROGRAM MANAGEMENT

Chairman: G. Albert Weese
Vice Chairman: Norman Darwick
Recorder: Robert D. McMillen
Participants: Clifford E. Aden, Dwight Carlson,
William L. Carson, Kenneth E. Cook, Frank Ephraim,
Wayne S. Ferguson, Carlton Fisher, G. A. Fleischer,
James E. Foley, Thomas A. Hall, Gloria Hill, Everett
L. McBride, Donald E. Orne, Joe Rhodes, Edwin M.
Smith, Lynne Smith, Ferdinand Thar, Orin J.
Tonemah, Vincent D. Walsh, Sr.

Background

Since 1970, DOT has divided management responsibility for the highway safety program between FHWA and NHTSA. FHWA is responsible for the highway-related standards required of state programs, and NHTSA manages the driver- and vehicle-related standards. Both agencies jointly administer the highway safety grant program. Each agency has its own field offices through which state and local problems are filtered. Both NHTSA and FHWA have regional offices within the same regional boundaries, and FHWA also has division offices in each state.

State program managers are now accustomed to dealing with this dual supervision, although it does delay action on their programs since clearance must come from both agencies. Unfortunately, the delay is not compensated by a doubly thorough review of the programs, because neither NHTSA nor FHWA reviews in detail the technical aspects of programs relating to the other's purview.

As alternatives to the present federal structure, it has been suggested that all federal safety activities be delegated to a single agency within DOT or that FHWA and NHTSA responsibilities for procedural requirements or program approvals be completely separated.

At the state level, locations and lines of management vary widely from one state to another. The Highway Safety Act specifies only that a state's governor must be responsible for administering the state's program; beyond this, each state organizes its highway safety efforts according to its own priorities, interests, and political structure. At present, the highway safety office in 40 percent of the states is directly under the governor, usually in a highway safety agency; in the other states, the safety office is within a major department, usually the department of transportation or the department of highways.

The federal government influences state organizations and operations only indirectly, since state highway safety projects must be subjected to planning, review, and fiscal control procedures in order to be approved for funding under section 402. Although these procedures vary from state to state, they are at least consistent over time within any one state.

There are several possible ways that the federal government's influence with respect to state organization of highway safety matters could be changed.

- 1. The state highway safety agency could be given total responsibility for both federal- and state-supported programs, and the duties of this agency could be spelled out in more detail by the federal government.
- 2. The federal government could require minimum levels of expenditure on state planning and administration in order to encourage competency on the state level.
- 3. The functions of state agencies could be split along the same lines as in the federal government, that is, between highway-construction safety and traffic safety.
- 4. The federal government could allow the states complete flexibility in organizing state safety efforts.

Discussion

The workshop's deliberations focused on alternatives and recommendations that could be influenced by administrative or legislative action of the federal government; actions that states might take on their own were not considered. It was agreed that program management should be designed to minimize red tape, serve the needs of the public, and preserve the continuity of existing programs. The management process should lend itself to problem identification, data analysis, and evaluation procedures. The workshop first considered the alternatives for improving

state management systems and then the alternatives for management of the federal program. It was recognized that the two systems must be compatible and consistent.

In the course of discussion, the basic state management options were narrowed to three: keeping the present system, allowing complete flexibility in state organization, and splitting responsibility between safety construction and traffic safety. It was generally agreed that governors should be responsible for the management of state highway safety programs but that allowing them complete program flexibility was not realistic—some federal guidelines are a necessity. The dual-responsibility form of organization was also believed to be impractical. It was unanimously agreed that vesting the state safety program in a single agency would best ensure the continuity of present programs and the coordination of the safety construction standards with the categorical programs. This form would also facilitate management along the principles of problem identification and evaluation.

It was generally felt that two additional requirements should be placed on state programs. The first would establish minimum levels of competency in planning and administration. The emphasis in this condition would be on ability rather than on the level of investment brought into the process of planning and administration. Although programs in several states are mature enough to participate to some extent in financing their own departments, it would be unrealistic to expect states to contribute more than 20 percent of the funds used for planning and administration over the next several years.

The second requirement would give state safety agencies coordination responsibility for all other state-supported highway safety programs and related activities, along with their responsibility for the section 402 program. Four workshop members felt that this coordinative function should extend to federal, state, and local safety activities. Further, certain activities, such as direct responsibility for countermeasure planning and evaluation, should be made an explicit part of this function. There was a unanimous vote to include this modified proposal in the workshop's report to the full conference.

The workshop then turned its attention to the management of the federal program. It was pointed out that many federal agencies—NHTSA, FHWA, HEW, and HUD—have some role in highway safety. The special needs of the Indian Nation in the safety program were also discussed. It was generally agreed that neither the existing system of joint NHTSA and FHWA responsibility nor the alternative of completely separating management of the highway and traffic safety standards would be effective or desirable in the long run. The workshop also considered the following policy recommendation of the Na-

tional Governors' Conference:

The governors recommend that the National Highway Traffic Safety Administration and the Federal Highway Administration administer the Highway Safety Program in a unified manner as a single program. The two administrations should move toward a programmed approach for highway safety funds by adopting flexibility in administering the Highway Safety Program. The federal aid requirements should be simplified and states should be permitted to focus federal highway safety resources on the most pressing problems in each state.

Workshop members agreed that the single-agency approach is the best way to coordinate systematic efforts in problem identification, data analysis, and evaluation. They also felt that this approach would provide uniformity of program administration and give proper priority to the highway safety program. It was recognized that any recommendation that the federal program be managed by a single agency is contingent on a reorganization of DOT. In the absence of reorganization, it was agreed that the funding of the highway safety program should be through a single source.

Recommendations

The workshop developed basic recommendations for national and for state organization.

State organization

The governor should be responsible for the administration of the highway safety program and for the adequacy of its final performance. In order to achieve the objectives of the program, the governor should retain full organizational flexibility. The governor should be urged to concentrate responsibility for problem identification, countermeasure development, and effectiveness evaluation in a single central agency. The workshop also recommended two requirements for state highway safety agencies that could be applied regardless of the organizational form these agencies take.

- 1. Minimum levels of competency in planning and administration—The institutional development of the highway safety agency should be expanded by requiring that certain skills (e.g., planning, evaluation, and statistical analysis) be obtained and maintained. No administrative ceiling on funding for planning and administration should be permitted to interfere with the accomplishment and maintenance of these objectives. State matching funds of not more than 20 percent would be required. The Secretary of Transportation may waive this requirement for the Indian Nation.
 - 2. Coordination for state safety agencies—Because

there was some disagreement among workshop members on this requirement, two versions were described: (a) DOT would require that the highway safety agency have coordination responsibility for state-supported highway safety programs and related activities in addition to the section 402 program and (b) the state highway safety agency would coordinate the state highway safety program plan with other federal, state, and local programs and activities relating to or having impact on highway safety (this coordination would include but not be limited to access to state and local traffic records data and other related highway safety program data to ensure adequacy of problem identification as well as direct responsibility for countermeasure planning and evaluation).

Federal organization

NHTSA and FHWA should administer the National Highway Safety Program in a unified manner as a single program. To facilitate the single-program concept, Congress should provide a single funding authorization for the highway safety program. Should reorganization occur, DOT should consider establishing a single agency to administer highway and traffic safety.

Conference Response

The presentation of the workshop's recommendations to the conference as a whole provoked a lengthy discussion among participants. Most of those expressing disagreement with the workshop's conclusions thought that the basic state-level recommendation should have required that the state highway safety agency have review and approval responsibility over all highway-safety-related activities at the state level. A few of those disagreeing with the report thought that requiring state financial participation at a possible level of 20 percent of planning and administration costs is not realistic and would hurt the highway safety program in some states.

The proponents of the recommendations agreed that it would be desirable for the highway safety agency to have review and approval authority over all state highway safety activities, but they felt that this is not realistically possible in the foreseeable future because the highway safety program is not high enough on the states' lists of priorities to permit this type of overview responsibility to become a reality.

The workshop report and recommendations were accepted by the conference by a vote of 44 to 42. One formal dissenting opinion was filed during the week following the conference. In this opinion, the workshop's recommendations failed to include substantive proposals for change in the present federal

or state systems for program management; the workshop should have clearly recommended that a single federal agency be designated to administer highway safety programs and that definite guidelines be set forth for the organization of state agencies. Finally, it was felt that the state agency should control rather than coordinate highway-safety-related activities in order to elevate the influence of this agency and its safety efforts among other state agencies and activities.

STATE-LOCAL RELATIONSHIPS

Chairman: Francis X. Colleton

Vice Chairman: Patricia Hause Ehrlich

Recorder: Jan H. Lyle

Participants: Donato J. Altobelli, H. Lee Arledge, Donald S. Berry, John F. Blenn, Thomas W. Brahms, David H. Bulman, Rupert A. Doan, J. Robert Doughty, Richard Guyer, David W. Gwynn, Donald B. Head, Vern L. Hill, Paul C. Hooper, K. B. Johns, Andrew J. Lampe, Thomas A. Lanhard, William H. Lautz, James C. Ray, William E. Roach, Jr.

Background

Although local agencies actually perform many highway safety activities, there is no direct federal pipeline to local areas. Any federal funds that local jurisdictions receive for highway safety purposes pass through the state highway safety agency. Under the Highway Safety Act of 1966, 40 percent of the funds a state receives under section 402 must be expended by local jurisdictions. Although states control the distribution of funds among local areas, there is usually little coordination of local projects with state plans and even less with federal goals.

Just as the federal government does not specify all elements of state highway safety programs, state governments have difficulty encompassing local operations within the overall state program. State highway safety efforts may be handicapped by inadequate data or by the lack of analytically trained manpower, but local areas are even more poorly equipped in this respect. As a result, local requests for safety funds are largely for ad hoc projects, and few local safety efforts originate in a process oriented to problem identification and solution. At the federal level, there is usually little review of local programs or of the way the state selects local projects for funding.

State-local and federal-local relationships are critical to the effective delivery of a highway safety program. Traditionally, however, the federal government affects local activities by influencing state-local relationships. Among the many options that could be used to change this relationship with regard to highway safety are the following:

- 1. States could be required to develop an intrastate apportionment formula to allocate the 40 percent for local funds among counties and cities in order to ensure a more objective distribution of highway safety funds.
- 2. States could be required to develop explicit criteria for selecting projects to be financed with the 40 percent for local funds.
- 3. The 40 percent requirement could be eliminated, leaving states to pass funds through to local areas at their own discretion.
- 4. The share of section 402 funding that goes to local jurisdictions could be increased at the expense of state-level funding.

Discussion

At the outset, the workshop decided that whatever recommendations it proposed should provide sufficient flexibility to allow for differences between states and their local constituents in administrative organization and authority. Discussion then moved to the four suggested alternatives to the existing system for funding local safety efforts. The first (that states should distribute local funds by formula) was rejected on the grounds that the states would be mere conduits from the federal to local governments and would have little discretion in project selection. It was felt that either state programs would be diminished in favor of local options or local options would have to be dictated by the states; neither result was considered acceptable. The alternative that would eliminate the 40 percent minimum was also rejected; it seemed unlikely that local governments would be willing to give up this guarantee of safety funds.

The workshop considered the basic structure of the present system acceptable, since it allows state autonomy, and also functional. It was felt, however, that some mechanism was needed to coordinate local projects with state safety plans. The members of the workshop agreed that the development of project-selection criteria by the state, in cooperation with local governments, would provide local officials with a better understanding of the highway safety program and their roles in it. In addition, a more comprehensive program addressed to local problems might result from considering highway construction safety along with section 402 funds. Approval was given to retaining the 40 percent minimum requirement, but increasing the local share should be encouraged where this would be practical and productive.

The workshop also discussed explicitly what role the federal government should play in highway safety programs in general. The idea that a national statistical data base should be developed was rejected until such time as its usefulness, practicability, and limitations could be evaluated. It was suggested that the federal government could best serve a national highway safety program by

- 1. Increasing financial and technical assistance for the purposes of accelerating and promoting effective highway safety programing at all levels of government (a predictable and adequate source of highway safety funding should be provided through trust funds or other equally dependable means);
- 2. Monitoring and disseminating information about federal, state, local, and private-sector efforts in research, demonstration, and evaluation programs (a specific percentage of section 403 funds should be earmarked for research by the states);
- 3. Initiating legislative recommendations at the national level; and
- 4. Developing a public information program covering needs, projects, and successes in the highway safety field in order to generate public awareness and support.

Recommendations

The workshop suggested several actions affecting the states and their local jurisdictions that would increase the efficiency of highway safety programs.

- 1. Increased highway safety funding in local jurisdictions is appropriate and should be encouraged. The requirement that a minimum of 40 percent of section 402 funds be expended by or for the benefit of local government is good and valid and should be continued. In states in which many highway safety activities are local responsibilities, the expenditure of more than this minimum is appropriate and should be strongly encouraged. In addition, special efforts should be made to increase the expenditure of highway construction funds at the local level.
- 2. The federal government should continue to rely on the states to aid local jurisdictions in their highway safety efforts. Local projects funded under section 402 should remain subject to state approval. This delivery system requires close coordination between state and local jurisdictions in identifying problem areas. The state, in consultation with local governments, should develop and make available criteria for selecting local projects.
- 3. Existing safety construction categorical grant programs under title 23 of the 1966 Highway Safety Act should be eliminated in favor of developing a highway safety construction grant program for all public roads in a state. This program would require that criteria be established by the state, in consultation with local officials, for a fair and equitable distribution of funds, subject to approval by the Secretary of Transportation.

