Northern Virginia Transportation Commission

NVTC

Twelfth Annual Report

Transportation Service Coordination Plan

September, 1996

ABSTRACT

This twelfth in the series of Transportation Service Coordination Plans (TSCP) of the Northern Virginia Transportation Commission reviews the institutional and legislative settings within which transportation policies and programs are planned and implemented in Northern Virginia. Scores of agencies and organizations work to gather data, define problems and opportunities, and craft solutions to the region's mobility needs. The TSCP also assembles performance data for the region's public transit systems, reviews ongoing activities, and discusses the qualities of a good transportation system. The report concludes with a set of issues and recommendations for action to guide NVTC and its jurisdictions as the region shapes long-range plans for its transportation network. Finally, appendices provide data on transportation agencies and organizations, public transit ridership and routes, taxi services, park-and-ride lots, transit fare and transfer policies, and ongoing studies in the region.

Money is scarce, congestion is getting worse, and existing transportation facilities are in need of immediate repair. In the future, the picture only looks more bleak. Between 1990 and 2020, the population of the region is expected to increase by 43 percent, while vehicle trips in the region are predicted to increase by 64 percent, and vehicle miles traveled daily by 74 percent. Planned investments in road and transit networks will not keep up with the traffic. In 1990, for example, during the evening rush hour, 26 percent of vehicle miles traveled in the region were at free-flow speeds, and 45 percent were traveled in stop-and-go conditions. By 2020, these figures are forecast to be 12 and 68 percent, respectively.

Daily public transit ridership in Northern Virginia is about 232,000 on several regional and local systems varying in size from approximately 270 peak-hour Metrobuses in Virginia to the two trolleys that serve the Crystal City area in Arlington. Both public agencies and private firms operate transit services. While most encourage transfers between systems, no uniform regional transit pass yet exists that would reduce the cost and increase the convenience of travel by public transit.

Among the studies and new initiatives underway in the region are efforts to implement bus and rail service in the Dulles corridor and provide high-speed rail service to Richmond. The region is also looking at a range of improvements in the I-66 and Beltway corridors, and is moving forward with extensions and additions to the HOV network. In addition, the regional paratransit system, MetroAccess, began operations in 1994, and has been expanding its schedule each year.

Recommended actions for future years include enhancements to the transit system, increased attention to bicycle and pedestrian access to facilities, and an effort to implement demand management techniques in the region. In upcoming years, the area will seek to identify new sources of transportation funding and grapple with issues of regional vs. local control over land use and transportation decisions. By considering these issues now, Northern Virginia and the entire region can begin to strive for consensus as to how to best move forward.

TABLE OF CONTENTS

TABLE OF CONTENTS Continued

SECTION III Continued

SECTION IV: IMPROVING THE REGION'S TRANSPORTATION SYSTEM

TABLE OF CONTENTS Continued

SECTION IV Continued

APPENDICES

LIST OF FIGURES

SECTION I

INTRODUCTION

INTRODUCTION

Often, at public meetings or in letters to editors, citizens express opinions and ask questions about transportation that, to them, appear to have obvious answers. "What we need out here is light rail." "Why don't they run a bus through my neighborhood? There are plenty of people." "They should have lowered the HOV requirement long ago."

While the input and ideas of the people who use the system everyday is invaluable, sometimes the questions also betray a lack of understanding of the complexities of transportation planning. There are few easy answers. Instead, there are competing interests, limited resources, and uncertainties about how one change in the system will affect other travelers.

Below we discuss one issue – the provision of bus service – that has been a contentious one in Northern Virginia, and attempt to demonstrate the multitude of considerations that must factor into any decision made by the jurisdictions or Metro. We trust that this Transportation Service Coordination Plan will both encourage citizens to more actively participate in the region's transportation decision-making process, and provide them with tools to help them understand and navigate through those complexities.

Northern Virginia Bus Service – A Case Study

When transportation questions arise in Northern Virginia, one issue that is often debated is who should be allowed to answer them, or—more specifically—at what level of government it is most appropriate that decisions be made. When it comes to the provision of local bus service, this debate is often particularly heated.

Some advocate a regional bus system that can adjust service in response to demand, regardless of jurisdictional boundaries, tying together disparate areas and enhancing our region's mutual interdependence. Others favor local systems, in part because decisions regarding how those systems operate do not require agreement by other jurisdictions. In either case, the question of the most appropriate level at which to plan and implement those plans is one that the region has not yet settled. Below, we discuss a few of the considerations central to this debate.

WMATA first began providing bus service in the region in 1973 after purchasing two private bus companies. One of the major sources of funding for the system has been the federal government. While the availability of federal money has made both Metrobus and Metrorail possible, recipients of federal funding must comply with specific procedures and requirements that often raise costs. For example, federal labor regulations are often credited with causing significant increases in operating costs.

Over time the cost of providing Metrobus service increased and some jurisdictions came to believe that local bus service could be provided at a lower cost. Individual jurisdictions soon began providing local bus service; for instance, Fairfax County's Connector service and DASH in the City of Alexandria. Some local services supplemented Metrobus service; however, the majority of the service changes have been to take over routes originally operated by WMATA. Currently, Metrobus operates most interjurisdictional routes and is the sole service provider in the District of Columbia, while the local bus services primarily operate routes that remain within their own jurisdictions.

This situation does offer some advantages to Northern Virginia jurisdictions. From a budgeting prospective, it is desirable to keep the cost of bus service as low as possible, and local systems have historically been more cost-effective. This may be attributed to a number of factors – among them that the agencies are smaller, and the systems are not subject to federal regulations. In addition, the local bus operations are younger, drivers receive lower wages and have less seniority, and newer vehicles are often under warranty and require less maintenance. Of course, as the systems age, these advantages will shrink. Furthermore, because they do not have to be responsive to the needs of the entire region, local bus services can more directly address the specific needs and objectives of the jurisdictions operating them.

However, the arrangement also can be problematic. The fact that local systems do not have to be responsive to the needs of the region may be an advantage to the jurisdiction operating each system but it does not necessarily best serve the interests of Northern Virginia as a whole. Multiple bus service producers result in a disjointed decision-making process, one that is not always as efficient or effective as it could be. For instance, regional travel patterns do not generally stay within jurisdictional boundaries, but often, local bus routes do. Those bus routes operated by WMATA, which generally do cross county and city lines, are subject to the decisions of each of the jurisdictions they pass through; if one jurisdiction cuts back service to provide its own, the travel options of other people along that route are reduced.

Changes made by one operator have an impact not only on passengers, but on other transit systems. When demand for transportation increases, and

more service is added, coordination is needed to ensure that overlapping routes are not created. Service reductions must also be well planned. Many routes were designed to feed passengers to the Metrorail system, or to facilitate transfers to other systems. Thus, reducing local bus service can impact transit ridership on a regional scale, not only within the jurisdiction making the change. The region saw this effect most recently when Fairfax County was forced to cut some routes due to budget constraints.

Financial issues are often central to decisions about bus service in Northern Virginia. Two allocation formulas determine the cost of transit services for each Northern Virginia jurisdiction. The first formula is administered by WMATA and assigns costs for Metrobus and Metrorail service. Metrobus **variable** costs are allocated to each jurisdiction based on the hours and miles of bus service provided within that jurisdiction. Allocation of **fixed** costs is based on the percentage of WMATA regional peak bus service that each jurisdiction offered in 1975. Thus, each year, Northern Virginia and all WMATA compact jurisdictions are charged a set percentage of the region's fixed costs, regardless of how much bus service is provided in the Commonwealth. As a result of an NVTC decision, Virginia's fixed costs are then suballocated to each jurisdiction based on the percentage of Northern Virginia's variable costs that jurisdiction pays.

The second formula, which is administered by NVTC, distributes state and regional transit funding that has been allocated to Northern Virginia. Each jurisdiction receives a share of the transit assistance based on a weighted average of transit subsidies and costs. A jurisdiction providing more transit service will have higher cost and subsidy burdens, and qualifies for a higher percentage of the NVTC formula money to offset these costs.

Service changes can be used to illustrate the financial impacts of the two formulas. When bus service is reduced or eliminated, the local jurisdiction initiating the change is allocated a smaller portion of the Metrobus operating and fixed costs, because the costs are based on a smaller number of bus miles and bus hours. However, Northern Virginia's total bill for fixed costs does not decrease very much (because it is based on the 1975 bus ratio), so some of those costs are shifted to other Northern Virginia localities. This leaves jurisdictions that maintain service levels suddenly paying more for the same amount of service, and Northern Virginia as a whole paying a larger bill for equal service levels. Thus, while the particular jurisdiction cutting service benefits, the region does not. These formulas have the opposite effect when service is increased: the jurisdiction increasing service bears a greater burden while its neighbors benefit. Clearly, the existing formulas establish an incentive to pull routes out of WMATA, shifting more of the fixed costs to one's neighbors. This incentive, regionwide, promotes inefficient decisions.

Changes to both the WMATA and the NVTC formulas have been proposed in recent years, but to date no consensus has been reached among the jurisdictions. Any change in the formulas would mean that some jurisdictions would fare better than others, and none of the jurisdictions is willing to accept changes that will increase its financial burden unless corresponding benefits are provided. To mitigate immediate concerns, NVTC has created a fund that can be used to compensate jurisdictions for increased costs associated with a service change by its neighbors, and the jurisdictions have agreed to continue using the current NVTC formula at least until the new Franconia/Springfield Metro station opens in 1997. In the interim, NVTC jurisdictions are working together to convince WMATA to revise the allocation formula for fixed Metrobus costs.

WMATA has also been working closely with jurisdictional staff to achieve cost reductions and has made significant progress, such as reaching a new labor agreement with a number of its unions. However, in some instances, the agency's options are limited. As stated above, some of WMATA's costs, such as labor protection, are associated with federal mandates. As another example, when service reductions result in the need to reduce the number of employees, part-time and newer operators (the lowest paid) are the first to be laid off. As a result, the *average unit* cost of labor actually increases. Other jurisdictions then pay more for the same service because costs are assessed based on the higher average unit costs.

Of course, none of the issues discussed above is likely to be quickly resolved. The point is not that there should or should not be one regional bus service, or that one agency should make decisions, or that any one version of the formulas is correct. Rather, it is that **the situation is typical of all transportation planning, both highway and transit, in the Washington, DC region: it is complex, it involves individuals from many jurisdictions and many levels of government, it is linked to environmental issues, it involves large amounts of money, and it has the power to affect a large percentage of the people living and working in the Washington, D.C. region.**

Overview of Report

The purpose of this report is to demonstrate how transportation planning and investment decisions occur in Northern Virginia. Section II discusses the various contexts in which planning takes place: What are travel patterns like? What laws affect how planning occurs? Who are the people and institutions involved? Finally, what types of funding are available?

Section III describes the many aspects of the transportation system that is in place today, addressing in particular the performance characteristics of the many transit systems operating in the area. Finally, Section IV includes a discussion of how a "good" transportation system might be defined, what the region is doing to create it, and what might be done better. Several appendices containing agency contacts, public transit ridership data, descriptions of ongoing studies, and related information complete the report.

BACKGROUND

History of the Planning Process

In early 1984 the Northern Virginia Transportation Commission initiated a formal process to create a Bus Service Coordination Plan by adopting a set of goals:

- Improve transit information sharing within the region;
- Provide better coordination of bus planning and services; and
- Improve bus service benefits relative to costs.

This is the twelfth in the series of reports on NVTC's Bus Service Coordination Process. However, since the focus of the planning process has expanded beyond buses to include passenger rail and other High Occupancy Vehicle (HOV) strategies as well as related highway improvements, the report has been renamed to reflect the broader emphasis on surface transportation services.

NVTC's Transportation Service Coordination Plan is not a typical government plan, in which routes are drawn on a map or specific equipment needs identified. Rather, the commission's plan is part of a process through which the commission seeks to accomplish improvements by changes in the way local and state governments and the private sector think about, analyze and solve transportation problems. Thus, the NVTC plan can never be "complete;" the process must be continually enhanced and revised to accomplish steady progress toward its objectives. The annual reports that describe the process and the progress are, therefore, more on the order of dynamic proposals rather than static blueprints. The reports set forth strategies for coping with congestion and coaxing more productivity from scarce transportation resources, primarily through improved coordination and communication.

The genesis of the commission's planning process was Virginia Senate Resolution #20, passed in 1983, that directed NVTC and the former Virginia Department of Highways and Transportation (now the Virginia Department of Rail and Public Transportation --VDRPT -- and the Virginia Department of Transportation -- VDOT) to conduct a thorough study of bus transportation in Northern Virginia. The resulting 1983 study (Report on the Feasibility and Desirability of Locally Sponsored Bus Service in Northern Virginia) concluded that while NVTC should not promote decentralization of bus service within the regional network operated by the Washington Metropolitan Area Transit Authority, it should take an active role by developing a bus service management plan. That plan should examine feasible options for planning, routing, scheduling, establishing fare structures for, operating, marketing, and coordinating a diverse set of public transportation services in Northern Virginia.

It is toward those goals (expanded to include other transportation modes) that NVTC's series of reports on its Transportation Service Coordination Plan is focused.

Role of the Northern Virginia Transportation Commission

NVTC was created by the Virginia General Assembly in 1964, and consists of 19 commissioners representing six Northern Virginia jurisdictions and the Virginia Department of Rail and Public Transportation. **Figure 1** shows the current membership.

NVTC provides a transportation policy forum, and is charged with allocating as much as $100 million in state and federal aid each year among its member jurisdictions. The commission also appoints Virginia's two principal and two alternate members of the Board of Directors of the Washington Metropolitan Area Transit Authority (WMATA or Metro). WMATA operates Metrobus and Metrorail service in the District of Columbia, Maryland and Northern Virginia. The commission also appoints three members and one alternate to the Operations Board of the Virginia Railway Express. The commuter rail system co-owned by NVTC and the Potomac and Rappahannock Transportation Commission (PRTC), began service in mid-1992 and now provides 8,000 daily trips in the congested I-66 and I-95 commuting corridors of Northern Virginia.

NVTC has sponsored numerous demonstrations to improve coordination among transportation services, such as private taxis serving Metrorail station in lieu of more expensive bus service. As evidenced by this plan, the commission has assumed an active role in coordinating transportation services in Northern Virginia, and is working with local governments to maintain stable and reliable funding for these services. NVTC also seeks to improve transit connections and assure that

Figure 1

NVTC OFFICERS AND COMMISSIONERS

--1996--

Sharon Bulova, Chairman
Kerry J. Donley, Vice-Chairman
Robert E. Harris, Secretary-Treasurer

Arlington County

Ellen M. Bozman[1]
Albert C. Eisenberg
James B. Hunter

Fairfax County

Sharon Bulova[3]
Robert B. Dix, Jr.
Katherine K. Hanley
Gerald W. Hyland[1,3]
Dana Kauffman[2,3]

Loudoun County

David G. McWatters

City of Alexandria

Kerry J. Donley
Lois L. Walker[2,4]

City of Fairfax

Scott Silverthorne

City of Falls Church

David F. Snyder

Department of Rail and Public Transportation

Leo J. Bevon

Virginia General Assembly

Senator Joseph V. Gartlan, Jr.
Senator Mary Margaret Whipple
Delegate L. Karen Darner
Delegate Robert E. Harris
Delegate Marian Van Landingham

1 Principal member of Metro Board
2 Alternate member of Metro Board
3 Principal member of VRE Board
4 Alternate member of VRE Board

useful information is provided to passengers, while upgrading the performance of transit operators. The integration and coordination of transit services is an area of intense current interest on the part of the commission, as is leveraging public transit assistance through cooperation with the private sector.

More information about NVTC, its statutory mandate, history and accomplishments, as well as a detailed listing of its 1996 work program, is available in the commission's 1996 Handbook. This document, as well as the earlier reports on the Transportation Service Coordination Plan, are available on request to the commission. The categories of goals enumerated in the Fiscal Year 1996 work program are listed below:

1) Transit service coordination
2) WMATA governance
3) Grant, contract, and trust fund management
4) Finance
5) Public information, marketing, and customer service
6) Policy development and legislative advocacy
7) Ownership and operation of public transit services
8) Planning and technical assistance

SECTION II

THE CONTEXT OF REGIONAL TRANSPORTATION PLANNING

PHYSICAL AND DEMOGRAPHIC CONTEXT

Commuters in the Washington metropolitan region know that traffic congestion is an increasingly costly and aggravating problem for the area and its approximately four million residents. In fact, in a 1994 study conducted by the Texas Transportation Institute, the Washington, D.C. metropolitan area was rated second in roadway congestion behind Los Angeles, California, delay and fuel costs attributable to the problem were estimated at $2.4 million each year.

While traditionally these congestion problems have occurred on radial "spokes" leading into the urban core, jobs are now moving out into the suburbs. In 1990, more than one-half of all commuting trips in the Washington region were estimated to be suburb-to-suburb.[1] Some employers cluster, creating "edge cities" such as Tysons Corner, but many are just part of the low-density development that characterizes the suburbs of this region. Housing too is spreading outward, as families seek cheap land, a bigger home far from the city, or -- in the case of many two-worker households -- a location between two distant offices. These land use patterns are the most difficult to serve by traditional transit, which in the past has relied on a large number of people making similar trips.

The two or more-worker household is hard for traditional transit to accommodate for other reasons as well. The greatest of these is that these families often must squeeze errands in at the beginning and end of the work day, such as dropping off clothes at the dry cleaner on the way to work, then stopping by the grocery on the way home, and bringing the kids to and from day care. In addition, at least one parent often wants to have a car available in case of an emergency during the day -- when transit service might not be convenient or operating.

Thus, trips today are often longer, occur from suburb to suburb, and involve multiple stops along the way. All of these factors contribute to the region's congestion, not only on major highways, but on many of the region's arterial and local roads as well.

As part of a regional traffic monitoring effort, the Metropolitan Washington Council of Governments conducts a triennial Core Cordon Count, in which it

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[1]National Capital Region Transportation Planning Board Long-Range Transportation Plan for the National Capital Region. (September 21, 1994).

enumerates how many cars and people cross an imaginary cordon line around the metropolitan core during the peak morning period (see **Figure 2**). Results of the 1993 count, the most recent conducted, confirm that region-wide (including Maryland, the District of Columbia and Virginia) the number of automobiles entering the core was higher than three years ago; average auto occupancies had dropped; and the percentage of travelers crossing the line using transit had decreased slightly.

In Northern Virginia, the picture was slightly brighter. In this sub-region, the number of travelers using transit to cross the cordon line increased by 16 percent. Furthermore, the percentage of riders on transit as opposed to private automobiles increased by five percent. While the number of cars entering the *region* increased by six percent, in Northern Virginia, it *decreased* by six percent.[2] Clearly, Northern Virginia's efforts to increase transit service levels and ridership have produced results.

A similar count of vehicles crossing the Beltway shows what may be an even stronger relationship to transit availability. Between 1992 and 1995, the number of automobiles crossing the Beltway in Northern Virginia increased by seven percent, while it decreased by one percent in Maryland. However, this increase in Virginia varied greatly by corridor, increasing by 43 percent in the Dulles corridor; and by 9 percent in the I-66 corridor, remaining flat along I-95, and decreasing by four percent along Route One. The I-95 corridor, while it has experienced growth during the past three years, also provides many transit options; the Dulles corridor, on the other hand, does not. [3]

A look at the more distant future indicates that conditions are not likely to improve. In 1994, regional planners expected the population of the region to increase by 41 percent between 1990 and 2020. In Northern Virginia, however, it was forecast to increase by 57 percent, with the outer suburbs experiencing the greatest growth rate. At the same time, vehicle trips in the region were predicted to increase by 64 percent, from 12.6 million to 20.6 million per day, and vehicle miles traveled daily were expected to increase by 73 percent, from 96 to 167 million vehicles miles.

Since these numbers were generated, based on observed and currently planned development, planners have concluded that even a larger portion of that growth will occur in the outer jurisdictions than was originally expected. For

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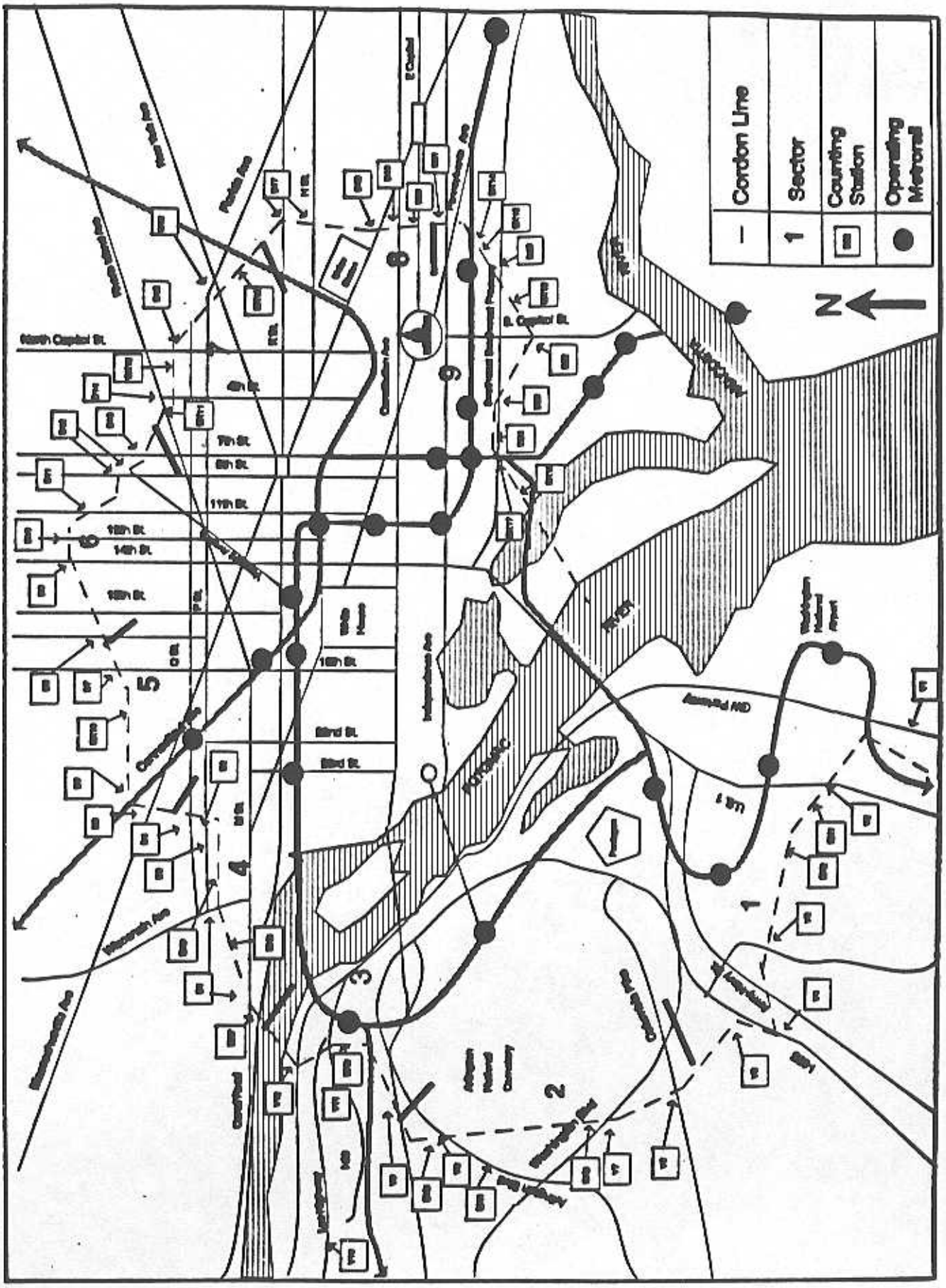
[2]National Capital Region Transportation Planning Board, 1993 Metro Core Cordon of Vehicular and Passenger Volumes. Washington, DC: May, 1994.

[3] National Capital Region Transportation Planning Board, 1995 Beltway Cordon County of Count Vehicular and Passenger Volumes, Washington, D.C.: April, 1996.

Figure 2

Metro Core Cordon Count Sites



instance, between 1990 and 2020, Loudoun County's population is expected to increase by 200,000 people, or 232 percent, and Prince William County's by 213,000 people, a 99 percent increase. Prince William County is also expected to see a growth of 95,500 jobs, compared to only 59,000 in D.C. over the same 30-year period.[4] Clearly, both the growth and the dispersions of jobs and people will add to the region's traffic, and will make the provision of effective transit services a greater challenge.

THE INSTITUTIONAL CONTEXT

Current Status

Scores of agencies and organizations meet regularly, adopt policies, define programs, and work diligently to improve the mobility of people and goods in Northern Virginia. Some of these groups are mandated by government regulations, some represent certain areas or jurisdictions, and some arise in response to a particular problem. Federal regulations (to be discussed in further detail later in this chapter) have emphasized cooperative planning efforts and public participation; these have caused the achievement of consensus among the many agencies and individuals involved to become more and more critical to the successful implementation of any project designed to relieve traffic congestion.

In order to participate effectively in the ongoing regional "conversation" regarding the transportation system, one must first be aware of the wide array of agencies and organizations already engaged in transportation planning, financing, construction, regulation, and the advocacy of change. In many cases, coalitions of these organizations form to provide greater leverage to achieve shared objectives. When pursuing new programs, it is essential to notify and involve these groups to avoid misunderstandings and duplication of effort.

Appendix A gives names, addresses, and telephone numbers for the most important agencies and organizations currently involved in transportation (and related air quality) endeavors in Northern Virginia and the Metropolitan area. For each, a brief synopsis of their current activities is given. The appendix is organized by regional, local, and private sector. **Figure 3** shows the major local governments and populations that comprise the Washington Metropolitan Area, and **Figure 4** shows the many transit operators in the region and their service

[4] Metropolitan Washington Council of Governments, Round 5.3 Land Use Forecasts. Washington, D.C.: June, 1996.

Figure 3

1995 POPULATION OF THE METROPOLITAN WASHINGTON AIR-QUALITY NON-ATTAINMENT AREA	
JURISDICTIONS	**1995 POPULATION**
NVTC:	
• City of Alexandria	117,000
• Arlington County	184,000
• City of Fairfax	20,000
• Fairfax County	879,400
• City of Falls Church	10,000
• Loudoun County	112,500
Subtotal:	1,322,900
PRTC:	
• City of Fredericksburg	19,000[1]
• City of Manassas	31,700
• City of Manassas Park	8,000
• Prince William County	250,000
• Stafford County	80,300
Subtotal:	389,000
DISTRICT OF COLUMBIA:	554,300
NATIONAL CAPITAL PARKS AND PLANNING COMMISSION:	
• Montgomery County	810,000
• Prince George's County	764,400
Subtotal:	1,577,400
OTHER MARYLAND COUNTIES:	
• Calvert County	64,600
• Charles County	111,300
• Frederick County	174,200
Subtotal:	350,100
TOTAL:	4,193,700
Source: **Local government population estimates provided by the Metropolitan Washington Council of Governments.**	

[1] 1990 figure.

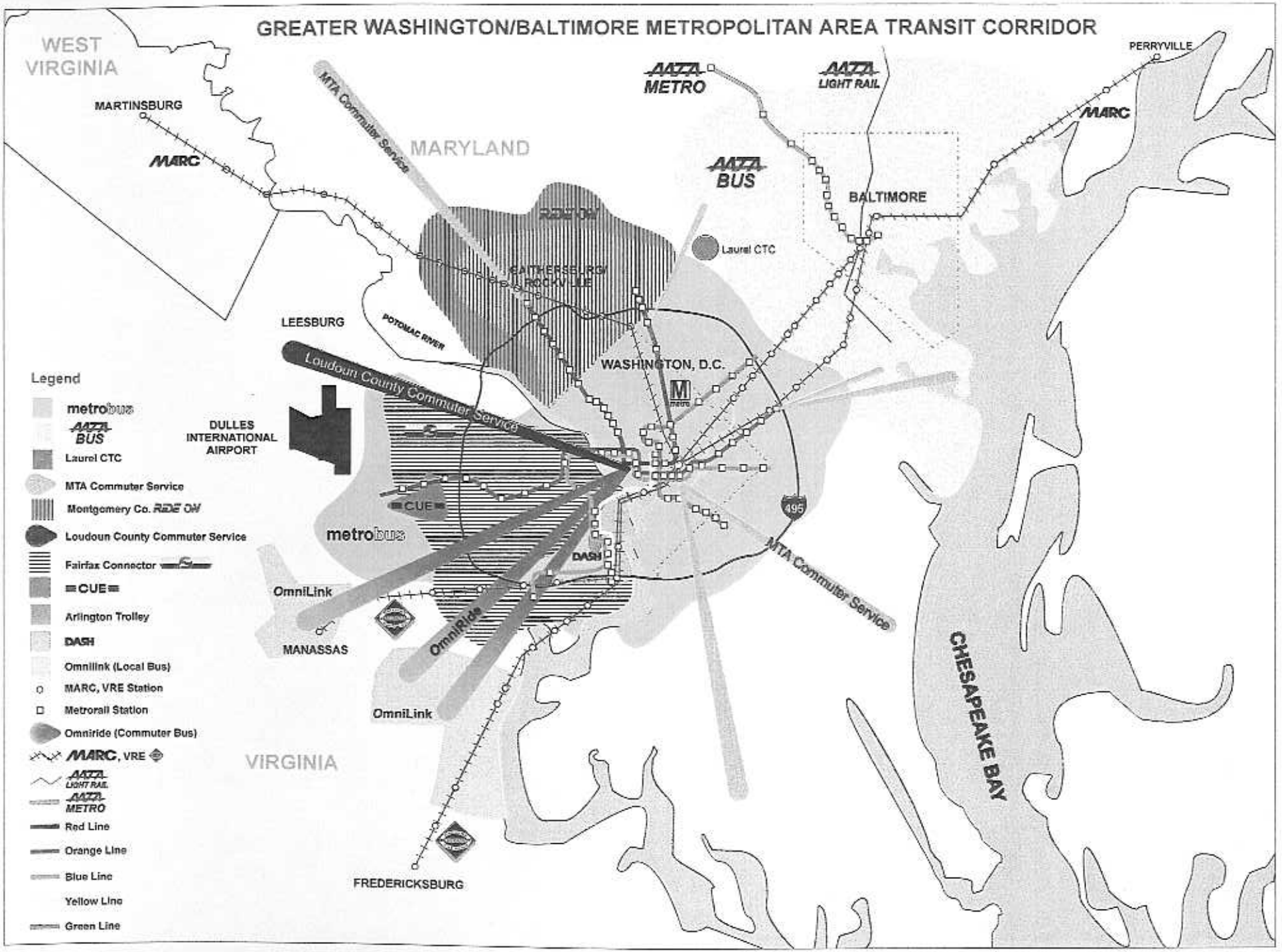

GREATER WASHINGTON/BALTIMORE METROPOLITAN AREA TRANSIT CORRIDOR
WEST VIRGINIA
MARYLAND
VIRGINIA
MARTINSBURG
MARC
MTA Commuter Service
AATA METRO
AATA LIGHT RAIL
AATA BUS
PERRYVILLE
MARC
BALTIMORE
Laurel CTC
RIDE ON
GAITHERSBURG
ROCKVILLE
LEESBURG
POTOMAC RIVER
Loudoun County Commuter Service
WASHINGTON, D.C.
DULLES INTERNATIONAL AIRPORT
CUE
metrobus
DASH
OmniLink
MANASSAS
OmniRide
OmniLink
FREDERICKSBURG
495
MTA Commuter Service
CHESAPEAKE BAY
Legend
metrobus
AATA BUS
Laurel CTC
MTA Commuter Service
Montgomery Co. RIDE ON
Loudoun County Commuter Service
Fairfax Connector
CUE
Arlington Trolley
DASH
Omnilink (Local Bus)
MARC, VRE Station
Metrorail Station
Omniride (Commuter Bus)
MARC, VRE
AATA LIGHT RAIL
AATA METRO
Red Line
Orange Line
Blue Line
Yellow Line
Green Line

FIGURE 5: TRANSPORTATION AGENCIES/ORGANIZATIONS

FEDERAL/NATIONAL
Congress
Executive
U.S. Department of Transportation (USDOT)
- Office of The Secretary
- Federal Transit Administration (FTA)
- Federal Highway Administration (FHWA)
- Federal Railroad Administration (FRA)

Environmental Protection Agency (EPA)
Army Corps of Engineers
National Park Service
General Services Administration (GSA)
Transportation Research Board National Research Council (TRB)
American Association of State Highway and Transportation Officials (AASHTO)
American Public Transit Association (APTA)

STATE
Governor
Secretary of Transportation
Virginia Department of Transportation (VDOT)
Commonwealth Transportation Board (CTB)
Virginia Department of Rail & Public Transportation (VDR&PT)
State Corporation Commission (SCC)
Division of Risk Management (DRM)
Virginia General Assembly
Virginia Association of Counties (VACO)
Virginia Municipal League (VML)
Virginia Association of Public Transit Officials (VAPTO)
George Mason University (GMU)

REGIONAL
Northern Virginia Transportation Commission (NVTC)
Potomac and Rappahannock Transportation Commission (PRTC)
Virginia Railway Express (VRE)
Northern Virginia Planning District Commission (NVPDC)
Transportation Coordinating Council (TCC)
Washington Metropolitan Area Transit Authority (WMATA)
Metropolitan Washington Council of Governments/Transportation Planning Board (COG/TPB)
Metropolitan Washington Air Quality Committee (MWAQC)
Metropolitan Development Policy Committee
Baltimore/Washington Regional Association
Greater Washington Board of Trade
Federal City Council (FCC)
Maryland National Parks and Planning Commission
Washington Suburban Transit Commission (WSTC)
Maryland DOT
- Maryland Rail Commuter Service (MARC)
- National Capital Parks and Planning Commission

LOCAL
Offices of Transportation, Finance, Planning and Public Works
Citizens Transportation Advisory Boards
Transit Operators
- DASH (Alexandria)
- CUE (City of Fairfax)
- CONNECTOR (Fairfax County)
- CRYSTAL CITY TROLLEY (Arlington)
- RIBS (Reston)
- TYSONS SHUTTLE (Fairfax County)

Transportation Management Associations
- Ballston/Rosslyn Area Transportation Association (BATA)
- Dulles Area Transportation Association (DATA)
- Reston Area Transportation Association (LINK)
- Transportation and Environmental Management, and Planning Organization Alexandria, Inc. (TEMPO)
- Tysons Transportation Association (TYTRAN)

PRIVATE
Toll Road Corporation of Virginia
Washington Area Bicyclists Association
American Automobile Association (AAA)
Northern Virginia Transportation Alliance
League of Women Voters

areas. **Figure 5** lists the names of the agencies and organizations included in the appendix. As the lengthy list suggests, areas of responsibility often overlap considerably, despite each of the entities trying to define its individual role in relation to the others. Throughout this report, many of the agencies listed in Figure 5 will be referred to by their acronyms. Please refer to this figure to help recall the full names, and refer to Appendix A for more information.

Partial Listing of Key Players

Among the major participants in Northern Virginia's efforts to improve transportation coordination are, in addition to NVTC, the following organizations:

Federal, State, and Local Agencies: In addition to local jurisdictions listed in Figure 3, both the federal and state departments of transportation and related agencies play key roles in planning for this region. This is especially true in this area because of the federal government's central role in both employment and land ownership. In addition, the federal government directly owns certain facilities, such as the Woodrow Wilson Bridge. However, the federal government is also represented by agencies other than the U.S. Department of Transportation (USDOT) and its modal administrations. Due to the Clean Air Act Amendments of 1990, for example, the Environmental Protection Agency may exert great influence over transportation plans and funding.

Transportation Coordinating Council (TCC): Includes separate policy, technical and citizens groups, with a work plan that features regional consensus-building to establish transportation priorities. TCC is staffed by the Northern Virginia District Office of VDOT. The policy group, consisting primarily of Northern Virginia elected officials from NVTC, PRTC and the Transportation Planning Board and chaired by Northern Virginia's member of the Commonwealth Transportation Board, meets at least quarterly. The technical and citizens' committees meet monthly. TCC has adopted procedures to develop closer ties to the Transportation Planning Board and to provide better representation for town governments in the regional allocation process for transportation funds. TCC's Technical Committee initiates the annual process of allocating flexible federal ISTEA funds available to Northern Virginia, and provides recommendations to the TCC policy group, which – when adopted -- are forwarded to the Transportation Planning Board. TPB's actions are in turn forwarded to the Commonwealth Transportation Board. The TCC is also engaged in a study of the transportation planning process in Northern Virginia; this study is discussed in further detail below.

Transportation Planning Board (TPB): Designated as the metropolitan planning organization (MPO) for Northern Virginia, suburban Maryland and the District of Columbia, TPB adopts annual lists of projects to receive federal funding and produces long range transportation plans. Members of the board consist primarily of elected officials from the local jurisdictions in each state and the District of Columbia.

Commonwealth Transportation Board (CTB): The policy-making body that allocates state funds (and federal funds channeled through the state) for transportation projects. Virginia's Secretary of Transportation chairs the CTB; the board's 16 members are appointed by the Governor. The group adopts a six-year funding program, which is updated each year.

Metropolitan Washington Air Quality Committee (MWAQC): This group, which consists of elected officials from localities, states, and the District of Columbia, has been given the authority by the governors of Maryland and Virginia and the Mayor of the District to develop specific recommendations for a regional ozone control strategy in the Washington non-attainment area. Once final, these recommendations are folded into Virginia's State Implementation Plan, which is submitted to the Environmental Protection Agency. The committee works closely with MWCOG and state and local staffs, as well as with the Air Quality Public Advisory Committee (AQPAC), which was created by MWAQC in order to enhance citizen input into the process.

Washington Metropolitan Area Transit Authority (WMATA): WMATA is the regional transit authority for the Washington Metropolitan area. It operates the heavy rail system "Metrorail" and the bus service "Metrobus" within a service territory established by an interstate (District of Columbia, Maryland, and Virginia) compact. In Virginia, the cities of Alexandria, Fairfax, and Falls Church are included in the transit zone defined by the compact, as well as Arlington, Fairfax, and Loudoun Counties. This zone is contiguous with NVTC's district, and NVTC appoints from its commissioners Virginia's members of the WMATA Board of Directors.

Metropolitan Washington Council of Governments (MWCOG): In 1966 MWCOG was officially recognized by the federal government as the agency responsible for comprehensive regional planning. MWCOG functions as the Metropolitan Planning Organization (MPO) for purposes other than transportation (e.g., population forecasts).

Metropolitan Development Policy Committee: One of five policy committees which advise the MWCOG Board of Directors, the Metropolitan Development Policy Committee makes recommendations regarding regional forecasts (which are closely linked to the region's transportation planning process) and works to facilitate and oversee interjurisdictional agreements. A broad-based membership of approximately 60 representatives allows not only state and local governments, but also members of private industry, civic and environmental associations, the Greater Washington Board of Trade, and other organizations to be represented.

Potomac and Rappahannock Transportation Commission (PRTC): Created in 1986, PRTC is the transportation commission for Prince William and Stafford counties and the cities of Fredericksburg, Manassas, and Manassas Park. A total of 15 principal commissioners are appointed from each jurisdiction, the General Assembly, and the Virginia Department of Rail and Public Transportation (VDRPT). PRTC operates the OmniRide bus service, which includes a commuter bus system, a neighborhood and rail station feeder service known as OmniLink, and a ridesharing program. PRTC is also co-owner of the Virginia Railway Express commuter rail service.

Transportation Management Associations: Transportation Management Associations (TMA's) form a relatively new institutional mechanism that can be used to coordinate the needs of activity centers with ridesharing and transit services. These associations have been critical to the opening of several transit stores in Arlington, and often work closely with both local government agencies and private businesses to ensure that the transportation needs of employees in their areas are met. Some TMA's, such as the Dulles Area Transportation Association, have also further enhanced regional communication through sponsoring conferences on topics of interest to the area and have encouraged new transit services, ridesharing, and highway improvements.

TMA's usually have full- or part-time executive directors or managers who serve at the pleasure of a Board of Directors. This Board generally consists primarily of private business people, with some representation of local governments. Member dues usually fund the employee outreach programs, surveys, ridematching, and marketing efforts of the TMA's. Occasionally government grants are utilized.

Commission on the Future of Transportation in Virginia: This commission was established by the Virginia legislature in March of 1996, for the purposes of examining the need for and financing of transportation-related projects across the state over the next twenty-five years. The commission consists of 25 members, including representatives of both the House of Delegates and the Senate, as well as citizens appointed by each. Representatives of VDOT, VDR&PT, the Department of Aviation, and the Virginia Port Authority also serve as non-voting members. This study is described in further detail in **Appendix B.**

High Speed Rail Commission: This commission, also established by the Virginia legislature in March, 1996, will study and make recommendations necessary to assure the presence of a high-speed rail system in Virginia. The Commission is made up of representatives of both sides of the legislature, citizens appointed by each, the Lt. Governor, the Secretary of Commerce and Trade, the Secretary of Transportation, and the Director of VDR&PT. The current chairman of the VRE Operations Board is one of the citizen appointees of the Senate. This study is further described in **Appendix B.**

Regional vs. Local Decision Making

With all these groups taking part in transportation planning, it should come as no surprise that the issue of the appropriate level at which decisions should be made arises frequently. The issue is particularly contentious in this region, which combines two states and an independent district – and happens to be the front yard of the federal legislature. Many levels of government care about the region, act upon the region, and react to decisions made at other levels that impact the region.

The question may be best examined through the issue of land use. Today's planning standards suggest that land use and transportation should be coordinated, and yet usually, land use decisions are made independently by local jurisdictions, and transportation planners are left responsible for providing capacity to developments that are often at odds with the existing transportation policy. The point is not that the placement of all development should necessarily be a function of transportation decisions, but that often the two aspects of planning, while they should be linked, are handled separately, and at different levels of government.

TCC Planning Study, Phase II

The institutional arrangements surrounding transportation planning are currently being studied by the Transportation Coordinating Council. This study, which is in its second phase, received its impetus from a bill in the Virginia legislature that suggested the establishment of a subcommittee to study the creation of a Northern Virginia Regional Transportation Authority. Such an authority would have broad powers over transportation planning and financing.

While some elected officials at both the state and local level thought that such an authority was worthy of further consideration and study, there was also a desire that this study be conducted by the jurisdictions that would be most effected. Thus, the Asembly has called for a consideration of these issues, but the TCC will look at them first, so that the TCC's conclusions can be used as input into the legislative study.

The TCC began the study process by identifying a range of ways in which the transportation planning process might be reconfigured. These alternatives ranged from establishing a very powerful authority, as was suggested in the original legislation, to merely abolishing the TCC itself, to doing nothing. In between these options are other variations, such as merging NVTC, PRTC, and the TCC; or modifying the Northern Virginia District office of VDOT.

There has been some difference of opinion from the beginning of the study as to the exact definition of the problem being addressed. To some, the greatest problem with transportation planning in the region is the multitude of parties involved: as this report makes clear, planning involves many people at many agencies, communicating with various citizens groups, and the process by which anything is accomplished can often appear convoluted and cumbersome. To others, however, that same process, because it requires time and discussion, ensures that many different points of view are considered before a final decision is made, and allows a consensus to be reached. For these people, the problem is not necessarily the process, but the lack of transparency in that process; it is very difficult for those outside the process to understand what is happening or where they might be able to influence a project. For still others, the concern is not the transportation planning *process* so much as it is the lack of adequate funding for regional transportation projects.

Thus, many different aspects of a new system must be considered by the TCC. It must review the efficiency of an alternative (would this process allow the region to move transportation projects to completion more swiftly?) but also allow for adequate input from a variety of constituencies. The group must consider whether the alternative would allow for new types of funding or financing, whether it would allow the region to prioritize its needs in order to speak with a

unified message in Richmond, and whether the planning process would be more understandable to the public. Of course, many of the institutional changes suggested would also require legislative action – not only in Virginia, but possibly also in Maryland, the District of Columbia, and in Congress, due to the language of the WMATA compact. This difficulty must be considered carefully by the TCC as well. The TCC is in the process of drafting a preliminary report that will outline its conclusions, and has committed to delivering a report to the General Assembly before the 1997 session.

LEGISLATIVE CONTEXT

Current Federal Legislation

Since 1990, three pieces of federal legislation have worked to reshape the context in which transportation decisions are made. The law most directly related to transportation is the **Intermodal Surface Transportation Efficiency Act of 1991, also known as ISTEA.** ISTEA, which establishes federal transportation funding programs, emphasizes increasing funding flexibility among modes, so that states and metropolitan areas can choose to construct and enhance those modes of transportation that best meet their particular needs. The Act outlines criteria that must be considered when states and metropolitan areas plan their transportation systems, and requires that these entities establish management systems in order to track the condition of infrastructure such as pavement, bridges, and transit systems, and to monitor conditions such as congestion.

A year earlier, the **Clean Air Act Amendments of 1990 (CAAA)** established federal air quality standards and deadlines to meet them. The Environmental Protection Agency measures air pollution levels across the country, and counties found to be in non-attainment of the federal standards are rated on a scale from extreme to marginal for a number of pollutants. The Metropolitan Washington non-attainment area (see Figure 5) is rated "Moderate" for carbon monoxide, and "Serious" for ozone.

Together, ISTEA and the CAAA require improved long-term planning on the part of Metropolitan Planning Organizations such as the Transportation Planning Board. In October of 1993, the U.S. Department of Transportation issued regulations that attempt to clarify the nature and extent of these requirements.

The most central of these is that each region must prepare a long-range transportation plan, including the following elements:

- the development of a financial plan that demonstrates how the plan can be implemented with revenues "reasonably expected to be available."

- consideration of the "likely effect of transportation policy decisions on land use and development and the consistency of transportation plans and programs with...short-and long-term land use and development plans."

- a demonstration of conformity with the purpose of plans for meeting national air quality standards, including a demonstration that the transportation plan contributes to annual emissions reductions.

- the development of a congestion management system "that provides for effective management of new and existing transportation facilities through the use of travel demand reduction and operational management strategies."

- the inclusion of "a proactive public involvement process...that supports early and continuing involvement of the public in developing plans...."

- consideration of a list of 15 planning factors defined in ISTEA dealing with efficient management of existing facilities; preservation of future rights-of-way; overall social, economic, energy and environmental effects of transportation decisions; efficient movement of freight; and access to ports, airports, national parks, and military installations.[5]

In carrying out these requirements, a number of planning documents are to be produced. Each state must submit a State Implementation Plan (SIP) to the EPA annually; this plan documents the steps the state will take to attain its air quality goals, and stay within a "budget" of allowable emissions. In the Washington region, MWAQC creates a regional plan, which is then incorporated into the Commonwealth's plans.

Metropolitan areas are responsible for two primary documents, a "constrained" Long Range Plan (CLRP) and a Transportation Improvement Program (TIP). The CLRP outlines all planned projects of regional significance

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[5]National Capital Region Transportation Planning Board, A Citizen Guide to Transportation Planning in the National Capital Region. Washington, DC: July, 1994.

over a longer period of time (in the case of the metropolitan Washington region, until 2020); the document is "constrained" by the amount of funds that can reasonably be predicted to be available for transportation improvements over the same time period. The TIP is a more specific programming of funds in the region over a period of six years. TIP's must be updated every other year, CLRP's at least every three years. While not required by the federal planning regulations, the Washington region has also embarked upon a vision planning process, in order to look farther into the future and identify new initiatives and new strategies for funding them. This plan is discussed in greater detail in Section IV.

The third piece of federal legislation to significantly change the transportation field in recent years is the **Americans with Disabilities Act of 1991**. This act, along with rules promulgated during 1991 by the U.S. Justice Department, Architectural and Transportation Barriers Compliance Board, U.S. DOT, and others, generally requires that accessibility to public spaces and services be guaranteed. In the field of public transit such rules require changes ranging from lift-equipped busses and directional signs in Braille to complete paratransit services, which must be provided by all public transit systems except commuter railroads.

Future Federal Legislation

The legislative arena is a fluid one, and this year, that is certainly true of the transportation sector. Many aspects of the situation described above could change in the near future. The most wide-sweeping of these will probably be the reauthorization of ISTEA in 1997. Already, advocacy groups representing a wide variety of interests have begun to express their positions on portions of the law they would like to see either altered or retained. How the law is written will impact not only how much money will be available for transportation, but also how much control states and metropolitan areas will have over how that money is spent, what types of planning must take place before funds can be spent on a project, and the extent to which a transportation agency must involve the public in its decision-making process.

