

The Post-War Highway Program

By H. S. Fairbank, Deputy Commissioner, Public Roads Administration
(Presented before the American Society of Civil Engineers in New York, January 21, 1944).

In a timely statement published in July 1943, the American Society of Civil Engineers outlined certain basic principles that should be observed in the planning of a post-war construction program and defined some of the major elements that should constitute such a program.

Reminding that industrial construction and private housing have normally accounted for approximately two-thirds of all construction activity, all classes of public works forming the remaining third, the Society pointed out that the latter element, if composed of useful works designed to restore needed worn-out facilities or to provide new facilities demanded by advancing or changing standards of living, is not less essential than the former. It stated further that the creation of such useful public works is frequently a prerequisite to maximum individual enjoyment of the products of private industry, and cited in illustration the interdependence of the private motor car and the publicly built highway.

In accord with this view, the Society advocated the planning of a sound program of useful public works as part of the preparation essential to insure the reemployment of soldiers and displaced industrial workers after the war, cautioning only that the dimensions of such a program should not be so great as to unbalance the national

economy or stifle private initiative. Furthermore, it expressed the opinion that work of this character could be placed under contract promptly after the war closes, provided essential preliminary work were started at once and completed before the end of hostilities. Of such essential preliminary work the statement listed the following:

1. Preparation of working plans, specifications and contract documents:
2. Selection of rights of way and other necessary rights; determination of their costs; and preparations for prompt acquisition:
3. Completion of legal and financial arrangements for immediate construction.

This calm counsel of the Society stands out among many more emotional proposals as a reasoned guide to effective action. It is appropriate to observe that the course it charts is precisely that which has been followed in shaping the provisions of recently enacted and pending Federal highway legislation.

In this observation I refer particularly to the provisions made: For advance planning, by the Defense Highway Act of 1941 and Public Law 146 enacted last July; for Federal participation in the costs of rights of way, by Public Law No. 146; and for planning, of right-of-way acquisition and post-war construction, by the bills now pending in both Houses of Congress, designated S.971 in the Senate and H.R.2426 in the House.

Of these several provisions, the most remarkable, for its farsighted anticipation of future needs, is that of the Defense Highway Act. Passed a month before the American declaration of war, this Act authorized Federal expenditure of \$10,000,000, to be matched by an

approximately equal State expenditure, for surveys, plans, specifications and estimates for future construction on the strategic highway network and on routes in, through, and around cities.

To this early provision for advance planning, limited to particular classes of projects, Public Law No. 146 added permission to expend in each State otherwise unobligated amounts of an apportioned national total of \$50,000,000 of Federal funds, previously available for construction only, for surveys, plans, specifications and estimates for post-war street and highway improvements, without restriction of class or system. Under this permissive provision it now appears probable that at least \$25,000,000 of Federal funds matched by an approximately equal sum of State revenue will actually be devoted to the authorized planning purpose. The total of roundly \$50,000,000 thus realized, added to the approximate \$20,000,000 previously authorized, will provide for the detailed planning of post-war highway and street construction a grand total approaching \$70,000,000. Assuming a 4 percent planning cost, this probable Federal-State expenditure alone, time and other circumstances permitting, promises the availability of plans for post-war highway and street construction amounting in cost to \$1,750,000,000. And, let it be emphasized, this generous provision is available for, and, soundly administered, will be used for the planning of rural roads and city streets, main arteries and their feeder connections, with no restrictions whatever inconsistent with the development of a well balanced program.

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From this it will be clear that, in the highway field, Federal legislation alone makes substantial provision for the preparation of working plans, specifications, and contract documents - first of the three categories of preliminary work declared by the Society's policy statement to be essential to the prompt undertaking of construction at the end of the war.

For work of the second category - that is, the acquisition of rights of way - the amendment of the Federal Highway Act incorporated in Public Law No. 146, which permits Federal funds hereafter to be expended for rights of way as well as for construction, makes the essential basic provision. It signifies the importance attached by the Federal Government to adequate rights of way for future highway improvements and promises full Federal cooperation in meeting the costs of such rights of way for any projects that may hereafter be constructed with Federal aid. What is needed further is the assurance of post-war Federal construction appropriations, and this is one of the purposes of the bills now pending in Congress.

In addition to completing the provision for right-of-way acquisition these bills also aim to accomplish on the part of the Federal Government the third of the conditions which the Society has declared to be essential, namely the completion of legal and financial arrangements for the beginning of construction immediately at the end of the war. This they aim to do by authorizing Federal appropriations of \$1,000,000,000 for each of the first three post-war years, and by

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prescribing the manner in which such funds are to be apportioned and matched by the States, and the purposes for which they are to be expended.

Hearings on these bills are now definitely scheduled by the appropriate committees of both Houses of Congress; and while it is probable that the present bills will undergo substantial amendment, there is good reason for the confident expectation that they will emerge as adequate and effective legislation in a reasonably short time.

