Long-Range Transportation Demand Management (TDM) Plan

Dulles Area Transportation Association

2011-2036

prepared for

Dulles Area Transportation Association (DATA)

prepared by

Cambridge Systematics, Inc.

with

LDA Consulting

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Executive Summary

This Long-Range TDM Plan is intended to serve as DATA's operational road map through 2036, focusing only on the TDM component of DATA's functions, activities and services. This Plan attempts to evaluate the needs and outcomes of DATA's services from a strategic planning perspective, including documentation of an overarching mission and vision statement that is supported by goals, objectives, and performance metrics to guide existing and future program activities. Core activities aimed to shift single occupancy vehicle (SOV) drivers to alternative modes have been a priority for this TMA in the Dulles region. However, a long-term blueprint that documents ongoing activities— and potentially new services—has not been developed since the program's inception.

Given its institutional framework and membership base, DATA is well-positioned to serve as a catalyst in promoting and coordinating public/private solutions to reducing demand on the Commonwealth's transportation infrastructure and encouraging the use of non–single occupancy vehicle (SOV) modes in one of the fastest growing and congested portions of the Commonwealth. A key part of this coordination involves the future activities of TDM agencies within the three counties that comprise DATA's service area—Fairfax, Loudoun and Prince William. Each of their respective TDM agencies has already developed a Long-Range TDM Plan for its service region that references DATA as a key service delivery partner. This partnership is already evidenced by ongoing coordination with respect to employer outreach efforts.

This Long-Range Plan first provides an overview of TDM strategies, their potential benefits, and the purpose of this Plan in Section 1.0. In the following section (Section 2.0), the governance structure, operations, and program services of DATA are then discussed. This is followed by a discussion of demographic, transportation and land use trends that provide the backdrop to challenges and opportunities DATA faces now, and will continue to face in the future (Section 3.0).

The key Plan insights and recommendations are contained in the Strategic Plan (Section 4.0), as well as the Plan and Program Evaluation (Section 5.0) elements of this Plan. The former section contains goals and strategies for DATA to accomplish during the timeframe of this plan, while the latter presents an approach for periodically evaluating the program's performance toward established goals.

1.0 TDM and Plan Purpose

Section 1.0 defines Transportation Demand Management (TDM); describes a range of potential TDM strategies and markets; provides examples of regionwide and county-sponsored TDM efforts in Fairfax, Loudoun, and Prince William Counties; summarizes the environmental benefits from employer-based strategies in the Dulles region; and describes the context and goals for the Dulles Area Transportation Association (DATA) in developing this Long-Range TDM Plan for its service area.

1.1 WHAT IS TDM AND WHAT ARE ITS BENEFITS?

Transportation Demand Management (TDM) is a set of policies, strategies, or programs that emphasize managing the *demand* for motor vehicle travel, in contrast to the more expensive alternative which involves increasing the *supply* of transportation services (e.g., typically through means such as road capacity expansion). TDM efforts reduce motor vehicle trips through several means, including:

- Accommodating the same number of people in fewer motor vehicles (e.g., transit, carpooling, vanpooling, bicycling, walking);
- Eliminating trips entirely (e.g., teleworking); and
- Redistributing the timing of trips from most congested "peak" periods to less busy "non-peak" times (e.g., flextime benefits through employers).

TDM strategies readily lend themselves to reducing, eliminating, or altering daily trips to and from a place of employment by employees (i.e., commuters).

Commute trips are traditionally the key target of TDM programs since they comprise the largest proportion of total trips that take place during peak periods of traffic congestion (i.e., typically between 7-9am and 4-6pm). Moreover, these trips are characterized by the same set of commuters traveling along a route from the same origin (home) to the same destination (work or school) on a daily basis. The habitual patterns of the commute trip make it an effective target of TDM strategies, such as carpooling and vanpooling formation among employees. A comparable, although less traditional tool, is informal or casual carpooling known as "slugging" which has had tremendous success in Virginia particularly for northbound commuters along the Interstate 95 (I-95) corridor in Prince William County. In this case, the TDM program role deviates from the traditional function of "matching" potential ridesharing partners, but rather in designating/supporting potential locations where such activities can occur (including provision of the necessary infrastructure where needed, such as park

and ride lots), and informing interested residents of the availability of this option.

In summary, TDM programs throughout Virginia promote a wide range of transportation alternatives to driving alone using single-occupancy vehicles (SOV) to the commuter market. These alternatives include traditional ridesharing (carpooling or vanpooling), informal ridesharing or "slugging", public and private transit options, walking, bicycling, and alternative work arrangements.

Alternative work arrangements reduce the number of commuting days or shift commute travel to non-peak periods. They can be grouped into three major categories, including:

- Compressed work week schedules, in which employees work a full work week in fewer than five days;
- Flexible work schedules, in which employees shift their "start" and "end" work times to less congested periods of the day; and
- Telecommuting, in which employees work one or more days at home or at a satellite work center which is located closer to their homes than the work site.

TDM strategies also encompass: improvements in transportation services, financial incentives, and support services that make the use of alternatives more convenient or remove psychological barriers to using alternatives; information dissemination; and marketing activities that heighten awareness and interest in using alternatives. The common feature of the below strategies is that they all strive to change behavior and attitudes about alternative modes as a viable option to SOV travel:

- Transportation service improvements, such as shuttle buses, vanpool programs, car sharing services (e.g., Zipcar);
- Financial incentives, employee transportation allowances or subsidies for transit users;
- Tax incentives for employers;
- Congestion pricing;
- Parking management programs, including parking pricing and reduction of supply;
- Priority treatment for ridesharers, such as preferential parking for carpools/vanpools, high occupancy vehicle (HOV) lanes, signal priority or dedicated lanes for Bus Rapid Transit (BRT);
- Information and marketing of transit schedules, bicycle/ pedestrian facility maps, online commuter tools (e.g. cost calculators), ridematching and other services;
- Support services, such as Guaranteed Ride Home (GRH) programs;

- Employer on-site amenities, including secure bicycle storage, lockers and showers, quality child care, as well as proximity to dining and establishments where employees can run errands without the use of a car; and
- Land use, planning-related efforts.

TDM programs can serve a variety of markets, including non-commuters, tourists, and residents who do not own a car or, for whatever reason, are unable to drive (including the elderly, disabled, or student populations). Therefore, TDM can serve much broader mobility goals than those solely focused on commuters. Figure 1.1 illustrates the wide range of potential benefits of TDM programs.

Figure 1.1 Potential Benefits of TDM Strategies

Source: LDA Consulting

TDM programs play an important role in maintaining a high quality of life in Virginia by:

- Assisting individuals in identifying transportation options for traveling to work, school, and other destinations;
- Improving the operational performance of the transportation system;
- Mitigating congestion and "wear-and-tear" on Virginia's roadways;

- Reducing the environmental impact of vehicle emissions, roadway expansion, and other transportation-related factors; and
- Promoting the benefits associated increased walking, bicycling, and transit use, such as improved air quality, increased exercise and public health, and stress reduction.

In the Dulles region specifically, TDM-supportive planning policies and strategies have the potential to impact a substantial number of employers, businesses, and residents who are located in one of the most economically-significant zones in the Northern Virginia area[1]. Due to the substantial business presence in the Dulles region, as well as the need to address severe congestion issues, the TDM-based strategies of Fairfax County and Loudoun County agencies have largely focused on employer outreach efforts, including opportunities for telework, flextime, and compressed schedules.

Below are some examples of how TDM programs and services (including provision of TDM-supportive infrastructure) are being used to address highway congestion and single occupancy vehicle (SOV) travel in the Dulles region.

Regionwide TDM Efforts

- *Commuter Connections* - Through marketing, information dissemination, and employer technical assistance, this regional TDM network – which includes DATA as one of its members—continues to support an array of employer and commuter services, tools and resources, and special incentive programs to stimulate trials of alternative modes, such as the recent Pool Rewards program for carpoolers.
- *Telework!VA* -- Through technical assistance and financial incentives, this program assists interested employers in developing or enhancing their telework programs. Qualified employers can receive up to $35,000 in financial support.

Representative TDM Efforts – Fairfax County

- *Fairfax County Transportation Services Group (FCTSG)* – This TDM agency partners with DATA to provide outreach and services to employers in Fairfax County. Of the over 5,000 some major employers in the county service area, FCTSG reportedly has relationships "at some level" with approximately one-fifth of these employers[2]. The program strives to enhance employer participation in programs that support trip reductions; namely, financial

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[1] "Dulles region" is defined here to roughly approximate the DATA services area (for example, Tysons Corner is excluded).

[2] Fairfax County Transportation Services Group (FCTSG) Long-Range Transportation Demand Management (TDM) Plan, February 2010.

incentives, telework/compressed work schedules, bike/walking program implementation, provision of amenities such as bicycle racks and lockers, incentives for carpools/vanpools, and provision of employee shuttles.

- The county utilizes its proffer system as an important tool to construct sidewalks, trails, bicycle paths, bus stops, and other transit and TDM-supportive elements on development sites.
- FCTSG partners with residential developments, multifamily complexes, and associations to promote use of alternative modes of transportation, including public transit. Its community residential program (CRP) provides many of the same services to residential developments as are provided to employers through the employer outreach program.
- Fairfax County has recently undertaken a comprehensive effort to make bicycle transportation a more significant piece of the overall transportation component of Fairfax County. The ongoing Fairfax County Bicycle Study will identify specific improvements that are needed to accommodate and encourage bicycling within and between activity/population centers throughout Fairfax County, as well as to adjacent jurisdictions.
- Fairfax County offers a financial incentive to employers who implement a SmartBenefits transit program for their employees during the first six months of the program.

Representative TDM Efforts – Loudoun County

- *Loudoun County Office of Transportation Services (OTS)* --This county TDM agency works with DATA on employer outreach activities, including the hosting of quarterly Employer Council meetings to discuss transportation issues.
- OTS has recently launched their Green Business Challenge, a collaborative effort between Loudoun County government and the county Chamber of Commerce. The program encourages businesses to track their efforts toward environmentally sound practices.
- Like Fairfax County, Loudoun County also uses its proffer system to construct TDM-supportive elements on development sites.
- The county has recently developed its first Countywide Transit Plan, which recommends expanded provision of public transit service. One of these expansions includes a new Tysons Express Commuter Bus Service from Leesburg and Broadlands south to employment sites in Tysons corner.
- The county has recently opened its first county-owned park-and-ride lot. The Leesburg lot is home to 691 spaces, six bus shelters and 24 bicycle racks. Loudoun County Transit provides AM and PM peak service from this lot to the Metropolitan Washington DC region. The county also leases park-and-ride lot spaces from private providers in the region.

Representative TDM Efforts – Prince William County

- Although not part of the study area, the county is currently conducting a Bus Rapid Transit Study to explore the feasibility of a bus rapid transit system along the Route 1 corridor.
- Prince William County has over 20 park-and-ride lots; however, the majority of these lots are located the eastern portion of the County, outside the study area.
- The 2008 Comprehensive Plan recognizes TDM as a policy area and outlines specific TDM action strategies.
- In the approved I-66/Route 29 Sector Plan, which is a separate chapter of the 2008 Comprehensive Plan, two commuter parking lots are recommended. One of these lots is in the study area in the vicinity of the I-66/Route 29 interchange.

Popularity and Estimated Impacts of TDM Strategies in Dulles Region

As the subject of this Long-Range TDM Plan, DATA has recently published two related studies that attempt to quantify the benefits gained from employer-based TDM strategies in the Loudoun, Fairfax, and Prince William County portions of its service area. A 2009 survey of businesses conducted by DATA staff revealed that, in terms of popularity of TDM strategies among area businesses, flextime (flexible scheduling) ranked first. More than two of three businesses, or 69 percent of total businesses, in the DATA service area used this strategy with their employees. The second-most popular program was formal telework arrangements, reported by almost half of those businesses (49 percent), followed by the use of compressed work schedules (employed by more than one-third of businesses, or 34 percent). The least popular TDM programs embraced by those employers were shuttle services (1 percent of all businesses), ride matching (also reported by 1 percent of all businesses) and preferred parking arrangements (slightly higher at 2 percent)[3]. Carpool and vanpool strategies were used by 14 percent of all businesses, less than bike racks/lockers (which were reported by 22 percent of all surveyed businesses).

It is estimated that the impact of these TDM strategies on an annual basis removes more than 396,000 tons of greenhouse gas emissions from the region's atmosphere. TDM programs in the DATA service area are also credited with

[3] *Theoretical Analysis of the Effectiveness of TDM Strategies in Reducing Greenhouse Gas Emissions*; Dulles Area Transportation Association (DATA), August 1, 2010.

reducing the region's vehicle miles travels (VMT) by more than 2.85 million miles daily, or about seven percent of the region's total VMT[4].

The rest of this report focuses on the roles and contributions of DATA in bringing expertise, technical assistance, education, and facilitation to other partners and stakeholders in order to bring about improvements in the transportation system in its service region.

1.2 PLAN BACKGROUND AND PURPOSE

While TDM strategies have not always been, nor are they now, an exclusive part of DATA's operations, this Long-Range TDM Plan focuses only on this component of DATA's functions, activities, and programs. It should be noted that, at this point in time, DATA is not conceived by its leadership (i.e. its Executive Committee) as "a TDM organization" in the traditional sense, but rather as an organization that is increasingly employing TDM efforts as a means to respond to business problems and using these strategies as a key tool for managing the transportation system more effectively.

The process of developing the Long-Range TDM Plan provides an opportunity for DATA to take an introspective view of its current base of TDM services, which comprises a growing share of its overall activities. This Plan will attempt to evaluate the needs and outcomes from these services from a strategic planning perspective. Plan development includes the formulation of an overarching mission and vision statement that is supported by goals, objectives, and performance metrics to guide existing and future program activities. Core activities aimed to shift single occupancy vehicle (SOV) drivers to alternative modes have been a priority for this TMA. However, a long-term blueprint that documents ongoing activities— and potentially new services—has not been developed since the program's inception.

This document will serve as DATA's long-range operational plan for 2011 through 2036, with activities outlined for three major time frames: short-term (one to six years), medium-term (seven to 15 years), and long-term (16 to 25 years). It builds upon the TDM program's past successes and strengths, future challenges, and opportunities in the context of existing and planned transportation infrastructure, demographic patterns, and plans and policies of counties within DATA's service area.

The Long-Range Plan also fulfills the TDM plan requirement established by the Virginia Department of Rail and Public Transportation (DRPT). Since 2009, DRPT has required all agencies receiving State TDM grant funds to prepare,

[4] Ibid.

adopt, and submit a long-range TDM plan that documents the TDM programs currently provided, outlines potential improvements, and illustrates the financial resources necessary to implement these improvements. This document establishes the scope and benefits of the DATA's TDM programming efforts program and acts as the basis for DRPT to incorporate the program into all relevant State transportation plans and funding decisions in the future.

Given its institutional framework and membership base, DATA is well-positioned to serve as a catalyst in promoting and coordinating public/private solutions to reducing demand on the Commonwealth's transportation infrastructure. A key part of this coordination involves the future activities of TDM agencies within the three counties that comprise DATA's service area—Fairfax, Loudoun and Prince William. Each of their respective TDM agencies has already developed a Long-Range TDM Plan for their service region. Each Plan has goals, strategies and recommendations that include DATA as a collaborative partner. Additionally, these Plans provide some reference as to how DATA's activities and resources can effectively interface with their programs in the future. It is intended that DATA's Long-Range Plan will provide a stronger and more developed cross-walk to these Plans and ensure that local planning initiatives carried out by these TDM agencies are meshed with DATA's own activities.

2.0 Overview of DATA

2.1 TMA STRUCTURE AND RELATED FUNCTIONS

The 2001 *TMA Handbook: A Guide to Successful Transportation Management Associations* defines a Transportation Management Association (TMA) as "an organized group applying carefully selected approaches to facilitating the movement of people and goods within an area. TMAs are legally constituted and frequently led by the private sector in partnership with the public sector to solve transportation problems." The Dulles Area Transportation Association (DATA) was founded in 1986 and is guided by this premise of a public private partnership "dedicated to transportation improvements in the greater Dulles area[5]."

