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In FY 2008, Arlington County Commuter Services (ACCS) eliminated 38,000 daily vehicle trips in the County by helping people shift from driving alone to transit, carpooling, vanpooling, walking, bicycling, or teleworking. To visualize 38,000 vehicles, consider that I-395 and I-66 carry a combined total of 37,000 passenger vehicles in eight inbound lanes during the three hour morning rush period. This shift also prevented more than 542,000 vehicle miles of travel (VMT) per day and contributed to traffic reduction during the peak travel periods.

Increased use of alternatives modes also eliminates more than 64,000 tons of air pollution associated with global warming and saves nearly 23,000 gallons of gasoline each day. In a year, ACCS eliminated 10.4 million daily trips in the County.

Since 1989, ACCS, a division of Arlington County’s Department of Environmental Services, has served as the transportation information and educational resource center for Arlington County, Virginia. Through Transportation Demand Management (TDM), ACCS meets its goals of:

- encouraging the use of non-single occupant vehicle (SOV) travel
- lessening congestion, air pollution, and energy consumption
- improving accessibility
- enhancing quality of life

Transportation Demand Management is a comprehensive set of services, programs, policies, and strategies for businesses and individuals that promote the use of public transit, walking, biking, carpooling, vanpooling, teleworking, and other options. ACCS’ TDM services are the “software” that enables the “hardware” of Arlington County’s multimodal transportation infrastructure and urban village development to function effectively. ACCS offers a wide range of TDM services and programs:

- Arlington Transportation Partners (ATP)
- The Commuter Store® and Mobile Commuter Store®
- Commuterpage.com®
- Commuterdirect.com®
- Call/fulfillment center—703/228-RIDE
- Marketing and Outreach
- Logistics and Distribution
- WALKArlington
In 2006, ACCS embarked on an extensive research and evaluation program to measure its success in meeting customers’ needs and document the travel and environmental impacts of mode changes influenced by TDM services. ACCS conducted surveys of residents, employees, service users, and employers to measure their awareness and use of TDM services, their satisfaction with the services, and their travel patterns before and after their contact with the program.

The research demonstrates the value of these cost-effective services to individual users and the collective value of the travel changes made by these users to achieve County-wide transportation and environmental objectives. This report highlights ACCS’ significant accomplishments and impacts in FY 2008, as measured by those surveys and other data collected.
ACCS Activities Positively Influence Congestion, Emissions, Quality of Life and Customer Satisfaction

As mentioned above, ACCS’ services help commuters shift 38,000 daily vehicle trips from driving alone to other modes. Out of this total, 34,600 daily commute trips are reduced. This shift saves more than 542,000 vehicle miles of travel (VMT) each day. Information in this report demonstrates how these results, and other ACCS accomplishments, lessen traffic in some of the County’s most congested corridors and benefit residents, workers, businesses, and the environment. ACCS’ TDM programs and services also enhance investment in smart growth and transit infrastructure.

Higher use of non-SOV modes from ACCS’ TDM programs has benefited Arlington County’s air quality through reduced vehicle pollutant emissions. During FY 2008, ACCS’ programs helped Arlington eliminate 105 tons of pollutants that are instrumental in forming smog. And ACCS’ services helped Arlington County residents and employees reduce 64,000 tons of carbon dioxide (CO₂), reducing both their individual carbon footprints and contributing to Arlington’s County-wide efforts to address global warming through the Fresh AIRE (Arlington Initiative to Reduce Emissions) initiative.

Similarly, ACCS’ accomplishments on travel and environmental measures directly contribute to Arlington’s reputation as a progressive community and a desirable place to live. For example, a 2006 survey of Arlington residents showed 83% rated the transportation system and service as good or very good. In the same survey, 88% of residents rated quality of life in Arlington County favorably with the transportation services one part of this assessment.

A regional State of the Commute (SOC) survey conducted in 2007 found that Arlington residents make 55% of their trips to work by driving alone, compared to 71% for all regional commuters.

ACCS’ TDM services and the County’s high quality transportation system also contribute to economic development by helping to attract and retain employers to the County and offering employees a wealth of sustainable transportation choices. CEOs of Arlington area businesses offer Transportation Demand

TDM in Arlington = ACCS — 4
Management (TDM) services because they aid in recruitment, productivity and morale. They rely on guidance from ACCS to establish and maintain these programs. This pays off in reduced use of SOV by employees. These statements are borne out in several studies of Arlington County business leaders and regional commuter studies cited in this report.

ACCS’ research has demonstrated the personal value of ACCS’ services to users and users’ high level of satisfaction with the quality and usefulness of the information they receive.

Most importantly, the research discussed in this report documents that ACCS services help convert and maintain the use of transit and other transportation options. Transportation is an integral part of Arlington’s quality of life. Based on the research discussed in this report, ACCS has a measurable impact on getting people to live, work, shop, and play in Arlington…no car required. ACCS is influencing individual users; and their collective travel changes are a major factor in meeting County-wide transportation, business, and environmental objectives.
Transportation, Quality of Life, and the Business Environment

Transportation plays an essential role in defining the structure and future of a community. The connections it establishes to move around an area determine the mobility and accessibility opportunities for residents and visitors, either connecting community members together or isolating them from each other and the outside world.

Transportation, in combination with land use structure, signals the community’s vision for how public space is designed to be used and enjoyed. The types of transportation infrastructure that are developed, and the transportation information services provided to support them, can encourage or discourage travel choices that support environmental stability. In short, transportation contributes to a community’s quality of life, through access to jobs, shopping, and recreation, cultivation of sound community structure, and impact on the health of the environment.

Transportation also is important in promoting and maintaining business vitality. Access—to workers, customers, business support services, and inventories of goods—is an essential ingredient in business success. A strong and comprehensive transportation network reduces operational costs and allows a business to coordinate needed business functions. In this way, transportation supports “quality of business.”

In Arlington, three major elements combine for the successful operation of an integrated approach to land use and transportation:

- The Urban Villages development pattern creates high density, mixed-use development designed for easy pedestrian use integrated with a range of transportation services.

- A multimodal transportation infrastructure with high capacity offers many options.

- Comprehensive transportation information TDM services support and encourage the use of non-SOV travel.
Urban Villages: Visionary Transportation and Land Use Planning

More than 30 years ago, Arlington County leaders envisioned a development approach characterized by coordinated urban planning and transportation design. Since then, the County has invested in mixed-use, smart growth land development combined with an inter-connected, multimodal transportation system of roads, train and bus services, bike trails, and walking paths.

Arlington planners have concentrated high-density commercial and residential development around Metrorail stations in the Rosslyn-Ballston and Jefferson Davis Metrorail corridors, while maintaining lower density residential neighborhoods in the rest of the County. The County also has supported a high level of public transit and biking and walking facilities to maximize non-driving travel options. In addition, the County has invested heavily in high quality bus service and related transportation amenities along Columbia Pike to provide travel options and to support medium density development in that corridor.

The result is Arlington’s urban villages—walkable, mixed-use neighborhoods well-served by public transportation and pedestrian facilities. Residents and visitors in these neighborhoods can walk to shopping and restaurants or hop on Metrorail, Metrobus, or Arlington Transit (ART) when they need to go elsewhere in the metro Washington area. Consequently, Arlington County residents, employees, and visitors spend more time enjoying the attractions of the region, and less time trying to get places. This mobility, in a region known for gridlock, makes the County an exciting destination, with the advantages of urban living, but few of the urban liabilities.