So far as it can be done by legislation and financial authorization, then, the Federal Government either already has made, or is about to make, adequate provision for all of the preliminary work rightly held by the Society to be essential to the prompt undertaking of a post-war highway program.

It must now be acknowledged that in the application of the available legal and financial provisions, there has been unexpected and disturbing delay.

On December 31, 1943, only \$6,200,000 of the Federal \$10,000,000 available for advance planning since November 1941 had been allotted, with matching State funds, to definitely programmed surveying and planning projects. Of this provision, therefore, more than a third remained unapplied less than a month ago. Of the similar provision by Public Law No. 146, available since last July, very little has been applied in active work. The highway departments of 28 States and the District of Columbia have thus far advised the Public Roads Administration of their intention to use for survey and planning purposes about

\$16,000,000 of these available Federal funds, matched by \$14,000,000 of State money. Four State highway departments have announced that they will use none of these Federal funds for planning, preferring to reserve them for eventual construction expenditure and meet the whole cost of advance planning with State funds only; and 16 State highway departments have as yet given no positive and official signification of their intention to use any of these funds for planning purposes.

The amount of the Federal planning funds put to work, of course, does not measure the full extent of the highway planning that has been undertaken. As indicated, some of the State highway departments prefer to provide for their planning operations entirely with State funds. In many States, probably in all, there is some planning, projected, in progress, or completed, in which there is no use of the Federal funds in planning undertaken, if not by the State highway departments, at least by some of the cities and other subdivisions of government.

But, with due allowance for all such actual and possible independent undertakings, the fact remains that the unexpectedly slow rate of allotment of the Federal planning funds does mirror the effect of several delaying causes that have probably retarded the whole highway planning operation.

One of these causes has been the heavy loss of trained engineering personnel experienced by all public highway agencies, and the preoccupation of remaining forces with access road construction and other work of immediate essentiality in the conduct of the war.

Another - more effective a year ago than now - has been a general sense of the remoteness of the war's end and a feeling of the futility of definite planning against a vague and uncertain future.

A third, and very important cause has been the uncertainty that has existed, and that still exists as to the amounts of road and street building funds that will be available and the conditions that will be attached to their expenditure. In part, this uncertainty has resulted from the difficulty of anticipating the extent of the decline in road-user revenues during the war and the rate at which these revenues, forming so great a part of the support of road building operations, may be expected to increase when the war is over. To some extent, also, the uncertainty has been due to the break that has occurred in the chain of Federal-aid authorizations and the impossibility of knowing in what amount and under what conditions this aid will be restored. As a result, highway officials have been undecided not only as to the extent of the needed and useful planning program, but also as to the place and character of improvements it will be possible to finance.

And, finally, a condition that has delayed the planning of some of the most vital of needed post-war projects has been the lack of effective working relationship between the State highway departments and the planning and highway authorities of cities, and a want of decision in the cities themselves as to the character and location of important arterial routes within their limits. It is generally agreed that the connections of main highways across and around the

cities constitute in their present condition some of the most serious deficiencies of the highway system. The Public Roads Administration has strongly urged that the planning of adequate improvements of these connections be given a prominent place in programs for expenditure of the highway planning funds available under the two Federal acts. But, although most of the State highway departments agree, and desire to expend substantial amounts of the available funds for these purposes, the absence of well established cooperative relations with the cities and a mutual unreadiness for the decisions involved have delayed the undertaking of many such desirable planning projects.

As these causes have operated to delay the fixing of locations for post-war projects, so they have also been among the first and most influential reasons for a pronounced hesitance of progress in right-of-way preparation. And, in this connection, the uncertain magnitude of future Federal participation has undoubtedly had an important effect.

To resolve these uncertainties and speed the preliminary work which the Society's policy statement so rightly holds to be essential, the most beneficial of practicable steps would be early passage of the pending Federal highway legislation. By defining the extent and character of the Federal contribution in support of post-war undertakings, this would clear the way for parallel action by the States and their subdivisions. It is desirable that the Federal decision be promptly taken, as a basis for State action in regular and special sessions of the legislatures to be held this year.

The war-deferred and previously accumulated needs of the highway system for mere structural restoration are so great that, were we content to replace roads and bridges in their present locations and capacities, the preparation for a large post-war construction program - certainly a program as large as any for which provision is likely to be made - would not be a particularly difficult or time-consuming matter. Such a program of construction could be launched with little more preparation than the deferred maintenance operations that must and will be undertaken the moment wartime restrictions are relaxed. On all the country's highways and streets these maintenance operations alone are likely to require in the early post-war years expenditures at a rate above 750 million dollars per year. A much larger construction program, directed simply to the rebuilding of worn-out roads and bridges in situ and in kind, could be prepared with comparatively little effort; and, with the maintenance operations, would assuredly furnish employment for large numbers of workers.

If employment were the primary motive of a post-war highway program, it would be reasonable, perhaps, to limit at least the earlier construction undertakings to projects thus easily planned.

