UNITED STATES DEPARTMENT OF COMMERCE John T. Connor, Secretary Washington, D.C.

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REMARKS BY ALAN S. BOYD, UNDER SECRETARY OF COMMERCE FOR TRANSPORTATION, PREPARED FOR DELIVERY BEFORE THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS, AT WICHITA, KANSAS, NOVEMBER 29, 1966, AT 11 A.M.

It has been my pleasure to meet many of you at various highway meetings in the past, but this is my first opportunity to address your own organization, the American Association of State Highway Officials.

I am glad to be here and speak to you--the men who make this nation's highway system work. You have the lion's share of the responsibility for the \$15 billion a year we are spending throughout the country to build and maintain our highways.

I am especially glad to be here at this time because your Federal Government is preparing to embark on a new effort in transportation development with the creation of a Department of Transportation.

We Americans spend one-fifth of our Gross National Product on transportation. This not only indicates the importance of mobility of people and goods in our way of life it emphasizes the great benefits to be realized through improved efficiency and economy in transportation. When we speak of transportation, of course, we are speaking to a massive degree about highways. Our estimated national transportation bill last year was a little over \$140 billion. Highway passenger and freight transport accounted for about \$115 billion, or 82 percent of the total. Private automobiles accounted for more than 88 percent of the 1965 passenger dollar, while for-hire motor vehicles added another 4 percent. Of the 1965 freight dollar, 73 percent was spent on highway transport.

Highways now account for 92 percent of intercity travel, and 23 percent of the ton-miles of all intercity freight.

As State highway officials it is your duty and your privilege to serve this enormous highway transportation industry and, ultimately, the millions of people who daily use and benefit from our highways.

The new Department of Transportation will have the same mission—with respect to all modes of transportation and to our ultimate customers, the American public.

To do this, the Department will bring together most of the scattered Federal agencies which have been dealing for years with various aspects of transportation on a compartmented basis. The Department's creation reflects an awareness throughout the Government, the industry and the Nation that our transportation problems have outgrown the fragmented approach which we have relied upon in the past. While the program-oriented organization has given us some remarkable accomplishments when viewed primarily from a modal standpoint, it clearly has failed organizationally, administratively and from the program standpoint to develop the kind of systems approach to transportation that our future needs demand.

In its field, the highway program has demonstrated the kind of approach we need to apply to our total transportation program. Despite a multitude of governmental jurisdictions, highway administrators have succeeded in coordinating their efforts to produce an integrated,

nationwide system of roads and streets. In this accomplishment, AASHO has played an indispensible role.

It is now the purpose of the Department of Transportation to coordinate the various Federal transportation programs into a cohesive whole. The Department represents the beginning of a new approach to transportation problems. It is a logical framework for coping with complex technical, economic and social relationships, and a vital ingredient to our future prosperity.

It will enable us to maintain the necessary dialogue between the Federal Government, State and local governments and private enterprise. It will insure that we continue to have the safest, most efficient transportation system in the world—one which is privately owned and offers the user convenient service and competitive alternatives to the maximum extent possible.

It will provide the focal point for developing a system suited to the accomplishment of our transportation objectives while at the same time recognizing the necessary relationship of transportation to other social and economic objectives.

I believe highway people come to this new program particularly well prepared. But before discussing this point, I think you would be interested in how highways fit into the organization of the Department.

The operational programs of the Department will be administered through its modal units, the major ones of which are the Federal Highway Administration, the Federal Railroad Administration, the Federal Aviation Administration, and the Coast Guard. The administrators of these units will be Presidential appointees and will report directly to the Secretary rather than through any intermediate officials. They will be the advocates of their mode within the Department, as well as the representatives of the Administration in dealing with their respective industries.

Your agency in the Department will be the new Federal Highway Administration. Its administrator will be your

pipeline with the Secretary. He will be the principal adviser to the Secretary on all matters relating to highway construction and highway transportation in its broadest sense.

As you know, the Federal Highway Administration will include the Bureau of Public Roads and the newly created National Highway Safety Agency, which was recently established in the Department of Commerce. The inclusion of the traffic safety program in the Federal Highway Administration represents a reorganization to accommodate expanded highway functions and new responsibilities, somewhat similar to the creation of the Office of Highway Safety in the Bureau of Public Roads a few years ago.

