

December 28, 1960

INTRODUCTION AND SUMMARYThe President's Directive

In a letter of July 2, 1959, the President instructed the Special Assistant for Public Works Planning to conduct a broad review of the Federal Highway Program. He referred to the sharply accelerated roads program authorized by the Federal Aid Highway Act of 1956 and pointed to the questions that had arisen as to whether policies used in selecting routes for highways would achieve most economically the purposes sought, whether the design standards were greater than needed and whether the needs justified a system of Interstate and Defense Highways of the magnitude planned. Specifically, the President's letter directed that the review should:

- "1. Re-examine policies, methods, and standards now in effect in order to ascertain their effectiveness in achieving basic national objectives. This re-examination should cover, but not be limited to, intra-metropolitan area routing including ingress and egress, interchanges, grade separations, frontage roads, traffic lanes, utility relocations, and engineering design.
- "2. Delineate Federal responsibility as distinguished from State and local responsibility in financing, planning, and supervising the highway program.
- "3. Determine the means for improving coordination between planning for Federal-aid highways and State-local planning, especially urban planning.
- "4. Develop recommendations covering the legislative and administrative action required to redirect the program as indicated in 1, 2, and 3, in a manner that will (a) minimize the Federal cost of the highway program, and (b) assure financing these costs from the Trust Fund on a self-sustaining basis."





The Highway Act of 1956 and the Interstate System

The Federal Aid Highway Act of 1956 started a new era in Federal participation in highway development. It designated the System of Interstate highways authorized by the 1944 Act as the "National System of Interstate and Defense Highways." It expressed the intent of Congress that the System be completed as nearly as possible over a 13-year period and that the entire System in all the States be brought to simultaneous completion. It established the principle of control of access. It provided for the adoption of standards adequate to accommodate the types and volumes of traffic forecast for the year 1975. It raised the authorized extent of the Interstate System from 40,000 miles to 41,000 miles. It increased from 60% to 90% the part of the cost of the Interstate System to be financed from Federal taxes. It authorized annual Federal appropriations totaling \$25.0 billion over a 13-year period or 90% of the total estimated cost of \$27.5 billion. It prescribed a procedure for apportioning the funds among the States in the ratio of the cost of completing the System in each State to the total cost of completing the system in all States.

To finance the Federal cost, the 1956 Act established a "Highway Trust Fund" and appropriated to the Trust Fund certain existing and additional taxes on motor fuels, vehicles, and parts.

The 1956 Act was enacted in response to demands of the President and the general public for a comprehensive, quick and forward-looking program to overcome the growing deficiencies in highway facilities. The President, in his 1955 Special Message to the Congress, presented a program of highway construction of unprecedented magnitude and popular appeal. It was geared to meet the great need and enthusiasm of Americans for a nationwide network of controlled access highways for swift, safe and uninterrupted motor travel that would join both coasts, link with our neighbors to the north and to the south, connect the principal cities, ports, manufacturing areas and other traffic-generating centers, and provide for the National defense.

The needs for improved intercity highways grew during the 1930's. They became increasingly evident as the requirements of defense for highway transportation in the early 1940's were superimposed on these peacetime requirements. Rapid growth of motor vehicle transportation after World War II continued to pile up the backlog of highway needs. Highway accidents were continuing to take an alarming toll of lives. The cessation of highway construction and maintenance during World War II, together with the ever-increasing number of vehicles, compelled



the launching of a vigorous attack on the highway problem. The practice of the Congress theretofore of enacting biennial highway authorization legislation had proven to be too indefinite a method of insuring that the obstacles would be overcome in the foreseeable future. The proposal for authorizing a long-range program to be accomplished over a definite period of years received practically unanimous acceptance. The only really serious controversy that remained at the time of the enactment of the 1956 Act was the means of financing the program.

Problems that Led to Presidential Directive for Review

The new highway program authorized by the Congress in 1956 was undertaken with vigor and enthusiasm by the Federal government, the States and the Road Building industry. However, it was not long before major problems of finance, planning, function and scope arose with respect to the new Interstate Program.