Instead, the sounder view is held to be that objectives of employment should be subordinated to those of efficient and adequate highway improvement; and such a conception would imply that whatever construction may be undertaken after the war's long hiatus shall supply properly placed and adequately designed units of a street and highway system better and in important respects different from that which now exists.

The need for this change, this betterment, this modernization, is widely recognized. It has been known for the better part of a decade. Impediments of the depression and the war have overlong delayed a beginning of the well planned conversion that is needed. It will be lamentable indeed if by hasty and ill-considered action substantial (perhaps extraordinarily large) post-war means are misdirected to timid, misplaced, and merely provisional construction, that will not only fail to advance the realization of an eventual plan, but, far worse will add unnecessarily to the debt of obsolescent facilities that we have already to liquidate.

In this connection, the Society's policy statement makes what seems to be its only unfortunate suggestion, so far as the highway program is concerned. It refers to two basic views that are held in regard to the planning of post-war public works. One it describes as the long-range view, looking to an ultimate change of the faces of American cities, to the interlacing of the country with a tremendous system of superhighways, and to other farsighted objectives. The other view, which it describes as the more realistic, is one of shorter range, looking to the provision of projects promptly needed and to the part that construction can play, presumably by providing employment, in the critical period immediately after the war.

The implication of the Society's statement is that the two views are mutually inconsistent. Conceding that the purposes of the broader view should be encouraged in so far as they are sound, it calls common sense to witness that such long-range concepts can be fully

planned and realized only over periods of twenty-five to fifty years, adds that it is inconceivable that the long-range projects can be financed and brought to construction with sufficient promptness to meet immediate post-war needs, and suggests that the efforts so to plan beyond immediate necessities is somehow starry-eyed and impractical. In contrast, it holds that the most casual surveys will reveal that there is an enormous volume of practical and useful public work projects that will fit into any long-range plans, that have the further merit of being needed now, and that may be financed on a basis that will not bankrupt the country and make worse the financial problems resulting from enormous war expenditures that will have to be met in the post-war period.

Presuming to comment upon this portion of the Society's statement only in its application to a post-war highway program, the speaker holds that the two views referred to are not alternative and not inconsistent, but on the contrary are helpfully complimentary, and both to be encouraged. It would be most unfortunate, in his opinion, if the statement of the Society were to confirm a tendency in highway planning toward the too ready acceptance of what is immediately expedient, and discourage as impractical and idealistic the determination of immediate action in consideration of its relation to, and contribution toward the realization of enlightened long-ranged objectives. He does not share the confidence expressed that improvement projects can be casually selected that will fit into any long-range plans. He believes, on the contrary, that the formulation of particular, well

considered and feasible long-range plans is the most important of present needs, as a safeguard against the wasteful, haphazard, and misdirected expenditure of large sums of post-war highway funds that may occur in the absence of the sense of direction that only such long-range plans can afford.

For more than two decades it has been the good fortune of the highway program to possess for its partial governance just such long-range plans, as represented by the designated Federal-aid and State highway systems and the intergovernmental relationships, and policies conceived and consistently followed in the progressive improvement of these systems of primary highways.

It is the present misfortune that these earlier long-range plans for development of important parts of the whole highway and street network, adequate as they were for an earlier stage of highway development, have not been revised and broadened, as they now should be to meet more completely the modern need.

The highway planning surveys were undertaken by the State highway departments and the Public Roads Administration in the middle thirties to establish the factual basis for a replanning of these modern long-range objectives. The overpowering conclusions to be drawn from the vast body of facts amassed are the notable lack of balance that exists in the highway development that has resulted from the preceding years of pioneer effort, and the danger that such unbalanced development will be continued in the absence of a more concerted plan of attack upon the highway problem as a whole. And subordinate only to these is

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The conclusion that the time is past ripe for the scrapping of provisional policies and methods appropriate to the earlier stage of development and the adoption of new policies, methods and plans which will give greater assurance that whatever is henceforth done in the improvement of any part of the whole highway and street system will contribute lastingly and in its proper place toward the balanced development of the whole. Knowing what we now do of the trends of traffic increase, the dynamics of traffic flow and the interrelationship of traffic concentration and land frontage values, it is inconceivable, for example, that temporary obstacles of land acquisition will be permitted to confine the reconstruction of important existing highways for another twenty years of life within cramped rights of way on dangerous, indirect and capacity-reducing alinement. Yet unless there is revision of some of our broader policies, and a new recognition of long-range objectives - not only by highway engineers but by others, including the public at large, that often determine the character of specific highway improvements - there will continue to be many such ill-advised reconstructions to embarrass the efficient service of highway movement for years to come.

