

THE  
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**1997 Issue Brief**

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*Transportation*

Vision 2001:  
Virginia's Transportation System for the  
New Millennium

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## Thomas Jefferson Institute for Public Policy

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This Issue Brief is published by the Thomas Jefferson Institute for Public Policy and is sent to elected leaders, business executives, policy experts, community leaders and to the media in order to offer ideas and information to further the public debate in our state.

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Briefing Paper  
**Transportation**

**Foreword**

Transportation systems and their ability to effectively service all aspects of the population is a vital source for creating economic development. Quality transportation systems improve business efficiency and productivity and that means jobs and improved quality of life for all Virginians.

Whenever a new business locates in Virginia, we invariably hear statements about our good transportation system as part of the company's reason for choosing to locate in the Commonwealth. We are fortunate that past leaders chose to fund a good road, air, rail and waterway transportation network in Virginia.

However, we cannot continue to rely on the funding and methodology used in the past to maintain an up-to-date transportation system for the future.

Hampton Roads has one of the finest seaports in the world, but no major international airport to complement its services. Northern Virginia has world class airports, but its highways are ranked among the worst in the country in terms of congestion. Roanoke has great economic potential, but Highway 81 needs expansion and a modern regional airport would be ideal.

The author of this Issue Brief feels Virginia must build a safe, coordinated, comprehensive intermodal transportation system that effectively integrates all major transportation modes and establishes efficient connections between them. And Virginia has to promote and improve privatization, deregulation, intermodalism, planning and technological leadership to build a transportation system in our state to support future economic progress.

The Thomas Jefferson Institute for Public Policy urges our elected leaders, those wanting to become elected leaders, business and community leaders to make transportation a major issue in the months ahead. Without a strong consensus on what is actually needed in transportation and how to fund those needs, the public will not support the improvements. The attached Issue Brief gives more in-depth explanations to our state's transportation challenge.

Michael W. Thompson  
Chairman and President  
Thomas Jefferson Institute for Public Policy  
September 1997

**VISION 2001:  
VIRGINIA'S TRANSPORTATION SYSTEM  
FOR THE NEW MILLENNIUM**

**PREPARED FOR THE THOMAS JEFFERSON INSTITUTE FOR  
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BY**

**THE CENTER FOR TRANSPORTATION TRAINING,  
EDUCATION AND RESEARCH, INC**

## **INTRODUCTION**

Transportation is a vital element of Virginia's economy. Key elements in the Commonwealth's transportation system include an extensive highway network, rail systems that connect the state with major national markets, passenger and cargo air service, a world class seaport and a range of mass transit services. The highway system includes 54,000 miles of interstate, primary, and secondary roads, all the majority of which are maintained by the state. Of this total, approximately 1100 miles comprise the interstate system and 1800 miles make up the arterial network serving communities of 3500 people or more. Virginia is fortunate in having developed tremendous motor carrier capacity through wise investments in infrastructure.

Virginia's rail network totals approximately 3300 miles and two of the nation's seven largest railroads, CSX and Norfolk Southern, are headquartered in the Commonwealth. AMTRAK, which operates eight routes in Virginia, provides intercity passenger services. Metro rail and the Virginia Rail Express (VRE) provide service to commuters in the suburbs of Washington DC and thirty-four mass transit systems serve local and regional needs throughout the state. The Commonwealth is served by thirteen commercial airports with service to 600 destinations worldwide. The Port of Hampton Roads, one of the finest natural seaports in the world, is among the largest intermodal facilities on the East Coast.

While Virginia's transportation infrastructure is a major asset for stimulating economic growth, changing conditions dictate the need to develop a new approach to continue and to enhance prosperity in the Commonwealth. Transportation projects are becoming increasingly complex, difficult to complete and more expensive because of the myriad of environmental, regulatory, and other issues that must be addressed during the planning and implementation process. The situation today is characterized by stringent regulatory requirements, limited financial resources

that call for diligence and stewardship, and new intergovernmental relationships that were redefined with the passage of the Intermodal Surface Transportation Efficiency Act of 1991. These new definitions have barely been understood and accepted when the need to prepare the Commonwealth for the impacts of NEXTEA is upon us. These impacts include changes in the formula for allocating highway funds, more funding for Intelligent Transportation Systems for deployment, and changes in the planning regulations implemented under ISTEA. Each of these areas will impact the Commonwealth and require changes in the manner in which we address these issues.

