

What are the preferences of prospective businesses with respect to employment environments, transportation needs, and overall quality of life for Loudoun's targeted industries?

Innovation and Technology Service Sectors Are Demanding Mixed-Use Business Environments

In recent years, traditional employer location preferences have begun to shift, focusing on employee desires in order to attract top talent. Employers anticipate that their employees are more satisfied in places that offer diverse, connected land uses. Given a focus on employee satisfaction, particularly young talent, urban or mixed-use locations have experienced a resurgence. The innovation and technology service sectors exhibit these new preferences more noticeably than many other industries.

Quality of Place and Lifestyle are a Key Factor in Target Industry Decision-making

Consideration of quality of place and lifestyle will be an important consideration for several of Loudoun County's target industries, most notably Information and Communications Technology. As previously noted, innovation firms have more often demonstrated a shift to selecting locations that offer key quality of life measures including walkability to services, access to alternative transportation modes, and nearby housing. Locations near future Silver Line Metro stations will offer key opportunities for development that meets the evolving needs of these tenants. The County has actively pursued lifestyle upgrades, including taking steps to cultivate a more active and robust nightlife for its residents through the work of the Nighttime Economy Ad Hoc Committee.



Infrastructure and Location

Several of Loudoun's target industries for economic growth are driven by location decisions that will continue to use more traditional site selection metrics, most notably inherent location and infrastructure accessibility. These sectors include data centers, federal contracting, aerospace and defense, aviation, and agriculture. These industries benefit from Loudoun's transportation corridors, proximity to Dulles International Airport, proximity to Washington, DC, access to utilities including fiber optics, industry clustering, and land affordability.

The success of one sector can become critical infrastructure for another sector. For example, the success of aviation - related services dependent on Dulles International Airport can improve service and make the County more attractive to Federal contractors. In the County's promotional materials for attracting the health and medical research industry, it includes the nearby data center cluster as necessary processing power that can help run more sophisticated research.

Traditional Site Selection Factors

1. Proximity to skilled labor
2. Access to highways
3. Site and land availability
4. Access to utilities
5. Energy availability
6. Industry clustering
7. Incentives and tax rates
8. Housing options
9. Quality of life

Some industries are also becoming more interested in locating in connected and vibrant communities that foster innovation and provide employees with desired urban amenities.

Rural Economy by the Numbers

Loudoun County's impressive rural businesses add significant value to Loudoun's economy:

\$117 million

value of land, buildings, machinery, equipment, and ag products sold

1,387

tons of grapes produced

\$2 million

value of grapes produced

\$36 million

value of wine produced

\$180 million

economic impact of equine industry

1,396

USDA farms

How have rural and agricultural policies and the promotion of the agricultural industries impacted the local economy over the last decade?

Industries present in Western Loudoun including art, tourism, traditional agriculture, equine sports, hospitality services, and agribusinesses account for over 4,700 jobs. Other industries such as wedding/event venues, vineyards, and food (restaurant or artisanal production) do not have formalized industry reporting, but account for additional jobs and sales within the rural economy. The statistics shown to the left illustrate the value of these industries to Loudoun. The open spaces and agritourism of western Loudoun can also be seen as an amenity that can help attract residents and businesses to other parts of the County.



Sources of Information Used for this Chapter

[2016 Virginia Data Center Report](#)

2012 Targeted Cluster Analysis & Strategy Report

[Core Values: Why American Companies are Moving Downtown](#)

[The Long View: A Business Development Plan for Loudoun County's Rural Economy](#)

[Market and Fiscal Impact Analysis of the Phase 2 Metrorail Extension to Loudoun County](#)

[Nighttime Economy Ad-Hoc Committee Report](#)

[Preferred Office Locations - National Association of Industrial and Office Property Research Foundations](#)

[Retail, Entertainment & Culture Cluster Study](#)

[U.S. Census OnTheMap](#)

Environmental Systems Research Institute

[Visit Loudoun Visitors Guide](#)

[Additional Loudoun County Department of Economic Development Analytic and Promotional Materials.](#)

[Bureau of Labor Statistics, Virginia Labor Market Information](#)

[2011-2015 American Community Survey, Five-Year Estimates](#)

6. OUR COMMUNITY INFRASTRUCTURE

What community infrastructure does Loudoun County provide?

Loudoun County provides high quality and award winning public services and facilities to its citizens. In fiscal year 2017, Loudoun County’s budget for County operations and capital facilities totaled nearly \$2.5 billion. The County’s public facilities are located on 535 properties totaling 8,151 acres of land that are either owned or leased by the County.

Loudoun County Public Facilities

Types of County Facilities	#	Example Facilities
General Government Facilities	20	Government Center, storage/warehouse, offices, Community Corrections, Health Department soil labs
Fire and Rescue Facilities	26	Fire stations, public safety centers, Fire-Rescue Support
Sheriff Facilities	16	Sheriff stations, community policing offices, administrative offices
Parks	62	Community parks, nature preserve, regional parks
Recreation Centers	12	Community centers, Potomack Lakes Sportsplex
Waste Management	3	Loudoun County Landfill, Lovettsville Recycling Center, Wastewater Treatment System
Parking	8	Park and ride lots, staff parking lots
Loudoun County Public Schools		
Administrative	6	Loudoun County Public Schools Administrative Building, Instructional Materials Center, Warehouse, Valley Services Center
Elementary Schools	54	
Middle Schools	12	
High Schools	16	
Technology Center	1	CS Monroe Technology Center

The vast majority of residents living in Loudoun County live in the Suburban Policy Area. To provide efficient public services, the County has located public facilities in close proximity to its residents, and therefore most of the public facilities that provide direct services to residents (such as parks and community facilities) are located in the eastern portions of the County. The locations of these public facilities are shown on the map on the following page. To make the map easier to read, it focuses on public facilities located in eastern Loudoun County, but there are additional facilities located in western parts of the County as well.



Loudoun County Public Facilities

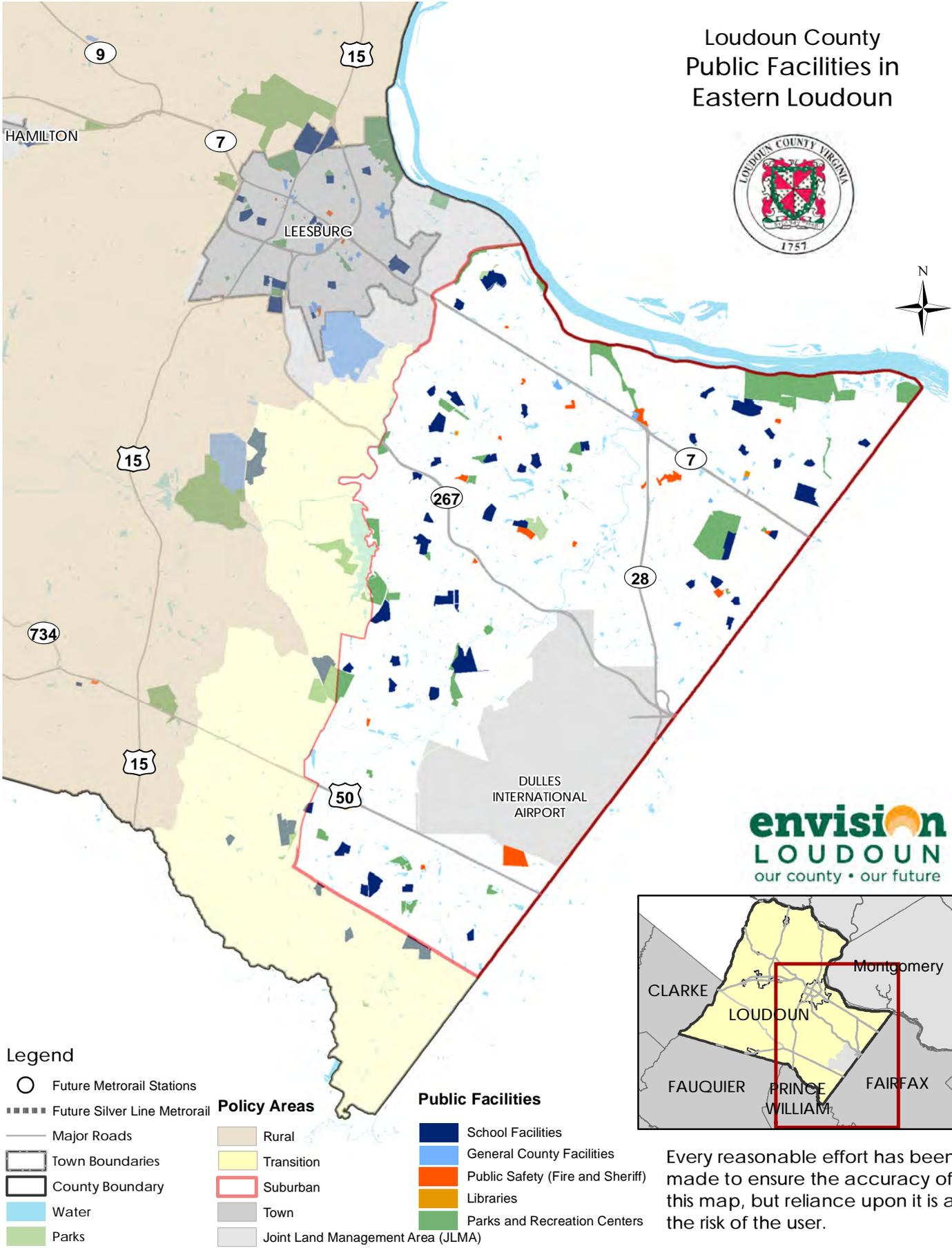
535

Properties (owned or leased)

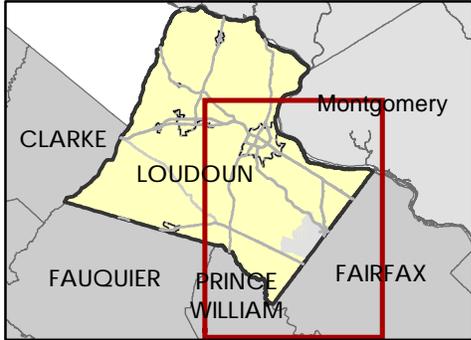
8,151

Acres of Owned/Leased Land

Loudoun County Public Facilities in Eastern Loudoun



envision
LOUDOUN
our county • our future



Every reasonable effort has been made to ensure the accuracy of this map, but reliance upon it is at the risk of the user.

Legend

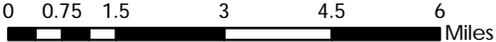
- Future Metrorail Stations
- Future Silver Line Metrorail
- Major Roads
- ▭ Town Boundaries
- ▭ County Boundary
- Water
- Parks

Policy Areas

- Rural
- Transition
- Suburban
- Town
- Joint Land Management Area (JLMA)

Public Facilities

- School Facilities
- General County Facilities
- Public Safety (Fire and Sheriff)
- Libraries
- Parks and Recreation Centers



January 15, 2017

How does Loudoun County plan for future capital needs?

Loudoun County has a sophisticated capital planning system for a County its size. The system includes several key planning and analysis tools described below.

Fiscal Impact Committee (FIC) and Fiscal Impact Committee Guidelines

As an advisory committee to the Board of Supervisors, the FIC reviews assumptions about future growth and capital facility needs, and provide recommendations for use in the County's long-range planning. The Committee develops forecasts based on current approved development projects, and anticipated growth as guided by land use policies in the Revised General Plan. These forecasts of housing, population, development, and employment are documented in the Fiscal Impact Committee Guidelines, adopted by the Board of Supervisors. The FIC also reviews and advises on updates to the County's capital planning guides listed below.

Capital Facility Standards (CFS)

The CFS outlines the type, acreage and size of future capital facilities, along with "triggers" based on population, population within a given age group, or geographic factors. These standards are reviewed every two years by the Fiscal Impact Committee and ultimately adopted by the Board of Supervisors.

Capital Needs Assessment (CNA)

The CNA serves as the linkage between the policy guidance provided in the Comprehensive Plan and the specific capital projects that are included in the Capital Improvement Program (CIP). The Capital Needs Assessment uses the County's forecasted population growth in the Fiscal Impact Committee Guidelines, and the adopted Capital Facility Standards (CFS) to identify the type and number of capital facilities that will be needed to serve the public over a ten-year planning period beyond the CIP. This analysis is conducted for planning subareas (see map on the next page), and the CNA is updated every other year.

Capital Improvement Program (CIP)

The CIP sets out short-term capital planning needs for six fiscal years that includes individual projects and their associated funding sources. The CIP facilitates land acquisition, facility design and construction, and procurement of capital equipment; and considers both capital and operational costs of new capital projects and any debt service requirements.

The CIP is developed as a biennial budget with the same six-year planning period in place for two years and two new years added every other year. Projects included in the CNA comprise the majority of projects considered for inclusion in the CIP, but not all projects included in the CNA for a given fiscal year are always approved as part of the CIP. The inclusion of projects in the CIP depends upon the need for the facility, available land, local tax revenues available to achieve the 10% "pay as you go" local financing requirement, and debt capacity.

