DATE: February 26, 2019

TO: Planning Commission

FROM: Alaina D. Ray, AICP, Director, Department of Planning & Zoning
       Dan Galindo, AICP, Community Planning Manager

SUBJECT: February 28, 2019 Planning Commission Work Session

The order of the Loudoun 2040 Comprehensive Plan discussion for the February 28, 2019 Planning Commission (Commission) Work Session is provided below. This packet contains the materials for Items 1, 2, 3 and 5. Staff will endeavor to provide Chapter 4 in a supplemental on Wednesday but may only be able to bring printed copies to the work session.

1. Final review of Chapter 1: Introduction
2. Final review of Chapter 2: Land Use
   a. Quality Development
   b. Infill & Redevelopment
   c. Urban Policy Area
   d. Suburban Policy Area
   e. Transition Policy Area
   f. Rural Policy Area
   g. Towns & JLMAs
3. Final review of Appendix
4. Final review of Chapter 4: Housing
5. Review of Glossary

Expectations for Upcoming Meetings
The February 28, 2019 Commission Work Session should be the last opportunity for the Commission to direct staff to make any significant changes to the Draft Loudoun 2040 Comprehensive Plan. Ideally, a clean (or nearly clean) Draft Plan will be provided for the Commission’s March 12 Work Session. On March 12, it is anticipated that the Planning Commission will provide a “soft recommendation” to the Board of Supervisors that includes the March 12 version of the Draft Loudoun 2040 Comprehensive Plan, as well as any overarching comments, concerns, or recommendations the Commission feels the Board should consider or
be aware of. This will be transmitted to the Board as a “soft recommendation” so as not to commence the Code of Virginia’s 90-day review period that begins once the Plan is certified by the Commission.

Instead at the Commission’s regular Public Hearing meeting on March 26, it is anticipated that the Planning Commission will vote on a Resolution that will certify the March 12 version of the Loudoun 2040 Comprehensive Plan as the Commission’s official recommendation to the Board. This will be the official commencement of the Board’s 90-day review period, at the end of which the Board must adopt, adopt with revisions, or remand the Plan back to the Planning Commission for further review. It should be noted that the Board will not begin Work Sessions on the Plan until the Planning Commission has certified the document. While the draft Plan will be presented to the Board at its March 21 Business Meeting and the Fiscal Impact and Travel Demand Model results will be provided to the Board at an Informational Meeting in early April, the Board will not actually conduct straw polls to consider revisions to the Plan until after the Commission’s certification.

Final Review of Chapter 1

At the February 14, 2019 Planning Commission Work Session, staff presented a redlined version of Chapter 1, reflecting comments previously received from Commission members and the STAC for Commission discussion. Staff has since revised this draft chapter per feedback received during the Work Session discussion and provided a final redline draft (Attachment B). Following the February 28 meeting, staff will incorporate any additional feedback from the Commission into the final draft.

Final Review of Chapter 2 & Appendix

At the February 14th and February 23rd Commission Work Sessions, staff presented a redlined version of Chapter 2, reflecting comments previously received from Commission members and the STAC for Commission discussion. Staff has since revised this draft chapter per feedback received during these discussion and provided a final redline draft (Attachment C). New maps and those that have been significantly revised to reflect the Commission’s decisions of the past few months have also been provided for the Commission’s review (Attachment D). All other maps will be provided as part of the final draft. As directed by the Commission, the Place Type Considerations and various Design Guidelines from Chapter 2 have been moved to a new Appendix which is also provided for the Commission’s review (Attachment E). Following the February 28 meeting, staff will incorporate any additional feedback from the Commission on these items into the final draft.

Review of Glossary

The Glossary from the October 23, 2018 draft of the Loudoun 2040 General Plan has been revised and updated with additional terms to reflect the chapter revisions that have occurred. A redline
of the Glossary has been provided for the Commission’s review (Attachment F). Following the February 28 meeting, staff will incorporate the Commission’s feedback into the final draft.

**Although no discussion of the following chapters of the Loudoun 2040 General Plan is anticipated at the February 28 Work Session, staff has also provided the final clean versions incorporating all of the Commission’s desired changes in the packet:

Chapter 3: Natural and Heritage Resources (Attachment G)
Chapter 5: Economic Development (Attachment H)
Chapter 6: Fiscal Management & Public Infrastructure (Attachment I)
Chapter 1 - Introduction

Table of Contents

Purpose and Definition ......................................................................................................... 3
Loudoun County’s Planning Approach ................................................................................. 3
Loudoun County: Trends and Influences............................................................................. 6
Elements of Loudoun 2040................................................................................................. 8
Policy and Regulatory Context......................................................................................... 10
Reference Maps ................................................................................................................ 11
Chapter 1 - Introduction

The *Loudoun 2040 Comprehensive Plan (Loudoun 2040)* is the culmination of a collaborative multiyear effort and an unprecedented public outreach campaign that brought together Loudoun’s citizens, elected and appointed officials, stakeholders, and County staff to create a new comprehensive plan for the County. This planning process, known as *Envision Loudoun*, identified the community’s desires for the future of Loudoun County as they relate to growth management, land use, place types, transportation, natural and heritage resources, community facilities and amenities, economic development, and fiscal management.

**Vision:**

Loudoun County continues to flourish as a prosperous and inclusive community with a well-deserved reputation for great places – natural and built, as well as, historic and new – in a variety of settings. The County will foster economic innovation, fiscal strength, and sustainability.

The Envision Loudoun planning process began with a Charter adopted by the Board of Supervisors in April 2016. The Charter identified key issues to be addressed in the new comprehensive plan: Growth Management, Land Use, Transportation, Natural and Heritage Resources, Community Facilities and Amenities, Economic Development, and Fiscal Management. The Charter called for the formation of a 26-member committee of community stakeholders, convened a staff technical advisory committee from regional public agencies, and set forth a community engagement strategy to allow for multiple opportunities for public outreach throughout the process. To ensure the community was kept informed, a communications plan was deployed that utilized internet, social media, radio advertising, and print materials.

Envision Loudoun proved to be an unprecedented public engagement effort for the County. Between summer 2016 and spring 2018, the stakeholders committee and County staff held over 40 worksessions. The public participated in three sets of public outreach sessions – totaling 17 meetings – each at various locations throughout the county. An Envision Loudoun website was established and kept up-to-date with maps, process updates, and project documents. The website also provided a web interface for citizens to provide input regarding the key issues to be addressed in the new comprehensive plan. All told, approximately 3,000 people participated in the Envision Loudoun process.
**Purpose and Definition**

*Loudoun 2040* includes this *General Plan* and the *Countywide Transportation Plan*, a standalone document developed in close coordination with this plan. *Loudoun 2040* is not a development ordinance, but is instead a “blueprint” policy document that provides guidance for elected officials and other governmental decision-makers as to where and how the community will grow in the long-term.

Comprehensive plans provide an opportunity for communities to think collectively about the future of their community and to develop a shared set of values and strategies intended to achieve a unified vision. They are critical tools for managing growth, the provision of capital facilities, and the fiscal health of communities. They are especially important for high growth communities like Loudoun County, where change can happen quickly, and a comprehensive plan is needed to guide that change. A comprehensive plan is not a static document and, as required by the Commonwealth of Virginia, must be reviewed at least every five years.

**Loudoun County’s Planning Approach**

*Loudoun 2040* builds upon the County’s strong foundation of growth management practices. The Loudoun County Board of Supervisors adopted the County’s first zoning ordinance in 1942 and its first comprehensive plan in 1959. The County’s 1991 General Plan, *Choices and Changes*, was written when the County was largely undeveloped with an abundance of greenfield development opportunity in the eastern part of the County. By 2001, when the *Revised General Plan* was adopted, the County was feeling the effects of a 97 percent population increase since the adoption of *Choices and Changes*.

For decades, the County has supported the protection of its rural and agricultural areas to the west and focused development in suburban areas to the east. The County has accommodated growth near existing infrastructure to support development in a fiscally sound manner, and near Washington Dulles International Airport and Washington, D.C., where the market forces have been strongest for new residential and employment development. Loudoun’s growth management policies have resulted in some of the most highly valued residential communities in the region, while also encouraging new business development.

The framework for land planning in Loudoun County consists of four types of policy areas – Urban, Suburban, Transition, and Rural – and several smaller planning areas designated as Joint Land Management Areas and Rural Villages. These Areas represent distinct planning communities with specific policies, strategies, and actions tailored to address the needs of each area.
CHAPTER 1-4

Urban Policy Areas

The Urban Policy Areas represent a new planning area concept in Loudoun, encompassing approximately 2,600 acres in areas around the Silver Line Metrorail Stations. The two Urban Policy Areas represent major growth opportunities for the County with mixed-use and transit-oriented place types and development intensity not previously contemplated in Loudoun. Loudoun 2040 calls for complete urban communities that accommodate housing, employment, retail, education, and entertainment in close proximity to Metrorail. These areas will facilitate opportunities for significant job creation and expansion of the County’s tax base.

Suburban Policy Area

The 48,000-acre Suburban Policy Area comprises the eastern third of the County and is where most of the residential and commercial growth has occurred since the 1960s. The Suburban Policy Area developed in a traditional suburban pattern with predominantly single-family neighborhoods. From 1990 to 2017, 102,905 housing units were built throughout Loudoun County and over 70 percent of those were built in the Suburban Policy Area. Route 28 and Loudoun County Parkway (Route 607) form the County’s “data center alley,” having evolved into an international leader for global data management, technology, and communications industries. More than 70 percent of all internet traffic is routed through data centers in this policy area. The area around Washington Dulles International Airport is also expected to continue to be a major factor as a key location for industrial uses, airport-related businesses, and data center development.
CHAPTER 1-5

Transition Policy Area

The Transition Policy Area is a 24,000-acre area along the western edge of the Suburban Policy Area and is intended to be visually distinct from the Suburban and Rural Policy Areas. The area is planned for a diversity of clustered housing with limited commercial uses to support residents and some industrial spaces focused on quarry activity and energy infrastructure. Public utilities are available in the Transition Policy Area, though the transportation network is limited in certain places at present time. Large amounts of open space, trails, and parks provide recreational opportunities for residents of the entire County and help to maintain a visual distinction between the more densely populated east and the rural west.

Rural Policy Area

The western 230,000-acre Rural Policy Area comprises nearly two-thirds of Loudoun’s land area and contains twelve historic Rural Villages (see Chapter 2). This area is planned for limited residential development and supports a robust rural economy. *Loudoun 2040* includes policies that protect the landscape, economy, and the existing community character of the Rural Policy Area, emphasizing the preservation of farmland, natural and heritage resources, open space, and vistas that are vital aspects of Loudoun’s identity.

Towns and Joint Land Management Areas

Loudoun County’s seven towns exercise planning and zoning controls within their corporate limits. In addition to the four policy areas, the County has partnered with several of its towns to develop Joint Land Management Areas (JLMA) around the edges of the towns. A JLMA is a planning area where Loudoun and each respective town set the limits for municipal water and sewer extension. These JLMA
planning areas effectively serve as a growth boundary for each town and are intended to manage new growth and expansion outward from the towns.

**Loudoun County: Trends and Influences**

Loudoun County has rapidly transformed from a farming community to one of the fastest growing counties in the nation, ranking fifth in the country for growth between 2000 and 2010. This growth has slowed somewhat as the eastern part of the County has approached build out, but the County’s proximity to Washington, D.C., will continue to drive market demand. *Loudoun 2040* identifies a number of trends and influences, including population diversity, housing affordability, and land availability that will affect future demand for both residential and nonresidential products.

### Loudoun by the Numbers

- **362,400**: Loudoun County’s population.
- **117,100**: Number of households.
- **$125,672**: Median annual household income.
- **39**: Percent of households with annual income above $150,000.
- **3**: Percent of households with annual income below $15,000.
- **35.5**: Loudoun County’s median age.
- **29**: Percent of population under 18 years of age.
- **8**: Percent of population 65 years and older.
- **31**: Percent of population that speaks a language other than English at home.
- **93**: Percent of population 25 years and over graduated from high school.
- **59**: Percent of population with a bachelor’s degree or higher.
- **34**: Average number of minutes it takes commuters to get to work.

*Source: U.S. Census, 2012-2016 American Community Survey 5-Year Estimates*

### People

Loudoun County’s population has risen over the decades as the Washington, D.C., Metropolitan Area has grown and as Loudoun County has captured more of this regional growth. In 1940, the County’s population was just over 20,000 people. Fifty years later, the population had quadrupled, totaling just over 86,000 people in 1990. Since 1990, the population quadrupled again with an estimated 373,000 people in 2016. However, this exponential growth is projected to slow as Loudoun continues to mature, a trend that may already be occurring. From 2000-2010, Loudoun was the 5th fastest growing county in the nation but dropped to the 20th fastest growing county from 2010-2015. Even with this slowdown, Loudoun’s population is projected to increase to almost 489,000 by 2040.¹

As Loudoun’s population has grown, the community has also diversified. Between 2000 and 2016, the percentage of Loudoun’s population identifying as Hispanic or Latino increased from 6.0 percent to 13.7 percent. During the same time period, the percentage of people identifying as Asian

---

¹ U.S. Census, 2012-2016 American Community Survey
grew from 5.6 percent to 18.7 percent. The percentage of residents identifying as Black or African American is also growing, though at a much slower rate, increasing from 7.0 percent to 7.7 percent. Overall, Loudoun’s foreign-born population has increased from 11.3 percent in 2000 to 23.9 percent in 2016. This growth has led to greater diversity in service demands, expanded retail and entertainment opportunities, changes in housing needs, and overall expanded economic growth of the community.

**Housing**

As of 2017, Loudoun ranked number one in the country for the highest median household income for the tenth straight year, yet housing affordability and attainability remain a significant challenge in the County and the region. Limited housing supply and high demand presents difficulties for employers in attracting employees and contributes to workforce instability, especially in lower paying industries.

*Loudoun 2040 seeks to address these competing factors of limited land supply and increasing residential demand by encouraging a greater diversity of housing types, including affordable and workforce housing, near jobs, schools, and transportation facilities.*

Over 82 percent of Loudoun’s existing housing stock consists of traditional suburban single-family detached and single-family attached dwellings. Most of the housing stock is also considered large, with 80 percent of all dwellings containing three or more bedrooms. Conversely, studio and one-bedroom housing make up less than six percent of all housing in Loudoun. National trends show that smaller households, such as aging seniors, couples without children, and single persons, may demand different housing types, public services, and lifestyle options than provided in the past.

There is also a general national trend toward more people living in multigenerational households, where extended family lives together. This trend can be attributed to several factors including housing affordability and cultural traditions as more foreign-born residents settle in the region. Multigenerational households may require different types of housing options, with larger common areas, accessory apartments, in-law suites, or other attributes that help accommodate the needs of multiple generations living together.

The amount of land available for new residential development also affects housing affordability and availability. The Suburban Policy Area, where residential development has been concentrated, is approaching buildout with less than 1,200 undeveloped acres remaining for residential uses. With limited land available for development in the Suburban Policy Area and the County’s desire to protect the character of the Rural Policy Area, *Loudoun 2040* includes increased policy guidance regarding infill development and revitalization of previously developed areas where additional housing may be located in the future.

*Loudoun 2040 seeks to address these competing factors of limited land supply and increasing residential demand by encouraging a greater diversity of housing types, including affordable and workforce housing, near jobs, schools, and transportation facilities.*

---

2 U.S. Census, 2012-2016 American Community Survey
Transit

The County’s connection to the regional Metrorail network through the Silver Line extension signals a new era for Loudoun, with significant impacts on transit options available to Loudoun’s residents, workers, and visitors. Two Metrorail stations in Loudoun provide a gateway to Loudoun County from Washington, D.C., while also providing Loudoun’s residents with an alternative method of commuting to the east. Access to the Silver Line creates the opportunity to develop vibrant, transit-oriented, mixed-use, urban environments around the Metrorail stations, where people can live and work in close proximity to regional transit.

The Washington Dulles International Airport will also continue to serve as a major transportation gateway to the country and the world. It provides a critical economic engine for leisure and business travel as well as cargo transport for the County and the larger Washington, D.C., region. In 2017, 265,025 flights operated out of Washington Dulles International Airport, serving nearly 22,800,000 passengers, including 7,744,586 international travelers. With its close proximity to the Metrorail stations and Urban Policy Areas, Washington Dulles International Airport is well positioned to grow moving into the future, operating currently at approximately one-third of its ultimate capacity.

Economy

The Loudoun 2040 General Plan acknowledges that local, regional, and national economic factors have changed significantly in the last two decades and includes new policies and strategies to continue Loudoun’s remarkable success as an economic leader in the region. Employment in Loudoun County increased nearly 77 percent from 2000 to 2015, adding over 67,000 new jobs in a 15-year period. Momentum in Loudoun’s job base is influenced by activity in the surrounding region, proximity to Washington Dulles International Airport, a growing information and communications sector, agritourism, and a robust increase in households requiring a wide array of services.

Loudoun’s economy continues to diversify and Loudoun 2040 provides growth opportunities for this evolving economy. Employment uses adjacent to the future Metrorail Stations will also present new opportunities to attract employers who seek to locate in dynamic, urban communities with access to mass transit.

Elements of Loudoun 2040

The Loudoun 2040 General Plan begins with an overarching vision and goals; then sets forth policies, strategies, and actions for five elements: Quality Development Land Use; Natural and Heritage Resources; Housing; Economic Development; and Fiscal Management and Public Infrastructure. An Implementation matrix is provided to prioritize and track the execution of the Loudoun 2040 General Plan action items. In addition to this Introduction, the Loudoun 2040 General Plan includes chapters associated with each of the five elements and the Implementation matrix:

---

3 Metropolitan Washington Airport Authority, 2018
4 Loudoun County Department of Economic Development, 2018
• **Quality Development Land Use.** Chapter 2 lays out the vision for Loudoun’s future land uses, growth management, and built environment. It includes specific policy guidance for Quality Development, Infill and Redevelopment, and each geographic policy area. Place Types guide the intent, form, character, and anticipated uses within each policy area.

• **Natural and Heritage Resources.** Chapter 3 provides guidance for the protection, maintenance, and enhancement of the County’s abundant natural and heritage resources. The policy approach is applicable at multiple geographic scales, from initiatives that may affect these resources countywide, to management of specific watersheds and waterways, to site-level development considerations.

• **Housing.** Chapter 4 analyzes the current and anticipated housing environment in Loudoun County and includes policies aimed at ensuring the provision of a full housing continuum for the varied lifestyles, households, ages, cultures, market preferences, incomes, and abilities of Loudoun’s residents.

• **Economic Development.** Chapter 5 examines the many challenges and opportunities facing Loudoun County in maintaining and advancing the County’s diverse and globally competitive economy. The policies focus on targeted industries, investments, and County initiatives that contribute to Loudoun’s world-class business environment and ties in land use considerations to sustain a diverse, adaptable, and dynamic County economy.

• **Fiscal Management and Public Infrastructure.** Chapter 6 acknowledges the interrelatedness of land use, growth management, fiscal management, and facilities planning. The policy approach ensures the provision of public facilities and utilities, high-quality telecommunications networks, and passive and active recreational amenities in accordance with the County’s larger planning and fiscal policies.

• **Implementation.** Chapter 7 compiles the individual Policies, Strategies, and Actions described throughout the *Loudoun 2040 General Plan* and provides an Implementation matrix that prioritizes, assigns responsibility, and tracks progress for each action item.

In addition to the Place Types in Chapter 2, *Loudoun 2040*’s guidance is established through:

• Policy statements for each element that provide the approach to decision-making for specific topics or issues,

• Strategies providing more focused, measurable guidance for decision-making relative to each policy, and

• Actions that target specific steps to realize the Policies and Strategies and intent of the *Loudoun 2040 General Plan*.

The five elements of the *Loudoun 2040 General Plan* are interrelated and complementary, and Policies, Strategies, and Actions from multiple elements may apply when evaluating individual proposals or initiatives. The Policies, Strategies, and Actions are organized hierarchically; however, each category carries equal weight. As such, Strategies may apply to different Policies and Actions to different Strategies than those under which they are nested.
Policy and Regulatory Context
Statutory Basis for the Comprehensive Plan

The basis for the Loudoun 2040 Comprehensive Plan is rooted in the Code of Virginia §15.2-2223. The County’s Planning Commission is responsible for preparing and recommending elements of the County’s Comprehensive Plan to the Board of Supervisors, which adopts the Comprehensive Plan. Within statutory limitations afforded by the Dillon Rule, the County can manage development in accordance with the policies of its Comprehensive Plan.

Relationship to Other Planning Documents

The Loudoun 2040 Comprehensive Plan serves as the “umbrella” document for the County’s planning efforts and consists of the Loudoun 2040 General Plan and the Loudoun 2040 Countywide Transportation Plan. The Loudoun 2040 Comprehensive Plan supersedes the previous Revised General Plan (2001), the Revised Countywide Transportation Plan (2010), the Bicycle and Pedestrian Mobility Master Plan (2003), Greenways and Trails Plan (1994), the Toll Road Plan (1995), and the Countywide Retail Policy Plan Amendment (1997). Loudoun 2040 also supersedes area management plans for Dulles North (1993), Dulles South (1993), Cub Run (1989), and Eastern Loudoun (1980).

The County will continue to apply the adopted area plans for the communities of Hamilton (1995), Leesburg (1982), Round Hill (1990), and Waterford (1988). The Heritage Preservation Plan (2009), Route 50 Corridor Design Guidelines (2007), and Strategic Land Use Plan for Telecommunication Facilities (1996) as amended, also remain in effect. The policies and guidelines in the Loudoun 2040 Comprehensive Plan will supersede any conflicting policies and/or guidelines contained in any of the plans mentioned above. Additional information regarding the relationship between the Loudoun 2040 Comprehensive Plan and other planning documents can be found in [a future Appendix].

The Loudoun 2040 Comprehensive Plan anticipates the need for additional detailed planning efforts, such as small area plans and village plans, to address the County’s complex and evolving planning challenges and to better realize the County’s long-range community development goals.

Relationship to Regulatory Documents

The Loudoun 2040 General Plan sets forth the community-based vision for Loudoun’s future and is a policy document that provides guidance to the County’s decision-makers regarding land development, capital improvements, and public programs. Loudoun County’s zoning ordinances are regulatory documents that establish the rules governing the use of land. The zoning ordinances’ regulations specify permitted uses on properties, establish the density and intensity of development, and establish design parameters for developments. These regulations also provide “entitlements” or certain rights of property owners to develop their property.

Revisions and amendments to the current zoning ordinance will implement many of the Policies, Strategies, and Actions described in the Loudoun 2040 General Plan. Parts of the Loudoun 2040 General Plan also refer to other documents that regulate the County’s use mix, land management, and development patterns, including the Loudoun County Facilities Standards Manual and the
Loudoun County Land Subdivision and Development Ordinance. Although Loudoun 2040 provides guidance for potential revisions and amendments to various regulations, it does not replace or supersede the County’s existing codes and ordinances, all of which will continue to apply as standalone regulatory documents.

**Reference Maps**

Loudoun County and Surrounding Area (Map #2018-153)
Chapter 2 - Quality Development

Table of Contents

- Quality Development
- Infill and Redevelopment
- Urban Policy Areas
- Suburban Policy Area
- Transition Policy Area
- Rural Policy Area
- Towns and Joint Land Management Areas
- Reference Maps
Chapter 2—Quality Development

Vision
Loudoun will carry forth our successful land use and growth management policy while promoting the well-planned development of unique and appealing places providing a full spectrum of housing and employment options that are linked to supporting commercial, entertainment, educational, agricultural, and recreational activity.

Introduction
Loudoun County has accommodated a high rate of growth over the past decades, concentrating new development in the eastern portion of the County where utilities and roadways have been constructed to serve the population efficiently. Much of Loudoun’s success is due to land use planning that has guided, managed, and directed growth to appropriate locations. Loudoun County’s growth management strategy has comprised an approach that 1) focuses the location and intensity of development in eastern Loudoun and around towns, which maintains the agricultural character, pastoral landscapes, and natural resources of the County’s rural areas; 2) uses service standards and development forecasting to plan the location and timing of investments in infrastructure, facilities and services; and 3) calculates a fair share contribution by new development towards associated capital facility impacts. This approach recognizes that more concentrated population centers better facilitate the provision of emergency response services, roads, utilities, and public facilities. Further, the location of such services and facilities often guide subsequent development patterns. By concentrating these services in the areas of the County where development has been planned and appropriately scaling their availability and levels of service in the less developed areas, the County facilitates growth patterns that help achieve long-term land use, environmental, economic, and fiscal goals.

Previous planning efforts in Loudoun County have focused on promoting quality of life for residents and workers by establishing and delivering a shared vision. Loudoun 2040 builds upon previous efforts and encourages a range of priorities that will further enhance quality of life in the County through a renewed vision. To realize this vision, Quality Development addresses a range of topics important to future growth and development that will have a lasting and positive impact on current and future generations of residents and workers in the County. Quality Development represents a level of excellence and a commitment to inclusiveness in future planning efforts. It is a holistic approach that seeks to maintain and build upon the high quality of life that residents have grown to enjoy.

To further enhance and improve the quality of life in Loudoun County, this chapter presents countywide policies that will allow the County to address growth and development in future planning and implementation initiatives. The goal of Quality Development in Loudoun is to support these initiatives based on the following aspirations:

- Make great places through development that complements, strengthens, and benefits surrounding communities.
• Encourage a mix of complementary land uses and project designs that ensure the long-term sustainability, or environmental and economic health, of both the individual development and the broader community.

• Foster places with distinctive identities through the use of high-quality design, siting, landscaping, architecture, signage, sustainability, and other design elements.

• Integrate land use and transportation policies that prioritize development first at the Metrorail Stations and provide the most compact and accessible development.

Quality Development also encompasses key qualities that will ensure future development positively contributes to the daily life of citizens by establishing and building upon traditional growth patterns and creating places that are conducive to a range of daily activities. Consideration of the following characteristics will help ensure future development and coordinated placemaking enhance quality of life in Loudoun:

• Sensitive integration of the natural and built environments,
• Context-sensitive site and building design between adjacent developments and land uses,
• Architecture that is appropriate for its context,
• Sustainable energy technology,
• Walkable and pedestrian-friendly environments that promote activity and connectivity in spaces between buildings and developments,
• Multi-modal choices that offer a range of transportation opportunities, and
• Accessible and connected parks and open spaces.

Integral to Quality Development is an emphasis on the incorporation of these characteristics in existing and future development. Their thoughtful consideration will help ensure high-quality design and aid in the creation of communities that have distinctive identities.

Loudoun will continue to be an attractive place for development given its geographic location, school system performance, business-friendly practices, and notable quality of life. However, new policies and approaches in Loudoun 2040 provide guidance to address emerging issues and trends in the County and region, including a constrained land supply, the County’s connection to the regional Washington Metropolitan Area Transit Authority (WMATA) Metrorail network through the Silver Line extension in 2020, availability and affordability of housing, and a growing demand for new development options. The Plan streamlines its presentation of design concepts, providing specific design guidelines for each policy area in subsequent sections of this chapter. Future implementation of the design policies in Loudoun 2040 will require thoughtful revisions to zoning regulations that will help accommodate the flexibility and adaptability of a new land use planning approach in Loudoun.

Expected Growth and Development Patterns

Building upon the County’s successful planning policy, Loudoun 2040 is largely organized by geographic policy areas that serve to prioritize areas for new growth and development based on the availability of existing and planned infrastructure and public facilities. Accordingly, this chapter describes the policy areas that provide the geographic framework for the County’s growth.
management and land use strategies. Policy areas in *Loudoun 2040* include the Suburban Policy Area (SPA), Transition Policy Area (TPA), Rural Policy Area (RPA), and Towns & Joint Land Management Areas (JLMAs), and newly-established Urban Policy Areas (UPA).

The UPAs are intended to accommodate living, working, shopping, and playing in a dense urban environment, creating complete communities that will serve as centers of activity for the County. The Plan designates two areas around the Silver Line Metro stations as UPAs, envisioning these areas to develop as dense urban centers. Both areas represent major growth opportunities for the County and are planned to provide for walkable mixed-use and transit-oriented development that will more efficiently absorb much of the County’s anticipated growth, offer a diversity of housing to meet changing housing needs, and offer flexible land use policies to allow for innovation and changing market demands.

The SPA continues to be planned for additional growth and development though at a lesser intensity than the Urban Policy Areas. However, rapid growth in the SPA in recent decades has significantly reduced the amount of developable land and subsequently reduced this area’s capacity to accommodate substantial growth. This represents a significant juncture in the County’s planning and development history as development efforts will be forced to increasingly prioritize infill development on the few remaining undeveloped parcels in the SPA as well as the redevelopment and adaptive reuse of existing buildings.

The TPA is intended to be visually distinct from the Suburban and Rural Policy Areas with a development pattern focused on retaining substantial open space within the context of an assortment of community designs. The open spaces serve as dominant landscape and development features that provide opportunities for public recreation and facilities interwoven through a land use pattern that is predominantly residential with limited commercial and industrial uses.

The RPA comprises nearly two thirds of Loudoun’s land area in the western portion of the County and contains twelve historic Rural Villages. This area is planned as an enduring rural landscape of working agricultural lands, rural economy uses, and limited residential development. Protection of the RPA helps to ensure the preservation of farmland, natural and heritage resources, open space, and vistas that are vital aspects of Loudoun’s identity.

**Place Types**

While the policy areas described in this chapter provide the geographic foundation for the County’s growth management and land use strategies, the Plan refines the County's policies to better adapt to rapid changes in technology, demographics, and market factors without losing sight of the County's vision and goals. Central to this more adaptable, enduring approach to land use is the “place type” concept.

The place type approach differs from the County’s previous approach to land use planning in that it provides a way to shape the future of Loudoun by concentrating on context – the look and feel of places, their form and their character – instead of focusing only on conventional land use categories and specific uses. Place type categories define not only the basic expected land uses for
specific areas in the County, but also preferred development patterns, streetscapes, and design features that make places and environments visually distinctive and functional for people.

The place type approach is intended to create distinct and “complete” residential neighborhoods, employment centers, open spaces, and other areas. By providing greater flexibility in development types and uses while providing additional guidance on design expectations, place types can also facilitate more dynamic, livable neighborhoods and allow for established areas to evolve and improve. In the next graphic you will find the transect of the County which transitions from rural to increasingly urban place types. A transect defines a series of place types that transition from sparse rural farmhouses to the dense urban core. Each place type contains a similar transition from the edge to the center of the neighborhood. The transect does not show all place types found in the plan but rather a few to show the transition at a higher level. Through the use of place types in Loudoun 2040, the County aims to achieve Loudoun’s vision for a prosperous and inclusive community consisting of great places in a variety of settings.

What Makes a Place?
Many characteristics of the natural and built environment contribute to an area’s sense of place, or the impression a particular place leaves on residents and visitors. These factors include:

- The size, scale, and configuration of the buildings and the spaces between and surrounding them,
- The uses in the buildings (although these may change over time),
- The patterns of activity in the spaces between buildings,
- Views to and from the buildings and spaces, and
- Special details such as historic structures, landscape elements, and public artwork.
These elements help define a place in our minds and give it a distinct identity. It is this human dimension of place types — their relationship to the way we experience our environment — that makes them such a useful tool in describing the type of development desired in Loudoun County.

**Using Place Types**

The Place Types described in this chapter have been carefully chosen to complement the current built and natural environment of the County while fulfilling the land use patterns and community characteristics envisioned for each policy area. Place types emphasize form and function in addition to expected land uses. This makes place types especially useful tools to guide future decisions regarding growth and development in each community, taking into account variable priorities such as: economic development, land preservation, protection of natural and heritage resources, efficient transportation options, and the provision of public facilities and services.

Each of Loudoun's policy areas is divided into distinct place types that reflect their unique form and character. Collectively, the defined elements of each place type help to ensure that future development creates the desired character and function. Each policy area section in the Plan provides a detailed description of each corresponding place type, including:

- A summary of the general development pattern, scale, form, function, and how the place type complements or fulfills the larger visions or policies described elsewhere in the Plan
- Use categories expected in the area
  - including core and complementary uses that will fulfill the intent of the place type;
  - Appropriate conditional uses;
  - Special Activity and Parks and Recreation are listed as conditional uses in all place types and will be reviewed on a case by case basis;
- The expected physical form of each place type in terms of:
  - street pattern — shown below are all configurations that will be found in the Place Types,
o block length consistent with the Countywide Transportation Plan,
o setbacks based on roads and pedestrian features,
o parking
  ▪ accessory - a parking facility that provides parking for a specific use or uses. The facility may be located on or off the site of the use or uses to which it is accessory.
  ▪ short-term - lots and/or spaces designed for people who are dropping off and picking up passengers and/or goods
  ▪ garage and shared - parking garage that may have spaces reserved and other spaces open to another use
  ▪ shown below are other types of parking

![Diagram showing different types of parking](image)

o design amenities
  ▪ including sidewalks, street trees, street furniture, shade trees, bike racks, lighting, crosswalks, plazas, pedestrian malls, network of green space, and public art,
o retail and service
  ▪ Retail commercial development in residential and employment place types will be designed to respond to the particular characteristics of the place type. In residential areas, retail and service uses will be characterized as Neighborhood or Community serving dependent upon the size of the area
being served and the characteristics of the site (i.e. access, location, function). They will be located internal to the areas that they serve and will provide convenience or routine shopping and personal services. Retail and service uses in the employment place types are intended to provide convenient retail and personal services supporting the employment uses and are based on a percentage of the uses they will serve.

- and open space in terms of the following:
  - Recreational – for both passive and active recreation;
    - Passive - trails (hiking, biking, walking, or equestrian), picnic, community gardens, camping, or fishing areas
    - Active - ballfields, tennis or basketball courts, swimming pools, tot lots, golf courses, dog parks, and other areas for recreational sports and games
  - Community – plazas, playgrounds, pocket parks, gardens, public art, amphitheater
  - Natural and Heritage - forests, stream valleys, wildlife habitats, floodplains and their buffers, steep slopes and ridge tops, meadows, hedgerows, wetlands, heritage resources, and land contributing to the context of heritage resources which may be incorporated into publically accessible parks and preserves.
  - Agricultural land including fallow land and working lands (agriculture, horticulture, and silviculture)

- The expected development intensity in terms of floor area ratio (FAR) and/or residential density (dwelling units per acre) to better define the anticipated massing, scale, and level of activity expected; and

- A discussion of how design elements, variations in land use, and changes in density can be applied to ease transitions among different place types and uses, ideally minimizing the need for intrusive screening or other structural mitigation measures.

**Place Type Implementation**

Place types are not meant to directly parallel use-based zoning districts, but rather are a direct way of connecting the day-to-day experiences and preferences of the community with the more specialized and technical discipline of land use planning. The place types in *Loudoun 2040* are:

1. Used to describe the desired future condition and environment of our community’s places;
2. Mapped similarly to a traditional future land use map and used to guide future development; and
3. Linked to a future comprehensive Zoning Ordinance revision, which will create enhanced design standards and may include new districts that better align with the desired character of the place.

**Policies, Strategies, and Actions**

Unless otherwise specified, the following Policies, Strategies, and Actions apply countywide.
QD Policy 1: Provide flexible design guidelines in all policy areas and in priority areas of the County to create more specific design guidelines that encourage innovation and appropriate architectural, site, and landscape design in all development.

**Strategy**
1.1. Identify and prioritize areas in the County where more specific design guidelines are desired.

**Actions**
A. Develop user-friendly, illustrative design guidelines. Promote an overall sense of place through design elements that in-part relate to block size, circulation and connectivity, streetscape and street sections, building form, placement (setbacks), orientation, articulation, parks and open spaces, public and civic uses, landscaping, and sustainability.

B. Create incentives that provide the opportunity to implement design guidelines.

C. The County will consider the development of zoning regulations and design standards that incorporate the design guidelines of this plan and any design guidelines that may be created in the future.

**Strategy**
1.2. Encourage the submission of site development and architectural guidelines for new developments, where applicable.

QD Policy 2: Create compact, walkable development patterns characterized by smaller blocks, shorter distances among uses, inter-parcel connectivity, greater diversity of uses on the same street, and connected open spaces that facilitate social interaction and offer affordable and convenient lifestyles.

**Strategy**
2.1. Ensure related County guidelines, zoning regulations, and design standards encourage a compact, walkable development pattern.

**Action**
A. Consider the development and implementation of zoning regulations or design guidelines that support a compact, walkable development pattern.

QD Policy 3: Provide diverse environments and experiences in all development.

**Strategy**
3.1. Ensure that context and development potential are considered by integrating uses with the natural environmental features from site to site.

**Actions**
A. Develop flexible guidelines, regulations, and design standards that support diverse
environments and experiences.

B. Create incentives to ensure a mix of environments and experiences within a development.

C. Use the conservation design process in order to integrate natural environmental features into the development. (see Chapter 3 for more information on conservation design)

QD Policy 4: Design spaces to maximize pedestrian, bicyclist, and other multimodal activity, comfort, and convenience.

**Strategy**
4.1. Development must ensure pedestrian and bicyclist connectivity and safety while pursuing high-quality design.

**Actions**
A. Create guidelines, zoning regulations, and/or design standards that ensure bike lanes, shared spaces, and paths of travel are created.

B. Create guidelines, zoning regulations, and/or design standards that ensure innovative traffic calming designs.

QD Policy 5: Ensure greater interaction between activity inside buildings and the public realm.

**Strategy**
5.1. Ensure that design guidelines emphasize the quality of the pedestrian experience in public spaces.

**Action**
A. Develop design guidelines, zoning regulations and/or design standards, and additional design elements that contribute to the quality of the human experience in the built environment.

QD Policy 6: Promote high-quality design and a mix of uses to encourage activity and longer stays in spaces, in order to create vibrant areas and a sense of place.

