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# NATIONAL HIGHWAY PROGRAM

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## MESSAGE

FROM

### THE PRESIDENT OF THE UNITED STATES

RELATIVE TO

### A NATIONAL HIGHWAY PROGRAM



FEBRUARY 22, 1955.—Referred to the Committee on Public Works  
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## PRESIDENT'S MESSAGE

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*To the Congress of the United States:*

Our unity as a nation is sustained by free communication of thought and by easy transportation of people and goods. The ceaseless flow of information throughout the Republic is matched by individual and commercial movement over a vast system of interconnected highways crisscrossing the country and joining at our national borders with friendly neighbors to the north and south.

Together, the uniting forces of our communication and transportation systems are dynamic elements in the very name we bear—United States. Without them, we would be a mere alliance of many separate parts.

The Nation's highway system is a gigantic enterprise, one of our largest items of capital investment. Generations have gone into its building. Three million three hundred and sixty-six thousand miles of road, traveled by 58 million motor vehicles, comprise it. The replacement cost of its drainage and bridge and tunnel works is incalculable. One in every seven Americans gains his livelihood and supports his family out of it. But, in large part, the network is inadequate for the Nation's growing needs.

In recognition of this, the governors in July of last year at my request began a study of both the problem and methods by which the Federal Government might assist the States in its solution. I appointed in September the President's Advisory Committee on a National Highway Program, headed by Lucius D. Clay, to work with the governors and to propose a plan of action for submission to the Congress. At the same time, a committee representing departments and agencies of the National Government was organized to conduct studies coordinated with the other two groups.

All three were confronted with inescapable evidence that action, comprehensive and quick and forward-looking, is needed.

First. Each year, more than 36,000 people are killed and more than a million injured on the highways. To the home where the tragic aftermath of an accident on an unsafe road is a gap in the family circle, the monetary worth of preventing that death cannot be reckoned. But reliable estimates place the measurable economic cost of the highway accident toll to the Nation at more than \$4.3 billion a year.

Second. The physical condition of the present road net increases the cost of vehicle operation, according to many estimates, by as much as 1 cent per mile of vehicle travel. At the present rate of travel, this totals more than \$5 billion a year. The cost is not borne by the individual vehicle operator alone. It pyramids into higher expense of doing the Nation's business. Increased highway transportation costs, passed on through each step in the distribution of goods, are paid ultimately by the individual consumer.

Third. In case of an atomic attack on our key cities, the road net must permit quick evacuation of target areas, mobilization of defense forces, and maintenance of every essential economic function. But the present system in critical areas would be the breeder of a deadly congestion within hours of an attack.

Fourth. Our gross national product, about \$357 billion in 1954, is estimated to reach over \$500 billion in 1965 when our population will exceed 180 million and, according to other estimates, will travel in 81 million vehicles 814 billion vehicle-miles that year. Unless the present rate of highway improvement and development is increased existing traffic jams only faintly foreshadow those of 10 years hence.

To correct these deficiencies is an obligation of government at every level. The highway system is a public enterprise. As the owner and operator, the various levels of government have a responsibility for management that promotes the economy of the Nation and properly serves the individual user. In the case of the Federal Government, moreover, expenditures on a highway program are a return to the highway user of the taxes which he pays in connection with his use of the highways.

Congress has recognized the national interest in the principal roads by authorizing two Federal-aid systems, selected cooperatively by the States, local units, and the Bureau of Public Roads.

The Federal-aid primary system as of July 1, 1954, consisted of 234,407 miles, connecting all the principal cities, county seats, ports, manufacturing areas, and other traffic generating centers.

In 1944 the Congress approved the Federal-aid secondary system, which on July 1, 1954, totaled 482,972 miles, referred to as farm-to-market roads—important feeders linking farms, factories, distribution outlets, and smaller communities with the primary system.

Because some sections of the primary system, from the viewpoint of national interest, are more important than others, the Congress in 1944 authorized the selection of a special network, not to exceed 40,000 miles in length, which would connect by routes, as direct as practicable, the principal metropolitan areas, cities, and industrial centers, serve the national defense, and connect with routes of continental importance in the Dominion of Canada and the Republic of Mexico.

This national system of interstate highways, although it embraces only 1.2 percent of total road mileage, joins 42 State capital cities and 90 percent of all cities over 50,000 population. It carries more than a seventh of all traffic, a fifth of the rural traffic, serves 65 percent of the urban and 45 percent of the rural population. Approximately 37,600 miles have been designated to date. This system and its mileage are presently included within the Federal-aid primary system.

In addition to these systems, the Federal Government has the principal, and in many cases the sole, responsibility for roads that cross or provide access to federally owned land—more than one-fifth the Nation's area.

Of all these, the interstate system must be given top priority in construction planning. But at the current rate of development, the interstate network would not reach even a reasonable level of extent and efficiency in half a century. State highway departments cannot effectively meet the need. Adequate right-of-way to assure control of access, grade separation structures, relocation and realignment of



present highways—all these, done on the necessary scale within an integrated system, exceed their collective capacity.

If we have a congested and unsafe and inadequate system, how then can we improve it so that 10 years from now it will be fitted to the Nation's requirements?

A realistic answer must be based on a study of all phases of highway financing, including a study of the costs of completing the several systems of highways, made by the Bureau of Public Roads in cooperation with the State highway departments and local units of government. This study, made at the direction of the 83d Congress in the 1954 Federal-aid Highway Act, is the most comprehensive of its kind ever undertaken.

Its estimates of need show that a 10-year construction program to modernize all our roads and streets will require expenditure of \$101 billion by all levels of Government.

The preliminary 10-year totals of needs by road systems are:

	<i>Billions</i>
Interstate (urban \$11, rural \$12 billion).....	\$23
Federal-aid primary (urban \$10, rural \$20 billion).....	30
Federal-aid secondary (entirely rural).....	15
Subtotal of Federal-aid systems (urban \$21, rural \$47 billion).....	68
Other roads and streets (urban \$16, rural \$17 billion).....	33
Total of needs (urban \$37, rural \$64 billion).....	101

The Governors' Conference and the President's Advisory Committee are agreed that the Federal share of the needed construction program should be about 30 percent of the total, leaving to State and local units responsibility to finance the remainder.

The obvious responsibility to be accepted by the Federal Government, in addition to the existing Federal interest in our 3,366,000-mile network of highways, is the development of the interstate system with its most essential urban arterial connections.

In its report, the Advisory Committee recommends:

1. That the Federal Government assume principal responsibility for the cost of a modern interstate network to be completed by 1964 to include the most essential urban arterial connections; at an annual average cost of \$2.5 billion for the 10-year period.
2. That Federal contributions to primary and secondary road systems, now at the rate authorized by the 1954 act of approximately \$525 million annually, be continued.
3. That Federal funds for that portion of the Federal-aid systems in urban areas not on the interstate system, now approximately \$75 million annually, be continued.
4. That Federal funds for forest highways be continued at the present \$22.5 million per year rate.

Under these proposals, the total Federal expenditures through the 10-year period would be:

	<i>Billions</i>
Interstate system.....	\$25. 000
Federal-aid primary and secondary.....	5. 250
Federal-aid urban.....	. 750
Forest highways.....	. 225
Total.....	31. 225

The extension of necessary highways in the Territories and highway maintenance and improvement in National Parks, on Indian lands and on other public lands of the United States will continue to be treated in the budget for these particular subjects.

A sound Federal highway program, I believe, can and should stand on its own feet, with highway users providing the total dollars necessary for improvement and new construction. Financing of interstate and Federal-aid systems should be based on the planned use of increasing revenues from present gas and diesel oil taxes, augmented in limited instances with tolls.

I am inclined to the view that it is sounder to finance this program by special bond issues, to be paid off by the above-mentioned revenues which will be collected during the useful life of the roads and pledged to this purpose, rather than by an increase in general revenue obligations.

At this time, I am forwarding for use by the Congress in its deliberations the report to the President made by the President's Advisory Committee on a National Highway Program. This study of the entire highway traffic problem and presentation of a detailed solution for its remedy is an analytical review of the major elements in a most complex situation. In addition, the Congress will have available the study made by the Bureau of Public Roads at the direction of the 83d Congress.

These two documents together constitute a most exhaustive examination of the national highway system, its problems and their remedies. Inescapably, the vastness of the highway enterprise fosters varieties of proposals which must be resolved into a national highway pattern. The two reports, however, should generate recognition of the urgency that presses upon us; approval of a general program that will give us a modern safe highway system; realization of the rewards for prompt and comprehensive action. They provide a solid foundation for a sound program.

DWIGHT D. EISENHOWER.

THE WHITE HOUSE,  
*February 22, 1955.*

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**A 10-YEAR NATIONAL HIGHWAY PROGRAM**

**A REPORT TO THE PRESIDENT**

**THE PRESIDENT'S ADVISORY COMMITTEE  
ON A NATIONAL HIGHWAY PROGRAM**

**JANUARY 1955**

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## LETTER OF SUBMITTAL

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The PRESIDENT,  
*The White House.*

DEAR MR. PRESIDENT: The plan submitted herewith, for modernizing America's road and street network was prepared in response to your request of September 7, 1954, to the Advisory Committee on a National Highway Program.

The Committee has received a great deal of factual data, documenting the urgent need to improve our highways as quickly as possible, to prevent tragic and costly accidents, to serve the national defense, and to provide facilities essential to our growing population and economy. As you stated to the governors' conference on July 12, 1954, through Vice President Nixon, our road network is inadequate and obsolete, and its improvement calls for immediate and earnest attention.

So far as availability of materials, contracting capacity, personnel, and administrative machinery are concerned, the doubling of our present road construction program, which the studies indicate as a magnitude of need is entirely feasible. A difficult problem, of course, is finance, a responsibility shared by all levels of government. The Committee is confident that if the Federal Government, as proposed herein, increases its share of the total construction program to about 30 percent of the total, the States and local units of government also will correspondingly step up to this challenge.

The plan recommends authorization by the Congress of long-term financing, with existing Federal aid continued and additional funds concentrated for 10 years on modernizing the key 40,000-mile national system of interstate highways. It would, in effect, be a self-liquidating program since the funds to be capitalized would be equivalent to the revenues anticipated from Federal taxes on gasoline and lubricating oils. It will achieve our objective while entailing no increase in either the Federal tax rates on these items or the national debt limit.

Early in 1955 the Bureau of Public Roads, pursuant to a directive of the Congress, will submit a comprehensive report on its current study of highway needs and financing. The estimates used by this Committee have been based upon preliminary tabulations of data by the Bureau, and hence no major inconsistencies are anticipated.

Acknowledgment is made to the governors' conference, for counsel and suggestions; to the interagency committee, reflecting the views of various departments of the Federal Government, and to more than a score of organizations whose representatives gave useful information and assistance. The Committee's special thanks are due the Bureau of Public Roads, whose capable personnel and resources were indispensable, and to a small group of consultants who worked indefatigably in the preparation of this report.

Respectfully submitted.

LUCIUS D. CLAY, *Chairman.*  
STEPHEN D. BECHTEL.  
DAVID BECK.  
S. SLOAN COLT.  
WILLIAM A. ROBERTS.





## SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

1. A safe and efficient highway network is essential to America's military and civil defense, and to the economy. The existing system is inadequate for both current and future needs. It must be improved to meet urgent requirements of a growing population and an expanding economy. ✓

2. Total construction needs of all highway systems during the next 10 years are estimated at \$101 billion, including completion to modern standards of the 37,600 miles of the presently designated national system of interstate highways. The present program if continued unchanged would make available for highways during that period approximately \$47 billion, leaving a gap of \$54 billion.

3. The Committee concurs with the governors' conference in recommending to the President that the Federal share of this needed construction program be increased to about 30 percent of the total, with States, cities, counties, and other agencies remaining responsible for financing the remaining 70 percent.

4. The interstate network is preponderantly national in scope and function. Modernization of the presently designated system in 10 years, together with the most necessary urban-connecting arterials, is estimated to cost \$27 billion. It is recommended that State and local participation be \$2 billion of this amount, which would continue the present responsibility of the States for this system. ✓

5. Since roads are a capital asset, it is recommended that the Federal share of interstate construction be financed by bonds to be issued by a Federal highway corporation created for this purpose by the Congress. The cost of the interstate system improvement, together with the total authorized funds under the regular Federal-aid highway program to the States, would approximate the revenues which the Federal Government will derive from the motor vehicle fuel and lubricating oil taxes projected at the present rates.

6. The Federal Highway Corporation should have a Board of Directors to be composed of three citizens appointed by the President and confirmed by the Senate with the Secretaries of Treasury and Commerce as ex officio members. On matters involving highway locations, the Secretary of Defense would also serve as an ex officio member. The Commissioner of the Bureau of Public Roads would serve as Executive Director. The Board of the Corporation should be responsible for the development of financial policy. It should serve when necessary as an appeals board to resolve major points of difference between the Federal and State authorities which may arise under the program.

7. Toll roads built to acceptable standards and meeting other requirements of the Corporation may be included as segments of the interstate system. However, toll financing is not a satisfactory solution to the full problem of network modernization.

8. Appropriate credit should be given to those States in which adequate sections of the interstate system have been constructed by State

or toll financing provided the funds thus made available are used for further highway improvements. Moreover, States that elect to build further toll-road sections of the interstate system should be reimbursed for all costs other than financing, provided such funds are used for further highway improvement. Obviously, these funds would become available only after all other Federal funds had been matched as required by law.

9. It is recommended that traditional Federal aid to the States be continued in the amounts authorized by the Congress in 1954 with some adjustments in the amounts for urban areas, and Federal-domain roads, omitting the interstate system authorization since this system is provided for in sections 4 and 5 above.

10. In many States the modernization of highway-enabling laws is necessary, especially in connection with the acquisition of land for right-of-way, the control of access, and the closer integration of State, city, and county highway managements. States should be encouraged to revise existing statutes where needed to permit expeditious and economical completion of the program. Congress should provide for the use of the Federal right of eminent domain to acquire right-of-way for the interstate system where it is not feasible to obtain it through normal procedures under State law, and the State so requests.

# A 10-YEAR NATIONAL HIGHWAY PROGRAM

## I. INTRODUCTION

This report contains recommendations for translating into reality the concept of the President of the United States for a vastly expanded and strengthened national highway system.

The concept was first presented in behalf of President Eisenhower at the governors' conference on July 12, 1954, by Vice President Nixon. In that speech, using the President's own notes, he conveyed to the governors the conviction that the Nation's highway network is obsolete and inadequate.

It is obsolete—  
the President's note said—

because in large part it just happened. It was governed in the beginning by terrain, existing Indian trails, cattle trails, arbitrary section lines. It was designed largely for local movement at low speeds of 1 or 2 horsepower. It has been adjusted, it is true, at intervals to meet metropolitan traffic gluts, transcontinental movement, and increased horsepower. But it has never been completely overhauled or planned to satisfy the needs 10 years ahead.

We can no longer afford to deal with the problem in that manner, the President pointed out.

We live in a dramatic age of technical revolution through atomic power, and we should recognize the fact that the pace is far faster than the simpler revolutions of the past. It was a very long generation from the Watt steam engine to a practical locomotive. It was less than 9 years from the atomic bomb to the launching of an atomic-powered submarine. We have seen a revolutionary increase in opportunity, comfort, leisure, and productivity of the individual.

Look at the prospects in population. In 1870, the population of the United States was 38½ million, and our population growth in the previous half century was one of the wonders of the world. In 1970, the population of the United States, it is estimated, will reach 200 million. It will grow in the next 16 years as much as the entire population of the United States was in 1870.

In planning for that future, the President's message pointed out, top priority must be given to transportation, and to health and efficiency in essential industries. "America is in an era," he said, "when defensive and productive strength require the absolute best that we can have."

The President specifically called for "a grand plan for a properly articulated [highway] system that solves the problems of speedy, safe transcontinental travel—intercity transportation—access highways—and farm-to-farm movement—metropolitan area congestion—bottle-necks—and parking."

As a target, the President suggested an expenditure of \$5 billion annually from all sources for the next 10 years, in addition to current, normal construction expenditures. "It will," he said, "pay off in economic growth \* \* \* and we shall only have made a good start in the highways the country will need for a population of 200 million people."

The President called attention to the severe penalties inflicted by inadequate roads and streets, particularly the loss of life and limb from accidents, the economic cost of congestion, and the clogging of our courts by cases having their origin in traffic.

#### APPOINTMENT OF COMMITTEES

In response to the invitation from the President to recommend cooperative action which might be taken to provide adequate highways, the governors by resolution authorized an immediate study and a report. A special seven-man highway committee was created, consisting of Govs. Walter J. Kohler, Jr., of Wisconsin; Frank J. Lausche, of Ohio; Howard Pyle, of Arizona; John Lodge, of Connecticut; Lawrence W. Wetherby, of Kentucky; Paul Patterson, of Oregon; and Allan Shivers, of Texas. Governor Kohler was named chairman of the committee, and Gov. Robert F. Kennon of Louisiana, chairman of the governors' conference served automatically as an ex-officio member.

An interagency committee within the Federal establishment also was set up to consider the matter from the standpoint of Federal interest in roads and their financing. This group included representatives appointed by the Secretaries of Defense, Commerce, Agriculture, and Treasury, the Director of the Bureau of the Budget and the Chairman of the Council of Economic Advisers.

On September 7, 1954, the appointment of the President's Advisory Committee on a National Highway Program was announced. This Committee is composed of Lucius D. Clay, chairman of the board, Continental Can Co., Chairman; Stephen D. Bechtel, of San Francisco, Calif., president, Bechtel Corp.; David Beck, of Seattle, Wash., president, International Brotherhood of Teamsters; S. Sloan Colt, of New York, president, Bankers' Trust Co.; and William A. Roberts, of Milwaukee, Wis., president, Allis Chalmers Manufacturing Co. The headquarters of this Committee were established in the White House Executive Office Building.

The Committee was requested by the President to study the problem and report back to him, working in cooperation with the Special Highway Committee of the Governors' Conference and with the Interagency Committee. To provide opportunity for all other interested individuals and groups to present their views, public hearings were held by the President's Advisory Committee in Washington, D. C. on October 7 and 8, at which 22 organizations associated with the highway problem made presentations with respect to financing and executing the proposed construction program.

#### HELP RECEIVED BY COMMITTEE

In reaching its conclusions and recommendations, the Committee has given full consideration to the several viewpoints expressed in these hearings. Helpful and constructive suggestions were received from many other groups, including the Federal agencies represented on the Interagency Committee.

The Governors responded promptly and wholeheartedly to the President's request for suggestions regarding the program, with the result that a special study was completed by their highways committee.

A carefully considered plan was submitted to President Eisenhower on December 3, 1954, by Governor Kennon, of Louisiana, chairman of the governors' conference. The Committee has drawn heavily upon this report by the governors, and upon their wise counsel, in the formulation of the program recommended herein.

The Committee has also drawn on the abundance of information and experience of the Federal Government departments and agencies and from private associations, organizations, State, city, and other units of government and individuals without whose help the Committee could not have accomplished its work.

Likewise, the Committee has sought out and been benefited by, the able advice and counsel of members of the congressional committees and their staffs who have long been associated with legislation designed to provide a highway program adequate for our Nation's needs.

Grateful acknowledgment must be made to these and others who have so capably and unselfishly aided the Committee's work.

## II. THE HIGHWAY SYSTEM

### USE OF OUR HIGHWAYS

Highway transportation in the United States is provided currently by approximately 48 million passenger cars, 10 million trucks, and a quarter of a million buses, operating on 3,348,000 miles of roads and streets, which is by far the most comprehensive public transportation network in the world.

All forms of transportation are essential to the national economy, including waterways, railroads, airways, and pipelines and their continued functioning as complementary services under equitable competitive conditions is important. Representatives of the railroads have pointed out to us the competitive threat represented by improved highway facilities and increasing truck haulage. However, this Committee was created to consider the highway network, and other media of transportation do not fall within its province. This relationship between the several forms of transportation is under study by other Government agencies and special committees fully informed of these views.

In relatively recent years, the motor vehicle has come to occupy a unique place in America, not only because it is a major unit of transportation, but also because it is an intimate and seemingly indispensable part of our daily life. The bread winner uses an automobile to get to work; the housewife to shop; children ride in a car or bus to school, and the entire family relies on the automobile for many social and recreational activities. Privately owned passenger cars now in service could transport the entire population of the Nation at one time—with seats to spare.

The universal use of rubber-tired vehicles for transportation on a family-unit basis has resulted in the creation of large manufacturing, distributing and service industries. Highway transportation provides essential movement of people and goods; in addition, it has itself become a major element of the economy, generating directly or indirectly approximately one-seventh of all gainful employment, and accounting for about 14 percent of the total gross national product.

One out of every six retail, wholesale, and service businesses is connected with motor vehicles.

About 3 million miles, or 90 percent of the total, of the public roads carrying this traffic are rural highways, with the balance being streets inside municipalities. These figures have remained comparatively stable over the last two decades, increasing now at a very slight rate, because most construction of "new" roads actually is the replacement or betterment of existing facilities. A highway improvement program therefore is not designed to achieve "more" highways so much as it is to achieve "better" or "more adequate" ones.

#### HIGHWAYS DIVIDED INTO SYSTEMS

One of the principal characteristics of this road network is its classification into designated systems, for purposes of financing and management. Thus we have Federal-aid, State, county, township, and other systems, classified in accordance with the responsibility which those political jurisdictions have in the highway function. A street or road providing access to individual homes or farms obviously is of predominant local interest, whereas one linking together the principal population centers of a State is primarily of State and Federal concern. Traffic tends to concentrate on rather limited mileages of highways, so that some of these highways are required to carry heavier volumes than others.

