

to persons and cars, and on the economics of highway traffic. A specific direction might well be given to such research by the experimental illumination of portions of road where the record of accidents indicates especially difficult or dangerous conditions.

This suggestion does not imply that *all* paved roads are so heavily traveled during the dark hours as to demand or even justify their illumination, it is meant simply to point out the possible value of scientifically planned lighting judiciously applied to the correction of unfavorable conditions where they exist.

There was a time when highway illumination of a high standard was prohibitive in cost. To obviate this, experimental research has been conducted over a period of years. This practical study has embraced every condition of weather and atmosphere, every month of the year, every degree of illuminating intensity, all feasible locations and heights of units, and other contributing factors. These prolonged technical investigations point to the conclusion that the illumination of main trunk lines of traffic is economically practical. In addition this illumination will afford to the public the freest use of the highways at all hours, at reasonably fast speed, and with a high factor of safety for motorists and pedestrians.

It is the opinion of many well-informed engineers and scientific authorities, who have specialized in the intensive study of highway lighting, that main rural traffic arteries can be illuminated adequately and at reasonable expense, and that hazardous sections of these roads should be illuminated. They are also of the opinion that the Highway Research Board and others interested in promoting a safer, more flexible use of our highways should commence to give this subject their serious consideration.

EXTENT OF DESIRABILITY FOR STATE CONTROL OF TRAFFIC REGULATION IN MUNICIPALITIES

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Reduction of accidents, highway efficiency and uniformity in methods of handling traffic are desirable.

In many places traffic conditions create costly and annoying delays and serious accident losses. The situation calls for systematic and concentrated attention.

Divers systems of rules and regulations are an annoying hardship for drivers and too frequently bring well intentioned drivers into conflict with police officers and the courts. The public is entitled to reasonable, and lucid uniformity of traffic control.

In some cases governmental units are facing heavy expenditures for highway improvement to reduce congestion of traffic. In many of these cases cooperation will modify conditions. In general, comparative studies will be of great service. Full cooperation of State and local authorities will aid in conserving public funds and increase efficiency in expenditure.

Activities of the three National Conferences on Street and Highway Safety in the past six years have been long steps toward uniformity of regulation and operation, but up to the present very few states have undertaken to establish bureaus or arms of the state government to unify and enforce these regulations within their boundaries even though there may be some semblance of uniformity in the state vehicle codes.

Your Committee believes that there should be established some state governmental unit, either as a separate commission or as a bureau of the Highway Department. The commission or bureau should have more than advisory authority in the planning of regulations. It should be empowered and required to use mandatory authority to enforce the provisions of the state vehicle code and the regulations adopted by authority of law.

PURPOSES AND SCOPE OF THE REPORT

It is the aim of the Sub-Committee in submitting this report

- 1 To establish the legal right and positive duty of the State actively to control the regulation of traffic within the limits of chartered municipalities as well as upon state highways,
- 2 To indicate the desirability of such control, and to cite some of the objections, and obstacles to be overcome,
- 3 To describe the activities of a State traffic bureau and present some of the accomplishments to be expected of such control,
- 4 To outline two forms of organization and point out the advantages and disadvantages of each,
- 5 To define the functions, authorities and limitations of a State traffic bureau,
- 6 To point out essential features of State regulation of traffic in municipalities,
- 7 To discuss organization and personnel for such a bureau

CONCLUSIONS AND RECOMMENDATIONS

- 1 Your committee believes that it is the right of the State to repossess authority it has delegated to its cities, boroughs or townships, and to assert that authority. Such authority is in the hands of the State Legislature. It has been exercised in at least four states, and the list is growing.
- 2 The amount of state money now necessary for the widening of

existing arteries of travel, provision for parallel routes, by-pass highways, grade crossing eliminations and other heavy construction projects, places upon those in authority over such improvements, a duty to the tax-payer whose money is being expended, to see that each of these costly structures is used to its maximum capacity

The state traffic bureau may serve as a clearing house of information for municipalities, eliminating the necessity for each to conduct duplicate experiments with various devices. It may also afford assistance to boroughs or municipalities too small or too poor to maintain adequate traffic bureaus or obtain trained and experienced advice.

Such a bureau should prescribe and enforce uniformity in signs, signals and markings. By careful studies the bureau can discover and advance methods of reducing the accident rate at particular locations.

Against the activities of such a State bureau is the long established feeling that each community should rule its own destinies. The opposition is advanced by local police authorities who feel that their prerogatives are being encroached upon. Occasionally, the opposition will have a political flavor, based upon interference with the private arrangements of ward or district politicians.

A real objection is the difficulty to be experienced by a State bureau in enforcing its regulations when they are of minor importance and purely local or possibly temporary of nature, such as certain signs of parking regulations on side streets of isolated municipalities.

3 The underlying reason for State regulation of traffic within municipalities is to secure uniformity. This can be done only by centralized control of regulations coupled with the authority and mandatory duty to take active steps necessary to that end. The maximum utilization of all the available street and highway area is forced upon us by the astounding increase in the motor vehicle as a means of transportation. Reduction of the accident toll, with its costly and horrible consequences is necessary to the welfare of the State. Education of the public is a part of this operation.

4 The organization of State traffic control may take either of two forms: a "State traffic commission" similar to the several commissions now exercising jurisdiction over public utilities, or a "traffic bureau" attached to and a part of the State Highway Department.

The former method has the advantage that the commission may represent several parts of the state and many interests. It has the disadvantage that it is costly to organize and maintain. It would be necessary to build from the ground up. Its personnel would in no sense be local or available for contact on short notice to local authority.

The latter method has the distinct advantage that there is always a central organization strongly established, together with local personnel in "District" offices available on short notice. The cost would be

appreciably less because personnel for short studies could be always obtained in the least time and without heavy transportation costs

A further advantage of a Highway Department Bureau is the fact that trained engineering personnel is always at hand. There would be close cooperation between the traffic bureau and the construction and maintenance bureaus.

5 The functions of a traffic engineering bureau should be—to exercise control over limitations of speed and parking, traffic signals, direction and warning signs, street and highway markings, to set up standards of operation and issue or deny permits for the same, to conduct studies of traffic and transportation needs, to devise methods of educating vehicle operators and the general public, particularly in schools, to control the operation of policing the highways, outside of areas maintaining efficient police departments, and to enforce the uniform laws and authorized regulations throughout the State.

6 State regulation of traffic may include many features, such as, speed limitations, traffic signal operation, parking restriction, (limitation or prohibition), and control of turns. There may be consideration of street railway lines as they affect street transportation, taxicab and bus stands, routing of buses and heavy duty vehicles, segregation, off street loading, terminal facilities, night deliveries, and other items.

7 The executive head of a traffic bureau should be an experienced engineer capable of directing a technical staff.

The staff should comprise a capable electrical engineer in charge of traffic signals, a trained safety engineer capable of collecting and analyzing accident statistics, two or more assistant engineers for special duties, statisticians, clerks, stenographers, draughtsmen, et cetera.

If the traffic bureau is attached to a Highway Department, practically all of the field investigations, counts and examination of applications for permits can be made by the maintenance forces.

If the traffic bureau is an independent organization, all of these functions will have to be performed by specially built up and trained personnel.

An important consideration, in connection with the problem of organizing a traffic bureau is that the science of traffic engineering is relatively new, and there are few men who have had experience in this field, and trained men are not available in sufficient number to build large independent organizations.