Additional Performance Measures

Arlington County Transportation & Development Division │ Fiscal Year 2014
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Goal:
Expand multimodal access and connectivity to destinations both within and outside of the County.

Accessibility refers to people’s overall ability to reach key destinations such as jobs, schools, libraries, shopping, and entertainment. Connectivity within each modal network as well as between networks, such as walking or cycling to public transit stations, is a critical component of accessibility.

Access and connectivity to destinations both within and outside of the County are important factors in the quality of life of Arlington residents and employees and the economic vibrancy of our businesses. As a part of the Washington Metropolitan Region, thousands of jobs, retail establishments, entertainment venues, educational institutions, and attractions are located in and around Arlington County, but we must continue to strive to expand the list of destinations that are accessible to our residents and origins that are accessible for visitors to the County.
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**MEASURE 1: Proximity to Multi-Modal Transportation**

Percent of population and employment in close proximity to pedestrian, bicycle, car share, bike share, and transit facilities.

**Description**

This performance measure tracks the percent of the population and jobs that have access to various transportation modes and facilities. Proximity to pedestrian, bicycle, car share, bike share, and transit all offer Arlington County residents and workers the ability to move throughout the county and the region. This measure tracks the number of persons, as a percent of the total county population, living within a certain distance of the specified transport facility. This measure also looks at the number of jobs accessible to the same transportation infrastructure.

**Importance**

Proximity to multi-modal transportation services indicates the ability for a resident or employee to be able to access Arlington’s and the region’s destinations, services and activity centers using the most appropriate travel mode for their trip. Proximity to these modes also improves the quality of life for residents and persons traveling to jobs in the County. This measure ties into the MTP Goal 1: Provide High-Quality Transportation Services and Goal 2: Move More People Without More Traffic.

**Current Status**

Based on American Community Survey (ACS) data for population at the block group level, more than 60 percent of Arlington County residents lived within a reasonable distance of bicycle and transit facilities. While nearly 50 percent live within a quarter mile of the primary transit network (PTN). An overwhelming 99 percent lived within an eighth of a mile of Arlington’s pedestrian network.

Likewise, 2008 and 2011 employment data from the U.S. Census Longitudinal Employer-Household Dynamics (LEHD) program also showed that nearly 100 percent of jobs are within the pedestrian network of Arlington. Over 70 percent of jobs are in close proximity to the transit and/or bicycle network. Additionally, over 40 percent of jobs in Arlington can be accessed by Capital Bikeshare, car share and/or the primary transit network.

Only historic data for ART bus stops, Metrorail stations, and VRE stations was available for comparison over time. However, between 2008 and 2011 all three infrastructure types showed an overall increase in the percent of jobs within a reasonable distance of access.

**Data Sources**

Population: American Community Survey (2008-2012 five-year estimates)


County Transportation Network Data, 2014
The number of jobs within ¼ mile of an ART bus stop increased by 11% between 2008 and 2011.

*ADA Stops are stops accessible to Americans with disabilities and comply with the Americans with Disabilities Act (ADA). Of 1990.
MEASURE 2: Awareness and Use of TDM Programs

Awareness and use of TDM programs by Arlington residents, workers, and visitors.

Description
This performance measure uses survey data collected by ACCS on awareness and use of Arlington’s commuter and TDM programs. The measure looks at both the resident awareness and use of Transportation Demand Management services available and the number of employers offering transit benefits to employees.

Importance
Measuring the use and awareness of transportation programs available to Arlington County residents, employees, and visitors indicates the success of marketing the available resources. Identifying shortfalls or gaps in awareness or use of a certain transportation option can signify either the need to expand the marketing effort or to reevaluate the effectiveness of the program itself.

Current Status
Overall, the use and awareness of TDM services in Arlington County has increased, by both residents and employers. The most significant increases in use are the residents’ use of BikeArlington services, and employee use of walking and biking TDM services provided by their employers. This measure addresses the MTP Goal 2: Move More People Without More Traffic.

Data Sources
Resident Awareness of TDM services in Arlington: Arlington County Resident Study
Employers Working with ATP that offer transit benefit: ATP Dashboard, Virginia Quarterly Census of Employment and Wages (QCEW) (total employers in Arlington County)

Arlington Workers Who Use Employer-Provided TDM Services

Workers using employer-provided TDM services has increased for subsidies, carpool/vanpool incentives, and biking and walking services.
Resident use of TDM services has increased in 5 out of 6 categories measured since 2009.

Of those working with ATP, roughly 2/3 of employers consistently have offered transit benefits to their employees.
MEASURE 3:
ADA Accessibility

ADA accessibility to ART and Metrobus in Arlington County.

Description
The Americans with Disability Act (ADA) dictates requirements for bus stops, as well as connecting pedestrian infrastructure (including sidewalks and pathways), to be equitably accessible for persons with disabilities and/or mobility devices. ADA accessible bus service is measured here in absolute number of bus stops meeting ADA requirements and in terms of the accessibility of employment or various groups to those bus stops.

Importance
The comparison of ADA accessibility at transit stops to the geographic distribution of underserved populations helps Arlington measure the distribution of transit infrastructure in order to identify instances of the in-equitable provision of accessible facilities. This measure can identify needs that should be filled and can help to track the movement of these populations so as to ensure continued and equitable access to transit services.

Likewise the tracking of accessibility of transit near employment also can identify needs for improved access for persons with disabilities to job opportunities. This measure ties into the MTP Goal 1: Provide High-Quality Transportation Services and Goal 4: Establish Equity.

Current Status
Approximately three-quarters of the bus stops in Arlington County are not compliant with the ADA guidelines. During the same period, between 2008 and 2014, the County also increased the number of compliant bus stops by almost five percent.

Similarly, there have been significant improvement in residents' access to an ADA bus stop, with an increase of almost 14 percent between 2008 and 2014. In 2008, the 82.2 percent of jobs had access to an accessible bus stop.

Data Source
County Transportation Network Data, 2008 and 2014
The number of **ADA Accessible stops** increased by 4.8% between 2008 and 2014.

**Metrobus and ART Bus Stops Accessible under the Americans with Disabilities Act**

- **2008**
  - ADA Accessible Bus Stops: 21.5%
  - Non-ADA Accessible Bus Stops: 78.5%
- **2014**
  - ADA Accessible Bus Stops: 26.3%
  - Non-ADA Accessible Bus Stops: 73.7%

**Employment within Walking Distance (1/4 mile) to ADA Accessible ART and Metrobus Stops**

- **2008**
  - Employment in Walking Distance: 82.2%
  - Employment NOT in Walking Distance: 17.8%

**Overall, according to most recent data available, 82.2% of jobs are within 1/4 mile of an ADA bus stop.**

**Population within Walking Distance (1/4 mile) to ADA Accessible ART and Metrobus Stops**

- **2008**
  - Population in Walking Distance: 38.3%
  - Population NOT in Walking Distance: 61.7%
- **2014**
  - Population in Walking Distance: 24.5%
  - Population NOT in Walking Distance: 75.5%

The number of Arlington residents within 1/4 mile of an ADA bus stop increased by 13% between 2008 and 2014.
MEASURE 4: Service to Traditionally Underserved Populations

Percent of traditionally underserved (low-income and minority) populations living in close proximity to pedestrian, bicycle, bikeshare, car share, and transit facilities.

Description

The Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance. To ensure that these populations have equal access to transportation programs and resources, Arlington monitors access to transportation facilities for these protected groups, as well as for low-income households.

Importance

Much like the measure for ADA accessibility, measuring the accessibility of minority populations and low-income households to these transportation resources is an attempt to ensure equal access to resources provided through public funding. Gaps in access are important to identify so they can be minimized over time. This measure relates to the MTP Goal 4: Establish Equity, but also Goal 1: Provide High-Quality Transportation Services and Goal 2: Move More People Without More Traffic.

Current Status

Compared to the accessibility of the overall population in Arlington, minority and low-income populations have the same or slightly better proximity to all facilities measured, with one exception: access by minority populations to car share vehicles and VRE stations. However, minority and low-income populations, as well as the county as a whole, have seen a significant increase in proximity to ART bus stops and Capital Bikeshare stations since 2008.

Data Source


Sidewalks, bikeshare, car share, ART Stops: Arlington County GIS layers.

Proximity varies between modes because each mode has different standards in terms of an accessible catchment area.

![Populations Living within 1/4 mile of an ART Stop](chart.png)
Minority and Low-income populations have seen an average increase of 32% in terms of access to Capital Bikeshare stations.
Performance Measures for Mobility

Goal:
Improve mobility for all users of the transportation system in Arlington County.

Mobility refers to the ability of a person to move from place to place. It is measured by tracking indicators like the number of trips taken, distance travelled, and travel time. Mobility is often used as an economic development indicator; the affluence of a community impacts its access to transportation options, which in turn impacts mobility.

Arlington is striving to continue to improve the mobility of all our residents by focusing on how a well-planned variety of land uses, access to excellent transportation options, and well-designed infrastructure can increase mobility, which would in turn increase access to many more destinations.
OBJECTION 1
Provide efficient (cost and time to users) personal mobility balancing all modes of transportation.

MEASURE 5: Reduction in SOV Trips

MEASURE 6: Expenditures on Transportation

MEASURE 7: Average Household Trips per Day

MEASURE 8: Commute Mode Share

MEASURE 9: Usage of ART & Metrobus

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MEASURE 12: Usage by Traditionally Underserved Populations

MEASURE 13: Zero to One Car Households

MEASURE 14: Traffic Volumes

Objective 2
Maximize use of transportation options while minimizing single-occupancy vehicle travel.