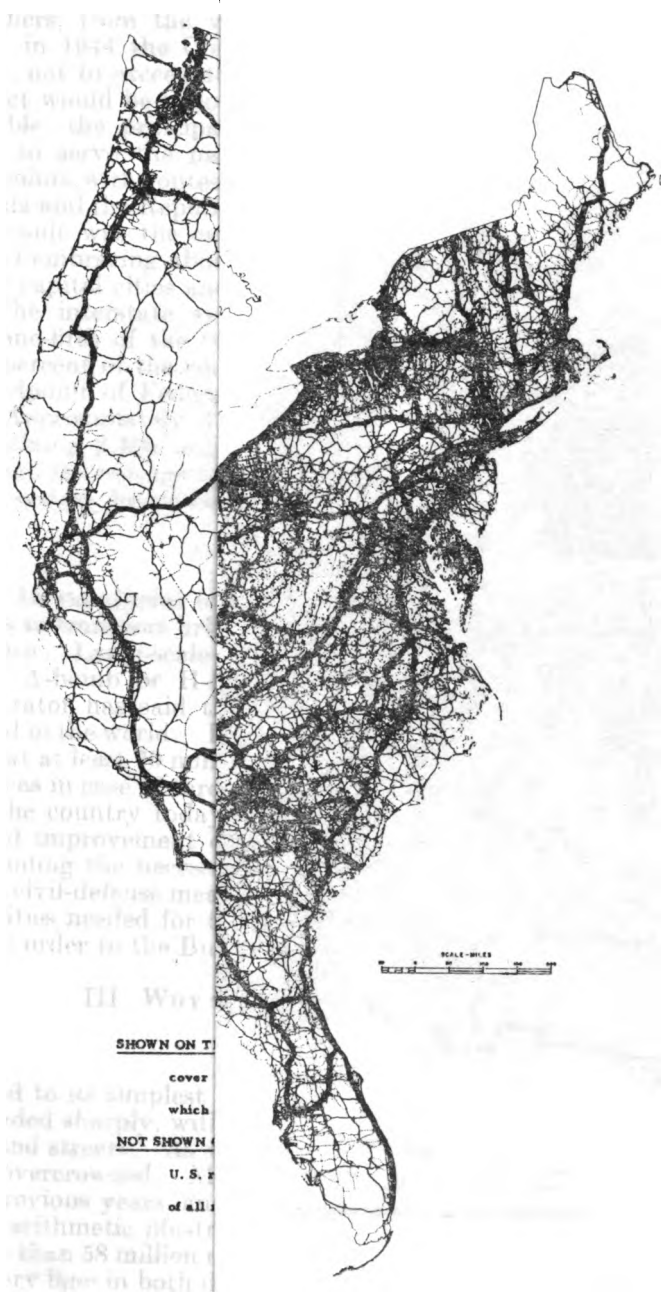
With agriculture, industry, and our defense planning closely geared to motor transportation, Congress has recognized the national interest in a limited mileage of the principal roads by authorizing the designation of two Federal-aid systems, selected cooperatively by the States, local governments, and the United States Bureau of Public Roads.

In 1916 the basic Federal-Aid Highway Act provided for the sharing of highway construction costs between the States and the Federal Government, under standards mutually approved, and with the initiative retained by each State for choosing projects and carrying them out. The planning and development of the Federal-aid systems referred to above began in 1921. Federal funds share with State funds in costs of engineering, construction, and right-of-way acquisition on the designated systems while other charges, such as maintenance and policing, are entirely borne by the States and local agencies. It is proposed to continue this well established and very effective partnership in the enlarged program recommended herein.

The Federal-aid primary system as of July 1, 1954, consisted of 234,407 miles, connecting all of the principal cities, county seats, ports, manufacturing areas, and other traffic generating areas. In general, these are at the same time the main State trunkline roads.

In 1944, the Congress approved designation of the Federal-aid secondary system, which on July 1, 1954, totaled 482,972 miles commonly referred to as the farm-to-market system but which could equally be referred to as the market-to-farm system. It is composed of important feeder roads linking the farms, factories, distribution outlets, and smaller communities of our Nation with the primary system.

Responsibility for construction of these two Federal-aid systems traditionally has been shared in approximately equal amounts by the Federal Government and the States, in accordance with an apportion-



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ment formula in which land area, road mileage, and population are factors. But some sections of the primary system are more important than others, from the viewpoint of the national interest. Consequently, in 1944 the Congress authorized the selection of a special network, not to exceed 40,000 miles in length, which in the language of the act would be so located as "to connect by routes, as direct as practicable, the principal metropolitan areas, cities, and industrial centers, to serve the national defense, and to connect at suitable border points with routes of continental importance in the Dominion of Canada and the Republic of Mexico."

The result was the creation of the national system of interstate highways embracing about 1.2 percent of total road mileage, joining 42 State capital cities and 90 percent of all cities over 50,000 population. The interstate system carries more than a seventh of all traffic, one-fifth of the rural traffic, serves 65 percent of the urban and 45 percent of the rural population, and is the key network from the standpoint of Federal interest in productivity and national defense. Approximately 37,600 miles have been designated to date; the remaining 2,400 miles are reserved for future additions. This system and the mileage referred to are included within the Federal-aid primary system described above.

#### CIVIL DEFENSE ASPECTS

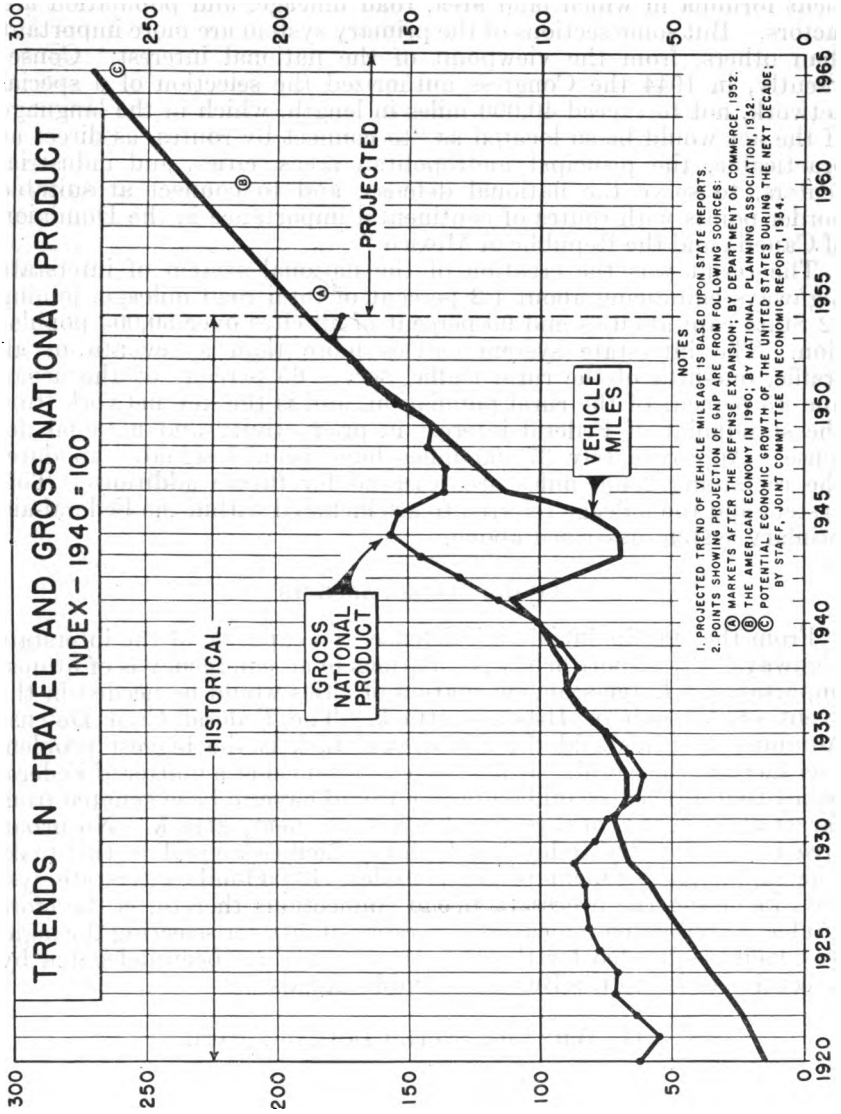
From the standpoint of civil defense, the capacity of the interstate highways to transport urban populations in an emergency is of utmost importance. Large-scale evacuation of cities would be needed in the event of A-bomb or H-bomb attack. The Federal Civil Defense Administrator has said the withdrawal task is the biggest problem ever faced in the world. It has been determined as a matter of Federal policy that at least 70 million people would have to be evacuated from target areas in case of threatened or actual enemy attack. No urban area in the country today has highway facilities equal to this task. The rapid improvement of the complete 40,000-mile interstate system, including the necessary urban connections thereto, is therefore vital as a civil-defense measure. Responsibility for selecting the highway facilities needed for this defensive action has been delegated by Executive order to the Bureau of Public Roads. ✓

### III. WHY THE SYSTEM IS INADEQUATE

#### THE TRAFFIC JAM

Reduced to its simplest terms, the highway problem is this: Traffic has expanded sharply, without a corresponding expansion in capacity of roads and streets. As a result, a major portion of our facilities are seriously overcrowded. Moreover, this movement is faster and heavier than in previous years, and continues to increase. ✓

Simple arithmetic illustrates the dimensions of the task. We now have more than 58 million motor vehicles registered—one for every 700 feet of every lane in both directions on all streets and highways in the Nation. This gigantic fleet traveled an estimated 557 billion vehicle miles in 1954, much of it concentrated on main arteries in urban areas which have become the expensive, hazardous bottlenecks referred to by the President.



The existing traffic jam is bad enough, but prospects for the future are even worse. Vehicle registrations are expected to continue their upward surge, reaching 81 million by 1965, an increase of 40 percent. Total highway travel of these 81 million vehicles will likewise continue to increase as we attempt to meet the transportation requirements of an expanding economy, probably to reach an estimated 814 billion vehicle-miles in 1965.

This Committee believes that these forecasts, carefully projected on the basis of all available data, are soundly conservative and represent the foundation upon which the Nation's highway improvement programs should be planned. Our population is expected to exceed 180 million by 1965. Our gross national product, which was about \$357 billion in 1954, is estimated to reach \$535 billion by 1965, an increase of almost 50 percent in the next decade, as recently reported by the Joint Congressional Committee on the Economic Report.

#### HIGHWAYS IN THE NATIONAL ECONOMY

The governors' report to the President pointed up sharply the importance of highways to the Nation's future economy in these words:

An adequate highway system is vital to the continued expansion of the economy. The projected figures for gross national product will not be realized if our highway plant continues to deteriorate. The relationship is, of course, reciprocal; an adequate highway network will facilitate the expansion of the economy which, in turn, will facilitate the raising of revenues to finance the construction of highways. ✓

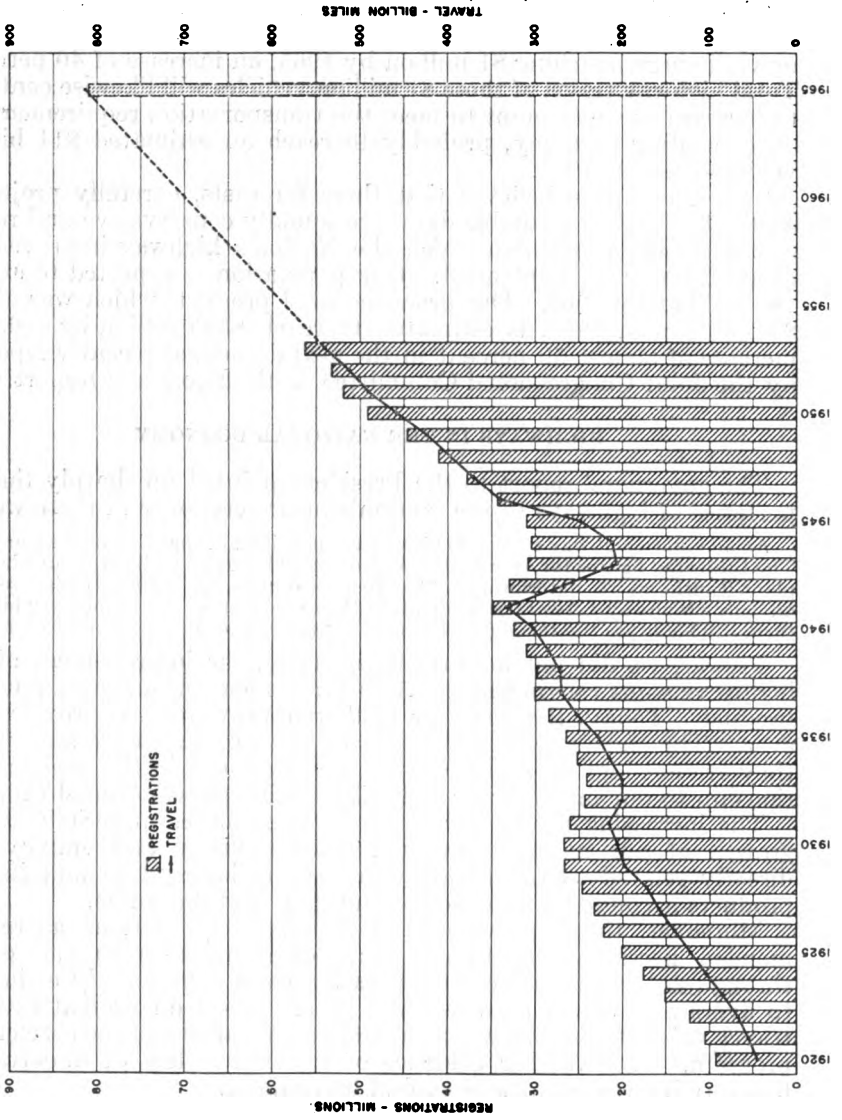
Prewar, we did not hesitate to spend on the improvement of our highways sums ranging from 1.1 to 1.7 percent of our gross national product. Today, the need for further improvement is greater than ever. The sums needed to accelerate the program may seem high; they are not high in terms of what we have done in the past in relationship to our much larger and still growing gross national product.

The increasing use of our highways contributes materially to the growth of our national product, since industry and employment directly related to the highway transportation system and its by-products account for about one-seventh of its total value.

Moreover, the improvement of our highway systems as recommended herein would reduce transportation costs to the public through reductions in vehicle operating costs competently estimated to average as much as a penny a mile. Based on present rates of travel, this saving alone would support the total cost of the accelerated program. It is further evidence of the desirability of undertaking highway improvement as a capital investment. |

# NATIONAL HIGHWAY PROGRAM

## MOTOR-VEHICLE REGISTRATIONS AND MILES OF TRAVEL ON ALL ROADS AND STREETS, BY YEARS



## OUR HIGHWAYS DETERIORATE

Vehicle registrations and travel mileages, enormous though they have been, do not fully disclose the constantly increasing demands on our highways. Increased weight of vehicles, higher average speeds, heavier axle loads have caused a serious deterioration of inadequately designed highways.

The 4-year moratorium on construction imposed during World War II prevented both adequate maintenance and replacement, thus causing further deterioration.

The shrinkage in the purchasing power of the road dollar has also contributed to our present situation. While dollar expenditures for road construction have increased in approximately the same ratio that their purchasing power has declined, the actual level of construction is not much higher than it was in 1940.

Thus, our road improvement programs have failed to keep pace with a growth in traffic which requires far more capacity of our road plant.

## SAFETY

In any consideration of road deficiencies, the safety factor must assume large importance. As President Eisenhower has said, we have an "annual death toll comparable to the casualties of a bloody war, beyond calculation in dollar terms," and as stated by the governors' report:

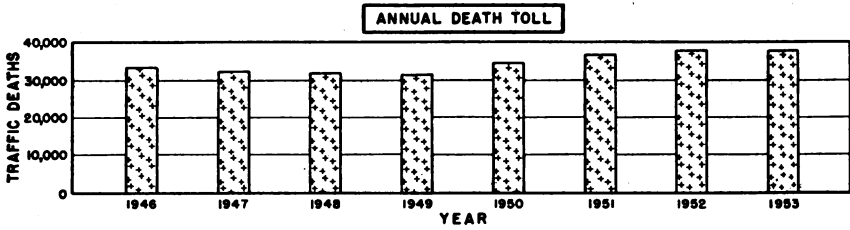
A simple dollar standard will not measure the "savings" that might be secured if our highways were designed to promote maximum safety, so that lives were not lost and injuries sustained in accidents caused by unsafe highways. Various estimates have been made of the number or proportion of traffic deaths due to inadequate, unsafe highways; data do not exist to permit accurate evaluation of these estimates. But whatever the potential saving in life and limb may be, it lends special urgency to the designing and construction of an improved highway network. ✓

Replacement of the obsolete and dangerous highway facilities which contribute to this tragic condition with roads of modern design will substantially reduce this toll. The death rate on high-type, heavily traveled arteries with modern design, including control of access, is only a fourth to a half as high as it is on less adequate highways. The average motorist today will undoubtedly be surprised to learn that he pays considerably more for insurance to protect himself against accident costs than he pays in State fuel tax and license fees which supply almost the entire financial support for the streets and highways over which he operates.

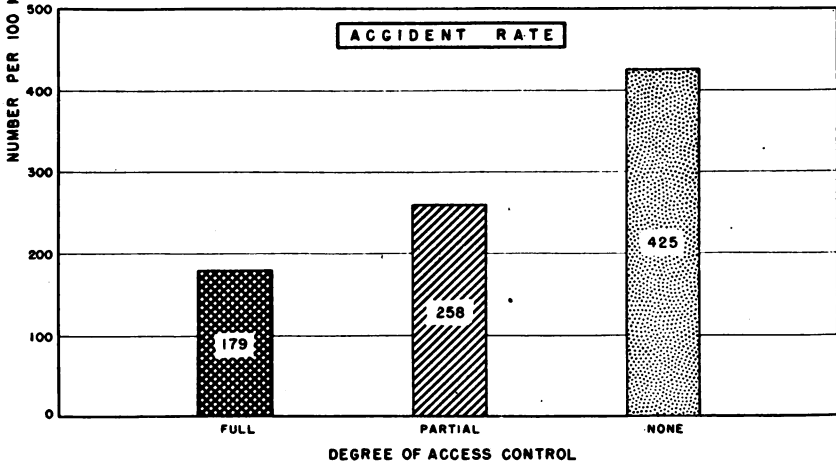
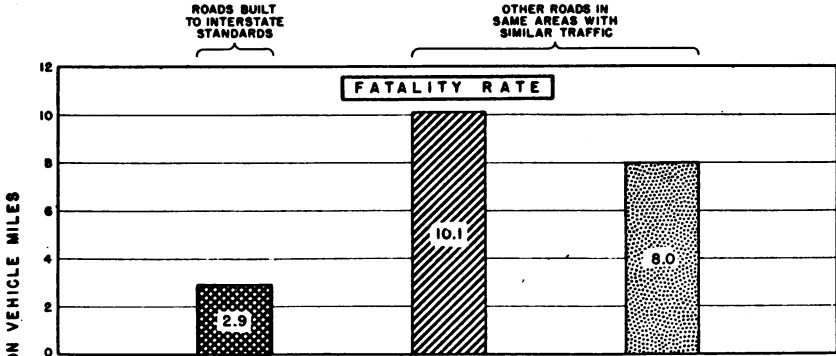
NATIONAL HIGHWAY PROGRAM

OUR FIRST PENALTY OF AN OBSOLETE HIGHWAY NET IS AN ANNUAL DEATH TOLL COMPARABLE TO THE CASUALTIES OF A BLOODY WAR BEYOND CALCULATION IN DOLLAR TERMS

VICE PRESIDENT NIXON, LAKE GEORGE, 1964



EFFECT ON ACCIDENT RATES OF BUILDING ROADS TO INTERSTATE STANDARDS



## PARKING

It is generally recognized that offstreet parking for passenger cars and termini for buses and trucks are essential components of the highway transportation picture. But, unlike public highways, these facilities are not generally provided by Federal or State Government, some being provided by private enterprise, some by municipalities, and some by both groups working together. While the Federal Government can serve an important role in basic research on this question, in the judgment of this Committee Federal funds should not be used for construction of offstreet parking facilities, or for the acquisition of land for such purposes. The Committee believes that progress in this field must continue without Federal funds, and that the States, where necessary, will meet their responsibility to provide enabling legislation whereby municipalities and other local political subdivisions can develop needed programs, in cooperation with the sizable private operations which have grown up in this important field.

## IV. COST OF MODERNIZATION

## HIGHWAY NEEDS STUDIES

The Congress in the 1954 Federal-aid Highway Act directed the Secretary of Commerce to make a comprehensive study of all phases of highway financing, including a study of the costs of completing the several systems of highways, reporting to Congress not later than February 1955. The Bureau of Public Roads in the Department of Commerce made this study during 1954, in cooperation with the State highway departments and local units of government. It covered the estimated costs of completion of all roads and streets including toll roads, and is the most comprehensive study of its kind ever undertaken. The committee has obtained the essential data on highway needs developed from this study.

To insure uniformity in the measurement of needs among the States, a manual was prepared by the Bureau which set forth the standards to be used in making the estimates of need. In the case of the interstate system, the estimates provided for building in 10 years roads adequate for traffic of 1974, while for the other systems the estimates provided for the replacement or reconstruction of the portions that are now inadequate or are expected to become so during the 10-year period. The tabulated data thus obtained was provided to this Committee as preliminary totals. These studies are treated in much more detail in the Bureau's own report being sent to the Congress.