Conference Response

The workshop recommendations prompted several comments concerning the local share of highway safety funding. One participant suggested that programs should develop from the bottom up and that local areas should therefore be financed directly by the federal government. There was also some question as to whether the recommendations indicated that the 40 percent share of section 402 funds must be passed through to local areas for expenditure or whether it could be spent by a state on behalf of local jurisdictions. The workshop chairman reported a ruling that at least some state expenditure in local areas, but not by local areas, can no longer be included as part of the 40 percent local share.

The workshop recommendations were adopted by the full conference without further discussion.

RESEARCH AND MANPOWER DEVELOPMENT

Chairman: Robert L. Marshall Vice Chairman: B. J. Campbell Recorder: Robert L. Baldwin

Participants: Roy W. Anderson, John E. Baerwald, Isaac Barnett, Allan E. Cafferty, James E. Carnahan, Gerald J. Driessen, Lee N. Hames, Robert L. Hess, Robert Knaff, Charles W. Larson, Joseph E. Lema, Burton W. Marsh, A. James McKnight, Willa Mylroie, Richard F. Pain, Ronald C. Pfefer, Charles F. Sheffey, Robert Voas, Charles V. Wootan

Background

Since 1966, almost every aspect of the federal highway safety research program has been centrally initiated and managed. The research efforts of NHTSA and FHWA are roughly divided along the same lines as their management jurisdiction.

NHTSA research has concentrated on problem identification and isolation and the development of countermeasures in both technical and behavioral areas. NHTSA has also conducted demonstration projects in alcohol safety, emergency transportation, selective enforcement, and adjudication.

FHWA research in highway safety is part of its larger research effort, the Federally Coordinated Program for Research and Development, which encompasses applied research in safety, traffic environment, materials, and structures. The Implementation Division of the Office of Development translates research results into applicable form by field testing and evaluation and by the development of operating tools, such as manuals, specifications, and films. New technologies are transferred to users through experimental or demonstration projects and programs conducted by FHWA regional and division personnel.

Although virtually all research is conducted within DOT, section 403 of the Highway Safety Act provides for funding safety research and development that are carried out with state and local agencies, institutions, and individuals. The areas in which research may be assisted with section 403 funds are quite broad and allow considerable latitude in what can be undertaken and by whom.

There are a number of ways in which state participation and involvement in research, development, and demonstrations might be increased. Among these are that

- 1. Research funds appropriate under section 403 (or a new specific section) could be awarded to the states on a project-competitive basis;
- 2. All, or a major portion, of section 402 funds could be allocated to state- or local-directed research and development projects, with management vested in a state agency;
- 3. The federal government could provide technical assistance to individual state, regional, or local research and development projects (the assistance could be financed under section 403 and the projects themselves under section 402); and
- 4. The difficulty in transferring research activities financed under section 403 into operations funded under section 402 could be alleviated by providing start-up funds for new programs.

Section 403 of the Highway Safety Act also provides for training grants and fellowships in highway safety, and both NHTSA and FHWA have assistance programs. In order to widen such opportunities at state and local levels the following techniques might be considered:

- 1. A portion of section 403 funds could be allocated to the states for manpower development, without specifying the type of assistance to be provided;
- 2. States could be required to match section 403 general manpower development funds with either section 402 funds or state funds;
- 3. States could be required to compete for section 403 manpower development funds by submitting project proposals to be judged on criteria developed in cooperation with the states; and
- 4. State manpower development proposals could be incorporated into a system of competitive research proposals.

Discussion

The research and manpower workshop took as its point of departure three previously prepared papers. Two of these, presented by representatives of FHWA and of NHTSA, reviewed the present status of research and manpower development programs con-

ducted by these agencies. The third paper, delivered by A. James McKnight of the National Public Services Research Institute, discussed research and manpower requirements for the future.

A very wide range of issues was discussed early in the workshop session—sources of research funds, research targets, dissemination of research, evaluation of research, and specific areas in which manpower should be developed. In order to focus this array of issues more specifically, the workshop was divided into two subcommittees, one to develop research findings and the other to address manpower development. Each subcommittee drafted a list of recommendations, and these were debated within the full workshop. The lists underwent some changes, additions, and deletions during discussion, and the wording for specific recommendations was agreed on by a vote of the workshop members.

Recommendations

The following recommendations were endorsed by a majority of workshop members.

Research

- 1. Priorities—In addition to continuing safety development projects, the federal government should fund more research in the areas of (a) individual and interacting characteristics of vehicles, highways, drivers, and other highway users that are associated with high accident-risk potential; (b) methods of influencing driver behavior in relation to identified risk factors; (c) evaluation methods that can be used by states to assist the effectiveness of accident countermeasures and support activities, including manpower programs; and (d) factors that motivate decision makers to institute and support safety programs.
- 2. Planning—The federal government should intentionally plan and coordinate a national highway safety research program in cooperation with states and the private sector. The planning process should include (a) a formal system for soliciting multiple inputs from all sectors of the highway safety community; (b) coordinated research planning and programming across federal and state agencies and across traditional lines of authority, such as highway departments, departments of motor vehicles, and departments of education and enforcement; and (c) long-term, stable, highly visible research plans, which would include priorities and the probable time frame.
- 3. Funding—Federal funding for highway safety research should include the following features: (a) research support on a national scale to encourage and assist both fundamental and exploratory efforts and those intended for experimental and development purposes (the law should be changed to permit use

of section 402 funds for research, education, and training); (b) contracting mechanisms that allow longer term (2 to 4-year) research efforts that are funded from year to year so that research organizations can attract and retain higher quality research personnel; (c) research procurement practices designed to raise the quality of research proposals submitted in response to state or federal requests, including longer (4 to 8-week) lead times for proposal development, a list of prospective research sources with estimated levels of effort required, shorter (4 to 8-week) periods for evaluating proposals and awarding study contracts, and more uniform distribution of research procurements throughout the year: (d) reasonable provisions and earmarked funds for unsolicited sole-source studies; and (e) an objective component, appropriate to the activity and level of expenditure, that is incorporated in advance for section 402 funds used for research.

4. Implementation—The federal government should further the implementation of research results by (a) including information dissemination and implementation in the planning, formulation, and management of internal and sponsored research; (b) encouraging contractors to make use of scientific and technical journals as a means of disseminating research information; (c) expediting the dissemination of research results in the form of reports, handbooks, training materials, and other devices that can be used by highway safety practitioners; and (d) allocating funds to the states for the express purpose of hastening the implementation of research results.

Manpower development

- 1. Higher priority and increased support should be given to greatly expanded manpower development programs. The fundamentals of Highway Safety Manpower and Training, published by the National Safety Council in 1972, are still valid and relevant.
- 2. These programs should be directed toward developing technical or administrative competence and should include basic highway safety courses and graduate study as well as pre-service and in-service training.
- 3. Although there is a definite need for private funding, the primary source of funding for manpower development programs should be governmental. Federal funds authorized under section 402 or 403 should be made available. Support should include travel and living costs, released time, and other incentives in addition to the actual cost of education.
- 4. The effectiveness of manpower development programs should be evaluated periodically.

Conference Response

The workshop's recommendations were approved by

the full conference without question or change.

PRIVATE-SECTOR INVOLVEMENT

Chairman: Victor J. Perini, Jr. Vice Chairman: Mati Koiva Recorder: Richard Tippie

Participants: Russell J. Arend, Johnny M. Cowan, Douglas M. Fergusson, Paul F. Gavaghan, Adam G. Johnson, Francis C. Kenel, Kevin Kruke, Gordon G. Lindquist, John G. Manikas, Ken Nevil, Roland A. Ouellette, Richard C. Peet, Billie D. Reynolds, David Saari, John O. Salveson, F. J. Tamanini

Background

Before the initiation of the federal highway safety program in 1966, organizations in the private sector played a prominent part in stimulating governments at all levels into action to improve highway safety. The 1966 Highway Safety Act provided much the same impetus within a formal legislative structure. Providing these mechanisms for program action by governments was essential to a national attack on highway safety problems, but less room was left for the safety activities of the private sector.

Even though the relationship between the private sector and government was obscured by the passage of the 1966 Highway Safety Act, the private sector is no less active in promoting highway safety today. Private organizations and individuals are an important source of research, technical assistance, and public education in highway safety. Many organizations, such as the Motorcycle Safety Foundation and the Insurance Institute for Highway Safety, concentrate their efforts within well-defined areas and maintain a high level of technical expertise within these areas. Others, such as the universities and consulting firms, offer top-quality analytical capability over a broad range of highway safety problems.

These technical and analytical resources could be a valuable adjunct to public-sector highway safety programs, as well as an important source of innovation. If there were a formal structure for tapping these capabilities, the private sector would have much to offer a working partnership in highway safety.

- 1. The new emphasis on using the problem-solving technique of problem identification, countermeasure development, and evaluation presupposes a technical and analytical competence that simply does not exist within many government highway safety units. This is precisely the kind of capability on which most private-sector organizations are built. Although private agencies are called on from time to time to assist governments on specific projects, there has been no systematic effort to draw on this resource.
 - 2. Given the limited amount of funds available for

research in highway safety, it is important that these efforts be as efficient as possible. Government research efforts cannot afford to duplicate past, ongoing, or planned studies conducted by the private sector. Further, because research has always been an important part of private-sector activity, these organizations may be better equipped than governments to explore new areas. In either case, some mechanism for exchanging information in advance of research undertakings is essential.

3. The private sector can carry out some highway safety activities that government cannot. For instance, the private sector has a unique capacity to provide public education in and support for programs that depend heavily on influencing personal behavior and choice. Individual actions are a vital factor in traffic accidents, but there is some question as to whether programs to influence this factor are a proper function of government; the national education program to discourage drunk driving is a case in point. Providing public information, education, and training programs to improve the safety behavior of individuals has been an important—and traditionally acceptable—role for organizations in the private sector.

Several alternative ways of involving the private sector in federal highway safety activities were proposed for discussion in the workshop.

- 1. Private-sector organizations could be assisted, through regular financial support where necessary, in integrating and coordinating their activities with federal, state, and local safety efforts.
- 2. A separate category of funding could be provided to encourage effective private-sector participation as a third partner in the present federal-state safety effort.
- 3. The operation of public information programs could be left to the states and private-sector agencies, with development and technical assistance available from the federal government.
- 4. A national public education effort in behalf of traffic safety could be specifically budgeted.

Discussion

The members of the workshop decided that "private sector" should be defined to include nongovernmental groups, as distinguished from government agencies or quasi-governmental organizations, such as the American Association of Motor Vehicle Administrators or the International Association of Chiefs of Police, that are made up of representatives of state or local government agencies. Under this definition, private-sector groups would include such organizations as the Highway Users Federation, National Safety Council, American Automobile Association, and Center for Auto Safety.

The members of the workshop agreed that the current relationship between the federal government and the private sector is not satisfactory. Among the reasons cited was that the private sector is called in to arouse public support for an already established program. It should be asked to participate at the outset in the establishment of program objectives and criteria.

Private-sector safety activities have not really subsided since 1966, but they are not coordinated with governmental efforts. Workshop members gave several examples of duplication in private and governmental efforts toward the same end, e.g., driver education. It was generally agreed that government and nongovernment efforts should be cooperative rather than competitive or duplicative, a goal that would require input from the private sector at an early stage—before governmental decisions are made final. Private-sector organizations should be an active third partner in the research, development, implementation, and evaluation phases of the national highway safety effort.

There are currently at least two stumbling blocks to this partnership. One is the difficulty of identifying the specific resources available within the wide array of interests and expertise private organizations have to offer. The second is the lack of a formal mechanism or funding for using private technical assistance in public programs.

An illustration of how these problems might be overcome was developed in the workshop. FHWA and NHTSA could compile a computerized inventory of private-sector organizations or groups categorized by areas of expertise and technical competence in highway and traffic safety. The inventory would also include individuals within these organizations. When dealing with an identified problem, the federal agencies could search this inventory for sources of specific assistance from the private sector. Experts could then be convened as an advisory or study panel to address particular problems or specific aspects of them. Each panel would assemble on an ad hoc basis, although the computerized inventory would be continuous. The system could be administered by a university, institute, or other nonprofit organization funded for this purpose by FHWA and NHTSA.

Recommendations

The workshop members agreed that the private-sector traffic safety community must function as an active partner in the research, development, implementation, and evaluation of the national highway safety effort. This partnership must be instituted and maintained through a mechanism that identifies nongovernmental expertise and resources and involves them in a timely structured manner. To establish this concept, there must be

- 1. An acknowledgement of the private sector as a viable, visible, committed partner;
- 2. A new way for the federal government to work more effectively with the private sector, including action to provide the necessary authority for implementation;
 - 3. An information exchange network;
- 4. A mechanism to review and advise on highway safety programs and directions;
- 5. A comprehensive scope, ranging from research and development to implementation and evaluation; and
- 6. A high-priority commitment by the private sector to the partnership in furthering the highway safety effort.

Conference Response

The workshop recommendations were endorsed by the full conference without discussion.

FUNDING, INCENTIVES, AND SANCTIONS

Chairman: Nils A. Lofgren Vice Chairman: Alvord C. Estep

Recorder: R. L. Lewis

Participants: E. Robert Anderson, Milton Bennett, Russell I. Brown, Robert Burgess, William E. Corgill, John W. McDonald, William R. McGrath, Thomas Milldebrandt, Ed C. Miller, Ken Schmidt, Gordon H. Sheehe

Background

The Highway Safety Act of 1966 allowed the Secretary of Transportation to use financial penalties to move states and local jurisdictions toward full compliance with federally determined uniform program standards. The act stipulated that a lack of reasonable progress and failure to implement an approved program could result in withholding of both the section 402 highway safety grant money and 10 percent of a state's federal-aid highway construction funds.

