

AN ACTION PROGRAM TO ADVANCE SAFETY ON THE HIGHWAYS

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The advancement of safety on the streets and highways of the nation requires definite action on many fronts. The desirable objective for the year 1938 is a vigorous, concerted movement to bring into being on an effective scale the measures and methods which the present knowledge of the character and scope of the problems sustains as a sound program. Perhaps the most important single principle developed during the year just closed of extensive study by the Bureau of Public Roads and the Highway Research Board of many phases of this subject is that there is no single cause of accidents. Each accident is the result of causes in combination. There are always present more than a single element and the number of these elements that can and do contribute to accidents is very large. The possible number of combinations of these elements by mathematical calculation produces a potentiality of accidents of a magnitude beyond conception. Probably the failure of the law-makers to recognize this characteristic of multiple contributing elements in each accident has acted as a powerful deterrent to more effective programs of accident control. Certainly it has given rise to serious delays in formulating and applying sound preventive measures. For example, the hope that a single panacea exists that will stop accidents, although utterly absurd, results in all sorts of cure-all offerings, many of them from so-called experts or near experts. Since there is no single cause there can be no single panacea for accidents. On the other hand, the recognition by the courts of multiple accident-contributing elements has resulted adversely to the imposition of even reasonable penalties upon offenders of the traffic laws. Here the recognition of the contributing factors mitigates to the point of allowing, in many cases, the offender to escape without price the most serious infractions of the law. So widespread is this experience as to lead to the reasonable conclusion that reliance for any great assistance in accident prevention does not lie in the courts as they are now operated in the field of traffic regulation. Sufficient recognition has not as yet been given to the fact that this big problem of street and highway safety throws upon the established routine and traditions of the courts a new social problem of tremendous dimensions with which they are not designed to cope. The processes of the courts are not singled out for criticism in themselves but to illustrate the failure of society as a whole to recognize the tremendous dimensions of the street and highway traffic safety problems and to provide adequate methods and organizations to deal with these problems effectively.

A year ago the Congress directed the Bureau of Public Roads to undertake a study of the problem involved and to submit a report. Acting in cooperation with the Highway Research Board the Bureau has produced a report or rather a series of reports dealing with the following subjects:

1. Non-Uniformity of State Motor Vehicle Traffic Laws.
2. Skilled Investigation at the Scene of the Accident Needed to Develop Causes.
3. Inadequacy of State Motor Vehicle Accident Reporting.
4. Official Inspection of Vehicles.
5. Case Histories of Fatal Highway Accidents.
6. The Accident-Prone Driver.

These reports have all been transmitted to Congress and are now in process of printing. They will be available for general distribution almost immediately. By acting through the Highway Research Board not only the previous studies which had been made by that Board were available, but it was possible to secure the assistance of the individuals who were already working in the several fields of investigation and who have devoted their best efforts to the studies and the resulting reports. Further, a number of the leading authorities, representative of organizations primarily concerned in the traffic safety field, served as an advisory committee to make suggestions as to the scope of the studies and the production of the report.

It is not the purpose of this paper to review the findings of these reports but on the basis of the material developed to propose an action program for the immediate future and to fix in so far as possible the responsibility for the initiation of this program. Neither is it the purpose to prove by the use of statistical material the urgent necessity for enlarging, and quickening the tempo of, sound national programs directed toward the control of the tragic record of accidents and fatalities. A responsible attitude of good citizenship and intelligent selfishness places the road builders and road building industry of the nation behind every effort to advance the cause of highway safety. In this social problem already grown to such alarming dimensions that it ranks as one of our greatest national problems, while most of the implications and indications are discouraging there is one important encouragement. Under the coordinating influence of the Automotive Safety Foundation, twelve national organizations which are most intimately and directly concerned with traffic safety problems have united in accepting and recommending a comprehensive model program for each State to increase traffic efficiency and to reduce accidents. This program brings into a coordinate entity the elements of legislation, motor vehicle administration enforcement, engineering, education, training personnel and research.

It places responsibility for action upon the Governor, the State officials and the legislature supported by a non-official organization of civic and business groups. The combination of official and public groups is conceived to constitute the State safety organization. With this program the Bureau of Public Roads is in entire accord and holds it to be indicated by all the important studies and researches which have been made in this field.