The estimates of the several States may vary, some tending to be lower in relation to actual needs, while others may be higher. The total estimates for the country as a whole, however, are the best available, and are accepted by the Committee as a measure of requirements. They establish the target for nationwide estimates of planning and financing; the actual expenditures for construction, of course, will be subject to the detailed specifications and other controls normally used.

Some of the individual States in recent years have undertaken special studies to measure their future needs in terms of the anticipated demands of traffic, and the results of those studies tend to substantiate the fundamental validity of the nationwide estimates referred to above which have been furnished to the Committee. None of these studies would have been possible without the vast storehouse of data accumulated and analyzed through the continuing highway planning surveys conducted over the last two decades by the State highway departments in cooperation with the United States Bureau of Public Roads.

The estimates of need show that a 10-year construction program to modernize all of our roads and streets will require expenditure of \$101 billion. This figure cannot properly be compared with any previous estimate of the Nation's road needs because none has ever before been made on the same basis. Earlier estimates producing figures of about half the present amount were based on traffic conditions and road deficiencies which existed at the time of the studies. In this latest survey, however, traffic volumes expected to be reached in 10 to 20 years from completion of the systems have been used, producing a much more realistic determination of the requirements to be met during the reasonable life of the improvement. For example, an estimate made for the interstate system in 1948 without any regard for the future requirements caused by further growth already is obsolete because of a 40 percent increase in travel since that time.

The preliminary 10-year totals of needs by road systems are:

	<i>Billions</i>
Interstate system (urban \$11, rural \$12 billion)-----	\$23
Federal-aid primary (urban \$10, rural \$20 billion)-----	30
Federal-aid secondary (rural)-----	15
Subtotal, Federal-aid systems (urban \$21, rural \$47 billion)-----	68
Other roads and streets (urban \$16, rural \$17 billion)-----	33
Total of needs (urban \$37, rural \$64 billion)-----	101

#### CONTROLLED ACCESS HIGHWAYS

The interstate system which carries the top national economic and defense priority is planned for completion in 10 years. One of its principal features is provision for adequate right-of-way to permit control of access to the highway itself. Otherwise, experience shows that the facility becomes prematurely obsolete due to developments crowding against the roadway which made it unfit for the purposes for which it was designed. Control of access to the degree required by traffic conditions is essential to the protection of life and property. It is also essential to preserve the capacity of the highway. So far as the investment of funds in major roads is concerned, provision for control of access to the extent required by traffic is fundamental. It assures that roads financed by the sale of bonds will still be serving efficiently when the bonds mature at a future date. Even though control of access may not be essential to a particular section of road at the time of construction, provision should be made for future control, when it becomes necessary.

Present highway inadequacy results in part from the need to replace highways which have become unsafe and limited in capacity because of unlimited and uncontrolled access. We must not repeat



such costly mistakes in the large investments which must be made now.

State highway departments cannot meet the need for this type of facility. At the current rate of improvement, the interstate network would not reach even a tolerable level of efficiency in half a century. It is clearly necessary in the national interest to accelerate the program.

Under the standards used in developing the program, approximately 7,000 miles of the interstate system when completed to 1974 standards would remain 2-lane highways, but large sections would become 4, and in some cases 6- and 8-lane facilities to meet anticipated traffic volumes.

Additional grade separation structures also will be required at many points on the system to carry intersecting routes over or under the main route, and traffic will be brought onto and taken off the highway at selected points with maximum safety. The capacity of the road will thus be permanently preserved, and, where necessary, adjacent service roads will be built to serve local traffic needs. The preliminary estimated cost of modernizing the presently designated interstate mileage on this basis in 10 years is \$23 billion.

In constructing a controlled access system, care must be exercised to insure that traditional free enterprise is promoted and that no monopolistic tendencies develop in the provision of needed facilities to service the highway user with food, lodging, vehicle fuel, and similar needs. This is a problem which requires careful thought and planning not only by Federal and State Governments but also by private industry serving the highways so that equitable plans may be developed taking local requirements into account.

On a considerable portion of the interstate network (especially in urban and suburban areas) it will be more economical to relocate than to acquire the additional land necessary to permit control of access. Realignment of the highway to eliminate sharp curves will be required in some sections and changes in location to reduce mileage between terminal points will be required in others.

#### TOLL ROADS ON INTERSTATE SYSTEM

Some States have utilized the toll method of financing to provide adequate sections on the interstate system. Therefore, our Committee has given careful consideration to this method of financing. As of December 1, 1954, 7 States have 988 miles of toll roads in operation which parallel or coincide with the interstate system. The estimated construction cost of these toll roads was \$1.1 billion. Another 1,200 miles, presently under construction or financed, also coincide with the interstate system. These routes, to cost \$1.9 billion upon completion, lie in 9 States, 4 of which have toll roads already in operation.

Agencies have been set up in 17 States and authorized to study and plan nearly 4,000 more miles of toll roads which would coincide with the interstate system. Estimated cost of these authorized toll routes is put at \$4.3 billion. However, recent studies disclosed that of the 4,000 miles at least 914 miles, costing \$991 million, do not appear economically feasible.

Thirteen States have proposed, but not yet authorized, another 3,500 miles of toll roads which would coincide with the interstate system. Available estimates set the cost of these proposals at \$2.6

billion. Investigations to date on a portion of the 3,500 miles proposed have disclosed that at least 240 miles, costing \$200 million, would not be financially feasible.

In summary, 5,242 miles of toll roads in operation, under construction, financed, or authorized, either parallel or coincide with the interstate system in 23 States. This mileage does not include those proposed projects found not to be feasible. Additional proposals in these States and in 5 more States, excluding projects found economically unfavorable, bring the total of present and potential toll routes coinciding with the interstate system to 8,527 miles.

Thus, it seems clear that while toll financing on a sound financial basis can meet the needs of a limited portion of the system, it cannot support the cost for the system as a whole. It is obvious, of course, that existing toll roads must be protected in their appeal to traffic.

However, our Committee feels strongly that the Federal Government should not enter into toll-road construction nor provide funds for deficit financing of otherwise non-self-supporting projects. It feels equally strongly that this is a question to be resolved by State governments. Since the national interest is an adequate highway system, sound toll projects which fit into the system are worthy of consideration by the States, as discussed later in the report.

The Committee believes that major structures such as bridges and tunnels should be financed from tolls to the extent feasible financially. It would leave this determination to the judgments of the States as approved by the Federal Highway Corporation. It does not recommend credit being given for the cost of such structures financed by separate toll charges as compared with lesser structures considered and financed as integral parts of the highway.

About half of the States have provided for meeting their interstate system needs through construction of expressways and freeways of design standards equaling or exceeding those of the toll-financed roads, without imposition of tolls, paying for the facilities from current revenues or bond issues of the State amortized principally from gasoline taxes and license fees. The amount of progress made by this method is about the same as through tolls.

However, neither State nor toll-road financing separately or jointly will suffice to finance the interstate system as it should be constructed, and therefore the requisite funds must be found elsewhere.

#### ADDITIONAL URBAN FEEDER ROUTES NEEDED

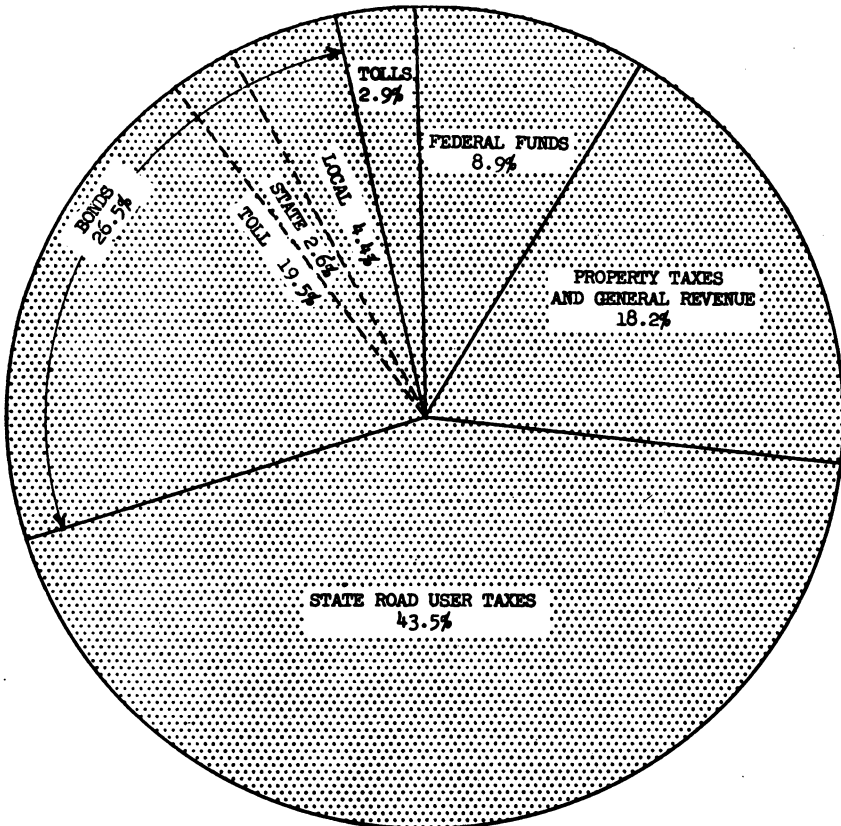
Further to render the interstate system fully effective, it must be tied in much more closely with existing roads in congested areas. This will require provision for the major feeder and distribution routes which at present are not included within any of the Federal-aid systems. Since complete data were not available from the Bureau of Public Roads on this particular point from the current needs study, the Committee arranged for special examination of this feature in several representative metropolitan communities, including a review of cost estimates involved. The examination disclosed that a desirable improvement program for the interstate network should include certain of these urban arterials. Accordingly, the Committee in its appraisal of needs has included \$4 billion as an amount to be assigned for this work over a 10-year period. This is intended to provide only

for the most important connecting roads and is not intended to meet the total needs in this category.

FEDERAL DOMAIN ROADS

The Federal Government has the primary, and in many cases, the sole responsibility for building roads to cross or provide access to federally owned land, the area of which aggregates more than one-fifth of the Nation's total area. In a few cases, States have themselves provided funds to improve these connections across Federal land areas in order to furnish continuity for one of their own main routes. In any estimate of needs for highways to be financed from Federal funds, it is necessary therefore to include the cost of such roads within the Federal domain.

These roads are located in the national forests and parks, Indian reservations, national monuments, and other public lands. While the majority of these road needs are in the Western States, there are also such areas in most of the 48 States, Alaska, Puerto Rico, Hawaii, and the District of Columbia. Many of these roads provide access within our national recreational areas, and serve to generate a considerable portion of the vehicle-travel mileages on which Federal and State fuel-tax revenues are dependent.



SOURCES OF FUNDS FOR HIGHWAYS - 1954

## SIZE OF PROGRAM REQUIRED

To what extent will the highway needs of the country—Federal, State, and local—be met if the present program is continued? Allowing for anticipated growth in vehicle registration and usage, the existing tax structure and other highway-revenue sources, there would be available for construction during the next 10 years a total of \$47 billion. As indicated in the tabulation on page 18, the total estimated needs on all systems for that period will be \$101 billion. The gap is therefore \$54 billion.

This then is the deficiency in the roads program—documenting in dollars the goal toward which we must work, as the President has said, if highway transportation is to perform its vital job in an expanding economy. An enlarged construction program is essential on all systems of roads—local, State, and Federal. President Eisenhower underscored its urgency and its justification when he said:

It will pay off in economic growth \* \* \* and we shall only have made a good start in the highways the country will need—  
in the years just ahead.

## V. A FINANCING PROGRAM

## THE FEDERAL SHARE

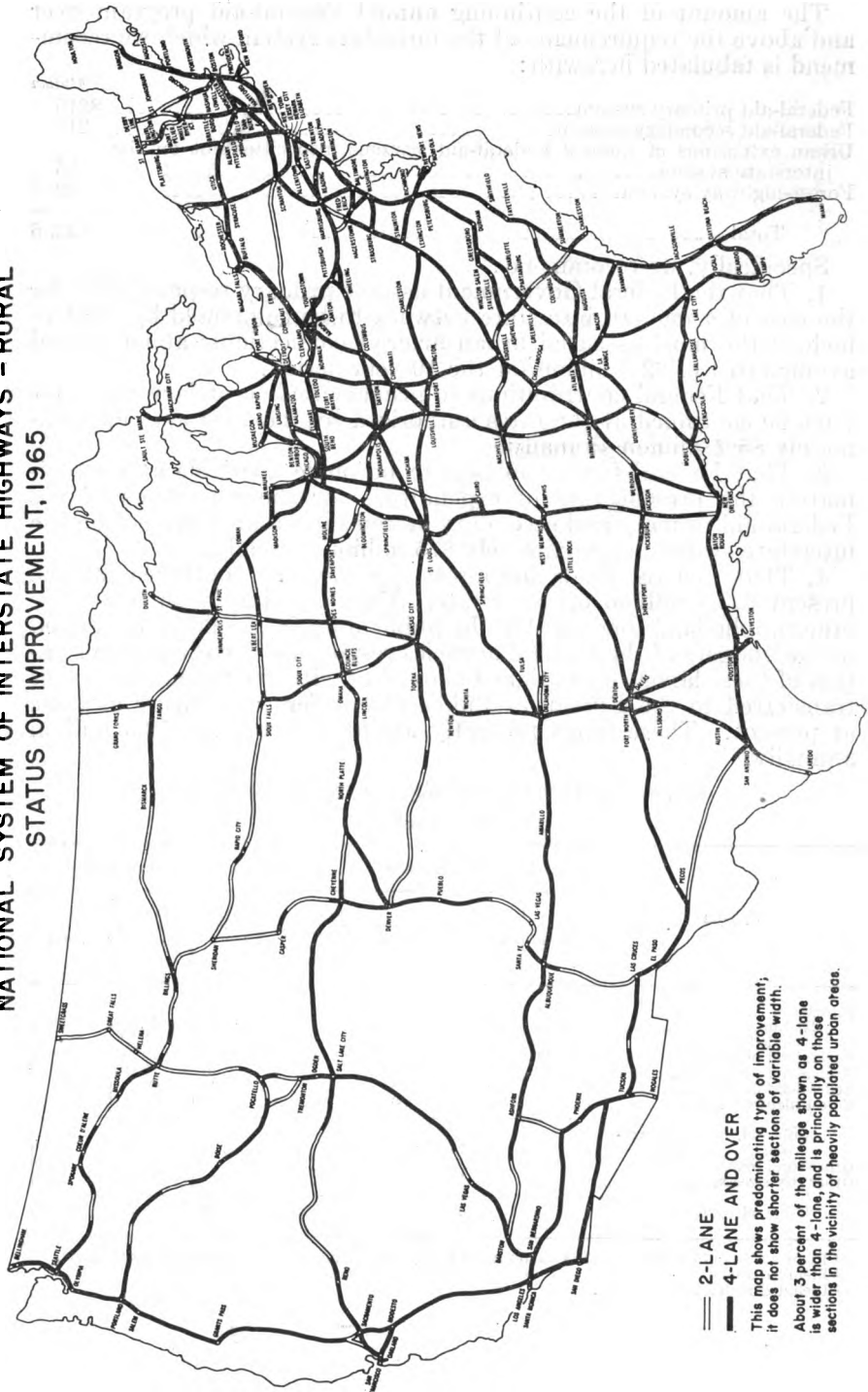
The responsibility for financing road and street construction in the United States is shared by Federal, State, and local governments, with the States and local governments assuming the major portion. If the recommendations of this Committee are accepted, the Federal portion of the cost for this \$101 billion of needed highways would be about 30 percent of the total, leaving to State and local units of government the responsibility to finance the remaining 70 percent.

The additional responsibility accepted by the Federal Government in this program is for the development of the interstate system together with its essential urban arterial connections. The existing Federal interest in our 3,348,000-mile network of highways remains unchanged.

This interest as expressed in the Federal Highway Act of 1916 in its presently amended form authorizes Federal contributions of \$315 million to the primary system, \$210 million to the secondary system, and certain amounts to urban routes and to routes on public lands.

The committee believes these contributions are essential to a balanced program. The funds now authorized for urban routes could be reduced to \$75 million per year, because much of the work to be done with these funds as previously authorized is within the interstate system. Forest-highway funds in the amount of \$22.5 million per year should be continued.

NATIONAL SYSTEM OF INTERSTATE HIGHWAYS - RURAL  
STATUS OF IMPROVEMENT, 1965



 2-LANE  
 4-LANE AND OVER

This map shows predominating type of improvement; it does not show shorter sections of variable width. About 3 percent of the mileage shown as 4-lane is wider than 4-lane, and is principally on those sections in the vicinity of heavily populated urban areas.

The amount of the continuing annual Federal-aid program over and above the requirements of the interstate system which we recommend is tabulated herewith:

	<i>Million</i>
Federal-aid primary system.....	\$315
Federal-aid secondary system.....	210
Urban extensions of these 2 Federal-aid systems into cities not on the interstate system.....	75
Forest-highway system.....	22.5
<b>Total.....</b>	<b>622.5</b>

Specifically, we recommend:

1. That the Federal Government assume primary responsibility for the cost of a modern interstate network to be completed by 1964 to include the most essential urban arterial connections; at an annual average cost of \$2.5 billion for the 10-year period.

2. That Federal contributions to primary and secondary road systems be continued at the rates authorized by the 1954 act; approximately \$525 million annually.

3. That Federal funds continue to be made available at approximately the present rate of expenditure for those portions of the Federal-aid primary and secondary systems in urban areas not on the interstate system; approximately \$75 million annually.

4. That Federal funds for forest highways be continued, at the present \$22.5 million per year rate. Funds for improvement of the other public-land roads within the public domain should be contained in the budgets of the Federal agencies responsible for the administration of these lands as mentioned above but with the funds themselves transferred to the Bureau of Public Roads for expenditure as done at present. These funds presently are at the rate of \$58.5 million annually.

*Proposed 10-year national highway program financing*

[In billions]

System	Estimated 10-year needs			Proposed financial responsibility			
	Rural	Urban	Total	Federal Highway Corporation	Regular Federal aid	State and local governments	Total
Interstate:							
Existing.....	\$12	\$11	\$23	\$22		\$1.00	\$23.00
Extended.....		4	4	3		1.00	4.00
Federal-aid primary.....	20	10	30		\$3.15	\$25.88	29.03
Federal-aid secondary.....	15		15		2.10	12.90	15.00
Federal-aid urban.....	(?)	(?)	(?)		.75	(?)	.75
Forest highways.....	(?)	(?)	(?)		.23		.23
Subtotal, Federal systems.....	47	25	72	25	6.23	40.77	72.00
Other rural roads.....	17		17			17.00	17.00
Other city streets.....		12	12			12.00	12.00
<b>Total, all systems.....</b>	<b>64</b>	<b>37</b>	<b>101</b>	<b>25</b>	<b>6.23</b>	<b>69.77</b>	<b>101.00</b>

<sup>1</sup> Reduced by \$0.75 billion and \$0.23 billion taken up by Federal-aid urban and forest-highway funds.

<sup>2</sup> Included above.

<sup>3</sup> Included Federal-aid primary.

## STATE AND LOCAL PARTICIPATION

The Committee is of the view that the traditional requirement for local financial participation is sound and should continue. It was pleased to find that the governors' conference was of the same view. The Committee recommends no change in the matching requirements as presently fixed except for the interstate system and the connecting routes included in the \$27 billion program. In the accelerated program, the States would be expected to contribute annually the amount they are required to contribute now to obtain funds from the \$175 million made available to the interstate system by the Federal Government. The cities would be expected to participate to the same degree. This would make the cost of the 10-year program to the Federal Government about \$25 billion.

## PURCHASE OF EQUITY INTEREST IN EXISTING ROADS

Some States have already constructed sections of the interstate system to the required standards with either State or toll financing and others are proceeding along similar lines. Such construction should not be discouraged by this report since our goal is maximum highway improvement. Those States in which sections of the interstate system have been provided to meet the presently established standards for the completed system should receive appropriate credit, provided such funds are used to improve other roads on established Federal-aid systems or as may be approved by the Federal Government and all other Federal funds for highway purposes have been matched as required. No funds should be made available as a credit for toll roads unless the returns from tolls above financing requirements are used exclusively for road construction as contemplated above.

To limit the Federal liability, credit for roads built between 1947 and 1951 should be limited not only to those sections fully meeting the new standards but also to a maximum of 40 percent of costs other than financing. The credit for those roads completed prior to the calendar year 1955 should be limited to 70 percent of such costs. In no instance would credit be given for Federal funds expended on the road or for toll roads in excess of remaining amortization. Roads built at a later date should be credited at full cost.

The funds thus made available to the States will not only encourage matching of available funds but will also make possible accelerated improvement of primary, secondary, and other roads, and will encourage local financing of interstate mileage to make funds available for other roads without increasing total Federal responsibility. They will be paid to the States only as required to meet the costs of projects approved for construction and, it thus appears, would provide a major incentive to the highway improvement program as a whole.

## A FEDERAL HIGHWAY CORPORATION

The Committee finds it feasible to finance the needed improvements on the interstate network through a capitalization of appropriated funds in accordance with accepted financial principles, creating for this purpose a Federal Highway Corporation as an independent agency of the Government.

In the expenditure of funds provided for the interstate system, the Committee recommends that Congress provide legislation to guide the Corporation in allocating such funds in a manner which would reflect the needs of the system in the respective States as jointly determined by the Commissioner of Public Roads and the States, and finally certified by the Commissioner of Public Roads.