Two advocacy groups that will be very involved in the pre-authorization discussions are the American Public Transit Association (APTA) and the American Association of State Highway and Transportation Officials (AASHTO). In general, the legislative committee of APTA supports continuation of the present ISTEA framework, but with increased funding for transit. The committee also seeks to narrow the difference between the $65 of tax-free monthly employee transit benefits and the $165 of tax-free parking benefits currently allowed by the IRS. Finally, the committee supports expenditures, at state

option, of flexible funds for intercity rail passenger and commuter rail projects. Virginia has used such funds for rail projects, but does not have the ability to spend federal funds on projects such as track improvements between Richmond and Fredericksburg, where commuter rail does not operate.

AASHTO also supports increased funding for all modes of transportation, but calls for great changes in the structure of funding and the requirements ISTEA imposes on state and local transportation officials. In effect, the Association would like states to receive more money, but have fewer restrictions as to how it may be spent. For example, AASHTO objects to "set-aside" programs, such as the ten percent of STP money that is reserved for enhancement projects, because it reduces a state's ability to direct funds towards what the state perceives to be its greatest needs.

Another coalition that promises to have an impact on the upcoming transportation legislation is the Coalition for a Streamlined Transportation Efficiency Program for the 21st Century, or "Step 21." This coalition of 22 states, including the Commonwealth of Virginia, calls for all funding of ISTEA to be streamlined into two block grants, one for the National Highway System (40% of all allocations) and one for other surface transportation programs (60% of allocations). While a portion of the STP money would continue to be allocated to MPO's, other specific programs (e.g., CMAQ funds or safety money) would be eliminated. Step 21 does not speak to planning or policy issues that are not directly tied to funding allocations.

Ultimately many competing interests – many with valid concerns – will weigh in on what the "new ISTEA" should look like. It will be left to federal lawmakers to determine how much flexibility they want to hand to state and local transportation officials, and how much accountability they will demand in return.

Another piece of federal legislation that is in the midst of being revised is the Clean Air Act Amendments. The Environmental Protection Agency, in response to comments and concerns expressed by many of the parties involved in clean air issues, issued a draft rule amendment in July of 1996. These amended rules would simplify and streamline many of the requirements that states and metropolitan areas, such as the Washington, D.C. region, are subject to. The EPA will receive comments on this proposed rule this fall, and then issue a final revision.

State Legislation

Virginia's General Assembly meets each January through February or March. By the preceding December, NVTC, the Transportation Coordination Council and its member jurisdictions have determined their legislative agendas and communicated desired actions to the Northern Virginia General Assembly delegation. For example, for the 1996 session, NVTC advocated the following actions:

1) Seek to increase the statewide bond authorization to $50 million annually. This would provide Northern Virginia with an additional $4.5 million annually and allow the remaining $80 million of Northern Virginia recordation bonds to be issued in 1996.

2) Support legislation endorsed by the Virginia Transit Association to amend state statutes to allow transit operators the option of using safety measures when using their vehicles to transport school children.

3) Monitor and support legislation allowing transportation district commissions with at least two jurisdictions to impose a two percent motor fuels tax. Currently, only NVTC and PRTC have this authority.

4) Monitor legislation that might be introduced that adversely affects Northern Virginia's transportation planning and financing institutions, that does not recognize the TCC study or that does not provide an appropriate voice for the region to determine its own procedures that are consistent with ISTEA.

5) Support a continuation of the Transportation Efficiency Improvement Fund under current rules and funding.

At the state executive level, the institutional context in which transportation policy and funding decisions are made is centered on the Commonwealth Transportation Board (CTB). Among its responsibilities, CTB approves the Statewide Transportation Improvement Program (STIP) and long range state transportation plan. Each spring CTB conducts a series of public hearings around the commonwealth before adopting its updated six-year transportation program in June.

The Virginia Department of Rail and Public Transportation, under the direction of the Secretary of Transportation, manages several state-funded programs to assist public transit and ridesharing, including formula assistance (operating) and capital grant programs that now yield over $53 million annually for NVTC's jurisdictions (excluding another $86 million of bonds for Metro capital

projects authorized by the General Assembly in 1993 and 1994 for sale by VDOT in 1993, 1995, and in the fall of 1996). VDRPT and VDOT also manage several studies that will help shape the future course of transportation in Northern Virginia, including rail feasibility studies in the Dulles and Richmond-Washington, D.C. corridors, a Major Investment Study of the I-66 Corridor outside the Beltway, and another study of the Beltway itself.

The designee of the Secretary of Transportation (currently the director of VDRPT) serves on NVTC and PRTC, and Northern Virginia's CTB member chairs the TCC. VDOT provides a voting member of TPB and coordinates Northern Virginia's submittal of transportation projects for TPB's TIP. In this way, state policy can be considered and integrated into regional decision making.

NVTC (and PRTC) also profit from the several members of the General Assembly who serve as commissioners. This allows the region's transportation legislative agenda to be effectively communicated to Richmond. Two issues that may involve these state institutions are:

1) Consideration of additional state transportation funding: Governor Allen has pledged to avoid any new transportation taxes, but statewide business interests and others are advocating increased state fees to support transportation maintenance and investments. By the 1997 General Assembly session, NVTC and Northern Virginia's local governments may have agreed on strategies to seek more state funding for public transit, in light of growing needs, sharp cutbacks in federal transit aid enacted by the U.S. Congress, and new projects (such as a rail line in the Dulles corridor). Such a strategy is even more likely for the 1998 General Assembly Session. For example, the Virginia Transit Association will seek additional state monies to replace lost federal operating assistance. Last year, the VTA was successful in obtaining $1 million in such funds for transit systems across the state. If such money is appropriated in 1997, NVTC will seek to have it allocated according to existing, agreed-upon assistance formulas. The need to quickly replace the Woodrow Wilson Bridge may also lead to the development of new funding sources. The results of the 1997 gubernatorial election will also affect what may happen in this arena.

2) Role of Northern Virginia District Office of VDOT. One recommendation of the first phase of the TCC planning study was that the role of the Northern Virginia District Office of VDOT be examined, with a focus on how it might be strengthened. This District Office has been given more authority in recent years, and has become more involved in actual transportation planning. However, some local officials continue to be

dissatisfied with the amount of planning and programming that takes place in Richmond, and to feel that local concerns are not adequately considered in this process. On the other hand, there is a danger that in pulling away from Richmond, the region risks cutting itself off from the locus of decision-making and budgeting for the state. Clearly, this is a delicate issue that will have to be considered carefully and would most likely involve extensive negotiations between state and local interests.

FINANCIAL CONTEXT

Federal Funding

As was noted above, ISTEA must be reauthorized in 1997, and this may involve substantial changes in the structure of federal transportation funding. In the meantime, however, funds of particular interest to the Northern Virginia region are generally passed down to states and localities in one of three ways:

Formula money allocated to the state. Includes the following programs:

- **Surface Transportation Program** STP funds may be used for any mode of surface transportation (e.g. rail, highways, or bicycle and pedestrian paths) and therefore are the most adaptable to local needs.[6] In Virginia, STP funds are allocated in three ways. One part of it is distributed to areas of the state based on population; this becomes the regional share (see below). Another portion (roughly 30 percent) is allocated to specific projects by the Commonwealth Transportation Board. The remainder goes into the regular state distribution formula. In FY 1996, $14.1 million in statewide STP funds were programmed in Northern Virginia. Of these funds, $8 million was flexed to transit or intercity rail projects.

- **Enhancements and Safety Set-Asides** Ten percent of all STP funds must be reserved for transportation enhancements such as scenic, historic, and environmental projects which enhance the aesthetic or

[6]Funding program descriptions adapted from State Expenditures of Federal Surface Transportation Funds: Do They Reflect the New Directions? Surface Transportation Policy Project. (Washington, DC) 1993.

environmental aspects of the intermodal transportation system. Virginia invites local jurisdictions to submit proposals for enhancements funding; in the past, these were reviewed by VDOT, VDRPT, and a citizens committee, which screened the proposals and made recommendations to the CTB. However, the CTB disbanded the citizens committee in 1995, and now screens all proposals itself.

An additional ten percent of the STP funds must be set aside for safety programs. Among other activities, these funds are available for the improvement of at-grade railroad crossings.

- **Congestion Mitigation and Air Quality Improvement Program** These funds are apportioned to states on the basis of the population living in areas that violate federal air-quality standards weighted by the severity of the pollution. Funds are to be used for the purpose of improving air quality and reducing traffic congestion. VDOT uses its own formula to allocate these funds among the state's three non-attainment areas; in Northern Virginia, the TCC then recommends to the TPB and then to the CTB which projects to fund. $9 million in CMAQ funds were programmed in Northern Virginia in FY96.

- **National Highway System** The NHS is a system of 156,500 miles of existing roads of "national significance," including the 42,800 mile Interstate System. Up to 50 percent of this money may be transferred to the STP fund and used for any mode; the other 50 percent may also be transferred with the U.S. Secretary of Transportation's permission. In addition, transit projects in an NHS corridor (VRE, for instance) are eligible for NHS monies.

- **Interstate Programs (Completion and Maintenance)** ISTEA acknowledges that the Interstate system is virtually complete, and authorizes only a few billion annually for its completion. The law emphasizes the need to maintain and repair the system while restricting its expansion.

<u>Formula money allocated to the metropolitan planning organization</u>

- **Regional Surface Transportation Program** A portion of STP monies are reserved for the MPO's to allocate. In the Washington region, that money is then divided among the states to use as they wish; in Northern Virginia, projects are chosen by the TCC with confirmation by TPB and CTB. In FY96 Northern Virginia flexed $2.1 million in RSTP funds to transit, out of a total of.$10.8 million.

Discretionary and Formula money allocated directly to transit systems

- **Transit, Discretionary grants (P.L. 1103-272, § 5308)** These funds are distributed by the federal government on a discretionary basis for capital projects only. Nominally, these distributions are made by the Federal Transit Administration, but in recent years, Congress has earmarked nearly available funds as part of the annual appropriations action. Funds are divided among new projects, rail modernization, and other activities such as purchasing buses.

- **Transit, Block Grants (P.L. 1103-272,§ 5336)** These funds (formerly called Section 9 funds) are distributed on a formula basis, and are reserved for capital and operating transit expenses in urban areas. Because operating dollars are generally spent more quickly than capital dollars, Congress has limited the amount of each system's allocation that can be used for operating expenses. VRE, WMATA, and the Maryland Mass Transit Administration all receive Section 9 funds; of these, WMATA is the only system to receive operating monies.

State Funding

The sources of state transportation funding and the formulas by which that funding is allocated have grown and changed over time, resulting in a complicated method of distributing state transportation monies. The following is an attempt not to follow each dollar through the process, but to describe in general how state funds are allocated.

The bulk of transportation revenues in the state flow to the Highway Maintenance and Operating Fund (HMOF). The sources of these funds include gas tax and motor vehicles sales tax revenues, as well as fees collected for motor vehicle registrations and license plates.

The administrative costs of VDOT and VDRPT ($47.4 million in FY96) are first taken "off the top" of this fund. Funds are also taken off the top for the mass transit program. A certain amount of the remaining money is then allocated to each locality for the maintenance of its highway system; this amount is determined by a formula based on the number of lane-miles and types of roads in each jurisdiction. The remaining money is used for highway construction, and is distributed by state allocation formula.

The Transportation Trust Fund (TTF) was created by the Special Session of the General Assembly in 1986 in order to increase transportation funding statewide and to redistribute where that funding went. Like the HMOF, the fund is made up of revenues from the state sales tax, various transportation user fees (e.g., tax on automobile rentals) and other smaller sources.

These funds are then divided among four modes of transportation. Just over four percent of the proceeds are designated for the Commonwealth Port Fund, to be allocated to specific port projects by the Virginia Port Authority. Another 2.4 percent is reserved for the Commonwealth Airport Fund, and is divided among the state's airports by the Virginia Aviation Board. 8.4 percent is allocated to the Commonwealth Mass Transit Fund, where it is divided as described below. The remaining 85 percent is used for highway maintenance and construction, with 40 percent going to the primary road system, and the remainder being split evenly between the secondary road system and the urban road system.

The money set aside for mass transit is managed by the Virginia Department of Rail and Public Transportation (VDRPT), under the direction of the Secretary of Transportation. In FY96, the Commonwealth spent approximately $120 million on transit state-wide. Financial assistance to mass transit programs is divided into three sub-categories:

1) Formula Assistance - 73.5 percent of the total funds are made available to public transit systems for operating-related expenses (administration, fuels, lubricants, tires, and maintenance parts and supplies) and ridesharing program expenses under a distribution formula based on total operating expenses.

2) Capital Assistance - 25 percent of the funds are used as capital grants which are awarded on a discretionary basis. The state participation ratio will vary from year to year according to the demand for capital assistance, but in any one year, the state participation ratio will be the same for all capital grants awarded.

3) Special Programs - 1.5 percent of the funds will be used to award special programs grants for independent ridesharing programs, technical assistance, and experimental public transportation projects on a discretionary basis.

The capital assistance sub-program funds available to be distributed each year are determined by adding together 25 percent of the total amount of Financial Assistance to Mass Transit and any surplus of formula allocations. Each year, the Commonwealth Transportation Board approves an annual capital program of projects to be funded. All capital projects approved in the annual program will

receive the same percentage of state participation up to a maximum of 95 percent of the non-federal share. The actual percentage of state participation in capital projects may vary from year to year depending on the total amount of the funding requests; in recent years it has ranged from 30 to 50 percent.

The Transportation Efficiency Improvement Fund (TEIF) supports projects that reduce the demand for new or expanded transportation facilities that serve single occupant vehicles and contribute to the attainment of the National Ambient Air Quality Standard in non-attainment areas of the Commonwealth. This purpose is achieved by supporting initiatives at the state, regional, and community level that demonstrate innovative approaches to reducing traffic congestion. Effective approaches to transportation demand management (TDM) is the primary focus of the TEIF Program. This program augments the efforts of the Commonwealth generally and of the Department of Rail and Public Transportation to promote TDM initiatives.

Local Funding

Transit funds allocated to Northern Virginia by the Commonwealth are provided to through NVTC, where they are further allocated to the member jurisdictions using a formula that considers a weighted average of transit subsidies and costs. The Northern Virginia jurisdictions also levy upon themselves a two-percent motor fuels tax, which is collected by the state and returned to NVTC. These funds are dedicated to transit and also go through the formula.

NVTC allocates up to $100 million annually to its member jurisdictions to support public transit systems. The costs used in the calculation of the formula include Washington Metropolitan Area Transit Authority (WMATA) total capital and operating costs for the Northern Virginia portion of the bus and rail lines and costs of locally provided transit services. Subsidies are the total costs less the ridership revenue and grant funds associated with the service provided.

As explained above, due to the nature of the fixed cost allocation in the formula currently in use at NVTC, an inequity exists in the formula such that if a jurisdiction chooses to discontinue Metrobus service, it effectively increases the costs allocated to the other jurisdictions, even though the other jurisdictions have had no voice in the decision to reduce Metrobus service. The converse is also true; if a jurisdiction increases its Metrobus service, NVTC's formula provides a significant increase in its Metrobus costs and benefits neighboring jurisdictions with reduced costs. This is because Metrobus fixed costs are currently allocated to each member jurisdiction based on the level of Metrobus service it provides, even though Northern Virginia's total fixed cost allocation from WMATA is based on the level of peak-hour buses in service in 1975. Therefore, the increase or decrease

of service in any one Virginia jurisdiction will cause a significant shift in the fixed costs allocated to the other jurisdictions.

For the last several years changes to the formula have been discussed by NVTC, but to date no consensus has been reached among the jurisdictions. At its December 7, 1995 meeting, the commission agreed to maintain the current formula at least through FY 1997. However, at the same meeting, it was also agreed to use a $1.8 million gas tax reserve fund to "cushion" those jurisdictions harmed by another jurisdiction's service changes, as well as to pursue changes at WMATA in the way fixed costs are assigned to Virginia.

Local jurisdictions also use their own funds to support both highway and transit projects. For example, in fiscal year 1996, Northern Virginia jurisdictions spent $36.2 million in local funds on WMATA and local transit systems alone.

Future Funding

It is clear to most members of the community today that, unless fairly significant changes are made in the way the region finances transportation projects, we will not have the resources available to meet the expected demand in upcoming decades. The information gathered in the development of a financially constrained long range plan highlights this fact: when the projects included in the region's 1991 long range plan were all costed, along with the maintenance and operation of existing facilities, and compared to anticipated revenues, it was found that the region faced an annual shortfall of $538 million, in 1993 dollars. Revenues, it was found, would cover operations, maintenance, and preservation of systems in Maryland and Virginia, but nothing would be left over for system expansions. In the District of Columbia, revenues were not expected to be sufficient to maintain the existing system.

In order to meet the condition of financial constraint, the region decided to drop a number of significant projects from the plan, and to extend the plan to 2020, taking an extra ten years to complete those projects that remained. The plan now anticipates that the Northern Virginia area will take in approximately $706 million in revenues annually; of these, $507 million will go to operations and preservation of the existing system, $77 million will be spent on local projects that are not listed in the CLRP, and $122 million will remain for investment in new capacity.[7]

[7]Transportation Planning Board Long-Range Plan.

Clearly, the region must look to innovative funding sources and financing mechanisms if it is to keep up with projected growth. In both these areas, the most promising suggestions focus on mechanisms which in some way charge the costs of the system more directly to its users, i.e., some type of user fees or pricing. A listing of a few types of pricing that have been suggested in the Washington region demonstrate the different levels of specificity and the different impacts various strategies might have.

A very general form of pricing is a special tax district, in which a particular area agrees to tax itself in order to pay for a facility from which the businesses or residents believe they will benefit. This is the concept behind the Route 28 Tax District in the Dulles corridor.

Another type of pricing is "cash-out parking", a system in which an employee may choose to receive employer-paid parking privileges, as most employees in this region do, or the cash equivalent. In this way, employees can make the best use of the benefit available to them -- either by continuing to take advantage of the parking spot, by using the money for transit fares or bicycle maintenance, or by profiting from the fact that they have chosen to live near their office and can walk to work. Right now, the federal tax code, by allowing tax free parking benefits of up to $160 a month, tax-free transit benefits of up to $65 a month, and no tax-free benefits for other forms of transportation, creates a bias towards providing free parking. There are signs that this policy may change; in southern California, cash-out parking is mandated for some employers -- and the IRS is among the offices complying with that local law.

Another form of pricing is also one of the oldest -- the toll. Toll facilities are once again being constructed, for example on the Dulles Toll Road and now, privately, on the Dulles Greenway, and are being considered for other facilities, such as the Woodrow Wilson Bridge. New technologies such as Automatic Vehicle Identification (AVI) allow tolls to be deducted automatically from drivers' accounts, or billed to them later, increasing both the capacity and the safety of toll facilities. A variation, also made more feasible by AVI technology, is congestion pricing, in which tolls are imposed or are increased during peak periods, providing an incentive for people to share trips during those times or drive at other times if their schedules are flexible. This technology, which is discussed further in Chapter III, is now being used very successfully in California.

It is important to differentiate pricing from "just another tax." Many of the costs of driving, such as air and noise pollution, are not borne only by the drivers, and thus, driving is overconsumed. Similarly, for the most part, society does not acknowledge that certain driving times are more "expensive" than others. For instance, if everyone wants to drive during the same hour, then a highway that accommodates them must be twice as large as it would if they were to spread their

trips out over two hours. Through encouraging people to better distribute their trips, congestion pricing can serve not only to raise revenues for new construction, but also to limit the amount of new construction required.

The TPB staff has modeled the effects of a region-wide congestion pricing program in this area, and results suggest that it would generate large amounts of revenue, while decreasing travel demand more than many other strategies. Of course, many issues, involving both equity and logistics, would have to be settled before any such program could be implemented, but the fact that the investigation is starting is a promising sign.

Virginia has also acted to take advantage of private investment opportunities through the passage of the Public-Private Transportation Act of 1995. This Act grants public entities the authority to allow private entities to construct and/or operate certain transportation facilities. Individually negotiated agreements are to define the rights and obligations of both the public and private parties, and proposals do not have to be competitively procured. This Act allowed the construction of the Dulles Greenway, and has led to proposals around the state from private developers.

In a similar type of funding initiative, Virginia is also one of eight states to be selected by the U.S. DOT for a pilot project to initiate development banks for highways and transit. Federal funds would help start these banks, which would then rely on debt financing. It is anticipated that this program will increase flexibility in the use of federal funds, accelerate the construction of traditional projects, attract private capital, and allow for the recycling and leveraging of funds. One of the five projects that VDOT proposed as a possible candidate for this type of financing is an 800-space parking deck at the Vienna Metrorail station. This would probably involve a $10 million public/private initiative, with four more decks as potential additions. New financing initiatives such as these hold the promise of transportation improvements beyond those the region is currently able to afford.

SECTION III

EXISTING SERVICES AND FACILITIES

RAIL SERVICES

Metrorail

Since its opening in 1976, the Metrorail system has served as the core of the region's transportation system. In fiscal year 1996 the Metrorail system carried over 145 million passengers. Average weekday boardings were 507,000 system-wide, and over 158,000 in Virginia. For the Metro system as a whole, these passengers traveled almost one billion miles, with an average trip length of 7.2 miles.

Economic Benefits of Metrorail to Northern Virginia

A 1994 KPMG Peat Marwick study sponsored by NVTC titled "Fiscal Impact of Metrorail on the Commonwealth of Virginia" assessed the tangible economic benefits that accrue to the Commonwealth from tax revenues generated from Metrorail-related development and Metrorail construction and operations.

An earlier commission study conducted in 1985 projected a 13 percent return on the Commonwealth's investment in Metrorail for the period from 1978 to 1995. According to the 1994 update, the actual internal rate of return on the Commonwealth's investment in Metrorail through that year was 12.4 percent. Using the same methodology, the 1994 update forecasts a stunning 19.2 percent annual return for the period from 1995 to 2010.

The study estimated that by the year 2010, Metrorail will generate $2.1 billion in additional Commonwealth tax revenues and $1.2 billion in tax revenues net of state contributions to Metrorail; 25 million additional square feet of office space, 1.8 million additional square feet of retail space, 4,000 additional hotel rooms and 31,000 additional residential units; and permanent employment totaling 86,000 office jobs, 1,500 retail jobs and 3,500 hotel jobs.

Planned System Expansions and Enhancements

The Metrorail system is still being constructed, and the currently planned 103-mile system is now scheduled to be completed in 2001. The Franconia/Springfield station, located on the Blue Line, is under construction and scheduled to open in the summer of 1997. Other possible expansions in Northern Virginia – in particular, extensions of the Orange Line in the Dulles and I-66 corridors – are under study. (See **Appendix B.**)

On the Maryland end of the Blue Line, a Draft Environmental Impact Statement is being prepared for an extension from Addison Road to the Largo Town Center. Preliminary engineering is underway on the Summerfield Station and the Largo Town Center Station, which will also provide Metrorail access to the US Air Arena.

Metrorail is also enhancing its fare collection system by implementing the new SmartCard technology through a demonstration of the "GO Card," which is a product of the Cubic Automatic Revenue Collection Group. The wallet-sized cards are programmed to store fare value and are used to gain access to Metrorail, Metrobus, and Metro parking by placing the card near a "target." Fare value is automatically deducted. Currently, 21 Metrorail stations, three Metro bus routes, and five parking lots are equipped with the GO Card and over 2,800 customers are using the card as part of the demonstration program. The numbers of people who can take advantage of the cards will be limited until more stations are equipped with card readers.

Other plans for Metrorail system improvements are also moving forward. For instance, Arlington County received an $800,000 Livable Communities grant from the FTA, which the county has matched with $200,000. The County Board has recently approved an agreement with WMATA to allow the Authority to improve the Rosslyn Metro station and the surrounding streetscape. Over the next two years, WMATA, working with the County, will improve lighting on the upper level and upgrade the entrances and stairways to the station, as well as the bus waiting facilities. The County is also working with adjacent property owners to leverage private investment; the owners of the building above the station are planning improvements to their facility, and Virginia Power is working with the County to improve the appearance of its nearby substation.

In addition, WMATA and the RF&P Corporation, which owns the Potomac Yard near Crystal City, have negotiated an agreement for construction of an additional station in the Alexandria portion of the Yard. The station's construction will be funded entirely by RF&P, and is required to be constructed as part of the City of Alexandria's approval of the commercial development of the Potomac Yard project.

Virginia Railway Express (VRE)

The Virginia Railway Express is a joint commuter rail project of the NVTC and PRTC. In 1992, VRE began peak period service from Fredericksburg and Manassas into Washington DC, with stations in the Washington-area employment centers of Alexandria, Crystal City, L'Enfant Plaza, and Union Station, as well as at

suburban locations along the 82 miles of right-of-way. Amtrak is VRE's contract operator, running trains over two lines owned by four private railroads.

On June 22, 1996, VRE celebrated its fourth year in operation. In Fiscal Year 1996, the service carried 1.9 million passengers, with weekday boardings now averaging over 8,000. Besides regularly scheduled service, the VRE also occasionally operates special trains, such as the two trains the system ran on the Fourth of July, which carried over 1,200 people to and from the Smithsonian Mall.

Customers rate the quality of service highly and ridership is growing. VRE's fares remain competitive with the average price of parking automobiles in core employment locations. While the costs per trip may appear to be high on VRE, the long distances traveled by commuters (averaging 33 miles) result in costs per passenger-mile (26 cents) that are very competitive with the costs of operating a single-occupant automobile.

Program Enhancements

The VRE portion of the Franconia/Springfield Transportation Center opened in July, 1996, along with parking for some 200 vehicles. The station will eventually also be served by Metrorail and feeder buses. In addition, Fairfax County has recently opened an additional 156 spaces at the Burke parking lot.

Riders can use their 10-trip or monthly VRE tickets on Amtrak trains, effectively doubling VRE service throughout the week and on weekends. The joint Amtrak-VRE arrangement was negotiated in 1994 in response to riders' requests for later service from Fredericksburg in the morning and from Washington in the evening. Approximately 300 passengers take advantage of this arrangement each day.

VRE passengers can transfer free to and from many Metro and local feeder buses at several stations. Passengers need only show their VRE ticket with a validation for that morning or evening to the bus driver upon boarding the bus. Single-ride, ten-trip, and monthly tickets are all accepted. VRE later reimburses the bus systems for these rides.

The Operations Board has approved a mutual ticket exchange between VRE and MARC, Maryland's commuter rail service. VRE customers with a valid VRE pass are allowed to continue onto MARC trains at Union Station, and MARC riders may board VRE trains and continue southbound. Currently, about 30 people take advantage of this arrangement each day Eventually, VRE and MARC hope to be able to continue service into each other's jurisdiction, saving their riders a transfer.

Since January, 1994, VRE has offered a guaranteed emergency ride home program, "Special Delivery." To date, VRE passengers have used Special Delivery to get home in a hurry during mid-day hours when VRE service is not scheduled. The system arranges just over one taxi trip per day compared to the almost 8,000 VRE daily trips. Reasons for using the emergency ride home have been personal and child sickness, frozen pipes, and even husbands rushing to the hospital to assist their wives in labor. Ninety percent of the costs of the emergency rides home is paid by VRE. The costs of the program, which have amounted to about one-third the amount originally budgeted, are more than offset by the fare revenues from riders who, without the Special Delivery program, would not be on the train.

Finally, VRE has developed an ambitious Capital Improvement Program (CIP) for fiscal years 1997-2002. The program involves many of the railroad track improvements that are required by the CSXT contract. These improvements to signals and interlockings will allow trains to travel faster and reduce delays caused by two trains requiring access to the same track.

Intercity Rail

Amtrak, which serves VRE stations at Alexandria, Woodbridge, Quantico, and Fredericksburg offers intercity rail links to various points along the Eastern Seaboard and inland. Some intercity service has been lost due to Amtrak's budget difficulties, and as the agency comes under further financial pressure, the Commonwealth may choose to become more involved in the provision of intercity rail service. One example of this possibility is the ongoing Bristol Passenger Rail Study, which examines the option of state-provided rail service between Richmond, Washington D.C. and Bristol (on the Tennessee-Virginia border).

Amtrak serves as VRE's contract operator, providing crews, mid-day storage and maintenance. Through an additional arrangement with VRE, Amtrak also provides valuable service to commuters with its scheduled intercity trains. VRE ticket holders may board certain Amtrak trains, which then stop at shared stations. Amtrak is reimbursed per passenger by VRE. This arrangement has benefited both lines, as Amtrak is provided with increased revenues and VRE is able to, in effect, add capacity and frequency to its service without incurring the costs of running additional trains.

Amtrak is currently moving ahead with plans to implement high-speed rail service in the Northeast Corridor, generally defined as between Boston, Massachusetts, and Washington, D.C. The Commonwealth of Virginia believes that this service would be of great benefit to the state, and has been discussing with Amtrak the possibility of extending the plans for that service past Washington

to Richmond. In the meantime, the plans will have an impact on VRE, which stores equipment at Amtrak's Ivy City yard in Washington, D.C. during the day. Amtrak wishes to use this space for storage and maintenance of its high-speed equipment, and is now working with both VRE and MARC to identify alternative storage areas. As a result of this change, the cost of mid-day storage will most likely increase considerably. This is one of the factors that VRE will consider as it evaluates the benefits of buying bi-level passenger cars, which can carry more passengers without increasing the need for storage space.

BUS SERVICES

Metrobus

Over the years, as the Metrorail system has expanded, Northern Virginia's Metrobus routes have been restructured. Today, besides offering a number of primarily interjurisdictional cross-county routes, Metrobus serves as an essential and effective feeder service to the rail lines. Metrobus offers 42 lines and 141 routes in the Northern Virginia area, served by a fleet of 314 buses. During FY 96, Metrobus served over 107 million passengers system-wide, over 16 million passengers in Virginia, and provided over 42 million miles of bus service system-wide.

Despite its effective service, Metrobus is viewed as an expensive service. As discussed earlier in this report, one of the greatest of these is that it is perceived to be expensive. Many of the region's jurisdictions have responded to this situation by beginning their own services, to either replace Metrobus routes with their own, or to add new service without bids from Metrobus. As the local jurisdictions take over the more cost effective routes, it becomes more difficult for Metrobus to cut costs in proportion with service reductions. With the cooperation of local jurisdictions, Metrobus has been responding to this problem through efforts identified during the Strategic Bus Planning process. The plan is discussed further in Section VI.

Local Bus Systems

Many local jurisdictions also offer bus service. In FY 1995, these services carried approximately 10.3 million passengers in Northern Virginia. As stated above, jurisdictions have found that locally operated service is often more flexible

and less expensive than that provided by WMATA; thus, some jurisdictions have chosen to begin or expand their own jurisdictional systems. Others, such as Arlington and Falls Church, have announced that they are considering moving in this direction.

The locally provided systems and some of the highlights of this past year are as follows:

- **Arlington Trolley** (Arlington County) - Operates along a loop in Crystal City serving Metrorail and VRE stations. This year, Arlington entered into an agreement with a number of private companies in Crystal City to share the costs of operating the trolley. For its part, Arlington will replace the aging vehicles now in service.

- **CUE** (City of Fairfax) - Serves points in the city, George Mason University, and the Vienna Metrorail station.

- **DASH** (City of Alexandria) - Provides connections to four Metrorail stations and VRE, including express service to the Pentagon. Ten new buses were purchased in May, 1996. These buses will be used to replace aging vehicles and to expand service between the Eisenhower corridor and Old Town. An operational analysis was recently completed, and recommendations such as increasing service frequency are currently being reviewed.

- **Loudoun Transportation Association** - operates both fixed route and door-to-door service covering most of the county. Two buses run through Leesburg, two serve rural areas, one bus operates in Sterling, and another operates along Route 7 providing feeder service to Loudoun County Commuter Buses during peak periods.

- **Fairfax Connector** (Fairfax County) - Serves a portion of the county with connections to Metrorail, Metrobus, DASH, and VRE. In response to a budget crisis, Fairfax County made a number of service changes in July, 1997 cutting back or eliminating some Connector and Metrobus routes. The Reston/Herndon routes and the Reston Internal Bus Service (RIBS) have been integrated into the Connector system.

- **Tysons Shuttle** (Fairfax County) - Provides service between Tysons Corner and the West Falls Church Metrorail Station.

Various ridership data and performance measures for these systems are listed in **Figures 6 and 7.** Contact names and telephone numbers, monthly ridership information, and system maps are attached in **Appendix C.**

Figure 6: Northern Virginia Public Transit Systems Operating Statistics, FY 1996

Transit System	Number of Peak Vehicles	Average Weekday Boardings	% of VA Boardings	Operating Costs	Farebox Recovery Ratio
Metrobus [1]	317	61,131	23.5%	69,827,014	26%
Metrorail [2]	584	158,792	61.1%	352,431,000	67%
Fairfax Connector:[3]	101	16700	6.4%	10,397,000	24%
Huntington Service	56	10,050	3.9%	6,754,500	21%
Reston/Herndon Service	37	5,080	2.0%	3,740,630	24%
Community Service	8	1,420	0.5%	1,028,400	14%
PRTC CommuteRide	46	2,816	1.1%	4,360,230	44%
PRTC Omnilink[4]	15	358	0.1%	333,000	20%
Virginia Railway Express[5]	49	7,992	3.1%	17,600,283	48%
Alexandria DASH	26	7,815	3.0%	3,558,680	53%
City of Fairfax CUE	8	3,380	1.3%	1,570,380	33%
Arlington Trolley	2	423	0.2%	200,000	17%
Loudoun County Commuter Service	12	423	0.2%	541,289	63%
Loudoun Transportation Association[6]	8	145	0.1%	306,291	10%

Notes:

1. *Metrobus peak vehicles includes spare factor.*
2. *Metrorail operating costs and recovery ratio are for the entire system.*
3. *Connector totals may not equal the sum of the three services because of rounding.*
4. *OmniLink figures are for VRE feeder service only.*
5. *VRE Peak Vehicles includes rail cars only, not locomotives.*
6. *Loudoun Transportation Association numbers are preliminary, fiscal year ends in September.*

Figure 7: Estimated Annual Transit Pasenger Trips, Miles, and Transfer Volumes in Northern Virginia 1996

Transit System	Total Annual Passenger Trips for FY96 (Including Transfers)	Passenger Miles Traveled	Passengers Transferring
Metrobus[1]	107,762,525	462,301,232	1,884,437
Metrorail[1]	145,738,034	942,925,080	28,856,131
Fairfax Connector:	4,512,323	65,428,683	N/A
Huntington Service	2,752,760	30,280,360	N/A
Reston/Herndon Service	1,369,800	26,026,200	N/A
Community Service	389,700	5,455,800	N/A
PRTC CommuteRide	686,489	N/A	77,000
PRTC Omnilink	89,669	N/A	89,669
Virginia Railway Express	1,902,142	N/A	626,671
Alexandria DASH	2,235,647	N/A	462,335
City of Fairfax CUE[1]	858,000	N/A	850
Arlington Trolley	104,502	24,115	16,189
Loudoun County Commuter Service[2]	81,061	3,242,440	N/A
Loudoun Transportation Association	35,000	N/A	3,100

Notes:

1. *Metrobus and Metrorail numbers are for entire system, not just Virginia.*
2. *Passengers counts transferring to Metrorail from Cue include only paying passengers, and does not i*
3. *Loudoun Transportation Association numbers are preliminary because their fiscal year ends September 30, 1996.*

- **OmniLink (PRTC)** The Potomac and Rappahannock Transportation Commission began operating a feeder bus system in the Prince William area in December, 1994, and local flex-route service in April, 1995. The feeder service, consists of five routes serving the Rippon, Woodbridge and Manassas stations, now delivers over 350 riders to the rail system each day. The five local flex-service routes operate in the Woodbridge/Lakeridge, Dale City, Dumfries, Manassas Park and Manassas areas.

Increasing the Regional Share of Federal Money

In the Washington region, WMATA, VRE, Fairfax Connector, PRTC, and Ride On report National Transit Database (NTD) data (formerly Section 15 data). All recipients of Urbanized Area Formula funds from FTA are required to submit a NTD report. The data are then used to allocate funding to the Washington region based on the amount of service provided and its cost. Every system that reports data brings additional federal money to the region, therefore substantial benefits could be gained if all regional operators report.

In order to capture a larger share of the federal funds, NVTC has applied for a grant from the state to coordinate collection and dissemination of performance data for Northern Virginia transit operators not currently reporting NTD data. While local transit providers already collect much of the required data, certain costs would be associated with gathering the additional data needed to fulfill NTD requirements. In particular, estimating passenger miles would likely increase costs. If the project is funded, NVTC staff will hire a consultant to assist jurisdictional staff in creating a data collection mechanism for all Northern Virginia bus systems.

Previous estimates of the benefits CUE and DASH would receive if NTD data had been reported for FY95 are $190,000 and $378,000 respectively, amounts that would outweigh the costs of data collection. WMATA's policy is that these benefits may be passed on to the individual system in the form of capital assistance (as is the case with VRE), or stay within the WMATA budget, where they benefit the region and reduce local subsidies. The local bus systems have all indicated that they do not wish to receive this money directly, as it brings with it many other burdensome federal requirements.

Commuter Bus Systems

While many of Northern Virginia's commuters use local bus systems, residents who live further from the core often avail themselves of the region's many

publicly and privately provided commuter bus systems. Together, the services provide approximately 9,600 passenger trips in and out of the urban core daily, often operating out of park and ride lots. A list of the area's commuter bus service providers, along with some of the area's vanpool operators, is provided in **Figure 8.**

Of particular interest in this list is the bus service provided by Loudoun County, Loudoun Commuter Service Bus. The service was taken over by the county in April, 1994, when the two private operators in the area ceased service. The county originally contracted with a private firm to provide four buses during the peak period, serving Rosslyn and downtown DC, one of which also serves the Pentagon. Two buses have been added since that time, and additional buses may be added in November, 1996. This is the first time that the county has subsidized transit service. The other publicly financed commuter bus service is PRTC's OmniRide. A comprehensive operations analysis of OmniRide service is underway and is expected to be completed in mid 1997.

Vanpools

A large number of commuters also enter the core in vanpools. Besides the commercially operated pools listed in Figure 8, many commuters have formed their own. In 1993, the MWCOG Core Cordon Count recorded 5,085 commuters crossing the Northern Virginia cordon line in 423 vanpools on a typical workday. While this is a significant number, it represents a 26 percent drop from the 1990 counts.

In order to support those commuters taking advantage of vanpools, the Arlington County government includes vanpools in its transit incentive program, in which employees using transit are eligible to be reimbursed up to $65 per month through Metrochek, an employer-provided transit subsidy that is distributed in the form of Metrorail passes. Vanpool drivers may redeem their Metrocheks over-the-counter at any of Arlington's transit stores as well as use WMATA through the mail.

Another regional incentive program for vanpools is the **VanStart program**, which provides an impetus for new vanpool formation by temporarily funding empty seats during the critical start-up phase. The program is open to all owner/operators of new vanpools who register for assistance with a local Rideshare Program. Assistance is granted at the discretion of the local organization based on the applicant's demonstrated aggressiveness in recruiting passengers. Eligible vanpools may receive cash assistance equivalent to the average per passenger cost for between one and four passengers for up to four

FIGURE 8: SUMMARY OF COMMUTER BUS SERVICES AS OF 1996

COMMUTER SERVICE	PHONE	SERVICE AREA	VEHICLES	AVERAGE DAILY TRIPS	FARES **
Aries P.O. Box 192 Fredericksburg, Va 22404	(540) 373-3433	Fredericksburg Spotsylvania/Stafford TO: Fort Belvoir	2 Buses	120	$4.00 one-way/$6.00 return trip $38.00 Every two weeks
Brooks Transit Services Route 2, Box 3340 Front Royal, Va 22630	(703) 636-6148 (703) 635-3797	Front Royal TO: CIA, Pentagon, Crystal City, Navy Annex	5 Buses	240	$32.50
Groome Transportion 5500 Lewis Road Sandstone, Va 23150	(804) 222-7226	Richmond Airport TO: Fredericksburg, National Airport	10 Vans	300+ a day	$21.00 Fredericksburg one-way $28.00 Nat'l Airport one-way
Lee Coaches Route 4, Box 38 Sealston, VA 22547	(540) 371-6785 (800) 443-4533	Fredericksburg TO: Crystal City, Pentagon, Fort Belvoir	14 Buses	400	$10.00 round trip $8.50 one-way $60.00 Crystal City, Pentagon - 2 weeks $45.00 Fort Belvoir-2 weeks
National Coach Works 10411 Hall Industrial Drive Fredericksburg, Va 22401	(540) 898-6959	Fredericksburg TO: Crystal City, Pentagon, Wash. D.C.,	42 Buses	3500	$75.00 Crys. City, Pentagon-every 2 wks $80.00 Wash. D.C-every two weeks $50.00 10 one-way tickets $15.00 round-trip
Prince William COMMUTERIDE Laid Law Transit Srv., Inc. 2540 Horner Rd. Woodbridge, Va 22192	(703) 492-7444	Prince William TO: Vienna Metro, Pentagon, Downtown Washington	53 Buses	2730	$35.50 Ten trip. $ 5.00 Single Fare
Quick's Commuter Service 41 RV Parkway Falmouth, Va 22405	(540) 373-6027	Fredericksburg TO: Crystal City, Pentagon, D.C., Rosslyn, Bailey's X-roads, Navy Annex	16 Buses	1200	$58.00 Every two weeks to Northern Virginia $62.00 to Wash. D.C. every two weeks
Greyhound/Trailways Route 1 Fredericksburg, VA 22407	(540) 373-2103	Triangle/Woodbridge TO: Washington, DC	N/A	20	$40 for 10 ride tickets which must be used within 30 days
Quick-Livic Bus Company 41 RV Parkway Falmouth, VA 22405	(540) 373-6027	Fredericksburg/Spotsylvania/Stafford Counties TO: Pentagon, Crystal City, Rosslyn Bailey's Crossrds, Vienna, and Washington, DC	14 Buses	960	$58.00 to No. VA and $62 to Washington Every two weeks
Van Pool Services, Inc. (VPSI) 2760 Eisenhower Avenue, Suite 306 Alexandria, VA 22314	1(800) 825-7433	Prince William County, Manassas, Stafford County, Spotsylvania TO: DC, No. VA and Quantico	N/A	N/A	N/A
Transportation Total, Inc. 6220 Tally Ho Lane Alexandria, Va 22307	(703) 960-7433	Northern Prince William County, Manassas, Manassas Park areas, DC, Arlington and Fairfax Counties	20 Vanpools	N/A	N/A
Loudoun Commuter Bus Service Harrison St. S.E., 3rd Floor Leesburg, Va 20177	(703) 771-5665 (703) 478-8416, ext. 5665	Cascade, Purcellville, Hamilton, Leesburg, Ashburn, Sterling TO: Rosslyn, Pentagon, Downtown Washington	6 Buses	272	$40.00 Per 10 one-way tickets. $ 5.00 One Way

N/A = Information not available. * Some figures are approximate. ** Weekly fares unless otherwise indicated.

months. The program is funded through the local ridesharing programs. Through the rideshare program, the state also supports the **VanSave Program**, which offers temporary emergency financial support to vanpools that have lost over 25% of their ridership.

In order to increase the amount of vanpooling in the region, in 1996, the Transportation Planning Board committed to funding a new package of incentives. Jurisdictional and agency staff are now in the process of determining the details of what those incentives will be. One incentive that looks particularly promising is the provision of a direct subsidy to vanpool operators that is meant to cover their capital costs. Because the federal government allows federal transit funds to be used to pay the capital portions of a contract with a private sector party, the region may use these funds to subsidize vanpools with which it has a contract.

In exchange for this subsidy, the vanpool operator would be required to submit information on the number of passengers in the vanpool, the distance each travels, and other such data. This data would then be submitted to the federal National Transit Database. Because the amount of the federal funds that is allocated to the region is determined by the amount of transit provided in the region and reported to the NTD, this information from the vanpool operators would allow the region to earn additional dollars. Preliminary estimates indicate that the money earned for the region each year would most likely be several million dollars more than the amount required to subsidize the vanpools. This measure is particularly exciting because it appears to not only be an effective way to reduce automobile traffic and emissions, but to also raise additional transit funds for the Washington, D.C. region.

TAXICABS

Appendix E gives taxi company names, addresses, and telephone numbers by jurisdiction. Licensed cabs by jurisdiction include:

Alexandria: 615
Arlington: 605
Fairfax County (including Falls Church and City of Fairfax): 417
Loudoun County: 20

In addition, the Washington Flyer provides 315 taxis for service to and from Dulles Airport, and will provide a door-to-door shared ride Flyer service to National in the fall of 1996, and to Dulles the following year.

One issue that has come to the forefront over the past year is that of reciprocity policies, or the ability of taxicabs to cross into jurisdictions other than the one in which they are licensed. Currently, an agreement exists between the District of Columbia, the local jurisdictions in Northern Virginia and the Washington region of Maryland, and the Metropolitan Washington Airports Authority that outlines the conditions of this reciprocity. The primary restriction is that, while a cab may bring passengers from its own jurisdiction to another, it may not then "cruise" for passengers in the other jurisdictions. However, cabs may pick up fares in another jurisdiction to bring back into the "home" jurisdiction, as long as either the passenger has called and ordered the cab or the person is picked up on the return trip from dropping off someone else.

District officials have become concerned that cabs from the surrounding counties may be picking up fares illegally, thus causing the D.C. cabs to lose business. In September, 1995, the District of Columbia Taxicab Commission issued a notice to the other jurisdictions and the public that it was considering terminating the reciprocity agreement. Such an action would, for instance, make it illegal for an Arlington-based cab to respond to a request from an Arlington resident to be picked up at his or her D.C. office and be driven home. It would also cause problems for programs like VRE's Guaranteed Ride Home program, which relies upon agreements with Virginia cab companies, many of which then must travel into the District to pick up passengers.

After hearing from the suburban jurisdictions, the District government has agreed to discuss the matter further, and a Task Force of jurisdictional representatives has been meeting under the auspices of MWCOG to draft a revised agreement. The Task Force has agreed to reciprocity in principle, and is now focusing on how the terms of a new agreement might be enforced to the satisfaction of all parties.

COMMUTER SUPPORT SERVICES

Transit Stores

The Arlington County Commuter Assistance Program's three transit stores, located in Ballston, Crystal City, and Rosslyn, have proven to be an increasingly successful support service for transit riders. The stores provide fare media and schedule information for Metro, VRE, MARC (Maryland commuter rail), OmniRide, the Arlington Trolley, DASH, Prince Georges County's The BUS, CUE, the Fairfax Connector, the Maryland MTA bus system, RIBS, and the Tysons Shuttle. They accept Metrocheks as payment, providing a convenient outlet for commuters to exchange these for fare media for the system of their choice. Store staff also provide rideshare matching services at the three store locations, and WMATA has authorized the stores to accept bike-on-rail permit applications and administer the exams, as well as process Metro Access ID cards.

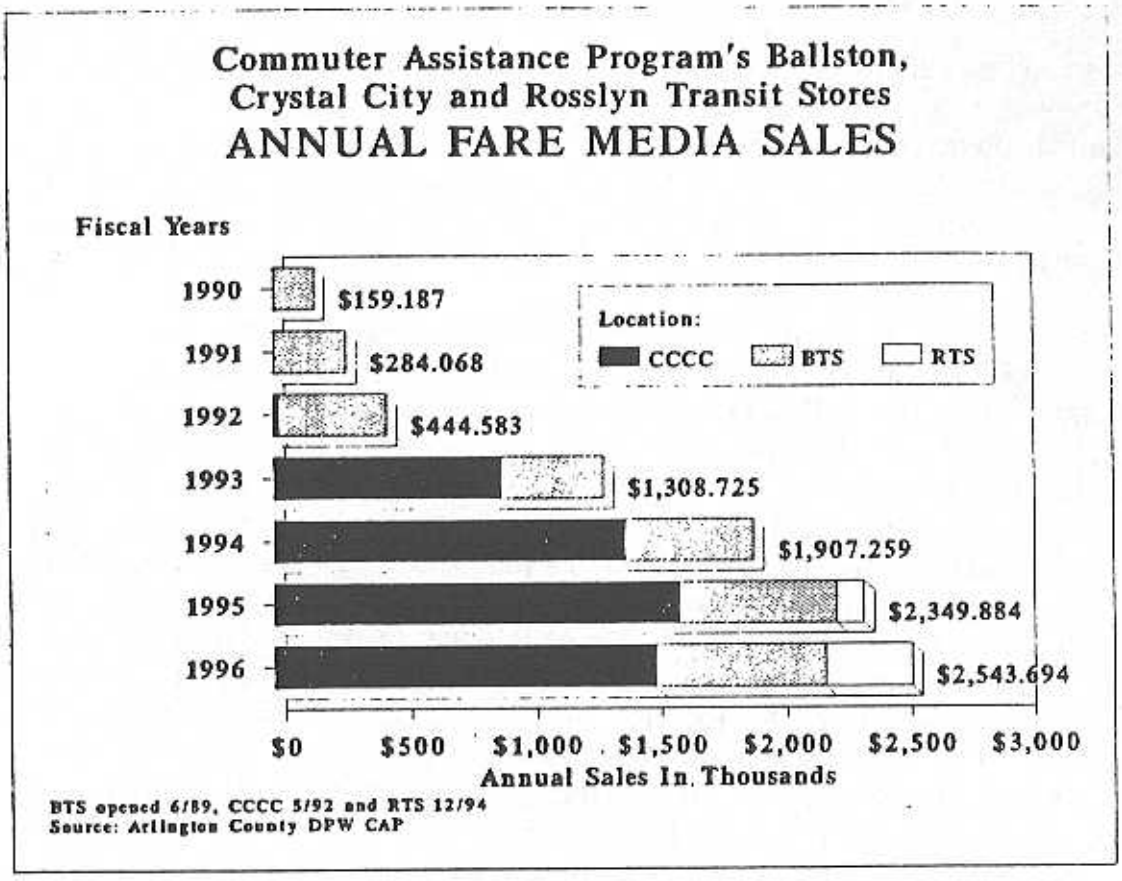
During FY96 Arlington's three stores served 129,371 customers, or 14 percent more than the 113,427 served in FY95. Crystal City served 61,322 customers, Ballston, 45,806 and Rosslyn 22,242. $2,543,694 in fare media was sold at the three stores during FY96, or an increase of eight percent over last year's figure. Charts showing sales and customers served since the stores openings are provided in **Figure 9**.