The urgency of getting work underway and fears that the road building industry might not be geared to accomplish the expanded program resulted in direction of the major efforts toward getting construction started rather than toward first establishing and clarifying understandings as to the major objectives to be achieved. The availability of Federal tax funds for 90% of the cost of the work provided an attractive lure for solving traffic problems of a predominantly local character -- a consequence not foreseen at the time of enactment of the Act.

The ascending rate of growth in population, particularly in the suburbs of the metropolitan areas, and the accelerated economic development increased transportation facilities needs, especially for motor vehicles, to the point where any program with funds available was sought to be used to relieve mounting traffic congestion. The many pressures that developed as a result of the growing metropolitan area problems, together with the enlarged authorizations contained in the 1956 Federal Aid Highway Act, placed unparalleled demands on the Bureau of Public Roads and State Highway Departments and apparently did not give sufficient time for the establishment of clear basic objectives. There were increasing tendencies to use the Interstate System as the main solution to commuter transportation problems in metropolitan areas without adequate consideration of suitable and possibly better and more



economic alternatives. Differences of opinion emerged as to whether parts of this program were being directed more at attempts to solve purely local traffic problems than at advancing basic national objectives. There was concern that some of the new freeways being provided by the Interstate Program might be strangled by their own traffic on opening day. There was not agreement as to the types of needs and services which were to have primary emphasis in the development of the Interstate System, nor the order in which the construction of facilities was to be programmed.

Lack of adequate progress in overall planning, particularly land use and mass transportation planning in urban areas, was apparent. The mammoth size, the speed, and the complexity of this program, made the need for improved coordination with the planning of other programs even more imperative. Yet, by the same token, sufficient time for this coordination was precluded. Planning and designing were often based on continuation of trends in existing highway traffic rather than in well-thought-out forecasts of future needs and developments, technological as well as other, and how these needs could best be satisfied. Insufficient attention was being given to the impact of the new highways on the development and form of mushrooming urban regions. Urgent demands for speed in placing work under way prevented adequate consideration as to whether traffic should be encouraged to follow past motor vehicle patterns, possibly to its own long-range detriment, or whether routes should be so selected as to channel parts of such traffic to other arteries or to other forms of transportation or, as a result of land use studies, to other origins or destinations.

Time also was not available to fully develop suitable geometric and construction standards for reasonably uniform application throughout the country as required by the 1956 Act. Oftentimes the width of right-of-way and the cross-section elements, especially the width of median, design of the left shoulder, and the number of lanes, were such that safety was impaired and that additional capacity could not be added to the Interstate System without increasing the unit cost of highway transportation. Furthermore, the spacing and design of interchanges in some urban areas seriously affected the capacity and function of the Interstate System.

The traditional Bureau of Public Roads - State Highway Departments relationship, which had been so effective over a period of some forty

years, was subjected to new considerations, untried procedures, and severe strains. The simple relationships which had existed during the period when Federal-aid highway programs were much more modest appeared to lack the facility and techniques required for speedy and successful accomplishment of the new, intricate, gigantic Interstate Highway construction program. The need for modernization of procedures to meet late 20th Century demands was obvious.

The Department of Commerce, the Bureau of Public Roads, and the States took many steps toward the solution of the imposing mass of new problems and issues. Certain new techniques were initiated, arrangements made for review of actions, and responsibilities assigned. Yet, the morass of detail, combined with the limited staff seemed to so engulf the attention of personnel that there was insufficient time to monitor directives to insure that authorities and responsibilities were being adequately exercised, principles applied, and established procedures properly followed. Furthermore, there had not been sufficient experience with the tremendously enlarged program to be sure that the guides and instructions were workable and effective.

The first realistic estimate of cost of the Interstate System, submitted to the Congress in January 1958, showed that the original hurried estimates of \$27.5 billion -- \$25.0 billion Federal and \$2.5 billion State -- were inadequate and that the total cost would probably exceed \$40 billion. The expected continuous, adequate flow of income into the Highway Trust Fund was not being fully realized. Acceleration of the total Federal-aid highway program, financed by borrowing from the general fund of the Treasury, was authorized by the Congress in 1958 to help relieve unemployment.