DATA operates as one of five Transportation Management Associations (TMAs) in the Northern Virginia region[6]. DATA is one of the oldest and largest TMAs in Virginia and has been operating in this capacity for over 25 years. The agency continues to function as a 501(c)(3) not-for-profit organization comprised of regional businesses, citizens, local and state government transportation professionals and elected representatives who are dedicated to improving the transportation system in the DATA service area.

DATA's 1996 *Amended and Restated Articles of Incorporation* state that DATA has been organized exclusively for "charitable, educational, and scientific purposes, including, for such purposes, lessening of the burdens of Government.." The Articles further define DATA as "an organization dedicated to achieving a

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[5] "DATA At A Glance"; DATA informational brochure.

[6] Others TMAs in Northern Virginia include: TYTRAN, LINK, TAGS, and FAST. The first of these, TYTRAN, covers a nearby area of Tysons Corner and provides information, as well as advocacy on transportation-related issues. LINK, the TMA for the Reston area, is sponsored by the Reston Town Center Association and provides centralized information on transportation alternatives for Reston. The Transportation Association of Greater Springfield (TAGS) is a TMA that advocates and promotes transportation alternatives and economic development services in and around Springfield. The most recently formed Full Access Transportation Solutions (FAST) for Potomac Yard covers the rapidly developing tract of land along Route 1/Crystal City in Alexandria and Arlington County. In contrast to these more narrowly defined groups, DATA is the only 501(c)(3) organization formed exclusively to serve businesses and citizens in a broad 361-square mile area. DATA also participates on a full-time basis in all TDM-related programs in the region.

significantly improved transportation system through private and public sector activities in the Association's area of concern". The Articles further list the following activities that DATA may undertake:

- Active participation in the public process of allocating funds for transportation facilities and services;
- Planning, funding and providing enhanced public transportation facilities and public and/or private mass transit services within or serving the service area;
- Reducing transportation demand through application and coordination of transportation system management ("TSM") programs, such as shuttle buses, carpools, vanpools, staggered work hours, and high occupancy vehicle ("HOV") lanes;
- Planning, developing, implementing, operating, and evaluating additional programs that provide for TSM services to relieve local government of the burden of such programs; and
- Cooperating and coordinating with local, state, and regional efforts to enhance private and public transportation systems in the service area.

While the "TSM" terminology has been largely replaced by "TDM", DATA is very much involved in performing these functions today (with the exception of funding and providing additional public/or private mass transit services). The core of DATA's efforts now, and in the future, consists of public education, promotion of multimodal options, employer outreach, and provision of technical assistance. DATA promotes transportation solutions by providing educational forums and meetings to support its mission and meet the needs of members across the region. In recent years, DATA has supported several research efforts to develop tools and methodologies to help employers measure and reduce greenhouse gases (GHG) produced by commuter activities of their employees.

2.2 GEOGRAPHIC REACH AND KEY ROLES

DATA's service area encompasses an approximately 361-square mile area bounded by the Potomac River on the north, Hunter Mill Road on the east, by the Route 15 corridor on the west, and the Route I-66 corridor on the south. The region spans multiple jurisdictions, including Loudoun County, Fairfax County, a small portion of Prince William County, and the Towns of Leesburg and Herndon. DATA's service area contains some of the fastest growing employment centers in Loudoun and Fairfax Counties, as well as small cities and towns. DATA also has a presence in the eastern portion of Prince William County along the Route 28 Corridor.

Similar to other TMAs, DATA defines its goals and programs to meet the unique challenges of the region it serves and the specific needs of its members. Issues

such as traffic congestion and air quality have been at the forefront of those efforts, which (over time) have spanned promotion of additional transportation infrastructure such as roadway expansion and transit facilities, as well as more recent TDM programs that encourage alternative commuting options.

DATA's activities primarily fall into three functional areas:

- Identifying and advocating solutions for meeting transportation needs of the Dulles Corridor;
- Fostering education about transportation options; and
- Providing a forum to engage its members and other interested parties to take action to improve the area's transportation system.

2.3 HISTORY OF PROGRAM

Since its founding 25 years ago, DATA has broadened its reach to expand its existing partnerships and service offerings with an increasing, although not exclusive, TDM focus. In so doing, DATA has over time diversified its funding base from a pure private membership dues funding model to one that includes public funding sources from agencies such as the Virginia Department of Transportation (VDOT) and the Virginia Department of Public Rail and Transportation (DRPT). DATA's program history, as illustrated by select milestones and activities below, is also marked by more innovative outreach and technical assistance efforts that respond to current needs and transportation/ land use/demographic trends (e.g. Transit Oriented Development, greenhouse gas (GHG) emissions, etc).

Since its early beginnings, DATA has provided support for regional transportation infrastructure enhancements (including both TDM and non-TDM elements), such as Route 28 corridor improvements and related funding mechanisms for those improvements; promotion of transit, including the Metrorail extension to Dulles International Airport; development of partnerships with groups such as Chambers of Commerce and local businesses; and participation in a variety of activities to engage employers and employees, such as transportation and benefit fairs and "Employer Breakfasts".

Most recent milestones, activities, and DATA accomplishments (i.e., within the past five years) include:

- **2007 –** Helped launch the Dulles Loop Implementation Group (DLIG), which is working to create an integrated access plan for Dulles International Airport and the community.
- **2008** - Established the Employer Council of human resource professionals, drawn from businesses near the Dulles Airport. This program was modified to include Employee Transportation Coordinators, who are designated individuals within organizations who serve as points of contact for information about TDM programs and events.

- **2008 –** Won a prestigious multimodal grant from the Virginia Department of Transportation (VDOT) Multimodal Office to study the effects of TDM strategies on reducing companies' carbon footprint from employee commutes.
- **2009 –** Began collaborative effort with Commuter Connections to use the new web-based ACT! Database to expand and maintain its extensive database of employers.
- **2009 –** Initiated Transit Oriented Development (TOD) Program to encourage developers to become educated about, and supportive of, building near the future Silver Line Metrorail Stations, which will serve commuters as a high-speed and high-capacity commute option.
- **2009 –** Assisted in jumpstarting Telework!VA, a program of the Virginia Department of Rail and Public Transportation (DRPT), to promote teleworking opportunities throughout Northern Virginia.
- **2010 –** Published results of the study *Examining the Effectiveness of Transportation Demand Management Strategies In Reducing Greenhouse Gas Emissions*, which provides important information and a new calculation tool— E3Calc— that will assist local, state, and federal agencies and the private sector in quantifying the impact that TDM strategies have in reducing GHG emissions that are associated with employee commutes. This represents a significant step forward in documenting the contribution that TDM strategies have in reducing a region's carbon footprint.
- **2009 - 2011 -** Continued with Phase I and full implementation of the expanded E3Calc tool. Phase II of the program will be implemented after beta sites are tested.
- **2010 – 2011 –** Planned and instituted its first Rotating Rideshare Coordinator Pilot program (funded through a DRPT grant) to be filled by a prospective candidate who will work on-site at various hotel locations and assist staff in forming carpools, maintaining existing carpools, facilitating ridematching through locally established web-based services, and potentially assisting in the formation of vanpool services. This candidate will also work with other DATA staff and external partners to ensure coordinated operation, outreach, and communication regarding this program.
- **2011 -** In cooperation with a consultant team, supervised a Dulles International Airport Employee Commute Survey. Outcomes from this survey will inform long-term planning in the region.

2.4 GOVERNANCE AND ORGANIZATIONAL STRUCTURE

Operating as a 501(c)(3) not-for-profit organization, DATA is governed by a 10-person Executive Committee, including an Executive Director, President, Vice President, Secretary, and General Counsel. The organization is also overseen by

a Board of Directors, which includes representatives from regional companies, transportation agencies and organizations, and locally elected officials.

Membership

As determined by the By-laws created by the Board of Directors, DATA has two Categories of members.

- Category I membership is for property owners in the Greater Dulles area, with dues varying based on criteria such as the area of property under development.
- Category II membership is open to Corporations, Regional Agencies and Associations, dues vary by the number of employees.

DATA's membership currently includes approximately 65 dues-paying members and about the same number of members which are honorary or reciprocal members.

Staff

DATA's staff fall into five functional areas, as listed below. Staff role descriptions in each of these areas are currently under review, and will be added to future versions of this document.

- Executive Director and CEO
- Business Service Manager
- Director of Sales and Marketing
- Database/eCommunications Manager
- Director of Special Grant Projects

2.5 PROGRAM ROLE IN DULLES REGION

DATA is both a leader and a partner in confronting the transportation challenges in the Dulles region of Northern Virginia. The agency appreciates that this service area functions as part of a larger economic region and transportation system within the Washington Metropolitan Region. Therefore, the integration of DATA's TDM programs and the service area's transportation infrastructure into this larger, interconnected system is essential. For example, DATA advocated for the Silver Line Metrorail which will link the Dulles Airport through Tysons Corner into the Washington DC area and other parts of Virginia. Understanding the regional context of the movements of residents and employees within the Washington Metropolitan region, and the transportation infrastructure and programs which serve them, is critical to making sound and sensible investments in the DATA service area. As the regional focus and goal of connectivity is so crucial, so is communicating and coordinating with partners in the region. For this reason, DATA participates in other transportation

association and organizational meetings and activities, and partners and coordinates with local governments and the region's MPO, MWCOG. Many government officials and business and transportation association leaders are members of DATA or are on the Board of Directors. For example, DATA actively coordinates with the following state, regional, and local partners:

- Virginia Department of Rail and Public Transportation (DRPT)
- Metropolitan Washington Council of Governments (MWCOG)
- Virginia Regional Transportation Association
- Dulles Transit Partners
- Dulles Corridor Rail Association
- Committee for Dulles
- Loudoun County Board of Supervisors
- Fairfax County Board of Supervisors
- Fairfax County Department of Transportation
- Leesburg Town Council
- Herndon Town Council

DATA supports regional priorities shared by local governments and other associations and organizations. Its ongoing activities, events and programs continue to actively address the priorities of groups such as the Committee for Dulles, Washington Airports Task Force, Dulles Corridor Rail Association, and the regional Chambers of Commerce. These priorities include securing new, sustainable transportation funding to provide mobility in the most cost-effective manner, constructing a comprehensive regional transportation grid, and reducing congestion. Specific examples include DATA's promotion of the Dulles Corridor Metrorail Project and participation in the Dulles Loop Implementation Group (DLIG).

As DATA tailors its programs to the regional context – such as the current and anticipated land use, transportation infrastructure, and residential and employment makeup of its service area and the surrounding region—it pursues multi-modal strategies that address congestion and greenhouse gas (GHG) reductions. DATA promotes additional transportation infrastructure and services, as well as TDM program support and outreach, to address the challenges faced throughout the region (including its urban, sub-urban, and less developed land use components). As a significant number of residents within the DATA service area work in the Greater Washington Metropolitan area, DATA prioritizes connectivity. DATA is positioned to work in partnership with other organizations to address the unique needs across the region, such as widening lanes and adding interchanges on Route 28, and promoting public and private transit and TDM programs to increase travel choices and reduce the

number of single occupancy vehicles (SOV) on the regional roads. Together, these combined efforts lead to regional benefits, such as the reduction of congestion and greenhouse gas emissions, thereby contributing to achievement of regional air quality attainment goals.

2.6 CURRENT SERVICES

Seeking multimodal solutions to transportation challenges, DATA supports programs and services that provide commuting options to Northern Virginians in the Dulles region, such as telework, ridesharing, flextime, use of public transit, walking or biking to work.

These services include the following:

- As a member of the Commuter Connections TDM network, DATA conducts employer outreach within its service area (including parts of Fairfax, Loudoun, and Prince William counties) to assist employers in implementing programs such as telework or flextime. The Employer Outreach Program provides support and education to all interested businesses, as well as their employees.
- DATA provides outreach to employers wishing to participate in the Telework!VA program that provides up to $35,000 in assistance for implementing or expanding a formal telework program.
- DATA offers educational seminars and forums on TDM and transportation trends to employers and other interested parties.
- DATA holds Employer Council meetings to update HR Directors and Facilities Managers on the importance of TDM.
- DATA encourages individual employees to change commuting modes through educational and awareness-building events, such as transportation fairs, Lunch 'n' Learns, and on-site demonstrations of ridematching software and other transportation tools.
- DATA has developed a greenhouse gas (GHG) calculator, called E3Calc, to help companies measure their carbon footprint based on employee commuting modes. This unique tool helps to evaluate how the implementation of transportation options might improve a company's carbon footprint and help reduce greenhouse gases.

3.0 Service Area Characteristics

Section 3.0 describes the service area in which DATA operates, including its demographic and employment characteristics. An understanding of the current and projected population, employment and transportation trends in the service area—as well as planning efforts and investments already underway—helps frame the opportunities and challenges that DATA faces, and is likely to face in the future, as it strives to bring about positive change to the region's major transportation issues.

3.1 GEOGRAPHICAL BOUNDARIES AND KEY AREAS OF INTEREST

As depicted in Table 3.1, DATA's total service area encompasses approximately 361 square miles and includes portions of Fairfax, Loudoun, and Prince William counties. The number of square miles in each county is shown below.

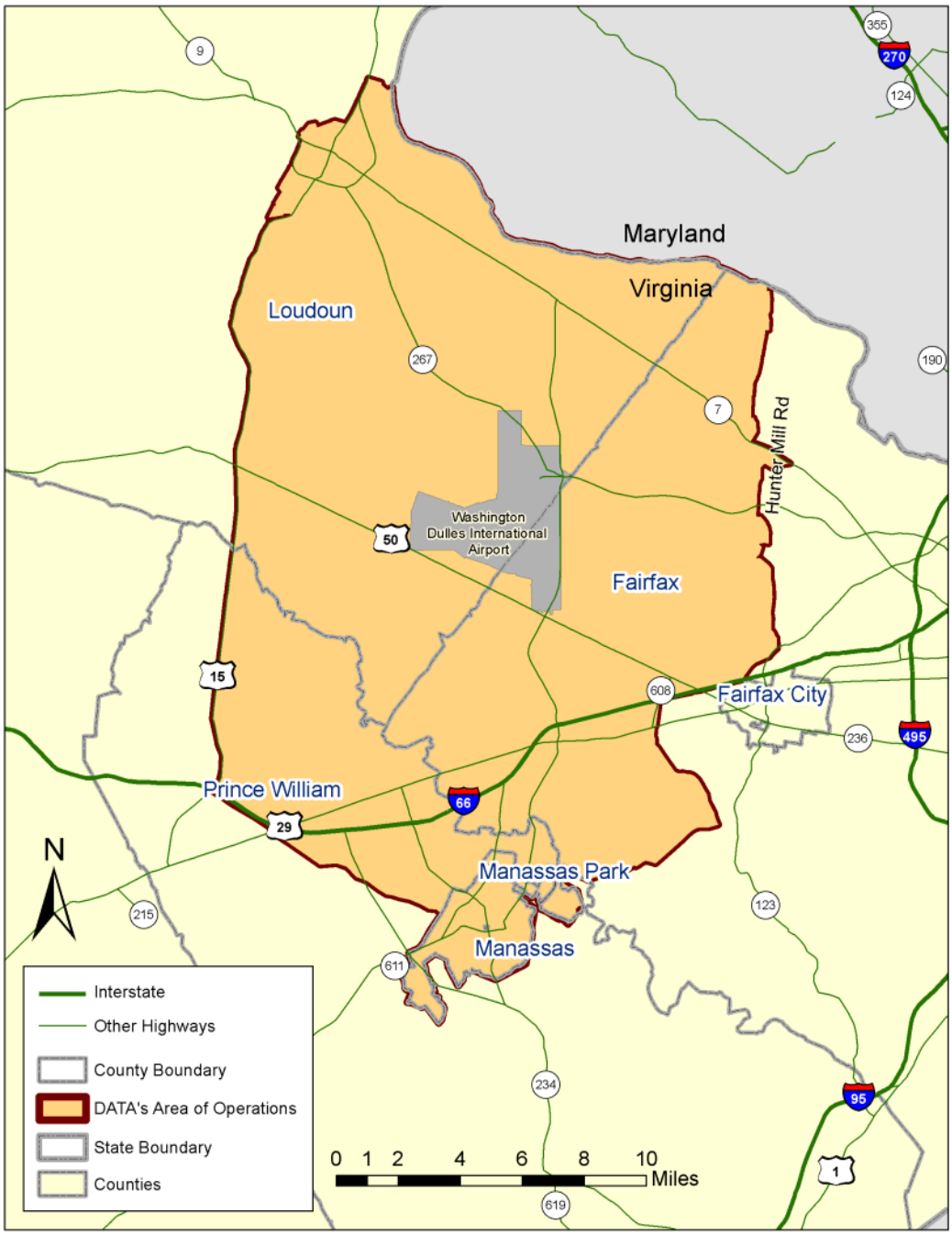
Figure 3.1 displays the approximate geographical boundaries of DATA's service area based on aggregated traffic analysis zones (TAZ) from the most recently available transportation modeling forecast produced by the Metropolitan Washington Council of Governments (MWCOG). The MWCOG forecast file, known as the Final Round 7.2A Cooperative Forecast, was provided by DATA to 1) enable its service area to be graphically displayed on a map and 2) to enable an analysis of demographic trends within this area over a long-term timeframe[7]. As shown by the map in Figure 3.1, DATA's service area is bounded by the Potomac River on the north, Hunter Mill Road on the east, the Route 15 corridor on the west, and Interstate 66 (I-66) on the south. The boundaries contain portions of three counties: Fairfax, Loudoun, and Prince William. The major cities within DATA's service area are Manassas, Manassas Park, and Fairfax. The major towns include Herndon and Reston, while the unincorporated areas include Sterling, Ashburn, Centreville, Chantilly, and South Riding. Several major areas of interest also lie in DATA's service area, namely; the Washington Dulles International Airport, (Dulles Airport) George Mason University[8], Northern Virginia Community College (Loudoun Campus), George Washington

[7] Traffic analysis zones are units of geography most commonly used in conventional transportation planning models, such as the 7.2A Cooperative Forecast used by MWCOG. These zones are constructed using U.S. Census blocks and related socio-economic data.