To accomplish its purposes, the Federal Highway Corporation should be empowered by the Congress among other things to issue bonds and utilize the proceeds therefrom for the following purposes:

1. For payments by the Corporation to the States of the cost of constructing projects on the interstate system and approved arterial connecting routes in urban areas; or payments of the cost of such projects undertaken by the Federal Government in the Federal domain;

2. To establish an appropriate credit to a State which has built subsequent to the date of designation of the interstate system or does build within the period 1955-64 with State funds, or funds of an agency under State highway department control, sections of the interstate system, toll or nontoll, in conformance with the prescribed design standards and other requirements which may be established by the Congress and the Corporation;

3. For necessary costs of administration, research, planning, and other purposes as authorized by the Congress;

4. To establish an advance revolving fund, if requested by any State highway department, to enable it to prosecute the program pending receipt of any payments described above.

Consideration might be given to authorizing the Corporation at the request of a State, to receive funds to be made available annually by the State to extend its bond issue thus capitalizing for the State its proposed annual expenditures on the interstate system. This might be helpful in those States with income insufficient to meet their matching requirements. It would require agreement as to rate of interest, security, and charges made by the Corporation for this service. Such agreement should be made only with the approval of the Treasury and then, only if possible without affecting the marketability and cost of the bond issue.

## BOND ISSUES

The Corporation should be authorized to issue bonds, in an amount sufficient to meet its share of the costs to complete the interstate system during a construction period of 10 years, with maturity schedules, interest rates and other conditions determined by the Corporation with the approval of the Secretary of the Treasury. Similar authority would extend to issuance of other bonds under one of the State participating proposals referred to above. The bonds would be fully taxable.



The obligations of the Federal Highway Corporation issued for interstate system improvements should be secured by a contract between the Corporation and the Treasury Department under the terms of which, it should be provided that the Corporation will receive certain specified amounts annually as authorized by the Congress, always sufficient to meet its obligations. It is estimated that these amounts plus those proposed herein for continued allocations to the other Federal-aid highway programs, will be approximately equivalent to that portion of the receipts from Federal taxes on gasoline and lubricating oils.

These and other moneys received by the Corporation would be pledged in the first instance for payment of the interest and principal on any obligations issued by the Corporation. All balances remaining after the payment of debt service would be used solely, apart from setting up such operating reserve as may seem desirable, for improving the interstate highway system, the approved urban feeders and other purposes described above.

The Corporation should have a mandatory call on the United States Treasury for loans up to some agreed total, possibly \$5 billion outstanding at any given time, in order to assure investors of ability to meet obligations when due through borrowing temporarily from the Treasury, if ever necessary.

In order to broaden the market for the bonds of the Corporation, the enabling act should permit commercial banks to underwrite and deal in its securities in the same manner as those of the farm credit agencies and the International Bank for Reconstruction and Development. This would provide the widest possible trading as well as investment interest.

#### ANNUAL COSTS OF THE PROGRAM

A table on the following page illustrates a possible schedule of annual debt service requirements. This indicates that the cost of the recommended program is offset by the anticipated growth in a single revenue source without an increase in present rates (January 1955) and without the need to reduce the continuing Federal-aid program for other roads. It is not recommended that the tax received from any source be earmarked or linked to the amount of construction program. However, the table does show that the proposed additional program could be paid for with the anticipated increase in revenue from the established gasoline tax. Thus, the program creates no demand for further taxation for its accomplishment.

The general outline of this program has been discussed with Treasury Department representatives, the Council of Economic Advisers, Department of Commerce, and Department of Defense as well as with State and municipal representatives who have indicated in a general way their acceptance of the program. Banking and investment banking experts have approved the proposed financing as feasible.

In estimating the value of the project the Committee has made no attempt to evaluate possible revenue from rentals to concessionaires serving the traveling public nor has it attempted to estimate the additional tax revenue which will result from the creation of new values in real property resulting from the improvement.

*Financial plan for highway program—Excess Federal gasoline tax over \$623 million annually available for highway program*

[In million dollars]

Year	Estimated <sup>1</sup> Federal 2-cent tax less \$623 million	Construction expenditures			Bond matur- ities, years	Annual debt service			Annual excess revenue	Balance
		Total	From revenue	From bond proceeds		Interest 3 per- cent	Prin- cipal	Total		
1956	\$527	\$1,000	\$500	\$500	11				\$27	\$27
1957	567	2,000	500	1,500	13	\$15		\$15	52	79
1958	611	2,500	600	1,900	15	60		60	-49	30
1959	652	2,700	500	2,200	17	117		117	35	65
1960	694	2,900	500	2,400	19	183		183	11	76
1961	734	2,900	500	2,400	20	255		255	-21	55
1962	777	2,900	500	2,400	21	327		327	-50	5
1963	818	2,900	400	2,500	21	399		399	19	24
1964	860	2,700	400	2,300	22	474		474	-14	10
1965	898	2,500	365	2,135	22	543		543	-10	None
1966	943					607		607	336	336
1967	983					607	\$500	1,107	-124	212
1968	1,024					592		592	432	644
1969	1,063					592		592	471	1,115
1970	1,099					592	1,500	2,092	-993	122
1971	1,141					547		547	594	716
1972	1,171					547		547	624	1,340
1973	1,218					547	1,900	2,447	-1,229	111
1974	1,257					490		490	767	878
1975	1,294					490		490	804	1,682
1976	1,339					490	2,200	2,690	-1,351	331
1977	1,381					424		424	957	1,288
1978	1,422					424		424	998	2,286
1979	1,465					424	2,400	2,824	-1,359	927
1980	1,504					352		352	1,152	2,079
1981	1,550					352	2,400	2,752	-1,202	877
1982	1,588					280		280	1,308	2,185
1983	1,631					280	2,400	2,680	-1,049	1,136
1984	1,671					208	2,500	2,708	-1,037	99
1985	1,706					133		133	1,573	1,672
1986	1,745					133	2,300	2,433	-688	984
1987	1,785					64	2,135	2,199	-414	570
Total	37,118	25,000	4,765	20,235		11,548	20,235	31,783		

<sup>1</sup> Motor fuel and lubricating oil taxes levied by Federal Government—estimated by Bureau of Public Roads.

## VI. EFFICIENT ADMINISTRATION

### ORGANIZATION FOR ADMINISTRATION

The size of this construction program makes its efficient administration most important. Fortunately, the existing Federal-State partnership in this field has demonstrated its effectiveness over four decades. It should be retained and fully utilized with care taken to avoid establishment of any unnecessary new agencies.

However, a new agency must be established to exercise the proposed financial authority as previously set forth. It should be small in size with its administrative functions exercised by existing agencies. The committee recommends that the Federal Highway Corporation should consist only of a Board of Directors with secretarial assistants. Three members-at-large would be appointed by the President and confirmed by the Senate, while the Secretary of the Treasury and the Secretary of Commerce would be ex officio members. On problems of location, the Secretary of Defense would also serve as an ex officio member.

The terms of office of the 3 appointed members should be staggered over 5 years or some reasonably similar period of time to insure

maximum continuity of management for the Corporation. The public members might initially have 1-, 3-, and 5-year terms and be eligible for reappointment. The Chairman of this group should be designated by the President with the Chairman alone drawing an annual salary and expected to devote full time to the task. The other two members should draw appropriate per diems and allowances only when serving on the Corporation's business. The Corporation should have legal corporate status for the issuance and management of its bonds and other financial instruments, and the usual powers necessary for the transaction of business as a corporate body. It should be responsible to the President and required to submit annual reports of its transactions to the President for transmittal to the Congress. The Secretary of the Treasury would designate the treasurer of the Corporation to be established within the Treasury Department and authorized to utilize such Treasury Department personnel as the Board found necessary to properly perform its financial responsibilities, charging the costs thereof to the Corporation.

While the Board's functions would be principally of a financial management nature, it would also serve when needed as an appeals board in hearing and deciding, in an administrative as distinguished from a judicial capacity, any major questions which arise between the Bureau of Public Roads and other parties in the execution of this program. This group should have no other management functions in administering the program except those here described. All other responsibilities of management should be vested in the Commissioner of Public Roads, whose present authority should be amended as may be needed to administer the additional responsibilities required by this program. The Board should have as much latitude as feasible in approving agreements with the several States and in resolving differences between the States and the Bureau of Public Roads, bearing in view its purpose to provide a maximum highway program with the total available funds.

Staffing for the Corporation (other than secretarial assistants) would be provided by the Bureau of Public Roads and the Treasury Department. The Bureau of Public Roads would continue to perform all of its presently authorized duties including those in connection with the continuing Federal-aid highway program. The Commissioner of the Bureau of Public Roads would serve as Executive Director of the Corporation in addition to his usual duties as Commissioner of Public Roads.

#### ADMINISTRATIVE PROBLEMS OF THE PROGRAM

Consideration has been given to certain administrative problems which will arise when a program of this magnitude is undertaken, and while some are difficult, the Committee is convinced they can be satisfactorily met.

Probably the most serious initial obstacle to execution of this program is a shortage of highway engineers and technical personnel. Completion of the interstate system program in 10 years would entail considerable expansion of the workload. A canvass made through the Highway Research Board of the National Academy of Sciences and the American Association of State Highway Officials, whose opinions in this field the Committee accepts as competent, indicates, however, that the shortage can be met by cooperative effort on the part

of highway agencies, particularly if the several States utilize the private engineering organizations capable of providing sound engineering in this field. Simplified procedures and standardization of specifications possible on a long-range program should be encouraged to reduce the engineering requirements.

#### IMPORTANT TO EXPAND HIGHWAY RESEARCH

An essential part to any large construction program is continuing and adequate research. Therefore, the Committee urges that the present research program be continued and enlarged to insure that the latest thinking of the engineer, the scientist, and the administrator be available to the program, thus insuring economic and efficient accomplishment.

#### MATERIALS AND CONTRACTORS ARE ADEQUATE

While a construction program of this size would impose an additional and heavy load upon the contracting, road equipment, and highway materials industries, surveys made for this Committee by the American Road Builders' Association and the Associated General Contractors of America give assurance that the program is feasible. A substantial enlargement of the current construction program in the highway field can be achieved by highway contractors without difficulty. Since several years are required for the construction program to reach its peak level, ample time exists for the training of equipment operators and other necessary skilled workers. These conclusions are also substantiated by an earlier and independent finding of the American Association of State Highway Officials. During World War II, the American contracting industry demonstrated its ability to meet successfully a challenging program of this magnitude.

Information furnished by the Bureau of Mines as to the outlook for increased availability of cement, aggregates, and petroleum products indicates that no critical bottlenecks are foreseen once a construction program of definite size and duration is authorized. Other key materials are expected to be available in ample quantities as determined from studies made by the Bureau of Public Roads.

#### SOME LEGISLATION NEEDED

A study made for the Committee by the Highway Research Board shows that in many States important revisions of enabling legislation governing the financing and construction of State highways will be needed for efficient execution of the program. This modernization of statutes is essential to success of the program, especially in three areas:

1. In the advance acquisition of land necessary for right-of-way;
2. In the control of access, which, as was pointed out earlier in this report is fundamental to the development of the interstate system as contemplated;
3. In the integration through cooperative working agreements of State, city, and county agencies concerned with street and highway research, planning, and construction.

The expeditious purchase of land needed for right-of-way is particularly important from the standpoint of cost. Inadequate State

laws in this regard could be serious obstacles to the program. Likewise the lack of adequate laws to control access in some States could nullify the program. It must be expected that legislatures in those States requiring modification of their statutes will take prompt action to remedy the situation.

It is recommended also that for the early improvement of the interstate system and its connecting urban arterials, provision be made by the Congress for exercise of the Federal right of eminent domain in cases where this is necessary, and is requested by the State, similar to that authority now contained in the Federal-Aid Highway Act as related to the program of access roads for the national defense.

The various agencies concerned with highway administrative research should concentrate early effort to development of the needed legislation whereby States and other agencies may jointly participate in the most effective manner in building the needed highway improvements being recommended herein. It might be pointed out that failure to do this may seriously delay and jeopardize a State opportunity to receive the very substantial Federal aid proposed herein for projects on the interstate system.

Utilities and other interested parties appeared before the Committee to point out the huge costs which they would face in the relocation of utilities in the event the program is adopted. They urged that the Federal Government bear the cost of such relocation. Present estimates include only those right-of-way costs which must be assumed under the laws of the several States and do not contain funds for this purpose. The Committee has not revised these estimates to meet the views thus presented nor does it make any specific recommendation in this proposal which is, of course, far reaching in its effects. It is understood that it is a broad policy matter already receiving the attention and consideration of the Congress.

## VII. CONCLUSION

The Committee in arriving at its conclusions has sought the views and recommendations of many representative agencies in our economy, of Federal and local government, and of individuals with outstanding experience in highway development. It has found a preponderant opinion that our present highway system is inadequate for existing traffic, that improvements are not keeping pace with increasing traffic, and that the cost of an inadequate system is high not only in wear and tear on the automobile but also in accidents and loss of life.

At present, approximately \$47 billion is expected to be spent on highway improvement during the next 10 years as compared with \$101 billion needed to modernize our highway system. The Committee believes that about half of this deficit of \$54 billion should be assumed by the Federal Government. The half which represents the cost of a fully modernized network of highways connecting our most important cities, known as the national system of interstate highways, together with important feeder routes in congested population areas can be fully justified as a Federal responsibility due to the value of the system to the national economy as a whole, to interstate commerce, to safety, and to national and civil defense. The remainder of the program should continue either as a joint Federal-State respon-

sibility as in the case of primary and secondary roads, or as a local government responsibility.

The Committee offers no suggestions as to how local governments may raise funds to do their share of the program. Present matching requirements are continued, credits for completed portions of the interstate system must be used on other roads, the assumption of major responsibility by the Federal Government for the interstate system releases corresponding amounts of State funds for other roads. Thus, there is both incentive and encouragement to State and local governments to accelerate their own programs. The Committee hopes and believes that all government units will participate and cooperate in this program designed to meet the needs of a growing America in which the highway system used daily by our people is an integral part of our way of life. In doing so, we shall further strengthen our system of government to meet the President's stated desire for "a cooperative alliance between Federal Government and the States so that local government \* \* \* will be the manager of its own area."

We are indeed a nation on wheels and we cannot permit these wheels to slow down. Our mass industries must have moving supply lines to feed raw materials into our factories and moving distribution lines to carry the finished product to store or home. Moreover, the hands which produce these goods and the services which make them useful must also move from home to factory to store to home.

Our highway system has helped to make this possible. We have been able to disperse our factories, our stores, our people; in short, to create a revolution in living habits. Our cities have spread into suburbs, dependent on the automobile for their existence. The automobile has restored a way of life in which the individual may live in a friendly neighborhood, it has brought city and country closer together, it has made us one country and a united people. //

But, America continues to grow. Our highway plant must similarly grow if we are to maintain and increase our standard of living. There can be no serious question as to the need for a more adequate highway system. Only the cost and how it is to be met poses a problem.

The Committee realizes fully the necessity for the reduction and early elimination of the deficit in the annual budget, the reluctance of the Congress to increase the Federal debt limit, and the heavy tax burden already borne by our people. It also is sympathetic to "pay-as-you-go" financing. However, in this instance, the advantages of a modern, efficient national highway network to be completed in 10 years to meet the traffic demands to be reached a decade later, and with a minimum life of 30 years justifies its financing through a bond issue to be retired during the useful life of the system. The proposed financing need not be inflationary since the financing is spread over a 10-year period and the program can be planned to fit in with general governmental fiscal policy. Bonds will be retired on schedules from general revenue to be specifically appropriated by the Congress in which the anticipated increase in the gasoline tax alone suffices to service the bond issue while continuing a substantial Federal-State cooperative program on other roads.

The Committee has complete confidence in the continued growth of America. Its increasing population and expanding economy re-

quires a vastly improved highway system. In fact, we face a challenge today and America has ever evidenced its readiness to meet a challenge head on with practical bold measures.

Therefore, the Committee believes that an increase in Federal expenditures of approximately \$25 billion for highway improvement over the next 10 years is of vital importance to our growth as a nation and recommends the adoption of its financing proposals so that these funds can be made available for the full completion of the interstate system with important urban feeders.

Thus, we will accomplish the objective sought by the President for a "grand plan for a properly articulated highway system that solves the problems of speedy, safe, transcontinental travel—intercity transportation—access highways—and farm-to-market movement—" \* \* \* "paying off in economic growth—" \* \* \* and making "a good start on the highways the country will need for a population of 200 million people."

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## APPENDIXES

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The President's Advisory Committee on a National Highway Program met in Washington on October 7 and 8 to hear representatives of associations interested in highway development. The following associations appeared:

American Railway Association  
American Trucking Associations, Inc.  
Automobile Manufacturers' Association  
Chamber of Commerce of the United States  
Truck-Trailer Manufacturers' Association  
American Road Builders' Association  
National Association of County Officials  
American Automobile Association  
National Association of Township Officials  
Associated General Contractors of America  
National Association of Motor Bus Operators  
American Petroleum Institute  
National Council of Private Motor Truck Owners, Inc.  
American Association of State Highway Officials  
National Grange  
American Farm Bureau Federation  
American Municipal Association  
Automotive Safety Foundation  
Conference of Mayors of the United States  
National Highway Users Conference  
Independent Advisory Committee to the Trucking Industry  
National Parking Association

Estimates of Federal taxes relating to motor vehicles, 1955-99<sup>1</sup>

[1,000 dollars]

Calendar year	Motor fuel	Lubricating oil	Motor vehicles and parts					Total	
			Automobiles and motorcycles	Trucks, buses, and trailers	Parts and accessories	Tires and tubes	Total	Year	Cumulative
1955	1,007,000	101,000	877,500	200,725	204,829	186,208	1,469,262	2,577,262	2,577,262
1956	1,045,000	105,000	891,000	203,500	212,568	193,244	1,500,312	2,650,312	5,227,574
1957	1,082,000	108,000	903,750	206,645	220,172	200,156	1,530,723	2,720,723	7,948,297
1958	1,122,000	112,000	916,500	211,270	228,122	207,384	1,563,276	2,797,276	10,745,573
1959	1,159,000	116,000	930,000	212,565	235,726	214,296	1,592,587	2,867,587	13,613,160
1960	1,197,000	120,000	944,250	220,150	243,434	221,304	1,629,138	2,946,138	16,559,298
1961	1,234,000	123,000	956,250	224,405	251,280	228,436	1,660,371	3,017,371	19,576,669
1962	1,273,000	127,000	968,250	232,175	258,883	235,348	1,694,656	3,094,656	22,671,325
1963	1,310,000	131,000	981,000	236,900	266,490	242,284	1,728,554	3,167,554	25,838,799
1964	1,348,000	135,000	995,250	238,465	274,094	249,176	1,756,985	3,239,985	29,078,864
1965	1,383,000	138,000	1,006,500	252,340	281,252	255,684	1,795,776	3,316,776	32,395,640
1966	1,424,000	142,000	1,020,000	254,190	289,648	263,316	1,827,154	3,393,154	35,788,794
1967	1,460,000	146,000	1,035,250	256,225	296,003	269,912	1,858,290	3,464,290	39,253,084
1968	1,497,000	150,000	1,046,250	263,810	304,511	276,828	1,891,399	3,538,399	42,791,483
1969	1,533,000	153,000	1,061,250	265,475	311,766	283,424	1,921,915	3,607,915	46,399,398
1970	1,565,000	157,000	1,071,000	267,325	318,283	289,348	1,945,956	3,667,956	50,067,354
1971	1,604,000	160,000	1,083,750	274,725	326,286	296,624	1,981,385	3,745,385	53,812,739
1972	1,636,000	164,000	1,096,500	276,575	332,851	302,592	2,008,518	3,808,518	57,621,257
1973	1,674,000	167,000	1,110,000	273,305	340,454	309,504	2,038,263	3,879,263	61,500,520
1974	1,709,000	171,000	1,121,250	289,155	347,714	316,104	2,074,223	3,954,223	65,454,743
1975	1,743,000	174,000	1,134,300	297,110	354,521	322,292	2,106,223	4,025,223	69,470,966
1976	1,784,000	178,000	1,151,250	299,330	362,921	329,928	2,143,429	4,105,429	73,585,395
1977	1,822,000	182,000	1,164,000	301,735	370,528	336,844	2,173,107	4,177,107	77,762,502
1978	1,859,000	186,000	1,180,500	305,065	378,132	343,756	2,207,453	4,252,453	82,014,955
1979	1,898,000	190,000	1,197,000	309,690	386,078	350,980	2,243,748	4,331,748	86,346,703
1980	1,934,000	193,000	1,215,000	317,090	393,338	357,580	2,283,008	4,410,008	90,759,711
1981	1,975,000	198,000	1,233,750	321,900	401,632	365,120	2,322,402	4,495,402	95,252,113
1982	2,010,000	201,000	1,252,500	326,525	408,892	371,720	2,359,637	4,570,637	99,822,750
1983	2,049,000	205,000	1,271,250	334,665	416,843	378,943	2,401,706	4,655,706	104,478,456
1984	2,085,000	209,000	1,290,000	339,630	424,938	385,544	2,439,302	4,733,302	109,211,758
1985	2,117,000	212,000	1,308,750	342,250	430,881	391,528	2,473,209	4,802,209	114,013,967
1986	2,153,000	215,000	1,327,500	351,685	437,928	398,116	2,515,229	4,883,229	118,897,196
1987	2,189,000	219,000	1,346,250	354,460	445,183	404,712	2,550,905	4,958,005	123,855,801
1988	2,228,000	223,000	1,365,500	359,455	453,134	411,940	2,588,020	5,039,029	128,894,830
1989	2,263,000	226,000	1,383,000	362,600	460,394	418,540	2,624,534	5,113,534	134,008,364
1990	2,301,000	230,000	1,402,500	365,930	467,987	425,452	2,661,879	5,192,879	139,201,243
1991	2,337,000	234,000	1,421,250	367,410	475,257	432,052	2,695,969	5,269,969	144,468,212
1992	2,374,000	237,000	1,440,000	372,220	482,860	438,964	2,734,044	5,345,044	149,813,256
1993	2,410,000	241,000	1,458,650	382,590	490,116	445,560	2,774,906	5,425,906	155,239,182
1994	2,447,000	245,000	1,476,000	390,905	497,724	452,476	2,817,105	5,509,105	160,748,287
1995	2,484,000	248,000	1,496,250	392,940	505,327	459,388	2,853,905	5,585,905	166,334,172
1996	2,520,000	252,000	1,513,650	397,935	512,682	465,984	2,890,151	5,662,151	171,996,323
1997	2,556,000	256,000	1,532,400	402,930	519,842	472,584	2,927,756	5,739,756	177,736,079
1998	2,588,000	259,000	1,551,300	407,740	526,412	478,556	2,964,008	5,811,008	183,547,087
1999	2,622,000	262,000	1,569,900	412,920	533,324	484,840	3,000,984	5,884,984	189,432,071

<sup>1</sup> Estimated at tax rates in effect Jan. 1, 1955.