Multimodal Transportation Infrastructure

Arlington County is blessed with a strong transportation infrastructure. The Metrorail train system that serves the Washington metropolitan region is the transportation backbone for Arlington’s Urban Villages development pattern. Metrorail provides access through 11 neighborhood-based Metrorail stations with high density development focused around each. Numerous arterial roads and two interstate highways, I-395 and I-66, provide connections to and through the County, with numerous High Occupancy Vehicle (HOV) access points serving the high-density development nodes. The County is served by Amtrak and the Virginia Railway Express (VRE) commuter rail service. Extensive local bus service is offered by Metrobus and Arlington Transit (ART); and regional express bus service is provided by Metro, Fairfax County, PRTC, and Loudoun County. Bicycling and walking options are well-developed through the “Complete Streets” approach to accommodating all modes, and a system of off-street trails.
In a 2007 State of the Commute (SOC) survey of Washington-area commuters, Arlington residents reported a very high level of public transit access in their home areas and greater access than did commuters region-wide; 93% of Arlington residents reported bus and/or rail operating in their home areas, compared to 83% of regional commuters. And more than 90% of Arlington residents said they lived within a half-mile of the nearest bus stop, compared with only 68% of commuters region-wide.

### Transportation Demand Management

County visionaries deserve tremendous credit for their foresight in creating an environment that fosters mobility, building walkable, mixed-use neighborhoods well-served by public transportation. However, visionary development, when placed in the middle of a vehicle-dependent region does not ensure success in, and of, itself. Travelers must learn of the variety of travel options available, understand how they work, and consider how to incorporate available options into their personal trip decision-making process. This knowledge and usability are essential to the wide-spread utilization of non-SOV choices.

ACCS performs this important task for Arlington County by implementing Transportation Demand Management (TDM) programs and strategies that promote public transit, walking, biking, carpooling, vanpooling, teleworking, and other options that reduce the demand for car travel, lessen congestion and air pollution, and improve accessibility. ACCS serves as an information and educational resource center for residents, employees, and visitors who travel to and through the County.

ACCS offers a wide range of services to commuters, employees, employers, visitors and other customers. These can most easily be thought of as travel options, such as taking public transit, walking, biking, carpooling, vanpooling, teleworking, etc. ACCS organizes its services and activities by operational function—how it provides its services. While these functions are presented as separate activities, they are designed and coordinated to work together seamlessly to facilitate travelers’ awareness, appreciation, and selection of non-SOV modes. These functions include:

- **Direct Sales—Arlington Transportation Partners (ATP):** Business-to-business direct sales and TDM program implementation. ATP sales representatives work with corporate clients to facilitate the adoption of TDM strategies at employment sites and within residential complexes and hotels. By working with the “influencer market” ATP can assist a company to further implement transit benefit programs and provide information to a wider target audience consisting of employees, residents and visitors.
ACCS Marketing and Outreach: Comprehensive marketing and promotions for transportation options, biking, walking, carsharing and telework, as well as promoting the “family” of ACCS products and services to corporate clients and individuals.

Retail Commuter Information and Support: Direct information, assistance, and transit pass sales and fulfillment for commuters, residents, and visitors through Commuter Stores®, CommuterPage.com® and CommuterDirect.com® websites, and call / fulfillment center (703-228-RIDE).

Logistics and Distribution: Services to fulfill information materials requests for schedules and maps and maintenance of bus stop information units.

Special Initiatives: Promotion and planning for four programs—BikeArlington, WALKArlington, carsharing, and Arlington retail marketing and partnerships.

Planning and Research: Negotiation and enforcement of TDM conditions for properties, articulation of TDM policies, and documentation of benefits.
ACCS Highlights

Making it Easy to Live Car Free in Arlington

Since its formation in 1989, ACCS has focused attention on meeting travelers’ needs and promoting the many transportation options available to Arlington travelers. Because of the wealth of available transit and other non-SOV options, it is truly feasible for many Arlington residents to live car free or car lite. To promote the many alternatives to driving alone and acquaint travelers with information resources available to assist them, ACCS developed the umbrella marketing campaign—Arlington’s Car-Free Diet.

A central element of the very successful rollout of Arlington’s Car-Free Diet campaign is the CarFreeDiet.com website. The site is a central location for information on car-free travel options and destinations in Arlington that can be easily reached using transit, bicycling, and walking. Links are provided to transit service websites, WALKArlington.com and BikeArlington.com, and to ACCS’ main information source, CommuterPage.com®. As a motivational tool, the site offers a set of calculators with which users can estimate their travel cost savings, calories burned, and CO₂, “greenhouse gas” emissions reduced. Through interactive elements, campaign participants can participate in the Car-Free Diet Challenge and share stories of their car-free experiences on the blog.

QUOTE FROM WEBSITE  “After moving to the Courthouse area of Arlington I sold my car. After having a car for over 50 years it was very strange. But I found myself learning how to “Metro” and relearned how to walk. Amazing how much better you feel. Whenever a car is required I simply rent with Zipcar. Rent by the hour, gas and insurance included and all the cars are new. All types from sub compacts to pick-ups. Yes, you can live without a car.” —ROBERT CHANOW, ARLINGTON, VA

ACCS promoted the campaign through multiple county-wide and location specific brochures, materials inserted in The Citizen newsletter to Arlington households, ads in many different media including web, print, on bus and rail, and in Arlington Metrorail stations, and a Car-Free Diet Expo for residents and employees. Materials about the program were stocked in point-of-purchase displays in County buildings and in the Commuter Stores®.

The campaign has generated many local and national news stories, many of
which are posted on CarFreeDiet.com. ACCS also sponsored production of a Special Arlington, Virginia Edition of How To Live Well Without Owning a Car by Chris Balish, a book that provides detailed advice on how to live car free.

**KEEPING THE CREATIVITY FLOWING WITH INNOVATIONS—PTOPS**

ACCS has a rich history of creativity and innovative thinking in its efforts to serve the community and increase use of the whole spectrum of travel alternatives. In 2007, ATP successfully launched PTOPS—Personalized Transportation Options Portfolios—custom transportation information packets tailored for individual employees’ unique travel needs.

Travel information often is generic, but employees’ travel choices are driven by their personal needs and opportunities. A lack of specific information about the travel options available to a particular employee, and the need to research travel options, is often a barrier to trying an alternative to driving alone. PTOPS are an intensive, special service that ATP offers to employers and their employees to fill this important information gap.

Employers provide employees’ home addresses to ATP, which prepares a custom portfolio for each employee. Each portfolio is unique, describing all the options conveniently available to the employee, including bus schedules for specific bus routes, locations of bus and train stops near the home location, and Park & Ride lot locations. Ridematching and vanpool information are also provided.

ATP encourages employers to schedule a transportation information fair and other promotion around the time the PTOPS portfolios are distributed to heighten employees’ interest in trying new travel options. During 2008, ATP prepared PTOPs for 959 employees at 26 employment sites.