[8] George Mason University has two campuses in the service area: the Prince William Campus in Manassas and the Loudoun County Campus in Sterling.

University's Science and Technology Campus (Ashburn) and the National Air & Space Museum – Steven F. Udvar-Hazy Center.

Figure 3.1 Map of DATA's Service Area



Source: MWCOG Final Round 7.2A Cooperative Forecast.

3.2 CURRENT AND PROJECTED DEMOGRAPHIC TRENDS

The service area is projected to experience steady population, housing, and employment growth over the next twenty-five years. Currently, there are over 700,000 individuals living in the area, slightly more than 257,000 households, and approximately 450,000 jobs. According to MWCOG's demographic and transportation projections, these totals will increase by the year 2035. Over this twenty-five year timeframe, the population within the service area is anticipated to grow by approximately 37 percent; employment growth is projected to increase by 57 percent; and the number of households is projected to increase by 42 percent. Table 3.1 shows population, household, and employment statistics for each county portion within the service area, as well as the overall totals, for each five-year increment from 2010 to 2035.

Table 3.1 Demographic Snapshot of DATA's Service Area

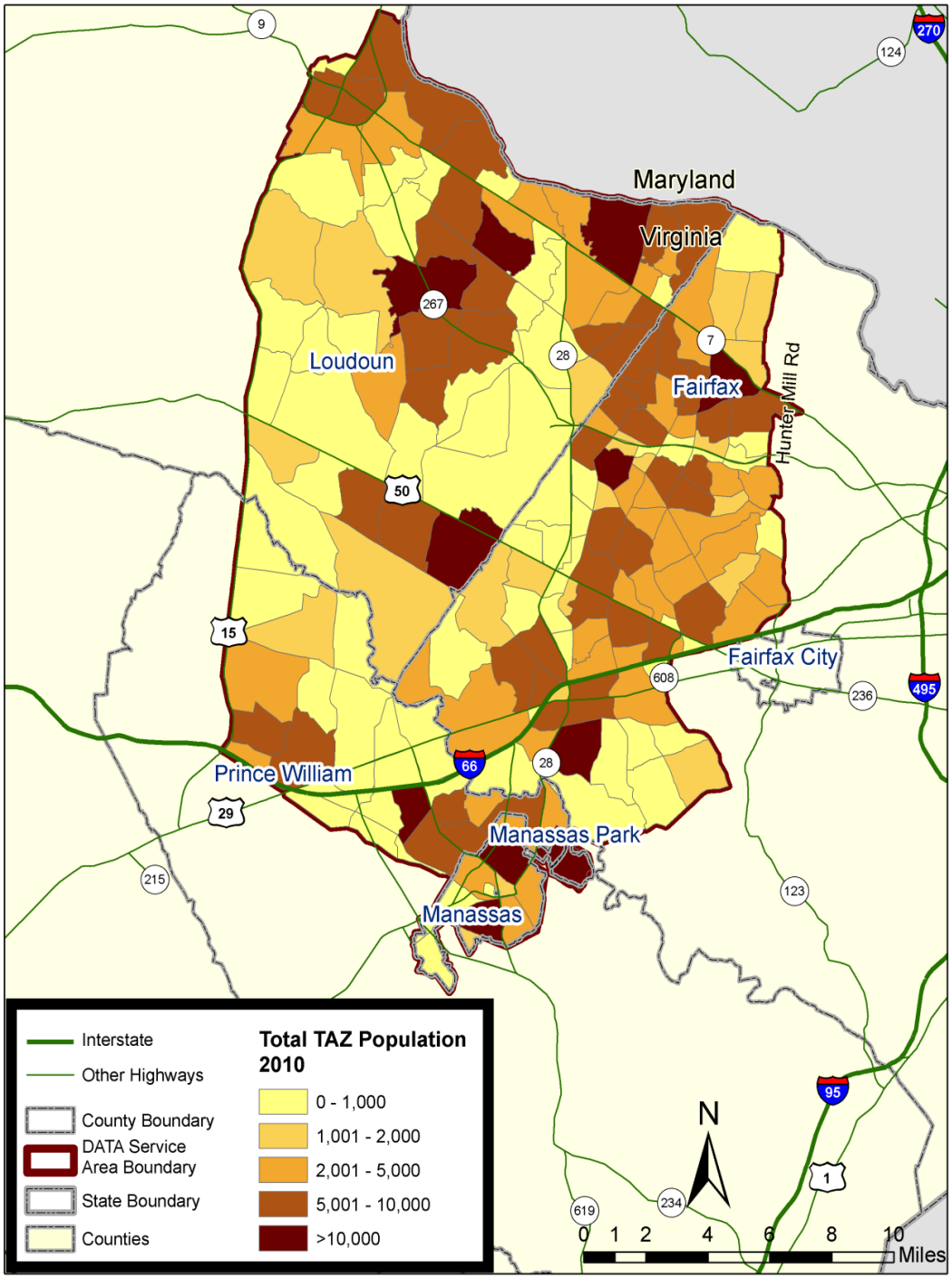
County	Demogra-phic Measures	2010	2015	2020	2025	2030	2035	Increase from 2010 to 2035
Loudoun County Portion of DATA Area	Population	221,585	249,227	289,925	316,795	326,099	331,947	+ 110,362
	Households	77,725	88,276	104,066	114,505	118,504	121,241	+ 43,516
	Employment	140,164	168,305	203,205	229,122	247,293	262,342	+122,178
Fairfax County Portion of DATA Area	Population	380,721	406,285	429,533	451,005	468,956	482,354	+ 101,633
	Households	138,950	149,944	159,821	168,983	176,684	182,378	+43,428
	Employment	264,423	283,898	302,753	321,543	337,229	349,488	+86,065
Prince William County Portion of DATA Area	Population	117,508	129,237	142,835	155,143	164,778	172,914	+ 55,406
	Households	40,567	45,427	50,857	56,069	60,135	63,462	+ 22,895
	Employment	46,343	56,401	66,906	77,568	88,345	96,186	+51,843
TOTAL	Population	719,814	784,789	862,293	950,529	959,833	987,215	+267,401

	Households	257,242	283,647	314,744	339,557	355,323	367,081	+109,839
	Employment	450,930	508,604	572,864	628,233	672,867	708,016	+257,086

Source: MWCOG Final Round 7.2A Cooperative Forecast.

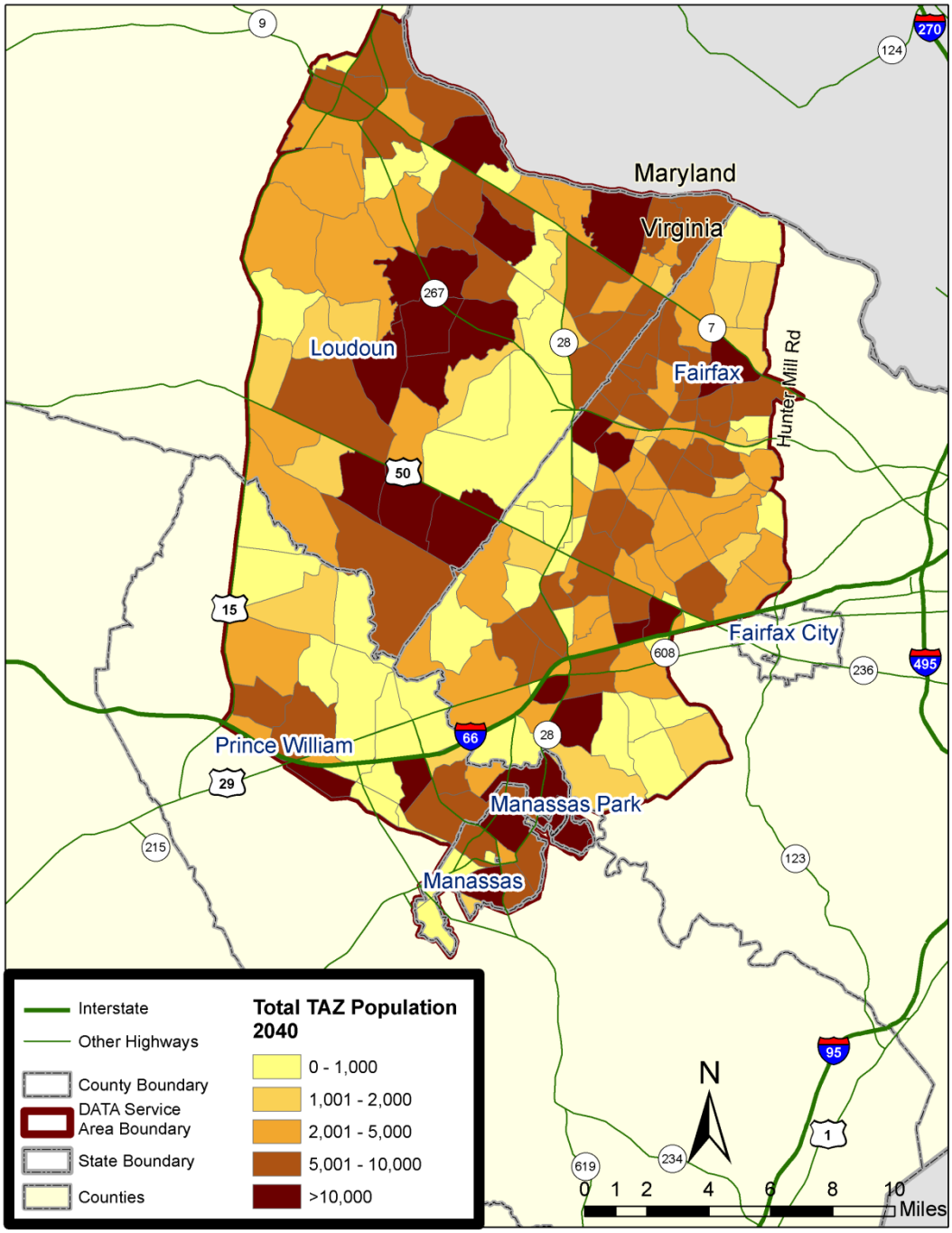
Figures 3.2 and 3.3 illustrate the current (2010) and projected (2040) population and illustrate where the largest increases are anticipated to occur. Much of these increases will take place in Loudoun County, between U.S. 50 and Route 7.

Figure 3.2 Total Population – 2010



Source: MWCOG Final Round 7.2A Cooperative Forecast.

Figure 3.3 Projected Population – 2040



Source: MWCOG Final Round 7.2A Cooperative Forecast.

3.3 TRANSPORTATION/ LAND USE PROFILE

DATA's service area is already home to a number of households, businesses, and destinations, including the Washington Dulles International Airport, which continues to expand. Employment at the airport is expected to increase by approximately 25 percent between 2010 and 2035. Table 3.2 shows the specific employment projections for the Airport.

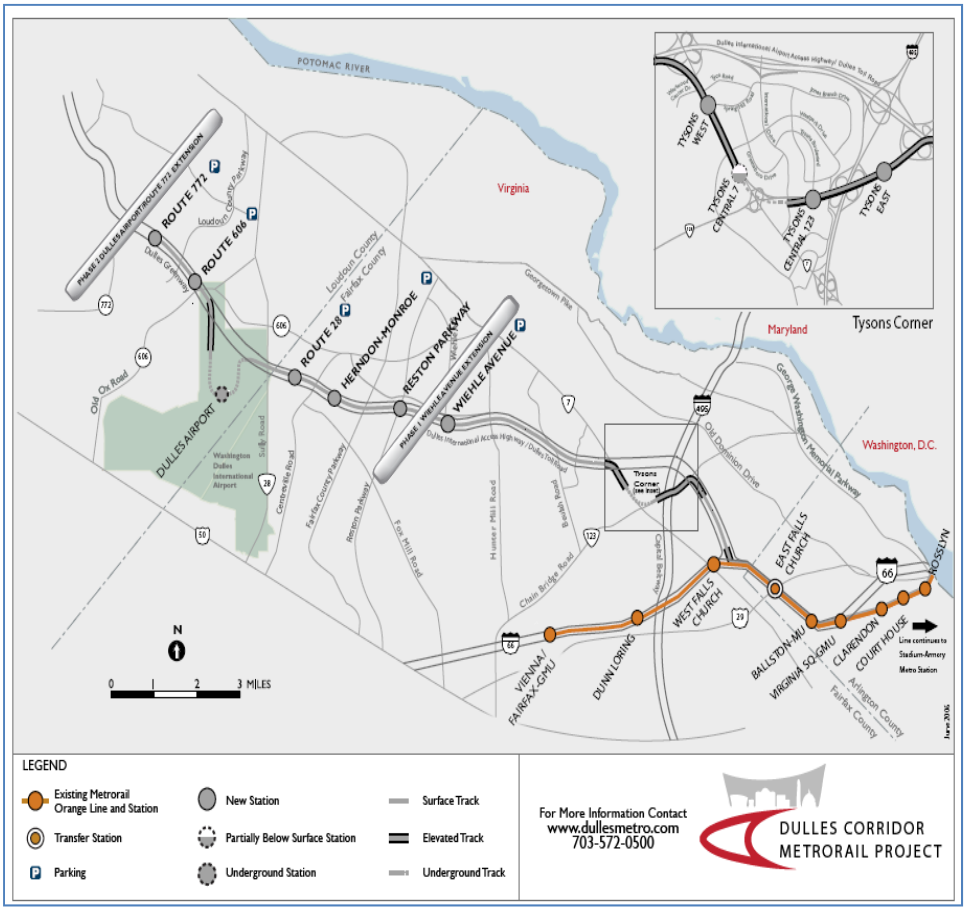
Table 3.2 Dulles Airport Employment Trends – 2010 to 2035

Year	2010	2015	2020	2025	2035	Increase from 2010 to 2035
Number of Employees	16,268	18,296	19,431	19,955	20,412	+ 4,144

Source: MWCOG Final Round 7.2A Cooperative Forecast.

