

**REPORT OF THE  
SECRETARY OF TRANSPORTATION**

# **How Virginia Is Using Transit and Transportation Demand Management Programs to Address Highway Congestion and Single Occupant Vehicle (SOV) Travel**

**TO THE GOVERNOR AND  
THE GENERAL ASSEMBLY OF VIRGINIA**



## **SENATE DOCUMENT NO.**

**COMMONWEALTH OF VIRGINIA  
RICHMOND  
2010**



# COMMONWEALTH of VIRGINIA

Office of the Governor

Sean T. Connaughton  
Secretary of Transportation

November 1, 2010

The Honorable Robert F. McDonnell  
Governor of Virginia  
Patrick Henry Building, 3rd Floor  
1111 East Broad Street  
Richmond, Virginia 23219

Honorable Yvonne B. Miller  
Chairman, Senate Transportation Committee  
General Assembly Building, Room 315  
Richmond, Virginia 23219

Honorable Joe T. May  
Chairman, House Transportation Committee  
General Assembly Building  
P.O. Box 406  
Richmond, Virginia 23218

Lady and Gentlemen:

Attached for your review is the "How Virginia Is Using Transit and Transportation Demand Management Programs to Address Highway Congestion and Single Occupant Vehicle (SOV) Travel" report as requested by the 2010 General Assembly session in Senate Bill 553. This report is provided by the Secretary of Transportation, and responds to the General Assembly's direction to:

- i. Report on actions taken by the Commonwealth, local governments, and regional transportation authorities to (i) increase transit use and (ii) reduce highway congestion and use of single occupant vehicles through programs and initiatives involving transportation demand management, transit use, telecommuting, carpooling, construction of commuter parking facilities, use of flexible work hours, and telecommunications technology.

Sincerely,

A handwritten signature in black ink, appearing to read "Sean T. Connaughton", with a long horizontal flourish extending to the right.

Sean T. Connaughton

Report to the Virginia General Assembly

***How Virginia Is Using Transit  
and Transportation Demand Management  
Programs to Address Highway Congestion and  
Single Occupant Vehicle (SOV) Travel***

## I. Introduction

This report was prepared pursuant to § 33.1-223.2:24 of the Code of Virginia, which, as stated below, requires:

*“The Secretary of Transportation, in consultation and cooperation with the Commonwealth Transportation Commissioner and the Director of the Department of Rail and Public Transportation shall submit annually, not later than November 1, a report to the General Assembly on actions taken by the Commonwealth, local governments, and regional transportation authorities to: (i) increase transit use and (ii) reduce highway congestion and use of single occupant vehicles through programs and initiatives involving transportation demand management, transit use, telecommuting, carpooling, construction of commuter parking facilities, use of flexible work hours, and telecommunications technology.”*

This document is the first annual report. While the primary focus of this document is to present the most recent transit and transportation demand management (TDM) initiatives that address highway congestion and single occupant vehicle (SOV) travel, this report begins with a brief overview of Virginia’s transit and TDM operational infrastructure – *who’s involved, what they do, and how they do it*. In addition, this document presents an overview of the trends that will affect the future of Virginia’s transportation system and ways that Virginia’s transit and TDM community are planning to address and leverage these trends.

This report was developed in coordination with transit and commuter services agencies; major public transportation stakeholders, including regional Metropolitan Planning Organizations (MPOs); regional Planning District Commissions (PDCs) and other organizations. Additional information is available on VDOT’s, DRPT’s and Telework!VA’s Web sites.

## II. Overview of Virginia’s Transit and TDM Community

One of the Secretariat of Transportation’s primary goals is to ensure that the Commonwealth has a safe and efficient multimodal transportation system that supports economic growth and prosperity. The Commonwealth transportation system’s efficiency is realized by moving more people in fewer vehicles, moving travelers out of peak travel periods, or, in the case of teleworking, eliminating travel altogether. These efficiency-oriented results are achieved through the use of people-oriented transportation options, including transit, carpooling, vanpooling, walking, biking and teleworking. Growing congestion in the Commonwealth’s more populous areas requires the increased use of these alternatives to SOV travel.

### **Virginia’s Partnership Approach – Virginia’s Transit and TDM Community**

In Virginia, increasing the use of transit and other options is orchestrated through a unique partnership of state, regional, and local agencies – *Virginia’s transit and TDM community* and private companies. Key members include:

- Virginia Department of Transportation (VDOT)

- State Office of Intermodal Planning and Investment
- Department of Rail and Public Transportation (DRPT)
- Planning District Commissions (PDCs)
- Metropolitan Planning Organizations (MPOs)
- Transportation Management Associations (TMAs)
- 60 transit agencies
- 18 Transportation Demand Management (TDM) agencies or local Commuter Services programs
- Network of private companies such as VPSI (national vanpool company), NuRide (national ridesharing service through employers that use incentives) and participants in DRPT's Telework!VA program

The emphasis of this report is on increasing usage of transportation options among the segment of the population that has the ability and means to choose between multiple modes of travel – known as “choice riders.” This is because of the legislatively mandated purpose of this report.

Virginia's transit and TDM community is one of the Commonwealth's finest examples of an ongoing, successful collaboration across all levels of government and the private sector. Working as equal partners, members of the transit and TDM community assume well-defined roles to accomplish their common mission – increasing the use of people-oriented transportation options. For example, DRPT provides technical and financial support to local transit and commuter service agencies through annual grant programs, consumer research, training and marketing assistance. The local transit and commuter services agencies, with DRPT's technical and financial support, implement programs at the regional and local level. Implementation is guided and supported by regional PDCs and MPOs, as well as private sector companies. Another example includes VDOT's Park-and-Ride Program. VDOT maintains a statewide network of over 340 park-and-ride lots across Virginia, facilities that support and encourage greater use of carpools, vanpools, and commuter buses. VDOT works closely with Virginia's transit and TDM agencies to ensure that these lots are located in the right areas and are promoted through regional rideshare programs.

Virginia's transit and TDM community is also known for its legacy of innovation, having first come together in the 1970s to help manage demand for limited gas supplies. Their initial focus was on carpool and vanpool formation. At that time, commuter needs and traffic flows were relatively predictable. The primary commute was from suburban locations to jobs concentrated in downtown areas. Over the years, Virginia's transit and TDM community expanded to support a host of commuter needs, such as employer support services and telework support programs. Today, Virginia's transit and TDM community addresses some of our most complex traffic-related challenges, such as congestion chokepoints and highway construction-related congestion mitigation.

