

# FEDERAL ROLE IN TRAFFIC SAFETY

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HEARINGS  
BEFORE THE  
SUBCOMMITTEE ON  
EXECUTIVE REORGANIZATION  
OF THE  
COMMITTEE ON  
GOVERNMENT OPERATIONS  
UNITED STATES SENATE  
EIGHTY-NINTH CONGRESS  
FIRST SESSION

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TRAFFIC SAFETY: EXAMINATION AND REVIEW  
OF EFFICIENCY, ECONOMY, AND COORDINATION  
OF PUBLIC AND PRIVATE AGENCIES' ACTIVITIES  
AND THE ROLE OF THE FEDERAL GOVERNMENT

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JULY 13, 14, 15, AND 21, 1965

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PART 2

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Printed for the use of the Committee on Government Operations



U.S. GOVERNMENT PRINTING OFFICE  
WASHINGTON: 1966

49-959

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## FEDERAL ROLE IN TRAFFIC SAFETY

(Pursuant to S. Res. 56, 89th Cong.)

TUESDAY, JULY 13, 1965

U.S. SENATE,  
SUBCOMMITTEE ON EXECUTIVE REORGANIZATION,  
COMMITTEE ON GOVERNMENT OPERATIONS,  
*Washington, D.C.*

The subcommittee met, pursuant to notice, at 9:30 a.m., in room 1114, New State Office Building, Senator Abraham Ribicoff (chairman) presiding.

Present: Senators Ribicoff, Kennedy of New York, Javits, and Curtis.

Also present: Jerome Sonosky, staff director and general counsel; Walter L. Reynolds, chief clerk and staff director, Committee on Government Operations; and Raymond Battocchi, staff member.

Senator RIBICOFF. This morning the Subcommittee on Executive Reorganization will continue its hearings on the Federal role in traffic safety.

Before we hear the testimony of Mr. Donner, I would like to read a statement.

### STATEMENT OF HON. ABRAHAM RIBICOFF, U.S. SENATOR FROM THE STATE OF CONNECTICUT

Our witnesses this morning are the chairman of the board and the president of the General Motors Corp. Tomorrow we shall hear from representatives of the Chrysler Corp. to be followed by Mr. Roy Abernethy, president, American Motors, on Thursday, and Mr. Arjay Miller, president, Ford Motor Co., on Friday.

In our initial hearings last March members of the Federal Interdepartmental Highway Safety Board explained the role of the various Federal agencies involved in traffic safety. This week we will hear industry's views on this important subject.

#### DEVELOPMENTS IN TRAFFIC SAFETY SINCE MARCH 1965

Between then and now a great deal has already happened. Regulations governing safety devices on 1967 autos purchased for use by the Federal Government are now in effect. Legislatures in various States have taken steps to improve auto safety in their States. New York, for instance, has established an automotive safety board with authority to construct a prototype safe car. Illinois' House of Representatives approved a bill requiring GSA safety standards on all State-owned cars. Maryland, over the weekend, announced new standards

for tires in the State. Public interest in traffic safety, I would say, is at a new alltime peak. A recent Harris poll showed traffic safety to be one of the six or seven problems the American people worry about most.

And well they should. Each of us is a potential victim—whether we like to think about it or not. In not so many years from now one out of every five Americans will be killed or injured in auto accidents if the present rate continues. We killed 83 more people over the 3-day Fourth of July weekend just passed than have been killed in combat since January 1, 1961, in Vietnam—a fantastic number, 552 persons. I want to emphasize that today's holiday traffic toll will be tomorrow's average when you consider the increasingly large number of drivers, especially young drivers, and cars that use our roads and streets daily.

#### NEED FOR NATIONAL POLICY

That is why we must reexamine the traffic safety problem in the light of current experience. It is apparent that we have little if any national policy regarding traffic safety—especially as it relates to the private automobile. All forms of passenger-carrying vehicles must satisfy certain Federal safety requirements except the private auto. To say that it is a problem to be left to the States is almost as archaic as some of the horse and buggy rules and regulations that govern our roads today. To say that our national policy is to leave traffic safety to the States and private sector is to have no national policy. I submit that this is at the crux of the problem today.