The legislation to establish the Department of Transportation did not in any way change the basic legislation under which the various Federal highway programs operate. It continues the Federal-State partnership for highway construction, with Federal-aid funds apportioned from the Trust Fund on the basis of legislatively established factors. It continues the research programs, the safety programs and the planning programs, including the requirement for the highway needs studies and the authority for planning for a continuing high-level Federal-aid program-which will be one of the major responsibilities under the new Department. And, of course, Congress retains its responsibilities for highway program policies, as it does for all transportation policies.

It will, however, be the duty of the Department to study transportation systems, develop new information and knowledge, and make recommendations to the Congress. In this task, as I have indicated, the Department must take the broad view. It must think beyond the narrow limits of a particular mode and focus the efforts of all interests on our common goals, which are greater efficiency and economy in transportation generally and coordination of entire transportation systems—and all this within the context of economic and social policies.

In striving toward these goals, the new department is fortunate to have the Federal-aid highway program as one of its bulwarks. This program not only meets the requirements of the Federal role in transportation, it often has been a forerunner in establishing them.

The Federal-aid highway program is characterized by:

- its dedication to the continuous, systematic improvement of the highway plant;
- 2. its well-established tradition of Federal-State cooperation in administering an aid program;
- its reliance on user charges to finance the Federal investment; and
- its responsiveness to change, both technological and social.

Each of these characteristics is important to the success of the highway program and offers a lesson for other Federal transportation programs.

Certainly, a commitment to the continuous modernization of the physical facilities of our transportation system is essential. This in turn calls for long-range vision and sound planning to identify needs and develop programs to meet them.

Effective programs require a smooth-functioning organization and cooperation, whether this be achieved through a Federal-State aid program as in the case of high-ways, or through cooperation with other units of government or private industry.

Effective programs also require sound financing. The most desirable method of financing transportation improvements is through an equitable system of charges against the users who benefit from these improvements. Such a system has served the highway program well, providing it with a dependable source of revenue, and largely freeing Federal participation from reliance on the General Fund.

Together, these three characteristics form the undergirding which enables the Federal-aid highway program to respond to change and to serve the public. This is the real field of action, where your performance is most visible and where you can be judged. In its responsiveness to change, the Federal-aid highway program, under the leadership of the Bureau of Public Roads, has played some notable pacesetting roles. This is a continually evolving program, however, and as some challenges are met new ones appear. No doubt there always will be unsolved problems demanding attention.

One of the outstanding contributions of the highway program has been its pioneer work in the field of transportation planning. This work dates from 1934 when Federal-aid funds were first made available for statewide highway planning surveys. These surveys were the first successful means to inventory highway systems, their use, and their financing. With continuing breadth and refinement they have provided the facts from which forecasts and plans can be made.

This early effort paved the way for the planning and now the construction of the Interstate Highway System. Later it led to the establishment of the urban transportation planning process in some 230 urban areas, as mandated by the Federal-Aid Highway Act of 1962. Urban transportation planning not only is bringing about the coordination of highways with other forms of urban transport, it also is giving impetus to community and area planning generally. For example, well over 1500 formal agreements for cooperative planning on a continuing basis have been signed between the various State highway departments and local communities throughout the country. Certainly, never before has this number of elected officials been brought face to face with planning. And since the very first step in the planning process is the determination or estimate of future land use in each individual community, the requirement to join in planning for transportation is bound to have a far-reaching effect on general planning in metropolitan areas, since land use is the basis of all planning.

Now, drawing on these years of highway planning experience, we are going to undertake the planning of our total transportation system. This is really the heart of the Department of Transportation program.

In responding to technological change, and often spurring it on through research and development, the highway

program has made remarkable progress. These achievements may not be spectacular, or even appreciated, since they tend to appear in relatively small increments, and on an enormous base, but they are real. The controlled-access freeway is a good example. Every five miles of new freeway will, on the average, save one life a year. The completed Interstate System will save 8,000 lives a year. In addition, modern freeway design contributes to highway capacity, efficiency and economy. The completed Interstate System will save its users an estimated \$11 billion a year in reduced operating, time and accident costs.

