



**Virginia's Long-Range Multimodal  
Transportation Plan  
2007-2035**

**MOBILITY, ACCESSIBILITY, AND  
CONNECTIVITY**

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**Prepared by:**

**KFH Group, Incorporated  
with  
Cambridge Systematics**

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## **EXPANDING MOBILITY, ACCESSIBILITY, AND CONNECTIVITY IN VIRGINIA: MAJOR INITIATIVES AND OPPORTUNITIES**

The ability for Virginians to access jobs, shopping, recreational activities, medical facilities, and numerous other community locations is obviously a fundamental need, and has a dramatic impact on both the individual as well as the Commonwealth's economy. The need for mobility, and for different transportation services and modes to connect, is vitally important to all residents and visitors, and particularly critical to older adults, people with disabilities, people with lower incomes, and people who live in households with no vehicles, who often have fewer transportation options.

This paper discusses several major initiatives that have been identified to help fill mobility gaps, support more effective connectivity, and ensure greater accessibility to activities and locations. These initiatives are presented at the outset, followed by additional background information. The initiatives are often inter-related, both between themselves and with the topics in other VTrans2035 reports and policy papers, and are generally categorized by the opportunity to fill gaps in mobility, to improve connectivity and accessibility, to support and expand mobility options, to address infrastructure and other issues that impact mobility, and to utilize new initiatives.

### **Filling Gaps in Service to Expand Mobility Options**

- **Expand the Reach of Transit Services** – While transit services are fairly extensive in the urbanized portions of Virginia, there is a need to expand the reach of transit beyond the current service areas – even in urban areas. Funding for transit services has not kept pace with development, resulting in underserved or unserved areas just outside current transit systems. In addition, there are still areas without service, with consequences of a lack of mobility for those without access to autos.
- **Expand Paratransit Services and Going Beyond Traditional Transit and Americans with Disabilities Act (ADA) Paratransit** – Potential strategies include the use of special neighborhood loop routes targeted to populations with limited mobility options, flexible shuttle-type routes, deviated-fixed route services, taxi voucher programs, and demand-response services beyond the required ADA service area and times.
- **Expand Volunteer Driver Programs** – The use of volunteer drivers can offer transportation options that are difficult to provide through public transit and human service agency transportation, and volunteers can also provide a more personal and one-to-one transportation service for customers who may require additional assistance.

### **Improving Connectivity and Accessibility**

- **Implement Mobility Management Structures** – In some areas of the Commonwealth there have been strong efforts to ensure that various transportation services are connected, through partnerships, agreements, coordinated schedules, regional information centers, and coordinated fare and media policies. Current and future technology can be employed by mobility managers to allow customers to easily access information on mobility options and

allow different providers to coordinate trips. In addition, the Virginia 511 system offers a trip planning tool and offers information on a variety of commuter options. Also, transit services in Bluefield, Culpeper, Fairfax, Loudoun County, Warrenton, and Winchester offer Google Transit for trip planning. Building upon these, and as needed around the state, mobility management structures can be established to ensure the most effective use of resources to meet the growing demand for mobility and to improve accessibility and connectivity. In addition, through these effort and current regional efforts that enable customers to easily transfer between various services, the Commonwealth could consider some type of statewide media to encourage even greater connectivity between transit providers, paratransit providers, and others.

- **Establish Single Point of Entry** – “One Transportation System for All Virginians” would provide a transportation system with a single point of entry, without duplication and gaps across geographic and jurisdictional boundaries. This system would utilize different travel modes provided by public transit providers, non-profit agencies, and for-profit companies, make more effective use of public and private dollars, and build upon current efforts to provide “one-stop” opportunities such as regional trip planners and the current 511 system. In addition to simply providing static information, such a system would, through the use of technologies such as Automatic Vehicle Locators (AVL) and vehicle detection systems, provide real time travel information. Current and predicted travel times and costs of travel using any mode or combination of modes would be available through this system. Parking availability at lots or on the street would be available as well.

### **Implement or Expand Support Services to Enable Mobility**

- **Ensure Safe Mobility for Older Drivers** – AARP notes that “Complete Streets” planning presents an opportunity to increase the safety and availability of older adults’ travel options. Complete Streets planning encourages local, regional, and state planning agencies to change policies and procedures so that non-auto forms of travel become a routine part of project development. As part of the Complete Streets effort, Virginia Department of Transportation (VDOT) has a policy for integrating pedestrian and bicycle accommodations. This policy could be expanded in accordance with AARP recommendations so that communities can build upon the principles of Complete Streets to address the specific needs of older drivers.
- **Implement or Expand Travel Training Programs** - At times some customers may have transportation services available to them, but are unaware of these services or unsure about how to use them. Travel instruction or travel training provides people with the skills required to travel safely on available transportation options. While some transit systems have implemented travel training programs, there is an opportunity to expand these efforts and provide travel instruction that reflects the individual needs of the person being trained and an appropriate understanding of a person’s ability to travel safely and independently.
- **Implement or Expand Taxi Voucher Programs** – Programs such as Fairfax County’s Seniors-on-the-Go! taxi voucher program offer additional mobility options, especially for same day or unscheduled transportation needs. In addition, through the coordinated transportation planning process, many Virginia regions identified this strategy as an important one in their area.