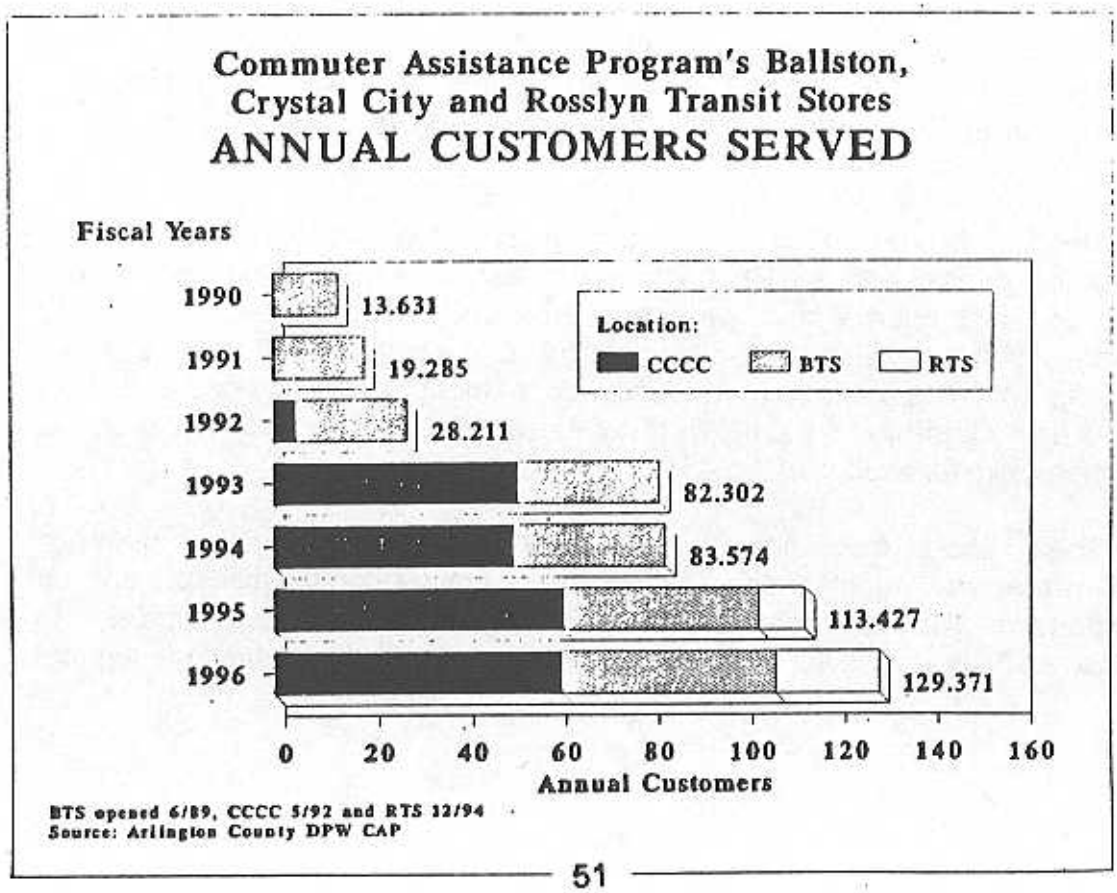
The private sector, working through associations such as BATA, has been instrumental in the success of these stores, both in the start-up phase and through the donation of office space and equipment. The City of Alexandria has received a $160,000 state grant to establish a store in Alexandria as well. Market research is currently underway to determine the optimum location for the store. As part of the research, a random telephone survey of Alexandria residents was completed with results expected shortly.

Ridesharing Services

Many jurisdictions in the region actively assist commuters to identify appropriate transit routes or to find other commuters with whom to carpool. The most extensive of these services is the Commuter Connections Program, (previously called the RideFinders Network), coordinated by MWCOG (1-800-743-RIDE.) This service generally processes between 1,500 and 2,000 applications each month for potential car and van-poolers. The system maintains a computerized database of people interested in ridesharing, so that potential

FIGURE 9: ARLINGTON TRANSIT STORE DATA





matches can be easily located. This database, which contains between 6,000 and 9,000 names at any one time, can be accessed by local jurisdictions as well. Ridesharing information numbers are listed in Appendix A.

Employer Outreach Programs

As part of the Commuter Connections Program, renewed emphasis has been given this year to employer outreach programs. In Arlington County, the Commuter Assistance Program's Ballston/Rosslyn Area Transportation Association (BATA) and the newer Jefferson - Davis Corridor (JDC-TMA) assist employers to establish programs targeted at encouraging employees to ride transit, cycle, rideshare and telecommute. During 1996, BATA and JDC-TMA conducted 28 visits and assisted 30 employers with direct assistance ranging from providing information to employees to setting up full scale commuter programs. At the end of the year there were 117 companies in Arlington providing a Metrochek benefit; over 20 of these companies started these programs as a direct result of the TMA's employer outreach programs during the fiscal year. According to WMATA, each new Metrochek program results in a 12-20 percent conversion rate to transit at an employment site. In addition, the two Arlington TMAs held two telecommuting workshops representing 18 companies, held two Metrochek workshops representing another 25 companies, held one Business Professionals Workshop on TMA services for another 15 companies and participated in five economic development events. Transportation management associations in Fairfax and Loudoun Counties are organized to address similar goals, with TYTRAN, DATA, LINK and the Loudoun County Transportation Association actively working to increase employee awareness of transit and transportation options.

The City of Alexandria continues outreach efforts through its Alexandria Transportation Program (ATP). The ATP assists employers in establishing incentives for employees to use alternative commuting modes. The key component of the program is the city providing up to a fifty percent cash match, for one year, to those employers who provide a monthly transit benefit to their employees. Currently, 11 employers in Alexandria have established a transit benefit program as a result of the ATP.

These efforts are being augmented by the regional employer outreach program that was adopted as a FY 96 transportation control measure by the Transportation Planning Board. This measure provides funds to localities to increase staff, as well as for coordinated publicity materials throughout the region.

PARATRANSIT

MetroAccess

The Americans With Disabilities Act (ADA) requires that all fixed-route transit systems (with the exception of commuter rail systems) provide paratransit for persons with disabilities who are certified paratransit eligible. The Washington region has responded by developing MetroAccess, a regional paratransit service operated by WMATA and its member jurisdictions. Service was initiated on May 16, 1994. Over 6,500 people have now been certified to use MetroAccess, and the service is providing a weekday average of more than 1,000 trips.

In FY96, WMATA provided over 239,500 trips, and demand for paratransit services is expected to grow in future years. To minimize funding requirements, WMATA is evaluating the current management strategy and considering alternative systems. Some of the initiatives being considered include increased driver training, utilization of contract taxi service where appropriate, and designated Metro Access landmark stops to facilitate passenger pick-up.

Eligible Users: People are considered eligible for paratransit service if they are:

1) A person who is unable, as the result of a physical or mental impairment, to get on, ride, or get off any vehicle on the transit system; or

2) A person who needs the assistance of a wheelchair lift or other boarding assistance device and is able, with such assistance, to get on, ride, and get off any accessible vehicle, BUT such a vehicle is not available on the route when the person wants to travel; or

3) A person who has a specific impairment-related condition which prevents travel to or from a bus stop or rail station.[8]

The traveler's need for paratransit service must be certified by a healthcare professional, and a complete application returned to WMATA in order for a person to be approved to use the service.

The paratransit service area is that area within 3/4 of a mile from of any WMATA bus or rail station service area. Current operating hours are from 5:30

[8]WMATA ADA Paratransit Guide. Washington, DC: September, 1993.

a.m. to 12:00 a.m. on weekdays and from 8:00 a.m. to 6:00 p.m. on weekends and major holidays. MetroAccess operates 365 days a year, including all federal, state, and local holidays, and during special events when the fixed route systems are operating. Effective January 26, 1997, weekend and holiday service hours will be extended to midnight. Once this expansion occurs, Metro Access will be fully ADA compliant.

The MetroAccess fare system has been developed in accordance with the federal ADA regulations. Fares are double the regular non-discounted fares for the fastest comparable trips on the fixed-route system.

Jurisdictional Services

In addition to MetroAccess, a number of local jurisdictions operate their own paratransit systems, many of which are also core carriers for the regional operation. Metro Access provides regional paratransit services for all ADA eligible users. ADA eligibility is not required for jurisdictional paratransit passengers. Alexandria, Arlington, and Fairfax are considered core carriers because they serve some Metro Access passengers as well. These systems are described below:

Alexandria DOT

The City of Alexandria began operating DOT paratransit service within the city limits in 1984. In 1993, the service was modified to comply with the Americans with Disabilities Act. This included expanding the service area to all Northern Virginia jurisdictions and extending the service hours. The system requires a one-day advance reservation for paratransit services. Fares start at $1.70 per person per one-way trip for travel within the City of Alexandria. Trips outside the City are based on the number of miles traveled and are double what the fare would be for the same trip on the fixed-route transit system. Anyone living within the city limits of Alexandria who has a disability which prevents the use of regular transit service is eligible to use DOT. Participation is by application to the City of Alexandria.

Arlington Access

Arlington County began an independent paratransit service with the intention of discontinuing service as MetroAccess was phased in. To implement this service, the county contracted with the Arlington chapter of the American Red Cross, Diamond Transportation Service, and the Red Top Cab Company. MetroAccess also began taking calls for Arlington Access in May, 1994. Reservations are needed to travel on Arlington Access, and fares are double that of comparable Metrorail/Metrobus trips. Participation is not based on place of residence, but need for the service.

City Wheels

The City of Fairfax City Wheels program offers alternative transportation within the City of Fairfax to the Vienna Metrorail station, to George Mason University, and to Fair Oaks Hospital. Participation is by application to the City of Fairfax. Coupons for transportation are obtained by placing a mail order prior to each month. Orders may take up to two weeks to process. Rides are arranged by the participant by contacting the transportation company directly. The average passenger fare two times the CUE bus fare, which is $1.

Fare Wheels

The City of Falls Church Fare Wheels program services the cities of Falls Church and Fairfax, and Arlington County. Fare Wheels allows participants to use redeemable coupons to pay for transportation services. Individuals may choose from among a pool of participating transportation providers, selecting the one that best meets their needs. Participants must be residents of the City of Falls Church, at least 62 years of age or permanently disabled, with an annual income not to exceed $30,000. Participation is by application to the City of Falls Church.

Fastran

Fairfax County owns and operates the Fastran fleet, which offers curb-to-curb service within Fairfax County to county residents. Fares are paid on a cash basis and average between $1 to $3 per trip. Trips are scheduled by the participant through Fastran. Participation is by application to Fairfax County. The program is structured to meet the transportation needs of low income persons by restricting eligibility to those with an annual income at or below $16,500.

Ride On

Loudoun County's Ride On paratransit program services Leesburg and the Sterling area five days per week for approximately eight hours per day. Special runs have also been made to support specific activities in the County. The Ride On fare structure offers fare books of 10 or more trips, or payment on a cash-per-ride basis. Only county residents are eligible to participate.

PEDESTRIAN AND BICYCLE FACILITIES

Bicycle and pedestrian facilities have too often been regarded as amenities rather than integral parts of the transportation system. Fortunately, this view is changing, as planners and the community in general realize that roadways often serve to inhibit non-vehicular trips by destroying the alternatives.

For the most part, decisions regarding when and where to construct sidewalks and bicycle trails are made by local jurisdictions. However, VDOT is increasingly including these facilities in its project designs. A Bicycle Technical Subcommittee under the TPB serves as a forum for jurisdictions to discuss and coordinate their plans region-wide. Across the region, progress towards a network of trails, sidewalks, bicycle lanes and parking, and other support facilities (such as locker rooms) is slowly developing.

In March, 1995, for example, the WMATA Board approved mid-day (10:00 a.m. to 2:00 p.m.) bicycle access on Metrorail as a permanent feature of the Bike-on-Rail Program. This action followed a six-month pilot program that ended in January. Metro staff testified that there were no problems reported during the pilot and that the number of Bike-on-Rail permit holders increased from 4,600 to 5,400 during the pilot. There are four sites to apply for a Bike-on-Rail permit: WMATA offices, Rosslyn Transit Store, Ballston Transit Store, and the Crystal City Transit Store. A test (which takes about 30 minutes) is required as well as a $15 service fee. The permit is valid for three years.

Arlington County routinely induces bicycle accommodations such as indoor parking cage, ample outdoor visitor bike parking and on-site employee fitness center with showers and clothing lockers in new buildings by accepting owner/developer proffers in exchange for permission to exceed by-right building densities in development site plans. Currently, Virginia law does not require bicyclist accommodations and prohibits localities from enacting zoning ordinances that do. The bicyclist accommodations in Arlington County's site plan conditions are a national model for localities facing this problem.

An Alexandria Drafting Company's (ADC) regional bike route map, which includes Fairfax and Prince William counties, is available at most book stores for $10.95. The map was updated in 1996 with the cooperation of the Bicycle Technical Subcommittee.

TRANSIT-SUPPORTIVE HIGHWAY FACILITIES

HOV Lanes

In addition to its extensive highway network, Northern Virginia enjoys one of the country's most successful High Occupancy Vehicle, or HOV, systems. Currently, HOV lanes exist in three corridors: the Shirley Highway and a portion of I-95 to the south, the I-66 corridor both inside and outside the Beltway, and on Route One and the George Washington Parkway through Old Town, Alexandria. While the lanes may look underutilized, they carry far more persons per hour than do the parallel regular-occupancy lanes. **Figure 10** details the existing segments of HOV lanes and the most recent traffic counts available for each.

There have been questions over the past year as to the policy regarding cars that are traveling in the HOV lanes when the HOV period begins and do not carry enough passengers to meet the occupancy requirement. VDOT's policy is that once the HOV period begins, all non-HOV vehicles must leave the highway at the next exit. State police have begun enforcing this requirement, since otherwise these "shoulder" periods become very crowded, which negates the time-savings incentive for people to use carpools. The long distances that can now be traveled on HOV lanes would make any other policy unworkable; for instance, a driver could enter at the Pentagon five minutes before the HOV period began and travel thirty miles in the HOV lanes, which is clearly unfair to those who have established carpools in order to take advantage of those lanes. However, some local judges have chosen to interpret the rule differently, and have questioned tickets written soon after the HOV period begins. VDOT is now looking into ways to improve signage on the roadway in order to reduce confusion regarding this issue.

Motorcycles on HOV Lanes

VDOT recently completed a study on the safety risk of motorcycles in HOV lanes. ISTEA mandated that motorcycles be permitted to travel on federally funded HOV facilities unless they created a safety hazard or adversely affected HOV operations. Although motorcycles had previously been banned from traveling on Virginia's HOV lanes, the Commonwealth Transportation Board (CTB) authorized motorcycle travel on HOV facilities in Virginia as of September 21, 1992, for a two-year trial period. However, out of concern over whether this policy should continue, the CTB resolved that VDOT conduct a study to determine whether the cycles presented a safety risk.

FIGURE 10: HIGH OCCUPANCY VEHICLE (HOV) HOURS AND USE

HOV FACILITY	PERSONS	DIRECTION	RESTRICTED HOURS	VEHICLES A.M. PERIOD	PEOPLE A.M. PERIOD[1]
I-395/I-95 (D.C. to Prince William Parkway): (reversible lanes)	HOV-3	Northbound Southbound	6:00 A.M. - 9:00 A.M. 3:30 P.M. - 6:00 P.M.	7,324	34,647
I-66 (I-495 to D.C.): (HOV only)	HOV-2	Eastbound Westbound	6:30 A.M. - 9:00 A.M. 4:00 P.M. - 6:30 P.M.	8,216	22,844
I-66 (I-495 to Route 50): (far left diamond lane)	HOV-2	Eastbound Westbound	5:30 A.M. - 9:30 A.M. 3:00 P.M. - 7:00 P.M.	4,598	9,666
ALEXANDRIA:					
Washington Street	HOV-2 HOV-2	Northbound Southbound	7:00 A.M. - 9:00 A.M. 4:00 P.M. - 6:00 P.M.	N/A N/A	N/A N/A
Patrick Street/Rte. 1 Henry Street/Rte. 1	HOV-2 HOV-2	Northbound Southbound	6:00 A.M. - 9:00 A.M. 3:00 P.M. - 7:00 P.M.	N/A	N/A

Sources: Transportation Planning Division, Virginia Department of Transportation
Alexandria Transportation and Environmental Services Department

[1] Counts include vans and buses.

The study found that motorcycles account for as much as three percent of the annual traffic on some HOV lanes. However, in the two years after the CTB authorized their travel, there were only five motorcycle crashes on these highways. The study recommended that the CTB allow motorcycles to continue to travel on HOV lanes and the VDOT continue to monitor their travel and accident rates.

Improvements to Current System

Currently, the region has adopted plans to extend the major HOV corridors and construct HOV lanes on other corridors, and is studying other major locations such as the Capital Beltway. Ongoing expansions to the system are described below, and further details of plans and studies are presented in **Section V.**

Dulles Toll Road

The Dulles Toll Road, which regularly experiences heavy traffic during peak periods, is currently being expanded by one lane. This lane, a fourth in each direction, will be reserved for HOV-2 traffic during peak periods in peak directions. The design of the road was coordinated with the Dulles Rail Study in order to minimize potential future impacts on the road if rail is also constructed in the corridor. The HOV lanes are scheduled to open in late 1998.

While the Toll Road and the privately owned Dulles Greenway to the west are the only major toll facilities in the region, this type of funding mechanism is now being examined for other large projects, such as the replacement of the Woodrow Wilson Bridge. Because of this, the operation and structure of the DTR are worthy of closer examination.

In Fiscal Year 1997, approximately $29 million is expected to be collected in Dulles Toll Road tolls, or earned in interest on those tolls. Of this money, about $10 million, or 33 percent, will be used to operate the toll system and maintain the highway itself. Another 39 percent of the funds will be used for debt service on previous and current improvements, such as the third lane that was constructed in 1992, and the HOV lanes now under construction. Of the $7.5 million left for future improvements, 25 percent (or six percent of the total funds) is reserved for transit, and will be used to support the Western Regional Park and Ride projects. The bulk of the remaining money will be used for the fourth lane and Wiehle Avenue interchange improvements.

Dulles Greenway

The Dulles Greenway, which opened in September, 1995, is one of the few privately constructed and operated toll roads in the U.S. The Greenway extends approximately 14 miles from the Dulles Airport northwest to Leesburg and offers four operational lanes and seven interchanges. Two additional lanes and two additional interchanges have been planned when future expansion becomes necessary. Fastoll, the automated toll collection system on the Dulles Toll Road (described below), also operates on the Greenway. Rail right-of-way has been preserved throughout the road corridor in case of future rail extensions to Leesburg.

The level of tolls is controlled by the Virginia Corporation Commission, an independent state regulatory body in Richmond. The tolls are applied to debt service on the highway and are then meant to provide a regulated rate of return to private investors. However, one year after the highway's opening, the level of tolls is significantly lower than was anticipated by its builders. In fact, since the roadway opened, the Toll Road Investors Partnership II (TRIP II), which built and operates the highway, has lowered the toll, from $1.75 to $1.00 each way, and raised the speed limit (after obtaining permission from the Virginia Legislature) to 65 miles per hour. These measures have helped to attract drivers to the highway, and the road now carries about 23,000 automobiles per day, as opposed to the 10,500 per day it carried in March, 1996. However, traffic projections before the highway opened were 34,000 cars per day after a year of service.

In July, 1996, TRIP II missed an interest payment to its bondholders, and was forced to seek an agreement with them to avoid foreclosure on the highway. As congestion on parallel roads like Route 7 becomes worse, and as development in Loudoun County both catches up with and follows the highway, it is likely that traffic levels on the Greenway will continue to increase. However, TRIP II's experience will most likely lead to more careful examination of the financial feasibility of projects before the private sector becomes involved with their financing. It also raises interesting questions about how much people are in fact willing to pay to avoid congestion; in this case, TRIP II clearly misjudged the initial market.

Fastoll

One aspect of tolls that has traditionally been problematic is their impact on traffic speeds. VDOT has been working to address this problem through the introduction of the Fastoll system. This electronic toll collection system can read a transponder on a vehicle's windshield, link that transponder to an account the

driver has established, and bill the toll to that account. Drivers must pre-pay at least $35.00 of tolls to open an account, and are then notified when the account falls below $10.00.

Fastoll has proved to be very popular with motorists. The system opened on April 15, 1996 and by early August, over 25,000 transponder accounts had been opened. This response far exceeds expectation; VDOT had been hoping to open 30,000 accounts by April 15, 1997, and has almost reached this goal, eight months early. This response has allowed VDOT to set aside one lane at the main toll plaza in each direction for Fastoll users only, greatly increasing the time savings for those users. Commuters can enroll by calling VDOT's toll-free number, 1-888-FASTOLL. This new technology may also allow the region to eventually implement true congestion pricing, as described in Section IV.

HOV-2 on I-66 Inside the Beltway

I-66 opened in late 1982 with an HOV-4 status during peak direction, peak period operation. As a result of federal legislation, several subsequent changes have occurred. By January of 1984 the HOV requirement was reduced to three. In March of 1995, VDOT began an year-long HOV-2 demonstration project.

The goal of this project, according to Virginia Secretary of Transportation Martinez, was to provide an opportunity to evaluate optimum use of I-66 through increased person movement and car pooling in the I-66 corridor and at the same time, to alleviate traffic congestion on the parallel roadways, especially Routes 29 and 50. A number of concerns regarding the possible negative impact of the change in the requirement was expressed by citizens, local jurisdictions and transit agencies, and VDOT worked with local and regional staff to establish the conditions under which the demonstration would take place.

In general, the results of the demonstration period showed that the number of people using the highway did increase, although not as much as did the number of vehicles on the roadway. In other words, the highway became more effective, although less efficient, at moving people. These results led the region to agree to the Secretary's request to extend the time period for HOV-2.

In deciding to adopt HOV-2 on the highway for a longer period of time, the region followed a process outlined in the Coleman decision. This ruling, issued by then U.S. Secretary of Transportation Coleman before the construction of I-66, calls for any changes in the HOV status of the highway to be made cooperatively by the U.S. Secretary of Transportation, Washington Metropolitan Area Transit Authority, the full TPB and the Commonwealth of Virginia.

This cooperative process led to an agreement whereby the roadway will remain open to HOV-2 vehicles as long as certain thresholds of traffic are not exceeded (1,950 vehicles per lane per hour). Counts taken in the fall of 1995, during the demonstration project, showed 1,660 vehicles per lane per hour, and MWCOG counts from the spring of 1996 indicate that traffic volumes on the facility have since increased to 1,826 vehicles per lane during the peak hour.

If the thresholds are exceeded, VDOT must report to TPB, which will then consider allowing the road to revert to HOV-3. In the meantime, VDOT must monitor the highway quarterly in order to check traffic levels. In addition, because the additional vehicles on the highway increase the region's automobile emissions, VDOT has committed $800,000 annually to subsidize bus fares in Northern Virginia. The subsidy will be applied to a limited number of bus routes each year in order to boost transit ridership and offset the increased emissions. Finally, VDOT is committed to funding police enforcement of the highway in order to minimize HOV violations.

Improvements to Reversible HOV Lanes on I-95

VDOT is currently in the process of extending the reversible HOV lanes on I-95 south from Springfield. The project has been opening in stages, as sections are completed. Currently, the lanes are open from I-395 to a point one-half mile south of Route 234 in Prince William County. The final segment, which will reach the Stafford County line, is scheduled to open early in 1997.

In addition, it is expected that by the year 2010, VDOT will restripe the reversible lanes on I-395 in order to provide three lanes. This segment of highway was originally designed with extra shoulder width to allow for such a contingency.

Park & Ride Lots

To support its network of HOV lanes, bus routes, and rail lines, Northern Virginia has provided a growing number of park and ride lots. A list of the lots, together providing over 30,000 spaces (including rail stations) served by transit, is provided in **Appendix G**, and VDRPT will publish a list of park and ride lots throughout the region in early 1997.

In addition to lots supporting buses, carpools, and vanpools, both WMATA and the jurisdictions that support the Virginia Railway Express provide lots for their riders. The Metrorail lots are particularly well utilized, and with the exception of the Huntington South parking lot, all of the nearly 10,000 spaces provided at rail

stations in Northern Virginia are usually full by 10:00 a.m. each workday. Fairfax County has worked with a private developer to make available approximately 450 extra spaces at the Vienna station, where the problem is particularly severe. This lot opened in October, 1994 and charges fees slightly higher than those charged by WMATA. In January, 1996, the CTB proposed a joint development project on land owned by WMATA to further expand parking at the Vienna Metrorail station. Private sector developers have expressed an interest in the suggested 1000+ parking structure, however, the project awaits the approval of WMATA's new General Manager. A list of Metrorail stations and their connections to feeder bus systems is also included in Appendix C.

AIRPORTS

Residents of the Northern Virginia area are fortunate in having two major Virginia airports easily accessible to them – Dulles International and Washington National Airports. In 1992, 27.3 million passengers traveled to or from the region through these airports. Both airports are vital to the economic development of the region, and indeed, Dulles is seen as the key to fueling anticipated growth in the Dulles/Route 28 area. In order to preserve these advantages, however, maintaining both the quality of the airports themselves and the ease of access to those transportation centers must remain priorities of the region. Listed below are some of the elements of this effort:

Capital Improvement Program

Currently, both National and Dulles airports are undergoing major capital improvements. An entirely new terminal is to be constructed at National, just to the north of the original terminal. This new building will improve not only the airport, but access to it, as it is designed to connect directly to the Metrorail platform. Metro passengers will thus be able to access the terminal and gates without being exposed to airport traffic or the weather. A second Metro farecard plaza, the connection to the new terminal, and two new parking garages directly behind the Metro station are currently under construction, and a portion of the new terminal, including the connections to the Metrorail station, will open in mid-1997.

At Dulles, the existing 600 foot terminal has been expanded to 1,240 feet at three levels, adding 600,000 square feet of space to the interior. The terminal additions, which measure 320 feet to the east and 320 feet to the west, mirror the

distinctive facade of the existing building, as the architect, Eero Saarinen, originally intended. This new space accommodates offices, new ticket counters, additional baggage facilities, two new ground transportation centers, an extended curbside area and extra lane for passenger pick-up and drop-off, and other passenger amenities. The entire expansion project, which began in October, 1993, is scheduled to be completed in 1997, and will be accompanied by improvements to the street system outside the terminal as well.

Also at Dulles, ground was broken on the first phase of the first of three permanent Midfield Terminals, which will eventually replace the existing facility after notice to proceed was issued in October, 1995. The existing Midfield Concourse (C/D) was built as a temporary structure in the mid-1980s in response to rapid domestic air service growth at Washington Dulles. Phase one of the build out will include 12 of the 44 gates planned for the 424,000 square foot, bi-level building. Long-term plans for Dulles Airport include the construction of a people-mover system to carry passengers between the main and satellite terminals.

An environmental assessment is underway for the Smithsonian National Air and Space museum planned near Dulles airport. The proposed museum is expected to open between 2001 and 2003. Preliminary plans indicate that transit service to the museum would include shuttle bus service from Dulles airport as well as bus service from the West Falls Church Metrorail station.

MWCOG Passenger Survey

In order to track changes in customer needs and preferences, MWCOG performs a survey of airport passengers at the region's three airports every five years. After the 1992 survey, MWCOG reported the following conclusions:

- Approximately 52 percent of locally originating passengers flew out of National Airport, with the rest split between Dulles (25 percent) and BWI (23 percent).

- 62 percent of those surveyed at Dulles Airport and 77 percent of those surveyed at National Airport cited accessibility as the most important reason for choosing the airport they used.

- At Dulles Airport, 76 percent of all passengers arrived by private or rented automobile, and 14 percent by taxi. However, at National Airport, 36 percent arrived by taxi, making this the most common mode of access at that facility, while only 44 percent used a private or rented car.

- Passengers using Metrorail to get to National Airport decreased, from 15 percent in 1987 to 9 percent in 1992. This is still one of the highest proportions of any airport in the Nation, and a portion of the drop was likely due to the hindrance of ongoing construction at the airport. It is also due to fewer non-resident business travelers using Metrorail. Newly constructed terminals will provide much more convenient access to Metrorail in the future.

Ground Access

In 1995, the Council of Governments updated the ground access study, which forecasts access demands and capacities in future years. This study found that access to both Dulles and National airports had either remained at acceptable levels or improved since the 1988 study was conducted. In addition, several additional routes were recommended for inclusion in the future updates, including trips from Upper Marlboro, Maryland to Washington National Airport, and from both Manassas and Springfield, Virginia to Dulles Airport, via Route 28 and the Fairfax County Parkway, respectively.

Travel-time data are most useful in a time series, permitting analysis of travel-time trends, as well as analysis of transportation improvements. The next update of the Ground Access Travel Time Study is scheduled for fiscal year 2000.

One of the most vital aspects of ground access to Dulles Airport is the Dulles Airport Access Road (DAAR), which connects I-66 to the airport. Traffic on the highway is limited to vehicles traveling to and from the airport; other travelers (such as commuters) in the corridor must use the Dulles Toll Road. Over the years, a number of attempts to broaden access to this roadway have been made, and MWAA has allowed busses to use the road during peak hours. The MWAA is currently awaiting reauthorization by Congress, and the current version of the House bill explicitly restricts access to the highway, reserving it for airport users.

Ground Transportation Services

The Metropolitan Washington Airports Authority (MWAA) currently operates the Washington Flyer ground transportation system. For Fiscal Year 1996, the Flyer projects profits of approximately $100,000, and revenues of $5 million. In Fiscal Year 1996 the Washington Flyer carried approximately 1,475 passengers daily, providing over 35,550 trips between the two airports and downtown Washington, DC, 16,790 trips between Dulles airport and the West Falls Church Metrorail station, and 12,410 trips between the two airports.

Scheduled express bus service operates at one-half hour frequency from a terminal at 15th and K Streets in Northwest Washington D.C. to and from National Airport ($8 one-way; $14 round-trip) and to Dulles Airport ($16 one-way and $26 round-trip). Service is also provided to and from major Washington D.C. hotels. Express buses connecting National and Dulles Airports cost $16 one-way ($26 round trip). Finally, from 10:00 A.M. to 6:00 P.M., buses operate every 20-minutes between Dulles Airport and the West Falls Church Metrorail station at a one-way fare of $8 ($14 round-trip). Before 10:00 A.M. and after 6:00 P.M., buses operate every 30-minutes.

These scheduled services are operated under contract to MWAA by a firm that provides all dispatchers and drivers. MWAA also contracts for most other functions associated with the ground transportation system, including ticket sales, operation of the Washington D.C. terminal, a 24-hour, 7-day per week telephone information system, nightly washing and bi-monthly detailing, and preventative maintenance. The Authority also operates airline diversion charters (for bad weather, mechanical problems) between National, Dulles and BWI airports, and a shuttle bus service that connects the various terminals, garages, and the Metrorail station at National Airport. This shuttle service alone enables many passengers who would otherwise drive to use Metro and other transit to reach the airport. Finally, Washington Flyer also contracts with a fleet of taxis to serve Dulles airport. There are currently 315 taxicabs in service.

Recently, the MWAA selected a firm to provide door-to-door shared ride van service to and from the airports. The vans, which can carry up to eight passengers, will be limited to three stops per trip in order to minimize delays, and will cost about half the fare of a taxicab ride. Service is expected to begin at National Airport in the fall of 1996, and at Dulles the following year.

SECTION IV

IMPROVING THE REGION'S TRANSPORTATION SYSTEM

DEFINING AN IDEAL TRANSPORTATION SYSTEM

The complexity of transportation and its role in society makes it very difficult to define a "good" transportation system. ISTEA and the CAAA address this when they stress the need for an integrated approach to planning that takes into account complex trade-offs and competing goals. As was pointed out during the discussion of the reauthorization of ISTEA, different people and different groups will believe that one or another of these goals is primary, and that others are merely luxuries.

The current Virginia Secretary of Transportation's strategic plan for transportation, "Virginia Connections", stresses intermodalism, deregulation, economic development, market forces, privatization, freight, and technological leadership and safety. These are all valuable principles to incorporate into plans, but in stressing the importance of a good transportation system that links markets and promotes economic development, there are other important elements that a good system must consider and account for. These include the "externalities" of traffic, including air and noise pollution, large numbers of automobiles on residential streets, loss of green space and wetlands to parking lots, and wasted time and energy. Our present system does not charge directly those who create such broad impacts, nor does it attribute to the providers the resulting social benefits of providing mobility to those who lack economic resources or the disabled.

Below are some aspects of a alternative "model" transportation program as NVTC envisions it.

Mobility

An effective transportation system must provide mobility. People and goods should move throughout the region safely, conveniently, and comfortably. Within this category, needs must be balanced; for instance, drivers might have to travel more slowly than they would prefer in some areas in order to allow for safe pedestrian movement. Clear policies should guide decision-makers through the assessment of these trade-offs.

Travel times should be predictable and subject to as little fluctuation as possible. This is especially important for freight carriers as just-in-time shipping is the norm for many businesses. Finally, the benefits of mobility should be widespread; the transportation system should serve all members of the community rather than focus on any particular segment to the detriment of others.

Affordability

In keeping with the goal of providing mobility across all spectrums of society, an ideal transportation system would provide users and taxpayers with affordable options, preferably including public and private sector alternatives. As jobs leave the central city and become dispersed in the suburbs, it has become more and more necessary to have access to a car in order to reach them. This eliminates the members of 12 percent of the households in the Washington, DC area from the market for those jobs -- cutting them off from important income opportunities. Thus, reasonably priced transit should be made available for consumers of transportation.

It is vitally important that the region's transportation system be affordable for society as a whole. According to the Transportation Planning Board's analysis, the Washington region currently spends $1.8 billion annually to preserve, maintain and operate the transportation systems in place today. Every new road or expanded transit service represents not only a large capital investment but an ever increasing commitment to ongoing costs as well. This money spent by governments is in addition to the considerable amount spent by individuals on transit fares and on operating and maintaining their automobiles. In the United States, these expenses are estimated to consume, on the average, 19 percent of our household budgets.[9] As noted above, many of the social costs of our systems are not included in either of these numbers. A good transportation system is a prerequisite for economic development; however, we must assure that the costs never exceed the rewards.

Efficiency

Closely associated with the issue of affordability and mobility is that of efficiency. A good transportation system will deliver the maximum mobility for the least costs. How this relatively simple concept is measured is the subject of ongoing debate. Many costs -- for example, those caused by air pollution -- have not traditionally been included in cost/benefit or efficiency analyses. Planners are also grappling with how to compare the efficiency of alternative investments in different modes, as must be done as part of a major investment study.

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[9]U.S. Bureau of Labor Statistics, Consumer Expenditures Survey, 1994.

Demand Management

Lacking sufficient resources to supply unlimited amounts of highways *or* transit, our transportation program should seek to reduce the demands made of that system. There are many ways to reduce this demand, two of the most effective (and least popular) being congestion pricing and parking restrictions. Toll roads on which the traveler pays a variable amount for use of a roadway based on the time of day, are a good example of congestion pricing. The availability of Intelligent Transportation Systems technologies (described below) has made this type of pricing much more feasible. A recent modeling exercise at the Metropolitan Washington Council of Governments has also concluded that pricing could effectively reduce both total trips and total vehicle miles traveled in future years. This exercise is discussed in greater detail later in this section.

Restricting the amount of parking available or increasing the cost of parking is another form of managing the demand for automobile travel. Frequently, employers will offer their employees free parking in a benefit package. An alternative to paid parking would be a travel allowance. Telecommuting, also discussed below, is another effective form of demand management.

Integration with Land Use Planning

Land use and transportation obviously are closely related, and their planning should be as well. However, the prevailing pattern of land development in the Washington region since the 1960's has been rapid low-density residential development in suburban areas, accompanied by the emergence of suburban commercial centers or "edge cities," such as Tysons Corner. More and more travel takes place between suburbs, yet the region's public transit system is primarily designed to serve traffic in and out of the urban core. Furthermore, at this point, nearly 80 percent of the constructed facilities that will exist in the Washington region in 2020 exists now or has already been approved for construction. Consequently, it would be difficult to have a great impact by modifying land use/transportation strategies within the time covered by current long-range plans.

A good transportation system with a supportive land use pattern would allow for alternatives to the single-occupant automobile by fostering an environment that permits people to easily use other types of transportation. However, planning for public transportation does not have to imply a radical departure from current development practices. The issue is not to change the land uses that make up a community, but rather to influence their mixture and design. Locating apartment houses on major streets with bus routes and installing sidewalks near bus stops are examples of planning for public transportation.

The manner in which land uses are laid out in relation to a transit facility or route is vital to the success of efficient transit services. Uses that are oriented to the transit services and facilities, with physical and visual connections, will encourage transit use. For example, a primary factor that discourages walking is the long distance to various destinations that are characteristic of "sprawling" land use patterns and single-use zoning codes. In pedestrian-friendly land use patterns, shops and services are clustered within walking distance of residences and employment centers. Strategies to increase pedestrian travel can be coherently linked with policies to promote housing affordability, economic revitalization, and fiscal responsibility.

Balancing the landowner's rights and the public interest is another important land use issue that often arises in the context of transportation planning. It is important to anticipate rights-of-way that will be required for future transportation corridors and to plan and budget for necessary land purchases before development escalates costs. Right-of-way purchases and environmental preservation needs often involve difficult choices between public needs and private development and ownership rights.

Environmental Considerations

Air and water quality are growing concerns in the National Capital Region. The Washington region's most serious air pollution problem is ozone, an invisible component of smog that is harmful to the lungs and breathing passages. Crops, trees and other plants also suffer from ozone exposure. Cars, trucks, buses and motorcycles generate more than a third of the ozone-causing emissions in the metropolitan Washington area. Vehicle emissions also contribute to water pollution, and this problem is compounded when a large portion of land is paved over. This prevents water runoff from seeping into the ground where it can be naturally purified; instead it finds its way directly into streams and reservoirs, along with all the pollutants it is carrying.

Environmental considerations must also take into account the transportation system's impact on neighborhoods and on the natural movement of animals. Most highways and at-grade heavy rail lines create a physical barrier that divides communities and endangers any person or animal attempting to cross it. An excellent example of this conflict is the Route 50 corridor at Seven Corners, where six lanes of rapidly moving traffic separate two shopping centers. The site has been the location of numerous fatalities, as no crosswalk is provided and people often attempt to cross in front of the speeding cars. Their alternative, however, is to walk nearly a quarter mile to a light, and then backtrack to the other shopping

center. A model transportation system would better address and balance these conflicting needs.

MOVEMENTS TOWARD THE IDEAL

Across the region, changes are occurring that move us closer to an ideal transportation system. Listed below are areas in which the region is making progress that should be encouraged and applauded, as well as areas in which the commission sees further potential.

Enhancing Transit

Commuter Services

Many employers and government agencies throughout the metropolitan area have developed programs to provide employees with incentives to commute by some means other than driving. In 1995, the regional Employee Commute Options (ECO) program was established at the Metropolitan Washington Council of Governments to coordinate all the programs offered throughout the region designed to encourage alternative commuting patterns, encourage participation in such programs, and quantify the resulting air quality benefits. The ECO program has expanded rapidly, and was renamed Commuter Connections in May, 1996. There are five key components of the Commuter Connections Program: the Employer Outreach/Guaranteed Ride Home program, ridesharing assistance, telecommuting programs and telework centers, enhanced transit information, and the ENDZONE Program. Employer Outreach, ridesharing and GRH, are discussed in greater detail below.

Employer Outreach/Metrochek

The region's various employer outreach programs, which are operated by WMATA, the local jurisdictions, and the TMA's, are crucial to introducing transit to new and non-traditional markets. Also vital to these efforts is the Metrochek program, which provides a means for employers to give transit benefits of up to $65 to employees without being taxed. This program makes it convenient for employers who provide parking to offer corresponding, although not equivalent, benefits to employees who use transit.

One of the ways the region will attempt to achieve conformity with federal air quality standards is through a region-wide employer outreach program. High-quality marketing materials will be available in late 1996 for use by all employer-based and government employee outreach programs. The material will provide information on programs throughout the region in a format that can be easily customized for use by the many participating agencies. The marketing materials will be used as a tool to help increase participation in the many programs under Commuter Connections. Currently only 25 percent of the employer market offers any demand management incentives. According to Gallup research, with aggressive marketing, 50 percent of regional employers could be encouraged to offer some demand management and/or transit incentive.

Ridesharing

Two initiatives are currently planned to enhance ridesharing services. VDRPT and Arlington County plan to test two pilot ridematch information kiosks to be located in Ballston and Crystal City. The kiosk will be designed to extend the capabilities of the employer outreach programs by making ridesharing information available in high density pedestrian areas. The second initiative involves upgrading the computer system at the Commuter Operations Center to include information on available transit options in addition to the currently available ridesharing information. WMATA has supplied their ARTS and transit databases, but the software to run the databases is needed. An estimated $350,000 will be needed to upgrade the system.

Guaranteed Ride Home

Often, transit designed to serve the regular commuter is only offered during peak periods, when demand is the highest. For the most part, this is the case with VRE, as well as with many of the region's bus routes. Thus, potential riders who foresee a possible need to return home in the middle of the day for emergencies (because of an illness, or to care for a sick child) often forego transit for the security of having a car, and thus a ride home, available to them. Some transit operators in the region have addressed this concern through programs such as VRE's *Special Delivery*, described in Section III.

In addition, as part of the regional effort to improve air quality, COG will begin operating a region-wide Guaranteed Ride Home program in October, 1996. The program will provide participants with a free ride home in the event of a personal or family emergency, illness, or unscheduled overtime. Commuters who walk, bicycle, carpool, vanpool, or ride transit will be eligible. Registered

participants will receive up to four rides home per year. While advanced registration will be encouraged, a one time exception will be allowed under emergency circumstances for non-registered commuters. Rides must originate within the Metropolitan Statistical Area (MSA) and terminate within the MSA or another approved destination (see **Figure 11**). Fairfax County has a similar program for county residents; this program will be eliminated once the region-wide program is in place.

Shower and Locker Facilities

Another way to encourage alternative forms of commuting is by providing access to shower and locker facilities. Commuters who might be inclined to walk, run, or bike to work often cite the lack of locker and shower facilities as a significant barrier to their doing so. Currently, Virginia law does not require bicyclist accommodations and prohibits localities from enacting zoning ordinances that do. However, Arlington County routinely accepts proffers from developers in exchange for permission to exceed building densities as an alternative method of enticing developers to include these facilities. Greater access to shower and locker facilities could also be achieved through a shared use agreement where buildings with excess capacity agree to provide access to their facilities for a fee. **This type of effort might be initiated by a Transportation Management Associations, as a private sector effort to encourage alternative commuting options.**

Creating a Seamless Transit System

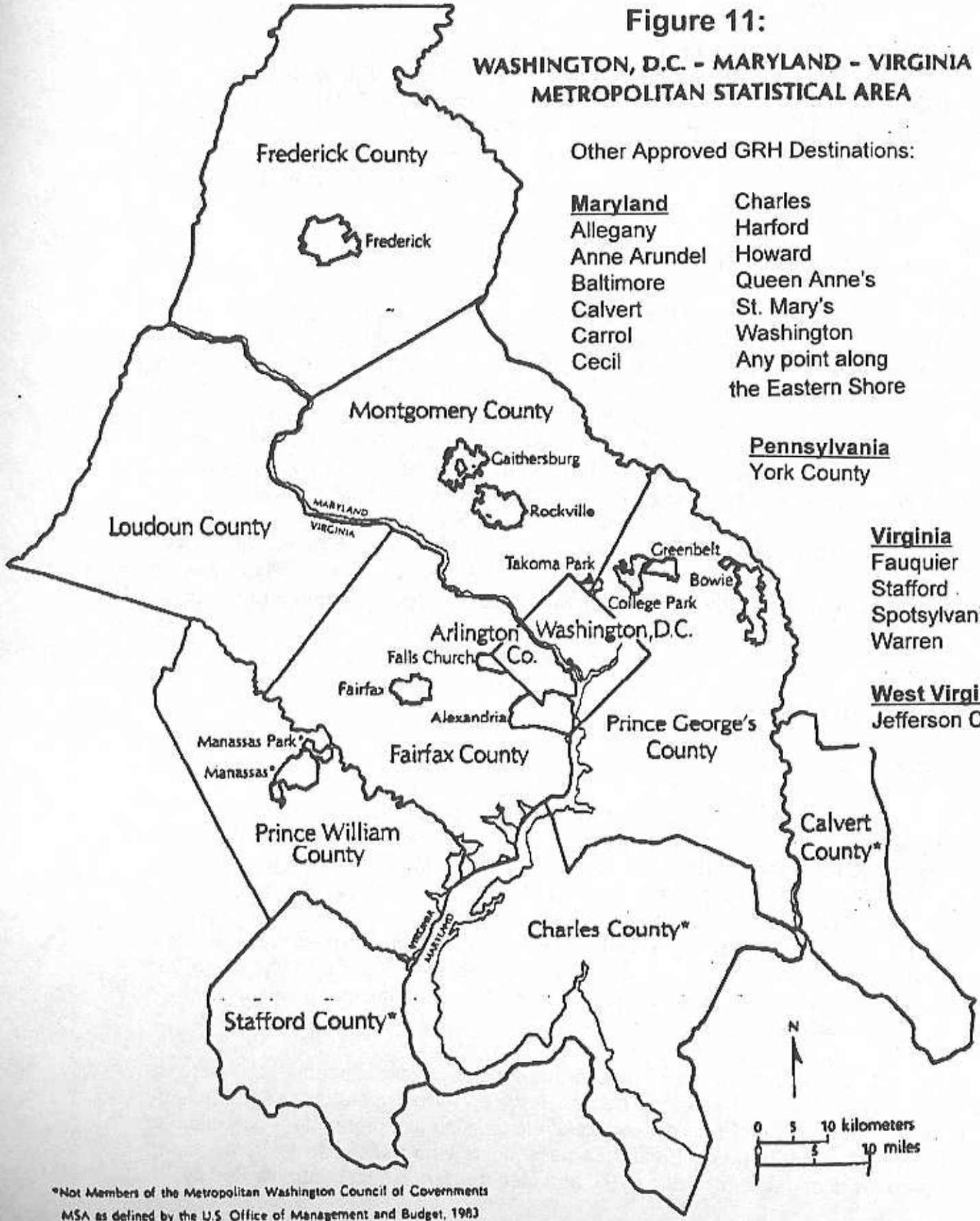
Fare Integration

In the Washington region, fare collection practices are different for each system, and transferring passengers are required to purchase different fare media. This requires transit patrons to purchase and use multiple tickets to reach their final destinations. The psychological effect of repeatedly paying for a trip that the patron perceives to be one integrated movement contributes to a negative perception of transit as an expensive and inconvenient travel mode. Northern Virginia bus service providers are exploring mechanisms for simplifying the fare system. **Appendix D** demonstrates the many fare and transfer policies currently in effect in Northern Virginia.