MEASURE 9:
Usage of ART & Metrobus

MEASURE 10:
Usage of Bicycle Infrastructure

MEASURE 11:
Usage of Pedestrian Networks

MEASURE 12:
Usage by Traditionally Underserved Populations

MEASURE 13:
Zero to One Car Households

MEASURE 14:
Traffic Volumes
MEASURE 5: Reduction in SOV Trips

Average weekday SOV vehicle trips and miles in Arlington reduced by ACCS.

Description

Single occupancy vehicle (SOV) vehicle trips are the total number of unique trips made by a single private vehicle, such as an automobile, van, pickup truck, or motorcycle carrying only one person. Vehicle miles traveled is a unit to measure the distance of vehicle travel made by these vehicles. Each mile traveled is counted as one vehicle mile regardless of the number of persons in the vehicle. This measure is the number of average weekday SOV vehicle trips and vehicle miles traveled that were reduced in Arlington through the programs and activities of Arlington County Commuter Services (ACCS).

Importance

Reducing the number of SOV vehicle trips and vehicle miles traveled on an average weekday in Arlington County limits harmful air pollution, traffic congestion, and roadway related costs.

Current Status

Since this data was first tracked in 2008, the number of vehicle trips reduced on an average weekday has risen from 38,000 to over 41,000 (an eight percent increase), corresponding with a 39 percent reduction in the number of vehicle miles traveled.

Considering that the average lane of interstate highway carries approximately 8,000 – 12,000 vehicles in both rush periods, a reduction in trips by 41,000 is a significant benefit produced by ACCS.

Between 2001 and 2009 the number of daily vehicle miles traveled on Wilson Boulevard in Clarendon fell by 23 percent, while Glebe Road in Ballston experienced a daily vehicle miles mile traveled reduction of 31 percent.

Data Source

Arlington County Commuter Services internal analysis.
ACCS programs helped eliminate 41,146 vehicle trips each day in Fiscal Year 2014.
MEASURE 6: Expenditures on Transportation

Arlington resident expenditures on transportation.

Description
This measure considers the typical household expenditure on transportation costs as a percentage of a community’s median household income. Using the Center for Neighborhood Technology’s (CNT) Housing and Affordability Index, Arlington County’s typical household transportation costs are compared to those of households in surrounding areas.

Importance
Expenditures on transportation can be an indication of affordability. After housing, the next most expensive cost for a household or family is the cost of transportation. This measure demonstrates Arlington County’s ability to successfully provide affordable and accessible transportation options for its residents. Comparing Arlington’s typical household transportation expenditure to that of households in surrounding counties and cities gives regional context. This can help the County determine if the transportation infrastructure is sufficient, in terms of equity and affordability, weighed against like communities within the region. This measure relates to the MTP Goal 1: Provide High-Quality Transportation Services, Goal 4: Establish Equity, and Goal 5: Manage Effectively and Efficiently.

Current Status
Based on the most recent data available through the CNT Housing and Affordability Index (ACS 2009), within Arlington, the Rosslyn-Ballston corridor fares the best in terms of percentage of household income spent on transportation, with only 13 percent. In terms of actual dollar expenditures, the Columbia corridor spends the least with only $11,353 per year.

Compared to the Washington region as a whole, Arlington residents typically spend 2.5% less of their household income on transportation costs. However, compared to the District, Arlington households spent one percent more, which in actually dollars, equates to a difference of $5,316 more per year.

Data Source
Center for Neighborhood Technology Housing and Affordability Index
Arlington households spent 2.5%, or $1,249, less income on transportation than a typical household in the Washington metropolitan region.

Rosslyn-Ballston households spent the least on transportation, saving an average of $2,520 annually, compared to a typical household region.
MEASURE 7: Average Household Trips per Day

Total number of trips per day in Arlington / Regional number of trips per day.

Description
Using the 2010 Arlington County Household Survey, the total number of miles traveled by the average Arlington household was compared to the number of Vehicle Miles Traveled (VMT) by household. The breakdown of trip types (drive alone, rideshare, transit, walk/bike, and other) per the average Arlington household was also taken from the 2010 survey. For context, the number of household miles traveled per day, the VMT traveled per day, and the breakdown by trip type is also provided for a typical household in the Washington metropolitan region.

Importance
Comparing the number of total miles traveled to the number of daily VMT miles indicates how much of an average Arlington household’s travel is comprised of driving. The breakdown of household trip types further demonstrates the same factors. This is important when evaluating how well Arlington County is moving people without creating more traffic. Balancing the use of all modes provides for a more efficient and effective transportation system. This measures ties into the MTP Goal 1: Provide High-Quality Transportation Services and Goal 2: Move More People Without More Traffic.

Current Status
According to responses collected in 2010 to the Arlington Household Survey, the typical Arlington Household traveled fewer miles per day that compared to the average household in the Washington region. Likewise, the average Arlington household traveled six fewer vehicle miles than the average household in the region. This means that the most Arlington households travel less overall than the typical regional household.

According to the breakdown by trip type, Arlington is about on par with the region in terms of the number of household trips that are driving alone. However, Arlington has a higher number of household trips that are made using transit or walking/biking.

From these indicators, Arlington appears to provide better access to alternative modes than other counties or cities in the region. This could be due, in part, to Arlington’s successful integration of land use and transportation planning policies; making it easier for residents to access jobs, services, retail and commercial uses through the transportation network.

Data Source
2010 Arlington County Household Survey
Arlington households make 3 times the number of trips via walking, biking, and transit than the typical household in the region.
MEASURE 8: Commute Mode Share

Mode of transportation used by Arlington residents and workers for the commute to work.

Description

Mode share is the split between the various transportation options available, driving alone, sharing a ride (carpooling and vanpooling), using public transportation (commuter rail, heavy rail, and/or bus transit), and walking and biking. The mode share of Arlington residents and workers is gathered through MWCOG’s State of the Commute Survey, conducted in 2007, 2010, and 2013. In this measure, Arlington’s commute mode split is compared to that of the region, and over time.

Importance

Commute mode share is a strong indicator of whether Arlington residents and workers are utilizing available alternative transportation options. Measuring this over time can reveal whether Arlington is successfully managing travel demand and the transportation systems, a specific policy outlined in Arlington’s Master Transportation Plan. This measure ties into the MTP Goal 1: Provide High-Quality Transportation Services, Goal 2: Move More People Without More Traffic, and Goal 5: Manage Effectively and Efficiently.

Arlington County anticipates a 22 percent increase in population and a 38 percent increase in jobs between 2010 and 2040. A reduction in the drive alone commute mode share is important to managing the experience of traffic congestion in a constrained network, and to minimizing the wear and tear on roadways to help each infrastructure investment last longer.

Current Status

In the 2013 State of the Commute, 53 percent of Arlington resident respondents reported driving alone to work, as compared to 54 percent of Arlington worker respondents, versus 66 percent of respondent commuters across the entire regional sample.

Between 2007 and 2013, the percent of Arlington workers driving alone has fallen. Meanwhile, Arlington workers using transit or teleworking has increased by four and five percent, respectively. During the same period, the number of workers using a vanpool or carpool dropped seven percent.

For Arlington residents, the share of those driving alone to work has remained relatively stagnant over the 2007 to 2013 period. Biking, walking and telecommuting have seen a slight increase, while commuting by public transit has fallen slightly.

Data Source

MWCOG Commuter Connections State of the Commute Survey, Summary Results for Arlington County (2007, 2010, 2013). These data are collected approximately every three years.
Approximately 10% more Arlington residents and workers use a non-SOV mode to get to work than regional residents and commuters.
MEASURE 9:
Usage of ART & Metrobus

Usage of ART and Metrobus.

Description

ART and Metrobus ridership is measured annually in terms of the number of people boarding vehicles. This measure is of unlinked passenger trips. If a single individual boards an ART bus and then transfers to another ART or Metrobus route to reach their final destination, then that is counted as two distinct, unlinked passenger trips. Data for this measure is collected annually from ART and Metrobus operators and tracked by Arlington’s Mobility Lab.

For context, ART’s annual revenue hours and miles are also collected. Revenue hours and miles are defined as the amount of time (hours) or distance (miles) Arlington’s fixed routed bus system operates in revenue service (i.e. picking up or dropping off passengers).

Importance

Measuring the ridership of bus transit services provided in Arlington County can show the growth in usage—or decline—of the transit system. Tracking ridership conveys whether Arlington is successfully maximizing the use of its transit system. Increasing ridership overall would meet the Master Transportation Plan’s goal of encouraging a low-auto-usage lifestyle. This measure relates to the MTP Goal 1: Provide High-Quality Transportation Services.

However, increasing ridership must be taken in context with the increase in the level of service (number of revenue hours and miles operated annually). Increasing frequency of service can lead to increases in ridership.

Current Status

Bus ridership has steadily increased every year, between 2010 and 2013. Annual unlinked passenger trips have increased by 6.9 percent, or approximately 1.3 million trips annually.

Within overall ridership, the share of transit riders using the ART system has also steadily risen. ART ridership made up 12.5 percent of all unlinked trips in 2013, compared to just 10.1 percent in 2010. Metrobus ridership has been stable between 2011-2013.

While ART’s ridership has risen between 2010 and 2013, so has the number of annual revenue hours and miles. During this period, revenue hours and miles increased by 43.2 percent and 48.1 percent, respectively, while ART ridership increased by 32.8 percent.