## **Addressing Infrastructure Needs and Other Issues that Impact Mobility**

- **Lower the Average Age of Transit Vehicles** – While the average age of transit vehicles in Virginia in FY 2006 was lower than the national average of 9.4 years, an aging fleet means more vehicle breakdowns, higher maintenance costs, and non-operating wheelchair lifts. The Virginia Department of Rail and Public Transportation’s (DRPT) asset management initiatives address these issues directly. A vehicle replacement schedule as part of the Transit Development Plan (TDP) process will be another opportunity to better identify vehicle needs and to lower the average age of vehicles used to provide mobility in the Commonwealth.
- **Address Land Use Issues** – Development that allows Virginia residents to live in proximity to work, shopping, and other community destinations, and offers the ability to walk to these locations and eliminate vehicle trips help reduce traffic and improve regional accessibility. Policies that encourage mixed-use development, if not already in place, can be considered. In addition, more densely developed and urbanized areas are more able to support traditional transit, while lower density areas are often more suited for flexible transportation options (e.g., route deviation or point deviation public transit) and demand-response/paratransit services (e.g., checkpoint paratransit, general public dial-a-ride) that is more costly to provide. While in some portions of the Commonwealth, transit providers are actively involved in the initial land use and development process, there can always be a greater emphasis to help ensure that transit issues and relationships to land use are fully considered. In addition, greater bike and pedestrian opportunities can be accomplished through land use that is friendly to these travel modes.
- **Emphasize Transit Oriented Development (TOD)** – Tied to effective land use is a strong state and local emphasis on TOD – high density, high-quality development within a short walk from multi-modal centers – that features walkable designs with pedestrians and non-motorized modes as the highest priority, transit stations as prominent features of town centers, and regional nodes containing a mixture of uses in close proximity, including office, residential, retail, and civic uses. Compact, mixed use development near new or existing public transportation infrastructure can serve housing, transportation, and neighborhood goals. Pedestrian-oriented design, an important feature of TOD, encourages residents and workers to drive their cars less and ride mass transit more. Construction of higher density residential development, along with office and retail space, adjacent to Metrorail and commuter rail stations has the potential to concentrate development in an area well-served by high capacity transit. By allowing Virginia residents opportunities to reach needed destinations without using their car, this effort can help reduce traffic and improve overall accessibility.
- **Address Environmental Barriers** – Coordination between transit agencies and local jurisdictions and commitment by both entities are critical to ensure the infrastructure is in place to accommodate pedestrian access and movement and to help ensure that customers can reach available services.

## Utilizing Promising New Initiatives

- **Promote Aging in Place Policies** – Aging in Place, an initiative of Partners for Livable Communities (Partners) and the National Association of Area Agencies on Aging (n4a), promotes affordable and appropriate housing, supportive community features and services, and adequate mobility options, which together facilitate personal independence and the engagement of residents in civic and social life. As noted by this initiative, most Americans choose to age in place and within the same communities where they have long lived. By 2035 nearly one in five people in Virginia will be over the age of 65, and therefore the aging in place phenomenon will present opportunities to plan and design appropriate and effective mobility services.
- **Coordinated Human Service Mobility Planning** - In 2007-2008, DRPT undertook the development of Coordinated Human Service Mobility (CHSM) Plans organized geographically around the Commonwealth's 21 Planning District Commissions (PDCs). Through the CHSM planning process, key local stakeholders in each region endorsed a variety of strategies to meet these unmet transportation needs. Common strategies among the CHSM Plans include implementation of new public transportation services or operation of existing public transit services on a more frequent basis; expansion of demand-response service and specialized transportation services; establishment or expansion of programs that train customers, human service agency staff, medical facility personnel, and others in the use and availability of transportation services; and new mobility management and coordination programs among public transportation providers and other human service agencies providing transportation.
- **Employ Value Pricing Strategies** – As noted in the policy paper on congestion, investments in Intelligent Transportation Systems (ITS) technology and other transportation system management and operations measures will help to squeeze more capacity out of the existing highway network. Examples of this approach include managed lanes, which maximize capacity through value pricing. Value pricing works by shifting purely discretionary rush hour highway travel to other transportation modes or to off-peak periods. By removing a fraction (even as small as 5%) of the vehicles from a congested roadway, pricing enables the system to flow much more efficiently, allowing more cars to move through the same physical space. The main types of pricing strategies that can be employed are variably priced lanes (involving variable tolls on separated lanes within a highway, such as Express Toll Lanes or High Occupancy Toll lanes), variable tolls on entire roadways, cordon charges that require either variable or fixed charges to drive within or into a congested area, and area-wide per-mile charges on all roads within an area of congestion, and lane guidance including the use of shoulders as travel lanes in peak periods. Additional information on value pricing is included in the VTrans2035 paper on congestion.
- **Utilize Intelligent Transportation Systems (ITS) Technology** – The use of advanced technologies to improve the efficiency of transportation systems and improve customer service has been embraced by transit operators in Virginia. These technologies have included computer-aided dispatch systems, on-board and remote information systems, and automated fare collections systems. In August 2009, DRPT produced a strategic plan that detailed ITS deployment throughout the Commonwealth, and identified opportunities to

maximize the benefits of local transit ITS technologies and possible coordination with regional and statewide initiatives.