Efforts are underway to reduce the number of tickets needed and increase the ability of a transit patron to transfer between transit operators using the same ticket. VRE and Metrorail, for example, are working to integrate fare collection, to serve the over 25 percent of VRE's passengers who transfer to Metrorail during the daily commute. Integrating VRE and Metrorail fare media is complicated by

Figure 11:

WASHINGTON, D.C. - MARYLAND - VIRGINIA METROPOLITAN STATISTICAL AREA



Other Approved GRH Destinations:

Maryland

Allegany
Anne Arundel
Baltimore
Calvert
Carrol
Cecil
Charles
Harford
Howard
Queen Anne's
St. Mary's
Washington
Any point along the Eastern Shore

Pennsylvania

York County

Virginia

Fauquier
Stafford
Spotsylvania
Warren

West Virginia

Jefferson County

*Not Members of the Metropolitan Washington Council of Governments

MSA as defined by the U.S. Office of Management and Budget, 1983

the disparate fare validation systems utilized by each operator. VRE employs a barrier-free proof-of-payment fare collection system, which relies upon random checks by conductors to verify that the proper fare has been paid. Fares vary by zones according to the approximate distance traveled. This fare policy is quite different from the controlled faregates used by Metrorail, whereby Metrorail access and egress are controlled by faregates. The price of the trip depends upon distance traveled and the time of day.

One form of integration is the SmartCard, a transportation debit card that would allow the holder to move from one form of transit to another, or pay tolls or parking fees, all of which would be deducted from one card. This type of SmartCard technology is currently being used in Metrorail's GO Card demonstration project (See Section III for a more detailed description).

Approximately $1 million in both FY97 and FY98 was requested from the CTB in 1996 to fund expansion of the GO Card demonstration project to the VRE and some local bus systems. Total funding required for the VRE GO Card expansion is approximately three million dollars over a two year period. CTB has funded the initial phase of the project ($500,000 in FY97). In addition to extending GO Card capabilities to VRE, project plans would also allow VRE passengers using the GO Card to receive a $0.25 discount on each connection to Metrorail (with a portion of the grant money being used to reimburse WMATA for the discount). VRE passengers transferring to local bus systems could use their cards to transfer for no additional fare. **This project is an important step towards a universal fare media for the region, and should be a high priority for the area's transit operators.**

The Interjurisdictional Bus Study commissioned by NVTC in 1994 made a number of recommendations as to how the fare system could be made less burdensome regionwide. Specific recommendations from the study for consideration include:

- Examine the elimination of the distinction between peak and off-peak fares.

- Application of the bus and Metrorail round trip transfer fee used by Arlington County to all routes in Northern Virginia that serve Metrorail stations. This fee allows a person transferring from bus to rail in the morning to pay an additional nickel and receive a transfer that gets them onto the return bus trip that evening.

- Elimination of unnecessary information on public timetables, for instance, District and Maryland fares on Virginia Metrobus timetables.

- Addition to timetables of information on pass programs and the fare structures of the connecting Northern Virginia bus systems.

Future improvements would involve the development of a regionally acceptable fare structure and transfer coordination policy. This should be accomplished in an intermediate (three to five years) period. Finally, a longer range effort would involve implementation of a truly "seamless" fare structure that utilizes the latest available technology to collect **fares.** The GO Card may be the technology that eventually allows the region to accomplish this important objective.

Clearly, the financial implications of any fare changes would have to be looked at in greater detail by both WMATA and local staff before they were adopted. Over the past few months, WMATA, jurisdictional, and bus system staff have begun to meet at NVTC in order to discuss possible simplifications to WMATA's fare structures and the implementation of a more consistent structure across all the systems. **This analysis and discussion should be continued over the next year, and changes implemented as they are agreed upon by local jurisdictions and transit operators**.

Quality Transit Information

Many persons who might otherwise use transit do not do so because they do not know the service exists, or they are unsure how to take advantage of it. This lack of information provides another barrier to ridership. Transit stores, which provide a centralized source of information for the many different transit systems in the region, are one effective response to this problem. WMATA's bus maps, which show all of the Metrobus and local systems' routes, and the published Metrorail weekend and evening schedules are important enhancements of public information. But more can be done to make information easily available.

The Interjurisdictional Bus Study makes several recommendations for public information improvements, including the simplification of timetables. This would most likely be best approached by reducing the number of sub-routes that correspond to each main route, and presenting fare information appropriate to each route on the corresponding timetable. The study also recommends coordinating bus stop signs of the different operators that serve the same stop location, rather than having one sign for each operator. This would serve to make the inter-system connections more clear. As with any changes to the fare structure, the cost implications of any recommendation would have to be examined by WMATA and the local jurisdictions before a major change was made.

ARTS

The information provided by ARTS, a regional database of schedule and route information that is maintained and operated by WMATA, is useful and accurate. However, the ARTS system has been in use for a number of years and over time, system needs have outgrown capabilities. For example, local jurisdictions have reported difficulties receiving consistent information from the database, particularly regarding the locally operated systems. It appears that this variation is a result of the way information is retrieved from the database. Because the system allows queries based on multiple parameters, requesting a bus route by departure time may get a different set of transit options than requesting a bus route by arrival time. Likewise, due to travel time constraints, a change in arrival time by a mere ten minutes may result in an entirely different set of transit options.

To make ARTS more accessible and useful to minority groups and the disabled, two new efforts have been initiated. WMATA has contracted with a language service that is available to translate information requests. With so many different languages spoken in the Washington area, a language translation service was chosen instead of hiring bilingual staff so that more languages could be translated. The second program, Mobility Link, provides information to disabled customers on the location of information and services designed for their use. A five week test of Mobility Link was conducted in July and August, after which the program became permanent.

Regional jurisdictions have approached WMATA about expanding the area served by ARTS. Currently, transit providers such as VRE and PRTC OmniRide are not incorporated into the database because they operate outside WMATA's service area, which limits the region from fully utilizing a valuable resource for transit services that feed customers into the regional system. As part of the regional ITS Showcase project, the ARTS system may be expanded to include all the regional providers.

WMATA staff have investigated the feasibility and costs of such an expansion. At this point, WMATA has determined that new functions would deteriorate service quality to unacceptable levels without costly new software. Another issue affecting whether or not WMATA would expand the system is the ability to maintain the customized information in the current system, such as geographic details. However, the decision also relies on what WMATA and the region see as the Authority's proper role: should it work to promote and provide information for its service area only, or should it be investing resources towards promoting transit use throughout the region? Currently, such actions are not part of the Authority's official mission.

Given the number of transit providers in the region, it can be difficult to keep track of schedule changes in order to coordinate transfers. To remedy this situation, NVTC will track schedule changes for the various transit systems and compile a document to provide up to date information to each transit operator. A list of contacts for highway and street construction projects will also be developed so that transit operators will be able to request early warning for projects that could interfere with transit routes or operations. **System operators should consider transfer coordination opportunities carefully, and establish timed transfers when possible. Bus schedules should actively publicize the opportunities for timed transfers.**

Another opportunity to integrate services is through the use of multimodal centers. The more closely systems are physically linked, the simpler transfers between them should be. The new Franconia/Springfield Transportation Center scheduled to be fully operational in the summer of 1997, is an excellent example. The station will link the new VRE station with Metrorail and various bus systems while providing parking and opportunities for ridesharing. The adjacent Metrorail, VRE, and Amtrak stations and bus bays at King Street in Alexandria also make up such a center, and Alexandria's planned extension of the King Street platform will make such transfers even more convenient. **To the extent possible, opportunities such as these should be pursued. NVTC can play a role in identifying and helping jurisdictions to successfully respond to these types of opportunities, and to sort out issues such as cost and responsibilities in the case of shared facilities. When facilities are upgraded (e.g. the historic rail station in Alexandria), opportunities for improved intermodal connections should always be considered.**

Taking Advantage of New Technologies

Intelligent Transportation Systems (ITS)

ITS uses advanced surveillance, computer, and communications technologies to provide accurate, real-time information on transportation system conditions. This information can be used to improve the safety and operational efficiency of transportation systems as well as to provide improved information to travelers. For example, highway signs reading "Congestion ½ Mile" are one way that communication technologies can be used to increase roadway efficiency.

Virginia's Department of Transportation has completed an early deployment study intended to identify a strategy to integrate new technologies with existing and planned systems and enhance coordination between the various jurisdictions and agencies involved in transportation provision. The project reviewed existing

transportation plans and operations and maintenance policies, and created a framework to guide future ITS development plans. The District of Columbia and the State of Maryland are conducting similar studies. All three studies will be enveloped into regional ITS efforts.

Movement towards a regional ITS implementation plan called the "National Capitol Traveler Information Showcase" (NCTIS) is also being managed by VDOT. The project will use ITS technologies to improve the dissemination of travel information throughout the region. Bidders have submitted proposals for developing and operating a regional traveler information system. Since the request for proposals was relatively general, detailed negotiations with the selected contractor regarding work plan specifics and financing will ensue. The expansion of the ARTS system is one important transit improvement that may be funded under this contract.

An ITS operational test using cellular phone technology to monitor traffic flow data and to disseminate real-time traffic information was conducted on the Capital Beltway. As the popularity of cellular phone use has grown, an interesting pattern has emerged: accidents and traffic congestion causes a sudden spike in cellular use as drivers call to report accidents or to tell people they will be late. The project was designed to see if the location of sudden cellular use could be used to identify where accidents and/or congestion were occurring. The information could then be used to alert police and inform other drivers of the situation via variable message signs. In April, 1995, a partnership of public and private agencies including the Federal Highway Administration, Maryland State Highway Administration, Virginia Department of Transportation, Bell Atlantic Mobile (BAM), Farradyne Systems and Engineering Research Associates began testing the technology. The surveillance tests used Global Positioning Systems (GPS) equipment in conjunction with existing BAM co-located cellular towers to locate and monitor randomly selected, anonymous, cellular-equipped vehicles to collect traffic data.

The potential for ITS technologies to both decrease vehicular congestion and enhance public transit service should continue to be explored. Those parties developing systems and conducting research should cooperate to ensure that disparate systems are compatible and will ultimately be able to be used by travelers on all modes. Transit operators should actively participate in the National Capital Traveler Information Showcase in order to ensure that transit patrons benefit from these new technologies.

New Technologies Currently in Use

While the region has been cooperatively exploring the possibilities of ITS, some transit systems have moved ahead to implement technological improvements. For instance, in 1995, PRTC initiated a flex-route bus service designed to combine transit and paratransit services in Prince William County. To maximize the responsiveness of the flex-route service, a Global Positioning System has been installed to track the exact location of each bus. GPS uses satellites signals to track bus locations. Requests for pick-up can be handled more efficiently when dispatchers can keep track of where each bus is and how well it is keeping schedule. Because this system is a demonstration of one of the most promising new technologies in the transportation field, PRTC has been able to leverage federal, state, and private funds in order to buy the buses and the computer system as well as cover initial operating expenses.

Two contactless electronic payment systems were also recently introduced into the region. Along the Dulles Toll Road, the *Fastoll* system described in Section III uses a transponder installed in the vehicle to collect tolls. A dedicated *Fastoll* only lane has been opened at the main toll gate to allow *Fastoll* participants the benefit of a more speedy entry and exit by avoiding the cash payment lines. WMATA's Go Card demonstration project allows Metrorail and some Metrobus patrons to pay for fares and parking fees with an electronic stored value card. **Opportunities to use electronic fare payment devices should be expanded throughout the region. Over the longer term, the payment mechanisms should be integrated so that one payment device can be used to pay all transportation fees.** For example, one payment mechanism would allow travelers to drive up to New York without stopping to pay a toll, or allow transit users to take Metrorail to Union Station, Amtrak to New York, and transfer to the subway with one card.

Interjurisdictional Bus Study Recommendations

In 1994, NVTC commissioned an Interjurisdictional Bus Study, which focused on ways to improve the effectiveness and efficiency of the interjurisdictional bus routes. Some of the recommendations of that report have been adopted by WMATA and the jurisdictions; others have been cited elsewhere in this document. Following are other important recommendations of this study, along with progress the region has made in responding to those recommendations. [10]

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[10]Abrams-Cherwony & Associates, for the Northern Virginia Transportation Commission, Study of Coordinating and Integrating Northern Virginia's Interjurisdictional Bus Routes. Washington, DC: October, 1994.

Garage Facilities: The location of bus storage and maintenance facilities impacts the operating costs of bus services. Costs can be reduced by locating garage facilities closer to the routes that the buses located in that garage serve. While the Metrobus garage at Four Mile Run in Arlington has adequate capacity, it is not well located with respect to Metrobus routes serving western portions of Fairfax County. A preliminary analysis has been done to evaluate the impacts of locating a Metrobus garage annex at Backlick and Industrial Road in the Springfield area. A bus annex at this location would reduce the buses' deadhead time, and thus WMATA's operating costs.

The Bus Study also recommends that DASH either find another site for its garage or expand into the vacant land adjacent to its current site, as the DASH garage is currently at capacity; DASH is currently exploring expansion opportunities.

Fleet Replacement: In order to keep down costs and maintain the quality of its service, **WMATA must undergo an extensive program to replace the bus fleet that serves Northern Virginia with a modern and well-equipped fleet**. The following recommendations are presented to guide the fleet replacement:

- The goal of WMATA should be to provide a fleet in Northern Virginia that has an overall average age of six years with no bus exceeding the 12 year replacement guideline suggested by the FTA. In 1994, the year of the study, the average age of the Metrobus fleet was 10.5 years, and the study recommended that WMATA embark on an aggressive fleet replacement program that achieves this goal in five years.

- In future fleet replacements, WMATA should consider the size of the bus that is appropriate for the service being provided. Therefore, a mixed fleet with 40 foot (45 to 50 passengers), 35 foot (35 to 40 passengers) and even smaller 30 foot (28 to 33 passengers) buses should be obtained. The nature of current WMATA bus services has changed to a feeder network with local services within the community, and the bus fleet should be consistent with the new service pattern (e.g. smaller buses may be less disruptive in residential neighborhoods).

To its credit, WMATA has been attempting to upgrade the quality of its fleet, and its policy calls for regular replacement of a large number of buses each year. As a consequence, in FY96, the average age of the fleet will have dropped to 9.7 years. Unfortunately, the CIP, which is agreed to by the jurisdictions, is then not always fully funded by those jurisdictions,

leaving WMATA unable to move more quickly with these important improvements.

New Bus Routes: The Bus Study suggested three new bus routes, all connecting the outlying portions of Fairfax County with either the Vienna Metrorail station or the Fair Oaks Mall. The consultant estimated that about 225,000 annual passenger trips would be made on these new routes. Routes were also recommended in Loudoun County, along with a blueprint for the development of a transit system in that jurisdiction. In its examination of new bus service in the Dulles Corridor, Loudoun County will be revisiting these route suggestions.

WMATA Strategic Bus Plan

As was discussed earlier, the cost of Metrobus to the jurisdictions has resulted in some localities contracting out service that was formerly operated by Metrobus or was added later. Much of the higher costs of Metrobus are related to the fact that WMATA receives federal funds, and is therefore subject to federal mandates, such as labor wage protections, that do not constrain the local bus systems. The system also has an older bus fleet than many of the newer local operations, and a labor force with greater seniority, which drives up salaries and the costs of fringe benefits.

In response to this problem, WMATA has spent the past few years engaged in a strategic planning effort, with the goal of reducing labor costs by 15 percent over a five year period. In recent negotiations with labor, WMATA achieved a number of cost-saving contract changes, focusing on issues this planning effort had identified. These include changes in wage rates and the rate of wage progression, as well as increases in employee contributions for pensions and health insurance. Opportunities to contract out more work and to use new technologies and automation to reduce costs are also being investigated. These efforts have allowed WMATA to achieve its goal of a 15 percent reduction in labor and administrative costs over a two year period instead of the originally envisioned five years.

Northern Virginia should support efforts to remove or reduce federal employee parking subsidies and encourage all employees to pay market rates. In addition to the Metrochek program, employers should be encouraged to offer parking cash-out as an option.

Telecommuting

Another way to reduce demand for transportation during the peak commuting periods is by encouraging employees to work in or near their homes. Telecommuting involves working from home using telecommunications equipment to keep in touch with the main office. To encourage more employers to offer telecommuting as an option to employees, information packets have been developed by MWCOG and marketing efforts are underway. Telework centers are based on the idea as telecommuting, but an alternative work location with office equipment is set up closer to areas were the employees live than the main office. GSA has seven telework centers operating in the Metropolitan Washington region, and 12 more are planned in 1997. The centers are currently available for use by federal employees; however, the centers will eventually be marketed to non-federal users as well in order to facilitate the transition towards becoming self-supporting. Five public telework centers (four in Virginia, and one in D.C.) each capable of accommodating 500 employees are planned for the region by 1999. **Employers should be encouraged to offer telecommuting as an option and information on telework centers should be widely disseminated.**

Marketing Initiatives

Transit operators throughout the area are offering incentives to encourage transit use and reduce the number of vehicle trips while increasing revenue. New marketing incentives are described below:

- Alexandria's DASH has developed "DASH n' Dine", which offers customers with a valid DASH transfer a 15-50 percent discount at local participating restaurants. 23 restaurants are currently participating in the one year demonstration program, which began in May, 1996. Cable TV ads, print ads, bus posters, buttons, window decals, restaurant table tents, promotional flyers, newsletters, and displays at City events are all being used to promote the project.

- With the assistance of a State TEIF grant, Arlington County's Commuter Assistance Program will initiate a Transit Ridership Development Initiative. This community-based outreach effort will target residential neighborhoods in high potential transit corridors for marketing and promotional programs and services to encourage new and additional ridership on Metrobus. Some of the techniques may include permanent

transit information displays, bus stop information, neighborhood service summaries, maps and instructions, new rider incentive programs, promotion and on-site visits, direct mail, door drops and multi-lingual materials. The goal of the program is to increase ridership in the Columbia Pike and Arna Valley areas by four percent, or 1,000 revenue generating passengers per day. A contractor will be hired in fall, 1996 to begin work on the project.

- To help riders become more familiar with the neighborhoods around each of the 74 Metrorail stations, WMATA has developed neighborhood maps. The maps include information on points of interest nearby, fares, hours and service frequency. Station managers distribute the maps. Comprehensive guides containing all 74 maps are available for sale at the Metro Sales office, the Pentagon, Metro Center, and many bookstores and museums.

- In July, 1996, WMATA initiated a cooperative sales program designed to increase sales of the $5.00 One Day Pass. The effort is primarily geared towards the tourist market. A toll free number enables tourists to request Metro information before leaving home. In addition, Old Town Trolley Tours and WMATA are selling a combined package of a One Day Pass and an Old Town Trolley Ticket. WMATA still receives the $5 for the pass, but Old Town Trolley gives a $2 discount on its ticket to encourage buyers to choose the combination.

- WMATA has approved some seed money to begin a Database marketing initiative. When passengers call for transit information, they will have the option of being added to a database. The database will store the name, origin and destination of the passenger. This information could then be used to alert customers to service changes in their area, and to target transit marketing initiatives.

- The New Resident Program operated by WMATA is an ongoing marketing initiative that provides transit information to new residents. New residents are sent a questionnaire which can be filled out to receive $5.00 in transit media. Approximately 35 percent of the recipients return the survey requesting either bus tokens or a Metrorail pass. Budget cuts will result in reducing program operations to seven months in fiscal 1997.

- Northern Virginia Transit Stores are using "Mr. Ticket," a stylized graphic character to advertise one stop ticket shopping. In March, 1996 Mr. Ticket began appearing in all Northern Virginia Metrobuses advertising "Everything You Need for A Speedy Commute!" in both English and Spanish. Similar efforts are planned for Metrorail stations.

While many efforts are being made to promote transit use, public awareness of transit options and incentives is limited. **Continuing and aggressive marketing initiatives are needed to increase public awareness regarding transit options.**

I-66 Congestion Management Program

In order to cope with the inevitable delays caused by the construction of additional lanes on I-66, VDOT and VDR&PT conducted an innovative I-66 Congestion Management Program (CMP), designed to divert peak hour single-occupancy vehicle trips from the construction corridor. In order to do this, they focused on time, convenience, and cost incentives through the following initiatives:

- Free Metrobus service on some routes in the corridor.
- Free, peak period, timed-transfer, WMATA and PRTC buses between the Vienna Metrorail Station and Tysons Corner, and express buses connecting VDOT-provided park and ride lots with the Vienna station.
- An extensive employer outreach program in the corridor, focusing on raising awareness of carpool and vanpool options for employees.
- Provision of an increased number of park and ride spaces in the corridor.

These services were primarily paid for with federal construction funds.

Overall, the program was successful. Ridership on the bus routes increased by 40%, and has remained at higher levels even after the program was discontinued. An April, 1995 survey of riders found that 34 percent of the respondents had previously used their own automobile to make the trip. This indicates that approximately 290 vehicles had been removed from the road during the peak period. In addition, park and ride lot usage in the corridor increased by 83 percent over pre-program figures.

The results of the program, however, were not positive across the board. One of the "12" routes requested by VDRPT generated little ridership and was discontinued. VRE ridership dropped on the Manassas Line during the course of the study, and boardings at the Vienna Metrorail station dropped slightly, despite

the additional riders dropped off. However, WMATA was also required to add trips to other bus routes due to the high demand, and ridership on both rail lines is back up to earlier levels. In addition, it was particularly difficult to pinpoint the exact effects of the I-66 project on rail ridership, both because the "base" measure was taken after construction in the corridor was ongoing, and because the HOV-2 demonstration project, which although it took place inside the Beltway, affected traffic along the entire corridor, occurred during the same time period.

As construction draws to a close in November of this year, the region will need to grapple with how to close, or whether to continue, the congestion mitigation efforts. Some parts of the program – the park and ride lots, for instance – will obviously stay in place. Others, such as free fares on certain routes, have continued with a different funding source – in this case the air quality mitigation program for HOV-2 on I-66. But not all the service will remain. Commuters who have become accustomed to 20 minute headways and a seat on the bus are now experiencing 35 minute headways and full vehicles. Other patrons will have to travel further to reach a park-and-ride lot served by buses. One question transportation planners will have to answer is how best to retain those transit patrons in the face of possible returns to pre-construction service levels.

Public Participation

For the transportation community, effectively involving the public in planning and project development poses a significant challenge. Some citizens are skeptical about whether they can truly influence the outcome of a highway or transit project. Many others are discouraged by the complexity of the local, state and federal planning processes and requirements. The goal of public participation efforts is to provide information to the public and stimulate discussion early on in order to be aware of concerns and ideas on the part of the public, and to attempt to achieve consensus earlier in the transportation planning process, rather than run up against conflict at the end of it.

In addition to holding public hearings, as is required by law, there are a number of other mechanisms that can be used to encourage public involvement. The Northern Virginia office of VDOT has begun providing information on major transportation projects on a home page that can be accessed via the internet. Users are provided with the names and phone numbers of people to contact for more information. Some web sites allow users to add themselves to the mailing list by entering their name and address. This new, low cost mechanism of providing information to the public has been very successful.

A web site was established to receive comments and provide information on the Dulles Corridor MIS, and was advertised in local newspapers. Over a two month period, 8,412 people visited the web site and 617 people commented on the project. While this participation mechanism is not available to everyone, it does allow residents who are out of town or working long hours to participate. Approximately 20 of the respondents commented from outside the metropolitan area. Another component of the on-line public involvement effort was a chat room question and answer session with the consultant and the VDRPT.

Another way to encourage public participation is by setting up informational displays at fairs throughout the region. Open houses are also being held to promote public awareness. Interested citizens can often sign up at fairs, open houses or via the internet to receive newsletters that will keep them informed as the process moves forward.

VDOT plans to use a new public involvement technique on the Fredericksburg North East Connector Study. Work sessions between VDOT and consultants that are normally open to the public. In addition, a combined technical and policy meeting format is expected to be used.

Although public involvement efforts are required at many points in the transportation planning process, the number of people that participate as a result of those efforts is often very low. Unless the project is extremely controversial, the average citizen does not get involved. One way to promote citizen involvement in the future might be to teach it in schools. For example, high school students could select an issue to follow each year and be asked to document the process and events at year end. If more people were aware of the importance of public involvement, understood the processes by which planning occurs, and had previous experience providing input to their government, then perhaps more "average" citizens would participate.

Vision Planning

MWCOG Vision Plan

The federal requirement that long-range plans be fiscally constrained is helpful, in that it forces the region to only plan for what it can afford right now. However, as a region, we still need a forum in which to discuss what we would like our community to look like, rather than what bandages we can apply to the situation – what we aspire to rather than what we can manage. After all, it was only after the Metrorail system had been dreamed of, discussed, and accepted as an important regional goal that the Washington area was able to gather together the financing to begin constructing it.

It is in this spirit that in mid-1995 the TPB initiated a Vision Planning process entitled "Getting There." The effort was designed to engage citizens, elected officials, and interested organizations in developing a bold transportation vision for the first half of the 21st century. Phase I involved an outreach effort to solicit public comment and input through a series of public meetings. Phase II of the vision planning process took place from July, 1995 to June, 1996, and focused on developing alternative visions and strategies for the implementation of regional transportation initiatives. To accomplish these tasks, three groups were formed to develop alternative visions. One task force focused on economic prosperity, another emphasized quality of life, and the third looked at access to opportunities.

When the three task forces met to report the results from each group in June, significant areas of agreement and disagreement emerged. The recommendations on which the groups agreed included:

- The District of Columbia should be strengthened and revived as a place to live and work to interrupt the current exodus of jobs and families to the suburbs and maximize use of the existing transportation infrastructure.
- Where employment, housing and services are located closer together, residents spend less time and money on transportation. Mixed land use patterns should be encouraged as another why to help reduce the number and length of trips.
- Specific areas should be targeted for growth. In particular, mixed use development should be encouraged near transit stations.
- Transportation options should be multimodal (bicycle, HOV, pedestrian, roads, transit), environmentally sound, consistent with land use plans, and available to people of varied income levels.
- Clear, user friendly, more accessible scheduling information is needed. A simplified fare system and wide spread availability of financial incentives such as Metrochek would also support greater transit use.
- A split rate tax involves applying lower tax rates to buildings and a higher tax rates to land values to promote growth and investment around existing infrastructure should be considered.
- User fees should be considered such as tolls, additional gas taxes, parking, or registration fees to fund new transportation improvements.
- An additional transportation tax or fee should be assessed and earmarked for specific transportation improvements.

There were also a number of recommendations that were unique to each task force. The economic prosperity task force recommended:

- construction of specific projects proposed in the region; and
- identification and preservation of key freight routes

For the access to opportunities task force, recommendations included:

- low income groups should pay lower fares, fare increases should not keep up with the inflation rate, and transfer fees should be eliminated;
- transit service should be accessible to all types of people (i.e. low income groups, commuters, students, the disabled and the elderly); and
- the possibility of truck only lanes or off peak truck use of HOV lanes should be explored.

Some unique themes identified by the quality of life task force included:

- giving priority to maintenance of existing roads and building new connector roads that make existing roads more efficient;
- focusing investments on transit as the number one priority;
- setting target dates for achieving land use and transportation goals;
- locating all federal facilities in the District or within walking distance of transit stations;
- increasing tolls during peak hours (congestion pricing); and
- allowing transfers of development rights across borders, and sharing of the tax base among jurisdictions to direct growth to selected areas.

A minority document was also developed to express the views of members who did not concur with the vision put forward by the Quality of Life Task force. The minority report called for better roads, demand oriented and cost effective transit, more regional transportation funding and greater emphasis on implementation. In general, the minority group objected to the heavy pro-transit emphasis in the Quality of Life report and the lack of support for new roads. A supplemental report has been submitted by the Washington Regional Network, and the Washington Board of Trade is developing its own supplement in coordination with George Mason University and the University of Maryland. WRN's report entitled *"A Network of Livable Communities,"* advocates efforts to limit sprawl, encourage transit use, and concentrate development in urban areas. The Board of Trade report will focus more on the technical aspects of vision planning.

During phase III, a subcommittee of the TPB will guide the presentation of alternative visions to the public and develop a preferred alternative. The vision plan will be used as a guide to update the region's Constrained Long Range Plan (CLRP). Based on concerns that the public will have a difficult time evaluating the enormous financial requirements necessary to implement any of the vision plans, information on relative costs associated with the vision plan components will be added. Members of the three task forces have expressed interest in continuing participation, and in particular, helping to develop a comprehensive, aggressive effort to engage the public in choosing a transportation future for the region.

The schedule for selecting a publicly supported vision plan is currently being revised. In the meantime, work is already underway on a feature presentation in *Region* magazine, MWCOG's quarterly publication, and informational brochure and a video are being developed.

Local Plans

Long range planning is also taking place at the local level. In June of 1992, for example, the Loudoun County Board of Supervisors adopted a goal of developing a comprehensive transportation plan consistent with the needs of Loudoun County citizens. Accordingly, the Planning Commission's Transportation Plan Committee spent the next few years drafting a County-Wide Transportation Plan (CTP).

The Committee began by outlining the issues, topics, and questions to be addressed during the discussion and development of the CTP. The plan address the regional transportation objectives of the county; transportation links and land use, and natural and cultural environmental considerations; transit and parking policies; pedestrian and bikeway issues; and the division of responsibilities between county and the state are also addressed.

During the drafting of the plan, open meetings were held monthly to discuss these issues. The Plan was adopted by the Loudoun County Board of Supervisors on July 5, 1996, and is available to the public.

Arlington County is in the process of initiating a county-wide transit study. Planners will look at the county's bus operations in an effort to identify opportunities for timed transfers and cross-county service. The county will also be looking at the costs and advantages of taking over some of its local service, or of entering into service agreements with Alexandria or Fairfax County for inter-county routes. County staff expect that the planning effort will require approximately two years.

Minimizing of Corridor Splits

Balancing the landowner rights and the public interest is another way land use and environmental issues often relate to transportation planning. It is important to anticipate rights-of-way needed for future transportation corridors and to plan and budget for necessary land purchases before development escalates costs. Right-of-way purchases and environmental preservation needs often involve difficult choices between public needs and private development and ownership rights.

In a variety of ways, Northern Virginia planners and officials are attempting to mitigate the impact of traffic corridors on their communities. One example familiar to most people in the region is the "overlaying" of modes within one corridor, such as the Metrorail Orange Line in the median of I-66, or the planning for the Dulles rail line within the Dulles Access Road median. Such joint use of corridors allows the region to benefit from multiple modes without disrupting communities with multiple facilities.

In many cases, specific facilities for pedestrians and bicyclists are required in order to allow them to cross these corridors. Some of these facilities exist today, but more are needed. One possible step in this direction is Arlington County's plans to rehabilitate pedestrian underpasses at two locations – one at 23rd Street and Route One; the other under I-395 near the Dolley Madison Apartments. This tunnel, which was extensively used by residents of the area, is currently in such a state of disrepair that it has been blocked off, cutting off safe passage from one side of the highway to the other.

Another important, if less obvious, example, is the "traffic calming" practices being used by many localities. Arlington, for example, installs traffic circles at some intersections in residential neighborhoods, and often extends the curb out into the parking lane at the end of each block. These structures tend to slow traffic speeds and prevent drivers from using the parking lane as an extra or turning lane. This serves to make streets safer for pedestrians and bicyclists, and ensure that cars are a less intrusive presence in residential areas – minimizing the impact of the streets through those communities.

A particularly innovative example of corridor mitigation was used in conjunction with the construction of the Fairfax County Parkway through Fort Belvoir. In order to balance the amount of planned development at the fort, the Army set aside a protected wildlife corridor in which migrating animals can move across the post to the nearby Huntley Meadows Park and the Mason Neck Wildlife Refuge. The Parkway alignment, however, infringes on that corridor. In order to allow movement to continue through the corridor, the Army constructed a wide tunnel under the Parkway, in consultation with environmental specialists to make

the underpass amenable to wildlife. Here, the Army has acted upon the recognition that the community that needs to be protected from corridor impacts is truly a diverse one.

Planners should continue to look for opportunities to minimize the community and environmental impacts of travel corridors; long-range plans in particular can help the region avoid unnecessary impacts due to loss of the most appropriate rights-of-way, etc.

Ease of Access

Another factor vital to maintaining and promoting transit ridership is the ease with which passengers can access the bus and rail stations. This factor incorporates a number of issues discussed elsewhere in this plan; park-and-ride lots, bicycle and pedestrian access, and intermodal facilities are all parts of a complicated whole. One other factor that should be explicitly mentioned is the cooperation between the public and private sector that is often required in order to provide and preserve good access.

This issue arose in 1994 in connection with the heavily used bus stop located at the Seven Corners Shopping Center. Due to a major renovation and expansion project underway at the Center, the property managers contacted WMATA and informed them that they would be required to find another location for the stop. The stop, which has been a critical transfer point for almost 40 years, serves over 2,000 people daily. WMATA required public hearings before abandoning the stops, and no other feasible alternative was both safe and accessible. Eventually, WMATA and the property management company were able to identify a location at the Shopping Center that satisfies the concerns of each group. However, no formal process for working out these concerns has been set forth.

Local jurisdictions are also actively improving access to transit stations. Arlington County, for example, has recently taken the first step towards opening an already existing tunnel between the Pentagon City Metrorail station and the MCI offices. Alexandria's planned extension of the King Street Metrorail station platform, which would allow pedestrians to enter the station without crossing a busy section of King Street, is another excellent example. And in Fairfax County, the Board has approved funding to construct a pedestrian trail between the Lorton VRE station and the Washington Square residential development. While the trail will only be 500 feet long, it will provide a shortcut for passengers who otherwise would be forced to drive to the station because of both the distance and the traffic. This trail, which is now being designed, will be a great improvement to pedestrian accessibility.

It is only through cooperative efforts such as these that vital transit access to private properties will be maintained, and these lines of communication should be established before a crisis arises. NVTC and local governments should reach out to the private sector to establish an "early warning system" to prevent these situations. This process might by initiated through the TMA's.

Transit Supportive Development

As noted above, transit systems are much more efficient when serving higher density areas than they are in low density, areas characterized by sprawl. To increase density around transit stations, WMATA has initiated a joint development effort. WMATA owns land near Metro stations, and is soliciting bids from parties that may be interested in pursuing transit friendly development. Under a joint development contract, WMATA would provide the land available to the qualified bidder interested in funding an appropriate development project near a Metro station. In most cases, Metro sites are large and are appropriately zoned with infrastructure available to support development. Joint development allows the developer access to Metro land, creates greater density in the station catchment areas, and contributes to increased ridership for Metro.

Another method jurisdictions in the region might use to encourage increased density near Metro stations is through property tax incentives. Often, land near public infrastructure (like a Metro station), remains underutilized because a land owner is waiting for a price in excess of what space users will pay today. Property taxes based on both the value of the land and the value of development can help reduce the incentives that create sprawl. For instance, a split rate tax can be applied that reduces the tax applied to building values while increasing the tax rate applied to land values. The higher land tax cannot be avoided or passed on to space users until the land is developed. Thus, land owners are motivated to develop the land and generate income from which to pay the tax. The greatest economic incentive will be to develop where land values are highest. This could help harmonize economic incentives with public policy objectives for mixed use, economically sound development and environmental protection.

Efforts to minimize demand for public sector investment and encourage transit friendly development, such as joint development and the split rate tax, should be pursued.

FIGURE 12: SUMMARY OF RECOMMENDATIONS

Employer Outreach Marketing Metrochek	The region's employer outreach, marketing, and Metrochek programs, which are operated by WMATA, the local jurisdictions, and the TMA's, are crucial to introducing transit to new and non-traditional markets, and should be supported by the region.
Commuter Services	Commuter services such as Guaranteed Ride Home programs or shower facilities at worksites should be encouraged. Many of these types of programs offer the opportunity for the private and public sectors to work together.
Go-Card and Fare Media Integration	The Go-Card project is an important step towards a universal fare media for the region, and should be a high priority for the area's transit operators.
Bus Fare Structure Simplification	The ongoing discussion regarding the simplification of bus fare structures should be continued over the next year, and changes implemented as they are agreed upon by local jurisdictions and transit operators.
Transit Information/ ARTS System Enhancement or Replacement	WMATA and local jurisdictions should develop an equitable arrangement for funding an ARTS system expansion or replacement. This effort should be carried out in conjunction with the ITS plans for disseminating regional transportation information.
Intermodal Facilities	To the extent possible, opportunities for intermodal facilities should be pursued. NVTC can play a role in identifying and helping jurisdictions to successfully respond to these types of opportunities, and to sort out issues such as cost and responsibilities in the case of shared facilities.
Service Integration Timed Transfers	System operators should consider service integration transfer coordination opportunities carefully, and establish timed transfers when possible. Bus schedules should actively publicize the opportunities for timed transfers.
Intelligent Transportation Systems	The potential for ITS technologies to both decrease vehicular congestion and enhance public transit service should continue to be explored. Those parties developing systems and conducting research should cooperate to ensure that disparate systems are compatible and will ultimately be able to be used by travelers on all modes. Transit operators should actively participate in the National Capital Traveler Information Showcase in order to ensure that transit patrons benefit from these new technologies.

WMATA Bus Replacement Program	WMATA should move forward with an extensive bus replacement program in order to provide the region with a modern and well-equipped fleet. Northern Virginia jurisdictions should support WMATA's efforts to accomplish this.
Demand Management	Northern Virginia should support efforts to remove or reduce federal employee parking subsidies and encourage all employees to pay market rates. In addition to the Metrochek program, employers should be encouraged to offer parking cash-out as an option.
Telecommuting	Employers should be encouraged to offer telecommuting as an option and information on telework centers should be widely disseminated.
Corridor Impacts	Planners should continue to look for opportunities to minimize the community and environmental impacts of travel corridors; long-range plans in particular can help the region avoid unnecessary impacts due to loss of the most appropriate rights-of-way, etc.
Transit Access	It is only through cooperative efforts between the public and private sectors that transit access to private properties will be maintained, and these lines of communication should be established before a crisis arises. NVTC and local governments should reach out to the private sector to establish an "early warning system" to prevent these situations.
Transit Supportive Development	Efforts to minimize demand for public sector investment and encourage transit friendly development, such as joint development and the split rate tax, should be pursued.

APPENDICES

APPENDIX A

TRANSPORTATION AGENCIES AND ORGANIZATIONS

TABLE OF CONTENTS

TABLE OF CONTENTS cont'd

TABLE OF CONTENTS cont'd

NATIONAL/FEDERAL AGENCIES/ORGANIZATIONS

Congress

Senators of Virginia:

The Honorable John Warner (R)
The Honorable Charles Robb (D)

U.S. Senate
Washington, D.C. 20510
Telephone: 202/224-3121 (U.S. Capitol Switchboard)

Senate Committees:

Senate Appropriations Committee
Telephone: 202/224-3471

Transportation Subcommittee
Telephone: 202/224-7281

Senate Banking, Housing and Urban Affairs Committee
Telephone: 202/224-7391

Senate Commerce, Science and Transportation Committee
Telephone: 202/224-5115

Surface Transportation Subcommittee
Telephone: 202/224-4852

Senate Environmental Public Works Committee
Telephone: 202/224-6176

Transportation and Infrastructure Subcommittee
Telephone: 202/224-6176

Representatives of Virginia:

1. The Honorable Herbert Bateman (R)
2. The Honorable Owen Pickett (D)
3. The Honorable Robert C. Scott (D)
4. The Honorable Norman Sisisky (D)
5. The Honorable L.F. Payne (D)
6. The Honorable Robert W. Goodlatte (R)
7. The Honorable Thomas Bliley (R)
8. The Honorable James Moran (D)
9. The Honorable Rick Boucher (D)
10. The Honorable Frank Wolf (R)
11. The Honorable Thomas Davis (R)

Federal Transit Administration

The Honorable Gordon Linton, Administrator
Federal Transit Administration, (FTA)
400 7th Street, S.W.
Washington, D.C. 20590

Telephone: 202/366-4040
Fax: 202/366-9854

Sheldon Kinbar, Regional Administrator
FTA Region III
1760 Market Street, #500
Philadelphia, PA 19103

Telephone: 215/656-6900
Fax: 215/656-7260

Function: Administer grants to support public transit capital investments operations and research.

Federal Highway Administration

The Honorable Rodney Slater, Administrator
400 7th Street, S.W.
Washington, D.C. 20590

Telephone: 202/366-0650
Fax: 202/366-3244

Functions: Administer grants to support flexible investments in surface transportation.

Federal Railroad Administration

The Honorable Jolene Molitoris, Administrator
400 7th Street, S.W.
Washington, D.C. 20590

Telephone: 202/632-3114
Fax: 202/632-3700

Function: Provide grants, primarily for safety purposes, and regulate safety of railroads. Administer major grant programs to develop new technology, such as magnetic levitation.

Environmental Protection Agency

The Honorable Carol M. Browner, Administrator
Environmental Protection Agency, (EPA)
401 M. Street, S.W., West Tower
Washington, D.C. 20460

Telephone: 202/260-4700
Fax: 202/260-0279

W. Michael McCabe
Regional Administrator, Region III
841 Chestnut Street
Philadelphia, PA 19107

Telephone: 215/566-5000
Fax: 215/566-2782

Function: Responsible for mandates of the Clean Air Act and establishing regulations to provide state and local compliance.

U.S. Army Corps of Engineers

(Vacant)
Chief of Engineers
20 Massachusetts Avenue, N.W.
Washington, D.C. 20314-1000

Telephone: 202/761-0001
Fax: 202/761-1683

Function: Must award permits to approve surface transportation construction affecting wetlands (e.g. at WMATA's Franconia/Springfield Station).

National Park Service

Roger Kennedy, Director
1849 C Street, N.W.
Washington, D.C. 20240

Telephone: 202/208-4621
Fax: 202/208-7889

Function: Controls access to certain federal lands, including the George Washington Parkway. Permits are required when encroaching on Park Service land, such as at VRE's L'Enfant station.

General Services Administration

David J. Barram, Acting Administrator
18th & F Streets, N.W
Washington, D.C. 20405

Telephone: 202/501-0800
Fax: 202/219-1243

Function: Helps determine parking and transportation arrangements for federal agencies. Would be involved in a coordinated regional strategy to boost public transit and ridesharing use among federal employees.

Transportation Research Board/National Research Council

Robert E. Skinner, Jr., Executive Director
2101 Constitution Avenue
Washington, D.C. 20418

Telephone: 202/334-2933
Fax: 202/334-2003

Function: Sponsors cooperative research programs for surface transportation, and often is directed by Congress to manage special transportation studies.

American Association of State Highway and Transportation Officials

Frank Francois, Executive Director
444 N. Capitol Street, N. W.
Suite 249
Washington, D.C. 20001

Telephone: 202/624-5800
Fax: 202/624-5806

Functions: Trade association for state departments of transportation. Very active in lobbying Congress. Also collects some data from its members.

American Public Transit Association

Jack Gilstrap, Executive Vice President
1201 New York Avenue, N.W.
Washington, D.C. 20005

Telephone: 202/898-4000
Fax: 202/898-4029

Function: National trade association for public transit operators and suppliers. Several active committees evaluate proposed regulations and advocate legislative positions, including legislative and policy committees as well as modal committees such as commuter rail. Peer review groups are sometimes organized to offer advice to individual operators, such as the group that advised WMATA on its efforts to "winterize".

STATE AGENCIES/ORGANIZATIONS

Office of the Governor

The Honorable George Allen
Governor
Commonwealth of Virginia
P.O. Box 1475
Richmond, Virginia 23212

Telephone: 804/786-2211

Function: Proposes financing measures for transportation; appoints Secretary of Transportation and members of various Boards and Commissions.

Office of the Secretary of Transportation

The Honorable Robert G. Martinez
Secretary
Commonwealth of Virginia
1401 East Broad Street
Room 414
Richmond, Virginia 23219

Telephone: 804/786-6670
Fax: 804/786-6683

Function: Oversees the Virginia Departments of Transportation and Rail and Public Transportation, serving as chairman of the Commonwealth Transportation Board.

Virginia Department of Transportation

David Gehr
Commissioner
Virginia Department of Transportation, (VDOT)
1401 East Broad Street
Richmond, Virginia 23219

Telephone: 804/786-2700
Fax: 804/786-2940

Claude D. Garver
Assistant Commissioner for Operations
Virginia Department of Transportation, (VDOT)
1401 East Broad Street
Richmond, Virginia 23219

Telephone: 804/786-2700
Fax: 804/786-2940

Function: State agency responsible for planning, constructing and maintaining surface transportation improvements.

Commonwealth Transportation Board

The Honorable Robert E. Martinez, Chairman
Commonwealth Transportation Board
1401 East Broad Street
Richmond, Virginia 23219

Telephone: 804/786-6670
Fax: 804/786-6683

Function: Policy Board for VDOT. Chaired by Secretary of Transportation. Adopts six-year program for highway and transit projects.

Virginia Department of Rail and Public Transportation

Mr. Leo J. Bevon, Director
1401 East Broad Street
Richmond, Virginia 23219

Telephone: 804/786-1051
Fax: 804/786-7286

Function: Technical and financial assistance to Virginia's public transit, ridesharing, and railroad operators.

State Corporation Commission

The Honorable Preston C. Shannon, Commissioner
The Honorable Theo B. Morrison, Jr., Commissioner
The Honorable Hullihen William Moore, Commissioner
1300 East Main Street, 11th floor
Richmond, Virginia 23219

Telephone: 804/367-0268

Function: Provides authority to operate and regulates fares for certain privately owned transportation services (e.g. intercity bus service) within the Commonwealth. Must approve tolls to be charged by the Virginia Toll Road Corporation for its Dulles Toll Road Extension to Leesburg. Does not regulate government-owned bus systems nor private carriers operating within the Washington Metropolitan Area Transit Zone.

Division of Risk Management

Don W. LeMond, Director
James Monroe Building - 6th Floor
101 North 14th Street
Richmond, Virginia 23219

Telephone: 804/225-4619
Fax: 804/371-8400

Function: Risk manager for the Virginia Railway Express. On behalf of NVTC/PRTC, manages VRE's insurance program which provides $200 million of protection and incorporates $20 million of cash reserves.

Virginia General Assembly

Function: Sessions are held for two or three months each year beginning in January, but committee hearings occur all year. Created NVTC in 1964. Designates NVTC's members from the General Assembly and the number of members from each jurisdiction. Specifies the method of sharing NVTC's administrative costs and allocating the majority of NVTC's state aid.

In a special session in 1986, created a new Transportation Trust Fund with public transit to receive 8.4 percent allocated according to a statutory formula. Public transit funding was doubled.

The Honorable Richard Saslaw
Democratic Leader
Virginia Senate
P.O. Box 1856
Springfield, Virginia 22151

The Honorable Joseph B. Bendetti
Republican Leader
Virginia Senate
P.O. Box 8726
Richmond, Virginia 23236

Susan Clark Schaar, Clerk
Senate
P.O. Box 396
Richmond, Virginia 23219-0396

Telephone: 804/786-2366
Fax: 804/225-3434

The Honorable Thomas W. Moss, Jr.
Speaker of the House of Delegates
Delegate for the 79th District
P.O. Box 6190
Portsmouth, Virginia 23705

The Honorable Richard Cranwell
Majority Leader of the House of Delegates, Chairman of Finance Committee
Delegate for the 14th District
P.O. Box 459
Vinton, Virginia 24179

Bruce F. Jamerson, Clerk
House of Delegates
P.O. Box 406
Richmond, Virginia 23203-0406

Telephone: 804/786-8826

Virginia Association of Counties (VACO)

James D. Campbell, Executive Director
1001 E. Broad Street
Suite LL20
Richmond, Virginia 23219

Telephone: 804/788-6652
Fax: 804/788-0083

D.C. Office:

Telephone: 202/393-6226

Function: Advocacy group for Virginia's County governments. Each year adopts legislative agenda, including transportation components.

Virginia Municipal League

R. Michael Amyx, Executive Director
P.O. Box 12164 (13 East Franklin Street)
Richmond, Virginia 23241

Telephone: 804/649-8471
Fax: 804/343-3758

Function: Advocacy group for Virginia's cities and towns. Pursues an annual legislative agenda. Provides management services for the Virginia Association of Public Transit Officials.

Virginia Transit Association (formerly called VAPTO)

Linda McMinimy, Administrator
1511 Chauncey Lane
Richmond, Virginia 23233

Telephone: 804/741-8471
Fax: 804/741-1579

VML Staff Contact: Janet Areson, Liaison
13 East Franklin Street
P.O. Box 12164
Richmond, Virginia 23241

Telephone: 804/649-8471
Fax: 804/343-3758

Turner Spencer
President
Pentran
3400 Victoria Boulevard
Hampton, VA 23661

Telephone: 804/722-2837
Fax: 804/722-9662

Function: Trade group for Virginia's public transit operators and associated suppliers. Primarily focused on state legislation, VAPTO employs a lobbyist and uses VML for secretarial services. Provides annual awards honoring outstanding public officials, transit systems and innovative programs. Sponsors a rodeo for transit drivers and mechanics.