Lastly, this highly effective network of innovative transit companies, TDM agencies and private sector partners is known for results. This document highlights performance outcomes; most specifically, how this network or organizations decreases total vehicle miles traveled (VMT) and reduces pollution. By increasing the use of people-oriented transportation options, Virginia's transit and TDM community has enabled the Commonwealth to continuously improve the efficiency of our overall transportation system.

### III. Virginia's Transit and TDM Community's Multifaceted Approach, Related Strategies and Highlights of Most Recent Initiatives

Virginia's transit and TDM community's success has come from decades of practical experience in the marketplace. This experience has led to the conclusion that there is no one single program that can effectively advance and stimulate the use of other transportation options. Over the years, the most effective approach has proven to be a holistic approach, offering a comprehensive array of services and support programs that inform travelers about their options, motivate them to try various forms of travel, overcome some of their barriers to trial and provide incentives to reward behavior.

#### 10 Strategic Imperatives

There are 10 core strategies that make up Virginia's transit and TDM community's coordinated, multi-disciplined approach. In this section, a brief description of each strategy is presented, followed by highlights of supporting initiatives that have been launched by the Commonwealth, local governments and regional transportation authorities.

It should be noted that the reported "*examples of recent initiatives*" represent a sample of all of the actions conducted by the 18 TDM agencies, 60 transit agencies, and various PDCs and MPOs in preparation of this report. The complete inventory of these actions is available at <http://www.drpt.virginia.gov/> and is included in the Appendix of this document.

#### Strategy #1: Understand and Focus on Customer Needs

Ridesharing in any form, be it transit or carpooling, begins and ends with market demand—*people must need and want travel options other than personal vehicle travel*. There is ample evidence of consumer demand for every kind of travel option. From transit-dependent citizens who have few travel options to affluent automobile owners who simply want to save time and lower their commuting costs, the demand for travel options is growing. The challenge to providing travel options is ensuring that they are readily available and accessible, that people know about them, are encouraged and incentivized to try them, and that more people ultimately use them on a regular basis.

To this end, Virginia's transit and TDM community has always been focused on the end user of transit and TDM-related services – travelers and commuters. For over four decades, this customer-centric focus has been developed and informed by a comprehensive marketing research program conducted by VDOT, DRPT and other community partners. Most of this research is inventoried on the Virginia Transportation Marketing Research Database, which is located within VDOT's Web site – <http://www.virginiadot.org/info/researchdatabase/index.asp>.

#### *Examples of Recent Initiatives:*

- DRPT, VDOT and the Metropolitan Washington Council of Governments Commuter Connections Program recently launched the 2010 State of the Commute Survey. The comprehensive survey is conducted every three years and collects extensive data from thousands of responses to questions on travel behavior and attitudes toward travel options.
- Hampton Roads Transit (HRT) is currently surveying residents about the new light rail service to help formulate its comprehensive marketing program.

- Greater Richmond Transit Company (GRTC) is undertaking the Broad Street Rapid Transit Study to increase overall mobility along this busy corridor, and is working with riders, businesses and the general public to gain feedback on the project.
- The Fredericksburg Area Metropolitan Planning Organization (FAMPO), the Northern Virginia Transportation Commission (NVTC) and the Potomac and Rappahannock Transportation Commission (PRTC) are collectively studying the feasibility of establishing a vanpool incentive program where vanpools in the Northern Virginia and Fredericksburg region report their passenger data to the National Transit Database and generate additional Federal funds for vanpool support and the region.
- VDOT is continuing its efforts to survey the public about how it can better manage its Park-and-Ride Program. This includes gaining an understanding of ongoing and changing commuter needs, encouraging commuters to use the lots, making the park-and-ride lot information more accessible to the public, and developing new methods to market the use of the Park-and-Ride lots.
- The VDOT-DRPT MegaProjects team is conducting a tracking study to assess the degree that residents who drive through the construction zones in Northern Virginia are aware of construction-related information and travel options that can help their commutes.
- RIDE Solutions in Roanoke just completed a feasibility study on carsharing in metropolitan Roanoke to encourage and support transit and other TDM initiatives.

## **Strategy #2: Maintain and Build on Virginia’s Current Investment in the Existing Transit & TDM Infrastructure**

To increase transit use and other forms of ridesharing among residents, the transit and TDM community must continue to maintain and build on its investment in both the “hardware” and “software” of the existing transit and commuter services infrastructure.

Transit and TDM “hardware” refers to the physical infrastructure that includes thousands of urban, small urban and rural buses and shuttles, over 340 park-and-ride lots, more than a hundred miles of High Occupancy Vehicle (HOV) lanes, and, in the near future, expanded rail transit options, including the Dulles Metrorail extension in Northern Virginia and “The Tide” light rail service in Hampton Roads. The “software” of transit and commuter services includes the marketing programs and services that educate and inform, support, encourage and enable participation in available options to SOV travel. These include services such as ride matching, transit subsidies through employers, guaranteed “ride home” services, vanpool insurance, etc.

### Examples of Recent Initiatives:

- DRPT has positioned Virginia as one of only a few states in the country to develop a comprehensive asset inventory database that allows DRPT to predict years in advance the statewide transit replacement needs and costs. This allows for more effective program management and improves the performance and reliability of transit service by replacing assets that have met their useful life in a timely manner.
- DRPT recently introduced the AdvANTage Vanpool Self-Insurance Program, a collective partnership with the George Washington Regional Commission GWRideConnect program and the Division of Risk Management at the Virginia Department of the Treasury. Recognizing that insurance options for vanpools had declined to a critically low level, the AdvANTage program was launched to ensure

that vanpool drivers in Virginia had more insurance choices when it came to vanpool protection. This new, low cost insurance option helps ensure the viability of vanpools statewide.

- VDOT is currently in the process of a statewide review of all park-and-ride lot locations in order to develop a current and accurate inventory and identify existing needs to maintain the inventory going forward.

### **Strategy #3: Maximize Efficiency of Existing Transit & TDM Infrastructure**

To get more out of existing resources is just as important as it is to maintain and build on Virginia's investment in transit and TDM; Virginia must also continue to deploy strategies to maximize the efficiency of the existing system.

