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REMARKS BY FEDERAL HIGHWAY ADMINISTRATOR
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"Highways in the Seventies"

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Highway officials begin the decade of the Seventies during an exciting and challenging period in our profession.

That old stereotype of the highway engineer and his slide rule is about as up to date as green eye shades on the city editor or quill pens to keep hand-written ledgers at the bank.

Of course, we are still in the engineering and construction business. Highways can't be built without engineers and constructors -- even though we are making almost universal use of computers and advanced gadgetry of all kinds to help solve design problems, and permit us to analyze and compare a whole spectrum of alternate schemes.

But today's highway engineering -- and the engineer's vital concerns -- go far beyond what most people think of as engineering. He is in the transportation business, concerned with the role of highways in the total transportation system. And he is in the environmental business -- the community development business -- the people business -- concerned with the impact of his highways on the world in which we live.

While we are involved -- and properly so -- with many non-transportation concerns, we have been entrusted with a primary responsibility for meeting the transportation needs of our communities, our States, and our Nation.

So, as we look to the decade ahead, let us consider first our transportation needs.

In our 1970 National Highway Needs Report to the Congress we summed up the trends affecting highway transportation as follows:

1. Highways will continue to be the predominant mode of transportation, regardless of whatever can reasonably be expected to be achieved in any other mode;
2. The trend to urbanization will continue,
3. Continued need exists for improvement of inter-city and rural highways.

The Department of Transportation under Secretary John Volpe is undertaking a vigorous program to promote and encourage all modes to contribute the services for which they are best suited in order to meet our total transportation needs. The optimum development of all other modes, however, will leave a tremendous volume of movement of both people and goods which will continue to require highways. Motor vehicle travel is expected to increase 50 percent in the next 15 years, just as it has doubled itself in each of two preceding similar time intervals.

Much of this expected increase is attributable to population growth,

and most of that growth will occur in urban areas. With 70 percent of the population today, urban areas are expected to contain 80 percent by 1985.

Most of this urban growth will not occur in central cities, but in the suburban or exurban areas surrounding them, or perhaps it will even be channeled into totally new communities away from the present large metropolitan complexes.

In either case it will require a greatly expanded urban highway program. Over 85 percent of all trips in urban areas have either their origin or destination, or both, at home. This determines the family's mode of travel. The highway system needed to provide the flexibility of travel to and from home also frees from the restrictions of location many kinds of business, industrial and recreational activities. Regional and neighborhood shopping centers, places of recreation and amusement, hospitals, churches and many other activities seek locations in the suburbs that facilitate arrival by motor vehicle, and thus demand is created for highways designed to provide land access, as well as those to provide arterial service. Have you seen any new shopping centers recently which did not depend entirely on the highway to get the customers to and from the center and to get all the sales goods and salespeople in and out by street and highway?

In contrast to the suburbs, the downtown areas are growing slowly, if at all, and we probably will not see major new highway construction in the central cities beyond those facilities now underway or planned.

Instead, we need to concentrate our efforts more on increasing the efficiency of the highway plant that will be serving the central cities in the coming decade. For this reason we have turned our attention to improving public transportation.

Expanded use of bus transit to accommodate the morning and evening commuter load increases the people-moving capacity of highways. At the same time it lessens the vehicle congestion and adverse environmental impact and reduces the need for new facilities and the disruption they can cause in built-up areas.

Highway officials can do much to help cities meet their public transportation needs since in all but the largest metropolitan areas mass transit is provided exclusively by buses on highways. Even in the cities with fixed rail systems the proportion of trips by bus ranges from just under 50 percent here in New York City to nearly 90 percent in Cleveland.

Highways are helping to provide improved bus rapid transit through the use of exclusive bus lanes or preferential use on freeways during peak hours. Fringe parking demonstration projects need more emphasis and the TOPICS program can be employed to improve bus transit on

existing streets by providing bus bays, left-turning lanes, channelized intersections, and traffic signal synchronization to speed travel times.

Since 1956 State and Federal efforts have been heavily devoted to building the Interstate System although the ABC portion of the program is almost as large. This 42,500-mile network of freeways is now 70 percent open to traffic and will be completed in the Seventies. Congress probably will set the timetable for completion after receiving our revised cost estimate later this month.

About four-fifths of available Federal-aid highway funds currently are devoted to financing Interstate projects. As a result needs on the remainder of the Federal-aid primary and secondary systems have outstripped the ability to make improvements. Yet, nearly half of all travel today occurs on inter-city and other rural highways, in spite of the trend toward urbanization.

It seems likely that some realignment of Federal highway programs will be necessary in the Seventies to meet the needs of inter-city and rural highways. The Functional Classification Study soon to be submitted to Congress will provide a basis for this adjustment.

Before concluding this overview of the transportation responsibilities of highway officials let me emphasize one need that will demand the highest priority throughout the coming decade. I am speaking of highway safety.

If we fail to reduce the current death rate, highway crashes will be killing more than 70,000 persons a year by the end of this decade. They killed over 56,000 and injured another five million last year.