Many problems remain, of course, on our existing roads and streets, both with regard to safety and capacity. While these problems would be more acute were it not for the continuous rebuilding and updating of facilities through the Federal-aid program, much remains to be done. Federal Highway Administrator Rex M. Whitton has outlined additional measures that are needed to improve the capacity of urban street systems -- better application of proven traffic engineering techniques, improvement and utilization of new electronic measures, the possible utilization of arterials as rush-hour freeways, the provision of reversible bus lanes, and the development of new programs for off-street parking. I would urge you to give immediate and serious consideration to these possible solutions to your urban congestion problems, and to make use of the Federal aid available for their implementation.

In the matter of traffic safety, the Federal-aid highway program again has had the distinction of being a forerunner for subsequent programs. Highway and traffic engineers deserve a large share of the credit for bringing traffic safety finally out of its pre-scientific period. Their insistence on finding countermeasures with measurable results demonstrated the effectiveness of the technological approach to accident reduction. They proved that safety could be built into the highway.

The late Commissioner of Public Roads, Thomas H. MacDonald, was almost a voice alone when he said in 1949: "We cannot remake the drivers to fit the highway. We must build the highways to fit the drivers." And so was

Rex Whitton in 1963 when he said: "The majority of drivers are performing as well as we can reasonably expect, under existing conditions. From that premise it is logical to reason that the conditions must be changed—we must continue to improve the road, the vehicle, and the basic control measures of the system."

President Johnson acted on that advice a few months later when he called on you to give priority to the correction of high-hazard locations on the Federal-aid systems. And now, with the enactment of President Johnson's national highway safety program, we are going to apply scientifically based knowledge to all aspects of the traffic accident problem.

While technological changes are having great impact on the highway program, social changes have become equally as significant and can be ignored only at the peril of the program itself.

The rapid urbanization of the Nation has brought a shift in emphasis in the highway program toward urban problems, and this trend undoubtedly will continue. It is clear that our most severe highway transportation problems are in the urban areas and that the partnership between State highway departments and the Federal Government will continue to be effective and fruitful if the two levels of government can effectively respond to the challenge of urban transportation. The problem is more severe, of course, in the populous States with many urban centers than it is in the less densely populated States. But wherever it exists it is most important for the State highway departments to focus their outstanding talents on these urban problems.

The highway program today is one of the major programs aiding the Nation's cities. Out of the total cost of the Interstate System, 46 percent is for improvements in urban areas. In the Federal-aid primary and secondary programs, 36 percent of all funds is being spent in urban areas.

A capital improvement and construction program of such magnitude obviously has far-reaching impact on the urban areas. It is a major force in shaping cities and their future growth, and it affects the lives of many city and suburban residents.

It is imperative then, as Rex Whitton has repeatedly warned, that the highway program live up to its social responsibilities. It must respect the human values that Rex and the Bureau of Public Roads have sought to define. It needs to minimize the displacement of people, and the disruption of neighborhoods. Highway improvements must be made compatible with their environment, and consistent with community values. They should be mindful of the public interest in parks and recreation, in conservation, in beautification, and in historical resources.

That is a large order, but with conscientious dedication and imagination better ways can be found to cope with it. One of the most promising new ideas is the proposal by the Bureau of Public Roads for the joint development of urban freeways, replacement housing and other community facilities. This idea for the complementary development of urban freeway corridors makes good common sense. It is a logical way to make better use of urban space and money, both of which are in chronic short supply.

One of the attractions of joint development is its positive approach to urban problems. Rather than merely trying to minimize the adverse effects of highway construction, it offers a way to creatively improve the urban environment—and this through the cooperation of the highway department and other community agencies.

The time to act on it is now. The first city which succeeds in putting this idea into practice should earn itself a place in history, and serve as a demonstration to the rest of the country.

I have been speaking about the highway program's adaptability to changes in the technological and social spheres. Now I would like to turn to the economic sphere, where some changes also are in the making.

Within the past week you have been informed by the Bureau of Public Roads that the Federal-aid highway program is being limited to \$3.3 billion in total project obligations during fiscal year 1967. This is \$700 million less than the nearly \$4 billion obligated in fiscal '66.