Although the increase in service does not equate to a one-for-one percentage point increase in ridership, the increase in revenue hours and miles helped to expand accessibility of residents and workers to ART bus stops.

Data Source

ART and WMATA ridership data, 2010-2013
ART operations data, 2004-2014
ART transit ridership has increased by 654,531 passenger trips per year between 2010 and 2013.

Annual Ridership, ART and Metrobus, 2010-2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual Passenger Trips</th>
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<tr>
<td>2010</td>
<td>17,779,988</td>
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<tr>
<td>2011</td>
<td>18,340,075</td>
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<tr>
<td>2012</td>
<td>18,616,051</td>
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<tr>
<td>2013</td>
<td>18,495,908</td>
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ART Revenue Miles and Hours, 2004 to 2014

- **2010**: 75,797 Hours, 776,262 Miles
- **2013**: 108,551 Hours, 1,149,715 Miles

Revenue Miles and Hours, 2004 to 2014

- **2010**: 776,262 Miles
- **2013**: 1,149,715 Miles
**Bicycle trail volumes and Capital Bikeshare memberships.**

**Description**

This measure tracks bicycle network usage in the county through two primary methods: the county’s automated bicycle counters on trails and membership statistics for Capital Bikeshare.

**Importance**

This measure is important to track the usage of the county’s bicycle network and bicycle infrastructure and to inform future projects and supports the MTP Goal 1: Provide High-Quality Transportation Services and Goal 2: Move More People Without More Traffic. Increasing the number and percentage of trips that are made by bike helps to decrease reliance on and congestion of Arlington’s roadways while improving residents’ and workers’ mobility.

**Current Status**

Overall, the County’s trails have seen slight increases in bicycle ridership between 2010 and 2013. However, many of the automated counters have not been in service long enough to provide a complete understanding of how ridership is changing over time. The Mount Vernon Trail near National Airport had the highest recorded ridership, with over 600,000 riders counted during 2013.

Data from bicycle counters at 11 on-street locations will be available for full years beginning in 2015. Currently, the S Joyce Street northbound has the highest bicycle ridership, with over 7,000 riders so far in 2014.

Capital Bikeshare trips have grown significantly since the system first opened in Arlington in 2011. In 2013, the system had nearly 150,000 trips taken by registered members and 32,000 trips taken by casual (monthly or daily) members. The proportion of registered member trips versus casual member trips has also increased since 2011, demonstrating growing popularity of Capital Bikeshare as a valued transportation choice.

**Data Source**

BikeArlington Dashboard
Capital Bikeshare
The Mount Vernon Trail near National Airport had the highest bicycle ridership overall with 637,493 users in 2013.

Capital Bikeshare (Cabi) Trips Originating in Arlington

Capital Bikeshare trips have increased 213% since 2011.
MEASURE 11: Usage of Pedestrian Networks

Usage of pedestrian networks.

Description
This measure looks specifically at the percent of commuters, both those living in Arlington and those working in Arlington, who use biking or walking as their primary mode of transportation. Also measured is the count of pedestrians utilizing the twelve county trails.

Importance
Transit depends on accessible pedestrian pathways. The overwhelming majority of transit riders walk to and from transit stops. Measuring the use of pedestrian trails and the percent of commuters who walk to work can show the growth in usage of walking as a form of transportation in Arlington County. Tracking usage of pedestrian trails and the percent of pedestrian commuters can show whether Arlington’s policies are successfully incentivizing walking as a form of transportation. Increasing the number and percentage of trips that are made by bike helps to decrease reliance on and congestion of Arlington’s roadways while improving residents’ and workers’ mobility. This measure supports the MTP Goal 1: Provide High-Quality Transportation Services and Goal 2: Move More People Without More Traffic.

Current Status
The percent of Arlington residents who commute by biking or walking remained steady at 7 percent between 2010 and 2013.

The percent of Arlington workers who commute by biking or walking increased from 3 percent to 5 percent between 2010 and 2013.

Counters on Arlington trails recorded over 3.2 million pedestrian users in 2013. The highest pedestrian counts were recorded on the Key Bridge sidewalks with over 800,000 persons recorded walking over the bridge in 2013. Pedestrian traffic may be higher on sidewalks in other parts of the County, however full-time counters are currently only installed on bicycle and pedestrian trails.

Data Source
The percent of Arlington residents who commute by biking or walking remained steady at 7% between 2010 and 2013.

The percent of Arlington workers who commute by biking or walking increased from 3% to 5% between 2010 and 2013.

Arlington Trails recorded over 3.2 million pedestrian users in 2013.
MEASURE 12: Usage by Traditionally Underserved Populations

Use of Metrobus, Metrorail and ART systems by minority and low-income populations.

Description
This measure looks at ridership on the Metrobus, Metrorail and ART systems by minorities and low-income individuals and compares their share of ridership to their share of countywide total population.

Importance
This measure demonstrates how well Arlington County’s transit services are serving traditionally underserved populations. High use of Metrorail by these populations is an indicator that the County is doing a good job in providing equitable and efficient access to Metrorail for these populations who may live farther on average from Metrorail stations than other residents due to housing costs. This measure supports the MTP Goal 4: Establish Equity and Goal 1: Provide High-Quality Transportation Services.

Current Status
Between 2008 and 2013, the share of ART riders that are minority or have a limited English proficiency (LEP) has declined. While there is a decrease in the share of riders that are traditionally underserved, during the same period there has been significant improvements in the level of service for ART as well as increases in absolute ridership. This has likely caused an increase in choice riders using the system. However, it is important to note that the ART system is still serving a share equal to or greater than the share of low-income, minority and LEP populations present in the county.

Overall, the percentage of ART riders that are low-income is comparable to the county as a whole. Compared to Metrobus and Metrorail, ART ridership is also comprised of a higher breakdown of low-income and minority users.

The percentage of Metrorail and Metrobus riders that are minorities is somewhat higher than the county population as a whole. However, the percentage of low-income individuals on Metrorail and Metrobus is substantially higher than the county as a whole. This is likely due to the relative inability of low-income residents to afford alternative modes of transportation – and therefore more likely to be transit-dependent.

Data Source
In 2013, 68% of ART riders were minorities.

Traditionally Underserved Populations, Makeup of ART Ridership vs County Population 2008-2013

Alrington County Population and Transit Ridership Breakdown of Traditionally Underserved Populations
MEASURE 13:  
Zero to One Car Households

Number of 0-1 vehicle households.

Description
This is a measure of households in Arlington with access to vehicles. For comparison, the same measure is presented for the region, demonstrating context for the changes in Arlington and showing whether Arlington is performing better or worse than its counterparts.

Importance
A higher share of total households with one or no vehicles would signify that Arlington residents are able to travel without the use of a personal vehicle. This would, in turn, be a measure of how accessible the transportation system is and how much mobility it provides Arlington residents. The share of one or zero vehicle households residing in Arlington compared to the overall share residing in the region provides a benchmark for measurement. This measure supports the MTP Goal 2: Move More People Without More Traffic and Goal 5: Manage Effectively and Efficiently.

Current Status
Since 2000, Arlington County has been steady in the breakdown of vehicles per household. Roughly 60 percent of households have one or no vehicles, compared to about 50 percent of households in the region. Even in a region with significant transit infrastructure, Arlington households are less likely than others in the Washington metropolitan region to have more than one vehicle.

When household size is considered, there was a three percent uptick in the number of one-person household with no vehicles between 2010 and 2013. Two-person households saw a slight drop from two vehicles available (five percent drop) and a slight increase in one-vehicle available (three percent rise).

Data Source
Decennial Census (2000, 2010)  
American Community Survey (five-year estimates for 2008-2012, and one-year estimates for 2010 and 2013)
In 2012, over 60% of Arlington Households had one or less vehicles, compared to only 50% of households in the region.
MEASURE 14: Traffic Volumes

Arterial traffic volume counts at locations throughout the County.

Description

Arterial traffic volumes are regularly counted throughout the County at key locations, or cordons. These cordon counts typically occur every three years and measure the number of motorized vehicles passing a specific location in a single day.

Importance

Traffic volumes on arterials throughout the County are key indicator of motorized activity and in part are a reflection of the County’s efforts to minimize growth in single-occupancy vehicle (SOV) travel. Decreases in traffic volumes, or small increases relative to County and regional population growth, can be indicative of successes the County has made in implementing both land use and transportation policies, programs, and investments that encourage non-SOV use, including transit, bicycling, and walking. This measures supports the MTP Goal 2: Move More People Without More Traffic and Goal 5: Manage Effectively and Efficiently.

Current Status

Overall traffic volumes on arterials throughout the County have decreased three percent between 2006 and 2012, even though the County population has increased by 9,000 residents, an increase of eight percent. Of the 14 counted locations, 11 of them show no increase or a decrease in traffic volume over this time period. Of the three arterial locations that showed an increase, only Arlington Boulevard, one of the most heavily utilized roadways in the County, showed a significant increase in actual volumes, increasing by 5,000 vehicles per day over that time period. This could be due in part to the effect of BRAC. It also serves a major East-West connection between Fairfax and DC resulting in large percentage of thru trips.

Data Source

Arlington DOT Transportation Engineering and Operations, traffic cordons.
Overall traffic volumes at key locations throughout the County have decreased by 3% between 2006 and 2012, even as population grew by 9,000 residents (or 8%) in the same period.
Performance Measures for Safety and Security

Goal:
Provide transportation infrastructure and an integrated transportation network that is safe and secure for all users and all modes of travel.