We now are addressing this problem on a comprehensive nationwide basis with a program that seeks to improve safety in the driver, the vehicle and the highway elements of the system. Safety has been a primary concern of the highway program from its earliest days, and many of the gains made in cutting the death rate to one-third of its level of 35 years ago can be attributed to highway improvements, and related traffic operational improvements.

Under the new reorganization of safety in the DOT, the Federal Highway Administration will continue to be responsible for the highway and highway traffic segment of the safety system. I can assure you we will not only continue to emphasize safety in highway design, the clear roadsides program and the Spot Improvement program, but will substantially intensify our efforts in this direction.

It has been six years since we launched the Spot Improvement program for the systematic correction of high-hazard locations. Through the end of 1969 more than 24,000 safety projects had been initiated -- 5,609 projects consisting of 7,158 separate improvements and costing \$1.06 billion in State-Federal matching funds, and 18,554 projects funded solely by the States at a cost of \$557 million.

Nevertheless, this record is not as good as it should be. Less than 50 projects were reported by some 17 States. So there is plenty of room for improvement, and many improvements to be made to assure safe highways for the public.

In carrying out their transportation responsibilities highway officials -- as I stated at the outset-- are necessarily concerned with the impact of highways on the environment, on community development, and above all, on people.

The translation of these concerns into program requirements and operating techniques is an evolving process. It evolves and develops -- as it should in a democracy -- pretty much in step with the desires of our clients, the public. Highway officials should, and have, exercised leadership in turning these desires into practical accomplishment.

Our challenge in the Seventies will be to bring about even more positive benefits from the impact of highways.

It is true, for example, that highway engineers did not just yesterday discover the environment. But it also is true that we will be expected to produce more positive results for environmental quality in the future.

In support of the assertion that highway officials are presently heavily involved in the environmental business let me point out that in fiscal year 1969, at least 15 percent of total project costs for Federal-aid highway improvements were devoted to items generally associated with

the environment. That is more than one-half billion dollars in Federal highway funds alone committed to protect and enhance the environment in just one year. What other program is making an equal contribution toward this effort?

These environmental items include such things as landscaping, beautification, construction of rest areas, added costs in design features -- such as depressed roadways or aesthetic treatment of structures -- and added costs in right-of-way -- such as buffer zones or wider medians. They include control of erosion and siltation, and control of noise and air pollution. They also include planning work and public hearings devoted to consideration of community and environmental impact.

They even include rodent control. This relatively modest item was devoted to combating the rat problem in connection with the acquisition and clearing of rights-of-way. It could prove a significant expenditure with benefits for many other units of government if our hopes of finding better techniques for rat control work out.

As you know, we have over the years developed a long list of environmental concerns that must be considered in the highway planning and location process. We require, for example, early consultation with interested agencies, such as those responsible for fish and wildlife, historic preservation, and parks and recreation.

These environmental requirements, along with other socio-economic considerations, were formalized last year in the two-hearing memorandum -- with its checklist of 23 factors to be considered for the record.

Meanwhile, a national policy on the environment has been undergoing formulation by the Congress and the President.

The 1968 Highway Act directs us to take account of social and environmental factors in highway improvements. That Act and Section 4(f) of the DOT Act of 1966 as amended, declare it to be national policy that special effort be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.

Most recently, the National Environmental Policy Act of 1969, which President Nixon signed last New Year's Day, directs the Federal Government to provide leadership in protecting and enhancing the quality of the Nation's environment to sustain and enrich human life.

You are familiar with the requirements of Section 4(f) and with our commitment, from Secretary Volpe on down, to carrying them out. The Bureau of Public Roads issued guidelines to its field offices in January for implementing projects under the provisions of the Act and a more detailed instructional memorandum is now in preparation.

As a matter of general guidance, it is most important that you give the earliest possible consideration to any adverse environmental effects of highway improvements, and that statutorily protected areas be avoided wherever possible. If that is not possible, then we must show why avoidance is not feasible or prudent, and why the desired alternative is, in terms of traffic services, economic and social costs, environment, and other factors. It is also important to do whatever is possible to preserve or enhance the affected area.

What additional requirements may be placed on the highway program by the Environmental Policy Act and its implementation by President Nixon and his newly-appointed Environmental Policy Council is still to be determined. However, I would call your attention to a provision in the Act requiring all Federal agencies, in connection with all direct Federal or Federally-assisted programs, to utilize an interdisciplinary approach which will insure the integrated use of natural and social sciences and the environmental design arts in decision-making which may have an impact on man's environment.

In the Bureau of Public Roads we have created an Environmental Development Division consisting of architects, urban planners, landscape architects, sociologists and economists, in addition to engineers. I would recommend that all State highway departments develop a similar staff capability.

In this connection, I want to commend the American Association of State Highway Officials for creating recently a Joint AASHO Liaison Committee on Environment, chaired by Robert Bartlett, Pennsylvania's Secretary of Highways. The Committee includes representatives of many non-highway department conservation and environmental groups.

Related to the highway official's interest in environmental matters is his concern with the broad subject of community development.

It is easy to foresee that our already substantial involvement in community development will expand in the coming decade.

We have made considerable progress, particularly in the past decade, in developing more effective programs and techniques for dealing with community development problems.

