

## A NEW HIGHWAY PROGRAM

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On June 2, in the House of Representatives, a bill was introduced with the unanimous support of the Roads Committee, the purpose of which is to prepare and definitely provide for the participation of the Federal Government in a new program of road and street construction in the first 3 years after the war.

It has been nearly 4 years since the passage of the last pre-war authorization for Federal-aid highways. In that period other Federal highway appropriations have been made, but the purpose of the other appropriations has been to provide for the urgent highway needs of war, and their expenditure has been sharply restricted to that purpose.

The new bill looks to the future era of peace - the long era of peace, we fervently hope - which is to follow the present ordeal. It promises the aid of the Federal Government in the first years of a new period of road and street construction which must and, I firmly believe, will raise the facility of highway transport by 1960 as far above the level of 1940 as by that year it had been raised above the level of 1920.

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States, counties, and cities have been awaiting a definition of the Federal contribution to the new program before deciding upon the amount of their necessary supplementary provision. The bill that has been introduced is not yet law. It may be substantially modified before it is finally enacted. It does, however, afford the most authoritative intimation of ultimate Congressional action yet afforded, and its provisions may probably be accepted as constituting a conservative index to the ultimate decision.

It may be of interest therefore to review the salient provisions of the bill.

It proposes to authorize a total Federal appropriation of \$1,500,000,000, expendable in equal annual installments of \$500,000,000 in the first 3 post-war years.

For the first year the Federal funds would be available to pay 60 percent of the cost of projects undertaken. The remaining 40 percent would be paid with State or State-controlled funds.

For the second and third years the bill would require the Federal contribution to be matched equally with State or State-controlled funds.

The \$500,000,000 to be authorized for each year would be apportioned among the States according to their area, road mileage, and population by a formula giving a weight of one each to the factors of area and road mileage, and a weight of two to the factor of population.

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The first year's authorization would be apportioned within 30 days of the passage of the act and would be immediately available for allotment to approved projects, such allotments constituting a contractual obligation of the United States to pay for work performed. The survey and planning of projects could be undertaken at once with Federal participation in the cost. Rights-of-way for programmed projects could be acquired without delay and with the assurance of eventual Federal participation in their cost. For construction the first \$500,000,000 would be available for expenditure in the first Federal fiscal year ending after the termination of the war emergency or at such other date as Congress shall determine.

The second installment of \$500,000,000 would be available for expenditure in the next fiscal year - the fiscal year beginning after the end of the war, and the third installment would be available for the fiscal year next succeeding. According to the bill, each of these installments (the second and the third) would be apportioned on or before January 1st next preceeding the beginning of the fiscal year for which it is made available, and that for the second fiscal year could be contractually obligated immediately upon its apportionment.

More positively than any previous legislation, this bill provides for Federal participation in the improvement of roads and streets of all classes, including roads and streets in urban areas. This it does by earmarking parts of each annual installment for expenditure on the Federal-aid highway system, on a secondary Federal-aid system, and on a system of principal Federal-aid routes in urban areas.

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For expenditure on the Federal-aid highway system, either within or without cities, the bill earmarks \$225,000,000 of each \$500,000,000 annual installment; for expenditure on the system of secondary roads to be selected, it earmarks \$125,000,000 of each installment. This leaves \$150,000,000 of each year's installment which is earmarked for expenditure on principal Federal-aid routes in urban areas.

Of the bill's several other provisions I shall refer here to two only. By those who take the longer view, these two provisions are regarded as the most significant features of the bill.

One of these provisions directs the highway departments of the several States to join in the designation of a National System of Interstate Highways, limited to 40,000 miles in the United States as a whole. The character and extent of the system to be designated, as defined in the bill, are identical with the character and approximate extent of the interregional highway system recommended by the National Interregional Highway Committee and the Commissioner of Public Roads, and described in the report entitled, "Interregional Highways." The report, as you will recall, was forwarded by the President, with his endorsement, to the Congress on January 12 last.

Although the Roads Committee has preferred another name for the system, this bill it has introduced would authorize and direct the taking of the first step necessary to give effect to the recommendations of the Interregional Highways report. This provision is regarded as of more far-reaching effect than any other measure incorporated in the bill.