**Strategy**
6.1. Ensure the development of inviting public spaces that encourage longer stays and increase the vibrancy of the area, such as public/civic gathering spaces, outdoor rooms, public art spaces, and passive/active recreation spaces.

**Action**
A. Create guidelines that address public seating, art, landscaping, outdoor rooms, safety, and other innovative elements that can maximize opportunities for the public.

QD Policy 7: Ensure high quality development where the natural and built
environment contribute to an area's "sense of place."

Strategy
7.1. Ensure the place types complement the current built and natural environment of the County, while fulfilling the land use patterns and community characteristics envisioned for each policy area.

Actions
A. The density and use intensity of a place type will be defined by gross area. Structured parking and open space is not included within the floor area ratio of a place type.

B. The three use lists of a place type are a guide where: core uses are most prevalent in the place type, complementary uses support the core uses, and conditional uses are to be considered on a case-by-case basis.

C. Follow the ideal-preferred mix of uses for each place type which is an approximate amount that would be needed to achieve the full intent of the place type. The appropriate use mix of a development may differ from the ideal-preferred mix within the ranges noted in the place type as justified on a case-by-case basis depending on street and open space network, project size, and/or surrounding context.

D. Amend zoning regulations and design standards to implement place types. It may be necessary to utilize incentive provisions in order to achieve the maximum development intensity or residential density stated in this Plan for any individual place type.

E. Within the Urban Policy Area, projects less than 5 acres in size that can demonstrate that they help meet the intent of the place type will not be strictly held to the use mix specified for that place type. This can be demonstrated if the effect of a proposed development is to shift the use mix for an area within ¼ mile of its boundaries closer to the ideal-preferred mix for the place type. Such projects will be evaluated by Policy 3, Strategy 3.1 in the Infill and Redevelopment section.

F. Within the Suburban Policy Area, projects less than 20 acres in size that can demonstrate that they help meet the intent of the place type will not be strictly held to the use mix specified for that place type. This can be demonstrated if the effect of a proposed development is to shift the use mix for an area within ½ mile of its boundaries closer to the ideal-preferred mix for the place type. Such projects will be evaluated by Policy 3, Strategy 3.1 in the Infill and Redevelopment section.

Strategy
7.2. Consider the incorporation of interim uses that contribute to the community and are planned to efficiently and easily evolve to more intense uses called for by Loudoun 2040 when market forces support additional development.

Actions
A. Ensure interim development types, locations, or intensities are not a deterrent or barrier to implementing the long-term vision that will maximize economic development for
Loudoun County.

B. Require projects that are proposing a phased development program or an interim use to include a plan that achieves the ultimate development of the site, consistent with the intent of Loudoun 2040.

C. Require development proposals to design and build infrastructure, buildings, parking lots, and parks and landscaped areas to support the ultimate, higher density development.

D. Determine acceptability of interim development phases and land uses against:
   a. Location, site constraints, relationship to surrounding uses,
   b. How well the interim use complements and supports community life and activity of the surrounding development, and
   c. How well the project retains the capacity to achieve the ultimate development pattern and meet the policies and objectives of Loudoun 2040.

E. Encourage development in its ultimate condition to rely on structured parking but consider a mix of structured parking, on-street parking, and surface parking as an interim land use.

**GENERAL PLACE TYPE CONSIDERATIONS**

The following prompts should be considered while devising and developing a project to assess whether a proposal is compatible with the place type and improves the site and its surroundings:

**Safety**

1. Protection against traffic and accidents.
   a. Can people walk or bicycle safely and comfortably?
   b. Are streets planned with a Vision Zero strategy that will help eliminate traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all?

2. Protection against harm by others.
   a. How is the public space made safe day and night? Are there people and activities at all hours because the area has, for example, both residents and offices?
   b. Are sidewalks and trails, parking areas and outdoor public spaces clearly visible, comfortable and near activity areas during the day and night?

**Vibrant**

3. Mobility.
   a. How well do walkways and public spaces avoid physical elements that might limit walking, using a wheelchair, or pushing a stroller?
   b. How easily navigated is the arrangement of sidewalks and trails, parking areas and outdoor public spaces?

4. Interaction.
   a. What features invite visitors to rest and linger? Are seating options placed in or near interesting things like public art, a façade that invites one to spend time next
to it, a bus stop, a park, or a plaza?

b. How well can people from adjoining developments walk or bike safely and comfortably to the development?

5. Options for sitting.
   a. What are the obvious seating options such as benches or chairs? Is there only secondary seating such as a stair, seat wall, or the edge of a fountain?
   b. What are the options for sitting that do not require patronage?

6. Options for talking and listening/hearing.
   a. Is it possible to have a conversation here? What options are there to sit together and have a conversation?

7. Options for play, exercise, and activities.
   a. Are there options to be active year round? Are there options to be active at multiple times of the day and year for all ages?

Purpose

8. Scale.
   a. How well do public spaces and the buildings that surround them exhibit a human scale? How well does the space function for people in small gatherings and large events?
   b. How does the development exhibit high quality design through shape, materials, finish, relationship with surrounding buildings, and coordinated use of lighting, public art, street furniture, surfacing, planting, etc?

   a. How well are existing environmental features protected and integrated into the design?
   b. To what extent are pre-development views retained?
   c. How well does the project protect ridgelines?
   d. How are impacts on water quality addressed?
   e. Is open space accessible to the public and does it connect to open space on adjacent properties?
   f. Are most wetlands, lakes, streams, and other water amenities retained? Are significant natural amenities at least partially fronted by thoroughfares rather than hidden behind back yards?

10. Residential neighborhood characteristics.
   a. Are there a variety of dwelling types?
   b. Are there places to work in the form of office buildings or live-work units?
   c. Are there shops sufficiently varied to supply the ordinary needs of a household such as a convenience store, a post office, a teller machine, or a gym?
   d. Do thoroughfares within the neighborhood form a continuous network, providing for the dispersment of traffic? Are the thoroughfares connected to those of adjacent neighborhoods and communities?
   e. Are thoroughfares relatively narrow and shaded by rows of trees that slow traffic and create an appropriate environment for pedestrians and bicyclists?
   f. Are the large areas of open-space between neighborhoods connected into continuous corridors?
g. Are culs-de-sac avoided except where absolutely necessary due to natural conditions?

h. Are there public places for people to congregate and areas to engage in recreational activities dispersed throughout the neighborhood?
Infill and Redevelopment

Vision
A community where careful public investment in services, facilities, and growth management can maintain neighborhood vitality, revitalize underused areas, and facilitate complete, connected, and distinct communities.

Introduction
Loudoun County is a maturing community. For the last several decades, the approach to planning and zoning focused on managing and directing rapid suburban growth to primarily undeveloped land, or greenfields, in eastern Loudoun County – areas designated for growth in the Revised General Plan. Today, much of the Suburban Policy Area (SPA), has been developed and there is a limited supply of land remaining for new greenfield development, creating new planning challenges and opportunities in this area.

Some existing neighborhoods, commercial developments, and employment centers are aging or underutilized, and thus vulnerable to disinvestment and decline. Other newer developments that never realized their full commercial potential present additional opportunities for redevelopment. As these maturing commercial centers and neighborhoods evolve over the next two decades, Loudoun 2040 seeks to ensure that they do so in a way that meets the County’s long-term land use, housing, economic development, and public infrastructure goals. This section focuses on several interrelated concepts that are integral to successful projects and initiatives in previously developed areas: redevelopment, infill, adaptive reuse, and revitalization, as defined in the following table.

This section focuses on several interrelated concepts that are integral to successful projects and initiatives in previously developed areas: redevelopment, infill, adaptive reuse, and revitalization. Table 1 provides a definition of each of these terms, the intent and goals of each, and the kinds of locations in the county where their use may be most appropriate. These are not mutually exclusive concepts, and a project or initiative may include elements of one or more of them. Generally speaking, redevelopment describes the conversion of any existing developed property into other uses or a different intensity of use. Adaptive reuse is a form of redevelopment that repurposes existing—oftentimes obsolescent or historically significant—structures for new uses. Infill refers to the development of substantially undeveloped or underutilized properties that exist in otherwise built areas with existing or planned infrastructure and service capacity to handle more intensive land uses. Although not a form of redevelopment by definition, infill may be coordinated with redevelopment projects to better realize the planning vision for a particular area, sometimes as a part of a larger revitalization program. Revitalization aims to encourage new vitality and economic activity in a community. Revitalization programs may include smaller-scale redevelopment efforts or infill development, but often feature more targeted programs to improve building facades, beautify streetscapes, and generate investment through incentive-based economic development tools.
Table 1. Comparison of Redevelopment-Related Concepts

<table>
<thead>
<tr>
<th>Definition</th>
<th>Intent and Goals</th>
<th>Primary Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Redevelopment</strong></td>
<td>To achieve land uses that are more economically beneficial, more compatible with existing or anticipated surrounding land uses, and align uses with the long-term vision of the Plan.</td>
<td>Any existing built property where conversion to a new use better achieves the economic development, housing, land use, and public infrastructure policies of the Plan.</td>
</tr>
<tr>
<td>A change in land use involving the rehabilitation, removal and replacement, rehabilitation, or adaptive reuse of existing structures or uses. This includes any development projects that make significant modifications to significantly modifies an existing developed site resulting in changes to its design, use, and/or intensity. Projects may involve razing existing structures and constructing completely new buildings and may necessitate mitigation of previous uses or remediation of the impacts of previous uses.</td>
<td>To optimize infrastructure investments, leverage existing service capacity, and reduce development pressure on areas not designated for growth.</td>
<td>Undeveloped or underutilized areas otherwise served by public infrastructure and utilities. These may include brownfield sites.</td>
</tr>
<tr>
<td><strong>Infill</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establishment of a new land use on a site that may be undeveloped or underutilized but is located in an area of established, stable development where public facilities such as roads, water, sewer, and general services are available or planned. Infill sites are often small (less than 25 acres), and their development should complement or complete a larger development area.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Adaptive Reuse</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reuse of an existing structure for a different purpose than that originally intended. Repurposing of an existing structure in order for the purpose of preserving the structure to accommodate new uses while preserving the structure. Adaptive reuse efforts make improvements. This often involves improving existing buildings or changing the land uses found within existing buildings.</td>
<td>To prolong building lifespans, encourage reuse of existing resources, facilitate market alternatives, and encourage preservation of historic structures through appropriate renovation.</td>
<td>Existing buildings where prior uses are obsolete or economically infeasible. Appropriate building stock is in sound structural condition and provides flexibility for retrofitting for new uses. Context-sensitive reuse can be an important tool for preservation of historic structures.</td>
</tr>
<tr>
<td>Definition</td>
<td>Intent and Goals</td>
<td>Primary Locations</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>To adapt developments to allow for modern design and building program preferences.</td>
<td>To instill vitality and economic activity through small-scale redevelopment, renovation, beautification, and incentive-based economic development tools.</td>
<td>Existing neighborhoods with declining commercial activity and diminishing property values but with a baseline of housing or commercial building stock that does not require wholesale redevelopment.</td>
</tr>
</tbody>
</table>

**Revitalization**

Reestablishing the economic and social vitality of an area through a combination of targeted efforts and investments— that may be coordinated with Revitalization initiatives may be used in coordination with redevelopment, infill, and adaptive reuse projects.

Generally speaking, redevelopment describes the conversion of any existing developed property into other uses or a different intensity of use. Adaptive reuse is a form of redevelopment that repurposes existing—oftentimes obsolescent or historically significant—buildings for new uses. Infill refers to the development of vacant or substantially undeveloped properties that exist in otherwise built areas, typically within existing infrastructure and/or utility service areas. Although not a form of redevelopment by definition, infill may be coordinated with redevelopment projects to better realize the planning vision for a particular area, sometimes as a part of a larger revitalization program. Revitalization aims to encourage new vitality and economic activity in a community. Revitalization programs may include smaller-scale redevelopment efforts or infill development, but often feature more targeted programs to improve building facades, beautify streetscapes, and generate investment through incentive-based economic development tools.

The **Loudoun 2040** planning approach reflects a greater emphasis on redevelopment of aging areas, infill development on the few remaining undeveloped parcels, and adaptive reuse of existing buildings, complemented with revitalization initiatives as needed. These types of development bring unique challenges and opportunities inherently different from greenfield development. The policies and implementation steps of this section are intended to support these development types.

**Opportunities**

With redevelopment, infill development, and adaptive reuse come opportunities. Redevelopment offers communities the opportunity to reimagine underutilized or underperforming sites to create unique places and provide amenities desired by residents. Other redevelopment projects may maximize commercial potential, increasing neighborhood commerce and enhancing property values. Infill development can maximize the use of public investments and existing infrastructure,
create opportunities to achieve more cohesive development patterns, encourage reinvestment, and better connect neighboring developments. Adaptive reuse projects can support historic preservation goals, generate activity within vacant buildings and underutilized areas, and preserve iconic or prominent buildings exemplifying community character while maintaining compatibility with the surrounding neighborhood. Each can also provide opportunities to diversify housing stock. However, these projects can upgrade or retrofit older or substandard infrastructure for the site and surrounding area, which generally increases the value of a property and contributions to the tax base.

Emerging Revitalization Issues

Most of Loudoun County’s suburban development is relatively new, but as Loudoun’s communities continue to age, County policies and initiatives to support and enhance these neighborhoods and commercial centers will be increasingly important.

The Potomac and Sterling communities are two of the oldest and most diverse communities in Loudoun County. With neighborhood development beginning in the 1960s, the communities are mostly built-out. Housing stock has been in place for approximately 50 years and a need for revitalization has emerged. The 2007 recession also significantly affected Potomac and Sterling. The largest concentration of foreclosures and subsequent vacancies in the County occurred in these communities, compounding the area’s challenges.

Recognizing the need for revitalization in Potomac and Sterling, the Loudoun County Department of Planning and Zoning undertook a community outreach project in 2008. During the outreach, residents identified needs and desires to help revitalize areas of the community. Community members expressed concerns that poor neighborhood maintenance created blight conditions and contributed to an increase in crime. Furthermore, residents worried that their neighborhoods lacked law enforcement personnel, neighborhood volunteer watch groups, and teen programming. Loudoun 2040’s more flexible, incentive-based regulatory approach is intended to encourage private interests to undertake a range of context-sensitive redevelopment, infill, and revitalization projects with support from County programs and targeted planning and community outreach efforts.

In recent years, Loudoun County undertook certain recommendations originating from the Potomac and Sterling community outreach project. To address the foreclosure issue and the deterioration of housing, the County made considerable investment of Community Development Block Grants (CDBG), tax dollars, and Neighborhood Stabilization funds; provided grants to non-profit housing providers to purchase and renovate homes to sell to low and moderate income families; and provided direct loans and grants to qualified residents through several programs. The County also revised the Zoning Ordinance to address community aesthetics, began proactive code enforcement, and established a full service Eastern Loudoun Sheriff’s Substation in Sterling Park.

As other neighborhoods continue to mature, the County will look to emulate and improve upon past public engagement efforts and collaborative planning solutions. It is important, however, that the County considers the diverse needs, desires, and vision of each affected area. Some smaller scale projects, such as incorporating a mix of residential and new retail uses into a declining strip
commercial center, may be appropriately handled through the rezoning process, which provides for public hearings before the Board of Supervisors and Planning Commission. Larger scale infill or redevelopment projects that are likely to displace large numbers of business or residential tenants may warrant a more in-depth, collaborative public input process. The Policies, Strategies, and Actions of this section are intended to clarify the County’s interest in redevelopment and revitalization and the planning tools and processes available to encourage and shape these efforts.

**Challenges**

Redevelopment, infill development, and adaptive reuse projects may also face or present different challenges than greenfield developments, including:

- Land development regulations that are generally designed to guide greenfield development and lack the flexibility needed to facilitate redevelopment, adaptive reuse, or infill development projects.
- Redevelopment sites and adaptive reuse projects may require infrastructure improvements and experience other fiscal challenges that result in costlier projects than greenfield development.
- Sites that are often owned or leased by multiple entities, making it difficult to craft a unified vision and project.
- Potential opposition from the community for redevelopment, infill development, and adaptive reuse projects.
- Redevelopment projects that may displace populations because market-provided affordable housing is demolished or rents and property taxes increase due to the new development.
- Redevelopment projects that may displace established employment uses, adversely affecting the diversity of the County’s commercial tax base.

Considering the complexity of challenges related to these projects, developing a community vision that anticipates redevelopment, infill development, and adaptive reuse projects is critical. The County should take a leading role in developing this community vision by identifying and prioritizing areas that would benefit from redevelopment and revitalization, and by conducting proactive planning efforts to establish this vision. In addition, Loudoun County should require developers to consider and include community input for significant infill and redevelopment projects, especially those that are most likely to displace established residents and tenants. A community vision endorsed by the locality provides assurances to both developers and the community. It also identifies the locality’s role in advancing such projects.
Redevelopment, infill development, adaptive reuse, and revitalization projects within the County should result in great places that complement, strengthen, and benefit surrounding communities. Such projects should enhance the quality of life and help build a strong sense of community, where people feel connected to each other and to places that are expressions of community character. The following Policies, Strategies, and Actions of the Loudoun 2040 General Plan will foster this vision of compatible infill development within existing neighborhoods, and quality redevelopment and revitalization of aging or underutilized commercial and employment areas. They encourage efficient use of land and maximizing the use of existing infrastructure, public facilities, and community amenities, while benefiting established communities and alleviating development pressure outside of planned growth areas.
Policies, Strategies, and Actions

Unless otherwise specified, the following Policies, Strategies, and Actions apply countywide.

IR Policy 1: Ensure revitalization initiatives and redevelopment, infill development, and adaptive reuse projects will enhance quality of life and neighborhood character, fulfill community needs, and improve economic opportunities.

Strategy
1.1. Where infill development, redevelopment, and revitalization initiatives could affect established neighborhoods, facilitate community engagement to build County and community support for future projects.

Actions
A. Develop criteria to identify and prioritize areas for redevelopment, infill development, adaptive reuse, and revitalization, with the Priority Commercial Redevelopment Areas Map serving as the source for initial areas of focus.
B. Create a common vision and objectives for areas identified for redevelopment, infill development, adaptive reuse, and revitalization through a public process.
C. Address redevelopment, infill development, adaptive reuse, and revitalization as part of community and small area plans. Pay particular attention to a community’s historic assets and function in areas with under recognized historic resources or limited historic resources protections, such as the legacy village cores of Ashburn, Arcola, and Old Sterling.
D. Identify methods for ensuring developers will follow through on commitments to communities that are products of a facilitated engagement process between the developer and the surrounding neighborhoods and developments.
E. Evaluate the creation of overlay districts to encourage revitalization and convey community support and buy-in for investment in priority/targeted areas.

Strategy
1.2. Support projects that provide community amenities, fulfill community needs, and benefit the surrounding communities.

Actions
A. Conduct analysis of local market demands to determine what is needed to foster successful redevelopment.
B. Identify priority redevelopment areas and targeted strategies through the small area planning process.
C. Ensure residential and mixed-use projects increase and diversify housing opportunities when in conformance with other Plan policies.
D. Require redevelopment projects to replace, at a minimum, market-provided affordable units lost through a redevelopment process.
E. Develop strategies to address displacement and housing affordability, when redevelopment occurs.

F. Require the provision of comparable community amenities to any lost through a redevelopment process.

G. Encourage annexation of residential projects into adjoining homeowners’ associations (HOAs) to make the provision of amenities more economical.

H. Develop criteria, such as site constraints, important resources, and community amenity gaps, to identify infill sites appropriate for use as park, civic, and open space rather than private development.

I. Promote the development of interim uses on underutilized properties that are compatible with the surrounding development pattern, such as community gardens, playgrounds, park-and-ride lots, and farmer’s markets.

**Strategy 1.3.** Enhance established residential communities specifically in need of revitalization through methods that will not involve a redevelopment project.

**Actions**

A. Identify and prioritize neighborhoods with an emerging need for revitalization and reinvestment, and work with these communities to identify needs and desires and build support for revitalization.

B. Identify strategies to preserve and enhance a community’s sense of place, social fabric, and historic assets and functions.

C. Identify, and include in the Capital Budget, capital facilities improvements necessary to support revitalization in targeted areas.

D. Identify and utilize funding sources for community revitalization strategies.

E. Educate the community about funding sources for home improvement and repair.

F. Provide incentives and resources for the provision of community amenities, such as pedestrian/bicycle facilities, sidewalks, traffic calming, street lighting, bus stops, cultural centers, and community gathering places.

G. Develop incentives that encourage the private sector to improve retail and commercial establishments in targeted areas.

H. Provide resources for community-based initiatives, such as neighborhood volunteer watch groups and teen programming.

**Strategy 1.4.** Facilitate redevelopment, infill development, and adaptive reuse projects through technical assistance, an improved regulatory framework, and streamlined review processes.

**Actions**

A. Provide general project guidance, such as best practices, tool kits, examples of “approvable” development types, and profiles of successful projects.
B. Develop and maintain a redevelopment webpage with information and resources for residents and developers.

C. Develop zoning regulations and design standards that acknowledge the need for flexibility, existing conditions and constraints, and previous development standards; allow for creative design and emerging development types; and provide certainty and clear direction for developers.

D. Develop creative incentive programs for projects located within the priority areas for redevelopment identified on the Priority Commercial Redevelopment Areas Map and other qualifying projects, such as increases in permitted density where infrastructure is available, reduced fees, or expedited review processes.

**Strategy**

1.5. Incentivize redevelopment, infill, and adaptive reuse projects, and revitalization efforts in priority areas to be established by the County, using the Priority Commercial Redevelopment Areas Map to determine initial priority areas.

**Actions**

A. Evaluate and implement the use of fiscal tools to incentivize redevelopment, such as tax increment financing (TIF) and public improvement districts (PID).

B. Evaluate entering into public-private-partnerships to initiate redevelopment and adaptive reuse efforts and reduce development risks in priority areas.

C. Direct public investment and resources to priority areas to facilitate redevelopment.

D. Establish programs to assist in business retention, expansion, and recruitment when commercial redevelopment projects occur.

**Strategy**

1.6. Achieve unified site design, efficient use of existing infrastructure, and maximum land development potential through the consolidation of small, adjacent, underutilized properties.

**Actions**

A. Facilitate redevelopment of multi-ownership sites through a planning process that engages owners and the larger community in the creation of a shared vision for the area.

B. Create incentives for parcel assembly and funding opportunities for infrastructure improvements associated with redevelopment projects to alleviate private sector risk and costs.

**Strategy**

1.7. Ensure that projects proposed for eastern Loudoun’s legacy village cores – including Ashburn, Arcola, and Old Sterling – complement the scale, form, and historic land use patterns of these areas.

**Actions**

A. Develop zoning regulations and design standards that emulate existing lot patterns in
the village cores of Ashburn and Arcola with buildings oriented to the street, encouraging pedestrian activity.

B. Develop zoning regulations and design standards that promote a mix of land uses including residential, retail, office, institutional, public facilities, parks, playgrounds and other uses in the village cores where such uses do not otherwise conflict with existing uses or anticipated noise impacts from Washington Dulles International Airport.

C. Develop or maintain zoning regulations and design standards for the legacy village core of Ashburn that limit residential densities to four (4) units or fewer per acre.

D. Develop zoning regulations and design standards that limit commercial, flex, or industrial building footprints to 10,000 SF and building heights to three (3) stories.

E. Develop zoning regulations and design standards that discourage new automobile-oriented retail uses in the village cores.

F. Where compatible with surrounding land uses, allow residential or mixed-use development in areas of the Arcola village core that fall outside the 65-Ldn noise contours of Washington Dulles International Airport, applying the standards of the Suburban Neighborhood Place Type.

G. Encourage residential development above first floor retail or employment uses in the village cores.

H. Use the small area planning process to develop a unified planning vision and targeted implementation actions for Ashburn, Arcola, and Old Sterling.

Strategy
1.8. Promote the retention or development of small-scale industrial, employment, and manufacturing uses in order to promote local provision of jobs and services and maintain a diversified commercial tax base (see Established Industrial Centers map).

Actions
A. Within the areas identified on the Established Industrial Centers Map, the reuse and/or repurposing of existing flex, commercial, and industrial structures is preferred.

B. Develop zoning regulations and design standards that require additional review of proposals for new buildings with footprints exceeding 40,000 square feet or dedicated or distribution electric substations in the areas identified on the Established Industrial Centers Map.

C. Develop zoning regulations and design standards that expand opportunities for small-scale manufacturing in place types allowing flex, light industrial, industrial, and employment uses.

D. Amend zoning use definitions in industrial, flex, and employment-centered zoning districts to accommodate makerspaces, emerging small-scale manufacturing sectors, and the marketing and retail of goods produced on-site.
IR Policy 2: Recognize adaptive reuse of existing unused or underutilized buildings as an opportunity to establish or reinforce a community’s identity and sense of place.

**Strategy**

2.1. Support adaptive reuse projects that provide cultural activities and community gathering places.

**Actions**

A. Use the *Heritage Preservation Plan* to guide the adaptive reuse of historic resources.

B. Establish collaborative programs and partnerships for adaptive reuse projects to foster entrepreneurship and encourage innovative ways to reuse buildings and sites.

**Strategy**

2.2. Prioritize adaptive reuse of existing buildings with historic significance or importance to a community over demolition.

**Action**

A. Consult with communities to ensure all unused or underutilized buildings representing their history and character are identified, protected, and adaptively reused.

**Strategy**

2.3. Revise County regulations to accommodate creative adaptive reuse designs.

**Action**

A. Review zoning regulations, design standards, and building code regulations to identify regulatory encumbrances to adaptive reuse projects.

B. Develop zoning regulations and design standards that provide ample flexibility for adaptive reuse projects without compromising the health, safety, or welfare of users.

IR Policy 3: Promote redevelopment and infill projects that balance compatibility and integration with new housing choices and creative designs.

**Strategy**

3.1. Redevelopment and infill projects will be evaluated based on compatibility and the integration of the development within the context of the surrounding development patterns.

**Actions**

A. Ensure redevelopment and infill development is consistent with the Place Types land use structure and furthers the goals and objectives of the *Loudoun 2040 General Plan*.

B. Ensure residential development on infill sites is designed to fit into the surrounding context.
Guidelines

Evaluate redevelopment and infill development projects using the following criteria to determine if the proposal is compatible with the surrounding development and will improve the site and its surroundings:

1. Place type designation;
2. Size of the subject parcel relative to surrounding parcels;
3. Relationship to established development pattern;
4. Compatibility of site design with or without buffering from adjoining properties;
5. Methods of transition to adjoining properties;
6. Residential densities on adjacent parcels, projects, or land bays;
7. Range of proposed housing types and choices;
8. Intensity of proposed uses;
9. Mix of uses provided;
10. Building form and scale;
11. Vehicle, bicycle, and pedestrian connectivity;
12. Provision of community green spaces and other amenities;
13. Protection of environmental resources and restoration of degraded resources on the site;
14. Amount and location of open space and impervious surface;
15. Adequate public facilities and services, transportation facilities, and infrastructure; and
Effect of noise, light, and traffic generated on the site.
Urban Policy Areas

Vision
The Urban Policy Areas (UPA) will be complete communities that accommodate living, working, shopping, learning, and playing in dense urban environments of walkable mixed-use and transit-oriented development. These areas will possess high-quality public environments with accessible and connected places, and a rich mix of uses that establish a distinctive sense of place. UPA communities are envisioned to support development types, patterns, and densities that will create jobs, grow the tax base, and be fiscally sustainable.

Introduction
The new UPAs are planned and designed to be strong, diverse regional activity centers and economic drivers. As such, UPAs will provide new opportunities for regional employers to locate near complete urban communities with multiple transit options and access to Washington Dulles International Airport. The UPA has been in the making since the Toll Road Plan, with transit-oriented nodes and then building upon them in the Revised General Plan with Transit-Oriented Development areas in the Suburban Policy Area. The UPAs encompass areas around three Metrorail Stations: Innovation Center (in Fairfax County), Loudoun Gateway, and Ashburn (for reference, see Urban Policy Areas Place Types map). The areas around the Metrorail Stations are envisioned as transit-oriented communities with a dense urban core consisting of the greatest intensity of development in the County. These areas emphasize mixed-use development throughout and are the highest priority growth areas in the County. Due to their current suburban nature, the process of transitioning these areas to walkable communities may involve partial infill and redevelopment as described in the Infill and Redevelopment section of this chapter.

The expansion of Metrorail service into Loudoun County presents an unprecedented opportunity to create dynamic urban places that respond to the community’s evolving needs and demands. The Loudoun 2040 Comprehensive Plan integrates multimodal transit options with high quality urban and environmental design guidelines to shape livable, vibrant, and active UPA neighborhoods with a balance of business, commercial, and residential uses. The UPA communities will provide a variety of housing choices that offer diverse options for families, empty-nesters, individuals, couples without children, and seniors across socioeconomic groups, helping to provide the housing continuum described in Chapter 4. They will be communities that are rich in amenities including networks of publicly accessible green spaces, such as the Broad Run Stream Valley Park and Trail, that simultaneously protect valuable environmental resources.

Development Approach
The Loudoun 2040 General Plan’s design policies and guidelines recognize that urban form is essential to creating places that are functional and attractive to a diversity of users. Urban design characteristics in the UPA speak to the design of individual structures and spaces, the spatial relationship among structures, the relationship of buildings to the streetscape and other public places, and transitions between areas of differing densities or intensities. Building façades set at
the back of the sidewalk and ground floor retail uses with transparent façades will help activate
the streetscape. The guidelines also encourage the development of distinctive public places that
promote culture and the arts. Street furniture, public art, water features, and distinctive landscaping
will create visually appealing streetscapes that encourage street-level activity and public interaction.

All UPA communities will include transportation hubs that offer a wide array of transportation
mode choices including walking, biking, driving, and transit. The UPA is a place where walking
and bicycling can be convenient travel modes, diversity of use is nurtured, and public places are
aesthetically pleasing, safe, and accessible. Attractive grid-form street networks will prevent traffic
congestion, maximize travel choices, and safely and efficiently move individuals throughout the
area. Small, tree-lined blocks will enhance the pedestrian experience and encourage non-vehicular
travel. Contiguous, linear green spaces accommodating both passive and active recreational uses
will encourage alternative means and paths of travel.

*Loudoun 2040* envisions a certain level of activity and intensity of development in the UPAs,
which is necessary not only to create vibrant, viable transit-oriented communities but also to
protect their long-term tax revenue generation potential. Therefore, land uses that do not meet the
minimum bulk and/or density guidelines envisioned in the UPA Place Types should be avoided.
Interim uses may be appropriate, if it can be demonstrated that they will evolve to an ultimate
desired use that aligns with the long-term vision of the *Loudoun 2040 General Plan*.

The county’s ongoing collaboration with the Metropolitan Washington Airports Authority
(MWAA) regarding future land use planning around Washington Dulles International Airport’s
northern border is essential to the success and economic viability of the Loudoun Gateway
Metrorail Station. The County will continue its partnership with MWAA and explore mutually
beneficial land use alternatives that realize greater tax revenue while supporting current and
planned airport operations. This collaborative planning will ensure that the Loudoun Gateway
Metrorail Station develops as a walkable place with job opportunities, amenities, pocket parks,
transit options, and nearby housing without compromising Washington Dulles International
Airport’s long-term viability.

**Place Types**

As described in the beginning of this chapter, the following Place Types have been designated for
specific locations as displayed on the accompanying map. The Place Types will work in concert
with the Design Guidelines and Policies, Strategies, and Actions of the UPA to fulfill the land use
patterns and community characteristics intended for the area.
Urban Transit Center areas take advantage of proximity to transit to provide opportunities for dense urban development and a host of economic, entertainment, and community activities. Each area serves as a gateway to the county from the greater region and a major destination in its own right. The Urban Transit Center has two focus areas: within a ¼ mile of the Metrorail Station and outside of the ¼ mile. Development within a ¼ mile of the station will have smaller average unit sizes, a higher minimum FAR, and a more equal mix of residential and non-residential development.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
</table>
| • Multi-Family Residential  
• Office  
• Retail & Service Commercial  
*Residential restrictions in noise-sensitive areas located within 65 Ldn noise contours | • Entertainment Commercial  
• Civic, Cultural, & Community  
• Public Facilities | • Sports Arena/Training Facility  
• Conference Center  
• Full Service Hotel  
• Institutional  
• Special Activities  
• Parks & Recreation |

### Ideal-Preferred Mix of Uses

#### Within ¼ Mile
- Possible Ranges:
  - Res: 40-60%
  - Non-Res: 40-60%
  - Public/Civic: 5%+

#### Outside ¼ Mile
- Possible Ranges:
  - Res: 60-80%
  - Non-Res: 20-40%
  - Public/Civic: 5%+
DESIGN CHARACTERISTICS

Context
Vertically mixed-use buildings that are integrated in a walkable street pattern around the Metro station.

<table>
<thead>
<tr>
<th>Street Pattern:</th>
<th>Gridiron</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Length:</td>
<td>Within ¼ Mile: 200-400 feet</td>
</tr>
<tr>
<td></td>
<td>Outside ¼ Mile: 200-660 feet</td>
</tr>
<tr>
<td>Building Setback:</td>
<td>None to shallow</td>
</tr>
<tr>
<td>Parking:</td>
<td>Structured, on-street, accessory, short-term, alley-oriented</td>
</tr>
<tr>
<td>Design Amenities:</td>
<td>Sidewalks, street trees, street furniture, shade trees, bike racks, lighting, crosswalks, plazas, pedestrian malls, network of green space, public art</td>
</tr>
<tr>
<td>Open Space:</td>
<td>10% of the site-Recreational (Active &amp; smaller scale Passive), Community, and/or Natural and Heritage</td>
</tr>
</tbody>
</table>

An example plan view of Urban Transit Center from Orenco Station, OR
Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Within ¼ Mile  Total FAR: Minimum 2.0

<table>
<thead>
<tr>
<th>USE</th>
<th>Number of Stories (Average height is 12 feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Family Residential</td>
<td>8+</td>
</tr>
<tr>
<td>Office</td>
<td>8+</td>
</tr>
<tr>
<td>Retail &amp; Service Commercial</td>
<td>8+</td>
</tr>
</tbody>
</table>

*Buildings must not adversely affect airport operations. Maximum building heights must not create flight obstructions or otherwise impede flight operations at the Airport.

Outside ¼ Mile  Total FAR: Minimum 1.4

<table>
<thead>
<tr>
<th>USE</th>
<th>Number of Stories (Average height is 12 feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Family Residential</td>
<td>6+</td>
</tr>
<tr>
<td>Office</td>
<td>6+</td>
</tr>
<tr>
<td>Retail &amp; Service Commercial</td>
<td>6+</td>
</tr>
</tbody>
</table>

*Buildings must not adversely affect airport operations. Maximum building heights must not create flight obstructions or otherwise impede flight operations at the Airport.

Transition
Given the small block sizes and mix of different uses, transitions between uses and developments are critically important in the Urban Transit Center Place Type. Development should transition from eight stories or more near the Metrorail Station to six or more stories outside of the ¼ mile. Changes in height or building character, where allowed, should occur mid-block to promote balanced streetwalls where both sides of the street appear similar in height. Larger developments near smaller residential dwellings should step down appropriately to respect these neighbors.
Urban Employment areas provide opportunities for a broad array of employment uses within an environment that provides gathering spaces and opportunities for synergies among businesses. These offer prime locations for office and flex space uses as well as startups and established businesses. Appropriate uses do not generate excessive noise or air pollutants or require outdoor storage. First floor retail that supports predominant uses is appropriate.

Parking should generally be located behind the building to ensure the buildings are the predominant feature when viewed from roadways and adjacent properties.

Although civic or recreation space is not expected, required open space in Urban Employment developments should include areas for use by customers and employees.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Office</td>
<td>• Retail &amp; Service Commercial</td>
<td>• Institutional</td>
</tr>
<tr>
<td>• Research &amp; Development</td>
<td>• Entertainment Commercial</td>
<td>• Civic, Cultural &amp; Community</td>
</tr>
<tr>
<td>• Data Centers</td>
<td></td>
<td>• Public Facilities</td>
</tr>
<tr>
<td>• Flex Space</td>
<td></td>
<td>• Special Activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Parks &amp; Recreation</td>
</tr>
</tbody>
</table>

**Ideal Preferred Mix of Uses**

Possible Ranges:
- Res: 0%
- Non-Res: Up to 100%
- Public/Civic: 0%+
DESIGN CHARACTERISTICS

Context:
Separate and mixed employment uses that are integrated within a walkable, employment-based environment.

<table>
<thead>
<tr>
<th>Street Pattern:</th>
<th>Rectilinear, Gridiron</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Length:</td>
<td>300-800 feet</td>
</tr>
<tr>
<td>Building Setback:</td>
<td>Short to medium</td>
</tr>
<tr>
<td>Parking:</td>
<td>Structured, on-street, accessory, or short-term</td>
</tr>
<tr>
<td>Design Amenities:</td>
<td>Sidewalks, street trees, shade trees, bike racks</td>
</tr>
<tr>
<td>Open Space:</td>
<td>10% of the site- Recreational (trails), Community (outdoor seating, plazas, gardens, public art), and/or Natural and Heritage</td>
</tr>
</tbody>
</table>

Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Total FAR: Min. 1.0  Building Height: 3 to 8 stories

Transition
Transitions between Urban Employment uses and other developments, in particular adjacent residential neighborhoods, are vitally important. Building heights should step down appropriately to less intense residential uses. In developments adjoining less intensive uses, building heights should decrease moving outward from the center of the development, stepping down to heights generally within one story of adjacent structures.
Urban Mixed Use areas take advantage of their fringe proximity to the Metro stations to provide opportunities for dense urban residential development including a mix of commercial uses. The Urban Mixed Use areas will develop as high-density walkable urban neighborhoods that encourage social connections because their mix of uses, multimodal infrastructure, and public spaces create vibrant public realms.