**Planning for the Next 20 Years: Arlington County’s Master Transportation Plan**

ACCS’ services are a means of implementing an important element of transportation known as Transportation Demand Management or TDM. TDM strategies expand the travel choices available to the traveling public and provide incentives and assistance to make traveling by modes other than driving alone more feasible and attractive. Shifts from driving alone to modes such as carpooling, transit, bicycling, walking, and teleworking reduce traffic by moving more people in fewer vehicles or no vehicles (e.g. walking and telework) and maximize the efficiency and sustainable use of the County’s multimodal transportation system.

TDM also contributes to the larger community goals of optimizing mobility while reducing energy consumption, pollution, and global warming. Arlington County is currently updating its Master Transportation Plan, and for the first time is incorporating a TDM element, making the plan a multimodal transportation
policy guide. TDM is recognized as an underlying principle of the entire plan, and ACCS’ services are recognized as important components which make the transportation system work and thus support the County’s Urban Villages development policy. ACCS has been an integral part of the team that has produced the Master Transportation Plan during the past two years.

RESEARCH AND EVALUATION STUDIES DOCUMENT IMPACT ON TRAVEL BEHAVIOR

In 2006, with funding from grants provided by the Virginia Department of Rail and Public Transportation (VDRPT), ACCS embarked on an extensive research and evaluation program to assess its success in meeting customers’ needs and to document the travel and environmental impacts of mode changes assisted by ACCS’ services. Since that time, ACCS has conducted surveys of residents, employees, employers, and the many travelers who use ACCS services to measure their awareness and use of ACCS’ services, their satisfaction with the services, and their travel patterns before and after their contact with ACCS.

During 2008, ACCS completed Phase 1 of its multi-year research program to define customer needs and satisfaction and measure performance. This phase collected baseline information on ACCS’ key customer populations, including residents, Arlington County business leaders, ATP employer and property manager clients, The Commuter Store® patrons, CommuterPage.com® visitors, CommuterDirect.com® individual and corporate users, and BikeArlington and WALKArlington service users.

In 2008, ACCS also completed a year-long in-depth study of employers and employees at 19 commercial buildings in the County. The study, which focused primarily on the Rosslyn-Ballston corridor and Crystal City, explored the influence on mode split of transportation access and location factors, such as the walking distance to Metrorail, availability of parking, level of TDM services, and other factors. A key finding of the study was that TDM services had a statistically significant impact on employees’ mode choice.

The research studies completed to date clearly show that transportation is an integral component of Arlington’s high quality of life and that travel options and ease of getting around help to make that so. Surveys of numerous customer groups further demonstrated that ACCS meets customers’ expectations for a high level of quality service and that ACCS’ services influence travelers to try and to continue using non-SOV modes. ACCS is having a major impact on getting people to live, work, shop, and play in Arlington…no car required. This research has demonstrated the value of ACCS’ services to individual users, and also the collective value of the travel changes made by these users to County-wide transportation and environmental objectives.
SALES — ARLINGTON TRANSPORTATION PARTNERS (ATP)

- **Employer Services deepened market penetration** — Celebrating its 10th year of implementing TDM strategies and programs for Arlington employers and businesses, ATP reported record market penetration rates in 2008, with a total of 582 employers representing 124,000 employees. These clients represent 62% of the nearly 200,000 at-place Arlington workforce. Approximately 400 of these companies provide a transit benefit to their employees.

- **Assistance for newcomers boosted County’s business attraction** — ATP works closely with Arlington Economic Development in their business attraction efforts by easing the transition of employees to a new location. Six companies received Relocation Services, an extensive package of transportation assistance for companies relocating to Arlington County. Through this service, ATP provided information to inform more than 3,800 soon-to-be Arlington employees about commute options.

- **CommuterDirect.com® Corporate Services simplified ticket distribution** — Eighty-one Arlington companies participate in the CommuterDirect.com® Corporate Services program, generating $2M in FY08 ticket revenue by taking advantage of automated account management and reporting features for their company employees.

ATP SERVICES MADE AN IMPACT — In the 2007 regional State of Commute survey, 72% of Arlington workers said their employers offered at least one commute assistance service at their worksite, substantially higher than the 54% of all regional workers. An ATP survey of employers showed that ATP services are valuable to employers; 39% of employer clients and 74% of property manager clients said they wouldn’t have implemented on-site services without ATP’s assistance.

- **Expanded efforts in Residential and Visitor Services** — ATP expanded TDM programs to managers of apartment complexes and other residential property clients. In June 2008, ATP was providing services to 295 residential clients with 59,726 units, representing 85% of the multi-unit housing market in the County. Information services also were being provided to managers of 42 major hotels for distribution to guests and employees.

- **Expanded support to companies complying with Site Plan TDM conditions** — ATP expanded its service offerings to assist commercial and residential developers and property managers to comply with the TDM conditions of their approved site plans. Tenant information packages, brochure ordering accounts, coordination of transportation display purchases and the implementation of required tax-free transit benefit subsidy were offered and implemented by 50 site plan clients.

- **Marketing and information innovations fueled growth** — ATP successfully launched PTOPS—Personalized Transportation Options Portfolios and
prepared PTOPs for 959 employees at 26 employment sites. The Solutions newsletter circulation nearly doubled from 28,000 newsletters per year to 51,500 annual newsletters, due to bulk newsletter requests by large residential housing units.

- **Transportation Information Display Units deployed**—Following earlier focus groups and testing, ATP successfully rolled out the transportation information display units program to provide user-friendly transportation maps, brochures and transit schedules throughout the County. Funding was provided under a grant from the Virginia Department of Rail and Public Transportation. In conjunction with the Retail Partnership program and Logistics and Distribution, more than 150 units were deployed in commercial and residential buildings: 24 large units, 33 medium, and 100 small.

- **High client satisfaction for ATP services**—A survey of ATP employer and residential services clients documented high customer satisfaction and notable impacts for ATP. Three quarters of ATP clients said they were “very satisfied” with ATP’s service and 74% said they would recommend ATP to colleagues, leading to a Net Promoter Score® of 61. The Net Promoter Score® represents the percentage of users who would recommend a service minus the percentage of users who would be unlikely to recommend it (see page 26 for more information on Net Promoter Scores).

**RETAIL COMMUTER INFORMATION AND SUPPORT**

- **Commuter Information Center (CIC) fulfilled 29,000 information requests**—CIC responded to an average of 400 email inquiries and 2,000 telephone calls per month. Sales of transit fare passes topped $13 million in 2008, with 54% of sales generated through web purchases, and 46% through the Commuter Stores®. The continued phase-in of SmarTrip cards in bus systems around the region caused sales to drop, as anticipated, for Dash, OmniRide, and Loudoun Transit; but these were offset by growth in sales from the MARC and VRE systems for a slight net gain in overall sales for the year.

- **Nearly universal satisfaction for CommuterDirect.com®**—Surveys of CommuterDirect.com® users revealed amazing customer service scores—89% of customers were satisfied with CommuterDirect.com® individual services and 95% of CommuterDirect.com® Corporate services gave the service a top-two box score on satisfaction. Likely to recommend scores also were high, resulting in Net Promoter Scores® of 82 and 96, respectively, for CommuterDirect.com® and CommuterDirect.com® Corporate.