It is clear that a long-range highway program that provides for the future improvement of only part of the whole highway and street system, as do the State and Federal-aid programs in their present conception will not suffice; it is clear that a highway policy that establishes intergovernmental relations and financing means for such a partial program only, leaving the improvement, the financing and

administration of other essential parts to the casual and unrelated decisions of many times, places and persons will not suffice to bring about the balanced and adequate improvement of the whole system that should be the common goal of all effort after the war.

Hurrying to be ready with specific construction projects immediately after the war, our attention fixed upon the importance of having work for men to do when war work ends and fighting ceases, we are apt to fall into the mistake of thinking of the post-war period as a short period of emergency, one, two or three years in duration. It will make for greater soundness in our post-war highway planning if we think of the end of the war rather as the beginning of a long period of constructive peace; and of the first years of that period as years in which it will possibly be consonant with good economic policy to compress and extraordinarily large production of the new highway facilities the future will require.

So thinking, we shall not neglect the preparation for prompt beginning of construction projects or fail to provide the detailed construction plans and other preparatory measures essential to undertaking in the earlier years the larger-than-average program that may then be economically and socially desirable. But we shall see this earlier work as the beginning of a new orderly process, rather than as just another of the emergent expedients that have so confused the progress of highway development in the last decade. And we shall give prominent place in our present planning to preparation of the broader provisions that will be essential for such a new orderly process.

We shall make early and intelligent adjustment of highway plans and policies to the needs of a better coordination of the several modes of transportation - by highway, rail, air and water.

We shall untangle the unnecessary confusion of conflicting State limitations of the size, weight and speed of motor vehicles, thereby establishing both the basic conditions to be met in future highway and bridge design and the consistent restrictions essential to the prevention of damaging use, setting unambiguous standards for the manufacture of motor vehicles, and removing from highway transportation the unwarranted impediments by which it is now obstructed at numerous imaginary lines.

We shall recognize the finite limit of highway cost payable with road-user taxes, suspend the rule of blind grab that has prevailed in the division of these taxes between Federal, State, county and municipal demands, and use the reliable facts we now have to order the rates and the apportionment of these and other taxes between various parts of the highway and street system in balanced proportion to determined needs.

We shall review the present irrational classification of the highway and street system and effect a more reasonable division of the total mileage among administrative systems, determining in the same process the total extent of the improvable mileage, and the relative importance of the constituent parts of each system.

We shall establish between State, county and municipal highway authorities cooperative relations as close and efficient as those that have long existed between Federal and State agencies, and create

where the need exists new and effective authorities to deal with the complex planning and improvement of highways in metropolitan areas overlapping recognized governmental jurisdictions.

By organized deliberation and agreement, all levels of highway authority participating, we shall endeavor to establish for highways and streets of the several orders of importance and utility consistent standards of design to be applied alike in all States and communities, to the end that progressive future improvement by numerous agencies may eventually convert to reasonable balance the present irrational disparity of improvement of the highway and street system as a whole.

We shall modernize our antiquated right-of-way laws and practices, and make adequate legal provision for appropriate application of the principle of limited highway access, to make possible the creation of the wider, straighter and more free flowing highway arteries that will be necessary for safety and convenience under conditions of traffic volume and speed that the future will bring.

It is the chief merit of the report of the National Interregional Highway Committee to the President, transmitted by him to the Congress a week ago, that it envisions most of these more fundamental preparations as essential, equally with the more detailed engineering of early post-war construction projects, for the sound and efficient planning of an interregional system. The routes comprising the interregional system proposed - though they would serve, if improved as contemplated, at least 20 percent of the total highway movement - represent only one percent of the total mileage. But, in recommending the essential means for improvement of this small part of the whole highway system, the

Committee has outlined the broad essential principles of a complete master highway plan, and by example has demonstrated the methods that may and should be employed in the similar planning of other and larger portions of the total street and highway network.

The Committee has demonstrated that there is more -- much more -- to post-war highway planning than the surveying and designing of casually selected projects for a year or two of construction succeeding the war. For an important part of the highway system it has laid the foundations for a post-war improvement program that provides for both immediate and continuing action toward a clear future goal. It has set a pattern that ought to be applied with the least possible delay, and the utmost of intergovernmental faith and cooperation to the completion of a post-war program for the balanced improvement of the entire street and highway system of the country.

American Inter-Regional Highway System

II. How It Meets Postwar Needs

By H. S. FAIRBANK

DEPUTY COMMISSIONER, PUBLIC ROADS ADMINISTRATION, FEDERAL WORKS AGENCY, WASHINGTON, D. C.

IN a timely statement published in the September issue of CIVIL ENGINEERING (pp. 439-442), the Society's Committee on Postwar Construction outlined certain basic principles that should be observed in the planning of a postwar construction program, and defined some of the major elements that such a program should include. The Society advocated the planning of a sound program of useful public works as part of the preparation essential to insure the reemployment of soldiers and displaced industrial workers after the war; and suggested the immediate completion of all preliminaries—in the form of engineering, real estate, legal, and financial arrangements.