We have poorly equipped and poorly trained drivers because we have no national policy on driver performance.

We have unsafe roads because for years we didn't concern ourselves with safety—only speed and convenience and ease of travel. And even today the 40,000 miles of the Interstate System make up only a small part of the over 3 million miles of roads and streets in our Nation.

We have little if any idea of exactly how safe or dangerous our cars really are because the question of safety has been left to others. The Federal Government can control the contents of my wife's tube of lipstick but it lacks even a policy regarding the 3,500-pound, super-powered piece of machinery she and I and millions and millions of others use daily. When you consider that special messages calling for the expenditure of billions of dollars are sent to Congress to fight the three leading causes of death—heart attack, cancer, and stroke—one wonders why a report on the fourth leading cause of death, traffic accidents, still has not been made public despite the March 15 deadline given the Federal agencies involved by the President himself.

#### OBJECTIVE OF THESE HEARINGS

That is what these hearings are all about. A study of the Federal role in traffic safety is a study of national traffic safety policy. That is what is sadly lacking in the traffic safety field. Hopefully, out of these hearings—with the help of men like Mr. Donner and Mr. Roche and others who will testify—we will be able to create an atmosphere of mutual respect and recognition of the problem out of which a national traffic safety policy will evolve. To be "for" traffic safety is

not enough. What we are doing to promote it and how we plan to improve it is the question before us.

## COOPERATION OF WITNESSES

May I say that none of the witnesses this morning were "summoned" to come here. I sent a letter of invitation to the heads of all the automobile manufacturers of this country. Their response was quick, polite, and indicated, on the part of all of them, the desire to cooperate. All the companies indicated to me they would send their top executives and that is shown today. We have with us the top executives of General Motors—Mr. Donner, chairman of the board, and Mr. Roche, president. I want to express the gratitude of this subcommittee for your courtesy and cooperation. We will treat the testimony as one, with Mr. Donner testifying first to be continued by Mr. Roche. We will ask questions after you have finished reading your statements.

During the course of these hearings there probably will be frequent references to two bills—S. 2162 and S. 2231. I ask unanimous consent that we insert the bills at this point in the record.

## EXHIBIT 46

[S. 2162, 89th Cong., 1st sess.]

A BILL To provide for research, design, development, and construction of fully operational passenger motor vehicles in prototype quantities embodying certain safety features

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the Administrator of General Services is hereby authorized to research, design, develop, construct, and test fully operational passenger motor vehicles in prototype quantities embodying such safety features and technical approaches as the Administrator shall from time to time deem necessary. Such vehicles are to serve as prototypes for the development of safety designs, characteristics, and features for use on commercially manufactured passenger motor vehicles. There should be incorporated into such prototype vehicles those safety designs, characteristics, and features tending to avoid or minimize the risk of accident, and/or avoid or minimize injury to passengers, pedestrians, and damage to other vehicles in the event of accidents.

Sec. 2. The Administrator of General Services may consult with any sources, groups, or individuals from which sound data, recommendations, and evaluations may be obtained. Such prototype safety vehicles program shall not be limited to traditional methods of automobile design, styling, testing, production or sales practices and methods.

Sec. 3. In carrying out the purposes of this Act, the Administrator of General Services is authorized to acquire by purchase, license, lease for a term of years or less, or donation, secret processes, technical data, inventions, patent applications, copyright applications, patents, copyrights, irrevocable nonexclusive licenses, and other rights and licenses under patent and copyrights granted by this or any other country.

Sec. 4. To implement the provisions of this Act, the Administrator of General Services may negotiate research contracts, hire experts and consultants, and procure trade journals and technical information.

Sec. 5. Such experts and consultants as may be employed hereunder may be compensated at rates not in excess of \$75 per diem, and while away from their homes or regular places of business they may be paid actual travel expenses and per diem in lieu of subsistence at the applicable rate prescribed in the Standardized Government Travel Regulations, as amended from time to time.

Sec. 6. There is authorized to be appropriated a sum not in excess of \$5,000,000 to carry out the provisions of this Act. Any funds so appropriated shall remain available to carry out the purposes for which appropriated until expended.