- **The Commuter Store® won a national award and opened fourth store**—Commuter Stores® documented sales of $6 million and assisted 212,400 walk-in customers with information services and sales. In August 2007, The Commuter Store® won the Customer Service award from the Association for Commuter Transportation. In June 2008, the fourth Store opened at Shirlington Station.
CommuterPage.com® marked 10 years of operation and expanded content—Visits to the CommuterPage.com® family of internet sites continued to grow throughout the year, reaching 3,500 visitors per day according to Google Analytics. In March 2008, the site began hosting local reporter Steve Eldridge’s Sprawl and Crawl column three times a week. The CommuterPageBlog allows interaction and comments from users on transit-related topics and issues. In its 10th anniversary year, CommuterPage.com® received numerous citations in local/national media, including the Washington Post’s Dr. Gridlock for the “region’s best transportation resource.”

New Mobile Commuter Store® unveiled—ACCS completed build-out of a new and improved and “way cool” Mobile Commuter Store®, to replace aging vehicles. The design of the new Store won an Adwheel Award from the American Public Transit Association.

CommuterPage.com® was instrumental in encouraging travel change—More than half (52%) of CommuterPage.com® users said they started using a new non-SOV mode after receiving information from the website and 70% of these users said the site was instrumental in making that change. More than nine in ten users (90%) said they were “very satisfied.” The Net Promoter Score® for the site was 78.

Commuter Stores® continued to be a visible and valuable resource—A survey of Commuter Store® patrons indicated tremendous satisfaction with the Stores. In surveys, 94% of customers said they were “very satisfied” and the Net Promoter Score® for the Stores was 78. About (22%) of Commuter

### CommuterStore® and CommuterDirect.com® Sales: 1993-2008

Store customers said a Store service influenced them to start or increase use of non-SOV modes.

**ACCS Marketing and Outreach**

- **iRide Teen Transit Initiative**—ACCS completed the successful rollout for the iRide program targeting teen transit use. ACCS continues to support the program through the Teen Program administered by Parks, Recreation & Cultural Resources.

- **New marketing information materials developed**—Marketing materials were developed for a variety of programs, products, and services:
  - SmartBenefits flyers, brochures, and website on CommuterDirect.com®
  - STAR Rider Guide and updates to the STAR webpage; STAR member surveys
  - Arlington Street Naming Guide updated and placed on DES website
  - ART 10th Anniversary pieces include decals for buses, posters, magnets and articles in ART Forum and The Citizen newsletters
  - Multiple Metrobus and ART schedules and bus stop information updates and reprints
  - Quarterly ART Forum newsletters
  - CommuterCart, a custom cart that is pulled by a bicycle and used at community events
  - Ads for CommuterStore® monitors promoting ACCS programs and services as well as transit, bike and walk options

- **Successful rollout of Arlington’s Car-Free Diet**—ACCS launched Arlington’s Car-Free Diet Campaign to encourage residents and employees to reduce their use of and dependence on SOV travel. The rollout was accompanied by startup of CarFreeDiet.com, distribution of brochures and direct mail to Arlington households, and numerous print and media ads.

- **ACCS marketing campaigns received awards**—ACCS won numerous awards for marketing campaigns, including:
  - American Public Transit Association (APTA) First Place for Public Relations/Awareness or Education Campaign for Teen Transit Awareness
  - APTA First Place for Illustrated Bus for Mobile Commuter Store®
  - Outstanding Service Award for Teen Transit from the Association for Commuter Transportation
  - Gold MarCom Award for Car-Free Diet ad campaign from the Association of Marketing & Communication Professionals
DISTRIBUTION AND LOGISTICS

- **Record distribution of transit information materials**—A record number of transit timetables and brochures (550,000) were distributed to individuals and companies. Information also was placed at 425 ART and 55 Pike Ride bus stops.

SPECIAL INITIATIVES

- **WALKArlington coordinated community walking events and outreach**—WALKArlington distributed nearly 50,000 copies of its striking new Walkabouts booklet, featuring 13 self-guided neighborhood walks around the County, and held several well-attended “live” Walkabouts of residential and urban neighborhoods, including Arlington Forest, Dominion Hills, and Clarendon. To expand outreach, WALKArlington also videotaped hosted versions of these WALKAbouts, which can be seen on Arlington’s AVN cable channel, on YouTube, and on the WALKArlington website. The Pacer e-newsletter was published monthly.

- **WALKArlington teamed with schools and community partners**—WALKArlington collaborated with Arlington Public Schools in support of Walk and Bike to School Day activities, promoting the annual event throughout the County, partnering with targeted schools to encourage participation, supporting media and grass roots outreach, and coordinating events on-site. In conjunction with County programs and community groups, WALKArlington participated in health, fitness, transportation, and environmental fairs and activities throughout the year.

- **BikeArlington events exceeded participants from previous years**—BikeArlington implemented the 4th Annual Arlington-Alexandria Community Bike Ride (750 participants) and hosted the most successful pit stop, with 800 riders, in the 2008 Washington metro region’s Bike-to-Work Day event.

- **BikeArlington produced new map and cycling information materials**—Bike Arlington prepared a new, enhanced, and much applauded Arlington Bike Map; 30,000 copies were distributed. The program also introduced Lights for Bikes, Confident City Cycling classes, Street Smart Safety, and Safe Bicycling programs.

- **ACCS expanded carshare spaces**—ACCS expanded Arlington’s carshare program to 81 on-street spaces and 3,340 members in Arlington. The carshare program received national recognition for Arlington’s leadership.

- **Carshare members reported very high satisfaction with the program**—A carshare survey conducted by the Metropolitan Washington Council of Governments reported very high satisfaction among Arlington carshare members; 86% were either satisfied or very satisfied with the program and the Net Promoter Score® was 94, one of the highest of any in the ACCS program. Users gave particularly high ratings for safety of pick-up locations and availability of vehicles when needed.
PLANNING AND RESEARCH

- **Site Plan conditions generated new financial support for ACCS**—ACCS negotiated 12 new site plans with TDM conditions for a total of $1.5M in new contributions to ACCS over the coming 30 years. 113 site plans have been entered into the database. The program now has achieved an 83% compliance rate on contributions with $177,842 collected during the fiscal year. Institution of a new 30-year time frame on compliance and contributions (rather than 10 years) insures the program’s viability into the future.

- **ACCS broadened enforcement of site plan bike conditions**—ACCS hired a new Site Plan Enforcement Officer to oversee and enforce site plan requirements, modify language in Site Plans to provide greater control over bike specifications/storage, and initiate sign off/approval of plans for bikes to ensure compliance.

- **ACCS research documented broad impacts of transportation services**—ACCS completed Phase 1 of its multi-year Research Program to define customer needs and satisfaction and measure performance. The research showed that transportation is an integral component of Arlington’s quality of life and that travel options and ease of getting around are key factors. Surveys of numerous customer groups further demonstrated that ACCS meets customers’ expectations for a high level of quality of service and that the services influence travelers to try and to continue using non-SOV modes. ACCS is having a huge impact on getting people to live, work, shop, and play in Arlington…no car required.
Impacts of ACCS Activities

Indicators of ACCS’ Progress

One objective of ACCS’ research is to document the results of the program. How successful is ACCS in meeting customers’ needs and expectations? Do ACCS’ TDM services and programs encourage shifts to non-SOV travel options? And how much do shifts away from driving alone generate community benefits, such as reduced congestion on local roads? ACCS has measured its performance in five categories representing four steps along a behavioral change continuum from awareness to mode change and one category measuring the ultimate impacts of the changes.