Urban Mixed Use areas provide opportunities for a mix of housing types that meet the housing needs for all ages, abilities, and socioeconomic groups. The small-lot patio homes, townhomes, rowhouses, duplexes, quadruplexes, and multifamily residences are designed to fit within or adjacent to a traditional single-family style neighborhood. Accessory residential units are also appropriate for the area and may consist of apartments in the principal structure, garage apartments, or other outbuildings approved by the County. Development will have slightly larger average unit sizes than in the Urban Transit Center and a large amount of residential development. Small scale office, retail and service uses should be integrated into the neighborhood.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
</table>
| • Multi-Family Residential  
• Single Family Attached Residential | • Office  
• Retail & Service Commercial  
• Active Adult Retirement Communities  
• Civic, Cultural, & Community  
• Institutional  
• Entertainment Commercial | • Public Facilities  
• Accessory Residential Units  
• Small Lot Single Family Detached Residential  
• Special Activities  
• Parks & Recreation |

**Ideal-Preferred Mix of Uses**

Possible Ranges:

- Res: 70-90%
- Non-Res: 10-30%
- Public/Civic: 5%+
This Place Type encompasses a wide array of commercial designs that create a unique sense of place and complement surrounding developments. Urban Mixed Use developments are oriented to the street, and those including larger format retail commercial establishments should also include smaller commercial establishments without substantial surface parking lots. These developments should be designed to provide direct access to adjacent neighborhoods with which they should blend seamlessly. Parking should be predominantly structured with accommodations for on-street parking and limited surface lots.

**DESIGN CHARACTERISTICS**

**Context**
Vertically mixed use buildings as well as multi-story single-use buildings that are integrated in a walkable street pattern in the fringe of the Metro station area.

| **Street Pattern:** |
| Rectilinear, Gridiron |
| **Block Length:** |
| 200-660 feet |
| **Building Setback:** |
| Shallow setbacks at sidewalks, Residential can be setback near sidewalk |
| **Parking:** |
| Structured, on-street, accessory, short-term, alley-oriented parking |
| **Design Amenities:** |
| Sidewalks, street trees, street furniture, shade trees, bike racks, lighting, crosswalks, plazas, pedestrian malls, network of green space, public art |
| **Open Space:** |
| 10% of the site- Recreational (Passive, Active-dog parks, tennis or basketball courts, tot lots), Community, and/or Natural and Heritage |

*An example plan view of Urban Mixed Use from Richmond, VA*
Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Total FAR: Maximum 1.5

<table>
<thead>
<tr>
<th>USE</th>
<th>Number of Stories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Family Residential</td>
<td>4-8</td>
</tr>
<tr>
<td>Single Family Attached</td>
<td>2-4</td>
</tr>
<tr>
<td>Office</td>
<td>4-8</td>
</tr>
<tr>
<td>Retail &amp; Service Commercial</td>
<td>4-8</td>
</tr>
</tbody>
</table>

Transition
Small block sizes and a mix of different uses make transitions between uses and developments important in the Urban Mixed Use Place Type. Changes in height or building character, where allowed, should occur mid-block to promote balanced streetwalls where both sides of the street appear similar in height. Larger developments near smaller residential dwellings should step down appropriately to respect these neighbors. Developments should transition from taller buildings at the center to heights generally no more than a story taller than adjoining adjacent development consisting of less intensive uses. The predominant residential use type is multi-family and single family attached; however, a very limited portion of the development within the Urban Mixed Use Place Type may be developed with small-lot single family detached residential as a transitional use between Place Types.
Policies, Strategies, and Actions

Unless otherwise specified, the following Policies, Strategies, and Actions apply only within the UPA.

UPA Policy 1: Ensure walkable development and connectivity to the community throughout the UPA as it is important to foster the urban character found in the Place Types.

Strategy
1.1. Development designed to provide for a walkable mixed-use environment that supports multi-modal transportation choices and fosters substantial pedestrian activity within the half-mile area and to surrounding areas.

Strategy
1.2. Emphasize walkability in the half-mile buffer area by providing pedestrian and bicycle commuter connectivity to the core of the Metrorail stations and surrounding neighborhoods as well as enabling future connections from undeveloped parcels.

Strategy
1.3. Support a high level of pedestrian connectivity including connected street grid patterns with sidewalks, short block lengths, and connected trails and pathways providing connections to surrounding neighborhoods.

Strategy
1.4. The Ashburn and Loudoun Gateway Metrorail Stations will serve as transit and commuter hubs while providing an urban walkable environment. Development proposals provide a balance between the needs of commuters with the desire to create a walkable urban environment.

Strategy
1.5. Accommodate a long-term vision with an appropriate mix of residential and non-residential uses that fulfill daily and convenience needs of its residents and employees.

Actions
A. Mixed-use neighborhoods accommodate infrastructure plans for near-term and long-term transit circulator service.

B. Community facilities like schools, community centers, and libraries are located to allow as many residents as possible to be within a short walking distance.
C. Larger developments provide pedestrian access within their development and possible shuttles to connect to the Metrorail stations.

Strategy
1.6. Discourage single-story buildings exceeding 2,000 square feet in the UPA to promote compact, pedestrian-oriented spaces except when such buildings are integrated into a plaza or other public gathering space and are no larger than 2,000 square feet.

Strategy
1.7. Ensure that any drive-through retail uses are incorporated within mixed-use buildings.

UPA Policy 2: Provide dynamic and diverse public places and amenities within proposed UPA communities.

Strategy
2.1. Densities in the area are expected to sustain an urban development pattern with pedestrian activity.

Strategy
2.2. The County promotes concepts like outdoor dining, event space, street fairs, and public art within compact, walkable non-residential areas.

Action
A. Accommodate walkable features and amenities like centralized activity areas such as shopping and dining areas with wide sidewalks, more narrow pedestrian-oriented streets, transit stops, and community gathering places (e.g., parks and plazas).

UPA Policy 3: Provide a diverse mix of choices in all development.

Strategy
3.1. Accommodate office developments and/or high-employment generating uses that conform to the overall vision for a walkable urban development pattern.

Action
A. Create partnerships with universities and private sector companies to foster growth of an Innovation District at the Loudoun Gateway Metrorail Station that supports workers and students in the advanced technology and science industries.

Strategy
3.2. Ensure that development within half-mile of the Loudoun Gateway Metrorail Station reflect the station area’s long-term vision of a global destination, activity center, and leader in innovation and entrepreneurship.
Strategy
3.3. Accommodate diverse housing options in all development.

Action
A. Achieve an average unit size of approximately 1,200 square feet for new single family attached residences and an average unit size of approximately 650 square feet for new multifamily residences in the Urban Policy Area.

Design Guidelines
The Design Guidelines are to build upon our current high standard of development in a manner that allows innovative design and new responses to the market. While the Design Guidelines are not regulatory requirements, the County prefers that all future developments comply with these guidelines. The Design Guidelines do not supersede or otherwise limit the application of adopted zoning regulations, ordinances, building codes, or any other design standards or regulations administered by Loudoun County.

All applications for development in the UPA are expected to include project specific design guidelines, site plans, illustrative, landscape plans, building elevations, and other similar graphics that demonstrate consistency with the UPA Design Guidelines and planning principles in this document.

When using the guidelines make sure to analyze the impact a potential development may have on the landscape, considering not only appearance, but practical considerations such as proximity to utilities, community amenities, jobs, and housing to maximize the use of existing infrastructure and limit travel distances. Development should contribute to creating places within the Urban Policy Area by working with existing topography and site features, responding to the local context, and reinforcing the compact walkable character, rather than simply attempting to place suburban design onto the urban landscape. Unless otherwise specified, the following guidelines apply only to UPA.

The goals of the UPA Design Guidelines are to:

- Promote accessibility and establish links to transit,
- Promote walkability,
- Encourage human activity between buildings and streets,
- Establish human scale of buildings at street level (first floor of a multi-story building),
- Create visually compatible buildings and site designs that use building forms, materials, fenestration, repetition, rhythm, color and architectural variety resulting in blends of form, volumes, textures and colors in the various neighborhoods,
- Create inviting spaces for varied activities, and
- Create a sense of place and uniqueness.
Building Orientation and Setbacks

Buildings in the UPA, particularly along urban-type streets and “main streets”, should have common design strategies that promote walkability, accessibility, and activity in the ‘outdoor room’ or ‘outdoor hallway’ between streets and buildings.

1. Locate buildings at the front property line or at the minimum required setback to create a strong pedestrian pathway framed by adequate spaces for sidewalks, plantings, street furnishings, and lighting along buildings. Where additional setback is necessary adjacent to the street, that area can be used to create a plaza, pocket parks, or other public-gathering spaces that incorporate activity space, outdoor seating, landscape features, and/or water features.

2. Design grade level entrances providing direct access to building entrances from sidewalks and streets.

3. Make primary entrances to buildings visible from the street and sidewalk.

4. Create primary entrances for pedestrians that are easily identified and accessible with as direct a path as possible to transit amenities.

5. Maintain at least one entrance from the public way at retail and restaurant establishments.

6. Incorporate transitions from the sidewalk to the front door such as landscaping, overhead cover (canopies, awnings or trellises) and/or porches at individual entrances to businesses and residences.

7. Comply with the Americans with Disabilities Act (ADA), Universal Design, and International WELL Building Institute guidelines at primary pedestrian entrances. Alternate approaches for persons with mobility limitations, such as a ramp next to the main path to the primary entry, should not be necessary.

8. Incorporate passageways or alleys into mid-block developments, particularly on long blocks, that facilitate safe pedestrian movement through the depth of the block to the front of the next parallel block. Ensure that pedestrians do not have to walk the circumference of a block in order to access the middle of the next parallel block or alley or parking behind the block.

9. Activate use of mid-block passageways or alleys so that they are visually appropriate, functional, well-lit, and safe spaces.
Building Design

Addressing architectural features of buildings is an important component of creating the ‘sense of place’ that Loudoun County desires for the UPA, particularly with respect to the denser and more intensely used areas.

1. Incorporate different façade treatments such as forms, textures, colors, materials, and distinctive architectural features that add visual distinctiveness throughout the UPA, while building consistency in their application within individual developments to create uniqueness and identifiable character of each new development.

2. Add scale and interest to the building façade by articulated massing. Blank or long expansive walls with no detail or variation in form, color, texture, openings or material are undesirable, particularly in activity centers and along pedestrian pathways or linkages.

3. Use of architectural features, enhanced materials, fenestration, planting, lighting, and signage should contribute to a more pedestrian friendly streetscape.

4. Reinforce the existing façade rhythm along the street with architectural elements, landscaping, signage, street lighting, and street furnishings.

5. Include overhead architectural features, such as awnings, canopies, trellises or cornice treatments that provide identifiable entries, shade, and reduce heat gain.

6. Contribute to visual interest, human activity along streets and neighborhood safety by providing pedestrian scaled windows and fenestrations at the street level that act as pathways to activity inside buildings and “eyes on the street”.

7. For ground floor retail, restaurants, and professional office uses within mixed-use environments, along main streets, and other activity centers, devote a minimum of 65 percent to 75 percent relative to the length of the façade to pedestrian entrances and pedestrian-level display windows.

Sidewalks, Streets Trees, and Plantings

Sidewalks, in conjunction with street design and building placement, support ease of pedestrian movement and link people from their homes to community amenities such as parks, public places, retail and commercial areas, transit stops, nodes, landmarks, and the Metrorail stations. Sidewalks also enrich the quality of the public realm by providing appropriate connections and street furnishings in the public right of way. They create the basis for the concept of the ‘outdoor rooms’ and ‘outdoor hallways’ which support human activity at planned centers and along linkages.

Planting street trees and ground cover plantings has proven over time and across urban development to improve the human experience between building and streets. Along with creating inviting spaces, comfort for human activity, and positive impacts to the natural environment, street trees and ground level plantings contribute greatly to the visual appeal of building façades and outdoor spaces.

1. Create a continuous and predominantly straight sidewalk to support two-way pedestrian traffic with enough space for streetscape amenities such as street furnishings, street trees, ground cover plantings areas, street lighting, signage, and utilities.
2. Create amenities that act as a buffer between pedestrians and moving vehicles by the use of landscape and street furniture (benches, newspaper racks, pedestrian information kiosks, bicycle racks, bus shelters, and pedestrian lighting, etc.).

3. Use street furnishings to create a consistent rhythm (i.e., consistent height of light standards or consistent shade pattern of trees) and encourage the activity and use of the sidewalk area between buildings and streets.

4. Incorporate closely planted shade-producing street trees to encourage pedestrian activity along streets and promote comfort in the outdoor activity spaces. They may be interspersed with existing or proposed street trees. Select native trees and plantings with low maintenance requirements. Plant outdoor spaces with ground cover, low growing vegetation or permeable materials that accommodate both pedestrian movement and car door swings where on street parking is designed and planned. Incorporate stormwater bioswales with native plantings into the streetscape to serve both visual interest and stormwater management function.

### Street Furnishings and Lighting

Street furnishings and lighting should be designed to strengthen the pedestrian experience and encourage outdoor use and activity in activity centers and spaces between buildings and streets. These amenities should also serve to create neighborhood identity and visual coherence with the use of building and street lighting.

1. Provide usable space in the sidewalk areas which should include street furnishings such as benches, trash cans, kiosks, street gardens, bike racks, outdoor sitting spaces, and public art.

2. Provide adequate lighting levels to safely light the pedestrian path.

3. Use adequate, uniform, human scaled, and glare-free lighting to avoid uneven light distribution, harsh shadows, and light spillage.

4. Use poles, standards, fixtures, and lighting types that achieve “dark sky” compliant goals and objectives, such as lighting when necessary, reducing glare, use of energy efficient lighting systems, lighting enough to promote safety and security, and considers ecological impacts to the natural environment and humans.

### On-street Parking

On-street parking provides numerous benefits in urban environments such as reducing the need for parking decks and parking lots, buffering pedestrians, moving vehicle traffic, vehicle traffic calming, and providing parking near community amenities, businesses, and retail uses shaping the ‘outdoor rooms’.

1. Provide parallel or angled on-street parking wherever possible.

2. Eliminate street parking within pedestrian crossings.

3. Create traffic calming along streets designed for low speeds.

### Parking Structures

To promote an active and diverse streetscape and to minimize the visual impact of parking, parking structures should be integrated with surrounding development.
1. Parking structures that front streets should wrap the parking structure at the street level with an active use. Active uses may include retail, office, or residential uses and should be based on the allowed uses in each respective Place Type.

2. The height and mass of parking structures should be consistent with the design character of the area within which the structure is located (e.g., a five-story parking structure should not be situated in an area that consists primarily of two-story buildings).

3. Pedestrian entrances should be well-defined and attractive.

4. Façades that face public right-of-way should incorporate massing, textures, colors, and other architectural techniques that are of similar style and quality as primary adjacent buildings.

5. Parking structures should be designed to conceal the view of all parked cars and internal light sources from adjacent public right-of-way or public open space for the full height of the structure.

Public Places

Public places are areas that serve as centers for human activity, which could be a destination, a space to pass through, or a linkage. These places should provide a focal point for gathering, communicate community or neighborhood identity, and help make for complete neighborhoods. These places could include plazas, promenades, courtyards, park spaces that are landscaped and/or hardscaped, and should include trees and ground cover vegetation to create inviting spaces for activity and gathering.

1. Orient buildings so that public places receive sunlight as well as provision for high-quality, safe, night lighting.

2. Balance sunlight accessibility with shade producing trees and overhead cover.

3. Provide a variety of on-site features to maximize use and enjoyment of public places, including but not limited to:
   a) Water features / public art,
   b) Recreational features,
   c) Outdoor furnishings,
   d) Vegetative ground cover, gardens and shade tree plantings/reforestation,
   e) Use of stormwater management best practice features to create year round open space amenities with walking paths and benches,
   f) Open places for gathering large groups of people, and/or
   g) Variety of ground cover materials such as permeable and impermeable surfaces as well as natural ground cover.
Suburban Policy Area

Vision
The Suburban Policy Area (SPA) contains self-sustaining communities where one can live, work, and play. The SPA will have a mix of residential, commercial, and employment uses; a full complement of public services and facilities; amenities that support a high quality of life; and a design that incorporates a holistic approach to maintaining and improving community character through compatible development.

Introduction
The 46,000-acre SPA is located in the easternmost portion of the County, in close proximity to the job centers and activity areas located east of Loudoun. The Suburban Policy Area is defined on the north by the Potomac River and on the south by Braddock Road. Its eastern edge is the Fairfax County line, and its western edge begins at the Potomac River and follows a southerly path along the Goose Creek just east of Leesburg, the Goose Creek and Beaverdam Reservoirs, and a combination of property lines, roads, power line easements, and Washington Dulles International Airport’s 65 Ldn (day-night average noise level) noise contours. The earliest planned development occurred within the Potomac and Sterling communities during the 1960s signaling the beginning of the transformation of eastern Loudoun County from farmland with a centuries old rural heritage to the suburban area that it is today.

The SPA is designated as one of the growth areas of the County and has accommodated most of the residential and commercial development over the past decades due to the presence of central water and sewer utilities and an expanded road network. Two major events helped to open the SPA to residential development: 1) the construction of Washington Dulles International Airport, and 2) the construction of a major sewer line that accommodated the airport and improvements to Route 7 and Route 28.

Route 7 and Route 28 have evolved into critical transportation corridors that are contributing to Loudoun County’s reputation as an international center for technology, communications, and global data management sectors. Given its connection to the Washington Dulles International Airport, Route 28 continues to play a major economic role for Loudoun County as a key location for on-going development. The County is committed to the continuing growth of and need for an economically vibrant Route 28 corridor, and the Route 28 Highway Transportation Improvement District aids in accomplishing this goal by levying additional tax assessments on commercial and industrial properties to finance transportation improvements to Route 28. Additionally, the SPA surrounds the Urban Policy Area near the Silver Line Metro Stations that will include new dense, urban, transit-oriented types of development.
Background

The SPA consists of a mix of commercial areas and neighborhoods that provide a broad range of quality environments. The commercial areas of the SPA are focused areas for employment uses within a variety of commercial and workplace environments, including traditional office and industrial parks, mixed use centers, and neighborhood-serving commercial centers.

Residential neighborhoods in the eastern corner of the County were built between 1960 and 1990, while neighborhoods built in the western area of the SPA were built in the early 1990s or later. The older neighborhoods commonly reflect the housing styles and neighborhood designs that were prominent in the era they were developed and provide a more limited mix of housing types (primarily single-family) while relying on neighborhood commercial developments located on major roads like Route 7 for easy access to amenities. The master planned developments west of Route 28 include a variety of housing types organized around neighborhood centers designed as the focal point of the community and provide easy access to daily needs. Parks, greenways, and open space frame developments and link neighborhood residents to nature, neighborhood destinations, and beyond in both the western and eastern neighborhoods.

Development Approach

The County will focus efforts on fostering and maintaining community identity within the SPA and its communities. The SPA is not and should not be one homogenous area. Many existing neighborhoods in Eastern Loudoun are becoming increasingly diverse, bringing a new set of expectations and attitudes to these communities. As new development continues in this area, the roads are becoming increasingly congested, and the lack of transit access and safe pedestrian connections is a mounting concern. Continuing the County’s goal to create communities with unique community visions would help identify and strengthen the creation of distinct places within the SPA, ensure that they are well designed and serviced, and that they provide diverse and stimulating social, cultural, recreational, and livable environments for their residents. Policies below address ways to improve livability through: 1) protecting and enhancing elements of Natural and Heritage Resources, including open space and pedestrian connections; 2) ensuring compatible and complementary infill development; and 3) revitalizing existing neighborhoods in a way that protects and enhances our existing communities. The concept of creating Community Plans is one that offers tremendous potential to ensure that the vision of the SPA is fully achieved and to guide the remaining build-out of each area.

Rapid growth in the County, with the majority occurring in the SPA, has increased development pressure outside of the SPA. Today there is little undeveloped land remaining in the SPA as most
land has already been developed or is approved for development. With limited developable land in this area, the County is at a juncture in its planning efforts for greenfield development. Redevelopment and infill will soon begin to play an increasing role in development decisions within the SPA, which will mark a significant shift in the county’s planning and development activities (see the Infill and Redevelopment section). Because much of the SPA is currently developed, most new projects will be smaller in scope and need to be evaluated based on how they can be integrated into the surrounding community. The amount of limited land available and the added growth from redevelopment and infill will make adding public facilities to the SPA a challenge. Public facility standards may need to change to continue to adequately address the needs of the population. As the primary location for suburban-scale residential and nonresidential development, the manner of growth and redevelopment in the SPA is of vital importance.

The demographic, market and land use trends of the past decades have led to greater demand for mixed-use and urban environments. National trends show that changes in typical households (for example millennials, seniors, empty nesters) may demand different housing types, public services, and lifestyle options than provided in the past. To attract top talent, many employers are focusing on employee satisfaction when considering locations and designs of office space. Employers in professional services, technology, and innovation sectors are shifting away from traditional suburban offices towards urban “live, work, play” environments to enhance quality of life. While the County previously established an overall land-development strategy that encouraged compact, mixed-use development providing people with the opportunity to live, work, recreate, and shop in a pedestrian-friendly environment, the development that has occurred in Loudoun has largely remained single-use and automobile-oriented.

Loudoun County continues to be an attractive place for residential development given its geographic location in the region, school system performance, and notable quality of life measures. Demand for residential product will need to meet a wide variety of preferences, driven by attractiveness for families, young adults forming new households, and downsizing occurring in the Baby Boomer generation. Demand for non-residential development will be driven by the addition of new households, the County’s assets, infrastructure, and the County’s technology sector. Retail users will follow new residential development, seeking locations that offer accessibility and visibility to an expanding customer base. Other employers seeking office and industrial space will locate in areas that serve their target needs.
The County previously designated land along its primary transportation corridors for “Keynote Employment” areas to provide locations for corporate campus style office development; however, new suburban-style office developments are no longer envisioned in these areas due to declining demand and concerns about the sustainability of single-use development patterns.

It is expected that mixed-use developments, such as One Loudoun or those proposed near the future Silver Line Metro Stations, will be the most attractive environments for retail and office uses in the coming years. To provide alternative means of addressing office development and land uses along Route 7, Loudoun County Parkway, and Route 28, this Plan replaces the “Keynote Employment” planned land use designation with a number of designations. To continue to maximize the commercial development potential within the Route 28 corridor, the Suburban Employment and Suburban Mixed Use Place Type designations offer planned land uses that reflect the full economic potential of properties and provide employment settings that reflect the kind of environments sought by business users.

In addition, changes in technology over the past decade have contributed to the escalated development of data centers within the County. To date, there are approximately seventeen million square feet of data center facilities completed, under construction, or planned. Future demand for data centers will need to be accommodated in places that have access to utilities, including electricity, water, and fiber. The supply of industrial and flex space is being outpaced by demand, resulting in low vacancy rates. As available greenfield sites in eastern Loudoun County become more limited, targeting key tracts of land for employment uses will be critical to ensure future economic growth.

Overall, the County’s approach is to ensure that future development is complementary to the existing development pattern of the SPA while supporting the necessary flexibility in form and use that will be needed to create vibrant mixed-use environments. As each new development is absorbed into the SPA’s built environment, it will be viewed in the context of its larger community with an emphasis placed on the character of the development and how it contributes to the needs and overall identity of the SPA and Loudoun County.
Place Types
As described in the beginning of this chapter, the following Place Types have been designated for specific locations as displayed on the accompanying map. The Place Types will work in concert with the Design Guidelines and Policies, Strategies, and Actions of the SPA to fulfill the land use patterns and community characteristics intended for the area.
Suburban Neighborhood areas include Loudoun’s master planned neighborhoods of predominantly residential uses arranged on medium-to-large lots. Accessory residential units can be appropriate for the area and may consist of apartments in the principal structure, garage apartments, or other outbuildings approved by the County. Retail and service uses that serve the routine shopping needs of the immediate neighborhood (e.g., grocery, gas stations, drive-throughs, drycleaners, etc.) should be integrated into the area at significant intersections and along major roads.

The Suburban Compact Neighborhood Place Type may be appropriate for infill parcels designated as Suburban Neighborhood on the Place Type map.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
</table>
| • Single Family Detached Residential  
  • Single Family Attached Residential  
  • Civic, Cultural, & Community | • Retail & Service Commercial  
  • Active Adult Retirement Communities  
  • Multi-Family Residential  
  • Accessory Residential Units | • Office  
  • Public Facilities  
  • Special Activities  
  • Parks & Recreation |

**Ideal-Preferred Mix of Uses**

Possible Ranges:
- Res: 75-90%
- Non-Res: 0-15%
- Public/Civic: 10%+
DESIGN CHARACTERISTICS

Context
Primarily single family detached and attached residential uses that are integrated in a walkable street pattern.

Street Pattern:
Fragmented Parallel and limited Loop and Cul-de-sac

Block Length:
600-1,500 feet

Building Setback:
Shallow to medium

Parking:
Driveway, garage, or on-street

Design Amenities:
Sidewalks, street trees, lighting, crosswalks, common open spaces

Retail and Service:
Neighborhood - individual uses under 5,000 or small center up to 30,000 square feet
Community- individual uses under 30,000 or center between 30,000-150,000 square feet

Open Space:
30% of the site- Recreational (active and passive), Community, and/or Natural and Heritage

An example plan view of a Suburban Neighborhood
Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Residential Density: Up to 4 du/ac; Up to 6 du/ac for infill development
Non-Residential FAR: Up to 1.0
Building Height: Up to 4 Stories

Transition
Transitions should be gradual, particularly where natural or man-made buffers are not available. New developments within Suburban Neighborhood areas adjacent to lower-density residential uses should create transitions in building scale and incorporate design elements that soften those transitions. Higher-density residential development can serve as a transitional land use between nonresidential uses and lower-density residential areas. Appropriate transitional techniques include variations in building orientation, height step down, and creative and extensive use of landscaping and natural features. Fencing or other barriers should not be used as the sole means of screening and buffering.
Suburban Compact Neighborhood areas provide opportunities to develop neighborhoods that can take advantage of small infill parcels near traditional suburban neighborhoods or high-density walkable urban neighborhoods, depending on the context of their location. They provide opportunities for a mix of housing types including small-lot patio homes, townhomes, duplexes, and multifamily residences. Accessory residential units are also appropriate for these areas and may consist of apartments in the principal structure, garage apartments, or other outbuildings approved by the County. Open space areas such as parks, trails, community courtyards, and small public plazas should be integrated into individual site plans. Small-scale offices as well as retail and service uses serving the immediate or routine shopping needs of the immediate neighborhood (e.g., grocery, drycleaners, etc.) could be integrated into these neighborhoods. Auto-oriented uses such as gas stations, car washes, drive-throughs, would be located along streets primarily designed for the automobile. Development within this Place Type should include a public and civic component or be located within walking distance of public and civic amenities.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Single Family Attached Residential</td>
<td>• Active Adult Retirement Communities</td>
<td>• Office</td>
</tr>
<tr>
<td>• Single Family Detached Residential</td>
<td>• Accessory Residential Units</td>
<td>• Civic, Cultural, &amp; Community</td>
</tr>
<tr>
<td>• Multi-Family Residential</td>
<td>• Retail &amp; Service Commercial</td>
<td>• Public Facilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Special Activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Parks &amp; Recreation</td>
</tr>
</tbody>
</table>

**Ideal-Preferred Mix of Uses**

Possible Ranges:
- Res: 85-100%
- Non-Res: 0-15%
- Public/Civic: 0%+
DESIGN CHARACTERISTICS

Context
Compact residential development providing opportunities for a variety of unit types that can be designed to fit within or adjacent to surrounding neighborhoods.

<table>
<thead>
<tr>
<th>Street Pattern:</th>
<th>Rectilinear Grid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Length:</td>
<td>200-660 feet</td>
</tr>
<tr>
<td>Building Setback:</td>
<td>Shallow setbacks</td>
</tr>
<tr>
<td>Parking:</td>
<td>On-street, accessory, alley-oriented parking</td>
</tr>
<tr>
<td>Design Amenities:</td>
<td>Sidewalks, street and shade trees, lighting, street furniture, bike racks, crosswalks</td>
</tr>
<tr>
<td>Retail and Service:</td>
<td>Neighborhood - individual uses under 5,000 or small center up to 30,000 square feet Community- individual uses under 30,000 or center between 30,000-150,000 square feet</td>
</tr>
<tr>
<td>Open Space:</td>
<td>15% of the site-Recreational (Passive and Active), Community, and/or Natural and Heritage</td>
</tr>
</tbody>
</table>

An example plan view from Orenco Station, OR of a Suburban Compact Neighborhood
Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Residential Density: 8-24 du/ac
Building Height: Up to 4 stories
Total Nonresidential FAR: Up to 1.0

Transition
Appropriate transitional methods should be implemented where new development abuts more intensive nonresidential uses or less intensive residential uses. New high-density and large-scale infill within Suburban Compact Neighborhood areas adjacent to lower density residential uses should create transitions in building scale and incorporate design elements that soften those transitions. Appropriate transitional techniques include variations in building orientation, height step down, and creative and extensive use of landscaping and natural features.
Suburban Mixed Use areas provide compact, pedestrian-oriented environments with opportunities for a mix of residential, commercial, entertainment, cultural, and recreational amenities. Although this area provides for residential uses, commercial and entertainment uses are the primary draw to the mixed-use center. Reducing the distance between home, work, and entertainment/retail destinations, Suburban Mixed Use areas serve as logical locations for transit stops. Accessory residential units are also appropriate for the area and may consist of apartments in the principal structure, garage apartments, or other outbuildings approved by the County. Within this Place Type, mixed-use developments with increased densities and greater ranges of uses than otherwise allowed for Suburban Mixed Use may be appropriate on sites 150 or more acres in area.

Over time, existing commercial developments within Suburban Mixed Use areas should be redeveloped with a vertically integrated mix of uses on the site. Multi-family residential can also be introduced into the design of existing suburban-style commercial developments as an initial step toward creating vibrant, walkable mixed-use communities. The Suburban Compact Neighborhood Place Type may be appropriate for infill parcels designated as Suburban Mixed Use on the Place Type map.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
</table>
| • Retail & Service Commercial  
  • Office  
  • Entertainment Commercial  
  • Multi-Family Residential  
  • Institutional  
  *Residential restrictions in noise-sensitive areas located within 65 Ldn noise contours | • Small-Lot Single Family Residential Attached  
  • Active Adult Retirement Communities  
  • Civic, Cultural, & Community  
  • Accessory Residential Units | • Small-Lot Single Family Residential Detached  
  • Public Facilities  
  • Conference Center  
  • Hotel  
  • Special Activities  
  • Parks & Recreation |

**Ideal-Preferred Mix of Uses**

Possible Ranges:
- Res: Up to 70%
- Non-Res: Up to 80%
- Public/Civic: 5%+
DESIGN CHARACTERISTICS

Context
Vertically mixed-use buildings as well as multi-story single-use buildings that are integrated in a walkable street pattern. In such specialized designs, office and residential parking structures, gas stations, car washes, drive-throughs, and other auto-related functions would be located along streets primarily designed for the automobile. Office, multi-family buildings and store entrances would be located along streets designed primarily for pedestrians.

| Street Pattern: | Rectilinear, Gridiron, Linear |
| Block Length: | 200-660 feet |
| Building Setback: | Shallow setbacks at sidewalks |
| Parking: | Structured, on-street, accessory, short-term, and/or alley-oriented, Surface parking may be considered (see the Suburban Policy Area Design Guidelines). |
| Design Amenities: | Sidewalks, street trees, street furniture, shade trees, bike racks, lighting, crosswalks, plazas, pedestrian malls, network of green space, public art |
| Retail and Service: | Single-story individual retail buildings shall not be permitted greater than 2,000 square feet and must be integrated into the compact, pedestrian-oriented environment. Drive-through retail uses shall be incorporated within mixed-use buildings. |

Neighborhood (allowed only within Single Family residential areas) – single-story individual uses under 5,000 or small center up to 30,000 square feet

Open Space: 10% of the site-Recreational (passive and active), Community, and/or Natural and Heritage

An example plan view of Suburban Mixed Use from Silver Spring, MD
Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Total FAR: Up to 1.0* Building Height: Up to 5 stories

* Additional density (up to 1.5 FAR) may be achieved through the provision of one or more of the following project elements that go above and beyond required development standards to further the County’s comprehensive planning goals: affordable housing units, building techniques that exceed industry efficiency standards, additional community amenities and pedestrian connections, and/or beneficial revitalization/redevelopment in priority areas.

Transition
Small block sizes and a mix of different uses make transitions between uses and developments important in the Suburban Mixed Use Place Type. Changes in height or building character, where allowed, should occur mid-block to promote balanced streetwalls where both sides of the street appear similar in height if possible. Larger developments near smaller residential dwellings should step down appropriately to respect these neighbors. Developments should be transitioned from taller buildings at the center to heights generally no more than a story taller than adjoining adjacent development consisting of less intensive uses. The predominant residential use type is multi-family; however, a very limited portion of the development within the Suburban Mixed Use Place Type may be developed with small-lot single family residential as a transitional use between Place Types.
Suburban Employment areas provide opportunities for a broad array of employment uses within an environment that provides gathering spaces and opportunities for synergies among businesses. These offer prime locations for office, production, flex space, and warehousing uses as well as startups and established businesses. Appropriate uses do not generate excessive noise or air pollutants or require outdoor storage. Limited first floor retail that supports predominant uses is appropriate.

Parking should generally be located behind the building to ensure the buildings are the predominant feature when viewed from roadways and adjacent properties.

Although civic or recreation space is not expected, required open space in Suburban Employment developments should include areas for use by customers and employees.

### Core Uses
- Light Production
- Office
- Research & Development
- Warehousing
- Contractor without Outdoor Storage
- Data Centers
- Flex Space

### Complementary Uses
- Retail & Service Commercial

### Conditional Uses
- Institutional
- Civic, Cultural & Community
- Public Facilities
- Special Activities
- Parks & Recreation

#### Ideal-Preferred Mix of Uses

Possible Ranges:
- Res: 0%
- Non-Res: Up to 100%
- Public/Civic: 0%+
DESIGN CHARACTERISTICS

Context:
Separate employment uses that are integrated within a walkable, employment-based environment.

<table>
<thead>
<tr>
<th>Street Pattern:</th>
<th>Rectilinear, Gridiron, or Fragmented Parallel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Length:</td>
<td>300-1,000 feet</td>
</tr>
<tr>
<td>Building Setback:</td>
<td>Short to medium; greater if flex use</td>
</tr>
<tr>
<td>Parking:</td>
<td>Structured, surface, on-street, accessory, or short-term</td>
</tr>
<tr>
<td>Design Amenities:</td>
<td>Sidewalks, street trees, shade trees, bike racks, plazas, public art</td>
</tr>
<tr>
<td>Retail and Service:</td>
<td>Employment Supportive-Limited to support the predominate use. Generally 10% of the gross FAR of the employment uses.</td>
</tr>
<tr>
<td>Open Space:</td>
<td>30% of the site- Recreational (trails), Community (outdoor seating, plazas, gardens, public art), and/or Natural and Heritage</td>
</tr>
</tbody>
</table>

Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Total FAR: Up to 1.0  Building Height: 2 to 8 stories
Transition

Transitions between Suburban Employment uses and other developments, in particular adjacent residential neighborhoods, are vitally important. Building heights should step down appropriately to less intense residential uses. In developments adjoining less intensive uses, building heights should decrease moving outward from the center of the development, stepping down to heights generally within one story of adjacent structures.

Certain employment uses that may not be compatible with adjacent residential uses, such as data centers, should have transitional uses located in between.
Suburban Industrial/Mineral Extraction areas consist of large manufacturing, contractor with outdoor storage, and other productive uses. Streets in this district are typically designed to accommodate freight ingress and egress. This Place Type also includes mineral extraction areas such as quarries and mines. Industrial and mineral extraction uses are incompatible with residential uses due to the prevalence of outdoor storage and the emissions of noise, odor, and vibrations. Buffers between these uses and residential uses are necessary to ensure compatibility and maintain commercial viability.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• General and Heavy Manufacturing and Assembly</td>
<td>• Retail &amp; Service Commercial</td>
<td>• Office</td>
</tr>
<tr>
<td>• Warehousing</td>
<td>• Flex Space</td>
<td>• Public Facilities</td>
</tr>
<tr>
<td>• Contractor with Outdoor Storage</td>
<td>• Light Production</td>
<td>• Special Activities</td>
</tr>
<tr>
<td>• Data Centers</td>
<td></td>
<td>• Parks &amp; Recreation</td>
</tr>
<tr>
<td>• Fleet &amp; Equipment Sales &amp; Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Research and Development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Outdoor Storage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Public Utilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Quarry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Outdoor Manufacturing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Preferred Mix of Uses**

Possible Ranges:
- Res: 0%
- Non-Res: Up to 100%
- Public/Civic: 0%+
DESIGN CHARACTERISTICS

Context
Primarily one-to-two-story buildings used for warehousing, data centers, contractor services, or manufacturing.

| Street Pattern: | Irregular |
| Block Length:    | 300-1,000 feet |
| Building Setback:| Deep, varying with use |

Parking:
Surface

Design Amenities:
Sidewalks, street trees, shade trees

Retail and Service:
Employment Supportive-Limited to support the predominate use. Generally 5% of the gross FAR of the employment uses.

Open Space:
30% of the site-Recreational (sidewalks or trails), Community (outdoor seating area), and/or Natural and Heritage

Transition
Transitions between Suburban Industrial/Mineral Extractive uses and other developments, in particular adjacent residential neighborhoods, are critically important to the viability of long-term industrial operations. Setbacks, buffering, and natural open space can reduce impacts by blending the edges of Industrial/Mineral Extraction developments with surrounding developments, providing softer transitions than structural buffers. Storage and loading areas are to be oriented away from and screened from streets and adjacent uses.
Policies, Strategies, and Actions

Unless otherwise specified, the following Policies, Strategies, and Actions apply only within the SPA.