One technology that VDOT will be considering in the future is IntelliDrive<sup>SM</sup>, which uses wireless communications to provide real-time data far more robust and ubiquitous than currently available information. Future IntelliDrive<sup>SM</sup> technologies include Traffic Operations Centers (TOCs), On-Board Equipment (OBE) integrated with vehicle electronic systems to relay information on speeds and vehicle conditions to Road Side Equipment (RSE), and the use of real time data to optimize the operation of ramp meters. Additional information on this technology is also included in the VTrans2035 paper on congestion.

- **Support Car Sharing** – Car sharing can be an appropriate mobility solution for people who want the availability of a car, but don't drive enough to justify the expense of owning one. Through car sharing, people rent vehicles for short periods of time, often by the hour. This option can be especially ideal for people who drive less than 7,500 miles a year and don't need a car for everyday use. In addition to the personal savings that come with not owning a vehicle (car payment, insurance, etc.), this mobility option provides possible environmental benefits through pollution and greenhouse gas reductions.

## **DEFINITION OF THE ISSUE**

*Virginia's Transportation Performance Report for 2007* defines mobility in Virginia as the “capability of moving people or goods from place to place. The greater the ability to travel to desired activities and locations, the greater the mobility.” As noted in the report, connectivity and accessibility are key related concepts, with connectivity referring to the linkage among regions and centers of activity, and accessibility addressing the ability of people or goods to reach destinations by different modes of transportation. A separate freight issue paper is addressing these topics for freight, and therefore this paper is focused on passenger transportation in regard to mobility, connectivity, and accessibility. Also, the Commonwealth faces a future where traffic congestion continues to impose added costs for businesses and individuals, particularly in Northern Virginia, the Hampton Roads region, and the Richmond metropolitan area. A separate congestion policy paper addresses the relationship of congestion to mobility and accessibility, and includes opportunities for initiatives to help relieve congestion. These opportunities include several noted in this paper, such as expanding travel options and encouraging transit oriented development.

The VTrans2035 Vision Report includes the following goal statement for mobility, accessibility, and connectivity – “Facilitate the efficient movement of people and goods, expand travel choices, and improve interconnectivity of all transportation modes”. The report notes that this goal addresses improving access, expanding modal choices, and meeting the needs for special needs populations and disadvantaged socioeconomic groups. While this paper highlights issues related to mobility, connectivity, and accessibility that impact all Virginians, particular focus is on these groups who typically have fewer transportation options and whose access to jobs, shopping, and other vital community services is dependent on services that are accessible and connect. Key points of emphasis are opportunities to:

- Fill gaps in service in order to remove restrictions on mobility;
- Establish structures and support services to improve connectivity and accessibility and expand mobility options; and
- Address infrastructure and other issues that impact mobility.

In addition, the Code of Virginia that contains the statutes for the Commonwealth includes a specific goal for addressing the transportation needs of populations with limited mobility. Section 33.1-23.03:002 states that the “Commonwealth Transportation Board, in cooperation with other local, regional, or statewide agencies and entities vested with transportation planning responsibilities, shall establish specific mobility goals for addressing the transportation needs of populations with limited mobility, including, but not necessarily limited to, the elderly, persons with disabilities that limit their mobility, persons not served by any form of mass transit, and those who, for whatever reasons, cannot afford motor vehicles or cannot be licensed to drive them. Such goals, once established, shall be considered in the development and implementation of the Statewide Transportation Plan required by Section 33.1-23.03.”

Virginia’s transportation agencies operate a modern multimodal transportation system that offers users a range of options including public transit and paratransit services, an extensive roadway network, airports, rail lines, bikeways and sidewalks, and port facilities. While Virginia is committed to offering its citizens an array of modal choices that provide for seamless linkages when moving from origin to destination, not surprisingly there are areas for improvement and issues to confront. There are gaps in service that may restrict mobility of the general public, and there are particular issues for those without access to vehicles, older adults, people with disabilities, and people with lower incomes. Mobility options other than the use of a personal car are often their lifeline to the community. With the needs of these groups growing, the need for a variety of transportation services will also increase. In addition, these services will not only need to provide basic transportation within communities, but also to connect across jurisdictions and to be accessible from both physical (i.e. wheelchair lift vehicles) and cognitive (i.e. travel training) standpoints. This access is also vital to both individual social needs and economic development, and therefore relates highly to the Commonwealth’s economic vitality.

In some instances, desirable actions taken to resolve one sort of mobility problem – for example, the use of value pricing strategies to reduce congestion – may have an adverse impact on those who are least able to afford to pay tolls. DRPT has addressed this issue directly in the I-95/I-395 corridor through the proposed use of a portion of the toll revenues to support public transportation capital and operating improvements, and HOT lanes will be free for carpools of three or more people. It should also be noted that general purpose lanes are still a no-toll option available to all. Strategies that attempt to address congestion through demand management, including land use solutions and jobs-housing balance that allow people to live close to their employment, can make public transportation more effective, and can contribute to equity for groups that rely on public transportation services to meet their mobility needs.