1) **Awareness and Attitudes**—Travelers’ awareness, familiarity, and consideration of ACCS services and travel modes; perceptions of community vitality and business vitality

2) **Participation in ACCS’ Services**—Travelers’ use of various ACCS services and involvement of employers and property managers in ACCS’ services and transportation support programs

3) **Satisfaction with ACCS’ Services and Repeated Use**—Customers’ satisfaction with ACCS’ services and their likelihood to use services again and recommend them to others

4) **Trial and Ongoing Travel Behavior Change**—Extent and duration of shifts to non-SOV modes

5) **Travel, Energy, and Emissions Impacts**—Impacts of behavior change on the transportation system, energy use, air quality, and utilization of transportation infrastructure

Indicators of 1) Awareness/Attitudes, 2) Participation, and 3) Satisfaction were reported in the ACCS Highlights section of this report. They also are documented in other ACCS reports available at www.commuterpage.com/research. Results on 4) Travel Behavior Change and 5) Travel and Emissions Impacts are described in this section, specifically the four indicators noted below:

- **Alternative mode placements**—Number of travelers who start or increase their use of non-SOV modes for commuting or other travel
Vehicle trips reduced — Number of vehicle trips eliminated or replaced by greater use of non-SOV modes; in other words, “cars taken off the road”

Vehicle miles traveled (VMT) reduced — Number of miles of vehicle travel eliminated or replaced by greater use of non-SOV modes

Emissions reduced — Number of pounds of emissions eliminated from reduced use of SOV

Energy consumption reduced — Number of gallons of gasoline saved

For FY 2008, these impacts were calculated for the following ACCS’ programs:
1) Employer Services
2) Commuter Stores®
3) CommuterDirect.com® (Individual)
4) CommuterPage.com®
5) BikeArlington
6) WALKArlington
7) Carshare
8) Arlington umbrella marketing campaign

These calculations represent a conservative estimate of ACCS’ impacts, in the sense that they include credit only for impacts that can be reasonably documented with accepted measurement methods and tools and are adjusted to avoid double counting participants who use multiple programs. Additionally, the impacts of several other services, such as Residential Services, Mobile Commuter Store®, the Commuter Information Center, ACCS Marketing (transit), and Site Plan, are not specifically detailed for FY 2008 due to lack of data, although some of their impacts are captured under other programs’ impacts. These programs will be added in future years as additional evaluation data are collected.

The results of the program impact indicators for the activities noted above are shown in Table 1. The method used to calculate these impacts is briefly described in the Calculation Method, pages 28-33.

For more information on ACCS research, programs and services visit Commuter-page.com®.

Travel, Energy, and Emissions Reductions Provide Community Benefits

In FY 2008, ACCS’ services helped commuters shift 17,300 vehicle trips each morning and evening from driving alone to transit, carpool, walking, and other modes and eliminated more than 542,000 vehicle miles of travel (VMT) each day. This VMT reduction accounts for about 12% of the County’s total daily VMT.
The following data provides an idea of the scale of ACCS’ 17,300 morning commute trip reduction:

- More than twice the 7,854 morning passenger trips made on VRE in October 2008
- Above the 16,800 morning passenger trips on MARC rail in October 2008
- Nearly equal to the approximately 20,000 morning commute trips on Arlington Metrobus
- A little less than the 25,000 passenger vehicles in six inbound lanes on I-395 during the three hour morning rush period

Clearly, ACCS makes it easier for travelers to get around. Many travel routes in Arlington would be noticeably more congested if ACCS did not exist. ACCS has focused much of its attention on dense employment and residential areas of the County, so its efforts have particularly lessened traffic in some of the County’s most congested corridors. For example, about 35% of the 17,300 morning commute vehicle trips reduced would be traveling in the Rosslyn-Ballston corridor. This means that ACCS eliminated 6,055 vehicles each weekday morning and evening from roads in this corridor.

To put that number into perspective, consider that about 12,000 vehicles travel in the two eastbound lanes of I-66 in Arlington County parallel to the Ballston-Rosslyn corridor each morning between 7 am and 9 am. Imagine adding several thousand vehicles to that road during the morning rush hour and it’s clear that I-66, which is already near capacity, would be at a virtual standstill. Similarly, about one in five trips eliminated by ACCS travel to Crystal City, so it is likely that such benefits have been realized on roads in the Crystal City area as well.

Improved air quality through reduced vehicle pollutant emissions is another benefit of ACCS’s program achievements of higher use of non-SOV modes. During FY 2008, ACCS’ TDM programs helped Arlington eliminate 105 tons of oxides of nitrogen (NOx) and volatile organic compounds (VOC), two of the pollutants that are instrumental in forming smog. And ACCS’ services helped Arlington County residents and employees reduce 64,000 tons of carbon dioxide (CO2) in FY 2008, reducing both their individual carbon footprints and contributing to Arlington’s County-wide Fresh AIRE efforts to address global warming.

Energy savings is another direct result of less vehicle travel. Fewer vehicle miles traveled means 23,000 gallons less gasoline consumption each day, which benefits individuals through substantial cost savings and which, in the aggregate, benefits the community and the nation. At a time when volatile energy supplies and energy independence are issues of national concern, ACCS’ success in reducing vehicle travel provides benefits on many levels.
TABLE 1
Estimate of Daily Program Impacts for FY 2008

<table>
<thead>
<tr>
<th>JULY 2007 – JUNE 2008 IMPACTS</th>
<th>Commute</th>
<th>Non-work</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) ALTERNATIVE MODE PLACEMENTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employer Services</td>
<td>N/A*</td>
<td>N/A*</td>
</tr>
<tr>
<td>CommuterDirect.com (corporate)</td>
<td>N/A*</td>
<td>N/A*</td>
</tr>
<tr>
<td>Commuter Stores®</td>
<td>2,943</td>
<td>3,322</td>
</tr>
<tr>
<td>CommuterDirect.com® (individual)</td>
<td>1,095</td>
<td>887</td>
</tr>
<tr>
<td>CommuterPage.com®</td>
<td>13,710</td>
<td>9,681</td>
</tr>
<tr>
<td>WALKArlington</td>
<td>42</td>
<td>319</td>
</tr>
<tr>
<td>BikeArlington</td>
<td>264</td>
<td>282</td>
</tr>
<tr>
<td>Carshare</td>
<td>285</td>
<td>1,160</td>
</tr>
<tr>
<td>Umbrella marketing</td>
<td>5,446</td>
<td>N/A</td>
</tr>
<tr>
<td>2) DAILY VEHICLE TRIPS REDUCED (one-way)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commute trips (includes to and from work)</td>
<td>34,595</td>
<td></td>
</tr>
<tr>
<td>Non-commute trips</td>
<td>3,425</td>
<td></td>
</tr>
<tr>
<td>Total Daily Vehicle Trips Reduced</td>
<td>38,020</td>
<td></td>
</tr>
<tr>
<td>3) DAILY VMT REDUCED (including all above services)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commute VMT</td>
<td>518,310</td>
<td></td>
</tr>
<tr>
<td>Non-commute VMT</td>
<td>24,023</td>
<td></td>
</tr>
<tr>
<td>Total Daily VMT Reduced</td>
<td>542,333</td>
<td></td>
</tr>
<tr>
<td>4) DAILY POUNDS OF EMISSIONS REDUCED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily lb of VOC reduced</td>
<td>520 lb</td>
<td></td>
</tr>
<tr>
<td>Daily lb of NOx reduced</td>
<td>318 lb</td>
<td></td>
</tr>
<tr>
<td>Daily lb of CO₂ (GHG) reduced</td>
<td>511,578 lb</td>
<td></td>
</tr>
<tr>
<td>5) DAILY ENERGY REDUCED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily gallons of gasoline reduced</td>
<td>22,772 gallons</td>
<td></td>
</tr>
</tbody>
</table>

