

STATEMENT OF
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BEFORE THE SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT
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ON THE NATION'S TRANSPORTATION INFRASTRUCTURE NEEDS

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I am pleased to appear before this Subcommittee to discuss transportation infrastructure needs, and I commend you for holding this series of hearings to highlight the importance of infrastructure to the Nation's economic well-being and to the quality of life for all Americans.

The Infrastructure Deficit

A well functioning transportation infrastructure is a basic requirement for a mobile and prosperous society. The ability to move people and goods safely and efficiently affects the price of goods in our markets, our ability to sell our products overseas, and the quality of life of Americans who travel--virtually all Americans. Our dependence on transportation infrastructure is demonstrated constantly--as we commute back and forth to work and travel to meetings in distant cities, as our children travel back and forth to school, as produce is delivered from farm to market,

as we travel to the grocery store, as grain and fuel moves along our waterways, as our exports cross the oceans.

If we let the condition or performance of our infrastructure deteriorate, it costs us more--in time and money--to move from place to place. That is why Governor Clinton made "Rebuilding America" a major theme of his campaign for the presidency. As he and Senator Gore wrote in Putting People First,

In the 1980s, the concrete foundations of the United States crumbled as the investment gap widened between America and our global competitors.

...

To build a twenty-first century economy, America must revive a nineteenth century habit--investing in the common, national economic resources that enable every person and every firm to create wealth and value. The only foundation for prospering in the global economy is investing in ourselves.

Estimates of Infrastructure Investment Needs

You have said that the purpose of your hearings is to review our country's highway, transit, and aviation infrastructure needs; detail the importance of the infrastructure to the nation's economic competitiveness, productivity, and environment; examine past and current funding levels; and explore alternative financing methods.

The Department has been developing infrastructure investment needs estimates for more than twenty years. But we must be careful in assessing needs: such estimates are not simply derived from laws of physics; they have much to do with principles of

human behavior and they can vary with changes in the economy.

How Our "Needs" Estimates are Derived

Early last year, the Department submitted its biennial report on "The Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance." That report was the twelfth such report on highway and bridge conditions and the first to formally combine information on our highway systems with information on our transit systems.

The Department's highway capital investment estimates are developed using data from the Highway Performance Monitoring System (HPMS). The HPMS was developed jointly by the Federal and State governments in the late 1970s to provide a continuing source of standardized data on highway conditions and performance. The data system includes a statistically drawn sample of about 105,000 highway sections representing approximately 1.2 million miles of highway functionally classified as arterials or collectors. Bridge condition information is obtained from the National Bridge Inventory, which contains detailed data on the structural, deck condition, and performance characteristics of all bridges and culverts 20 feet or greater in length. Transit information is developed from the data reported to the Federal Transit Administration (FTA) by transit agencies as required by Section 15 of the Federal Transit Act and from results of the Nationwide Personal Transportation Survey.

Highway investment estimates come from an engineering-based simulation using

HPMS data to estimate future highway deterioration and the effects of capital improvements. Bridge requirements are estimated by a similar simulation model using the Bridge Inventory data. Transit estimates for buses and paratransit are developed by applying generally accepted equipment and facility replacement rates to the existing transit stock and adding costs for new stock to meet increasing demand. Rail estimates are taken from the "Rail Modernization Study," a separate FTA engineering study covering each of the Nation's rail transit systems on an individual basis.

While highway and transit information was combined in last year's report, it was not truly integrated, but that must be our goal. A key factor in estimates of investment requirements is future demand, both in total and by mode. Performance of the highway system--and, to a lesser extent, its condition--is almost entirely a measure of congestion, which is directly influenced by traffic growth. Projections of how many people will use highways and how many transit in the years to come are obviously interdependent and influence estimated investment requirements.

We have to see our surface transportation system as a whole and assess the interrelationships as we estimate investment needs. Your committee can help in that regard: the highway and transit conditions and performance reports are on different cycles by statute. In order to meet the transit reporting requirement, we will issue another report this year, which will have updated transit information but old highway information. Next year, when we will owe you a highway report, we will issue

another report with updated highway information to meet your requirement but year-old transit information. You could help by putting the requirements on the same time basis, so that we can not only be timely, but be realistic in evaluating the interrelationships between the modes.

But we are making improvements. Last year's report estimated investment needs based on maintaining current conditions and performance for highway and transit systems independently. This year's report will be based on maintenance of overall conditions and performance. Since we do not believe that all projected highway travel demand can or will be met by adding highway lanes, but, instead, that a portion will have to be handled by transportation system management, transportation demand management, and transit, this year's report will explore implications of an increasing market share for transit as a measure of transit investment needs.