Source: Department of Commerce, Bureau of Public Roads.

Mileage of designated Federal-aid highway systems, by State, as of June 30, 1954

[Miles]

State or Territory	Federal-aid primary highway system									Federal-aid secondary highway system
	National system of interstate highways <sup>1</sup>			Other			Total			
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	
Alabama	904	790	114	4,291	4,002	289	5,195	4,792	403	12,202
Arizona	1,184	1,149	35	1,353	1,285	68	2,537	2,434	103	3,022
Arkansas	528	467	61	2,953	2,822	131	3,481	3,289	192	13,489
California	1,899	1,680	219	5,365	4,666	699	7,264	6,346	918	9,616
Colorado	661	628	33	3,384	3,303	81	4,045	3,931	114	3,736
Connecticut	267	158	109	826	643	183	1,093	801	292	1,118
Delaware	26	23	3	515	465	50	541	488	53	1,287
Florida	1,136	993	143	3,190	2,841	349	4,326	3,834	492	10,511
Georgia	1,104	996	108	6,299	6,067	232	7,403	7,063	340	12,647
Idaho	613	593	20	2,519	2,469	50	3,132	3,062	70	4,141
Illinois	1,548	1,283	265	8,798	7,964	834	10,346	9,247	1,099	9,143
Indiana	1,068	884	184	3,804	3,350	454	4,872	4,234	638	15,611
Iowa	697	632	65	9,032	8,670	362	9,729	9,302	427	32,420
Kansas	728	677	51	7,029	6,803	226	7,757	7,480	277	22,216
Kentucky	656	590	66	3,240	3,047	193	3,896	3,637	259	14,851
Louisiana	606	507	99	2,047	1,902	145	2,653	2,409	244	5,652
Maine	299	272	27	1,338	1,260	78	1,637	1,532	105	2,261
Maryland	270	204	66	1,739	1,493	246	2,009	1,697	312	5,646
Massachusetts	347	206	141	1,703	1,078	625	2,050	1,284	766	2,200
Michigan	985	849	136	5,552	5,173	379	6,537	6,022	515	19,993
Minnesota	856	750	106	6,570	6,095	475	7,426	6,845	581	17,306
Mississippi	684	608	76	3,915	3,810	105	4,599	4,418	181	9,164
Missouri	1,075	996	79	7,028	6,828	200	8,103	7,824	279	16,038
Montana	1,237	1,209	28	4,625	4,585	40	5,862	5,794	68	3,597
Nebraska	477	455	22	4,873	4,755	118	5,350	5,210	140	11,264
Nevada	540	529	11	1,658	1,637	21	2,198	2,166	32	2,186
New Hampshire	213	183	30	1,010	891	119	1,223	1,074	149	1,372
New Jersey	204	102	102	1,521	1,005	516	1,725	1,107	618	1,919
New Mexico	1,013	968	45	3,101	2,999	102	4,114	3,967	147	4,607
New York	998	740	258	9,558	7,986	1,572	10,556	8,726	1,830	19,330
North Carolina	714	627	87	6,139	5,843	296	6,853	6,470	383	21,878
North Dakota	517	496	21	2,833	2,798	35	3,350	3,294	56	11,090
Ohio	1,231	996	235	6,422	5,547	875	7,653	6,543	1,110	12,402
Oklahoma	809	747	62	6,572	6,381	191	7,381	7,128	253	10,936
Oregon	729	668	61	3,273	3,145	128	4,002	3,813	189	4,925
Pennsylvania	1,364	1,068	296	5,902	4,992	910	7,266	6,060	1,206	13,146
Rhode Island	47	21	26	424	220	204	471	241	230	359
South Carolina	749	694	55	3,928	3,726	202	4,677	4,420	257	11,294
South Dakota	520	503	17	3,669	3,585	84	4,189	4,088	101	12,209
Tennessee	1,038	958	80	4,316	4,108	208	5,354	5,066	288	9,292
Texas	2,770	2,487	283	13,259	12,538	721	16,029	15,025	1,004	24,942
Utah	716	659	57	1,554	1,474	80	2,270	2,133	137	2,987
Vermont	343	309	34	904	873	31	1,247	1,182	65	1,787
Virginia	908	796	112	4,113	3,847	266	5,021	4,643	378	16,974
Washington	593	507	86	3,117	2,830	287	3,710	3,337	373	7,116
West Virginia	221	179	42	2,204	2,010	194	2,425	2,189	236	10,985
Wisconsin	472	427	45	5,673	5,176	497	6,145	5,603	542	18,433
Wyoming	1,019	991	28	2,424	2,408	16	3,443	3,399	44	2,013
District of Columbia	17	-----	17	131	-----	131	148	-----	148	59
Hawaii	-----	-----	-----	538	506	32	538	506	32	579
Puerto Rico	-----	-----	-----	576	440	136	576	440	136	1,021
Total	37,600	33,254	4,346	196,807	182,341	14,466	234,407	215,595	18,812	482,972

<sup>1</sup> Present traveled way.

State motor-vehicle registrations—1953 1

[Compiled for calendar year from reports of State authorities 2-Table MV-1, 1953, issued May 1954]

State	Motor vehicles										Motorcycles						
	Automobiles			Buses			Trucks			All motor vehicles			Comparison of total motor-vehicle registrations, 1952-53			Private and commercial	Publicly owned 3
	Private and commercial (including taxicabs)	Publicly owned 3	Total	Private and commercial	Publicly owned 3	Total	Private and commercial	Publicly owned 3	Total	Private and commercial	Publicly owned 3	Total	Increase or decrease, 1953	Percentage change			
Alabama.....	663,506	2,303	665,809	2,427	3,669	6,096	180,626	7,179	187,805	13,151	859,710	777,285	82,425	10.6	6,840	162	
Arizona.....	272,119	2,109	274,228	974	1,665	2,639	78,657	4,649	83,306	7,449	359,199	330,054	29,145	8.8	3,405	81	
Arkansas.....	353,179	853	354,032	883	2,874	3,757	167,627	3,393	171,020	5,211	528,814	505,281	23,533	4.7	2,211	6	
California.....	4,692,553	21,364	4,713,917	7,389	5,021	12,410	736,140	41,946	778,086	68,331	5,504,413	5,154,326	350,087	6.8	50,727	2,528	
Colorado.....	494,823	2,155	496,978	1,585	2,552	4,137	141,247	7,864	149,111	10,986	648,641	621,627	27,014	4.3	4,157	43	
Connecticut.....	724,621	2,844	727,465	3,060	3,219	6,279	93,306	4,402	97,708	7,405	828,392	789,483	38,909	4.7	3,577	110	
Delaware.....	106,228	766	106,994	476	504	980	25,599	873	26,472	132,303	133,976	122,232	11,738	9.6	579	115	
Florida.....	1,083,240	3,276	1,086,516	1,890	4,133	6,013	199,188	8,875	208,063	16,284	1,300,592	1,178,682	121,910	10.3	16,280	425	
Georgia.....	846,816	1,698	848,514	3,659	2,655	6,314	218,799	7,776	226,575	1,069,274	1,081,403	1,021,722	59,681	5.8	7,226	276	
Idaho.....	218,721	1,825	219,546	3,459	1,051	2,500	679,421	4,044	683,465	298,641	5,421	304,062	290,529	13,533	4.7	2,137	26
Illinois.....	5,395,911	5,395	5,396,306	6,560	3,409	9,969	355,341	13,201	368,542	2,998,622	22,005	2,998,622	2,947,961	50,661	1.7	23,030	605
Indiana.....	2,574,918	3,354	2,578,272	7,714	1,159	8,873	287,721	7,596	295,317	1,598,622	12,129	1,610,751	1,529,876	80,875	5.3	18,319	274
Iowa.....	911,044	2,228	913,272	1,235	3,207	4,442	200,612	2,335	202,947	1,112,881	12,231	1,125,112	1,090,358	35,193	3.2	9,740	85
Kansas.....	721,657	2,982	724,639	876	1,105	1,981	222,313	4,383	226,696	898,084	9,400	907,484	855,929	51,555	6.0	5,737	169
Kentucky.....	632,321	2,904	635,225	4,126	1,710	3,426	171,140	4,989	176,129	807,257	8,526	184,613	755,590	60,523	3.1	1,840	55
Louisiana.....	227,927	989	228,916	1,046	359	1,405	63,137	3,353	66,242	292,110	4,453	296,563	287,525	9,038	3.1	5,366	155
Maine.....	695,711	3,055	698,766	4,535	336	4,871	112,917	3,105	116,022	1,406,461	15,382	1,421,799	1,376,058	45,741	3.3	4,282	359
Maryland.....	1,237,638	4,771	1,242,409	5,042	86	5,128	163,737	10,525	174,262	2,755,855	27,207	2,783,122	2,666,628	116,494	4.2	9,945	67
Massachusetts.....	2,418,816	6,643	2,425,459	7,135	2,538	6,709	329,904	16,591	346,495	1,569,563	12,559	1,582,122	1,524,062	58,060	3.7	6,115	15
Michigan.....	1,040,962	2,149	1,043,111	4,171	2,448	5,260	164,879	5,129	170,008	548,614	8,111	556,938	524,062	32,876	6.2	6,736	27
Minnesota.....	380,923	534	381,457	2,812	1,634	3,446	272,476	6,900	279,376	1,375,155	6,394	1,381,549	1,332,747	48,802	3.5	5,013	8
Mississippi.....	1,098,649	2,240	1,100,889	3,760	1,323	5,083	91,296	4,866	96,132	295,908	10,394	392,302	282,578	109,724	4.0	1,070	56
Missouri.....	203,858	1,205	205,063	804	1,288	2,092	142,999	5,096	148,095	624,659	6,394	631,053	619,693	12,360	2.0	3,910	25
Montana.....	480,802	1,611	482,413	858	430	1,288	23,486	2,000	25,486	103,764	2,881	106,645	101,931	4,714	5.2	1,645	11
Nebraska.....	80,019	615	80,634	259	166	425	33,156	3,220	36,376	187,940	4,238	192,228	181,497	10,731	5.9	9,013	1
Nevada.....	153,981	961	154,942	823	571	1,394	218,549	11,644	230,193	819,437	17,477	1,836,914	1,746,068	90,846	5.2	18,147	8
New Hampshire.....	1,593,759	5,442	1,599,201	7,129	2,067	7,520	76,700	4,059	80,759	297,392	5,704	303,096	291,848	31,248	11.5	3,147	161
New Jersey.....	2,118,791	14,112	2,132,903	11,221	6,733	17,954	445,720	25,900	471,620	4,129,750	46,745	4,176,495	3,960,527	195,968	4.9	18,278	1,181
New Mexico.....	3,672,809	3,767	3,676,576	2,606	9,697	12,303	241,488	12,500	253,988	1,231,040	25,964	1,257,004	1,171,015	85,989	7.3	8,342	8
North Carolina.....	865,846	3,767	869,613	2,606	9,697	12,303	241,488	12,500	253,988	1,231,040	25,964	1,257,004	1,171,015	85,989	7.3	8,342	8

North Dakota.....	108,221	686	198,907	145	171	316	91,341	2,139	93,480	289,707	2,966	292,703	285,128	7,575	2.71	896	25
Ola.....	2,781,470	7,010	2,768,470	5,063	7,911	12,974	369,387	15,910	385,297	3,135,910	30,831	3,166,741	3,021,633	145,108	4.8	25,701	442
Oklahoma.....	2,681,574	2,466	2,684,040	1,568	4,711	6,269	231,118	7,124	385,242	914,250	14,301	928,551	891,473	37,078	4.2	7,540	
Oregon.....	8,651,800	7,570	659,379	1,488	4,672	3,180	876,537	5,876	820,413	729,834	15,118	744,952	711,982	32,970	4.6	5,440	6
Pennsylvania.....	2,897,059	10,668	2,907,727	11,116	8,500	1,966	477,430	22,819	500,249	3,385,605	34,337	3,419,942	3,266,830	153,112	4.7	23,849	520
Rhode Island.....	244,156	1,039	245,195	880	82	971	33,196	1,348	34,544	278,241	2,469	280,710	270,983	9,727	3.6	1,653	110
South Carolina.....	574,273	1,024	576,477	1,697	3,967	5,642	126,503	1,691	134,194	702,473	13,856	716,329	686,270	30,059	4.4	5,141	84
South Dakota.....	222,866	3,220	224,080	1,806	2,165	3,971	207,601	11,350	218,951	1,029,967	17,035	1,047,002	983,900	63,102	12.1	6,236	20
Tennessee.....	820,568	7,596	828,164	4,931	10,704	15,635	691,026	26,026	717,052	3,315,150	44,296	3,359,446	3,155,337	204,109	6.5	28,318	526
Texas.....	2,232,301	1,357	2,233,658	342	10,487	8,290	54,873	3,141	58,014	287,210	5,005	292,521	273,313	19,208	7.0	1,328	47
Utah.....	12,390	553	12,743	570	152	722	14,250	921	15,171	127,210	1,426	128,636	125,875	2,761	2.2	754	
Vermont.....	879,733	5,538	885,091	3,177	2,723	5,000	191,620	8,210	199,730	1,074,450	16,271	1,090,721	1,084,011	56,710	5.5	9,838	195
Virginia.....	847,960	6,025	854,015	1,123	2,533	3,654	178,469	15,379	193,848	1,027,582	22,635	1,050,167	982,840	62,668	6.3	5,544	262
West Virginia.....	388,487	1,987	391,184	1,183	1,652	2,825	118,689	4,159	122,848	509,360	7,498	516,867	497,313	19,554	3.9	3,058	44
Wisconsin.....	1,039,994	2,484	1,062,478	3,039	1,652	4,481	232,573	11,986	244,559	1,295,606	15,912	1,311,518	1,249,095	62,253	5.0	9,147	335
Wyoming.....	111,631	10 2,542	112,471	649	327	472	47,137	2,574	49,711	159,413	3,741	163,154	156,097	7,027	4.5	590	16
District of Columbia.....	167,154		168,696	2,053	19	2,074	18,284	2,308	20,592	187,463	4,569	192,362	183,657	-1,295	-1.7	516	
Total.....	46,289,129	170,965	46,460,094	141,255	102,996	244,251	9,162,280	413,239	9,575,519	55,592,664	687,200	56,279,864	53,265,406	3,014,458	5.7	401,547	10,288

For additional details of publicly owned vehicles and of trucks, buses, and trailers registered, see tables MV-7, 9, 10, and 11, respectively.

Data reported by the States were supplemented in some instances by information from other sources in order to present registrations as uniformly as possible. Where the registration year is not more than 1 month removed from the calendar year, registration-year data are given. Where the registration year is more than 1 month removed, registrations are given for the calendar year.

<sup>1</sup> Includes Federal, State, county, and municipal vehicles. Vehicles owned by the military services are not included.

<sup>2</sup> The following farm trucks, registered at a nominal fee and restricted to use in the vicinity of the owner's farm, are not included in this table: Connecticut, 5,669; New Hampshire, 3,523; New Jersey, 9,561; New York, 12,987; Rhode Island, 1,967.

<sup>3</sup> In Alabama a pickup truck that is a person's sole means of transportation is registered at the passenger-car rate. The estimated number of pickup trucks has been determined

from reported passenger-car registrations and added to truck registrations.

<sup>4</sup> Privately owned school buses are included with trucks.

<sup>5</sup> Commercial full trailers are included with trucks.

<sup>6</sup> In Oregon, trucks with gross weights of 4,500 pounds or less, and in Vermont, trucks under 1,500 pounds capacity, are not segregated from automobiles. In most States for which truck weight data are available, similar light trucks comprise approximately half of all trucks registered.

<sup>7</sup> Washington changed its registration year to a calendar year basis. The conversion schedule used resulted in the 1953 registrations shown here being for the 13½ months from Nov. 16, 1952 to Dec. 31, 1953, and are therefore not entirely comparable to those for previous years.

<sup>8</sup> Includes 1,563 automobiles of the diplomatic corps.

Source: Department of Commerce, Bureau of Public Roads.

NATIONAL HIGHWAY PROGRAM

Existing rural and municipal mileage in the United States, 1953, classified by system

[Compiled for latest available year from State Highway Planning Survey Data—Table M-1, 1953 issued November 1954]

State	Under State control				Under local control				Under Federal control <sup>4</sup>				Total	Total rural roads
	State primary system	State secondary system <sup>1</sup>	Other State roads <sup>2</sup>	Total	County roads <sup>3</sup>	Town and township roads <sup>3</sup>	Other local roads <sup>4</sup>	Total	National forest high-ways	National Indian reservation roads	Other national roads	Total		
Alabama	6,981	4,212		11,193	49,308			49,308	3,572	4,396	512	8,480	60,501	
Arizona	3,859		3	3,862	16,273		33	16,306				1,067	28,648	
Arkansas	9,446		7	9,453	55,993			55,993				19,268	66,513	
California	12,643			12,643	69,665		14,523	81,188	19,298			19,268	113,099	
Colorado	7,514	( <sup>1</sup> )	17	7,531	35,032		26,451	61,483	653	19	116	788	64,772	
Connecticut	2,362		188	2,550		7,929		7,929					10,479	
Delaware	452	3,390		3,842	30,929			30,929	736		390	1,126	32,542	
Florida	8,643	1,829	26	10,498	69,516			69,516	56			56	42,553	
Georgia	13,527		32	13,559	17,064	9,519		27,153	7,870	512	9	8,391	85,131	
Idaho	4,533		5	4,538	19,983	73,408		93,391					40,112	
Illinois	10,471			10,471	73,730			75,780					103,862	
Indiana	9,753			9,753	92,168			92,168					85,483	
Iowa	8,681		118	8,799	116,123			116,123	159		12	12	100,967	
Kansas	9,425			9,425	43,470			43,470					125,560	
Kentucky	16,311	11,853		28,164	25,907			25,907					60,108	
Louisiana	2,210	7,664	128	10,716		8,139		8,139					38,970	
Maine	2,924			2,924	12,327			12,327					18,944	
Maryland	4,546			4,546	84,680	16,925		101,605					16,873	
Massachusetts	1,978		123	2,101	41,742	55,790		97,532	1,011	408	8	1,427	110,579	
Michigan	8,271			8,271	53,916			53,916	904		125	1,029	62,185	
Minnesota	10,364		1,256	11,620	78,230			78,230	1,088			1,088	89,482	
Mississippi	7,240			7,240	54,170			54,170	5,650	754		6,659	69,788	
Missouri	12,260	3,403		15,663	67,170	23,004		90,174	113			286	99,853	
Montana	5,516		33	5,549	19,678			19,678					25,546	
Nebraska	9,417			9,417	8,867			8,867	128				110,579	
Nevada	2,132	3,735		5,867									12,374	
New Hampshire	1,485	2,161	15	3,661	4,894	8,585		13,479					25,546	
New Jersey	1,229		852	2,081	45,820	10,430		56,250	2,631	1,493	34	4,158	60,663	
New Mexico	10,682		3	10,685	18,527	54,304		72,831					86,390	
New York	12,938		862	13,800	25,361	82,130		97,491	845	115	308	1,268	67,063	
North Carolina	10,770	54,970	45	65,785	37,407			37,407					114,448	
North Dakota	6,480			6,480	81,764			81,764					82,179	
Ohio	16,019		88	16,107	81,198		1,110	82,308					91,968	
Oklahoma	9,708			9,708									338	
Oregon	4,492	2,415	799	7,706					13,024	1,295	209	14,528	54,542	

Pennsylvania.....	12,796	25,280	3,660	41,736	765	44,978	45,743	209	4	119	332	87,511
Rhode Island.....	590	64	64	663	26,235	1,095	1,095	1,095	1,042	84	1,126	1,788
South Carolina.....	8,116	13,452	122	21,720	20,142	61,864	26,235	635	1,042	148	1,126	47,955
South Dakota.....	6,492	63	63	6,555	56,196	28	82,006	535	1,042	148	1,126	86,987
Tennessee.....	7,464	355	355	7,819	153,756	28	56,224	535	1,042	148	1,126	64,736
Texas.....	42,874	.....	.....	42,874	153,756	.....	153,756	4,073	512	1,270	5,855	194,630
Utah.....	4,808	.....	.....	4,808	16,732	.....	16,732	14	512	8	22	27,395
Vermont.....	1,791	.....	68	1,859	.....	11,083	11,083	14	512	8	22	12,964
Virginia.....	7,868	39,732	12	47,612	512	.....	512	583	712	501	1,094	49,218
Washington.....	3,824	2,019	143	5,986	39,455	.....	39,455	6,187	78	78	6,977	52,418
West Virginia.....	4,457	26,233	322	31,042	.....	.....	1,682	514	303	303	399	33,238
Wisconsin.....	10,036	.....	80	10,116	18,577	57,699	76,176	96	303	308	1,988	86,691
Wyoming.....	4,781	.....	.....	4,781	15,075	.....	19,575	1,353	327	308	1,988	26,344
District of Columbia.....	.....	.....	.....	.....	.....	.....	4,500	.....	.....	.....	.....	.....
Total.....	376,902	214,638	8,978	600,518	1,710,516	563,189	2,322,012	72,378	12,667	4,945	89,990	3,012,520

See footnotes at end of table, p. 37.