While it may appear to the public at large that inadequate progress is being made in advancing the cause of safety, it certainly holds promise of a greatly accelerated rate of progress that all the most important organizations engaged in this field have agreed upon the program most needed and have joined their efforts toward the common end of making the program effective upon a national scale. The effort of this paper therefore is to reduce to concrete terms the necessary steps to be taken and in so far as possible to suggest the responsibility of initiation of the component parts of the program. Only by action on a national scale can even reasonable progress be made in the reduction of accidents, and in the freeing of our streets and highways from hazards that will permit the enjoyment of their convenience and service.

To carry into effect the existing knowledge in the field of accident prevention, the following eight-point program is submitted. It is not intended to include all of the steps that will be necessary but it does provide a sound foundation for traffic control and regulation in the interests of traffic safety. Neither are the elements of this program independent but on the contrary they are inter-dependent, and to an extent overlapping. Several of these which are important parts of others are given individuality for the purpose of emphasis. The action program recommended follows:

1. Uniform State motor vehicle traffic laws.
2. Skilled investigation of traffic accidents.
3. The establishment of a uniform system of accident reporting.
4. The establishment of an adequate highway patrol including the official inspection of vehicles.
5. The establishment of complete and final authority over the issuance and revocation of drivers' licenses.
6. A highway improvement program divided into two general classes of projects:
 - (1) Those of the emergency type, and
 - (2) Those for the long-time plan.

7. A plan of State and Federal safety organization adequate to secure on a wide scale the adoption and enforcement of the action program here proposed.
8. A national educational program.

The scope of each element of this program is indicated but not intended to be fully developed in this discussion.

1. Uniform State motor vehicle traffic laws.

This subject has received long and careful attention. Through the organized effort of the National Conference on Street and Highway Safety a series of five proposed model laws were drafted and have been widely distributed. While a considerable number of States have adopted these laws in whole or in part there yet remains a serious non-uniformity in the major principles which affect highway safety. It is not proposed that the motor vehicle laws must be identical in every detail, but they must be in those matters which even remotely affect the safety of motor vehicle operation. The driving habits of individuals tend to become fixed, and particularly in times of stress or emergency the reactions are involuntary. Now that the traffic between communities and between States has become universal the necessity for replacing uncertainty of the law with certainty is self apparent. The necessity for drivers knowing that they do not face new traffic laws or conditions when they cross State borders cannot be denied. But the existing condition is much more serious than this as indicated in these examples:

Eight States do not require that all motor vehicle operators be licensed.

Two States fail to provide a minimum age limit for the driving of a motor vehicle.

Fourteen States permit the operation of motor vehicles by minors fourteen or fifteen years old.

Twenty-two States do not prohibit the issuance of drivers' licenses to habitual drunkards or narcotic addicts.

Twenty-four States do not prohibit the issuance of drivers' licenses to those afflicted with mental disabilities.

Only eleven States require drivers to be able to read highway warning signs printed in English.

In six States which do require the licensing of motor vehicle operators, no examination or test is included as a prerequisite to the issuance of such license, and in five others the applicants may be examined only when the official issuing the license suspects they are unfit to drive.

Only thirty States require every applicant for a driver's license to be examined for competency and in these the examination varies widely. Only eight States require a test of vision, fifteen, a knowledge of traffic laws.

Unquestionably there should be a strict uniform license law issued only after a competent examination including tests of vision, ability to read traffic signs, knowledge of traffic laws and demonstration of ability to operate the vehicle.

In only twenty-seven States has there been adopted a manual of uniform traffic control devices. The rules of the road governing the operation of vehicles upon the highway vary so greatly from State to State that confusion is inevitable. Nine States do not require vehicles to be driven to the right of the highway at all times. Six States do not provide that passing must be on the left of the overtaken vehicle. Passing on curves is specifically prohibited in thirty-six States and on the crest of hills in thirty-five States, at intersections with other highways in thirty-four States. The provisions with respect to the equipment of motor vehicles and physical characteristics such as length, width, and height, have a wide variation with many inconsistencies.

Further discussion of this point is hardly necessary to indicate the fundamental necessity of a uniform motor vehicle law between the States in the interests of safety. The only possibility of providing for this part of the action program lies in the adoption by the State legislatures of the necessary uniform laws. A guide to the points of divergence from the uniform code will be found in the bulletin "Non-uniformity of State Traffic Laws" that will be available for distribution shortly by the Bureau of Public Roads.

2. Skilled investigation of traffic accidents.

An intelligent attack on the highway accident situation must depend upon two details which, while simple in concept, are not easy of achievement. There must be information as to the circumstances under which each accident occurs, and there must be sufficient analysis to record where, and the manner in which, accidents are happening repeatedly. Accident data are essential to an intelligent and efficient police enforcement program within the urban districts, and the highway patrol can provide important information in the rural districts. Within the urban areas the establishment of especially trained squads is essential which are ready on call to investigate each accident without loss of time.