ABCs of Capital Planning

CFS

Capital Facility Standards:
standards used to forecast
future capital planning needs

CNA

Capital Needs Assessment:
identifies capital needs for the
ten year period after the Capital
Improvements Program

CIP

Capital Improvement Program:
6 year schedule and funding
plan for near-term capital
projects

CIF

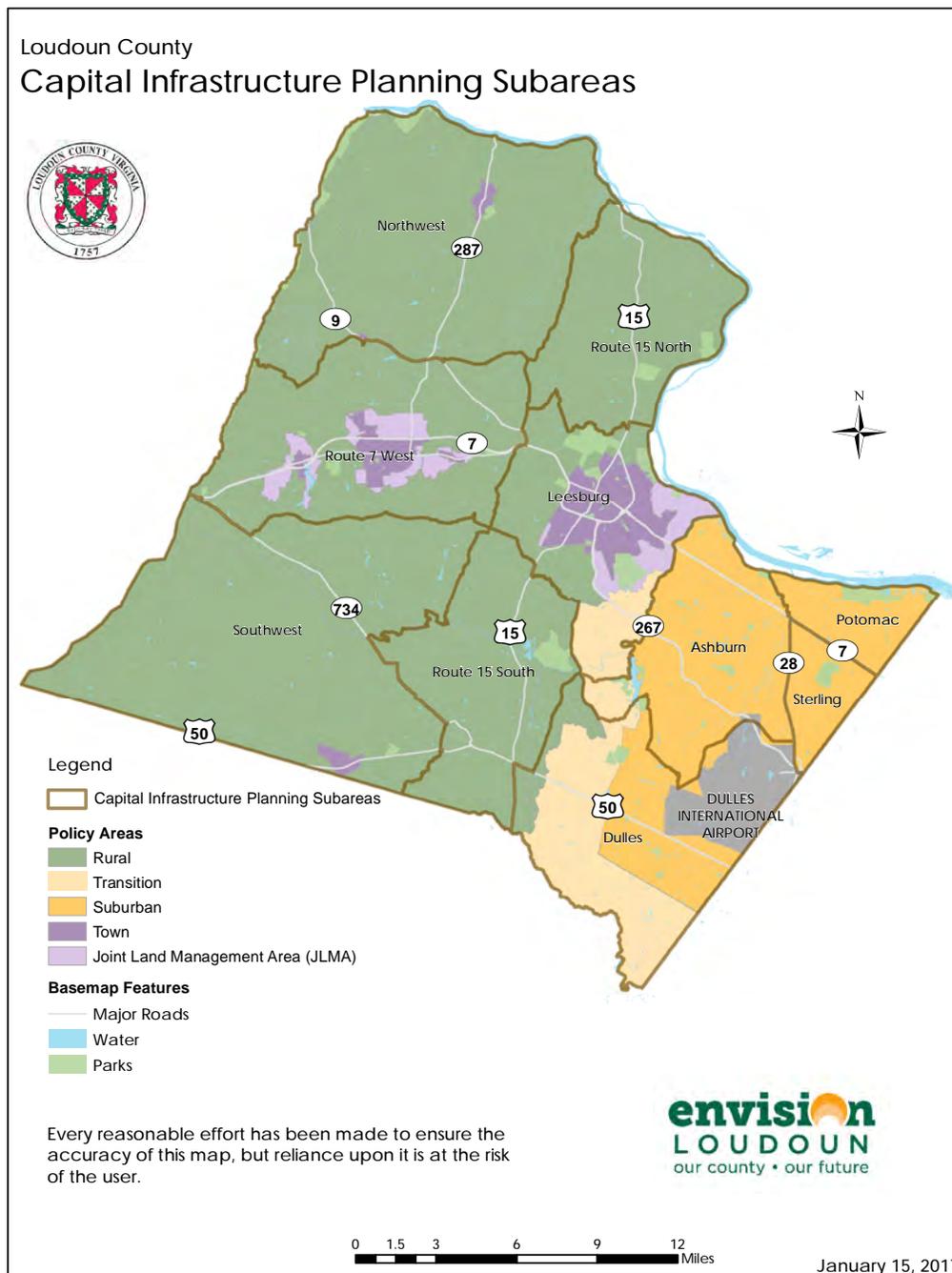
Capital Intensity Factor:
capital cost estimates per type
of newly developed residential
unit used in proffer negotiations

Capital Intensity Factor (CIF)

The CIF serves as a guide to the County for determining the cost of capital facilities that will need to be developed as a result of population growth from increasing density on a residential property. It does this by establishing an estimate of the average capital facilities costs associated with a new residential unit in Loudoun. The CIF is used in the evaluation and negotiation of proffers associated with residential rezonings. Proffers are voluntary contributions provided to the County to help offset the costs of future capital facility development generated by the rezoning of land to a higher density.

Capital Infrastructure Planning Subareas

Capital infrastructure planning is conducted at the planning subarea level in Loudoun (see map below). These ten geographic regions are used to identify service delivery areas and as a guide to the placement of new capital facilities. While similar to the County's Policy Areas, the Planning Subareas are not completely aligned with the Policy Areas.



Policy Topic to Explore:

Future Considerations for Loudoun's Capital Infrastructure Planning System

Recent development approvals to higher density and mixed-use developments, and land use planning for the Silver Line Metrorail stations suggest that the current County forecasts, and correspondingly, the Capital Needs Assessment, may be conservative in setting out future capital facility needs. In addition, if new types of development are included in the updated Comprehensive Plan, these development types will need to be incorporated into the capital infrastructure planning system. Any new use types will likely have an impact on growth forecasts, the Capital Intensity Factors, and the Capital Needs Assessment. The Envision Loudoun process will include an assessment of these issues and strategies for improving the capital infrastructure planning system will be developed.

What are the forecasted future needs for public infrastructure?

Between 2015 and 2045, County forecasts show that Loudoun could add 49,720 new housing units, 120,000 new residents, and 54 million square feet of nonresidential development. These new residents, businesses, and employees will require public services and facilities to meet their needs.

Loudoun County's Fiscal Year (FY) 2017-FY2022 Capital Improvement Program sets out \$1.79 billion of County capital construction projects, including school construction and renovation projects to be completed over the next six fiscal years. This includes two major transportation projects: Route 7 and Belmont Ridge Road (Route 649) Interchange, and the Silver Line Dulles Metrorail Project.

The County's FY2017-FY2022 Capital Improvement Program (CIP) explains that capital expenditures have increased significantly in the past five years due to several factors, including costs for major transportation projects (Silver Line Metrorail) and non-school and non-transportation County government projects. School capital project costs decreased over this period.

At the same time, funding for the FY2017-FY2022 Proposed CIP decreased from the previous adopted CIP due to completion of appropriation requirements for the Metrorail Silver Line construction, development of public parking garages, and the completion of appropriations for several major school projects. This also corresponds with slower paced growth of real property values as a result of the lingering effects of reductions in federal spending and lower rates of employment and income growth.

The County's longer term capital facility needs are documented in the FY2021-FY2030 Capital Needs Assessment (CNA). The CNA acts as a tool for identifying capital needs ahead of the creation of the CIP, documenting projected needs based on projected population growth. The majority of projects in the CNA are identified for FY2021 due to forecasted population increases triggering needs for capital facilities, and the fact that several projects were delayed from the FY2015-2021 CIP. At the point the Board of Supervisors considers the CIP, the Board balances the projected needs identified in the CNA with current needs based on actual population growth and fiscal constraints.

**What types
of capital
infrastructure
projects are
included in the
FY2017-FY2022
CIP?**

36

County Road Projects

15

Public Safety Projects

15

School Projects

11

Parks and Library
Improvements

7

Transit Projects

Capital Project Identified in
FY2021-2030 Capital Needs Assessment by Planning Subarea

	Ashburn	Dulles	Leesburg	Northwest	Potomac	Route 7 West	Route 15 North	Route 15 South	Southwest	Sterling	Countywide
Adolescent Residence											
Adult Day Center		X									
Community Park	X	X	X						X		
Developmental Services Residence	X										
District Park	X	X	X								
Elementary School		X				X					X
Fire/Rescue Station	X	X									
General Government Support Space											X
Library	X		X								
Mental Health Residence	X	X	X						X		
Neighborhood Park	X	X	X	X	X			X	X		
Park and Ride Spaces		X		X							
Recreation Center					X						
Recreational Trails											X
Regional Park	X										
Senior Center	X										
Teen Center	X								X		

Management of Loudoun Water

Loudoun Water is governed by a Board consisting of nine members appointed by the Loudoun County Board of Supervisors. The Loudoun Water Board members serve four year terms and can be reappointed by the County. The Board appoints the General Manager, who is responsible for the daily management of Loudoun Water.

How are land use and utilities policies coordinated?

Loudoun Water is an enterprise utility managed separately from Loudoun County that provides drinking water and wastewater services to over 65,000 households in Loudoun. Water sources include the Potomac River and Goose Creek, which are fully treated by either Fairfax Water, or Loudoun Water at the Goose Creek Water Treatment Facility.

The utility’s mission is to “sustainably manage water resources in advocacy of health, environment and quality of life.” Loudoun Water maintains over 1,200 miles of water distribution pipelines, over 880 miles of wastewater collection system pipelines and a growing reclaimed non-potable water system. It maintains and updates a 10-year Capital Improvement Plan to plan for future capital needs generated by new growth.

Loudoun Water has a cooperative arrangement with Loudoun County to extend water and wastewater services only to locations as guided by the Comprehensive Plan, unless health and safety issues require the extension of utilities beyond identified service areas.

The Loudoun Water Service Area includes the Suburban and Transition Policy Areas.

Communal wastewater treatment systems outside of the service area within rural and transition areas can be transferred to Loudoun Water for ongoing management, contingent upon the system meeting Loudoun Water facility standards.

Loudoun Water is authorized to extract water from the Potomac River for treatment and use under the condition that this volume of water will be treated and returned to the Potomac River. The results of this net zero water policy is that growth is effectively controlled, and capital facility costs are significant to meet this requirement.

The 2011 Water and Wastewater Assessment provides an inventory of public water systems, such as Loudoun Water, that are operating in the County, small systems serving towns and subdivisions, and private systems with individual wells and sewage disposal systems. The report identifies two main water concerns in Loudoun: older neighborhoods that have been bypassed by development and are not currently on Loudoun Water's central system, and other older communities that either due to poor soil conditions or age of the unit, have water or wastewater systems that are at risk for significant problems or failure. The assessment identifies 16 at-risk communities and another 20 that potentially could be at risk, and provides strategies for addressing these issues.

Policy Topic to Explore:

Future Water and Wastewater Challenges

Rural residents and businesses are served by individual private drinking water wells or small systems. Some of these areas are at risk for system problems given the conditions of the system. As more growth occurs in both the Rural Policy Area and the Towns, there is also concern for the long-term sustainability for drinking water wells to provide needed potable water to new users. The new Comprehensive Plan and the plans for the County's Towns should consider potential future water constraints as part of land use planning analyses

What is the status of planning for the County's energy needs for the future?

Adopted by the Board of Supervisors in 2009, the Loudoun County Energy Strategy (CES) provides a comprehensive, 30-year road map of energy strategies for the Loudoun County government and community. Using 2007 as a base year, this plan sets out strategies to reduce energy consumption in the County and plan to: "always have reliable and affordable energy, be energy efficient, and have reduced greenhouse gases."

When the plan was written in 2009, homes (34%) were the largest energy user in the County, with 28% of energy use by commercial businesses and public buildings and 28% for transportation. At that time, 70,753,000 BTU (British Thermal Units) of energy were used in the County. If no changes occur, the forecasts suggest that the 2040 population of Loudoun would use 45% more energy with a 50% increase in greenhouse gas emissions.

The County Energy Strategy sets out specific action steps that are intended to allow the County to continue growing, while also conserving energy and reducing greenhouse gas emissions by 22% of 2009 emissions. Immediately following adoption of the Plan, several short-term projects were successfully implemented and funded through U.S. Department of Energy grants. Focus on implementing this plan has waned in recent years.

Policy Topic to Explore:

Impacts of Land Uses on Future Energy Needs

Achieving the County's energy conservation goals will largely be determined by the individual commuting choices made by the County's citizens, which will be impacted by the transportation choices offered in the future. Heavy energy users, such as data centers, offer many fiscal and economic benefits to Loudoun, but are also a challenge for achieving the County's energy goals. Future land use policies explored by Envision Loudoun should consider the impact of land uses on future energy demands.

Loudoun's Award Winning Energy Plan

The National Association of Counties recognized Loudoun County for its exemplary County Energy Strategy.

By 2040, Loudoun County sets out to achieve a:



reduction in greenhouse
gas emissions

Sources of Information Used for this Chapter

[Adopted Loudoun County FY2017 Budget \(Includes FY2017-FY2022 Capital Improvement Program\)](#)

[2015 Fiscal Impact Committee Guidelines](#)

[Loudoun County Capital Needs Assessment](#)

[Loudoun County Capital Intensity Factor](#)

[Loudoun County Capital Facility Standards](#)

[Loudoun County Energy Strategy](#)

[Loudoun County Water and Wastewater Needs Assessment](#)

7. OUR TRANSPORTATION

Loudoun County has many challenges and opportunities when considering the mobility of commuters and access to destinations through the region. With proximity to the Washington, DC urban core and major regional employment centers in Northern Virginia, the County attracts many residents who are employed in surrounding jurisdictions. The County is also a strong employment center, attracting both County residents and those from neighboring jurisdictions. In addition, there are those who utilize the County's infrastructure as a means to their final destination, traveling through the County every day and adding travelers to the transportation network.

**VMT =
vehicles miles
traveled**

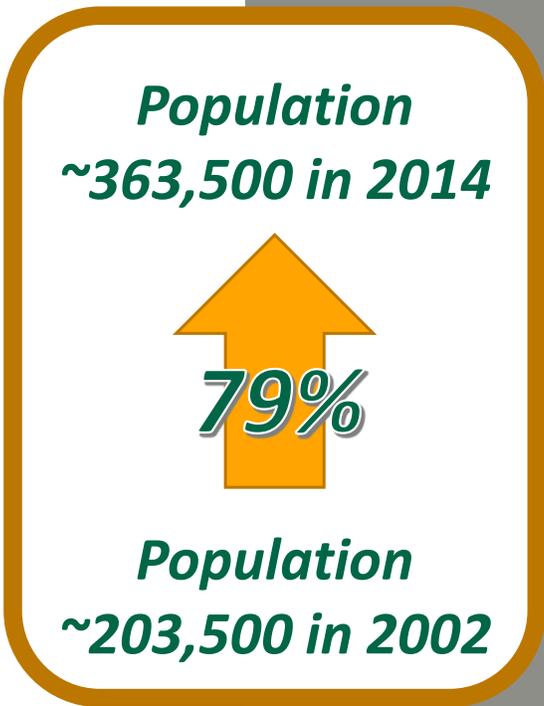
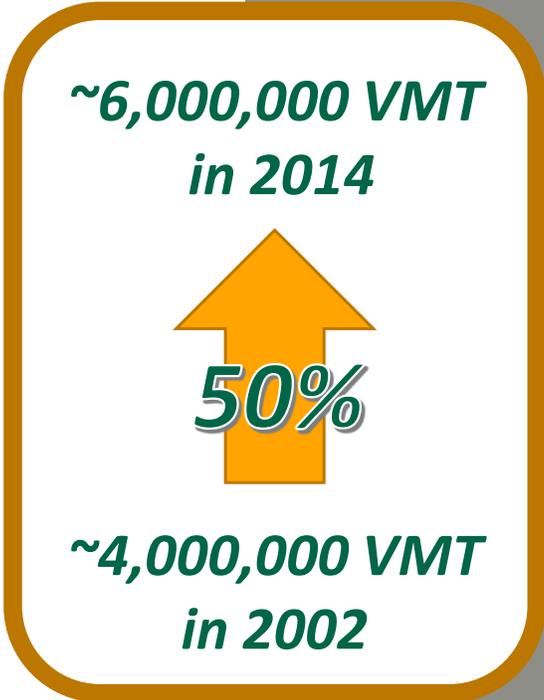
What are Loudoun's commuter trends?