This calm counsel of the Society stands out among many more emotional proposals as a reasoned guide to effective action. It is appropriate to observe that the course it charts is precisely that followed in shaping the provisions of recently enacted and pending federal highway legislation.

I refer particularly to the provisions made: (1) for advance planning, by the Defense Highway Act of 1941 and Public Law 146, enacted last July; (2) for federal participation in the costs of rights of way, by Public Law No. 146; and (3) for planning, right-of-way acquisition and the financing of postwar construction, by the bills now pending in both Houses of Congress, designated S. 971 in the Senate and H. R. 2426 in the House.

Of these several provisions, the most remarkable for its farsighted anticipation of future needs is that of the Defense Highway Act. Passed a month before our declaration of war, this Act authorized a federal expenditure of \$10,000,000, to be matched by an approximately equal expenditure by the states, for surveys, plans, specifications and estimates for future construction on the strategic highway network and on routes in, through, and around cities.

To this early provision for advance planning, limited to particular classes of projects, Public Law No. 146 added permission to expend in each state otherwise unobligated amounts of an apportioned national total of \$50,000,000 of federal funds (previously available for construction only) for surveys, plans, specifications and estimates for postwar street and highway improvements, without restriction of class or system. Thus at least \$25,000,000 of federal funds, matched by an approximately equal sum of state revenue, may be devoted to the authorized planning projects. The total of roundly \$50,000,000, added to the \$20,000,000 previously authorized, will provide for the detailed planning of postwar highway and street construction a grand total approaching \$70,000,000. Assuming a 4% planning cost, this promises plans for postwar highway and street construction amounting to \$1,750,000,000. And, let it be empha-

COMPREHENSIVE highway planning, illustrated by the government-recommended system, admirably fits into the postwar program visualized by the Society's committee, says Deputy Commissioner Fairbank. The aim, he believes, should be not merely to replace present structures, but to envision long-range modernization of the highway network. The adopted national system provides a master plan for immediate, as well as future, guidance. This paper, presented before the joint session of the City Planning and Highway Divisions at the Society's Annual Meeting, supplements the one in the May issue by Commissioner MacDonald, detailing how the proposed enlarged highway system dovetails into the postwar needs of cities.

sized, this generous provision is available for the planning of rural roads and city streets, main arteries and their feeder connections, with no restriction whatever within the limits of a well-balanced program.

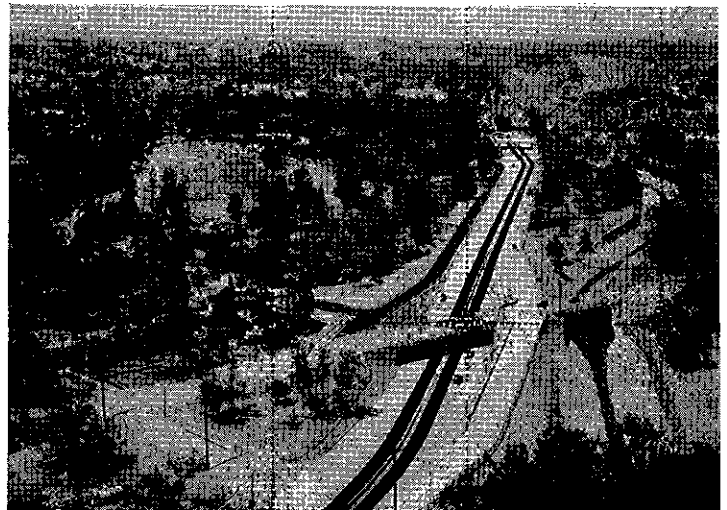
Thus, in the highway field, federal legislation alone makes substantial provision for the preparation of working plans, specifications, and contract documents—first of the three categories of preliminary work declared by the Society's Committee on Postwar Construction to be essential to the prompt undertaking of construction at the end of the war.

For work in the second category—the acquisition of rights of way—the amendment of the Federal Highway Act incorporated in Public Law

No. 146 makes the essential basic provision. It signifies the importance attached by the government to adequate rights of way for future highway improvements, and promises full federal cooperation in meeting such costs for projects hereafter to be constructed with federal aid. What is needed further is the assurance of postwar federal construction appropriations, and this is one of the purposes of the bills now (May 1944) pending in Congress.

These federal bills also aim to accomplish the third of the conditions which the Society has declared to be essential—that is, the completion of legal and financial arrangements for the beginning of construction promptly at the end of the war. They authorize federal appropriations of \$1,000,000,000 for each of the first three postwar years, and prescribe the manner in which such funds are to be apportioned and matched by the states, and the purposes for which they are to be expended.

There is good reason for the confident expectation that these bills will emerge as adequate and effective legislation within a reasonably short time. So far as it can be done by legislation and financial authorization, then, the federal government either already has made, or is about





EASTERN STATE PARKWAY NEAR FISHKILL, N.Y.