The transportation planning process, mandated by the 1962 Highway Act, is now operating in all 233 urbanized areas of more than 50,000 population. This process is based on land use planning and it is a cooperative effort involving local officials and State highway departments. Thus it provides the essentials for effective development planning and for assuring that highway improvements will contribute to the realization of community goals. It provides an opportunity to use the highway program as a creative tool to stimulate desired development.

One of our unsolved problems involves the need to assure land use development compatible with transportation development -- in other words,

the effective implementation of coordinated land use and transportation planning.

This is needed both to prevent highway improvements from becoming functionally obsolescent through over-developed or incompatible land uses, and to assure that the desired community facilities are provided in accordance with community planning.

We are still looking for better answers to this problem, and perhaps we can hope for a breakthrough in the Seventies.

Meanwhile, we believe a major step in the right direction lies in the joint development of transportation corridors by other public, non-profit, and private interests in cooperation with the highway department.

By using the transportation rights-of-way for more than one purpose and by designing these facilities and the abutting lands as integral parts of the whole, we can increase urban efficiency at no loss of urban amenity. Through judicious use of the corridor concept, the social and economic costs of urban growth can be minimized. Neighborhoods need not be unduly disrupted nor neighbors scattered.

The concept is applicable anywhere, in new towns, in expanding suburbs, and in central cities, where sensible urban design can reverse the effects of neglect and obsolescence and meet the aspirations of citizens.

And it can be equally rewarding in rural areas, as Colorado, for instance, has demonstrated in its development plans for Interstate 70 west of Denver. There numerous desired facilities were provided and others preserved as the highway department worked cooperatively with local officials, the State Historical Society, Denver Mountain Parks Department, the State Division of Game, Fish and Parks, the U. S. Bureau of Outdoor Recreation, U. S. Bureau of Land Management and U. S. Forest Service.

The multiple-use concept is receiving considerable attention around the country. Last year approvals were given for 56 major non-highway structures on rights-of-way. These included office buildings, community facilities, shopping plazas, airport runways, markets and restaurants. In addition, hundreds of non-structure projects, such as parking facilities, mini-parks, and playgrounds were approved.

In their concern for the environment and for community development highway officials are demonstrating their sense of social responsibility. I cannot conclude, however, without mention of the relocation assistance program -- a "people program" in the finest sense.

Initiated by the 1968 Highway Act, this program of effective, personal assistance to persons who must relocate because of highway improvements, and with additive payments to assure them of decent, safe and sanitary housing--leads all public works programs in an enlightened, humane approach to those who have been thought of as "victims" of progress.

The magnitude of the relocation program is indicated by the following statistics, even though all States were not fully operational during the period:

During the calendar year 1969, 21,734 dwellings, 259 farms, 3,769 businesses, and 145 non-profit organizations were displaced by Federal-aid highway projects. About three-quarters of the persons displaced were white. Approximately \$4,150,000 worth of residential moving cost payments were made during this period, averaging \$204 each. Business payments totaled \$5,180,000, averaging \$1,615 each. Farm payments totaled \$106,500 and averaged \$447 each.

Replacement housing payments or additives to fair market value were made in the case of 2,075 owner-occupants, involving 6,622 individuals. They totaled approximately \$4,810,000, with the average being \$2,317 each. Comparable payments were made in connection with 2,129 rental units involving 5,979 persons. They totaled over \$1,645,000, averaging \$772 each.

Payments for costs incidental to the transfer of property to the State for highway purposes averaged \$129 each for housing units, \$49 each for farms, and \$387 each for businesses.

Eighty-one percent of all residential displacements occurred in urban areas and 19 percent in rural areas. We estimate that during the next several years displacements resulting from Federal-aid highway displacements will average about 25,000 dwellings annually.

We are fully committed to easing the burden on those who will be uprooted and in so doing we will be following the policy announced by Secretary Volpe -- that no projects will be approved if they involve the dislocation of people unless and until adequate replacement housing has already been built or provided for. The net result of displacements under the highway program therefore is an improvement in the average quality of housing--so that what has for so long been considered a damage--is actually producing a gain to the community--at no cost to it--even an increase in tax base ratables.

I hardly need remind you that July 1 is the statutory deadline for full State compliance with the relocation provision of the 1968 Act. I would urge each State to review its organizational structure, staffing, training and procedures to be sure that it will be fully operational after July 1 and prepared to provide all the benefits and services called for under the Act.

Thus, the highway program enters the 70's with a vastly increased attention to the whole gamut of social considerations, in addition to the strictly engineering considerations, which also continue to be important as always. We've not really just begun to give consideration to these social values, but rather to add them to the total check list in a differently arranged order of priorities. The listing is responsive to public interest. Had we attempted to put all these present items into the current order of priority back in 1950 or 1960 we would likely have been

ridiculed and discharged by our employing public, for wasting their money on unneeded frills and extravagance. But in this decade -- as in all others before now -- there is change and we must be responsive to the need and demand for change and a new look. Even as we look back at the 60's and ahead to the 90's, I believe we're doing our job in the 70's in tune with the times.