As the entire Washington region continues to experience residential and employment growth, automobile trips generated from within and through the County have continued to grow. From 2002 to 2014, Loudoun County roadways experienced a 50% growth in total daily vehicle miles traveled (VMT), from roughly 4 million daily miles in 2002 to over 6 million daily miles in 2014. Despite heavy investment in construction of a robust roadway network, continued residential and commercial development have resulted in ongoing traffic congestion during peak travel times (weekday morning and afternoon). This increasing demand continues to cause increased travel times and delay for local trips as well as regional connections. The impacts of this increased demand require a diversified set of travel options in conjunction with enhancements to the overall street network.

Among residents and employees of the County today, there is a growing appetite for access to multiple modes of transportation. However, there is a need to plan and promote these opportunities in a strategic manner in order to make them viable options for travelers. The extension of the Silver Line Metrorail is a great incentive for increased focus on transit, bicycling, and walking as part of the County's comprehensive transportation strategy. This forthcoming service presents the opportunity for innovative facilities and travel options, not only via the rail itself, but through the mode by which the passengers reach the stations.

A study is currently underway to identify missing links and opportunities within the multimodal transportation networks in the areas planned for higher density urban development. The Comprehensive Plan will need to incorporate this effort into the County's overall plan to provide meaningful connections to locations throughout the County. Current transportation policies will be reviewed and new policies will be developed in the new Comprehensive Plan to accommodate the recommended improvements.

Providing a walkable and transit-friendly environment is not only beneficial to local citizens, but can become an attraction for office and retail businesses to grow and thrive in Loudoun County. The combination of innovative transportation solutions with smart, market-oriented land use plans can enhance the County's position as a strong economic driver of the region.



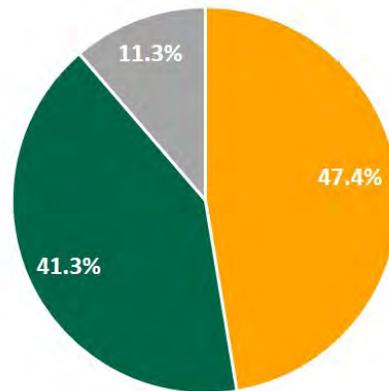
Where are employees working in Loudoun commuting from?

The US Census Bureau, OnTheMap application revealed that the greatest portion of employees in Loudoun County are residents of the County. Other popular residential origins of employees working in Loudoun include, but are not limited to:

- Fairfax County, Virginia
- Prince William County, Virginia
- Montgomery County, Maryland
- Frederick County, Virginia
- Jefferson County, West Virginia

In addition to employment and housing opportunities, Loudoun County is home to many recreational and tourist attractions, such as shopping and entertainment centers, vineyards, distilleries, and breweries, historic sites, and festivals amongst countless other opportunities. These quality of life amenities and attractions increase the desirability of our community, thereby increasing the number of trips to and within the County.

Where Employees Working in Loudoun County Reside



- Residency in Loudoun County
- Residency in other Virginia Counties
- Residency outside of Virginia

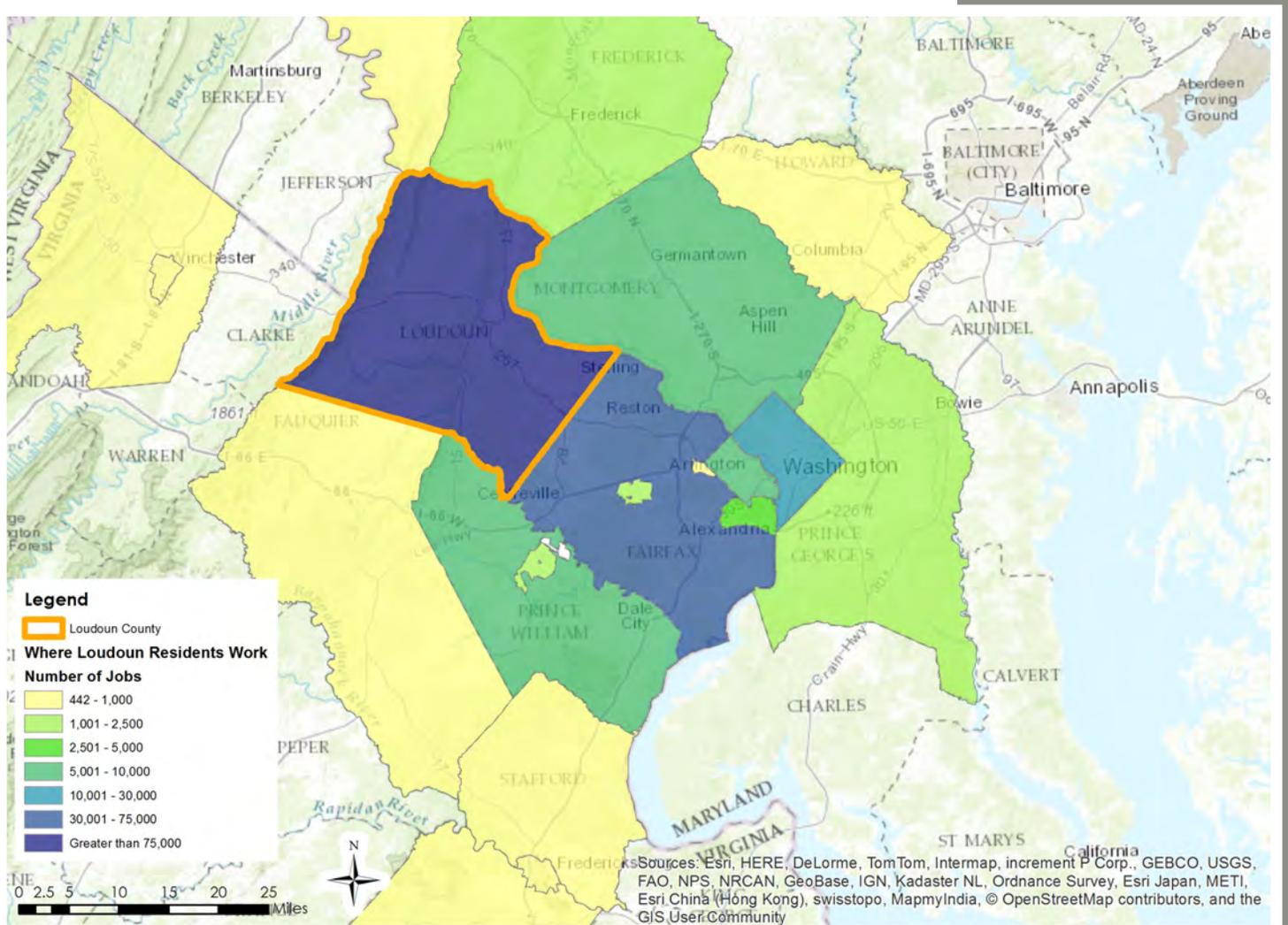
Source: ACS 2015 Estimate-Commuting Characteristics

Where do Loudoun's working residents commute to?

Many residents of the County also commute to neighboring jurisdictions. According to the US Census Bureau, OnTheMap application, popular destinations of County residents include but are not limited to:

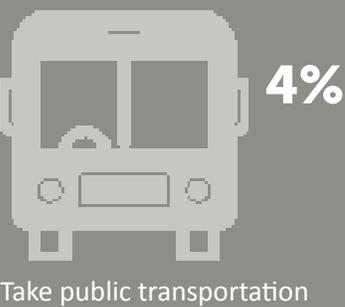
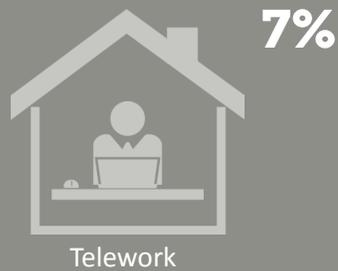
- Fairfax County, Virginia
- District of Columbia
- Arlington County, Virginia
- Montgomery County, Maryland
- Prince William County, Virginia

Where Loudoun Residents Work



Note that the thresholds shown are based on the top 25 work destinations for Loudoun residents, and this map is not inclusive of every destination.

How Our Residents Get to Work

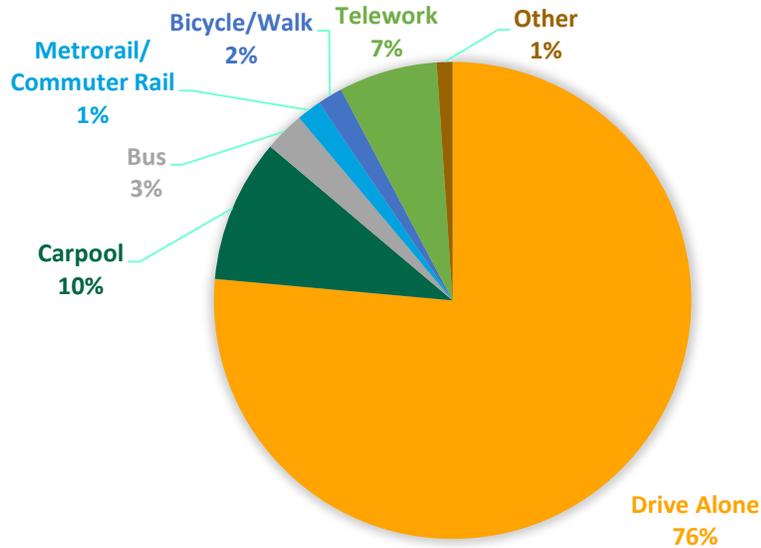


1% take some other mode of transportation

How do Loudoun's residents travel?

As travel demand and congestion increases in the County and region, some County residents are seeking to travel via a mode other than driving. Based on 2015 American Community Survey data, most commuters (76%) still drive alone, but 24% are carpooling or vanpooling, riding public transit, bicycling, walking, or use other means of transportation to arrive at their place of work.

Mode Choice of Loudoun Residents



Source: ACS 2015 Data

Modes Available in the Region

Bus: local and commuter bus service provided by Loudoun County Transit

Metrorail/Commuter Rail: WMATA Metrorail, VRE Passenger Rail, and MARC Train

Other: taxi, motorcycle, teleworking, etc.

Policy Topic to Explore:

Consideration of Alternative Travel Modes

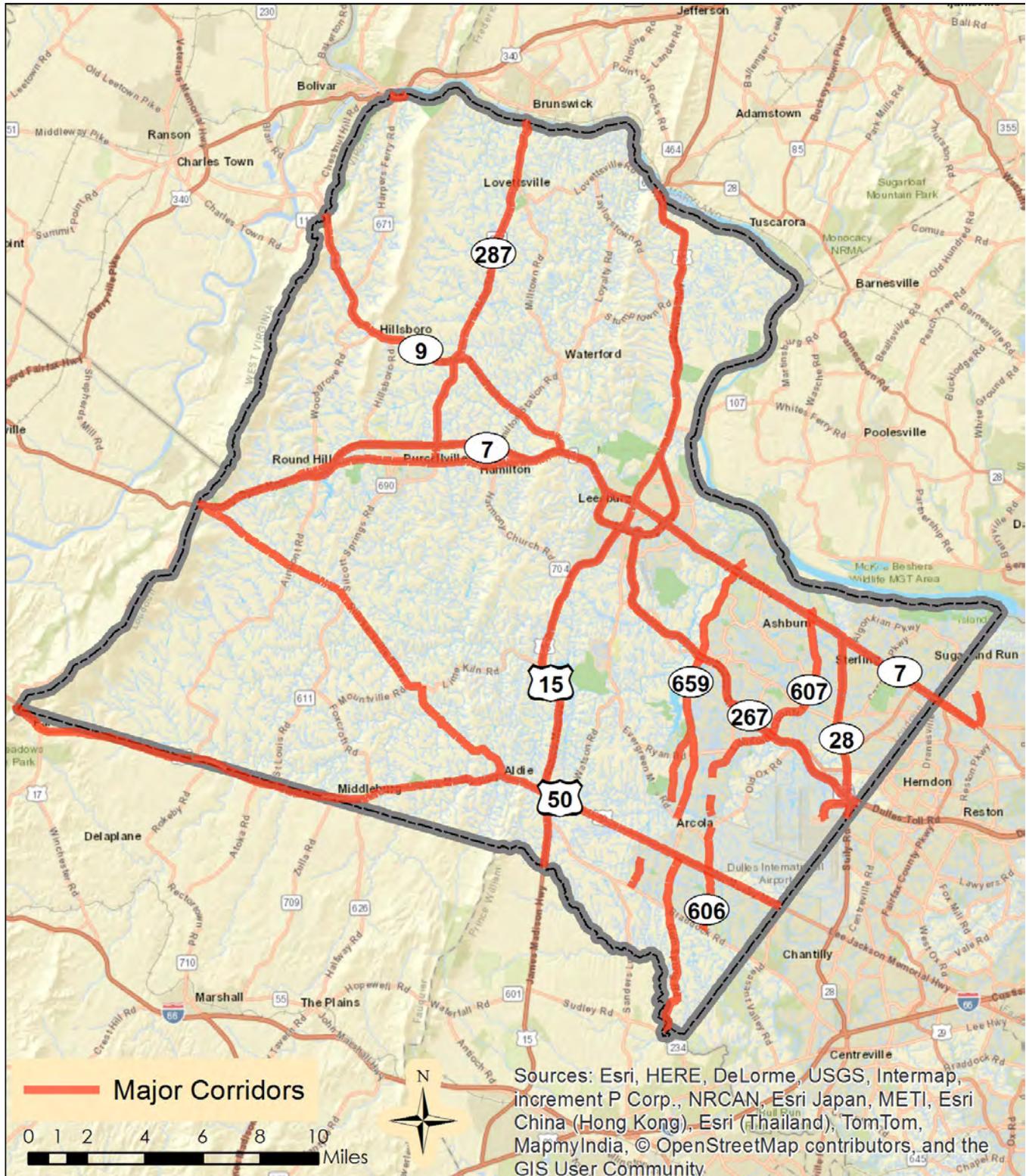
More robust bicycle and pedestrian options will be explored during the planning process. Future planned land use and designs will be considered for safety and attractiveness and the potential for increased use by pedestrians and cyclists. Street typologies will be reevaluated considering vehicle throughput and placemaking. Grade-separation and a variety of facilities will be considered to move people using all modes of travel.