SPA Policy 1: Foster community identity within the Suburban Policy Area.

Strategy
1.1. Build upon and enhance the sense of place in the Suburban Policy Area and its communities.

Actions
A. Update the County’s adopted Small Area Plans and create new Community Plans and other appropriate plans which address the particular needs and guide the remaining build-out and/or redevelopment of specific areas within the Suburban Policy Area.

B. Establish design principles for individual communities within the Suburban Policy Area which ensure a high quality of development and redevelopment is achieved.

C. Ensure development and redevelopment proposals conform to the applicable Design Guidelines of this plan.

D. Use the Infill and Redevelopment polices to maintain neighborhood vitality, revitalize underused areas, and facilitate complete, connected, and distinct communities.

E. Identify and protect environmental features and to follow, to the extent possible, the natural topography.

Strategy
1.2. Enable residents to become more involved in their neighborhoods.

Actions
A. Develop a public outreach program to educate neighborhood residents regarding County programs available to them.

B. Expand civic outreach to involve underserved individuals.

C. Support citizen organizations in their efforts to improve their communities.

D. Foster the development of community partnerships to improve community character, maintenance, and safety.

E. Invest in programs that allow residents to formulate and assume stewardship of neighborhood values, standards, and goals.

Strategy
1.3. Integrate new development within the Suburban Policy Area with the existing development pattern that surrounds it.
Action
A. Evaluate the appropriateness of a proposed use or development with the surrounding community.

Strategy
1.4. Design and develop Suburban Policy Area communities as walkable and interconnected places.

Actions
A. The County, in collaboration with other governmental agencies and the private sector, will ensure through a variety of measures that all public spaces in residential and commercial areas are accessible by pedestrians.

B. Retail and office development proposals will combine open and civic space in features such as pedestrian promenades and plazas, public art, entrance features, linear parks and trails, outdoor seating, lawns and greens, and similar design features that invite pedestrian activity.

C. Require convenient access by foot and bicycle for residential, office, institutional, civic, and retail areas.

D. The Loudoun 2040 Countywide Transportation Plan will provide additional transportation policy direction for the transportation network (walkability, multimodal, connectivity) in the Suburban Policy Area.

SPA Policy 2: Create environments where individuals can work, live, and have convenient access to services, shops, and recreation.

Strategy
2.1. Allow a mix of uses or uses that complement and complete existing communities.

Actions
A. Provide incentives for redevelopment, infill development, and adaptive reuse projects that will enhance quality of life and neighborhood character, fulfill community needs, and improve economic opportunities (see Infill and Redevelopment section).

B. Allow new multi-family residential units to be located within existing commercial centers to allow for more walkable, mixed use communities.

C. Promote residential and office uses above first floor retail.
D. Allow flexibility in the development phasing for mixed-use projects while establishing a build-out relationship between the residential and non-residential components that ensures a mix of uses is achieved and to best balance the fiscal costs and benefits of the project.

E. Promote high quality site and building design, landscape design and buffering in employment areas that reflect their function as a gateway to the Urban Policy Areas and location along major vehicular thoroughfares (see Quality Development section).

F. Accommodate transit infrastructure in Employment and Mixed Use Areas (see Loudoun 2040 Countywide Transportation Plan).

G. Provide pedestrian and bicycle connectivity to surrounding networks and transit nodes within employment areas.

H. Achieve an average unit size for new housing that is smaller than 80% of the County medians for each respective housing type.

SPA Policy 3: Support the Route 28 Highway Transportation Improvement District, established by the State as a means of providing additional local revenue to pay for improvements to Route 28.

Strategy
3.1. Ensure protection of the Route 28 Highway Transportation Improvement District as an important economic key of attracting major national and international corporations, and ensuring the long-term viability of Washington Dulles International Airport.

Actions
A. Limit residential development in the Route 28 Highway Transportation Improvement District except when allowing residential units will directly catalyze the office development potential of land in the District and result in an overall positive fiscal impact to the County’s Route 28 Highway Transportation Improvement District debt obligations.

B. Consider residential development on a case by case basis that results in a net positive impact to the County.

Design Guidelines
The Design Guidelines are to build upon our current development patterns in a manner that allows innovative design and new responses to the market. While the Design Guidelines are not regulatory requirements, the County prefers that all future developments comply with these guidelines. The Design Guidelines do not supersede or otherwise limit the application of adopted zoning regulations, ordinances, building codes, or any other design standards or regulations administered by Loudoun County.

The goals of the SPA Design Guidelines are to:
Create visually interesting and compatible buildings and site designs that use building forms, materials, fenestration, repetition, rhythm, color, and architectural variety resulting in delightful blends of form, volumes, textures, and colors in the various neighborhoods;

Create inviting spaces for varied activity; and

Create a sense of place and uniqueness.

When using the guidelines make sure to analyze the impact a potential development may have on the urbanizing landscape, considering not only appearance, but practical considerations—such as proximity and quality of connections to community amenities, jobs, and housing to maximize the use of existing infrastructure and limit travel distances. The County encourages a conservation design process when planning development in the SPA so that natural and heritage resources are conserved and incorporated into the site design. Development should contribute to creating unique places within the Suburban Policy Area by working with existing topography and site features, responding to the local context, and reinforcing the regional character. Sustainability requires maximum consideration for using the landscape for benefits like solar heat gain or shelter from wind, as well as building designs that incorporate energy efficient and green building technologies. Dense areas of buildings should contribute to a hospitable microclimate. Development should locate close to the road and avoid isolating itself on the site in order to “maximize presentation.” The bulk of the design should be appropriate to the function of the development. Unless otherwise specified, the following guidelines apply only within the SPA:

**Development Criteria:**

1. Ensure that the use contributes to and complements the existing development pattern;
2. Consider innovative uses that contribute to the surrounding community;
3. Provide consistency with the desired form, character and land uses of the underlying Place Type;
4. Differences between the height, scale, bulk, setback from the street, or other physical features of the proposed development, and existing development in the immediate area;
5. Presence and quality of a spatial or physical transition between uses;
6. Availability of adequate roads, services and infrastructure; and
7. Relationship and incorporation of existing Natural and Heritage resources.

**Building Orientation and Setbacks**

1. All development should include a site design that is compact and makes buildings the prominent feature of the site as viewed from adjoining/adjacent roads, especially along major thoroughfares. Site design and development will strive to minimize site disturbance and minimize removal of existing, viable vegetation.
2. It is desirable to have civic, open spaces, green spaces, and vegetation to separate parking lots from buildings and areas for human activity.
Civic spaces and green spaces are encouraged to have public art enhancements.

**Building Design**

1. Buildings within larger multi-building developments should exhibit a unity of design through the use of similar elements such as rooflines, exterior materials, facade treatments, window/fenestration arrangements, sign location, and architectural styles and details.
2. Freestanding stores, retail centers, commercial centers, and restaurants will be encouraged to provide usable outdoor civic or public spaces.
3. Required drainage and stormwater management facilities, such as holding basins, drainage swales, and culverts should be incorporated as features into the site design of the project, to the extent possible. Natural drainage features should be conserved to the greatest extent possible, minimizing impervious facilities to the extent technically feasible.
4. Building massing and walls must be varied to avoid long, flat facades and break down the scale of large buildings and commercial/retail centers. It is desirable that building facades should incorporate wall relief, recesses, off-sets, angular forms, or other features to avoid presenting buildings cannot present a “blank side” to neighboring properties.
5. Pitched, mansard, and other distinctive roof forms are strongly encouraged where appropriate.
6. Rooftop mechanical equipment will be screened with materials that blend with the architecture and will be perceived as an integral part of the principal building. Ground mounted mechanical equipment will also be screened either by incorporating it in the building architecture or by landscaping.
7. Buildings will incorporate covered entrances to provide weather protection for shoppers and create a pedestrian-oriented environment.
8. Commercial development should avoid the appearance of strip commercial development which is commonly characterized by the following features to be avoided: multiple entrances serving individual uses, minimal setbacks and landscaping, and multiple structures and signs without a unified design scheme.

**Sidewalks, Streets, Trees, and Plantings**

1. Large parking areas will be landscaped with trees and shrubs throughout to reduce the visual impact, provide shade, and reduce the heat island effect or heat absorption of the parking area.
2. The street frontage of development will be landscaped with trees to help create a green edge on both sides of the street.
3. Existing environmental features such as natural topography, hedgerows, mature trees, and berms will be integrated into the landscape plan for non-residential centers, when feasible.
4. Non-residential buildings and parking areas will be sufficiently screened and buffered from adjoining residential areas by distance, transitional uses, landscaping, and/or natural vegetation to mitigate the effects of noise, lighting, and traffic on the surrounding residences.
5. Residential areas will be buffered from adjacent non-residential uses by trees, fences, and hedges.
6. Sidewalks will be provided to all development to accommodate benches, bikes, strollers, trees, and planters.

**Street Furnishings and Lighting**

1. Provide usable space and amenities when planning sidewalks, including street furnishings such as benches, trash cans, kiosks, street gardens, bike racks, outdoor sitting spaces, and public art.

2. Signs for development will be developed as an integral part of the overall design. A unified graphic design scheme is strongly encouraged that is in conformance with an appropriate regulatory framework.

3. Site and building lighting will reduce glare and spillage of light onto adjoining properties and streets. Fixtures should be attractive site elements that are compatible with the architecture of the development.

4. Both lighting and signs will be designed for pedestrians, bicyclists, and vehicles.

**Parking, Circulation, and Loading**

1. All development should strive to create inter-parcel connectivity for pedestrian and vehicular circulation to increase pedestrian activity and decrease vehicular traffic on roadways necessitated by broken inter-parcel connections.

2. Pedestrian traffic, internal to non-residential centers, should be provided with a safe travel route from the parking area to the building with a demarcated pathway and clear directional signage. Trees and other plantings should be provided along the walkway.

3. Parking areas will be visually screened from adjacent streets and residential areas by heavy landscaping, depressing the parking area, constructing earthen berms, and/or other means.

4. All loading and storage areas must comply with Zoning Ordinance regulations and must be screened from adjacent residential areas by earthen berms, masonry walls, permanent wooden fencing, or dense landscaping.

5. Parking structures should be integrated with surrounding development to promote an active and diverse streetscape and to minimize the visual impact of parking. Pedestrian entrances should be well-defined and attractive.

6. Parking structures that front streets should wrap the parking structure at the street level with an active use. Active uses may include retail, office, or residential uses and should be based on the allowed uses in each respective Place Type.

7. The height and mass of parking structures should be consistent with the design character of the area within which the structure is located (e.g., a five-story parking structure should not be situated in an area that consists primarily of two-story buildings).

8. Pedestrian entrances should be well-defined and attractive.

9. Façades that face public rights of way should incorporate massing, textures, colors, and other architectural techniques that are of similar style and quality as primary adjacent buildings.

10. Parking structures should be designed to conceal the view of all parked cars and internal light sources from adjacent public right of way or public open space for the full height of the structure.
11. Surface parking should be located to the rear or side of buildings and away from the street or street intersections, while providing direct pedestrian access to the buildings.

12. Textures, patterns, and colors are encouraged in the design of surface parking to provide breaks in large areas of pavement and distinguish between areas for pedestrian and vehicular movement.

13. Large surface parking lots should be functionally divided into smaller, well-landscaped and shaded parking clusters containing fifty cars or less.
Transition Policy Area

Vision
The Transition Policy Area (TPA) is visually distinct from adjoining policy areas, providing expansive open space with recreational opportunities while accommodating a development pattern that promotes environmental protection, housing diversity, quality design, and economic growth.

Introduction
The TPA provides a distinct development pattern focused on retaining substantial open space to frame a unique built environment accommodating a variety of communities. The open spaces serve as dominant landscape, providing significant opportunities for public recreation and facilities within the context of an assortment of community designs. TPA communities range from rural estate developments to compact residential and mixed-use centers that can provide a variety of housing options and protect natural and heritage resources.

Loudoun 2040 proposes that, in order to sustain a healthy economy and to provide greater opportunities for attainable housing, the County seek to accommodate a share of the anticipated regional housing demand. Anticipated high density development in the UPA will help meet the important multifamily component of the housing demand. Loudoun 2040 also proposes increased density in areas of the SPA and the integration of new residential uses into areas previously planned for commercial or employment uses. These approaches notwithstanding, there is not adequate capacity in these areas to address the County’s housing demands. The Towns and RPA are not anticipated to absorb a significant portion of future housing demand. Infrastructure limits and community desires to maintain small-town community character are the primary constraints in the Towns. The RPA has land, but the limitations of onsite wells and septic systems, country roads, distance to services, and a strong community desire to preserve the rural character of western Loudoun all serve to limit growth capacity.

In light of these constraints, Loudoun 2040 acknowledges the key benefits of accommodating additional housing in the TPA, including access to central utilities, an improving transportation network, proximity to the SPA services and amenities, and large, undeveloped tracts of land that will allow for inclusive community designs. The fundamental goal of this new development pattern will be to accommodate residential products and neighborhoods that will help meet the needs and desires of the County’s growing and diversifying populace. Evaluation of new development proposals will focus on design concepts that reflect a strong conservation design process, offer housing that is affordable to a range of incomes, and retain significant open space to protect resources, provide space for public and civic facilities and parks, and hide the intensity of new development within a landscape of forests, hedgerows, and tree stands. Residential developments will be expected to support a continuum of housing options and prices. Three mixed-use commercial centers will offer local services and amenities so that the TPA will become a more self-sustaining community. Natural open spaces will continue to be the predominant visual element and create a contiguous network of green spaces.
Loudoun 2040 reaffirms a growth boundary (GB) beyond which central sewer and water is not allowed. Beginning in the north, the GB follows the Suburban Policy Area boundary to the point where it meets the Transition Policy Area. The GB then follows the western edge of the Transition Policy Area to meet the Prince William County line in the south. The Plan also retains the existing large-lot land use pattern along the western TPA areas and over a large part of the TPA, to reinforce the growth boundary and prevent further suburban development to the west.

**Background**

Between 1991 and 2001, the Board of Supervisors changed the policy direction for the geographic area of what is now the TPA went through four iterations. Until 2001, the area was planned as part of the SPA or a phased expansion of the SPA. In 2001, the Board established the TPA as a permanent policy area:

- In 1991, the area was planned for suburban development that was to be phased with ultimate development expected to occur by 1995.
- In 1993, the Dulles South Area Management Plan added Upper Broad Run to the Dulles South suburban area at densities between 3 and 6 units per acre and added the Upper and Lower Foley and Lower Bull Run areas at densities between 1 and 3 units per acre.
- In 1997, the Dulles South Plan reestablished a suburban development phasing boundary west of Northstar Boulevard. The phasing area was then subject to the policies of the Rural Policy Area until the County chose to expand the Suburban Policy Area.
- In 2001, the TPA became a distinct policy area in the Revised General Plan between the Suburban Policy Area (SPA) and Rural Policy Area (RPA). Six subareas of the TPA were established, each with density and open space requirements.
- In 2004, the Board of Supervisors amended the Revised General Plan and extended central utilities throughout the TPA, establishing the western edge of the TPA as the County’s urban growth boundary.

In 2017, there were approximately 5,600 residential units, along with parks, schools, and commercial development on 16,600 acres in the TPA and approximately 6,200 acres remaining available for potential development. Although the TPA is predominantly residential, Loudoun 2040 designates limited areas for industrial development in the northern portion of the TPA in close proximity to planned improvements to Sycolin Road and existing industrial land south of the Leesburg Joint Land Management Area (JLMA). Limited retail commercial development can be found along Route 50 and other retail space has been approved on Braddock Road.

Important drinking water resources are located within the TPA, and watershed protection extends over significant portions of the Goose Creek and the Beaverdam Reservoir to help protect these resources. Conservation easements, proffered open space, and development setbacks provide the 300-foot buffer adjoining Goose Creek. Loudoun Water owns the land surrounding Beaverdam Reservoir, while the County and NOVA Parks own parkland adjacent to the reservoir.

**Development Approach**
While continuing to focus growth in the UPAs and SPA, Loudoun 2040 acknowledges the limited amount of land available for development in the SPA and proposes new approaches in the TPA to accommodate some of the County’s needs. These needs include accommodating high demands for housing to support the County’s economic development goals, ensuring a high quality of community design, preserving open space, and maintaining a quality of life that hinges on a healthy and vibrant natural environment. There are several factors that enable the County to accommodate new growth in the TPA while protecting key environmental resources and protecting the RPA from encroachment of suburban development.

A number of existing neighborhoods along the western side of the TPA and rural villages just west of the TPA have already established a low density development pattern with significant amounts of permanently protected open space, which creates a distinct edge to the TPA. This existing pattern frames a mix of development intensities to the east. These eastern TPA developments will still be required to preserve large open space areas that are a hallmark of the TPA’s character and distinguishing it from the SPA, which requires preservation of less open space. The open space requirement will also require a more compact development pattern, resulting in smaller single family lots and a combination of detached and attached products.

Transportation projects in the eastern TPA, including improvements to Ryan Road and Sycolin Road, and the completion of Shreveport and Creighton Roads, will provide better connections to the east without necessarily adding to the congestion of Route 50. Loudoun 2040 proposes to concentrate future development proximate to existing and planned transportation improvements where capacity exists. Large tracts of undeveloped and underdeveloped land south of Braddock Road and east of Northstar Boulevard are in close proximity to the Suburban Policy Area immediately to the north, yet are separated by several miles from the Rural Policy Area further to the west. This southeast portion of the TPA is also directly adjacent to Prince William County across the Bull Run to the south and Fairfax County to the east. The principal constraining factor in this area is the current lack of traffic capacity on existing roads and, while major roads are planned, new development will need to be timed to occur in conjunction with the availability of additional road capacity.

The 2004 extension of central water and wastewater utilities throughout the TPA enabled more compact development than previously planned, when the TPA was only served by wells and septic systems. Select areas of higher intensity development interspersed among lower density projects and with substantial open spaces that offer screening, separation, and recreation can be compatible with existing development.

Loudoun 2040 examined specific land bays within the TPA that were not already occupied or committed to development. The potential for redevelopment of occupied properties was not considered in the development forecasts for the area. Areas subject to environmental constraints such as conservation easements, steep slopes and floodplain were excluded from development potential. Two land bays in the Rural Policy Area were added to the TPA because of the nature of increasingly intense development that was/is occurring around them: Land Bay P, near Leesburg and Land Bay Q near Brambleton.
Place Types
As described in the beginning of this chapter, the following Place Types have been designated for specific locations as displayed on the accompanying map. The Place Types will work in concert with the Design Guidelines and Policies, Strategies, and Actions of the TPA to fulfill the land use patterns and community characteristics intended for the area.
Transition Large Lot Neighborhoods include projects such as Willowsford, Red Cedar and Evergreen, which offer detached homes and substantial open space in low-density communities. Agriculture and related uses are encouraged as active uses on these open spaces. Neighborhoods should offer a variety of house styles and sizes and, similarly, a variety of lot sizes and configurations. Development layouts follow land contours, incorporate natural features into the development, and protect sensitive resources. Extensive open space should partially conceal views of the new residential development from perimeter roadways and adjacent development and protect natural and cultural resources.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Large Lot Residential</td>
<td>• Agriculture</td>
<td>• Civic, Cultural, &amp; Community</td>
</tr>
<tr>
<td>• Clustered Residential</td>
<td>• Agricultural Supportive Businesses</td>
<td>• Public Facilities</td>
</tr>
<tr>
<td>• Accessory Residential Units</td>
<td>• Equine Facilities</td>
<td>• Special Activities</td>
</tr>
<tr>
<td></td>
<td>• Agritourism</td>
<td>• Parks &amp; Recreation</td>
</tr>
</tbody>
</table>

**Ideal-Preferred Mix of Uses**

Possible Ranges:
- Res: 85-100%
- Non-Res: 0 - 10%
- Public/Civic: 5%+
DESIGN CHARACTERISTICS

Context
Low-density residential neighborhoods with significant open spaces allowing agricultural uses and the protection of adjacent environmentally sensitive areas such as the reservoirs and stream corridors.

<table>
<thead>
<tr>
<th>Street Pattern:</th>
<th>Contour forming, Irregular, Fragmented Parallel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Length:</td>
<td>Varies</td>
</tr>
<tr>
<td>Building Setback:</td>
<td>Varies</td>
</tr>
<tr>
<td>Parking:</td>
<td>Driveway, garage, or on-street</td>
</tr>
<tr>
<td>Design Amenities:</td>
<td>Trails, street trees, common open spaces</td>
</tr>
<tr>
<td>Open Space:</td>
<td>50% of the site-Recreational (predominantly passive), and/or Natural and Heritage</td>
</tr>
</tbody>
</table>

An example plan view of a Transition Large Lot Neighborhood
**Place Type Rendering**

*An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.*

**Total Nonresidential FAR: Up to 0.1**  
**Building Height: 1-3 stories**

<table>
<thead>
<tr>
<th>Target Residential Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Sycolin</td>
</tr>
<tr>
<td>Middle Goose Creek</td>
</tr>
<tr>
<td>Lower Bull Run</td>
</tr>
<tr>
<td>Upper Broad Run</td>
</tr>
<tr>
<td>Upper Foley</td>
</tr>
<tr>
<td>Lower Foley</td>
</tr>
</tbody>
</table>

**Transition**

Transition Large Lot Neighborhood projects should be surrounded by natural buffers that visually screen the development from view of surrounding roads and from other developments.
Transition Small Lot Neighborhoods include residential neighborhoods arranged in a cluster arrangement that includes a focal point such as a civic use, park, or green. The predominant use is single family detached housing and some single family attached housing in larger projects. The lot pattern within each community should align with the topography and key environmental features to minimize the visibility of the structures. Open space and natural vegetation are the dominant visual features and provide public and private trails, passive and active recreation, and significant perimeter and environmental buffers.

### Core Uses
- Single Family Detached Residential
- Single Family Attached Residential

### Complementary Uses
- Agriculture
- Agricultural Supportive Businesses
- Equine Facilities
- Live/Work Units
- Accessory Residential Units

### Conditional Uses
- Retail & Service Commercial (supportive)
- Institutional
- Civic, Cultural, & Community
- Public Facilities
- Special Activities
- Parks & Recreation

## Ideal-Preferred Mix of Uses

<table>
<thead>
<tr>
<th>Non Residential</th>
<th>Residential</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>90%</td>
</tr>
</tbody>
</table>

Possible Ranges:
- Res: 85-100%
- Non-Res: 0 - 15%
- Public/Civic: 0%+
DESIGN CHARACTERISTICS

Context
Neighborhoods offering assorted lot configurations, sizes, and shapes with substantial open space, offering easy access to trails and natural areas internal to the neighborhood and connecting adjacent communities. The community is to be surrounded by extensive wooded buffers maintaining the rural appearance of surrounding roads.

<table>
<thead>
<tr>
<th>Street Pattern:</th>
<th>Fragmented Parallel, Contour Forming, Irregular</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Length:</td>
<td>Varies</td>
</tr>
<tr>
<td>Building Setback:</td>
<td>Medium to deep</td>
</tr>
<tr>
<td>Parking:</td>
<td>Driveway, garage, or on-street</td>
</tr>
<tr>
<td>Design Amenities:</td>
<td>sidewalks, street trees, community greens, gardens, playgrounds other common open spaces</td>
</tr>
<tr>
<td>Open Space:</td>
<td>50% of the site-Recreational (passive and active) and/or Natural and Heritage</td>
</tr>
</tbody>
</table>

An example plan view of a Transition Small Lot Neighborhood
Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Residential Density: Up to 1-4 du/ac
Total Nonresidential FAR: Up to 0.2
Building Height: 1-3 stories

Transition
Transition Small Lot Neighborhood projects should be surrounded by natural buffers that visually screen them from view of surrounding roads and from other developments.
Transition Compact Neighborhoods include a variety of single family homes arranged around a focal point such as a civic use, park, green or small commercial center. The predominant use is a mix of single family detached and attached housing. If included, neighborhood-serving retail or employment space (such as shared office space) should be situated in conjunction with civic space or a central park or green to create a neighborhood core or focal point.

The lot pattern within each community should exhibit an easily recognizable diversity in lot size and configuration, a variety of house sizes, heights and styles, and a mix of housing types along each street frontage and within each block. A pattern of interconnected streets is intended to provide a walkable community. Open space and natural vegetation are the dominant visual features and provide public trails, passive and active recreation and significant perimeter and environmental buffers. Transition Compact Neighborhood developments will also form the major residential component of a Transition Community Center, surrounding the commercial component of the Center and providing a transition to other surrounding uses. In such cases, residential densities should be lower next to the adjacent communities.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
</table>
| • Single Family Detached Residential  
  • Single Family Attached Residential | • Civic, Cultural, & Community  
  • Entertainment Commercial  
  • Office  
  • Accessory Residential Units | • Retail & Service Commercial  
  • Public Facilities  
  • Special Activities  
  • Parks & Recreation |

**Ideal-Preferred Mix of Uses**

Possible Ranges:
- Res: 80-90%
- Non-Res: 0-10%
- Public/Civic: 10%+
DESIGN CHARACTERISTICS

Context
Neighborhoods providing assorted lot configurations, sizes and shapes, and smaller, intermixed housing types and styles, characteristic of historic towns and neighborhoods. Communities are to be walkable and residents and the public are to have easy access to parks, playgrounds, and trails internal to the neighborhood and connecting adjacent communities. The community is to be surrounded by extensive wooded buffers maintaining the rural appearance of surrounding roads.

<table>
<thead>
<tr>
<th>Street Pattern:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rectilinear Grid, Fragmented Parallel, and Contour Forming</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Block Length:</th>
</tr>
</thead>
<tbody>
<tr>
<td>400-800 feet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Building Setback:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parking:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driveway, Garage, on-street, or alley-oriented</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Design Amenities:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sidewalks, street trees, common open spaces</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Retail and Service:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neighborhood - individual uses under 5,000 or small shopping center up to 30,000 square feet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Open Space:</th>
</tr>
</thead>
<tbody>
<tr>
<td>50% of the site-Recreational, Community, and/or Natural and Heritage</td>
</tr>
</tbody>
</table>

Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Residential Density: 4-8 du/ac
Total Nonresidential FAR: Up to 0.6
Building Height: 1-3 stories
Transition
Where the Compact Neighborhood abuts a community center, integration of the two neighborhoods should be seamless with numerous pedestrian connections, complementary building scales and uses, and little separation or screening between the two. Adjacent a less intensive residential uses Compact Neighborhoods should use large setbacks to separate uses or create natural and landscape transitions.
Transition Community Centers consist of a mix of predominantly single family homes in residential neighborhoods integrated into and extending from a pedestrian-scale commercial development that provides retail sales, entertainment, and civic functions. The residential component will implement the Transition Compact Neighborhood Place Type. The commercial center will create a pedestrian shopping and entertainment environment with second-story residences and businesses, convenient and safe pedestrian and vehicular connections to adjacent neighborhoods, extensive landscaping, particularly at the perimeter, and outdoor activity and community space. Auto-oriented uses such as gas stations, car washes, drive-throughs, would be located along streets primarily designed for the automobile unless incorporated into the mixed-use buildings in the commercial center.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Residential Single Family Attached</td>
<td>• Single Family Detached Residential</td>
<td>• Retail &amp; Service Commercial</td>
</tr>
<tr>
<td>• Multi-Family Residential</td>
<td>• Office Institutional</td>
<td>• Special Activities</td>
</tr>
<tr>
<td>• Retail &amp; Service Commercial</td>
<td></td>
<td>• Parks &amp; Recreation</td>
</tr>
<tr>
<td>• Civic, Cultural, &amp; Community</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Entertainment Commercial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Public Facilities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Ideal Preferred Mix of Uses**

Possible Ranges:
- Res: 65-90%
- Non-Res: 5-25%
- Public/Civic: 10%+
DESIGN CHARACTERISTICS

Context
Pedestrian-focused retail centers with small footprint retail uses, active street frontages and outdoor activity. No “big box” retailers, with the exception of grocery or drug stores, surrounded by a mix of small detached, zero lot line and attached homes on an easily discernable mix of lot sizes and configurations which vary within most neighborhood blocks.

<table>
<thead>
<tr>
<th>Street Pattern:</th>
<th>Rectilinear Grid (Commercial)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Irregular Layouts (Residential)</td>
</tr>
<tr>
<td>Block Length:</td>
<td>200-800 feet</td>
</tr>
<tr>
<td>Building Setback:</td>
<td>Minimal but may vary</td>
</tr>
<tr>
<td>Parking:</td>
<td>Surface or structured, on-street, or alley-oriented</td>
</tr>
<tr>
<td>Design Amenities:</td>
<td>Sidewalks, street furniture, street trees, lighting, common open spaces</td>
</tr>
<tr>
<td>Retail and Service:</td>
<td>Two and three-story buildings with active ground floor retail and entertainment uses, few single story buildings integrated into the compact, pedestrian-oriented environment. Drive-through retail uses may be incorporated within mixed-use buildings.</td>
</tr>
<tr>
<td>Open Space:</td>
<td>50% of the site- Recreational, Community, and/or Natural and Heritage</td>
</tr>
</tbody>
</table>

Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Residential Density: 4-8 du/ac
Total FAR: Up to 0.6
Building Height: 1-3 stories

<table>
<thead>
<tr>
<th>Commercial Center Floor Area Mix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
</tr>
<tr>
<td>Commercial</td>
</tr>
<tr>
<td>Public/Civic</td>
</tr>
</tbody>
</table>
Transition
Single family housing should form the perimeter of the Transition Community Center, complement and link via sidewalks and trails to adjacent residential neighborhoods. A substantial part of the 30% required open space should provide perimeter screening such as a park or recreation area against other communities and adjacent roads. Transitions should be gradual, particularly where natural or man-made buffers are not available. Appropriate transitional techniques include variations in building orientation, height step down, and creative and extensive use of landscaping and natural features.
Transition Light Industrial areas provide opportunities for low-traffic industrial and employment uses. Predominant uses are data centers, contractor establishments, and small-scale assembly or production. Open space that creates effective visual buffers and environmental protection on the site will encompass the business. Trails and passive parks are also appropriate.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Light Production</td>
<td>• Retail &amp; Service Commercial (Ancillary retail)</td>
<td>• Civic, Cultural, &amp; Community</td>
</tr>
<tr>
<td>• Data Centers</td>
<td>• Institutional</td>
<td>• Public Facilities</td>
</tr>
<tr>
<td>• Flex Space</td>
<td></td>
<td>• Special Activities</td>
</tr>
<tr>
<td>• Contractor</td>
<td></td>
<td>• Parks &amp; Recreation</td>
</tr>
</tbody>
</table>

**Ideal-Preferred Mix of Uses**

**Possible Ranges:**
- Res: 0%
- Non-Res: Up to 100%
- Public/Civic: 0%+

Non Residential: 100%
DESIGN CHARACTERISTICS

Context
Industries and businesses within an environment dominated by open space of established forests or thickly vegetated buffers that screen such uses from roads and adjacent development.

<table>
<thead>
<tr>
<th>Street Pattern:</th>
<th>Rectilinear Grid, Irregular, Contour Forming</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Length:</td>
<td>Varies</td>
</tr>
<tr>
<td>Building Setback:</td>
<td>Varies</td>
</tr>
<tr>
<td>Parking:</td>
<td>Surface</td>
</tr>
<tr>
<td>Design Amenities:</td>
<td>Sidewalks, street trees, shade trees, lighting, crosswalks, plazas, bike racks</td>
</tr>
<tr>
<td>Open Space:</td>
<td>50% of the site-Recreational (trails), Community (outdoor seating, plazas), and/or Natural and Heritage</td>
</tr>
</tbody>
</table>

Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Total Nonresidential FAR: Up to 0.6 Building Height: 1-3 stories

Transition
Building heights should step down appropriately to less intense residential uses and outdoor activities, noise generators separated from residential uses by buildings, berms and vegetation. Certain employment uses that may not be compatible with adjacent residential uses, such as data centers, should have transitional uses located in between. Transition Light Industrial projects will be visually screened from view of roads and separated from adjacent residential development and sensitive environmental and water supply reservoirs by large wooded buffers, berms, and distance.
As a primary industry, mineral extraction should be supported and protected as long as the quarries remain productive. Predominant uses are quarries, large-scale public facilities, and complementary manufacturing operations. Such uses are generally incompatible with residential development and considerable screening and setbacks are necessary to protect their viability.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• General Manufacturing</td>
<td>• Office</td>
<td>• Special Activities</td>
</tr>
<tr>
<td>and Assembly</td>
<td>• Outdoor Manufacturing</td>
<td>• Parks &amp; Recreation</td>
</tr>
<tr>
<td>• Data Centers</td>
<td>• Retail &amp; Service</td>
<td></td>
</tr>
<tr>
<td>• Research and Development</td>
<td>Commercial (Ancillary retail)</td>
<td></td>
</tr>
<tr>
<td>• Outdoor Storage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Public Facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Quarry</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Possible Ranges:**
- Res: 0%
- Non-Res: Up to 100%
- Public/Civic: 0%+

**Ideal-Preferred Mix of Uses**
DESIGN CHARACTERISTICS

Context
Existing quarries and quarry-related industries and businesses surrounded by substantial open space.

<table>
<thead>
<tr>
<th>Street Pattern:</th>
<th>Rectilinear Grid, Contour Forming</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Length:</td>
<td>300-1,000 feet</td>
</tr>
<tr>
<td>Building Setback:</td>
<td>Deep</td>
</tr>
<tr>
<td>Parking:</td>
<td>Surface</td>
</tr>
<tr>
<td>Design Amenities:</td>
<td>Sidewalks, street trees, shade trees</td>
</tr>
<tr>
<td>Open Space:</td>
<td>50% of the site-Natural and Heritage</td>
</tr>
</tbody>
</table>

Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Total Nonresidential FAR: Up to 0.6  Building Height: 1-4 stories

Transition
Transitions between Industrial/Mineral Extractive uses and other developments, in particular adjacent residential neighborhoods, are critically important to the viability of long-term industrial operations. Setbacks, buffering, and natural open space can reduce impacts by blending the edges of Industrial/Mineral Extraction developments with surrounding developments, providing softer transitions than structural buffers. Storage and loading areas are to be oriented away from and screened from streets and adjacent uses. Industry/Mineral Extraction projects should be separated from adjacent development and sensitive environmental and water supply reservoirs by wide, wooded buffers, berms, and distance.
Policies, Strategies, and Actions

Unless otherwise specified, the following Policies, Strategies, and Actions apply only within the TPA.

TPA Policy 1: Ensure that the Transition Policy Area retains the visual character established by extensive natural open space by using compact development concepts with substantial open space requirements, and low profile construction to minimize visual intrusion into the natural environment.

Strategy
1.1 Promote new communities that provide more affordable and innovative residential communities in compact development patterns, while preserving open space, natural and heritage resources, and other valued features that may exist on site.

Actions
A. Encourage a variety of housing within individual developments by permitting small and large lot single-family detached units, duplexes, semi-detached units, accessory units, townhouses, and other housing types to expand housing options and thus affordability opportunities and support the lifestyle preferences of a diverse community.
B. Develop zoning regulations and design standards to accommodate mixed-use Transition Community Centers, Transition Compact Neighborhood, and Transition Small Lot Neighborhood Place Types to expand housing diversity and improve commercial viability.
C. Require new development to connect to Loudoun Water’s central water and wastewater systems and encourage existing development to connect.
D. Continue to define the TPA by six subareas to implement the Transition Large Lot Residential Neighborhood development pattern as identified on the Transition Policy Area Place Types Map.
E. Continue to support agriculture-related businesses including agritourism, commercial nurseries, and similar uses throughout the TPA.
F. Continue to define the western edge of the TPA as the full extent of central sewer and water and the western edge of the growth boundary, pursuant to 15.2-2223.1.

TPA Policy 2: Offer safe and accessible parks and recreation opportunities that provide diverse activities for all ages, interests, and abilities.

Strategy
2.1 Provide a network of protected open space that maintains natural and heritage resources and reinforces the TPA’s unique character.

Actions
A. Develop a Master Plan for parks, open space, and trails in the TPA that: 1) builds on
and links current planned trails and park areas, and 2) places greater emphasis on quality, connected, usable, and publicly accessible open space.

B. Protect the drinking water resources of the Occoquan, Beaverdam, and Goose Creek Reservoirs with natural stream and reservoir buffers, improved stormwater management, and other means.

C. Retain 50 percent open space throughout the TPA, and seek to reserve publicly usable, accessible, and interconnected open space.

D. Establish programs and regulatory mechanisms to increase publicly accessible open space, consistent with County facilities plans, through easements, land dedications, and purchase.

E. Require Open Space Plans with individual development applications to illustrate proposed use, public accessibility, resource protection, and connection with other open space.

F. Take advantage of existing or planned parks, stormwater ponds, and stream valley corridors, particularly the Goose Creek and Bull Run corridors, to create a linear park network linking larger park facilities and destinations.

**TPA Policy 3: Target specific areas of the TPA for higher density residential and mixed-use development to create affordable and diverse housing opportunities in compact communities recalling the historic pattern of villages and towns in Loudoun.**

**Strategy**

3.1 Establish guidelines to accommodate higher density residential and mixed use communities to provide sustainable and affordable housing.