An important factor that impacts mobility is congestion. As noted through the *Virginia Performs* initiative, traffic congestion not only negatively impacts commuters, but it also increases the cost of goods and services by consuming valuable time and fuel. As noted in the



policy paper on congestion, a variety of strategies are being employed in Virginia to help reduce congestion, including improvements to the roadway network and to transit facilities, use of ITS technology and other transportation system management and operations measures, and Travel demand management (TDM) strategies range such as transportation-land use coordination. .

In addition, public transit use in Virginia is growing much faster than the national average. However, since some revenues to support transit in Virginia are tied to revenues from fuel purchases and to revenues from vehicle registrations, shifts from single occupancy vehicles to public transit rides can partially reduce revenue to support current public transit services. This topic is also addressed in a separate VTrans2035 revenue issue paper.

## **WHY IS THIS ISSUE IMPORTANT?**

While improving mobility, connectivity, and accessibility are important for all Virginians, as noted it is of vital concern to the people in Virginia who have limited transportation options. According to the 2000 Census, over 200,000 Virginia households have no available vehicles – 7.7% of the population. In addition, with transportation budgets strained to meet current needs, let alone fill gaps, it is imperative that existing resources are used efficiently and effectively and services appropriately coordinated and connected. So, while there are a myriad of social and economic reasons why this issue is important, quite possibly the most critical ones are the need to meet both current and the growing transportation demands, while making efficient use of existing services.

### **Meeting the Growing Need for Mobility Options**

The impending need for a variety of mobility options is highlighted through both input from key stakeholders in Virginia communities obtained through a local mobility planning process detailed later in this report, as well as through forecasts of socioeconomic activity and travel data for VTrans2035, Virginia’s statewide multimodal transportation plan. These forecasts highlight the impending need for improving mobility, and include:

- Between 2010 and 2035, Virginia’s population may grow by about one third;
- Between 2010 and 3035, daily vehicle miles may increase between 35% and 45%;
- The number of people age 65 and over is forecast to double, from one million at the present to two million in 2035, and to increase from 12% of the population to 19%;
- Population and employment growth rates are forecast to vary greatly between the different regions, with some experiencing growth rates as high as 80% to 90%, and others very low growth rates;
- Income levels also vary greatly from region-to-region, for instance the household income in parts of Southwest Virginia is less than half of parts of Northern Virginia.

Current research is being conducted for the DRPT to determine current and future demand for transportation for older adults, people with disabilities, and people living below the

poverty level. The initial research shows that by 2035 that at a minimum the demand for transportation just from these groups will be over 19 million trips annually, and may be as high as 72 million trips per year.

### **Making Efficient Use of Existing Services**

As highlighted in the *Virginia Transit Performance Report*, in many areas of the Commonwealth transit services are an essential part of the overall transportation system. Transit increases accessibility and mobility for Virginia residents by connecting them to the broader transportation network and helping them save time and conserve energy. Transit services provide significant social and economic benefits to the customers and communities served. Improving the transit component of a transportation system often starts with upgrades or expansions of existing services, which tend to be more economical and fulfill growing needs compared to implementing new services. Transit performance information is an important factor to consider in determining the relative success of transit systems, potential areas for improvements, and the process by which funding should be allocated. Addressing congestion issues, as noted in the policy paper on this topic, will improve highway and road performance that will in turn help transit services to operate more efficiently.

### **Address Regional Accessibility**

As noted in the *Regional Accessibility: Why it matters? What should be done?* paper, the majority of trips made by Virginia's citizens are intra-regional trips to work, shopping, local restaurants, and community activities. In urban areas, traffic congestion has dramatically increased the amount of time spent stuck in traffic trying to access these locations. For example, from 1982 to 2000 the amount of time travelers spent stuck in traffic increased 225% in the Washington metropolitan area, 200% in the Hampton Roads metropolitan area, and 167% in the Richmond metropolitan area. Road improvements can only go so far in solving a problem that requires a long look at land use policies and development that only continue to add to the current problem. At the same time, connectivity between various transportation providers is essential to ensure people who choose not to drive, or who rely on other transportation options beyond a car, can move about their region.

## **CURRENT CONDITIONS AND PERFORMANCE IN VIRGINIA**

The roadway system throughout Virginia serves as the basic means of transportation for most Virginians. The paper on congestion provides information on this mode, and the issues and opportunities that result. Therefore as noted earlier, the focus on current conditions is more on the solid foundation of activities and efforts upon Virginia builds upon to improve mobility, accessibility, and connectivity, particularly for population groups that depend on alternatives to driving.

## **Public Transit**

In Virginia, bus services are the predominant public transportation mode. This includes fixed-route bus services operating on regular routes and schedules, demand-responsive services through which customers schedule their trips, and commuter bus services. Regional rail services operate in Northern Virginia through the Washington Metropolitan Area Transit Authority's (WMATA) heavy rail system and the Virginia Railway Express (VRE) commuter lines. A new light rail is also under construction in Norfolk.

A significant number of public transit services also operate in small cities and rural parts of the Commonwealth, although the level and type of service vary from system to system. While these public transit operators provide vital services for local communities, their routes typically do not travel beyond county or regional boundaries, though needs may exist for such connectivity to access major medical and employment destinations. Overall, with over 50 public transportation providers, hundreds of human service agencies that provide transportation for the people they serve, numerous Medicaid transportation providers, and countless private transportation operators in the Commonwealth, connectivity between various services to enable customers to move seamlessly throughout Virginia is a complex issue and daunting challenge.