These problems became of major concern to the Administration in early 1959. In order to assure that the Program would proceed on a sound foundation, the President decided that a review of the Federal-aid highway program was necessary, and assigned the task to the Special Assistant for Public Works Planning.

The Review and Analysis of the Highway Program

In view of the magnitude of the highway program, the study was concentrated on a review of some of the major facets and problems of the Interstate Program.

It was obvious that an effective study of the Federal-aid highway program required an analysis of its purposes in relation to the objectives of the nation's entire transportation plant. Furthermore, in a progressive economy all forms of transportation must be considered. Provision of integrated, coordinated transportation presents an enormous challenge, particularly since developments in the various modes of transport have taken place sporadically over the years and largely independently of each other. It was because of this loose grouping of modern and antiquated systems and the straitjackets under which distribution takes place that the Secretary of Commerce, at the President's request, recently conducted a very useful and enlightening study to identify measures needed to assure the balanced development of our transportation system. This report has been a valuable aid in providing general background material for this Highway Study.

The President, in his letter of July 2, 1959, asked that the review of the Federal-aid highway program ascertain the effectiveness of existing policies, methods and standards in achieving basic national objectives. To establish a framework for this review, the following statement of basic national objectives was prepared in consultation with the Bureau of the Budget and the Department of Commerce: -

Basic National Objectives of Federal-aid highway systems

In the development of the various systems of transportation in the United States, the main objective is to see that each system bears that type of traffic which it can most effectively and efficiently carry with the least consumption of resources, and thereby (1) facilitate the movement of people and goods, (2) promote the Nation's economic growth and development, (3) contribute to the general well-being of its people, and (4) promote the national defense.

Within this framework, the objective of the highway systems of the nation is to provide for those movements of people and goods which can best be served by motor vehicles, either separately or in conjunction with other modes of transportation. The objective of the Federal-aid highway systems is to promote the development of those elements of the overall system of roads and highways which promote broad definable national interests.



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The objective of the National System of Interstate and Defense Highways, which is presently a selected part of the Federal-aid Primary System, is to provide for efficient movement of that highway traffic which is most important to communication between major centers of population, production, and defense. The Interstate System is to serve as a nation-wide network of controlled access highways, affording safe, efficient, rapid motor vehicle travel, and connecting with other highway systems which serve as major collectors and distributors.

The objective of the remainder of the Federal-aid Primary System is to provide for other main arterials required to interconnect major centers of population, production, and defense.

The Federal-aid Secondary System is a collection of feeder roads which facilitate local and intercommunity movements of special importance. It is not an integrated network in itself.

Major Steps to Increase Effectiveness of Highway Program

During the early stages of the highway study, it became apparent that the Department of Commerce and the Bureau of Public Roads, as well as the States, were being faced with many new problems arising from the rapid expansion and enormous increase in magnitude of the Federal-aid highway program. In the conduct of this study much factual data were compiled. On the basis of this information, it was found that a number of further actions could be taken, without interrupting the program, to overcome some of the more troublesome problems and achieve greater overall coordination, efficiency, economy and understanding. They have been under continuing discussion with the Department of Commerce and many have been implemented.

Much of the authorized program is completed, underway or committed. This does not eliminate the desirability or necessity for proceeding with improvements in the planning and administration of the program as they may become apparent. Additional and varied needs will develop over the years and Federal participation in highway construction will undoubtedly continue into the indefinite future. It is for this reason that the study has been aimed at long-range targets rather than at finding temporary expedients.

In the absence of agreement and clear understandings as to the major objectives of the various parts of the highway program, it is inevitable that policy questions should arise. To overcome the surge of criticisms of the program and assure widespread public support, its purposes should be distinctly set forth. The National Objectives outlined above establish a basic framework around which a coordinated, integrated system of highways can be built. Each of the categories included therein has certain specific goals. Each should have an equitable cost-sharing ratio directly related to the type and magnitude of benefits supplied, and the cost of providing such benefits.