This sanctioning mechanism has never actually been used. Although hearings were held in the mid-1970s for three states that had not enacted motorcycle helmet laws, no sanctions were ever imposed. In 1976, Congress diluted the original sanction laws considerably. The Highway Safety Act of 1976 called for discretionary withholding of 50 to 100 percent of a state's section 402 grant depending on the gravity of the state's noncompliance with the standards; it completely removed the penalty on highway construction funds as a sanctioning device. In addition, states were exempted from sanctions for noncompliance with helmet requirements, and a moratorium was placed on the use of all sanctions

until the highway safety standards could be evaluated and a report submitted to Congress. Finally, the 1976 act stated that "implementation of a highway safety program under this section shall not be construed to require compliance with every uniform standard in every state."

Thus, the nature of the threat imposed by sanctions has changed since their inception in the 1966 act. The question now is whether sanctions should be eliminated entirely or be reestablished in their original—or in some modified—form. While many variations are possible, two that have been suggested are

- 1. The imposition of sanctions could be limited to only those areas of the program that are not in compliance with particular standards (funding for other programs would not be affected) and
- 2. Noncomplying states could be penalized by making them ineligible for incentive awards but not by withholding their section 402 safety grants.

However, the use of incentives is itself somewhat controversial. Congress authorized the use of incentive awards as an additional way of encouraging states to give attention to highway safety problems. It provided that additional section 402 grants may be awarded to states that (a) enact legislation that satisfies the criteria for the use of automobile safety belts published by the Secretary of Transportation or (b) reduce the numbers or rates of highway fatalities below the average for the preceding 4 years.

Since the total amount of incentive funds available for distribution is limited, states must in effect compete for fatality reduction awards. The states are ranked in order of percentage of improvement and are awarded an amount equal to 25 percent of their regular section 402 grants until all incentive funds are exhausted. The funds usually stretch over less than a fourth of the ranked list of states. Some states, however, may receive double awards for reducing both numbers and rates of fatalities. Paradoxically, a state may lack an approved program or even be involved in sanctioning procedures but still receive an incentive award.

States have expressed some misgivings about the competitive nature of the awards and about the use of fatalities as an indicator of progress in highway safety. Several alternatives, including the elimination of incentives, have been proposed.

- 1. Incentives could be geared to the change in fatality rates rather than comparative state standings.
- 2. Expenditure of incentive grants could be limited to special problem areas or to areas not otherwise eligible for federal funding.
- 3. Incentive grants could be awarded on a competitive basis for innovative projects.
 - 4. Awards could be based on compliance or on

improved performance in specified critical areas, such as enforcing the new lower speed limits.

Discussion

In discussing funding in general, the members of the workshop found that the level of funding had to be based on program action, which in turn must be determined by the nation's highway safety goals. It was proposed that these goals should be "to continue decreasing the fatality rate and to achieve a continuing reduction in the number of fatalities and injuries, to reduce the billions of dollars of economic losses from accidents, and to maintain and extend the present level of mobility for people and goods." Several general objectives were listed that would be consistent with achieving these goals:

- 1. To review the strategies for achieving the stated goal, select the most promising of these, and fund those programs included in the strategies selected;
- 2. To strengthen state and local program planning and management capabilities;
- 3. To strengthen research, demonstration, and evaluation capabilities; and
- 4. To obtain improved understanding, agreement, cooperation, and coordination among all levels of government and the private sector on highway safety objectives, programs, and funding.

The program actions implied by these objectives, when costed out, will probably require an increase in total national (that is, federal, state, and local) funding. Just how much additional funding will be needed will depend on changes in or additions to present national highway safety program standards. Funding should be made available for programs that are of particular concern to individual state and local areas, as well as for problems of national scope. Finally, the level of funding should take into account the effects of inflation and the increasing difficulty of continuing to reduce the fatality rate and improve other highway safety indicators.

The members of the workshop also discussed at length possible sources of federal safety funds. It was suggested, and the majority of workshop members concurred, that the Highway Trust Fund is the most appropriate source of funds for federal participation in highway safety, since this would avoid competition with other demands on Treasury funds. Those who opposed this suggestion felt that comments on a specific amount or source of funding would be premature in view of the workshop's emphasis on the need to calculate the magnitude and consider the sources of funding; the suggestion would also be inconsistent with the workshop's position that such recommendations should be made cooperatively by DOT, the states, and other members of the high-

way safety community.

With regard to sanctions, it was observed that in some cases the threat of sanctions—particularly the withholding of some highway construction funds—has precipitated a program action that states might not otherwise have undertaken at that time. Workshop members generally opposed using construction funds to encourage compliance with safety standards that are not related to construction.

The consensus in the workshop was that sanctions are both unnecessary and undesirable. The annual program-approval process gives federal agencies sufficient leverage to ensure continuing improvement in state programs. Solving national highway safety problems requires excellent working relationships at all levels of government, but sanctions have the effect of inhibiting good federal-state relationships.

The incentive system was criticized because there is no evidence that it fulfills its function—to stimulate states to use countermeasures that they might not otherwise have applied. The entire section 402 program acts as an incentive, but perhaps the best incentive for program improvement in the states would be to allow the states to develop their own programs under broad flexible guidelines with a minimum of federal control.

The workshop also felt that it is difficult if not impossible to develop an equitable, objective basis for awarding incentives. Incentives have been an after-the-fact reward for fatality reduction that may or may not have been the result of any specific program action; a reduction might have been at least partly the result of nonprogram factors, such as the weather. Further, incentives give additional funds to states that are most successful in reducing fatalities, whereas states that have been less successful may be in greater need of supplemental funds to stimulate and aid more effective program actions.

Although eliminating the incentive system might reduce the amount of total federal funds available to the states for their programs, this possibility was not considered sufficient reason to perpetuate an illadvised program.

Recommendations

As a result of its discussions, the workshop endorsed the following recommendations:

- 1. Federal funding should continue at at least its present level until estimates of funding requirements can be made for the achievement of specified objectives. These funds should be available for state and local problems as well as for national problems. The Highway Trust Fund is the most appropriate source of funds for federal participation in highway safety.
- 2. Since sanctions are detrimental to good federalstate relations and distort state responses to national

objectives, they should be eliminated.

3. Since incentives are of questionable value in stimulating program improvement and cannot be awarded equitably under the present system, they should be discontinued.

Conference Response

Several points were raised during the plenary session discussion of the workshop report. It was suggested, and accepted, that manpower development and training should be explicitly included as a means of achieving the objectives of strengthening research, demonstration, and evaluation programs, as well as local program planning and management capabilities. Other comments concerned the specification of a national highway safety goal and whether this goal should be quantified.

The appropriateness and adequacy of the Highway Trust Fund as a source of federal funding for safety programs were debated at some length, and a motion was introduced to remove this reference from the workshop recommendations. The motion did not carry, and the report was endorsed in its original form by a majority of the participants in the conference.





Text of the Highway Safety Act of 1966



Public Law 89-564 89th Congress, S. 3052 September 9, 1966

An Act

To provide for a coordinated national highway safety program through financial assistance to the States to accelerate highway traffic safety programs, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

TITLE I-HIGHWAY SAFETY

SEC. 101. Title 23, United States Code, is hereby amended by adding at the end thereof a new chapter:

"Chapter 4.—HIGHWAY SAFETY

Sec. 401. Authority of the Secretary. 402. Highway safety programs. 403. Highway safety research and development. 404. National Highway Safety Advisory Committee.

"§ 401. Authority of the Secretary

"The Secretary is authorized and directed to assist and cooperate with other Federal departments and agencies, State and local governments, private industry, and other interested parties, to increase highway safety.

"§ 402. Highway safety programs

"(a) Each State shall have a highway safety program approved by the Secretary, designed to reduce traffic accidents and deaths, injuries, and property damage resulting therefrom. Such programs shall be in accordance with uniform standards promulgated by the Secretary. Such uniform standards shall be expressed in terms of performance criteria. Such uniform standards shall be promulgated by the Secretary so as to improve driver performance (including, but not limited to, driver education, driver testing to determine proficiency to operate motor vehicles, driver examinations (both physical and mental) and driver licensing) and to improve perfection performance. In additional contractions of the province of th driver licensing) and to improve pedestrian performance. In addition such uniform standards shall include, but not be limited to, provisions for an effective record system of accidents (including injuries and deaths resulting therefrom), accident investigations to determine the probable causes of accidents, injuries, and deaths, vehicle registra-tion, operation, and inspection, highway design and maintenance (including lighting, markings, and surface treatment), traffic control, vehicle codes and laws, surveillance of traffic for detection and correction of high or potentially high accident locations, and emergency services. Such standards as are applicable to State highway safety programs shall, to the extent determined appropriate by the Secretary, be applicable to federally administered areas where a Federal department or agency controls the highways or supervises traffic operations. The Secretary shall be authorized to amend or waive standards on a temporary basis for the purpose of evaluating new or different high-way safety programs instituted on an experimental, pilot, or demonstration basis by one or more States, where the Secretary finds that the

public interest would be served by such amendment or waiver.

"(b)(1) The Secretary shall not approve any State highway safety

program under this section which does not—

"(A) provide that the Governor of the State shall be respon-

sible for the administration of the program.

"(B) authorize political subdivisions of such State to carry out local highway safety programs within their jurisdictions as a part of the State highway safety program if such local highway safety programs are approved by the Governor and are in accordance with the uniform standards of the Secretary promulgated under this section.

"(C) provide that at least 40 per centum of all Federal funds apportioned under this section to such State for any fiscal year will be expended by the political subdivisions of such State in

carrying out local highway safety programs authorized in accordance with subparagraph (B) of this paragraph.

"(D) provide that the aggregate expenditure of funds of the State and political subdivisions thereof, exclusive of Federal funds, for highway safety programs will be maintained at a level which does not fall below the average level of such expenditures for its last two full fiscal years preceding the date of enactment

of this section.

"(E) provide for comprehensive driver training programs, including (1) the initiation of a State program for driver educa-tion in the school systems or for a significant expansion and improvement of such a program already in existence, to be administered by appropriate school officials under the supervision of the Governor as set forth in subparagraph (A) of this paragraph; (2) the training of qualified school instructors and their certification; (3) appropriate regulation of other driver training schools, including licensing of the schools and certification of their instructors; (4) adult driver training programs, and programs for the retraining of selected drivers; and (5) adequate research, development and procurement of practice driving facilities, simulators, and other similar teaching aids for both school and other driver training use.

"(2) The Secretary is authorized to waive the requirement of subparagraph (C) of paragraph (1) of this subsection, in whole or in part, for a fiscal year for any State whenever he determines that there is an insufficient number of local highway safety programs to justify the expenditure in such State of such percentage of Federal funds

during such fiscal year.

"(c) Funds authorized to be appropriated to carry out this section shall be used to aid the States to conduct the highway safety programs approved in accordance with subsection (a), shall be subject to a deduction not to exceed 5 per centum for the necessary costs of administering the provisions of this section, and the remainder shall be apportioned among the several States. For the fiscal years ending June 30, 1967, June 30, 1968, and June 30, 1969, such funds shall be apportioned 75 per centum on the basis of population and 25 per centum as the Secretary in his administrative discretion may deem appropriate and thereafter such funds shall be apportioned as Congress, by law enacted hereafter, shall provide. On or before January 1, 1969, the Secretary shall report to Congress his recommendations with respect to a prodication of the secretary shall report to congress his recommendations with respect to a prodication of the secretary shall report to congress his recommendations with respect to a prodication of the secretary shall report to congress his recommendations with respect to a prodication of the secretary shall report to congress his recommendations. tions with respect to a nondiscretionary formula for apportionment of funds authorized to carry out this section for the fiscal year ending June 30, 1970, and fiscal years thereafter. After December 31, 1968, the Secretary shall not apportion any funds under this subsection to

any State which is not implementing a highway safety program approved by the Secretary in accordance with this section. highway funds apportioned on or after January 1, 1969, to any State which is not implementing a highway safety program approved by the Secretary in accordance with this section shall be reduced by amounts equal to 10 per centum of the amounts which would otherwise be apport oned to such State under section 104 of this title, until such time as such State is implementing an approved highway safety program. Whenever he determines it to be in the public interest, the Secretary may suspend, for such periods as he deems necessary, the application of the preceding sentence to a State. Any amount which is withheld from apportionment to any State under this section shall be reapportioned to the other States in accordance with the applicable provisions of law.

(d) All provisions of chapter 1 of this title that are applicable to

Federal-aid primary highway funds other than provisions relating to the apportionment formula and provisions limiting the expenditure of such funds to the Federal-aid systems, shall apply to the highway safety funds authorized to be appropriated to carry out this section, except as determined by the Secretary to be inconsistent with this section. In applying such provisions of chapter 1 in carrying out this section the term 'State highway department' as used in such provisions shall mean the Governor of a State for the purposes of this

section.

"(e) Uniform standards promulgated by the Secretary to carry out this section shall be developed in cooperation with the States, their political subdivisions, appropriate Federal departments and agencies, and such other public and private organizations as the Sec-

retary deems appropriate. "(f) The Secretary may make arrangements with other Federal departments and agencies for assistance in the preparation of uniform standards for the highway safety programs contemplated by subsection (a) and in the administration of such programs. Such departments and agencies are directed to cooperate in such preparation and

administration, on a reimbursable basis. "(g) Nothing in this section authorizes the appropriation or expenditure of funds for (1) highway construction, maintenance, or design (other than design of safety features of highways to be incorporated into standards) or (2) any purpose for which funds are authorized

by section 403 of this title.

"§ 403. Highway safety research and development

"The Secretary is authorized to use funds appropriated to carry out this section to carry out safety research which he is authorized to conduct by subsection (a) of section 307 of this title. In addition, the Secretary may use the funds appropriated to carry out this section, either independently or in cooperation with other Federal departments or agencies, for (1) grants to State or local agencies, institutions, and individuals for training or education of highway safety personnel, (2) research fellowships in highway safety, (3) development of improved accident investigation procedures, (4) emergency service plans, (5) demonstration projects, and (6) related activities which are deemed by the Secretary to be necessary to carry out the purposes of this section.