## **Intercity Passenger Rail**

Intercity passenger rail provides additional intercity and interstate connectivity for Virginia residents. In the I-95/I-64 corridor, Amtrak currently operates two daily round trip intercity passenger trains between Newport News and Washington, DC and two daily round trip intercity passenger trains between Richmond and Washington, DC, with connecting service to the Northeast. In the I-81/US 29 corridor, Amtrak currently operates daily Crescent and three day a week Cardinal intercity train service in the Route 29 corridor.

DRPT has developed a draft Statewide Rail Plan to provide a clear vision and strategy to address rail needs in the Commonwealth. The plan outlines proposed projects designed to meet the Commonwealth's goals for the efficient and effective movement of people and goods through passenger and freight rail transportation. The proposed projects will deliver results such as removing approximately 7.3 million cars and trucks from Virginia highways, saving more than 445 million gallons of fuel and more than 1.2 million tons of carbon emissions.

Among other actions, improvements to passenger rail over the last six years have included development of the first dedicated source of funding for passenger and freight rail capital improvements in Virginia's history (Rail Enhancement Fund - 2005), advancement of two three-year intercity passenger rail demonstration projects that will operate new daily round trip passenger rail service between Lynchburg and Washington, DC and Richmond and Washington, DC., and advancement of planning and engineering of the extension of VRE service from Manassas to Gainesville and Haymarket.<sup>1</sup>

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<sup>1</sup> Recently, the Commonwealth Transportation Board allocated \$17.2 million in its six-year transportation plan for a three-year pilot program to run two trains along the corridors of interstates 95 and 81. The trains would travel from

## **Transportation Demand Management**

DRPT supports a number of Transportation Demand Management (TDM) programs to help manage travel demand and make transportation more efficient. The core mission of the TDM program is to move more people in fewer vehicles, move travel time out of the peak period, or, in the case of teleworking, eliminate travel time altogether. TDM programs in the Commonwealth include HOV lanes, carpooling and vanpooling, and telework initiatives.

TDM is accomplished through a unique partnership between DRPT, 18 local commuter assistance programs, Metropolitan Planning Organizations, various Transportation Management Associations (TMA's) and the VDOT. Heavy emphasis is placed on business-to-business promotion to assist employers in starting or expanding employee transportation programs. DRPT also provides technical and financial support to local commuter assistance agencies through grant programs, research, training, and marketing assistance. Through this partnership, VDOT and DRPT also collaborate on the development, implementation and evaluation of Transportation Emission Reduction Measures (TERMS) to help improve air quality and jointly market the state's HOV systems to promote use of shared rides and on the design and promotion of Park and Ride lots.

## **Performance Measures**

The Performance Report includes a variety of measures in regard to mobility, connectivity, and accessibility. The measures detailed in that report are:

- Public Transportation Trips Per Capita
- Transit Revenue Miles
- HOV Use
- Hours of Delay
- Park and Ride Spaces
- Bicycle Travel
- Pedestrian Travel
- Intercity Rail Service

In addition, the *Virginia Performs* initiative includes the passenger trips on public transportation systems taken by elderly, disabled, and low income people in Virginia. Through the *Virginia Performs* Website, DRPT reports their target to achieve a 2.08% increase in ridership by elderly, disabled, and low income Virginians over the latest available data (2006). More details on the performance of public transit services in Virginia in comparison with such performance measures is included in the Recent Trends and Available Forecasts section later in this report.

## **Coordinated Human Service Mobility Planning**

In 2007-2008, DRPT undertook the development of Coordinated Human Service Mobility (CHSM) Plans organized geographically around the Commonwealth's 21 Planning District Commissions (PDCs). This planning process brought various stakeholder and providers together to discuss the mobility issues that these groups face on a daily basis, and to develop and prioritize mobility strategies for each PDC.

The CHSM planning process identified several common themes and issues:

- Limited general public transit, particularly in rural areas.
- Limited transportation options in evenings and on weekends.
- Limited or no demand-response service outside fixed-route service areas.
- Limited transportation options to access jobs that require second and third shift work.
- Trips to medical services for people not eligible for Medicaid.
- Transportation provided by human service agencies constrained by jurisdictional boundaries or to specific clientele.
- Lack of information on available transportation options, including limited outreach to customers, doctor offices, human service agencies, employers, and others on available transportation services.
- Limited transportation options for customers who need additional assistance beyond the vehicle to access their destination.

Through the CHSM planning process, key local stakeholders in each region endorsed a variety of strategies to meet these unmet transportation needs. Common strategies among the CHSM Plans included:

- Implementation of new public transportation services or operation of existing public transit services on a more frequent basis.
- Expansion of demand-response service and specialized transportation services.
- Establishment or expansion of programs that train customers, human service agency staff, medical facility personnel, and others in the use and availability of transportation services.
- New mobility management and coordination programs among public transportation providers and other human service agencies providing transportation.

Based on the CHSM planning process, DRPT is funding new projects that respond to the identified strategies, including mobility managers, defined later in this report, who are working at the local and regional levels to improve the connectivity of services and promote coordination between transportation providers.