The Interstate System should be established as a distinct and separate part of the Federal-aid highway program with its objectives being as defined in the above statement of National Objectives. The purpose of the Interstate System is to provide for efficient movement of the highway traffic which is most important to communication between major centers of population, production, and defense. Projects meeting this qualification should be included in the Interstate System whether or not they were included in the authorized 41,000-mile network. Those that do not fulfill these purposes should be classified under other systems.

Proposals for road projects hereafter advanced for Federal-aid, regardless of the program under which they are presented, should be screened against the various objectives set forth above to ascertain into what classification they should fall. As they are developed as part of local, regional, and national plans, found justified, and presented for consideration, they should be approved and incorporated into the particular system for which they qualify. This should be a continuing process.

It would be unrealistic and a lack of exercise of normally expected foresight to decide at this time that a program would be stopped at a point some decade or so in the future when a predetermined number of miles of a certain type of highway have been completed. This would fail to recognize that progress, growth and change are constantly taking place. No matter how sophisticated we may be today, we are in no position to assume that present patterns will be frozen for sometime in the future. We should not impose limitations on the decisions which must be made by our progeny nearly a generation hence. While useful for planning purposes as a prospectus of the size of the package of the Interstate System program with which we will probably be concerned in the next decade, the 41,000-mile authorization for the Interstate System should be abandoned as a long-range legal limitation and a service concept should be adopted as a control.



Construction of the Interstate System has vital and long-range impacts on the areas through which it traverses, as well as on the economy of the nation as a whole. Coordination of such a major public works program with the multitude of other programs at the several levels of government is an exceedingly complex undertaking. One of the most useful tools in overcoming this problem and assuring effective solutions is comprehensive planning.

The foundation for comprehensive planning - be it for a region, State, metropolitan area, city or community - rests on the principle that economic growth and broad land use plans will first be developed before embarking on detailed planning for functional facilities. Comprehensive planning requires that all types of needs be measured and their growth forecast, then their relative urgencies compared and weighed. It is at this point that long-range plans are formulated for their fulfillment, and the costs, benefits and consequences of each evaluated. This planning process, which develops coordinated programs in terms of their contribution to the overall objectives, is as essential to the success of the Federal-aid highway program as it is to any other functional development program. Of such comprehensive plans the transportation plan is one part, and, in turn, the Highway Plan is but one part of the transportation plan.

This concept of planning, common to successful business and industry, is gradually gaining acceptance by the public and Government officials throughout the country. The efforts in this direction by the Bureau of Public Roads and the States, as well as local governmental bodies, should be encouraged and strengthened. With improved mechanisms for coordinating planning grants under the various Federal programs, it should be reasonable to require, that, as a prerequisite to an allocation of Federal-aid funds to an Interstate System project, it be a part of a satisfactory highway plan which conforms to the regional transportation plan and the community growth and land use plan for the area.

The effective solution of the urban transportation problem requires planning for the problem in its entirety. A separate Federal-aid program is needed to stimulate and assure the planning and development of those facilities that can most effectively and economically meet urban transportation requirements, such as mass transportation.

Land acquisition for right-of-way of the Federal-aid highway program is big business today. It will require expenditures of more than one-half