#### Examples of Recent Initiatives:

- DRPT is creating a set of multimodal design guidelines for communities across Virginia. These multimodal design guidelines will help Virginia evolve into a network of diverse, walkable, bikeable and transit-friendly communities by balancing the needs of different transportation options with transportation supportive land use decisions and public right-of-way designs.
- DRPT routinely funds comprehensive operations analysis studies for transit systems that help identify underperforming routes, cost savings strategies and underserved markets that could represent opportunities for increased passenger revenue. Recent examples include Greater Richmond Transit Company, Hampton Roads Transit, and the Greater Lynchburg Transit Company.
- DRPT completed a Statewide Intelligent Transportation Systems (ITS) Strategic Plan in 2009 to evaluate and document how the use of ITS in transit can enhance customer service and satisfaction, improve on-time performance, and reduce capital and operating costs. The plan included customized deployment plans for transit systems in Virginia to help them advance targeted technologies that would increase efficiency. DRPT is currently providing technical assistance on technology deployment to providers such as the Potomac and Rappahannock Transportation Commission, Harrisonburg Transit, and Williamsburg Area Transport. DRPT is also working with providers to update their deployment plans in advance of the FY12 state grant application cycle.

### **Strategy #4: Build New Capacity**

No matter how well maintained the current transit and rideshare system is, it will not be able to absorb projected demand from the Commonwealth's increasing population and changing demographics. With the population expected to grow by 36 percent between 2010 and 2035, increased capacity will be required just to maintain the current level of transit and commuter service and related market share.

#### Examples of Recent Initiatives:

- Two critical rail transit projects are currently under construction in Virginia's urban areas – Phase 1 of the Dulles Metrorail extension and the Norfolk Light Rail Project ("The Tide"). These projects will generate new transit trips, spur economic development and improve mobility in these congested areas of Virginia.

- DRPT has recently worked with local partners to establish transit in areas that have not been previously served: Fort Pickett, Radford, Rockbridge and Altavista. In each of these cases, employers have approached local officials asking for transit services to support their work force.
- Arlington Transit (ART) introduced three new transit service routes.
- Loudoun County recently opened its first county-owned park-and-ride lot. The Leesburg lot is home to 691 spaces, six bus shelters and 24 bike racks. Loudoun County Transit provides AM and PM peak service from this lot to the Metropolitan Washington, D.C., region. The County also leases park-and-ride lot spaces from private providers in the region.
- Loudoun County launched a new Tysons Express Commuter Bus Service from Leesburg and Broadlands South to employment sites in Tysons Corner. PRTC launched new Tysons Express Commuter Service from Woodbridge to employment sites in Tysons Corner. These new transit services help mitigate congestion directly related to roadway improvements and highway construction in Northern Virginia.
- GRTC Transit System launched a new Mechanicsville Express Service to downtown Richmond.
- Virginia Railway Express added a new Express train to the Fredericksburg Line. The train is already at capacity.
- Pulaski Area Transit started a new service to Fairlawn and Dublin, offering discounted fares for students traveling to the New River Community College.
- In addition to new services, operators like Danville Transit have also extended service hours on existing routes to better accommodate shift workers.
- DRPT is currently exploring ways to increase transit capacity in growing population areas; especially in localities where local officials have expressed their community's growing interest in expanding transit services.
- VDOT is currently outlining processes by which new park-and-ride lots can potentially be implemented on land that is not owned by VDOT. These processes will include coordination among VDOT construction districts, landowners and localities to identify potential locations, designate funding, and develop agreements regarding the construction and maintenance of lots.
- DRPT continues to advance enhanced intercity passenger rail service (Amtrak) in the Commonwealth. In October 2009, DRPT and Amtrak expanded passenger rail service in Virginia with a new train originating in Lynchburg. Ridership on the Lynchburg train in July 2010 was 14,075, exceeding the monthly target of 4,340 by 224.3 percent. The total Lynchburg route revenue credited to Virginia in July 2010 was \$706,178.20 exceeding the monthly target of \$219,139 by 222.3 percent. In July 2010, DRPT and Amtrak expanded service again by adding a new train originating in Richmond. Finally, DRPT is working on a third Amtrak train that will originate in Norfolk.

#### **Strategy #5: Provide New, Innovative Service Delivery**

Virginia's transit and TDM community continues to introduce innovative transit and commuter services' program enhancements across Virginia.

##### Examples of Recent Initiatives:

- Blacksburg Transit, by making its transit data "open source," has allowed for the development of a SmartPhone Application called "BusTracker," which was developed and launched through a group of

Virginia Tech students and faculty. The application tells subscribers when the next bus will arrive to a certain transit stop.

- Virginia is one of the leading states in advancing technology through investments in safety and security with cameras onboard buses and GPS to track the locations of buses.
- DRPT is working with Google Transit to make transit information available through the Google search engine.
- Arlington County ART riders can now download bus arrival information at the stop of their choosing onto desktop computers and PDAs.
- Carsharing is alive and well in Virginia. Zipcar is now available at locations throughout Virginia including Northern Virginia, Richmond, Charlottesville, Williamsburg and Hampton Roads. Carsharing allows members to reduce their vehicle ownership rates and overall vehicle-miles traveled while increasing transit use and walking. Commuter services programs and transit agencies regularly promote the service as an extension of their own services.
- Several years ago, DRPT funded a pilot project to introduce NuRide to Virginia and the Metropolitan Washington, D.C. area. NuRide is an on-line tool that helps people find rideshare matches and then gives them rewards for recording “greener” trips. A greener trip is any non-SOV trip – walk, bike, carpool, vanpool, subway, train, bus, ferry or even compressed work week and telework. The program is now available in Charlottesville, Richmond, Hampton Roads and Northern Virginia. According to NuRide, there are now 12,059 members that have reduced 748,920 trips since starting in Virginia.

#### **Strategy #6: Build Awareness of Transit and Other Travel Options**

Offering alternatives to SOV travel is not enough; Virginians must be made aware of the many transportation options that are available and be encouraged to use them. Continuous outreach and public education has been a hallmark of all of the members of Virginia’s transit and TDM community. Together, community members promote the benefits of ridesharing and the existence of the enabling infrastructure and support services such as park-and-ride lots, ride-matching services and guaranteed ride home services.