Virginia is at a crossroads. In this period of rapid change, the opportunities and challenges to meeting the critical transportation requirements of the Commonwealth must be identified, evaluated and systematically addressed. In the past, Virginia has made its transportation investment decisions largely from an individual modal perspective. This was adequate during the period where modes were seen as individual and sometimes competing systems. If Virginia is to retain and improve its competitive position in the national and global economy, a new approach must be taken. This approach must be developed on a multimodal basis that effectively integrates and connects all transportation modes (rail, aviation, maritime, highways, and transit). In addition as the resources available to develop this approach become scarce there is a need to examine the role of the private sector in assisting the Commonwealth in meeting this transition to the new millennium. Strategic transportation policies and investments that make a critical difference in the performance of the transportation system and economy must be identified and pursued.

## **THE CRITICAL ROLE OF TRANSPORTATION**

Transportation is vital to our economy and quality of life. It is the mechanism for the safe and efficient local, regional and international movement of people and goods. It provides access to economic opportunities and the vast cultural, educational and recreational resources of our

Commonwealth. Mobility in the next century, as in the past century, will provide the means for fulfilling the many needs of society.

The transportation needs in Virginia vary by geography and degree of development. In recent years, the shift in population from rural to urban areas has exacerbated regional differences and accentuated the disparate views of the role of transportation. In the high growth urban areas of Northern Virginia, Richmond, and Hampton Roads, transportation projects are critical to solving congestion, air quality, and land use problems. In the rural communities, connection to population centers and markets is a critical need. In both urban and rural areas, transportation infrastructure must be used to create economic development opportunities. Opening these communities to economic development will allow the Commonwealth to grow and prosper. In this regard transportation is an essential element to:

- ◆ **Promote Economic Development**

The transportation system is a vital force in creating economic development. The ability to generate income and wealth is largely dependent on the ability to move goods and people in an efficient and timely manner. Evidence of the impact of transportation can be seen in the Northern Virginia, Richmond and Hampton Roads areas.

- ◆ **Ensure Regional and International Competitiveness**

Transportation improvements provide the Commonwealth with increased business productivity. This rise in productivity generates new concepts in service delivery and allows for the rapid movement of goods and people to and from production and labor markets.

- ◆ **Provide the Platform for Job Creation**

Infrastructure investments stimulate economic growth and job creation. The transportation industry is a major provider of employment in Virginia.

◆ **Provide Market Access for Goods and Services**

The transportation system provides business and people direct access to markets both internal to the state and external for manufactured goods and services. In this regard the transportation system is the link to international markets for the Commonwealth.

◆ **Maintain and Enhance the Quality of Life**

A safe and effective transportation system is key to maintaining and enhancing the quality of life for the citizens of Virginia. The mobility supplied by the transportation system provides the opportunity for people to access the economic, cultural, educational and recreational resources of the Commonwealth.

### **A NEW VISION FOR A NEW MILLENNIUM**

Virginia must have a vision for transportation that provides a safe, coordinated, intermodal, comprehensive transportation system that effectively integrates all modes and establishes efficient connections among them. Virginians must be able to move from their automobiles to mass transit and from mass transit connect to international airports or receive cargo at ports that are state-of-the-art. A balanced transportation system that provides a range of viable transportation choices forming the basis of a strong intermodal network that serves as a catalyst for economic development and growth must be developed for Virginia in the new millennium. This requires a transportation planning focus that defines problems and opportunities in terms of a coordinated, comprehensive, continuous transportation system. This system must take into account the changes in lifestyle of the citizenry, from rural to urban to suburban and exurban. It must also develop mechanisms for implementing the new technology that is rapidly coming on line in the field of transportation. Virginia Polytechnic University is at the forefront of research in the area of new technology with its “Smart Highway research project”. This project will establish the parameters for “radar” enhanced braking, for the use of satellite technology to

provide traffic control information, and the use of technology to ameliorate the impacts of severe weather conditions on highway surfaces, melting ice and snow thereby providing a safer driving surface.

The new transportation system cannot be mode-specific or focus exclusively on the movement of vehicles, it must embrace the concept of "mobility" and create a system that provides the best "mobility" for the citizens of the Commonwealth.

In order to accomplish the transition to the new millennium there are seven key areas that must be addressed.

1. Privatization. The privatization of transportation planning, design, construction and maintenance will enhance the efficiencies and effectiveness of the government sponsored transportation system. This can be accomplished through innovative financing mechanisms, particularly the development of public-private partnerships and privatization initiatives that move the financial burden away from sole dependence on government to a sharing of financial responsibility between government and the private sector. The current privatization legislation needs to be strengthened to provide incentives for the transportation industry to assume greater responsibility and for the state Department of Transportation to yield responsibility to the private sector. The adequacy of the private sector to provide this assistance must be addressed as the role of the public sector is reduced. Opportunities to privatize government activities should be pursued. An example of this privatization is the project conducted by the motor pool at the state. This project resulted in the hiring of Enterprise Rent-A-Car to provide a back up source of vehicles for state employees who travel, this allowed the motor pool to more efficiently manage the state cars and allowed a substantial savings over reimbursing state employees for using their personal vehicles for travel. This year Richmond Car and Truck Rental won the bid and reduced the cost from \$25/per vehicle and 19 cents a mile to \$18.95 and unlimited mileage. Other examples include; contracting out of maintenance functions by VDOT, and in Fairfax County and the City of Alexandria bus service is now provided

through contracts with private transportation management companies.