The second most significant provision of the bill is attached to the authorization for secondary roads. It specifies that the funds earmarked for secondary roads shall be expended on a system of such roads selected by the State highway departments in consultation with county and local road officials, subject to the approval of the Commissioner of Public Roads.

The great significance of these two provisions lies in the fact that they complete the foundation for a balanced highway program under joint auspices of the Federal and State governments. The Federal highway program in the past has been centered mainly on the development of the Federal-aid system. With few exceptions the programs of the States have been centered upon the State highway system. Both of these systems are composed of main roads. Although there have been previous Federal appropriations for secondary roads, and although an effort has been made by administrative action to direct the expenditure of these funds to a well considered system, a secondary road system has never been legally established. Here for the first time is the promise of a provision in Federal law for the designation of a system of secondary roads, coordinated with the regular Federal-aid system. And most important, here also is a provision for the designation of the major interregional routes of the Federal-aid system in such a manner as to make them eligible for preferential improvement into a modernized express facility.

Thus these new departures of the House Roads Committee would establish a firm foundation for a balanced new highway program. The Committee's bill would continue the regular Federal-aid system; would coordinate with it a secondary system designated appropriately by the States in cooperation with the counties and local governments; and would make the major routes of the Federal-aid system eligible for the preferential treatment they justify, placing particular emphasis where it should be -- on the improvement of the urban sections of these major routes.

So we have in this bill a forecast -- perhaps a conservative forecast -- of the Federal Government's intention to cooperate in an early post-war operation. And this is important because there must be a beginning. But the bill goes beyond this beginning and lays a new and broad foundation for a long-time Federal-aid program, that is really a new program. It is new in time and new in form, and it is right in emphasis.

It remains to be seen what action Congress will take on this Roads Committee bill. The States, counties, cities, and local governments are waiting for the Federal Government definitely to announce its policy so that they may adjust their own policies, arrange for the necessary funds to match the Federal contributions, and make provisions for their own independent action in highway construction. Whatever the form of the Federal provision may be, it will exert a powerful influence tending to shape the programs of the States and their subdivisions.

If the provision for designation of the interstate system is retained in the final act, it will be the inducement and the first means of establishing wherever it is needed -- in rural and urban environments alike -- a new type of express highway -- a type of highway designed especially for the safe and efficient accommodation of the larger arterial flows of traffic.

In cities the building of these new express arteries, affording the means of relieving other streets of the press of center-bound and trans-city traffic, will be the first step toward a desirable classification of streets into ways of through and local usage, and may conceivably give the first positive impetus toward the accomplishment of plans for the gradual remodeling of the existing amorphous city structure into a structure of neighborhood and functional cells, logically and naturally arranged.

Between the cities, in rural areas, and especially in the suburban zones where rural highway traffic reaches its highest peaks, the building of these special facilities for the accommodation of express movement, will not only speed this important element of highway traffic, but should go far toward the elimination of the causes of the more numerous and serious accidents and so reduce the lamentable toll of death and destruction hitherto claimed by congested highways of mixed local and arterial usage. It is conceivable, that by setting apart recognized avenues of major interstate travel and promptly fitting these arteries, in their roadways and bridges, in one State as in another, for the accommodation of vehicles of reasonable size, weight, and speed capacity.

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it may be one means, through application of agreed uniform limitations of size, weight and speed to these routes at least in all States alike, of affording a solution of the troublesome problem of interstate barriers.

If the provision for designation of a secondary Federal-aid road system is retained, and if as now outlined in the bill local road authorities are assured of having a voice in the designation, this measure should go far toward the relief of strains unfortunately existing in the relations between these authorities and the State highway departments, and bring the two administrative groups into common agreement upon a plan of orderly development of the more important farm-to-market roads as an integrated part of the improved highway system. In dealing with roads of this class, wise selection of roads to be improved from the vast mileage existing -- a selection taking due account of social and efficient land-use objectives -- is still a cardinal principle to be observed, if in reasonable time the expenditure of available funds is to accomplish the greatest general benefit.

Action of the Federal Congress is a necessary preliminary to the sessions of the State legislatures next winter, for considerable State legislation will be needed before the post-war construction of really modern highways can begin. For instance, about 30 States need legislation to enable them to adopt the limited-access type of design recommended for the interregional or interstate highways.