## EXHIBIT 47

[S. 2231, 89th Cong., 1st sess.]

A BILL To establish a National Highway Traffic Safety Center to promote research and development activities for highway traffic safety, to provide 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, That this Act may be cited as the "National Highway Traffic Safety Act of 1965".

## STATEMENT OF PURPOSE

SEC. 2. It is the purpose of this Act to establish and strengthen a national effort for highway traffic safety by initiating and accelerating a national research and development program, by applying the results of such research to improving minimum standards for highway traffic safety, by providing assistance to the States for improved driver education and motor vehicle inspection and testing programs, and by encouraging public and private agencies and organizations to participate in traffic safety programs.

## DEFINITIONS

SEC. 3. As used in this Act—

- (a) the term "Secretary" means the Secretary of Commerce;
- (b) the term "State" means a State, the District of Columbia, and the Commonwealth of Puerto Rico; and
- (c) the term "State highway safety board" may include in the case of a State in which there is no State highway safety board an appropriate State agency other than a highway safety board designated for the purposes of this Act by the Governor of such State.

## ESTABLISHMENT OF HIGHWAY TRAFFIC SAFETY FUND

SEC. 4. (a) There is hereby established in the Treasury of the United States a highway traffic safety fund (hereinafter referred to as the "fund") into which shall be covered for each fiscal year beginning after June 30, 1965, amounts equivalent to so much of the taxes received by the Treasury after such date under section 4061(a)(2) of the Internal Revenue Code of 1954 (relating to tax on passenger automobiles and trailers) as is attributable to so much of the tax imposed on articles taxable under such section as does not exceed a rate of 1 percent. For purposes of the preceding sentence, amounts received during the fiscal year ending on June 30, 1966, shall be taken into account only to the extent attributable to liability incurred after June 30, 1965.

(b) The Secretary of the Treasury shall from time to time transfer from such fund to the general fund of the Treasury amounts equal to the amounts of credits or refunds (or the proper portion thereof) of the taxes under such section 4061(a)(2) allowed or paid under such Code.

## APPROPRIATIONS

SEC. 5. Amounts covered into the fund established by this Act shall be available for expenditure for the purposes of this Act only to the extent appropriated therefor.

## NATIONAL HIGHWAY TRAFFIC SAFETY CENTER

SEC. 6. The Secretary shall carry out the provisions of this Act through a National Highway Traffic Safety Center (hereinafter referred to as the "Center") which he shall establish in the Department of Commerce. The Center shall be headed by a Director who shall be appointed by the Secretary and shall receive compensation at a rate fixed by the Secretary in accordance with the Classification Act of 1949.

## DUTIES OF THE SECRETARY

SEC. 7. In order to carry out the purposes of this Act the Secretary shall—

- (1) plan, conduct, and administer basic research and development programs for highway traffic safety;
- (2) conduct engineering studies, establish testing facilities and proving grounds to apply the results of such research and to assure the practicability of such developments for highway traffic safety;



(3) prepare, with the assistance of State, interstate, and private organizations, an inventory and evaluation of present standards for highway traffic safety, including the consideration of driver training, traffic laws, driver licensing, traffic control devices, highway construction, motor vehicle inspection, and accident reporting;

(4) collect and disseminate through appropriate means, all information pertaining to such standards of highway traffic safety, the results of such research, and recommendations for the improvement of such standards;

(5) establish national minimum standards for highway traffic safety;

(6) cooperate with State highway safety boards, such interstate agencies as are established pursuant to the joint resolution of the Congress relating to highway traffic safety approved August 20, 1958, and other public and private agencies and organizations (including private industries) in the preparation and administration of the research programs under this Act;

(7) coordinate all programs for highway traffic safety research, development, and testing in the Federal establishment;

(8) make grants to or contract with, public and private agencies, organizations, and individuals for research and training projects, and such contracts for research shall be made in accordance with and subject to the limitations provided with respect to research contracts of military departments in section 2353 of title 10, United States Code, except that the determination, approval, and certification required thereby shall be made by the Secretary.