#### *Examples of Most Recent Initiatives:*

- GRTC and RideFinders have helped to create two innovative advocacy efforts – Transit Talk ([www.transittalk.com](http://www.transittalk.com)) and Sustainable Transportation Initiative of Richmond ([www.projectstir.com](http://www.projectstir.com)).
- The Thomas Jefferson PDC and RideShare created a new model of public involvement that engaged 4,500 residents in a community-wide conversation on the future of transit. The Federal Transit Administration plans to use the lessons learned from this effort as a national model.
- The Valley Commuter Assistance Program in the Northern Shenandoah Valley Front Royal area promoted the “Dump the Pump” event by holding commuter appreciation events at three of the largest park-and-ride lots in the region. The media promoted the event and featured promotional activities and give-a-ways.
- The City of Alexandria invited employees of the U.S. Patent and Trademark office to learn about the advantages of vanpooling and drew over 400 attendees to the event.

- Fairfax County RideSources attended over 50 employer fairs across their region promoting the “One Less Car” Marketing Campaign. The employer events focused on reducing SOV travel.
- The George Washington Regional Commission’s GWRideConnect program relaunched its now famous Commute Fairy radio advertising campaign during drive times targeting drive alone commuters and offering a better alternative. The campaign was so successful it won an award from the Virginia Association of Broadcasters.
- DRPT continues to facilitate and moderate informed discussions on issues such as high speed rail – what it can and cannot do, what it really costs, etc. Town hall style meetings were recently held in Henrico and Hampton Roads. DRPT has also launched successful marketing campaigns for new Amtrak service originating in Lynchburg and Richmond.
- DRPT worked with all transit agencies across the state to launch “Try Transit Week” – September 20-24, 2010. Recognizing that trying an alternative mode is the first step to changing commuting behavior, DRPT sponsored the [www.trytransitweek.com](http://www.trytransitweek.com) Web site and sponsored a statewide contest to promote the event.

### **Strategy #7: Help People Avoid Travel Altogether – Support Teleworking**

While Virginia’s transit and TDM community offer both the hardware and software to facilitate travel options, it also recognizes the importance of helping commuters avoid the trip altogether. To this end, members have successfully advanced greater acceptance of work force practices such as staggered work hours, compressed work weeks and teleworking. In the case of teleworking, financial assistance is offered to encourage employers to adopt teleworking practices.

#### *Examples of Recent Initiatives:*

- Telework!VA ([www.teleworkva.org](http://www.teleworkva.org)) helps companies offset the cost of starting up or expanding a telework program. Qualified employers can receive up to \$35,000 (up to \$50,000 in specific areas of Northern Virginia). In addition to funding, DRPT provides these employers with technical assistance on how to set up and administer their telework program. DRPT’s Telework!VA program currently has over 161 private employers and 3 public sector employers participating and has won several national awards.
- DRPT’s Telework!VA program is partnering with organizations in Northern Virginia, Hampton Roads and Richmond to educate the business community and provide employers with information on the benefits of telework, and to introduce them to the Telework!VA program. This is done through telework events and direct outreach with employers.
- In cooperation with the Department of Human Resource Management, Office of Telework Promotion and Broadband Assistance and Virginia Information Technologies Agency, DRPT provides telework assistance to state agencies upon request.

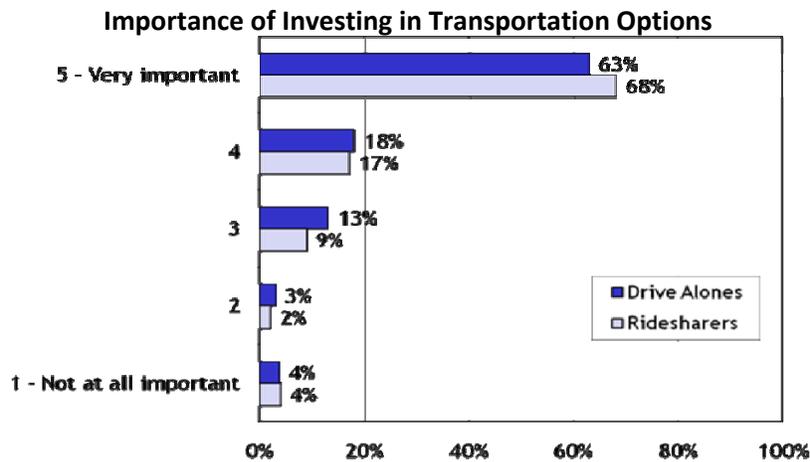
### **Strategy #8: Build Stakeholder Awareness, Appreciation and Support for Transit and Commuter Services**

Travel options benefit all of Virginia’s residents, employers and visitors. Those who use ridesharing and transit make the roads less congested for those who cannot. In fact, if everyone stopped using the

travel options provided in Virginia for just one morning or evening rush hour, our transportation system would grind to a halt.

Studies show that people that drive alone in cars are aware of the ways in which the ridesharing programs – programs they themselves don’t use – benefit their own driving experience and overall quality of life. In the 2007 Virginia State of the Commute Study, a telephone survey of 7,000 Virginia commuters, 75 percent of drive-alone commuters said they benefited in some way from other people who could rideshare. Statewide, the top two perceived societal benefits included less congestion and improved air quality.

Based on this finding, it is not surprising that the 2007 Virginia State of the Commute Study also revealed that citizens who drive alone, for whatever reason, support Virginia’s investment in ridesharing at nearly the same rate as people who rideshare.



*Questions: (Even though you might not carpool, vanpool or ride a bus), how important to you is it that Virginia invests in programs to support and make these transportation options more available to commuters?*

Examples of Recent Initiatives:

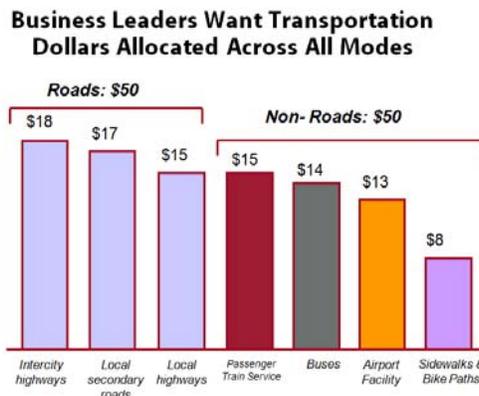
- The Northern Virginia Transportation Commission hosted several legislators and local businesses on a tour of Northern Virginia’s transit systems. Guests of the tour gained a better understanding of the transportation challenges faced by the region by riding Metro, VRE and every major bus system in Northern Virginia.
- Richmond RideFinders works closely with local businesses and media to promote Clean Air Campaign messages to reduce driving to help the environment. In addition, RideFinders and GRTC have worked to create two advocacy groups: TransitTalk and Sustainable Transportation Initiative of Richmond (STIR).
- The Loudoun County Office of Transportation Services staff represented their program at over 30 Commuter Information Fairs and events within Loudoun County promoting their services and messages.