Existing rural and municipal mileage in the United States, 1953, classified by system—Continued

State	Municipal mileage						Total rural and municipal mileage
	Under State control			Under local control			
	Extensions of State primary systems	Extensions of State secondary systems	Total	Extensions of county, town and township roads	Local city streets	Total	
Alabama.....	877		877		6,310	6,310	67,778
Arizona.....	98		98		1,626	1,626	30,372
Arkansas.....	583		583		3,946	3,946	4,724
California.....	1,278		1,278	338	23,275	24,553	4,780
Colorado.....	337		337		4,255	4,592	137,652
Connecticut.....	604		604		4,194	4,798	74,364
Delaware.....	83		83		410	493	15,277
Florida.....	1,137	101	1,238		11,434	12,672	4,415
Georgia.....	1,570		1,570	2,565	5,200	6,770	55,225
Idaho.....	208		208		2,061	2,269	92,466
Illinois.....	1,807		1,807		17,354	19,161	42,381
Indiana.....	1,904		1,904		11,067	12,971	123,023
Iowa.....	1,046		1,046		10,160	11,206	97,454
Kansas.....	519		519		6,940	7,459	112,173
Kentucky.....	641		641		2,760	3,401	133,019
Kentucky.....	340	631	971	343	5,297	6,268	63,509
Louisiana.....	237	235	472		1,146	1,618	46,581
Maine.....	250		250	112	2,440	2,690	20,562
Maryland.....	131		131		6,349	6,480	19,675
Massachusetts.....	1,030		1,030	462	12,630	13,660	24,506
Michigan.....	1,472		1,472	1,657	8,815	10,287	107,073
Minnesota.....	537		537	158	3,308	3,845	122,523
Mississippi.....	1,026		1,026		10,650	11,676	66,278
Missouri.....	164		164	50	1,518	1,682	11,168
Montana.....	411		411		5,047	5,458	71,520
Nebraska.....	52		52		506	558	105,341
Nevada.....	172	113	285		995	1,280	26,123
New Hampshire.....	546		546	1,758	9,402	9,948	13,654
New Jersey.....	411		411		1,494	1,905	28,841
New Mexico.....	137		137		16,800	16,937	62,568
New York.....	1,126	1,323	2,449		5,988	8,437	103,327
North Carolina.....	250		250	560	1,474	2,040	75,490
North Dakota.....	2,384		2,384		13,928	16,312	116,735
Ohio.....	383		383	623	6,144	6,527	98,491
Oklahoma.....	383		383		4,161	4,544	99,253
Oregon.....	1,851	1,175	3,026	2,263	11,960	14,986	59,288
Pennsylvania.....							104,960



Rhode Island.....	265	1,351	265	2,046	2,046	2,311	4,069
South Carolina.....	716	1,351	2,067	2,500	2,500	4,567	52,522
South Dakota.....	225	225	2,033	2,033	2,033	2,268	91,945
Tennessee.....	671	671	4,370	4,370	4,370	5,041	69,767
Texas.....	2,512	2,512	2,512	25,795	25,795	28,307	224,987
Utah.....	593	593	3,092	3,092	3,092	3,655	31,050
Vermont.....	165	165	656	656	656	821	13,785
Virginia.....	804	443	1,247	3,775	3,775	5,022	54,240
Washington.....	326	138	464	6,160	6,160	6,624	59,042
West Virginia.....	444	127	571	2,390	2,390	2,961	36,199
Wisconsin.....	1,254	1,254	1,254	7,424	7,985	9,239	95,930
Wyoming.....	118	118	118	738	738	856	27,200
District of Columbia.....				1,189	1,189	1,189	1,189
Total.....	33,233	5,787	39,020	303,072	314,650	353,670	3,366,190

<sup>1</sup> Includes mileage of county roads under State control in Alabama (4 counties), Delaware, North Carolina, Virginia (all but 2 counties), and West Virginia; 6,811 miles designated as farm-to-market system in Louisiana; State-aid system in Maine; and 19 miles of State-aid roads in Montana.

<sup>2</sup> Includes mileage of State park, forest, institutional, toll, and other roads, rural and municipal, that are not a part of the State or local highway systems.

<sup>3</sup> Includes local roads designated as State-aid mileage as follows: Illinois, 19,983 miles; Minnesota, 15,634 miles; and Vermont, 2,550 miles.

<sup>4</sup> Roads not on county, town, or township systems. The mileage shown for California, Colorado, and Wyoming has not been classified by administrative system.

<sup>5</sup> Includes only the mileage of roads not forming a part of the State or local highway system.

<sup>6</sup> Municipal extensions of county, town, and township roads cannot be segregated for all States.

<sup>7</sup> Mileage previously reported here is now a part of the State primary and local road systems.

<sup>8</sup> Toll roads are included as follows: Colorado, Denver-Boulder Turnpike, 17 miles; Connecticut, Merritt, and Wilbur Cross Parkways, 67 miles; Florida, Buceaneer Trail, 15 miles; Georgia, Brunswick-St. Simon Highway, 11 miles; Maine Turnpike, 45 miles; New Hampshire Turnpike, 15 miles; New Jersey Turnpike, 118 miles; New York county parkways, 26 miles; State parkways, 13 miles; and the New York State Thruway, 80 miles; Oklahoma, Turner Turnpike, 88 miles; Pennsylvania Turnpike system, 328 miles.

Source: Department of Commerce, Bureau of Public Roads.

Existing rural and municipal mileage in the United States, 1953, classified by type of surface  
 [Compiled for latest available year from State highway planning survey data—Table M-3, 1953, issued November 1954]

State	Total existing	Total non-surfaced	Total surfaced	Rural mileage						Municipal mileage							
				Total	Non-surfaced	Surfaced mileage :				Total	Non-surfaced	Surfaced mileage :					
						D :	E :	F, G-1, H-1	G-2, H-2, I			J, K, L	Total	D, E	F, G-1, H-1	G-2, H-2, I, J, K, L	
Alabama.....	67,778	17,874	49,904	60,591	17,487	43,104	9,649	19,156	9,365	4,520	414	7,187	387	6,800	2,596	1,640	2,564
Arizona.....	30,372	18,179	12,183	28,648	17,654	10,984	4,720	4,625	3,585	2,053	269	1,724	525	1,199	273	1,441	2,282
Arkansas.....	71,280	35,056	36,224	66,513	34,421	32,092	4,792	25,788	1,017	4,212	1,046	1,754	635	1,132	834	411	1,887
California.....	137,652	46,433	69,257	113,069	43,842	69,257	17,242	10,756	31,545	7,318	2,511	24,553	2,377	22,176	1,805	16,355	5,016
Colorado.....	74,364	48,079	26,285	69,772	47,275	23,238	17,242	15,971	1,652	5,622	476	4,798	547	4,251	525	8	2,514
Connecticut.....	15,277	8,312	14,965	10,479	7,275	10,204	40	1,664	5,562	2,351	587	4,798	3	4,795	173	8	1,776
Delaware.....	4,415	811	3,604	3,842	680	3,162	906	1,68	2,388	340	601	4,798	131	4,781	20	189	2,233
Florida.....	55,225	31,689	42,553	20,823	20,823	21,730	2,865	2,576	13,984	1,562	743	12,672	2,713	9,959	1,838	5,574	2,549
Georgia.....	92,460	55,910	36,556	83,131	52,071	31,760	9,819	6,858	8,297	4,374	1,433	6,335	3,839	5,496	1,583	1,006	3,907
Idaho.....	42,381	19,240	23,141	40,112	18,943	21,169	9,395	15,070	3,507	2,164	33	2,269	297	1,972	916	67	9,989
Illinois.....	123,023	14,413	108,610	103,862	12,220	91,642	9,818	62,141	6,396	3,046	10,241	19,161	2,193	16,968	6,104	1,656	9,208
Indiana.....	97,454	9,485	87,969	85,483	23,621	76,853	9,160	53,791	10,119	9,487	3,206	11,971	855	11,116	1,965	3,790	5,321
Iowa.....	112,173	25,761	86,412	100,967	23,621	77,346	602	68,772	1,545	1,259	5,168	11,459	2,140	9,319	4,57	1,888	3,821
Kansas.....	133,019	71,218	61,801	125,560	68,968	56,562	189	45,435	8,043	1,631	1,364	7,459	2,220	5,239	2,486	5,586	2,157
Kentucky.....	63,509	21,361	42,148	60,108	21,126	38,982	31	24,972	8,245	4,881	853	3,401	233	3,166	651	599	1,556
Louisiana.....	46,581	15,509	31,072	39,970	14,361	25,609	9	18,624	22	2,703	2,262	6,611	1,148	5,463	2,706	110	2,647
Maine.....	20,562	15,400	16,522	18,944	36	18,908	9	9,215	8,367	1,243	74	1,618	56	1,614	2,211	1,066	2,637
Maryland.....	19,675	1,789	17,886	16,873	1,003	15,140	1,040	6,553	7,499	1,343	1,605	2,802	56	2,746	510	783	3,433
Massachusetts.....	24,506	1,052	23,454	18,026	1,003	17,023	331	10,121	3,360	2,974	237	6,480	49	6,431	378	639	3,416
Michigan.....	107,073	26,360	80,713	92,951	26,127	69,824	416	47,202	14,470	1,840	4,312	14,122	1,233	12,889	2,748	1,555	9,988
Minnesota.....	122,523	23,289	99,234	110,579	21,139	89,440	1,283	75,835	6,780	3,813	2,596	11,944	2,150	9,794	2,841	3,917	3,036
Mississippi.....	66,278	22,842	43,436	62,185	22,619	39,566	1,907	30,300	6,444	981	3,058	6,673	223	3,870	1,418	1,135	1,319
Missouri.....	111,158	22,961	87,197	99,482	22,619	75,714	1,907	64,242	6,447	1,434	3,684	11,676	1,193	8,483	4,119	1,775	5,192
Montana.....	71,520	49,267	22,253	69,788	48,783	21,005	103	14,651	3,177	618	27	7,32	484	3,150	516	1,500	2,332
Nebraska.....	105,341	63,717	41,694	99,853	62,673	37,210	103	32,324	3,034	3,158	1,131	1,458	1,044	4,414	2,406	228	1,780
Nevada.....	26,123	18,905	7,211	25,545	3,053	6,693	129	2,987	8,967	3,063	3	5,728	15	3,255	104	133	381
New Hampshire.....	13,654	3,053	7,601	12,374	1,825	9,549	15	3,957	4,765	405	212	1,290	63	1,262	204	910	248
New Jersey.....	28,841	8,874	14,975	17,135	3,327	13,808	15	4,805	6,013	1,451	1,455	11,706	547	11,159	1,460	4,353	5,316
New Mexico.....	60,663	31,083	29,544	60,663	50,544	4,907	3,875	4,407	17,785	4,407	1,455	16,937	549	15,386	206	206	4,477
New York.....	103,327	1,127	102,200	86,390	33	86,357	16,339	23,184	17,281	23,292	7,281	16,937	1,094	15,843	1,623	6,754	7,466
North Carolina.....	75,490	14,885	60,605	67,053	13,303	53,663	8,944	13,437	18,659	10,278	1,945	8,437	1,405	6,942	1,928	6,780	4,266
North Dakota.....	114,445	34,501	79,944	114,445	8,944	105,500	1	1,764	17,719	1,764	114	11,778	136	10,602	1,338	124	316
Ohio.....	98,491	2,055	96,436	82,179	1,919	80,260	1	38,252	20,073	20,166	1,768	16,512	1,612	16,176	2,015	4,981	9,183
Oklahoma.....	59,253	59,179	40,074	91,958	57,546	34,412	9	24,859	3,422	3,881	2,511	1,633	1,633	5,662	2,515	595	2,532
Oregon.....	59,268	26,031	34,237	54,542	24,354	30,188	89	19,360	6,838	3,628	2,275	4,725	677	4,048	1,341	209	2,499

Pennsylvania.....	104,860	31,294	73,666	87,811	26,022	58,789	235	18,344	18,838	15,697	5,675	17,149	2,272	14,877	1,903	6,202	6,772
Rhode Island.....	4,069	4,431	3,638	1,758	127	1,631	28	520	804	1,038	141	2,311	304	2,007	174	1,050	783
South Carolina.....	52,322	26,735	25,787	47,955	25,640	22,315	4,733	14,994	14,994	1,534	1,534	4,567	1,095	3,472	1,056	1,697	719
South Dakota.....	61,945	57,681	34,264	86,687	57,039	32,648	133	28,017	2,941	1,600	390	2,258	642	1,616	1,211	1,114	201
Texas.....	69,707	8,049	61,718	64,726	7,935	56,791	37	42,043	11,175	3,324	1,116	5,041	114	4,927	1,270	110	3,547
Tennessee.....	224,837	107,865	117,072	196,630	101,603	95,027	37	42,902	38,441	9,198	4,449	28,307	6,262	22,045	8,037	9,585	4,423
Utah.....	31,050	15,255	15,795	27,395	14,820	12,575	2,483	7,859	1,404	3,176	136	3,655	435	3,220	1,337	1,084	769
Virginia.....	13,785	2,672	11,113	12,964	2,663	10,301	22,451	5,142	1,619	927	130	3,821	9	3,812	168	1,460	184
Washington.....	54,240	2,962	51,278	49,218	2,765	46,453	22,451	328	20,740	2,486	448	5,022	197	4,825	239	692	3,894
West Virginia.....	39,042	16,468	42,574	52,418	15,338	37,080	4	22,168	10,078	3,201	1,629	6,624	1,130	5,494	1,144	1,368	2,982
Wisconsin.....	80,139	13,808	22,391	33,238	13,492	19,746	1,590	8,535	4,423	4,307	891	2,961	316	2,645	1,421	1,471	1,471
Wyoming.....	27,800	5,649	87,281	86,691	8,300	78,391	3,228	46,836	19,919	4,672	3,736	9,239	349	8,890	1,531	3,751	3,608
District of Columbia.....	1,139	174	1,015	26,344	17,043	9,301	---	4,268	1,748	3,285	---	1,189	174	1,015	---	156	859
<b>Total.....</b>	<b>3,366,100</b>	<b>1,205,880</b>	<b>2,160,310</b>	<b>3,012,520</b>	<b>1,157,076</b>	<b>1,855,444</b>	<b>116,758</b>	<b>1,054,329</b>	<b>402,564</b>	<b>198,654</b>	<b>83,139</b>	<b>353,670</b>	<b>48,804</b>	<b>304,866</b>	<b>70,038</b>	<b>102,617</b>	<b>132,211</b>

<sup>1</sup> For more detail of surface types by systems, see table series SM for 1953 and table L-M-O.  
<sup>2</sup> Surface types indicated by symbols in these columns are as follows: D, soil surfaced; E, slag gravel base; F, bituminous surface treated; G-1, mixed bituminous, nonrigid base; G-2, mixed bituminous, rigid base; H-1, bituminous penetration, nonrigid base; H-2, bituminous penetration, rigid base; I, bituminous concrete and sheet asphalt; J, portland cement concrete, rigid; K, J, K, and L, block. Segregation according to base course (nonrigid and rigid), for G and H surface types is not uniform for all States. Where no segregation was reported, the mileage was arbitrarily classified as G-1 and H-1.

<sup>3</sup> Complete segregation of surface types D and E is not available.  
<sup>4</sup> Some soil and gravel surfaces included with bituminous surfaced mileage. Complete classification is not available.  
<sup>5</sup> Nonsurfaced mileage includes soil and gravel surfaces. Complete classification is not available.

Source: Department of Commerce, Bureau of Public Roads.

*Existing rural and municipal mileage in the United States, 1953, classified by system and type of surface*

(Compiled for latest available year from State Highway Planning Survey Data—Table M-2, 1953, issued November 1954)

[In thousand miles]

System	Total	Nonsur- faced mileage <sup>1</sup>	Surfaced mileage			
			Total	Low type <sup>2</sup>	Inter- mediate type <sup>3</sup>	High type <sup>4</sup>
<b>Rural mileage:</b>						
Under State control:						
State primary systems.....	377	8	369	41	129	199
State secondary systems.....	87	8	79	28	34	17
County roads under State con- trol <sup>5</sup> .....	127	29	98	56	33	9
State parks, forests, reservations, etc. <sup>6</sup> .....	9	5	4	2	1	1
Total.....	600	50	550	127	197	226
Under local control:						
County roads.....	1,711	779	932	741	155	36
Town and township roads.....	563	215	348	281	48	19
Other local roads.....	48	43	5	4	1	-----
Total.....	2,322	1,037	1,285	1,026	204	55
Under Federal control: National parks, forests, reservations, etc. <sup>6</sup> .....	90	70	20	18	1	1
Total rural mileage.....	3,012	1,157	1,855	1,171	402	282
<b>Municipal mileage:</b>						
Under State control: Extensions of State highway systems.....	39	1	38	1	9	28
Under local control: City streets.....	315	48	267	69	94	104
Total municipal mileage.....	354	49	305	70	103	132
Total rural and municipal mileage in the United States.....	3,366	1,206	2,160	1,241	505	414

<sup>1</sup> Nonsurfaced mileage includes primitive and unimproved and graded and drained roads.

<sup>2</sup> Consists of slag, stabilized soil, and gravel or stone surfaces.

<sup>3</sup> Consists of bituminous treated and mixed bituminous surfaces.

<sup>4</sup> Consists of bituminous penetration, bituminous concrete, sheet asphalt, Portland cement, concrete, brick, and block surfaces.

<sup>5</sup> County roads are under State control in Alabama (4 counties), Delaware, North Carolina, Virginia (all but 2 counties), and West Virginia.

<sup>6</sup> State and National park, forest, reservation, toll, and other roads that are not a part of the State or local systems.

Source: Department of Commerce, Bureau of Public Roads.

Toll roads and the United States interstate highway system

State	In operation	Under construction or financed	Authorized	Total	Additional proposals	Total
Alabama					330	330
Arkansas					133	133
Connecticut	67	130		197		197
Florida			103	103	366	469
Georgia			415	415		415
Illinois			417	417		417
Indiana		157	150	307	220	527
Iowa					298	298
Kansas		234		234		234
Kentucky		40	100	140	100	240
Louisiana					75	75
Maine	47	66	200	313		313
Massachusetts		123		123	10	133
Michigan			351	351		351
Mississippi					290	290
Missouri					458	458
Nebraska			300	300		300
New Hampshire	15		40	55		55
New Jersey	118	6	79	203		203
New York	396	163		559	373	932
Ohio		240	295	535		535
Oklahoma	88	88	222	398		398
Pennsylvania	327		130	457		457
Tennessee					885	885
Texas			659	659		659
Virginia			36	36		36
Washington			70	70		70
Wisconsin			287	287	40	327
Total miles	1,058	1,247	3,854	6,159	3,578	9,737
Less not feasible			917	917	283	1,200
Total			2,937	5,242	3,295	8,537

- 1 Not feasible.
- 2 65 miles not feasible.
- 3 280 miles not presently feasible.
- 4 110 miles not feasible.
- 5 60 miles not feasible.
- 6 225 miles not feasible.

Toll roads paralleling or serving same cities as designated United States interstate highway system, Dec. 15, 1954

State	Toll route	Miles	Status	Cost <sup>1</sup>
Alabama	Tennessee line-Mobile	330	Proposed; not authorized	Millions
Arkansas	West Memphis-Little Rock	133	Under study; not authorized; previously found not feasible.	\$250
Connecticut	Merritt and Wilbur Cross Parkways	67	In operation	38.0
Florida	Greenwich-Killingly Expressway	130	Bonds partially sold	338.0
	Hollywood-Fort Pierce	103	Authorized	87
	Fort Pierce-Jacksonville	238	Proposed; not authorized	150
	Titusville-Clearwater	128	do	80
Georgia	Buccaneer trail extension	50	Authorized; not studied	30
	Cartersville-Florida line	300	do	225
	Tennessee line-Cartersville	65	Authorized; not feasible	40
Illinois	Chicago-Rockford	100	Authorized; under study	100
	Chicago-Antioch	14	do	40
	Chicago-Iowa line	149	Authorized; 126 miles not feasible.	162
	East St. Louis-Indiana line	154	Authorized; not feasible	163
Indiana	Hammond-Indianapolis	100	Authorized	225
	Indianapolis-Kentucky line	110	Not feasible	100
	East-West Turnpike	157	Under construction	280.0
	Indianapolis-Cincinnati	110	Proposed; not authorized	100
Iowa	Council Bluffs-Davenport	298	do	180
Kansas	Kansas City-Topeka-Wichita-Oklahoma line	234	Bonds sold	160.0
Kentucky	Louisville-Elizabethtown	40	Under construction	38.5
	Elizabethtown-Tennessee line	100	Authorized; not studied	80
	Louisville-Cincinnati, Ohio	100	Proposed; not authorized	80

See footnote at end of table, p. 42.