#### INCENTIVE GRANTS FOR STATE MOTOR VEHICLE INSPECTION PROGRAMS

SEC. 8. (a) From sums appropriated pursuant to section 5 of this Act for any fiscal year but not to exceed \$45,000,000 of such appropriation, the Secretary is authorized to make grants to State highway safety boards to pay up to 50 per centum of the cost for the establishment or improvement of State programs for motor vehicle inspection in accordance with the provisions of this section.

(b) Any State desiring to participate in the grant program under this section shall submit through its State highway safety board a State plan which shall—

(1) set forth a program for establishing, or improving (in the case of a State which already has in operation a State administered motor vehicle inspection program), State supervised motor vehicle inspection at garages or other suitable facilities certified by the State for that purpose;

(2) agree to accept and apply such minimum standards for highway traffic safety with respect to inspection as the Secretary shall by regulation prescribe;

(3) provide that the State will pay from non-Federal sources the remaining cost of such program;

(4) set forth provisions for the financing of such plan without Federal assistance;

(5) contain satisfactory evidence that the State will adequately supervise such inspection;

(6) provide that the State highway safety board will make such reports, in such form and containing such information as the Secretary may require; and

(7) provide such fiscal control and fund accounting procedures as may be necessary to assure proper disbursement of and accounting of funds received under this section.

#### INCENTIVE GRANTS FOR STATE DRIVER EDUCATION AND TRAINING PROGRAMS

SEC. 9. (a) From the sums appropriated pursuant to section 5 of this Act for any fiscal year, but not to exceed \$60,000,000 of such appropriation, the Secretary is authorized to make grants to State highway safety boards to pay up to 50 per centum of the cost of developing, establishing, and improving programs for driver education in accordance with the provisions of this section.

(b) Any State desiring to participate in the grant program under this section shall submit, through its State highway safety board, a State plan which shall—

(1) initiate a State program for driver education or significantly expand and improve such a program already in existence;

(2) include provisions for the training of qualified instructors and their certification;

(3) provide for adequate research, development, and procurement of practice driving facilities, simulators, and other similar teaching aids;

(4) include financial assistance by the State to institutions of higher education for research in driver education testing, curriculum, and methods of instruction;

(5) provide that the State will pay from non-Federal sources the remaining cost of such program;

(6) provide adequate State supervision and administration of such driver education; and

(7) provide such fiscal control and fund accounting procedures as may be necessary to assure proper disbursement of and accounting of funds received under this section.

(c) Prior to prescribing regulations under this section the Secretary shall consult with the Secretary of Health, Education, and Welfare.

#### DETERMINATION OF FEDERAL SHARE

Sec. 10. The Secretary shall determine the amount of the Federal share of the cost of programs for motor vehicle inspection and testing approved by him under section 8, and such share of the cost of programs for driver education approved by him under section 9, for each fiscal year, based upon the funds appropriated therefor pursuant to section 5 for that fiscal year and upon the number of participating States.

#### ADVISORY COUNCIL ON HIGHWAY TRAFFIC SAFETY

Sec. 11. (a) The Secretary may, without regard to the civil service laws, appoint an Advisory Council on Highway Traffic Safety to advise and consult on all matters concerning traffic safety including the establishment of national minimum standards for such safety. The Council shall be appointed by the Secretary from persons who are specially qualified by training, experience, and competence to render such service and who are representative of the fields of State and local traffic safety and enforcement, law, medicine, engineering, education, psychology, and public information.

(b) The Council shall meet at least once each year and at such other times as the Secretary may direct.

(c) Members of such Advisory Council shall, while attending meetings or conferences of such Council or otherwise engaged on business of such Council, be entitled to receive compensation at a rate fixed by the Secretary, but not exceeding \$100 per diem, including travel time, and, while so serving away from their homes or regular places of business, they may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5 of the Administrative Expenses Act of 1946 (5 U.S.C. 73b-2) for persons in the Government service employed intermittently.

#### ADMINISTRATION

Sec. 12. (a) The Secretary shall prepare and submit to the President for transmittal to the Congress at least once in each fiscal year a comprehensive and detailed report on the administration of this Act.

(b) The Secretary is authorized to request directly from any department or agency of the Federal Government information, suggestions, estimates, and statistics needed to carry out his functions under this Act; and such department or agency is authorized to furnish such information, suggestions, estimates, and statistics directly to the Secretary.