* Calculation methodology uses the US EPA model that does not separately show Placement Rate, but the impacts of these services are included in calculations of reductions in vehicle trips, VMT, and emissions.
### TABLE 2
#### Estimate of Daily and Annual Travel and Emissions Impacts for FY 2008

<table>
<thead>
<tr>
<th></th>
<th>VEHICLE TRIPS*</th>
<th>VMT</th>
<th>NOx (LB)</th>
<th>VOC (LB)</th>
<th>CO₂ (LB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer Services</td>
<td>21,868</td>
<td>341,429</td>
<td>325</td>
<td>192</td>
<td>323,187</td>
</tr>
<tr>
<td>CommuterDirect.com® (corporate)</td>
<td>360</td>
<td>7,622</td>
<td>7</td>
<td>4</td>
<td>7,330</td>
</tr>
<tr>
<td>Commuter Stores®</td>
<td>3,544</td>
<td>59,314</td>
<td>51</td>
<td>29</td>
<td>51,762</td>
</tr>
<tr>
<td>CommuterDirect.com® (individual)</td>
<td>1,121</td>
<td>38,310</td>
<td>35</td>
<td>17</td>
<td>36,017</td>
</tr>
<tr>
<td>CommuterPage.com®</td>
<td>4,992</td>
<td>53,189</td>
<td>55</td>
<td>38</td>
<td>51,813</td>
</tr>
<tr>
<td>WALKArlington</td>
<td>121</td>
<td>133</td>
<td>1</td>
<td>1</td>
<td>134</td>
</tr>
<tr>
<td>BikeArlington</td>
<td>271</td>
<td>2,423</td>
<td>3</td>
<td>2</td>
<td>2,434</td>
</tr>
<tr>
<td>Carshare</td>
<td>1,234</td>
<td>16,512</td>
<td>17</td>
<td>12</td>
<td>16,566</td>
</tr>
<tr>
<td>Umbrella marketing campaign</td>
<td>4,509</td>
<td>30,662</td>
<td>34</td>
<td>28</td>
<td>29,665</td>
</tr>
</tbody>
</table>

**TOTAL—ALL PROGRAMS**

<table>
<thead>
<tr>
<th></th>
<th>Daily Impacts</th>
<th>Annual Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>38,020</td>
<td>9,847,500</td>
</tr>
<tr>
<td></td>
<td>542,333</td>
<td>137,986,000</td>
</tr>
<tr>
<td></td>
<td>520</td>
<td>130,013</td>
</tr>
<tr>
<td></td>
<td>318</td>
<td>79,381</td>
</tr>
<tr>
<td></td>
<td>511,575</td>
<td>127,894,500</td>
</tr>
</tbody>
</table>

* NOTE: The total 38,020 vehicle trips reduced includes 34,595 daily commute trips (17,289 each way) and 3,425 daily non-commute trips.
High Quality Services Support High Quality of Life and Sustainable Mode Choices

ACCS’ accomplishments on travel and environmental measures directly contribute to Arlington’s reputation as a progressive community and a desirable place to live. In a 2006 survey of Arlington residents, 83% rated the transportation system and services as good or very good and almost half gave good or very good ratings to ease of getting around Arlington without a car (44%), by bus (50%), by walking (49%), and by bicycle (44%).¹ In the same survey, 88% of residents rated quality of life in Arlington County favorably and statistical tests showed that the quality of the transportation system and services was one factor leading to their positive quality of life view.² All this is especially remarkable because it is in the context of the Northern Virginia region which is notorious for its traffic congestion.

In FY 2008, ACCS’ services helped eliminate 38,000 daily vehicle trips and eliminated more than 542,000 vehicle miles of travel (VMT) each day.

The impacts on residents’ travel choice are conclusive. A regional State of the Commute (SOC) survey conducted in 2007 found that Arlington residents make only 55% of their work trips by driving alone, compared to 71% for all regional commuters.³ They also are likely to use non-drive alone travel options for non-work trips. Arlington residents make more than half (55%) of their non-work trips using non-SOV modes and make one-third of these trips by walking.⁴

ACCS’ services and the County’s high quality transportation system also contribute to economic development by helping to attract and retain employers to the County and offering employees a wealth of sustainable transportation

² Ibid
⁴ Ibid
choices. An ACCS survey of Arlington County CEOs revealed that transportation options and TDM services are a key reason for locating in Arlington. And more than 50% of the employers that participate in ACCS’ services say that Arlington County’s transportation system impacts somewhat or very positively their retention, customer relations, and recruitment efforts.

Arlington employers that offered TDM services to their employees noted that they do so because it helps with employee recruitment and increases employee productivity and morale. Nearly four in ten employers that offered commute services said they received guidance from an ACCS program and that they would not have implemented the services without this support.

This support pays off in reduced use of SOV by people working in Arlington. The 2007 regional SOC survey showed that 72% of Arlington employees had access to commuter services at work, compared with 54% of employees region-wide. The same survey found that commuters who work in Arlington were less likely to drive alone (63% of weekly commute trips) than were regional commuters overall (71%). Zeroing in further, the same study found that at worksites where TDM services are offered to employees, the drive-alone rate is 28% lower, bus and rail use is double, and ridesharing is triple the rates at sites where no TDM is offered, assuming reasonably comparable parking and transit availability.

A recent, in-depth study of employers and employees at nineteen commercial buildings in the County supported the role that TDM plays in influencing employees’ travel choices. A key finding of the study was that the TDM services had a statistically significant impact on employees’ mode choice; employees who had used TDM services were less likely to drive alone and more likely to ride transit than were employees who had not used these services, even considering differences in parking and transit access.

**ACCS’ Programs Get High Marks for Customer Satisfaction**

Finally ACCS’ research has demonstrated the personal value of ACCS’ services to users and their high level of satisfaction with the quality and usefulness of the information provided. Surveys of customers using the Commuter Stores®, CommuterPage.com® and CommuterDirect.com®, Arlington Carshare, Arlington

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7 Ibid.
9 Ibid.
Transportation Partners, and other ACCS services documented that ACCS meets customers’ expectations for a high level of quality of service.