George Mason University

Alan Mertin
President
George Mason University
Fairfax, Virginia 22030-4444

Telephone: 703/993-1000

Dr. Roger Stough
Northern Virginia Chair in Local Government
Institute of Public Policy
George Mason University
Fairfax, Virginia 22030-4444

Telephone: 703/993-2280
Fax: 703/993-2284

Ellie Doyle
Director, Transportation and Land Use Policy
GMU-Alumni House
4400 University Drive
Fairfax, Virginia 22030

Telephone: 703/993-3351

Function: State-supported university located in Fairfax County/City of Fairfax. Has active transportation education and research programs. Emphasis is on Intelligent Vehicle Highway Systems and traveler information systems. Recipient of several federal transportation research grants and active supporters of private-sector involvement.

Northern Virginia Transportation Commission (NVTC)

The Honorable Sharon Bulova, Chairman
Richard K. Taube, NVTC Executive Director
4350 N. Fairfax Drive, Suite 720
Arlington, Virginia 22203

Telephone: 703/524-3322
Fax: 703/524-1756

Function: Created by the General Assembly in 1964, currently has 19 members from six jurisdictions. Members are elected officials from local jurisdictions and the General Assembly, with a designee of the Commissioner of VDOT. Concentrates on finance, and allocates up to $100 million annually of state/federal funds to assist public transit. Co-sponsor of the Virginia Railway Express. NVTC Commissioners are also members of the Transportation Coordinating Council. Four NVTC members are appointed by the Commission to the WMATA Board of Directors. Levies a two percent motor fuels tax generating $12 million annually; the funds are used primarily for Metro operating costs and debt service.

Potomac and Rappahannock Transportation Commission (PRTC)

The Honorable Hilda Barg, Chairman
Leo P. Auger, PRTC Executive Director
3460 Commission Court
Woodbridge, Virginia 22192-1759

Telephone: 703/490-4811
Fax: 703/490-5254

Function: Created in 1986 under authority of Section 15.1-1342 of the Code of Virginia: (Transportation District Act). Current members include Prince William and Stafford Counties, and the cities of Fredericksburg, Manassas and Manassas Park. Operates the Commuteride commuter bus system, a ridesharing program, and is a co-sponsor of VRE commuter rail service. Commissioners are appointed from each jurisdiction and the General Assembly including as many of six principals and six alternates from Prince William County. Total commissioners are 15, with 14 alternates. The two percent motor fuels tax levied within PRTC yields almost $5 million annually.

Virginia Railway Express

The Honorable William Greenup, Chairman of Operations Board
Stephen T. Roberts, Director of Operations
6800 Versar Center, Suite 247
Springfield, Virginia 22151

Telephone: 703/642-3808
Fax: 703/642-3820

Function: Joint operating board created by NVTC and PRTC to manage operations.

Northern Virginia Planning District Commission (NVPDC)

The Honorable Albert C. Eisenberg, Chairman
G. Mark Gibb, Executive Director
7535 Little River Turnpike, Suite 100
Annandale, Virginia 22003

Telephone: 703/642-0700
Fax: 703/642-5077

Function: State planning review agency. Conducting land use study of the Virginia Railway Express (VRE).

Transportation Coordinating Council

The Honorable Robert T. Lee, Chairman
c/o Northern Virginia District Office
VDOT
3975 Fair Ridge Drive
Fairfax, Virginia 22033

Telephone: 703/934-7300

Function: The TCC was created by Governor Wilder in 1990 based on earlier plans by NVTC Chairman John Milliken. Member jurisdictions adopted resolutions to participate. The Council consists of three parts: 1) A policy group with 35 elected officials (plus alternates) from NVTC, PRTC and selected towns. This group is chaired by the Northern Virginia member of the Commonwealth Transportation Board. 2) A TCC Technical Committee with staff representatives of local and regional jurisdictions, chaired by the Northern Virginia District Administrator of VDOT. 3) A TCC Citizens Committee chaired by an appointee (Doug Ham) of the Secretary of Transportation.

Washington Metropolitan Area Transit Authority

The Honorable Ellen M. Bozman, Chairman
Richard A. White, General Manager
600 Fifth Street, N.W.
Washington, D.C. 20001

Telephone: 202/637-1234

Metro Bus/Rail Information:	202/637-7000
Metro On-Call Lift-Equipped Buses:	202/962-1825
Elderly Disabled Assistance I/D Cards:	202/962-1245

Function: Operates the Metrorail and Metrobus systems within a service territory established by an interstate compact; this area includes the cities of Alexandria, Fairfax and Falls Church; and Arlington and Fairfax Counties.

Metropolitan Washington Council of Governments

The Honorable John Mason, Chairman
Ruth A. Crone, Executive Director
777 North Capitol St., Suite 300
Washington, D.C. 20002-4201

Telephone: 202/962-3200
Fax: 202/962-3202

Function: In 1966, MWCOG was officially recognized by the federal government as the agency responsible for comprehensive regional planning and agreed with the TPB to use the latter as its Transportation Policy Committee.

National Capital Region Transportation Planning Board

The Honorable Harry Thomas, Chairman
Ron Kirby, Director, Office of Transportation
777 North Capital Street, Suite 300, N.E.
Washington, D.C. 20002-4201

Telephone: 202/962-3200

Function: Serves as Metropolitan Planning Organization and provides extensive database and modeling capability for population, employment and transportation studies. TPB now includes representatives of 18 cities and counties, plus three state transportation agencies, MWAA, WMATA, and five federal agencies. A weighted voting procedure is employed. MWCOG staff operate the Ride Finders network, which provides a centralized carpool and vanpool matching database. A citizens advisory committee is chaired by Ms. Anne Haynes.

Metropolitan Washington Air Quality Committee

The Honorable Robert B. Dix, Jr., Chairman
777 North Capital Street, Suite 300, N.E.
Washington, D.C. 20002-4201

Staff Contact: Travis Markle
Assistant Director of the Department
of Environmental Programs
777 North Capital Street, Suite 300
Washington, DC 20002-4201

Telephone: 202/962-3200

Function: Consists of elected officials from localities, states, and the District of Columbia. Develops recommendations for a regional air quality attainment strategy for the Washington area; these recommendations become part of the State Implementation Plan, which is submitted to the Environmental Protection Agency.

Metropolitan Development Policy Committee

The Honorable Gary Allen, Chairman
777 North Capital Street, N.E., Suite 300
Washington, D.C. 20002-4201

Telephone: 202/962-3200
Fax: 202/962-3201

Function: Advises the MWCOG Board of Directors on all planning, land use, forecasting, and economic development issues, and seeks to promote the effective coordination of regional land use, transportation and environmental policies.

Greater Washington Board of Trade

John Tydings, President
1129 20th Street, N.W.
Suite 200
Washington, D.C. 20036-3494

Telephone: 202/857-5900
Fax: 202/223-2648

Function: Advocates improvements for the regional economy.

Federal City Council

Tom Foley, President
1155 15th Street, N. W.
Suite 301
Washington, DC 20005

Telephone: 202/223-4560
Fax: 202/659-8621
Function: Undertakes studies of regional issues.

Maryland-National Park and Planning Commission

The Honorable Elizabeth Hewlett, Chairman
County Administration Building
14741 Governor Oden Drive
Upper Marlboro, MD 20772

Telephone: 301/952-3560
Fax: 301/952-5074

Trudye Morgan Johnson, Executive Director
6611 Kenilworth Avenue
Riverdale, Maryland 20737

Telephone: 301/454-1747
Fax: 301/454-1750

Function: Joint agency for Montgomery and Prince George's County that plans and analyzes transportation improvements.

Washington Suburban Transit Commission

The Honorable Carton Sickles, Chairman
8720 Georgia Avenue, Suite 904
Sliver Spring, Maryland 20910-3602

Telephone: 301/565-9665
Fax: 301/565-0241

Function: Provides a forum for Maryland's members of the WMATA Board of Directors.

Maryland Department of Transportation

The Honorable David L. Winstead
Maryland Secretary of Transportation
P.O. Box 8755
BWI Airport, Maryland 21240-0755

Telephone: 410/859-7397
Fax: 410/865-1334

Tom Donahue, Acting Manager of Washington Area Transit Programs
8720 Georgia Avenue, Suite 904
Silver Spring, Maryland 20910-3602

Telephone: 410/792-0273
Fax: 410/565-0241

John A. Agro, Jr., Administrator
Mass Transportation Administration
6 St. Paul Street
Baltimore, MD 21201-3415

Telephone: 410/767-3943
Fax: 410/333-3279

Function: Provides Maryland jurisdictions' WMATA funding.

MARC

Kathy Waters, Director
P.O. Box 8718
BWI Airport, Maryland 21240-8718

Telephone: 410/859-7400
Fax: 410/859-5713

Function: Operator of MARC commuter rail service. Part of Maryland Mass Transit Administration.

National Capital Planning Commission

Reginald W. Griffith, Executive Director
801 Pennsylvania Avenue, N.W., Suite 301
Washington, D.C. 20576-2604

Telephone: 202/724-0176
Fax: 202/724-0195

Function: Must approve federal construction projects in the District of Columbia, and consider transportation implications.

District of Columbia Department of Public Works

Larry King, Director
2000 14th Street, N.W.
Washington, D.C. 20009

Telephone: 202/939-8000
Fax: 202/939-8191

Function: Advises WMATA Board members and cooperates in transportation projects such as VRE's L'Enfant station.

Virginia Department of Transportation

Northern Virginia District Office
3975 Fair Ridge Drive
Fairfax, Virginia 22033

Tom Farley, District Administrator
Telephone: 703/934-7300
Fax: 703/934-5626

Joan Morris, Director of Public Affairs
Telephone: 703/934-7322

Dulles Toll Road Operations Center
Telephone: 703/734-9754

Function: The Northern Virginia office manages construction and maintenance of highways in the district and controls ramp meters and other facilities.

Metropolitan Washington Airports Authority

James A. Wilding, General Manager MA-1
44 Canal Center Plaza
Alexandria, Virginia 22314

Telephone: 703/417-8610
Fax: 703/417-8949

Washington Flyer: 703/685-1400
703/661-2700

Function: Regional agency operating Washington National and Washington Dulles International Airports. Also offers Washington Flyer bus, van and taxi system serving both airports.

Washington Metropolitan Area Transit Commission

The Honorable Agnes M. Alexander, Chairperson
The Honorable Claude Ligon, Chairperson
Judge Clinton Miller, Chairperson
W.H. McGilvery III, Executive Director
1828 L. Street, N.W., Suite 703
Washington, D.C. 20036-5104

Telephone: 202/331-1671
Fax: 202/653-2179

Function: Created in 1960 as part of the Washington Metropolitan Area Transit Regulation Compact signed by Virginia, Maryland and the District of Columbia. Composed of one member from each of the three jurisdictions, each from the respective regulatory commissions of those jurisdictions. Geographic jurisdiction includes the Washington Metropolitan Transit District. The Commission regulates for-hire transportation between points in the District (or for routes outside zone if operated under Interstate Commerce Commission authority with a majority of passengers in the District), including taxicabs operating between jurisdictions. The Commission does not regulate water, air or rail transit; federal, state, local or WMATA transportation; school transit; or transit solely within Virginia. Examples of regulatory activities include setting maximum interstate taxi rates for D.C. cabs. As of July, 1992, a total of 28 Virginia-based Companies held WMATC certificates, including commuter bus operators, charter buses, and limousine services.

OFFICES OF TRANSPORTATION (AND RELATED AGENCIES)

City of Alexandria

City Hall
301 King Street
Alexandria, Virginia 22314

Department of Transportation & Environmental Services

Thomas F. O'Kane, Jr., Director
Mary J. Anderson, Deputy Director/Administration
City Hall, Room 4100
Telephone: 703/838-4966

Function: Planning, construction and maintenance of streets, sidewalks, HOV-facilities, and bridges. Manages traffic control systems and provides public works programs management.

Office of Transit Services and Programs

Valerie Sikora, Division Chief (Room 5100)
Telephone: 703/838-3800

Function: Overseeing operation, planning, and marketing of commuter services, including transit, ridesharing, paratransit, and transportation demand management programs. Planning, construction, and maintenance of transit facilities.

Arlington Department of Public Works

Sam Kem, Director
Ken Hook, Deputy Director
James R. Hamre, Transit Programs Coordinator
No. 1 Courthouse Plaza
2100 Clarendon Blvd., Suite 717
Arlington, Virginia 22201-5445

Telephone: 703/358-3371

Function: Planning, construction and maintenance of streets, bridge, transit and HOV-facilities. Coordination and marketing of ridesharing commuter stores, and other commuter services.

City of Fairfax

10455 Armstrong Street
Fairfax, Virginia 22030-3630

David Hudson, Director of Community Development and Planning
Telephone: 703/385-7932

Richard R. Fruehauf, Director of Transit and Utilities
Telephone: 703/385-7920

Paul Briggs, Transit Superintendent
Telephone: 703/385-7827
Telephone: 703/385-7859 (Information for CUE Bus)

Function: City government responsible for planning, construction and maintenance of street, bridge, transit and HOV-facilities, and operation of the CUE Bus System.

City of Falls Church

Halsey Green, Assistant Director of Financial Services
300 Park Avenue
Falls Church, Virginia 22046

Telephone: 703/241-5092

Function: City government responsible for planning, construction and maintenance of streets, and finance.

Fairfax County Office of Transportation

12055 Government Center Parkway
Suite 1034
Fairfax, Virginia 22035-5511

Shiva K. Pant, Director
Telephone: 703/324-1100

Andy Szakos, Chief, Transit Operations Section
Telephone: 703/324-1100

Function: County agency responsible for planning and coordinating roads, bridges, HOV-facilities and public transit.

Loudoun County

Sanjeev Malhotra, Chief of Transportation Planning
Julie Pastor, Director, Department of Planning
750 Miller Drive, S.E.
Leesburg, Virginia 22075

Telephone: 703/777-0246
Fax: 703/777-0441

Function: County agencies responsible for planning and coordinating roads, bridges, HOV-facilities and public transit.

RIDESHARING OFFICES

Alexandria

Mary Bowler, Ridesharing Coordinator
Alexandria Rideshare
P.O. Box 178
City Hall, Room 5100
Alexandria, Virginia 22313

Telephone: 703/838-3800

Arlington County

Chris Hamilton
Transit Engineer
Suite 706
2100 Clarendon Blvd.
Arlington, Virginia 22201

Telephone: 703/358-3575 (Business)
703/528-3541 (Rideshare)

Fairfax County

Dorothy Cousineau
Fairfax County Ridesources
12055 Government Center Parkway
Suite 1034, Tenth Floor
Fairfax, Virginia 22035-5511

Telephone: 703/324-1109 (Business)
703/324-1111 (Rideshare)

Loudoun County

Lynne Roberts
Ridesharing Coordinator
Loudoun County
750 Miller Drive, S.E., Suite 300
Leesburg, Virginia 22075

Telephone: Metro: 703/478-8416 (ext. 5665)
Local: 703/771-5665

Prince William County

Lauretta Ruest
Project Director
Potomac & Rappahannock Transportation Commission
3460 Commission Court
Woodbridge, Virginia 22192-1795

Telephone: Metro: 703/643-0239
Local: 703/490-4422

Function: Administer local ridesharing services and marketing in cooperation with MWCOG's regional network, known as the Ride Finders Network.

Metropolitan Washington Council of Governments Commuter Connections

Nicolas Ramfos, Chief, Alternative Commute Programs.
777 N. Capitol St., N.E., Suite 300
Washington, D.C. 20002-4201

Telephone: 202/962-3200

LOCAL CITIZENS TRANSPORTATION ADVISORY BOARDS

Arlington Transportation Commission

Kathleen N. Ausley, Chairman
c/o James R. Hamre
Arlington Department of Pubic Works
2100 Clarendon Blvd.
Arlington, Virginia 22201

Telephone: 703/358-3681

Alexandria Planning Commission

W.B. Hurd, Chairman
C/O Sheldon Lynn
Alexandria Department of Planning & Zoning
301 King Street, Room 2100
Alexandria, Virginia 22314

Telephone: 703/838-4666

Alexandria Traffic and Parking Board

C. Peter Schumaier, Chairman
C/O George Jivatode
Alexandria Department of Transportation & Environmental Services
301 King Street, Room 4100
Alexandria, Virginia 22314

Telephone: 703/838-4411

Fairfax County Transportation Advisory Commission

Don Emerson, Chairman
c/o Dan Southworth, Transportation Planner II
Fairfax County Office of Transportation
12055 Government Center Parkway
Suite 1034, Tenth floor
Fairfax, Virginia 22035-5511

Telephone: 703/324-1100
Fax: 703/324-1450

Function: Members are appointed by the County Board of Supervisors, with one member from each magisterial district. TAC responds to Board requests for advice.

Falls Church Planning Department

Citizens Advisory Committee on Transportation
Maureen Budetti, Chairman
C/O Planning Department
300 Park Avenue
Falls Church, Virginia 22046

Telephone: 703/241-5040

LOCAL TRANSIT OPERATORS

Alexandria DOT

Valerie Sikora
Division Chief/Transit Services & Programs
301 King Street
City Hall, Room 5100
Alexandria, Virginia 22314

Telephone: 703/838-3800 (for reservations)
703/836-5222 (for an eligibility application)

Function: Paratransit service for persons with disabilities.

Arlington Trolley in Crystal City

Chris Hamilton
Transit Engineer
#1 Courthouse Plaza, #706
2100 Clarendon Blvd.
Arlington, Virginia 22201

Telephone: 703/358-3575

Function: Serves Crystal City with connections to Metrorail.

DASH (Alexandria Transit Company)

William B. Hurd, Chairman
Sandy Modell, General Manager
116 S. Quaker Lane
Alexandria, Virginia 22304

Telephone: 703/370-3274

Function: Over 60 full and part-time employees operate seven routes and carry about 2.0 million passengers annually. Non-profit corporation with seven shares of capital stock all owned by the City of Alexandria. The Board of Directors is elected annually by the City Council. The Company owns all assets but has no employees. Operations are contracted to the ATE Management and Service Company, which employs the General Manager. All other transit employees work for Transit Management of Alexandria, Inc., a wholly owned subsidiary of ATE.

OmniRide

Eric Marx
Potomac & Rappahannock Transportation Commission
3460 Commission Court
Woodbridge, Virginia 22192-1759
Attn: Eric Marx

Telephone: 703/490-4422
Fax: 703/490-5254

Function: Provides commuter bus service to core locations with connections to Metrorail and feeder bus service to some VRE stations within Prince William County.

CUE Bus (City of Fairfax)

Paul Briggs, Transit Superintendent
10455 Armstrong Street
Fairfax, Virginia 22030

Telephone: 703/385-7827

Function: Provides local transit service with connections to Metrorail.

Fairfax Connector

Andy Szakos, Office of Transportation
12055 Government Center Parkway
Suite 1034
Fairfax, Virginia 22035-5511

Telephone: 703/324-1172
Fairfax Connector Information: 703/339-7200

Function: County-owned public bus system.

Reston RIBS

Andy Szakos, Office of Transportation
12055 Government Center Parkway
Suite 1034
Fairfax, Virginia 22035-5511

Telephone: 703/324-1172
Reston RIBS Information: 703/548-4545

Function: County-funded public bus system.

Tysons Shuttle

Andy Szakos, Office of Transportation
12055 Government Center Parkway
Suite 1034
Fairfax, Virginia 22035-5511

Telephone: 703/324-1172
Tysons Shuttle Information: 703/548-4545

Function: County-funded public bus system.

TRANSPORTATION MANAGEMENT ASSOCIATIONS

Ballston/Rosslyn Area Transportation Association (BATA)

Nadine Martinat, Transit Store Manager
4238 Wilson Blvd., Suite 1244
Arlington, Virginia 22203

Telephone: 703/528-3541
Fax: 703/522-4356

Function: Contract operator of the Ballston Transit Store, now located at Ballston Commons Shopping Mall, and the Rosslyn Transit Store, located at 1700 N. Monroe Street, both funded by Arlington County. Works closely with the Ballston Partnership.

Crystal City Commuter Service Center

Laura Maddox, Manager
1615 B Crystal Square Arcade
Arlington, Virginia 22202

Telephone: 703/413-4287
Fax: 703/413-4291

Function: Sponsored by Arlington County.

Dulles Area Transportation Association (DATA)

Tanya Matthews, President
2340 Dulles Corner Blvd., Suite 110
Herndon, Virginia 20171-3415

Telephone: 703/713-0103
Fax: 703/713-0105

Function: Dedicated to improving mobility in the Dulles Airport/Route 28 employment center (Fairfax, Loudoun, Prince William County). Members include employers, property owners, local governments and other groups. Activities include assessing transportation needs, identifying issues; formulating strategies, and providing a forum. Publishes quarterly newsletter "TransActions."

Reston Transportation Management Association (LINK)

Karl J. Ingebritson, Director
1760 Reston Parkway, Suite 513
Reston, Virginia 20190

Telephone: 703/318-9663 or 435-LINK
Fax: 703/318-0817

Function: Improving mobility in the Reston Area.

Transportation and Environmental Management and Planning Organization Alexandria, Inc. (TEMPO)

Ms. Cynthia Fondriest, Executive Director
c/o Fondriest & Associates
5750 Heritage Hill Drive
Alexandria, VA 22310

Telephone: 703/519-8970
Fax: 703/960-2744

Function: A private, non-profit TMA founded in July, 1989. The TMA serves as a resource center for transit and ridesharing information.

Tysons Transportation Association (TYTRAN)

William J. Menda, Chairman and President
P.O. Box 3264
Tysons Corner, Virginia 22103

Telephone: 703/714-3406
Fax: 703/714-4854

Staff Contact: Kathleen A. Jackson, Director of Transportation
Telephone: 703/799-5394

Function: Actively works to improve mobility.

Loudoun County Transportation Association (LCTA)

Dave Daugherty, President
P.O. Box 2833
Leesburg, Virginia 20177

Telephone: 703/777-5246
Fax: 703/777-2552

Function: Improve mobility.

Toll Road Corporation of Virginia

Michael Crane, CEO
45240 Business Court, Suite 100
Sterling, VA 20166

Telephone: 703/707-8870
Fax: 703/707-8876

Function: This private organization has been working for several years to design, finance and construct an extension of the Dulles Toll Road to Leesburg. The Corporation will operate the road after its 1995 opening.

Washington Private Operators Council

Kenneth W. Butler, Executive Director
11350 Random Hills Road
Suite 800
Fairfax, VA 22030

Telephone: 703/620-4914
Fax: 703/620-4709

Function: Created in January 1992, this non-profit association consists of a group of for-profit transportation companies seeking to educate the public and elected officials about the benefits of contracted public transit services. Start-up costs are partially covered by FTA through George Mason University. Has begun to publish a monthly newsletter. Current members include American Contract Management, Inc., Diamond Transportation, ATE Management & Services, Inc., American Coach Lines, Inc., Barwood Taxi, and Transportation General, Inc.

Washington Area Bicyclist Association (WABA)

Ellen Jones, Director
818 Connecticut Ave., N.W., Suite 300
Washington, D.C. 20006

Telephone: 202/237-8967
Fax: 202/833-4626

Function: Promote bicycling.

American Automobile Association

Ron Kosh, General Manager
12600 Fair Lakes Circle
Fairfax, Virginia 22033-4904

Telephone: 703/222-5655
Fax: 703/222-4049

Function: Advocacy group for automobile owners.

Northern Virginia Transportation Alliance

Gary Garczynski, President
Bob Chase, Director
P.O. Box 6149
McLean, Virginia 22106-6149

Telephone: 703/883-1355
Fax: 703/883-1850

Function: This non-partisan interest group lobbies for completion of transportation facilities in Northern Virginia and coordinated land use policies. For example, the group strongly supports completion of a western bypass.

Virginia VanPool Association, Inc.

Dick Boyd
P.O. Box 1016
Woodbridge, Virginia 22193

Telephone: 202/310-2700

Function: Advocacy group for vanpools.

National Railroad Passenger Corporation (Amtrak)

Wade Hall, Deputy General Manager - Commuter Services
900 Second Street, Suite 111
Washington, D,C, 20002

Telephone: 202/906-2619
Fax: 202/906-3569

Function: Contract operator for VRE commuter rail service.

APPENDIX B

REGIONAL STUDIES AND PLANS

The State of Virginia is currently embarking on a number of simultaneous Major Investment Studies (MIS) -- analyses that will help the region determine how best to address mobility needs in each corridor. An MIS, which is required before projects can be constructed using federal funds, must define the needs of a transportation corridor and examine multiple modes of travel and their possible interactions before recommending a particular course of action. While these studies receive a great deal of press and public attention, other studies, more limited in scope, are also ongoing. Some of these focus on a particular mode of travel that was decided upon in an earlier analysis; others are merely concerned with one aspect of travel, such as safety. Below, we list a number of these studies that are more regional in nature, along with other demonstration projects or new developments of particular interest.

DULLES CORRIDOR

The Dulles corridor is expected to experience exponential growth in the coming years, growth that will add to the already congested traffic in this part of the region. The problem is being addressed in a truly multi-modal manner: highway, bus, and rail projects are all in various stages of progress, as described below.

Bus Service in the Dulles Corridor

Two separate projects for increased transit in the Dulles Corridor are currently being developed. In coordination with the fourth lane/HOV widening, Fairfax County is constructing two park-and-ride facilities -- one at Wiehle Avenue and one at Monroe Avenue. Both sites have been identified as probable station locations if rail is eventually constructed in the corridor. In the meantime, the garages will support ridesharing, as well as increased express bus service, another improvement planned by the county. Both facilities will have surface parking, bus bays, and kiss-and-ride locations. The Wiehle Avenue site will have about 800 spaces, while the Herndon/Monroe site, which will also have a parking structure, will offer just over 1,700 spaces. The Wiehle Avenue lot is scheduled to open on December 1996, and the Herndon/Monroe facility should be open in the fall of 1998. Both projects are being funded with a combination of a Federal Transit Administration grant and County bond funds. Fairfax County also plans to construct a bus transfer station, with a covered waiting area and other passenger amenities in the Tysons Corner area.

In addition, in January, 1994, Representative Frank Wolf obtained an earmark for $950,000 of federal Section 3 capital funds from the Federal Transit Administration to implement an express commuter bus service traveling from the Dulles Airport area to Tysons Corner and the West Falls Church Metrorail station. Loudoun County is working with VDR&PT to file an application with FTA for the Wolf Initiative funds. The intent is to use the funds as part of the construction funding for the Loudoun County Western Regional Park-and-Ride Lot. This will allow the allocation of other funding to support expanded bus service from Loudoun County in the Dulles Corridor. This would include bus service to the regional core as well as new bus service to Tysons Corner and the West Falls Church Metrorail station.

Contact: Fairfax County Office of Transportation: (703) 324-1100
Loudoun County Dept. of Planning, Transportation Division: (703) 777-0246

Western Regional Park & Ride Study

VDOT's 1992 Dulles Corridor Plan concluded that park and ride lots were needed in both western Fairfax and eastern Loudoun counties. Consequently, VDOT conducted a study to determine the most feasible locations for such lots. The study is divided into three phases. First, six possible sites at which to locate facilities were evaluated. Assessment was made of environmental issues, compatibility with future rail, accessibility, bus routing, carpool usage, financial requirements, and interjurisdictional issues.

Following a series of meetings with local jurisdictions and the public, the Technical Committee recommended that three sites be further evaluated. Based on the results of this analysis, VDOT recommended that funding be pursued for the construction of lots at two sites. These are located north of the Dulles Toll and Access Roads just east of the Fairfax/Loudoun County line and at the intersection of Route 606 and the Dulles Greenway (also specified as a possible station location if a rail line is constructed in the corridor).

It is anticipated that Loudoun County, VDOT and VDR&PT will advance, in the fall of 1996, a Route 606/Dulles Greenway site into Phase 3 of the study, in preparation of an implementation plan. As part of this effort Loudoun County, with the assistance of its Citizens Bus Advisory Board, is preparing a bus operations plan. This plan will guide the implementation of expanded Loudoun County express bus service in the Dulles Corridor. The Loudoun County Western Regional Lot is planned to be opened in 1998, in conjunction with the completion of the HOV lanes on the Dulles Toll Road.

Contact: VDOT, Northern Virginia District Office: (703) 934-7322
Loudoun County Dept. of Planning, Transportation Division: (703) 777-0246

Dulles Corridor Rail Study

In June, 1996, VDR&PT concluded a two-year major investment study that examined transit options in the Dulles Corridor. The Policy Committee, made up of local officials and representatives of WMATA and the Metropolitan Washington Airports Authority, adopted as its preferred alternative metro-like rail to Loudoun County. The alternative designated would leave the Orange Line at East Falls Church, and go through Tysons Corner before returning to the median of the Dulles Airport Access Road. After the train reached the airport, it would continue into Loudoun County, terminating at Route 772 in the median of the Dulles Greenway.

The committee had also considered a basic rail system, which would consist of a shuttle service; an enhanced express bus system; and a no-build alternative. Various alignments of the rail system were also examined. Along with the alignment and the type of rail, the Policy Committee recommended that an enhanced express bus system be implemented in the corridor as an interim measure.

While this portion of the study did not address funding, the Policy Committee discussed the development of a financial plan at some length, and local officials made it clear that 1) they should continue to be involved, and 2) local dollars for the project are limited. The Secretary has committed to keeping local jurisdictions and agencies involved through the TCC process. The financial plan itself will be developed by the VDOT Finance Office, working with the consultant who was hired at the beginning of the study.

In August, Secretary Martinez took this recommendation to the Commonwealth Transportation Board, which adopted the following recommendations of the Policy Advisory Committee:

1) The preferred alternative should be a seamless extension, using Metro-like facilities, of the regional rail system from the West Falls Church station to the vicinity of Route 772 in Loudoun County. The term "Metro-like" means that the rail line would be compatible with the existing regional rail system but indicates no conclusion on the institutional arrangements for ownership or operation of the line.

2) As the entity established to make decisions with regard to transportation funding in Virginia, the Commonwealth Transportation Board should begin to consider funding alternatives and foster the development of a funding strategy for capital and operating costs of the preferred alternative for the Dulles Corridor. Some progress toward agreement on a strategy is necessary for the inclusion of the rail line in the long-range transportation plan for the Washington metropolitan area—a step that is required before any funding assistance can be obtained from the Federal Transit Administration.

3) In addition to the longer-term funding needs of the rail line, the funding strategy should also provide for the near-term implementation and operation of enhanced express bus services in the corridor. In the near term, these services would use the new lanes on the Toll Road, the park-and-ride lots being developed along the Toll Road and Greenway in Loudoun County, and other existing transportation facilities in the corridor. The services would provide immediate response to continued growth in the corridor and help to develop further the transit market in anticipation of the rail line.

Once a funding plan is developed, the Commonwealth Transportation Board may request that the TPB add the rail line to the region's Constrained Long Range Plan.

Contact: Dulles Corridor Study Hotline: 1-800-960-RAIL

NVTC's Transportation Plan for the Smithsonian's National Air and Space Museum Annex

In 1990 NVTC led a regional task force to produce a plan to serve the new museum annex when it opens early in the next decade. The facility, which is currently being designed, will be located on 185 acres about five miles south of the main terminal at Dulles Airport. Peak daily attendance for the first phase could reach 17,700, with public transit forecast to serve from five to 10 percent of these persons.

NVTC's plan calls for new shuttle bus service linking the museum extension with the Vienna Metrorail station at a total annual subsidy cost ($1990) of $800,000 to $1 million, as well as a system of van shuttles linking the Dulles terminal with the museum annex for another $217,000 annual subsidy cost. VDOT is assisting the museum with related highway improvements, and has committed to assisting with the transit related improvements as well.

I-66 Corridor

I-66 Major Investment Study

In cooperation with jurisdictional and agency staff, VDR&PT is coordinating an MIS in the I-66 corridor. The study area covers the I-66 corridor from the Beltway west to the Fauquier County Line, including Route 50 as far north as Route 28, and is bordered on the south by the Norfolk Southern railroad tracks on which VRE operates. While this study area ranges fairly far off I-66 in either direction, many of the people

traveling on Routes 50 and 29 during the peak hours are making essentially east-west trips, and so what happens on any one of these facilities is likely to have impacts on the others.

The study team began by compiling a list of eighteen different alternatives to be considered in the corridor. These alternatives range from additional general capacity on I-66 to light rail along various alignments (Route 50 and Route 29, for example) to the extension of the Metrorail Orange Line to Centreville. These 18 alternatives were then reviewed for "fatal flaws" in terms of inconsistencies with local or regional plans or very serious environmental impacts, and the list was narrowed to 15. The consultant hired by VDR&PT has been modeling the travel impacts of these alternatives, and the results are due to be presented to policy-makers and the public in the fall of 1996.

It is not anticipated that any one alternative of the fifteen under consideration will be the final recommendation of the study. Rather, staff expects that, based on the results of the travel forecasting, some alternatives will be dropped and others may be changed or combined to create new alternatives. Ultimately, it is likely that the Policy Advisory Committee and the Secretary will recommend to the CTB a "strategy" – a combination of improvements that together appear to best address the corridor's transportation needs. The study will most likely conclude in mid-1997.

Contact: I-66 MIS Hotline: 1-800-811-4661

I-66 Park and Ride Lot Location Study

The final report of this study, which examined possible sites for a park and ride lot in the I-66 corridor, was issued in July, 1996. The report recommends construction of a lot in the northwest corner of the intersection of I-66 and Stringfellow Road. This will be adjacent to the HOV-only ramp onto I-66 from this location. The ramp, which opened this summer, is only open during peak hours, in the peak direction. The lot would initially contain just over 300 spaces, but land would be acquired to allow for future expansion as needed. The report also suggests rerouting the 12S Metrobus route in order to serve the lot.

In August, the Fairfax County Board approved the recommendations of VDOT's study, and requested that VDOT proceed with lot design and site development. The plan will be presented to the public over the next few months.

Bristol Rail Passenger Study

At the direction of the General Assembly, the Virginia Department of Rail and Public Transportation has conducted a study of potential rail passenger service connecting Bristol, VA to both Richmond and Washington, D.C. The Washington D.C. service would pass through Manassas and continue along the I-66 corridor. The study

assessed the conditions and capacities of the existing transportation network, examined alternative service scenarios, projected potential ridership and revenues for the service alternatives, and listed improvements required in order to support the various service levels. The final report issued for the 1996 legislative session recommended further study of a service level of two trains per day in each direction.

This study has now moved onto its second phase. In this portion of the study, VDR&PT will work with the consultant to examine in detail conflicts that might arise between such a passenger service and the freight operations conducted by Norfolk Southern, the railroad that owns the tracks. This portion of the study will also focus on liability issues, which were a source of delay in the start-up of VRE service. VDR&PT will report its preliminary findings to the General Assembly in January, 1997, and a final report should be concluded in the spring.

This service would provide the Northern Virginia region with an important non-highway link with the rest of the state. In addition, expanded intercity rail service could lead to more state funding for VRE if the services are integrated.

Contact: Alan Tobias, VDRPT: (804) 786-1063

Manassas Rail Relocation Study

VDR&PT, in cooperation with the Norfolk Southern Railway, is also studying the possible relocation of the Norfolk Southern tracks that pass through the City of Manassas and Prince William County. The growing amount of freight train traffic has become increasingly disruptive to local traffic, a problem exacerbated by the many at-grade crossings in the vicinity. Currently, the line carries an average of 18 through and local freight trains per day, and it is estimated that without a realignment, that number will increase to 48 trains per day by 2020. If a relocation is constructed, it is estimated that another 44 through freight trains would be diverted to the new facility.

VDR&PT began the study by compiling a large list of alternatives, including some suggested at public meetings. This list was then narrowed down to 10 preliminary alternatives. These have been studied in greater detail, and six have been eliminated, leaving four Candidate Alternatives. VDR&PT expects to do further screening and environmental work through 1996, and bring its recommendations to the public in early 1997.

Review of VRE Access Alternatives to Norfolk Southern Corporation's Right-of-Way between Manassas and Alexandria

In early 1995, the Norfolk Southern Corporation (NS) notified the commissions that VRE's access agreement to NS tracks between Manassas and Alexandria would not be renewed unless the commissions agreed to examine access alternatives including purchase of the right-of-way. The commissions subsequently approved a detailed study process and employed R.L. Banks and Associates, Inc. to manage the study. The scope-of-work called for a year-long process of data gathering, appraisals and financial analyses, to culminate in July, 1996 with recommendations to the commissions and negotiations with NS.

The initial steps of that scope-of-work have been completed, including the preparation of a white paper with an access alternatives presentation to the VRE Operations Board and local financial and legal officers. However, work was discontinued in Fall, 1995 as protracted negotiations occurred over confidentiality of data to be provided by NS to the commissions. Also, a closely related analysis of a proposed rail by-pass of Manassas was begun, and its findings and recommendations are essential to informed judgments by the commissions and state and local governments on cost-effective VRE access. Finally, NS agreed to a two-year extension of VRE's access agreement on favorable terms, thereby postponing the need for a quick decision on any new access arrangements.

The on-going analysis of the Manassas rail by-pass is scheduled to go to public hearing in early 1997, with completion of the federal environmental impact statement in Spring, 1997. Funding for whatever preferred alternative is selected has not yet been identified. Accordingly, the schedule for the analysis of access alternatives in NS's Manassas-Alexandria corridor has been revised. Appraisals will be undertaken in Fall, 1996, with recommendations to the commissions provided by July, 1997. This will allow several months for negotiations with NS prior to consideration of FY 1999 VRE budgets and the expiration in July, 1998 of the commissions' extended access agreements with NS.

Western Transportation Corridors

Western Transportation Corridor Study

VDOT is currently conducting a Western Transportation Corridor Study. This MIS, formerly known as the Western Bypass Study, is examining north-south travel needs west of Fairfax County. In the fall of 1995, participation in the study, which is being led by VDOT, was expanded to include a Technical Committee made up of local jurisdictional staff, and federal and other agency representatives. Local involvement at the public level began in March, 1995, with the appointment by Secretary Martinez of a Policy Advisory Committee.

The study corridor is bordered by points between Routes 15 and 17 on the west, points just to the east of Routes 28 and 234 on the east, Route 17 and I-95 to the south, and the Potomac River to the north. The state of Maryland has indicated that it will cooperate with the study as long as river crossings are limited to the Point of Rocks crossing into Frederick County, and all alternatives either stop at Route 7 or cross the Potomac at Route 15. Some citizens have pointed out the complications of Virginia's position; a road placed far enough to the west to cross the Potomac at Point of Rocks has been found in the past to divert little traffic from the Beltway, and yet roads further to the east, if they cannot cross the Potomac, will also serve very little purpose as an actual "by-pass" of the Beltway.

Four types of alternatives were initially identified: a "no-build" scenario, which considers only those improvements already included in the CLRP; an Travel Demand Management alternative, including localized road improvements and improved bus service; an alternative that would upgrade and link existing or currently planned roadways; and alternatives consisting of new facilities. At this point, three new alignments are still under consideration.

Travel demand forecasting was conducted this summer and the technical analysis will be completed this fall. Public meetings are scheduled to be held in October, 1996 and the CTB is expected to designate a preferred alternative or combination of alternatives by the end of the year.

Contact: Western Bypass MIS Hotline: 1-800-960-8448

Dulles Airport Access Study

During the 1996 legislative session, the General Assembly requested that VDOT, working with the Metropolitan Washington Airports Authority and the Washington Airports Task Force, conduct a study to determine the need for and feasibility of a

northern, southern, and western access to Dulles Airport. Because the study areas are so similar, VDOT has incorporated this study into the Western Corridor Transportation Study. A report is due to the General Assembly in 1997.

Eastern Loudoun County Cut-Through Traffic Impact Study

Loudoun County staff has asked VDOT to conduct a subarea transportation analysis of eastern Loudoun County. The area of analysis is bounded by Route 7 to the north, Dranesville Road to the east, Route 606 to the south, and Sterling Boulevard to the west. The study will determine how planned east-west highway improvements will impact the roadway facilities within the area, allowing local planners to better determine how cut-through traffic on nearby residential roads might be affected.

In the course of the study, VDOT has modeled traffic in this subarea for 1990 and 2010, testing seven alternative networks in the 2010 time frame. From the results of this analysis, they have provided an estimate of cut-through traffic on many of the local roads, and demonstrated where the cut-through traffic is originating. VDOT is now reviewing the results of the analysis with Loudoun and Fairfax Counties and the Town of Herndon before issuing a report this fall.

Contact: VDOT, Northern Virginia District Office: (703) 934-7322

Beltway

I-495 Capital Beltway Improvement Study

The Virginia Department of Transportation has long had plans to construct a fifth, possibly HOV, lane on the Beltway. During early discussions of this proposed project, members of the community and elected officials raised concerns about the safety of a fifth lane on the Beltway. In particular, there was concern that, due to the cost of right-of-way in the corridor, lanes might by narrowed or shoulders virtually eliminated. NVTC has also expressed concern that, without barrier-separated HOV lanes, lack of enforcement would destroy the lanes' effectiveness.

In response to these concerns, as well as in response to both federal requirements and the need to coordinate plans with Maryland, VDOT and VDRPT have elected to put these plans on hold and conduct a joint MIS process with the state of Maryland. The study, which addresses the entire facility, is examining HOV lanes, but is also looking at other transit and transportation demand management strategies, as well as a no-build alternative.

The study is a complicated one because Maryland and Virginia are each defining the alternatives to be examined on their respective portions of the highway. Thus, for instance, while the two states are together modeling a rail line that follow the path of the Beltway, Virginia has not tested express bus service as extensively as has Maryland.

An MIS focused on the Beltway is also a peculiar situation in that the Beltway itself does not connect many major origin or destination points in the region. Instead, the majority of people travel to reach it, travel on it, and then leave it and travel to their final destination. Thus, transit services connecting Bethesda to Tysons Corner, for example, might serve many people now driving on the facility, although the service would clearly operate on other roadways as well. The extent to which the study will examine transit service such as that described, that leaves the facility to connect activity centers, is still a matter of debate.

This phase of the study will conclude this fall with the recommendation of a small number of promising strategies. These strategies will then move forward into a more detailed NEPA review process. During this process the strategies will be analyzed more closely for effectiveness, costs, and environmental impacts. The NEPA review process will most likely require another year.

Contact: VDOT, Northern Virginia District Office: (703) 934-7322

Capital Beltway Safety Study

In January of 1994, the Capital Beltway Safety Team began work to evaluate and implement recommended safety improvements for the Capital Beltway. The team, chaired by Tom Farley, District Administrator of Northern Virginia VDOT, generated its first report in September, 1994. The work team conducted its own analysis, used the results of focus groups, and utilized analysis done at the National Highway Traffic Safety Administration (NHTSA) to identify key safety problems on the Beltway and the actions that might address them.

The team has focused on five areas in which improvements should be made: driver behavior, engineering, incident management, ITS, and research. In the area of driver behavior, both enforcement and education efforts have been stepped up, and the #77 program enables motorists to report non-emergency crashes, roadway hazards, or disabled vehicles. Engineering efforts range in scope from the redesign of interchanges to the addition of rumble strips to alert drivers to sharp turns on entrance and exit ramps. ITS efforts also range greatly in scope – from the information provided or variable message signs to the projects that will ultimately be implemented with the $4 million FHWA grant for ITS systems in the National Capital Region.

The team's involvement in this issue is ongoing, and implementation is often carried out by other organizations. In this respect, the Beltway Safety Team has provided a valuable opportunity for region-wide dialogue and cooperation.

Contact: Capital Beltway Safety Team: (703) 934-0767

I-95 Corridor

Richmond-Washington Rail Corridor Study

In April, 1996, the Virginia Department of Rail and Public Transportation issued the final report of a study of the feasibility of high speed rail service in the Washington, D.C. - Richmond corridor. Tasks undertaken for the study include an assessment of current travel conditions, a forecast of travel demand, recommended system improvements, and cost projections.

The study found that the current distribution of trips among modes is weighted heavily to the automobile (84.7 percent) with both bus and rail carrying only about seven percent of the total trips in the corridor. Rail improvements to increase capacity and speed as well as improve safety would be needed in order to implement service.

The report suggests six phases of improvements aimed at introducing a 110 mile per hour tilt train service. The total cost is projected to be over $360 million. With a 97-minute travel time and three round trips offered daily, the projected ridership would increase over 51 percent from existing ridership. Reducing the travel time to 90 minutes is projected to increase ridership to 64 percent from existing ridership and by the year 2000, ridership could increase to almost 80 percent.

As a result of these findings, the Commonwealth Transportation Board has programmed a total of $13 million over the next four years to fund the first three phases of improvements recommended in the study. When they are completed, these improvements will allow trains to increase their maximum speed from 70 to 90 miles per hour, shaving 20 minutes off the current two hour trip between Washington, D.C. and Richmond. That portion of the improvements to be implemented north of Fredericksburg will be administered by the Virginia Railway Express.

Contact: Alan Tobias, VDRPT: (804) 786-1063

High Speed Rail Study

The results of the Richmond-Washington Rail Corridor Study also led to the creation of a High Speed Rail System Commission during the 1996 session of the General Assembly. The commission is to determine where in the Commonwealth high speed rail service will be most effective and efficient, given the goals of an intermodal system, and what the roles of the various private and public entities now involved in rail service should be. It has also been tasked with developing a time-table and a financing plan for any high-speed system it recommends.

Commission members were appointed in June and met for the first time in July. An interim report to the General Assembly is due in January, 1997.

Contact: Alan Tobias, VDRPT: (804) 786-1063

Addition of Fourth Lane to I-95

VDOT has recently budgeted funds for a feasibility study to examine the addition of a fourth lane for general traffic on I-95. During the construction of the HOV lanes on I-95 through Fairfax County, the shoulders of the highway were modified to allow their temporary use as through lanes. This was done in order to provide capacity until the HOV lanes opened (diverting cars form the regular lanes) and to mitigate the impacts of construction taking place in the center of the roadway. When the HOV lanes opened, these shoulders returned to their original use.

Fairfax County officials requested that the extra capacity not be returned to shoulder use, and that, in fact, the shoulders be converted to permanent lanes. This would require more extensive construction and additional right-of-way (to build shoulders outside the fourth lanes), and so VDOT has agreed to study the matter further. VDOT hopes to have the feasibility study completed in time to submit any construction plans to the TPB in January, 1997.

Contact: VDOT, Northern Virginia District Office: (703) 934-7322

Springfield Interchange Congestion Management Project

In June of 1995, VDOT initiated the planning of a Congestion Management Program (CMP) for the construction of a new I-95/I-395/I-495 interchange. The first portion of the project is expected to last between eight and 10 years, and will substantially disrupt traffic. Planning for the CMP will build off the experience gained from the ongoing I-66 CMP.

The construction, which is scheduled to begin in the fall of 1998, will proceed through eight phases, each to be bid separately. During construction, contractors will be required to maintain the current number of peak period lanes, but lanes will be taken during other times of the day. The number of HOV lanes may also be reduced during portions of the construction.

The CMP is expected to incorporate the following planning features:

- Establishment of pre-construction conditions.
- Market research in order to identify best opportunities to "sell" transit and high-occupancy vehicles.
- Identification of capacity reductions during each phase of construction (i.e., how many vehicles must be removed from the roadway in order to continue to allow traffic to flow smoothly?)
- Use of a traffic coordinator to help rearrange traffic patterns during construction (this task is often handled by the construction company itself, rather than a traffic engineer.)
- Coordination with construction projects in parallel corridors (e.g. Route 1) in order to avoid backing up alternative routes when they are most needed.

For planning purposes, four groups have been created: transit, ridesharing/HOV, incident management, and traffic management. Projects that might be used to mitigate traffic include additional bus service in the corridor, expansion of park and ride opportunities, and the provision of additional capacity on VRE. At this point, however, while VDOT has committed to funding the program, no specific funds have been allocated in the Six-Year Program.

U.S. Route One Corridor Study

The 1994 session of the Virginia Legislature directed VDOT to conduct a complete and comprehensive study of the Route One Corridor in Fairfax and Prince William Counties. The study, which is being managed by the Northern Virginia District Office of VDOT, centers on the U.S. Route One corridor from the Stafford County/Prince William County Line to the Fairfax County/City of Alexandria Line. In coordination with state and local officials, VDOT has inventoried existing transportation related features, documented existing traffic conditions and deficiencies, and projected future demand. The study team is now in the process of developing alternatives which would address the transportation needs while accommodating county-specific economic development goals for the corridor, and which balance transit capacity and highway improvements.

Citizen participation is an important aspect of the study; VDOT has held one round of public meetings in the two counties, and is planning two more. The next round of meetings will most likely be in September or October, 1996. The Department plans to deliver an interim report this October, and a final report in September, 1997.

Contact: Joe Langley, VDOT, Northern Virginia District Office: (703) 934-0604

Fourteenth Street Bridge Corridor Improvement Study

VDOT has recently initiated a study to look at the improvements of traffic flow and safety in the vicinity of the 14th Street Bridge. The area under study ranges from the Arlington Ridge Road exit of I-395 across the river and up 14th Street to Constitution Avenue in the District, as well as along several connecting highways such as the G.W. Parkway.