Toll roads paralleling or serving same cities as designated United States interstate highway system, Dec. 15, 1954—Continued

State	Toll route	Miles	Status	Cost <sup>1</sup>
				<i>Millions</i>
Louisiana.....	Monroe-Minden.....	75	Proposed; under study; not authorized.	\$60
Maine.....	Kittery-Portland.....	47	In operation.....	21.6
	Portland-Augusta.....	66	Under construction.....	55.0
	Augusta-Bangor-Lincoln.....	200	Authorized; not studied.....	140
Massachusetts.....	Weston-West Stockbridge.....	123	Bonds sold.....	239.0
	Weston-Boston.....	10	Proposed.....	100
Michigan.....	Bay City-Toledo, Ohio.....	175	Authorized; found not feasible—60 miles, \$40 million.	226
	Ypsilanti-New Buffalo.....	176	Authorized; reported feasible.	215
Mississippi.....	Memphis-Louisiana line.....	290	Proposed; not authorized....	100
Missouri.....	Kansas City-St. Louis-Joplin.....	458	do.....	300
Nebraska.....	Omaha-Colorado line.....	300	Authorized; under study.....	300
New Hampshire.....	Seabrook-Portsmouth.....	15	In operation.....	7.5
	Concord-Nashua.....	40	Authorized; to be built in 1955.	23
New Jersey.....	New Jersey Turnpike.....	118	In operation.....	285.0
	State line extension of turnpike.....	20	Authorized; under study.....	75
	East-West Turnpike.....	59	Authorized; not studied.....	300
	Link to Pennsylvania Turnpike.....	6	Under construction.....	27.2
New York.....	New York State Thruway.....	396	In operation.....	490.0
	do.....	30	Under construction.....	110.0
	do.....	133	Partly financed; to be completed by 1958.	300
New York.....	Elmira-Watertown.....	173	Not authorized, proposed....	232
	Albany-Canada.....	200	do.....	200
Ohio.....	East-West Turnpike.....	240	Under construction.....	326.0
	Cincinnati-Conneaut.....	295	Authorized—70 miles (\$93 million); found feasible.	525
Oklahoma.....	Tulsa-Oklahoma City.....	88	In operation.....	38.0
	2 extensions.....	222	Authorized; found feasible.	162
	Tulsa-Missouri line.....	88	Financed.....	68.0
Pennsylvania.....	Ohio line—King of Prussia.....	327	In operation.....	211.5
	Seranton-New York line.....	40	Authorized; not studied.....	75
	New Jersey spur.....	30	do.....	70
	Erie-Ohio line.....	60	do.....	55
Tennessee.....	Nashville-Kentucky line.....	45	Proposed, not authorized....	45
	Knoxville-Chattanooga-Memphis-Bristol.....	590	do.....	350
	Nashville-Georgia line.....	150	} Mentioned only with respect to regional north-south toll proposals.	175
	Nashville-Alabama line.....	100		
Texas.....	Dallas-Fort Worth.....	33	Authorized; reported feasible.	32
	Oklahoma line-Houston.....	350	Authorized; private corporation.	180
	Dallas-San Antonio.....	276	do.....	200
Virginia.....	Richmond-Petersburg.....	36	Authorized; reported feasible.	57
Washington.....	Tacoma-Everett.....	70	Authorized; under study.....	200
Wisconsin.....	St. Paul-Illinois line.....	287	Authorized; not feasible.....	200
	Milwaukee-Illinois line.....	40	Proposed; not feasible.....	40
Total.....		9,737		9,922.3
Reported not feasible.		1,200		1,231
Total.....		8,537		8,691.3

SUMMARY

	Miles	Cost
		<i>Millions</i>
In operation.....	1,058	\$1,081.6
Under construction or financed.....	1,247	2,001.7
Authorized.....	2,937	3,186
Proposed and other.....	3,295	2,402
Not feasible.....	1,200	1,231
Total.....	9,737	9,922.3

<sup>1</sup> Amounts shown with decimal indicate actual bond issues, other figures are estimates.

9,700,000 employed in highway transport industries—1 out of every 7 employed in United States

State	Motor vehicles, parts, and tire manufacturing <sup>1</sup>	Crude and refined petroleum <sup>2</sup>	Sales and servicing <sup>3</sup>	Federal, State, county, and local roads <sup>4</sup>	Truck drivers and other employees <sup>5</sup>	Bus employees (common carriers) <sup>6</sup>	Total
Alabama.....	3,963	344	30,084	12,591	100,644	2,271	149,847
Arizona.....	74		10,678	3,862	58,245	672	73,581
Arkansas.....	203	4,580	21,195	5,268	79,216	1,321	111,783
California.....	39,556	39,753	157,328	29,602	524,069	12,744	803,062
Colorado.....	549	1,792	23,299	6,538	80,089	1,066	113,333
Connecticut.....	2,471		25,248	7,964	71,282	2,906	109,851
Delaware.....	3,211	95	4,302	1,217	17,418	193	26,436
Florida.....	444	98	39,354	12,243	140,050	3,248	195,437
Georgia.....	7,200	149	43,114	13,594	121,280	2,367	187,694
Idaho.....		95	9,658	3,673	39,572	372	53,375
Illinois.....	22,300	16,747	99,527	20,887	216,434	10,479	386,374
Indiana.....	78,700	11,047	55,025	10,385	166,646	3,662	325,465
Iowa.....	1,359		42,512	11,521	109,470	1,494	166,556
Kansas.....	6,877	12,528	34,211	11,337	104,366	1,690	171,018
Kentucky.....	3,173	3,376	27,049	10,117	102,713	3,940	160,368
Louisiana.....	386	24,633	28,483	10,594	105,703	2,816	172,615
Maine.....			11,811	5,463	36,194	817	54,285
Maryland.....	5,776	1,867	26,696	7,179	74,448	2,875	118,841
Massachusetts.....	9,728	869	50,239	17,768	126,370	6,894	211,868
Michigan.....	505,069	4,484	89,516	22,225	226,236	8,011	855,541
Minnesota.....	3,075	217	44,724	16,329	113,842	3,767	181,954
Mississippi.....		3,887	20,443	12,756	83,206	955	121,247
Missouri.....	27,902	1,041	60,934	11,714	151,717	5,519	258,827
Montana.....	22	2,386	9,989	3,465	43,306	453	59,621
Nebraska.....	510	348	23,018	5,461	66,476	2,610	98,423
Nevada.....		3,065	3,065	1,465	17,669	190	22,389
New Hampshire.....		6,607	6,607	3,553	24,319	578	35,057
New Jersey.....	15,400	12,690	54,223	11,787	171,003	11,874	276,977
New Mexico.....		4,108	9,699	3,426	49,807	552	67,592
New York.....	40,600	2,849	138,826	51,146	325,670	20,577	579,668
North Carolina.....	1,340		48,824	14,269	142,390	3,977	210,800
North Dakota.....		10,660	10,660	3,737	25,184	225	39,806
Ohio.....	131,495	8,222	103,291	25,629	249,838	10,374	528,849
Oklahoma.....	1,541	27,310	35,561	8,246	126,594	1,802	201,054
Oregon.....	685	163	26,011	8,247	97,930	1,542	134,578
Pennsylvania.....	31,393	14,804	123,596	35,669	342,599	12,277	560,338
Rhode Island.....	113	353	8,903	2,435	27,153	1,187	40,144
South Carolina.....	247	204	22,511	7,979	76,955	808	108,704
South Dakota.....		10	10,744	3,825	32,069	370	47,018
Tennessee.....	7,589	110	35,810	11,124	115,161	3,313	173,107
Texas.....	3,148	94,520	122,160	30,105	433,642	8,567	692,142
Utah.....		1,782	10,505	2,903	31,611	751	47,552
Vermont.....			5,546	2,707	13,977	324	22,554
Virginia.....	2,008		37,955	14,157	111,784	4,135	170,039
Washington.....	1,702	136	35,785	8,563	111,878	2,746	160,810
West Virginia.....	810	610	19,862	6,162	75,878	2,963	106,285
Wisconsin.....	34,376	163	44,017	18,229	130,047	2,672	229,504
Wyoming.....		5,139	5,921	2,016	28,569	188	41,833
District of Columbia.....			10,145	2,142	16,474	2,521	31,282
Total.....	71,009,852	303,509	1,918,714	553,179	5,737,153	177,664	9,700,071

<sup>1</sup> For motor vehicles and parts, 1953 BLS average monthly employment for States were available. Others estimated by distributing balance of BLS total on basis of 1951 social-security employment data. For tires, 1951 social-security data was used without further adjustment.

<sup>2</sup> 1953 BLS average monthly employment in crude-oil production and petroleum refining adjusted for nonautomotive use by deducting 60 percent from crude oil, and 10 percent from petroleum refining. Break-down by States estimated on basis of crude-oil production and petroleum-refining capacity by States where BLS unable to furnish actual State figures.

<sup>3</sup> 1948 Census of Business.

<sup>4</sup> U. S. Bureau of Public Roads for Federal and State data, U. S. Department of Commerce estimates on local highway employment by States.

<sup>5</sup> Estimated by assuming 0.80 driver per nonfarm truck. Includes employees other than drivers of truck transportation companies.

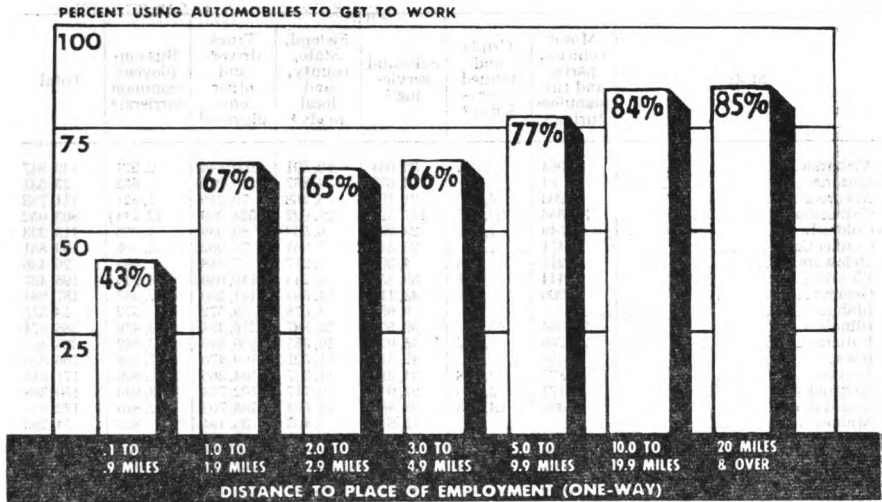
<sup>6</sup> Bus transportation estimate of employment in common carrier bus industry distributed by States on basis of number of common carrier buses in each State.

<sup>7</sup> Includes 14,857 tire manufacturing employees for whom no State distribution is available.

NOTE.—Table above does not include persons engaged in manufacturing batteries, automobile stamping and electrical equipment, raw materials, and in taxicab, insurance, and financing services, estimated at 609,000 additional employees.

(From Automobile Facts and Figures, 1964.)

*85 percent of workers living 10 or more miles from jobs depend on passenger cars<sup>1</sup>*



	Method of home-to-work transportation <sup>1</sup>					
	Passenger car	Passenger car and public transportation	Public transportation	Walk	All other means and other combinations	Total
<b>By occupation:</b>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Professional and semiprofessional.....	68.6	1.0	11.8	17.6	1.0	100
Proprietors, managers, officials.....	77.9	1.9	4.7	13.3	3.2	100
Farmers and farm managers.....	72.5	.6	-----	18.9	8.0	100
Store and office clerks, salesmen (excluding traveling), etc.....	60.3	2.1	18.9	17.8	.9	100
Traveling salesmen, agents, etc.....	85.0	2.0	6.1	4.7	2.2	100
Craftsmen, foremen, skilled laborers, etc.....	73.2	1.4	11.4	10.4	3.6	100
Operatives, semiskilled workers, unskilled workers and laborers.....	61.4	1.5	15.2	17.4	4.5	100
Protective services.....	77.6	2.4	9.7	9.6	.7	100
Personal-service workers.....	24.6	.6	37.7	35.1	2.0	100
<b>By population group:</b>						
Unincorporated areas.....	78.2	.2	5.5	8.4	7.7	100
Incorporated places under 5,000.....	65.5	.2	1.4	28.1	4.7	100
5,000 to 24,999.....	67.7	.2	4.5	24.7	2.9	100
25,000 to 99,999.....	64.3	.3	15.9	17.1	2.4	100
100,000 and over.....	47.6	.5	39.0	10.0	2.9	100
<b>By 1-way distance to place of employment:</b>						
0.1 to 0.9 mile.....	42.9	.2	3.3	50.5	3.1	100
1.0 to 1.9 miles.....	66.5	.2	18.3	12.0	3.0	100
2.0 to 2.9 miles.....	65.4	.1	28.5	2.5	3.5	100
3.0 to 4.9 miles.....	65.7	.5	28.6	.4	4.8	100
5.0 to 9.9 miles.....	77.0	.3	18.4	.4	3.9	100
10.0 to 19.9 miles.....	84.1	.5	9.5	-----	5.9	100
20 miles and over.....	84.5	.7	6.1	-----	8.7	100
All employed persons.....	63.5	.3	15.5	16.6	4.1	100

<sup>1</sup> Excludes persons for whom no travel was required, such as self-employed farmers, proprietors of small stores living at the place of business, etc.

Source: Motor vehicle use studies, summer, 1951, in Arkansas, Louisiana, North Dakota, Oklahoma, South Dakota, and Wisconsin, by State highway departments in cooperation with U. S. Bureau of Public Roads (from Automobile Facts and Figures, 1954).



1952 motor-vehicle insurance premiums \$3,650,000,000—Auto insurance premiums and loss record, 1952

State	Automobile liability		Automobile property damage		Automobile physical damage		Total	Total auto-insurance premiums per vehicle
	Direct premiums written	Ratio of losses paid to premiums written	Direct premiums written	Ratio of losses paid to premiums written	Direct premiums written	Ratio of losses paid to premiums written		
Alabama	\$12,555,831	35	\$6,410,334	44	\$22,963,782	46	\$41,929,947	\$59.22
Arizona	7,218,396	41	3,141,099	46	10,423,144	46	20,782,639	64.51
Arkansas	5,834,141	35	2,921,459	52	14,372,073	46	23,127,673	46.54
California	155,663,852	45	75,274,032	47	165,647,535	53	396,585,419	81.48
Colorado	8,792,706	35	5,600,204	53	17,632,087	45	32,024,997	53.10
Connecticut	34,097,928	39	11,470,136	49	20,285,926	42	65,853,990	87.56
Delaware	2,855,261	29	1,760,505	51	4,531,816	40	9,147,582	82.20
Florida	21,240,151	50	12,102,160	48	33,593,609	36	66,935,920	57.05
Georgia	17,125,969	46	9,574,931	60	34,772,709	40	61,473,609	60.35
Idaho	3,969,945	39	2,113,517	55	8,714,725	44	14,798,187	53.28
Illinois	89,642,492	45	43,686,790	54	102,759,665	48	236,088,947	84.02
Indiana	31,022,937	38	20,054,203	57	51,941,647	43	103,018,787	88.22
Iowa	15,388,584	49	11,279,589	60	29,053,362	44	55,721,535	51.87
Kansas	12,108,584	45	6,878,667	53	26,495,671	50	45,482,922	49.41
Kentucky	12,576,907	46	7,005,032	65	22,467,429	42	42,049,368	49.80
Louisiana	17,492,756	30	8,988,048	38	25,870,871	46	52,351,675	69.83
Maine	6,099,464	36	3,933,150	48	7,047,156	41	17,079,770	61.37
Maryland	19,188,200	41	11,810,326	53	23,160,179	43	54,158,705	70.02
Massachusetts	64,920,684	58	36,359,605	46	36,150,139	45	137,430,428	100.39
Michigan	43,025,584	39	32,456,521	58	81,318,422	49	156,800,527	82.00
Minnesota	27,205,233	46	12,724,001	56	25,729,159	43	65,658,483	54.28
Mississippi	5,968,775	38	2,699,430	48	15,452,902	51	24,101,107	47.40
Missouri	35,319,460	44	15,125,961	55	43,943,840	46	94,388,261	71.70
Montana	4,894,467	25	2,071,289	55	8,386,065	48	15,351,821	55.53
Nebraska	8,630,430	37	5,421,682	48	14,273,197	42	28,325,309	45.91
Nevada	1,755,676	59	959,760	50	3,386,664	48	6,102,100	66.87
New Hampshire	5,510,829	39	2,423,236	54	4,571,203	40	10,505,268	70.82
New Jersey	53,996,622	38	28,515,029	45	54,576,765	42	137,088,416	78.65
New Mexico	3,841,201	42	2,257,843	51	10,820,080	40	16,919,124	63.85
New York	226,582,659	45	77,316,449	50	106,892,757	49	410,791,865	106.53
North Carolina	13,623,833	41	9,409,039	49	37,336,263	44	62,369,135	54.35
North Dakota	3,224,291	32	1,504,297	53	5,763,813	49	10,492,401	37.17
Ohio	61,963,296	40	43,798,007	49	94,933,697	44	200,255,000	67.24
Oklahoma	13,763,219	48	7,235,350	53	27,034,151	42	48,032,720	54.60
Oregon	17,506,525	50	10,190,462	54	23,059,148	45	50,756,135	70.77
Pennsylvania	77,094,537	38	47,517,934	55	100,574,586	45	225,187,057	68.18
Rhode Island	5,621,712	39	3,048,484	53	7,102,524	43	15,772,720	59.68
South Carolina	5,633,744	42	3,932,078	49	20,572,248	42	32,138,070	49.49
South Dakota	3,427,563	36	1,813,807	57	6,894,590	54	12,135,960	41.09
Tennessee	18,457,044	50	9,190,678	6	25,361,313	43	53,009,035	59.47
Texas	64,810,076	31	34,411,031	43	106,087,557	43	205,308,664	65.95
Utah	4,662,414	44	2,437,932	66	8,489,104	46	15,589,450	51.58
Vermont	2,879,684	44	1,609,154	51	3,878,388	45	8,367,226	66.58
Virginia	21,183,306	45	10,343,749	65	31,573,721	46	63,100,776	61.98
Washington	21,014,522	44	12,440,561	58	31,283,651	42	64,738,734	66.97
West Virginia	9,875,259	44	5,503,996	64	16,325,251	50	31,704,506	64.34
Wisconsin	36,606,331	44	16,030,149	55	28,660,252	43	81,296,734	66.12
Wyoming	2,020,060	26	1,063,144	54	4,843,194	47	7,926,396	52.39
District of Columbia	6,146,197	47	3,182,654	58	8,256,244	40	17,585,095	87.00
United States Total	1,348,039,337	44	686,997,584	51	1,614,804,274	46	3,649,841,195	69.84

Source: 1953 statistical issue, The Spectator Magazine (from Automobile Facts and Figures 1954).

Projections of the total population of the United States, including Armed Forces overseas, July 1, 1955 to 1975, based on various assumptions as to fertility<sup>1</sup>

[In thousands]

Year	A	B	C	D
1955	164,782	164,782	164,644	164,403
1960	177,426	177,426	176,126	173,847
1965	189,916	189,916	186,146	180,927
1970	204,222	202,359	196,269	189,110
1975	220,982	213,568	206,615	198,632

<sup>1</sup> The following assumptions as to fertility are implied: A, 1950-53 level continues to 1975; B, 1950-53 level continues to 1965, then declines to about the 1940 level by 1975; C, 1950-53 level declines to about 1940 level by 1975; D, 1950-53 level declines from 1953 level to about 1940 level by 1960 and continues at that level to 1975. The 1950 population, including Armed Forces overseas, was estimated to be 151,677,000 on July 1, 1950.

Gross national product, 1953-74, projected at a 3 percent per year rate of increase

[Billions of dollars]

1953 (actual) .....	364.9	1965 (projected) .....	520.4
1954 (projected) .....	375.8	1966 .....	536.0
		1967 .....	552.1
1955 .....	387.1	1968 .....	568.7
1956 .....	398.7	1969 .....	585.8
1957 .....	410.7	1970 .....	603.4
1958 .....	423.0	1971 .....	621.5
1959 .....	435.7	1972 .....	640.1
1960 .....	448.8	1973 .....	659.3
1961 .....	462.3	1974 .....	679.1
1962 .....	476.2		
1963 .....	490.5	Total 1965-74 .....	5,966.4
1964 .....	505.2	Total 1955-74 .....	10,404.6
Total 1955-64 .....	4,438.2		

Highway construction activity as related to gross national product

Year	Total highway construction expenditures (millions of dollars)	Gross national product (current billions of dollars)	Construction as percent of gross national product
1921	853	68.5	1.3
1922	876	69.9	1.3
1923	905	81.6	1.0
1924	987	82.0	1.2
1925	1,082	86.4	1.3
1926	1,067	92.3	1.2
1927	1,222	90.9	1.3
1928	1,289	93.7	1.4
1929	1,286	103.8	1.4
1930	1,516	90.9	1.7
1931	1,355	75.9	1.8
1932	958	58.3	1.7
1933	847	55.3	1.4
1934	1,000	64.9	1.5
1935	945	72.2	1.1
1936	1,362	82.5	1.7
1937	1,226	90.2	1.3
1938	1,421	84.7	1.5
1939	1,381	91.3	1.3
1940	1,302	101.4	.9
1941	1,066	126.4	.4
1942	734	161.6	.2
1943	446	194.3	.2
1944	362	213.7	.2
1945	398	215.2	.2
1946	895	211.1	.4
1947	1,451	233.3	.6
1948	1,774	259.0	.7
1949	2,131	258.2	.8
1950	2,272	284.2	.8
1951	2,518	329.2	.8
1952	2,860	348.0	.8
1953	3,222	364.9	.9
1954 (estimate)	3,729		

<sup>1</sup> Revised.