"§ 404. National Highway Safety Advisory Committee

"(a)(1) There is established in the Department of Commerce a National Highway Safety Advisory Committee, composed of the Secretary or an officer of the Department appointed by him, who shall be chairman, the Federal Highway Administrator, and twenty-nine members appointed by the President, no more than four of whom shall be Federal officers or employees. The appointed members, having due regard for the purposes of this chapter, shall be selected from among representatives of various State and local governments, including State legislatures, of public and private interests contributing to, affected by, or concerned with highway safety, and of other public and private agencies, organizations, or groups demonstrating an active interest in highway safety, as well as research scientists and other

individuals who are expert in this field.

'(2)(A) Each member appointed by the President shall hold office for a term of three years, except that (i) any member appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed shall be appointed for the remainder of such term, and (ii) the terms of office of members first taking office after the date of enactment of this section shall expire as follows: ten at the end of one year after such date, ten at the end of two years after such date, and nine at the end of three years after such date, as designated by the President at the time of appointment, and (iii) the term of any member shall be extended until the date on which the successor's appointment is effective. None of the members appointed by the President other than Federal officers or employees shall be eligible for reappointment within one year following the end of his preceding

term.

"(B) Members of the Committee who are not officers or employees of the United States shall, while attending meetings or conferences of such Committee or otherwise engaged in the business of such Committee, be entitled to receive compensation at a rate fixed by the Secretary, but not exceeding \$100 per diem, including traveltime, and while away from their homes or regular places of business they may be allowed travel expenses, including per diem in lieu of subsistence, as authorized in section 5 of the Administrative Expenses Act of 1946 (5 U.S.C. 73b-2) for persons in the Government service employed intermittently. Payments under this section shall not render members of the Com-

mittee employees or officials of the United States for any purpose.

"(b) The National Highway Safety Advisory Committee shall advise, consult with, and make recommendations to, the Secretary on matters relating to the activities and functions of the Department in the field of highway safety. The Committee is authorized (1) to review research projects or programs submitted to or recommended by it in the field of highway safety and recommend to the Secretary, for prosecution under this title, any such projects which it believes show promise of making valuable contributions to human knowledge with respect to the cause and prevention of highway accidents; and (2) to review, prior to issuance, standards proposed to be issued by order of the Secretary under the provisions of section 402(a) of this title and to make recommendations thereon. Such recommendations shall be published in connection with the Secretary's determination or order.

"(c) The National Highway Safety Advisory Committee shall meet from time to time as the Secretary shall direct, but at least once each

year.

"(d) The Secretary shall provide to the National Highway Safety Committee from among the personnel and facilities of the Department of Commerce such staff and facilities as are necessary to carry out the functions of such Committee.

SEC. 102. (a) Sections 135 and 313 of title 23 of the United States

Code are hereby repealed.
(b) (1) The analysis of chapter 1 of title 23, United States Code, is hereby amended by deleting:

"135. Highway safety programs."

(2) The analysis of chapter 3 of title 23, United States Code, is hereby amended by deleting:

"313. Highway safety conference."

(3) There is hereby added at the end of the table of chapters at the beginning of title 23, United States Code, the following:

"4. Highway safety_____

SEC. 103. Section 307 of title 23, United States Code, is amended (1) by inserting in subsection (a) thereof immediately after "section 104 of this title" the following: ", funds authorized to carry out section 403 of this title," and (2) by adding at the end of such section the following new subsection:

"(d) As used in this section the term 'safety' includes, but is not limited to highway safety systems, receased, and devalorment relations."

limited to, highway safety systems, research, and development relating to vehicle, highway, and driver characteristics, accident investigations, communications, emergency medical care, and transportation

of the injured.'

SEC. 104. For the purpose of carrying out section 402 of title 23, United States Code, there is hereby authorized to be appropriated the sum of \$67,000,000 for the fiscal year ending June 30, 1967; \$100,000,000 for the fiscal year ending June 30, 1968; and \$100,000,000 for the fiscal year ending June 30, 1969.

Sec. 105. For the purpose of carrying out sections 307(a) and 403 of title 23, United States Code, there is hereby authorized to be appropriated the additional sum of \$10,000,000 for the fiscal year ending

June 30, 1967; \$20,000,000 for the fiscal year ending June 30, 1968; and \$25,000,000 for the fiscal year ending June 30, 1969.

SEC. 106. All facts contained in any report of any Federal department or agency or any officer, employee, or agent thereof, relating to any highway traffic accident or the investigation thereof conducted pursuant to chapter 4 of title 23 of the United States Code shall be available for use in any civil, criminal, or other judicial proceeding arising out of such accident, and any such officer, employee, or agent may be required to testify in such proceedings as to the facts developed in such investigation. Any such report shall be made available to the public in a manner which does not identify individuals. All completed reports on research projects, demonstration projects, and other related activities conducted under sections 307 and 403 of title 23, United States Code, shall be made available to the public in a manner which does not identify individuals.

TITLE II—ADMINISTRATION AND REPORTING

SEC. 201. The Secretary shall carry out the provisions of the High-SEC. 201. The Secretary shall carry out the provisions of the Highway Safety Act of 1966 (including chapter 4 of title 23 of the United States Code) through a National Highway Safety Agency (hereinafter referred to as the "Agency"), which he shall establish in the Department of Commerce. The Agency shall be headed by an Administrator who shall be appointed by the President, by and with the advice and consent of the Senate, who shall be compensated at the rate prescribed for level V of the Federal Executive Salary Schedule established by the Federal Executive Salary Act of 1964. The Administrator shall be a citizen of the United States, and shall be appointed with due regard for his fitness to discharge efficiently the powers and the duties delegated to him. The Administrator shall have no pecuniary interest in or own any stock in or bonds of any enterprise involved in (1) manufacturing motor vehicles or motor vehicle equipment, or (2) constructing highways, nor shall he engage in any other business, vocation, or employment. The Administrator shall perform such duties as are delegated to him by the Secretary. On highway matters the Administrator shall consult with the Federal Highway Administrator. The President is authorized to carry out the provisions of the National Traffic and Motor Vehicle Safety Act of 1966 through the Agency and Administrator authorized by this section.

Spo. 202. (a) The Secretary shall prepare and submit to the President for transmittal to the Congress on March 1 of each year a comprehensive report on the administration of the Highway Safety Act of 1966 (including chapter 4 of title 23 of the United States Code) for the preceding calendar year. Such report should include but not be restricted to (1) a thorough statistical compilation of the accidents and injuries occurring in such year; (2) a list of all safety standards issued or in effect in such year; (3) the scope of observance of applicable Federal standards; (4) a statement of enforcement actions including judicial decisions, settlements, or pending litigation during the year; (5) a summary of all current research grants and contracts together with a description of the problems to be considered by such grants and contracts; (6) an analysis and evaluation of completed research activities and technological progress achieved during such year together with the relevant policy recommendations flowing therefrom; (7) the effectiveness of State highway safety programs (including local highway safety programs) and (8) the extent to which technical information was being disseminated to the scientific community and consumer-oriented material was made available to the motoring public. (b) The annual report shall also contain such recommendations for

safety and to strengthen the national highway safety program.

Sec. 203. The Secretary of Commerce shall report to Congress, not

additional legislation as the Secretary deems necessary to promote cooperation among the several States in the improvement of highway

later than July 1, 1967, all standards to be initially applied in carrying out section 409 of title 92 of the United States College

out section 402 of title 23 of the United States Code.

Sec. 204. The Secretary of Commerce shall make a thorough and complete study of the relationship between the consumption of alcohol and its effect upon highway safety and drivers of motor vehicles, in consultation with such other government and private agencies as may be necessary. Such study shall cover review and evaluation of State and local laws and enforcement methods and procedures relating to driving under the influence of alcohol, State and local programs for the treatment of alcoholism, and such other aspects of this overall problem as may be useful. The results of this study shall be reported to the Congress by the Secretary on or before July 1, 1967, and shall include recommendations for legislation if warranted.

SEC. 205. The Federal Highway Administrator and any other officer who may subsequent to the date of enactment of this Act become the operating head of the Bureau of Public Roads shall receive compensation at the rate prescribed for level IV of the Federal Executive Salary Schedule established by the Federal Executive Salary Act of

1964.

SEC. 206. Section 105 of title 23, United States Code, is hereby amended by adding the following subsection at the end thereof:

"(e) In approving programs for projects on the Federal-aid systems pursuant to chapter 1 of this title, the Secretary shall give priority to those projects which incorporate improved standards and features with safety benefits."

SEC. 207. In order to provide the basis for evaluating the continuing programs authorized by this Act, and to furnish the Congress with the information necessary for authorization of appropriations for fiscal years beginning after June 30, 1969, the Secretary, in cooperation with the Governors or the appropriate State highway safety agencies, shall make a detailed estimate of the cost of carrying out the provisions of this Act. The Secretary shall submit such detailed estimate and recommendations for Federal, State, and local matching funds to the Congress not later than January 10, 1968.

SEC. 208. This Act may be cited as the "Highway Safety Act of

1966".

Approved September 9, 1966, 1:11 p.m.

Discussion of the Issues and Alternatives

Prepared by the National Highway Traffic Safety Administration and the Federal Highway Administration for the Conference on the Future of the National Highway Safety Program

The State and Community Highway Safety Program (commonly referred to as the 402 program after section 402 of title 23 of the United States Code) was established with the passage of the Highway Safety Act of 1966. In an attempt to gain a better understanding of the impact and effectiveness of the highway safety program, Congress required under section 208b of the Highway Safety Act of 1976 that

The Secretary of Transportation shall, in cooperation with the States, conduct an evaluation of the adequacy and appropriateness of all uniform safety standards established under Section 402 of Title 23 of the United States Code which are in effect on the date of enactment of this Act. The Secretary shall report his findings, together with his recommendations, including but not limited to the need for revision or consolidation of existing standards and the establishment of new standards, to Congress on or before July 1, 1977....

Meeting this mandate requires a reevaluation of the goals and objectives that led to the establishment of the program 10 years ago. Is the program on the right track or is it in need of modification if it is to more effectively serve the public in the decade ahead? Can the same structure that was required to create a new program serve a mature program? Now, 10 years after the establishment of the program, how would we define the highway safety problem? Should the federal highway safety program be structured as a rule-making program or as a more conventional grant-in-aid program? Should the 402 program be a catalyst for innovation or should it serve as the means for coordinating and managing substantial state and local resources now dedicated to highway safety? Could it achieve both? Should

it be primarily a financial assistance program?

Underlying these questions are two additional, more fundamental questions: Assuming that there will be a joint federal-state highway safety program, what unique purposes and responsibilities constitute the federal role, and how does this role differ substantially from state and local roles? What are reasonable expectations for a federally funded highway safety program in terms of achievement?

All of these questions can be addressed in very general terms, but the purpose of this paper is to address operational issues, to identify a number of critical areas in which the federal establishment has a wide range of choices, and to evaluate these choices. The paper discusses four alternative approaches to managing a highway safety program and six issues of particular significance: standards, guides, and goals; federal-state program management; state-local relationships; sanctions and incentives; research and manpower; and private-sector involvement. Discussion of these issues will guide the direction of the program and help shape its major operational elements.

APPROACHES TO PROGRAM MANAGEMENT

To make the discussion of alternatives under each issue more meaningful, four alternative ways of managing grant-in-aid delivery systems are described below. At the very broadest level, these approaches can be characterized as alternative funding-allocation schemes that reflect different management philosophies as they relate to federal grant-in-aid programs. They differ principally with respect to the degree of

federal control over resources made available through such programs. At one extreme are precisely defined categorical grant programs that leave very little latitude to the grant recipient. At the other extreme is the revenue-sharing approach, which provides resources to local governments to use as they see fit.

Prescriptive Approach

Under a prescriptive approach, emphasis is placed on what money is spent for. Requirements for using federal funds are precisely delineated, and a state has relatively little latitude in its options. Under such an approach, there would be precisely defined program requirements that would have to be satisfied by each jurisdiction. There would be very little guidance as to the organization that would be required. Under the safety program, the logic of this approach would require severe sanctions and would limit the discretion of the Secretary of Transportation to waive them. Most important, explicit approval at the federal level would be required for every expenditure.

Programs operated under this approach are generally characterized by a very precise understanding of federal priorities, and these federal priorities differ by a substantial degree from local priorities. Because of this difference, the federal government maintains control of the output of the program.

Process Approach

Under a process approach, the emphasis is principally on how decisions are made rather than on what those decisions are. Under such an approach, the present comprehensive program standards would be replaced by general guidelines in conjunction with relatively few explicit requirements. There would probably be no sanctions. However, requirements concerning organizational responsibility at the state level would be well defined. There would be a requirement for program planning with federal approval of the plan. States would, however, have authority to modify plans to some degree without federal approval.

Programs managed through a process approach are generally those in which federal priorities are very similar to state priorities or in which federal priorities are general enough that they encompass a very broad range of state priorities. The federal focus shifts from the approval of projects to the development of institutions at the state and local level that are capable of managing programs, identifying problems, and developing appropriate solutions.

Block Grant Approach

Under a block grant approach, DOT would define a

wide range of eligible uses for federal funds and merely audit state expenditures after the fact to ensure that funds were spent on permitted activities.

Programs operated under this approach are generally those in which the federal government perceives that there is a shortage of funding for described services and wants to increase aggregate spending on a problem. It does not want to impose any requirements and would leave decision making to state and local authorities. The only requirement that might be included under this approach would be a maintenance-of-effort requirement to ensure that there is not merely a straight substitution of federal dollars for state and local dollars.