**Actions**

A. Support Transition Compact Neighborhoods in areas specified on the Transition Policy Area Place Types Map provided they comply with the Place Type standards and incorporate the following features:

i. A combination of housing types, including detached, duplexes, zero-lot-line, semi-detached and/or attached.

ii. Housing units that are smaller and more affordable than the County medians for each respective housing type.

iii. Discernible variations in lot shape and building setbacks along residential street frontages, in a manner reflective of traditional villages and towns, to visually differentiate individual residential structures.

iv. Design concepts within units and neighborhoods that allow residents at different stages of their lives to remain in the community.

v. A walkable community design emanating from one or more community greens with minimal use of cul-de-sac streets and easy access to parks, playgrounds and amenities.
vi. Public trails and parks internal to the neighborhood and connecting to adjacent communities and public facilities.

vii. Extensive buffers screening the intensity of the development from surrounding roads and communities through the use of dense vegetation, earthen berms, and/or natural topography.

B. Support Transition Community Centers in areas specified on the Transition Policy Area Place Types Map provided they are consistent with the Place Type standards and offer the following features:
   i. Small footprint retail uses and no “big box” commercial retailers with the exception of grocery or drug stores.
   ii. An attractive pedestrian shopping and entertainment environment with second-story residences and-or businesses and active streets featuring relationships between interior and outdoor spaces, sidewalk cafes, outdoor restaurant seating, and vendor shopping on the street, complementary ground floor uses (such as retail rather than offices) and a high level of transparency and window space.
   iii. Convenient and safe pedestrian connections to adjacent neighborhoods and public facilities.
   iv. Extensive landscaping, particularly at the perimeter to screen the project intensity from adjacent roads and communities.
   v. Outdoor activity and community space.
   vi. For Commercial Centers exceeding 30,000 square feet of commercial floor area, a residential component consisting of residences within the community center and an integrated Transition Compact Neighborhood as defined by this Loudoun 2040 General Plan.

TPA Policy 4: Non-residential uses will include consist of uses that are compatible with desired development patterns and the rural landscape.

Strategy

  4.1 Provide for development of commercial, employment, and public uses in areas specified on the Transition Policy Area Place Types Map that achieve the desired development patterns and the character of the TPA.

Actions

  A. Require Industrial uses to:
     i. Be located only in locations consistent with the Place Types Map.
     ii. Be visually concealed from adjacent roads and residential areas by siting buildings and uses to avoid ridgetops and high visibility areas and enclosing buildings and uses within a substantial, undisturbed, vegetated perimeter.
     iii. Minimize the effects of noise, vibration, and odor.
     iv. Have access to adequate infrastructure and roads.
     v. Identify and protect environmental features and to follow, to the extent possible, the natural topography.
     vi. Enhance water quality protection when near water supply reservoirs and associated streams.
B. Continue to protect the extractive industry by maintaining a quarry notification overlay zoning district.

C. Establish zoning regulations and design standards that ensure new development does not hinder the operation of quarries.

**TPA Policy 5:** Ensure that adequate infrastructure including roads, utilities, public facilities and services are available to meet increased demands of new development.

**Strategy**

5.1 Ensure adequate public facilities and services are available as demand is generated by new development.

**Action**

A. Evaluate residential development proposals against the available and forecasted capacity of public schools and other facilities and services through the projected buildout period of the application.

**Strategy**

5.2 Increased development in the TPA in areas south of Braddock Road will be contingent on the extension of Northstar Boulevard to Interstate 66 or by the widening of Braddock Road to Route 28 or other road alignments accomplishing the same functions.

**Actions**

A. Evaluate available road connections to Interstate 66 and Route 28 with any application for higher density residential development south of Braddock Road.

B. Consider phased development plans that link higher density to the transportation improvements outlined in Strategy 5.2 but permit interim development in a pattern that accommodates higher density in the future.

**Design Guidelines**

The Design Guidelines are to build upon our current development patterns in a manner that allows innovative design and new responses to the market. While the Design Guidelines are not regulatory requirements, the County prefers that all future developments comply with these guidelines. The Design Guidelines do not supersede or otherwise limit the application of adopted zoning regulations, ordinances, building codes, or any other design standards or regulations administered by Loudoun County.

When using the guidelines make sure analyze the impact a potential development may have on the landscape, considering not only appearance, but practical considerations such as proximity to utilities, community amenities, jobs, and housing to maximize the use of existing infrastructure and limit travel distances.

**The goals of the TPA design guidelines are to:**

- Development should contribute to creating attractive places within the TPA by working with existing topography and site features, responding to the local context, and reinforcing
the landscape’s character, rather than simply attempting to place suburban design onto the landscape.

- Development should use the landscape for benefits such as solar heat gain or shelter from wind.
- Buildings should be treated as parts of the landscape and attention given to their form and scale relative to their surrounding environment.

When using the guidelines make sure to analyze the impact a potential development may have on the landscape. Considerations should include both appearance and practical considerations, such as proximity and quality of connections to community amenities, jobs, and housing to maximize the use of existing infrastructure and limit travel distances. The County encourages a design process when planning development in the TPA that conserves and incorporates natural and heritage resources into the site design. Unless otherwise specified, the following guidelines apply only within the TPA:

1. Those areas of each development designated as open space by the applicable place type shall integrate buildings and parking into the existing natural landscape and provide usable space that is accessible to residents and the public, subject to the following:
   a. Perimeter open space screening from roads and other communities may be the predominant component of the 50 percent open space requirement,
   b. Distribute community greens, playgrounds, and gathering spaces within residential development,
   c. Link open space to surrounding neighborhoods and public facilities with pedestrian and bicycle networks,
   d. Link open space to natural and heritage resources, unique site features, and open space in other communities,
   e. Locate low intensity parks that emphasize undisturbed open space in highly visible areas or in conjunction with schools, churches, and neighborhood commercial centers where they can serve as a buffer for adjoining homes.

2. Ensure that open space within developments creates or enhances the following:
   a. The 300-foot buffer and 200-foot transitional area along the Bull Run in the Upper and Lower Foley and Lower Bull Run subareas,
   b. The 300-foot buffer and 1,000-foot voluntary open space area along the Goose Creek, Goose Creek Reservoir, and Beaverdam Reservoir in the Lower Sycolin and Middle Goose subareas,
   c. A contiguous network of green spaces to supplement the natural and heritage resources connecting communities and natural resource areas, and
   d. A public trail and park network to destinations throughout the area.

3. Locate development on areas of the site that afford the least disruption of views of the landscape.

4. Protect the historic context of nearby archaeological and historic sites and along scenic corridors.

5. In all development, provide trails and sidewalks that connect to adjacent neighborhoods and other destinations within and outside the project.
6. Ensure that clusters of residential units proposed in TPA communities are appropriate in number of units to reflect a traditional hamlet scale with multiple clusters separated by open space areas and featuring:
   a. A variety of lot sizes with no minimum lot size requirement and minimal setbacks,
   b. A predominantly single-family residential development pattern,
   c. A network of publicly accessible trails and pedestrian sidewalks linking communities and amenities, and
   d. A network of tree-lined streets constructed at minimum required widths to merge into the open landscape and slow traffic.

7. Ensure that housing diversity and affordability are components of larger and higher density developments, such as Transition Compact Neighborhoods, and Transition Community Centers, by including a mixture of housing types, a range of building and lot sizes, and configurations.

8. Include varying densities in neighborhoods with higher densities generally in close proximity to community greens, civic uses, or small-scale retail uses.

9. Diversify housing size, unit types, lot sizes, and lot pattern along each street frontage and in the same blocks to reflect the design of traditional villages and towns.

10. Include pedestrian features, landscaping, short blocks, few dead ends, and traffic calming features.

11. Locate buildings close to the street but require some discernable variations in building setbacks along residential streets.

12. Avoid bulky designs by breaking down the mass into smaller elements that follow natural contours.

13. Address parking in Transition Compact Neighborhood and Transition Community Center place types through a combination of on-street and off-street choices designed and located to minimize their visual impact.

14. Develop employment uses at a scale that minimizes their intrusion into the rural and natural landscape and their impact on surrounding roads and communities by:
   a. Screening all outdoor storage and equipment parking areas from view of adjoining properties and roads,
   b. Minimizing the number of entrances from major collector or arterial roads;
   c. Ensuring adequate road and infrastructure capacity,
   d. Avoiding large expanses of blank building surfaces by using articulation, fenestration and façade treatments, especially when the facades are visible from public roads, and
   e. Separating industrial uses from residences by locating less-intensive uses adjacent to residential uses or using natural or manmade barriers between the uses.
Rural Policy Area

Vision
The Rural Policy Area (RPA) is an enduring rural landscape that is characterized by a unique composite of natural and man-made environments, rural economy uses, working agricultural lands, open space, and a limited residential base.

Introduction
The RPA occupies the western half of the County and is the largest of the County’s Policy Areas. It encompasses approximately 230,000 acres, representing about 67 percent of the County’s total land area. The RPA comprises a blend of low-density residential, working farms, rural economy uses, pastoral landscapes, forested areas, mountains, and wildlife habitats. The RPA encompasses six of the County’s seven incorporated Towns, 12 existing Rural Villages, and numerous smaller crossroad communities. As of April 1, 2017, the population of the RPA is approximately 40,400 people, representing approximately 10 percent of the County’s total population.

The RPA is divided into two areas—the Rural North and the Rural South. Each of these distinct geographic areas (see Rural Policy Area Place Types Map) has different base residential densities in response to their dominant rural land use and development patterns. The Rural North (geographically defined as north of Goose Creek and the North Fork of Goose Creek to the County border with Montgomery, Frederick, and Washington Counties, Maryland; Jefferson County, West Virginia; and Clarke County, Virginia) is characterized by a mix of smaller lots that are interspersed with larger parcels that are still in agricultural use. The Rural North, proximate to the Towns within the Route 7 Corridor, has the highest concentration of residential development and a more developed paved roadway network with easy access to commuter routes. Additionally, the Route 15 corridor, both north and south of the Town of Leesburg, has experienced substantial residential growth since the Board adopted the Revised General Plan in 2001. The Rural South (defined generally as south of Goose Creek and the North Fork of Goose Creek to the County border with Clarke, Fauquier, and Prince William Counties, Virginia) is characterized by an existing large lot pattern and represents the center of Loudoun’s prominent equine industry. The Rural South contains a number of large working farms that are accessed by a network of mostly unpaved rural roads. The Rural South contains Loudoun County’s largest amount of permanently protected land that is held under voluntary conservation easements. Both the Rural North and Rural South are marked by a scattering of Rural Villages and small crossroad communities, which provide limited retail and commercial services to rural residents and visitors.

Approximately 700 miles of public roads maintained by the Virginia Department of Transportation (VDOT) serve the RPA. These roads range across all classifications, including arterials which feature greater access control to facilitate longer distance travel; collector roads, which feature less access control in order to balance parcel access and mobility; and local secondary roads, which primarily provide access to individual parcels. Unpaved gravel secondary roads constitute approximately 255 miles of this road network—the most of any county in Virginia. The County’s rural road network. The County—with the support of residents—has made a conscious effort to
preserve portions of the historic gravel road network which contribute to the character of the rural landscape and provide opportunities for recreational users such as equestrians, bicyclists and pedestrians. VDOT, in collaboration with the County, has worked to maintain the delicate balance between service needs and the preservation of the aesthetic character of the road network in the RPA, providing adequate transitions from major rural highways to main streets to rural paved and unpaved road segments. Specific long-range plans and local projects have generally sought to maintain two-lane rural section roadways along most rural corridors, while providing improvements to major commuter routes. These include the Virginia Scenic Byway program; national and state historic district designations; traffic calming projects at appropriate locations; the VDOT Rural Rustic Roads Program; and the incorporation of low-impact modern improvements, such as roundabouts, in lieu of traffic signals and interchanges. As increased demand—increasing traffic volumes and growth—continues to place stress on the rural road network, the County will need to make comprehensive and strategic decisions regarding the best practices ways to provide reasonable mobility, while protecting the rural character and scenic quality of rural roads in the RPA (see Loudoun 2040 Countywide Transportation Plan).

The Rural North and Rural South are home to a centuries old farming community that shaped the physical landscape and the social and economic fabric of Loudoun. However, over the past 30 years, as portions of the County and the region have become more urbanized, the RPA has faced increased challenges related to demographic changes, land use, economics, and transportation improvements, thus facilitating and enabling the conversion of land for rural residential subdivisions at an increasing rate as some residents seek an alternative to urban life. The adoption of the Revised General Plan in 2001 and the accompanying down-zoning of the majority of the land in western Loudoun in 2003 and in 2006, marked a dramatic turn in the County’s effort to limit residential development in the RPA and established an approach for land preservation tied to the creation of a viable rural economy and the clustering of homes to preserve the rural character of the land. The Loudoun 2040 General Plan carries this approach forward.
Rural Residential
A variety of residential development options exist within the Rural Policy Area, including conventional subdivision, spin-off lots, and rural clusters which permit different densities. Among the existing subdivision options, rural clusters remain the preferred residential development pattern in the RPA because these designs better preserve the natural features and open character of the land by tightly grouping homes on smaller lots so that a majority of the land is available for rural economy uses, agriculture, and/or open space. The concentration of homes in a rural cluster also minimize the amount of roads, clearing and grading, and the overall footprint of development, in comparison to a conventional by-right subdivision which require placement of homes on a uniform size lot dispersed over an entire property.

Between 2000 and 2016, 5,653 residential units have been built in the RPA. The “build out” analysis for the RPA, which reflects conditions as of July 1, 2016, identifies 91,000 acres of land uncommitted to development projects. This results in the potential for up to 11,643 residential units under current policy and entitlements. The acreage calculation includes parcels that are partially or fully developable and excludes floodplain, conservation easements, mountainside, and steep slope, which do not have development potential. The forecasted development from 2016 to 2040 in the RPA is 7,500 residential units based on current trends and the base density allowed by current zoning, which leaves approximately 4,000 residential units to be developed after 2040. The 2040 forecasts and the ultimate residential buildout for the RPA may be much lower than projected above if property owners continue to retain and preserve large areas of land for agricultural, equine activities, open space, and rural economy uses. Land trusts are anticipated to continue establishing conservation easements on properties in the RPA, reducing the residential development potential allowed by current zoning. Current and future county policies and initiatives, including land use-based property tax assessments and land conservation programs, may also affect future development potential in the RPA.

Rural Economy
The County’s land development approach for the RPA is to limit residential development so that land will remain available for the continued operation, expansion, and establishment of agricultural and rural economy uses that preserve the rural character of the landscape and support the County’s environmental goals. Loudoun’s rural economy has grown to become a collection of business uses that currently include: crop and livestock production, forestry, horticulture and specialty farm products, farm markets and wayside stands, the equine industry, orchards, vineyards, farm wineries, cideries, and brewerries, hospitality services such as farm-to-table restaurants, rural
resorts, bed and breakfasts, country inns, banquet/event facilities, private camps and parks, and other similar uses. These rural economy uses largely depend on the agricultural productivity, scenic quality, and rural character of the RPA to derive income to sustain business activities. Additionally, a range of businesses providing either direct or indirect support and services to agricultural, forestal, horticultural, and animal husbandry activities also contribute to the rural economy. These agriculture-supportive uses include farm machinery sales and repair services, veterinary services, blacksmiths, agricultural product storage and processing, feed and seed supply, and similar uses. The importance of all these rural businesses to Loudoun County has led to the implementation of a business development plan for the County’s rural economy that aims to double the growth of the County’s rural economic sectors by 2023. The business development plan strives to create an environment for high value agricultural production that supports the equine and tourism industries, maintains prime farmland, and recognizes that commercial growth in eastern Loudoun is augmented by a thriving rural economy in western Loudoun (see *The Long View, A Business Development Plan for Loudoun County’s Rural Economy*).

The 2012 Federal Census of Agriculture identified 1,396 farms in Loudoun County (gross income of $1,000 or more) with a total of approximately 135,000 acres of farmland in production. Over half of these farms (824) were less than fifty acres in size and a quarter of the farms (301) were between fifty and one-hundred and seventy-nine acres. These numbers are slightly down from 2007 when the County identified 1,427 farms with a total of 142,452 acres of farmland in production. This illustrates a number of changes: 1) a shift in the type of farming in the County as land and operational costs continue to rise, 2) the subdivision of larger farms into residential lots, and 3) the decline in the number of farmers. In response to market trends, many farmers in the County have shifted to the direct marketing of agricultural products to consumers through either on-farm sales and/or farmers markets to increase profitability. These specialty farms tend to be smaller in size than traditional farms that produce row crops or raise livestock. These farms include a number of pick-your-own farms which may have fruits, vegetables, flowers, Christmas trees, and other farm-grown products available to the public. A number of farms have also implemented Community Supported Agriculture (CSA) programs where people buy a subscription from a farmer to receive a weekly share of local seasonal produce, meats, and other products (depending on the farmer’s offerings).

The equine industry is a major component of the rural economy. Loudoun County leads the state in the number of horses, and the equine industry is the County’s largest agricultural employer providing thousands of jobs associated with the care of these animals and the operation of barns and stables. The Virginia Tech Marion DuPont Scott Equine Medical Center is located north of Leesburg, with Morven Park, Glenwood Park, and Oatlands providing regional venues for horse
events. Other smaller stables are scattered throughout the County, which provide private lessons, boarding, trail rides, and camps, and host smaller events.

Loudoun County has the highest concentration of wineries in Virginia, with over 45 wineries and 738 acres in vineyards as of 2017. Loudoun County has been marketed as ‘DC’s Wine Country’, though it also has the highest number of breweries in the state. The County has a total of 28 breweries, seven of which are farm breweries located within the RPA. Black Hops Farm, located near Lucketts, is the site of the region’s first hops processing center and Virginia’s first dedicated malting operation. As of 2017, there are 10 hops yards in the County with 16 acres in production, and there are two growers cultivating 140 acres of malting grain for the production of beer and distilled spirits. Farm wineries, breweries and cideries that grow their own products maintain significant amounts of land in agricultural use which protects the rural character of the RPA.

The RPA is home to a number of hospitality and tourism businesses, which provide thousands of jobs and contribute millions of dollars to the local economy through visitor spending on restaurants, retail goods, lodging, and the hosting of weddings and events. County-sponsored events such as the Spring and Fall Farm Tours, Stable Tours, Wine Trail, Ale Trail and Artisan Trail allow visitors to enjoy self-guided driving tours which support local growers, producers and artisans. Numerous community events such as the Bluemont and Waterford fairs draw thousands of residents and visitors to western Loudoun annually. Heritage tourism is also an important contributor to the County’s economy, which include the Journey Through Hallowed Ground National Heritage Area and National Scenic Byway, the Waterford National Historic Landmark District, Balls Bluff Battlefield and National Cemetery, Morven Park, Oatlands, Aldie Mill, as well as other historic sites, museums and battlefields. Like many of Loudoun’s other rural business uses, these hospitality and tourism businesses rely on the natural, scenic, and rural character of the RPA to attract visitors. Therefore, it is critical to maintain the natural and heritage resources that provide the setting and context for our rural tourism economy.

**Farmland Preservation and Protection**

To support the rural economy and ensure that agriculture continues as a long-term use in the RPA, the County will continue to develop and support voluntary participation in programs that provide assistance and reduced tax burdens to landowners. Such programs and measures as the Land Use Assessment Program, the Agricultural and Forestal District (AFD) program, and public/private conservation easements will be used to encourage landowners to use their land to expand the rural economy, rather than convert it to residential use. These programs also assist in the protection of the RPA’s unique manmade and natural environment, which directly benefit the rural economy.

The County’s Land Use Assessment Program and AFD program are tools used to protect agricultural lands and forests. The Land Use Assessment Program provides tax relief to landowners to protect farmland for future agricultural use and to protect historic and scenic resources for the economic and cultural benefits derived from their preservation. The AFD program limits the subdivision of large, farmable acreages and forested lands (typically 20-40 acres), and prohibits cluster subdivisions. While the County’s Land Use Assessment Program and the AFD program support keeping land in production and/or open space for a specified number of
years, they are voluntary programs that do not preserve land in perpetuity. The only means of preserving agricultural land and open space permanently is through the establishment of conservation easements on individual properties, which restrict residential and non-agricultural uses. Conservation easements currently preserve one-third of the acreage within the RPA, 70,000 acres in the County, the vast majority of which are held by private land trusts. The County should commit to supporting efforts to increase the total acreage of land held in conservation easements as part of an overall land use strategy to further reduce density in the RPA, and ensure that farmland and open space are available in perpetuity for future generations. The County may consider cost-share initiatives to assist in establishing conservation easements and/or public/private partnerships with existing land trusts to leverage efforts and funding to support the recordation of additional conservation easements.

**Future of Rural Strategy**

Loudoun County and its citizens continue to recognize the importance of maintaining and preserving the farming and equine heritage, cultural and natural resources, open space, and scenic beauty of the RPA as a fundamental component of the County’s identity. The RPA contributes to the overall economic vitality of the County and quality of life of its residents. The County’s current growth management approach, which is being carried forward in this *Loudoun 2040 General Plan*, reaffirms the vision previously established for the RPA in the *Revised General Plan* to has been successful in limiting residential growth and sustaining the rural economy. This approach has contributed to the County’s economic success through attracting businesses, residents, and visitors while maintaining the character of the RPA. The strength of the agricultural sector, equine industry and the rural economy is a critical component of supporting the economic development and fiscal policy goals of the County. In the future, development pressures and the incremental loss of productive agricultural land to residential development will require continued monitoring by the County to maintain the RPA’s unique character.

**Place Types**

As described in the beginning of this chapter, the following Place Types have been designated for specific locations as displayed on the accompanying map. The Place Types will work in concert with the Design Guidelines and Policies, Strategies, and Actions of the RPA and Rural Villages to fulfill the land use patterns and community characteristics intended for the area.
The Rural North consists of pastoral and forested landscapes that serve mostly agricultural and agricultural supportive uses with limited residential. The area allows for complementary agricultural, rural business, and tourism uses that constitute Loudoun’s rural economy. This category also includes low-density, large-lot residential subdivisions that are compatible with the surrounding pastoral character, and subdivisions that cluster smaller residential lots while retaining large lots for open space, agricultural production and/or rural economy uses. Public utilities are not provided, but shared water and wastewater systems are encouraged for cluster developments and rural economy uses. Minimum lot sizes vary according to land use and the development option chosen. All developments should incorporate natural and heritage resources while preserving important viewsheds that contribute to the rural landscape.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>Large Lot Residential</td>
<td>Public Facilities</td>
</tr>
<tr>
<td>Agricultural Supportive</td>
<td>Clustered Residential Subdivision</td>
<td>Civic, Cultural &amp; Community</td>
</tr>
<tr>
<td>Businesses</td>
<td>Accessory Residential Units</td>
<td>Institutional</td>
</tr>
<tr>
<td>Equine Facilities</td>
<td>Agritourism</td>
<td>Special Activities</td>
</tr>
<tr>
<td>Rural Economy</td>
<td>Rural/Heritage Tourism</td>
<td>Parks &amp; Recreation</td>
</tr>
</tbody>
</table>

...
DESIGN CHARACTERISTICS

Context
Large areas of land preserved for open space, agriculture, and rural economy uses to retain the rural character of the area with limited low-density residential and clustered residential development that blends with and is compatible with the surrounding area.

<table>
<thead>
<tr>
<th>Street Pattern:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contour Forming, Fragmented Parallel</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Block Length:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irregular (0.5-5 mile)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Building Setback:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varies (incorporate existing natural features to protect viewsheds)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parking:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface lot, driveway, garage, shared</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Open Space:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recreation (Passive), Natural and Heritage, and/or Agriculture</td>
</tr>
<tr>
<td>70% of site for clustered subdivisions</td>
</tr>
</tbody>
</table>

Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Residential Density: Up to 1 du / 20 acres
Residential Cluster Option: Up to 1 du / 5 acres equivalent
Building Height: Up to 2 stories

Transition
Locate buildings and structures to blend with the existing topography and natural features. Preserve and incorporate existing trees and vegetation on the property and its perimeter to buffer and screen views for adjoining properties. Provide landscaping or supplemental plantings comprised of native species when screening and buffering are required between rural uses.
The Rural South contains mostly agricultural and equine uses and allows for complementary rural economy uses. This Place Type includes very low-density residential with homes located on large lots that are compatible with the surrounding pastoral character and clustered subdivisions that group smaller residential lots while retaining large lots for open space, agricultural production, and/or rural economy uses. Public utilities are not provided, but shared water and wastewater systems are encouraged may be utilized for cluster developments and rural economy uses. Minimum lot sizes vary according to land use and the development option chosen. All developments should maintain the distinctive rural character through the incorporation of natural and heritage resources and the preservation of important viewsheds.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>Large Lot Residential</td>
<td>Accessory Residential Units</td>
</tr>
<tr>
<td>Agricultural Supportive Businesses</td>
<td>Clustered Residential Subdivision</td>
<td>Public Facilities</td>
</tr>
<tr>
<td>Equine Facilities</td>
<td>Agritourism</td>
<td>Civic, Cultural &amp; Community</td>
</tr>
<tr>
<td>Rural Economy</td>
<td>Rural/Heritage Tourism</td>
<td>Institutional</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Special Activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parks &amp; Recreation</td>
</tr>
</tbody>
</table>
DESIGN CHARACTERISTICS

Context
Large areas of land preserved for open space, agriculture, and rural economy uses to retain the rural character of the area with limited low density residential and clustered residential development that blends with and is compatible with the surrounding area.

| Street Pattern: | Contour Forming, Fragmented Parallel |
| Block Length:   | Irregular (0.5-5 mile)               |
| Building Setback: | Varies (incorporate existing natural features to protect viewsheds) |
| Parking:       | Surface, driveway, garage, shared   |
| Open Space:    | Recreation (Passive), Natural and Heritage, and/or Agriculture |
|                | 70% of site for clustered subdivisions |

Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Residential Density: Up to 1 du / 40 acres
Residential Cluster Option: Up to 1 du / 15 acres equivalent
Building Height: Up to 2 stories

Transition
Locate buildings and structures to blend with the existing topography and natural features. Preserve and incorporate existing trees and vegetation on the property and its perimeter to buffer and screen views for adjoining properties. Provide landscaping or supplemental plantings comprised of native species when screening and buffering are required between rural uses.
Rural Villages consist of small, pedestrian-scale rural communities that are compact in comparison to the surrounding agricultural landscape. The majority of these villages have developed around a small residential and/or commercial core that provide for the daily needs of village residents, surrounding rural residents, and visitors. Villages are characterized by low-density residential development situated on smaller lots interspersed with limited commercial uses. Residential and commercial uses are generally located in detached stand-alone two-story buildings which are located close to the street. In some instances office or residential uses are located above first floor retail. Each Rural Village has its own unique character linked to its historic development pattern, spatial organization, and location within the County.

Spacing of buildings—both commercial and residential—should respect each village’s historic precedents for lot size, building setbacks, and orientation to the street. Buildings should be designed to be sensitive to the context of the village through compatible siting, size, scale, massing, materials, design details, and roof forms.

### Core Uses
- Single Family Detached Residential
- Retail & Service Commercial

### Complementary Uses
- Office
- Live/work units
- Civic, Cultural, & Community
- Rural/Heritage Tourism
- Rural Economy
- Agricultural Supportive Businesses

### Conditional Uses
- Accessory Residential Units
- Public Facilities
- Special Activities
- Parks & Recreation

### Ideal Mix of Uses

#### Possible Ranges:
- Res: 60-80%
- Nonres: 20-40%
DESIGN CHARACTERISTICS

Context
Small-scale and often historic buildings sited in a compact pattern that contain residential or commercial uses that may also be vertically mixed. Each Rural Village has a unique character and sense of place that should be preserved and enhanced.

Street Pattern:
- Rectilinear Grid
- Contour Forming
- Fragmented Parallel
- Irregular

Block Length:
- 100-600 feet (Varies by Village)

Building Setback:
- Shallow

Parking:
- On-street, driveway, garage

Open Space:
- Recreation (Passive), Community, Natural and Heritage, and/or Agriculture

An example plan view of a Rural Village from Lincoln, VA
Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Residential Density: Varies by individual village; no more than 4 du / acre
Building Height: Up to 2 stories

Transition
Maintain areas of open space and natural areas on the perimeter of the villages to maintain a hard edge and visual separation from surrounding uses. Within the village, preserve existing trees and vegetation, which define building lots and contribute to the streetscape. New construction should be designed to complement surrounding properties and maintain the existing development pattern within the Village.
Policies, Strategies, and Actions

Unless otherwise specified, the following Policies, Strategies, and Actions apply only within the RPA.

Land Use & Development

RPA Policy 1: Foster land use and development patterns that incorporate natural, cultural, heritage, and agricultural resources to preserve character-defining features of the rural landscape while providing opportunities for rural living and businesses.

Strategy

1.1. Support uses that protect, preserve, and enhance natural areas and open space, retain farmland and the vitality of the rural economy, and foster a high quality of rural life for residents.

Actions

A. Incentivize the consolidation of underutilized or undeveloped small lots into larger parcels for agricultural and rural economy uses.

B. Consider cost-share initiatives to assist in establishing conservation easements and use public funds to create public and private conservation easements, in order to reduce the land that is available for residential development and to provide landowners with financial options to support working farms, rural economy uses, and/or stewardship of the land.

Rural Residential

RPA Policy 2: Limit residential development to protect the land resource for agricultural operations, rural economy uses, and open space uses; minimize traffic impacts; and reduce the demand for additional public facilities and services.

Strategy

2.1. Where residential development does occur in the RPA, it should be designed to preserve the rural character, work with the land form to preserve and protect natural features, and conserve land for agriculture, rural economy uses, passive recreation, and open space.

Actions

A. Establish and revise zoning regulations and design standards to improve the design of subdivisions and clustered residential development by incorporating natural features and maintaining usable open space.

B. Establish zoning regulations and design standards to facilitate the provision of publicly accessible and connected open space.

C. Educate property owners about alternatives to residential subdivision by providing information on conservation easements, the Land Use Assessment Program, and other efforts to keep rural properties intact and productive.
Rural Economy

RPA Policy 3: Agricultural and rural business uses that are compatible with the predominant land use pattern will be developed in a manner that is consistent with the County’s growth management, economic, and environmental goals.

Strategy

3.1. Ensure compatibility of rural economy uses through the evaluation of the scale, use, intensity, and design (site and building) of development proposals in comparison with the dominant rural character and adjacent uses.

Actions

A. Adopt, evaluate, and revise zoning regulations and development standards for rural economy uses. Such regulations and standards will address traffic capacity limits, safe and adequate road access, number of employees, site design standards (i.e., land disturbance, buffering, use intensity, siting, and architectural features), and public health, safety, and welfare.

B. Allow the establishment and/or expansion of existing commercial, industrial, and institutional uses by Special Exception if the use and/or expansion: 1) is compatible in scale, use, and intensity with the surrounding rural environment, 2) uses building forms, massing, and architectural styles that reflect the surrounding rural character, 3) preserves ridgetops, natural resources, farmland, and open space, and 4) meets applicable zoning regulations and development standards.

C. Non-agriculturally related commercial uses may be permitted by Special Exception if the use is compatible in scale and intensity with the agricultural and rural character of the area; poses no threat to public health, safety, and welfare; and helps to preserve farmland, open space, and/or continued agricultural operations.

Strategy

3.2. Promote the retention and development of rural business uses that sustain the rural economy and support the County’s agricultural, and equine, and tourism industries.

Actions

A. Adopt zoning regulations and design standards that include new types of rural business and agricultural uses, permit flexibility for the sale of farm products, and promote rural tourism, hospitality uses, and similar kinds of rural business uses that are compatible with the character of the RPA.

B. Evaluate and revise zoning regulations and design standards to permit a variety of residential unit types, including accessory apartments for seasonal farm laborers and year-round tenant housing, that support the rural economy.

C. Create zoning regulations and design standards for existing and new types of rural recreational uses to evaluate their appropriateness and ensure their compatibility with the character of the RPA.

D. Develop County parks with trail networks, cross country courses, and equestrian riding rings or other equestrian-related features.
E. Develop a publicly accessible multi-use trail network (i.e., pedestrian, bicycle, and equestrian) to link private and public lands in the RPA in partnership with nonprofit entities, landowners, and developers of rural properties.

Strategy
3.3. Promote and expand agricultural enterprises and the rural economy, and attract rural entrepreneurs to locate in Loudoun.

Actions
A. Promote rural business sectors and community events to support rural tourism, showcase the rural economy, and strengthen the economic vitality of rural businesses, villages, and towns.

B. Develop a coordinated service approach to assist rural landowners in the review and development of proposals to maintain agricultural operations, preserve the agricultural potential of farmland, institute farm and rural business plans, and assist in filing applications, which support agriculture, agricultural activities, and the rural economy.

C. Develop additional incentives to retain and encourage agricultural enterprises and support land preservation.

B.D. Retain the Rural Economic Development Council (REDC) as an advocacy and advisory committee on initiatives, programs, and policies that affect the economic growth and development of rural Loudoun County.

C.F. Support public education and job training in agriculture-based careers to ensure a stable agricultural work force and promote the region’s agricultural and tourist based economy.

Strategy
3.4. Maintain the Land Use Assessment Program to provide property tax relief to retain and support agriculture, horticulture, forestry, and open space as critical components of the RPA.

Actions
A. Regularly review, update, and enhance the Land Use Assessment Program and other voluntary agricultural programs, such as the AFD program, to strengthen the rural economy, preserve rural character, and maintain the viability of farming.

B. Develop additional incentives to retain and encourage agricultural enterprises and support land preservation.

Strategy
3.5. Promote and encourage the preservation, rehabilitation, and repurposing of farm buildings and structures to maintain infrastructure for future agricultural enterprises and rural economy uses. Where possible, rural business uses should locate in existing agricultural and historic structures.

Action
A. Adopt zoning regulations and design standards to facilitate the use of existing agricultural and historic structures.
Strategy
3.6. Support and increase farming activities and maintain a resilient food network for local consumption.

Actions
A. Promote community supported agriculture (CSA); the direct sale of farm products between farmers and local consumers including farmers markets, local restaurants and retailers; and the establishment of a permanent year-round indoor farmers market in the eastern portion of the County.
B. Facilitate effective processing, distribution, and marketing of locally grown products.
C. Promote best practices in farming, including adapting to new crops, livestock, and technology, to address market demands and diversify agricultural production.

Strategy
3.7. Protect farming and farmers from nuisance complaints in accordance with the provisions of the Right to Farm Act, Code of Virginia §3.2-301.

Actions
A. Develop Maintain zoning regulations and design standards that protect the right to farm.
B. Support and provide educational programs about farming practices and activities to reduce potential conflicts associated with the proximity of agriculture to nonagricultural uses.

Design Guidelines
The Design Guidelines are to build upon our current development patterns in a manner that allows innovative design and new responses to the market. While the Design Guidelines are not regulatory requirements, the County prefers that all future developments comply with these guidelines. The Design Guidelines do not supersede or otherwise limit the application of adopted zoning regulations, ordinances, building codes, or any other design standards or regulations administered by Loudoun County.

When using the guidelines make sure to analyze the impact a potential development may have on the landscape, considering not only appearance, but practical considerations such as proximity to roads, utilities, and community amenities to maximize the use of existing infrastructure and limit travel distances. Development should contribute to creating unique places within the Rural Policy Area by working with existing topography and site features, responding to the local context, and reinforcing the landscape’s character, rather than simply attempting to place suburban design onto the rural landscape. Sustainability requires maximum consideration for using the landscape for benefits such as solar heat gain or shelter from wind when siting buildings. It is imperative that buildings and structures are treated as objects in the rural landscape and given due attention to their location and form to ensure they blend with the topography, protect viewsheds, and contribute to the traditional pattern of development in the RPA. The County encourages the adoption of a conservation design process when planning development in the RPA so that natural and heritage...
resources are conserved and incorporated into the site design. Unless otherwise specified, the following guidelines apply only within the RPA:

1. Development on ridgelines or hill tops should be avoided to retain the rural character of the landscape and protect viewsheds.
2. Site development to preserve existing land forms and minimize significant alterations to the topography while incorporating natural features, trees, hedgerows and other vegetation into the design to protect viewsheds and provide visual buffers between parcels.
3. Locate development within the landscape to minimize visibility from roadways and other properties.
4. Limit the use of outdoor lighting to areas where activity occurs and use the minimum light intensity necessary to eliminate glare and light trespass.
5. Provide trail connections when feasible to link private and public lands as part of a multi-use trail network.
6. Rural Cluster subdivisions are a land development design that compactly groups homes on lots as small as a quarter acre in a traditional community pattern while retaining large tracts of land for open space, agricultural production, and/or rural economy uses to preserve natural features and the rural character. When developing Rural Cluster subdivisions in the RPA:
   a. Use existing topography, hedgerows, mature woodlands, and other site features to influence the location of the clusters to maintain the rural and scenic quality of the landscape.
   b. Provide a compact cluster of building lots and maximize open space.
   c. Design roads and driveways to follow the natural contours of the land. Roads and driveways should be the minimum width necessary to provide safe travel ways.
   d. Cluster development to retain large areas of agricultural soils for farming
e. Encourage the use of shared water and wastewater systems to serve cluster developments to protect water resources.
7. Site building and structures to blend with the natural landscape to reduce their perceived scale, mass, and height; thus, reducing their impact on the landscape and surrounding viewsheds.
8. Buildings should incorporate architectural styles and design elements that emulate and relate to the historical and regional architecture of Loudoun which contributes to the visual quality and identity of the RPA.
9. Locate parking, mechanical units, and other site features in locations which diminish their visual impact from public roadways and neighboring properties.
Rural Villages

Vision

Rural Villages are important historic settlements that possess significant heritage, cultural, social, and economic assets that contribute to the character of the Rural Policy Area.

Introduction

The County recognizes the Rural Villages as important features of the RPA that possess scenic and historic resources, act as gathering places for citizens, provide services to the surrounding community, and support rural tourism. The existing Rural Villages were established during the 18th and 19th centuries, in areas located around historic mills, railroad depots, or major crossroads that later developed as commercial and mercantile business centers that served the surrounding farming communities.