- Charlottesville Area Transit regularly participates in community events, including Clean Commute Day, Try Transit Week, Earth Week EcoFair, Government Services Day and many commuter fairs over the course of the year.
- Bay Transit is an active participant and member of 11 Chambers of Commerce in the Middle Peninsula, Northern Neck and New Kent County. The agency uses the opportunity to share its views on transit and build ongoing relationships with stakeholders.
- RIDE Solutions (Roanoke) expanded its workplace partnership program and began work on their Bicycle Friendly Business Outreach program and advocacy, including step-by-step application packets and consulting services to improve opportunities for bicycle commuters.

**Strategy #9: Encourage Employer Support and Active Involvement in Offering Transit and Other TDM Alternatives**

The benefits of ridesharing are not lost on business leaders. According to regional transportation studies conducted over the past two years in Hampton Roads, Richmond and Northern Virginia, today’s business leaders feel they have a responsibility to help their employees get to work. Moreover, they view absenteeism, lost productivity, and recruitment and retention costs as consequences of traffic congestion.

When asked how they would allocate transportation funds in their community (\$100 in this study), business leaders allocated at least half of the funding to non-road infrastructure – transit, carpool support, walking and biking trails, etc. The most recent example of this finding is from the 2008 GRTC/RideFinders’ Study.



Given employers’ interest in all commute options, members of the transit and TDM community place a great deal of emphasis on business-to-business outreach and engagement.

Examples of Recent Initiatives:

- VDOT and DRPT have joined together to provide employers and businesses in the areas affected by the Virginia Megaprojects, a series of six major construction projects in Northern Virginia, with a comprehensive set of transit and TDM services to keep their employees moving during construction.
- Telework!VA provides hands-on telework support and training to employers in Virginia. Telework!VA offers up to \$35,000 in financial incentives (up to \$50,000 in specific areas of Northern

Virginia) to businesses and non-profits in Northern Virginia, Richmond and Hampton Roads for eligible telework-related expenses.

- NuRide rewards program is now being used by Richmond area's RideFinders, Hampton Roads TRAFFIX, and Charlottesville and Central Shenandoah area's RideShare.
- Loudoun County Commuter Services launched their Green Business Challenge, a collaborative effort between Loudoun County government and the Loudoun County Chamber of Commerce. The program encourages businesses to track their efforts towards environmentally sound practices.

### **Strategy #10: Seek Sustained and Dedicated Funding**

Virginia's transit and TDM community requires sustained and dedicated funding. A successful transit program requires ongoing maintenance, marketing and scheduled equipment replacement. Likewise, successful TDM programs require promotion, park-and-ride lots, ridematching and guaranteed ride home services.

Maintenance funding alone will not be sufficient to fund transit and commuter services as the demand for such services continues to outpace local, state and federal resources. Metrorail, the Virginia Railway Express and commuter bus systems, are quickly reaching capacity. Smaller cities and rural areas face mounting demand for services as they cope with the impact of statewide demographic and economic shifts.

As demonstrated through all of the examples in this report, DRPT, VDOT and its partners are achieving positive results within existing funding constraints. As more transit services come on-line such as the Dulles Metrorail extension and The Tide light rail project, ongoing operations and maintenance resources will be stretched even thinner. This is occurring at a time when more and more communities are realizing the economic development potential that transit and TDM bring and are asking for more services and support. Our single greatest transit-related challenge will be meeting this demand. Consequently, DRPT and VDOT will need to continue working together to maximize existing resources, implement strategies to better manage capacity and identify new, dedicated and sustained funding sources to maintain and expand capacity.

#### Examples of Recent Initiatives:

- DRPT recently prepared the 2010 Statewide Public Transportation Plan, a report that details the status of public transportation in the Commonwealth and describes the transit-related challenges and opportunities Virginia will face over the next 25 years. The report makes the case for sustained and dedicated funding.
- Virginia's transit agencies, with assistance from DRPT, are preparing Transit Development Plans that will guide future service expansions. Work on the first 10 Transit Development Plans was finalized in June 2009. DRPT is currently assisting 12 additional transit operators with their respective Transit Development Plans.
- Virginia's TDM agencies, with assistance from DRPT, recently developed or completed comprehensive Long-range TDM Plans. In 2009, DRPT required all TDM agencies receiving TDM grant funds to prepare and submit a long-range TDM Plan. These plans identify and detail the TDM programs currently provided in each region, outline potential improvements to be carried out in the Plan's timeframe, and illustrate the financial resources necessary to implement these programs and

improvements. Moreover, every plan now contains information necessary to include into the Six-Year Improvement Program (SYIP), the Statewide Transportation Improvement Program (STIP), the regional Transportation Improvement Programs (TIPs), and the regional Constrained Long-Range Plans (CLRPs).

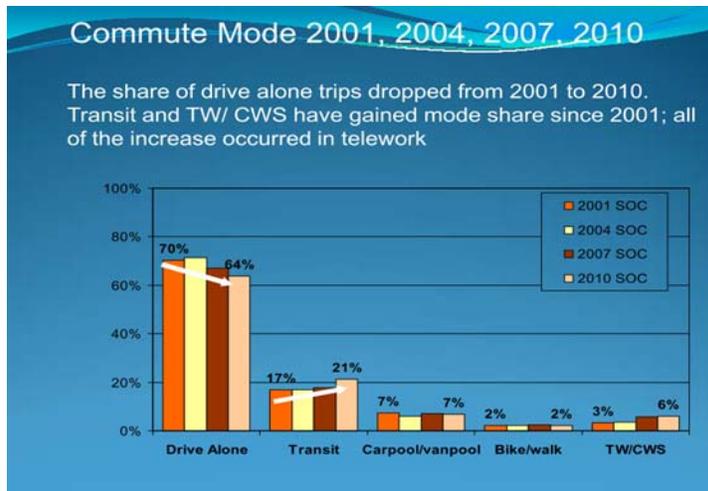
- DRPT created a Statewide ITS Strategic Plan to evaluate available transit technology, develop a vision and goals for the use of transit technology in the Commonwealth and provide a short term and long term focus.