The addition of five new Metrorail stations will also generate much of this expected growth. The Metropolitan Washington Airport Authority (MWAA) is constructing a twenty three mile extension of the existing Metrorail system, which will be operated by the Washington Metropolitan Area Transit Authority (WMATA). When phase two of the construction is completed, in 2016, there will be five new train stops in the DATA service area. These include Reston Parkway, Herndon-Monroe, Route 28 (near Dulles Airport), Dulles Airport, Route 606 (near the Dulles Greenway), and Route 772 (near the Dulles Greenway). Figure 3.4 shows the entire Metrorail expansion, including the stops listed above.

Figure 3.4 Dulles Corridor Metrorail Expansion Project



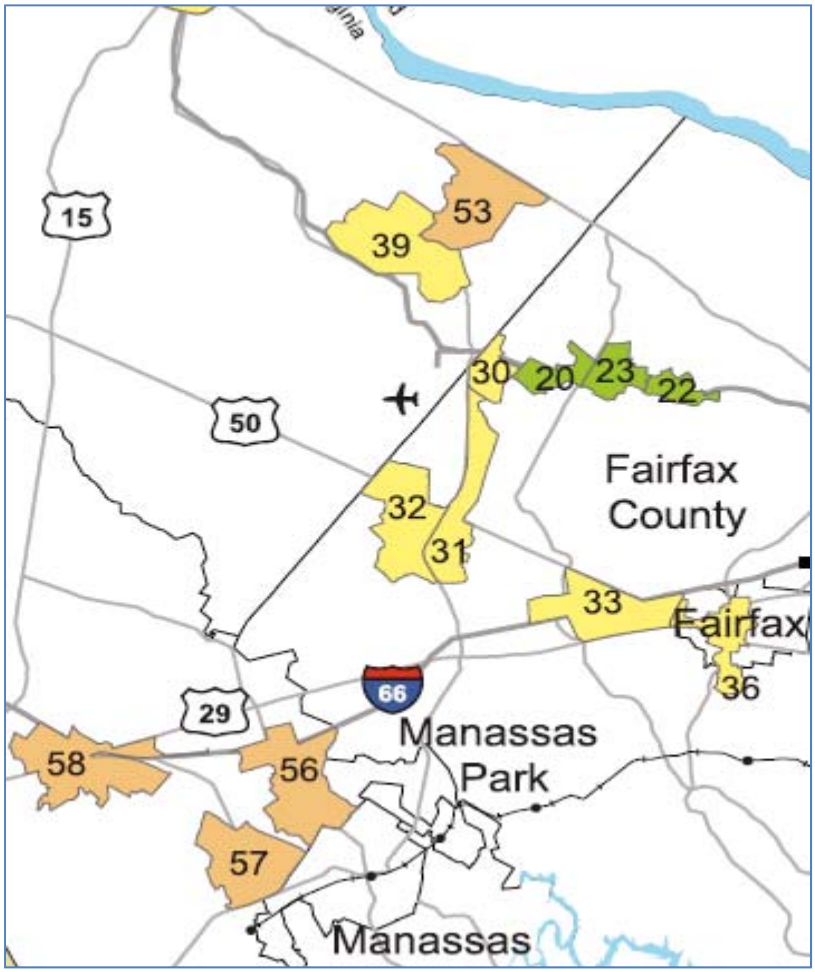
Source: MWAA Dulles Corridor Metrorail Project, http://www.dullesmetro.com/.

According to projections for the year 2030, there will be close to one million people in the DATA service area, as well as 400,000 households, and 700,000 jobs. The implications for traffic congestion could be alarming, making it critical to link the transportation assets (specifically Metrorail) with housing and employment to create mixed-used developments that reduce the need for SOV travel.

A mixed-use area is designed to encourage business, commercial, social, and residential developments, in close proximity to one another, thereby reducing the need for extensive automobile travel. MWCOG uses its transportation, population, household, and employment forecasts to identify areas of land that are prime for mixed-use development. These areas are labeled as "Activity Centers". The Activity Centers in the DATA area are shown in Figure 3.5 and include Herndon, Reston East, Reston West, Dulles Corner, Dulles East, Dulles West, Fairfax Center, City of Fairfax/GMU, Corporate Dulles, and Route 28 North.

Many of the Activity Centers mentioned above are close to the proposed Metrorail stations and plans for mixed use developments have already begun. MWCOG awards funds to local agencies to promote transportation and land use strategies. They have helped fund the plans for Dulles Station, a 2.7 million square foot mixed use development near the future Herndon station; Arcola Center, a mixed use development, just southwest of the Dulles Airport; Moorefield Station, a mixed use center, south of the Dulles Greenway; and One Loudoun, mixed-use center, under construction, at Loudoun County Parkway and VA Route 7.

Figure 3.5 Regional Activity Centers in DATA Service Area



Source: Metropolitan Washington Regional Activity Centers and Clusters
http://www.mwcog.org/planning/planning/activitycenters/

Table 3.3 Employment and Household Projections by Activity Center - 2030

Activity Center	Jobs 2030	Households 2030
Herndon (#20)	30,888	3,809
Reston East (#22)	26,508	2,408
Reston West (#23)	45,744	5,923
Dulles Corner (#30)	22,114	7,442
Dulles East (#31)	45,257	3,673
Dulles West (#32)	43,972	1,551
Fairfax Center (#33)	28,072	3,336
City of Fairfax/GMU (#36)	35,231	2,646
Corporate Dulles (#39)	44,129	0
Route 28 North (#53)	18,958	2,441

Source: Metropolitan Washington Regional Activity Centers and Clusters

Congestion in the DATA Service Area

DATA's support for multimodal travel choices and other TDM solutions, such as telework, is important to everyone who bears the costs of congestion in the Washington Metropolitan area, which ranked #2 for worst congestion in the country in 2009. Congestion has real impact on the quality of life of people working and living in the DATA service area. It affects commuters' time, pocketbooks, and the air they breathe. In 2009, each auto commuter in the Washington Metropolitan area experienced approximately 70 hours - nearly two work weeks - of annual delay due to congestion, and incurred costs averaging $1,555, including the purchase of 57 extra gallons of fuel while stalled in traffic.[9] For the entire area, more than four million dollars were lost in commuting time and fuel costs in 2009.

DATA's efforts to reduce congestion in its service area contribute to:

- Money savings for businesses and employees;
- Improving the economy by facilitating the movements of goods;
- Improving the quality of life for employees by freeing up time spent in traffic to be spent on other preferred activities; and

[9] TTI's 2010 Urban Mobility Report.

- Contributing to air quality attainment goals by reducing the amount of greenhouse gases contributed by transportation as congestion delay is minimized.

Current and Future Investments

As a public private partnership, DATA communicates and coordinates with local jurisdictions and the regional MPO as it works towards its goal of improving the transportation system in its service area. Understanding how and where the region is going to grow helps to inform DATA as to what types of transportation investments which it should help to promote, what modes of transportation may best serve the new growth, and what TDM programs might alleviate additional transportation demand spurred by the new growth. DATA understands that the success of the Activity Centers in the DATA service area, or any focused growth in general, is dependent upon how easy it is to access these areas and move between them. Therefore, DATA's work to support an effective transportation system is pivotal to the economic centers it serves.

To effectively identify and promote particular transportation investments that will serve the DATA service area, it is necessary for DATA to understand the larger network in which the investments will operate. Therefore, DATA is cognizant of the road and public transportation investments in the Constrained Long Range Transportation Plan (CLRTP) and the Congestion Management Process (CMP) which address linkages, accessibility, and mobility. The following discussion and maps set the stage for understanding the regional transportation system in and surrounding the DATA service area, as it is today and as it is planned for in the next few decades.

MWCOG Transportation Planning and Programming

When MWCOG plans for and programs transportation projects, it is guided by a set of goals. Goal Number 2 in the CLRTP states:

The Washington metropolitan region will develop, implement, and maintain an interconnected transportation system that enhances quality of life and promotes a strong and growing economy throughout the entire region, including a healthy regional core and dynamic regional activity centers with a mix of jobs, housing and services in a walkable environment.

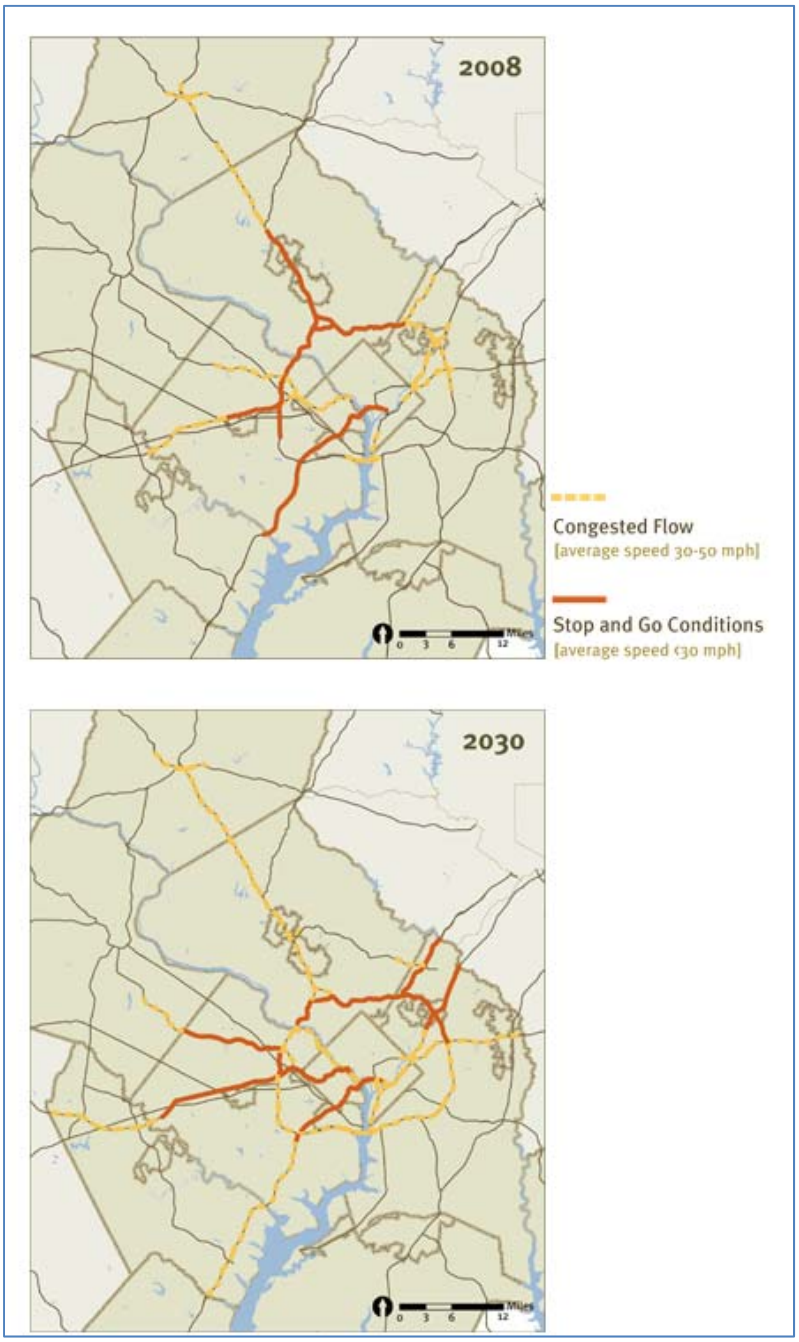
To help achieve the above goal, the Congestion Management Process (CMP) includes strategies to mitigate congestion in the region, but it also specifically addresses the movement to, from, and within Activity Centers. The CLRTP utilizes that information to build a program of highway, transit, HOV, and bicycle and pedestrian improvements that reduce congestion and provide key linkages. Many of the projects in the CLRTP are within the DATA service area and will benefit any current and future Activity Centers.

The MWCOG 2009 Constrained Long Range Transportation Plan provides maps, which are informative about current and projected levels of service on roadways

in the region and DATA service area, as well as planned and programmed transportation projects. The technical information provided by the MPO may help to inform DATA discussions, initiatives and programs.

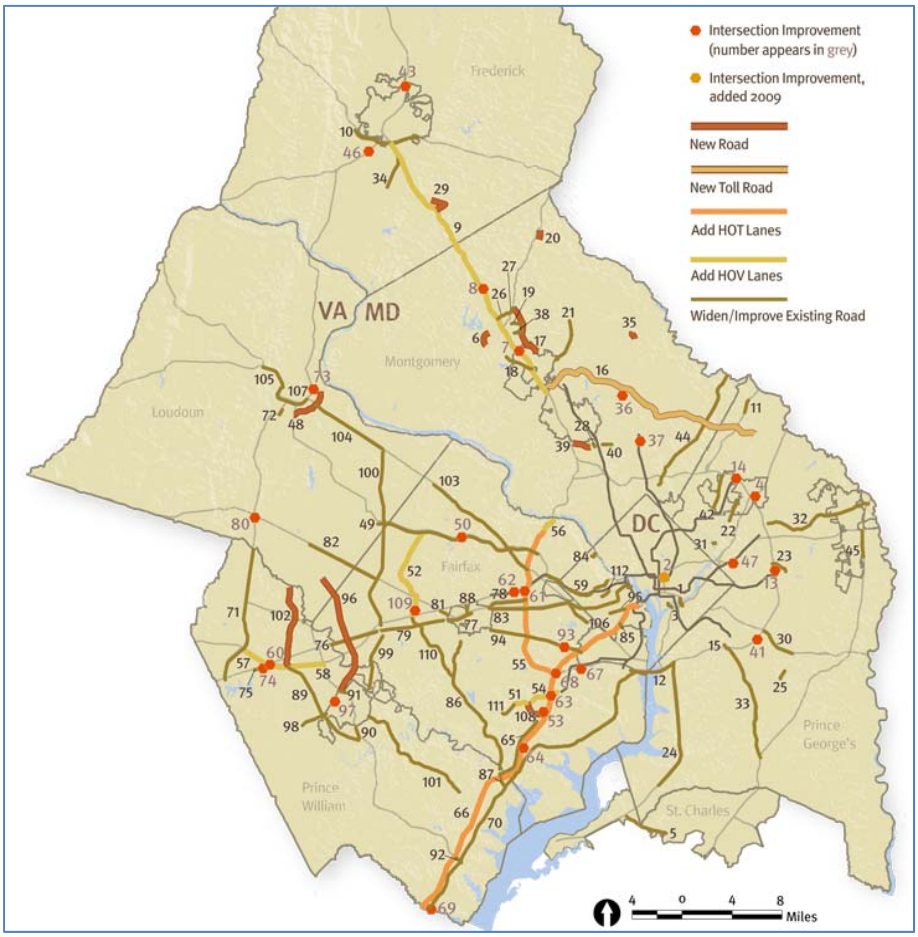
The map in Figure 3.6 shows the current and predicted levels of service on roadways in the metropolitan region. The roadways in the DATA area are congested, but are projected to be much worse in 2030, even with the addition of the Silver Line Metrorail. Maps shown in Figures 3.7 through 3.10 depict multi-modal improvements that, if funded, will ease this congestion and enhance regional mobility. Figure 3.7 depicts the major highway improvements, Figure 3.8 depicts Transit and HOV projects, Figure 3.9 depicts Major Studies, and Figure 3.10 depicts Bicycle and Pedestrian projects.