Our airport needs estimates are developed from data reported by airport operators and compiled in the "National Plan of Integrated Airport Systems." The data they report is basically the capital improvements they are tentatively planning for the next five years. The Federal Aviation Administration reviews the project lists and removes projects that seem unlikely to be advanced, but the report is not a performance-based analysis of investment needs. It is our goal to move in that direction in the years to come.

What Our Needs Estimates Tell Us

The highway and transit report submitted to Congress last year indicated that the average annual capital investment needed to maintain 1991 (the year the data were collected for the report) conditions and performance on highways, bridges, and transit systems totaled \$55.5 billion. The average annual capital investment needed to improve conditions and performance to specific cost-effectiveness engineering guidelines associated with moderate performance was reported as \$73.7 billion. Those are expressed in 1991 dollars and do not reflect inflation. In contrast, the report indicated that a total of \$36.4 billion from all levels of government was spent in 1991 on the kind of highway, bridge, and transit capital needs that the report includes.

A consequence of investing at a rate lower than required to maintain and improve conditions and performance has been a backlog of highway pavement, capacity, bridge, and transit deficiencies. The estimated 1991 cost to eliminate those deficiencies was reported as \$290 billion. In 1991, approximately 234,500 miles of arterial and collector roads were rated as "poor" or "mediocre." In 1992, about 118,500 of the Nation's 575,000 bridges were rated as structurally deficient. With respect to transit, 40 percent of urban rail infrastructure is in less-than-good condition, but that percentage has declined from 60 percent when the 1987 Rail Modernization Study was conducted. In addition, over 10, 000 urban transit vehicles are past their normal replacement age; that figure has remained stable in recent years.

With respect to airports, total annual investment needs just for projects eligible under the Federal Airport Improvement program are estimated at \$7 billion; total annual investment for such projects (including Federal funds) is estimated at \$6.2 billion, leaving a shortfall of \$800 million per year.

The bottomline of our various needs assessments is clear -- we have been investing at levels that do not permit us to maintain the conditions and performance of our transportation systems. The consequences of the shortfall have primarily been in performance of the systems -- delays. For example, there are 23 airports currently experiencing annual delays of more than 20,000 hours. Without improvement, there will be 33 airports experiencing this degree of delay by the year 2002. And delays are expensive: the Federal Highway Administration (FHWA) estimates that congestion in the Nation's 50 most populous urban areas costs over \$39 billion a year in time and fuel wasted. The conditions of our highways and rail transit facilities have been improving somewhat. But if adequate funding is not available to maintain conditions, the backlog of investment needs goes up dramatically: deferring one dollar in highway resurfacing can mean up to \$4 in highway reconstruction costs in two years.

But, at the same time that we face an "infrastructure deficit," we face a "budget deficit." There is a limit to what the Federal government can do and, in truth, what State and local governments can do. We need to do our parts, but we need to do two other things: manage and invest in infrastructure more wisely and make infrastructure

investment more attractive for the private sector.

Federal Investment

The President stressed the need for infrastructure investment, and he proposes to ensure the Federal government does its part. His budget for the coming fiscal year proposes to fully fund the formula capital programs in the Intermodal Surface Transportation Efficiency Act of 1991--ISTEA. Under his proposal, States and local governments will have \$3.6 billion more to spend on highways and transit next fiscal year than they had in FY 1993. The Budget proposes to maintain airport grant funding at this year's level even as airports derive an increasing amount of revenue from passenger facility charges to help close the gap between needs and investment. Altogether nearly 71 percent of our proposed spending within DOT is for investment in infrastructure, up from 69 percent in 1990.

At the same time he proposes to increase infrastructure investment, the President also proposes that we invest more wisely. On January 26 of this year, the President signed an Executive Order on Infrastructure Investments. That Order requires that Federal agencies conduct systematic analysis of the expected benefits and costs of proposed infrastructure investments, periodically review operation and maintenance of facilities to ensure their efficient use, encourage greater private sector participation in financing and managing infrastructure, and encourage the recipients of Federal grants to apply the same principles to their program administration. The Executive Order will not

disturb the traditional relationship between DOT and the recipients of our formula grant funds. While we will encourage them to use our funds wisely, we will not second-guess them on specific project decisions. The Order does direct us to do system-level reviews of our formula programs, and that information will help us and Congress identify the extent to which our programs are meeting their objectives.