The Rural Villages have gradually developed over a number of years and feature a variety of building setbacks, types, and styles as well as streetscapes that reflect the historic growth and character of the individual villages. The Rural Villages are dominated by residential dwellings with some commercial structures that have upper floor apartments and offices. Small scale, non-residential uses, such as country stores, restaurants, antique shops, and other retail establishments that meet local needs and support tourism, are located within the Rural Villages. In addition, numerous civic uses, such as churches, post offices, community centers, fire and rescue stations, and schools, are also located within the Rural Villages.

The County’s land development approach for the Rural Villages is to limit residential, business, and commercial activities to uses that are compatible with the historic development patterns, community character, and visual identity of the individual villages. Loudoun 2040 strives to maintain the traditional development pattern and distinguishing features of the individual villages while accommodating opportunities for compact, small-scale growth where appropriate in a manner that enhances existing residential and commercial areas. By encouraging limited compact, residential and non-residential development within the Villages, these policies complement the County’s efforts to preserve open space and maintain the character of the rural area. Although limited development is anticipated in the Villages, that development should not adversely affect the quality of life of residents nor pose a threat to public health or safety. Only three of the existing Rural Villages – Aldie, St. Louis and Waterford – are currently served by public community wastewater systems. Aldie is the only village that is served by a private water company. The remainder of the properties located within the Rural Villages are

Rural Villages

Aldie
Bluemont
Bowmantown
Lincoln
Loudoun Heights
Lucketts
Neersville
Paeonian Springs
Philomont
St. Louis
Taylorstown
Waterford
currently served by individual water wells, and septic sewage systems (i.e., conventional drainfields, alternative systems, etc.), which limit the potential scale and intensity of development. Additionally, a number of the Rural Villages are bisected by major roadways that experience high volumes of commuter traffic and impact the quality of life of residents. With careful planning and growth management, the Rural Villages will maintain their scenic and historic character as well as their social and economic viability.

**Policies, Strategies, and Actions**

Unless otherwise specified, the following Policies, Strategies, and Actions apply only within the Rural Villages.

**RV Policy 1:** Development and uses in Rural Villages must be compatible with the historic development pattern, community character, visual identity, intensity, and scale of the individual villages.

**Strategy**

1.1. Encourage the retention and development of a variety of compatible residential and commercial uses that enhance the attractiveness and vitality of the Rural Villages.

**Actions**

A. Develop criteria to evaluate existing Rural Villages to determine if their current designation is warranted and amend the Comprehensive Plan and Zoning Ordinance as appropriate.

B. Develop small area plans and master plans for the Rural Villages to support community goals and address issues related to land use and zoning, economic development, natural and historic resources, community facilities and services, water and wastewater, and transportation to maintain the character of the villages.

C. Develop Review and revise zoning regulations, design standards and guidelines to achieve compatible building and street design to ensure that quality development occurs within the Rural Villages.

D. Clearly differentiate entrances into the villages from surrounding areas through appropriate street design, landscaping, and building placement.

E. Incorporate traffic calming measures where appropriate to reduce vehicle speeds and provide a pedestrian-friendly environment within the Rural Villages.

F. Evaluate existing Rural Commercial (RC) zoning and consider new zoning regulations and design standards for commercial uses in the Rural Villages which are compatible with the settlement patterns and neighborhood scale.

G. Develop criteria for evaluating other crossroads communities in the RPA for designation as Rural Villages and amend the Comprehensive Plan and Zoning Ordinance as appropriate.
Strategy
1.2. Preserve the character of the villages and their historic structures and sites through the rehabilitation and adaptive reuse of existing buildings.

Actions
A. Promote and support building maintenance and improvements to preserve the existing building stock and the character of the villages.
B. Establish and expand the County Historic Zoning Districts for the Rural Villages.

Strategy
1.3. Limited increases in residential densities within the Rural Villages may be considered when the design of the project reinforces the character, development pattern, and identity of the village. Conventional, suburban forms of development are not appropriate in or contiguous to Rural Villages.

Action
A. Adopt zoning regulations and design standards to encourage traditional housing on smaller lots, allow accessory apartments attached to single-family residential units, and allow residential units above commercial/retail uses within the Rural Villages to provide housing options.

Strategy
1.4. Business and commercial uses in the Rural Villages should be small scale, compatible with existing development, meet local community needs and support rural tourism.

Action
A. Adopt zoning regulations, design standards and performance criteria that are specific to the types of small-scale, community-related commercial uses that the County encourages within the Rural Villages.

Design Guidelines
The Design Guidelines are to build upon our current high quality development in a manner that allows innovative design and new responses to the market. While the Design Guidelines are not regulatory requirements, the County prefers that all future developments in the Rural Villages comply with these guidelines. The Design Guidelines do not supersede or otherwise limit the application of adopted zoning regulations, ordinances, building codes, or any other design standards or regulations administered by Loudoun County.

When using the guidelines make sure to analyze the impact potential development may have on the Rural Village and surrounding landscape, considering not only appearance, but practical considerations such as road and street access, siting of buildings and parking, safe and adequate water and wastewater, community amenities, jobs, and housing to assess compatibility. Development should contribute to the character of the Rural Villages to integrate and blend with existing development patterns and building styles.

Many properties within the Rural Villages of Aldie, Bluemont, Lincoln, Taylorstown and Waterford are located within County Historic and Cultural Conservation Districts which are
zoning overlays that regulate the appearance of properties through architectural design guidelines. Any alterations, additions, demolition or relocation of an existing structure, or any new construction within the conservation districts requires approval from the County’s Historic District Review Committee. The goal of the architectural review processes is to ensure the historic, architectural, and landscape characteristics that are unique to the villages are protected, preserved, and enhanced for future generations. While the remainder of the Rural Villages do not have historic district zoning overlays, the County’s policies also support compatible development and the retention of the unique character of the individual villages. Public water and wastewater facilities are encouraged to provide services to the villages. The following design guidelines apply to development within the Rural Villages:

1. New development should reinforce the existing pattern of streets/roads in the Rural Villages.
2. The streetscape of Rural Villages should incorporate sidewalks, crosswalks, lighting, landscaping and other street amenities which enhance the pedestrian experience and contribute to the visual quality of the village.
3. Sidewalk and trail networks within the Rural Villages should be expanded to provide connections to surrounding trail networks in the RPA.
4. Incorporate and retain existing trees and other site vegetation, especially when these features form a visual edge defining the streetscape or space between properties.
5. New buildings will be oriented on their site to maintain the existing street pattern, street design, and relationship to other buildings to reinforce the historic development pattern of the village.
6. The scale, size, massing, and design of new buildings will adopt building forms and architectural styles related to the individual character of the village.
7. Where the footprint of a new building is larger than existing buildings, reduce the perceived mass by dividing the building into smaller pieces with varying wall planes and rooflines. Design new commercial development to conform with the storefront configuration of existing historic examples, when no local precedent exists look to other examples in the villages to inform new construction.
8. Locate parking, mechanical units, and other site features in locations which diminish their visual impact from the street.
Towns and JLMAs

Vision
The western Towns will continue to be hubs of economic and cultural activity in western Loudoun.

Introduction
In 2016, approximately 62,000 Loudoun residents lived in Loudoun’s incorporated Towns (see Table 1). The seven incorporated Towns in Loudoun County offer a window to the County’s past and are a key component of Loudoun’s unique character today. All have existed as independent incorporated entities for more than a century, first as agricultural business centers providing markets for farm products, and supplying the necessary goods and services for rural residents. They were also distribution points linked by railroad to markets to the east. While still influenced by their agricultural tradition, the Towns play a larger economic and cultural role that includes retail and service-based businesses, educational opportunities, medical centers, and industrial centers. What was once a railway link has become an important regional trail link still tying the Towns to each other and communities to the east.

Table 1. Housing and Population Estimates

<table>
<thead>
<tr>
<th>Town</th>
<th>Population</th>
<th>Housing Units</th>
<th>Approximate Town Area (acres)</th>
<th>Approximate JLMA Area (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamilton</td>
<td>448</td>
<td>193</td>
<td>135</td>
<td>630</td>
</tr>
<tr>
<td>Hillsboro</td>
<td>98</td>
<td>44</td>
<td>170</td>
<td>NA</td>
</tr>
<tr>
<td>Leesburg</td>
<td>49,401</td>
<td>17,202</td>
<td>8,000</td>
<td>4,300</td>
</tr>
<tr>
<td>Lovettsville</td>
<td>2,096</td>
<td>694</td>
<td>570</td>
<td>NA</td>
</tr>
<tr>
<td>Middleburg</td>
<td>656</td>
<td>429</td>
<td>680</td>
<td>NA</td>
</tr>
<tr>
<td>Purcellville</td>
<td>8,914</td>
<td>2,725</td>
<td>2,200</td>
<td>2,200</td>
</tr>
<tr>
<td>Round Hill</td>
<td>570</td>
<td>222</td>
<td>240</td>
<td>1,450</td>
</tr>
<tr>
<td>Totals</td>
<td>62,183</td>
<td>21,509</td>
<td>12,000</td>
<td>8,580</td>
</tr>
<tr>
<td>Loudoun County</td>
<td>362,435</td>
<td>122,490</td>
<td>333,558</td>
<td>17,160</td>
</tr>
</tbody>
</table>

Source: 2016 American Community Survey

Development Approach

Loudoun 2040 recognizes the cultural and economic importance of these individual towns maintaining their historic character. The Plan continues the JLMA concept, in place since 1991, which intends to accommodate the outward expansion of the Towns, permitting moderate growth at densities and designs suitable to the Towns until the Towns choose to annex property. However, implementation of the JLMA policies has not created development patterns that reflect the historic character of the Towns. Loudoun 2040 recommends future action to review and modify the concept. Loudoun 2040 also recognizes that, where possible, the remaining defining edge distinguishing the towns and the JLMA from the rural area be maintained and enhanced with an
effort to create “gateway” corridors leading to each town. The JLMA zoning regulations offer a range of densities, design guidelines, and utility requirements. Leesburg, Round Hill, Purcellville, and Hamilton have seen extensive development in their respective JLMAs, while Lovettsville, Middleburg, and Hillsboro have over time chosen not to have JLMAs because of utility constraints, concerns about growth, or a desire to concentrate inside their existing limits. Leesburg’s JLMA has a distinct suburban pattern with predominantly residential development north of Route 7 and business and employment uses south of Route 7.

**Place Types**
As described in the beginning of this chapter, the following Place Types have been designated for specific locations as displayed on the accompanying map. The Place Types will work in concert with the Design Guidelines and Policies, Strategies, and Actions of the JLMAs to fulfill the land use patterns and community characteristics intended for these areas.
The Purcellville JLMA Rural is a combination of low-density rural residential uses and limited agriculture and related businesses in a rural visual setting that is easily distinguished from the Town development pattern. Uses are predominantly residential but limited agriculture-supportive businesses that can be accommodated by onsite well and septic systems are appropriate. Municipal (town) utilities are not anticipated except to address potential health threats, but shared water and wastewater systems are permitted for public facilities.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Large Lot Residential</td>
<td>• Clustered Residential Subdivision</td>
<td>• Public Facilities</td>
</tr>
<tr>
<td>• Agriculture</td>
<td>• Accessory Residential Units</td>
<td>• Civic, Cultural &amp; Community</td>
</tr>
<tr>
<td>• Agricultural Supportive</td>
<td>• Agritourism</td>
<td>• Institutional</td>
</tr>
<tr>
<td>Businesses</td>
<td>• Rural/Heritage Tourism</td>
<td>• Special Activities</td>
</tr>
<tr>
<td>• Equine Facilities</td>
<td></td>
<td>• Parks &amp; Recreation</td>
</tr>
<tr>
<td>• Rural Economy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CHAPTER 2-120
DESIGN CHARACTERISTICS

Context
Large areas of land preserved for open space, agriculture, and rural economy uses to retain the rural character of the area leading to the Town with limited low-density residential and clustered residential development screened from the roads to maintain the distinct identity of the Town.

<table>
<thead>
<tr>
<th>Street Pattern:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contour Forming, Fragmented Parallel</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Block Length:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irregular (0.5-5 mile)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Building Setback:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varies (incorporate existing natural features to protect viewsheds)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parking:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface lot, driveway, and garage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Open Space:</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-50% of site-Recreation (Passive), Natural and Heritage, and/or Agriculture</td>
</tr>
</tbody>
</table>

Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Residential Density: 0.3 – 2.0 du / acre

Building Height: 1-3 stories

Transition
Locate buildings and structures to blend with the existing topography and natural features. Preserve and incorporate existing trees and vegetation on the property and its perimeter to buffer and screen views for adjoining properties. Provide landscaping or supplemental plantings comprised of native species when screening and buffering are required between uses.
The Western JLMA Neighborhood applies to areas around Round Hill and Hamilton. This Place Type includes a variety of residential subdivisions ranging in densities from 0.3 to 3.0 units per acre. The higher density development is adjacent to Round Hill and resulted from the Round Hill Associates rezoning that was approved in 1991. Remaining areas include densities from 0.3 to 1.0 units per acre. Most neighborhoods are connected to Town utilities.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Large Lot Residential</td>
<td>• Accessory Residential Units</td>
<td>• Public Facilities</td>
</tr>
<tr>
<td>• Cluster Residential</td>
<td>• Agriculture</td>
<td>• Civic, Cultural &amp; Community</td>
</tr>
<tr>
<td></td>
<td>• Equine Facilities</td>
<td>• Institutional</td>
</tr>
<tr>
<td></td>
<td>• Rural Economy</td>
<td>• Special Activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Parks &amp; Recreation</td>
</tr>
</tbody>
</table>
DESIGN CHARACTERISTICS

Context
Low-density residential neighborhoods maintaining the development pattern around Hamilton and Round Hill. Much of these JLMA areas has been developed and remaining sites should develop with a consistent and compatible pattern and intensity.

<table>
<thead>
<tr>
<th>Street Pattern:</th>
<th>Contour Forming, Fragmented Parallel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Length:</td>
<td>Irregular (0.5-5 mile)</td>
</tr>
<tr>
<td>Building Setback:</td>
<td>Varies (incorporate existing natural features to protect viewsheds)</td>
</tr>
<tr>
<td>Parking:</td>
<td>Surface lot, driveway, garage, shared</td>
</tr>
<tr>
<td>Open Space:</td>
<td>30-50% of site- Recreation, Community, Natural and Heritage, and/or Agriculture</td>
</tr>
</tbody>
</table>

Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Residential Density: 0.3 – 2.0 du/acre  Building Height: 1-3 stories

Transition
Buildings and structures should be surrounded by natural buffers that visually screen the development from view of surrounding roads and from other developments.
The Leesburg JLMA Residential Neighborhood reflects a suburban residential pattern with densities between 0.3 and 4.0 units per acre. This Place Type applies primarily to areas north of Route 7 near the eastern boundary of the Town and adjacent to the Woodlea Hills community on the southwest side of the Town. Single family detached and attached homes are the predominant land use. Retail and service uses that serve the routine shopping needs of the immediate neighborhood (e.g., grocery, gas stations, drive-throughs, dry cleaners, etc.) should be integrated into the area at significant intersections and along major roads. Neighborhoods include a range of amenities and community open space.

### Core Uses
- Single Family Detached Residential
- Single Family Attached Residential

### Complementary Uses
- Accessory Residential Units
- Public Facilities
- Multifamily Residential
- Retail & Service Commercial

### Conditional Uses
- Civic, Cultural & Community
- Public Facilities
- Special Activities
- Parks & Recreation

#### Ideal-Preferred Mix of Uses

Possible Ranges:
- Res: 85-100%
- Non-Res: 0-15%
- P/C: 0+
DESIGN CHARACTERISTICS

Context
Low-density residential neighborhoods maintaining the development pattern along the eastern and western boundary of Leesburg. Much of these JLMA areas has been developed and remaining sites should develop with a consistent and compatible pattern and intensity.

<table>
<thead>
<tr>
<th>Street Pattern:</th>
<th>Fragmented Parallel and limited Loop and Cul-de-sac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Length:</td>
<td>600-1,500 feet</td>
</tr>
<tr>
<td>Building Setback:</td>
<td>Shallow to medium</td>
</tr>
<tr>
<td>Parking:</td>
<td>Driveway, garage, or on-street</td>
</tr>
<tr>
<td>Design Amenities:</td>
<td>Sidewalks, street trees, lighting, crosswalks, common open spaces</td>
</tr>
<tr>
<td>Retail and Service:</td>
<td>Neighborhood - individual uses under 5,000 or small center up to 30,000 square feet</td>
</tr>
<tr>
<td>Open Space:</td>
<td>Minimum 30% of site - Recreation, Community, and/or Natural and Heritage</td>
</tr>
</tbody>
</table>

Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Residential Density: Up to 4.0 du/acre  Total Nonresidential FAR: Up to 0.4
Building Height: 1-3 stories
Transition
Development is intended to be consistent with surrounding neighborhoods. Transitions should be gradual, and appropriate transitional techniques include variations in building orientation, height step down, and creative and extensive use of landscaping and natural features. Fencing or other barriers should not be used as the sole means of screening and buffering. Where possible, new developments within Leesburg JLMA Residential Neighborhood areas should locate uses along their perimeter that are similar in use and density with adjacent neighborhoods.
Leesburg JLMA Employment areas provide opportunities for a range of light and general industry uses similar to the existing pattern south of Route 7 and around the Leesburg Executive Airport. This Place Type accommodates flex space, manufacturing, warehousing, contractor services and other productive uses.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Light Production</td>
<td>• Office</td>
<td>• Institutional</td>
</tr>
<tr>
<td>• Research &amp; Development</td>
<td>• Retail &amp; Service Commercial</td>
<td>• Civic, Cultural &amp; Community</td>
</tr>
<tr>
<td>• Warehousing</td>
<td>• Data Centers</td>
<td>• Public Facilities</td>
</tr>
<tr>
<td>• Contractor without Outdoor Storage</td>
<td></td>
<td>• Special Activities</td>
</tr>
<tr>
<td>• Fleet &amp; Equipment Sales &amp; Service</td>
<td></td>
<td>• Parks &amp; Recreation</td>
</tr>
<tr>
<td>• Flex Space</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Ideal-Preferred Mix of Uses**

Possible Ranges:
- Res: 0%
- Non-Res: Up to 100%
- Public/Civic: 0%+
DESIGN CHARACTERISTICS

Context
Primarily separate one-to-two-story buildings used for industrial and employment uses.

<table>
<thead>
<tr>
<th><strong>Street Pattern:</strong></th>
<th>Rectilinear Grid or Fragmented Parallel</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Block Length:</strong></td>
<td>300-1,000 feet</td>
</tr>
<tr>
<td><strong>Building Setback:</strong></td>
<td>Short to medium; greater if flex use</td>
</tr>
<tr>
<td><strong>Parking:</strong></td>
<td>Structured, on-street, accessory, or short-term</td>
</tr>
<tr>
<td><strong>Design Amenities:</strong></td>
<td>Sidewalks, street trees, shade trees, bike racks</td>
</tr>
<tr>
<td><strong>Retail and Service:</strong></td>
<td>Employment Supportive-Limited to support the predominate use. Generally 10% of the gross FAR of the employment uses.</td>
</tr>
<tr>
<td><strong>Open Space:</strong></td>
<td>20% of the site- Recreational (sidewalks or trails), Community (outdoor seating area), and/or Natural and Heritage</td>
</tr>
</tbody>
</table>

**Place Type Rendering**
*An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.*

**Total Nonresidential FAR: Up to 1.0**

**Building Height: 1-4 stories**

**Transition**
Extensive buffering including berming and, where appropriate, walls can separate and screen parking, loading and other industrial activities from public roads and adjacent residential uses. Larger projects should situate lower intensity uses next to residential or other sensitive uses. Landscaping, lawns and retained natural areas will frame buildings and streets.
Leesburg JLMA Industrial/Mineral Extraction areas consist of large manufacturing, warehousing, and other productive uses. Streets in this district are typically designed to accommodate freight ingress and egress. This Place Type also includes mineral extraction areas such as quarries and mines as well as associated uses such as asphalt plants and cement plants. Industrial and mineral extraction uses are incompatible with residential uses due to the prevalence of outdoor storage and the emissions of noise, odor, and vibrations. Buffers between these uses and residential uses are necessary to ensure compatibility and maintain commercial viability.

<table>
<thead>
<tr>
<th>Core Uses</th>
<th>Complementary Uses</th>
<th>Conditional Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• General and Heavy Manufacturing and Assembly</td>
<td>• Retail &amp; Service Commercial</td>
<td>• Office</td>
</tr>
<tr>
<td>• Warehousing</td>
<td>• Flex Space</td>
<td>• Public Facilities</td>
</tr>
<tr>
<td>• Contractor with Outdoor Storage</td>
<td>• Light Production</td>
<td>• Special Activities</td>
</tr>
<tr>
<td>• Data Centers</td>
<td>• Research and Development</td>
<td>• Parks &amp; Recreation</td>
</tr>
<tr>
<td>• Fleet &amp; Equipment Sales &amp; Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Outdoor Storage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Public Utilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Quarry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Quarry</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ideal Preferred Mix of Uses

Possible Ranges:
- Res: 0%
- Non-Res: Up to 100%
- Public/Civic: 0%+
DESIGN CHARACTERISTICS

Context
Primarily one-to-two-story buildings used for warehousing, data centers, contractor services, or manufacturing.

| Street Pattern: | Rectilinear Grid, Contour Forming |
| Block Length:   | 300-1,000 feet                     |
| Building Setback: | Deep, varying with use |
| Parking:        | Surface Lot                        |
| Design Amenities: | Sidewalks, street trees, shade trees |
| Retail and Service: | Employment Supportive-Limited to support the predominate use. Generally 5% of the gross FAR of the employment uses. |
| Open Space:     | 20% of the site- Recreational (sidewalks or trails), Community (outdoor seating area), and/or Natural and Heritage |

Place Type Rendering
An oblique projection of development within a Place Type to showcase the qualitative characteristics of how buildings within the Place Type should interact to create activity.

Total Nonresidential FAR: Up to 1.0 Building Height: 1-4 stories
Transition

Transitions between Leesburg JLMA Industrial/Mineral Extractive uses and other developments, in particular adjacent residential neighborhoods, are critically important to the viability of long-term industrial operations. Extensive buffering, berming, and distance should separate and screen adjacent uses. Larger projects should situate lower intensity uses next to residential or other sensitive uses. Storage and loading areas are to be oriented away from and screened from streets and adjacent uses.
Policies, Strategies, and Actions

Town Policy 1: The County will collaborate with the Towns on matters of common interest to preserve the identity of each Town and their role as economic and social centers.

Strategy

1.1 Work with the Towns to develop and implement a shared vision for the Towns and their environs.

Actions

A. Continue to refer to jointly approved area management plans and refer to applicable Town policies on matters within the JLMA.

B. Establish a regular coordination program with Towns to anticipate, monitor, and address development and planning matters.

C. Undertake joint planning efforts in the JLMA.

D. Support the towns in their negotiations with VDOT and other agencies for safety improvements and traffic calming, particularly along Routes 15, 50, 7, 9, and 287 in proximity to the Towns, and other changes in roads and/or transportation services that are consistent with both the Town’s and the County’s development goals and priorities.

E. Assess the effectiveness of the JLMA approach and associated zoning in protecting town character, maintaining a defining edge between the town and the rural areas, and/or as a tool for expanding economic development objectives. The defining edge is the boundary between two distinct land use patterns, whether existing or desired. The edge may encompass an area that establishes a visual distinction, either as perceived from the road or from broader views of the landscape.

F. Add provisions to the rural and JLMA zoning districts specific to roadway corridors leading into each town that would establish deeper building setbacks variable building and lot configuration and orientation, “hedgerow” landscaping and buffering along the road, and other measures that retain or create a traditional rural or natural appearance leading into the town.

G. The County will work with the Towns and interested groups to identify open-space and agricultural-preservation strategies such as: donation of conservation easements, fee-simple purchase, clustering, and the possible creation of a conservation service district and/or nonprofit foundation to promote and implement open-space preservation around the Towns.

Strategy

1.2 Encourage new development to locate within the Towns before moving into the JLMAs or surrounding area.
**Actions**

A. Encourage the maintenance, improvement, or adaptive reuse of existing building stock in a manner that supports social and economic diversity within the community.

B. Promote the commercial areas within the Towns as the preferred location of retail and service businesses, office development, and public and civic uses.

C. Work with the Towns to enhance their economic base and maintain viable commercial areas through marketing, capital investments, and business attraction.

D. Support annexations by the Towns when water and sewer extend into a JLMA in accordance with the annexation guidelines in this section and to resolve jurisdictional questions for property owners.

E. Encourage development in the JLMA to extend the existing and planned development patterns of the Town.

**Strategy**

1.3 Continue to recognize the Towns as the preferred location of public facilities in western Loudoun County when consistent with Town policies and when suitable land and services are available.

**Actions**

A. Encourage the continued use of existing public facilities located in the Towns and JLMAs and seek to maintain existing community-based schools as an important social and economic component of the communities.

B. Cooperate with the Town Councils of those communities providing local law enforcement to ensure a coordinated enforcement strategy within the Town JLMAs.

C. Support development of sidewalks and recreational, multi-use, and equine trails connecting the Towns to each other, to regional trail networks such as the W&OD and C&O Canal, and to area destinations.

**Hamilton**

First settled in the 1730s and incorporated in 1875, the Town of Hamilton is located along business Route 7 between Leesburg and Purcellville. Hamilton served as a commercial and tourism hub after the railroad was extended west of Leesburg, though by the mid-1900s had become primarily a residential community. Hamilton’s population of 640 residents represents an increase of approximately 25 percent since 2010\(^1\). The existing JLMA around Hamilton and the adjacent RPA along the north side of its boundaries have also developed with residential uses. While Hamilton has extended utilities outside of its boundaries and has water facilities in the JLMA, it does not foresee expansion of the JLMA. An existing school and school support facilities on the western edge of the JLMA serve to separate the community from Purcellville.

---

The Town of Hamilton Comprehensive Plan for the Town of Hamilton and JLMA serves as Loudoun County’s planning document for the Hamilton JLMA. The Comprehensive Plan for the Town and JLMA was jointly adopted by Loudoun County and the Town of Hamilton and planned for a period through 2020. The Policies, Strategies, and Actions specific to Hamilton address the continued coordination between the Town and County regarding future updates to Hamilton’s Comprehensive Plan.

The Town of Hamilton supports the Town’s ability to annex land within its JLMA. The Town believes such annexations provide “win-win” scenarios that enable the Town to provide better and additional services to property owners, while the County still receives applicable tax revenue from these areas.

The Town of Hamilton also supports collaboration between Loudoun County and the Town regarding development issues near the Town, especially to the west and east along Business Route 7/Colonial Highway.

Hamilton’s wells are vital to the continued provision of potable water to County and Town residents. As such, Hamilton supports Policies, Strategies, and Actions regarding the location and depth of private wells to protect municipal wells that provide water to thousands of people throughout Loudoun County.

The Town of Hamilton supports an emphasis on affordable housing and supports increased efforts to provide housing that is affordable to the workforce, seniors, teachers, firefighters, police, and others who allow Loudoun County to function as a community.

**Strategy**

1.4 Development within the Hamilton JLMA will comply with the comprehensive plan for the Town of Hamilton and the adjacent area in the JLMA.

**Actions**

A. Maintain the Town of Hamilton authority over subdivision applications within 1 mile of its corporate limits.

B. Work with the Town of Hamilton to update the Comprehensive Plan for the Town and JLMA after the adoption of the 2040 Plan.

C. Support the Town of Hamilton efforts to develop an identifiable town center to serve as a community focal point for the Town of Hamilton and the JLMA.

D. Seek to improve street connectivity as the redevelopment and infill development occur in the JLMA and connect to the existing streets in the Town of Hamilton, where feasible, with roads that are compatible with traditional town designs.

E. Work with the Town of Hamilton to effectively manage transportation systems around the Town and to explore methods of traffic calming on Business Route 7 through town including the possible use of a traffic circle at Route 7 and St. Paul Street.

F. Maintain a distinct identity for the greater Hamilton community separate from the adjacent rural areas by establishing a greenbelt around the Town of Hamilton and the
JLMA using conservation easements, passive and active parks and other means.

G. Work with the Town of Hamilton to achieve a balanced land use pattern that will retain Hamilton’s historic small-town character in a rural setting and maintain its unique sense of place.

H. Support continued operation of Hamilton Elementary school at its present site.

**Hillsboro**

Established in 1752 in the narrow gap of the Short Hill Mountains and known simply as “The Gap” until incorporated as Hillsborough in 1802, today’s Town of Hillsboro is among the best preserved 18th/19th-century rural villages in the Commonwealth. Although a 2016 boundary line adjustment nearly doubled the Town’s area, with a population of approximately 100 residents, Hillsboro remains the fourth smallest town in Virginia.

First placed on the National Register of Historic Places in 1977, the Hillsboro Historic District was expanded in 2010 to encompass 152 acres with 52 contributing structures dating primarily from the 18th and mid-19th centuries. The compact linear village is bounded on its south by Catoctin Creek and South Short Hill, and the North Short Hill on the north, and is bisected by Historic Charles Town Pike (Va. Route 9), which has become a major commuter route connecting Northern Virginia to West Virginia and Maryland and carrying more than 17,000 vehicle trips daily.

Hillsboro successfully supported a traffic-calming and congestion mitigation project with the intent to reduce delays during peak hours, control speeds via dual roundabouts and traffic-calming features, and create a safe pedestrian/multi-modal environment with the addition of sidewalks, raised crosswalks, and a series of multi-modal trails. Utilizing context-sensitive materials, streetscaping, and burial of overhead utilities, this project preserves Hillsboro’s historic character and enhances its sense of place. With safe parking and pedestrian access allowing appropriate small-scale enterprises, Hillsboro looks to regain its historical role as the hub of a robust agricultural region, which has also become a major tourist destination with an expanding array of vineyards, breweries, and recreational activities – including Virginia’s newest state park.

In addition to Hillsboro’s traffic-calming project, the complete overhaul of the Town’s drinking water system and installation of a low pressure sanitary sewer force main, in anticipation of a community wastewater treatment facility, will serve the community for years to come.

With its transformative infrastructure projects, Hillsboro’s Comprehensive Plan and Zoning Ordinance will be updated to better reflect the potential for appropriate economic development within the existing built environment that is consistent and complementary to historic preservation and provides a broader tax base to ensure long-term viability. The Town will continue the repurposing of its landmarks, Old Stone School and Gap Stage, into a regional venue for the arts in addition to serving as Hillsboro’s Town Hall and community/visitor center.

---

2 2012-2016 American Community Survey 5-Year Estimates.
As the traditional “home town” for a nearly 50-square mile rural region in Northwest Loudoun, the Town of Hillsboro has taken a leadership role in unifying and “branding” the area. The Town supported and facilitated the conversion of the Hillsboro Elementary School into Loudoun’s second public charter school in 2016, led a successful effort in 2017 to reestablish an official Hillsboro postal identity for this area, and fostered the creation of the Greater Hillsboro Business Alliance.

With more than a dozen vineyards, numerous specialty farm operations and Loudoun’s greatest concentration of bed and breakfasts within five minutes of the Town’s center, Hillsboro is the gateway to one of Virginia’s most dynamic rural economies. As such, the Town has an existential stake in the preservation of the farmlands and open spaces, mountainside forests and ridge lines that surround it. Hillsboro’s historic integrity as a rural village situated on the 18th-century “Great Road” – Charles Town Pike – is largely defined by the still existent swaths of farmlands on its east and west approaches. As Hillsboro’s National Register of Historic Places nomination describes: “The majority of the buildings in Hillsboro are nestled along Charles Town Pike. The nominal setback of these buildings contributes to Hillsboro’s sense of time and place, as the uniformity and integrity of the building stock has been maintained…. The buildings share a commonality in their setback, maintaining Hillsboro’s integrity of location and feeling. The rural character of Hillsboro is further increased by the size of the outlying properties.”

Hillsboro’s uniquely unspoiled rural and historic character – despite its location within one of the nation’s most economically dynamic, fastest-growing and wealthiest counties – makes the Town and its environs assets that will only become more valuable with the urbanization of eastern Loudoun. Proactive preservation of farmland in the RPA through private permanent conservation easements is essential.

The renaissance that Hillsboro is currently experiencing will serve as a catalyst to ensuring the long-term viability of a strong recreational/agritourism economy in Northwest Loudoun. In partnership with Loudoun County, the Town is committed to forging policies that protect and preserve the vital rural assets that contribute to economic vitality and quality of life for all Loudoun residents.

**Strategy**

1.5 Enhance the role of Hillsboro as a gateway into the County from the west.

**Actions**

A. Maintain the distinct identity for the Hillsboro community, separate from the adjacent rural areas, by encouraging establishment of a greenbelt around the Town using conservation easements, development design techniques and other means to help maintain the distinct edge to the Town of Hillsboro.

B. Support the development of entry features into the town, to enhance the identity of the Town of Hillsboro as a gateway community.

C. Encourage rural economy business development in the Hillsboro Area to provide local goods, services and jobs to residents and visitors.
D. Encourage the preservation of those resources which contribute to the identity of Hillsboro.

E. Oppose any increase in density and development outside of the Town of Hillsboro that does not retain the low density, farm landscape that helps highlight entry into the town.

F. Work with the Town of Hillsboro and with VDOT to identify short and long-term solutions for improving the safety of Route 9 in western Loudoun and through Hillsboro that do not compromise the rural character of Hillsboro.

G. Promote safety measures for pedestrian movement along and across Route 9.

H. Work with the Town of Hillsboro to establish a safe and adequate water supply.

**Leesburg**

Leesburg, the largest and most populous of the incorporated towns with a population of approximately 49,000 residents\(^3\), has the added distinction of serving as the seat of the County government. By its location, it functions and appears to be a commercial hub at the junction between suburban areas to the east and rural areas to the west. The pressures for growth in Leesburg are the result of the robust regional economy that will continue to draw more businesses, government jobs, and residents. Town character is of paramount importance to Leesburg. The Old and Historic District is the basis of Leesburg’s identity. It is a compact, mix of land uses; its blocks and buildings are human scaled; a resurgence in entertainment retail uses and downtown residential development have brought new development interest to the community. Other portions of the Town have a different, more suburban character where more uniform uses and large lots, curved streets, and cul-de-sacs dominate the landscape. Between 2001 and 2016, Leesburg added 5.5 million square feet of retail, commercial, office, and institutional development, and approximately 4,300 residential units.

The Town’s planning vision for the foreseeable future is to continue the diversity in economic and housing opportunities in a manner that reflects the best and essential qualities of the old and historic downtown. Leesburg will maintain a high quality of life by providing a full range of community facilities and services and diverse economic opportunities, protecting natural and heritage resources, and protecting against negative environmental impacts. The Town of Leesburg is approximately 90 percent built out and, like other towns, has limited land area for new government facility development. County strategies recognize the fiscal impact of public facilities on a Town with limited land resources and has added more flexibility to locating such facilities in and around towns.

Leesburg’s JLMA is situated almost entirely to the south and east of the corporate limits and contains approximately 7,000 acres. The northeast portion of Leesburg's JLMA has developed in the manner recommended by Town and County plans with a distinct suburban residential pattern, while other areas of the JLMA are planned for non-residential uses.

---

\(^3\) 2012-2016 American Community Survey 5-Year Estimates.
The Town views the main purpose of JLMA land uses between Route 7 and the Greenway to serve as an expansion of economic development goals by focusing on employment uses. JLMA planned land uses reflect Leesburg’s Comprehensive Plan and no major changes to land use are proposed.

On the south, west, and north sides of Leesburg there is no JLMA; instead, policies support a greenbelt and a defining edge adjacent to the Town. Loudoun 2040 implements the greenbelt by maintaining a rural zoning up to the Town boundary and proposing specific development guidelines along the major roads leading to the Town to preserve distinctly rural development pattern.

**Strategy**

1.6 Ensure development within the Joint Land Management Area complies with the Leesburg Area Management Plan, the Annexation Area Development Policies as amended, and the Leesburg Town Plan.

**Actions**

A. Collaborate with the Town of Leesburg on locating new facilities in the Town or JLMA.

B. Maintain the planned land use of the JLMA consistent with Town of Leesburg land use policies; maintaining an emphasis on employment uses south of Route 7 and residential to the north of Route 7.

C. Prohibit power generation plants in the Leesburg JLMA.

D. Define the Town of Leesburg and JLMA as a distinct community separate from the Suburban and Rural Policy Areas by retaining rural policies and zoning to the north and south of the Town boundary and west of Evergreen Mills Road, and protecting the Goose Creek and Sycolin Creek floodplains to the east and south of the JLMA.

E. Preserve the rural character of the viewsheds along Route 15 as it approaches the Town of Leesburg from the north and south by encouraging additional conservation easements and instituting design guidelines.

F. Cooperate with the Town of Leesburg to complete the Heritage Trail and conserve open space along the Potomac River.

G. Coordinate with the Town of Leesburg and VDOT on the feasibility of planning and building Edwards Ferry Road as a two-lane facility with a bike path.

H. Protect the viability of the Leesburg Airport by ensuring development in the JLMA does not impede Airport operations by continuing to prohibit residential development inside the 65 Ldn noise contour.

**Lovettsville**

Lovettsville, originally known as the German Settlement, is a small town with historical roots that go back to 1732. The Town served as a thriving commercial center for the surrounding farming areas for over one-hundred years. This function was eventually eclipsed during the post-World
War II period by other, larger communities in Loudoun County, Northern Virginia, and nearby Maryland, which is about three miles from the Town.

Since 2005, Lovettsville has experienced a rapid increase in population and housing associated with growth of single-family detached residences. The population influx consists of people who are attracted to the traditional main street character of Lovettsville set in the larger context of the (mostly) rural northern Loudoun Valley.