Better right-of-way acquisition laws are a further need in many States. The process of land acquisition usually is too slow and cumbersome. Furthermore, most State laws prohibit the taking of right-of-way width additional to that required for the physical improvements immediately planned, yet the proposed standards for the interregional highways call for immediate acquisition of sufficient right-of-way to meet the anticipated need for future widening, to protect the express character of the roads, and to permit the screening out of unsightliness.

Another problem which the State legislatures need to solve is that of more effective cooperation between State highway departments and city administrations. Particularly there is need for some better means of dealing with the complicated situation in metropolitan areas which consist of several cities, or of a major city and numerous surrounding satellite communities. Perhaps the creation of an over-all authority would be desirable in these complex urban areas to coordinate the interregional and other express routes with the metropolitan street and highway plan. If this is the solution, it will have to be legislatively provided.

If in the planning of the new highway program there is a proper recognition of the new elements that should distinguish it as a refining, adjusting, standardizing and ultimately adequate program from the necessarily provisional character of the earlier pioneer program, that recognition will be due in no small measure

to the wise initiative of the President in appointing the National Interregional Highway Committee and to the Interregional Highway report recently produced by that Committee. The distinguished Chairman of your Board of Directors and the presiding officer of this morning's session, Mr. Frederic A. Delano, was a member of the Committee. Mr. Harland Bartholomew of this city, one of the country's outstanding leaders in city planning, was another. To these two gentlemen, both present in this gathering today, we are indebted for much of the foresighted guidance and counsel provided by the report.

Briefly the report recommends:

(1) That Congress immediately provide for the designation of an interregional system.

(2) That plans be developed for post-war construction of the system to the highest modern standards, on locations and within rights-of-way where they will have the prospect of long and beneficial service.

(3) That the initial mileage be limited to about 40,000 miles of the routes and their urban connections which will serve a larger volume of traffic than any other larger or smaller network.

(4) That since cities and metropolitan areas are the source and destination of a major part of all traffic, the proposed system of interregional highways, within the limit of the mileage adopted, be located to connect as many as possible of the larger urban centers regionally and interregionally.

(5) That since short-range movement is the predominant element of traffic on all roads, deviation be made from ideally direct lines of connection between the larger regional centers in order to connect enroute as many as practicable of the smaller urban centers of at least 10,000 population.

The proposal of an interregional system (or a National System of Interstate Highways) is really only a recognition that the roads that comprise the system are the roads most in need of modernization. The unsatisfactory condition of the sections of interregional highways approaching and traversing cities in particular is the reason for the great emphasis placed by the report on the city sections as the very most needed of all most needed improvements.

Built according to the construction standards recommended, the interregional system would provide or allow for the subsequent provision of facilities capable of serving safely and efficiently a mixed traffic of passenger automobiles, motor busses, and various types of trucks, in the volumes expected 20 years from the date of construction.

All roadways and structures on the system, in their immediate design or a feasible modification later, would provide in all seasons for the passage and support of vehicles and combinations of vehicles of specified width, height, length, and axle load in the frequency and distribution of these dimensions and weights to be expected in 20 years from the date of construction. The specified axle load is 18,000 pounds on pneumatic tires; the width 96 inches; height, 12-1/2 feet; and over-all length, 35 feet for single vehicles and up to 60 feet for combinations.

Constructed to the standards recommended, all rural sections of the system in flat topography would be designed at all points and in all respects for safe travel by passenger vehicles at a speed of not less than 75 miles an hour and by truck and tractor combinations at a speed of not less than 60 miles an hour, in all seasons. In difficult terrain, the design speed might be reduced somewhat. The design speed for urban sections would be 50 miles an hour for passenger cars and 35 miles an hour for trucks in all seasons.

Furthermore, the interregional system would be designed with a sufficient number of traffic lanes and other facilities so that except at infrequent peak hours when traffic density might interfere, the average running speed would not need to be reduced at any time or in any season to less than 50 miles an hour on rural sections or to less than 40 miles an hour on urban sections.