### **Mobility Needs of People with Disabilities**

A report for the Virginia Board for People with Disabilities (Board) titled “Mobility for All: A Model Approach for the Commonwealth”, also highlights that affordable and accessible transportation is especially important for people with disabilities, many of whom rely on it to access work opportunities and to actively participate in their communities. These individuals’ independence and quality of life largely depends on their capacity to get *where* they need to go *when* they need to get there.

The Board serves as the Commonwealth’s Developmental Disabilities Planning Council and as the Governor’s Advisory Council on issues affecting people with developmental disabilities. In its *2007-2011 Developmental Disabilities State Plan*, the Board notes that “transportation services for people with disabilities in Virginia are managed and administered in highly compartmentalized systems at both the state and local levels. Inadequate, unreliable, or inaccessible public transportation services significantly contribute to dependency - fiscal and personal - for individuals with disabilities. Current planning structures are disjointed. More importantly, transportation need assessments and planning too often fail to routinely consider the interests and concerns of persons with disabilities.” In the FY 2009 update of the Plan, the Board reiterated these points, adding an emphasis on transportation needs in rural areas: “Statewide, public and paratransit transportation services are often inadequate or unreliable, especially in rural areas, which significantly contribute to dependency - fiscal and personal - for individuals with disabilities. The Plan noted that quality assurance for transportation provided under the Medicaid brokerage system also remained problematic.

Further, the Board’s Plan included specific objectives for improving transportation:

- **Objective 1:** Support planning and coordination of transportation at the state and local levels for full inclusion of people with disabilities.
- **Objective 2:** Promote the improved quality of public and private transportation services for people with disabilities in the Commonwealth of Virginia.

While DRPT addressed the mobility needs of people with disabilities in the CHSM planning process described previously, the Board maintained that planning and operation of transportation services for persons with disabilities could be further improved.

### **Mobility Issues for Older Adults**

In their *Planning Complete Streets for an Aging America Research Report*, AARP reported that despite the oncoming stream of older adults, over two-thirds of transportation planners and engineers have not begun to consider the needs of older people in their multimodal

street planning. In addition, only one-third of the state and local Complete Streets policies adopted to date, have made explicit mention of older road users.

In Virginia, the Commonwealth of Virginia *Plan for Aging Services* (October 1, 2007 – September 30, 2011) completed by the Virginia Department for the Aging discussed several mobility needs and accessibility issues for older adults with regard to transportation:

- Need additional funding to expand affordable, accessible, and reliable community transportation services to take older and disabled persons to the doctor, pharmacy, grocery store, bank, etc.
- Need reliable “on demand” public transportation services seven days a week for those who cannot drive.
- Need to consider the development and funding of a voucher or “smart card” system for providing transportation through the existing bus, taxi, and wheelchair van programs already available in local communities.
- Need to pass legislation that would make volunteers who provide transportation in their own vehicles exempt from liability claims in case of an accident.

Notwithstanding the need for alternative forms of transportation, many older adults will opt to continue driving. In most cases, older drivers can continue to drive safely, especially if they change their driving habits to avoid peak traffic periods, night time driving, or hazardous conditions. Others may need assistive devices to drive safely such as collision warning or blind spot and obstacle detection systems. In the future, advances in ITS technologies may help the older driver by providing real-time information that would warn of upcoming hazards or changes in driving conditions. Additional safety features that warn drivers of speeds too high for the road conditions or geometric conditions or that slow or stop the vehicle when a crash is imminent may be particularly helpful to older drivers. When medical conditions or infirmity make driving unsafe, older adults will need access to alternative transportation options.

### **Funding for Human Services Transportation**

As part of efforts to enhance coordination of public transit and human services transportation, DRPT along with other state-level agencies reviewed the programs that fund transportation services for older adults, people with disabilities, and people with lower incomes. This review found that approximately \$162 million was spent on human services transportation and on public transit in rural and small urban areas of the Commonwealth in FY07.

Surprisingly, but similar to other states, the vast majority of the funding to support human services transportation is not administered by DRPT, the state agency that administers public transit programs. DRPT only oversees about 9.7% of the overall total of human services transportation funding. The leading source of funding for human services transportation is through the Medicaid Program administered by the Virginia Department of Medical Assistance Services.

## RECENT TRENDS AND AVAILABLE FORECASTS

### Transit Trends

The growth in transit use, detailed in the *Virginia Transit Performance Report*, indicates that needs for increased mobility options, accessibility of transit services, and connectivity of these services still exist and even continue to grow, as demonstrated by increased transit demand. Increased efficiency in providing services and continuing support for transit from the state and localities will be vital to improve mobility options in the future. The *Virginia Transit Performance Report*, along with recent information from DRPT, highlights several recent trends:

- Between FY 2003 and FY 2007, transit ridership grew by 19% or 31.2 million trips. This compares to a national growth trend of only 4% during the same period.
- The total transit miles operated in Virginia, as measured in vehicle revenue miles, grew by 13.1 million, or 20%, between FY 2002 and FY 2006. This growth was greater than the 7% increase in vehicle revenue miles nationally.
- In Virginia, the operating cost per passenger trip in FY 2006 was \$2.73 compared to \$3.42 in North Carolina, \$3.95 in Maryland, and \$4.15 in Tennessee.
- The cost per trip in FY 2006 (\$2.73) was 17% higher than in FY 2002 (\$2.34). This was a slower increase than seen nationally, where the operating cost per passenger trip increased by 24% from FY 2002 to FY 2006. For the same period, Maryland experienced a 38% increase, and North Carolina saw a 24% increase.
- Overall, the level of state government funding available to transit operators in Virginia was 42% higher in FY 2006 than in FY 2002.
- When combined, local government capital and operating funds available for transit operators in Virginia grew by 38% between FY 2002 and FY 2006.
- In FY 2006, transit operators in Virginia paid for approximately 41% of their operating costs through fares collected. This was equal to the percentage of costs paid out of fares nationally (41%), but was higher than the farebox recovery of transit operators in Maryland (24%), North Carolina (19%), and Tennessee (20%).