Separate Roadways, Sometimes at Different Levels, Are the Proposed Standard for a Daily Traffic of Upwards of 3,000 Vehicles

to make, adequate provision for all the preliminary work rightly held by the Society to be essential to the prompt undertaking of a postwar highway program.

It must now be acknowledged that in the application of the available legal and financial provisions, there has been unexpected and disturbing delay. On December 31, 1943, only \$6,200,000 of the federal \$10,000,000 available for advance planning since November 1941 had been allotted, with matching state funds, to definitely programmed surveying and planning projects. Of the similar provision by Public Law No. 146, available since July, 1943, very little has been applied in active work. The highway departments of 28 states and the District of Columbia have thus far advised the Public Roads Administration (PRA) of their intention to use for survey and planning purposes about \$16,000,000, matched by \$14,000,000 of state money. Four state highway departments have announced that instead they will reserve their funds for eventual construction, financing the advance planning with state funds only; and 16 state highway departments have given no official notice of their intention to use any of these funds for planning purposes.

The amount of the federal planning funds put to work, of course, does not measure the full extent of the highway planning that has been undertaken. Probably in all states some planning has been projected or completed, without federal funds—planning undertaken, if not by the state highway departments, at least by some of the cities and other subdivisions of government. Even so, the fact remains that the unexpectedly slow rate of allotment of the federal planning funds does mirror the effect of several delaying causes that have probably retarded the whole highway planning operation.

MANY HANDICAPS OPERATE

One of these causes has been the heavy loss of trained engineering personnel and the preoccupation of the remaining forces with access road construction and other work immediately essential. Another reason—more effective a year ago than now—has been a general belief that the war would be a long one and a feeling of the futility of definite planning for a vague and uncertain future.

A third and very important cause has been the uncertainty as to the amount of road building funds to be available and the conditions attached to their expenditure. In part, this uncertainty has resulted from the difficulty of anticipating the extent of the decline in

road-user revenue during the war, and the rate at which these revenues, forming so great a part of the support of road-building operations, may be expected to increase when the war is over. To some extent, also, the uncertainty has been due to the break in the chain of federal-aid authorizations and the impossibility of knowing in what amount, and under what conditions, this aid will be restored.

And finally there has been the lack of an effective working relationship between the state highway departments and the planning and highway authorities of cities, and a want of decision in the cities themselves as to the character and location of their important arterial routes. It is generally agreed that the connections of main highways across and around cities constitute some of the most serious deficiencies in the present highway system. The PRA has

strongly urged that the adequate improvement of these connections be given a prominent place in programs for expenditure of the highway planning funds available under the two federal acts. But, although most of the state highway departments agree, and desire to expend substantial amounts of the available funds for these purposes, the absence of well-established cooperative relations with the cities, and a mutual unreadiness for the decisions involved, appear to have delayed many of the undertakings.

These causes have also been among the first and most influential in the pronounced delay in right-of-way preparation. And, in this connection, uncertainty as to the extent of future federal participation has undoubtedly had an important effect.

To resolve these uncertainties and speed the preliminary work which the Society's statement of policy so rightly holds to be essential, the most beneficial of practicable steps would be early passage of the pending federal highway legislation. By defining the extent and character of the federal contribution in support of postwar undertakings, this would clear the way for parallel action by the states and their subdivisions this year.

The war-deferred and previously accumulated needs of the highway system for mere structural restoration



Dept. of Parks, City of New York

NEAR CITIES, TRAFFIC SEPARATION IS IMPORTANT
At Least Three Main Expressways Intersect at Kew Gardens,
New York City

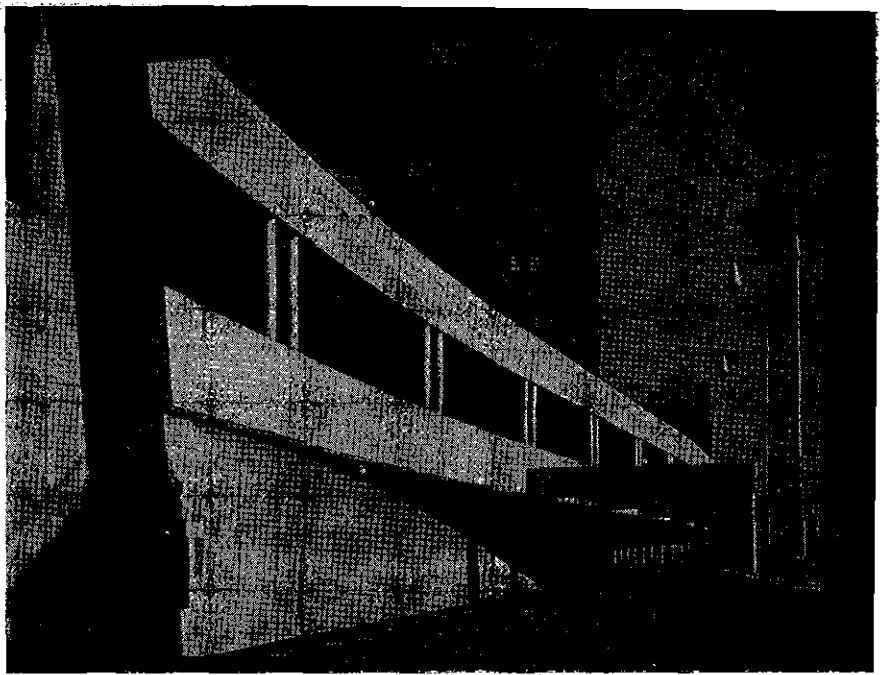
are so great that, were we content to replace roads and bridges in their present locations and capacities, preparations for a large postwar construction program would not be particularly difficult or time-consuming. In total, these maintenance operations alone are likely to require expenditures at a rate of above 750 millions a year. A much larger construction program, directed simply to the rebuilding of worn-out roads and bridges in situ and in kind, could be prepared with comparatively little effort. Together with maintenance operations, this would assuredly furnish employment for large numbers.