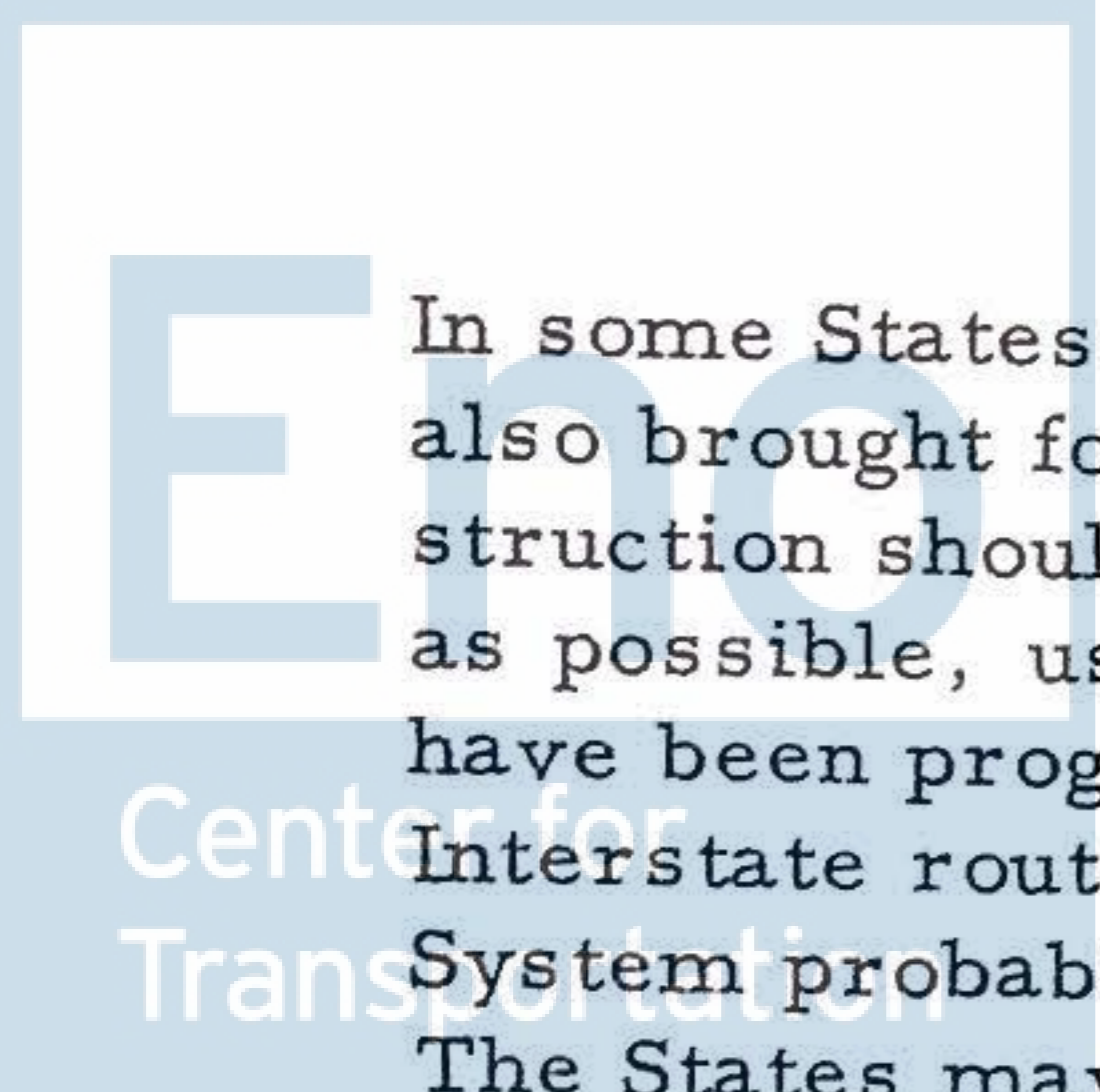


billion dollars annually during the next decade. As an item in the overall cost of highway construction, it has rapidly moved from a position of relative insignificance to one of great importance. The right-of-way cost of the Interstate System will be 20% to 25% of the total cost of the Interstate System.

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The efficiency of acquisition procedures varies greatly between the States, and the Bureau of Public Roads auditing practices vary accordingly. In some States the procedures are efficient enough to permit auditing by sampling methods, while in others a 100% audit is required. While speed is an important factor in many projects there are certain generally accepted procedures, not now being uniformly followed, which would materially assist in getting fair and expeditious action in land acquisition. In fact the scope of this problem justifies that specific steps be taken to provide for advance acquisition not only to allow sufficient lead time but also to keep costs to a minimum. There should be no further delay in insisting that all States be placed on some minimal level of required procedure and practice for land acquisition.

