

Federal Highway Progress

by

Thos. H. MacDonald, Chief
U.S. Bureau of Public Roads

The Federal and State highway organizations were called into action when the nation united to use its great strength to overcome depression and to restore a normal national life. To achieve effective results, agencies capable of functioning on a country-wide scale were essential; and it was inevitable that the existing highway organizations should be called upon to take a prominent position in the front line of the offensive operations. These organizations became the shock troops to point the entering thrust of the "war against unemployment" army which the Public Works Administration has marshaled into action.

The National Industrial Recovery Act provided \$400,000,000 for highway and bridge construction practically all of which money is now involved in work under way. This money was directly employing over 172,000 men on May 19 with a rapid increase indicated as the construction season swings into full action. The construction program will be at its peak this summer and the various projects will be largely completed by fall - a large number of projects already have been completed. Moreover, it appears probable that all Federal and State highway employment this summer will provide jobs for at

least a half-million men directly employed. An idea of the extent and speed of the highway program provided may be gained by considering that in the six months between July, 1933, and January, 1934, construction under the supervision of the Bureau of Public Roads had been undertaken by the State highway departments on a road mileage sufficient to build six transcontinental highways.

Actually, this highway work has not been concentrated upon any single line or class of highways, but has been distributed widely to reach into nearly every county in every State. There are included secondary roads, municipal streets that are a part of important highway routes, and principal rural roads on the Federal-aid highway system.

From the beginning of the Federal highway work, policies have been directed toward the building of a national system of highways as the principal objective. Now employment is the first consideration and the most important reason for making available to the highway departments an appropriation more than three times as large as the annual Federal contribution for highways heretofore.

Coupled with the relief of unemployment, a number of new Federal highway policies as well as modifications of old ones have been made effective. Of these, one of the most important is the use of Federal funds for the improvement of extensions of the Federal-aid system into and through municipalities without regard to size. The minimum of 25 percent of the funds allocated by the regulations for this purpose has been increased voluntarily by the States.

For the first time also Federal funds are being used for the improvement of secondary roads. As defined, this class comprises any roads not on the Federal-aid system. The regulations provide that not more than 25 percent of the total funds may generally be used for this purpose.

Particular emphasis is placed in the law upon projects to eliminate highway safety hazards. For the first time the entire cost of the construction necessary to improve grade crossings is being paid from the Federal highway apportionments, but this does not include any land or property damages. The program includes many grade separations between railroads and highways and a number between highways. In addition, narrow roads are being widened to meet traffic demands, dangerous bridges replaced by modern structures, and numerous other highway traffic hazards removed.

One of the most important causes of serious accidents charged against highway traffic is the use by pedestrians of roadways designed for vehicular traffic only, particularly in the suburban districts of metropolitan areas. For the first time Federal funds are being used to provide footpaths; and a reasonable start is being made in the furnishing of such facilities.

There has been so widespread and insistent a demand for the extension of adequately improved roadways on which to operate motor vehicles that it has been the general practice to confine the expenditure

to this purpose and to design the roadways themselves without the comfortable margins desirable to contribute to safety, durability and beauty. While practice has required that the construction work be brought to a workmanlike finish, the conception of roadside improvement has heretofore stopped with the finishing and seeding of cut slopes and the careful cleaning up behind the construction operations. There is a substantial change in this attitude in the direction of roadside improvements by supplementary construction and planting. Proper landscaping is coming rapidly to be recognized as a necessary part of adequately improved highways.

A summary of the public works highway projects under the supervision of the Bureau of Public Roads as of April 30, 1934, (exclusive of the loan and grant highway projects recently transferred by the Public Works Administration to the supervision of the Bureau) shows 8,050 projects on 29,533 miles of highways. Of this mileage, 21,042 miles were under way or completed using funds from the \$400,000,000 appropriation; the remainder was divided between forest, park, public lands and work relief roads. The total estimated cost of work in progress on that date was \$428,528,937, of which \$386,404,558 was from the public works fund. Of the 21,042 miles using funds from the \$400,000,000 appropriation, types of construction were divided as follows: graded and drained, 4,854; sand-clay and gravel, treated and untreated, 7,974; macadam, treated and untreated, 809; bituminous mix,

macadam and concrete, 4,134; Portland cement concrete and block, 3,157; bridges, railroad-highway and highway-highway grade separations, 114. On May 19, of the 7,791 projects under way using the \$400,000,000 appropriation a total of 1,379 had been completed and 4,958 projects were under construction.

The experience in handling the present as well as the previous highway programs has emphasized the necessity for broad planning on a national scale of the future highway improvements. This planning comprises two phases:

First, the division of the highways themselves into service classifications; and second, the surveys and other investigations of both an economic and an engineering character necessary to plan the specific improvements upon the systems as classified. It will be recognized that the classification of highways is in a constant state of flux. There are the Federal-aid system, the State highway systems, local roads, such as county and township, and also city streets. These classifications have been largely jurisdictional. There is need of continuation of the studies now in progress in some States and the beginning of such studies in States not now engaged in such work, for the purpose of classification on the basis of present and future utilization. It is only by such a classification that we can build the long-time jurisdictional, financial and engineering policies that are sound.

As to the second phase, the more important the improvement the longer the time necessary to make the detailed studies to insure a sound plan. Also, when public works are to be expanded to absorb unemployment, it is necessary that these studies and plans be ready for such an emergency. It is recommended that the policy of future planning be recognized as a necessary continuous operation, and appropriations provided for such planning on a cooperative basis with the State highway departments and the other Federal agencies.

The self-liquidating character of highway construction is too generally overlooked. The highway user is very heavily taxed. The Bureau of Public Roads has in final preparation a study of the returns through taxation of the road user by Federal, State and local authorities. The returns to the Federal Treasury during the calendar year 1933, as reported by the Bureau of Internal Revenue, of taxes levied directly upon the road user and indirectly through sales taxes, shows that the payments into the Federal Treasury totaled \$257,217,517. At this rate the \$400,000,000 set aside for highway construction will be returned from these sources to the Federal Treasury within the period that the funds are actually paid out.

As a final thought, while the major accent has been placed upon the need for furnishing employment as widely and as rapidly as possible, the other principles here touched upon are highly important from the standpoint of the future development of our highways.

The planning of highways to meet both metropolitan and rural needs, the coordination of highway transportation with other forms, the inauguration of a national campaign for beautiful highways, and the inauguration of widespread activities to do away with safety hazards of all kinds on our highways, these in themselves are worthy of our most intelligent efforts.