The study will look at operational and safety issues in both the short and the long term, and recommend improvements for a 2000 and a 2020 time frame. Of particular concern are the many decision points along this section of highway, as well as the presence of a large amount of weaving among traffic lanes. The signage, which is often confusing, particularly for those unfamiliar with the area, will also be addressed. VDOT has begun the study by filming traffic at numerous locations during peak periods, in order to better understand the complicated traffic patterns that exist today and identify possible solutions. It is anticipated that alternatives to be evaluated will range from operational changes and improved signage to the construction of an additional lane on the bridge.

A steering committee, consisting of representatives from VDOT, VDR&PT, Arlington County, the District, the National Parks Service, and the Federal Highway Administration, has been established. In addition, VDOT will be holding two public meetings, one after a detailed analysis of the problem has been conducted, and the other during the evaluation of alternatives. A final report is expected in late1997.

Contact: VDOT, Northern Virginia District Office: (703) 934-7322

Beauregard Street Study

At the request of the City of Alexandria, the Virginia Department of Transportation conducted a study of traffic operations along the Beauregard Street corridor between Route 236 (Little River Turnpike) and South Walter Reed Drive in Arlington. The Alexandria City Council established the Beauregard Street Corridor Task Force, including representatives from Arlington and Fairfax Counties, to review the results of the VDOT analysis and to make recommendations on which alternatives warranted further consideration. The study focused primarily on improvements needed for two intersections—Beauregard Street at Seminary Road, and Beauregard

Street/South Walter Reed Drive at King Street.

The Task Force met in late 1995 and early 1996 to review the final draft of information provided by VDOT. They agreed to focus only on the improvements needed at the intersection with King Street at this time. There was a consensus recommendation that a grade-separated interchange be built at King Street, with King Street elevated above Beauregard Street/South Walter Reed Drive, and widened to three lanes in each direction between North Hampton and Dawes Avenue.

VDOT is completing preliminary design for the project, and a Local and Design public hearing will be scheduled in late 1997.

Contact: Kanti Srikanth, VDOT, Northern Virginia District Office: (703) 934-0608

Woodrow Wilson Bridge

The Federal Highway Administration, which owns the Woodrow Wilson Bridge, has recently concluded a Major Investment Study (MIS) of this facility in accordance with the recent federal planning regulations. The MIS has addressed both the deteriorated structural condition of the bridge and its constrained capacity. A Woodrow Wilson Bridge Improvement Study Coordination Committee, made up of elected officials and senior government executives from a number of jurisdictions, identified a wide range of alternatives. Included in these alternatives were the construction of a tunnel under the river, a tunnel combined with a drawbridge, two drawbridges side by side, a doubledeck bridge, and a high bridge further to the south of the existing bridge.

In May, 1996, the Woodrow Wilson Bridge Coordination Committee chose two alternatives to be studied further: a bridge/tunnel combination along the current alignment, with a cost estimate of $2.1 billion; and a bridge along the current alignment, with a cost estimate of $1.6 billion. On September 26, the Coordination Committee met again and decided to recommend a twelve-lane, twin-span drawbridge. The new bridge will be higher than the bridge that exists today, so that while it will be able to be opened, it will have to do so much more infrequently.

It is likely that the facility would be built to twelve lanes but striped for ten; when HOV lanes or approaches are added to the Beltway, the bridge could be restriped for twelve lanes, with two reserved for HOV. The decision as to whether the bridge would be wide enough to allow for barrier-separated HOV lanes has not yet been made, and will probably not be addressed at this stage. Barrier-separation has been an issue of concern to the commission, as the I-66 HOV diamond lanes outside the Beltway have a number of operational and safety problems.

Tolls between $1.00 and $2.00 have been suggested by the Coordination Committee as a means of closing the gap between the projected cost of the bridge (estimated at $1.6 billion) and available funding. In August, federal officials indicated that they would be willing to contribute about $400 million, which is approximately the cost of replacing the existing bridge. Much of the additional expense is due to expanded and more complicated interchanges that both allow for separated HOV and express traffic and take up more space than the existing interchanges. Some officials have suggested that, in order to control costs and reduce the negative impacts of the project on the local community, the size and scope of these interchanges should be reduced.[1]

Because of the deteriorated condition of the bridge, and because of its complicated interstate status, an Interstate Transportation Study Commission focused on this project in its report to Congress. The commission recommended that:

- "A new authority be created to own, construct, operate and maintain an enhanced southern Beltway crossing of the Potomac River as recommended by the Woodrow Wilson Bridge Coordination Committee and approved by the National Capital Region Transportation Planning Board.

- "The life of the Interstate Study Commission be extended under the sponsorship of The Greater Washington Board of Trade in order to spearhead adoption of legislation at the state, District of Columbia, and federal levels to create the new authority.

- "This new authority shall seek federal funds to construct the recommended Potomac River crossing and include local elected officials on its governing board. In addition, the new authority will not be activated until the availability of federal funds is determined by the federal government.[2]

Legislation regarding the establishment of such an authority was passed by both the Maryland and Virginia legislatures during the 1995 session, and in the National Highway Act, Congress gave the two states and the District of Columbia the power to create an authority through an interstate compact. However, the District is currently insisting upon being granted full voting rights in such an authority. This arrangement is contrary to that approved in the two state's legislation, and would require both pieces of legislation to be amended. The Secretaries of Transportation from each state are now meeting with members of the District of Columbia City Council in order to address this issue.

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[1] "Replacing Wilson Bridge to Take Uncertain Toll on Motorists," Alice Reid, The Washington Post, August 11, 1996, p. B1.

[2] Interstate Transportation Study Commission, Improving Interstate Transportation in the National Capital Region (December, 1994).

In the meantime, the design alternative will be further refined this fall, and aspects such as mitigation of impacts on the adjacent communities will be addressed. It is expected that the Final Environmental Impact Statement will be completed early in 1997, and a Record of Decision issued in April of that year.

Contact: Woodrow Wilson Bridge Improvement Study: (703) 519-9800

Other Studies

Occoquan Crossing Feasibility Study

This study, which is being managed by the VDOT Northern Virginia District Office, addresses traffic through the Clifton area of Fairfax County. Policy guidance is being provided by a joint subcommittee made up of three supervisors from each of Fairfax and Prince William counties; this subcommittee is currently attempting to define the scope of the study. Fairfax County has also appointed a citizens committee to provide input. In the meantime, VDOT is planning to do a study of the origins and destinations of travelers through the area, as well as to conduct preliminary modeling to examine future capacity and demand at the crossings of the Occoquan River.

Contact: VDOT, Northern Virginia District Office: (703) 934-7322

Central Fairfax Study

The City of Fairfax and Fairfax County staff and officials have been working together to address the issue of commuter traffic cutting through the center of the city. The city in particular is concerned about traffic levels on Route 236 in the historic section. Together with VDOT, which has been providing technical assistance, local officials are examining the possibility of new or improved alignments that divert through traffic from these sensitive neighborhoods.

Contact: Bob MacDonald, VDOT, Northern Virginia District Office: (703) 934-0610

Commission on the Future of Transportation

In March, 1996, the General Assembly established a Commission on the Future of Transportation in Virginia. The desire for the commission and the study it will conduct arose out of concerns regarding the transportation needs of the state, and the limited funds that are available to address those needs. Consequently, the commission has been assigned the following tasks:

- Review and update the findings of similar studies conducted in 1993 and 1994.

- Identify those major transportation system construction projects whose construction will be required over the next 25 years and the needs of public transportation.

- Determine the amount of additional transportation revenue to be required over that period to cover these costs.

- Propose appropriate means of raising and allocating such needed revenues while determining sources of reliable, dedicated funding for public and other modes of transportation.

- Study existing transportation agencies and authorities and the need to create, restructure, and combine agencies and authorities for Virginia.

The 25 members of the commission were appointed this spring, and are in the process of scheduling their first meeting. A report from the commission is due to the General Assembly by July 1, 1997.

In the meantime, the design alternative will be further refined this fall, and aspects such as mitigation of impacts on the adjacent communities will be addressed. It is expected that the Final Environmental Impact Statement will be completed early in 1997, and a Record of Decision issued in April of that year.

Contact: Woodrow Wilson Bridge Improvement Study: (703) 519-9800

Other Studies

Occoquan Crossing Feasibility Study

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Summary of Regional Studies and Plans

Study	Lead Agency	Product	Schedule	Contact
Dulles Corridor				
Bus Service in Dulles Corridor Study	Fairfax County Loudoun County	Construction of Facilities Recommendation for service	1996-1998 unknown	Fairfax County Office of Transportation 703-324-1100 Loudoun County Dept. of Planning - Transportation Division 703-777-0246
Western Regional Park and Ride Study	Virginia Department of Transportation	Recommendation to Loudoun County Board	September 1996	VDOT, Northern Virginia District Office 703-934-7322 Loudoun County Dept. of Planning - Transportation Division 703-777-0246
Dulles Corridor Rail Study	Virginia Department of Rail and Public Transportation	Recommendation to CTB	Completed	Dulles Corridor Study Hotline 1-800-960-RAIL
NVTC's Transportation Plan for the Smithsonian's National Air and Space Museum Annex	Northern Virginia Transportation Commission	Report	Completed	
I-66 Corridor				
I-66 Major Investment Study	Virginia Department of Rail and Public Transportation	Recommendation to CTB	Mid-1997	I-66 MIS Hotline 1-800-811-4661
I-66 Park and Ride Lot Location Study	Virginia Department of Transportation	Report	Completed	
Bristol Rail Passenger Study - Phase II	Virginia Department of Rail and Public Transportation	Report	January 1997	Alan Tobias, VDRPT 804-786-1063
Manassas Rail Relocation Study	Virginia Department of Rail and Public Transportation	Recommendation to CTB	1997	
Review of VRE Access Alternatives to Norfolk Southern Corporation Right-of-Way between Manassas and Alexandria Study	Virginia Railway Express	Recommendation to Commissions	July 1997	
Western Transportation Corridors				
Western Transportation Corridor Study	Virginia Department of Transportation	Recommendation to CTB	Fall, 1996	Western Bypass MIS Hotline 1-800-960-8448
Dulles Airport Access Study	Virginia Department of Transportation	Report to General Assembly	February, 1997	

Study	Lead Agency	Product	Schedule	Contact
Eastern Loudoun County Cut-Through Traffic Impact Study	Virginia Department of Transportation	Report	Fall 1996	VDOT, Northern Virginia District Office 703-934-7322
Beltway				
I-495 Capital Beltway Improvement Study	Virginia Department of Transportation	Report	Fall 1996	VDOT, Northern Virginia District Office 703-934-7322
Capital Beltway Safety Study	Capital Beltway Safety Team	Reports	Ongoing	Capital Beltway Safety Team 703-934-0767
I-95 Corridor				
Richmond-Washington Rail Corridor Study	Virginia Department of Rail and Public Transportation	Report	Completed	Alan Tobias, VDRPT 804-786-1063
High Speed Rail Study	High Speed Rail System Commission	Report to General Assembly	January 1997	Alan Tobias, VDRPT 804-786-1063
Addition of Fourth Lane to I-95 Study	Virginia Department of Transportation	Report to TPB	January 1997	VDOT, Northern Virginia District Office 703-934-7322
Springfield Interchange Congestion Management Project	Virginia Department of Transportation	Congestion Management Plan	1997	
U.S Route One Corridor Study	Virginia Department of Transportation	Interim Report Final Report	September 1996 October 1997	Joe Langley, VDOT, Northern Virginia District Office 703-934-0604
Fourteenth Street Bridge Corridor Improvement Study	Virginia Department of Transportation	Report	late 1997	VDOT, Northern Virginia District Office 703-934-7322
Beauregard Street Study	Virginia Department of Transportation	Design of improvements to King Street intersection	late 1997	Kanti Srikanth, VDOT, Northern Virginia District Office 703-934-0608
Other Studies				
Woodrow Wilson Bridge Study	Federal Highway Administration	Record of decision	April, 1997	Woodrow Wilson Bridge Improvement Study 703-519-9800
Occoquan Crossing Feasibility Study	Virginia Department of Transportation	N/A	N/A	VDOT, Northern Virginia District Office 703-934-7322
Central Fairfax Study	City of Fairfax and Fairfax County	N/A	N/A	Bob MacDonald, VDOT, Northern Virginia District Office 703-934-0610
Commission of the Future of Transportation Study	Appointed Commission	Report to General Assembly	July 1997	

APPENDIX C

PUBLIC TRANSIT

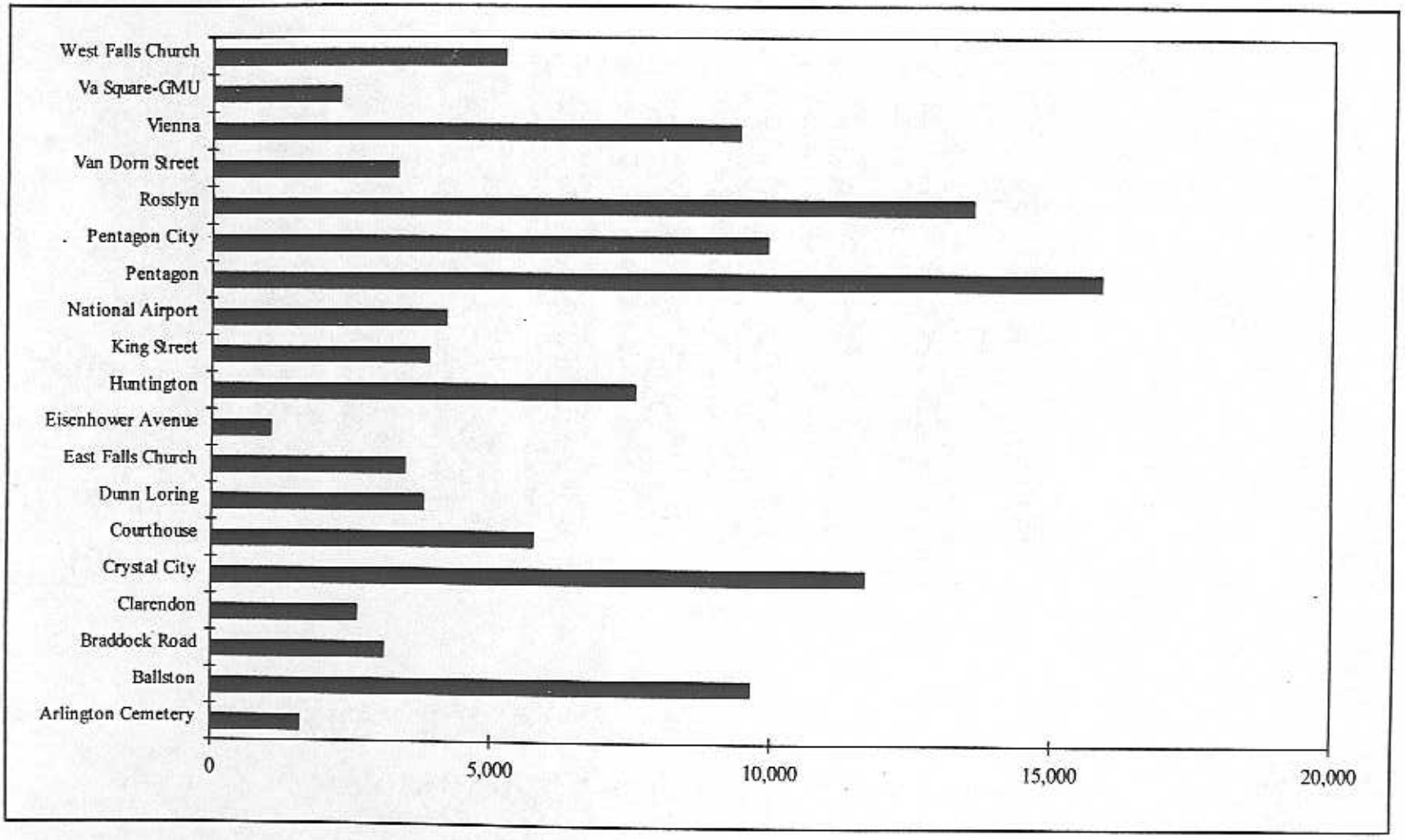
RIDERSHIP AND ROUTES

APPENDIX C-1: TRANSIT SYSTEM PHONE NUMBERS

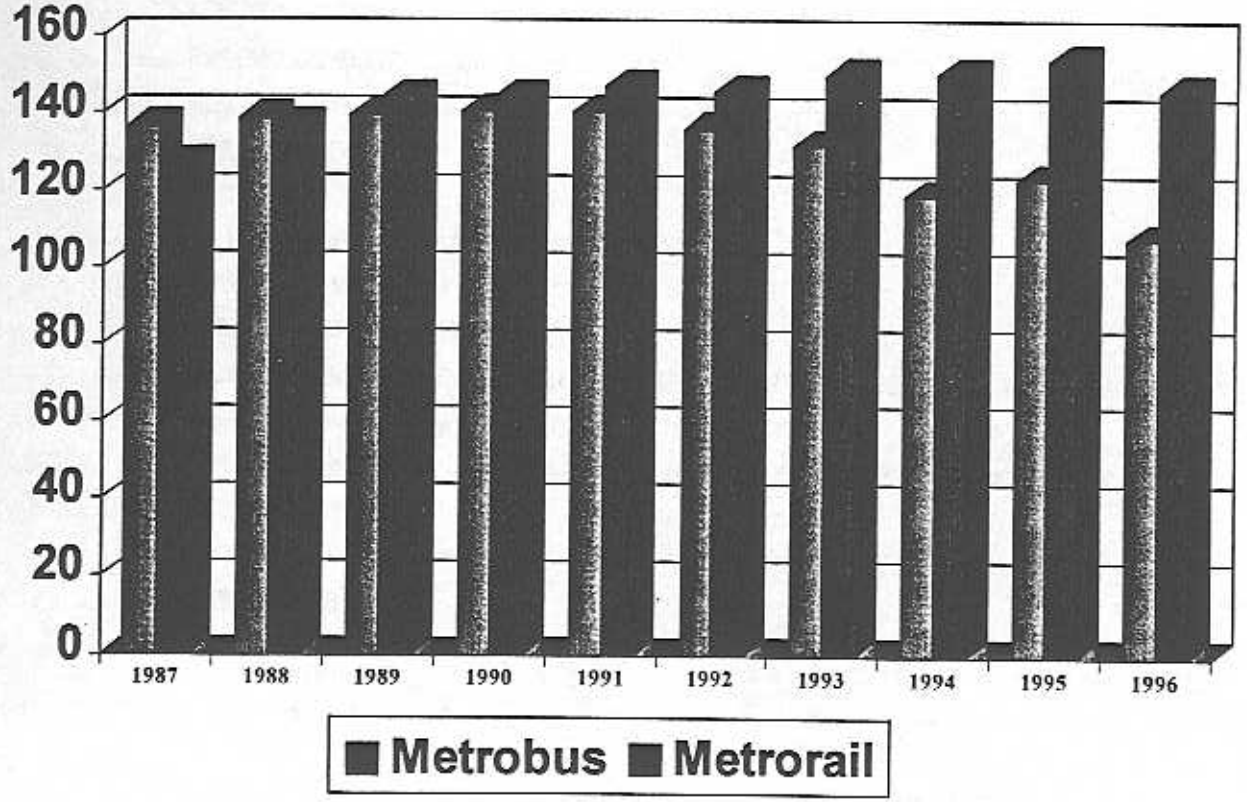
Alexandria	
DASH	(703) 370-DASH
	(800) 828-11250 (TDD)
DOT: Specialized Transportation for Persons with Disabilities	(703) 838-3800
	(703) 836-5222 (Reservations)
	(800) 828-1120 (TDD)
Senior Taxi	(703) 838-4414
Office of Transit Services & Programs	(703) 838-3800
	(703) 838-5056
Arlington	
Arlington Trolley in Crystal City	(703) 358-3575
Arlington Access	(703) 358-3681
City of Fairfax	
CUE Bus	(703) 358-7859 (Voice/TDD)
City Wheels (Paratransit)	(703) 385-7920
City of Falls Church	
Farewheels (Paratransit)	(703) 241-5042
Fairfax County	
Fairfax Connector	(703) 339-7920
Washington Metropolitan Area Transit Authority	
General Information	(202) 637-7000
MetroAccess	(301) 588-8181
Bicycle Services	(202) 962-1116
Potomac and Rappahannock Transportation Commission	
OmniLink and OmniRide	(703) 490-4811
	(800) 828-1120 (TDD)

TRANSIT SYSTEM RIDERSHIP

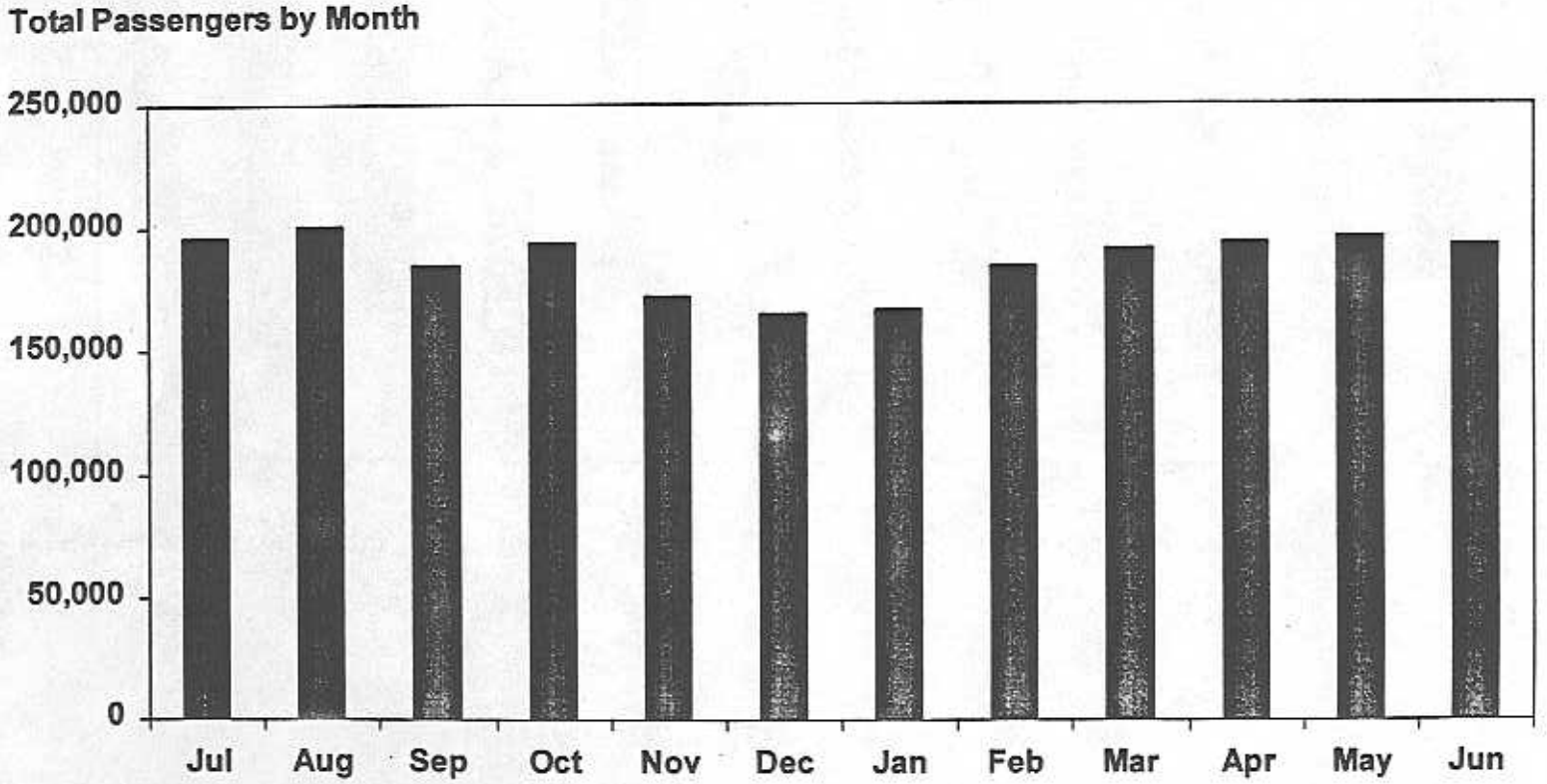
Daily Metrorail Passenger Boardings
May, 1996 Virginia Stations Only



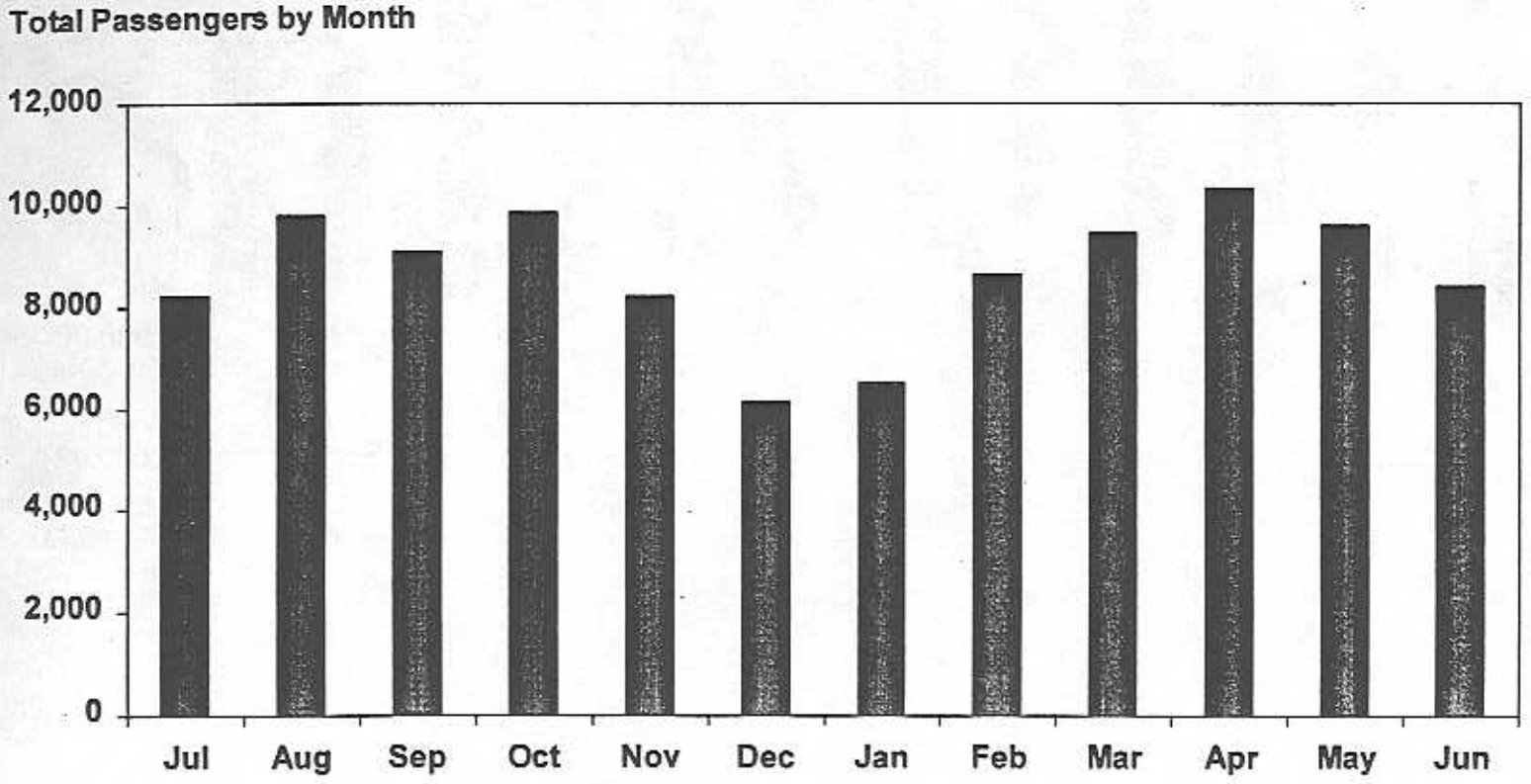
Systemwide Metrorail & Metrobus Ridership by Fiscal Year, 1987-1996



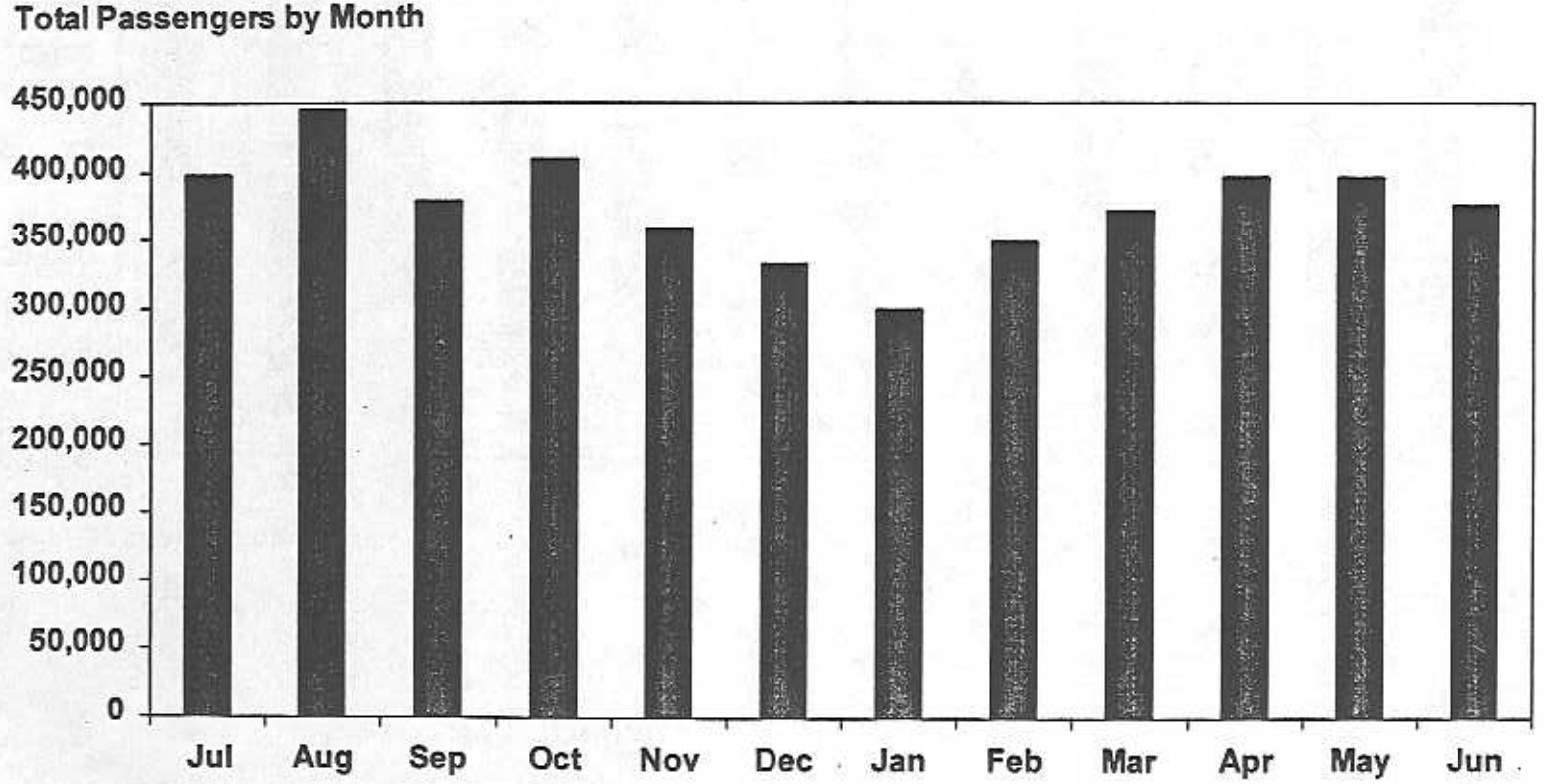
DASH
Ridership for FY 1996



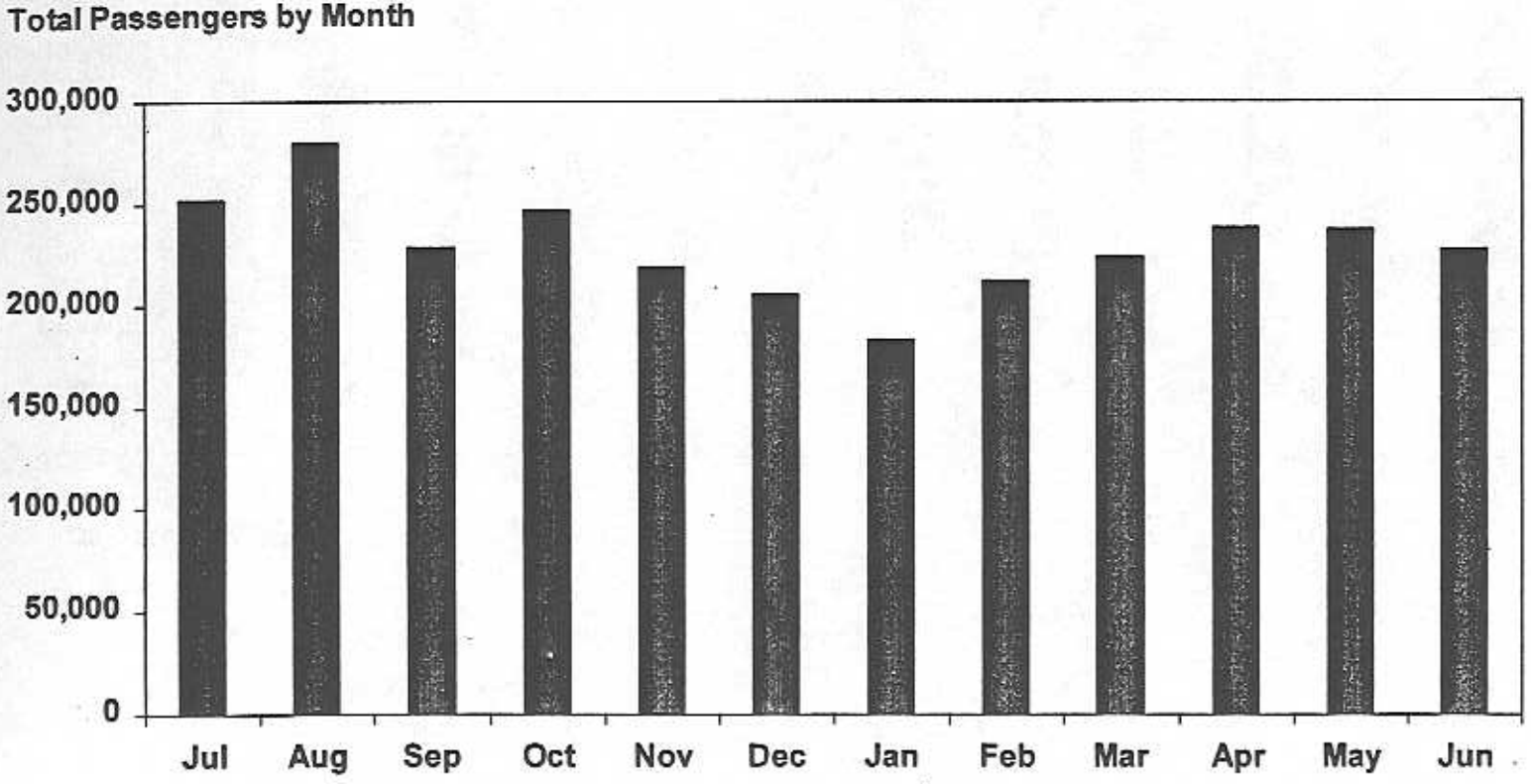
Arlington Trolley
Ridership for FY 1996



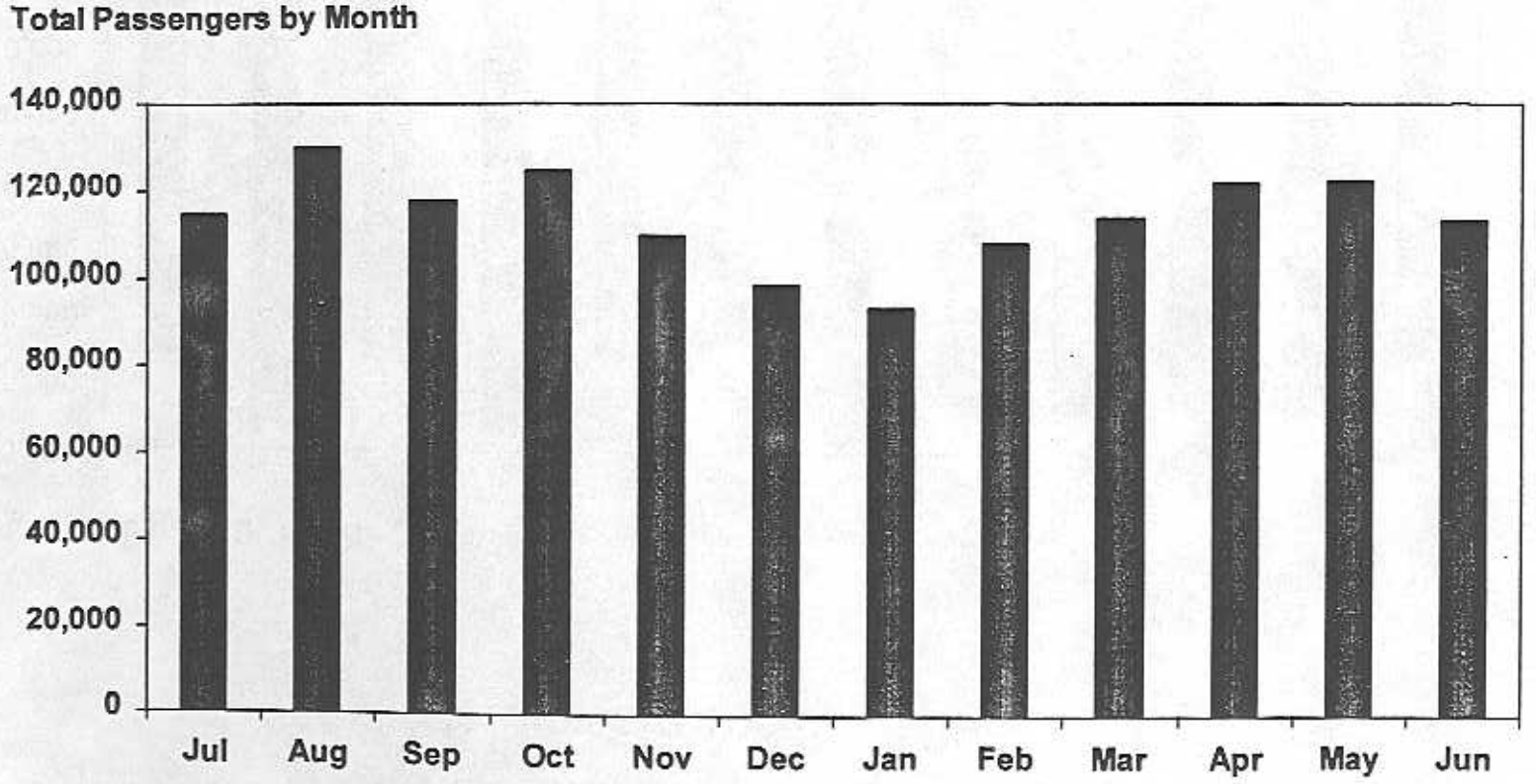
Fairfax County - Community Service Division
Ridership for FY 1996



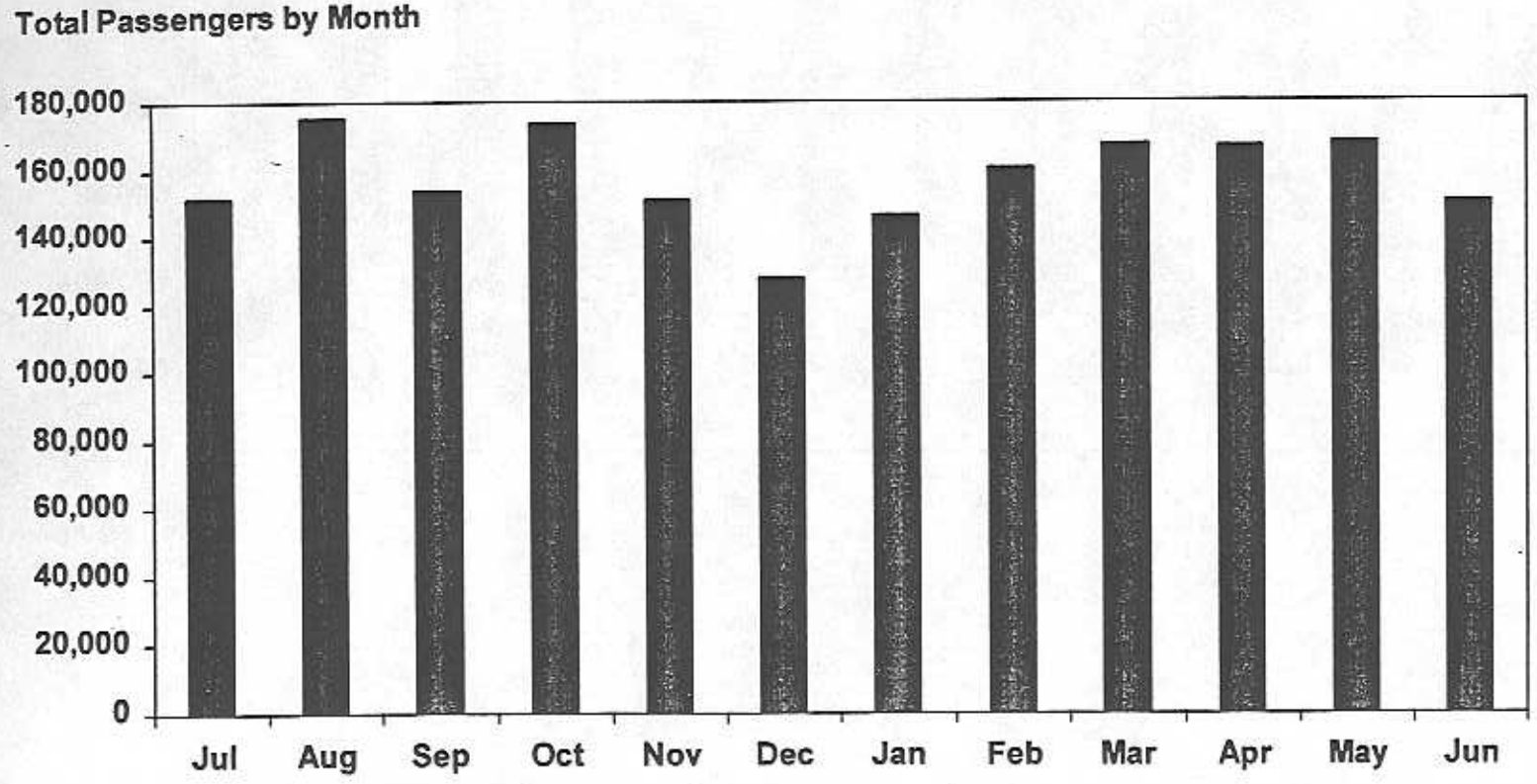
Fairfax County - Huntinton Division
Ridership for FY 1996



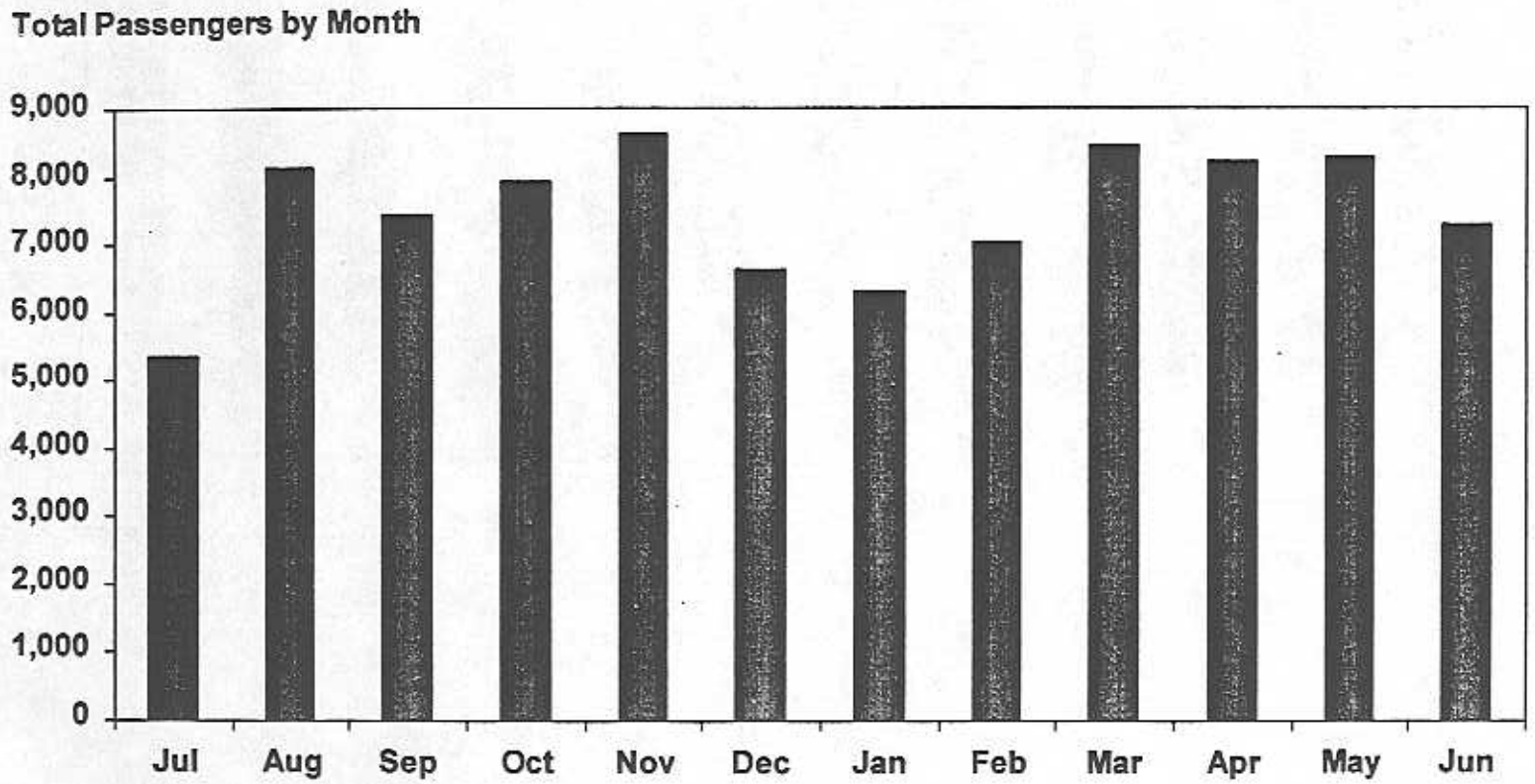
Fairfax County - Reston/Herndon Division
Ridership for FY 1996