Access to and from the future Silver Line Metrorail Stations is being evaluated under the Silver Line Area Plan, but should be incorporated and supported by this new Countywide Transportation Plan.

Corridor Characteristics

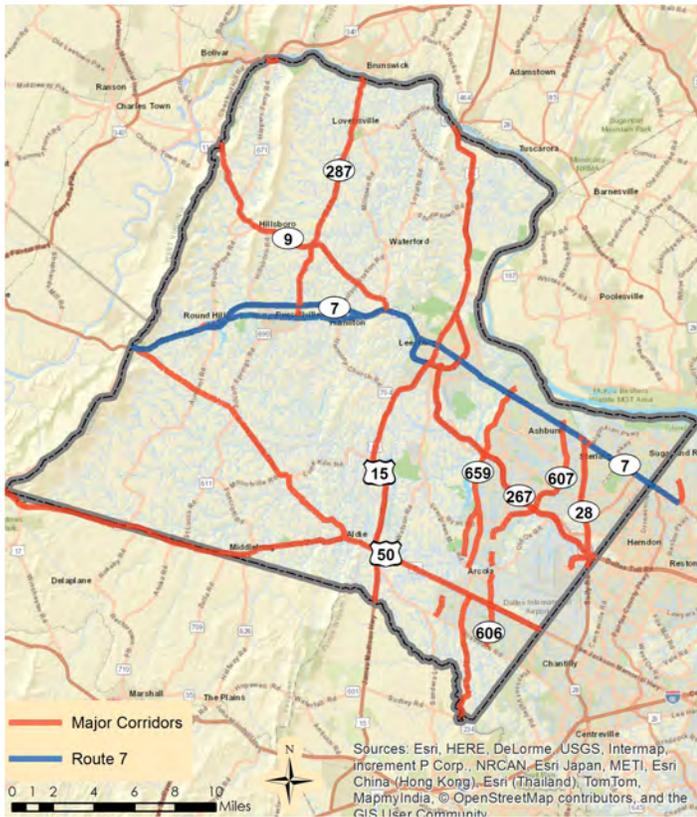
Loudoun County commuters are served by a series of major corridors that travel the length of the County and a network of intra-county connections that serve local trips and connect neighborhoods to major corridors. Travel demand management measures also exist in efforts to reduce travel demand or to shift travel demand by providing other transportation options. The corridors most critical to current commuters and in need of examination as the future CTP is developed are outlined as follows.

Major Corridors in Loudoun County



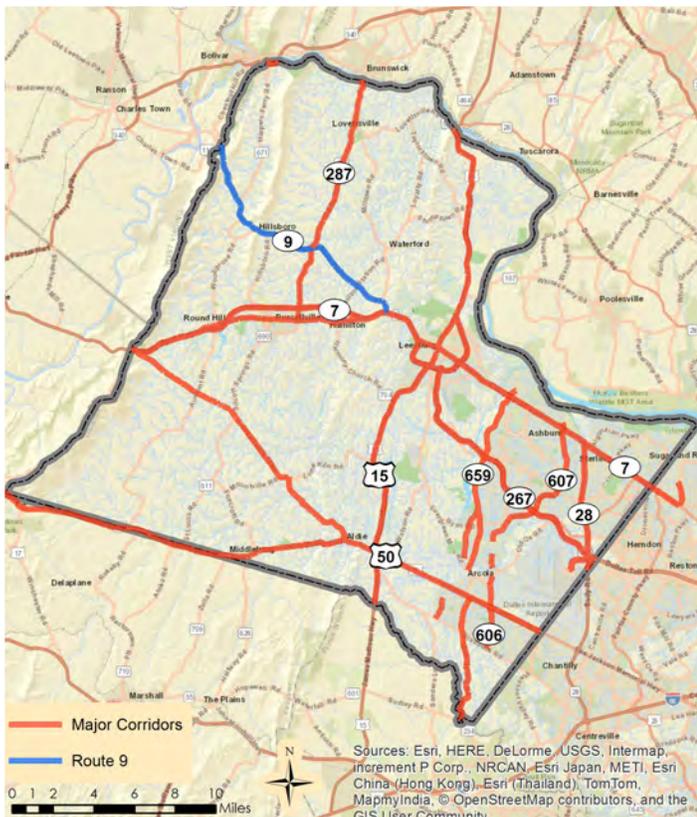
Virginia Route 7

Virginia Route 7 travels along the northern border in the eastern portion of the County and through the middle of the western portion of the County, connecting Round Hill, Purcellville, and Western Loudoun to Leesburg, Ashburn, and the Sterling area, and to external destination points to the east and west. This facility varies between segments of limited access interchanges to controlled access with signalized intersections. Transitions between these facility types and cross-sections create bottlenecks, especially between Leesburg and Paeonian Springs at Route 9 and as Route 7 crosses through Sterling into Fairfax County. Construction is underway to make Route 7 a limited access facility between Algonkian Parkway and Leesburg with interchanges under construction at Ashburn Village Boulevard and Belmont Ridge Road, and a planned interchange at Battlefield Parkway.



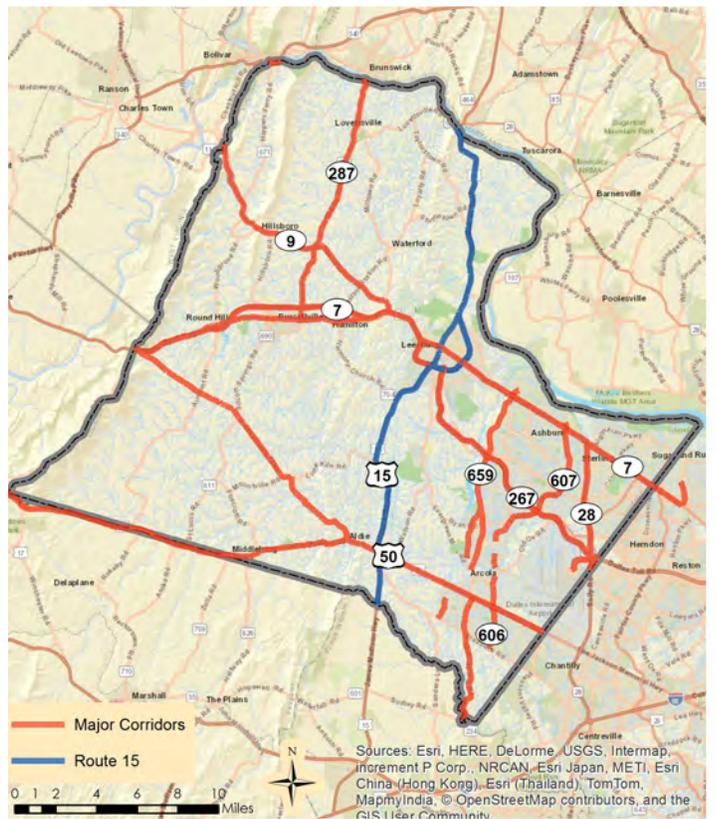
Virginia Route 9

A significant amount of traffic travels on roadways to and through the County from the west. Accompanying Route 7 to the western border of Loudoun is Route 9 which is a major route for traffic coming from West Virginia. Within Virginia, Route 9 operates as a two-lane undivided facility. However, the roadway widens to a four-lane divided highway in West Virginia. Due to limited travel options between Jefferson County, WV and Loudoun County, significant traffic volumes exist along this corridor. The congestion on this rural highway, which serves as a main street for Hillsboro, leads to additional traffic through the Town, changing the travel characteristics of the corridors and impacting nearby residents. Route 287, which serves north-south traffic through northwestern Loudoun County, experiences similar issues as traffic seeks to move between Purcellville and Lovettsville to Brunswick and other destinations in Maryland.



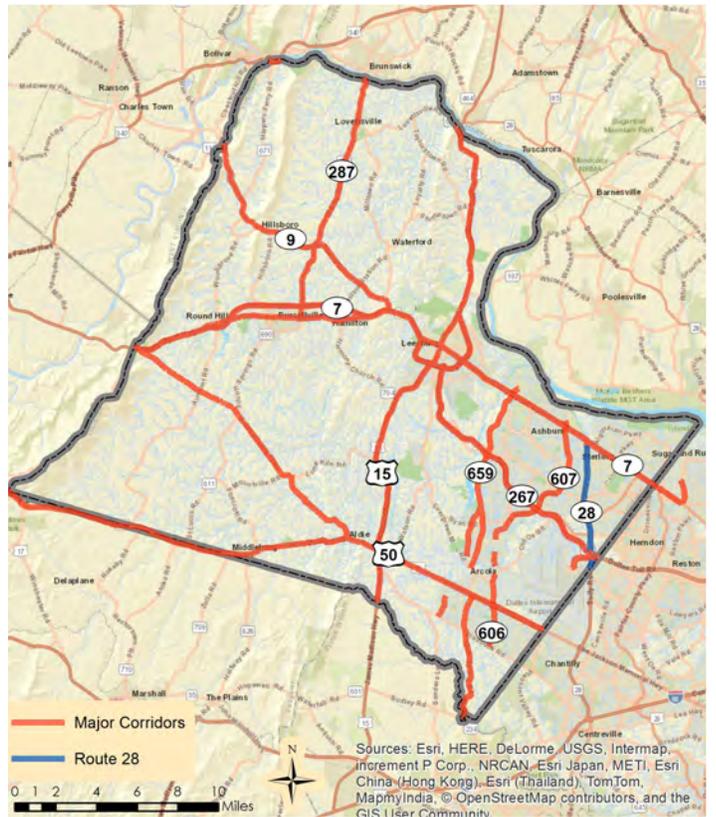
US Route 15

A Corridor of Statewide Significance, US Route 15 connects the County to Maryland across the Potomac River at the Point of Rocks Bridge. Southward, it provides a route all the way through the state of Virginia. It provides access to the Town of Leesburg, a key economic generator and location of the County's government, and extends north and south through more rural residential areas. Today, US Route 15 experiences heavy congestion north of Leesburg, as heavy commuter traffic enters and exits the County on a two-lane highway that connects to the first Potomac River crossing west of the Capital Beltway (I-495). A study is underway to evaluate mitigation measures for this corridor that could be accomplished while seeking to maintain its rural character.



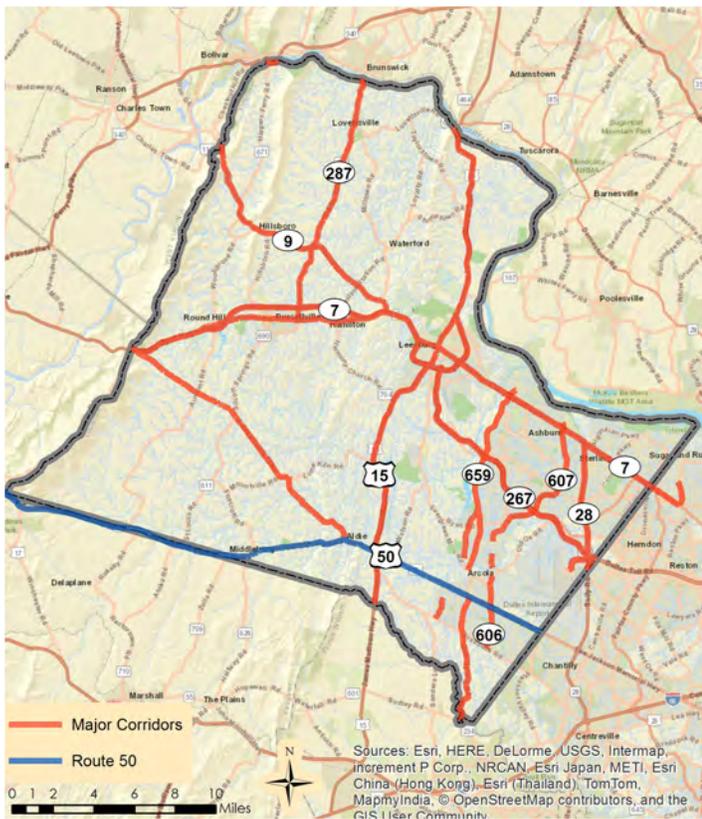
Virginia Route 28

The primary north-south arterial in the eastern portion of the County, this 6- to 8-lane freeway connects many of the County's most substantial employment centers such as Dulles Town Center at Route 7, Sterling, and Dulles International Airport at Route 267. It continues south into Fairfax County where it connects with US 50 in Chantilly and I-66 in Centreville, both high-volume east-west corridors. Route 28 serves as an important connection for those in northern and southern Loudoun County to travel to job centers through the region.



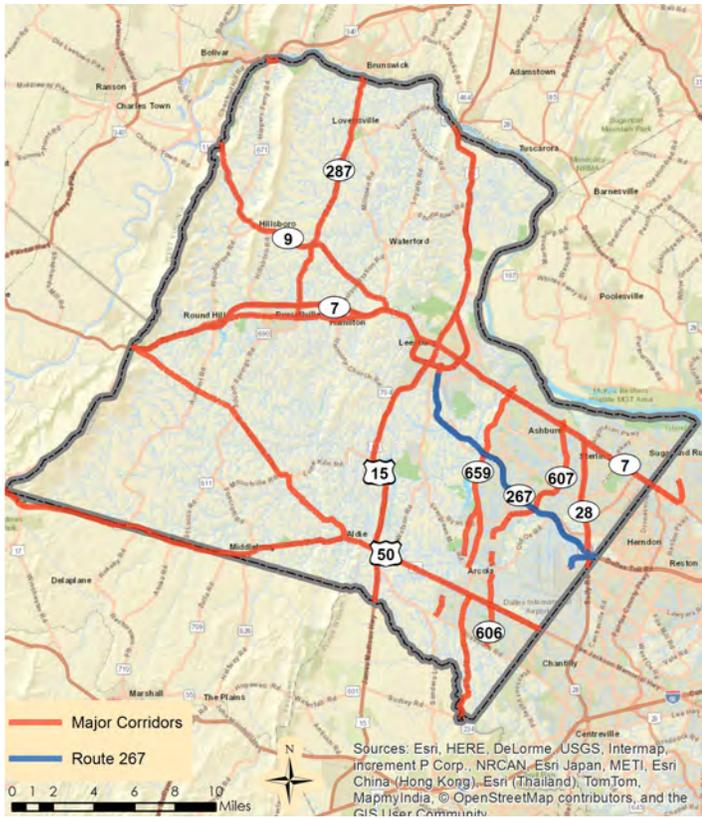
US Route 50

US Route 50 travels along the southern edge of the County, connecting Middleburg, Aldie, Stone Ridge and South Riding before crossing into Fairfax County. This route also provides connections to other major commuter thoroughfares, such as Route 28, I-66, I-495, and Washington, DC. This route varies in width along the corridor, but maintains at-grade intersections within Loudoun County.