(c) Payments of grants made under this Act may be made in installments, and in advance or by way of reimbursement, as may be determined by the Secretary.

Senator RIBICOFF. Mr. Donner, you may proceed.

**STATEMENT OF FREDERIC G. DONNER, CHAIRMAN OF THE BOARD,  
GENERAL MOTORS CORP.; ACCOMPANIED BY JAMES ROCHE,  
PRESIDENT, GENERAL MOTORS CORP.; AND HARRY F. BARR, VICE  
PRESIDENT IN CHARGE OF ENGINEERING STAFF**

Mr. DONNER. *Good morning, gentlemen.*

For the record my name is Frederic G. Donner. I am chairman of General Motors. With me today are James M. Roche, our president, and Harry F. Barr, vice president in charge of our engineering staff.

**POSITION AND POLICIES OF GENERAL MOTORS WITH RESPECT TO HIGHWAY  
SAFETY**

The invitation to appear before your committee, which was addressed to Mr. Roche and me, indicated that this series of hearings was on the subject of traffic safety and that your interest was not limited to any specific bill or proposal. We welcome this opportunity to report to you our policies and programs as they relate to today's pressing problems of safety on our highways. I believe you will find that our own objectives in this area are identical with yours. It certainly must be entirely clear that an enterprise like ours can hope to succeed only if we do everything we can properly do to promote highway safety, and I might say, Senator, in preparing our statements, we went back to your statement before the Senate on the 17th of June in which you said you wanted to know about our product and the consideration we gave in designing the product. So we have not applied ourselves to some of the other problems that you indicated in your introduction.

May I also say, Mr. Chairman, that my associates and I wish to compliment you on your vigorous efforts on behalf of traffic safety, extending in part over many years. Your efforts have had a great impact in creating public awareness of and promoting positive attitudes toward this problem.

**SAFETY IS OF PRIME IMPORTANCE IN TECHNICAL IMPROVEMENTS**

In the engineering, development, and testing of our automobiles no consideration is more important to us than safety. We are moving ahead in this area with the help of all the scientific, engineering, and manufacturing talent we can muster. These efforts go back to the very beginnings of General Motors. The safety improvement of our products has always had the full backing and support of management in our corporation. Thus in General Motors the engineering and research policy groups are responsible for formulation of corporation-wide policies that guide the development of our products. While vehicle safety is the direct responsibility of the individual divisions, these policy groups stress the need for constant attention to the safety of our products. Both Mr. Roche and I, together with our four executive vice presidents and other top executives, are members of the engineering and research policy groups. These policy groups work under our executive committee.

Today we should like to tell you what General Motors has done, is doing, and proposes to do to assure that our customers will be driving safer cars from year to year when they buy General Motors cars.

Safety on the highways involves three factors—the car, the road, and the driver. General Motors is concerned with all three factors and we are proud of our contributions to the improvement of all three.

Spurred on by the accelerating pace of technological advance and the growing experience and competitive pressures that come over the years, numerous safety improvements have been incorporated in our products. These improvements have ranged to every part of the vehicle and every aspect of its functions. I might mention safety glass, turret steel tops, turn signals, windshield wipers and defrosters, and better headlamps as examples of items that today are accepted as commonplace.

All of the constantly improving standards of safety have been the result of a wide variety of continuing research, engineering, and testing activities. Our safety-related technical activities are conducted at the corporate staff level, by the car and truck divisions, by other divisions which supply parts and components for our vehicles, as well as by many outside suppliers, other organizations, and consultants.

The focal point for the corporation's staff activities in this field is the General Motors Technical Center at Warren, Mich. The engineering and styling staffs and the research laboratories which are housed at the center, all engage in extensive vehicle-safety oriented programs.

#### CAR TESTING FACILITIES

Extremely important to this many-faceted safety effort is the work done at the General Motors proving grounds at Milford, Mich.; Mesa, Ariz.; and Pikes Peak, Colo. Basically, our extensive and varied car testing facilities have car safety, reliability, and durability as their first concern.