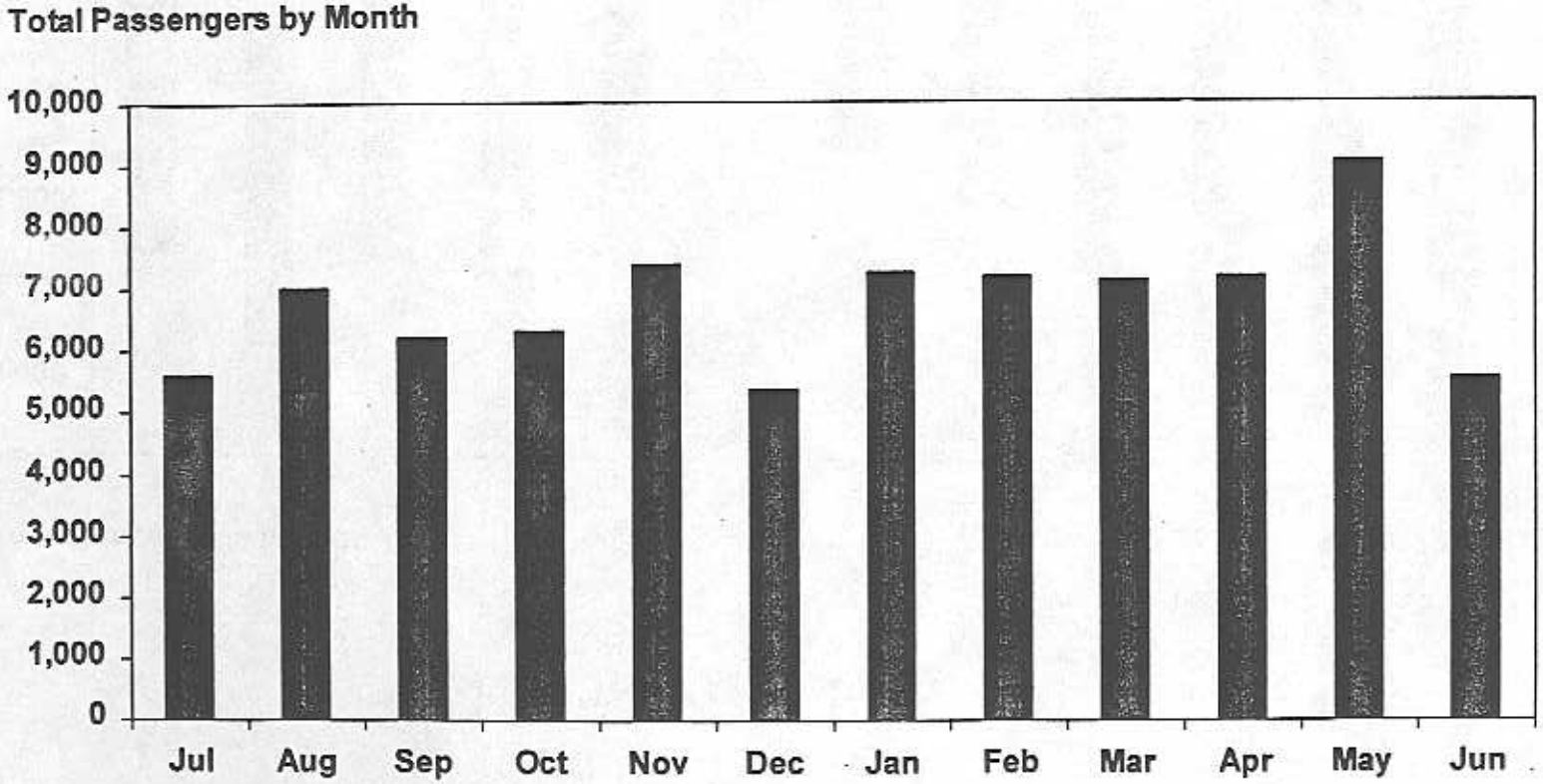
Virginia Railway Express
Ridership for FY 1996



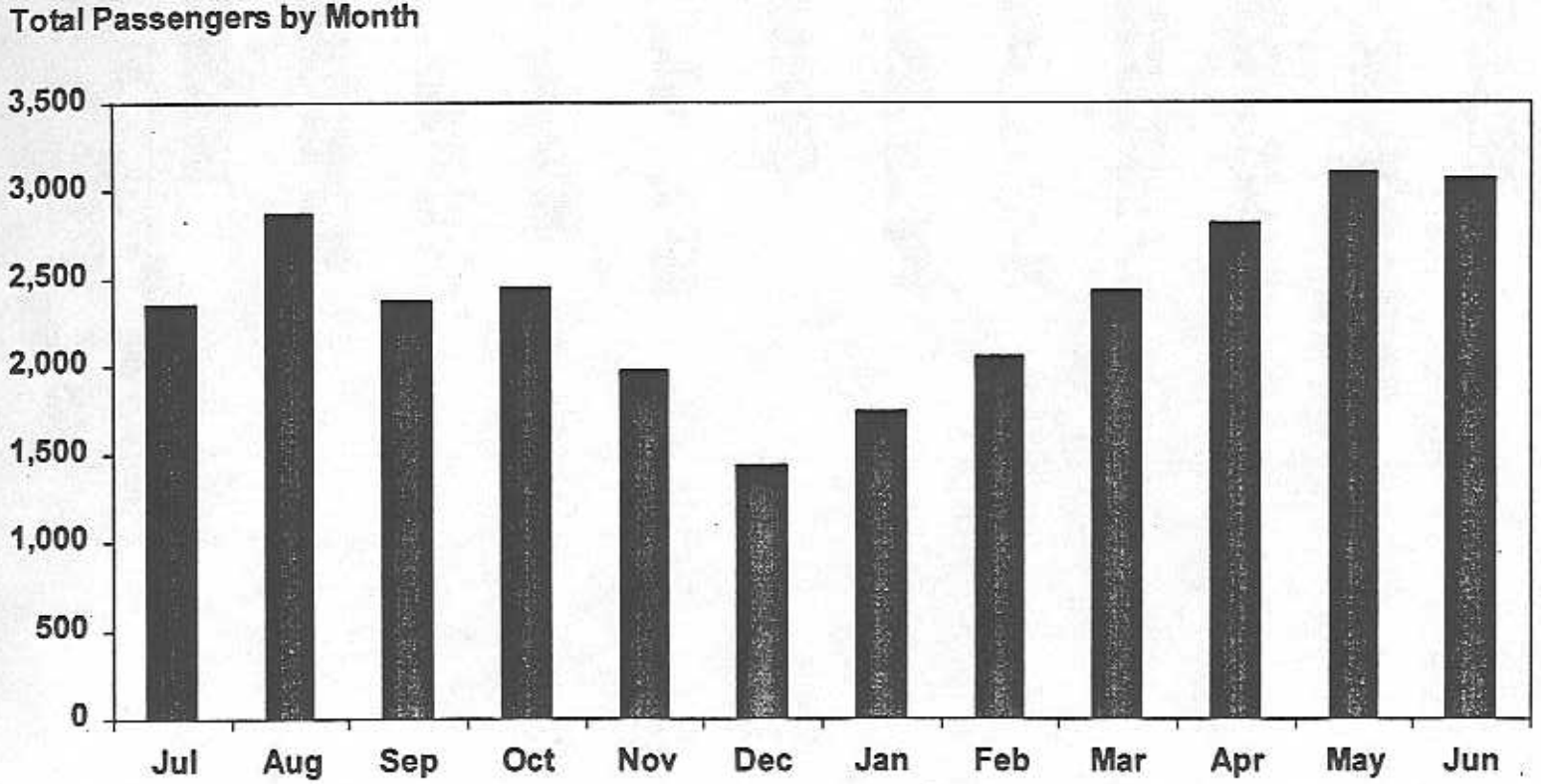
PRTC
VRE Feeder
Ridership for FY 1996



Loudoun County Commuter Service
Ridership for FY 1996



Loudoun County Transportation Association
Loudoun Ride-On
Ridership for FY 1996



TRANSIT SYSTEM MAPS

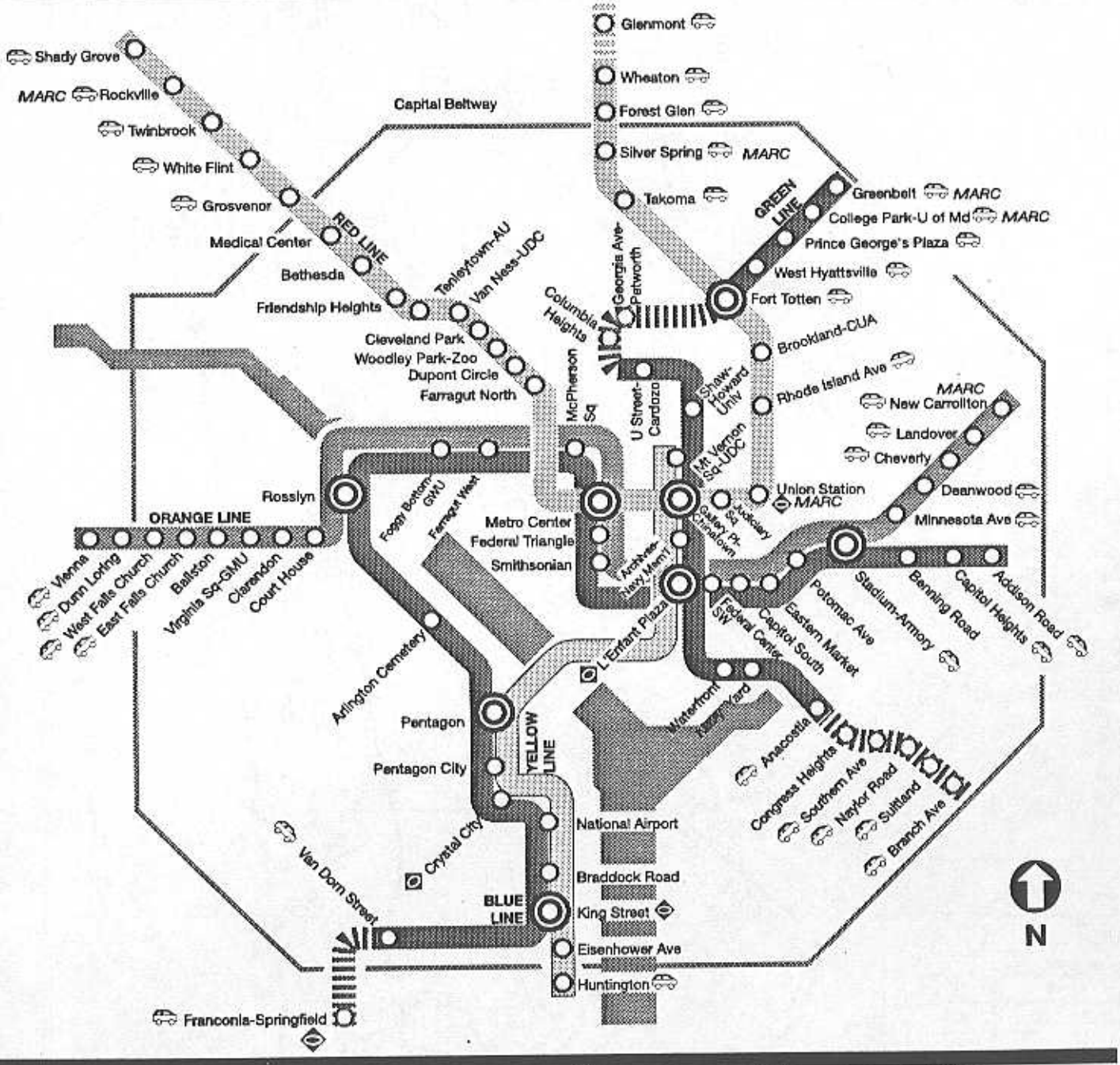
SYSTEM MAP

metro

Legend

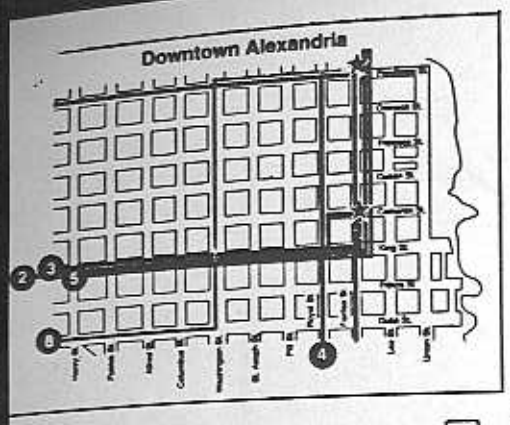
- Red Line • Glenmont/Shady Grove
- Orange Line • New Carrollton/Vienna
- Blue Line • Addison Road/Franconia-Springfield
- Green Line • Branch Avenue/Greenbelt
- Yellow Line • Huntington/Mt. Vernon Sq-UDC

MARC Commuter Rail
Parking
Station in Service
Transfer Station
Future Station



No Smoking
No Food or Drinks
No Animals (Except Guide Dogs)
No Audio or Video Devices (Without Earphones)
No Litter or Spitting
No Dangerous or Flammable Materials

DASH TRANSIT MAP

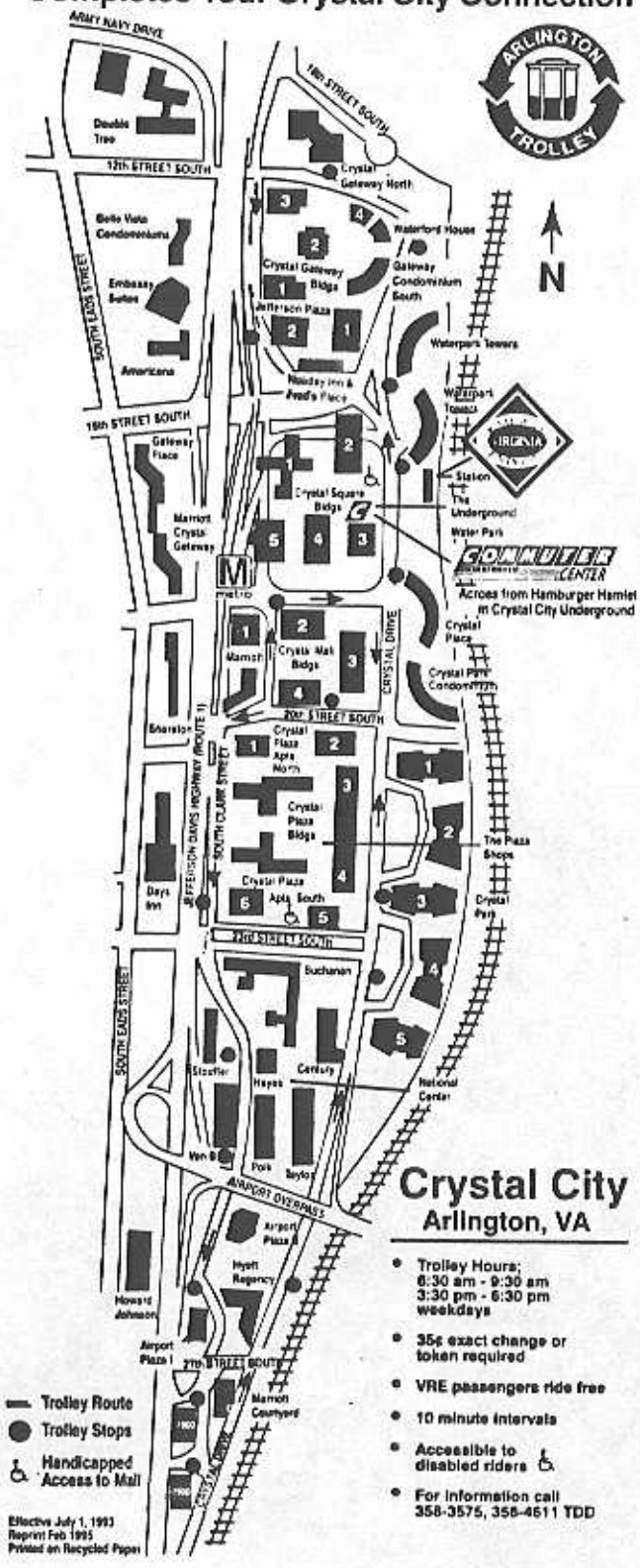


ROUTE LEGEND

- A.T. 2
- A.T. 6
- A.T. 5
  - Midday Extension
- A.T. 7
- A.T. 3
  - Rush Hour Extension
  - Midday Extension
- A.T. 4
  - Rush Hour Extension
  - Midday Extension
- A.T. 8
- Terminal Point
- One Way Travel Only
- Metrorail Stations
  - Yellow Line
  - Blue Line
- Post Office
- Government Building
- Library
- Park
- Residential Complex
- Shopping Center
- College
- School
- Hospital
- DASH PASS Sales Site

The Arlington Trolley in Crystal City

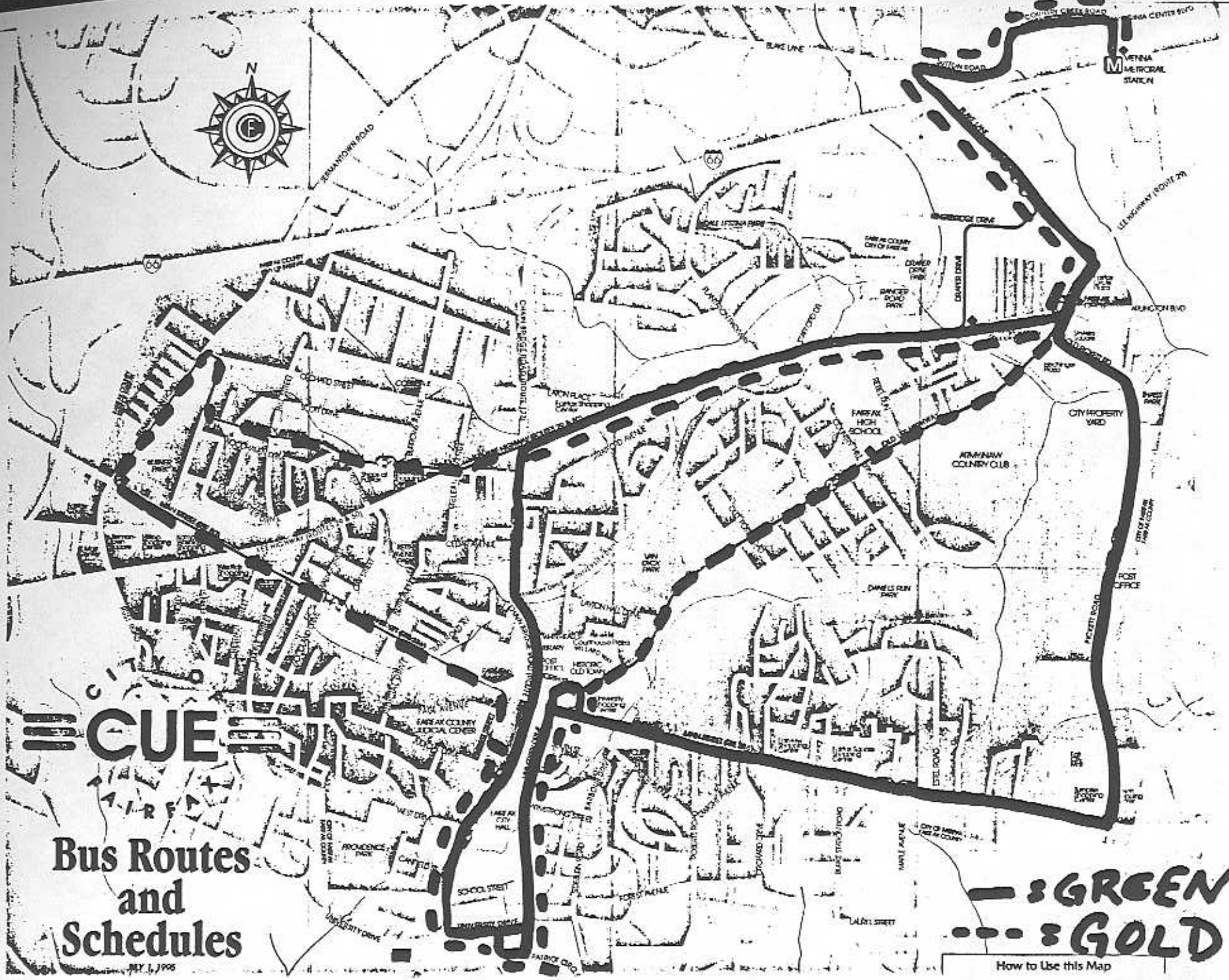
Completes Your Crystal City Connection



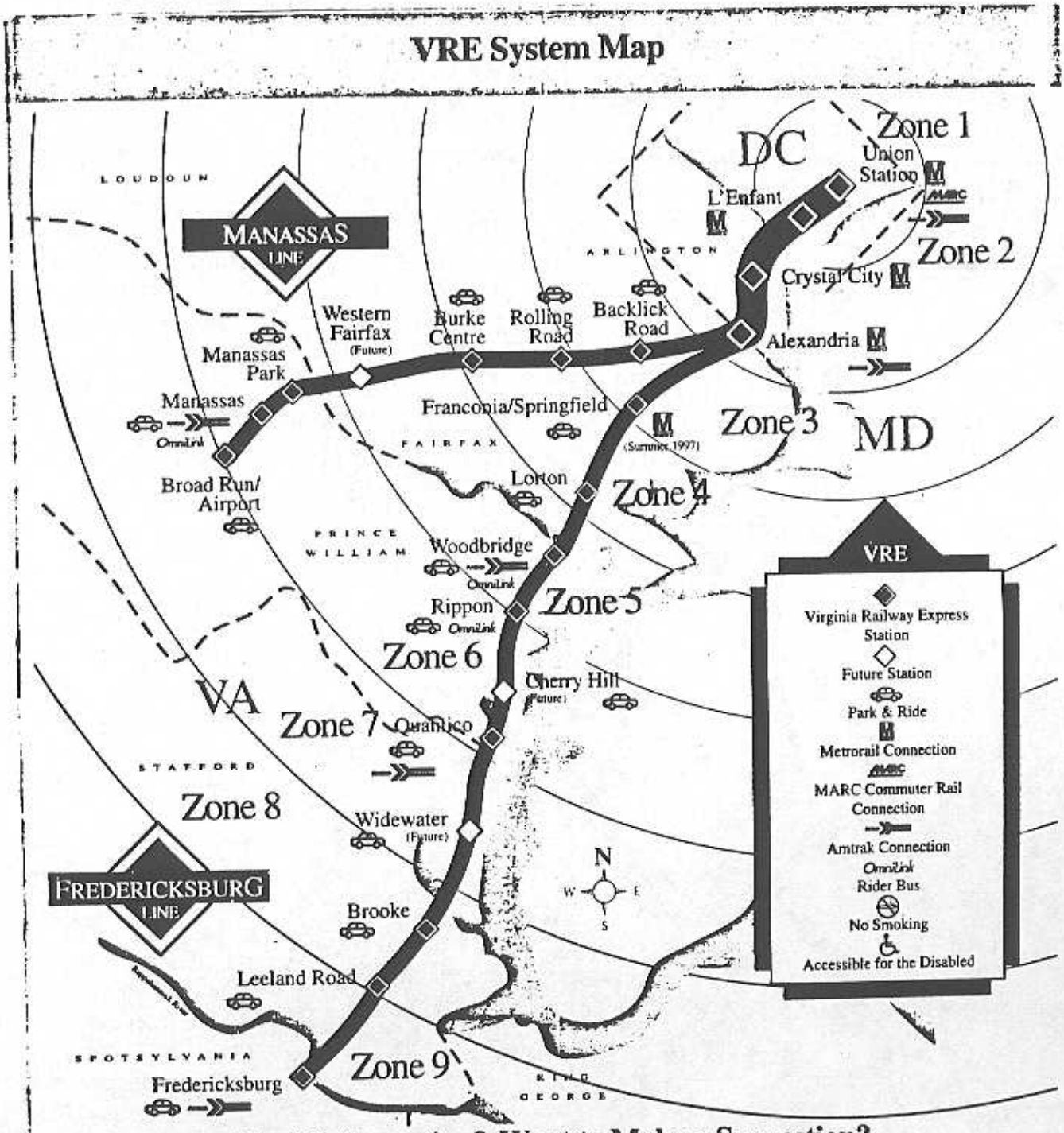
Effective July 1, 1993
Reprint Feb 1995
Printed on Recycled Paper

Crystal City
Arlington, VA

- Trolley Hours:
  6:30 am - 9:30 am
  3:30 pm - 6:30 pm
  weekdays
- 35¢ exact change or token required
- VRE passengers ride free
- 10 minute intervals
- Accessible to disabled riders
- For information call 358-3575, 358-4611 TDD


CUE
Bus Routes and Schedules
— : GREEN
--- : GOLD
How to Use this Map

VRE System Map



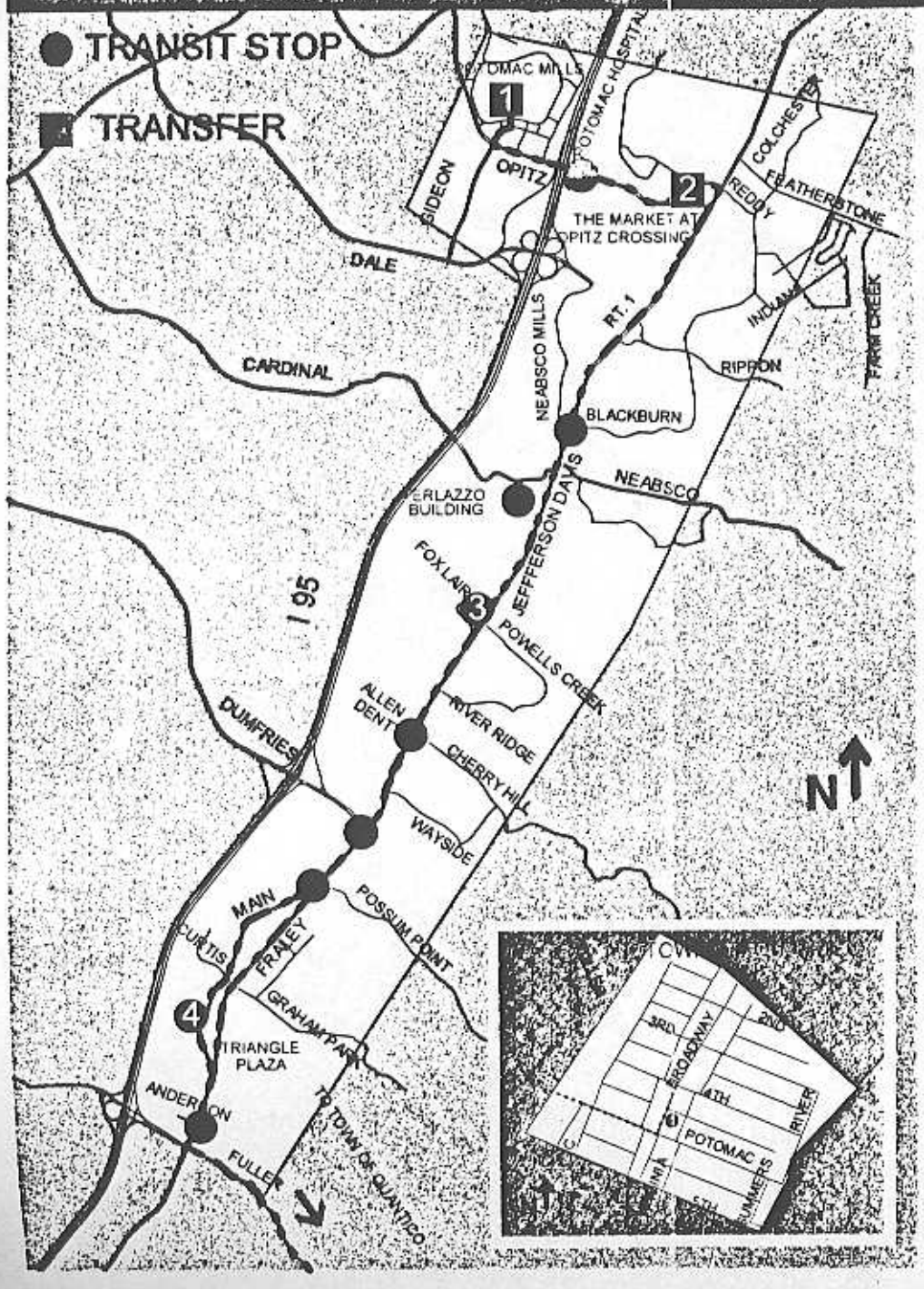
Need Information? Want to Make a Suggestion?

Late train information, special events, comments—
all at your fingertips 24 hours a day, 365 days a year.

Call 703-658-6200 or 1-800-RIDE-VRE.

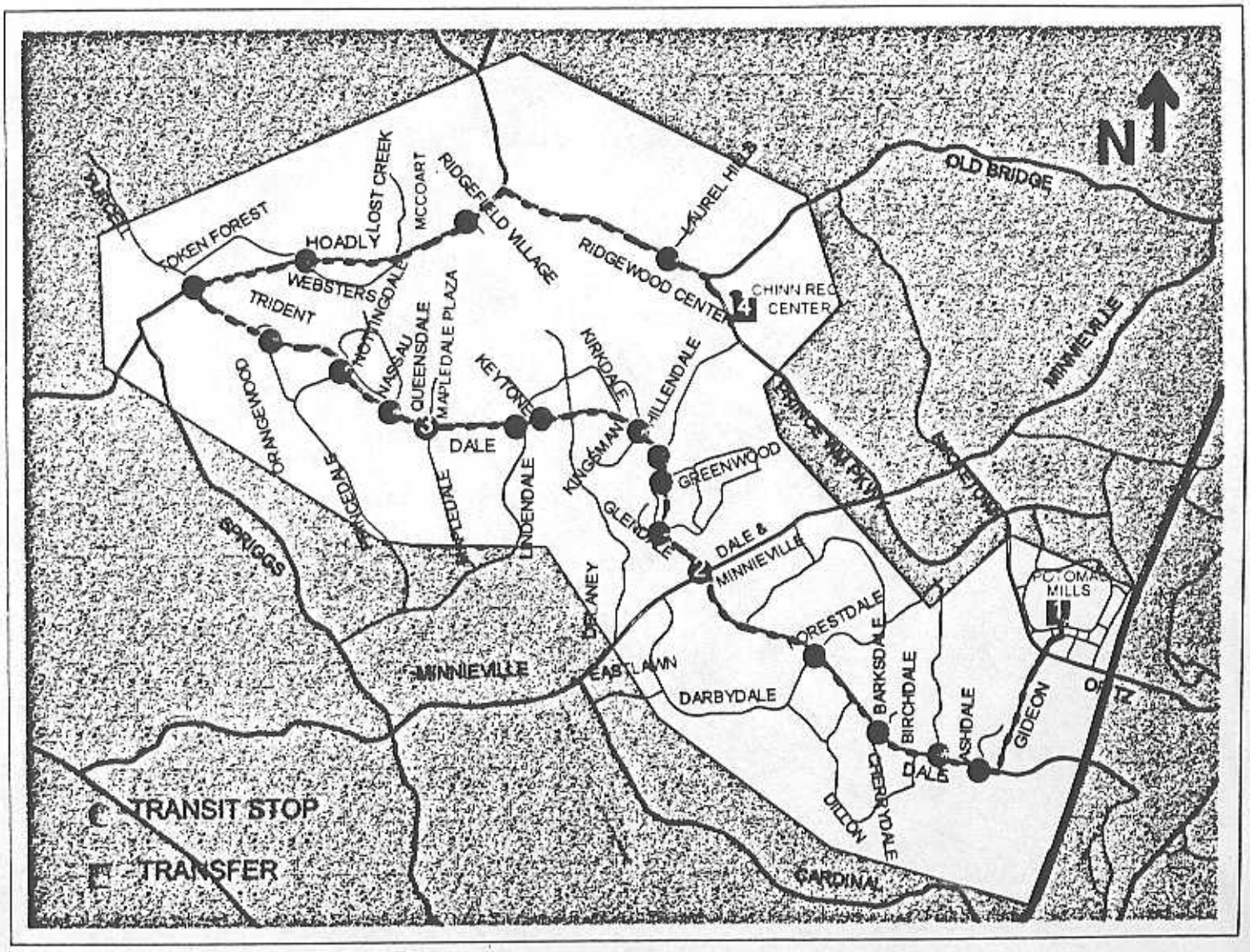
In Prince William County, call P.R.T.C. at 703-490-4811 ext. 2 for feeder bus information.

Dumfries



The unshaded area on the map shows where this *O*mniLink service is available. *O*mniLink vehicles will stop at all of the *O*mniLink stops. If you cannot get to one of the *O*mniLink stops, or if your destination is not close to a stop, call *O*mniLink at 490-4811, ext. 2 to make a reservation. **Buses enroute to or from the Town of Quantico are not authorized to stop or deviate from the Fuller Road/Potomac Avenue corridor to pick up or discharge passengers inside Marine Corps Base boundaries.** As *O*mniLink vehicles may not travel on the center line streets between the points shown, be sure to **wait only at transit stops or reservation locations**. Refer to other *O*mniLink brochures or call us to see how *O*mniLink can serve your travel needs. This schedule reads across the columns, for example, the first Potomac Mills bus leaves at 8:15 am then goes to Market at Opitz Crossing at 8:24 am and continues to Fox Lair Drive at 8:33 am then to Triangle Plaza at 8:44 am, arriving in Quantico at 8:59 am.

Dale City



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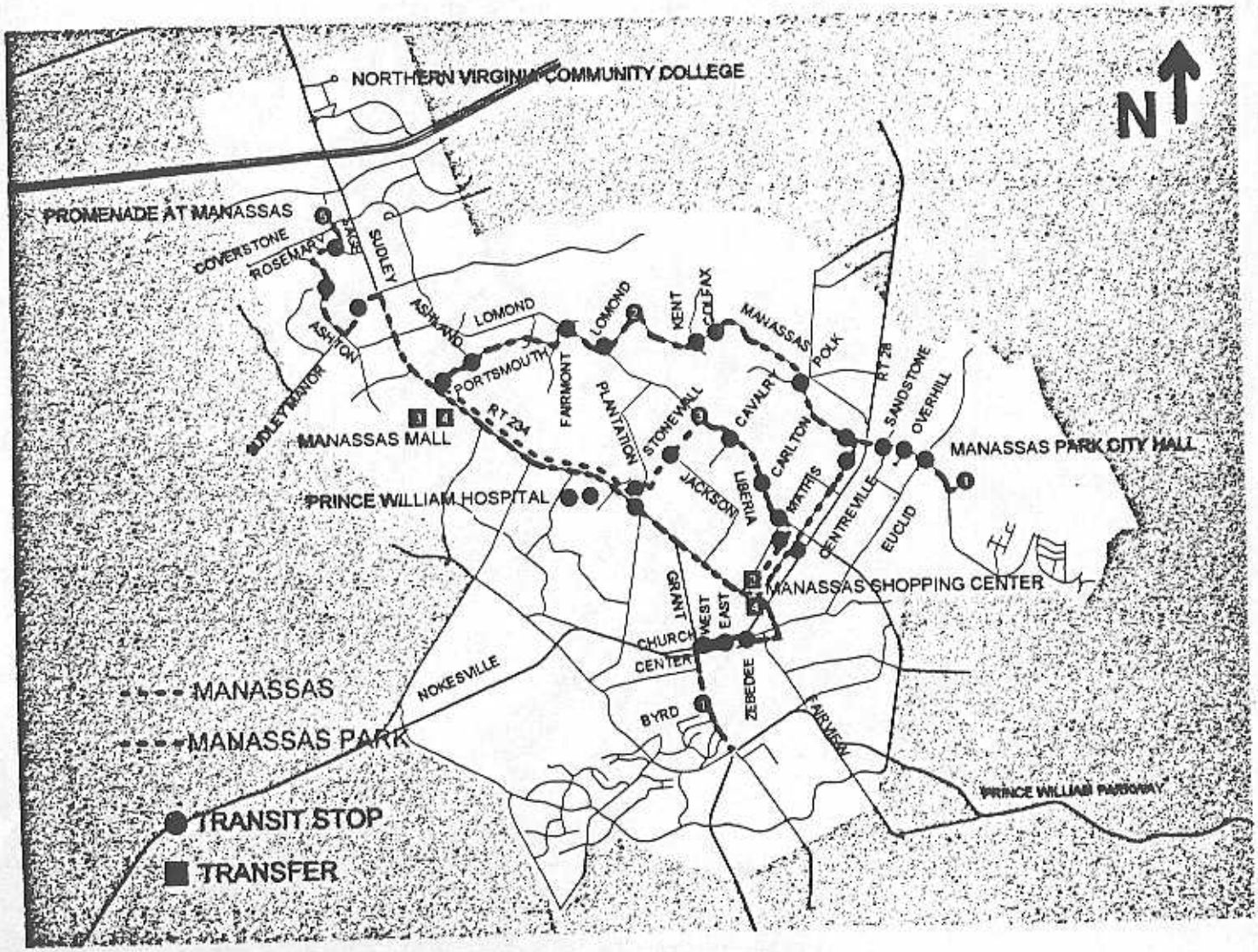
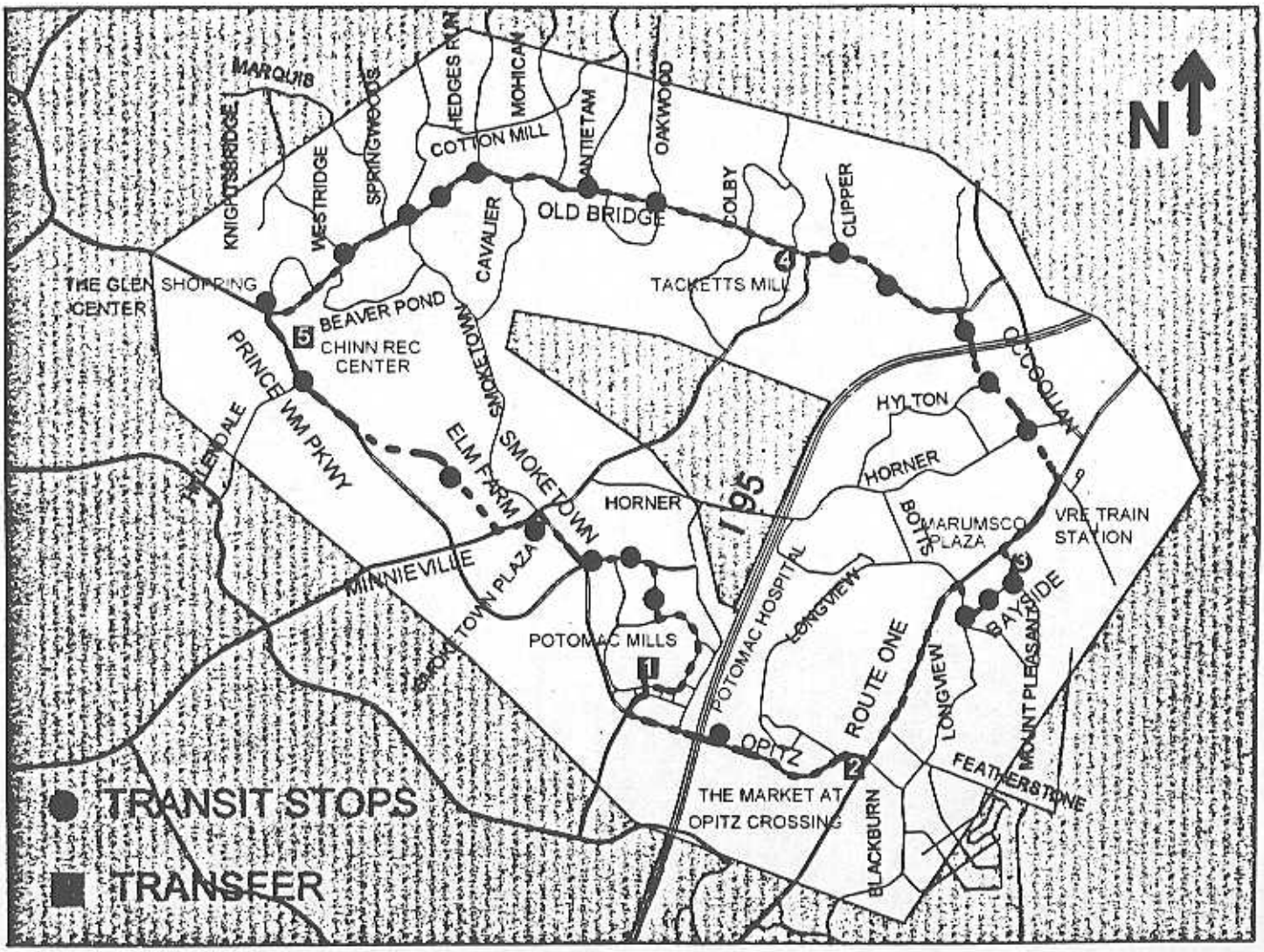
Manassas Park & Manassas



Woodbridge — Lake Ridge



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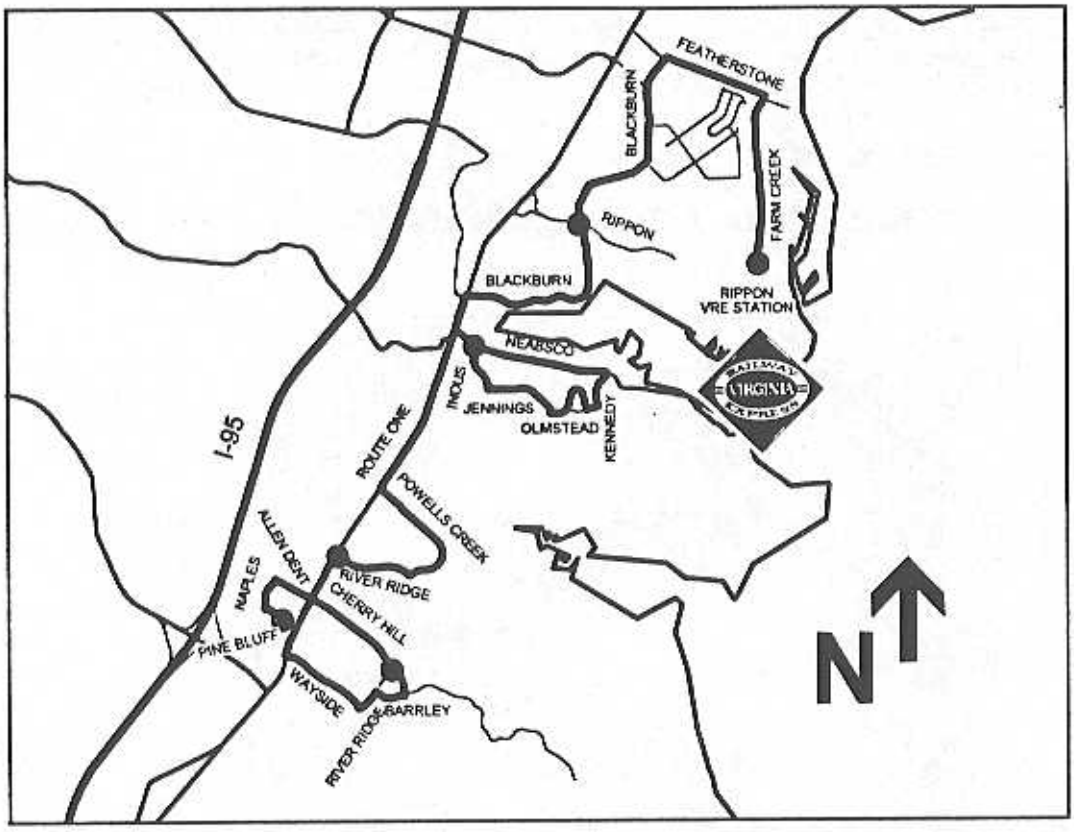
OmniLink FEEDER ROUTE ONE SCHEDULE



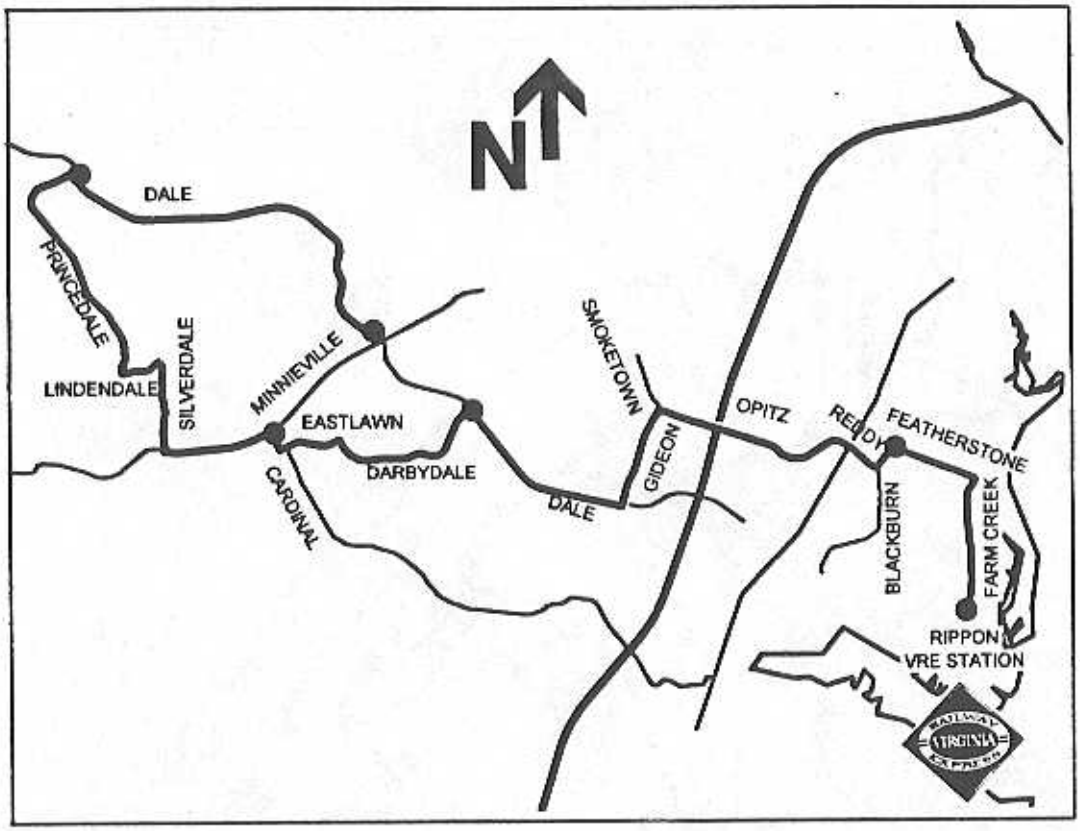
ROUTE ONE

To Rippon VRE Train Station – Morning Trips				
Train #	**300**	**302**	**304**	**306**
Pine Bluff Drive at Route One	5:05 AM	5:36 AM	6:12 AM	6:47 AM
Cherry Hill at River Ridge Boulevard	5:10 AM	5:41 AM	6:17 AM	6:52 AM
River Ridge Boulevard at Route One	5:15 AM	5:46 AM	6:22 AM	6:57 AM
Indus Drive at Jennings Street	5:22 AM	5:53 AM	6:29 AM	7:04 AM
Blackburn Road at Rippon Boulevard	5:29 AM	6:00 AM	6:36 AM	7:11 AM
Arrive Rippon VRE Train Station	5:37 AM	6:08 AM	6:44 AM	7:19 AM
VRE Train Departs	5:47 AM	6:18 AM	6:54 AM	7:29 AM

From Rippon VRE Train Station – Evening Trips					
Train #	**301**	**303**	**305**	**307**	**309**
VRE Train Arrives	4:34 PM	5:33 PM	6:08 PM	6:48 PM	7:29 PM
Depart Rippon VRE Train Station	4:39 PM	5:38 PM	6:13 PM	6:53 PM	7:34 PM
Blackburn Road at Rippon Boulevard	4:50 PM	5:49 PM	6:24PM	7:04 PM	7:45 PM
Indus Drive at Jennings Street	4:58 PM	5:57 PM	6:32 PM	7:12 PM	7:53 PM
River Ridge Boulevard at Route One	5:09 PM	6:08 PM	6:43 PM	7:23 PM	8:04 PM
Cherry Hill at River Ridge Boulevard	5:14 PM	6:13 PM	6:48 PM	7:28 PM	8:09 PM
Pine Bluff Drive at Route One	5:19 PM	6:18 PM	6:53 PM	7:33 PM	8:14 PM