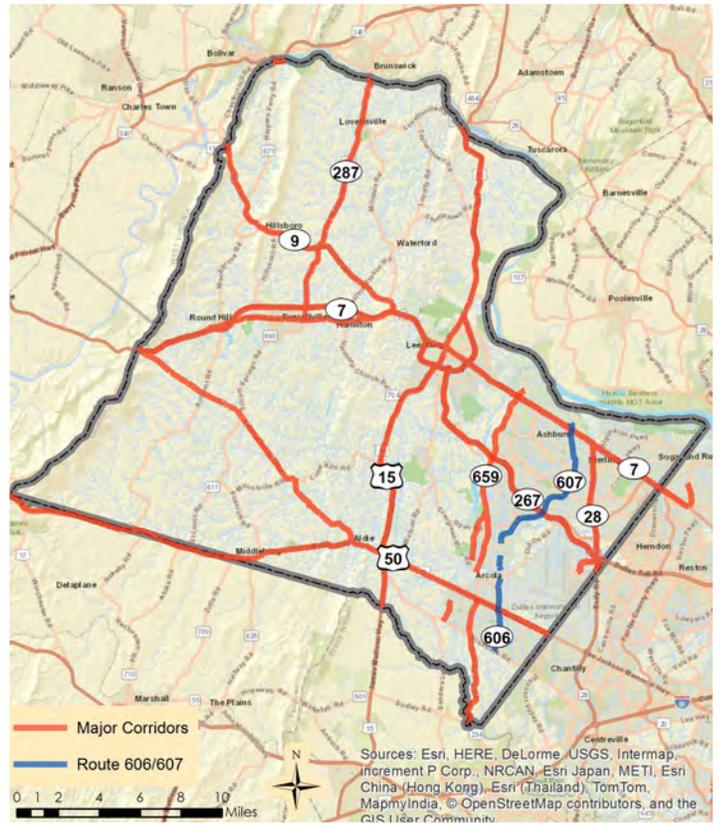
Dulles Greenway (Virginia Route 267)

Dulles Greenway (Route 267) is a privately owned, limited-access, toll facility that runs through the center of the eastern portion of the County. Due to the tolls charged for use of this facility, this freeway has available capacity. This capacity helps ensure a more dependable travel time, though backups occur at either end of the roadway due to bottlenecks at interchanges. Instead of paying the toll, many drivers may seek free alternative travel options, thereby increasing congestion on parallel facilities while leaving additional capacity available on the Greenway.



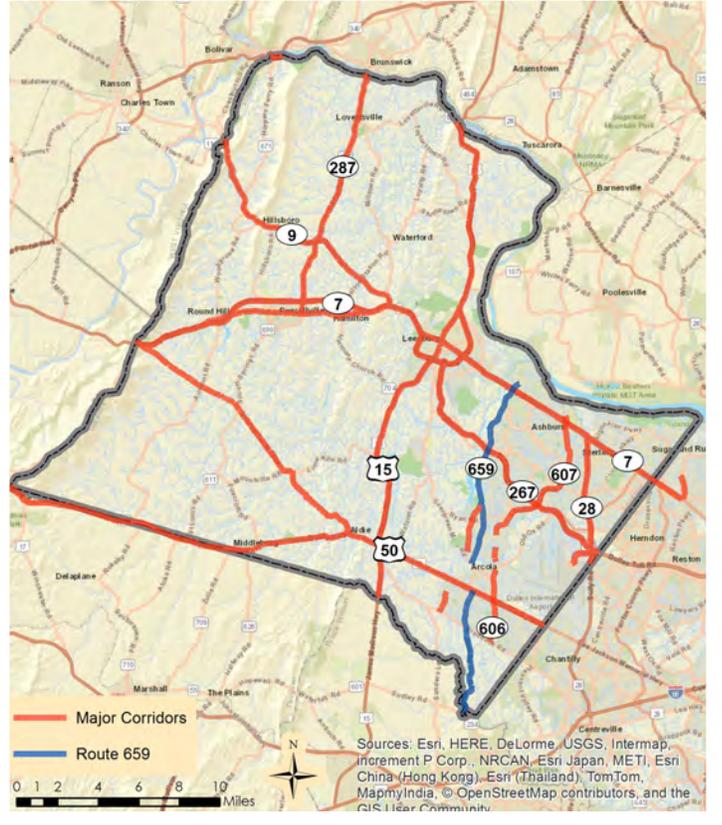
Loudoun County Parkway (Virginia Route 607)

This corridor is located west of Route 28, on the west side of the Broad Run, and connects residential, business, commercial, and retail land uses from University Center at Route 7 to Loudoun Valley and from Arcola Center to South Riding. Connection of these disparate segments is anticipated by the end of 2017. Loudoun County Parkway is centrally located between the two future Metrorail Stations and is anticipated to provide significant relief for Loudoun County commuters in Ashburn and South Riding seeking alternative travel options to Route 28.



Belmont Ridge Rd/Northstar Blvd/Bi-County Parkway (Route 659)

This corridor connects activity centers along Belmont Ridge and through Brambleton and Stone Ridge. It currently exists in two sections: one begins in Lansdowne north of Route 7 and travels to Shreveport Road in Brambleton; while the second section travels from Tall Cedars Parkway to south of Braddock Road, at which point it becomes Ashburn Farm Road and continues into Prince William County. Plans exist to connect this roadway to the Route 234 bypass in Prince William County to form the Bi-County Parkway. This multi-county connection is recognized by the Commonwealth of Virginia as a Corridor of Statewide Significance.



Transit and TDM Facts

- **20+** Park & Ride Lots in the County with over 4,000 spaces
- **8** Metro Connection Routes serving the Orange and Silver Lines
- Loudoun County Transit offers **15** Local Bus Routes, serving **303** bus stops, with annual ridership of approximately **489,000** in FY 2016
- **4** Long Haul Commuter Service Routes to Arlington and Downtown DC
- Commuter bus ridership has grown every year since Loudoun introduced its own service in 2003
- Silver Line Metrorail will expand into Loudoun County in 2020 with 3 new stations (Route 772, Route 606 & Dulles Airport)

Intracounty Circulation

Amongst the key commuter corridors are the network of more localized arterial, collector, and local roads that facilitate circulation and connectivity throughout the County. These roadways are crucial to moving residents between local activity centers without adding additional travel to the more regional roadways noted above. The previously adopted CTP incorporates a robust network of planned connections that the County strives to complete. This network will be evaluated and planned to best serve future travel demands.

Transit and Travel Demand Management (TDM)

Some commuters prefer to avoid driving and are instead choosing transit as a part of their daily commute. Loudoun County Commuter Bus service provides a reliable trip for multiple destinations in Washington, DC and Arlington, VA, traveling along the Dulles Greenway, Dulles Toll Road HOV lane, Dulles Airport Access Road, and dedicated shoulder lanes on the Dulles Connector to I-66, thereby providing a faster trip than driving in a private vehicle. Loudoun County also offers a MetroConnect service providing frequent transit from park and ride lot locations to the Silver Line Metrorail Station at Wiehle Avenue in Reston, and to the Orange Line Metrorail Station at West Falls Church, and other lines via destinations in Washington, D.C. As these alternate modes continue to increase in popularity, it is anticipated that additional commuters will choose to commute via the Silver Line as Metrorail extends into Loudoun County in early 2020, and as the County continues to expand its TDM programs. In addition to transit availability, many employers are offering variations in work schedules such as flex schedules and telecommuting, both of which reduce travel demand during the peak commuting periods.

Policy Topic to Explore:

Potential Future Challenges for Identifying Additional Network Capacity

Studies are underway to identify improvements to major commuter thoroughfares. It will be crucial to consider the outcomes of these studies in the new Plan. Should additional network capacity be identified as a future need, many constraints will need to be considered in identifying opportunities for network growth. Environmental barriers, existing development, future planned land use, and coordination with surrounding jurisdictions may present challenges to transportation improvements. Additionally, in a region with increasing transportation needs, funding is limited and need is great. Consideration of alternative funding sources will be critical.

How will Loudoun's commuters travel in the future?

The way people travel today is evolving. As the number of people demanding to travel increases in the County and throughout the entire DC region, new travel choices will become increasingly attractive to commuters and play a larger role in providing an efficient and dependable transportation system. Interest in varying travel options has been identified through recent surveying with the County. The Loudoun County Survey of Residents (2014) identified the following transportation improvements as priorities among residents:

- Improving and building roads
- Improving pedestrian walkways and bikeways
- Providing or improving commuter bus service to DC and the Pentagon
- Providing or improving local circulator buses to destinations other than Metrorail stations

When considering the Silver Line Metrorail access, respondents expressed desire for increased bus connections, parking, and bicycle storage. Though roadway improvements still prevail due to the auto-oriented nature of existing development, the appetite for evolving transportation solutions is apparent. Population increases and demographic shifts in recent years have contributed to the increased demand for a diversified transportation strategy. As younger residents and employees continue to move into the County, and other new residents relocate from places with more robust transportation options, the demand for transportation choices will continue to grow.

Future Challenges and Opportunities

The development of a new Countywide Transportation Plan provides the opportunity to reflect on the existing transportation system, identify potential improvements, and recognize future challenges and opportunities in the desired plan. The current plan was created with an auto-centric mindset in anticipation of incredible population and employment growth drawn by suburban development. Now that available land for development is diminishing and desired land uses and modes of transportation are moving towards a more urban-styled approach, existing policies will need review to determine how policy can best support the new plan.

A more robust bicycle and pedestrian plan will be a central component of the new effort. It will need to consider new planned activity centers and designs that will attract pedestrians and cyclists to provide greater access in a safe and attractive environment. Street typologies will be reevaluated to balance vehicle throughput and placemaking. Grade-separation and a variety of facilities will be considered to move people using all modes of travel, rather than just private cars.

Meanwhile, studies are underway to identify improvements to major commuter thoroughfares. It will be crucial to incorporate the outcomes of these studies in the new plan. The Plan will also provide an opportunity to identify opportunities to provide better interconnections to and through the County and enhance coordination with surrounding jurisdictions. To facilitate these efforts, regional agencies will be pivotal to the development of more fluid regional connections.

As these transportation policy areas are evaluated, funding, acquisition of right-of-way, and multimodal design will be essential. In a region with increasing transportation needs, funding is limited and need is great, and consideration of alternative funding sources is critical.

With a diverse population and a plethora of transportation needs to address in this new Plan, collaboration between transportation planners, the Board of Supervisors, other County departments, and—most importantly—the public will be vital to developing a plan that provides the best opportunity for continued success.

Policy Topics to Explore:

Potential Challenges to Introducing Transportation Infrastructure not Centered on Driving

With a diverse population and land use types, alternate transportation modes may not be the solution for everyone. To balance a plethora of transportation needs to address in this new Plan, collaboration between transportation planners, the Board of Supervisors, other County departments, and—most importantly—the public will be vital to developing a Plan that provides the best opportunity for continued success.



Sources of Information Used for this Section

[Loudoun County Demographics and Data](#)

[American Community Survey](#)

[2014 Loudoun County Survey of Residents Report of Results](#)

[U.S. Census OnTheMap](#)

[2010 Revised Countywide Transportation Plan](#)

[Silver Line Comprehensive Plan Amendment](#)

[FY2017-FY2022 Transit Development Plan](#)

8. OUR ENVIRONMENTAL, AGRICULTURAL AND CULTURAL HERITAGE

Abundant natural resources and a rich cultural heritage have defined Loudoun County's unique sense of place for more than two and a half centuries. The Blue Ridge Mountains, Broad Run and other major watersheds, forests, rural open spaces, vast stretches of agricultural land, and numerous historical sites are tangible assets that make the County an appealing place to live and work, while contributing directly and indirectly to the Loudoun economy. The County has a history of protecting and preserving the components of its green infrastructure system through policies, regulatory measures, land acquisition, and educational programs. As the County grows in the future, it will be important to understand how green infrastructure will continue to be managed and protected over time.

What is Loudoun County's Green Infrastructure?

Loudoun County defines its green infrastructure system as a "collection of natural, cultural, heritage, environmental, protected, passive, and active resources that [are] integrated in a related system." This is a complex system of interrelated natural and historic features that can be best described as including four main components:

1. **Natural Resource Assets** (rivers, streams, wetlands, water sources, geology, soils, forests, trees, vegetation, and wildlife habitats)
2. **Heritage Resource Assets** (historic and archaeological resources, and scenic areas and corridors)
3. **Open Space Assets** (greenways, trails, parks, recreation, public school sites, open space easements; some are for passive enjoyment and some have active programming)
4. **Complementary Natural Assets** (air quality, dark skies, and the aural environment)

The Value of Green Infrastructure

Green Infrastructure systems provide natural resource value to the Loudoun community, along with many social, economic, and fiscal benefits:

- **Increased Property Values**—open space, greenways, and parks increase property values
- **Natural Stormwater Management**—increasing stormwater storage through protection of natural hydrologic systems results in fiscal savings and reduction of private property loss due to flooding
- **Community Health**—limiting exposure to land and water pollutants increases the health of our community
- **Sense of Place**—protecting historic sites, cultural resources, and the surrounding spaces that provide the context for these special places helps to preserve Loudoun's sense of place and the visual and tangible conservation of its cultural and historic identity
- **Energy Efficiency**—protecting tree canopy and forests reduces the "heat island effect" and results in savings on utility bills
- **Recreation and Active Living**—recreational access to nature through parks, greenways, and trails creates a healthier active environment for residents, and adds value to related recreational businesses
- **Enhancement of Tourism**—protecting natural open spaces and heritage areas adds value to the tourism economy and enhances the value of related businesses
- **Species Diversity**—protecting natural habitat and migration corridors can support plant and animal species diversity and help them thrive