The safety and security of our streets, for all users as well as maintenance and construction crews, are of the highest importance to the County. The design of our infrastructure and signage, our response time to emergency situations, responsiveness to maintenance requests, coordination and collaboration with enforcement officers, and our educational programs all impact the safety of our users and maintenance crews.
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<tr>
<th>Objectives</th>
<th>Measures</th>
<th>Responsible Bureaus</th>
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<tbody>
<tr>
<td><strong>OBJECTIVE 1</strong></td>
<td><strong>MEASURE 15:</strong> Vehicle Collisions</td>
<td>Division Wide</td>
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<tr>
<td>Minimize the frequency and</td>
<td><strong>MEASURE 16:</strong> Fatal or Severe</td>
<td>Transportation Planning</td>
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<td>severity of injury on all</td>
<td>Collisions</td>
<td>Division Wide</td>
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<tr>
<td>modes of travel.</td>
<td><strong>MEASURE 17:</strong> Bicycle or</td>
<td>Division Wide</td>
</tr>
<tr>
<td></td>
<td>Pedestrian Collisions</td>
<td></td>
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<tr>
<td><strong>Objective 2</strong></td>
<td><strong>MEASURE 18:</strong> Transit Injuries</td>
<td>Transit</td>
</tr>
<tr>
<td>Mitigate transportation</td>
<td><strong>MEASURE 19:</strong> Emergency</td>
<td>Transportation Planning</td>
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<tr>
<td>related safety and security</td>
<td>Management</td>
<td></td>
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<tr>
<td>risks</td>
<td><strong>MEASURE 20:</strong> Bicycle Safety</td>
<td>Commuter Services</td>
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<td></td>
<td>Classes</td>
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<tr>
<td><strong>Objective 3</strong></td>
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<tr>
<td>Build and maintain a premier</td>
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<td>safety culture within the</td>
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<td>Transportation Division and</td>
<td></td>
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<tr>
<td>the community at large</td>
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</table>
MEASURE 15: Vehicular Collisions

Number of vehicular collisions.

Description

Vehicle collisions are tracked by the Transportation Engineering and Operations (TE&O) Bureau. Vehicular collisions involving one or more vehicles are recorded on an annual basis. Annual VMT estimates were obtained from the Virginia Department of Transportation. By using a simple calculation of collisions per year and annual vehicles miles traveled, an average collision rating can be obtained. This rate can be an effective tool in determining the relative safety of a roadway segment.

Importance

Nationally, motor vehicle collisions are the leading cause of death for all people ages 5–34, according to the Centers for Disease Control. The increase and decrease of collisions, proportional to the fluctuation of annual VMT, demonstrate Arlington’s success in sustaining roadway safety. Reducing the total number of crashes, the number of persons injured in crashes and the number of fatalities is the goal of safety improvements to the transportation network. This measure supports the MTP Goal 3: Promote Safety.

Current Status

The total number of vehicular collisions has dropped by 16 percent between 2013 and 2014. Similar to some of the other collision tracking data, there appeared to be a spike in 2013’s count of vehicular collisions. Although there was a significant drop from 2013 to 2014, collisions in 2014 remained higher than the 2008 to 2014 period. This reflects national trends, as during the recession, lower vehicle miles traveled resulted in a reduction in vehicular collisions.

Compared to the national rate of collisions per 100,000 VMT, Arlington’s rate has been one to three collisions per 100,000 VMT higher than the national average.

Data Source

Reported collisions from Arlington’s Police Department

VMT, Virginia Department of Transportation.

National Collision Data, National Highway Traffic Safety Administration
From 2013 to 2014, vehicle collisions declined by 16%.

Annual Vehicle Collisions, 2006-2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Collisions</th>
<th>Collisions per 100,000 VMT (Arlington)</th>
<th>Collisions per 100,000 VMT (Nationally)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>2,783</td>
<td>6.0</td>
<td>6.0</td>
</tr>
<tr>
<td>2007</td>
<td>2,628</td>
<td>6.3</td>
<td>6.0</td>
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<tr>
<td>2008</td>
<td>2,088</td>
<td>5.0</td>
<td>5.0</td>
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<tr>
<td>2009</td>
<td>1,986</td>
<td>5.1</td>
<td>5.1</td>
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<tr>
<td>2010</td>
<td>1,932</td>
<td>5.4</td>
<td>5.5</td>
</tr>
<tr>
<td>2011</td>
<td>2,088</td>
<td>5.5</td>
<td>5.5</td>
</tr>
<tr>
<td>2012</td>
<td>2,215</td>
<td>5.3</td>
<td>5.3</td>
</tr>
<tr>
<td>2013</td>
<td>2,970</td>
<td>5.3</td>
<td>5.3</td>
</tr>
<tr>
<td>2014</td>
<td>2,480</td>
<td>5.3</td>
<td>5.3</td>
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</tbody>
</table>
MEASURE 16:
Fatal or Severe Collisions

Number of fatal / severe injury collisions.

Description
The Transportation Engineering and Operations (TE&O) Bureau collects and tracks collision data based on the severity of crash as in whether an injury occurred and whether the injury was fatal or non-fatal. The Virginia Department of Transportation estimates the number of annual Vehicle Miles Traveled (VMT) on all roads, for each county. Vehicle miles traveled is determined by dividing the total number of miles traveled (in the County) by the current population. Ideally, increases and decreases in overall VMT impacts collision data; however, fatality rates provide a more accurate depiction of the overall safety trends.

Importance
This measure encompasses all vehicular-related crashes for which an officer responded. Considering collision trends, severity of collisions, and fatality rates will help Arlington County assess the success of overall transportation safety initiatives and aid in assessing whether it meets the Master Transportation Plan’s goal of promoting safety for all modes of transportation. Comparing collisions to the annual VMT provides perspective; overall collision rates should rise and fall with annual VMT. This measure ties into the MTP Goal 3: Promote Safety.

Current Status
During the last year, the total number of collisions fell by 490, from 2,970 in 2013 to 2,480 in 2014. For the period reported, 2006 to 2013, annual VMT in Arlington County has been relatively stagnant, holding between 4 million and 4.5 million miles per year. However, total number of collisions has varied from 1,900 per year to almost 3,000 annually. There is a significant downward trend in non-fatal injury collision incidents during the study period, dropping from 944 incidents in 2006 to 479 incidents in 2014. Between 2006 and 2012 the County’s population increased by 9,000, or 8 percent.

Even with a reasonable increase in population, fatalities have remained low, generally under 4 per year, with the exception of 2009. The record snowfall of 2009 was a contributing factor in some of the fatalities that year.

Data Source
Reports of reported collisions from Arlington County Police Department Estimated Vehicle Miles Traveled (VMT) in Arlington County, Virginia Department of Transportation

National Collision Data, National Highway Traffic Safety Administration
Between 2006 and 2014, the total number of injury-related collisions fell by 49%.

Arlington County falls far below the national average for fatal collisions, based on the annual vehicle miles traveled.
**MEASURE 17: Bicycle or Pedestrian Collisions**

Number of bicycle / pedestrian collisions involving a vehicle.

**Description**

The Transportation Engineering and Operations (TE&O) Bureau tracks the number and severity of collisions between motor vehicles and pedestrians and bicyclists. This data is compared to the annual number of VMT, obtained from the Virginia Department of Transportation.

**Importance**

The rise or fall in pedestrian and bicyclist-related injury and non-injury collisions can indicate whether the County is successfully implementing programs and building infrastructures that promote safety, access, and security of all users sharing the road – drivers, cyclists, and walkers with the goal of reducing the occurrence of crashes involving persons riding bicycles or walking. This measure supports the MTP Goal 3: Promote Safety.

**Current Status**

In 2014, there were approximately 108 collisions involving pedestrians and vehicles, which is down by 40 collisions, or 27 percent, compared to 2013. However, there appeared to be a large spike in 2013. The number of pedestrian collisions has risen slightly, from an average of 92 between 2009 and 2012, to 148 in 2013 and 108 in 2014.

Bike-related collisions have been decreasing steadily since 2011. These incidents have also been less likely to involve an injury as well. In 2014, 37 percent of bike-related collisions resulted in no injury to the parties involved. Between 2011 and 2014, Arlington has experienced a 10 percent increase in this type of non-injury collision.

**Data Source**

Collision reports from Arlington County Police Department

VMT, Virginia Department of Transportation.
Since 2011, the number of bike-related collisions has fallen by 43%.
MEASURE 18:
Transit Injuries

Number of transit injuries per 100,000 riders.

Description
The number of transit riders injured while using ART services is tracked by the Transit bureau. These numbers include riders injured while riding, boarding, or alighting an ART transit vehicle.

Importance
The number of transit injuries is an indication of the safety of the County’s transit service. It can also be used as a benchmark for measuring pre- and post-safety conditions when safety programs, such as driver safety training, are implemented across the system.

This measure will also help track the achievement of the County’s over-arching goal of minimizing injury and accident rates across all of the modes of transportation. This measure supports the MTP Goal 3: Promote Safety.

Current Status
The number of injuries per 100,000 riders fell from 2013 to 2014 by 0.2 injuries to just 0.07 injuries per 100,000 ART riders.

At the same time, ridership on the ART system has grown tremendously since 2010. Arlington Transit has continued to prioritize safety as the system continues to grow and expand in the region. The Contractor responsible for operating and maintaining ART buses has selected several bus operators on the basis of observed and statistical data to receive an enhanced training curriculum. The Contractor also has committed to enhance the screening process for bus operator applicants will be enhanced to highlight the propensity to be safe in pressured situations.