**IV. Overall Results – Virginia’s Transit & TDM Community Delivers Results**

There are multiple ways to define success when it comes to the impact of Virginia’s efforts to use transit and TDM programs to address congestion and reduce SOV travel. Virginia’s transit and TDM community focuses on outcomes, such as the shift in modal split – the share of drive-alone trips reduced or eliminated, the shift in the percent of people who telework, the congestion related to construction projects, and the projected overall return on investment of transit and TDM strategies. Outcomes are measured through ongoing research, such as the Virginia State of the Commute Study.

**Impact #1: Shift in Modal Split**

The shift in modal split, the share of drive-alone work trips compared to the use of other travel options, is perhaps the most direct indicator on the impact of Virginia’s transit and TDM community. Based on the most recent 2010 State of the Commute Study data for the Metropolitan Washington region, drive-alone travel is on a declining trend. Since 2001, the share of drive-alone work trips has dropped from 70 percent to 64 percent, with other travel options gaining ground from 30 percent to 36 percent of all work-related trips. Increased use of transit and telework, along with compressed work weeks, were responsible for this overall increase in modal split.

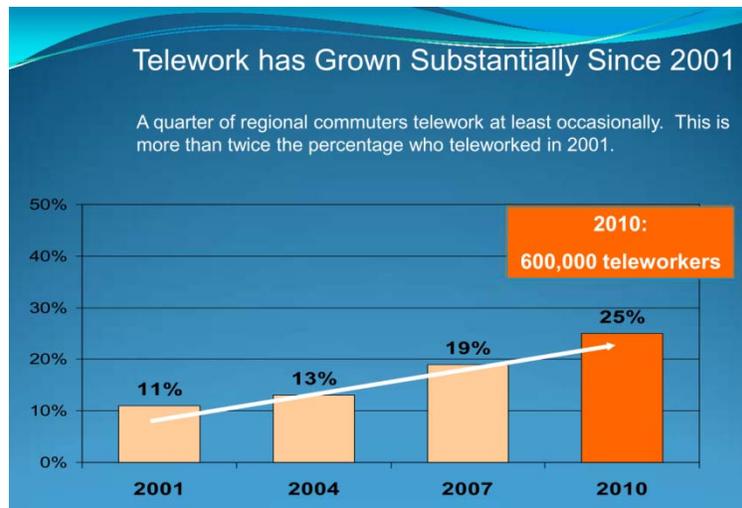


*(Note: Metropolitan Washington data that includes Northern Virginia are available at this time. The 2010 Virginia State of Commute Study for the rest of Virginia is currently in the fieldwork stage.)*

In the 2007 Virginia State of the Commute Study, Virginia's overall modal mix is 83 percent/17 percent (83 percent drive-alone travel to 17 percent rideshare). The trend in the Metropolitan Washington region is likely being experienced across the Commonwealth.

### Impact #2: Shift in Teleworking

The shift in teleworking, the percent of regional commuters that telework at least occasionally, is the optimal measure of success when it comes to teleworking. Based on the 2010 State of the Commute Study data that is currently available, teleworking in the Metropolitan Washington region is showing a positive trend. Since 2001, the percent of regional commuters who telework has doubled, from 11 percent to 25 percent.



(Note: Metropolitan Washington data includes Northern Virginia data. Northern Virginia data is not available at this time. The 2010 Virginia State of Commute Study for the rest of Virginia is currently in the fieldwork stage.)

In the 2007 Virginia State of the Commute Study, Virginia's overall percentage of commuters that telework at least occasionally was 10 percent. From various regional studies conducted since 2007, DRPT has seen increases in teleworking in both Richmond and Hampton Roads. Once the 2010 State of the Commute Study is finalized, DRPT expects to report an increase in teleworking across the Commonwealth.

### Impact #3: Return on Investment

There is no question that transit and TDM programs are helping with highway congestion and reduction in drive alone travel. What is still unanswered is precisely at what cost and at what overall return on investment. Answering these cost-benefit questions from an overall state perspective is one of DRPT's continuing primary areas of work. In 2008, DRPT conducted an assessment of statewide public transportation benefits and determined the following:

- Total benefits of public transportation amount to \$4.6 billion in the Commonwealth of Virginia in 2008. Economic development benefits alone account for over 60 percent of those benefits.
- The contribution of transit operations and maintenance to Virginia's economy is estimated at \$870 million.
- About \$1.3 billion in output is generated annually as a result of transportation cost savings being re-spent by households in the economy.
- Commuters would have to pay \$919 million more annually in transportation expenses (gasoline, maintenance, tires, insurance, depreciation, etc.) to access jobs, schools, shops, hospitals and other destinations.

Many factors can influence how benefits are calculated; however, the assessment conducted by DRPT with the support of leading transportation economic consultants provides a snapshot of Virginia's return on investment in public transportation. Following are three specific examples.

### **Small City Commuter Services**

GW RideConnect in Fredericksburg promotes the local FRED bus service, uses ridematching software to help people find carpool partners, and works closely with commuters to help them form vanpools for long distance commutes. GWRC has helped form 395 private vanpools that commute to jobs in Northern Virginia or Richmond. They have formed 129 vanpools in the past year alone, attesting to the vital need for commuter services in tough economic times. This is also an excellent use of private capital to provide commuter transportation. These vans carry 4,740 passengers, reduce single occupant vehicle trips by 8,690 per day, reduce 435,000 vehicle miles of travel, save 18,200 gallons of fuel, and reduce greenhouse gases by 217 tons per day.

### **Rural Commuter Services**

In rural areas the distance to get from home to ever scarce jobs can be huge, often 70 miles or more one way. The cost can be backbreaking for many families without more cost-effective ways to commute. Valley Commuter Assistance Program in Front Royal uses ridematching software to help people find carpools and vanpools. They also helped a group of commuters form a private commuter bus company that has grown to four buses commuting into parts of Northern Virginia and Washington, DC. This is another example of the resourcefulness of commuter services agencies to use private capital to provide transportation. With 1,500 passengers per day, they remove 3,000 trips from the road, save 210,000 vehicle miles of travel and 8,800 gallons of fuel, and remove 105 tons of greenhouse gases each day.

### **Large Urban Commuter Services**

DRPT also started working with Arlington County Commuter Services (ACCS) several years ago to improve commuter services program evaluation and reporting; this is a potential model that can be consistently applied in other markets and across the Commonwealth as a whole. Using survey data, ACCS calculated that its Commuter Services program reduced 542,000 miles of daily VMT (vehicle miles traveled), reduced greenhouse gases by 256 tons each day in FY 2008, and saved 22,772 gallons of fuel each day.