A survey of Commuter Store® patrons indicated that 94% of customers were “very satisfied” and the Net Promoter Score® for the Stores was 78, higher than Apple (66) and FedEx (56).\textsuperscript{11} Satisfaction was similarly high for other ACCS services. A carshare survey conducted by the Metropolitan Washington Council of Governments reported that 86% of Arlington carshare users were either satisfied or very satisfied with the program. The Net Promoter Score® for this service was 94, one of the highest in the ACCS program.\textsuperscript{12} More than 90% of CommuterPage.com® users said they were “very satisfied” with the website, 89% of customers were satisfied with CommuterDirect.com® individual services.\textsuperscript{13,14} and 95% of CommuterDirect.com® Corporate Services were satisfied, giving it a Net Promoter Score® of 96. This was the highest of any ACCS service, and a number that is rarely seen in any industry.\textsuperscript{15,16}

Most importantly, the research documents that these services help convert and maintain the use of transit and other transportation options. The 2006 Arlington resident survey found that 52% of Arlington residents had sought information on types of transportation they could use for travel around Arlington and/or around the Washington metro region; and 17% of those who sought transportation information or services used this information to start or try using a bus, train, or carpool to get around the County.\textsuperscript{17} About 22% of Commuter Store® customers and 35% of CommuterPage.com® users said these services influenced or assisted them to start or increase use of non-SOV modes.\textsuperscript{18,19}

The research studies completed to date clearly show that transportation and TDM services are an integral component of Arlington’s quality of life and that travel options and ease of getting around help to make that so. Surveys of numerous customer groups further demonstrated that ACCS meets customers’ expectations for a high level of quality of service and that these services influence travelers to try and continue using non-SOV modes. ACCS has a measurable impact on getting people to live, work, shop, and play in Arlington…no car required. This research has demonstrated the value of ACCS’ services to individual users, but also the

\begin{itemize}
  \item ACCS 2007 Commuter Store® Study, Conducted by Arlington County Commuter Services, 2007.
  \item CommuterPage.com® Study. Conducted by Arlington County Commuter Services, 2007.
  \item CommuterPage.com® Study. Conducted by Arlington County Commuter Services, 2007.
  \item 2006 Arlington County Resident Study. Conducted by Arlington County Commuter Services, 2006.
  \item ACCS 2007 Commuter Store® Study, Conducted by Arlington County Commuter Services, 2007.
  \item CommuterPage.com® Study. Conducted by Arlington County Commuter Services, 2007.
\end{itemize}
collective value of the travel changes made by these individual users to meeting County-wide transportation, business, and environmental objectives.

**ACCS’ TDM Program Shows Results**

There can be no doubt that the condition of transportation in Arlington is far superior to what is found in other metropolitan areas, and even other parts of the Washington Metropolitan region. No single element is responsible for this accomplishment. Rather it is a convergence of factors that began with the planning for urban villages and continued with the development of transportation services that make travel to and through the county comfortable and convenient with little or no need for a personal vehicle.

Arlington County’s multimodal transportation infrastructure and urban village development are the cornerstones of this highly useable and vital structure. ACCS binds together the many working parts into an integrated whole. The education and information TDM services ACCS provides through its multiple programs increase awareness, encourage the use of non-SOV travel options, keep stakeholders involved, and simplify the information needed to make the necessary choices. Through its efforts, ACCS has reduced the demand for vehicle travel. This has created a community fabric of less congestion, lower air pollution, increased accessibility and improved quality of life and business. In every category ACCS performs well above the norm to create a strong foundation for meeting the needs of future growth and development.

For more detailed information on ACCS’ research, visit: www.CommuterPage.com/research.
Calculation Method

The impacts presented on the previous pages were calculated by applying a set of multiplier factors developed from surveys of customer groups to program activity data from ACCS’ tracking systems. These steps are:

1) **Estimate commuter population “base”**—This is the population of travelers who have used each program (e.g., Commuter Store customers, Bike Arlington participants, etc.)

2) **Estimate “placements”**—Multiply the population base by the “placement rate” (percentage of population who made a travel change as a result of the program)

3) **Estimate vehicle trips reduced**—Multiply number of placements by a vehicle trip reduction (VTR) factor equal to the average daily vehicle trips reduced per placement

4) **Estimate vehicle miles traveled (VMT) reduced**—Multiply number of vehicle trips reduced by average travel distance

5) **Estimate emissions reduced**—Multiply vehicle trips and VMT reduced by emissions factors for the Washington DC metropolitan area

6) **Estimate energy (gasoline) savings**—Divide VMT reduced by average passenger fleet miles per gallon of 23.8 (source MWCOG)
**STEP 1 – COMMUTER POPULATION BASE**

The population base equals the population that potentially could have been influenced by the program. Population bases vary by program and are shown below.

**Population Base**

<table>
<thead>
<tr>
<th>PROGRAM COMPONENT</th>
<th>POPULATION BASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer Services</td>
<td>130,167 Employees at worksites participating in ATP programs</td>
</tr>
<tr>
<td>CommuterDirect.com® (Corporate)</td>
<td>6,952 Employees at worksites participating in Commuter Direct.com® (corporate)</td>
</tr>
<tr>
<td>Commuter Store®</td>
<td>14,853 “Unique” customers of a Commuter Store®</td>
</tr>
<tr>
<td>CommuterDirect.com® (Individual)</td>
<td>5,040 CommuterDirect.com® individual account holders</td>
</tr>
<tr>
<td>CommuterPage.com®</td>
<td>57,200 “Unique” visitors to CommuterPage.com®</td>
</tr>
<tr>
<td>Walk Arlington</td>
<td>1,759 Participants in WALKArlington programs</td>
</tr>
<tr>
<td>Bike Arlington</td>
<td>3,180 Participants in BikeArlington programs</td>
</tr>
<tr>
<td>Carshare</td>
<td>3,341 Registered carshare program members</td>
</tr>
<tr>
<td>Umbrella Marketing</td>
<td>166,133 Arlington residents 18 years or older</td>
</tr>
</tbody>
</table>

**STEP 2 – NUMBER OF NEW PLACEMENTS**

“Placements” are commuters or other travelers who were influenced or assisted by an ACCS program to start or increase use of non-SOV modes. The percentage of travelers who make a change to non-SOV modes is estimated from a survey of a sample of the population. The population base is multiplied by this “placement rate” to estimate the number of total placements in the target population.

**Placement Rates: Commute and Non-Work Trips**

<table>
<thead>
<tr>
<th>PROGRAM COMPONENT</th>
<th>PLACEMENT RATE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>COMMUTE</td>
</tr>
<tr>
<td>Employer Services</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>CommuterDirect.com® (Corporate)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Commuter Store®</td>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>CommuterDirect.com® (Individual)</td>
<td>17%</td>
<td>18%</td>
</tr>
<tr>
<td>CommuterPage.com®</td>
<td>28%</td>
<td>17%</td>
</tr>
<tr>
<td>WALKArlington</td>
<td>3%</td>
<td>18%</td>
</tr>
<tr>
<td>BikeArlington</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Carshare</td>
<td>9%</td>
<td>35%</td>
</tr>
<tr>
<td>Umbrella Marketing</td>
<td>3%</td>
<td>N/A</td>
</tr>
</tbody>
</table>
STEP 3 – VEHICLE TRIPS REDUCED

The number of vehicle trips reduced for each program component was estimated by multiplying the number of placements from Step 2 by a “vehicle trip reduction” (VTR) factor. This factor, also calculated from survey data, was equal to the average daily vehicle trips reduced by each traveler who made a shift to a non-SOV mode. VTR factors for commuting can range between 0 and 2.0 vehicle trips reduced per day. A VTR of 2.0 indicates that travel shifts were from driving alone to “zero vehicle” modes (transit, bike, walk, or telecommute) five days per week. But because some shifts will be to carpool and vanpool, some from one alternative mode to another (e.g. transit to carpool), and some to part-time use of non-SOV modes, VTR factors are typically lower than 2.0. Non-work VTR factors for ACCS’ programs were typically lower than were commute factors. This is because, unlike commute trips, which occur multiple days in a week, non-work travel tends to be less regular and predictable, so trip reduction is less likely to be repeated for multiple days.