Revenue-Sharing Approach

Under the revenue-sharing approach, funds are made available to local governments for use without any restriction. This is the only approach for the four described in which funds could be used for activities not related to highway safety. This program is purely an income-redistribution activity, and the more equitable distribution of tax dollars among various governmental entities is its principle objective.

STANDARDS, GUIDES, AND GOALS

A key highway safety issue now before DOT is to determine what the program shall consist of. The substance of the program is structured around 18 program standards. By statute, the standards are to be expressed in terms of performance. Underlying the concept of standards is the philosophy that there should be a federally directed national attack on highway safety. If it is accepted, the idea of prescriptive federal standards is defensible. When carried to its logical conclusion, the overriding concern of the program is national uniformity.

At the other extreme, federal control over the use of funds could be abolished in favor of relying solely on the decisions of state and local agencies. Under such an option, the federal government would help transfer information but would not actively participate in the direction of state programs.

The following alternatives offer different treatments for using standards in a joint federal-state highway safety program. In each of these alternatives, consideration should be given to the relationships between the highway safety program standards and the categorical highway safety improvement or demonstration program.

Alternative 1: Maintain the Status Quo

Under this alternative, the 18 highway safety stan-

dards would be retained and would continue to require careful monitoring and measurement by the federal government. The standards generally fall into three categories:

- 1. Standards intended to provide infrastructure for a highway safety program—traffic records systems, accident location reporting, registration, and driver licensing;
- 2. Standards that provide operational guidelines for managing specific activities within the program—highway design requirements, uniform signing, uniform rules of the road, and driver education; and
- 3. Standards that focus on common problem areas—alcohol, periodic motor vehicle inspection, and school bus safety.

In some instances, the standards are explicit and cover the entire program. In others, certain aspects of a problem are carefully quantified but others are not. However, in every case, the standards are broken down into components so that the relative level of implementation by the different states can be measured.

There are advantages to maintaining the status quo, both because program managers at all levels are familiar with the present standards and are generally in compliance with them and because the expectations of what the program is intended to accomplish are also clear at the state level. However, there are problems with the present system. Since it concentrates totally on 18 specific program standards, not enough attention is paid to the unique problems of each state; too much energy may be spent on administering many explicit requirements under each standard instead of solving specific state and local problems. The flexibility of program managers is often curtailed and innovation may be inhibited by the present concentration on detail.

Alternative 2: Consolidate Standards

Under this alternative, the 18 standards would be reduced through consolidation or elimination. To the extent that standards are consolidated without eliminating specific requirements, there would be no significant change in the program. Under this option, the character of the remaining standards would not change, because specific program requirements would be retained in each area in which standards are imposed.

If some standards were eliminated, states would have more time, resources, and latitude to develop programs targeted to their specific problems. If the program is to retain certain inflexible standards, a rationale for their retention should be developed; this should take account of the facts that there may be more confidence in some countermeasures than

in others and that uniformity is clearly more desirable in some areas than in others. If there is a strong rationale for retaining these requirements, certain disadvantages of the first alternative can be eliminated. To the extent that certain requirements are eliminated, there is a possibility that the level of effort expended on those areas could drop. This is particularly true if the program continues with many program requirements still in place. This could, but need not, mean limiting funds to fewer, necessary activities.

Alternative 3: State Standards in Terms of Performance Criteria

Section 402 requires that safety standards be stated in terms of performance criteria. Neglect of this practice has resulted in criticism of the current standards. Generally, the 18 standards specify the means or solutions program managers should use (such as classified driver licenses) rather than the ends of impact to be achieved (such as reductions in accidents attributable to vision impairment). Consequently, emphasis has centered on implementation and compliance. Lack of stated performance criteria intensified an already difficult problem of determining impact and accountability. Certain professionals point out that a shift toward performance criteria for standards will enhance the system of management by objectives, which involves analysis of state crash records as a method of problem identification. This analytic approach is currently being implemented at the state level; it allows states to pinpoint those groups (such as young drivers) that are overrepresented in accident occurrences. Problem identification does conflict to some extent with federal emphasis on compliance with a set of standards that contains certain prescribed countermeasures. Standards set in performance terms, tailored to state findings, may alleviate part of this concern.

Two additional factors affect this alternative. First, performance standards can be set at various levels: input, performance or output, and impact. Measurement might well be based on program resources expended or put in place, activity generated from the countermeasure, and direct impact on accidents, injuries, and fatalities. Second, performance standards could be stated differently for each state. This would permit consideration of variations in climate, topography, population density, roads, and the like.

Alternative 4: Permit Selective Compliance

Under this alternative, there would be fewer detailed program standards, and these would be limited to activities in which national uniformity is essential. A second class of standards would be created to identify areas in which states must have programs and to provide minimum or threshold requirements. Aside from these areas, standards would serve merely as guidance to the states.

For the first class of standards, uniformity at the national level would be an important requirement. Such standards would be required for rules of the road, school bus and ambulance marking, traffic-control devices, and minimum roadway design. These standards would use existing government guidance and policies, which contain more specific criteria than the present standards.

The second class of standards would apply to areas in which there is concern with developing an infrastructure. For example, driver licensing, vehicle titling, traffic records, and accident reporting would fall into this class. A standard might specify that the driver's license in each state must include use of the social security number and periodic retesting but nothing else; states would thus be required to obtain information without concern for how they meet the standards. The remaining areas would have standards that would serve as guidelines or definitions of eligibility.

The rationale for this alternative is that the states should have sufficient latitude to determine their own priorities and to solve their problems in their own way. The existence of a common problem does not always require a solution mandated by federal standards.

Alternative 5: Use Standards for Guidance

Under this alternative, standards would serve as guidance to the states to use or not use as they see fit. This gives the greatest flexibility but also requires a greater managerial competence at the state level.

Alternative 6: Eliminate all Standards

Under this alternative, standards would be eliminated, but a list of areas eligible for federal support would be maintained. For example, when equipment is purchased, it might have to meet DOT specifications. This alternative places the greatest degree of reliance on the states. As the strings are cut, there might be a significant shift in the use of section 402 funds.

Alternative 7: Relate Standards to Major Federal Programs

Under this alternative, standards would relate more closely to major program activities carried out with federal funds. As an example, a state could be required to improve railroad crossings, clear roadside obstacles, or reduce alcohol-involved accidents. Sup-

port activities to accomplish these programs—such as compiling accident records, improving technical capability, enforcement, and evaluation—would be included as part of the program requirements. This alignment could be particularly meaningful for areas of this program administered by FHWA, since standards could be tied directly to the safety construction program.

Alternative 8: Establish a National Highway Safety Commission

Under this alternative, a commission would be created that would become a permanent national body empowered to establish model national highway safety program standards, guidelines, and priorities. It would be modeled after other successful standard-making bodies. Membership would consist of safety officials from each state as well as representatives from industry, consumer groups, and other constituencies of the highway safety community. The commission would develop any and all standards that would be implemented with section 402 funds. It would also establish consensus positions, promote uniformity where desirable, and recommend research efforts. Through the active involvement of the states and the highway safety community, it would foster cooperation and joint planning among these groups.

FEDERAL-STATE PROGRAM MANAGEMENT

Along with standards, this is the most critical issue from DOT's perspective. To the extent that the present scheme of prescriptive program standards is altered to provide states with significantly increased latitude in the management of the program, this issue takes on still greater importance.

Federal Organization

A very brief review of the federal highway safety establishment as it evolved over the past 10 years begins with a single organization—the National Highway Safety Bureau, a part of the FHWA responsible for carrying out both the traffic safety and highway safety components of the highway safety program. In 1970, the bureau was separated from FHWA, established as NHTSA, and given responsibility for driver- and vehicle-related highway safety standards; the responsibility for highway-related safety standards was retained by FHWA.

The highway safety grant program (section 402) is jointly administered by FHWA and NHTSA, although recent legislation and administrative action are tending toward separate management, since Congress now funds the NHTSA and FHWA activities

through separate authorizations that require separate apportionments.

Alternative 1: Continue joint federal management

This alternative represents the status quo. It would continue the joint FHWA-NHTSA approval of all aspects of the program. Its advantages are that the program is understood and that it guarantees coordination of related activities between the agencies at the federal level. However, there are disadvantages to the continuation of the present system. DOT response time to the states is slow because everything has to clear two agencies. Further, with responsibility for highway standards vested in FHWA and responsibility for traffic standards in NHTSA, the joint approval generally results in substantial delay but little benefit since neither FHWA nor NHTSA reviews the actual technical aspects of the other's program in any great detail.

Alternative 2: Establish a single federal agency

Under this alternative, a single agency would manage the entire section 402 program. Within DOT, this could be accomplished under FHWA or under NHTSA. The advantages from the perspective of recipients at the state and local level are twofold. There would be a single agency to deal with, and administration of the program could be expected to be much simpler. Further, the single federal agency would serve as a national focus for safety.

If the organization were located within FHWA, there would be the added advantage of assuring continued coordination between traffic and highway safety activities as well as between section 402 highway-related safety and construction activities. The disadvantages of making FHWA the highway safety agency are that safety might be overwhelmed by the construction activities and that the longstanding relationship between state highway departments and FHWA makes many state highway safety agencies uncomfortable—though some consider the FHWA relationship an advantage. The management of the present section 402 program by NHTSA has the advantages that go with a single safety agency and the disadvantage of possibly reducing coordination between the highway-related components of the section 402 program and the construction programs.

There are many variations of this single-agency option that might make sense if taken in conjunction with a revision of the program. For example, if the standards were changed and the highway-related safety standards were replaced with similar requirements as an inherent part of the FHWA de-

sign criteria and standards for the management of a highway construction program, a traffic safety program under NHTSA would be a logical result. Under this option, the federal management of the program would be relatively simple. The issues here are how the change in highway-related safety activities in the section 402 program would alter the state's management of their safety programs and whether such a change would seriously weaken the chance to develop a consolidated safety program at the state level.

In conjunction with any restructuring of responsibility at the federal level, staffing patterns would have to be reviewed. FHWA management of the section 402 program would obviously rely on its division offices in each state. NHTSA, which operates through 10 regions, might elect to manage the section 402 program differently. It would be useful to consider the issue of whether the federal government should organize at the regional or state level under any alternative.

Alternative 3: Separate the federal management by NHTSA and FHWA

This option differs from that of maintaining the status quo at the federal level in that there would no longer be joint FHWA-NHTSA actions on program approvals or on procedural requirements. This would eliminate red tape at the federal level, and it has few disadvantages. This alternative could obviously be considered in conjunction with a wide variety of state organizational options.

State Organization

State organization shows much diversity. The present statute requires that the governor of each state be responsible for the management of the highway safety program through "a state agency which shall have adequate powers, and be suitably equipped and organized, to carry out, to the satisfaction of the Secretary [of Transportation], such programs." Since the beginning of the section 402 program, each governor has been requested to designate an individual who could represent the governor. The role of the governor's representative is one of grant administration and the coordination of statewide highway-safety-related issues. In some cases, a governor's representative reports directly to the state's chief executive. In the majority of cases, however, and largely due to the low level of section 402 funding, the governor's representative has less than ideal influence and authority, whether he or she is part of the governor's office or part of the highway, transportation, motor vehicle, or state police organization. This same kind of variation applies to the size of the unit and to the skills and tenure of the representative, depending in the latter case on whether the unit is part of the state's civil service system or is subject to political appointment in whole or part. The amount of leverage that a governor's representative can potentially exert on state program planning and budgeting for safety activities depends on the degree of his or her interest and active involvement in those programs related to safety.

There are two principal factors that provide some substance to the governors' representatives' area of control. One is the requirement of both FHWA and NHTSA that the state produce a program plan; the other is that control of the funds appropriated under section 402—depending on size and need of state and local organizations-gives the governor's representative some voice on safety-related program direction. There are, of course, states in which the governors' representatives have attained considerable stature and in which both the representative and the office are part of the decision-making process. It often does not matter where the office is in the formal structure; the key is the representative's ability to develop a constituency and exert top-level influence.

Although it has not been a specific goal, it must be recognized that 10 years of federally funded safety efforts have not produced uniformity of organization or action at the state level. In the past, each state has handled its role and organization for safety in a way that reflected its priorities, interests, and political structure. Both federal and state organizational issues must be reviewed together if they are to make sense. This discussion is focused on alternatives that can be influenced by federal action. The first series of alternatives addressed federal influence on state organizations; the second set addresses federal organizational options.

Alternative 1: Maintain the status quo

The current system is largely one of indirect influence on state organization and operations through the federal requirement for plans that incorporate certain areas of emphasis. Each state has developed certain procedures for plan preparation, review of proposed projects to be funded under section 402, and the fiscal control associated with a grant process. As discussed previously, both the degree of influence and the capability of the governors' representatives vary considerably. At present, DOT specifies neither where a state highway safety agency belongs in the state government's structure nor the functional responsibilities of the state agency.

Alternative 2: Expanded federal requirements for state agencies

Under this option, DOT would articulate state

agency responsibilities in more detail. Further, the focus would be on the responsibilities of the agency vis-à-vis state-financed activities rather than merely addressing the agency's responsibilities for managing federally supported projects.

There would be relatively little concern for how an agency is organized. Rather, the focus would be on its responsibilities. Specifically, under this option the state highway safety agency would have review and approval responsibility for state-supported highway safety activities of other operating agencies, such as the state police and the state highway department, as well as responsibility for the management of highway construction not funded by the federal government. This alternative implies the necessity of defining each part of the federal-state relationship. For example, it would be necessary to explain how states would provide input during formulation of the national program.