Figure 3.6 Current and Projected Levels of Congestion



Source: MWCOG 2009 Constrained Long Range Transportation Plan

Figure 3.7 Major Highway Improvements



Source: MWCOG 2009 Constrained Long Range Transportation Plan

<u>Major Highway Improvement Projects within the DATA service area include:</u>

#49 - Dulles Access Road, widen to 6 lanes including interchange reconstruct at I-495, 2017

#52 - Fairfax County Parkway HOV, widen and upgrade, 6 to 8 lanes, 2010, 2015

#82 - US 50, widen to 6 lanes, 2012, 2015

#100 - VA 28, widen to 6, 8 lanes, with interchanges, 2015

#104 - VA 7, construct interchanges, 2009, 2010, 2020

#103 - VA 7, Leesburg Pike, widen to 6, 8 lanes, 2013, 2020

#48 - Battlefield Parkway, construct, widen, upgrade 4 lanes, 2009, 2010

#96 - VA 28 Bypass, construct 4, 6 lanes, 2020, 2025

#102 - VA 411, (Tri-County Parkway), construct 4 lanes, 2025

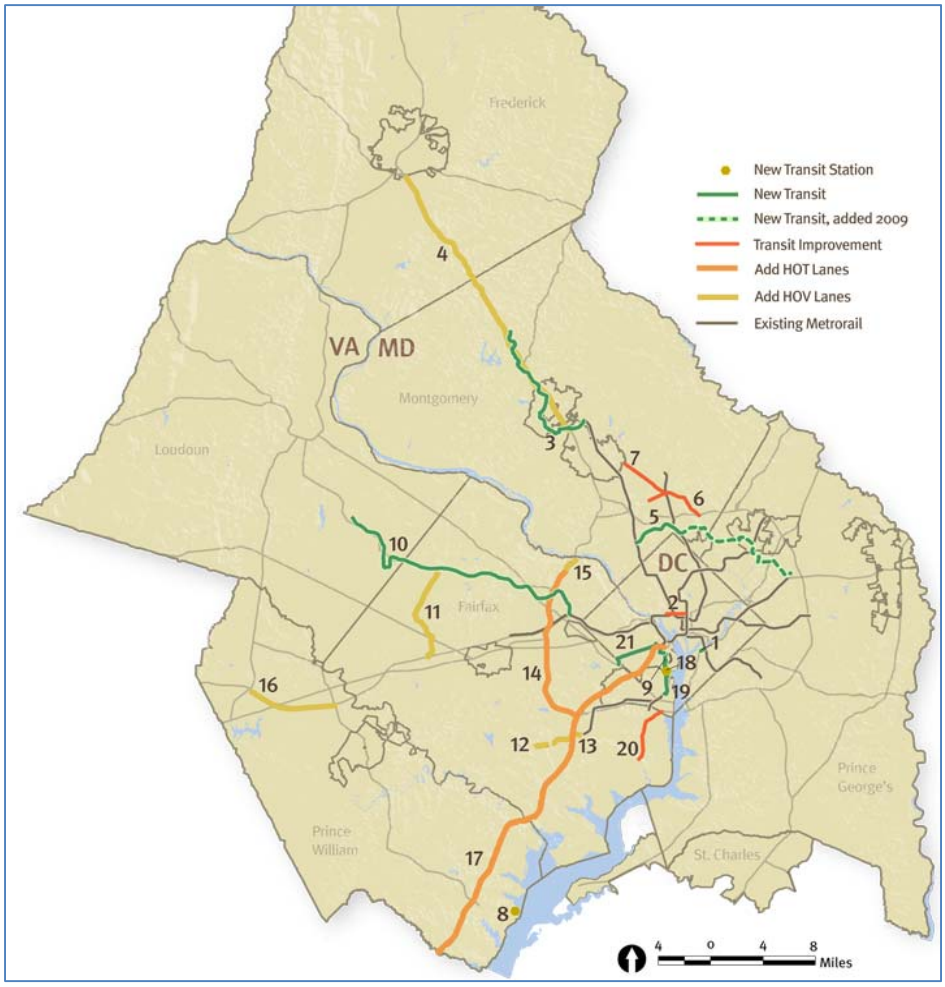
#72 - US 15, widen to 4 lanes, 2011

#107 - VA 7/US 15 Bypass, widen to 6 lanes, 2020, 2025

#71 - US 15, widen to 4 lanes, 2009, 2030

#80 - US 50, construct round-about at US 15, 2010

Figure 3.8 Major Transit and HOV Projects



Source: MWCOG 2009 Constrained Long Range Transportation Plan

<u>Major Transit and HOV Projects within the DATA service area include:</u>

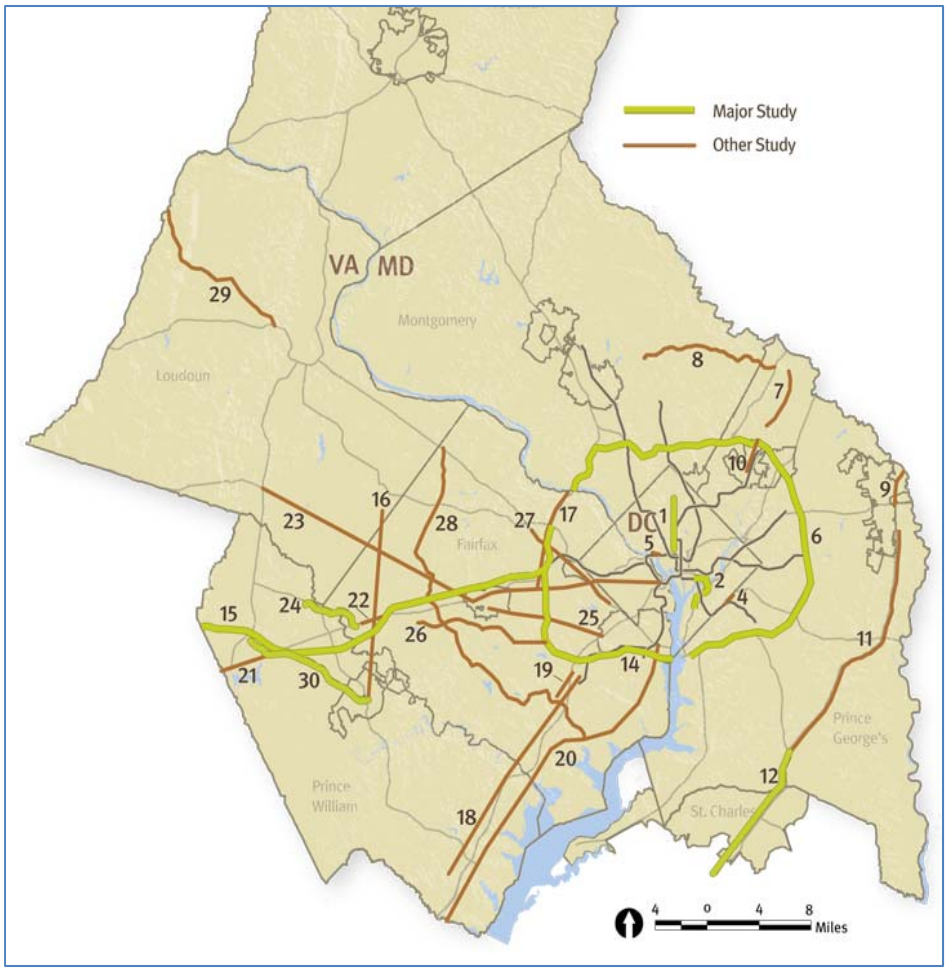
#10 - Dulles Corridor Rapid Transit

#11 - Fairfax County Parkway HOV, widen and upgrade 6 to 8 lanes, 2010, 2015

Metrorail Extensions within the DATA service area include:

- Phase One of the Metrorail Project expansion, which runs 11.5 miles and will be completed in late 2013. There will be four new stations, including; Tysons Corner-Tysons East, Tysons Central 123, Tysons Central 7, and Tysons West.
- Phase Two of the Metrorail Project, which runs entirely through the DATA area, includes six new Metro stations and is currently in the preliminary engineering phase. The rail line will continue on to Dulles airport as well as to the Reston Herndon area, which has the state's second largest employment concentration. Other stops include; Route 28, Route 606, and Route 772. The section of the line is expected to be completed in 2016.

Figure 3.9 Major Studies



Source: MWCOG 2009 Constrained Long Range Transportation Plan

Major Studies within the DATA service area include:

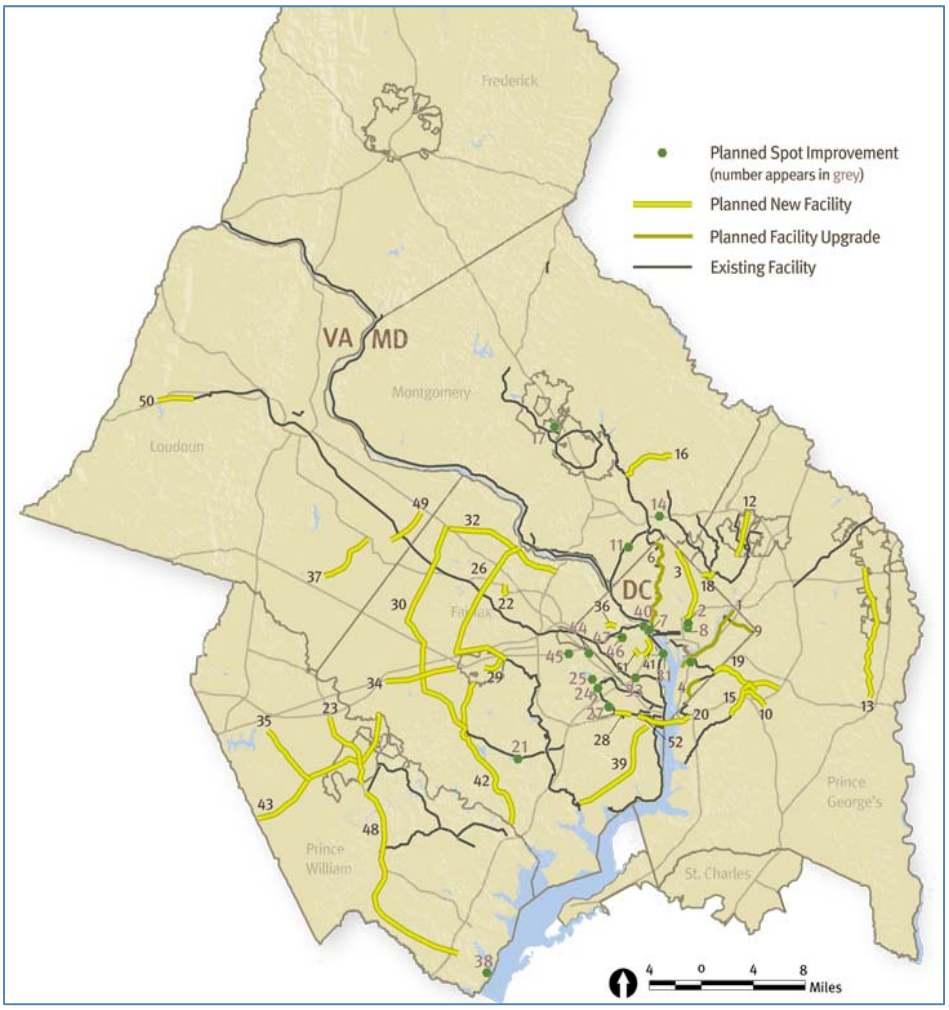
#15 - I-66, HOV and Transit Service Improvements

#16 - Light Rail from Manassas to Dulles

#23 - US 50, Transit Service Improvements

#28 - VA 7100, Priority Bus

Figure 3.10 Major Bicycle and Pedestrian Projects



Source: MWCOG 2009 Constrained Long Range Transportation Plan

<u>Major Bicycle and Pedestrian Projects within the DATA service area include:</u>

#30 - Fairfax County Parkway Train, construct 8-mile shared-use path

#37 - Old Ox Road Widening (Rt. 606), construct shared-use path

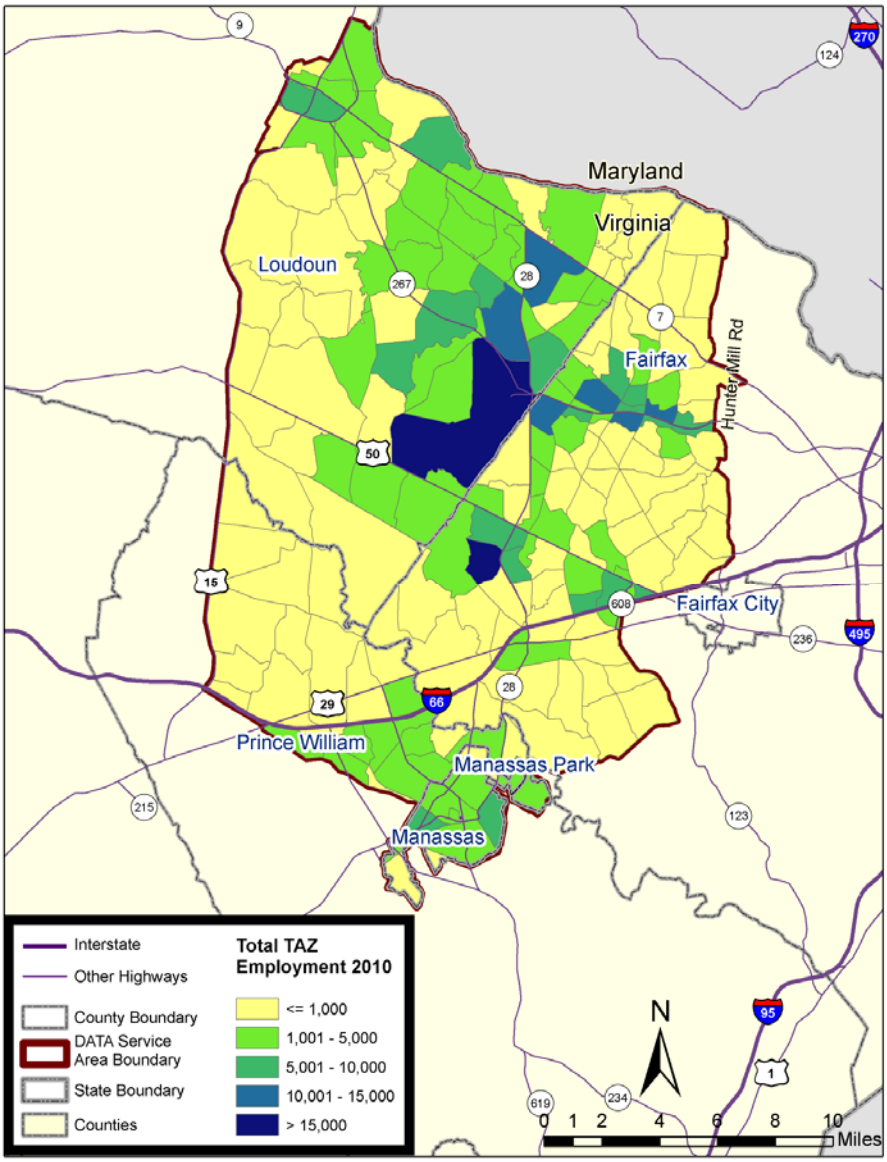
#49 - VA 846 (Sterling Boulevard) landscaping, streetscape/pedestrian improvements

*Not shown on the map is the Fairfax County Bicycle Plan, whose goal it is to identify specific improvements that are needed to accommodate and encourage bicycling within and between activity/population centers throughout Fairfax County, as well as to adjacent jurisdictions.