2. Deregulation. To enhance productivity, regulatory and administrative barriers that contribute to the inefficient operations of transportation systems should be removed. Except where the safety of the traveling public is an overriding concern, state regulatory requirements should not exceed federal. For example the state Commercial Driver Licenses requirements are the same as the Federal requirements, in addition many motor carrier requirements, that do not affect safety, have been reviewed and eliminated.
3. Economic Development. Providing a high quality transportation system is critical in the effort to attract and retain major employers. Improving the transportation infrastructure is a critical step in developing a secure economic future. It will allow the Commonwealth to attract major new industries and expand existing industries. Investment in special projects such as the “Smart Highway” at Virginia Polytechnic can create centers of economic growth and attract both private sector and Federal funding. The “Smart Highway” project applies and tests technology developed in the intelligent transportation systems field under actual road conditions. It will demonstrate the practical utilization of new and advanced technologies for controlling traffic flow, monitoring traffic conditions and making adjustments to ensure a free flow of traffic. There are other transportation projects that will generate economic development, the addition of two lanes to Interstate 81, the development of international airports for the Hampton Roads and Roanoke areas, and the development of a transportation infrastructure to support the Port of Hampton Roads, are a few examples of the types of transportation projects that will spur economic development.
4. Market Orientation. A market based approach to the provision of mobility needs to be developed. This approach would use the marketplace to determine what transportation investments will be made. This method will allow for decisions to be measured in terms

of the potential for economic development, the reduction in congestion costs, the improvement in mobility and the long-term viability of the project. An example of this approach is the Dulles/Greenway project. The private sector determined a need for the facility, projected the impact on potential economic development, and justified the cost by the rate of return expected over 30 years. This project is an example of the types of market oriented transportation approaches that need to be pursued to provide the Commonwealth with the most efficient transportation system possible.

5. **Technological Leadership and Safety.** To improve productivity, quality of service and reduce costs, state-of-the-art technology research must be utilized. The emphasis on "intelligent transportation systems" must move from the research arena into actual usage. Virginia must become a leader in research and in the implementation of technology to improve safety, mobility, increase the capacity of the infrastructure, and as a tool to foster economic development. This may be the most crucial element for transitioning to the new millennium. Examples of technology include ramp-metering, real-time traffic monitoring using satellite technology, vehicle tracking using geo-positioning satellite technology, and in vehicle computer systems that provide drivers with information on road conditions, alternative routes, and services type information (ATM machines, restaurants, shopping, etc.).
6. **Intermodalism.** The old way of viewing the transportation system as separate modal entities is no longer valid. Improvements in the connectivity of different modes will improve the efficiency and effectiveness of the transportation system. A full range of modal alternatives for passengers and freight should be developed. Key intermodal centers, such as Dulles Airport and the Port of Hampton Roads, should be studied so that there elements can be used to create intermodal centers in other geographic regions of Virginia.

7. Planning and Research. A key role for the Commonwealth in facilitating the changes necessary to move forward is in providing funding for researching and planning the new transportation system. This role of government should include investments from the private sector that match and supplement the investment made by the public sector. The economic benefit to both the public and private sector should be a major element in determining the projects that will be funded. Projects to consider would be the development of an international airport in the Hampton Roads/Norfolk area; the development of light rail in the City of Richmond; these and other projects that are currently in the transportation improvement plans of Virginia's urban areas need to be examined and used to develop a comprehensive statewide, multimodal transportation plan for the Commonwealth.

These seven key areas should form the foundation for creating the transportation vision for the next century. They provide the framework for identifying significant challenges and opportunities for Virginia's transportation system. They also form the basis for prioritizing a list of actions necessary to achieve the vision of a truly integrated and technologically advanced system that enhances economic prosperity.

## **TRANSPORTATION NEEDS**

Virginia must use the principles identified to address transportation needs. The changes in population throughout the Commonwealth, the creation of "edge cities" and the relocation of jobs to suburban and exurban areas requires a change in the manner and methodology of addressing transportation issues.