Alternative 3: Require minimum levels of spending on planning and administration

This alternative would be directed at increasing the relative share of section 402 funds that are spent for institutional development at the state level. It would reduce funding of operations projects to some degree. The amount designated for this purpose would either be a percentage or a fixed sum limited to use in staffing, training, and operations of a state highway safety unit. It would require that certain skills, for example in planning, evaluation, and statistical analysis, be obtained and supported. Further, there would have to be a hard match of funds for planning and administration. This option is intended to foster the institutionalization of state agencies that are adequately staffed and competent to manage a program in which greater reliance is placed on state agencies.

Alternative 4: Split responsibilities between construction and traffic safety at the state level

This alternative should be reviewed in tandem with the previous alternative that contemplates a separation between FHWA and NHTSA. The highway-related safety standards and the FHWA safety construction activities would be concentrated in state highway departments, along with responsibilities relating to such activities established by FHWA. Similar criteria would then be set forth for the traffic safety activities under a separate state agency responsible for these programs. Although a single state agency that coordinates both highway- and traffic-related safety functions may enjoy a certain degree of influence, this influence could be lessened by splitting the functions between two agencies.

Most, if not all, of these options have one main thrust—the institutionalization of highway safety at the state level. Under all these options, there would emerge a wide variety of state safety management entities. There would still be competition among perceived state needs and identified safety problems. Since in many cases the traditionally established state operations do not come under the control of the governors, a state agency for highway safety may not be the solution for all governors. There is a further option—that of almost total flexibility. This would accommodate differences so that federal and state governments could negotiate organizational and administrative questions within a range of allowable options chosen from those covered in the sections above. At the other extreme, at least on a theoretical level, there could be a requirement for uniform structure of state agencies. Because this was not viewed as a workable choice, it was not described above.

STATE-LOCAL RELATIONSHIPS

The area of state-local relationships must be reviewed because so many highway safety activities are delivered by local agencies. Under the present program there is a requirement that at least 40 percent of section 402 funds that are authorized must be expended by local jurisdictions. It may not be realistic to expect a state to develop a comprehensive safety program and plan that covers both state and local operations. Indeed, the whole state-local and federal-local relationship should be explored because it is so important to the effective delivery of a highway safety program.

The alternatives discussed below focus on those aspects of the state-local relationship that can be influenced by federal action. In this case, the options are in no way complete; rather, they are presented to encourage exploration of some difficult issues.

Alternative 1: Maintain the Status Quo

The current situation requires the expenditure of 40 percent of section 402 funds by local jurisdictions. The expenditure of these funds is subject to state approval, but there is usually little review of comprehensive local programs or of the way that local projects are selected by the state for funding. The system is largely reactive to local-level requests; it is rarely oriented toward problem identification and solution. This is resulting in inadequate data, manpower, and analytic training, especially at the local level.

Alternative 2: Require the State to Apportion the 40 Percent Local Funds to Local Governments

Under this option, states would be required to develop an intrastate apportionment formula to allocate funds among the counties and cities. This would ensure that some objective means of distributing funds would be developed, and it might encourage some planning and data development at the local level

The difficulties with such an alternative would be great. First, some functions for which the state is responsible might not be covered at the local level; thus, the hope of developing comprehensive local plans would not be possible. Second, given the problems inherent in the creation of state highway safety agencies, the difficulties found at the local level might prove insurmountable. Third, the program is relatively small, and such a requirement would further dilute this small sum. Fourth, because the dollar amounts available for specific projects are often very small, it is largely impractical, if not impossible, to demand rigorous justifications and evaluation. The major advantage of an intrastate apportionment of section 402 funds is the potential for developing a continuing and ongoing problem-identification procedure at the local level in conjunction with similar efforts under way at the state level.

Alternative 3: Require State-Developed Project Selection Criteria

This alternative would not require the apportionment of funds, but it would require the state to develop explicit criteria for selecting projects to be financed with the 40 percent local funds. Here, the criteria could be that certain functions are local responsibilities or that certain problems seem to be more severe in identifiable areas of the state. This alternative would force a more systematic review of local problems at the state level, while leaving decision-making authority in the hands of the state agency.

Alternative 4: Eliminate the 40 Percent Requirement

Under this option, a state could continue to fund projects in local jurisdictions, but there would be no mandate to do this. If under current operations the state does not systematically review local projects and only reluctantly passes funds to localities because of the statutory requirement, the option probably improves the state's program since it would not have to continue financing local projects. However, to the extent that states ignore local requirements or lessen their involvement in local problems,

the program would be damaged.

Alternative 5: Increase the Share of Section 402 Funds Spent at the Local Level

This alternative would increase section 402 funding in local jurisdictions at the expense of state-level funding. The premise underlying this alternative is that centralization and concentration of resources provide greater competence in and coordination between state agencies than local agencies. But, since many highway safety activities are local responsibilities, the section 402 funds should be targeted at that level. The concept of the program under this alternative would shift, in that the federal government would rely on the states to aid local jurisdictions. Now, at least in concept, both the state and local jurisdictions are viewed as the agents that deliver a highway safety product.

The success of this alternative would depend on state-local relations and the relative functional competence at each level. If the premise is correct that states are more competent than local jurisdictions, then forcing states to focus on local rather than state agencies is supportable. However, even if state agencies are more competent than local agencies, the governor's representative or equivalent unit must be able to gain the cooperation of, and be able to influence, local agencies to make this a workable alternative.

SANCTIONS AND INCENTIVES

Sanctions

The national requirement to implement the highway safety standards has been reinforced by the use of sanctions since the original statute was enacted in September 1966. The intent was to move states and local jurisdictions toward full compliance with federally set standards and hence toward national uniformity in combating what are commonly discerned as national safety problems. The means of sanctioning selected was traditional—a financial penalty. In this case, the Highway Safety Act stipulated that a lack of reasonable progress and failure to implement an approved program would result in the withholding of a state's highway safety grant funds under section 402 and 10 percent of its federal-aid highway construction funds (although the Secretary of Transportation was empowered to suspend the 10 percent withholding for any period he selected on the basis of public interest).

The use of sanctions remained largely in the background, serving as an implied threat, until the mid-1970s, when three states that had not enacted legislation requiring the use of helmets for all motorcycle operations were threatened with sanctions. Although sanction hearings were held, fiscal sanctions were not imposed. In the Federal-Aid Highway Act of 1976, Congress eliminated the use of sanctions against states that failed to enact helmet-use laws for people over 18 years of age and placed a moratorium on the use of all sanctions until all highway safety standards were evaluated and a report submitted to Congress. The sanction of withholding 10 percent of a state's federal-aid highway construction money was repealed by the 1976 Highway Safety Act. There are a number of alternative ways that penalties might be used to ensure compliance with standards.

Alternative 1: Retain the current sanctioning system

The 1976 Highway Safety Act changed the sanctioning procedure originally called for in the basic 1966 legislation. The process now consists of withholding 50 to 100 percent of the section 402 grant pending the determination by the Secretary of Transportation of the gravity of a state's conformance deficiency. No highway construction funds may be withheld. If a state satisfies the Secretary of Transportation that it is coming into conformance, apportionments that have been withheld can be released to the state. Otherwise, the amount withheld is reapportioned among the other states.

Two additional features are provided by the 1976 act. First, states are no longer required to conform to the helmet-use requirement of the motorcycle safety standard to obtain approval. Second, section 208a states that "implementation of a highway safety program under this section shall not be construed to require the Secretary [of Transportation] to require compliance with every uniform standard, or with every element of every uniform standard, in every State." The strictures of the original legislation have taken a sharp turn toward greater state flexibility and federal discretion in the use of sanctions.

Alternative 2: Reestablish sanctions on highway construction funds

This alternative would represent a return to the strictures of the original statute. Following the Secretary of Transportation's determination that a state had not submitted a satisfactory highway safety plan, he or she would be authorized to begin sanctioning proceedings with the ultimate aim of withdrawing 10 percent of that state's federal-aid highway construction funds and/or 50 to 100 percent of the section 402 funds. When changes to the plan met the requirements, full restitution could be made. Otherwise, the funds withheld would be available for reapportionment to states with approved plans.

Certain features of both the 1966 and the 1976 legislation could modify this sanctioning potential. The 1966 act authorized the Secretary of Transportation to suspend the 10 percent sanction if it were in the public interest. The 1976 act provides that the Secretary of Transportation may approve a plan even though a particular state is not in conformance with every aspect of a given standard. Thus, certain flexibility and discretionary authority are assumed to remain available under present legislation.

Alternative 3: Eliminate sanctions

Just as the 1976 legislation eliminated the 10 percent construction funds sanction, this alternative would eliminate the present authority to withhold 50 to 100 percent of the section 402 highway safety grant. Certain professionals in the highway safety community stress the point that Congress originally intended the national highway safety program to be a partnership between the federal government and state and local political subdivisions. The underlying thrust seemed to be that the federal level would study national problems, set guidelines for attacking them, provide technical assistance, and participate in the funding requirements. States and localities, on the other hand, would determine their own problems and priorities and would cooperate with the federal government in trying to overcome national safety problems. Nevertheless, even without sanctions, the federal government cannot ignore its responsibilities to ensure the proper stewardship and legal use of such funds. Although each state would receive its annual apportionment of section 402 funds, no actual obligation (use) of section 402 funds could occur without program approval.

Alternative 4: Provide for partial sanctions

This alternative would retain limited sanctioning authority for use by the Secretary of Transportation. Assuming that the elimination of the 10 percent construction-fund sanction is unchanged, limited sanctioning would be tied to the section 402 highway safety grant. A percentage of the safety grant commensurate with the state's degree of nonconformance as determined by the Secretary of Transportation would be withheld until the state's plan or situation was altered satisfactorily. However, the sanction would be limited to withholding funds in certain areas. Thus, if a state were not in compliance with licensing requirements, federal funds would be withheld from the Department of Motor Vehicles or the responsible state licensing authority, but funds could continue to be spent on enforcement, alcohol programs, or other areas in which the state is in compliance. It is recognized that the effect of

this type of sanction might be minimal; if a state did not wish to allocate its funds in a certain area and federal funds for such use were therefore denied, denial might suit the state very well and provide no leverage whatever.

Alternative 5: Make states ineligible for incentive grants

Under this alternative, states that had received approval of their safety programs would receive the full apportionment of section 402 safety grants, but they would be ineligible to receive incentive grants.

Current law authorizes the Secretary of Transportation to make annual incentive grants to states that enacted legislation requiring mandatory use of seat belts and to those that have achieved the most significant reductions in traffic fatality rates or the actual number of fatalities. The latter incentive may not exceed 25 percent of the state's grant amount, but it has the unique advantage that the only constraint on its use is that it be used to further the objectives of the federal highway safety legislation.

Incentives

Along with the opposition of states to sanctions, there is the view that the federal government should use a carrot rather than a stick to encourage compliance with standards. The congressional response was the authorization of incentive grants. The Secretary of Transportation is authorized by the Highway Safety Act to award additional section 402 grants or incentives to states that adopt legislation requiring the use of automobile seat belts, provided this legislation satisfies criteria published by the Secretary of Transportation (only Puerto Rico has received such funds, and Congress has recently not seen fit to appropriate funds in this area), or that reduce the highway fatality rate or actual number of fatalities below the average for the preceding four years. For the latter, states are ranked in order of the greatest percentage of improvement, and each is awarded 25 percent of its regular section 402 apportionment until all incentive funds are depleted. Normally, only one-quarter of the states or fewer can expect an award. Some states (six in 1975) receive double awards because they reduce both the rate and number of fatalities. Expenditure of the incentive grant does not require federal approval. It is interesting to note that under current law a state may receive an incentive award even though it does not have an approved program plan and could even be involved in a sanctioning procedure.

The issue of incentives raises special controversies among several constituencies of the highway safety community. To understand its importance as an issue, several concerns raised by the safety

community should be considered. First, states do not want incentives to be emphasized to the point that it might affect the apportionment of basic section 402 funds. Second, incentives are being awarded partly on the basis of chance, that is, whether the fatality rate or number of fatalities climbs or declines in relation to a state's own highway history and that of "competing" states. Finally, there is concern that it be understood that fatality rates and numbers alone are not an accurate or adequate indicator of the soundness of a state's highway safety program. There are a number of alternatives to the present incentive program.

Alternative 1: Base incentive grants on change in fatality rates rather than on comparative standing

State programs could be judged on their own merits. This alternative would eliminate what many professionals regard as a type of competition among states. It recognizes that each state faces certain unique problems (as well as the common or natural concerns) that lessen the validity of comparative judgments. Nevertheless, the aspects of chance and forces not amenable to safety program solutions would remain.

Alternative 2: Continue incentive grants but limit them to specified critical areas or to areas not eligible for federal funding

A safety administrator might select as a critical area one or more key national problems that are endemic in his state (such as alcohol-related accidents) or a particularly intense problem unique to the state (such as motorcycle accident rates that are significantly above the U.S. average). Incentive grants might then be used to fund countermeasures recommended by the federal government or developed at the state or local level. If the countermeasure selected were of an innovative type (normally funded by section 403 research and demonstration funds but outside normal section 402 assistance), the incentive could be used to support its implementation or matched with state or local funds to increase ongoing efforts.

Alternative 3: Use incentive grants to fund innovation projects

This alternative presupposes that a state can identify its most serious traffic problems and design countermeasures that are both innovative and have a good chance of success. It should be recognized that, since the federal government would have legal responsibility for the use of the incentive grants, the states would be required to supply use plans and

documentation to prove both that the problem required attention and that an effective, innovative proposed solution had been selected. This alternative incorporates a judgmental determination and is therefore vulnerable to challenge.

Alternative 4: Eliminate incentive grants

In effect, this alternative would entail repeal of current incentive legislation; it would require Congressional hearings and action. Incentives would no longer be available for seat belt legislation, for reductions of fatalities, or for other criteria the Secretary of Transportation might recommend to Congress.