Effective July 15, 1996

OmniLink FEEDER DALE CITY SCHEDULE

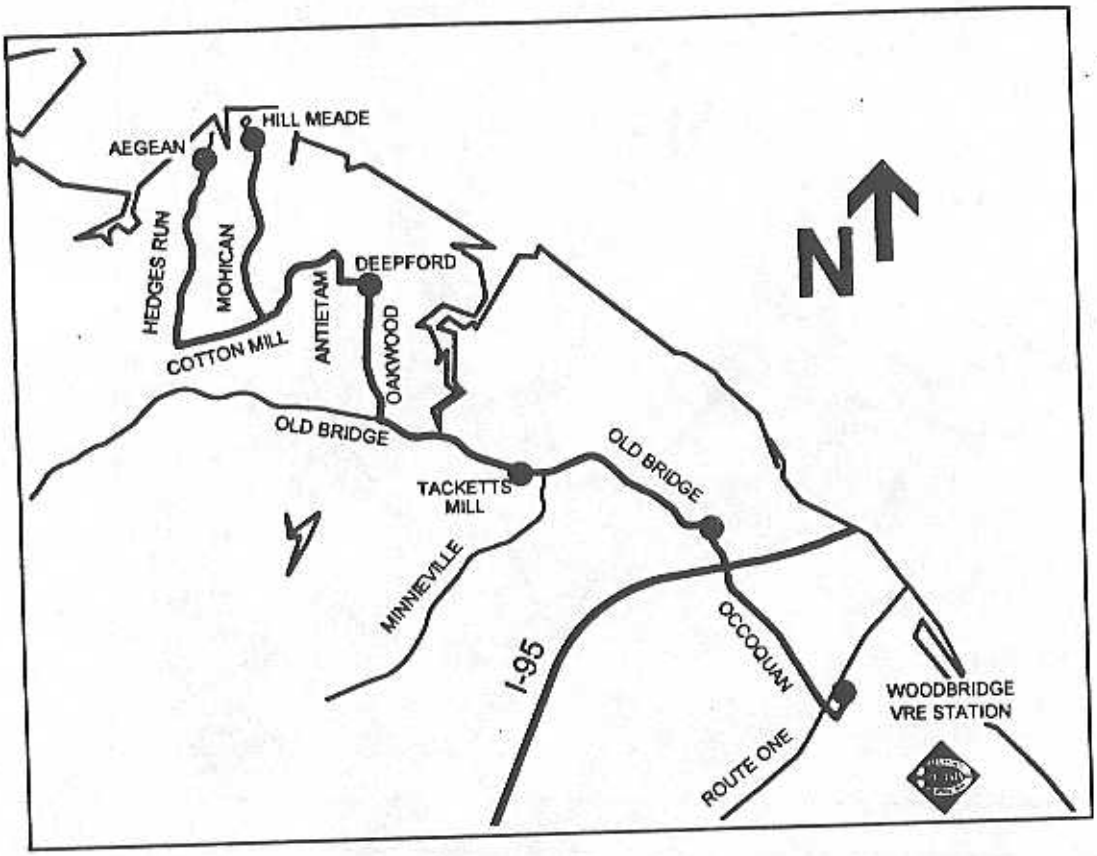


DALE CITY

To Rippon VRE Train Station – Morning Trips				
Train #	**300**	**302**	**304**	**306**
Dale Boulevard at Minnieville Road	5:01 AM	5:32 AM	6:08 AM	6:43 AM
Princedale Drive at Dale Boulevard	5:09 AM	5:40 AM	6:16 AM	6:51 AM
Minnieville Road at Cardinal Drive	5:17 AM	5:48 AM	6:24 AM	6:59 AM
Darbydale Avenue at Dale Boulevard	5:22 AM	5:53 AM	6:29 AM	7:04 AM
Featherstone Road at Blackburn Road	5:34 AM	6:05 AM	6:41 AM	7:16 AM
Arrive Rippon VRE Train Station	5:37 AM	6:08 AM	6:44 AM	7:19 AM
VRE Train Departs	5:47 AM	6:18 AM	6:54 AM	7:29 AM

From Rippon VRE Train Station – Evening Trips					
Train #	**301**	**303**	**305**	**307**	**309**
VRE Train Arrives	4:34 PM	5:33 PM	6:08 PM	6:48 PM	7:29 PM
Depart Rippon VRE Train Station	4:39 PM	5:38 PM	6:13 PM	6:53 PM	7:34 PM
Featherstone Road at Blackburn Road	4:49 PM	5:48 PM	6:23 PM	7:03 PM	7:44 PM
Darbydale Avenue at ale Boulevard	5:04 PM	6:03 PM	6:38 PM	7:18 PM	7:59 PM
Minnieville Road at Cardinal Drive	5:10 PM	6:09 PM	6:44 PM	7:24 PM	8:05 PM
Princedale Drive at Dale Boulevard	5:20 PM	6:19 PM	6:54 PM	7:34 PM	8:15 PM
Dale Boulevard at Minnieville Road	5:28 PM	6:27 PM	7:02 PM	7:42 PM	8:23 PM

OmniLink FEEDER LAKE RIDGE SCHEDULE

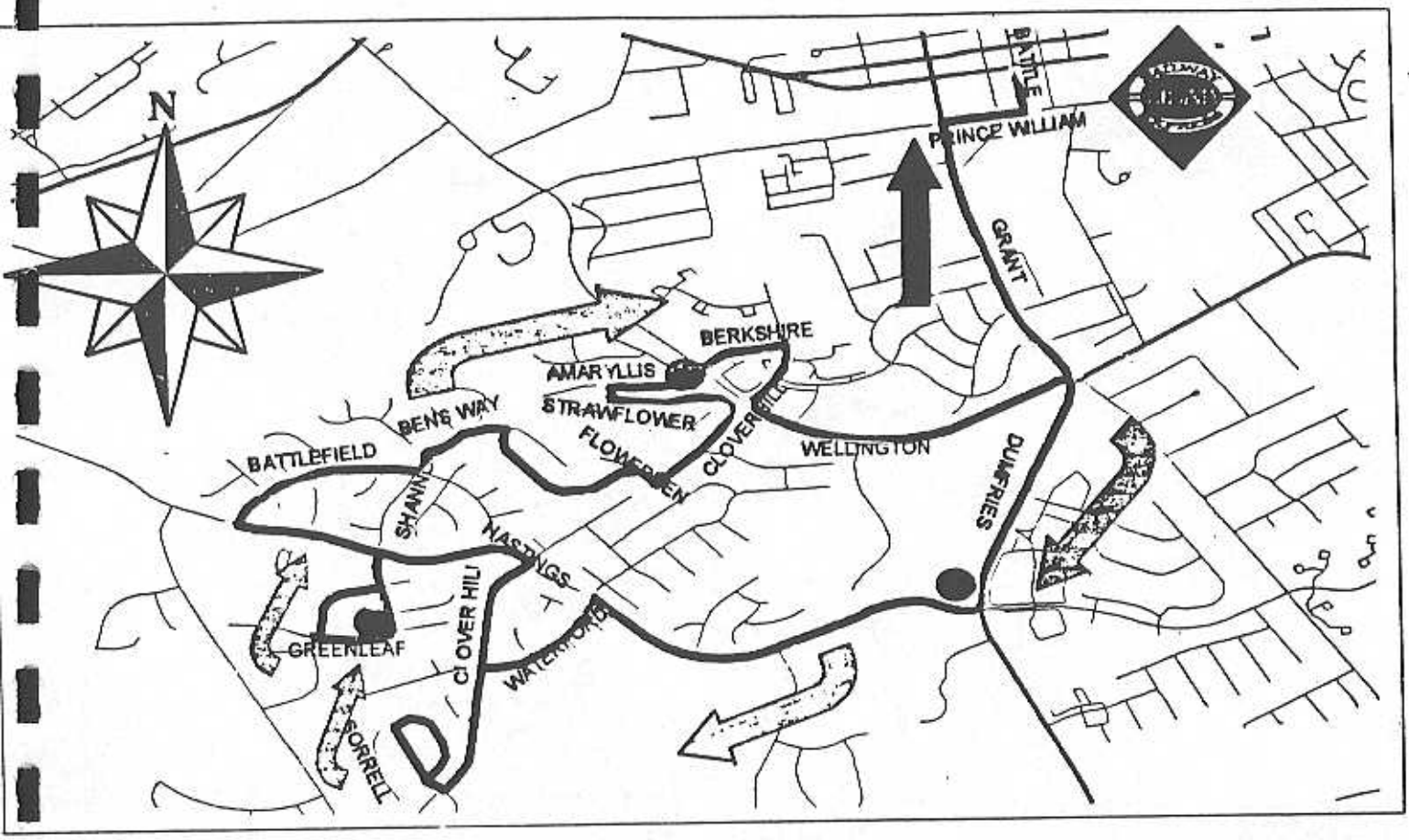


LAKE RIDGE

To Woodbridge VRE Train Station – Morning Trips				
Train #	300	302	304	306
Hedges Run Drive at Aegean Terrace	5:16 AM	5:45 AM	6:21 AM	6:56 AM
Mohican Road at Hill Meade Lane	5:23 AM	5:52 AM	6:28 AM	7:03 AM
Deepford Drive at Oakwood Drive	5:30 AM	5:59 AM	6:35 AM	7:10 AM
Old Bridge Road at Tacketts Mill	5:34 AM	6:03 AM	6:39 AM	7:14 AM
Old Bridge Road at Occoquan Road	5:37 AM	6:08 AM	6:44 AM	7:19 AM
Arrive Woodbridge VRE Train Station	5:43 AM	6:14 AM	6:50 AM	7:25 AM
VRE Train Departs	5:53 AM	6:24 AM	7:00 AM	7:35 AM

From Woodbridge VRE Train Station – Evening Trips					
Train #	301	303	305	307	309
VRE Train Arrives	4:29 PM	5:28 PM	06:03 PM	6:43 PM	7:24 PM
Depart Woodbridge VRE Train Station	4:34 PM	5:33 PM	06:08 PM	6:48 PM	7:29 PM
Old Bridge Road at Occoquan Road	4:42 PM	5:41 PM	06:16 PM	6:56 PM	7:37 PM
Old Bridge Road at Tacketts Mill	4:49 PM	5:48 PM	06:23 PM	7:03 PM	7:44 PM
Deepford Drive at Oakwood Drive	4:52 PM	5:51 PM	06:26 PM	7:06 PM	7:47 PM
Mohican Road at Hill Meade Lane	4:58 PM	5:57 PM	06:32 PM	7:12 PM	7:53 PM
Hedges Run Drive at Aegean Terrace	5:05 PM	6:04 PM	06:39 PM	7:19 PM	8:00 PM

OmniLink MANASSAS FEEDER SCHEDULE



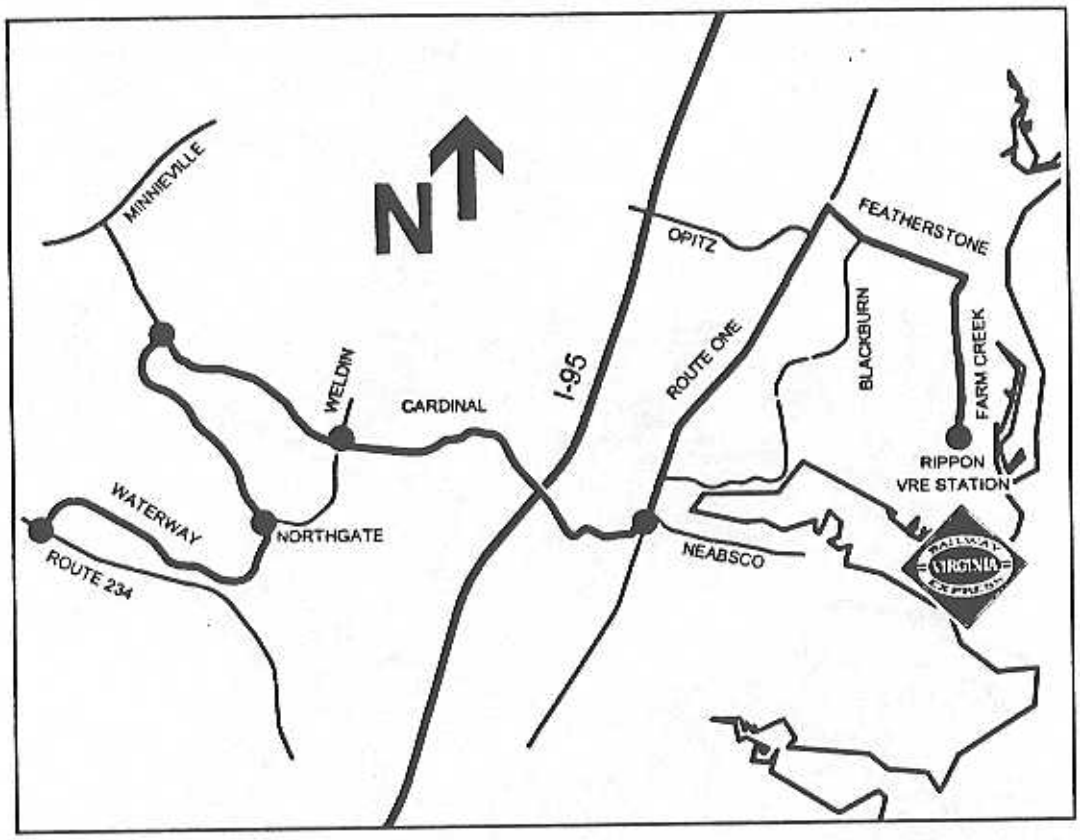
MORNING TRIPS TO MANASSAS VRE TRAIN STATION TO MEET VRE TRAIN

	#322	#324	#326	#328	#330
Dumfries Road at Hastings Drive	4:55 am	5:27 am	5:57 am	6:27 am	6:57 am
Shannon at Greenleaf Drive	5:03 am	5:35 am	6:05 am	6:35 am	7:05 am
Amaryllis Avenue at Wellington Road	5:09 am	5:41 am	6:11 am	6:41 am	7:11 am
Arrive at Manassas VRE Train Station	5:15 am	5:47 am	6:17 am	6:47 am	7:17 am
VRE TRAIN DEPARTS	5:25 am	5:57 am	6:27 am	6:57 am	7:27 am

EVENING TRIPS FROM MANASSAS VRE TRAIN STATION TO MEET VRE TRAIN

	#323	#325	#327	#329	#331
VRE TRAIN ARRIVES	4:57 pm	5:27 pm	6:10 pm	6:39 pm	7:26 pm
Depart Manassas VRE Train Station	5:02 pm	5:32 pm	6:15 pm	6:44 pm	7:31 pm
Amaryllis Avenue at Wellington Road	5:08 pm	5:38 pm	6:21 pm	6:50 pm	7:37 pm
Shannon at Greenleaf Drive	5:15 pm	5:45 pm	6:28 pm	6:57 pm	7:44 pm
Dumfries Road at Hastings Drive	5:23 pm	5:53 pm	6:36 pm	7:05 pm	7:52 pm

OmniLink FEEDER MONTCLAIR SCHEDULE



MONTCLAIR

To Rippon VRE Train Station – Morning Trips				
Train #	**300**	**302**	**304**	**306**
Waterway Drive at Route 234	5:12 AM	5:43 AM	6:19 AM	6:54 AM
Waterway Drive at Northgate Drive	5:17 AM	5:48 AM	6:24 AM	6:59 AM
Waterway Drive at Cardinal Drive	5:20 AM	5:51 AM	6:27 AM	7:02 AM
Cardinal Drive at Weldin Drive	5:23 AM	5:54 AM	6:30 AM	7:05 AM
Cardinal Drive at Route One	5:28 AM	5:59 AM	6:35 AM	7:10 AM
Arrive Rippon VRE Train Station	5:37 AM	6:08 AM	6:44 AM	7:19 AM
VRE Train Departs	5:47 AM	6:18 AM	6:54 AM	7:29 AM

From Rippon VRE Train Station – Evening Trips					
Train #	**301**	**303**	**305**	**307**	**309**
VRE Train Arrives	4:34 PM	5:33 PM	6:08 PM	6:48 PM	7:29 PM
Depart Rippon VRE Train Station	4:39 PM	5:38 PM	6:13 PM	6:53 PM	7:34 PM
Cardinal Drive at Route One	4:48 PM	5:47 PM	6:22 PM	7:02 PM	7:43 PM
Cardinal Drive at Weldin Drive	4:52 PM	5:51 PM	6:26 PM	7:06 PM	7:47 PM
Waterway Drive at Cardinal Drive	4:56 PM	5:55 PM	6:30 PM	7:10 PM	7:51 PM
Waterway Drive at Northgate Drive	4:59 PM	5:58 PM	6:33 PM	7:13 PM	7:54 PM
Waterway Drive at Route 234	5:04 PM	6:03 PM	6:38 PM	7:18 PM	7:59 PM

Appendix C: Transit System Maps

System maps for Metrobus and Fairfax Connector could not be condensed into one page. To obtain route or schedule information call:

Metrobus- (202) 637-7000
Fairfax Connector- (703) 339-7200

For a system map, visit any transit information center:

Ballston Transit Store
Ballston Common Mall, first floor
4238 Wilson Blvd.
Arlington, Virginia 22203
(703) 528-3541
TDD (703)528-7969

Crystal City Commuter Service Center
1615-B Crystal Square Arcade
Arlington, Virginia 22202
(703)413-4287
TDD (800)828-1120

Rosslyn Transit Store
1700 North Moore Street
Arlington, Virginia 22209
(703) 525-1995

APPENDIX D

FARE AND TRANSFER POLICIES

Appendix D-1: Comparisons of Public Transit Fares

	Regular Fares		
Transit System	**Peak Periods**	**Off-Peak Periods**	**Multiple Trips**
Metrorail:			
First 3 composite miles	$1.10		High Value-10 percent bonus on $20.00 or more.
Each additional composite mile over 3 up to 6	$0.195		Rail Fast Pass-$50.00-2 weeks unlimited travel. Period begins on day pass first used by patron.
Each composite mile over 6	$0.165		One Day Pass-$5.00-unlimited travel, after 9:30 a.m. on weekdays, all day Sat., Sun., and Holidays
Maximum peak period fare	$3.25		Metrorail Short-Trip Pass-$35.00-unlimited rail trips costing $1.60 or less for 2 weeks. Period begins on day pass first used by patron.
First 7 composite miles		$1.10	
Composite miles over 7 up to 10		$1.60	Metrorail 28-day Pass-$100.00-unlimited rail trips for 28 consecutuve days. Period begins when first used by patron.
Composite miles exceeding 10		$2.10	Bus/Rail Super Pass-$65.00-2 weeks unlimited travel.

Appendix D-1: COMPARISONS OF PUBLIC TRANSIT FARES - CONTINUED

Transit	Peak Fares		Off-Peak Fares	
Metrobus Virginia - Partial Listing	**Cash**	**with Rail Transfer**	**Cash**	**with Rail Transfer**
Within one zone in Virginia	$1.10	$0.85	$1.10	$0.85
Between Virginia Zones G & 1-Arlington	$1.10	$0.85	$1.10	$0.85
Virginia Zones G & 1-Alexandria	$1.45	$1.20	$1.10	$0.85
Virginia Zones G & 2	$1.80	$1.55	$1.10	$0.85
Virginia Zones G & 3	$2.15	$1.90	$1.10	$0.85
Washington DC to Virginia Zone G	$1.45	$0.60	$1.45	$0.60
Virginia Zone G to Washington DC	$1.45	$1.20	$1.45	$1.20

MULTIPLE TRIPS - Metrobus Flash Passes - valid for 2 weeks:

1. Virginia Base Flash Pass - $20.00 with no rail value. Full base fare within one zone in Virginia.
2. Virginia 2 - Zone Pass - $27.00 with no rail value, two-zone trip within VA and base fare in MD or Washington DC during peak periods, and full fare for Metrobus trips anywhere during off peak.
3. Virginia 3 - Zone Flash Passes - $34.00 with no rail value. Full Metrobus fare within VA, in MD or Washington DC during peak periods, and full fare for Metrobus trips anywhere during off peak.
4. Arlington County Flash Pass - $25.00 with $15.00 rail value. Valid for full Metrobus fare in Arlington County only. Metrorail fare value can be used anywhere.
5. MD/DC Pass - $30.00 - good for one zone in VA during peak period and for full fare anywhere during off-peak periods
6. Bus/Rail Super Pass - $65.00 - unlimited trips on Metrobus/Metrorail for two weeks.

Appendix D-1: Comparisons of Public Transit Fares - Continued

Transit System	Regular Fares	Multiple Trips
Alexandria DASH - DASH honors Metrobus VA base and zone 2 flash passes, Metrobus tokens, commuter tickets, and Metrobus and Fairfax Connector transfers for base fare, D.C. - MD Flash passes, and monthly VRE passes.	Base $0.85 with $0.25 surcharge to Pentagon Metrorail Station at all times.	$28.00 Monthly Pass; $38.00 Pentagon Metrorail Station Pass
Arlington Trolley	$0.35 fare	$11.20 40-token roll
City of Fairfax CUE	$.50 at all times. Persons with valid George Mason University I.D. ride free. Senior Citizens and school children pay 25-cents. Children under three ride free with an adult.	No Discount
Fairfax Connector	$.50 base fare on all feeder routes. $1.00 base + zone on all express routes.	No Discount
Loudoun Rideshare	$4.00 one-way fare.	$40.00 ticket for 10 one-way rides.
PRTC OmniLink	$.75 base fare; $0.25 for seniors and the disabled.	No Discount
PRTC OmniRide	$5.00 one way cash fare to Pentagon; $1.50 to Vienna Metro shuttle station as of October, 1996.	$35.00 - 10-ride token pack
Reston RIBS	Base fare $.50 with Reston/Connector transfer worth full fare.	No Discount
Tysons Shuttle	Fare $.75 ($1.20 round trip) at all times. No transfers given or accepted.	$6.00 11-trip card.
Virginia Railway Express	9 zone distance based fare structure; full fare single ride tickets .	Ten-trip ticket - 15% discounted; Monthly unlimited travel - 30% discount; Additional discount between fare zones 4-9. See chart for complete fare structure.

Appendix D-2: Discount Fares on Northern Virginia's Public Transit Systems

TRANSIT SYSTEMS	DISCOUNTS AVAILABLE	ELDERLY AND HANDICAPED FARES
Metrorail[1]	10% bonus on farecard purchase of $20 and over.	Half fares for elderly/disabled riders all day
Metrobus[2]	Flashpasses, which allow for unlimited use of the bus system for a period of time, are available.	50-cent fares for elderly/disabled riders all day, except those that have
VRE	30% discount on monthly passes; 15% discount on ten-trip tickets; 30% off group sales (20+)	N/A
Arlington Trolley	20% discount on a 40-token purchase.	N/A
Tysons Shuttle	20% discount on purchase of 2 one-way tickets.	Half Price
Reston Ribs	NO DISCOUNTS	N/A
City of Fairfax CUE	NO DISCOUNTS	$0.25 fare for elderly/disabled and children under 18. GMU students
Alexandria DASH	Approximately 20% discount on monthly passes.	Free transfers to all DASH buses w/in four hours of first boarding
Fairfax Connector	NO DISCOUNTS	$0.35 discount with transfers and valid Metro elderly and disabled ID
OmniLink	Feeder: Free to VRE passengers	Half fares during off-peak periods on local routes
Prince William County Commuteride	35% discount on 10-token purchase.	N/A

Appendix D-3: Northern Virginia Transit Transfer Policies

TO:	Metrorail	Metrobus	VRE	Arlington Trolley	Tysons Shuttle	Reston RIBS	City of Fairfax Cue	Alexandria DASH	Fairfax Connector	PRTC OmniRide
FROM:										
Metrorail	FREE	25¢ discount[1]	~	~	~	~	~	~	~	~
Metrobus	~	FREE within zone[2]	~	~	~	~	~	FREE	Free within zone	~
VRE	~	FREE	~	FREE	~	~	~	FREE	FREE	~
Arlington Trolley	~	~	~	~	~	~	~	~	~	~
Tysons Shuttle	~	~	~	~	~	~	~	~	~	~
Reston RIBS	~	25-cents discount	~	~	~	FREE	~	~	~	~
City of Fairfax Cue	~	~	~	~	~	~	FREE	~	~	~
Alexandria DASH	~	85-cents discount	~	~	~	~	~	Free (within 4 hours)	~	~
Fairfax Connector		Free or discounted	~	~	~	~	~	Free or discounted	~	~
PRTC OmniRide	~	~	~	~	~	~	~	~	~	Free from Pentagon to Crystal City
OmniLink	~	~	FREE	~	~	~	~	~	~	

Notes:

1. *Does not apply to bus routes with special reduced fares.*
2. *An additional $0.10 is required to obtain a Metrobus transfer.*

APPENDIX E

TAXI SERVICE BY JURISDICTION

TAXI SERVICE BY JURISDICTION

JURISDICTION		COMPANY	PHONE[1]	NUMBER OF VEHICLES
Alexandria	1.	Alexandria Diamond Cab 3035 Mt. Vernon Ave. Dispatch Office	549-1100 548-7505	146
	2.	Alexandria Yellow Cab 3025 Mt. Vernon Ave. Dispatch Office	549-2500 836-2500	198
	3.	VIP Cab 3700 Jefferson Davis Hwy.	549-6900	58
	4.	Columbus Cab 50 S. Pickett St., Ste. 106	684-7373	45
	5.	King Cab 104 S. Henry St.	549-3530	57
	6.	White Top Cab 3706 Mt. Vernon Ave. #100	683-4004	110
			TOTAL	**614**
Arlington	1.	Arlington Red Top Cab 3251 Washington Blvd.	522-3333	274
	2.	Arlington Yellow Cab 3251 Washington Blvd.	527-2222	110
	3.	Arlington Blue Top Cab 1008 N. Randolph St.	243-8294	145
	4.	Crown Cab Company 2324 N. Dinwiddie St.	528-0202	23
	5.	Friendly Cab Company 3022 S. 22 St.	892-4144	20
	6.	Hess Cab Company 2711 Jefferson Davis Hwy. #200	451-9202	33
			TOTAL	**605**

[1] **All telephone numbers are area code 703.**

Fairfax County & Other Areas	1.	Fairfax Red Top Cab Co. 11 Hillwood Ave.	934-4444	70
	2.	Yellow Cab Company 11 Hillwood Ave	534-1111(main)	245[2]
		- Annandale Yellow Cab	941-4000	
		- Bailey's Cross Rds Yellow Cab	820-2626	
		- Burke Yellow Cab	941-4000	
		- Fairfax Yellow Cab	941-4000	
		- Falls Church Yellow Cab	534-1111	
		- McLean Yellow Cab	356-3151	
		- Tysons Corner Yellow Cab	534-1111	
		- Vienna Yellow Cab	938-7272	
	3.	Springfield Yellow Cab* [3] 7956E Twist Lane, Springfield	451-2255	69
	4.	Herndon-Reston Cab* 7956E Twist Lane	451-7200	13
	5.	Belvoir Taxi Service* 7956E Twist Lane	781-7040	10
	6.	Fairfax White Top Cab Company 3706 Mt. Vernon Ave., #100, Alexandria	683-4004	10
			TOTAL	**417**
Loudoun County	1.	Country Side Cab* 7956E Twist Lane	444-2259	2
	2.	Airport Transportation, Inc. 22636 Glen Drive, #206, Sterling	430-2000	7
	3.	Loudoun County Yellow Cab 11 Hillwood Ave	437-9100	5
	4.	Dulles Express Cab Company 113 W. Church Rd., Sterling	406-3333 450-0045	2
	5.	Sterling Cab Company 113 W. Church Rd.	450-0045	3
			TOTAL	**19**

[2] Represents corporate total for all branches of Yellow Cab.

[3] All taxi companies marked with (*) are owned by Paul Wallace Management Inc., 8016 Russell Rd., Alexandria, Va. 22309.

Other Taxi Services

1.	Washington Flyer Taxi 1008 N. Randolph St., Arlington	661-8230	315

TAXI OVERSIGHT AGENCIES

Alexandria:	Hack Inspector's Office Officer Jim Oaks	838-4240
Arlington:	Hack Inspector's Office Detective Dan Wines	358-4258 358-4255
City of Fairfax:	There is no oversight agency.	
Fairfax County:	Consumer Affairs Office Dave Reidenbach	222-8435
Falls Church:	Falls Church Police Department Alan Freed, Hack Inspector	241-5054
Loudoun County:	There is no oversight agency.	

APPENDIX F

PARK-AND-RIDE LOTS

IN NORTHERN VIRGINIA

Appendix F-1: Park and Ride Lots in NVTC's Jurisdiction

Jurisdiction/ Lot Name	Address	Parking Capacity	Bike Racks	Pedestrian Access	Bus Service	Bus Shelters	P&R Marked
Alexandria:							
Jones Point Park	Off Royal St. under the Woodrow Wilson Bridge	300	no	bike and pedestrian access	Free shuttle service to Old Town	no	yes
Arlington:							
Four Mile Run	Columbia Pike and Four Mile Run	24	n/a	n/a	Metrobus	n/a	n/a
Washington-Lee	N. Quincey & N. 15th St.	354	yes	great bike and pedestrian access	Metrobus	n/a	yes
City of Fairfax:							
Kutner Park	Jermantown Rd. North of Main St.	12	yes		Metrobus, Cue	no	yes
Sipan Lot	North St. and University Dr.	100	yes	bike and pedestrian access	Cue	no	yes
Fairfax County:							
Ames Department Store	6457 Edsall Rd (E. of I-395)	23	no		Metrobus, Fairfax Connector	no	no
Blackies House of Beef	6710 Commerce Street near Bowie St.	185	no	some pedestrian access	Fairfax Connector	no	yes
Bowman Towne Lot	Bowman Town Road west of Reston Parkway	60	no	good bike and pedestrian access	Fairfax Connector near by	no	yes
Canterbury Woods Park	Wakefield Chapel Road	36	no	some pedestrian access		no	no
Centerville	U.S. 29 and Stone Rd.	372	yes	some pedestrian access	Metrobus	yes	yes

Park and Ride Lots in NVTC's Jurisdiction - Continued

Jurisdiction/ Lot Name	Address	Parking Capacity	Bike Racks	Pedestrian Access	Bus Service	Bus Shelters	P&R Marked
Centerville Square	Centerville Sq. Shopping Center, Rt. 28 &29	172	no		Metrobus	no	yes
Centerville Methodist Church	New Braddock Rd. and Rt. 28	150	no	some pedestrian access	Metrobus	yes	yes
Chi-Chris Restaurant	7010 Old Keene Mill Rd., Rolling Valley Mall	79	no	some pedestrian access	Metrobus	yes	yes
Fairlanes Bowling	13814 Lee Highway (Rt. 29 next to Centerville Plaza)	35	no			no	yes
Fair Oaks Mall	Fair Oaks Mall Areas 8&9 off of Legato Rd.	270	no		Metrobus	yes	yes
Fox Mill Road	Route 925 and 657	20	no	n/a	Fairfax Connector	n/a	n/a
Government Center	Government Center Pkwy and Post Forest Dr.	400	no		Metrobus	no	yes
Greenbriar Park	Melville Lane, near Stringfellow Rd.	60	yes	good bike and pedestrian access	Metrobus	no	no
Hechinger	6555 Little River Turnpike, Annandale	56	no		Metrobus		
Holiday Inn	6401 Brandon Ave. off Commerce St.	49	no	some pedestrian access	Metrobus	no	yes
Nottoway Park	Courthouse Rd. near Nutley St.	12	yes	good pedestrian and bike access	Metrobus, Fairfax Connector	no	no
Poplar Tree Park	Stringfellow Rd. near Fair Lakes Pkwy.	118	no	pedestrian and bike access	Metrobus	no	no
Parkwood Baptist Church	8726 Bradock Road	29	no		Metrobus	no	no
Reston North	Temporary Rd. bet. Reston Pkwy. & North Shore	20	no	good pedestrian and bike access	Connector service nearby	no	

Park and Ride Lots in NVTC's Jurisdiction - Continued

Jurisdiction/ Lot Name	Address	Parking Capacity	Bike Racks	Pedestrian Access	Bus Service	Bus Shelters	P&R Marked
Reston Park & Ride	Corner of Sunset Hills and Wiehle	358	yes	good pedestrian and bike access	Fairfax Connector	yes	yes
Reston South	Fox Mill Rd. at Lawyers and Reston Parkway	412	yes	good pedestrian and bike access	Fairfax Connector	yes	yes
Ridge Ford Drive	Ridge Ford Dr. and Burke Rd.	35	n/a	n/a	Metrobus and VRE	n/a	n/a
Rolling Valley Mall	Old Keene Mill Rd. East of Shiplett Blvd.	701	yes	some pedestrian access	Metrobus, Fairfax Connector	yes	yes
South Run Park	Pohick Rd. & Lee Chapel Rd.	324	n/a	n/a	n/a	n/a	n/a
Springfield Mall	Mall parking lot on Spring Mall Rd. between Frontier Dr. and Loisdale Rd.	242	no	some pedestrian access	Fairfax Connector	no	yes
Springfield Plaza	Bland St. between Old Keene Mill Rd. & Amherst Ave.	217	no	some pedestrian access	Metrobus, Fairfax Connector	yes	yes
Springfield Methodist Church	7047 Old Keene Mill Rd. (entrance on Spring Rd.)	62	no	some pedestrian access	Metrobus, Fairfax Connector	yes	yes
Sully Station Park and Ride	Stonecroft Blvd. near Westfields Blvd.	139	no	some pedestrian access	Metrobus	yes	yes
Wakefield Chapel Rec Center	N. Queensbury Rd. off Braddock	32	yes	pedestrian and bike access		no	no
Wakefield Chapel Rd.	S. Queensbury Rd. off Braddock	326	n/a	n/a	n/a	n/a	n/a
Worldgate	Worldgate Dr. behind Cosmetic Center	200	yes	some pedestrian access	Fairfax Connector	no	yes

Park and Ride Lots in NVTC's Jurisdiction - Continued

Jurisdiction/ Lot Name	Address	Parking Capacity	Bike Racks	Pedestrian Access	Bus Service	Bus Shelters	P&R Marked
Loudoun County:							
Ashburn Farm	Summerwood Ct. & Ashburn Farm Parkway	20	no	good bike and pedestrian access	none	no	no
Ashburn Village	Grottoes Dr. & Gloucester Parkway	40	no	good bike and pedestrian access	none	no	no
Cascades Park & Ride	Palisades Parkway and Whitefield Place	60	no	some pedestrian access	none	yes	yes
Hamilton	Baptist Church on Old Rt. 7	75	no	easy bike and pedestrian access	none	no	no
Innovation Ave	Innovation Ave. east of Rt. 28	75	no		none	no	yes
Leesburg	Harrison Street Park	20	no	some pedestrian access	Loudoun Commuter Bus	no	no
Leesburg Village	Catoctin Circle , Leesburg Village Shopping Center behind 1st Union Bank	30	no		Loudoun Commuter Bus	no	no
Purcellville	Route 7 and Hatcher St.	20	no	easy bike and pedestrian access	Loudoun Commuter Bus	no	yes
Sterling Shaw Road	Holiday Inn Drive between Shaw Road and Rt. 28	150	no	no sidewalks, bike trail 1 mile away	none	no	yes
Sterling Park Shopping Center	Enterprise St. between Sterling Blvd. and Food Lion	20	no	some pedestrian and bike access	none	no	yes
Walmart	Route 625 and Pacific Blvd., near Rt. 28	107	no		Loudoun Commuter Bus	no	no

n/a=information not available

Appendix F-2: OTHER PARK AND RIDE LOTS SERVED BY TRANSIT

Jurisdiction/Name of Lot	Address	Capacity	Served by Transit
City of Manassas:			
Giant Supermarket	Liberia and Centreville Avenues	N/A	OmniRide, OmniLink
Prince William County:			
Bethel United Methodist Church	Smoketown and Minneville	60	OmniRide
Brittany Commuter Lot	Exeter Dr. at Rt. 234, South of Montclair	200	None
Cloverdale Model Home Lot	Cloverdale Rd. East of Dale Blvd.	46	OmniRide
Dale City Commuter Lot	Minneville Rd. (Route 640)	555	OmniRide, OmniLink
Dumfries Shopping Center	Route 1 and Grahm Park Rd.	55	OmniRide
Featherstone Square	Route 1 and Featherstone	15	OmniRide
Harbor Drive	Old Bridge Road near Davis Ford Rd.	10	OmniRide
Old Bridge Festival SC	Old Bridge Rd. & Smoketown Rd.	75	OmniRide, OmniLink
Hechinger's Lot	Gordon Blvd. & Old Bridge Rd.	385	OmniRide, OmniLink
Hillendale	Hillendale & Rt. 784	241	OmniRide, OmniLink
Horner Road	Horner Rd. (Rt. 639) @ I-95	445	OmniRide
K-Mart, Dale City	Dale Blvd. And Gideon Dr.	92	OmniRide
K-Mart, Sudley Square	Sudley Manor Drive	200	OmniRide, OmniLink

OTHER PARK AND RIDE LOTS SERVED BY TRANSIT- Continued

Jurisdiction/Name of Lot	Address	Capacity	Served by Transit
Prince William County, continued:			
Kirkdale Road	Dale Blvd and Kirkdale Rd.	41	OmniRide
Lake Ridge	Rt. 640 & Harbor Dr.	200	OmniRide, OmniLink
Lindendale Lot	Northside of Dale Blvd. one block west of Lindendale Rd.	214	OmniRide, OmniLink
Manassas Junction Mall	Route 28 and Liberia Avenue	84	OmniRide, OmniLink
Manassas Mall	Route 234 and Route 668	425	OmniRide, OmniLink
Marumsco Plaza	U.S.1 & Longview Drive	200	OmniRide, OmniLink
Montclair Commuter Lot	Dumfries Rd (Rt. 234) South of Stockridge Dr.	110	OmniRide
North Forestdale Avenue	N. Foresdale anvenue and Dale Blvd.	15	OmniLink
NVCC Commuter Lot	Manassas Campus, Rt. 234	226	OmniRide, OmniLink
Oakwood Dr.	Oakwood Dr. North of Rte 641	75	OmniRide
Port Smith	Port Smith Road	620	OmniRide
Potomac Mills	Potomac Mills Circle & Beddeford Way	569	OmniRide, OmniLink
Prince William Square	Smoketown Rd. & Gideon Dr.	45	OmniLink
Prince William Stadium	Stadium Lot at County Complex	53	OmniLink
Princedale	Princedale Dr. west of Dale Blvd.	43	OmniRide

OTHER PARK AND RIDE LOTS SERVED BY TRANSIT- Continued

Jurisdiction/Name of Lot	Address	Capacity	Served by Transit
Prince William County, continued:			
I-95 & Rt. 123 Commuter Lot	I-95 & VA 123	800	OmniRide
Sudley Road	Route 234 and Digges Road	50	OmniRide
Tackett's Mill	Harbor Dr. and Old Bridge Rd.	176	OmniRide, OmniLink
Triangle Lot	Rt. 619 & Rt. 1	35	OmniRide, OmniLink
Spotsylvania County:			
Fredericksburg Commuter Lot	Rt. 3 & I-95 Old Salem Church	705	Private Bus Companies
Route 208 Commuter Lot	VA 208 1/4 mile off U.S. 1	302	Private Bus Companies
Route 3 Commuter Lot	Route 3 west of I-95/Old Salem Church	715	Private Bus Companies
Stafford County:			
Garrisonville	Rt. 610 & Rt. 684	775	Private Bus Companies
Falmouth Commuter Lot	Rt. 17 & I-95 (West of Falmouth)	1035	Private Bus Companies
Joint-Use Auxiliary Commuter Lot	Rt. 17 north of Falmouth Commuter Lot	58	Private Bus Companies
Stafford Commuter Lot	Rt. 630 & I-95	530	Private Bus Companies

Appendix F-3: Parking and Transit Feeder Services at VRE Stations

Stations	Parking Spaces	Daily Fee	Transit Feeder Service
Manassas Line:			
Broad Run/Airport	320	$1.25/day, $20/month	
Manassas	367	$1.00 non-residents, $1/month-residents	OmniRide, OmniLink
Manassas Park	300	$1.00-residents, $1.25 non-residents	
Burke Center	400	~	Metrobus Routes 17L, 26G, H
Rolling Road	400	~	
Backlick Road	220	~	Metrobus Routes 18A, B, F; Fairfax Connector 401
Fredericksburg Line:			
Fredericksburg	315	Free - available to residents only	Shuttle from Lee's Hill in Spotsylvania
Leeland Road	320	Free to Residents, $2.00 non-residents	
Brooke	300		
Quantico	227	$1.25	
Rippon	300	$1.25	OmniLink
Woodbridge	588	$1.25	OmniLink
Lorton	200		
Franconia/Springfield	300		

Shared Stations:		**Transit Feeder Service**
Alexandria	~	Metrorail Yellow/Blue Lines; Dash Route AT2 and 8 Metrobus Routes 28A, B, 29K, N; Amtrak
Crystal City	~	Metrorail Yellow/Blue Lines; Metrobus Routes 5N; 9A,B,C,E;10A; P11, 13; 23A, C, T; Arlington Crystal City Trolley
L'Enfant Plaza	~	Metrorail Yellow/Blue/Orange/Green Lines; Metrobus Routes A9, 42, 46, 48; 13A, B,C, D; 30; 32; 34; 36; 52; 70; 71; 73; 87; M2; P1, 17; V4, 6 MTA Buses
Union Station	~	Metrorail Red Line; MARC, Amtrak, MTA Buses, Metrobus Routes 40; 42; 44; 46; 80; 87; 90; 91; 92; 96; D2, 4, 6, 8; M2; X2, 4, 5, 8, 9

Appendix F-4: Metrorail Parking in Northern Virginia

Station	Location	Parking Capacity	Bike Racks	Pedestrian Access	Bus Service	Bus Shelters	P&R Marked
Huntington	Huntington Ave. at Fenwick Dr. Kings Highway north of Fort Dr.	3,090	yes	fair bike and pedestrian access	DASH, Fairfax Connector, Metrobus	yes	yes
Vienna	Median of I-66 at Nutley Rd.	3,572	yes	good bike and pedestrian access	Metrobus, CUE	yes	yes
Dunn Loring	Median of I-66 at Gallows Rd.	1,323	yes	good bike and pedestrian access	Fairfax Connector, Metrobus	yes	yes
West Falls Church	Median of I-66 at Leesburg Pike	1,062	yes	fair bike and pedestrian access	Fairfax Connector, Metrobus	yes	yes
East Falls Church	Median of I-66 at N. Sycamore Rd.	422	yes	good bike and pedestrian access	Metrobus	yes	yes
Van Dorn	Eisenhower Ave. in Alexandria	361	yes	poor bike and pedestrian access	DASH, Metrobus	yes	yes

APPENDIX G

HOLIDAY SCHEDULES OF LOCAL TRANSIT SYSTEMS

REGIONAL TRANSIT SERVICE

HOLIDAY SCHEDULES FOR FISCAL YEAR 1997

	(1996) New Year's Eve Tue., Dec. 31	(1997) New Year's Wed., Jan. 1	Presidential Inauguration and MLK Day Mon., Jan. 20	Presidents' Day Mon., Feb. 17	Memorial Day Mon., May 26
METRORAIL	5:30A - 2A (Weekday)	8A - 12M (Sunday)	5:30A - 2A (Mod. Sat.)	5:30A - 12M (Mod. Sat.)	8A - 12M (Sunday)
METROBUS	Weekday	Sunday	Sat. + Supp.	Sat. + Supp.	Sunday
METRO-ACCESS	Weekday	8A - 6P	8A - 6P	5:30 A - 12M	Sunday
RIDE-ON	Weekday	Sunday	Sat. + Supp.	Sat. + Supp.	Sunday
DASH	Weekday	No Service	Saturday	Saturday	Sunday
CUE	Weekday	No Service	Mod Weekday	Mod. Weekday	Saturday
FAIRFAX CONNECTOR	Weekday	Sunday	Sat. + Supp. Express	Sat. + Supp. Express	Sunday
TYSONS SHUTTLE	No Service	No Service	Bus "A" Only	Bus "A" Only	No Service
CRYSTAL CITY TROLLEY	No Service	No Service	No Service	No Service	No Service
RIBS	No Service	No Service	Mod. Saturday	Mod. Saturday	No Service

SERV/Market Analysis
May 3, 1996

REGIONAL TRANSIT SERVICE

HOLIDAY SCHEDULES FOR FISCAL YEAR 1997

	(1996) Fourth of July	Labor Day	Columbus Day	Veterans Day	Thanksgiving		Christmas
	Thurs., July 4	Mon., Sept. 2	Mon., Oct.14	Mon., Nov.11	Thurs., Nov. 28	Fri., Nov. 29	Wed., Dec. 25
METRORAIL	8A - 1A (Mod. Sat.)	8A - 12M (Sunday)	5:30A - 12M (Mod. Sat.)	5:30A - 12M (Mod. Sat.)	8A - 12M (Sunday)	5:30A - 12M (Weekday)	8A - 12M (Sunday)
METROBUS	Sat. + Specials	Sunday	Sat. + Supp.	Sat. + Supp.	Sunday	Weekday	Sunday
METRO-ACCESS	8A - 6P	8A - 6P	Weekday	Weekday	8A - 6P	Weekday	8A - 6P
RIDE-ON	Sunday[1]	Sunday	Sat. + Supp.	Sat. + Supp.	Sunday	Weekday	Sunday[2]
DASH	Sunday	Sunday	Saturday	Weekday	No Service	Weekday	No Service[3]
CUE	No Service	Saturday	Mod. Weekday	Weekday	No Service	Mod. Weekday	No Service
FAIRFAX CONNECTOR	Sat. + Supp.	Sunday	Sat. + Supp. Express	Sat. + Supp. Express	Sunday	Weekday	Sunday[4]
TYSONS SHUTTLE	No Service	No Service	Bus "A" Only	Bus "A" Only	No Service	Weekday	No Service
CRYSTAL CITY TROLLEY	No Service	No Service	No Service	No Service	No Service	Weekday	No Service
RIBS	No Service	No Service	Mod. Saturday	Mod. Saturday	No Service	Weekday	No Service

SERV/Market Analysis
May 3, 1996

[1]Ride-On will operate Saturday service on C6 and Z2
[2]Tuesday, December 24, 1996, (Christmas Eve) Ride-On Service will end at 7:00 p.m.
[3]Tuesday, December 24, 1996, (Christmas Eve) DASH Service will end at 7:00 p.m.
[4]Tuesday, December 24, 1996, (Christmas Eve) Fairfax Connector Service will end at 8:00 p.m.

REGIONAL TRANSIT SERVICE
HOLIDAY SCHEDULES FOR FISCAL YEAR 1997

	(1996) New Year's Eve	(1997) New Year's	Presidential Inauguration and MLK Day	Presidents' Day	Memorial Day
	Tue., Dec. 31	Wed., Jan. 1	Mon., Jan. 20	Mon., Feb. 17	Mon., May 26
VRE	No Service	No Service	No Service	No Service	No Service
MARC	No Service	No Service	Hol. Schedule	Hol. Schedule	No Service
MTA SERVICES					
--Laurel Flyer/320	No Service	No Service	Weekday	Weekday	No Service
--Rt. 29 Flyer 929	No Service	No Service	Hol. Schedule	Weekday	No Service
--I-95 Express	No Service	No Service	Hol. Schedule	Weekday	No Service
--Annapolis/921	No Service	No Service	Weekday	Weekday	No Service
--Annapolis/922	No Service	No Service	No Service	Weekday	No Service
--Crofton/923	No Service	No Service	No Service	Weekday	No Service
--Hagerstown-Frederick/991	No Service	No Service	Hol. Schedule	Weekday	No Service
--Rt. 5 Flyer/905	No Service	No Service	No Service	Weekday	No Service
--Rt. 4 Flyer/904	No Service	No Service	No Service	Weekday	No Service
"THE BUS"	No Service	No Service	No Service	Weekday	No Service
CONNECT-A-RIDE	Weekday	No Service	Weekday[1]	Weekday[1]	Saturday
PRTC COMMUTERIDE	Weekday	No Service	Mod. Holiday	Mod. Holiday	No Service

SERV/Market Analysis

May 3, 1996

[1]No Service to and from Ft. Meade/WSA

[1]No Service to and from Ft. Meade/WSA

REGIONAL TRANSIT SERVICE

HOLIDAY SCHEDULES FOR FISCAL YEAR 1997

	(1996) Fourth of July	Labor Day	Columbus Day	Veterans Day	Thanksgiving		Christmas
	Thurs. July 4	Mon., Sept. 2	Mon., Oct. 14	Mon., Nov. 11	Thurs., Nov. 28	Fri., Nov. 29	Wed., Dec. 25
VRE	No Service	No Service	No Service	No Service	No Service	Mod. Weekday	No Service
MARC	No service	No Service	Hol. Schedule	Hol. Schedule	No Service	Hol. Schedule	No Service
MTA SERVICES:							
–LAUREL FLYER/320	No Service	No Service	Weekday	Weekday	No Service	Weekday	No Service
–Rt. 29 Flyer 929	No Service	No Service	Hol. Schedule	Hol. Schedule	No Service	Hol. Schedule	No Service
–I-95 Express	No Service	No Service	Weekday	Weekday	No Service	Weekday	No Service
–Annapolis/921	No Service	No Service	Weekday	Weekday	No Service	Weekday	No Service
–Annapolis/922	No Service	No Service	No Service	No Service	No Service	No Service	No Service
–Crofton/923	No Service	No Service	No Service	No Service	No Service	Weekday	No Service
–Hagerstown–							
–Frederick/991	No Service	No Service	Weekday	Weekday	No Service	Weekday	No Service
–Rt. 5 Flyer/905	No Service	No Service	Weekday	Weekday	No Service	Weekday	No Service
–Rt. 4 Flyer/904	No Service	No Service	No Service	No Service	No Service	Weekday	No Service
"THE BUS"	No Service	No Service	No Service	No Service	No Service	Weekday	No Service
CONNECT-A-RIDE	Saturday	Saturday	Weekday[1]	Weekday[2]	No Service	Weekday	No Service
PRTC COMMUTERIDE	No Service	No Service	Mod. Holiday	Mod. Holiday	No Service	Mod. Holiday	No Service

SERV/Market Analysis
May 3, 1996

[1]No Service to and from Ft. Meade/WSA
[2]No Service to and from Ft. Meade.WSA