3.4 EMPLOYMENT PROFILE

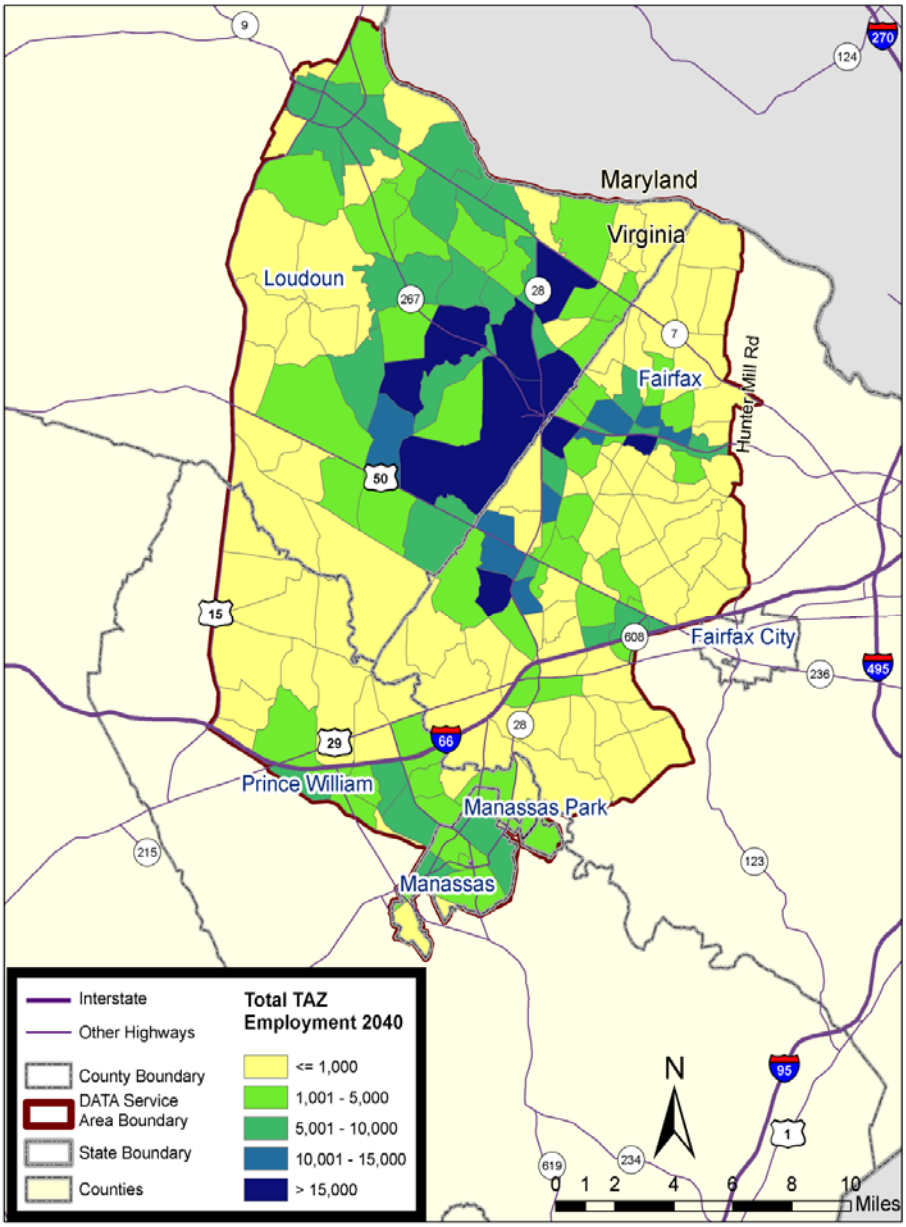
Figures 3.11 and 3.12 provide a snapshot of the current and future employment trends in the DATA service area. The remainder of the section focuses on the impact of Dulles International Airport and employment centers in each of the three respective counties in DATA's service area.

Figure 3.11 Total Employment - 2010



Source: MWCOG Final Round 7.2A Cooperative Forecast.

Figure 3.12 Projected Employment - 2040



Source: MWCOG Final Round 7.2A Cooperative Forecast.

Economic Impact of Dulles International Airport

The employment growth in the DATA service area is spurred by the proximity to the Washington D.C. Metropolitan area and the Washington Dulles International Airport, which is one of the fastest-growing airports in the country. The Dulles airport opened in 1962, since that time it has become a significant economic engine and catalyst for growth in Loudoun and Fairfax Counties, spurring the

growth of more than 11,000 businesses in the Dulles region, including more than 350 foreign-owned companies from 36 countries.[10] Many of the targeted business clusters in the Dulles region, such aerospace, aviation, information technology, life sciences, and Federal government contracting may desire to be located near an international airport for the connectivity to markets within the U.S. and around the world. Likewise, local companies that look to export high-value goods look to Dulles for shipping access.[11]

The Dulles economic/employment center is roughly the area within an eight-mile radius of the main air traffic tower at the airport.[12] This area, approximately 200 square miles, is only one fifth of the Loudoun and Fairfax acreage, yet hosts about one-third of the businesses in the two counties including 45 percent of the office space and nearly 30 percent of the retail space, providing more than 40 percent of jobs in the two counties.[13]

Although Fairfax County has other significant employment centers, the Dulles region surpasses them all in terms of employment impact. When compared to Tysons Corner, the population of the Dulles region is about four times as large. In all sectors, excepting finance and real estate, the Dulles region doubles and sometimes even triples the number of businesses in Tysons. At full build out (based on zoning capacities) the Dulles region will be twice the size of Tysons. The Dulles region has increased its private sector employment by one third in the last decade, while Tysons has remained fixed. Since 2002, the Dulles region surpassed Tysons in private sector job growth every year; as of 2010, its private sector growth is approximately twice that of Tysons.

The provision of convenient, economic alternatives to the single occupancy vehicle is crucial to managing transportation demand in this area. The Dulles region continues to grow, despite the national economic downturn. As employment projections in the Dulles region show a 14.5 percent increase in jobs and a 31.3 percent increase in gross area product between 2008 and 2015[14], DATA's TDM services will continue to be essential to the region.

Employment Centers in Fairfax County

Major employment centers in Fairfax County are located in Chantilly, Centreville, Dulles, Herndon, and Reston. Employment growth in these areas has been significant in the past decade, and trends indicate that growth will

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[10] Economic View through the Fairfax Lens, G. Gordon, President of Fairfax EDA.

[11] Ibid.

[12] Economic View through the Loudoun Lens, L. Rosentrauch, Director of Loudoun County EDC

[13] Ibid.

[14] Ibid.

continue. This is especially true in technology-driven markets which make up approximately one-third of the employment in the Fairfax County portion of the DATA service area.

Centreville, Chantilly, and Dulles

To the South of Dulles International Airport are the communities of Centreville and Chantilly, and to the east, the submarket of Dulles (formerly known as the Oak Hill/Herndon submarket).

Centreville's commercial sector is largely based out of a mixed-use development, Trinity Centre, which, when built out, will have 1.2 million square feet of office space, numerous restaurants, a hotel and apartments.

Chantilly is a major employment center in western Fairfax County, located north of Centreville and directly south of Washington Dulles International Airport, Chantilly hosts more than 10.8 million square feet of office space and 9.4 million square feet of industrial/flex space (See Table 3.4). Westfields Corporate Center, one of the Washington, D.C. Metropolitan area's largest business parks and home to numerous Fortune-500 companies, is located in Chantilly. Westfields is a 1,100-acre campus which, as of March 2010, had 8 million square feet of office and flex buildings. At build-out, the business park will house 16 to 18 million square feet of development. Currently, the development is anchored by the National Reconnaissance Office[15]. Other major employers located in Westfields include Lockheed Martin, Northrop Grumman, Aerospace Company, Boeing, CACI, TASC, General Dynamics, Scitor, Booz Allen & Hamilton, Silicon Graphics, Quest Diagnostics, Westfields Play & Learn Children's Centers, and Marriott Corporation.[16] Chantilly also serves patrons of the Dulles Airport by providing 14 hotels and more than 2.5 million square feet of retail development, such as the large retail center, the Sully Place Shopping Center and Metrotech plaza[17].

The Dulles submarket, which lies to the east of the airport, hosts 9.1 million square feet of space, which is primarily office space. Businesses located in this area include the new U.S. headquarters of Volkswagen Group of America, Inc., the Center for Innovative Technology, and the Smithsonian National Air and Space Museum's Steven F. Udvar-Hazy Center, which has millions of visitors

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[15] Ibid.

[16] Westfield Corporate Center: http://www.westfieldscorpcenter.com/community/

[17] Fairfax County Economic Development Authority: http://www.fairfaxcountyeda.org/sites/default/files/publications/ABR_centreville-chantilly.pdf

each year, is located on the southern edge of the airport.[18] In addition to office space, the Dulles area also has approximately 1.6 million square feet of flex space, nine hotels, and more than 702,000 square feet of retail development.

Another driver of economic activity in the Dulles submarket is the 15,000 square foot Dulles Expo and Conference Center, the second largest exhibit hall in the Washington, D.C. metropolitan area.

The Dulles submarket, together with the Chantilly sub-market, holds the largest concentration of undeveloped land in Fairfax County; however, much of this land is either under development or has plans for development, such as Arrowbrook Centre, Dulles Corner, Dulles Discovery, Dulles Station, the Pomeroy property and Woodland Park.[19]

Table 3.4 Fairfax County Commercial Space Inventory (Square Feet)

	Office	Industrial/Flex	Retail	Hotel	Total
Centreville	981,928	-	1,711,381	131,098	2,824,407
Chantilly	10,788,915	9,377,820	2,585,158	1,215,286	23,967,179
Dulles	9,106,371	1,638,186	702,255	1,227,525	12,674,337
Reston	19,459,505	465,775	1,727,112	823,062	22,475,454
Herndon	5,738,766	1,154,782	1,347,000	970,251	9,210,799
Fairfax County	111,529,937	38,760,187	43,609,000	10,314,676	204,213,800

Source: Fairfax County Economic Development Authority

Herndon and Reston

The Town of Herndon and the community of Reston also serve as two major activity centers in Fairfax County. The Town of Herndon is a center for office, retail and hotel space. Herndon offers more than 5.7 million square feet and approximately 1.2 million square feet of industrial/flex space, and 1.3 million square feet of retail development. Herndon has 10 hotels in proximity to Washington Dulles International Airport. Major employers in Herndon include Boeing, the Air Line Pilots Association, ITT Industries, Sprint, Northwest Federal

[18] Fairfax County Economic Development Authority: http://www.fairfaxcountyeda.org/dulles-business-area

[19] Fairfax County Economic Development Authority: http://www.fairfaxcountyeda.org/dulles-business-area

Credit Union, Parsons Brinckerhoff, SAVVIS Communications, Verizon and the Federal government.[20]

Reston has nearly 19.7 million square feet of office space, making it the second largest office market in Fairfax County. The Reston Town center hosts most of Reston's 1.7 million square feet of retail development. Additionally, Reston has four hotels and approximately 466,000 square feet of industrial/flex space. Major employers in the area include BAE Systems, Fannie Mae, Freddie Mac, Lockheed Martin, Sprint, Northrop Grumman, Oracle, Qinetiq North America, Raytheon, Sallie Mae, Unisys and the U.S. Geological Survey. Fairfax County is currently conducting a Reston Master Plan Special Study to evaluate existing Comprehensive Plan recommendations for the Dulles Corridor, including areas around the three planned transit station areas (i.e., Wiehle Avenue, Reston Parkway, and Herndon-Monroe), in addition to the Reston Town Center. The study is intended to help guide Reston's growth and development for the next 30 to 40 years.

As shown in Table 3.5, the professional, scientific and technical services sector accounts for a significant share of employment in the Fairfax County portion of DATA's service area. This may create sound opportunities for alternative work schedules and telework, as many of the employees in this sector may be able to successfully perform their work functions away from the office and without the constraints of traditional work schedules.

Table 3.5 Number of Business Establishments – Fairfax Employment Centers

	Centreville–Chantilly–Dulles		Herndon		Reston	
Sector (NAICS*)	Jobs	Share	Jobs	Share	Jobs	Share
Professional, Scientific and Technical Services	27,969	34.4%	4,245	22.7%	19,659	34.8%
Construction	6,495	8%				
Information	6,137	7.6%	1,455	7.8%	8,588	15.2%
Administrative and Support Services	5,905	7.3%	1,133	6.1%	2,379	4.2%
Accommodation and Food Services	5,414	6.7%	1,946	10.4%	3,029	5.4%
Retail Trade	4,479	5.5%	1,025	5.5%	2,659	4.7%
Health Care and Social Assistance	4,273	5.3%			4,117	7.3%

[20] Fairfax County Economic Development Authority: http://www.fairfaxcountyeda.org/sites/default/files/publications/ABR_herndon.pdf

Finance and Insurance			974	5.2%		
Educational Services					2,559	4.5%
Wholesale Trade	3,596	4.4%	1,499	8.0%		
Other Services (Except public administration)			1,282	6.9%	2,790	4.9%
Other	16,923	21.2%	5,139	27.5%	10,714	19.0%
Total Employment	81,191	100%	18,698	100.0%	56,494	100%

Table 3.6 below shows the number of jobs and businesses in the DATA submarkets of Centreville, Chantilly, Dulles, Herndon and Reston which can be attributed to information, telecommunications, and other technology industries. As this sector employment sector continues to expand, it is likely that a significant amount of commercial space that is not yet developed will be dedicated to these industries in the future. As this economic base tends to offer more flexibility than other employment sectors, DATA programs may be more likely to be supported by employers who are interested in expanding their business strategy to support expanded commuting options for new and existing employees.

Table 3.6 Jobs and Businesses in the Technology Sector – Fairfax County

	Centreville–Chantilly–Dulles		Herndon		Reston	
Technology Sector	Jobs	Businesses	Jobs	Businesses	Jobs	Businesses
Information Technology						
Computer and Data Services	4,615	103	396	38	1760	63
Software and Programming	4,869	251	703	75	4738	158
Systems Integration	11,362	459	1856	144	6832	265
Telecommunications Services						
Telecommunications Services	2,291	44	1025	25	5851	68
Other						
Energy and Environment	7,794	125	*	*	63	8
Engineering/R&D Services			609	18	4262	67
Internet/E-commerce			166	9	617	20
Technology Management Services	808	132	148	39	872	74
Technology Share of	41.0	30.6	29.2%	27.9%	45.0%	32.1%

Submarket						

* Not disclosed

Source: FCEDA analysis of 2008 VEC data
http://www.fairfaxcountyeda.org

Employment Centers in Loudoun County

Although Fairfax County hosts the majority of employment centers served by DATA, Loudoun County also has two communities with significant employment centers served by DATA; namely, Sterling and Ashburn. Sterling lies to the northeast of the airport, and Ashburn slightly further to the northwest.

Although these employment centers do not share Fairfax County's prime locational advantage between the Washington D.C. Metropolitan area and Dulles Airport, their proximity to the expanding Dulles Airport business environment has led to continued annual job growth for 16 consecutive years.[21] In the last 10 years, the number of jobs located within Loudoun County (mostly within the DATA service area) has doubled.[22] Although the majority of businesses in Loudoun County have less than 10 employees, those companies employing more than 100 people (about three percent), are responsible for about 55 percent of employment in Loudoun County. These top employers include companies shown in Table 3.7.

Table 3.7 Major Employers – Loudoun County

Company	Employment Range	Location
Inova Loudoun Hospital	1,000—4,999	Ashburn & Sterling, VA
M. C. Dean, Inc.	1,000—4,999	Ashburn, VA
Orbital Sciences Corporation	1,000—4,999	Sterling, VA
United Airlines, Inc.	1,000—4,999	Ashburn, VA
Verizon Business	1,000—4,999	Ashburn, VA
Department of Homeland Security	500—999	Sterling, VA
Verisign	500—999	Sterling, VA
HHMI Janelia Farm Research Campus	500—999	Ashburn, VA
Telos Corporation	500—999	Ashburn, VA

[21] http://biz.loudoun.gov/LinkClick.aspx?fileticket=Vu1aNUvsP%2bI%3d&tabid=80.

[22] Ibid.

Rockwell Collins Simulation	500—999	Sterling, VA

Source: Loudoun County Department of Economic Development
http://biz.loudoun.gov/LinkClick.aspx?fileticket=Vu1aNUvsP%2bI%3d&tabid=80

Like Fairfax County, technology-based industries are the leading employment sector in Loudoun County. The Information & Communications Technology (ICT) sector is the largest sector in Loudoun County, while other growing industry sectors include:

- Federal Government Contracting
- Aerospace & Airport-Related
- Life Sciences
- High-Value Agriculture
- International Business[23]

Table 3.8 below highlights the types of commercial space available in the Ashburn and Sterling communities within Loudoun County. Ashburn has almost twice as much commercial space as Sterling. About 40 percent of Ashburn's total commercial space is classified as industrial/retail.