The Milford proving ground was established in 1924, the first in the industry by many years. It was our strong belief then, as it is now, that controlled testing can best produce the information needed for the continued improvement in the safety and quality of our products. Only the controlled conditions of a laboratory or a proving ground permit such testing. The experience of the past 41 years has completely proven the need for and value of this type of test facility.

#### SAFETY ASPECTS OF HIGHWAYS

In addition to testing, important work has been done at our proving grounds to improve the safety aspects of highways. This work includes studies of roadside hazards and the development of more effective guardrails. We are also trying to learn what happens when we put the car and driver into given traffic situations at varying rates of speed.

#### SEVERAL ELEMENTS INVOLVED IN TRAFFIC SAFETY

As you are aware, the motorcar and its equipment make up only one element in the safety equation. We need safer drivers, and the public has demonstrated its willingness to accept law enforcement measures to curb unsafe driving beyond those now in force in many of our States. In this area, your chairman was a pioneer when he was Governor of Connecticut. Improvement in safe driving habits and law

enforcement in turn go hand in hand with improvement in our roads and highways as we push ahead with measures that reduce driving hazards and increase road safety. Accident prevention and safety on our highways is a continuing and demanding problem, requiring dedicated effort all along the line. We intend to continue to work at it, and do everything we can, even in areas that go beyond designing and building the car itself.

#### SPEED AND RACING

Speed is one of the factors in the search for safety. Consequently, much attention has been directed to our relation to auto racing and the resulting promotion of speed and racing. In response to general interest in this subject, the Automobile Manufacturers Association adopted a resolution on June 6, 1957, recommending to its members that they refrain from participation in auto racing and from featuring references to racing and speed in advertising and sales promotion. General Motors incorporated these provisions in its own policy on participating in racing and in the resulting promotion of speed and racing. While there is much disagreement about the value of such a policy, and about the value of racing as a means of "improving the breed," General Motors as recently as February 15, 1965, reaffirmed its position in support of the AMA resolution. We continue to abide by the spirit of that resolution and of our own policy.

#### COOPERATION WITH OUTSIDE ORGANIZATIONS

Beyond what we can accomplish with our own resources, there is other know-how and knowledge available. We have consistently worked with outside organizations to help reduce both the number of auto accidents and their severity. The Automotive Safety Foundation, for example, has long served as an effective channel for the constructive expression of our interest. General Motors has been one of the major contributors to this foundation since its creation in 1937 through the Automobile Manufacturers Association.

General Motors has long supported the activities of the National Highway Users Conference. In 1932, Mr. Alfred P. Sloan, Jr., then president and later chairman of General Motors, was a cofounder, guiding spirit and the first chairman of this organization. In 1948 he was succeeded by Mr. Albert Bradley, formerly chairman of General Motors, who remained NHUC chairman until 1956. We have also participated, since 1947, in the program of the Auto Industries Highway Safety Committee. These organizations conduct and support highway safety-related research and public information programs. Other leading organizations with which we work closely include the President's Committee for Traffic Safety, the National Safety Council, and the Highway Research Board.

On technical aspects of safety we work with organizations such as the Automobile Manufacturers Association, the Society of Automotive Engineers, and the State motor vehicle administrators. As examples of such cooperative efforts I might cite important developmental work over the years on such items as seat belts, headlighting, and turn signals. Another instance is the development of vehicle inspection standards.

We have taken, and will continue to take, further steps to bring all available knowledge to bear on the highway safety problem. The medical profession, certainly, is in a position to make a major contribution. Our industry, through the Automobile Manufacturers Association, is in close contact with the Automotive Safety Committee of the American Medical Association. General Motors has retained Dr. Donald F. Huelke, an eminent crash injury specialist at the University of Michigan Medical School, to work with us on interior body design features to reduce the frequency and severity of injuries. General Motors has also been supporting and utilizing the results of the research carried on by Cornell and Wayne State Universities, directed to improvement of passenger protection and minimizing injury in the event of accident.