### Interagency Coordinated Transportation Council

As described earlier in the overview of funding for human services transportation, a variety of state agencies fund transportation services. To help facilitate the coordination of these programs, in 2003, DRPT established the Interagency Coordinated Transportation Council (Council) to promote interagency cooperation at the state level and to allow state agencies to actively work together to identify and recommend policy changes to eliminate duplication and to improve transportation coordination and services to key populations.



The Council consists of various agencies under the Secretariat of Health and Human Resources, in addition to DRPT:

- Department for the Aging
- Department for the Blind and Vision Impaired
- Department of Medical Assistance Services
- Department of Mental Health, Mental Retardation and Substance Abuse Services
- Department of Rehabilitative Services
- Department of Social Services
- Virginia Board for People with Disabilities
- Office of Community Integration

### **United We Ride Report**

In 2004, with the Council's involvement, DRPT applied for and received a federally funded United We Ride State Coordination Grant. The grant was used to conduct a statewide inventory of human service transportation resources, unmet human service transportation needs, and current levels of human service transportation coordination. The results of this inventory were documented in the 2005 *United We Ride Inventory -- Coordination Efforts in Human Service Transportation in the Commonwealth of Virginia* report. This report highlighted several recent trends:

- In general, the human service transportation system is made up of community agencies that have complex organizational roles related to transportation of the clients in addition to their primary service responsibilities. Most agencies provide both direct transportation services and actively arrange transportation for their clients with other private providers, in addition to their primary services.
- The most common types of transportation services provided are curb-to-curb and door-to-door services, but about two-thirds of Community Service Boards (CSBs) and some Area Agencies on Aging (AAAs) report that they provide door-through-door services when necessary.
- All agencies and public transit systems in Virginia surveyed reported significant unmet transportation needs for the older adults, people with lower incomes, and people with disabilities that they serve. A quarter to almost one half of agencies reported that the needs of persons who use wheelchairs are unmet. The great majority of agencies reported that the needs of persons who request "off hours/weekend" transportation (e.g., for shopping, social events, church, or synagogue) are entirely unmet. The report noted that clients receive transportation to and from their "programs", but little to no transportation exists for regular community life interests or needs.
- Coordination efforts in most localities have been limited. Only about a third of organizations stated that they attend meetings with other local agencies specifically on transportation. Little coordination of vehicle maintenance was reported, and few

agencies share radio, dispatch equipment, software, or accounting systems. Respondents reported few efforts to develop formal cooperative agreements on transportation.

- The report noted that the reasons for lack of coordination in Virginia are varied and multifaceted. Low levels of interagency coordination may be due in part to lack of accurate information, limited experience, and a fear of cost shifting. Some respondents expressed concerns about possible loss of revenue that is currently collected if coordinated transportation becomes mandated.

## **CURRENT VIRGINIA LEADERSHIP ROLES**

Fortunately, the Commonwealth has a solid foundation for future efforts to improve mobility, accessibility, and connectivity. This foundation includes key state agencies, multi-agency agreements, effective planning processes, and local and regional coordination models. Some highlights include:

### **Virginia Department of Transportation**

VDOT's Traffic Impact Analysis Regulations include references requiring conducting multimodal analysis to help ensure connectivity between various transportation modes and to ensure alternative mode evaluation. As noted in the regulations, in their comprehensive plans localities are encouraged to include pedestrian, bicycle, transit, rail, and other multimodal recommendations. In addition, required elements in a Traffic Impact Statement (TIS) include the potential for walking, bike, or transit trips for proposed developments.

### **Virginia Department of Rail and Public Transportation**

DRPT is the lead state agency for supporting Virginia's transit systems, as well as support for intercity rail and TDM programs. The agency provides financial assistance to transit systems in the Commonwealth by serving as the designated recipient and administrator of federal funds for the Federal Transit Administration (FTA) programs and state grant programs. DRPT also provides technical assistance to transit systems for capital and operations planning, financial planning, vehicle purchases and inspections, federal and state program compliance, marketing, training, program management, and project development. To further improve the efficiency and effectiveness of public transit services in Virginia, DRPT requires all transit properties to complete a Transit Development Plan (TDP) by December 1, 2011. These TDPs will serve as a management and planning tool for local transit providers and provide DRPT with critical information for administering transit funding.