In the Hampton Roads/Norfolk area there is a need for an international airport to match the international nature of the port and enhance transportation opportunities. The same is true for the Roanoke/Lynchburg area, an international airport would provide the basis for major economic

expansion. In the Northern Virginia area there is a need to utilize technology to relieve congestion thereby freeing capacity and allowing for additional economic development. This technology may include the introduction of light-rail to the area, the coordination of traffic through satellite technology, real-time traffic control systems linked to ramp-metering, and the construction of alternatives to Interstate 95 for moving traffic around the Northern Virginia area rather than through it.

The state needs to upgrade and maintain the infrastructure that is in place even as it looks forward to meeting the needs of the next century. The system of highways, freeways, arterials, and streets that serve the Commonwealth must be preserved and protected. New pavement materials, new pavement designs and a program of reconstruction and rehabilitation must be developed and implemented to protect the investment that has been made to date and continue its status as one of the nation's best maintained transportation system. In addition Virginia needs to give more authority to localities to address their transportation needs.

## SUMMARY

Virginia's transportation infrastructure is among the largest and best maintained in the nation; however changing travel patterns, economic development needs, and reduced federal investment will require the Commonwealth to rethink its approach to providing transportation services. There will be a need for greater public/private partnerships, such as the Dulles/Greenway project, the light rail system to Dulles airport (under consideration in Northern Virginia), and the Richmond Car and Truck Rental project, to meet the demands for mobility.

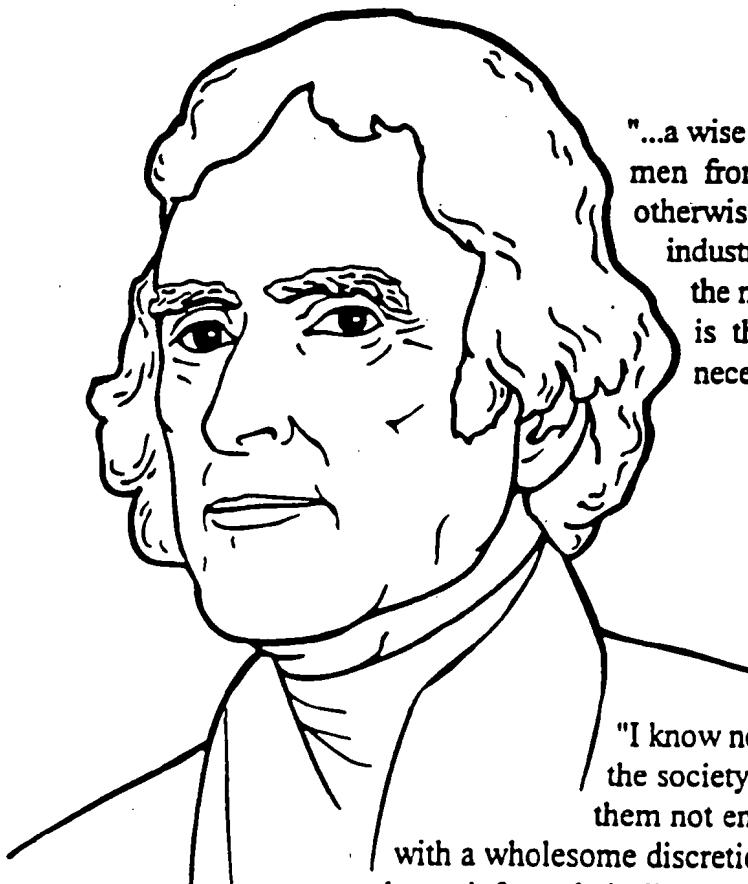
Virginia is at a crossroads. An opportunity exists for Virginia to adopt an effective new approach to address transportation challenges based upon an unbiased analysis of the transportation system as a whole to determine how to create a seamless transportation system for

the Commonwealth. This opportunity must be pursued, grasped and wrestled into existence for the Commonwealth to effectively, efficiently and cost-effectively meet the challenges that face the towns, the cities, the state of Virginia.

### **About the Author**

Stephen Blake attended the Masters Program in Political Science at the University of North Carolina, Chapel Hill and a Bachelor of Science Degree in Political Science from North Carolina A&T State University, Greensboro, North Carolina. With twenty five years experience in transportation planning and research, Mr. Black is the President of the Center for Transportation Training, Education and Research in Springfield, Virginia. From 1995 to 1997 he served as Director of the Transportation Group of Basic Technologies International where he was responsible for transportation planning, engineering and analysis areas of the firm.





"...a wise and frugal government, which shall restrain men from injuring one another, shall leave them otherwise free to regulate their own pursuits of industry and improvement, and shall not take from the mouth of labor the bread it has earned. This is the sum of good government, and this is necessary to close the circle of our felicities."

Thomas Jefferson -- 1801

"I know no safe depository of the ultimate powers of the society but the people themselves and if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion by education. This is the true corrective of abuses of constitutional power."

Thomas Jefferson -- 1820

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