#### GRANT TO MASSACHUSETTS INSTITUTE OF TECHNOLOGY FOR RESEARCH

In a major new program, General Motors is making a grant of \$1 million over the next 4 years to the Massachusetts Institute of Technology as a contribution toward a long-range research effort aimed at safer and more efficient highway transportation. Due to the complexity of the problem, it is expected that the effort will extend over a period of years. Plans for specific areas of study are now being defined. The need for such a broad research approach has been demonstrated by the fact that there is considerable difficulty in interpreting the available statistical data in a meaningful way. Accident reports are not made in a uniform manner, and accident records are combined into gross averages in such a way as to make an analysis of causes of accidents most difficult. It has long been recognized that a systems engineering approach to this overall highway safety problem has been needed, but experts trained in this field are nonexistent. MIT, one of the recognized world leaders in systems engineering, will undertake an engineering study in this area and train the kind of people who will be needed for work in this field.

This study will be a long-range, in-depth, quantitative analysis of all facets of the safety problem—the car, the road, the driver, and their various interactions.

#### SAFETY PROBLEM A COMPLICATED PROBLEM

I am sure that you understand the complications and complexities of the safety problem as well as we do. It involves a great many variables, some not susceptible to ready measurement or analysis. The problem embraces moving machines containing thousands of parts, driven at widely varying rates of speed on all kinds of highways under many conditions by all sorts of people.

Our job is to build a product that performs the job the customer expects it to do, under all sorts of conditions, under wide ranges of care and maintenance and often in the hands of a driver with little skill. And we must have a product that the customer will buy. The task of balancing these elements in the final design of the car is not an easy or a simple one.

Some things must be built into the motor car because they are essential to its operation. Examples are brakes, steering, and lights. Other items must be sold to the customer on their merits. That is, the customer must be convinced of their usefulness and of the contribution they can make to his own safety and that of others. In this latter category, for example, were turn signals, first introduced by GM in 1939. Since they were part of an intercar communications system, these signals have impact on the safety not only of the occupant but of a great many other drivers he meets on the road. This should have been self-evident and one might assume that the potential safety contribution of turn signals would have been readily and universally recognized. This, however, was not the case and only a small minority of our customers ordered turn signals when they were first available as optional equipment.

Similarly, seat belts were ordered by only a very small percentage of our customers when they were first introduced as options on the 1956 models. As late as 1962, only about 10 percent of our cars were sold with seat belts. However, when seat belts were made standard equipment, subject to deletion only on specific request of the buyer in 19 States not requiring them by law, seat belt installation rose to 95 percent.

In this connection you will be interested in a disclosure of a Gallup poll released to the press on July 4, 1965. The researchers reported that of car owners with seat belts installed in their cars, only 36 percent said they used the belts "always"; 49 percent used them "some of the time"; 14 percent "never" used them, and 1 percent could not say. This disclosure is the more astounding in view of the substantial public education—including General Motors—in attempting to convince the public of the wisdom of using seat belts at all times.

As manufacturers we need the support of the public—public acceptance of the new safety devices that become available. These items must also be thoroughly tested, under the controlled conditions of the proving ground and laboratory of which I spoke earlier. We do not propose to sell our customers untried equipment items.

OPTIONAL VERSUS STANDARD EQUIPMENT

This brings up the question of optional versus standard equipment. The decision to offer an item as optional equipment recognizes what I believe is the basic freedom of the customer to pay the cost of tailoring a car to his own specifications or rejecting whatever he may not want. From a commercial standpoint, in a competitive marketplace, this must be the approach until a very high proportion of customers select the item or unless there are other compelling reasons for standard installation. When this point is reached, the items can be included as standard equipment and required selling price adjustments made to cover the additional costs involved.

I come back again to the climate of public acceptance. If we were to force on people things they are not prepared to buy, we would face a customer revolt, and we want to stay in business.

For these reasons the improvement of our automobiles—in the safety as well as in other areas—has been evolutionary. This process is continuing. Specifically, as we announced on July 7, our 1966 models will include as standard equipment on all cars a number of items previously available as optional or standard equipment on nearly all GM cars—outside left-hand rear view mirror, dual speed windshield wiper and washer, padded instrument panel, back-up lamps, padded visor and rear seat belts. Other items, which Mr. Roche will discuss in more detail, are also a part of our cars today.

We believe that our approach to the goal of maximum vehicle safety has been a practical one. We have incorporated those features which have been proven by thorough testing under controlled conditions. This will continue to be our approach as new safety ideas emerge.