If employment were the primary aim of a postwar highway program, it would be reasonable, perhaps, to limit at least the earlier construction undertakings to projects thus easily planned. A sounder view is that employment should be subordinated to efficient and adequate highway improvement; that construction after the war should supply properly placed and adequately designed units different from, and better than, those which exist at the present time.

Need for this modernization has been widely recognized for almost a decade. The depression and the war have delayed it over long. It will be lamentable indeed if by hasty and ill-considered action, substantial (perhaps extraordinarily large) postwar means are misdirected to timid, misplaced, and merely provisional construction. This will not only lead to failure to realize a beneficial plan but, far worse, will add to the mass of obsolescent facilities that must be liquidated.

In this connection, the Society's policy statement refers to two basic views as to the planning of postwar public works—one, the long-range view, looking toward farsighted objectives; and the other, the more realistic, shorter-range view, envisaging projects needed at once.

The implication is that the two views are mutually inconsistent. As applied to a postwar highway program, they are not alternatives, but, on the contrary, are helpfully complementary, and are both to be encouraged. It would be most unfortunate if the Society's statement were to confirm a tendency in highway planning toward the too ready acceptance of what is immediately ex-



Dept. of Boro Works, Office of Boro Pres., Manhattan, N.Y.

SPREADING VERTICALLY INSTEAD OF HORIZONTALLY
Transition to Double-Deck Section on East River Drive, New York

pedient, and discourage as impractical and idealistic immediate action for the realization of enlightened long-range objectives. Improvement projects cannot be casually selected to fit into all long-range plans. On the contrary, the formulation of particular, well-considered, and feasible long-range plans is the most important of present needs. Only such long-range plans can prevent the wasteful and haphazard expenditure of large amounts of highway funds in the postwar period.

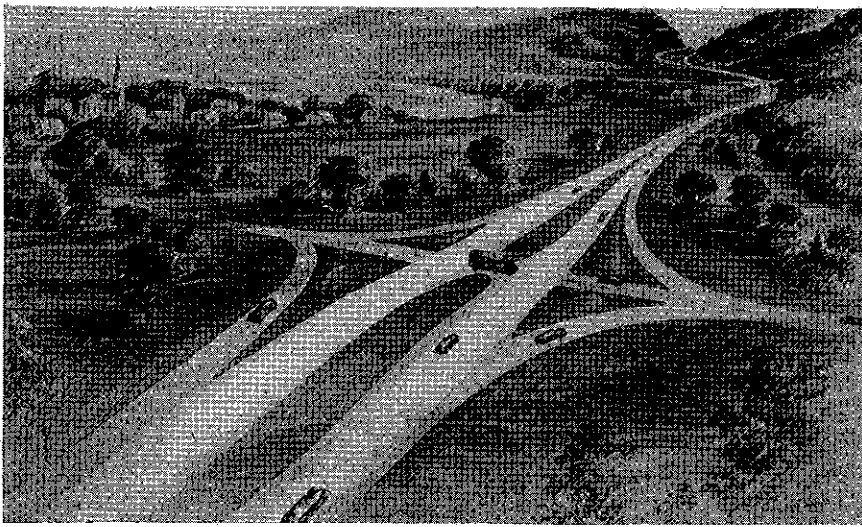
COMPREHENSIVE PROGRAM AVAILABLE

For two decades the highway program has been fortunate in possessing just such long-range plans, as represented by the designated federal-aid and state highway systems, and the policies consistently followed in the progressive improvement of these systems. It is unfortunate that these long-range plans, adequate as they were for an earlier stage of highway and street development, have not been revised and broadened, as they now should be, to meet the modern need.