Loudoun's Green Infrastructure At-A-Glance



30,375 acres
of floodplain



39 miles
of Potomac River waterfront



8,143 acres
of parkland

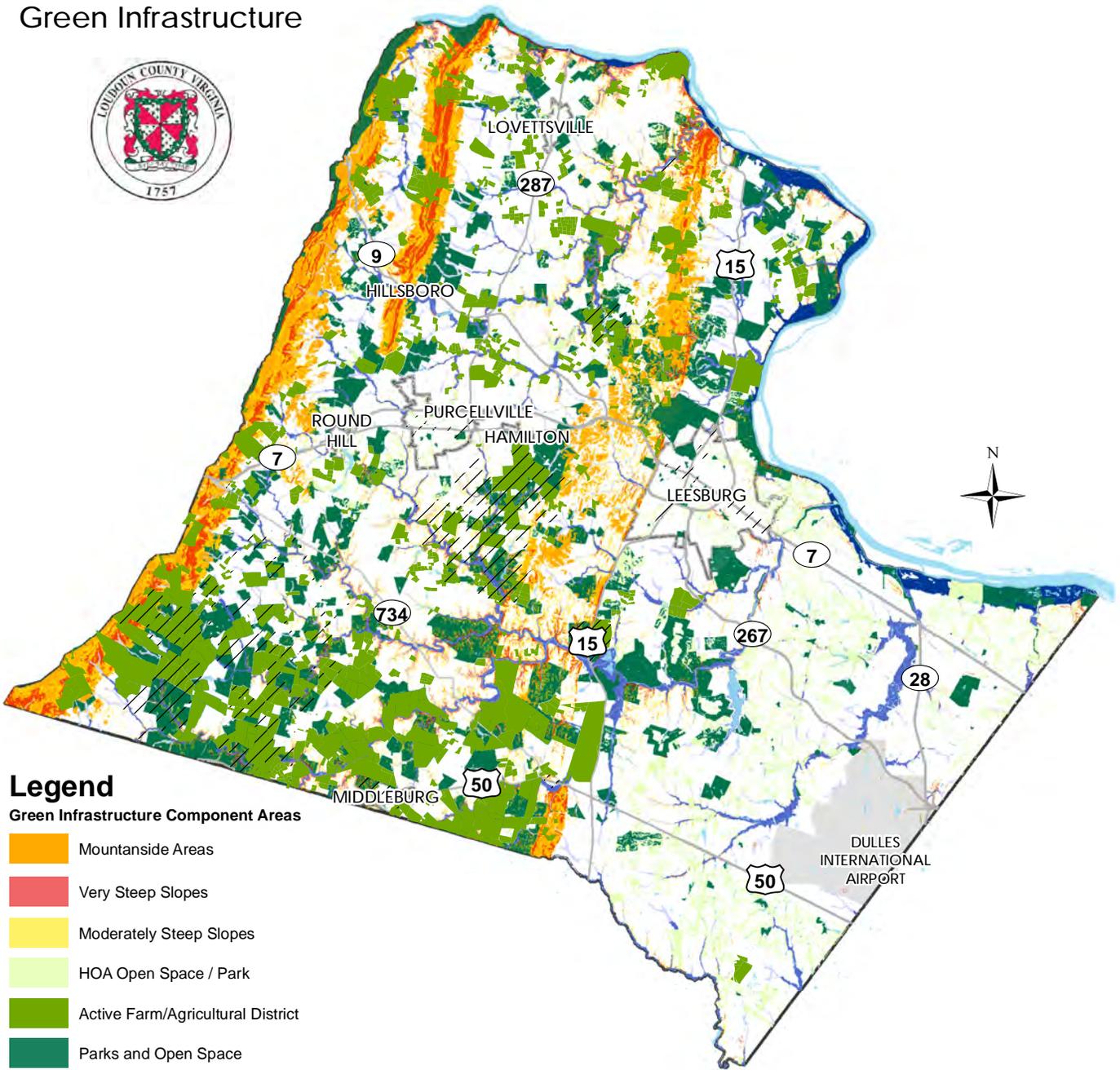


43,528 acres
of active farms and
agricultural districts



**9 historic
districts**
for historic and cultural
conservation areas, historic
sites, and historic roadways

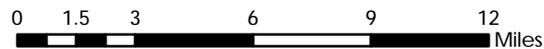
Loudoun County Key Components of Green Infrastructure



Legend

Green Infrastructure Component Areas

- Mountanside Areas
- Very Steep Slopes
- Moderately Steep Slopes
- HOA Open Space / Park
- Active Farm/Agricultural District
- Parks and Open Space
- Floodplain
- Water
- Historic Districts
- Major Roads
- Town Boundaries
- County Boundary



Every reasonable effort has been made to ensure the accuracy of this map, but reliance upon it is at the risk of the user.

February 9, 2017

How are Loudoun's natural assets managed?

Within the County's green infrastructure system, Natural Resource Assets, including critical water and land components, make up Loudoun's ecosystems. The County protects these assets using local preservation approaches that supplement state and federal laws. This includes restoration of assets to their natural state wherever practical. There are also numerous local partner organizations that assist with protecting Loudoun's natural assets, such as the Loudoun County Preservation and Conservation Coalition which serves as an umbrella group for over 30 such organizations.

Water Resources

Loudoun County's water resources are the largest component of the County's green infrastructure network. On the surface these resources include rivers, streams, wetlands, reservoirs, lakes, and ponds that collect rainwater and support diverse plant and wildlife ecosystems. These waters flow into one of the County's 17 watersheds, which comprise Loudoun's portion of the Potomac River Basin. Water resources below the ground include aquifers, springs, and wells that provide many rural residents with their potable water. Loudoun Water customers receive drinking water from the Potomac River and Goose Creek.

Protecting these water resources has been an important goal of the County for some time. These water resources and the lands surrounding them are valued as an important backdrop to the County's landscape and rural character. They provide numerous recreational opportunities for residents and visitors, protection against erosion and flooding, and diverse ecosystems for wildlife and plants. The State of Virginia has designated segments of Catoctin Creek and all of Goose Creek within the County as "Scenic Rivers" to maintain their scenic value. The Potomac River is designated as an "American Heritage River," by a federal program that can open the door to more resources for protecting the Potomac.

Natural Lands Resources

Loudoun County's natural lands are comprised of environmentally sensitive areas, productive lands, and natural forests and habitat found throughout the County, and focused within the rural portions of Loudoun.

Environmentally Sensitive Lands

The County's environmentally sensitive lands present a unique character and geography that are also highly sensitive to land disturbance and construction. Chief among them are floodplains, wetlands, areas of steep slopes, mountainsides, and the karst limestone area.

Floodplains support the County's water resources by providing a natural system that manages stormwater buildup during heavy rain events. They serve both natural systems through the conveyance of stormwater and protect the health and safety of Loudoun's citizens by reducing stormwater hazards.

Protections for steep slopes and mountainsides are valuable for maintaining the integrity of soils and land beneath the surface, managing the flows of the County's headwaters, and for serving as groundwater recharge areas. Steep slopes are defined as having a slope of 15% or greater and occupy approximately 53,000 total acres throughout Loudoun. Most are located along the easternmost front of the Blue Ridge Mountains comprised of the Bull Run Mountain along the western border of Loudoun, and Short Hill Mountain to the northeast.

Loudoun is also home to karst geology where limestone rock exists approximately one mile either side of State Route 15 from south of Leesburg north to the Potomac River. This landform causes constraints on development, as it is porous and forms natural conduits to the larger groundwater system of the County. This makes the land use above the limestone directly relevant to preserving the County's water quality. The rock can be susceptible to developing sinkholes.

Water Resources

Challenges to assets:

- nearby land disturbances
- pollution from upstream and adjacent land uses
- Failing septic and wastewater treatment systems

Tools used in Loudoun County to protect assets:

- U.S. Clean Water Act standards
- Watershed Management Plans
- Regulation of protected buffers
- Acquisition of stream corridors
- Open space dedications



Environmentally Sensitive Lands

Challenges to asset:

- nearby land disturbances
- soil slippage
- loss of scenic quality and mountain views

Tools used in Loudoun County to protect assets:

- Floodplain Overlay District
- FEMA Floodplain Maps
- Steep slope performance standards for new development
- Mountainside Development Overlay Zoning District
- Limestone Overlay District

Productive Lands

Challenges to assets:

- Adjacent development that is incompatible
- Improper soil management
- Conversion of land to development

Tools used in Loudoun County to protect assets:

- Agricultural Zoning Districts
- Mineral Resources – Heavy Industry Zoning District

Forest, Tree Canopy, and Habitat Areas

Challenges to asset:

- Deforestation
- Hazards such as insect outbreaks, diseases, severe weather, and wildfires

Tools used in Loudoun County to protect assets:

- Performance standards for landscape plantings
- Requirements for tree conservation and landscaping plans for new developments
- Tree protections standards that protect trees during construction
- Forest management plans
- Reforestation standards

Productive Lands

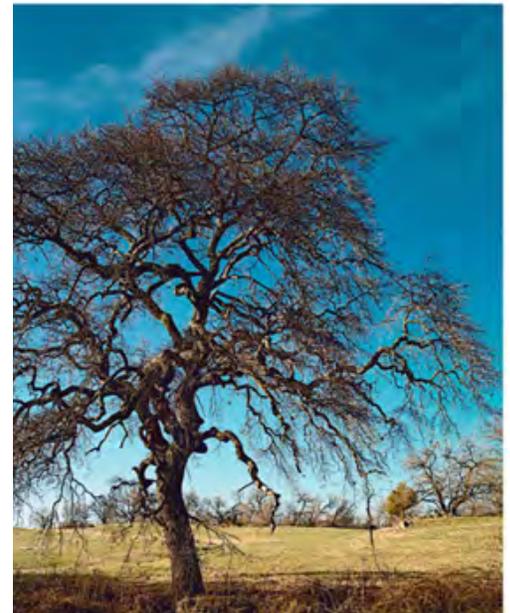
Parts of Loudoun County continue to produce economic value through either extraction of natural resources or through agricultural use. These activities are a contributing part of the County's green infrastructure network.

Prime agricultural soils account for approximately 19% of Loudoun County's soils. These soils are found in areas that are nearly level, well drained, and well irrigated—the same attributes that make land conducive to development. Loudoun's best agricultural soils are generally located in the Rural Policy Area. Prime agricultural lands that have been converted to a different use are difficult to reclaim. The County has emphasized the rural economy as an important part of its overall economic health, and this area is an important draw for residents from throughout the County and tourists alike, making prime farmland and agricultural soils especially valuable.

Diabase, or trap rock, is a significant mineral resource found in Loudoun south of Leesburg and near Washington Dulles International Airport. It is a hard, brittle rock actively mined for use as a base component for construction of roads and for building foundations.

Forest, Tree Canopy, and Habitat Areas

The forest ecosystems in Loudoun County serve as a green infrastructure resource that improves the lives of residents and preserves habitat for a variety of species. Some of the state's best hardwood stands for lumber and veneer production are located in Loudoun. These forest ecosystems provide multiple benefits to Loudoun residents. Forests protect air and water quality, provide plant and wildlife habitats, serve as buffers between communities, conserve energy through natural shading, reduce stormwater runoff, and can increase property values. Federally designated threatened and endangered species habitat in Loudoun County includes the bald eagle (recovery), green floater clam (under review), and the northern long-eared bat (threatened). There are also state designated species such as the wood turtle (threatened) and the aforementioned green floater clam.



The First place photo in the 2015 Arbor Day Photo Contest is of a Black Gum Tree in a field west of the wastewater Treatment Plant in Middleburg.
Photo by Stephen H. Wade

Preservation of existing trees and forests in the eastern portions of the County help to make attractive places in which to live, work, and visit. Special tree designations, such as National and State Champion Trees, State Big Trees, and Specimen Trees, help to highlight the value of trees in rural and developing areas.

Policy Topic to Explore:

Adequacy of Current Natural Resource Protection Tools

The 2001 Revised General Plan set out strong policy guidance for the protection of the County's natural resource assets through regulatory means, which were enacted for a time, but were ultimately removed from the County's code. There are many other tools being used to protect the County's resources, and one question Envision Loudoun will answer is whether the current set of tools is successful in achieving the County's preservation, conservation, and restoration goals.

What are Loudoun's open space assets and how are they managed?

Best described as the places where nature meets the built environment, Loudoun's open space assets enhance the vibrancy of communities by providing public interaction with nature and opportunities for outdoor activity. The County's sense of place and community attractiveness is in large part due to the protection of open spaces that include greenways and trails, parks and recreation, public school sites, and open space easements. Property owners have voluntarily put more than 70,000 acres in private conservation easements, and another 3,600 acres of open land is owned by Homeowners Associations.

Open space assets may be held in either private or public ownership or a combination thereof. Many complement and protect natural features like rivers, streams, and wetlands, others protect historic locations or key agricultural areas, while others provide recreational and educational opportunities in the form of parks and nature preserves. Regulation of protective buffers, donation of open-space easements, and performance standards are used by the County and individual property-owners to manage these elements.

Cluster Development design is a method of land development available to landowners that conserves Loudoun's green infrastructure elements located on a given site by grouping homes on small lots on a portion of the property at full density while providing large areas of usable open space on the remainder. This approach results in clustered, compact development patterns that promote a variety of nonresidential and residential building types, and can support protection of a contiguous green infrastructure network. Fundamental to the cluster development method is flexibility in setbacks, lot patterns, and lot sizes. This type of development also reduces road and utility costs due to the clustered pattern of development.

Policy Topic to Explore:

Exploring Conservation Design Solutions

The cluster development option is available to property owners interested in using alternative development plans to protect open space through clustering small lot development and saving large areas of open space. This process does not always include the protection of critical green infrastructure components on the site - a design approach referred to as conservation design. It may be worth exploring potential solutions for making this design approach more attractive to future developers.

Open Space Assets

- Greenways and Trails
- Parks, Recreation, and School Sites
- Open Spaces

Tools used in Loudoun County to protect assets:

- Regulation of protective buffers
- Donation of open space easements
- Open space performance standards for new development

Challenges to asset:

- Not all privately owned open space is permanently preserved

Cultural and Historic Resource Assets

- Historic and Archaeological Sites
- Scenic Areas and Corridors
- Historic battlefield sites

Challenges to asset:

- Degradation of historic structures
- Razing of structures or loss of historic sites to new development
- Changes in character of surrounding environment
- Loss of archaeological sites to development
- Insufficient public awareness/ education

Tools used in Loudoun County to protect assets:

- County Administered Historic Districts (9)
- Loudoun County Historic Preservation Plan
- Community Education
- Heritage Tourism
- National Register of Historic Places
- Phase 1 Survey for Residential Developments to Identify Historic and Cultural Resources
- Proffers

What are Loudoun County's heritage resource areas, and how are they protected?