The Federal Government took this considered action in recognition of the need for reducing nonmilitary Federal expenditures as a contribution to the Viet Nam effort and the resultant program to reduce inflationary pressures.

There is no blinking the fact that this temporary cutback in the highway program will create some hardships here and there. It will cause some dislocations in the program and require planning revisions. But this is a response to a national need that responsible citizenship demands.

Beyond this, however, I would remind you that inflation is a very real problem for State highway departments, and each of you has a stake in holding it in check.

For a decade or more, during which the highway program saw remarkable growth, it managed to largely escape the effects of the gradual creep in prices which was felt in most of the economy. The relative price stability in the highway program was made possible by improved management, machinery and materials, with consequent improvements in labor productivity, and fairly steady materials prices.

The development of modern equipment has had a particularly strong influence on the cost picture. Between 1950 and 1965 average hourly earnings in Federal-aid highway construction rose 105 percent; the cost of owning and operating construction equipment rose 47 percent; and prices of materials rose 28 percent. Nevertheless, contractors' bid prices during this period rose only 26 percent. This was the result of raising the productive capacity of construction machines and the skill and efficiency of their operators, and of better management.

The 163,800 on-site man-hours it took for \$1 million of construction in 1950 fell to 85,800 man-hours per \$1 million in 1965, in terms of constant dollars. The actual cost of labor was only 4.7 percent higher in 1965 than in 1950, despite the 105 percent rise in average hourly earnings. Gains in labor productivity, due largely to the use of more and bigger construction machinery with greater output per equipment operator, added up to 91 percent in the 15-year period.

During this period, the modest and gradual rise in construction costs tended to be offset by the continuing rise in tax revenues resulting from the increase in highway usage.

It now appears, however, that we have reached the end of this period and are entering a period in which we will not be able to get increases in productivity sufficient to offset other rising cost factors. Instead, it seems likely that highway costs will rise along with general cost-of-living increases.

This is apparent from what has happened in the past year. The composite construction price index for the third quarter of 1966 was up 8.4 percent over the same quarter of 1965. The biggest increases came in excavation prices, which rose 18.6 percent, and structural steel, which was up 15.1 percent.

During the year we have seen a combination of rapidly rising average hourly wage rates and a reduction in the rate of increased productivity. The difficulty of achieving continued large gains in productivity as a result of improved methods and machinery can be seen, for instance, in the case of excavation costs, which for many years were one of the most stable cost items. It is questionable now whether it is practical to effectively utilize much larger earthmoving equipment on the average highway contract than is currently being used.

Materials costs are perhaps a less significant factor, although they rose approximately 2.5 percent in the past year, which is a much greater rise than took place during several preceding years.

Another factor which probably has had some adverse affect on bid prices has been a decline in competition. The number of bidders has decreased from an average of about 7 per contract let during the period from 1958 to 1961 to about 5 per contract let since 1961. All this means, with the leveling off in the rate of productivity, that highway departments will be subject to the same inflationary pressures as the rest of the economy.

You depend on a relatively fixed income, since your revenues are derived largely from a unit tax base. Your revenues are geared to volume—the gallons of gas sold, the vehicles registered—and not to value, either of the fuel or the vehicles, or of your own construction costs.

During the past year, for example, gasoline consumption, and your revenue from it, increased 5 percent, but construction costs went up more than 8 percent. Trends in vehicle use and fuel consumption indicate an increase of about 4 percent in 1967's revenues, and about the same amount in 1968.

So long as costs increase faster than revenues you obviously are going to get not only less for your money but less absolutely.

You must, then, make every effort to achieve greater efficiency, cost reduction, and a renewed increase in productivity. This includes research and development work on materials, equipment and methods, the early application of the results of such work, and the continuing modernization of management techniques. In this effort, the Federal-aid highway program is at your service, offering its financial support and technical assistance.

It is also in your interests to carefully evaluate your capital expenditures, and consider what prudent controls over the level of expenditures are desirable to reduce inflationary pressures on highway construction costs. Certainly, the level of highway construction is a factor in highway construction costs.

As we look at the problems and challenges facing our Nation's highway program today, we can draw confidence from its 50-year history. In a spirit of cooperation, it has responded to changing times; and in the same spirit it will meet the challenges of the present and continue its proud tradition of service to the American people.