Data Source
ART Transit Operations internal data.
In 2014, just **0.07 injuries per 100,000 ART riders** occurred.
MEASURE 19: Emergency Management

Number of intersections with Traffic Signal Preemption for emergency vehicles; number of CCTV cameras available for emergency management; number of intersections with backup power.

Description
This measure tracks the number of three key emergency management elements at intersections: Emergency Vehicle Preemption (EVP) for traffic signal; the number of Closed Circuit Television (CCTV) cameras available for emergency management; and, the number of intersections with an uninterruptable power supply (UPS). EVP allows emergency vehicles to receive priority when approaching intersections. CCTV allows emergency management and response personnel to view emergencies in real-time. UPS ensure that traffic signals remain operational during a power outage, providing for the safe movement of vehicles. This measure supports the MTP Goal 3: Promote Safety.

Current Status
Since 2006, the number of signalized intersections in the County increased from 250 to 294. During the same time period, the number of intersections with CCTV available rose from 20 to 159, with an average of CCTV added at 18 intersections per year. The County installed TSP at 48 intersections and UPS at 46 intersections between 2009 and 2014. The County ultimately plans on installing CCTV at about 290 intersections and UPS and TSP at all intersections, if conditions permit.

Importance
Intersections play an important role in regulating the flow of people and vehicles throughout the County and ensuring a safe operating environment for all users of the transportation system. Emergency Vehicle Preemption (EVP) for emergency vehicles, CCTV cameras for emergency management, and intersection with backup power are each critical role in maintaining this safe environment. EVP preempts traffic signals to allow emergency vehicles to cross intersections safely while minimizing travel time. CCTV allows emergency management and response personnel to view emergencies in real-time and better coordinate the response and allocate resources. UPS ensure that traffic signals remain operational during a power outage, providing for the safe movement of vehicles.

Data Source
Arlington DOT Transportation Engineering and Operations internal data.
Currently 15% of all intersections have TSP and 16% of all intersections have a UPS.

**Percent of Intersections with TSP and UPS, 2009-2014**

- 2009: 1.9% TSP, 11.1% UPS
- 2010: 4.8% TSP, 3.7% UPS
- 2011: 11.1% TSP, 5.7% UPS
- 2012: 12.3% TSP, 6.3% UPS
- 2013: 13.6% TSP, 9.5% UPS
- 2014: 15.4% TSP, 16.1% UPS

**Total Count of Safety Risk Mitigation Tools, 2006-2014**

- Total Intersections: 299
- CCTV cameras available for emergency management: 159
- Intersections with Traffic Signal Preemption for Emergency Vehicles: TSP, 46
- Intersections with Uninterruptible Power Supply: UPS, 48

**Legend:**
- Percent of Intersections with Traffic Signal Preemption for Emergency Vehicles
- Percent of Intersections with Uninterruptible Power Supply
MEASURE 20: Bicycle Safety Classes

Number of bicycle safety related classes and events.

Description
The BikeArlington program conducts or organizes a number of bicycle safety classes each year. This measure provides the number of bicycle safety outreach events held each fiscal year, as well as event attendance.

Importance
As the number of bicycle trips increases, safety training and awareness for all users of Arlington streets and trails is crucial.

This measure tracks attendance at BikeArlington safety and outreach classes, including events like commuter seminars, Confident City Cycling classes, Two Wheel Tuesdays and Learn to Ride classes. This measure supports the MTP Goal 3: Promote Safety and Goal 5: Manage Effectively and Efficiently.

Current Status
BikeArlington outreach event attendance has increased over the last three years, and peaked in fiscal year 2013 with 538 individuals participating in safety classes, due largely to a similar increase in the number of outreach events held that year. The most recent fiscal year saw a correlation between the decrease in events and attendance, however, average attendance per event has risen from 9 people per class or event in 2012 to 16 people per class or event in 2014.

Data Source
BikeArlington Internal monthly dashboard.
In addition to monthly data on bike trail use and Capital Bikeshare trips, BikeArlington collects comprehensive data on the number, type and location of bicycle safety outreach events, as well as event attendance.
Performance Measures for Managing Effectively and Efficiently

**Goal:**
Construct and manage the transportation system, infrastructure, and operations effectively, efficiently and transparently

The Division of Transportation strives to provide the highest quality of service to our residents, workers, and visitors in the most cost-effective manner. To manage our infrastructure projects, services, and programs effectively and efficiently, we balance expenditures with both the value added to Arlington County and available funding. We do this while working to implement the Arlington’s transportation vision as articulated by the Arlington County Board and citizens in the Master Transportation Plan and through the public involvement process.
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<th>Measures</th>
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<td><strong>OBJECTIVE 1</strong>&lt;br&gt;Ensure fiscal stewardship in the funding, development, management, operation, and maintenance of transportation systems to maximize community value.</td>
<td>MEASURE 21: Taxes vs. Expenditure</td>
<td>Division Wide</td>
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<td>MEASURE 22: Leveraging of State and Federal Funds</td>
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<td>MEASURE 23: Public Infrastructure Achieved through Private Development</td>
<td>Development Services</td>
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<td>MEASURE 24: Cost per Trip for ART</td>
<td>Transit</td>
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<td>MEASURE 25: ART and Capital Bikeshare Farebox Recovery</td>
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<td>MEASURE 26: Cost Per Trip of STAR</td>
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<td>MEASURE 27: Parking Costs and Revenue</td>
<td>Transportation Planning</td>
</tr>
<tr>
<td><strong>Objective 2</strong>&lt;br&gt;Build and sustain meaningful public support in transportation policies and programs.</td>
<td>MEASURE 28: Website Traffic</td>
<td>Division Wide</td>
</tr>
<tr>
<td><strong>Objective 3</strong>&lt;br&gt;Construct financially sustainable assets and preserve, maintain and improve the condition of the existing transportation system.</td>
<td>MEASURE 29: Mean Distance Between Failures of ART Fleet</td>
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<td>MEASURE 30: Energy Consumption</td>
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<td></td>
<td>MEASURE 31: Citizen Service and Study Requests</td>
<td>Division Wide</td>
</tr>
</tbody>
</table>
MEASURE 21:
Taxes vs. Expenditure

Net tax support vs. expenditures for operations.

Description
This measure reports Arlington Transportation’s Program Operating Budget. Annual expenses, revenue and net tax support are reflective of managing internal and external funding sources. These measures also reflect the financial health of the existing transportation network and of future transportation projects.

Importance
Prior to 2010, major transportation projects were funded through the county’s General Fund. In 2010, Arlington County created the Transportation Capital Fund (TCF), a separate fund dedicated solely to transportation projects. The fund is maintained through a commercial real estate tax ($0.0125 per $100 of assessed value of property). Separating transportation funding means the General Fund, which is supported largely by residential property taxes, can dedicate more support to other county programs and Arlington County can maintain low residential property taxes.

Current Status
From 2010 to 2014, funding from the TCF has increased, while funding from the General Fund, has steadily decreased. In 2010, Net Tax Support, the amount taken from the General Fund, accounted for 41 percent of the total operating budget, whereas in 2014 it accounted for only 26 percent, a decrease of 14 percent across the five years. As expenditures increase slowly, only $7 million between 2010 and 2014, the decrease in tax support from the General Fund reflects Arlington County’s ability to strategize and leverage new funding sources.

Data Source
Arlington Transportation Program Operating Budget from Arlington County Department of Environmental Services: Transportation & Development.
Use of the county’s General Tax Fund decreased by 14% between FY 2010 and FY 2014.
MEASURE 22:
Leveraging of State and Federal Funds

State and federal dollars leveraged through local funds.

**Description**

This measure reports the annual amount of non-local dollars that have been utilized for Transportation Division activities. Typically transportation projects have more than one funding source and are a combination of local, regional, state, and federal sources. The dollar amount of state and federal funds leveraged locally in Arlington County is tracked in the Capital Improvement Plan. Arlington is able to leverage these funds through various means including competitive grant programs and through legislative appropriations.

**Importance**

Leveraging local funds to obtain federal and state funding helps the County maximize the impacts of limited local dollars. State and federal dollars are available when projects meet specific requirements and criteria typically through a competitive application process. By utilizing local funds for qualifying projects the County can leverage state and federal funding to accomplish larger projects, or accomplish projects in a shorter time-frame. The more federal and state funds that can be leveraged get the most out of Arlington’s local resources. This measure supports the MTP Goal 5: Manage Effectively and Efficiently.

**Current Status**

Fiscal Year 2014 had a nearly 100 percent increase over 2013 in the use of Virginia State Capital Funding. Since 2010, the County has leveraged $58.6 million dollars in state and federal funding, an average of $11.7 million per year. State and federal funding received by Arlington has been increasing, with peaks in 2012 and 2014 of over $18 million.

**Data Source**

FY2015-FY2024 Proposed Capital Improvement Plan, Arlington County Board Work-session - Transportation (6/18/14).
In 2014 the County was able to leverage local funds to acquire $18.4 million dollars in state and federal funding, a five year high.
MEASURE 23: Public Infrastructure Achieved through Private Development

Value of public infrastructure constructed by development projects.

Description

The total dollar value of public infrastructure built and completed each year through private development projects is tracked by the Director’s Office. This includes the cost to construct new or improved streets, sidewalks, water and sanitary mains, traffic signals and transit/bus stop improvements. (This number does not include the value of utility undergrounding.) This information is measured in millions of dollars and can fluctuate depending upon the completed projects within each year.

