## HIGHWAY PROGRAM FOR THE UNITED STATES

by
Thos. H. MacDonald
Commissioner of Public Roads
Public Roads Administration
U. S. Federal Works Agency

Chicago, Nov

The all inclusive implications of this subject cannot be outline much less discussed, in a brief paper. It is necessary to select a single phase of the whole subject, and for this conference it seems to me the discussion might be most profitably limited to the ways and means of creating a truly national highway program. To reach such an objective is a highly difficult undertaking in the beginning, but to pursue a pre-determined course for the period necessary actually to carry into effect a national program, will require an understanding and a cooperative attitude far beyond anything that has prevailed in the past. Yet in such a course lies to promise of greatest profit to all of those who are touched in one way or another.

We can be indeed grateful that we in this country continue to seek the solution of our common problems through democratic methods. We hear frequently of late that the democratic policies, while theoretically desirable, are not as efficient as those of the totalitarian States, and cannot succeed in competition with them. There is now a considerable opportunity to judge in the field of highway development the authenticity behind such statements, and there is good reason to doubt the correctness of this conclusion. For example, it has been casually assumed, and the idea has received more or less acceptance, that the United States has been failing in some way in its highway program because of a failure to under-

take the building of super-highways on a transcontinental basis similar to the program on which Germany embarked in 1933, of building a system of national motor roads.

It is not proposed in this discussion to debate the principle involved here, but rather to emphasize the dimensional aspects of the highway program solely in this country, and without attempted reference or comparison to other countries. Such comparison is wholly absurd, because the facts and conditions are so widely different. Here the motor vehicle is used by a very large percentage of the citizens. On market days and on Saturday afternoons the closely parked cars filling all available spaces around the squares and streets of cities and towns essentially rural in character all over the united States, reveal the highway problem in a more adequate way than even the highly concentrated traffic reaching to unbelievable numbers each twenty-four hours on main thoroughfares in the metropolitan areas. That is, any conception of a highway program that is not nation-wide, and does not reach all the elements of our national structure, is inadequate and will not serve.

Before a program, though adequately conceived, can be put into effect and held to continuously, a vast educational effort is necessary, which must reach and convince in excess of 50,000 public officials and legislators. After these have fully accepted a program only a start has been made, since there are many organizations, many industries, many conflicting private interests, and at least the majority of the public, to which the conviction of the proper program must extend if we are to have a national program.

Since it is wholly impossible now, or in the immediate future, to serve with adequate highways all of these interests, the choice of principle upon which to rest the policies adopted must be made, upon which there should be reasonable agreement by those who are willing to subordinate self interests to public service. The principle that highways should be provided in the order of their traffic utilization is sound and can be applied throughout the determination of a highway program, including national, state and local elements. It was this principle of traffic service that, based upon the State-wide highway planning surveys, provided the foundation for the master plan of highway development for the national as a whole, proposed by the Public Roads Administration in the report.

\*\*Toll Roads and Free Roads.\*\* Specifically this report outlined the class of improvement recommended as follows:

<sup>1.</sup> The construction of a special, tentatively defined system of direct interregional highways, with all necessary connections through and around cities, designed to meet the requirements of the national defense in time of war and the needs of a growing peacetime traffic of longer range.

<sup>2.</sup> The modernization of the Federal aid highway system.

<sup>3.</sup> The elimination of hazards at railroad grade crossings.

<sup>4.</sup> An improvement of secondary and feeder roads, properly integrated with land-use programs.

<sup>5.</sup> The creation of a Federal Land Authority empowered to acquire, hold, sell and lease lands needed for public purposes and to acquire and sell excess lands for the purpose of recoupment.

The report has been widely distributed and these recommendations have been discussed in detail in a number of previously prepared papers. A very illuminating review of the foundation on which these recommendations rest was presented by Mr. H. S. Fairbank of the Public Roads Administration before a group meeting of the Chairmen and Secretaries of the State Petroleum Industries Committees in New York on October 17th. For this reason it does not seem necessary to elaborate here the support for the conclusions as to the proper program for the future.

Two aspects are important: First, that it is only possible to conceive of the highway program as an annual progress toward planned objectives; and second, that while these planned objectives may remain constant, the conditions are dynamic and not static. It is not possible at any one time to determine that a fixed mileage of highways will be built and that a fixed amount of expenditures will be made. It is already proven by experience that the conditions of use and the income produced by the use are constantly changing, and that the two-fold problem of the national highway program is to determine the income which may be secured through reasonable taxation, and to allocate this annual income to the various purposes in such a manner that the continuing progress will best provide for traffic safety and economy.

To accomplish this the planning surveys must be kept constantly up to date in all the States, and to secure these facts and to consolidate them for use, provision has been made in the Federal legislation to devote one and one-half per cent of the Federal appropriations to the States for highway purposes to carry these planning surveys without the necessity

of the Federal funds being matched with State funds. The principal elements of this continuing highway transport survey are:

- l. A perpetual inventory recording the extent and condition of the whole highway system, the life expectancy of all existing improvements, and their probable salvage value in future reconstruction.
- 2. Currently revised estimates based upon an elaborate system of sample counts of the volume and variation of traffic on all roads and a determination of the class, size, weight, origin, destination, and purpose of travel of all vehicles composing such traffic, and the character and weight of the loads carried by them.
- 3. The dynamics of traffic flow, with particular reference to the characteristic behavior of traffic of all volumes under various conditions of road capacity and design.
  - 4. The situs of ownership of all motor vehicles.
- 5. The relative usage of all classes of rural roads and city streets by residents of cities and rural areas, respectively, and by residents of the respective governmental subdivisions, for the purpose of determining the spread of benefit afforded by highway improvements.
- 6. The kind and rates of all taxes directly or indirectly imposed for highway purposes by all divisions of government, the amount of revenue raised by all such taxes, the amounts, terms, interest rates, and status of all bond issues, the incidence of all highway taxation, and the purposes for which all revenues collected are expended, such as for construction, maintenance, administration, regulation, police protection, etc.
- 7. The assembly of all available information necessary as a basis for the estimation of trends of increase in motor vehicle registration and traffic, both in general and in relation to particular classes and sections of roads, for the purpose of estimating future changes in the amount and character of road usage.