## **Department of Transportation/Health and Human Services Memorandum of Understanding (MOU)**

Subsequent to the formation of the Interagency Coordinated Transportation Council, in June 2007 the Secretariat of Transportation and the Secretariat of Health and Human Services signed a MOU that outlined three specific objectives to be addressed by the Council:

1. Define and publish a matrix depicting the current human service transportation services, funding levels, and policy constraints affecting the provision of such services;
2. Identify and promulgate best practices and uniform methods for examining the efficiency and cost-effectiveness of these services, with the goal of improving provision of coordinated services; and
3. Develop an implementation plan to address the requirements of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and any other relevant laws and regulations, and define needed policy and regulation changes to implement the plan and provide for a process for identifying appropriate local coordinating agencies.

### **State Support for Transportation for People with Disabilities**

Virginia leadership in implementing coordinated human service transportation initiatives is especially evident in Governor Tim Kaine's 2008 decision to provide state funds to match federal dollars for the SAFETEA-LU initiatives in Virginia at the state level, thereby avoiding the local obstacles to change -- limited local match funds. By providing 45% of the required 50% match, the Commonwealth has clearly increased local and regional participation in the federal New Freedom Program, which funds new transportation services for people with disabilities above and beyond the requirements of the ADA.

Likewise, state agencies have demonstrated commitments to state policy changes this year by "recommending coordination" of transportation resources whenever possible. These commitments are found in state agency evaluation reports, demonstration grants, and requests for proposals. For instance, the Board issued a Biennial Assessment recommending a policy to "implement a Coordinated Human Services and Public Transportation Planning Model" and to require "coordination" in the Board's transportation-related grant funding opportunities.

### **Rural Transportation Planning**

As part of the development of Rural Regional Long-Range Plans, Virginia Department of Transportation and 21 PDCs throughout the Commonwealth, are partnering to evaluate the state's rural transportation system and to recommend a range of transportation improvements that best satisfy existing and future needs. This partnership will result in regional plans that identify needs

based on goals and objectives to be established by each PDC. The CHSM plans noted earlier will be included in these plans.

## **Models of Coordination**

There are additional excellent models of successful coordination that exist in Virginia:

- AAA initiatives, such as Four County Transit, New River Valley Senior Services, and Bay Transit;
- Local government initiatives, including RADAR, a nonprofit corporation based in Roanoke, and JAUNT, Inc., a public corporation owned by five local governments based in Charlottesville; and
- Models in Fairfax County (FASTRAN) and the Rappahannock Area/Fredericksburg (a CSB, AAA, and public transit coordinator).

## **RELEVANT LESSONS FROM OTHER STATES**

DRPT's efforts are consistent with United We Ride, a federal initiative to improve the coordination of human service transportation. As noted by the National Governors Association, states can address multiple needs and goals and use state, federal, local, and private resources more efficiently to provide transportation solutions for their citizens by establishing and supporting formal transportation coordinating mechanisms. The National Conference of State Legislatures has also conveyed that coordination can reduce or eliminate many of the problems caused by multiple specialized transportation programs in a report on state legislative approaches to coordinated human service transportation, which is summarized later in this section. These national efforts include information on efforts in other states that have been reviewed and considered by DRPT.

A variety of relevant state-level and regional coordination models serve as examples for developing a coordination model, which will build upon Virginia's current process and mechanism and help improve accessibility, mobility, and connectivity within the state. In particular, DRPT and the Interagency Coordinated Transportation Council have shown interest in the Florida model, which is generally acknowledged as the most formal statewide structure in the country. In 1989, the Florida Legislature created the Commission for the Transportation Disadvantaged to serve state-level policy board responsible for the oversight of coordinated transportation services in the State. The Commission is an independent agency with rule making and budget authority, located within the Department of Transportation for administrative and fiscal purposes. The Commission sets policies and provides direction in regard to quality assurance, program administration, contract management, and financial accountability, and contracts with a community transportation coordinator and planning agency in each county. In 2007, Florida's coordinated system provided over 51 million passenger trips. A variation of this model to fit Virginia is currently under review by DRPT and the Council.

The use of a mobility management strategy, currently emphasized at the national level, focuses more on the customers and meeting their needs through the coordinated use of a variety of providers. Virginia has begun to fund this strategy in a handful of locations. A mobility management approach can help with meeting the transportation challenges in Virginia, which on the surface appears to be in conflict with one another. On one hand, realities such as the anticipated increase of older adults, who need transportation services beyond their personal car, and the availability of jobs for low income workers requiring late night and weekend hours, call for increased mobility options and individualized trip arrangements, which cannot be met through traditional services. At the same time, transportation budgets are strained to meet mass transportation needs, let alone specific, individual needs. However, mobility management, through individual travel navigators and coordination of multiple transportation providers, can help ensure that people have access to various destinations in the most efficient and cost-effective manner possible.

In addition, other states are tackling the important connection between land use and mobility and can be used to develop appropriate plans and policies for the Commonwealth. For instance, the New Jersey Department of Transportation, in partnership with the Office of Smart Growth and other state agencies, is addressing rising congestion levels through their “New Jersey: Future In Transportation (NYFIT) effort. This initiative is taking a comprehensive and cooperative approach to transportation and land use planning, and has acknowledged that current land use development trends in the state are unsustainable. The effort is emphasizing work with community planners to keep jobs, services, and goods within reach of state residents, and encouraging reinvesting in the state’s infrastructure and shaping transportation to fit into the context of the state’s communities.