Alternative 5: Determine in advance target areas and award incentives based on accomplishments in those areas

Under this alternative, well-defined problem areas (probably those with direct influence on accident occurrences) would be identified, and there would be the option of negotiating goals within clear time frames. Earlier government studies of this approach selected as likely problem areas compliance with 88-km/h (55-mph) speed limits, drinking drivers, defective vehicles, motorcycle injuries and fatalities, and specific geographical areas. Performance might be judged, for example, by using proxy measures or intermediate performance indicators, such as citation and conviction rates for drivers who have blood alcohol concentrations that are above the legal limit.

Alternative 6: Award incentives on the basis of specific compliance with critical programs

This approach would require that the government, through research, program evaluation, and judgments based on 10 years of experience, identify with a firm degree of certainty problem areas or program standards that require broad uniform conformance in order to achieve reductions in accidents, injuries, or fatalities or to support countermeasures that have direct impact potential. Current knowledge suggests that the following would be prime candidates: uniform rules of the road, signs, signals and markings, and traffic records systems. Very simply, additional section 402 funds would be paid to states that are in full compliance or that have reached some previously established level of compliance. The important aspect of using established criteria-such as degree of compliance with the Uniform Code of Traffic Laws and Ordinances-is that these criteria were established by the safety community and have already been routinely published; they will thus not appear to be federal report cards. States of either longstanding or recent compliance would be eligible.

In addition to the preceding alternatives, DOT announced in December 1976 that four other incentive approaches were under consideration and requested comments by March 1977. Three of the following four proposals would have the effect of increasing the number of states that could receive incentive awards for reducing fatalities, although each award would be smaller. Neither the eligibility requirements nor the ranking of states would be affected. Alternative A would reduce the incentive amount from 25 percent of the state's regular section 402 grant to 20 percent. Alternative B would provide the highest ranked state with a bonus of approximately \$1 million, the next two states with \$750 000, the next three with \$500 000, the next four with \$350 000, and the remaining states with \$250 000 until the incentive funds were exhausted. Alternative C would also change the amount of the incentive grant to a particular state. A state would be judged on the quality of its performance compared with other eligible states. Awards would be made on the basis of a downward sliding scale, ranging from 25 to 5 percent improvement, until funds were exhausted. Alternative D would provide that all eligible states receive an incentive grant based on a formula comparing each state's ratio of fatality reductions with that of other states.

RESEARCH AND MANPOWER

The conduct of research and development should proceed along traditional managerial lines, beginning with the discovery and isolation of current or potential problems. It is difficult to generalize on just how a specific research project is begun, the scope of the effort, and the practical use of results. Since 1966 the federal highway safety research program has been centrally managed in just about every aspect, from applied research through demonstration of countermeasures. The Highway Safety Act of 1966 gave some latitude to the Secretary of Transportation to carry out safety research and development through state and local agencies, institutions, or individuals. Funds may be awarded for training or education of highway safety personnel, fellowships in highway safety, development of improved accident investigation procedures, emergency medical service plans, demonstration projects, and related activities that are deemed to be necessary to carry out the purposes of section 402. The definition of research and development described by these potential funding areas is quite broad and appears to allow considerable latitude in what can be undertaken and by whom.

NHTSA Research

Perhaps the largest NHTSA program effort since 1966 has concentrated on research dealing with problem identification and isolation and development of countermeasures—in both technical and behavioral areas—and on demonstration projects in alcohol safety, emergency transportation, selective enforcement, and adjudication. The process of managing and implementing this highway safety research program has had its share of problems. The need to take positive action has often resulted in the creation of demonstration projects without thorough prior field testing of countermeasures. Large efforts in applied research were made without a clear need for practical use.

In earlier years, the research effort and the traffic safety programs frequently operated relatively independently. Since they were based on different traditions, experience, and training, the respective plans and outcomes were understandably not well meshed. Because all these efforts were created at once at the federal level (first as a bureau under FHWA and later as an administration under DOT), the necessary lead time for research was in most cases incompatible with the mandate for immediate safety action as viewed by the safety program office.

FHWA Research

The FHWA program known as the Federally Coordinated Program for Research and Development is an applied research and development program designed to achieve solutions to the most critical problems facing the highway community. It is organized into categories for safety, traffic environment, materials, and structures.

The Implementation Division within the Office of Development is responsible for translating research results into a form that can be put into practice. The translation includes appropriate field testing and evaluation and the development of operating tools. These tools generally consist of some combination of field orders, manuals, handbooks, specifications, films, training materials, computer software packages, prototype hardware, and the like. The means of translation—experimental projects, demonstration projects, and National Highway Institute programs—represent some of FHWA's principal avenues for advancing new technology.

Technology transfer coordinators and committees to review the potential application of new technology have been organized into regional and division offices to reach states, cities, counties, and other local users. In fiscal 1976, to emphasize the importance of technology transfer within the agency, FHWA designated technology transfer as a major program emphasis area.

Research Issues and Alternatives

The focus of the following issues and alternatives is on state participation and involvement in research, development, and demonstration and on the funding options that might be considered.

Alternative 1: Selectively fund the states to conduct research or demonstrations

A significant part of a problem-identification process is its design and the subsequent analysis of all kinds of data. Once such a process is under way or completed, there are areas that require certain kinds of research, sometimes of a type peculiar to one state's requirements and sometimes of possible benefit to other states or to the nation as a whole. A number of states either have the expertise—a qualified staff and facilities—or are able to enlist the services of competent institutions for research purposes. One possibility for supporting such research would involve making federal funds available directly to the states from amounts appropriated under section 403 of the Highway Safety Act. The amount made available in this way would not cover all states each year; it would be necessary to award such projects on a competitive basis once selection criteria were established and an appropriate means for making recommendations and selections was devised. Participation by the governors' representatives in the project-selection process might help to assure both merit and need for the particular state proposal. Other funding possibilities for this alternative may emerge, such as a new separate section and subsequent line item, which could also be established under section 403.

Alternative 2: Redirect the federal grant

Over the years, the use of section 402 grants by the states has ranged from the purchase of hardware items to comprehensive multifaceted projects designed to address safety problems. These funds have been variously described as seed money, support for innovative techniques, a subsidy, a catalyst, a form of leverage, and so on. The amount is most often described as just 2 percent of statewide safety expenditures and, by some, as perhaps the sole resource for true highway safety because the large amount assigned to safety-related activities is assumed to be expended whether there is a federal highway safety program or not. It has been argued that it is more efficient to concentrate the effort and funds; once they are spread among 56 jurisdictions and subsequently divided among many lower level units, funds are so dispersed that little of consequence can result.

Although it is not currently permitted under existing law, it would be possible to allocate all or a major portion of section 402 grants to state- or local-directed research, development, demonstrations, and other areas considered (by current section 403 language) to be within research and development use. A state agency (the governor's representative or equivalent) would retain managerial responsibility for such a program, with plans developed and approved according to current procedures of the highway safety program. The mechanisms for allocating funds could range from a federal requirement for a specified percentage across the board to flexible amounts depending on a state's needs and capabilities.

Alternative 3: Assist state research and development

Although there are cogent arguments to be made for concentrating research work to achieve greater national efficiency, some thought should be given to a more direct hands-on service that could provide research and development assistance to individual state, regional, or local agencies in such areas as analytic techniques, evaluation, data systems, or technical development. This does not disregard the existing expertise in a state, but it could bring additional and national experience to bear on particular problems, either to help start up a necessary project or to provide consultation over relatively short periods. One feature would be a quick response capability. Funding for this service would be provided under section 403, but state, local, or section 402 funds would be used for the project itself.

Alternative 4: Provide start-up funds for initial implementation of new highway safety technology

The technology development cycle currently provided for in the Highway Safety Act has some difficulty in moving from research, development, and demonstration to the start-up of operations. Research and demonstrations are supported out of funds appropriated under section 403 of the Highway Safety Act, and section 402 funds are used to encourage new safety operations. The act provides that section 402 funds may not be used to support research activities that can be funded under section 403. As federal demonstration projects are phased out, attempts are made to pick up the activity through section 402 funding. This type of transition is being impeded by the wording of the current law. A more substantial problem in implementing new technology would be encountered if the options selected for the management of section 402 funds give the states complete freedom in their use. It would then be more difficult to get new highway

safety technology implemented. Therefore, consideration needs to be given to the possibility of providing start-up funds for use in initiating new highway safety programs at the state level.

Manpower Development

Current legislation (section 403) provides for training grants and fellowships in highway safety. Both FHWA and NHTSA have programs that incorporate one or more kinds of assistance for training. In discussions of manpower development, the respective roles of all levels of government, the scope and extent of training assistance, and the basic purpose of such training were reviewed. On the premise that trained personnel in such areas as problem analysis, countermeasure development, evaluation, and safety engineering provide a substantial impetus to the establishment and maintenance of highway safety programs, particularly at state and local levels, an emphasis on manpower development with one or more of the following elements might be considered:

- 1. A portion of section 403 funds could be allocated to the states for manpower development in such a way that the states may decide on the specific assistance (scholarships, curriculum development, and so on) to be provided.
- 2. The funding could be provided with the requirement that states match the section 403 funding with either section 402 or state funds.
- 3. Section 403 manpower development funds could be set aside and states could compete for such funds, submitting proposals that would be judged by criteria developed in cooperation with the states.
- 4. State manpower development proposals could be made eligible for funding under the first alternative described above for research issues.
 - 5. The status quo could be maintained.

PRIVATE-SECTOR INVOLVEMENT

This issue addresses mechanisms and policies for private-sector involvement at the federal level of highway safety administration. Such activities may include providing input at planning stages, reacting to federal policies and programs, and in certain instances delivering services in a unique way in cooperation with a federal office. The term private sector is here broadly defined to cover general membership organizations (e.g., American Automobile Association), industry membership organizations (e.g., American Road Builders' Association), associations of state or local officials (e.g., American Association of State Highway and Transportation Officials), single-issue organizations (e.g., American Safety Belt Council), and general consumer groups (e.g.,

Center for Auto Safety, National Safety Council).

Community Support

For 50 years private, voluntary, nonprofit citizens' safety organizations have been part of the effort to improve highway safety. They have been instrumental at all levels of government in stimulating official action and in providing public information, education, and training programs to improve the safety behavior of individuals.

Since the initiation of the federal safety program in 1966, there has been a lessening of highway safety activity by nonprofit private-sector organizations. However, private organizations can carry out certain activities and perform certain roles that cannot be attempted by government. In the current political atmosphere, initiatives of the federal government in areas that affect personal choice are likely to be met with suspicion and philosophical opposition. An effective privately endowed safety movement may be essential in winning the cooperation of the public in such vital areas as observing speed limits, use of safety belts, installation of passive restraints, and passage of helmet laws. The problem comes in discovering the unique capability of private safety organizations and determining appropriate ways to assist them in coordinating their efforts with the federal, state, and local programs. The resources of most of these agencies are limited. Can the federal government or Congress provide funding without co-opting these organizations?

Alternative 1: Maintain the status quo

Private agencies could continue to be used to assist on specific projects as appropriate. Contracts could be set up with these groups from time to time in cases in which they are best qualified to do the work.

Alternative 2: Coordinate private-sector and government activities

Private-sector organizations can be assisted in integrating and coordinating their activities with federal, state, and local safety efforts. This assistance can include providing some regular financial support when it is required to make this coordination possible.

Alternative 3: Participate as a third partner

It would be possible to establish a separate category of funding provided by Congress to enhance the growth and effective participation of private-sector safety agencies as the third partner in the existing federal-state partnership.

Public Information and Education

Since 1972 NHTSA has developed a national education program designed to encourage personal actions by the public that can prevent crashes. The best known example of such a program has been the alcohol safety mass media effort. To insure that this effort is effective, a scientific management system has been adopted. This process begins with survey research into the knowledge, attitudes, motivations, and interests of motorists in order to document gaps or obstacles to safe behavior. On the basis of these studies, public information and education programs, including mass media campaigns and community education activities, are mounted. Follow-up surveys are conducted to measure changes in attitudes and knowledge that can be attributed to the public education programs. There is some question whether this type of direct operational safety program should be undertaken by the federal government and whether it can appropriately be funded by section 403, which is intended for research and development and demonstration of new programs.

Alternative 1: Establish state and private public information programs

The operation of public information programs would be left to the states and private-sector agencies; federal efforts would be limited to developing new methods and approaches and to providing technical assistance to the states on request.

Alternative 2: Establish federal public information programs

There would be a specific budget for a national public education effort in behalf of traffic safety. Such a program might include (a) a continuation of the current effort to develop materials to be used in public service broadcasting time; (b) extension of this effort to include paid advertising; and (c) a regular, comprehensive appraisal of public knowledge, attitudes, and interests regarding highway safety for use by all safety organizations—private, state, and local—in planning their programs.



Participants

AARON, James E., Safety Center, Southern Illinois University, Carbondale

ADEN, Clifford E., Washington Traffic Safety Commission, Olympia

ALTOBELLI, Donato J., Federal Highway Administration, Hartford

ANDERSON, E. Robert, National Highway Traffic Safety Administration, Fort Worth, Texas

ANDERSON, Howard, Office of Highway Safety, Federal Highway Administration

ANDERSON, John P., National Highway Traffic Safety Administration, Linthicum, Md.

ANDERSON, Roy W., Bureau of Plans and Programs, National Transportation Safety Board, Washington, D.C.

AREND, Russell J., Traffic Institute, Northwestern University, Evanston, Ill.

ARLEDGE, H. Lee, Louisiana Highway Safety Commission, Baton Rouge

BAERWALD, John E., Highway Traffic Safety Center, University of Illinois, Urbana

BALCAR, Gerald P., Potters Industries, Inc., Hasbrouck, N.J.