Importance

Measuring the dollar value of public infrastructure built each year by developers helps the County track how its policies related to development result in public infrastructure improvements. By negotiating with, or requiring developers to construct public infrastructure in association with their projects, the County ensures that its infrastructure can support new development projects and the public at large. This measure supports the MTP Goal 5: Manage Effectively and Efficiently.

Current Status

Over the last nine years over $48.2 million in public infrastructure has been constructed by developers in association with new development. In 2014, with completed development down from the peak in 2008, $3.2 million worth of public infrastructure was completed throughout the county in the past year. On average, approximately $5.3 million of public infrastructure projects were completed per year over the past nine years. The amount of funds spent each year fluctuates making it difficult to determine an overall trend.

Data Source

Transportation Division Director’s Office summary of public infrastructure bonds returned to developers annually upon completion of work.
On average, approximately $5.3 million of public infrastructure projects were completed per year over the last nine years.
MEASURE 24:  
Cost per Trip for ART

Cost per passenger trip for providing Arlington Transit service.

Description

Cost per passenger trip is a performance measure used by the Transit Bureau to track cost effectiveness. Cost per passenger (unlinked) trip is calculated by dividing the total annual number of passengers who boarded an ART vehicle for all ART routes by the total annual operating cost for the system.

For comparison sake, the same measures are provided for Metrobus routes operating in Arlington.

Importance

This measure is a common benchmark for evaluating the cost efficiency of a transit service, either by individual route or on a system-wide scale. Cost per passenger trip measures cost efficiency by measuring the number of riders (or trips) that utilize the service relative to the cost of providing that service. A lower cost per passenger trip indicates a higher level of efficiency.

This measure supports the MTP Goal 5: Manage Effectively and Efficiently and Goal 1: Provide High-Quality Transportation Services.

Current Status

Since a significant drop in 2006, ART has maintained a relatively steady cost per passenger trip between 2006 and 2013. The most recent fiscal year, 2014, had the lowest cost per passenger trip ART has ever recorded, at $3.02.

Data Source

Arlington County Transit bureau internal data.
National Transit Database, Annual Profiles, 2006-2014.
ART’s cost per passenger trip has dropped 8% in 2014, equivalent to about $134 thousand dollars in savings.
MEASURE 25: ART and Capital Bikeshare Farebox Recovery

Share of total ART and Capital Bikeshare operating expenses that are covered by revenue generated from system users.

Description
Farebox recovery is the proportion of revenue generated through fares to total operating expenses. Cost recovery for Capital Bikeshare in Arlington is the proportion of the amount of revenue generated through membership fees and system usage fees to total operating expenses. ART farebox recovery was measured between 2006 and 2014, while Capital Bikeshare data was measured between 2011 (when the system was first implemented) and 2014.

Importance
Farebox Revenues as well as dedicated employer and developer contributions provide importance sources of funding to support local transit service. This measure supports the MTP Goal 5: Manage Effectively and Efficiently and Goal 1: Provide High-Quality Transportation Services.

Current Status
Since 2006, ART’s farebox recovery has increased from 13 percent to 30 percent as ridership increases faster than revenue hours. This trend is an indication that ART has significantly grown ridership and fare revenue while holding down operating costs. Capital Bikeshare cost recovery has fluctuated between 53 percent and 64 percent since 2011, and stood at 63 percent in 2014, well above typical transit service farebox recovery ratios.

Data Source
Transit Bureau internal data.
Arlington Capital Bikeshare Annual Report FY2014
In FY2014, Capital Bikeshare had a cost recovery ratio of 63%, while ART’s farebox recovery has risen from 13% in 2006 to 30% in 2014.
Cost per passenger trip of STAR.

**Description**
Cost per passenger trip on ART’s paratransit service, Specialized Transit for Arlington Residents (STAR), is measured annually for all STAR trips. A passenger trip is defined by a one-way trip taken by a STAR client. To obtain the cost per trip, the total number of trips taken annually is divided by the total annual operating cost of the STAR service. For comparison, the cost per passenger trip on MetroAccess, WMATA’s paratransit service, is also provided.

**Importance**
Measuring the cost per passenger trip of STAR helps the County measure the cost effectiveness of its paratransit service. The lower the cost per passenger trip, the more efficient the service is operated, providing more trips for every dollar invested. Comparing STAR’s costs per passenger trip to MetroAccess’ cost per passenger trip provides a point of reference for evaluating STAR’s costs per trip. This measure supports the MTP Goal 5: Manage Effectively and Efficiently and Goal 1: Provide High-Quality Transportation Services.

**Current Status**
Overall, STAR has had a lower cost per passenger trip compared to MetroAccess. While MetroAccess costs per trip have continued to rise since fiscal year 2006, the costs per trip for STAR have fluctuated over the same period. Most recently, a downward trend has been observed with approximately a 28 percent, or $10.63, drop in cost per trip between fiscal year 2011 and 2013. Between fiscal year 2012 and 2013, STAR’s drop in per trip costs equated a savings of $278,600.73.

**Data Source**
Arlington Transit Bureau internal data.
National Transit Database, WMATA Annual Profiles.
Between 2001 and 2013, STAR’s cost per passenger trip has dropped 28%.
MEASURE 27: Parking Costs and Revenue

Parking meter yearly cost and revenue.

Description
This measure tracks the annual cost effectiveness, calculated as revenues minus expenses, of Arlington’s parking meters between 2006 and 2014.

Importance
The goal of charging for parking is curbside management, controlling use of the curb space for maximum utility for the users. A profitable parking meter program demonstrates overall efficiency in the department while providing Arlington County with revenue that often comes from nonresidents. Such revenues can bolster funds for transportation improvement projects throughout the county. This measure supports the MTP Goal 5: Manage Effectively and Efficiently.

Current Status
Parking meter revenue steadily increased between fiscal year 2006 and fiscal year 2012, but has experienced a downward trend over the past two fiscal years. Net revenues followed a similar trend, while costs have followed a more consistently upward trend. Net revenues in 2014 totaled just over $5.6 million.

Data Source
Transportation Division Parking Operations internal data. Annual cost calculations include salaries and wages, fringe benefits, contractual services, materials and supplies, and equipment. Annual revenue calculations include residential and temporary parking permits, fines, parking meters, and service charges.
Parking meter return on investment exceeded 450% in 2013.
MEASURE 28: Website Traffic

Website traffic for key project websites.

Description
Website traffic is tracked for each major transportation project that has a separate and unique website.

Importance
Incorporating online outreach strategies is becoming a more important component of public outreach and information campaigns. Tracking the amount of website traffic is one indicator of how well the division is distributing information on important projects. This measure supports MTP Goal 5: Manage Effectively and Efficiently and Goal 1: Provide High Quality Transportation Services.

Current Status
The Columbia Pike Streetcar site was the most frequently visited project website with more than 11,000 unique page views between January and October 2014. The remaining project sites received between 1,000 and 2,000 page views with the exception of the Crystal City-Potomac Yard Transitway, which only had 700 page views at the time of data collection.

Data Source
Division of Transportation and Development Community Relations Google Analytics website data.
All transportation related project websites combined had over 18,000 visitors online.
MEASURE 29: Mean Distance Between Failures of ART Fleet

ART Fleet Mean Distance between Failures (MDBF).

Description
Mean Distance between Failures (MDBF) is a transit industry standard that measures the mechanical reliability of an agency’s fleet by tracking the mean distance between bus breakdowns or failures. A mechanical failure is any incident that precludes a revenue vehicle from completing its trip or beginning its next scheduled trip.

Importance
MDBF is an important measure of the success of the agency’s maintenance department and the investment in newer buses which are less prone to maintenance issues. When vehicles break down, interruptions in service, and delays for transit passengers typically occur. This measure supports the MTP Goal 5: Manage Effectively and Efficiently and Goal 1: Provide High-Quality Transportation Services.

Current Status
Though ART does not currently have an MDBF standard, Metrobus currently uses a standard of 8,000 miles. ART has performed consistently better than the Metrobus standard since Fiscal Year 2011. Since Fiscal Year 2012, ART’s MDBF has increased slightly from 11,268 miles to 11,938 miles.

Data Source
ART Transit Operations internal data.
In Fiscal Year 2014, ART had an MDBF of 11,938 miles, over 3,000 miles higher than the Metrobus established target.
MEASURE 30:
Energy Consumption

Percentage reduction in energy consumption for streetlights.

Description
Arlington has retrofitted over 65 percent of its streetlights to LED, and maintains a centrally controlled GIS-based web inventory to monitor streetlight location, status and energy use. Arlington also operates a smart streetlight program, where streetlights dim as the activities on street go down. For example, on residential streets, lights turn on at 75 percent at dusk and gradually decrease to 25 percent at 11:00 PM, then stay at that level for the rest of night.

Importance
A typical LED streetlight uses less than half of the energy (measured in kilowatt hours or megawatt hours) of a traditional high pressure sodium streetlight – and even less if it’s part of a smart streetlight dimming program. Through its streetlight LED retrofitting program the County has significantly reduced energy consumption and lowered its energy costs. Lower energy consumption also reduces greenhouse gases, contributing to a healthier environment. This measure supports the MTP Goal 5: Manage Effectively and Efficiently and Goal 6: Advance Environmental Sustainability.

Current Status
There are 18,000 streetlights in Arlington, but only 6,000 of them belong to the County – the remainder are operated by Dominion Virginia Power. Of those 6,000, the percent of LED streetlights has increased from 24 percent in 2011 to 67 percent in fiscal year 2014. During this time, Arlington has saved 6,433 MWh (megawatt hours) of energy. Based on the average yearly cost per kilowatt hour in Virginia, this is approximately a savings of $597,486 since fiscal year 2011.