Loudoun has a greater variety of documented heritage resources than any other County in Virginia. Loudoun County's rich geologic and environmental resources provided natural prehistoric settlement areas, particularly water courses and upland areas. The ridges and valleys of the County have been traversed for thousands of years, first by Native Americans traveling between winter and summer camps and later by settlers traveling north and south along the Old Carolina Road and east and west along the earliest turnpikes during the western frontier movement. Vestiges of these population movements and settlement areas remain, as do the natural resources that first attracted humans to the area. Heritage structures and sites comprise a valuable resource that has enormous cultural, aesthetic, and economic value to the residents of the County. Along with the rural landscape in which many of them are set, historic sites represent the County's largest tourist attraction.

Loudoun County's Special Places

- 5,087 cultural resources surveyed in Loudoun
- 300 miles of unpaved rural roads
- 213 African American heritage properties
- Journey Through Hallowed Ground Civil War battlefield sites
- Washington & Old Dominion Railroad Regional Park
- Scenic Byways and Scenic Rivers
- National Historic Landmarks (5)
- National Register Historic Places (88, including 13 Districts)

Policy Topic to Explore:

Tools to Protect Special Cultural and Historic Places

Loudoun County has used the proffer negotiation process (money voluntarily pledged in a document signed by the owner of property subject to rezoning) to protect historic and cultural sites and places, as well as the list of tools shown to the left. As new development occurs, the Envision Loudoun process can evaluate whether additional local tools are needed to preserve and protect the County's unique heritage sites.

What environmental elements are complementary to Loudoun County's Green Infrastructure?

The Revised General Plan lists a set of complementary issues that are important to consider to preserve Loudoun County residents' high quality of life. These are air quality, lighting and the night sky, and aural environment.

Air quality is impacted by air pollution from various sources of emissions. By its very nature, air quality requires regional approaches. Loudoun County cooperates with the Metropolitan Washington Council of Governments Air Quality Committee (MWAQC) to develop air quality plans for the region that fold into State Implementation Plans – a requirement of the Clean Air Act. When an area is not meeting the nationwide standard for levels of a pollutant, it is said to be in nonattainment. Loudoun is part of a nonattainment area for Ground Level Ozone. MWAQC has produced regional plans to attempt to correct this using measures like emissions testing.

The natural rustic character of Loudoun County, can be harmed by light pollution caused by excessive and improper lighting. The County has standards for lighting of public and private developments to address nuisances associated with light pollution.

The aural environment, or sound, is another important part of quality of life. Loudoun County's efforts to protect existing and future residents from increased levels of environmental noise have focused primarily on airport noise surrounding Washington Dulles International Airport and Leesburg Executive Airport, and highway noise adjacent to arterial and major collector roadways.

Legal Authority Granted to Loudoun County by Virginia

Local governments in Virginia are bound by a legal concept known as Dillon's Rule whereby local governments only have powers specifically granted by the general assembly. This means that in protecting and promoting the natural and historical heritage and special places within the County, the County is bound by the actions of the Virginia General Assembly. New tools may become available through enabling legislation over the life of the Comprehensive Plan and others may become unavailable. It will be essential to plan with the current toolkit available to Loudoun, but to regularly monitor statewide changes.



Waterford, VA

Sources of Informations Used in this Section

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[Loudoun County Heritage Preservation Plan \(2003\)](#)

[Loudoun County Revised General Plan \(Adopted 1991, Revised 2001, Amended through 2013\)](#)

[Loudoun County Revised Zoning Ordinance \(1993\)](#)

[Loudoun Water: Central System Water Quality Annual Report for the Year Ending 2015](#)

[The Rural Road Network of Loudoun County – Loudoun County Preservation and Conservation Coalition Rural Roads Committee \(2013\)](#)

[US EPA Green Book National Area and County-Level Multi-Pollutant Information](#)

[Virginia Cultural Resource Information System](#)

[Virginia Department of Transportation Rural Rustic Road Program Manual \(2014\)](#)

[Washington & Old Dominion \(W&OD\) Trail Amenities Crowd-Sourced Map](#)

9. OUR LIFESTYLES

Loudoun County prides itself on being a place “where tradition meets innovation.” Its setting of rural landscapes, historic towns, and thriving new suburban and urban development offers young families, professionals, and retirees with the amenities necessary to live a high quality rural, small town or suburban lifestyle. The County’s high rate of growth - particularly residential growth - and business investment over the last several decades is tied to the quality of life offered in Loudoun County. Put simply, Loudoun County is a highly desirable place to live. It is important to protect those aspects of the County that make it such a great place to call home, while also addressing current and future growth opportunities and challenges.

What attracts people and businesses to Loudoun County?

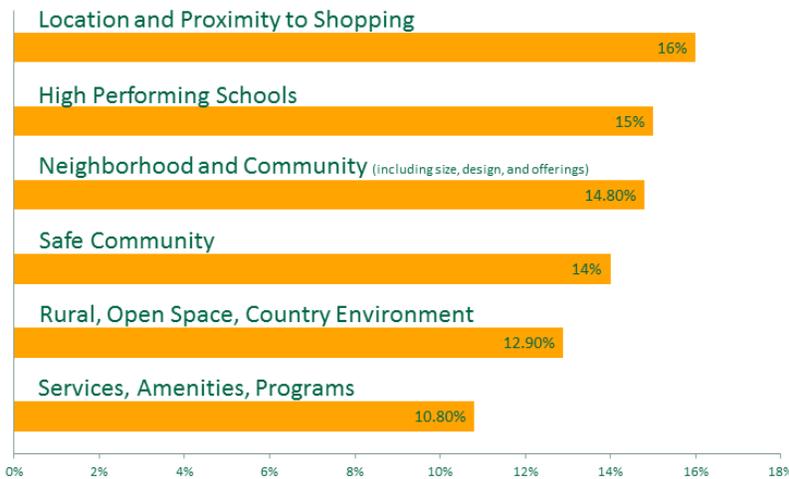
Loudoun County offers a unique blend of amenities in the DC region – high quality developments, rural heritage, tourism and lifestyle assets, excellent public schools, 21st century jobs, and exemplary services and amenities.

An Outstanding Quality of Life

A biennial Loudoun County citizen survey conducted in 2014 asked respondents what single thing they liked best about Loudoun. The results of this survey demonstrated that there are a broad range of reasons why people love their County. Over the years, the quality of life in Loudoun has been improving according to its residents, and they feel like they receive a good value for their taxes.

What single thing do you like best about Loudoun County?

(2014 Citizens Survey)



Residents in Dulles, Ashburn, Potomac, and Sterling communities also shared their opinions about their local communities between 2008 and 2015 as part of community outreach activities in these areas. These participants from the Suburban Policy Area identified the following reasons for why Loudoun is a great place to live.

- Sense of community
- Aesthetically appealing community
- High performing schools
- Quality of public facilities, parks, and trails
- Natural environment and ample open space
- Businesses eager to invest in the community
- Proximity to work, services, and shopping
- County events
- Low crime rate / public safety
- Quality of roads

Just a Few of Loudoun County's Achievements

• **#1 in America in business investment** for counties of our size - International Economic Development Council

• **Highest median household income in the nation** three years in a row for jurisdictions with a population of 65,000 or higher

• **3rd highest job growth in the nation** - U.S. Bureau of Labor Statistics

• **#1 in Virginia for business investment** for two years in a row - Smart Asset

• **70% of the world's internet traffic passes through Loudoun data centers every day**

• **More wineries and breweries than any other county in Virginia**

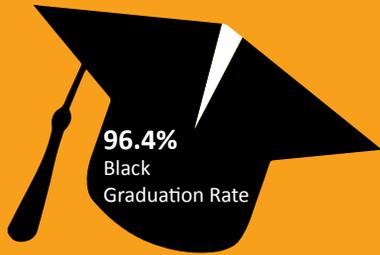
• **#1 in Virginia in grape-growing, bee farms, and honey sales**

• **Winner of the 2016 Certificate of Achievement Award** - International City/County Management Association

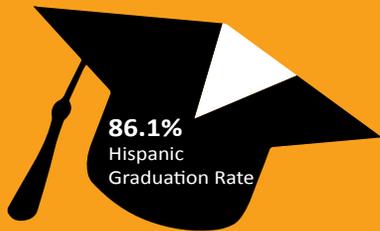
In 2016, Loudoun County Public Schools had...



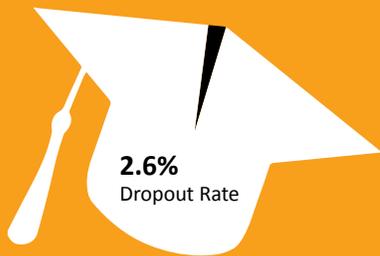
Compared to 91.3% statewide



Compared to 88.3% statewide



Compared to 82.8% statewide



Compared to 5.3% statewide



Compared to 51.7% statewide

An Environment of Educational Experience

Loudoun County public schools consistently excel when compared to other school districts in the Commonwealth, and are an important attraction for potential residents and workers looking to relocate.

High school graduates and workers have many options within Loudoun County to pursue advanced degrees. These higher education institutions play a significant role in training the County's workforce and advance economic development potential in Loudoun. Northern Virginia Community College provides necessary training for local industries. George Mason University collocates with a community college site, and George Washington University operates the Virginia Science and Technology Campus, helping to produce an educated workforce in the area and providing access to academic thought leaders.

Centers of Higher Education in Loudoun County include:

- The Art Institute of Washington-Northern Virginia (branch of The Art Institute of Atlanta)
- Northern Virginia Community College - Loudoun Campus
- George Mason University - Loudoun Campus
- Patrick Henry College
- The George Washington University - Virginia Science and Technology Campus
- Shenandoah University - Northern Virginia Campus
- Strayer University - Loudoun Campus



Unique Destinations and Events

Loudoun County offers a variety of destinations and events that attract both residents and visitors from all over the U.S. Many of these are focused on the food, wine, brews, and spirits produced right in the County, and others celebrate Loudoun's agricultural heritage and historic attractions. The County hosts numerous annual events, festivals, and equestrian events throughout the year. The County's proximity to Washington, DC and Dulles International Airport also helps to draw many national and international conferences to the County.

Opportunities to Play and Connect with Nature

Loudoun residents have direct access to a plethora of outdoor recreational activities and sporting events. With the Blue Ridge Mountains as its backdrop and accessibility to the Appalachian Trail and Potomac and Shenandoah Rivers, adventure seekers in Loudoun can hike, bike, ride a horse, canoe, zipline, and kayak.

Called the “skinniest park in Virginia,” the 45-mile, multi-use Washington and Old Dominion Rail Trail connects Purcellville in Loudoun to Arlington, Virginia, as well as other trails that ultimately lead to Washington, DC. The County is also home to 35 sporting venues and offers several mature sports destinations and sporting events, including the Babe Ruth World Series and the PGA Senior Golf Tour. The County provides a full range of parks, recreational facilities, and programming to its residents, including regional parks and recreation centers that account for one million visits annually.

Specifically, Loudoun County Department of Parks, Recreation & Community Services, provides its residents with...

- 1700** acres of open space
- 60** miles of trails
- 200** athletic fields
- 27** parks
- 18** playgrounds
- 10** community centers
- 6** sports complexes
- 4** misc. sites and centers
- 3** adult daycare centers

There's a lot going on in Loudoun County...

Nearly **50** vineyards and related businesses



18 breweries and spirit shops



24 historic attractions and museums



10 annual events and festivals



10 farmers markets



Loudoun County is a strong economic competitor

one of the most highly educated populations in the nation

In 2015, 60.2% of citizens 25 and older have earned a minimum of a Bachelor's Degree

highest share of job growth in region

11.1 Regional share of job growth from 1990-2010

home to 30% of world's data centers

every dollar on public services spent on data centers generates \$9.50 in tax revenue

[An Attractive Environment for New Businesses](#)

Over the last three decades, Loudoun's economy has experienced significant growth. As more people took up residence in Loudoun County, with high incomes and significant spending power, the retail businesses followed. Over the last fifteen years, the County's inventory of retail space went from less than 1 million to nearly 15 million square feet.

From 1990-2010, Loudoun County achieved 2nd place in the Metro Region in terms of overall job growth behind Fairfax County. Forty percent of the jobs averaged during that time period were for office-using businesses. Many industries have located in Loudoun to take advantage of its access to the County's highly educated workforce, to transportation and particularly Dulles International Airport, and to the nation's capital. The County also has a strong entrepreneurial culture, as illustrated by small businesses comprising 80% of all businesses in the County.

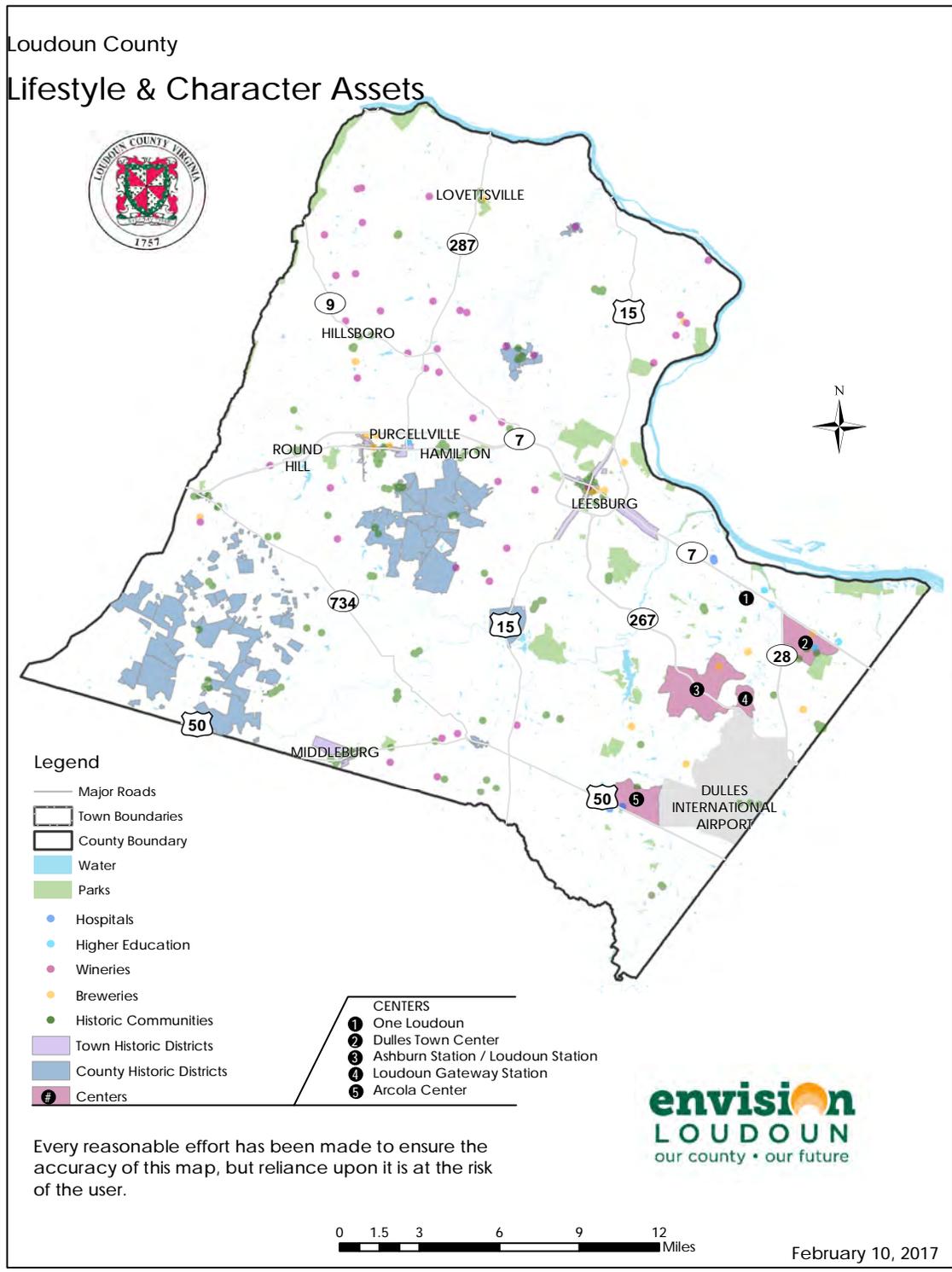
Competition for top talent is fierce and businesses locate where there is a high quality workforce to maintain their competitive edge. Businesses look at a variety of factors when making relocations decisions, such as available sites, local tax rates, access to a skilled workforce, and cost of doing business.