All of these examples support the fact that the need for additional lanes of highway can be reduced by making existing roadways more efficient.

## V. Future Demographic, Social and Transportation Trends That Could Impact Virginia's Transit and TDM Community

Virginia's population is expected to increase 36 percent by 2035, and there will be neither sufficient funds nor available land to build the roads required to meet projected demand. To accommodate this growth, Virginia must continue to shift its statewide modal mix away from drive alone commuting and toward effective travel options such as rideshare options (bus, carpool, vanpool, bike and walk), compressed work weeks and telework.

This modal shift will require dedicated intellectual and financial investment in building both the supply of travel options and the related support services necessary to build public demand for and use of these options. Key demographic, social and transportation-related trends make this the optimal time to increase Virginia's investment in travel options.

### ***Demographic Trends***

- **Growing Population**

Between 2010 and 2035, Virginia's population will increase by approximately 2.8 million residents, a 36 percent increase. The Commonwealth's expected population growth rate far exceeds that of the U.S. as a whole (25 percent) during the same time period. In many of the state's urban areas, where seven out of 10 Virginians currently reside, growth is projected to be significantly higher.

- **Aging Population**

The proportion of persons age 65 and over in Virginia will increase from about 12 percent to 19 percent; there will be approximately 2 million individuals age 65 or older in 2035 compared to 1 million in 2010. This shift has serious implications for the transportation system as a whole and especially for public transportation. Increases in the senior population and/or non-driver population will lead to increased demand for travel options, particularly non-work related mass transit options.

- **New Generation of Workers – The Millennials**

Millennials, also known as Gen Ys (9- to 29-year olds today), the youngest generation, are poised to make a huge impact on the use of travel options in America and across Virginia. Over the past several years, Millennials have shifted to non-drive alone work commute modes at a greater rate than any other generation.

While Millennials make up a small percentage of the workforce now (25 percent to 35 percent), they will make up the majority of the work force in years to come, surpassing the smaller Gen X and Baby Boomer generations. It will be these future workers who will shape our companies, cities and transportation systems, making travel options the focus of Virginia's transportation system.

### ***Social and Cultural Trends***

In addition to projected demographic trends, several major social and cultural trends may also increase demand for travel options in Virginia.

- **Changing Nature of Work and Distributed Workforce**

Technology in the workplace has helped employers recognize that work is not a place you go to but something you do. Many employers are now measuring employee productivity by outcomes

rather than time clocks. This shift is fueling the growth of teleworking and helping the United States evolve to a distributed workforce model.

This shift has been fueled by technology and the labor shortage experienced prior to the 2009 recession, and it may be accelerated by the labor shortages projected in the coming decade when millions of Baby Boomers retire. Employers' desires to cater to their employees' needs will result in greater use of compressed work weeks, greater flexibility in work hours and the ability to work from home locations. Experts project that 40 percent of the workforce may engage in teleworking over the next two decades. The role of TDM is to provide education and seed the market with incentives, where appropriate, to accelerate widespread adoption of telework practices.

- **The Greening of America**

The green movement is here to stay. At least 80 percent of Americans consider themselves "green"; as a consumer movement, green has gone mainstream.

Studies from rideshare networks across the country have repeatedly revealed that people rideshare for four main reasons: to save money, save time, avoid stress and help the environment. In every study, the environmental benefit of ridesharing ranks third or fourth; this benefit may increase in perceived importance as the green movement expands.

From a business perspective, more companies want to be perceived as "being green." In a recent study conducted for the Older Dominion Partnership, 50 percent of the CEOs in Virginia said they would like their companies to be perceived as "being green." Many companies and their business associations are now taking action by looking at their employer-based transportation program as a way to support their employees' green behaviors and practice environmental stewardship. Now more than ever, companies are welcoming the assistance from members of Virginia's transit and TDM community. This help is delivered through training and direct incentives for rideshare and telework programs.

- **New Frugality Movement**

The "Nu Fru" or "*frugality*" movement is the convergence of three major forces: the green movement, the sustainability movement and the recent economic downturn. Today, people want to spend less, live smarter and have a smaller personal footprint. According to the May 2010 American Pulse™ survey of 5,079 Americans, 8 in 10 (78 percent) say they are living a simpler life – spending less and being more frugal as a result of the downturn. The longer the impact of this downturn is felt, the more permanent cultural impact the "Nu Fru" movement will have in our society. This kind of attitude and behavior is perfectly aligned with the psychological and financial benefits that come with using travel options.

- **Technology Revolution**

Web-based technology is reshaping rideshare support and the use of rideshare support services. Just three years ago, most ridematching was done through large government-sponsored, centralized databases. Today, many commercial enterprises are serving commuters' need for hyper-social connectivity by offering ridematching as part of a social network such as Craigslist, Facebook, Goloco.org, Ridebuzz.org and Greenyour.com. These technology enhancements bring yet another appealing dimension to the ridesharing and make it more emotionally rewarding. While this initial private effort is encouraging, it is a recent phenomenon. It's important to the future of ridesharing that these initial players gain traction, become scalable and evolve into a full-fledged industry to be successful.

## ***Future Transportation and TDM-Related Trends***

- **Growing Use of Employer-based Transportation Support Services**

Over the past few years, the green movement and corporate experiences with it have helped advance the TDM cause. Corporate leaders have now realized that it is in their best interests to embrace employer-based transportation programs that will, in turn, boost recruitment, retention, employee productivity, etc. Consequently, more companies across Virginia are offering services and programs such as compressed work weeks, teleworking, carpool and vanpool onsite matching, transit benefits, etc.

- **Road-related User Fees**

Any increase in user fees – tolls; increased gas taxes; or vehicle mile traveled (VMT) tax, could impact future mode choice. If the reaction to the 2008 spike in gasoline prices was any indicator, a dramatic increase in user fees, in any form, could increase interest in and use of travel options.

- **The Possibility of Stricter Clean Air Standards in the Future**

The Obama administration is also proposing new clean air and fuel economy (CAFE) standards for cars and trucks, including Federal limits for tailpipe emissions. New standards could have an impact on the region's clean air attainment status over the long term, thereby threatening Virginia's share of federal transportation funding.

- **The Possibility of Higher Gas Prices in the Future**

Virginia's transit and rideshare agencies saw a dramatic increase in ridership and ridematching activities when gas prices hit \$4 per gallon. While prices have fallen way off this mark, most long-term oil industry price predictions indicate that gas prices will rise again.