Lovettsville continues to focus on development inside its existing boundaries and prefers a distinct edge between its boundaries and the surrounding rural landscape. Lovettsville has made significant investments in streetscape improvements and trails. Commercial development has also occurred at the Town Center and along East Broad Way (Route 673). Lovettsville supports continued County cooperation on transportation and public facilities, with a strong interest in developing multi-use County trails that connect the town to the W&OD and C&O Canal trails.

Significant land use changes have occurred within the Town. Most notably the evolution of the Lovettsville Town Center from its initial concepts to a nearly-completed, neo-traditional community centered on a pedestrian-friendly and centrally-located business district having wide sidewalks, decorative streetlamps, and ample public gathering spaces. This development, residential subdivisions on infill properties, redevelopment of properties in the “Old Town” for modern commercial uses, and implementation of streetscape projects throughout, has contributed to Lovettsville’s growth from a population of 853 in the year 2000 to approximately 2,300 residents in 2018\(^4\). Several large properties within the Town limits are available for future development, although much less land is available for new residential development compared to 18 years ago.

The County has not established a JLMA around Lovettsville, consistent with the Town’s desire to focus development inside the existing boundaries. The Town has identified several limited areas outside of its corporate limits that may be candidates for annexation for the purposes of supporting existing and developing future civic, commercial, or employment uses, and achieving the Town’s economic development goals. Future annexation of these areas will be considered on a case-by-case basis and is dependent on the capacity of Town water and wastewater services to accommodate the future development of these properties, something that the Town evaluates through its Water and Sewer Master Plan.

The County is actively improving and constructing public facilities in and around the Town including the Lovettsville Community Center, Lovettsville Community Park, Lovettsville Volunteer Fire and Rescue Station, and Lovettsville Elementary School. Coordination is critical to providing utilities and access to these facilities and to planned future development, which may require access through the County to afford multiple points of connection to and from public streets. The Town also seeks continued County funding for streetscape enhancements and for pedestrian safety improvements and traffic calming on Town streets near County facilities.

\(^4\) Annual Estimates of the Residential Population, United States Census Bureau.
Strategy
1.7 Support the Town of Lovettsville in efforts to consolidate development within its boundaries.

Actions
A. Retain and recruit businesses that serve the needs of Lovettsville and northern Loudoun County residents and align with Town plans.

B. Collaborate with the Town of Lovettsville in the planning and regulation of development along Route 287 north and south of Lovettsville to protect the scenic quality and the rural character of the road as it approaches the Town.

C. Link the County’s greenways and trails system with the Town of Lovettsville’s internal trail and bikeways network to link Lovettsville with the C&O Canal in Brunswick, Maryland, and the W&OD bike path in Purcellville.

D. Plan the location and design of County facilities within Lovettsville, in consultation with the Town of Lovettsville.

E. The County will collaborate with the Town of Lovettsville and VDOT on transportation planning in and around Lovettsville to improve traffic safety in the Town of Lovettsville and to improve regional road networks and access to employment centers.

F. Cooperate with the Town of Lovettsville, pursuant to County Annexation Guidelines, on boundary-line adjustments to resolve jurisdictional questions, to serve public and civic uses, and to support the Town of Lovettsville’s economic goals and priorities.

Middleburg
The Town of Middleburg, established in 1787, is the southernmost town in Loudoun County and retains a traditional village character that is treasured by its citizens and visitors. Middleburg is both the hub of a larger rural area and a major tourist destination. The character of Middleburg is irrevocably tied to the preservation of the farms, vistas, vineyards, open spaces, and forests that surround the Town, with equestrian facilities, estates, wineries, and associated businesses central to Middleburg’s way of life and tourism industry.

The commercial core of Middleburg contains both retail and service businesses that serve rural area residents and the tourism industry. Specialty and high-end accommodations, including the Salamander Resort opened in 2013, as well as retail, food, and beverage are cornerstones of the Town’s economy. The rural nature and character of its surroundings are critical to its continued success. Visitor dollars spent at restaurants, shops, and accommodations within Middleburg generate 75 percent of annual Town revenues.

The Town is home to 656 people and expects its population to increase modestly in the future. A significant portion of the Town has been placed on the National Register for Historic Places and the Town administers a local Historic District to carefully control the look and feel of new development. While undeveloped land is scarce within the Town limits, the Salamander Resort
has plans for 109 new residential units, and a limited number of other infill and redevelopment opportunities exist.

To preserve the character of the Town and the rural area that surrounds it, Middleburg promotes a “defining edge” between in-town development and open and agricultural lands outside of town. The defining edge will be established by the uses and development pattern of the Southern Rural Place Type and by identifying the lands adjacent to the Town as priority open space areas for conservation easements. For this reason, a JLMA is not proposed and the public utilities will not be extended beyond the Town limits except as supported by the Town and consistent with the Sewer and Water policies of this section. A high priority for the community is to safeguard the protection of its historic character and to ensure the viability of its local and tourism economies. Town citizens and surrounding property owners are extremely concerned about the rate of growth in the County and want to protect the open space around the Town from rural residential and commercial encroachment through land use regulation and conservation programs.

Middleburg is bisected by U.S. Route 50, one of two major east-west routes through the County. The community remains concerned about the volume and speed of traffic on this route, which serves as the Town’s main commercial street within the corporate limits. Even with the success of a traffic calming project completed in late 2016, traffic congestion and safety issues remain high priorities and require the County and Town to work together to identify and implement additional traffic demand reduction and traffic calming measures aimed at mitigating local and pass-through traffic in the Town.

Cooperation and regular collaboration should continue between the County and Middleburg to address issues important to both jurisdictions, including issues of economy, rural preservation, and transportation.

**Strategy**

1.8 Maintain a “defining edge” at the Town of Middleburg’s boundary in lieu of a JLMA to clearly distinguish where the Town of Middleburg stops and the rural, undeveloped countryside begins.

**Actions**

A. Collaborate with the Town of Middleburg on zoning and development activities outside the Town but in its vicinity, with the goal of preserving the rural character of its gateways and surrounding environs.

B. Work with the Middleburg community and interested preservation groups to identify open-space and agricultural preservation approaches such as: conservation easements, land acquisition, and development standards to promote and implement open-space preservation around the Town of Middleburg to help establish a greenbelt and protect the rural appearance of roadways leading into the Town of Middleburg.

C. Protect rural roads and scenic views through measures such as revised state road improvement standards; scenic easements; historic corridor overlay zoning for John
Mosby Highway (Route 50), Foxcroft Road (Route 626), and the Plains Road (Route 626); and development setbacks.

D. Assist, when requested, in the promotion of tourism, as a means of increasing public support for preservation of the scenic and historic Middleburg area.

E. Work with the Town of Middleburg to implement strategies that will preserve and enhance agriculture as the predominant use in the RPA around Middleburg.

F. Establish a “defining edge” by implementing the uses and development pattern of the Southern Rural Place Type and by identifying the lands adjacent to the Town of Middleburg as priority open space areas for conservation easements.

Purcellville

Purcellville was first settled in the mid-1700’s, given its official name in 1852, and incorporated in 1908. Purcellville has seen significant growth, with its population of 7,727 in 2010 growing to over 9,700 in 2017.\(^5\) Residents of Purcellville have expressed their support for maintaining the small town character of the Town as expressed by the traditional architecture of the older neighborhoods, the downtown, the repurposed farm buildings that serve as evidence of the Town’s rural past, the rural landscape, farmland, and green space that gives the community a sense of history. To maintain some of these factors requires cooperation between the Town and County to protect the rural nature of the land around the Town and to encourage continued economic development in the Town, which benefits western Loudoun residents.

Demand for housing in and around Purcellville is expected to increase. As Purcellville considers potential future growth demands, the Town’s preference is to focus on infill development within the Town limits and to protect surrounding rural landscapes. Purcellville does not anticipate extending utilities beyond the current Town boundaries. Any growth in or around Purcellville will increase the need for transportation improvements to be coordinated between the Town, County, and State, such as the Route 690 interchange and the Route 7 Bypass/Route 287 intersection.

Purcellville supports the protection of existing and the establishment of new open spaces in the JLMA along with trail connections, particularly between the W&OD Trail and Franklin Park. On the east and west sides of Purcellville the Town directly abuts the Rural Policy Area and there is no JLMA; however, the RPA provides for one dwelling unit per 10 acres. The Town supports a greenbelt extending to incorporate properties that fall within approximately one-quarter mile of the Town limits, with a “defining edge within the RPA. The Town supports preservation and protection programs within these areas.

The Town also supports implementation of gateways protecting rural view sheds at the east, west, north, and south entrances to the Town. To this end, the Town and County dissolved the Purcellville Urban Growth Area Management Plan (PUGAMP) in 2013 and adopted a rural development policy for the JLMA. The County encourages a low density, rural mix of residential

---

\(^5\) 2017 Population estimates, United States Census Bureau.
and business uses around the Town that are distinguishable from the intensity and character of development in Purcellville.

Strategy
1.9 Support Town of Purcellville’s efforts to accommodate growth within the existing Town limits and to maintain its role as a hub of economic development in western Loudoun.

Actions
A. Establish a defining edge by implementing the uses and development pattern of the Southern Rural Place Type and by identifying the lands adjacent to the Town of Purcellville as priority open space areas for conservation easements.

B. The County will work with the Town of Purcellville to plan for a trail extension that connects the W&OD Trail with Franklin Park.

C. Include setbacks, height limitations, and landscaping standards for developments along Route 7, Route 287, and the Route 7 Bypass to establish and maintain a greenbelt or defining edge around the Town of Purcellville characterized by open space and tree-lined roadways.

D. The County will encourage the use of frontage roads, coordinated development plans, and other means of minimizing the number of driveways along Route 7 and Route 287 leading into Purcellville.

E. Encourage new commercial uses to locate in the Town of Purcellville before locating in the JLMA.

F. Encourage owners of historic projects in the JLMA to place properties into a Purcellville or County Historic District.

G. Protect historic structures in the context of their natural settings.

Round Hill
Round Hill first became a recognized community in the mid-1800’s, after the construction of the Leesburg and Snicker’s Gap Turnpike, now Route 7. Incorporated in 1900, Round Hill served as a destination for those looking for a holiday from Washington, D.C., benefiting from the Washington and Old Dominion Railroad and proximity to the Shenandoah River.

The population within the Town’s limits is approximately 668 residents. Growth potential within Round Hill’s boundaries is very limited with a projected buildout of only 20 additional residences. In contrast, the JLMA around Round Hill has experienced the addition of 1,200 new homes and approximately 3,000 residents over a 16-year period. Approximately 400 additional homes can be built in the JLMA. As development in the JLMA increases, Round Hill’s ability to balance revenue and costs will be a significant consideration in annexing these residences into Round Hill’s

boundaries. The Town continues to seek commercial gateways at the east and west entrances to Town and is constrained downtown by the lack of space. Maintenance of the local roads is also a growth consideration. Maintenance is currently the responsibility of the Virginia Department of Transportation (VDOT) but would become a Town responsibility if the Town reaches a certain population through annexation.

There is a desire to expand public-use facilities and provide the community with additional amenities, such as a daycare, senior center, and community center. Round Hill also has an opportunity to become an Appalachian Trail community by taking advantage of its proximity to Bear’s Den and Blackburn trail stops.

**Strategy**

1.10 Support planning efforts to retain the small-town character of Round Hill and assist the Town of Round Hill in efforts to preserve the historic character and resources in and around the town.

**Actions**

A. Development within the Round Hill JLMA will comply with the Round Hill Area Management Plan and Round Hill Comprehensive Plan and adopted policies applicable to the Joint Land Management Area.

B. To that end new development should:
   
   i. Be of a density, lot pattern, street pattern, and scale which replicates existing development within the Town of Round Hill.
   
   ii. Become an extension of the existing town, forming logical and natural additions to the historic fabric and enhancing the existing town as the central focal point of the entire community.
   
   iii. Demonstrate that adequate water and sewer service will be available to serve the proposed development.
   
   iv. Support the clustering of residences as a method to obtain additional open space.
   
   v. Oppose development that proposes an average density greater than it would have been without clustering unless a rezoning is also involved.
   
   vi. Advocate for walkable neighborhoods in the JLMA using connected streets in a grid pattern and discourage the use of cul-de-sacs.

C. Encourage housing for the elderly that will allow residents to remain in the Town of Round Hill.

D. Encourage rural economy business development in the greater Round Hill Area to provide local goods, services and jobs to Town of Round Hill residents and visitors.

E. Oppose any increase in density and development outside of the JLMA that is not consistent with the traditional rural character of Western Loudoun County.
F. Avoid high density development between the current boundaries of Purcellville and Round Hill and expand open space around Franklin Park to help maintain a greenbelt between communities.

G. Enhance the gateways to the Town of Round Hill by developing features or retaining a clear distinction between the surrounding rural area and the edge of the town. Techniques may include measures to protect existing trees, hedgerows, viewsheds, and vistas; design guidelines for lot configuration to retain the rural lot pattern; new landscaping and entrance features and other techniques.

H. Support development of sidewalks, trails, and linear parks that connect civic and public facilities with residential and commercial neighborhoods in the Town of Round Hill and JLMA and extend to Franklin Park and the W&OD Trail.

I. Coordinate transportation planning with the Town of Round Hill to ensure that traffic generated from development within the County does not adversely affect Round Hill. The County will work with the Town of Round Hill on traffic calming measures.

**Towns and Joint Land Management Areas – Municipal Water and Sewer**

**Town Policy 2:** Town municipal systems will be given priority to provide utilities to surrounding Joint Land Management Areas. An alternative provider shall only be used when the Town, the County, and the Health Department agree.

**Strategy**

2.1. Serve all development in Joint Land Management Areas by municipal sewer and water when agreed to by the Towns.

**Actions**

A. Acquire written assurance from the Town of water and sewer service prior to approval of development in the JLMA beyond current zoning.

B. Consider potential impacts of surrounding development on Town wells during the development review process.

C. Any future expansion of municipal (Town) sewer and water into the County JLMA will support development that is consistent with the goals and policies of County’s and Town adopted plans.

D. Retain the option to use shared or alternative sewer and water facilities to serve Town and County owned and operated public facilities upon agreement between the Town and the County.

E. Permit the extension of municipal sewer and water into the Rural Policy Area only to serve public facilities or to address a potential public health risk. (See also, Chapter 6, Fiscal Management and Public Infrastructure, Rural Sewer and Water)
Design Guidelines

The Design Guidelines are to build upon our current development patterns in a manner that allows innovative design and new responses to the market. While the Design Guidelines are not regulatory requirements, the County prefers that all future developments comply with these guidelines. The Design Guidelines do not supersede or otherwise limit the application of adopted zoning regulations, ordinances, building codes, or any other design standards or regulations administered by Loudoun County.

The County supports a conservation design process to development being proposed with onsite utilities. These guidelines will be reviewed concurrently and coordinated with Town guidelines or policies related to the JLMA area.

1. Support the preservation and protection of historic, cultural, and environmental resources in and around each Town.

2. Support development of distinct “gateways” into each community and protect rural view sheds leading into the towns. Gateway concepts will be developed with the Town and may include measures to protect existing trees, hedgerows, viewsheds, and vistas, design guidelines for lot configuration to continue the rural lot pattern, new landscaping, entrance features, and other techniques.

3. Protect the natural or rural scenic views along roads leading into the Towns through measures such as revised State Road Improvement Standards, scenic or conservation easements, the creation of historic corridor overlay zoning, and rural design concepts.

4. Encourage a variety of housing types and commercial development within the JLMA that are consistent with applicable Town and County policies, are compatible with the existing communities, and extend in a contiguous, rational and convenient manner from the Towns.

5. Apply the SPA Design Guidelines when reviewing non-residential developments located within the Leesburg JLMA.

6. Encourage residential communities in the JLMA that propose to connect to municipal utilities to exhibit:
   a. A variety of lot sizes and, where permitted, a variety of unit types;
   b. A street network without cul-de-sac and P-loop streets with numerous connections to existing streets;
   c. An interconnected block pattern with compact lots, shallow front and side-yard setbacks, and small block sizes;
   d. Sidewalks along all streets, providing access to the town or neighborhood center, public buildings, parks, and other destinations;
   e. A compatible mix of complementary residential and non-residential uses such as home-occupation businesses, churches, and schools;
   f. Parks, squares, or greens that provide a combination of natural and passive open spaces throughout the development, and
   g. A central public focal point consisting of any combination of a park (village green), a public facility such as a church or community center, natural features, or neighborhood commercial uses.
County/Town Annexation Agreement/Corporate Boundary Line Adjustment Guidelines

The County and the incorporated Towns will explore entering into annexation agreements to facilitate the annexations of properties that are receiving Town sewer and water services. Agreements might include language based on the following recommendations:

1. It should be the intent of the County and of the Town that any property located within the Joint Land Management Area (as defined in the policies of this Plan) should, in the future, be incorporated into the Town by annexation or corporate boundary line adjustments pursuant to the Code of Virginia when the Town commits to and demonstrates the capacity to provide sewer and water service.

2. The Town and the County should only honor requests for the extension of sewer and/or water services outside the Town’s corporate limits, within the designated JLMA when the beneficiaries of such service provide written acknowledgement of the right of the Town Council to annex the subject properties. If the Town should desire, this written acknowledgement may include the beneficiaries’ written agreement to join with the Town in a joint annexation petition.

3. Parcels located within the designated JLMA and contiguous to the corporate boundaries of the Town, which have agreed to annexation in exchange for Town sewer and/or water service, should be immediately annexed by the Town upon County approval of the rezoning and/or development proposal that requires water and/or sewer service.

4. Parcels located within the designated JLMA, which have agreed to annexation in exchange for Town sewer and/or water but which are not contiguous to the corporate boundaries of the Town, should enter into an agreement with the Town as follows: that annexation of these parcels should take place at such time as the subject parcels become contiguous with the corporate limits of the Town or five years from the date of County approval of the rezoning and/or land development proposal, which requires Town water and/or sewer service, whichever comes first. In the latter case, where parcels receiving Town sewer and water remain noncontiguous to the corporate limits of the Town, any parcels lying between the corporate limits of the Town and the noncontiguous parcel which is receiving Town sewer and water should be annexed at the end of the five-year period. However, these intervening parcels should not be required to hook into the Town sewer and/or water service unless desired by the property owner or necessary to maintain public health standards.

5. When the County approves the rezoning and/or development proposal of a property in the JLMA, which would require Town sewer and/or water service, such approval should constitute the County’s approval of annexation. At the time of such approval, the County should also provide the Town with written consent of annexation.

6. The County and Towns may proceed with annexations or with corporate boundary line adjustments, pursuant to State Code requirements, irrespective of whether the Town has a JLMA.
Reference Maps

Policy Areas (Map #2018-155)
Priority Commercial Redevelopment Areas (Map #2018-156)
Urban Policy Areas Place Types (Map #2018-150)
Suburban Policy Area Place Types (Map #2018-151)
Transition Policy Area Place Types (Map #2018-148)
Rural Policy Area Place Types (Map #2018-152)
Conservation Easements in Rural Policy Area: 2018 (Map #2018-146)
JLMA Place Types (Map #2018-149)
Route 28 Tax District Area (Map #2018-312)
Map Number 2018-150

Loudoun County IS NOT LIABLE for any use of or reliance upon this map or any information contained herein. While reasonable efforts have been made to obtain accurate data, the County makes no warranty, expressed or implied, as to its accuracy, completeness, or fitness for use of any purpose.
Loudoun County IS NOT LIABLE for any use of or reliance upon this map or any information contained herein. While reasonable efforts have been made to obtain accurate data, the County makes no warranty, expressed or implied, as to its accuracy, completeness, or fitness for use of any purpose.
Loudoun County

Rural Policy Area
Place Types
2040 General Plan

Policy Areas
Parks & Recreation
Place Types
Rural North
Rural South
Rural Village

Loudoun County IS NOT LIABLE for any use of or reliance upon this map or any information contained herein. While reasonable efforts have been made to obtain accurate data, the County makes no warranty, expressed or implied, as to its accuracy, completeness, or fitness for use of any purpose.
Loudoun County IS NOT LIABLE for any use of or reliance upon this map or any information contained herein. While reasonable efforts have been made to obtain accurate data, the County makes no warranty, expressed or implied, as to its accuracy, completeness, or fitness for use of any purpose.
Established Industrial Centers

Loudoun County IS NOT LIABLE for any use of or reliance upon this map or any information contained herein. While reasonable efforts have been made to obtain accurate data, the County makes no warranty, expressed or implied, as to its accuracy, completeness, or fitness for use of any purpose.
Loudoun County IS NOT LIABLE for any use of or reliance upon this map or any information contained herein. While reasonable efforts have been made to obtain accurate data, the County makes no warranty, expressed or implied, as to its accuracy, completeness, or fitness for use of any purpose.
Appendix

GENERAL PLACE TYPE CONSIDERATIONS

The following prompts should be considered while devising and developing a project to assess whether a proposal is compatible with the place type and improves the site and its surroundings:

Safety

1. Protection against traffic and accidents.
   a. Can people walk or bicycle safely and comfortably?
   b. Are streets planned with a Vision Zero strategy that will help eliminate traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all?

2. Protection against harm by others.
   a. How is the public space made safe day and night? Are there people and activities at all hours because the area has, for example, both residents and offices?
   b. Are sidewalks and trails, parking areas and outdoor public spaces clearly visible, comfortable and near activity areas during the day and night?

Vibrant

3. Mobility.
   a. How well do walkways and public spaces avoid physical elements that might limit walking, using a wheelchair, or pushing a stroller?
   b. How easily navigated is the arrangement of sidewalks and trails, parking areas and outdoor public spaces?

4. Interaction.
   a. What features invite visitors to rest and linger? Are seating options placed in or near interesting things like public art, a façade that invites one to spend time next to it, a bus stop, a park, or a plaza?
   b. How well can people from adjoining developments walk or bike safely and comfortably to the development?

5. Options for sitting.
   a. What are the obvious seating options such as benches or chairs? Is there only secondary seating such as a stair, seat wall, or the edge of a fountain?
   b. What are the options for sitting that do not require patronage?

6. Options for talking and listening/hearing.
   a. Is it possible to have a conversation here? What options are there to sit together and have a conversation?

7. Options for play, exercise, and activities.
   a. Are there options to be active year round? Are there options to be active at multiple times of the day and year for all ages?

Purpose

8. Scale.
   a. How well do public spaces and the buildings that surround them exhibit a human
scale? How well does the space function for people in small gatherings and large events?

b. How does the development exhibit high quality design through shape, materials, finish, relationship with surrounding buildings, and coordinated use of lighting, public art, street furniture, surfacing, planting, etc?

   a. How well are existing environmental features protected and integrated into the design?
   b. To what extent are pre-development views retained?
   c. How well does the project protect ridgelines?
   d. How are impacts on water quality addressed?
   e. Is open space accessible to the public and does it connect to open space on adjacent properties?
   f. Are most wetlands, lakes, streams, and other water amenities retained? Are significant natural amenities at least partially fronted by thoroughfares rather than hidden behind back yards?

10. Residential neighborhood characteristics.
   a. Are there a variety of dwelling types?
   b. Are there places to work in the form of office buildings or live-work units?
   c. Are there shops sufficiently varied to supply the ordinary needs of a household such as a convenience store, a post office, a teller machine, or a gym?
   d. Do thoroughfares within the neighborhood form a continuous network, providing for the dispersment of traffic? Are the thoroughfares connected to those of adjacent neighborhoods and communities?
   e. Are thoroughfares relatively narrow and shaded by rows of trees that slow traffic and create an appropriate environment for pedestrians and bicyclists?
   f. Are the large areas of open space between neighborhoods connected into continuous corridors?
   g. Are culs-de-sac avoided except where absolutely necessary due to natural conditions?
   h. Are there public places for people to congregate and areas to engage in recreational activities dispersed throughout the neighborhood?
Urban Policy Area Design Guidelines

The Design Guidelines are to build upon our current high standard of development in a manner that allows innovative design and new responses to the market. While the Design Guidelines are not regulatory requirements, the County prefers that all future developments comply with these guidelines. The Design Guidelines do not supersede or otherwise limit the application of adopted zoning regulations, ordinances, building codes, or any other design standards or regulations administered by Loudoun County.

All applications for development in the UPA are expected to include project specific design guidelines, site plans, illustrative, landscape plans, building elevations, and other similar graphics that demonstrate consistency with the UPA Design Guidelines and planning principles in this document.

When using the guidelines make sure to analyze the impact a potential development may have on the landscape, considering not only appearance, but practical considerations such as proximity to utilities, community amenities, jobs, and housing to maximize the use of existing infrastructure and limit travel distances. Development should contribute to creating places within the Urban Policy Area by working with existing topography and site features, responding to the local context, and reinforcing the compact walkable character, rather than simply attempting to place suburban design onto the urban landscape. Unless otherwise specified, the following guidelines apply only to UPA.

The goals of the UPA Design Guidelines are to:

- Promote accessibility and establish links to transit,
- Promote walkability,
- Encourage human activity between buildings and streets,
- Establish human scale of buildings at street level (first floor of a multi-story building),
- Create visually compatible buildings and site designs that use building forms, materials, fenestration, repetition, rhythm, color and architectural variety resulting in blends of form, volumes, textures and colors in the various neighborhoods,
- Create inviting spaces for varied activities, and
- Create a sense of place and uniqueness.
Building Orientation and Setbacks

Buildings in the UPA, particularly along urban-type streets and “main streets”, should have common design strategies that promote walkability, accessibility, and activity in the ‘outdoor room’ or ‘outdoor hallway’ between streets and buildings.

1. Locate buildings at the front property line or at the minimum required setback to create a strong pedestrian pathway framed by adequate spaces for sidewalks, plantings, street furnishings, and lighting along buildings. Where additional setback is necessary adjacent to the street, that area can be used to create a plaza, pocket parks, or other public gathering spaces that incorporate activity space, outdoor seating, landscape features, and/or water features.

2. Design grade level entrances providing direct access to building entrances from sidewalks and streets.

3. Make primary entrances to buildings visible from the street and sidewalk.

4. Create primary entrances for pedestrians that are easily identified and accessible with as direct a path as possible to transit amenities.

5. Maintain at least one entrance from the public way at retail and restaurant establishments.

6. Incorporate transitions from the sidewalk to the front door such as landscaping, overhead cover (canopies, awnings or trellises) and/or porches at individual entrances to businesses and residences.

7. Comply with the Americans with Disabilities Act (ADA), Universal Design, and International WELL Building Institute guidelines at primary pedestrian entrances. Alternate approaches for persons with mobility limitations, such as a ramp next to the main path to the primary entry, should not be necessary.

8. Incorporate passageways or alleys into mid-block developments, particularly on long blocks, that facilitate safe pedestrian movement through the depth of the block to the front of the next parallel block. Ensure that pedestrians do not have to walk the circumference of a block in order to access the middle of the next parallel block or alley or parking behind the block.

9. Activate use of mid-block passageways or alleys so that they are visually appropriate, functional, well-lit, and safe spaces.
Building Design

Addressing architectural features of buildings is an important component of creating the ‘sense of place’ that Loudoun County desires for the UPA, particularly with respect to the denser and more intensely used areas.

1. Incorporate different façade treatments such as forms, textures, colors, materials, and distinctive architectural features that add visual distinctiveness throughout the UPA, while building consistency in their application within individual developments to create uniqueness and identifiable character of each new development.

2. Add scale and interest to the building façade by articulated massing. Blank or long expansive walls with no detail or variation in form, color, texture, openings or material are undesirable, particularly in activity centers and along pedestrian pathways or linkages.

3. Use of architectural features, enhanced materials, fenestration, planting, lighting, and signage should contribute to a more pedestrian friendly streetscape.

4. Reinforce the existing façade rhythm along the street with architectural elements, landscaping, signage, street lighting, and street furnishings.

5. Include overhead architectural features, such as awnings, canopies, trellises or cornice treatments that provide identifiable entries, shade, and reduce heat gain.

6. Contribute to visual interest, human activity along streets and neighborhood safety by providing pedestrian scaled windows and fenestrations at the street level that act as pathways to activity inside buildings and “eyes on the street”.

7. For ground floor retail, restaurants, and professional office uses within mixed-use environments, along main streets, and other activity centers, devote a minimum of 65 percent to 75 percent relative to the length of the façade to pedestrian entrances and pedestrian-level display windows.

Sidewalks, Streets, Trees, and Plantings

Sidewalks, in conjunction with street design and building placement, support ease of pedestrian movement and link people from their homes to community amenities such as parks, public places, retail and commercial areas, transit stops, nodes, landmarks, and the Metrorail stations. Sidewalks also enrich the quality of the public realm by providing appropriate connections and street furnishings in the public right of way. They create the basis for the concept of the ‘outdoor rooms’ and ‘outdoor hallways’ which support human activity at planned centers and along linkages.

Planting street trees and ground cover plantings has proven over time and across urban development to improve the human experience between building and streets. Along with creating inviting spaces, comfort for human activity, and positive impacts to the natural environment, street trees and ground level plantings contribute greatly to the visual appeal of building façades and outdoor spaces.

1. Create a continuous and predominantly straight sidewalk to support two-way pedestrian traffic with enough space for streetscape amenities such as street furnishings, street trees, ground cover plantings areas, street lighting, signage, and utilities.
2. Create amenities that act as a buffer between pedestrians and moving vehicles by the use of landscape and street furniture (benches, newspaper racks, pedestrian information kiosks, bicycle racks, bus shelters, and pedestrian lighting, etc.).
3. Use street furnishings to create a consistent rhythm (i.e., consistent height of light standards or consistent shade pattern of trees) and encourage the activity and use of the sidewalk area between buildings and streets.
4. Incorporate closely planted shade-producing street trees to encourage pedestrian activity along streets and promote comfort in the outdoor activity spaces. They may be interspersed with existing or proposed street trees. Select native trees and plantings with low maintenance requirements. Plant outdoor spaces with ground cover, low-growing vegetation or permeable materials that accommodate both pedestrian movement and car door swings where on street parking is designed and planned. Incorporate stormwater bioswales with native plantings into the streetscape to serve both visual interest and stormwater management function.

Street Furnishings and Lighting
Street furnishings and lighting should be designed to strengthen the pedestrian experience and encourage outdoor use and activity in activity centers and spaces between buildings and streets. These amenities should also serve to create neighborhood identity and visual coherence with the use of building and street lighting.

1. Provide usable space in the sidewalk areas which should include street furnishings such as benches, trash cans, kiosks, street gardens, bike racks, outdoor sitting spaces, and public art.
2. Provide adequate lighting levels to safely light the pedestrian path.
3. Use adequate, uniform, human-scaled, and glare-free lighting to avoid uneven light distribution, harsh shadows, and light spillage.
4. Use poles, standards, fixtures, and lighting types that achieve “dark sky” compliant goals and objectives, such as lighting when necessary, reducing glare, use of energy efficient lighting systems, lighting enough to promote safety and security, and considers ecological impacts to the natural environment and humans.

On-street Parking
On-street parking provides numerous benefits in urban environments such as reducing the need for parking decks and parking lots, buffering pedestrians, moving vehicle traffic, vehicle traffic calming, and providing parking near community amenities, businesses, and retail uses shaping the ‘outdoor rooms’.

1. Provide parallel or angled on-street parking wherever possible.
2. Eliminate street parking within pedestrian crossings.
3. Create traffic calming along streets designed for low speeds.

Parking Structures
To promote an active and diverse streetscape and to minimize the visual impact of parking, parking structures should be integrated with surrounding development.
1. Parking structures that front streets should wrap the parking structure at the street level with an active use. Active uses may include retail, office, or residential uses and should be based on the allowed uses in each respective Place Type.

2. The height and mass of parking structures should be consistent with the design character of the area within which the structure is located (e.g., a five-story parking structure should not be situated in an area that consists primarily of two-story buildings).

3. Pedestrian entrances should be well-defined and attractive.

4. Façades that face public rights-of-way should incorporate massing, textures, colors, and other architectural techniques that are of similar style and quality as primary adjacent buildings.

5. Parking structures should be designed to conceal the view of all parked cars and internal light sources from adjacent public right-of-way or public open space for the full height of the structure.

Public Places
Public places are areas that serve as centers for human activity, which could be a destination, a space to pass through, or a linkage. These places should provide a focal point for gathering, communicate community or neighborhood identity, and help make for complete neighborhoods. These places could include plazas, promenades, courtyards, park spaces that are landscaped and/or hardscaped, and should include trees and ground cover vegetation to create inviting spaces for activity and gathering.

1. Orient buildings so that public places receive sunlight as well as provision for high quality, safe, night lighting.

2. Balance sunlight accessibility with shade producing trees and overhead cover.

3. Provide a variety of on-site features to maximize use and enjoyment of public places, including but not limited to:
   a) Water features / public art,
   b) Recreational features,
   c) Outdoor furnishings,
   d) Vegetative ground cover, gardens and shade tree plantings/reforestation,
   e) Use of stormwater management best practice features to create year round open space amenities with walking paths and benches,
   f) Open places for gathering large groups of people, and/or
   g) Variety of ground cover materials such as permeable and impermeable surfaces as well as natural ground cover.
Suburban Policy Area Design Guidelines

The Design Guidelines are to build upon our current development patterns in a manner that allows innovative design and new responses to the market. While the Design Guidelines are not regulatory requirements, the County prefers that all future developments comply with these guidelines. The Design Guidelines do not supersede or otherwise limit the application of adopted zoning regulations, ordinances, building codes, or any other design standards or regulations administered by Loudoun County.

The goals of the SPA Design Guidelines are to:

- Create visually interesting and compatible buildings and site designs that use building forms, materials, fenestration, repetition, rhythm, color, and architectural variety resulting in delightful blends of form, volumes, textures, and colors in the various neighborhoods;
- Create inviting spaces for varied activity; and
- Create a sense of place and uniqueness.

When using the guidelines make sure to analyze the impact a potential development may have on the urbanizing landscape, considering not only appearance, but practical considerations - such as proximity and quality of connections to community amenities, jobs, and housing to maximize the use of existing infrastructure and limit travel distances. The County encourages a conservation design process when planning development in the SPA so that natural and heritage resources are conserved and incorporated into the site design. Development should contribute to creating unique places within the Suburban Policy Area by working with existing topography and site features, responding to the local context, and reinforcing the regional character. Sustainability requires maximum consideration for using the landscape for benefits like solar heat gain or shelter from wind, as well as building designs that incorporate energy efficient and green building technologies.

Dense areas of buildings should contribute to a hospitable microclimate. Development should locate close to the road and avoid isolating itself on the site in order to “maximize presentation.” The bulk of the design should be appropriate to the function of the development. Unless otherwise specified, the following guidelines apply only within the SPA:

Development Criteria:

1. Ensure that the use contributes to and complements the existing development pattern;
2. Consider innovative uses that contribute to the surrounding community;
3. Provide consistency with the desired form, character and land uses of the underlying Place Type;
4. Differences between the height, scale, bulk, setback from the street, or other physical features of the proposed development, and existing development in the immediate area;
5. Presence and quality of a spatial or physical transition between uses;
6. Availability of adequate roads, services and infrastructure; and
7. Relationship and incorporation of existing Natural and Heritage resources.
Building Orientation and Setbacks

1. All development should include a site design that is compact and makes buildings the prominent feature of the site as viewed from adjoining/adjacent roads, especially along major thoroughfares. Site design and development will strive to minimize site disturbance and minimize removal of existing, viable vegetation.

2. It is desirable to have civic, open spaces, green spaces, and vegetation to separate parking lots from buildings and areas for human activity. Civic spaces and green spaces are encouraged to have public art enhancements.

Building Design

1. Buildings within larger multi-building developments should exhibit a unity of design through the use of similar elements such as rooflines, exterior materials, facade treatments, window/fenestration arrangements, sign location, and architectural styles and details.

2. Freestanding stores, retail centers, commercial centers, and restaurants will be encouraged to provide usable outdoor civic or public spaces.

3. Required drainage and stormwater management facilities, such as holding basins, drainage swales, and culverts should be incorporated as features into the site design of the project, to the extent possible. Natural drainage features should be conserved to the greatest extent possible, minimizing impervious facilities to the extent technically feasible.

4. Building massing and walls must be varied to avoid long, flat facades and break down the scale of large buildings and commercial/retail centers. It is desirable that building facades should incorporate wall relief, recesses, off-sets, angular forms, or other features. Buildings cannot present a "blank side" to neighboring properties.

5. Pitched, mansard, and other distinctive roof forms are strongly encouraged where appropriate.

6. Rooftop mechanical equipment will be screened with materials that blend with the architecture and will be perceived as an integral part of the principal building. Ground mounted mechanical equipment will also be screened either by incorporating it in the building architecture or by landscaping.

7. Buildings will incorporate covered entrances to provide weather protection for shoppers and create a pedestrian-oriented environment.

8. Commercial development should avoid the appearance of strip commercial development which is commonly characterized by the following features to be avoided: multiple entrances serving individual uses, minimal setbacks and landscaping, and multiple structures and signs without a unified design scheme.
Sidewalks, Streets Trees, and Plantings

1. Large parking areas will be landscaped with trees and shrubs throughout to reduce the visual impact, provide shade, and reduce the heat island effect or heat absorption of the parking area.
2. The street frontage of development will be landscaped with trees to help create a green edge on both sides of the street.
3. Existing environmental features such as natural topography, hedgerows, mature trees, and berms will be integrated into the landscape plan for non-residential centers, when feasible.
4. Non-residential buildings and parking areas will be sufficiently screened and buffered from adjoining residential areas by distance, transitional uses, landscaping, and/or natural vegetation to mitigate the effects of noise, lighting, and traffic on the surrounding residences.
5. Residential areas will be buffered from adjacent non-residential uses by trees, fences, and hedges.
6. Sidewalks will be provided to all development to accommodate benches, bikes, strollers, trees, and planters.