Depending upon the industry being targeted, the lifestyle provided by a community can be a determining factor for relocation. Factors such as affordable workforce housing, transportation accessibility for workers, quality of schools, and community amenities can play a significant role in determining relocation sites. This helps maintain a local labor pool and makes the employer more attractive when recruiting talent from afar. The quality of life in Loudoun has been a significant driver of employment growth in the County. Maintaining a competitive edge and providing the types of environments and amenities that targeted industries desire is Loudoun's challenge for the future.



What areas contribute to the lifestyle of residents in the County?

Loudoun is a tapestry of neighborhoods, centers, downtowns, recreational areas, farms, and rural destinations tied together through a network of roads, sidewalks, greenways, and trails. The suburban and rural distinction in Loudoun is an important demarcation of the different lifestyles offered in the County. The suburban areas to the east provide the most variety for shopping, jobs, housing, and entertainment. And the rural areas to the west are home to the County's scenic viewsheds, active farms, farmsteads, and agrotourism businesses including numerous wineries, breweries, and wedding venues.



How have our lifestyles affected County growth patterns?

From Agricultural Hub, to Suburb of DC, to a Growing Metro Community

For more than two centuries, Loudoun's early settlement patterns were largely defined by the needs of farmers and access to markets. Rural roads later became the current Routes 7, 15 and 50, and natural features and waterways necessitated meandering roads and longer travel patterns. With the construction of the Dulles International Airport and the construction of Route 28 in the 1960s, the County became a full-fledged Washington, DC suburb, providing greater access to the capital city and opening up new opportunities for employment. The momentum of these major improvements spurred significant growth that continued to accelerate through the 1990s and 2000s. Strong demand for residential development that took advantage of both the access to DC and the scenic qualities of Loudoun, as well as the construction of a major community infrastructure, led to development of Loudoun's many high quality neighborhoods. Retail developments to serve these residents followed first as small neighborhood shopping centers, later evolving to larger community and regional destinations.

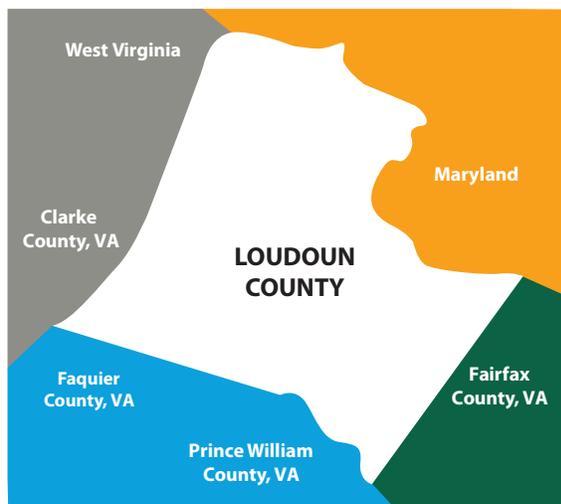
During this time, the community created a vision through the Loudoun County General Plan to focus investment and development in the eastern portions of the County closest to the regional market draw by preserving the rural and agricultural character of western Loudoun. Today, Loudoun is not just a bedroom community of DC, but is a full-service community that offers a considerable share of regional employment that continues to expand.

Commuting Patterns Illustrate Draw to DC and Demand for Regional Travel Options

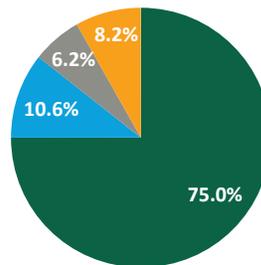
In 2015, 47.4% of workers age 16 and up living in Loudoun County were employed within the County. Many of the 52.5% of workers employed outside the County and workers traveling through the County contribute to peak period trips as they commute to and from work.

While there are people traveling throughout the region, the southeast border with Fairfax County (leading most directly to Washington, DC) sees the majority of these trips. Trips across this border account for three quarters of all trips out of Loudoun in the morning and into Loudoun in the evening, as well as half of trips into Loudoun in the morning and out of Loudoun in the evening. Others travel to other cities and counties in Virginia, Maryland, and West Virginia.

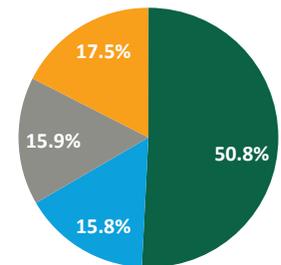
Direction of Peak Period Trips To and From Loudoun (2015)



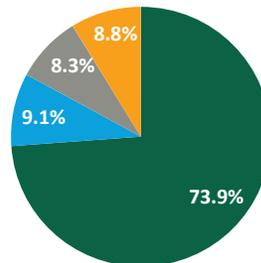
Morning, Leaving Loudoun



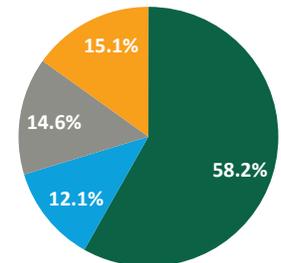
Morning, Entering Loudoun



Evening, Entering Loudoun



Evening, Leaving Loudoun



Most Residents Currently Travel by Car

U.S. Census American Community Survey estimates for 2010-2014 show that the majority of Loudoun residents drove to work. A small fraction telecommuted. Telecommuting in particular is a trend that can change work patterns. In the 2014 Loudoun County Survey of Residents, among residents with at least one full-time employed person in the household, over a third of respondents reported living in a household where someone telecommuted at least once a week. Telecommuting was defined by the survey as working remotely from home or from a telecommuting center away from the main office. A small minority took the bus, walked or biked to work. Understanding these commuting patterns helps to inform priorities for transportation investments.

According to a May 2015 report, 93% of Loudoun County's public transit users are satisfied with the current bus service. The average Loudoun commuter bus rider: drove to the park and ride lot to access the bus, is typically traveling to work in the DC area, and walked to their final destination after departing the bus. These bus commuters were split on the likelihood that they will consider using Metrorail in the future, and those that are more satisfied with the County's current bus service are less likely to consider using Metrorail.

What are the biggest challenges facing our quality of life?

Respondents to the 2014 Loudoun County Survey of Residents stated that the biggest challenges facing Loudoun centered on traffic, growth and development, and schools. Community outreach efforts for Dulles, Ashburn, and Potomac/Sterling reveal a desire for greater connectivity when walking or cycling between destinations, centralized retail hubs, greater transit service, and better proximity to jobs.

Another survey of residents conducted by Loudoun's Economic Development Advisory Commission identified the desire for more entertainment options and a more walkable community as the top two additions to the County that would make it a more popular destination. This survey also identified housing issues including a desire for affordability and density preferred by over half of survey respondents.

These findings suggest that while Loudoun has successfully produced desired rural and suburban environments, the preferences of at least some residents are shifting toward walkable communities that provide better access to entertainment, dining, and shopping options. These preferences suggest that there is latent demand for places to work and live in Loudoun that provide a mix of uses in close proximity.



How Loudoun Transit Commuters Get to Work:



*Of Loudoun
residents who
commuted by
bus...*

91%

Drove to a park and ride lot
to access bus transit

60%

Took the bus to Washington
DC

81%

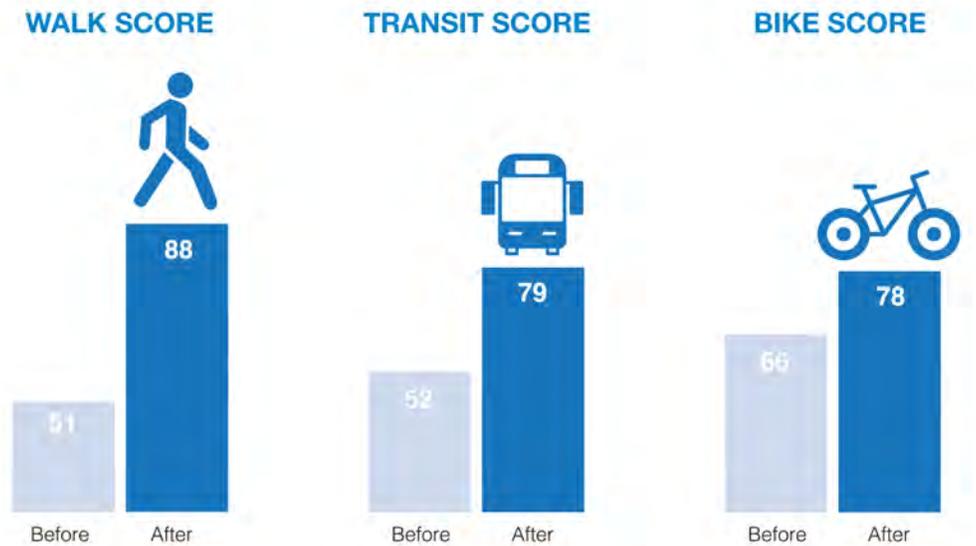
Walked to their final
destination after departing
the bus

National Trends Show Changing Lifestyle Preferences

National trends mirror Loudoun’s survey findings as it relates to work settings. A survey completed by the National Association of Industrial and Office Properties (NAIOP) found that office tenants preferred “vibrant” suburban centers to traditional single use suburban office centers, and that these vibrant centers were outperforming traditional office centers. Vibrant centers were defined by having successful live-work-play environments in the form of compact and walkable centers with a mix of employment, shopping, and housing uses.

Smart Growth America surveyed several hundred major companies that relocated in the 2010s and computed index scores out of 100 for walkability, transit, and bicycle infrastructure for the original business site and the new location. All indices were higher in the new locations, suggesting that corporate America is moving from the traditional suburban business park to walkable mixed use centers.

Scores for Character of New and Old Business Sites After Corporate Relocations



“Core Values: Why American Companies are Moving Downtown.” Smart Growth America

These changing preferences apply to where and how we choose to live. A national study of Generation Y/Millennial housing preferences by the Urban Land Institute found that 50 percent of the generation was renting (60% of that segment was renting apartments or townhomes), and that nearly 2/3 of those surveyed were satisfied with being renters. When selecting neighborhoods, three factors were much more likely to be listed among their top concerns: cost of housing, neighborhood safety, and proximity to work. Nationally, this generation is 78.6 million members strong – the largest generation in the US, so their preferences will have a major impact on housing demand.

Taken together, the evolving preferences of some businesses and of the largest employed generation are pointing toward demand for more choices for where they work, live, and play. New options for a more walkable environment that integrates land uses and creates a more connected environment could complement the suburban and rural lifestyle options provided in Loudoun today.

The County is creating the building blocks for this lifestyle with the two new Silver Line Metrorail stations and the potential for more dense and mixed developments surrounding the stations. The area around the two stations, named Ashburn and Loudoun Gateway, will likely change, welcoming in new denser development.

Policy Topic to Explore:

Adapting to Changing Resident and Business Preferences

Development within Loudoun has been guided now for decades by policies that support suburban and rural lifestyles. These policies are highly supported by Loudoun citizens. As lifestyle preferences change, the County will need to determine its vision for addressing these changing demands, while also preserving what is best about Loudoun.

Sources of Information Used in this Section

[2014 Loudoun County Survey of Residents Report of Results](#)

[American Community Survey](#)

[Ashburn Community Outreach Project](#)

[Commuter Connections – State of the Commute Survey 2016](#)

[Core Values: Why American Companies are Moving Downtown](#)

[Dulles Community Outreach Project Final Report](#)

[Gen Y and Housing: What They Want and Where They Want it](#)

[Loudoun County Department of Parks, Recreation & Community Services Activity Guide](#)

[Loudoun County Public Schools](#)

[Loudoun County Transit O & D Study Summary Report](#)

[Market and Fiscal Impact Analysis of the Phase 2 Metrorail Extension to Loudoun County](#)

[Nighttime Economy Ad-Hoc Committee Report](#)

[Parks, Recreation, and Community Services Strategic Plan 2016-18](#)

[Preferred Office Locations - National Association of Industrial and Office Property Research Foundations](#)

[Results Report for the Potomac and Sterling Communities](#)

[Retail, Entertainment & Culture Cluster Study](#)

[U.S. Census OnTheMap](#)

[Visit Loudoun Visitors Guide](#)



10. NEXT STEPS

This Report is the first work product of the Envision Loudoun Comprehensive Planning process. A summary of this report will be provided to the Envision Loudoun Stakeholder Committee at a February 21 meeting and to the Board of Supervisors at a February 23 meeting. It will also be made available for full public viewing on the project website:

www.envision-loudoun.org.

This information, along with the public input provided during the first phase of planning (Phase 1: Foundation) will be used to generate the County's vision for the Plan in Phase 2: Vision, that will ultimately guide development of the new Comprehensive Plan goals and actions.



envision
LOUDOUN
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