In the middle thirties, highway planning surveys were undertaken by the states and the PRA to establish a factual basis for replanning to secure long-range objectives. The overpowering conclusions to be drawn from the facts amassed are that there is a notable lack of balance in highway development resulting from the preceding years of pioneer effort, and that there is danger that this unbalanced development will be continued in the absence of a more concerted plan of attack on the problem as a whole. And subordinate only to these is the conclusion that the time is long since ripe for scrapping earlier provisional policies and methods and adopting new policies, methods, and plans giving greater assurance that whatever is henceforth done in improving any part of the whole highway and street system will contribute lastingly and in its proper place toward the balanced development of the whole. It is inconceivable, for example, that temporary obstacles of land acquisition should be permitted to confine the reconstruction of important existing highways for another



THIS TEXAS ROAD TYPIFIES DESIGN FOR TRAFFIC OF NOT OVER 1,000 VEHICLES A DAY
Pavement Is 24 Ft Wide, with Wide Shoulders and Easy Slopes



STANDARD FOR INTER-REGIONAL SYSTEM—A RURAL INTERSECTION

Wide Median Strip, Accelerating and Decelerating Lanes, and Other Improvements

twenty years within cramped rights of way on dangerous, indirect, and capacity-reducing alignment. Yet unless there is revision of some of our broader policies, and a new recognition of long-range objectives—by the public at large as well as by highway engineers—there will continue to be many such ill-advised reconstructions to prevent efficient traffic movement for years to come.

LONG- RATHER THAN SHORT-RANGE VISION

Clearly a long-range program that provides for improvement of only part of the whole highway and street system, as do the state and federal-aid programs in their present conception, will not suffice. A policy that establishes intergovernmental relations and means of financing for such a partial program, leaving the improvement, the financing, and the administration of other essential parts to the casual and unrelated decisions of many times, places, and persons, will fail to bring about the balanced and adequate improvement of the whole system that should be the goal of all effort after the war. Hurrying to be ready with specific construction projects immediately after the war, we are apt to make the mistake of thinking of the postwar period as only a short period of emergency. It will make for sounder planning if we think of it rather as the beginning of a long period of constructive peace; and of the first years as years into which it will possibly be consonant with good economic policy to compress an extraordinarily large amount of the new highway construction which the future will require.

So thinking, we shall see this immediate work as the beginning of a new orderly process, rather than as just another of the expedients that have so confused the progress of highway development in the last decade. We shall make early and intelligent adjustment of highway plans and policies to secure a better coordination of the several modes of transportation—highway, rail, air, and water.

We shall untangle the unnecessary confusion of conflicting state limitations in size, weight, and speed of motor vehicles, thereby establishing both the basic conditions to be met in future highway and bridge design, and the restrictions essential to the prevention of damaging use. This means also the setting up of unambiguous standards for the manufacture of motor vehicles, and the removal from highway transportation of the unwarranted impediments which now obstruct it at numerous imaginary lines.

We shall recognize the finite limit of highway cost payable with road-user taxes; and suspend the rule of blind grab in dividing these taxes between federal, state, county, and municipal demands, using them instead in balanced proportion to meet predetermined needs.

We shall review the present irrational classification of the highway and street system and effect a more reasonable division of the total mileage among administrative systems, determining in the same process the probable total extent of the improvable mileage, and the relative importance of the constituent parts of each system.

Between state, county, and municipal highway authorities, we shall establish cooperative relations as close and efficient as those that have long existed between federal and state agencies, and create new and effective authorities

to deal with the complex planning and improvement of highways in metropolitan areas where recognized governmental jurisdictions overlap.

By organized deliberation and agreement, all levels of highway authority participating, we shall endeavor to establish for the several orders of highways and streets consistent standards of design to be applied alike in all states and communities.

We shall modernize our antiquated right-of-way laws and practices, and make adequate legal provision for appropriate application of the principle of limited highway access, creating the wider, straighter, and more free-flowing arteries that will be necessary for safety and convenience under conditions of future traffic volumes and speed.

MASTER PLAN FOR NATIONAL USE

It is the chief merit of the report of the National Inter-Regional Highway Committee, transmitted by the President to the Congress, that it envisions most of these more fundamental preparations as essential, equally with the more detailed engineering of early postwar construction projects, for the sound and efficient planning of an inter-regional system. The routes proposed, though they would serve, if improved as contemplated, at least 20% of the total highway movement, represent only 1% of the total mileage. But in recommending the essential means for improving this small part of the whole highway system, the Committee has outlined the essential principles of a complete master highway plan, and by example has demonstrated the methods that may, and now should be, employed in similarly planning other and larger portions of the total street and highway network.

The Inter-Regional Committee has demonstrated that there is more—much more—to postwar highway planning than the surveying and designing of casually selected projects for a year or two of construction succeeding the war. For an important part of the highway system, it has planned the foundation for a postwar improvement program providing for both immediate and continuing action toward a clear future goal. It has set a path that ought now to be applied with the least possible delay; and with the utmost of intergovernmental faith and cooperation, to the completion of a postwar program for the balanced improvement of all segments of the street and highway system of the country.