When such ideas have been tested, they will be translated into hardware and made available to our customers. I should also like to remind you that there is no ironclad yardstick for engineers to use in determining what represents the optimum in vehicle safety conditions. Very often this is a matter of opinion. For example, views as to what constitutes a "safe" car interior vary.

#### ROLE OF GOVERNMENT AT VARIOUS LEVELS

We know very well that government at various levels has a role to play in regard to the safety problem. We view traffic safety promotion as primarily the responsibility of State and local governments, because these echelons of government are most familiar with local conditions that must be taken into account if successful programs are to be developed. At the same time, we recognize that there is an important role for the Federal Government as well, primarily one of encouraging and assisting the States. We will continue to cooperate fully with any agency of government, at whatever level, concerned with the safety problem.

#### CORPORATION'S OBJECTIVES AND FUTURE COOPERATION IN SAFETY FIELD

In conclusion, may I say that we have a real sense of pride in what we as manufacturers have done over the years to make driving safer on our highways. It is a problem we will continue to attack, and we will use our own extensive facilities and talents in this never-ending job. We will continue to study both on our own and in conjunction with interested industry groups, medical associations, and institutional groups, all aspects of the safety situation. We will continue to cooperate with and seek the assistance of outside experts, to the degree that such cooperative programs promise to make a real contribution to our objectives. These objectives include improvement in the highways and the driver as well as in the car. [We have every reason for building cars that perform safely and reliably.]

With your permission, Mr. Chairman, I would now like to present my associate, Mr. Roche, who will cover in more detail what we have done, are doing and propose to do.

Senator Ribicoff. Thank you very much.



Mr. Roche, you may proceed.

Mr. ROCHE. Thank you, Mr. Chairman.

Mr. Donner has stated the position and policies of General Motors with respect to highway safety.

#### ACHIEVEMENTS AND CONTRIBUTIONS TO TRAFFIC SAFETY

My comments, therefore, will concentrate on what the corporation has done and its significant contributions to the overall improvement of traffic safety in this country.

General Motors shares with all responsible citizens the desire to help reduce the toll of deaths, injuries, and property damage caused by traffic accidents. The current high standards of safety engineered, tested, and built into General Motors products are the result of continuing improvements which have been incorporated in our products year after year.

#### HISTORY OF CONTINUOUS ADDITION OF SAFETY FEATURES SINCE 1910

From the early days of our industry, General Motors vehicles have been improved by this continual and cumulative addition of safety features. Today we take these improvements for granted, but in their day they were revolutionary. It was not until after 1910 that all driver compartments were equipped with doors to keep the occupants from falling out. The same era saw the advent of demountable split tire rims, eliminating the hazard of the rim popping off while tires were being inflated.

Mechanical shock absorbers became standard equipment between 1915 and 1920, providing better steering control on rough roads. Rear-view mirrors and stop lamps—among other safety features—date from the same era.

The 1920's saw many additional advances. Four-wheel brakes replaced two-wheel brakes, substantially reducing stopping distances. Headlighting systems were improved and automatic windshield wipers came into use. Safety glass replaced ordinary glass in windshields. Dual tail and stop lamps were introduced, as was the footswitch for headlight beam control. The synchromesh transmission (a General Motors innovation) made positive gear shifting easier and thus improved the driver's ability to control the car, particularly in hilly or mountainous country. Hydraulic shock absorbers replaced mechanical ones and further improved vehicle stability. Adjustable front seats made it safer and easier for the driver to operate foot pedals and steering wheel.

The decade of 1930-40 saw the advent of numerous significant safety improvements. Welded all-steel bodies increased structural strength for greater protection of the occupants in the event of an accident. Hydraulic brakes replaced mechanical brakes, resulting in better brake equalization and distribution of the braking effort between front and rear wheels. General Motors developed independent front suspension replacing the solid axle, which gave better steering and ride control. Sealed beam headlights, a hermetically sealed unit, provided increased road illumination and service life. Steering wheels with cast spokes and wood rims were replaced with safety-type spring steel spokes and a plastic rim. This eliminated the hazard of wood splinter injuries