Data Source
Arlington DOT Transportation Engineering and Operations internal data.
As of 2013, over half of streetlights have been retrofitted with LED bulbs, resulting in over 2,500 MWh of energy saved in 2014 alone.
MEASURE 31: Citizen Service and Study Requests

Number of transportation related citizen complaints tracked through internal ‘CassWorks’ system and ‘Public Stuff’.

Description
This measure tracks transportation-related citizen service requests that are submitted via an application on a mobile device or through the internal public request documenting system, Public Stuff. Public Stuff and CassWorks are independent systems with varied uses. CassWorks is used to assign service requests and work order requests to staff. Data is CassWorks is available by a variety of query options between years 2006 and the present. Public Stuff offers an interactive tracking mechanism that documents the progression of a request from “received” to “completed”. Public Stuff’s intended use is for reporting transportation-related maintenance concerns (i.e. damaged or missing signs, and malfunctioning street lights). Service requests made in Public Stuff are available for February through December 2014.

Importance
Transportation-related complaints can measure the public’s satisfaction with the transportation system, as well as the overall physical condition of the transportation infrastructure. Public Stuff offers a user-friendly application for the community to report maintenance concerns to the County and to receive updates on the progression of the request. The measure supports the County’s mission of providing high quality customer service. The measure relates to the MTP Goal 5: Manage Effectively and Efficiently.

Current Status
In Public Stuff (2014), the majority of service requests were related to damaged street lights, followed by damage or missing traffic signs. In CassWorks, the most common service requests were regarding parking and traffic signs, followed by streetlights. The number of streetlight, traffic signal, transportation study requests and other transportation requests all remained steady between 2006 and 2013, however parking and traffic sign service requests rose considerably during this period.

It is expected that the overall service requests will continue rise with the increased awareness of the Public Stuff system. Additionally, it is possible that response times will decrease as more personnel are trained and become acclimated to this system.

Data Source
Transportation Division CassWorks and Public Stuff complaints databases internal data.
In 2013, 1,639 parking and traffic sign service requests were made.

CassWorks Transportation Service Requests
2006-2013
Performance Measures for Environment, Energy, Health, Economy

Goal:
Enrich the quality of life in Arlington County through sustainable transportation improvements and infrastructure.

The functions and services of the Division of Transportation support the County’s environmental, social, and economic sustainability efforts. The County’s success is built upon the resilience and beauty of our natural environment, the vitality of our businesses, and the mental and physical well-being of our residents. When we support community members to take transit, walk, bike, or share the ride, these choices not only reduce traffic congestion, but they are more fuel efficient, better for air and water quality, better for noise pollution, and they are correlated with a more physically-active and productive population.

The Division not only provides infrastructure and transit services to help people stay happy, productive, and healthy, but we support those investments with information, training, encouragement, and transportation decision support for individuals, businesses, community organizations, property owners and developers.
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**MEASURE 32: Greenhouse Gas Emissions Reduced by ACCS**

Greenhouse gas emission reductions attributed to ACCS.

**Description**

Annually, ACCS calculates the total greenhouse gas emission reductions that can be attributed to each of its programs to quantify one of the many program benefits.

**Importance**

Greenhouse gas (GHG) emissions from vehicular traffic and the burning of fossil fuels contribute to warming of the earth’s surface. Arlington County is committed to reducing vehicle trips and thereby mitigating Arlington’s role in global climate change.

Arlington is committed to further reducing County level GHG emissions, having already met its goal of reducing the County government’s 2012 emissions by 10 percent compared to 2000 levels. The Community Energy Plan, an element of the County’s Comprehensive Plan, sets an ambitious goal of reducing Arlington’s greenhouse gas emissions by approximately 75% by 2050, from 2007. This measure relates to the MTP Goal 2: Move More People Without More Traffic and Goal 6: Advance Environmental Sustainability.

**Current Status**

CO2 emission reductions that can be attributed to ACCS programs increased 40 percent between Fiscal Year 2008 and 2014. CO2 emission reductions in the County overall increased by 2 percent between 2011 and 2014.

According to the Arlington 2012 Community Greenhouse Gas Inventory, 35 percent of community emissions come from all transportation, with 15 percent of total emissions coming from pass through traffic. Therefore, ACCS Employer Services is providing an essential function by focusing on reducing work trips in single occupancy vehicles to and from County businesses.

**Data Source**

Arlington County Commuter Service internal analysis and calculation.
Performance Measures for Environment, Energy, Health, Economy

Greenhouse Gas Emissions directly related to ACCS programs were reduced by 40% between Fiscal Year 2008 and 2014.
Vehicle Miles Traveled (VMT) in the County, total and per capita.

**Description**

VMT is the total number of miles driven by motorized vehicles, and was calculated annually for this measure between 2006 and 2013. To account for population growth, VMT was calculated as a per capita, or per person, measure.

**Importance**

Decreases in VMT per capita is an indicator that the County is successful in accommodating population and employment growth while encouraging and experiencing lesser increases in motorized traffic volumes. Arlington has achieved this by ensuring that new transit, bicycling and walking infrastructure and services are implemented as the County continues to grow, providing options other than driving. This measure relates to the MTP Goal 2: Move More People Without More Traffic and Goal 6: Advance Environmental Sustainability.

**Current Status**

Overall VMT per capita decreased slightly between 2006 and 2009 and then increased in 2010 and 2011, only to steadily decrease through the end of 2013. Between 2006 and 2013, there was a 13 percent decrease in VMT per capita, equating to a drop of approximately 1,300 miles traveled annually by each Arlington resident.

**Data Source**


VMT: Virginia Department of Transportation, Arlington County, 2006-2013.
By 2013, annual VMT per capita had decreased by 13%.
MEASURE 34: Particulate Matter Produced by ART

Particulate produced by ART fleet.

Description
This measure tracks particulate matter emitted from ART buses annually. The ART fleet is 100 percent powered by compressed natural gas (CNG). For comparative purposes, the particulate matter from a hypothetical all diesel ART fleet also was calculated to understand the positive environmental impacts of the all CNG fleet. Although CNG powered buses still produce particulate, they do so at a much lower rate when compared to the most common type of bus used for fixed-route transit service, diesel.

Importance
Numerous studies have linked greenhouse gases, particularly particulate matter, to climate change and respiratory illnesses. Tracking ART’s contribution to greenhouse gases in the atmosphere will help the agency evaluate how effective new vehicle purchases have been in mitigating greenhouse gas emissions and avoiding local air quality impacts. This measure supports to the MTP Goal 6: Advance Environmental Sustainability.

Current Status
If the ART fleet was 100 percent diesel powered, particulate matter emissions from diesel vehicles would have totaled 16,545 pounds in 2014. However, ART’s fleet is almost entirely powered by compressed natural gas. With the current fleet make-up, the particulate matter emissions were only 3,309 pounds in 2014, or 80% lower than they would have been with a diesel fleet. As ART has replaced diesel vehicles with CNG-fueled vehicles, the County has avoided a total of 55,034 pounds of particulate matter from being released into the atmosphere since 2009.

Data Source
Transit Bureau, Annual ART Gasoline Gallon Equivalents (GGEs) and Fleet Annual Miles, 2006-2014.

EPA emission factors for diesel and CNG buses.
As a result of migrating to a CNG-fueled fleet, versus an all-diesel fleet, 13,236 pounds of particulate matter was not released in 2014, 80% lower than it would have been with a diesel fleet.
MEASURE 35: Impervious ROW

Impervious right-of-way (ROW) in Arlington treated by Green Streets Program.

Description
The Arlington Green Streets program creates features in the public right of way (ROW) that reduce the volume of stormwater and stormwater pollutants that enter local waterways, rivers, and streams, including the Potomac River and the Chesapeake Bay.

This measure looks at the amount of impervious surface treated by Arlington’s Green Streets ROW features that are currently in the ground. These features are listed in Arlington’s official retrofit inventory and are publicly owned and maintained.

Importance
Stormwater is rainfall that doesn’t soak into the ground. Instead, it flows over land into the storm drain network of pipes where it’s released — untreated — into waterways. During storms, a significant quantity of stormwater enters streams, causing erosion that exposes infrastructure and undermines trees that line the streams themselves. This runoff can also bring pollutants into the waterways and reduce groundwater recharge, which is important for maintaining a healthy and sustainable ecosystem. Arlington Green Streets aims to reduce this runoff by placing bioretention features and stormwater planters in the ROW. This measure supports to the MTP Goal 6: Advance Environmental Sustainability.

Current Status
From 2011 to 2014, Arlington increased the number of right-of-way acres in its Green Streets program from 0.9 acres to 3.5 acres. The majority of right-of-way Green Streets projects involve bioretention (the process in which contaminants and sedimentation are removed from stormwater runoff) along streets with heavy traffic volumes. As a result of a Stormwater Management Ordinance that took effect on July 1, 2014, the County will be monitoring impervious surface change for all right-of-way projects that disturb greater than 2,500 square feet of land. Many of these projects will include stormwater management systems required by the new ordinance.

Data Source
Arlington Department of Environmental Services internal data, 2011 and 2014.
Acres of bioretention along Green Streets increased from 0.9 to 2.3 between 2011 and 2014.
MEASURE 36: Population within Transportation Infrastructure Network

Percent of population within 1/8 mile of sidewalks, 1/4 mile of bicycle infrastructure, 1/4 mile of bike share (Capital Bikeshare stations), 1/4 mile of car share, 1/4 mile of bus transit, 1/4 mile of the primary transit network, 1/2 mile of commuter rail, and 3/4 mile of Metrorail.