Table 3.8 Loudoun County - Commercial Space Inventory (Square Feet)

	Office	Industrial/Flex	Retail	Other	Total
Ashburn	9,368,813	12,576,328	2,936,505	6,360,196	31,241,842
Sterling	3,179,935	6,199,588	3,843,142	3,749,258	16,971,893

Source: Loudoun County Department of Building & Development; compiled by Loudoun County Department of Economic Development.

Employment Centers in Prince William County

In Prince William County, the main employment centers served by DATA are Manassas Park and City of Manassas. Major employment centers include George Mason University, Northern Virginia Community College-Manassas Campus, Manassas Regional Airport, and numerous major shopping centers which are predominantly located between Manassas and Manassas Park south of Route 28. Manassas Park has historically been a residential community for workers in other parts of the region, and has a very limited amount of retail activity. There are few undeveloped parcels of land remaining in the City, which are zoned for

[23]Source: Virginia Employment Commission, Loudoun County Department of Economic Development
http://biz.loudoun.gov/LinkClick.aspx?fileticket=Vu1aNUvsP%2bI%3d&tabid=80

commercial or industrial development[24]. The employment base in the Manassas Park portion of DATA's service area is comprised largely of construction and trade sector jobs, which may be less likely to be influenced by TDM measures.[25] The City of Manassas may benefit from teleworking and other TDM strategies, as in the last decade the city has been gaining jobs in many employment sectors, particularly in government, health care and social assistance, and professional and technical services.[26]

The draft City of Manassas 2030 Comprehensive Plan recognizes the need to develop TDM programs, as well as improvements to complete gaps in the sidewalk system; provide intermodal links, especially to transit services; and develop sidewalk and path networks around major pedestrian generators, such as schools, parks, and cultural and employment centers[27]. Currently, transit service in the county includes the Virginia Rail Express (VRE) commuter rail, which provides weekday service to Washington D.C. The Manassas line has three stops in western Prince William County at Manassas Park, Manassas, and Broad Run/Airport. The Potomac Rappahanock Transportation Commission (PRTC) provides transit service in Manassas and Manassas Park, with connections to the Metrorail system.

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[24] Manassas Park Comprehensive Plan, 2007.

[25] Manassas Park Comprehensive Plan, 2007. http://www.cityofmanassaspark.us/public_documents/ManassasParkVA_CompPlan/Comprehensive%20Plan%20(final).pdf

[26] Draft City of Manassas 2030 Comprehensive Plan, 2010. http://www.manassascity.org/DocumentView.aspx?DID=3404.

[27] Ibid.

4.0 DATA Strategic Plan

Section 4.0 outlines the strategic framework that will guide the growth and development of DATA's TDM services over the short, medium, and long-term. In this Plan, the short-term reflects the next six years; the medium-term reflects Year 7 through Year 16; and the long-term reflects Year 17 through Year 25.

4.1 STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND THREATS (SWOT) ANALYSIS

A Strengths, Weaknesses, Opportunities, and Threats Analysis provides an organized framework for evaluating any organization, including DATA, and the environment in which it operates. This analysis highlights strengths as areas in which DATA already excels, while recognizing weaknesses as areas in which DATA should work to improve its performance. Opportunities are elements that DATA could use to its strategic advantage and convert into strengths, while threats are factors or events that could turn into weaknesses if not addressed proactively. Below is a description of strengths, weaknesses, opportunities, and threats that were identified through earlier SWOT analyses performed by DATA staff, informed and refined by more recent working group sessions.

4.1.1 Strengths

General

- DATA staff have solid TDM experience, creativity, and skills in other disciplines, such as communications, that are important to public-private partnerships;
- DATA Board members have a clear understanding of the role TDM can play, as well as the benefits it can provide.

Employer Outreach

- This area has traditionally served as the core business for DATA, providing consistent funding in a manner similar to rideshare funding grants received by traditional rideshare TDM agencies;
- The program provides visibility for DATA among businesses and peer programs (including local, regional and state organizations);
- The program adds credibility to DATA's operations by providing concrete services to local, regional, and state governments, including: Fairfax and Loudoun Counties, Metropolitan Washington Council of Governments

(MWCOG) Commuter Connections, and Virginia Department of Rail and Public Transportation; and

- The program has allowed DATA to assemble solid staff resources.

Special Projects

- These types of projects (e.g., Dulles Metrorail Business Outreach initiative and a Multimodal Planning Grant from the Virginia Department of Transportation) have allowed DATA to increase its base funding and to improve its visibility within the region and the TDM community.

4.1.2 Weaknesses

Employer Outreach

- Efforts in Prince William County are not as fine-tuned as they are in Fairfax and Loudoun, where DATA has overlapped successfully with existing county efforts over several years.
- Follow-up is currently insufficient and needs to improve, although this can be mitigated with more effective use of existing staff.
- DATA's members may have a lack of knowledge of this program.
- Currently, DATA lacks sufficient financial resources to expand beyond existing activities.

4.1.3 Opportunities

General

- In the region, there is a need for greater connectivity, integration, and coordination of the transit/transportation network; DATA could take a leadership role in this area.
- Fairfax County is integrating TDM into new development; this creates an opportunity for DATA to educate local decision-makers about TDM strategies that are effective in various types of developments and to work with developers.
- Potential to serve new markets, including the non-commute/discretionary travel market (including tourists, visitors, etc).
- Rising energy costs in the mid- to long-term create a potential to develop tools for tracking personal energy consumption and impact.
- In the past, outreach methods have been limited to traditional communications, but are recently expanding with DATA's efforts to include blogs and social media such as Facebook.

Employer Outreach

- The program offers growth potential, as well as potential for programmatic offshoots.
- The program holds potential in positioning DATA as the "go to" organization in the region.
- Growing awareness and concern by local jurisdictions, employers, and residents of the problems posed by climate change, the benefits of "going green", and the linkages between transportation/SOV use and a sustainable environment.
- Develop more comprehensive communication strategy that includes new methods and technologies, which include blogs, eLetters, and other forms of non-traditional communications.
- Revamp the DATA website to improve site organization and add content to clearly communicate what DATA does to potential stakeholders.
- Develop new seminars, such as "Live Near Your Work", and seek out new funding from MWCOG, private businesses, and foundations (e.g., a funding application for a new concept "Live More!" is underway)
- Collaborate with sister TMAs (Reston, Tytran, etc.).
- Communicate with non-traditional audiences (e.g., school children, girl/boy scouts, trade magazines, etc).

Special Projects

- Development of the Dulles Metrorail extension will create new transit opportunities for both commute and non-commute travel, as well as opportunities to collaborate with community groups and other TMAs (e.g., Reston) on rail-related projects.
- Can provide ancillary products that DATA can use beyond the life of the project (e.g., brochures, technologies, etc.).

4.1.4 Threats

Employer Outreach

- Future state and local budget shortfalls may have an adverse impact on the program.
- Need to update internal standard operating procedures (SOPs) for sales.
- Significant demographic diversity and transient population (and resulting high turnover) complicate communication and outreach efforts.
- Need for more measurable, "better" results (e.g. moving employers from lower to higher participation levels).

- Need to improve the correlation of information between DATA's activities and the annual Virginia State of the Commute (SOC) report.
- Need to improve employer knowledge and interest in the program.

4.2 MISSION AND VISION STATEMENT

As stated its promotional brochure titled *Moving the Dulles Corridor In the Right Direction* as well as its agency website, DATA's adopted Mission Statement currently reads:

> *"DATA is a Transportation Management Association (TMA) that identifies transportation needs; advocates steps to meet those needs; and provides a forum for members and other concerned parties to be informed of opportunities and participate in timely actions that will bring about a more effective transportation system."*

As worded above, the approved Mission Statement encompasses all of DATA's activities, not only those focused directly on TDM. When it was formed over 25 years ago, DATA was funded entirely with private contributions from its membership base. The insufficiency of this sole funding source led DATA to broaden its mission to encompass the public goals of its more recent state TDM grants. This occurred as DATA's emphasis expanded from advocating for transportation infrastructure to include congestion mitigation. To that end, an alternative Mission Statement that speaks more directly to the TDM aspects of DATA's mission (particularly as a way to improve congestion in the Dulles region) has been advanced by DATA staff in draft form, as shown below:

> *"DATA works to identify and implement multimodal transportation solutions through education, communication and technical assistance."*

4.3 GOALS, OBJECTIVES, AND STRATEGIES

The following section describes the context and process by which DATA developed its goals, objectives and strategies that are the subject of this Plan.

4.3.1 Coordination with Other Plans

This Plan will be coordinated with the existing Long-Range Planning documents prepared by Fairfax, Loudoun and Prince William Counties. The three plans identify DATA as a program partner to agency activities in each respective county.

4.3.2 Process for Developing Goals and Objectives

The goals and objectives contained in this Plan were developed through a collaborative process involving DATA staff and its Executive Committee, with assistance and input from Cambridge Systematics and LDA Consulting. The

process to identify and refine programmatic goals, objectives, and performance measures included:

- Brainstorming sessions with DATA staff and the Executive Committee to identify existing and future program needs;
- Review of existing DATA documents to understand the role and services of the program;
- Review of related Long-Range TDM plans of agencies within DATA's service area, including plans developed for the Fairfax County Transportation Services Group (FCTSG), Loudoun County Office of Transportation Services (OTS), and Potomac and Rappahannock Transportation Commission (PRTC) in Prince William County;
- Development of a Strengths, Weaknesses, Opportunities, and Threats Analysis based on brainstorming session summaries and reviewed documents; and
- Formation of draft TDM goals based on:
  - Existing vision statements and transportation or TDM-related goals and objectives in reviewed documents; and
  - Brainstorming session outcomes and Strengths, Weaknesses, Opportunities, and Threats Analysis.
- Review and revision of goals and objectives by DATA staff.

During the development of goals, objectives, and performance measures for this Plan, the following definitions were used:

- Goal– Is a broad, qualitative statement of what the agency wants to achieve.
- Objective—Is a specific, measurable statement of what will be done to achieve the goals.
- Performance Measure– Is a quantitative or qualitative characterization of performance that evaluates the efficiency or effectiveness in conducting business operations.
- Strategy– Is a statement of the approach or method the program will pursue to attain goals and objectives.

4.3.3 Agency Goals, Objectives, and Strategies

Following the process described in Section 4.3.2, DATA has identified the following broad goals:

Goal 1: Expand availability of TDM services at workplaces in DATA's service area.

Goal 2: Expand and enhance availability of non-SOV travel options in DATA's service area to facilitate travel to and through the DATA

area, reduce single-occupant vehicle travel, and enhance sustainability of the service area.

Goal 3: Increase awareness of employers, travelers, and public officials about the personal and public benefits of using alternative modes and implementing TDM actions.

Goal 4: Expand DATA's customer base by serving emerging market needs beyond the employee travel market, including residents, tourists, and business travelers.

Goal 5: Provide a high level of customer service and maintain a high level of client satisfaction.

Goal 6: Support continued economic development and vitality of the service area.

The strategies aligned under each goal are as follows:

Goal 1: Expand availability of TDM services at workplaces in DATA's service area.

Goal 1 Strategies:

Outreach and Service Development

- Increase the number of employers with active worksite TDM services for employees
- Increase the number of employers that provide Levels 3 and 4 services to employees
- Increase the number of employers that promote and / or participate in local and regional TDM programs
- Expand outreach efforts to businesses that are likely to be receptive to TDM benefits (e.g., congested locations, recruitment difficulties, parking constraints, productivity issues, etc)
- Conduct presentations on the benefits of TDM for local businesses at local business associations.
- Expand outreach to employers located on airport grounds; identify travel needs of airport employees.
- Conduct employee surveys and worksite assessments of travel patterns and employees' travel needs at specific worksites.
- Identify the travel locations and patterns of reverse commuters in the service area and commuters who travel during non-peak hours.

Employer Services / Assistance

- Conduct on-site information sessions for employees at client locations.
- Provide technical assistance to employers on development / implementation of TDM strategies tailored to their worksites.
- Promote telework opportunities and programs to employers.
- Develop tools to assist employers to evaluate business benefits of TDM services (e.g., productivity, recruitment, environmental impacts)
- Develop commute informational materials to distribute to employees.
- Develop a "new hire" package of materials for employer clients to distribute to new employees.
- When new Metrorail service begins operation, promote "transit benefits" to employers located near Metrorail stations.
- Develop travel information and assistance services for out-of-town business travelers originating and /or destined for employers in the service area.

Coordination / Partnerships

- Coordinate with employer outreach coordinators particularly in Prince William County to overcome challenges in serving employers in that part of the service region.
- Partner with Commuter Connections, Fairfax County, Loudoun County, Prince William County, and other local TDM agencies to enhance delivery of employer assistance services.
- Working with DATA and Fairfax County, implement a comprehensive TDM plan for Dulles Airport that serves employees as well as travelers.

Goal 2:	**Expand and enhance availability of non-SOV travel options in DATA's service area to facilitate travel to and through the DATA area, reduce single-occupant vehicle travel, and enhance sustainability of the service area.**

Goal 2 Strategies:

Transit Development

- In partnership with local governments, support the development of transit feeder service between new Metrorail stations/BRT stations and nearby employers, when new transit service is operational.
- Support expansion of transit services to serve local and long-distance trips.

- Continue support for the development of comprehensive transit infrastructure network to serve local needs, including concepts such as circumferential light rail system network to feed into transportation hubs; BRT on I-66 feeders to Dulles Airport; Dulles loop around airport; Rte 606 dedicated bus lanes.
- Identify and advocate for transit connections that serve north / south travel needs.
- Support improvement of transit infrastructure including signage, stops, and amenities throughout the service area.
- Work with Fairfax, Loudoun, Prince William, and Arlington counties to expand inter-jurisdictional service and reverse commute services.

Other TDM Service / Infrastructure Development

- Support development of park-and-ride lots and other infrastructure facilities to serve carpoolers, vanpoolers, and transit users.
- Assist DRPT, Commuter Connections, and Fairfax, Loudoun, and Prince William Counties to develop and implement new services for employees and residents.
- Advocate for enhanced and expanded bicycle and pedestrian connections within and to the service area.
- Encourage expansion of regional carsharing to serve employers and residents in the service area.
- Promote travel assistance services offered by DRPT (Van Start, Van Save), Commuter Connections (ridematching, Guaranteed Ride Home, incentive services), and Fairfax Loudoun, and Prince William Counties to employees and residents of the service area.
- With Fairfax and Loudoun Counties, explore opportunities to develop slug lines along I-66 and Toll Road.

Coordination / Partnerships

- Develop and maintain strategic partnerships to increase the visibility of TDM, enhance efficiency of TDM service delivery, and advocate for expanded non-SOV travel infrastructure.
- Continue to partner with MWCOG/Commuter Connections to promote regional TDM services in the Washington Metropolitan Area.

- Partner with Fairfax County, Loudoun County, Prince William County and other local TDM agencies to enhance delivery of travel assistance services to employees.
- Solicit employer participation and funding for new transit services[28].

Goal 3:	**Increase awareness of employers, travelers, and public officials about the availability of travel options, personal and public benefits of using and implementing alternative modes, and DATA's role in providing travel options.**

Goal 3 Strategies:

Employer and Traveler Information

- Promote commuter rail and commuter bus companies in the region.
- Promote new and expanded express/commuter bus services serving the I-66 and Dulles Toll Road corridors.
- Position DATA as a local authority on technical aspects of corporate environmental footprint assessments (Green House Gases– GHG- related to employees' commutes) and TDM-related solutions.
- Update information materials to highlight multimodal/ TDM focus
- Partner with DRPT to develop a Statewide TDM marketing/promotion campaign.
- Brand TDM/TMAs to the public to develop improved understanding
- Develop information about TDM to public and private partners to encourage the implementation of trip reduction strategies.
- Increase use of the Internet, website, and other technologies to improve the efficiency and convenience of outreach and marketing.
- Identify gaps in the available information for community members not fluent in English and develop information in alternative languages as needed.
- Team with local and regional TDM partners to promote commute events, such as Bike to Work Day.

Public Officials / Media Information

- Provide education/advocacy of public decision-makers to communicate the role of alternative modes in reducing congestion in the service area.

[28] TMAs typically engage in these efforts in order to help fund transit feeder services that serve the employment site.