## **VI. Future Program Refinements to Accelerate Use of Transit and Other Travel Options**

Based on these trends, the future initiatives of Virginia's transit and TDM community include:

1. **Discover Greater Insights and Continue to Share Knowledge Across Virginia's Entire Transportation Industry:**

As major trends and shifting demographics reshape customers' needs and expectations, it will be important to accelerate research efforts that will help drive the transit and TDM community's customer-centric focus. DRPT and VDOT will continue to lead the transit and TDM community's research efforts and share insights to help transit and TDM agencies formulate the most effective action plans. The Secretariat's new Multimodal Advisory Group will be included in this process to further seed even greater collaboration and marketplace impact.

2. **Enhance Measurement and Reporting of Impact and Return on Investment (ROI):**

It is imperative that all members of Virginia's transit and TDM community study, calculate, package, and showcase transit and TDM in terms of their impact on economic development, jobs and overall quality of life. Historically, program evaluation is a function that has been often short-changed by transit and TDM agencies simply because insufficient funding prevented them from conducting the research and data collection required for comprehensive evaluations. In the immediate future, the

insights and protocols gained from DRPT's public benefit assessment and the investment in Arlington County's impact assessment will be incorporated into a statewide measurement system.

**3. Continue to Build Awareness:**

The transit and TDM community will continue to educate Virginia residents, businesses and other stakeholders on transit's and TDM's key messages: current impact, how to find and use available travel options, and the future promise and related benefits of a more balanced transportation system. In addition, every member of Virginia's transit and TDM community will continue to promote transparency across the industry. VDOT and DRPT will lead by example by improving and promoting their respective performance reporting systems.

**4. Create More Appealing Services and Products:**

Virginia's transit and TDM community will continue to "bring to market" the most effective and innovative programs and services. For example, the transit and TDM community will pursue new technologies that provide real-time traveler information for bus and train arrivals and departures.

**5. Inspire Better Land Use Planning:**

To be most effective, land use planning must view the needs of pedestrians, bicyclists, transit users and automobile operators equally. Transit and TDM need to be made part of the land use plan. VDOT, DRPT and regional planning organizations will continue to embrace this important consideration.

**6. Offer More Employer Incentives:**

When employers are involved with transit and TDM initiatives there is a dramatic lift in participation among their employees. DRPT will continue to work with elected officials to explore tax and other incentives similar to the Telework!VA. Employer-based incentives work and are dramatically cheaper than funding new roads. Furthermore, they can be immediately implemented and generate immediate results.

**7. Elevate the Work of Virginia's Transit and TDM Community to an Economic Development Imperative for Communities Across America:**

Most economic development experts agree that in the age of ubiquitous technology, distributed workforce will become commonplace. The 21<sup>st</sup> century workforce will be defined by the highly educated, energetic professionals who can and will select their place of residence based on their preferred lifestyles and personal interests, rather than an employer's home location. The great outdoors, abundant cultural amenities, educational institutions at all levels, and state-of-the art healthcare services will become the defining attributes of the most desirable communities.

This list will also include unencumbered access and mobility – the freedom and convenience to enjoy all of the other attributes. Thus, economic development success in the future will be based, in part, on a community's ability to develop and sustain its transportation system. Transit and TDM-related services have demonstrated that they deliver. Showcasing Virginia's experience and commitment in this area should become part of the Commonwealth's economic development story.

**8. Increase Investment in Telework!VA:**

The potential growth of telework across Virginia is promising. One seventh of non-teleworkers “could and would” telework occasionally if offered the opportunity – that’s 15 percent of all commuters statewide. The potential to remove thousands of people from the road should not be overlooked.

**Potential New Teleworkers**

	<u>Statewide</u>
<b>Non-teleworkers who ...</b>	
<b>Have TW-appropriate job responsibilities</b>	<b>31%</b>
<b>Are interested in TW</b>	<b>24%</b>
- Occasional	<b>15%</b>
- Regular	<b>9%</b>
<b>Potential New Teleworkers (Not discounted)</b>	<b>751,000</b>

*Source: Based on figures and projections from the 2007 Virginia State of the Commute Survey*

**VII. Summary**

The potential impact of transit and TDM initiatives to further reduce highway congestion and single occupant vehicle (SOV) travel in the Commonwealth is large. Despite limited funding for infrastructure and support services (marketing, public outreach, etc.), efforts to date have paid dividends. The share of drive-alone work trips is on a downward trend. In the Metropolitan Washington region, which includes Northern Virginia, the share of drive-alone travel has dropped from 70 percent to 64 percent since 2001, a trend that’s expected to be reflected in the statewide State of the Commute survey currently underway. Increased investment could mean substantial, far-reaching and immediate benefits to Virginia citizens.

Investment in ridesharing, teleworking and employer-based programs that promote travel options not only work, but they also offer a particularly high return on investment. Using survey data, the Arlington County Commuter Services (ACCS) calculated that each day in FY 2008 its Commuter Services program reduced 542,000 miles of VMT (vehicle miles traveled), reduced greenhouse gases by 256 tons, and saved nearly 23,000 gallons of fuel.

Although transit and TDM services cost significantly less than the construction of new roads, they still require increased and sustained funding. Public transportation infrastructure is more than meets the eye. Transit comes with needed maintenance and marketing costs, while ridesharing programs must include park-and-ride lots, ride matching and guaranteed ride home services if they are to be successful.

This is the optimal time to redouble our commitment to and increase investment in transit and other travel options. First, a greater focus on building a truly sustainable transportation system will help Virginia communities maintain their economic development advantage. Second, Virginia citizens have never been more open to the many travel options being made available. Environmental concerns and rising gas prices on the horizon, along with demographic, social and cultural shifts, make the use of

trains, buses, carpooling, vanpooling and teleworking more appealing than ever. Third, while roads take years to plan and build, and require resources beyond currently available funds, providing and promoting travel options can yield short term results and an exceptionally high return on investment, two qualities that Virginians value now more than ever.

By moving more people in fewer vehicles, moving travelers out of peak travel periods, or, in the case of teleworking, eliminating travel altogether, the Commonwealth of Virginia will have a safe and efficient transportation system that supports and improves every Virginian's quality of life for years to come.

<b>VIII. Appendix:</b>
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Reports on recent initiatives from transit and TDM agencies across Virginia that were provided as input to this report are available on DRPT's Web site, [www.drpt.virginia.gov](http://www.drpt.virginia.gov).