Source: U. S. Department of Commerce, Construction and Building Materials, statistical supplement, May 1953; August 1953, 20th Century Fund; 1921-28, Survey of Current Business, May 1942, p. 12; 1929-53, Council of Economic Advisers, January 1954; 1953-54, Bureau of Public Roads.

*Proposed highway construction activity, 1955-64, as related to gross national product projected at 3 percent rate of increase, 1953 dollars*

Year	Total highway construction expenditures (millions of dollars)	Gross national product (billions of dollars)	Construction as percent of gross national product
1955.....	10, 136. 5	387. 1	2. 6
1956.....	10, 136. 5	398. 7	2. 5
1957.....	10, 136. 5	410. 7	2. 5
1958.....	10, 136. 5	423. 0	2. 4
1959.....	10, 136. 5	435. 7	2. 3
1960.....	10, 136. 5	448. 8	2. 3
1961.....	10, 136. 5	462. 3	2. 2
1962.....	10, 136. 5	476. 2	2. 1
1963.....	10, 136. 5	490. 5	2. 1
1964.....	10, 136. 5	505. 2	2. 0
Total.....	101, 365. 0	4, 438. 2	.....
Average.....	.....	.....	2. 3

*Estimate of travel by motor vehicles, 1921-54*

Year	Vehicle-miles (millions)	Percent change from previous year	Year	Vehicle-miles (millions)	Percent change from previous year
1921.....	55, 027	.....	1938.....	271, 177	0. 4
1922.....	67, 697	23. 0	1939.....	285, 402	5. 2
1923.....	84, 995	25. 6	1940.....	302, 143	5. 9
1924.....	104, 838	23. 3	1941.....	<sup>1</sup> 333, 396	10. 0
1925.....	122, 346	16. 7	1942.....	<sup>1</sup> 267, 096	-19. 9
1926.....	140, 735	15. 0	1943.....	<sup>1</sup> 206, 747	-22. 6
1927.....	166, 453	12. 6	1944.....	<sup>1</sup> 211, 580	2. 3
1928.....	172, 856	9. 1	1945.....	<sup>1</sup> 249, 344	17. 8
1929.....	197, 720	14. 4	1946.....	<sup>1</sup> 340, 655	36. 6
1930.....	206, 320	4. 4	1947.....	370, 622	8. 8
1931.....	216, 151	4. 8	1948.....	397, 589	7. 3
1932.....	200, 517	-7. 2	1949.....	424, 089	6. 7
1933.....	200, 642	( <sup>1</sup> )	1950.....	457, 222	7. 8
1934.....	215, 563	7. 4	1951.....	479, 369	4. 8
1935.....	228, 568	6. 0	1952.....	512, 242	6. 9
1936.....	252, 128	10. 3	1953.....	540, 707	5. 6
1937.....	270, 110	7. 1	1954.....	557, 000	3. 0

<sup>1</sup> Less than 0.1 percent increase.

<sup>2</sup> Excludes military traffic.

Source: Highway Statistics Summary to 1945, Bureau of Public Roads; Highway Statistics for respective years 1947-48, Bureau of Public Roads; Bureau of Public Roads estimates for 1953 and 1954; Automobile Facts and Figures, 1953, Automobile Manufacturers Association for 1921-35 and 1949-51 data; Public Roads, June 1954, vol. 28, No. 2, for 1952 data.

NATIONAL HIGHWAY PROGRAM

State and Federal gasoline tax rates by years 1

(Table G-205, issued August 1964)

[Cents per gallon]

State	1984	1985	1986	1987	1988	1989	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	
Alabama	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Arizona	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Arkansas	6-6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
California	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Colorado	4-5-4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Connecticut	2	2-3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Delaware	3	3-4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Florida	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Georgia	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Idaho	5	5	5	5	5	5.1	5.1	5.1	5.1	5.1	5.1	5.1-5.6	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Illinois	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Indiana	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Iowa	3	3	3	3	3	3	3	3	3	3	3	3-4	3	3	3	3	3	3	3	3	3	3
Kansas	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Kentucky	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Louisiana	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Maine	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Maryland	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Massachusetts	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Michigan	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Minnesota	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mississippi	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Missouri	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Montana	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Nebraska	4	4-5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Nevada	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
New Hampshire	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
New Jersey	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
New Mexico	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
New York	3	3-4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
North Carolina	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
North Dakota	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Ohio	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Oklahoma	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Oregon	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Pennsylvania	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Rhode Island	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
South Carolina	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
South Dakota	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Tennessee	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Texas	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4



Estimated expenditures for highway and street purposes, 1953-54<sup>1</sup>

(Table HF-2, preliminary, June 1954)

Expended on—	1953 preliminary estimate		1954 forecast	
	Million dollars	Percent	Million dollars	Percent
<b>State highways:<sup>2</sup></b>				
Capital outlay.....	2,276	39.5	2,740	42.8
Maintenance.....	628	10.9	660	10.3
Administration <sup>3</sup> .....	130	2.2	135	2.1
Highway police.....	105	1.8	107	1.7
Interest.....	100	1.7	138	2.2
Total direct expenditures.....	3,239	56.1	3,780	58.1
Obligations retired <sup>4</sup> .....	125	2.2	150	2.3
Total disbursements.....	3,364	58.3	3,930	61.4
<b>County and other local rural roads:</b>				
Capital outlay.....	463	8.0	488	7.6
Maintenance.....	634	11.0	639	10.0
Administration <sup>3</sup> .....	55	1.0	56	.9
Interest.....	27	.5	28	.4
Total direct expenditures.....	1,179	20.5	1,211	18.9
Obligations retired <sup>4</sup> .....	83	1.4	85	1.4
Total disbursements.....	1,262	21.9	1,296	20.3
<b>Urban streets:</b>				
Capital outlay.....	422	7.3	434	6.8
Maintenance.....	425	7.3	431	6.7
Administration <sup>3</sup> .....	61	1.1	63	1.0
Interest.....	49	.8	51	.8
Total direct expenditures.....	957	16.5	979	15.3
Obligations retired <sup>4</sup> .....	125	2.2	130	2.0
Total disbursements.....	1,082	18.7	1,109	17.3
<b>Federal expenditures not classified by system<sup>5</sup></b>	61	1.1	67	1.0
<b>All roads and streets:</b>				
Capital outlay.....	3,222	55.9	3,729	58.2
Maintenance.....	1,687	29.2	1,730	27.0
Administration.....	246	4.3	254	4.0
Highway police.....	105	1.8	107	1.7
Interest.....	176	3.0	217	3.4
Total direct expenditures.....	5,436	94.2	6,037	94.3
Obligations retired.....	333	5.8	365	5.7
Grand total.....	5,769	100.0	6,402	100.0

<sup>1</sup> Federal and State data are for calendar year; local data are for varying fiscal years.<sup>2</sup> Includes expenditures by States on transcity connections of State highways.<sup>3</sup> Includes engineering and equipment costs not charged to capital outlay and maintenance, and other miscellaneous expenditures.<sup>4</sup> Redemptions by refunding not included.<sup>5</sup> Includes funds of other agencies expended directly by Public Roads as well as funds expended by these agencies. Expenditures were principally for capital outlay and are included as such in the totals.

Source: Department of Commerce, Bureau of Public Roads.

*Estimated long-term highway obligations issued, redeemed, and outstanding, 1953-54<sup>1</sup>*

(Table HB-1, preliminary, June 1954)

[Million dollars]

Item	1953 preliminary estimate	1954 forecast
<b>Issued during year: <sup>2</sup></b>		
State obligations.....	1,539	1,602
County and other local rural obligations.....	73	80
Urban obligations.....	220	240
Total.....	1,832	1,922
<b>Less duplicated and interunit obligations:</b>		
State-assumed local debt duplicated.....	1	1
Interunit obligations not public debt.....		
Total public long-term highway debt issued.....	1,831	1,921
<b>Retired during year: <sup>3</sup></b>		
State obligations.....	125	150
County and other local rural obligations.....	83	85
Urban obligations.....	125	130
Total.....	333	365
<b>Less duplicated and interunit obligations:</b>		
State-assumed local debt duplicated.....	5	5
Interunit obligations not public debt.....	1	1
Total public highway debt redeemed.....	327	359
<b>Outstanding at end of year:</b>		
State obligations.....	4,530	5,982
County and other local rural obligations.....	823	818
Urban obligations.....	1,982	2,092
Total.....	7,335	8,892
<b>Less duplicated and interunit obligations:</b>		
State-assumed local debt duplicated.....	24	20
Interunit obligations not public debt.....	9	8
Total public highway debt outstanding.....	7,302	8,864

<sup>1</sup> State data are for calendar year; local data are for varying fiscal years.

<sup>2</sup> Refunding issues not included.

<sup>3</sup> Redemptions by refunding not included.

Source: Department of Commerce, Bureau of Public Roads.

[U. S. Department of Commerce, Bureau of Public Roads, June 1954]

ESTIMATE OF HIGHWAY RECEIPTS AND EXPENDITURES, 1953

Total disbursements for highway purposes are expected to reach \$6.4 billion in 1954, an increase of \$0.6 billion over 1953 and \$1.1 billion over 1952.

All expenditure items will show increases during 1954, but it is expected that capital outlay expenditures will account for the major portion of the increase. Estimated capital outlays of \$3,729 million will exceed the 1953 total by \$507 million and the 1952 total by almost \$1 billion.

Maintenance, administration, and highway police expenditures will show only nominal increases in 1954, but interest payments will be up \$41 million over 1953 and thus will continue to show the impact of the large-scale use of credit financing.

Principal payments of \$333 million in 1953 and \$365 million in 1954 are higher than the 1952 payments, but still do not reflect the greatly accelerated use of bond issues in the highway field. This expenditure item can be expected to increase materially during the next few years, however.

Total receipts for highway purposes are expected to exceed \$7 billion in 1954, while estimated receipts for 1953 were just under that figure. The 1954 forecast of \$7,250 million is \$370 million greater than the 1953 estimate of \$6,880 million and approximately \$1.5 billion more than the 1952 receipts.

All receipt items for both years, however, show fairly substantial increases over 1952. For 1954 Federal aid is up over \$100 million; highway-user imposts up \$392 million; property taxes, general revenue, and miscellaneous receipts up over \$100 million; and toll receipts up \$21 million over 1952. Further increases in Federal funds and toll receipts can be expected during the next few years.

The tremendous amount of bonds issued during 1953 and 1954 account for the major portion of the increase of total receipts over 1952. Bond issues of \$1,832 million in 1953 and \$1,922 million in 1954 are \$500 million and \$800 million greater, respectively, than the 1952 issues. Toll facility revenue bonds totaling over \$1.3 billion were issued in 1953, and it is anticipated that over \$1.4 billion will be issued in 1954.

Highway debt outstanding at the end of 1954 is expected to approach the \$9 billion mark, an increase of \$1.5 billion over 1953 and a little more than \$3.0 billion over 1952. This spectacular increase in debt outstanding is due, of course, to the issuance of toll-revenue bonds. At the end of 1952 it was estimated that approximately \$1.8 billion of toll-revenue bonds were outstanding. To that can be added the \$2.7 billion issued during 1953 and 1954, making a total of about \$4.5 billion of toll-facility bonds outstanding, of which about \$4.0 billion are not full faith and credit obligations of the governmental units. Thus, the outstanding highway debt of the governmental units remains relatively low as compared to revenues. However, the entire debt outstanding for highway purposes has to be repaid by the highway user, regardless of whether the credit of the issuing government is pledged.

It will be noted in the estimates for the 2 years included in this bulletin that the cumulative receipts are almost \$2.0 billion greater than the estimated disbursements, which indicates that there is little possibility that 1955 activities in the highway field will decline appreciably.



*Estimated revenues for highway and street purposes, 1953-54<sup>1</sup>*

[Table HF-1, preliminary, June 1954]

Source	1953 preliminary estimate		1954 forecast	
	<i>Million dollars</i>	<i>Percent</i>	<i>Million dollars</i>	<i>Percent</i>
<b>Federal Government:</b>				
Funds expended under the supervision of Bureau of Public Roads:				
Major funds.....	535	7.8	564	7.8
Forest, park, and public lands.....	37	.5	38	.5
Other.....	1		6	.1
Subtotal.....	573	8.3	608	8.4
Other Federal funds.....	40	.6	40	.5
<b>Total Federal Government.....</b>	<b>613</b>	<b>8.9</b>	<b>648</b>	<b>8.9</b>
<b>State governments:</b>				
Highway-user imposts.....	2,957	43.0	3,151	43.4
Toll receipts.....	143	2.1	150	2.1
Property taxes and general revenues.....	56	.8	58	.8
Miscellaneous.....	19	.3	19	.3
Total revenues.....	3,175	46.2	3,378	46.6
Bond issue proceeds <sup>2</sup> .....	1,539	22.3	1,602	22.1
<b>Total receipts.....</b>	<b>4,714</b>	<b>68.5</b>	<b>4,980</b>	<b>68.7</b>
<b>Counties and other local rural units:</b>				
Highway-user imposts.....	4	.1	5	.1
Toll receipts.....	15	.2	17	.2
Property taxes and general revenues.....	480	7.0	495	6.8
Miscellaneous.....	38	.5	40	.6
Total revenues.....	537	7.8	557	7.7
Bond issue proceeds <sup>2</sup> .....	73	1.1	80	1.1
<b>Total receipts.....</b>	<b>610</b>	<b>8.9</b>	<b>637</b>	<b>8.8</b>
<b>Urban places:</b>				
Highway-user imposts.....	37	.5	40	.6
Toll receipts.....	42	.6	44	.6
Property taxes and general revenues.....	575	8.4	590	8.2
Miscellaneous.....	69	1.0	71	.9
Total revenues.....	723	10.5	745	10.3
Bond issue proceeds <sup>2</sup> .....	220	3.2	240	3.3
<b>Total receipts.....</b>	<b>943</b>	<b>13.7</b>	<b>985</b>	<b>13.6</b>
<b>Summary:</b>				
Federal funds.....	613	8.9	648	8.9
Highway-user imposts.....	2,998	43.6	3,196	44.1
Toll receipts.....	200	2.9	211	2.9
Property taxes and general revenues.....	1,111	16.2	1,143	15.8
Miscellaneous.....	126	1.8	130	1.8
Grand total revenues.....	5,048	73.4	5,328	73.5
Bond issue proceeds.....	1,832	26.6	1,922	26.5
<b>Grand total receipts.....</b>	<b>6,880</b>	<b>100.0</b>	<b>7,250</b>	<b>100.0</b>

<sup>1</sup> Federal and State data are for calendar year; local data are for varying fiscal years.

<sup>2</sup> Refunding issues not included.

Source: Department of Commerce, Bureau of Public Roads.

## 10-year total construction needs, 1955-64

System	Amount
Interstate:	
Rural-----	\$13, 052, 000, 000
Urban-----	10, 862, 000, 000
Other Federal-aid primary:	
Rural-----	19, 887, 000, 000
Urban-----	10, 035, 000, 000
Federal-aid secondary-----	14, 876, 000, 000
Other rural roads-----	17, 073, 000, 000
Other city streets-----	15, 580, 000, 000
<b>Grand total, all roads and streets-----</b>	<b>101, 365, 000, 000</b>

NOTE.—These figures represent the preliminary accumulation of estimates made by the State highway departments in response to Bureau of Public Roads memorandum of July 16, 1954. This memorandum requested estimates of the costs of completing the several systems of highways as directed by sec. 13 of the Federal-aid Highway Act of 1954. They should be considered in conjunction with that memorandum in order to be properly interpreted.

Typical motor vehicle registration fees<sup>1</sup> status as of Jan. 1, 1954

State	Auto- mobile	Nonfarm single-unit truck	Farm single-unit truck	Tractor trucks <sup>2</sup>	Semitrail- ers <sup>2</sup>	Combina- tion
Alabama.....	\$3. 00	\$22. 50	\$22. 50	\$100. 00	\$50. 00	\$150. 00
Arizona.....	3. 50	30. 00	30. 00	69. 50	50. 95	120. 45
Arkansas.....	13. 00	42. 00	36. 00	200. 00	5. 00	205. 00
California.....	8. 00	48. 00	48. 00	88. 00	108. 00	196. 00
Colorado.....	5. 90	17. 50	17. 50	25. 00	20. 00	45. 00
Connecticut.....	7. 00	37. 50	37. 50	200. 00	-----	200. 00
Delaware.....	10. 00	52. 00	26. 00	95. 70	77. 30	173. 00
Florida.....	15. 00	58. 30	58. 30	96. 80	109. 50	206. 30
Georgia.....	3. 50	10. 00	10. 00	50. 00	100. 00	150. 00
Idaho.....	5. 00	30. 00	30. 00	50. 00	40. 00	90. 00
Illinois.....	10. 50	86. 00	86. 00	640. 00	-----	640. 00
Indiana.....	11. 00	35. 00	35. 00	215. 00	-----	215. 00
Iowa.....	27. 00	95. 00	95. 00	435. 00	60. 00	495. 00
Kansas.....	13. 50	100. 00	100. 00	250. 00	125. 00	375. 00
Kentucky.....	4. 50	32. 00	4. 50	350. 00	-----	350. 00
Louisiana.....	3. 00	60. 00	10. 00	140. 00	100. 00	240. 00
Maine.....	14. 00	60. 00	60. 00	300. 00	5. 00	305. 00
Maryland.....	10. 00	35. 00	10. 00	35. 00	100. 00	135. 00
Massachusetts.....	4. 50	39. 00	12. 00	120. 00	2. 00	122. 00
Michigan.....	10. 85	53. 00	26. 50	154. 00	127. 75	281. 75
Minnesota.....	18. 60	40. 00	25. 92	280. 00	10. 00	290. 00
Mississippi.....	9. 30	37. 00	21. 40	271. 00	11. 00	282. 00
Missouri.....	11. 00	50. 00	50. 00	300. 00	7. 00	307. 00
Montana.....	10. 00	28. 00	14. 00	60. 00	32. 50	92. 50
Nebraska.....	8. 00	80. 00	12. 00	380. 00	1. 00	381. 00
Nevada.....	5. 00	23. 85	23. 85	39. 60	32. 85	72. 45
New Hampshire.....	15. 50	75. 00	25. 00	240. 00	-----	240. 00
New Jersey.....	10. 00	60. 00	30. 00	110. 00	90. 00	200. 00
New Mexico.....	14. 00	43. 50	43. 50	99. 00	74. 00	173. 00
New York.....	15. 50	62. 50	43. 75	88. 00	157. 50	245. 50
North Carolina.....	10. 00	62. 50	31. 25	160. 00	160. 00	320. 00
North Dakota.....	20. 00	32. 00	32. 00	350. 00	-----	350. 00
Ohio.....	10. 00	81. 60	34. 60	177. 20	135. 20	312. 40
Oklahoma.....	24. 79	95. 00	17. 92	65. 00	295. 00	360. 00
Oregon.....	10. 00	37. 80	26. 50	62. 30	51. 80	114. 10
Pennsylvania.....	10. 00	45. 00	45. 00	120. 00	75. 00	195. 00
Rhode Island.....	14. 00	39. 00	39. 00	127. 00	2. 00	129. 00
South Carolina.....	5. 00	66. 00	66. 00	66. 00	96. 00	162. 00
South Dakota.....	25. 00	52. 50	52. 50	187. 50	81. 00	268. 50
Tennessee.....	7. 50	25. 00	12. 50	275. 00	-----	275. 00
Texas.....	11. 88	81. 25	40. 63	154. 00	117. 00	271. 00
Utah.....	5. 00	25. 00	25. 00	60. 00	90. 00	150. 00
Vermont.....	26. 00	118. 75	32. 00	420. 00	15. 00	435. 00
Virginia.....	10. 00	19. 50	19. 50	30. 00	150. 00	180. 00
Washington.....	5. 00	30. 00	17. 50	105. 00	55. 00	160. 00
West Virginia.....	18. 20	38. 00	38. 00	227. 00	15. 00	242. 00
Wisconsin.....	16. 00	140. 00	46. 67	475. 00	10. 00	485. 00
Wyoming.....	5. 00	15. 00	15. 00	50. 00	40. 00	90. 00
District of Columbia.....	5. 00	35. 00	35. 00	65. 00	50. 00	115. 00

<sup>1</sup> A 1951 model 4-door sedan was used as a typical passenger car. A 1951 stake body truck of 5,320 pounds empty weight, and 12,500 pounds gross vehicle weight was used as the typical single-unit truck. A tractor of 8,825 pounds empty weight and a semitrailer of 7,320 pounds empty weight, registered for 40,000 pounds gross weight, were selected as a typical combination.

<sup>2</sup> For States registering the tractor and semitrailer as a unit, the fee for the combination is given in the "tractor" column.

Source: Bureau of Public Roads, table MV-103.