- Develop relationships with local news media to increase visibility of DATA programs and DATA's role as a knowledgeable transportation resource in the service area.

Evaluation / Reporting

- Develop performance measures to estimate the benefits of DATA's services for employers, individual travelers, and the general public.
- Periodically review and report DATA's impacts on travel and sustainability to travelers, employers, local government partners, and elected officials.

Goal 4:	**Expand DATA's customer base by serving emerging niche market needs beyond the employee travel market, including residents, tourists, and business travelers**

Goal 4 Strategies:

- Coordinate with Fairfax County and Loudoun County TDM staff to develop programs to address the transportation needs of students at local schools in the service area
- Expand outreach to residential communities to identify travel needs and provide information on travel options available in the area
- Explore opportunities to serve non-commute markets, such as tourists, airport travelers, shopping markets; establish a non-commute division of DATA.

Goal 5:	**Continue to provide a high level of customer service and maintain a high level of client satisfaction.**

Goal 5 Strategies:

- Monitor customer satisfaction to identify areas for growth and service enhancements.
- Implement improved operating procedures to ensure that all customers (database registrants and employers) are contacted by DATA on a regular basis.

Goal 6:	**Support continued economic development and increased economic opportunities in the service area.**

Goal 6 Strategies:

Smart Growth Advocacy

- Support land use and community design that enable and facilitate the use of alternative modes of transportation.

- Advocate for the inclusion of TDM in county policies and plans and for TDM elements in new development projects.
- Identify activities in which DATA's role is mentioned in the Loudoun and Fairfax County Plans, and coordinate those activities to avoid duplication.
- Engage in infrastructure/facilities network, focusing on physical and institutional integration; the various counties do not talk to one another (strategy would be to serve as a catalyst and facilitator)
- Support the development of hubs around the airport for tourist destinations

Local Government Partnerships

- Educate elected officials, and area agencies on the role of TDM in transportation and land use planning.
- Establish relationships with elected officials to communicate DATA's support for sustainable transportation and land use decisions.
- Become a formally recognized partner in the Fairfax and Loudoun County proffer process; engage in management and monitoring of these proffers.
- Expand the Transportation Roundtable
- Strengthen and solidify relationships with local / county economic development organizations.

Business / Employer Partnerships

- Strengthen relationships with local and regional planning and economic development staff to learn about upcoming developments and increase awareness of the potential benefits of incorporating TDM in the development process.
- Working with Fairfax, Loudoun, and Prince William Counties, develop materials on TDM opportunities in new developments to be distributed to developers, architects, and engineers.
- Assist developers / property owners that are building in the service area to integrate TDM services and infrastructure in new developments.

A subset of these strategies were discussed and framed using three time horizons: namely, short-term (1-6 years); mid-term (7-15 years); and long-terms (16 to 25 years). These are outlined below:

<u>Short-term goals/ strategies (1-6 years):</u>

- Brand TDM to the public to develop improved understanding
- Improve outreach with newly elected officials, particularly education of newly elected leaders

- Become a formally recognized player in the Fairfax and Loudoun County proffer process; engage in management and monitoring of these proffers
- Update DATA's brochure to highlight multimodal/ TDM focus
- Identify activities in which DATA's role is mentioned in the Loudoun and Fairfax County Plans, and coordinate those activities
- Engage in infrastructure/facilities network, focusing on physical and institutional integration; the various counties do not talk to one another (strategy would be to serve as a catalyst and facilitator)
- Become more active along I-66 (e.g. Gainsville)
- Expand the Transportation Roundtable

Mid-term goals/ strategies (7-15 years):

- Support the development of hubs around the airport for tourist destinations
- Support shuttle service in areas where they are needed
- Continue to educate members (and public) about mobility options

Long-term goals/ strategies (16 to 25 years):

- Support travel/mobility opportunities for people who live in DATA's service area. The caution is that this push needs to coincide with a broader number of available options (i.e. bus service, transit, etc).
- Potentially serve non-commute markets (e.g. resident travelers, tourists, travelers heading to the airport, DC/Mall and Tysons/shopping markets); setting up a consumer division (if DATA could expand manpower).
- Continue support for the development of network/feeder services and other infrastructure (ideas include: a circumferential light rail system network to feed into transportation hubs; BRT on I-66 feeders to Dulles Airport; Dulles loop could encircle airport one day; Rte 606 could have a dedicated bus lanes).
- Support accommodating improved mobility from north to south.
- Potentially subcontract operation on shuttles or other infrastructure to serve businesses.

4.4 CURRENT AND FUTURE FINANCIAL RESOURCES

DATA receives funding from membership fees, the Department of Rail and Public Transportation (DRPT), MWCOG/Virginia Department of Transportation (VDOT) (e.g. "*Live Near Your Work*" program). In 2008, DATA received a one-

time Multimodal Grant award ($150,000) by presenting a joint application with Loudoun County in order to evaluate the multimodal benefits of TDM strategies in reducing greenhouse gas (GHG) emissions. In all fiscal years for which data was available (FY 2008 through FY 2011), DATA has received annual funding from DRPT's Transportation Efficiency Improvement Fund (TEIF), as shown in Table 4.1. Funding from this source increased from FY 2008 to FY 2009; stayed flat between FY 2009 and FY 2010; and increased by a substantial amount in FY 2011, coinciding with a successful DATA grant application to fund a Rotating Rideshare Coordinator, the conduct of a Dulles Airport Employee Survey, and development of a Greenhouse Gas (GHG) calculator, in addition to activities related to "commuter behavior modification in the Dulles Corridor"[29].

Table 4.1 DATA's TDM Funding Sources, FY 2006 - FY 2011

Funding Source	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
DRPT TEIF / TDM						
State	0	0	64,000	88,000	88,000	325,341
Local match	0	0	16,000	22,000	22,000	81,335
VDOT Multimodal Grant						
State	0	0	135,450	0	0	0
In-kind match	0	0	15,050	0	0	0
TOTAL	0	0	230,500	110,000	110,000	406,676

Source: DRPT Six Year Program documents, FY 06 to FY11; information provided by DATA; MWCOG 2008 Multimodal Office Grant Program
http://www.mwcog.org/uploads/committee-documents/Z15fWVdX20080319163437.pdf

While DATA has consistently received DRPT TEIF/ TDM funds for employer outreach/congestion mitigation efforts, in the short-term (next six years), the organization will seek to expand its partnerships with a variety of groups—developers, businesses, other TDM agencies – to seek new revenue sources for its operations. Two potential ideas include tapping Job Access Reserve Commute grants (provided DATA is eligible to apply) for reverse commute opportunities. DATA also could become involved in the Gainesville Corridor, but again this is dependent on securing revenue from existing or new sources.

[29] FY11 TDM Program Grants; DRPT.

5.0 Plan and Program Evaluation

This section of DATA's Long-Range TDM Plan presents an approach for periodically evaluating the program's performance toward established goals. This approach is designed to accommodate the full range of DATA's current and planned TDM activities with limited out-of-pocket costs, reserving the majority of funds for program outreach and services.

The evaluation approach is designed to serve three broad objectives:

1. To document participation in, and satisfaction with, program services;
2. To estimate the program's impact on travel behavior; and
3. To identify ways to enhance customer service.

The intent of the approach is to support future program decision-making and direct resources to produce the greatest benefits to DATA stakeholders. To this end, the approach defines potential *performance measures* that are relevant to the expectations set for DATA and identifies *data sources* from which DATA can obtain performance-related data.

5.1 POTENTIAL PERFORMANCE MEASURES

Incorporating travel choice into one's daily trip decision-making thought process is not easy since most travelers have been conditioned to "*think auto first.*" Changing this mindset requires that travelers are offered services that meet their travel needs and, secondly, that they have a positive experience with non-drive alone options that makes future choice of the options second-nature. As shown in Table 5.1, the classic social marketing model defines a four-step transformation that starts with awareness of travel choices and ends with adoption of the desired behavior.

Table 5.1 Social Marketing Model of Behavior Change

Step	Stage in Behavioral Change Process
1. Awareness	Build awareness of choices and related benefits
2. Familiarity	Increase appreciation and understanding of travel choices and support services
3. Consideration/ Trial	Try one or more options/ have a favorable experience
4. Desired Behavior	Adopt the behavior in everyday living

The above model has been adapted for a four-step approach to TDM program evaluation, with each step representing one element on a continuum of results.

- Category 1 – Awareness of modes/TDM services and attitudes toward modes
- Category 2 – Participation in, and satisfaction with, TDM services
- Category 3 – Utilization of modes, travel changes

Categories 1 and 2 (Awareness/Attitudes and Participation/Satisfaction) prepare travelers for behavioral change. Category 3 (Utilization) relates to trial behavior change. One additional set of performance indicators, Category 4 (Partnerships), is recommended for DATA to recognize the intermediary role of many of DATA's activities. Several of the goals defined in Section 4.3 focus on encouraging and assisting employers to provide TDM services for their employees and supporting other local or regional organizations to take actions that will enhance transportation facilities and services or create a physical/land use environment that is conducive to non-SOV uses. These additional elements are key to meeting travelers' transportation needs in an efficient manner and are essential to DATA's TDM success, but DATA cannot accomplish these actions without involvement of these other partners.

Table 5.2 suggests performance measures DATA could use to document progress in each of the four categories. The table also shows the target population, data source, and suggested evaluation timeframe for updating each measure. The data sources contained in this table, including existing and proposed new sources, are discussed in greater depth in the following section.

Table 5.2 Potential DATA Performance Measures

Performance Measure	Population	Data Source	Timeframe
1 Awareness / Attitudes Toward			
Aware of DATA (Percent)	Residents/Employees	MWCOG SOC	Triennial
Aware of / use Commuter Connections (Percent)	Residents/Employees	MWCOG SOC	Triennial
Aware of regional GRH (Percent)	Residents/Employees	MWCOG SOC	Triennial
Satisfaction with commute (Percent)	Residents/Employees	MWCOG SOC	Triennial
Satisfaction with regional transportation system (Percent)	Residents/Employees	MWCOG SOC	Triennial
Commute difficulty versus last year – Percent easier, percent more difficult	Residents/Employees	MWCOG SOC	Triennial
Interest in telework (Percent)	Residents	MWCOG SOC	Triennial
Aware of DATA (Percent)	Employers	Employer survey	Triennial
Satisfaction with regional / local transportation system (Percent)	Employers	Employer survey	Triennial

Performance Measure	Population	Data Source	Timeframe
2 Use of / Satisfaction with TDM Services			
Used commute info resource organization (Percent)	Residents/Employees	MWCOG SOC	Triennial
Service inquiries to DATA (Number)	Residents/Employees	DATA tracking	Quarter
Receive DATA assistance (Number)	Residents/Employees	DATA tracking	Quarter
Satisfaction with DATA services (Percentage)	Residents/Employees	User follow-up survey	Annual
New (non-client) employers contacted (Number)	Employers	DATA tracking	Quarter
New (non-client) employer site visits (Number)	Employers	DATA tracking	Quarter
Total employer clients (Number)	Employers	DATA tracking	Quarter
Satisfaction with DATA services (Percentage)	Employers	Employer survey	Triennial
3 Utilization of Modes / Travel Changes			
Commuter tried or shifted to non-SOV mode in past two years (Percent)	Residents/Employees	MWCOG SOC	Triennial
Commuter tried or shifted to non-SOV mode after receiving DATA service (Percent)	Residents/Employees	User follow-up survey	Annual
Use Park-and-Ride lot (Percent)	Residents	MWCOG SOC	Triennial
Use HOV lane (Percent)	Residents / Employees	MWCOG SOC	Triennial
Work trips by SOV (Percent)	Residents/Employees	MWCOG SOC	Triennial
Work trips by bus / train (Percent)	Residents/Employees	MWCOG SOC	Triennial
Work trips by carpool / vanpool (Percent)	Residents/Employees	MWCOG SOC	Triennial
Work trips by bicycle / walk (Percent)	Residents/Employees	MWCOG SOC	Triennial
4a Employer Partnerships			
New Level 1-2 TDM Programs (Number)	Employers	DATA tracking	Quarter
New Level 3-4 TDM Programs (Number)	Employers	DATA tracking	Quarter
Employers offer at least one TDM service (Percent)	Employees	MWCOG SOC	Triennial
Employers offer telework / compressed schedules (Percent)	Employees	MWCOG SOC	Triennial
Employers offer financial incentive (Percent)	Employees	MWCOG SOC	Triennial
Employers offer free parking (Percent)	Employees	MWCOG SOC	Triennial
4b Government Partnerships			
HOV lane available on route to work (Percent)	Residents/Employees	MWCOG SOC	Triennial
Less than Half a Mile from Home to Bus Stop (Percent)	Residents	MWCOG SOC	Triennial
Annual hours of transit service in DATA service area (Number)	---	Transit agency data	Annual
Park-and-Ride lot spaces (Number)	---	Jurisdiction data	Annual

5.2 DATA SOURCES FOR PERFORMANCE-BASED DATA COLLECTION EFFORTS

Existing Sources

DATA currently collects some data on service delivery activities and service participation, but only minimal data to assess awareness and attitudes, customer satisfaction, and behavior change. One possible source of awareness and attitudinal data (i.e., Category 1 in Table 5.2) is the regional State of the Commute (SOC) survey conducted by the Metropolitan Washington Council of Governments (MWCOG). This triennial survey collects data on commute patterns and awareness and use of local and regional transportation services for employed residents of the MWCOG region. The survey does not currently collect information for DATA; hence, DATA would need to request that it is included by MWCOG in questions about awareness and use of services. Additionally, the SOC analysis is typically conducted at the county level. Therefore, the analysis of SOC data for DATA's service area would require compilation of data for the relevant portions of Fairfax, Loudoun, and Prince William counties.

DATA also could review data from other surveys conducted by MWCOG, the Washington Metropolitan Area Transit Authority (WMATA), the Department of Rail and Public Transportation (DRPT), and other state and regional organizations. Another source of travel data might be developers and property managers that are required to conduct transportation/traffic studies for new developments. Additionally, DATA could coordinate with organizations such as local Chambers of Commerce, business associations, or government agencies to piggyback on future opportunities to collect new data to minimize the cost of data collection.

Proposed New Sources

Table 5.2_ includes two additional data collection sources that would be new for DATA: 1) Employer/Business survey and 2) User/Customer Survey. These two surveys would collect data primarily on the use and satisfaction of employers/businesses and residents/employees who use DATA services to estimate the impact of the services and the customers' satisfaction with the services they received.

Business/Employer Survey

This triennial survey would collect data to benchmark the business community's perceptions of transportation services, the extent to which the region/service area is meeting business' and employees' transportation needs, employers' awareness and use of and satisfaction with employer assistance services, the types and level of TDM services that employers are providing to employees at the worksite, and employees' receptivity to the services. The survey would be

about 10 minutes in length, conducted online with some telephone follow-up to increase response rate, and targeted to DATA clients and non-clients.

User/Customer Survey

This annual survey would examine how customers used services they received from DATA, define the influence of the services in assisting or motivating travel changes, and assess customers' ratings on services overall and on specific attributes of service. A customer survey would collect the following primary data that assesses use of and satisfaction with the services: 1) sources of information/referral to TDM services, 2) use of services to make travel changes, 3) overall satisfaction with services and satisfaction with individual service features, 4) likelihood to use service again and likelihood to recommend the service to others, and 5) desired improvements to existing services and desired new services. This survey could be administered through a variety of options, including a telephone/online survey of a sample of customers, a non-random sample using customer feedback cards, intercept surveys, and internet follow-up surveys.

It is important to note that results of these surveys might not be representative of the service area's actual results, since the distribution would not be truly random and likely would over-represent employers, employees, and residents who have had some previous contact with DATA and likely would be more interested in transportation issues compared to an average respondent. However, they would provide a qualitative check of needs and interests and identify unmet travel needs. If the surveys were collected from an adequate sample of respondents, they could permit analysis of various sub-populations, such as seniors, college students, minority groups, and employer sub-groups, which might have very different travel opinions or needs.