Thus, after detailed studies have been secured on a nation-wide basis, from which there have evolved the definite elements of a recommended national program, and after provision has been made for keeping these studies constantly up to date, it cannot be said that we have, as yet, actually in effect a national highway program. There does not other exist in the field of any/national activity of comparable scope the

foundation upon which to build so certainly a future course as has now been provided. The problem is to secure support from all of the interests, public and private, to insure the carrying into effect of the program thus evolved, which calls for a uniting of efforts of all those who are interested. There are many very large national industries which will be materially affected by whatever program is followed, and it is certain that their interests will be safeguarded and advanced by the adoption and fulfillment of a program designed through the intelligent interpretation of the factual data and their implications. To bring such a program into being, the State highway departments are the key to the whole organization. The progress that has been made during the past two decades in improving the major rural roads in all of the States ought to be sufficient evidence of the reliance that can be reposed in these departments to carry a sound program into effect in the future. but there are a number of trends which must be checked and reversed if the big objective of a truly national highway program is to become certain. It is certainly true that the State highway departments in many States must expand their thinking to include, in addition to the major rural highways, the important traffic arteries into and through the metropolitan areas, and the extension of State supervision and support to the secondary or feeder These are both integral elements in any national program, and perhaps there has been some reluctance on the part of the departments to undertake the tremendous responsibilities involved in a combination

of metropolitan and secondary roads while the major rural highway system is as yet incomplete. Since, however, the funds devoted to secondary roads and city streets are gradually increasing, while there has been a serious decrease in the percentage of the income devoted to State highways, it is evident that this trend must be recognized and the funds placed under the general direction of a single State authority if a well conceived program is to be carried on.

The groups represented by the Petroleum Industries Committee
necessarily have a very vital interest in the adoption of a national
highway program that will best serve and expand the traffic facilities
of the nation. The Petroleum Industry is largely dependent for its
markets upon the extent of the street and highway facilities provided
over which to operate motor vehicles, and at the same time the income
from taxation of the motor fuel is relied upon in an increasing extent
to provide these facilities. It is rare to find examples in which the
relationship between taxation and benefits secured is so direct and interdependent. While there may be isolated instances in which the rate of
taxation is higher than desirable for a number of reasons, it does not
appear either that the average rate in effect is too high or that any
efforts expended toward lowering this average rate will be successful,
under the conditions existing at this time.

The major purpose which prompted the Public Roads Administration to request the cooperation of the State highway departments in undertaking the highway planning surveys was to secure the facts needed to disclose to the public the immense dimensions of the requirements of the highway program, and thus insure the road user income for highway improve-

ment in each State must, upon the basis of the evidence secured, prepare a balance sheet which will show the required expenditures for maintenance, for the rehabilitation of the present highways, and for the extension of new facilities. When this is done and the facts placed before the legislature in each State, the reasons against diversion of this user income will be so convincing that there will be much less probability of extending or continuing diversion than has been true up to the present time.

There is included in this discussion a recapitulation of the disposition of highway user revenues for the period 1925 - 1938. For the period 1925 - 1930, when the income from user revenues first became a material part of the annual income for highway purposes, the average percentage used for State highway purposes was 74.35 per cent of the total and for local roads and streets an average of 21.09 per cent. That is, highways. State and local, including city streets, accounted for 95 per cent of the total funds. For the period 1931 - 1938, the same purposes accounted for only 84 per cent of the funds - an average loss between these two periods of 11 per cent of the total road user income directed to other than highway purposes. Other trends indicated are of importance, such as the decrease in the percentage of the user income funds for construction of the major State highways. During the first period approximately 67 per cent of the user income was spent for the construction, maintenance and administration of these highways, but in the second period only 46 per cent, a loss of 21 per cent to the State highway departments for the maintenance

and improvement of the main State highways, notwithstanding the fact that a very large increase in the mileage of these highways had taken place during that period.

A careful study of this schedule of the utilization of highway user income is convincing as to the handicaps which have been placed upon the State highway departments through added responsibilities and decreased percentage of the income which have marked the trend of legislation through the period since 1930 as compared with the preceding period. The annual cost for carrying into effect the various classes of highway improvement included in the recommended national program cannot be determined with any considerable accuracy until the computations of the annual State budgets for all States are available. It is certain, however, that based upon the most optimistic expectations of income, the total annual requirements for the highway program will exceed by a large margin the road user income at present rates of taxation.

The only conclusions, then, that can be reached, are logically these: -

That a national highway program should be adopted, and that all efforts, - Federal, State and local, - should be directed toward the financing and operation of this program;

That the basis for the annual program in each State should be a budget formulated on the factual data of the highway planning surveys with the State highway department as the direct or general supervising agency to carry the program into effect;

That the Federal financial support and legislation should be continued on the basis of State-Federal cooperation: That the rates of taxation for the road user should be adjusted to secure the maximum income;

and that all road user income should be conserved for highway purposes.

This last recommendation is not based upon any theory of taxation, but upon the facts indicated by a very careful survey of highway conditions in the States, and the developed necessities for the future, which indicate that the highest income we can possibly hope to receive will be insufficient to meet the reasonable needs of the public for the construction and maintenance of highway facilities.