All rural and urban sections of the interregional system would be legally established as limited-access highways, and actually so limited as need requires. There would be no railroad crossings at grade. No highway crossings at grade would exist on any of the heavily traveled rural sections, nor street or highway crossings at grade on urban sections. Wherever the volume of traffic necessitated four or more lanes of pavement, two distinct one-way roads would be constructed, unfettered by previous conceptions of divided-highway design of fixed and uniform cross section.

Alinement, curvature, and sight distance would be adapted to high-speed travel. Shoulders would be 10 feet wide to accommodate

standing vehicles. Grades in relatively level country and in cities usually would not exceed 3 per cent.

Rural right-of-way would be of ample width for immediate construction and future widening, varying from about 225 feet to 300 feet. Urban right-of-way would be ample to accommodate the facilities required.

To avoid frequent intersection with other streets or highways, urban sections of the interregional system would be depressed or elevated or both, preferably depressed. Wherever necessary for the service of property, local service streets would be provided at each side of urban sections of the interregional system.

These are a few of the report's more significant proposals, which I mention here primarily to excite your interest in reading the report itself, which has been published and is available without charge, by application to the Public Roads Administration.

If, as now seems probable, such an interregional or interstate system is finally agreed upon, it will not be developed by the Federal Government alone or even in its entirety by the Federal and State governments. Local governments, especially those of the cities will have important shares of the responsibility for an harmonious and balanced development. It is desirable, therefore, that there exist a determination on the part of all authorities and by the public generally that whatever work is henceforth done on routes generally conforming to the selected system shall be done in accordance with agreed high standards approximating those which have been proposed.

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It is highly important moreover, that such a determination be taken now or with the least possible delay in order that plans now being made, shall reflect in the character of their provisions the intended purpose. Unless this be done there is danger that plans now being made for execution as part of a large immediate post-war program may result in a substantial volume of inadequate construction, inadvisedly located, and so constitute a new and large reinvestment in early obsolescence.

To those who doubt on grounds of financial feasibility whether we can afford the modernization of our highway system which the Interregional Highway report proposes, who say in effect: "Yes, this all sounds very attractive; we recognize the need, but can we accomplish the ambitious ends proposed?" It might be answered that a better question would be: "Dare we fail?"

One answer is that if we fail, we will continue to pay heavily in lives. In the 15 years before the war, more than half a million people were killed on our obsolete highways and streets. Do we want to round that out to a million by the end of another 15 years? Year by year during the 15 years before the war, our highways and streets became more obsolete, and year by year, with some exceptions, traffic fatalities increased. The 25,000 traffic deaths in 1927 had increased to 40,000 in 1941. Will we reduce this death toll by endlessly repeating "Drive carefully" slogans? or will we adopt more positive means, among them that of designing the highways to eliminate the causes of accidents? We all know the answer, but a few figures will verify it.

The death rate on all highways was averaging about 12 fatalities per hundred million vehicle-miles during the years immediately before the war. The same rate occurred on a section of U S 1 paralleling the Merritt

Parkway in Connecticut during a  $3\frac{1}{2}$ -year period ending last July. This section of U S 1 may be accurately described as obsolete.

The nearby 37-mile Merritt Parkway, on the other hand is a modern facility built to much the same high standards as are recommended by the Interregional Highways report. In a  $5\frac{1}{2}$ -year period ending with 1943, its accident rate was less than 4 fatalities per hundred million vehicle-miles. Four on the modern Merritt Parkway; 12 on obsolete U S 1. Modern design only one-third as hazardous!

Dare we fail to modernize our highways and streets? Years ago, Thos. H. MacDonald gave succinct expression to the answer, when he said that we pay for modern highway improvements whether we have them or not, and we pay less if we have them than if we have not. That applies as well to the modernization work of the future, designed to take us out of the present muddle of congestion, as it did to the early work directed to the more limited objective of just getting us out of the mud. And it takes into account intangibles as well as dollars-and-cents economics.

The ideas expressed in the "Interregional Highways" report have had a remarkable acceptance. Highway authorities and others have expressed their approval in words, and the State highway departments have demonstrated their concurrence by their undertakings in the advance-planning program. A very substantial part of the advance-planning projects which they have proposed are located on the Committee's recommended interregional system, and will be planned substantially as recommended, even though the recommended system has not yet been designated either as an interregional system or, as the Congressional Committee would prefer to term it, A National System of Interstate Highways.