BALDWIN, Robert L., Missouri Safety Center, Central Missouri State University, Warrensburg

BANKS, Joseph F., Jr., Roy Jorgensen Associates, Inc., Gaithersburg, Md.

BARDELL, Donald J., American Association of Motor Vehicle Administrators, Washington, D.C.

BARNETT, Isaac, Safety and Driver Education Center, North Carolina Agricultural and Technical State University, Greensboro

BENNETT, Milton, West Virginia Department of Education, Charleston

BENNETT, R. Clarke, Office of Highway Safety, Federal Highway Administration

BERRY, Donald S., Northwestern University, Evanston, Ill.

BLENN, John F., Nassau County Traffic Safety Board, Mineola, N.Y.

BRAHMS, Thomas W., Institute of Transportation Engineers, Arlington, Va.

BROWN, Russell I., Safety Management Institute, Bethesda, Md.

BUFE, Noel C., Office of Criminal Justice Programs, Michigan Department of Management and Budget, Lansing

BULMAN, David H., Division of Traffic and Safety, New York State Department of Transportation, Albany

BURGESS, Robert, Missouri Office of Highway Safety, Jefferson City

BURNS, Elmer N., Bureau of Design Services, Ohio Department of Transportation, Columbus

CAFFERTY, Allen E., Idaho Department of Education, Boise

CAMERON, Joseph E., Office of Program Evaluation, National Highway Traffic Safety Administration

CAMPBELL, B. J., Highway Safety Research Center, University of North Carolina, Chapel Hill

CAREY, W. N., Jr., Transportation Research Board

CARLSON, Dwight, School Transportation and Safety Education Division, Iowa Department of Public Instruction, Des Moines

CARNAHAN, James E., Highway Traffic Safety Center, Michigan State University, East Lansing

CARROLL, Doris N., Governor's Highway Safety Committee, Granby, Mass.

CARSON, William L., Division of Transportation Safety, Maryland Department of Transportation, Baltimore

COHEN, Edward B., Committee on Commerce, U.S. Senate

COLEMAN, Robert R., Highway Safety Group, Pennsylvania Department of Transportation, Harrisburg

COLLETON, Francis X., Governor's Highway Safety Bureau, Boston

COOK, Kenneth E., Transportation Research Board

CORGILL, William E., District of Columbia Office of Highway Safety

COWAN, Johnny M., Texas Department of Public Safety, Austin

CUSHMAN, William D., American Driver and Traffic Safety Education Association, Washington, D.C.

DARWICK, Norman, Police Management and Operations Division, International Association of Chiefs of Police, Gaithersburg, Md.

DOAN, Rupert A., Hamilton County Municipal Court, Cincinnati

DOUGHTY, J. Robert, Bureau of Traffic Engineering, Pennsylvania Department of Transportation, Harrisburg

DOWNEY, Mortimer L., Office of the Secretary, U.S. Department of Transportation

DRIESSEN, Gerald J., Research Department, National Safety Council, Chicago

ECHOLS, Rich, Missouri Office of Highway Safety, Jefferson City

EDGERTON, Roy C., Transportation Research Board

EHRLICH, Patricia Hause, Idaho Transportation Department, Boise

EPHRAIM, Frank, Office of Program Evaluation, National Highway Traffic Safety Administration

ESTEP, Alvord C., Division of Highways, California Department of Transportation, Sacramento

FERGUSON, Wayne S., Safety Division, Virginia Highway Research Council, Charlottesville

FERGUSSON, Douglas M., Nationwide Insurance Company, Columbus, Ohio

FINKELSTEIN, Michael, Office of Planning and Evaluation, National Highway Traffic Safety Administration

FISHER, Carlton, Georgia Office of Highway Safety, Atlanta

FLEISCHER, G. A., Traffic Safety Center, University of Southern California, Los Angeles

FOLEY, James E., Office of Highway Safety, Federal Highway Administration

FORRESTER, James E., Office of State Vehicle Programs, National Highway Traffic Safety Administration

FRANEY, William H., American Association of Motor Vehicle Administrators, Washington, D.C.

GAVAGHAN, Paul F., Distilled Spirits Council of the United States, Washington, D.C.

GERSON, Sandra W., Economic and Government Division, U.S. Office of Management and Budget

GUYER, Richard, Maryland Department of Transportation, Baltimore

GWYNN, David W., New Jersey Department of Transportation, Trenton

HALL, Thomas A., Office of Highway Safety, Federal Highway Administration

HAMES, Lee N., Department of Health Education, American Medical Association, Chicago

HARTMAN, Charles H., Motorcycle Safety Foundation, Linthicum, Md.

HEAD, Donald B., Department of Public Works, County of Sonoma, Santa Rosa, Calif.

HESS, Robert L., Highway Safety Research Institute, University of Michigan, Ann Arbor

HILL, Gloria, Office of the Secretary, U.S. Department of Transportation

HILL, Vern L., Division of Motor Vehicles, Virginia Department of Highways and Transportation, Richmond

HOOPER, Paul C., Department of Public Works, King County, Seattle, Wash.

JOHNS, K. B., Transportation Research Board

JOHNS, William E., American Trucking Associations, Washington, D.C.

JOHNSON, Adam G., Motorcycle Safety Foundation, Linthicum, Md.

KEARNEY, Edward F., National Committee on Uniform Traffic Laws and Ordinances, Washington, D.C.

KENEL, Francis C., Traffic Engineering and Safety Department, American Automobile Association, Falls Church, Va.

KNAFF, Robert, Office of Driver and Pedestrian Research, National Highway Traffic Safety Administration

KOIVA, Mati, National Safety Council, Chicago

KRUKE, Kevin, Highway Users Federation, Washington, D.C.

LAMPE, Andrew J., 3M Company, Washington, D.C.

LANKARD, Thomas A., Office of Traffic Safety, California Business and Transportation Agency, Sacramento

LARSON, Charles W., Iowa Department of Public Safety, Des Moines

LAUTZ, William H., Division of Highways, Wisconsin Department of Transportation, Madison

LAZAREWICZ, Robert, Maryland Department of Education, Baltimore

LEMA, Joseph E., Research Triangle Institute, Research Triangle Park, N.C.

LEWIS, Robert L., Texas State Department of Highways and Public Transportation, Austin

LINDOUIST, Gordon G., National Highway Traffic Safety Administration, Atlanta

LIVINGSTON, Charles G., Office of Driver and Pedestrian Programs, National Highway Traffic Safety Administration

LOFGREN, Nils A., Highway Safety Program Department, Motor Vehicle Manufacturers Association, Washington, D.C.

LYLE, Jan H., Governor's Highway Safety Bureau, Boston

MANIKAS, John G., Legislative Affairs Office, Ford Motor Company, Dearborn, Mich.

MARSH, Burton W., Consultant, Washington, D.C.

MARSHALL, Robert L., Missouri Safety Center, Central Missouri State University, Warrensburg

McBRIDE, Everett L., National Highway Traffic Safety Administration, Kansas City, Mo.

McDONALD, John W., Automobile Club of Southern California, Los Angeles

McGEE, Jack, National Highway Traffic Safety Administration

McGRATH, William R., Raymond Parish and Pine, Inc., Tarrytown, N.Y.

McKNIGHT, A. James, National Public Services Research Institute, Alexandria, Va.

McMILLEN, Robert D., Ohio Department of Transportation, Columbus

MILLDEBRANDT, Thomas, Highway Patrol Division, Arizona Department of Public Safety, Phoenix

MILLER, Edward C., Montana Department of Community Affairs, Helena

MURPHY, Joseph P., National Conference of Governor's Highway Safety Representatives, Washington, D.C.

MYLROIE, Willa, Research and Special Assignments Division, Washington State Department of Highways, Olympia

NASH, Carl, National Highway Traffic Safety Administration

NEVIL, Ken, Governor's Office of Traffic Safety, Austin, Texas

ORNE, Donald E., Michigan Department of State Highways and Transportation, Lansing

OUELLETTE, Roland A., General Motors Corporation, Washington, D.C.

PAIN, Richard F., BioTechnology, Inc., Falls Church, Va.

PEET, Richard C., Citizens for Highway Safety, Washington, D.C.

PERINI, Victor J., Jr., Highway Users Federation, Washington, D.C.

PFEFER, Ronald C., Traffic Institute, Northwestern University, Evanston, Ill.

RAY, James C., County of Sacramento, Sacramento, Calif.

REEL, Thomas O., Office of Highway Safety Planning, Michigan Department of State Police, Lansing

REYNOLDS, Billie D., National School Transportation Association, Fairfax, Va.

RHODES, Joe, American Association of State Highway and Transportation Officials, Washington, D.C.

ROACH, William E., Jr., Somerset County, Somerville, N.J.

RUMMEL, James L., Program Management Division, Federal Highway Administration

SAARI, David, Center for the Administration of Justice, American University, Washington, D.C.

SALVESEN, John O., Cape May County Department of Transportation, Rio Grande, N.J.

SCHEFFEY, Charles F., Office of Research, Federal Highway Administration

SCHMIDT, Ken, U.S. General Accounting Office

SCOTT, Dana L., National Highway Traffic Safety Administration

SEMER, Charlene, Great Falls, Va.

SHEEHE, Gordon H., Highway Traffic Safety Center, Michigan State University, East Lansing

SMITH, Cordell, Division of Highway Safety, Colorado Department of Highways, Denver

SMITH, Edwin M., Texas State Department of Highways and Public Transportation, Austin

SMITH, Lynn, Insurance Institute for Highway Safety, Washington, D.C.

STEINBACH, Mark, Center for Auto Safety, Washington, D.C.

TAMANINI, F. J., Alexandria, Va.

THAR, Ferdinand, National Governors' Conference, Washington, D.C.

TIPPIE, Richard, National Safety Council, Chicago

TONEMAH, Orin J., National American Indian Safety Council, Albuquerque

VETTER, Fred W., Jr., Office of Traffic Safety Programs, National Highway Traffic Safety Administration

VOAS, Robert, Demonstration Evaluation Division, National Highway Traffic Safety Administration

WALLER, Patricia F., Highway Safety Research Center, University of North Carolina, Chapel Hill

WALSH, Vincent D., Sr., National Highway Traffic Safety Administration, Linthicum, Md.

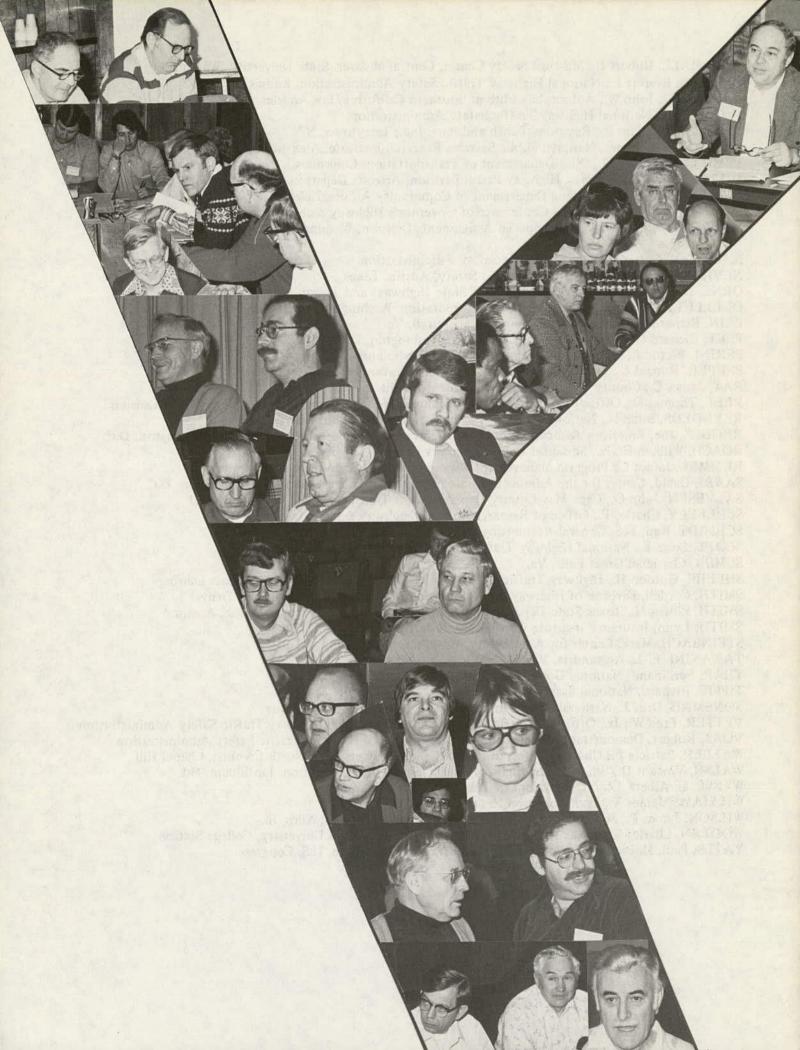
WEESE, G. Albert, Ohio Department of Transportation, Columbus

WILLIAMS, James K., Transportation Research Board

WILSON, James E., Signal Products Division, Amerace Corporation, Niles, Ill.

WOOTAN, Charles V., Texas Transportation Institute, Texas A&M University, College Station

YATES, Paul, House Public Works and Transportation Committee, U.S. Congress



TRANSPORTATION RESEARCH BOARD
National Academy of Sciences
2101 Constitution Avenue, N.W., Washington, D.C. 20418

Address Correction Requested

NON-PROFIT ORG. U.S. POSTAGE PAID WASHINGTON, D.C. PERMIT NO. 42970

JAMES W HILL
JAMES W HILL

IDAHO TRANS DEPT DIV OF HWYS
P O BOX 7129
ID 83707