It may not be practicable at once to establish accident squads in the rural police organization sufficiently extensive to investigate all accidents, but it is possible to establish a number of special accident squads and to train each member of the highway patrol in the correct procedure to investigate and to report accidents so that a high general level of accuracy in reporting may be attained. So long as we depend for accident data on ex parte information and make inadequate provision for the securing of reliable and disinterested reports, just so long will our knowledge of the facts be insufficient and open to question. It will not be possible to secure impressive accident reduction until it is recognized that every accident is the resultant of a number of causes and circumstances in the absence of any one of which the accident would not have occurred or would have had different consequences. No contributing cause is so unimportant that it may be overlooked or dismissed. That only a beginning has been made in this field in a very few States is convincingly revealed by the analysis presented in the case history of the fatal highway accidents now in process of publication by the Bureau of Public Roads. Certainly the establishment of a complete system of accident investigation and reporting will require much more adequate organization than now exists but the cost will be small in comparison with the losses in life and property.

3. The establishment of a uniform system of accident reporting.

The uniform reporting of accidents is partially covered by the preceding discussion, but requires in addition the adoption of a national standard form. Much work has been done upon the formulation of such a form by the National Safety Council, the Bureau of the Census and others, and further work is now in progress. It is essential that the terms be clearly defined, and the statistical methods employed give accurate results. In the studies made by the Bureau of Public Roads and the Highway Research Board the lack of accurate and sufficient statistical data relating to accidents, even those involving fatalities, was an insuperable obstacle in the production of a more determinate report. For example, the national reports of motor vehicle fatalities are divided between urban and rural on the basis that urban accidents are those in cities of 10,000 and upwards, and all others are classified as rural. Taking into consideration the fact that a very large percent of the total population lives in places of, say, 1,500 to 10,000 people, it is inevitable that a large percentage of fatalities reported in the rural category actually involve urban and not rural conditions. This probable

discrepancy is further accented by the fact that so large a percentage of fatal accidents involve pedestrians. It is apparent that effective efforts to combat accidents are utterly dependent upon accurate and complete statistical data.

4. The establishment of an adequate highway patrol including the official inspection of vehicles.

In most of the States the highway patrol organization for the rural districts, and in most of the cities, the traffic police, are wholly inadequate in numbers and equipment to patrol the mileage over which there is appreciable traffic. This condition of inadequacy in numbers is further aggravated by the addition of so many miscellaneous duties that too little time is left for patrol work. The most complete code of motor vehicle laws is of little avail unless there is proper enforcement. An increase in the number of trained patrolmen in every State is necessary.

Only twenty-three States now provide for the periodical inspection of motor vehicles, but all of these do not include all types. The inspection laws vary in detail but are uniform in the attempt to prevent the operation of mechanically defective vehicles. The establishment of inspection requirements for the safe mechanical condition of motor vehicles and their continuous enforcement is an important "must" in the action program.

5. The establishment of complete and final authority over the issuance and revocation of drivers' licenses.

In the development of this discussion the importance of the official charged with the administration of the motor vehicle laws must be more and more apparent. The lack of essential laws in a large number of States fixing the qualifications of those who are permitted to operate motor vehicles upon the public ways has been recorded. The disclosures in the bulletin upon the accident-prone driver sustain the conclusion that the motor vehicle administrator must have authority to suspend or revoke the license of operators, and that this power must be exercised. The discretionary authority to revoke licenses should by law be obligatory action in the more serious offenses. Thirty States now require that a license be revoked for conviction of manslaughter, thirty-six States, for driving under the influence of intoxicants, thirty-one States, for failure to stop after an accident, and twenty-five States, for reckless driving. Certainly these offenses justify the revocation of licenses in each State. But the fact of the existence of the accident-prone

driver, which is now established beyond reasonable doubt, justifies the suspending or revoking of licenses for much less grave offenses than these enumerated. Twenty-three States have recognized this by providing discretion to suspend or revoke for habitual recklessness or negligence, twenty-two States provide the same discretionary authority to revoke the license of drivers involved in a serious accident, and eleven States for any sufficient cause. The recognition of the responsibility resting upon the individual driver for accident prevention so far outweighs any other consideration that a sound action program must include as the most effective weapon of society in attacking the problem of accident prevention, the generally exercised power to revoke drivers' licenses for infraction of the traffic laws.

6. A highway improvement program divided into two general classes of projects: (1) those of the emergency type, and (2) those for the long-time plan.