Vehicle Trip Reduction Factors: Commute and Non-Work Trips

<table>
<thead>
<tr>
<th>PROGRAM COMPONENT</th>
<th>COMMUTE</th>
<th>NON-WORK</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer Services</td>
<td>N/A</td>
<td>N/A</td>
<td>US EPA COMMUTER model</td>
</tr>
<tr>
<td>CommuterDirect.com® (Corporate)</td>
<td>N/A</td>
<td>N/A</td>
<td>CommuterDirect.com® survey</td>
</tr>
<tr>
<td>Commuter Store®</td>
<td>1.1</td>
<td>0.2</td>
<td>Commuter Store® survey</td>
</tr>
<tr>
<td>CommuterDirect.com® (Individual)</td>
<td>0.9</td>
<td>0.2</td>
<td>CommuterDirect.com® survey</td>
</tr>
<tr>
<td>CommuterPage.com®</td>
<td>0.3</td>
<td>0.2</td>
<td>CommuterPage.com® survey</td>
</tr>
<tr>
<td>WALKArlington</td>
<td>0.7</td>
<td>0.3</td>
<td>Walk Arlington survey</td>
</tr>
<tr>
<td>BikeArlington</td>
<td>0.7</td>
<td>0.3</td>
<td>Bike Arlington survey</td>
</tr>
<tr>
<td>Carshare</td>
<td>0.3</td>
<td>1.0</td>
<td>MWCOG 2008 Carshare survey</td>
</tr>
<tr>
<td>Umbrella Marketing</td>
<td>1.2</td>
<td>N/A</td>
<td>2006 Arlington resident survey</td>
</tr>
</tbody>
</table>
STEP 4 – VEHICLE MILES TRAVELED (VMT) REDUCED

The total daily VMT reduced was calculated by multiplying the number of vehicle trips reduced by the average travel distance for each trip. The average distance was calculated from the same survey data used to calculate the placement rate and VTR factor.

Program Average Travel Distance (One-Way Miles)

<table>
<thead>
<tr>
<th>PROGRAM COMPONENT</th>
<th>ONE-WAY DISTANCE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>COMMUTE</td>
<td>NON-WORK</td>
</tr>
<tr>
<td>Employer Services</td>
<td>16.3</td>
<td>N/A</td>
</tr>
<tr>
<td>CommuterDirect.com (Corporate)</td>
<td>16.2</td>
<td>N/A</td>
</tr>
<tr>
<td>Commuter Store</td>
<td>19.1</td>
<td>4.6</td>
</tr>
<tr>
<td>CommuterDirect.com (Individual)</td>
<td>38.5</td>
<td>4.0</td>
</tr>
<tr>
<td>CommuterPage.com</td>
<td>16.3</td>
<td>3.9</td>
</tr>
<tr>
<td>WALK Arlington</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Bike Arlington</td>
<td>10.0</td>
<td>6.5</td>
</tr>
<tr>
<td>Carshare</td>
<td>11.5</td>
<td>13.5</td>
</tr>
<tr>
<td>Umbrella Marketing</td>
<td>6.8</td>
<td>N/A</td>
</tr>
</tbody>
</table>

STEP 5 – EMISSIONS REDUCED

Emission reduction due to changes motivated by ACCS’ programs was calculated by multiplying the numbers of trips and VMT reduced by emission factors obtained from the Metropolitan Washington Council of Governments (MWCOG) for the Washington metropolitan region to estimate the pounds of Oxides of Nitrogen (NOx), Volatile Organic Compounds (VOC), and Carbon Dioxide (CO₂, GHG — greenhouse gas).

STEP 6 – ENERGY CONSUMPTION REDUCED

Energy consumption reduced in the form of gasoline saved was calculated by dividing the daily VMT reduction of 542,334 by the average passenger vehicle fleet mileage rating of 23.8 (source MWCOG) resulting in a savings of 22,772 gallons per day.
Correction to Avoid Double Counting Impacts

The basic calculation of impacts for each program assumes that the programs operate separately, but this is generally not the case. Data from surveys shows that the markets for ACCS programs overlap, with many customers using more than one program. For this reason, an adjustment is necessary to eliminate double counting of credits by customers who use multiple programs.

This adjustment uses an approach that defines some services as “primary” and others as “supporting.” Primary services are those that are most likely to be visible to potential customers and to motivate behavior change independent of other services. Supporting services are less likely to be effective “standing alone” and more likely to be implemented to support successful operation of the primary services.

Impacts are estimated for primary services, and secondary service benefits are assumed to be included with the primary benefits, so are not calculated separately. The classification of primary and secondary services used for the 2008 calculation is shown below.

### Classification of Primary and Supporting Programs

<table>
<thead>
<tr>
<th>PRIMARY PROGRAMS</th>
<th>SUPPORTING / RELATED PROGRAMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer Services</td>
<td>- CommuterDirect.com (corporate)</td>
</tr>
<tr>
<td></td>
<td>- ACCS Marketing</td>
</tr>
<tr>
<td></td>
<td>- Commuter Info Center (fulfillment)</td>
</tr>
<tr>
<td></td>
<td>- CommuterPage.com</td>
</tr>
<tr>
<td>CommuterDirect.com (Corporate)</td>
<td>- Commuter Info Center (fulfillment)</td>
</tr>
<tr>
<td>Commuter Store</td>
<td>- CommuterPage.com</td>
</tr>
<tr>
<td></td>
<td>- ACCS Marketing</td>
</tr>
<tr>
<td>CommuterPage.com</td>
<td>- Commuter Info Center (fulfillment)</td>
</tr>
<tr>
<td></td>
<td>- ACCS Marketing</td>
</tr>
<tr>
<td>CommuterDirect.com (individual)</td>
<td>- Commuter Info Center (fulfillment)</td>
</tr>
<tr>
<td>WALKArlington</td>
<td>- ACCS Marketing</td>
</tr>
<tr>
<td></td>
<td>- Commuter Page.com</td>
</tr>
<tr>
<td>BikeArlington</td>
<td>- ACCS Marketing</td>
</tr>
<tr>
<td></td>
<td>- Commuter Page.com</td>
</tr>
<tr>
<td>Carsharing program</td>
<td>- ACCS Marketing</td>
</tr>
<tr>
<td>Umbrella marketing campaign</td>
<td>- CommuterPage.com</td>
</tr>
<tr>
<td></td>
<td>- Commuter Store</td>
</tr>
</tbody>
</table>
Individual program impacts were not calculated for ACCS Marketing (general transit marketing) or for the Commuter Information Center, so no corrections are needed for the programs with which these programs overlap.

But CommuterPage.com®, a major outreach service for ACCS, overlaps with four other programs (Commuter Store®, CommuterDirect.com®, WALKArlington, and BikeArlington). For example, about half of CommuterDirect.com® users said they also used CommuterPage.com®. Overlap also occurs between the Commuter Store® and CommuterDirect.com®, WALKArlington, and BikeArlington. And Umbrella marketing campaign overlapped with both the Commuter Store and CommuterPage.com. Corrections were made to these programs to eliminate double-counted credits.

Table 2 on page 23 shows the final travel and emissions impacts for each program.