We are taking steps now to implement the President's directive. We are at work on new criteria for selecting transit new start projects, as required by ISTEA, and for awarding discretionary airport grants. We are aiming to improve our ability to conduct system-level reviews across all modes. In particular, FHWA is developing a new Highway Economics Requirements System (HERS) that will bring cost-benefit analysis into the analytical model to evaluate highway investment needs, and we see the potential for application of the model to other modes.

Infrastructure Management

There are exciting new technologies to improve infrastructure management that we are hard at work on. Infrastructure can be divided into physical infrastructure and information infrastructure. Improvements in information infrastructure have great potential to promote more efficient use of the physical infrastructure. Intelligent Vehicle-Highway Systems--IVHS--is the most prominent. It covers a whole range of diverse information and control technologies to make highway use safer and more efficient. Self-diagnostic sensors on, for example, "smart" bridges, report when a

bridge needs repairs and can help target maintenance and renewal when it is most timely.

ISTEA took a major step forward to improve infrastructure management with its mandate for States to have management systems in place for pavement, bridges, highway safety, congestion, public transportation facilities and equipment, and intermodal transportation facilities and systems. The management systems are a tool for the States to use to identify the priorities for investment. ISTEA also gave a stronger role to metropolitan planning organizations (MPOs) in making transportation decisions and new flexibility in the use of Federal funds to support projects that best satisfy real transportation needs, without regard to the Federal pot of money from which the funds come. Congestion pricing, for which ISTEA authorized a pilot program, also has potential to reduce demand and, therefore, investment needs.

ISTEA also established the National Highway System (NHS). As you know, Secretary Peña submitted our proposal for the NHS last December and announced at the same time the start of an effort to identify a National Transportation System (NTS). Both concepts are important for helping to set priorities for investment and for focusing our attention on a whole system. Individual investments have payoffs, but, if we approach investment on a system-wide basis, the benefits of our investments will be greater than the sum of the benefits of each individual project because each improvement supports the others. For example, replacing a bridge on one highway with one of greater

capacity and widening a segment of another highway may both be cost-beneficial, but, if those improvements are made on the same nationally significant route, greater overall capacity may be achieved and benefits may exceed the total of the two separate investments.

Greater Private Sector Involvement

Comparison of assessments of investment needs with estimates of current investment levels makes clear that more investment is needed. We need to make our transportation projects more attractive to private investors. Again, ISTEA broke major new ground in this area, most notably with its provision for much broader mixing of Federal funds with toll revenues to build and improve highways, bridges, and tunnels. The Secretary has directed us to explore innovative financing techniques, and we have been holding meetings with representatives of State and local governments and the investment community. The Vice President's National Performance Review suggested permitting Federal surface transportation funds to be used as a capital reserve. There have been innovative proposals in Congress, including one by you, Mr. Chairman. There is great interest in promoting more investment and clearly there is the need.

Our first priority is ensuring that the authority already provided in ISTEA is understood and used. Then we want to understand what barriers there are to more investment, and we will be working with this Committee on those as we identify them.

Roles of the Various Partners in Infrastructure Revitalization

ISTEA helped clarify the partnership between the Federal government and State and local governments. The Federal partner is primarily the investor ensuring that key national priority needs are met. State and local governments are our partners in those investments, but they are also the operators and maintainers. If we at the Federal level are doing our part--and we believe the President's Budget for FY 1995 is our most aggressive step yet in that direction--then we have the right to ask that our State and local partners do their part. Are they maintaining the facilities we have helped them build? Are they operating them efficiently? Data from the management systems as they are put in place will provide answers.

An issue for this Committee and for us at the Department is whether the design of our capital assistance programs, especially in the case of bridges, may create a perverse incentive to defer maintenance and accelerate the need for eligible reconstruction or replacement. As I said, total investment for capital falls short of capital needs, and I would not want to see diversion of Federal funds away from meeting those needs, but we must work with our State and local partners to assure that regular maintenance is indeed performed so that the fullest useful life of every facility built is realized.

ISTEA also provided new opportunities for the private sector to join the public partners. The private sector has a significant role both as investor and manager. We look forward to working with you to exploit the opportunities ISTEA provided and to

identifying new ones to advance our common goal of an improved infrastructure that can support economic prosperity and a better life for all Americans.

That concludes my prepared testimony. I would be pleased to answer any questions you may have.