This year the State-wide transport surveys carried on in cooperation between the State highway departments and the Bureau of Public Roads will begin to reach usable form. There will be available for the first time in any State complete information as to the types and conditions of highways, the amount and character of use and all other information which can conceivably have a direct relationship to the safe use of the highways.

The extent to which highway conditions enter as a contributing factor into more serious accidents is unknown and to an extent indeterminate. Much that has been said in criticism of highway conditions confuses the fundamental issues of highway safety and highway capacity measured by speed and number of units. Between 1925 and 1936 highway usage measured in terms of gasoline consumption increased by an estimated amount of 110 percent, while registration in numbers of units increased 42 percent. The gas consumption per registered vehicle has increased just under 50 percent. From these facts it is apparent that motor vehicles are being used on a steadily increasing rate per average unit, and even with these increases the rate of accidents measured in miles of vehicle operation shows a decrease.

With the definite facts of the public use of highways in every community of the nation, it is readily apparent that the providing of safer highways must be through the elimination over large mileages of those conditions which to the best of our knowledge are most likely to be contributory factors in accidents. This is the keynote to the emergency program which should be put into effect determined by the data of the transport

surveys. As an illustration of the type of work included - a re-checking of the system of warning signs and signals, the relocating of these to fit the generally increased speed, the elimination of unnecessary signs, the marking of all curves with safe driving speeds if below the legal limits, the correction of sight distances particularly at intersecting roads, and the widening and maintenance of shoulders. The increased operating speeds demand wider roads and the narrower widths which were reasonably safe for speeds of a few years ago must be supplemented by non-skid material, the shoulders widened, slopes flattened and deep ditches eliminated. For the long-time program, particularly for new multiple lane roads, all the accepted elements of safe design to permit continuous safe traffic flow, including the division of opposing lanes by a neutral area and the elimination of cross traffic, should be provided. Separation of grades between the railroads and important intersecting highways must be a first consideration.

7. A plan of State and Federal safety organization adequate to secure on a wide scale the adoption and enforcement of the action program here proposed.

Just how the Federal Government fits into the general scheme of an adequate traffic safety organization is not clear beyond debate, but there are considerations of public policy which prompt the suggestion that no wholly new board, commission or other Federal authority is desirable. To be effective, such a Federal organization would have to duplicate organization, authority and operations now lodged in some Federal department. There is need for a correlation of the Federal activities and relationships between the Federal departments themselves, and between the Federal Government and the States in both the official and public aspects. A plan of Federal organization that can be made effective at once and make use of the going operations of the Government would be the establishment of an inter-departmental committee with representatives assigned from all of the Federal organizations which now have authority over, and responsibility for, elements of the safety problem under the Federal laws. In addition to this official organization there should be an advisory committee composed of representatives of the important national associations which are engaged in the traffic safety field in its broad aspects. This plan together with the plan of organization of the State safety authority would form a complete national structure for the formulation of an adequate nation-wide program and its effective operation.

8. A national educational program.

One of the most assuring steps that has been taken in the field of education is the action by the National Education Association and the American Association of School Administrators to prepare a yearbook on safety. This important undertaking will be supplemented by various bulletins and other useful material to be distributed to all the public schools of the country to serve as a background for sound safety instruction to school children. Too much emphasis cannot be placed upon the importance of this whole activity.

One of the most valuable contributions to a permanent safety program which will doubtless result from this organized study by the educators will be an evaluation and decision as to the supplementary safety activities which should be undertaken or continued on an even broader scale in connection with the public schools. One of the greatest hopes for improved safety conditions lies through the implanting of correct thinking and habits in those who are now passing through the public schools. Illustrative of these supplementary activities are the driver training and school patrol sponsored by the American Automobile Association. In addition, a widespread program of public education and of specialized training of traffic officers and engineers is under way by national organizations through funds provided by the Automotive Safety Foundation. This list of organizations is a notable one, and has been mentioned in connection with the formulation and recommendation of a safety program for each State. *

Every indication points to progress during the coming year in the safety movement far beyond that made in any previous year, but the concept of adequate governmental organization and comprehensive laws must be the objective continuously recognized as fundamental in the establishment of a permanent safety program.

* These organizations include the following:

American Automobile Association
American Legion
Automotive Safety Foundation
General Federation of Women's
Clubs
Harvard Bureau for Street
Traffic Research
Highway Education Board

International Association of
Chiefs of Police
National Automobile Dealers Ass'n
National Congress of Parents
and Teachers
National Grange
National Safety Council
Northwestern University Traffic
Safety Institute.