Description
This performance measure tracks the percent of the county’s population that falls within ¼-mile of sidewalks; ¼-mile of bicycle infrastructure; ¼-mile of a Capital Bikeshare station; ¼-mile of car share, ¼-mile of bus transit; ¼-mile of the primary transit network (PTN), which is corridors with transit service frequency of 15-minute or less, and service span of at least 18 hours per day; ¼-mile of ADA-accessible bus stops; ½-mile of commuter rail; and ¾-mile of a Metrorail station.

Importance
This measure tracks the proportion of residents who have access to a sustainable form of transportation – an important factor in ensuring access to jobs and providing mobility. This measure relates to the MTP Goal 2: Move More People Without More Traffic and Goal 6: Advance Environmental Sustainability.

Current Status
Overall, the county’s population is well served by public transit, biking infrastructure, and walking infrastructure. Sidewalks and bus stops have the largest percentage of population within walking distance, with 100 percent and 90 percent, respectively.

Within the bus stop category, three quarters of the population are close to an ADA-accessible stop while ART provides access to 65 percent of County residents.

While just 34 percent have access to Metrorail and only six percent have access to VRE; half of the residents living in Arlington County have access to the Primary Transit Network, which provides service of 15 minutes or better for the majority of the day.

Data Source
Data was obtained from various county GIS layers along with the 2008-2012 American Community Survey, and the Robert Wood Johnson Foundation County Health Rankings.


County Transportation Network Data, 2014
90% of Arlington's population is within 1/4-mile of a bus stop.

Percent of Population Living in Close Proximity to Pedestrian, Bicycle, Bike Share, Transit and Car Share Facilities, 2014

Percent of Population Living in Close Proximity to Bus Stop Facilities, 2014

90% of Arlington's population is within 1/4-mile of a bus stop.
MEASURE 37:
Jobs within Transportation Infrastructure Network

Proportion of Arlington jobs located within 1/8 mile of sidewalks, 1/4 mile of bicycle infrastructure, 1/4 mile of bike share (Capital Bikeshare stations), 1/4 mile of car share, 1/4 mile of bus transit, 1/4 mile of the primary transit network, 1/2 mile of commuter rail, and 3/4 mile of Metrorail.

Description
This measure tracks the percentage of Arlington jobs that are located within 1/8-mile of sidewalks, ¼-mile of bike share, ¼-mile of car share, ¼-mile of ART stops, ¼-mile of primary transit network bus stops, ½-mile of VRE Stations and ¾-mile of Metrorail Stations. The primary transit network is defined as any bus corridor in the county that has a weekday span of 18 hours or more and 15-minute weekday frequencies.

Importance
This measure is important to ensure that the county’s transportation investments are being focused in areas with high employment to maximize their use and stimulate economic development. This measure relates to the MTP Goal 2: Move More People Without More Traffic and Goal 6: Advance Environmental Sustainability.

Current Status
Over three-fourths of Arlington jobs were located within walking distance of sidewalks, bicycle facilities, ART stops, and Metrorail Stations in 2011. Bikeshare and VRE stations had the lowest percentage of jobs within walking distance.

The overall proportion of county jobs within walking distance increased between 2008 and 2011 for all modes about which data was available, including bike share, ART stops, VRE Stations and Metrorail Stations. The largest increase was seen in bike share, which did not exist in the county in 2008, but now is accessible to .41 percent of County jobs.

Data Source
County Transportation Network Data, 2014
The percentage of jobs within ¼-mile of ART stops increased from 65% in 2008 to 77% in 2011.

73% of jobs are within 1/4-mile of the Primary Transit Network.

The proportion of county jobs in close proximity to pedestrian, bicycle, bike share, transit, and carshare facilities is shown in the graph. The percentage of jobs within ¼-mile of ART stops increased from 65% in 2008 to 77% in 2011.
MEASURE 38:
Business Satisfaction

Business satisfaction with Arlington's transportation investments.

Description
This measure tracks businesses' overall satisfaction with Arlington’s transportation system. This includes measuring, satisfaction with regional coordination, availability of taxis, availability of parking, availability of multiple transportation options, and other factors.

Importance
Attracting and retaining business is Arlington County is a fundamental component of ensuring the County's long-term economic prosperity. The ability to attracting and retaining a talented workforce, from a large area, is a key factor in retaining businesses. Arlington’s Transportation Division strives to ease commuting for workers within and beyond Arlington to Arlington employers. Business satisfaction with the transportation system is a measure of how the system is performing in meeting their needs to access workforce, customers, partners, and goods in a timely and efficient matter. This measure supports the MTP Goal 5: Manage Effectively and Efficiently and Goal 1: Provide High-Quality Transportation Services.

Current Status
Overall, the majority of Arlington businesses were either “satisfied” (score of four) or “very satisfied” (score of five) with the county’s transportation system, essentially unchanged from 62 percent in 2007 and 2012. The number of businesses that were “very satisfied”, however, dropped from 32 percent to 18 percent between 2007 and 2012. While the number of businesses that were “satisfied” increased from 30 percent to 45 percent during the same time period.

The majority of businesses were “satisfied” or “very satisfied” with the availability of taxis and the availability of multiple transportation options in 2012. Satisfaction with regional coordination, parking availability, ease of getting around in a car, and ease of getting around without a car received lower ratings overall. For most measures the largest percentage of respondents was in the neutral category and relatively few were in the “unsatisfied” categories (scores of 1 and 2). Exceptions were Availability of Parking in which 36 percent were unsatisfied and Ease of Getting Around in a Car (lack of congestion) in which 41 percent were unsatisfied.

Data Source
Arlington County Commuter Services Business Leaders Study, 2007 and 2012
63% of Arlington businesses were satisfied with the county's transportation system in 2012.

Overall Satisfaction with Arlington's Transportation System, 2007 and 2012

Satisfaction with the Availability of Different Transportation Options in Arlington County, 2012
MEASURE 39: Economic Development

Success in linking land use and transportation investments, and protecting neighborhoods.

Description
This measure tracks office, retail, residential, hotel, and other completed developments by square footage in the county’s transit corridors (represented via three major corridors – Rosslyn – Ballston Corridor, Jefferson Davis Corridor, and Columbia Pike) and the County as a whole.

Importance
This measure is important to compare development in the County’s transit corridors, where transportation investments to facilitate the movement of high volumes of people are present, to the county as a whole. Outside of the transit corridors, Arlington’s neighborhoods and neighborhood centers are scaled to meet local needs and not to accommodate large volumes of development and new residents and jobs. It is also important to track development by transit corridors to see if transportation investments in those corridors are resulting in economic development, new jobs and multi-family residential buildings, which contribute to the local tax base and support the County’s services to citizens. This measure supports the MTP Goal 5: Manage Effectively and Efficiently.

Current Status
Residential and hotel development in the transit corridors, which represent 22 percent of Arlington’s land area, has consistently made up between 50 percent and 95 percent of total residential and hotel development in the county since 2006. Office, retail and other completed developments in the transit corridors as a percent of the county total has fluctuated since 2006. Since 2010, however, it has remained at 60 percent of the county total or higher. In addition, 46 percent of the County’s population lives in these three transit corridors.


Data Source

Arlington Transit Corridors

Rosslyn – Ballston Corridor
Jefferson Davis Corridor
Columbia Pike Corridor
Excluding 2009, the vast majority of all development in the County has taken place in three primary corridors.

Office, Retail and Other Completed Annual Development, in Square Feet, 2006-2013

Residential Unit and Hotel Unit Completed Annual Development 2006-2013

46 percent of the County’s population lives in three primary transit corridors.
Appendix

Common Acronyms

ACCS – Arlington County Commuter Services
ADA – Americans with Disability Act
ART – Arlington Transit
ATP – Arlington Transportation Partners
CNG – Compressed Natural Gas
CNT – Center for Neighborhood Technology
GGE – Gasoline Gallon Equivalent
GHG – Greenhouse Gas
LEHD – Longitudinal Employer-Household Dynamics
MDBF – Mean Distance between Failures
MTP – Master Transportation Plan
MWCOG – Metropolitan Washington Council on Government
MWh – Megawatt hours
PTN – Primary Transit Network
ROW – Right-of-Way
SOV – Single Occupancy Vehicle
STAR – Specialized Transit for Arlington Residents
STN – Secondary Transit Network
TDM – Transportation Demand Management
TDP – Transit Development Plan
TE&O – Transportation Engineering and Operations Bureau
TOD – Transit-Oriented Development
VMT – Vehicle Miles Traveled
VRE – Virginia Railway Express
WMATA – Washington Metropolitan Area Transit Authority

\[\text{\textsuperscript{1}}\text{ Definition adapted from the Bureau of Transportation Statistics Dictionary.}\]

\[\text{\textsuperscript{ii}}\text{ The methodology used to derive these calculations is detailed in the 2008 "Making an Impact" Report, available online at: http://mobilitylab.org/2008/08/15/accs-making-an-impact-fy2008/}.\]

\[\text{\textsuperscript{iii}}\text{ These statistics are from Arlington County Commuter Services' "Performance Report FY2014," available online at: http://www.commuterpage.com/tasks/sites/cp/assets/File/ACCS_Performance_Report_FY2014.pdf. Calculations are based off annual VMT reduced and EPA standards.}\]