The 1956 Highway Act provided that geometric and construction standards, approved by the Secretary of Commerce in cooperation with State Highway Departments and adequate to accommodate traffic forecast for 1975, shall be applied with reasonable uniformity throughout the States. While this requirement covers a multitude of items ranging from number and width of traffic lanes to structural design that must be suitable to wide variations in climate, terrain and traffic, progress has been made by the States and the Bureau of Public Roads in formulation of acceptable guides that have widespread application. Examples are the standards incorporated in various memoranda issued by the Bureau of Public Roads and in the instructions for preparation of estimates of cost of completion of the Interstate System under Section 108(d) of the Highway Act of 1956 and under Section 104(b)5 of Title 23, United States Code, "Highways." However, analysis of the characteristics of the sections of the Interstate System completed or under construction reveal considerable variation not only among the States but even within a State. Although there may be adequate justification for a number of these differences because of special circumstances, there is evidence that more dynamic and realistic progress could be made which would lead not only to better and more efficient facilities, but also to better utilization of resources.



In some States the programming of construction of sections of highways also brought forth serious criticisms. It can well be argued that construction should be programmed in such a way as to complete, as early as possible, usable sections for intercity travel. Yet, many States have been programming their construction along scattered segments of Interstate routes with the result that long, continuous sections of the System probably will not be available until the entire System is completed. The States may have laws, traditions or policies, requiring distribution of Federal fund allocations among various districts or on other bases. More attention to the scheduling of sections of the Interstate Highway System is necessary to assure that continuous sections most needed to meet national objectives are completed first.

Since the Interstate System is to serve the national interests, the Federal government has a responsibility to provide broad leadership in the planning and administration of the Federal-aid highway program. Yet such broad leadership has often been lacking, probably due in part to the limited staff and appropriations for the Department of Commerce to supervise the program and in part to a reluctance to disturb the historic position that the highway program was, to all intents and purposes, a State responsibility. However, when the national interest in a program is such that 90% of the cost is financed from Federal tax funds, it would seem only logical that the Federal government should play a greater part in the planning and policy-making process.

The cost of the Interstate System, with its high standards of convenience and safety, will be enormous. Presently authorized taxes will be insufficient to complete the system within the scheduled time. But means are available for augmenting financial resources both through extension or increase in present taxes and through general authorization of toll roads where financially feasible and desirable. The latter presents a very useful tool to provide the roads faster, as well as to insure funds for State maintenance during the period of amortization.

In addition to providing increased revenues to the Highway Trust Fund, ways must be found to finance a new program to stimulate the comprehensive planning and integrated development of urban transportation systems - embracing rapid transit, highways, and other modes of transportation.

Studies authorized under Section 210 of the 1956 Highway Act have been under way for four years by the Secretary of Commerce to determine, insofar as practicable, an equitable distribution of the tax burden among the various classes of users and beneficiaries of the Federal-aid highways. This report is intended to provide the information required to assign equitably, the costs among the beneficiaries.



General Recommendations

1. Clarify understanding as to basic purposes of the Interstate and other Federal-aid highway systems.
2. Establish the Interstate as a distinct system separate from the ABC Systems.
3. Establish systematic procedures for coordinating highway planning with comprehensive planning for other Federal programs and local development programs.
4. Strengthen land acquisition procedures.
5. Formulate more uniform and specific criteria and standards for route location and design of the Interstate System.
6. Formulate criteria for programming to assure orderly system development.
7. Strengthen Federal role in guiding Interstate System planning, programming and construction.
8. Delineate Federal, State, local and non-governmental responsibilities.
9. Provide for equitable assignment of costs among beneficiaries.
10. Authorize and assist the development of toll roads on routes of the Interstate and ABC Systems where feasible and desired by the States.
11. Provide means of assuring adequate financing to complete the presently authorized Interstate System on or near schedule, together with adequate progress on ABC Systems, as well as to plan and develop integrated urban transportation systems.