Street Furnishings and Lighting

1. Provide usable space and amenities when planning sidewalks, including street furnishings such as benches, trash cans, kiosks, street gardens, bike racks, outdoor sitting spaces, and public art.
2. Signs for development will be developed as an integral part of the overall design. A unified graphic design scheme is strongly encouraged that is in conformance with an appropriate regulatory framework.
3. Site and building lighting will reduce glare and spillage of light onto adjoining properties and streets. Fixtures should be attractive site elements that are compatible with the architecture of the development.
4. Both lighting and signs will be designed for pedestrians, bicyclists, and vehicles.

Parking, Circulation, and Loading

1. All development should strive to create inter-parcel connectivity for pedestrian and vehicular circulation to increase pedestrian activity and decrease vehicular traffic on roadways necessitated by broken inter-parcel connections.
2. Pedestrian traffic, internal to non-residential centers, should be provided with a safe travel route from the parking area to the building with a demarcated pathway and clear directional signage. Trees and other plantings should be provided along the walkway.
3. Parking areas will be visually screened from adjacent streets and residential areas by heavy landscaping, depressing the parking area, constructing earthen berms, and/or other means.
4. All loading and storage areas must comply with Zoning Ordinance regulations and must be screened from adjacent residential areas by earthen berms, masonry walls, permanent wooden fencing, or dense landscaping.
5. Parking structures should be integrated with surrounding development to promote an active and diverse streetscape and to minimize the visual impact of parking. Pedestrian entrances should be well-defined and attractive.
6. Parking structures that front streets should wrap the parking structure at the street level with an active use. Active uses may include retail, office, or residential uses and should be based on the allowed uses in each respective Place Type.

7. The height and mass of parking structures should be consistent with the design character of the area within which the structure is located (e.g., a five-story parking structure should not be situated in an area that consists primarily of two-story buildings).

8. façades that face public rights-of-way should incorporate massing, textures, colors, and other architectural techniques that are of similar style and quality as primary adjacent buildings.

9. Parking structures should be designed to conceal the view of all parked cars and internal light sources from adjacent public right-of-way or public open space for the full height of the structure.

10. Surface parking should be located to the rear or side of buildings and away from the street or street intersections, while providing direct pedestrian access to the buildings.

11. Textures, patterns, and colors are encouraged in the design of surface parking to provide breaks in large areas of pavement and distinguish between areas for pedestrian and vehicular movement.

12. Large surface parking lots should be functionally divided into smaller, well-landscaped and shaded parking clusters containing fifty cars or less.
Transition Policy Area Design Guidelines

The Design Guidelines are to build upon our current development patterns in a manner that allows innovative design and new responses to the market. While the Design Guidelines are not regulatory requirements, the County prefers that all future developments comply with these guidelines. The Design Guidelines do not supersede or otherwise limit the application of adopted zoning regulations, ordinances, building codes, or any other design standards or regulations administered by Loudoun County.

When using the guidelines make sure analyze the impact a potential development may have on the landscape, considering not only appearance, but practical considerations such as proximity to utilities, community amenities, jobs, and housing to maximize the use of existing infrastructure and limit travel distances.

The goals of the TPA design guidelines are to:

- Development should contribute to creating attractive places within the TPA by working with existing topography and site features, responding to the local context, and reinforcing the landscape’s character, rather than simply attempting to place suburban design onto the landscape.
- Development should use the landscape for benefits such as solar heat gain or shelter from wind.
- Buildings should be treated as parts of the landscape and attention given to their form and scale relative to their surrounding environment.

When using the guidelines make sure to analyze the impact a potential development may have on the landscape. Considerations should include both appearance and practical considerations, such as proximity and quality of connections to community amenities, jobs, and housing to maximize the use of existing infrastructure and limit travel distances. The County encourages a design process when planning development in the TPA that conserves and incorporates natural and heritage resources into the site design. Unless otherwise specified, the following guidelines apply only within the TPA:

1. Those areas of each development designated as open space by the applicable place type shall integrate buildings and parking into the existing natural landscape and provide usable space that is accessible to residents and the public, subject to the following:
   a. Perimeter open space screening from roads and other communities may be the predominant component of the 50 percent open space requirement,
   b. Distribute community greens, playgrounds, and gathering spaces within residential development,
   c. Link open space to surrounding neighborhoods and public facilities with pedestrian and bicycle networks,
   d. Link open space to natural and heritage resources, unique site features, and open space in other communities,
e. Locate low intensity parks that emphasize undisturbed open space in highly visible areas or in conjunction with schools, churches, and neighborhood commercial centers where they can serve as a buffer for adjoining homes.

2. Ensure that open space within developments creates or enhances the following:
   a. The 300-foot buffer and 200-foot transitional area along the Bull Run in the Upper and Lower Foley and Lower Bull Run subareas,
   b. The 300-foot buffer and 1,000-foot voluntary open space area along the Goose Creek, Goose Creek Reservoir, and Beaverdam Reservoir in the Lower Sycoclin and Middle Goose subareas,
   c. A contiguous network of green spaces to supplement the natural and heritage resources connecting communities and natural resource areas, and
   d. A public trail and park network to destinations throughout the area.

3. Locate development on areas of the site that afford the least disruption of views of the landscape.

4. Protect the historic context of nearby archaeological and historic sites and along scenic corridors.

5. In all development, provide trails and sidewalks that connect to adjacent neighborhoods and other destinations within and outside the project.

6. Ensure that clusters of residential units proposed in TPA communities are appropriate in number of units to reflect a traditional hamlet scale with multiple clusters separated by open space areas and featuring:
   a. A variety of lot sizes with no minimum lot size requirement and minimal setbacks,
   b. A predominantly single-family residential development pattern,
   c. A network of publicly accessible trails and pedestrian sidewalks linking communities and amenities, and
   d. A network of tree-lined streets constructed at minimum required widths to merge into the open landscape and slow traffic.

7. Ensure that housing diversity and affordability are components of larger and higher density developments, such as Transition Compact Neighborhoods, and Transition Community Centers, by including a mixture of housing types, a range of building and lot sizes, and configurations.

8. Include varying densities in neighborhoods with higher densities generally in close proximity to community greens, civic uses, or small-scale retail uses.

9. Diversify housing size, unit types, lot sizes, and lot pattern along each street frontage and in the same blocks to reflect the design of traditional villages and towns.

10. Include pedestrian features, landscaping, short blocks, few dead ends, and traffic calming features.

11. Locate buildings close to the street but require some discernable variations in building setbacks along residential streets.

12. Avoid bulky designs by breaking down the mass into smaller elements that follow natural contours.
13. Address parking in Transition Compact Neighborhood and Transition Community Center place types through a combination of on-street and off-street choices designed and located to minimize their visual impact.

14. Develop employment uses at a scale that minimizes their intrusion into the rural and natural landscape and their impact on surrounding roads and communities by:
   a. Screening all outdoor storage and equipment parking areas from view of adjoining properties and roads,
   b. Minimizing the number of entrances from major collector or arterial roads;
   c. Ensuring adequate road and infrastructure capacity,
   d. Avoiding large expanses of blank building surfaces by using articulation, fenestration and façade treatments, especially when the facades are visible from public roads, and
   e. Separating industrial uses from residences by locating less-intensive uses adjacent to residential uses or using natural or manmade barriers between the uses.
Rural Policy Area Design Guidelines

The Design Guidelines are to build upon our current development patterns in a manner that allows innovative design and new responses to the market. While the Design Guidelines are not regulatory requirements, the County prefers that all future developments comply with these guidelines. The Design Guidelines do not supersede or otherwise limit the application of adopted zoning regulations, ordinances, building codes, or any other design standards or regulations administered by Loudoun County.

When using the guidelines make sure to analyze the impact a potential development may have on the landscape, considering not only appearance, but practical considerations such as proximity to roads, utilities, and community amenities to maximize the use of existing infrastructure and limit travel distances. Development should contribute to creating unique places within the Rural Policy Area by working with existing topography and site features, responding to the local context, and reinforcing the landscape’s character, rather than simply attempting to place suburban design onto the rural landscape. Sustainability requires maximum consideration for using the landscape for benefits such as solar heat gain or shelter from wind when siting buildings. It is imperative that buildings and structures are treated as objects in the rural landscape and given due attention to their location and form to ensure they blend with the topography, protect viewsheds, and contribute to the traditional pattern of development in the RPA. The County encourages the adoption of a conservation design process when planning development in the RPA so that natural and heritage resources are conserved and incorporated into the site design. Unless otherwise specified, the following guidelines apply only within the RPA:

1. Development on ridgelines or hill tops should be avoided to retain the rural character of the landscape and protect viewsheds.
2. Site development to preserve existing land forms and minimize significant alterations to the topography while incorporating natural features, trees, hedgerows and other vegetation into the design to protect viewsheds and provide visual buffers between parcels.
3. Locate development within the landscape to minimize visibility from roadways and other properties.
4. Limit the use of outdoor lighting to areas where activity occurs and use the minimum light intensity necessary to eliminate glare and light trespass.
5. Provide trail connections when feasible to link private and public lands as part of a multi-use trail network.
6. Rural Cluster subdivisions are a land development design that compactly groups homes on lots as small as a quarter acre in a traditional community pattern while retaining large tracts of land for open space, agricultural production, and/or rural economy uses to preserve natural features and the rural character. When developing Rural Cluster subdivisions in the RPA:
   a. Use existing topography, hedgerows, mature woodlands, and other site features to influence the location of the clusters to maintain the rural and scenic quality of the landscape.
   b. Provide a compact cluster of building lots and maximize open space.
c. Design roads and driveways to follow the natural contours of the land. Roads and driveways should be the minimum width necessary to provide safe travel ways.

d. Cluster development to retain large areas of agricultural soils for farming

e. Encourage the use of shared water and wastewater systems to serve cluster developments to protect water resources.

7. Site building and structures to blend with the natural landscape to reduce their perceived scale, mass, and height; thus, reducing their impact on the landscape and surrounding viewsheds.

8. Buildings should incorporate architectural styles and design elements that emulate and relate to the historical and regional architecture of Loudoun which contributes to the visual quality and identity of the RPA.

9. Locate parking, mechanical units, and other site features in locations which diminish their visual impact from public roadways and neighboring properties.
Rural Villages Design Guidelines

The Design Guidelines are to build upon our current high quality development in a manner that allows innovative design and new responses to the market. While the Design Guidelines are not regulatory requirements, the County prefers that all future developments in the Rural Villages comply with these guidelines. The Design Guidelines do not supersede or otherwise limit the application of adopted zoning regulations, ordinances, building codes, or any other design standards or regulations administered by Loudoun County.

When using the guidelines make sure to analyze the impact potential development may have on the Rural Village and surrounding landscape, considering not only appearance, but practical considerations such as road and street access, siting of buildings and parking, safe and adequate water and wastewater, community amenities, jobs, and housing to assess compatibility. Development should contribute to the character of the Rural Villages to integrate and blend with existing development patterns and building styles.

Many properties within the Rural Villages of Aldie, Bluemont, Lincoln, Taylorstown and Waterford are located within County Historic and Cultural Conservation Districts which are zoning overlays that regulate the appearance of properties through architectural design guidelines. Any alterations, additions, demolition or relocation of an existing structure, or any new construction within the conservation districts requires approval from the County’s Historic District Review Committee. The goal of the architectural review processes is to ensure the historic, architectural, and landscape characteristics that are unique to the villages are protected, preserved, and enhanced for future generations. While the remainder of the Rural Villages do not have historic district zoning overlays, the County’s policies also support compatible development and the retention of the unique character of the individual villages. Public water and wastewater facilities are encouraged to provide services to the villages. The following design guidelines apply to development within the Rural Villages.

1. New development should reinforce the existing pattern of streets/roads in the Rural Villages.
2. The streetscape of Rural Villages should incorporate sidewalks, crosswalks, lighting, landscaping and other street amenities which enhance the pedestrian experience and contribute to the visual quality of the village.
3. Sidewalk and trail networks within the Rural Villages should be expanded to provide connections to surrounding trail networks in the RPA.
4. Incorporate and retain existing trees and other site vegetation, especially when these features form a visual edge defining the streetscape or space between properties.
5. New buildings will be oriented on their site to maintain the existing street pattern, street design, and relationship to other buildings to reinforce the historic development pattern of the village.
6. The scale, size, massing, and design of new buildings will adopt building forms and architectural styles related to the individual character of the village.
7. Where the footprint of a new building is larger than existing buildings, reduce the perceived mass by dividing the building into smaller pieces with varying wall planes and rooflines.
Design new commercial development to conform with the storefront configuration of existing historic examples, when no local precedent exists look to other examples in the villages to inform new construction.

8. Locate parking, mechanical units, and other site features in locations which diminish their visual impact from the street.
**Towns and JLMA Design Guidelines**

The Design Guidelines are to build upon our current development patterns in a manner that allows innovative design and new responses to the market. While the Design Guidelines are not regulatory requirements, the County prefers that all future developments comply with these guidelines. The Design Guidelines do not supersede or otherwise limit the application of adopted zoning regulations, ordinances, building codes, or any other design standards or regulations administered by Loudoun County.

The County supports a conservation design process to development being proposed with onsite utilities. These guidelines will be reviewed concurrently and coordinated with Town guidelines or policies related to the JLMA area.

1. Support the preservation and protection of historic, cultural, and environmental resources in and around each Town.
2. Support development of distinct “gateways” into each community and protect rural viewsheds leading into the towns. Gateway concepts will be developed with the Town and may include measures to protect existing trees, hedgerows, viewsheds, and vistas, design guidelines for lot configuration to continue the rural lot pattern, new landscaping, entrance features, and other techniques.
3. Protect the natural or rural scenic views along roads leading into the Towns through measures such as revised State Road Improvement Standards, scenic or conservation easements, the creation of historic corridor overlay zoning, and rural design concepts.
4. Encourage a variety of housing types and commercial development within the JLMA that are consistent with applicable Town and County policies, are compatible with the existing communities, and extend in a contiguous, rational and convenient manner from the Towns.
5. Apply the SPA Design Guidelines when reviewing non-residential developments located within the Leesburg JLMA.
6. Encourage residential communities in the JLMA that propose to connect to municipal utilities to exhibit:
   a. A variety of lot sizes and, where permitted, a variety of unit types,
   b. A street network without cul-de-sacs and P-loop streets with numerous connections to existing streets,
   c. An interconnected block pattern with compact lots, shallow front and side-yard setbacks, and small block sizes,
   d. Sidewalks along all streets, providing access to the town or neighborhood center, public buildings, parks, and other destinations,
   e. A compatible mix of complementary residential and non-residential uses such as home-occupation businesses, churches, and schools,
   f. Parks, squares, or greens that provide a combination of natural and passive open spaces throughout the development, and
   g. A central public focal point consisting of any combination of a park (village green); a public facility such as a church or community center; natural features; or neighborhood commercial uses.
Glossary

A

Active Adult Retirement Communities: Active adult retirement communities offer a form of housing most similar to traditional residential development. These communities offer an independent living environment with houses often designed to reduce maintenance requirements and cater to specific interests of the senior home buying market. Restricted to seniors above a certain age, these communities offer amenities and services tailored to this age group.

Adaptive Reuse: Repurposing of an existing structure in order to accommodate new uses while preserving the structure. This often involves improving existing buildings to allow for modern design and building program preferences. Reuse of an existing structure for a different purpose than that originally intended for the purpose of preserving the structure. Adaptive reuse efforts make improvements to existing buildings or change the land uses found within existing developments to adapt developments to modern design and building program preferences. These projects are not defined as redevelopment because they maintain the general massing and scale of existing buildings.

Affordability Gap: The difference between the median selling price of homes and the amount purchasers can afford to pay for them.

Affordable: When not used in the context of specific programs and policies (i.e., Affordable Dwelling Unit, Affordable Housing), a general descriptor for housing requiring no more than 30 percent of a household’s income.

Affordable Dwelling Unit: A dwelling unit for rent or for sale that is locally restricted for occupancy by households whose income falls within a certain range. Typically ADUs are offered at a below-market rate.

Affordable Housing: Non-subsidized housing (sale or rental) for those people whose income is 30–70 percent of the median household income for the area. Such housing should require no more than 30 percent of household income.

Agriculture: Any land use that produces live-stock or plant materials to be used for food or fiber for human or animal consumption. Examples include activities that produce cattle, sheep, hogs, horses or other live-stock; activities that produce grains such as wheat, barley and corn; fruit and vegetable production and tree or timber production.

Agricultural Soils: Productive soils that include both Prime Agricultural Soils (Class I) and Secondary Cropland (Class II) that are essential for growing plants, crops, raising livestock and supporting ecosystems.
**Agricultural Supportive Business:** Uses that provide either direct or indirect services to agricultural, silvicultural, horticultural, equine, and animal husbandry activities. These uses include farm machinery sales, rental, and repair services; veterinary services; blacksmiths; agricultural product storage and processing; feed and seed supply; and similar uses.

**Agricultural and Forestal District:** Districts that landowners voluntarily enter into to protect agricultural and forest lands by limiting the use and development of property for a specified term, subject to Boards of Supervisors approval.

**Airport Noise Impact Area:** Areas within one mile of the Ldn 60 and greater aircraft noise contour.

**Aquifer:** A geologic formation or structure that transmits underground water in sufficient quantity to supply pumping wells or springs.

**Aquifer Recharge:** Undeveloped or sparsely developed area where groundwater can be replenished by rainfall.

**Archaeological Site:** The physical remains of any area of human activity greater than fifty years of age for which a boundary can be established; including but not limited to domestic/habitation sites, industrial sites, earthworks, mounds, quarries, canals and roads.

**Area Median Income (AMI):** The middle household income in a specific metropolitan area; half of households of a particular size have incomes higher and half have incomes lower. AMI is used to determine eligibility for housing programs. The household income for the median or middle household in a region.

**Archaeological Survey:** The scientific archaeological investigation of a known or potential archaeological resource as defined by the Virginia Department of Historic Resources’ Guidelines for Archaeological Investigations in Virginia.

**Area Plans:** Specific, detailed land use plans, which Loudoun County adopts for various areas of the County.

**Arterial Road:** Generally, a publicly owned and maintained road, designed with restricted access and primarily intended to carry “through” traffic at 45 to 55 miles per hour.

**Bedrock:** Rock formation that underlies a surface covering such as soil.

**Best Management Practices (BMP):** Structural, operational, or procedural practices that are generally accepted as the most effective and practical means for reducing the amount of non-point source (NPS) water pollution to a level compatible with established water quality goals.
**Buffer:** An undeveloped or relatively undeveloped land area that lies between two conflicting land uses. A buffer is intended for screening the view or noise of one use from another. A buffer may include trees, plants, or other devices to further shield one use from the other.

**Built Environment:** Human-made surroundings that provide the setting in which people live, work, and recreate on a day-to-day basis and how they are interrelated as a complete and connected system in relationship to human activity. (The built environment includes such as buildings and structures, parks, utilities and communication infrastructure, roads, paths, transportation infrastructure, streetscape, wayfinding, man-made landscapes, and open space.)

**By-Right Uses:** Uses or structures that are allowed under a particular zoning district classification without the need for action by the Planning Commission or Board of Supervisors.

**Canopy:** The upper branches of a stand of trees; the tallest trees in a forested area.

**Capital Facility Proffer:** A contribution consistent with County policies and service needs, in-cash or in-kind (land or improvement), that benefits County residents at-large and is agreed to as a condition of a rezoning.

**Capital Facility Standards:** Standards developed to guide the development of new capital facilities such as schools, parks, libraries, roads, and other public facilities. They include the types and quantity of capital facilities needed, the typical square footage of each type of facility, the amount of acreage required (for building, parking, utilities etc.), and the demographic or geographic factors by which a new facility is warranted.

**Capital Improvement Program (CIP):** The County’s annual plan for future capital project expenditures. This plan spells out the funding for capital facilities including schools, libraries, and parks, that the County plans to finance over a six-year period.

**Capital Intensity Factor (CIF):** The dollar amount of the capital facilities impact measured by unit type or unit characteristics and geographic location that is calculated using County capital facility standards and demographic inputs.

**Capital Needs Assessment (CNA):** Assessment that identifies the type and number of capital facilities that will be needed to serve the public over a ten-year planning period and maintain the County’s desired levels of services.

**Central Water and Wastewater Systems:** The Loudoun Water utility network serving the Authority’s eastern service area, which includes the Suburban and Transition Policy Areas.

**Champion Tree:** Any tree deemed largest of its species and listed on either the Virginia Big Tree Registry (maintained jointly by the Virginia Forestry Association, Virginia Department of Forestry and Virginia Tech College of Natural Resources) or the National
Register of Big Trees (maintained by American Forests). A champion tree may be a National Champion, a State Champion, or both.

**Civic Uses:** Public or quasi-public uses in residential or business areas that are accessible to the public and primarily serve as gathering or meeting areas for the immediate community. Civic uses may be public buildings, defined space in commercial buildings or outdoor space constructed to accommodate gatherings of the community. They can be the settings where celebrations are held, where social and economic exchanges take place, where friends run into each other, and where cultures mix. Such uses may typically include churches, schools, libraries, community centers, amphitheaters, and property owner association meeting space or club houses.

**Cluster Development:** Grouping residences permitted by the zoning of a property, on smaller lots, with the intention of retaining a significant area of the site as open space or farmland.

**Collector Road:** A road into which local roads funnel and which, in turn, carries traffic to an arterial road. Ideally a collector road would have few private entrances accessing it directly.

**Commercial Core:** An identifiable center or focal point of a community. Typically a commercial area, park or civic facility that is convenient to most of the community.

**Commercial Use:** Any wholesale, retail, or service business activity established to carry on trade for profit.

**Community Plan:** Detailed land use plans to be developed for specific communities within the Suburban Policy Area.

**Compatible:** An existing or committed land use or activity that can co-exist with a neighboring use/activity or uses/activities, without either creating or experiencing one or more off-site adverse effect(s). Adverse Effect: Means one or more of:

- impairment of the quality of the natural environment for any use that can be made of it,
- injury or damage to property or to plant or animal life,
- harm or material discomfort to any person,
- an adverse effect on the health of any person,
- impairment of the safety of any person,
- rendering any property or plant or animal life unfit for use by man,
- loss of enjoyment of normal use of property, and
- interference with the normal conduct of business.

**Comprehensive Plan:** The general plan for the County and its supporting components. Every County in Virginia must have a Comprehensive Plan, which spells out policies for future development in order to ensure orderly growth and the protection of the public health and welfare. The Comprehensive Plan may consist of a number of components, such as
local area plans, service plans, and specific land-use related resolutions of the Board of Supervisors.

**Conservation Design:** A land development approach that conserves the environmental, natural, and heritage elements of a site while providing for development at full density on the remainder of the site. The first step in conservation design is to identify the environmental, natural, and heritage features of a site to be preserved. The unconstrained land then is available for development and buildings can be located in that area as part of the second step. Street, utility, and trail locations are then introduced on the development plan as the third step. The final step is to location lot lines.

**Conservation Easement:** A voluntary legal agreement between a property owner and a land trust or government agency that places permanent restrictions on a property which may relinquish certain development rights and/or require the preservation of farmland, natural and heritage resources on a property in perpetuity. The easement is recorded in the land records and the property owner retains ownership of the property and all rights and privileges for its use, except for the uses restricted under the easement.

**Contiguous:** Touching, abutting, and/or adjoining at the border or immediately across the street.

**Continuum of Housing:** A variety of housing types, sizes, prices, both rental and homeownership that meets the needs of Loudoun's current and future citizens. County resources will be focused on unmet housing needs of households with incomes up to 100% AMI.

**Cost-burdened Household:** A household that spends 30 percent or more of their income on housing (gross rent or mortgage).

**Cultural Landscape:** 1. “The combined works of nature and of man [that] are illustrative of the evolution of human society and settlement over time, under the influence of physical constraints and/or opportunities presented by their natural environment and of successive social, economic, and cultural forces, both external and internal” (UNESCO/ICOMOS Expert Group, World Heritage Convention Operation Guidelines, February 1995) OR 2. “A geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values” (National Park Service).

**Density:** The amount of development permitted per acre of land. It may be expressed in dwelling units per acre or as building floor area per acre (floor area ratio [FAR]).

**Density Transfer:** The act of allowing on the development potential of a parcel of land to be used on a different parcel of land.
Department of Transportation and Capital Infrastructure (DTCI): County department that oversees roadway planning, local transportation projects and transit functions, as well as capital planning, funding, design and construction management.

Development: The act of building, or the existence of structures for human habitation or business use including houses, stores, schools, offices, roads, etc.

Diabase: A fine- to medium-grained dark-colored igneous rock, which is a good source for crushed stone for road and building construction.

Dillon Rule: The rule adopted by the Virginia General Assembly that limits the legislative powers of local government in Virginia to those powers that have been specifically and expressly granted to them by the General Assembly.

District Energy Systems: Networks of hot and cold water pipes, typically buried underground, that are used to efficiently heat and cool buildings using less energy than if the individual buildings were to each have their own boilers, chillers, or cooling towers.

Drainfield: Soil absorption trench fed by underground pipes for dispersion of the liquid portion of sewage from a septic system.

Easement: An interest in land owned by another that entitles its holder to a specific and limited use or enjoyment.

Easement, Open Space (Scenic, Conservation): An easement that removes or limits the right to develop land. “Eased” is used as an adjective applied to land with such open space restrictions.

Eco-districts: A neighborhood committed to sustainability with empowered people, green buildings, and smart infrastructure. Eco-districts are a comprehensive strategy to accelerate sustainable development at the neighborhood scale by integrating building and infrastructure projects with community and individual action. Can be used as part of a public/private partnership.

Economic Development: Efforts that seek to improve the economic well-being and quality of life for a community by creating and/or retaining jobs and supporting or growing incomes and the tax base.

Ecosystem: A complex network of organic communities and their interaction with their environment. A specific ecological unit that is smaller than a biome and larger than a community.

Enabling Legislation: Legislation passed by the Virginia General Assembly which authorizes a locality to carry out some particular program or which grants certain specific powers to those localities. Local governments may not enact ordinances without enabling legislation.
**Erosion:** The wearing away and removal of soil or rock by natural means such as wind or water.

**Exemplary Natural Communities:** The most outstanding and viable occurrences of common community types, based on size, condition, and landscape context and all examples of rare community types as defined by the Virginia Department of Conservation and Recreation, Division of Natural Heritage.

**Extremely Low-Income Household:** A household with income at or below 30 percent of the Area Median Income (AMI).

**Facilities Standards Manual:** An adopted document that sets out specific regulations and design standards for such facilities as water/sewer service, roads and streets, soils review, etc.

**Fiscal:** Of or relating to public revenues, public expenditures and public debt; public financial matters.

**Floodplain:** A low, usually flat terrain on either side of a river or stream that is normally dry but submerged at times of high water, and where accumulations of silt and sand are deposited away from the main channel.

**Floor Area Ratio (FAR):** The enclosed gross floor area of buildings on a given lot divided by the total area of the lot.

**Forest:** A plant community predominantly consisting of trees and other woody vegetation of at least 10 acres in which 50 percent of the tree canopy coverage exceeds 25 feet in height and one that currently has or will result in 85 percent crown closure within ten years. A forest is further defined as forming an ecosystem that provides food, water, and shelter for various plant and wildlife habitats.

**Greenbelt:** Any largely undeveloped area or an area of low-density development consisting of entirely or primarily heavily vegetated open space surrounding a developed area or separating one area from another to create a visual separation.

**Greenfield Development:** Development that occurs on undeveloped land.

**Greyfield Development:** Development on real estate that has been previously developed and used but has become obsolescent or substantially underutilized. Examples of greyfield sites may include abandoned commercial, industrial, or public properties or underutilized older commercial centers that no longer attract investment.
**Groundwater:** The supply of freshwater beneath the ground surface in a saturated zone that forms a natural reservoir for potable water. Major source of water supply for western Loudoun County.

**Growth Management:** The process of guiding development in the direction that is most efficient, and fiscally and environmentally sound.

**Habitat:** The place or environment where animals or plants naturally or normally live and grow.

**Heritage Resource:** Those resources, both human and natural, created by activities from the past that remain to inform present and future societies of the past. Any valued historic, architectural, archaeological, or scenic site, structure, landscape, or object that has cultural or historic significance to the community.

**Heritage Trees:** Any tree that has been individually recognized by the local governing body for its association with a historic event, person, structure, or landscape. The historic significance may be at the local, state, regional, or national level.

**Historic District (County Designated):** A zoning district overlaid on an existing zoning district and adding additional architectural and design controls to the regulations of the base district. Historic Site Districts (HS) comprise one property with its related structures; Historic and Cultural Conservation Districts (HCC) comprise a number of properties related in some way to each other.

**Historic District Review Committee (HDRC):** A committee of citizens appointed by the Board of Supervisors and empowered to approve or deny the issuance of Certificates of Appropriateness for any construction, reconstruction, renovation or restoration in the Historic Districts.

**Historic Landmarks:** Used only when referring to a site designated by national, state, or local officials as a historic landmark. The term is primarily used to refer to National Historic Landmarks.

**Historic Property:** Building, site, district, object, or structure evaluated as historically significant inclusive of their historic setting.

**Historic Site:** An architectural, engineering or archaeological area, structure, object, or landscape that has historic significance to the region, locality, community, or nation.

**Homeowners Association (HOA)/Property Owners Association (POA):** A private association consisting of homeowners or property owners organized for the purpose of overseeing the enforcement of covenants or deed restrictions that apply to a group of homes, lots, or buildings. Covenants and deed restrictions may govern such things as the
maintenance and use of homes, buildings, private streets, and common areas, such as pools, playgrounds, landscaping, and parking lots.

**Hydric Soils:** Soils that are saturated long enough to develop an anaerobic condition in the upper soil so that only certain plants can live in it. Hydric soil is an indicator of wetlands.

**Impervious Surface:** Any material that prevents the absorption of water into the ground.

**Indigenous Vegetation:** Also referred to as native vegetation. Existing plant communities or species that occur naturally to a specified region or area, and that are descendants of plants that existed prior to the land being developed or cultivated.

**Industrial Uses:** Nonresidential and noncommercial employment uses such as warehousing, mining, milling, and manufacturing. Industrial Uses are defined by varying degrees of outside storage or activity, type of equipment use, and potential compatibility issues and are categorized as Light, General and Heavy Industrial Uses.

**Industrial, Light:** Uses that have less deleterious impact on their locality than the heavy industries, located in industrial parks or in conjunction with large mixed-use development. May include such uses as manufacture and distribution of such products as scientific and precision instruments and other items that may be manufactured without unpleasant impacts on their surroundings. In the mixed-use communities, it should not have outdoor storage and be of architectural design and size compatible with non-industrial uses.

**Industrial, Heavy:** A variety of uses that have significant impact on surrounding land uses and the environment. These industries include such uses as metal fabrication and quarries, asphalt or concrete mixing plants, and junkyards, which feature outdoor storage, noise, and other emissions, use of heavy equipment.

**Infill Development:** Establishment of a new use on a site that may be undeveloped or underutilized but is located in an area of established, stable development where roads, water, sewer, and general services are available or planned. Infill sites are often small (less than 25 acres), and their development should complement or complete a larger development area. Establishment of a new land use on a site that may be undeveloped or underutilized but is located within the Suburban and Urban Policy Areas in an established, stable development where public facilities such as roads, water, sewer, and general services are available or planned. Infill lots are often small (less than 25 acres), and their development should complement or complete a larger development area.

**Infrastructure:** Utilities such as water/sewer, electrical, gas, communication, internet and transportation, which form the skeleton on which a development is built.
**Institutional Uses:** Large scale government or quasi government facilities; and health, or educational facilities such as schools, training centers, universities, libraries, hospitals, or similar facilities.

**Intensity:** See Density. Intensity can also be described or measured in terms of impacts on the surrounding area such as traffic loading, sewage disposal needs, etc.

**Interim Use:** Land uses which do not require substantial infrastructure and construction investment and that by design or investment can be expected to be removed and the site redeveloped based on future market trends or can easily be adapted and augmented with future land uses. (such as community gardens, playgrounds, park-and-ride lots, and farmer’s markets)

**Invasive Plant Species:** Any plant species that is not native to the region and causes or is likely to cause economic, health-related or environmental harm.

---

**Joint Land Management Area (JLMA):** The County area surrounding an incorporated town intended to accommodate future town growth. The boundary of the JLMA typically marks the edge of utility service.

**Karst:** Refers to terrain characterized by the solution of bedrock that allows underground drainage and generates distinctive land forms and features such as sinkholes, pinnacled rock and caves. Much of the limestone conglomerate area is considered Karst.

**Land Trust:** A public and/or private, organization with the authority to buy, accept donations, hold, and/or sell interests in real property for the purpose of land and/or building preservation.

**Ldn:** Day-Night Sound Level. The energy-average level (Leq: see below) of sound for 24 hours adjusted to include a 10 decibel penalty for noise exposures during night-time hours (10:00 pm to 6:00 am).

**Leadership in Energy and Environmental Design (LEED):** A green building certification program developed by the U.S. Green Building Council that includes a set of rating systems for the design, construction, operation, and maintenance of green buildings, homes and neighborhoods aimed at being environmentally responsible and using resources efficiently.

**Light Pollution:** Unnatural brightening of the night sky caused by street lights and other man-made sources, which has a disruptive effect on natural cycles and inhibits the observation of stars and planets.

**Limestone Conglomerate:** Geologic formation that is highly water soluble and is characterized by numerous underground caves and surface sink holes; it is a natural groundwater aquifer and good water supply source. Limestone conglomerate consists of
various small rocks cemented together with a carbonate matrix. In appearance, it is very similar to concrete.

**Local Road:** A public, state-owned, and maintained road designed for direct access to individual lots.

**Low Impact Development (LID):** Land planning and engineering design approach to manage stormwater through sustainable systems and practices that use or mimic natural processes that result in the infiltration, evapotranspiration, or use of stormwater in order to protect water quality and associated aquatic habitat.

**Low-Income Household:** A household with income between 50 and 80 percent of the Area Median Income (AMI).

**Medical Centers:** An aggregation of health care facilities whose day-to-day operation is supplemented by the close proximity or collocation of other health care facilities or healthcare-related businesses.

**Micro-Grid Energy Systems:** Stand-alone electrical systems consisting of multiple generating sources and defined loads that can operate independently from the primary utility grid. They provide a reliable, efficient solution to unexpected power loss effectively balancing spikes in energy demand, optimizing energy usage for more reliable power, reducing operating costs and carbon emissions.

**Micro Unit (Housing):** A one-room, self-contained living space designed to accommodate a sitting space, sleeping space, bathroom and kitchenette. Residents may have access to a communal kitchen, bathroom, patio and gardens. Units are generally 50-350 square feet in size.

**Millennials:** A person reaching young adulthood in the early 21st century, born between 1981 and 1996.

**Mitigation (environmental):** Methods used to alleviate or lessen the impact of development. Examples include planting of new forests to replace those that have been removed; creation of new wetlands to replace those destroyed by development. Mitigation is sometimes done in a different area than that previously occupied by the replaced forest, wetland, etc, but this practice is not encouraged.

**Missing Middle:** The mix of small scale single-family units, accessory dwelling units, and limited multifamily units with a lower perceived density intended to increase diversity and affordability of housing types in a manner sensitive to the scale and context of existing neighborhood surroundings.

**Moderate-Income Household:** A household with income between 80 and 100 percent of the Area Median Income (AMI).
**Moderately Steep Slopes:** Surface formation with a vertical incline greater than 8.5 degrees or 15 percent and up to 22.5 degrees or 25 percent, a sufficient steepness to cause problems such as erosion or increased flooding when disturbed for land development or other purposes. (See also steep slopes.)

**Months of supply:** A measure of how many months would be needed to sell all of the existing home sales inventory available at the current rate of demand, calculated by dividing current inventory by current sales. This is an indicator for supply in the home sales market.

**Mountainside Areas:** Areas associated with the County’s mountain features, categorized based on weighted criteria as defined in the Loudoun County Interpretive Guide to the Use of Soils Maps, and defined by the following:

- Elevation: Above 700 feet mean sea level for the Short Hill and Blue Ridge Mountains and 550 feet for the Catoctin, Hogback, and Bull Run Mountains;
- Soils: Associated with mountainsides that affect groundwater recharge, slippage potential, and suitability for onsite sewage disposal systems;
- Slopes: Moderately steep slopes (15 to 25 percent) and steep slopes (greater than 25 percent); and
- Forests: The quality and extent of tree cover, woodlands, and forests.

**National Register of Historic Places:** The official Federal list of districts, sites, buildings, structures, landscapes, and objects significant in American history, architecture, archaeology, engineering and/or culture. These contribute to an understanding of the historical and cultural foundations of the United States.

**Natural Heritage Resources:** Those resources that include rare, threatened and endangered plant and animal species; exemplary natural communities, habitats, and ecosystems; and other natural features of the County.

**Non-Point Source (NPS) Water Pollution:** Diffuse water pollution that results when stormwater and other land runoff picks up pollutants and deposits them into a stream or other water body. NPS pollution cannot be traced to a specific source and/or point of entry.

**Old Growth Forest:** Also referred to as Ancient Forest. A forest that is ecologically mature and has been subject to negligible disturbance. Ecological maturity is typically defined when tree species reach the later stages of their life cycle, reflecting in significant amounts of the upper stratum or overstory in the mature (old) growth phases.

**100-foot Minimum Stream Buffer:** Minimum stream buffer providing a minimum filtration area ensuring maintenance of water quality and the integrity of the river and stream corridor. The buffer is measured from the ordinary high water mark landward on
both sides of the stream when the 100-year floodplain and adjacent steep slopes do not extend beyond either bank by 100 feet.

**On-Site or Individual Water and Wastewater Systems:** A system that serves a single user, commonly well and septic systems.

**Open Space:** Any parcel or area of land or water essentially unimproved and designated for public or private use or enjoyment or for the use and enjoyment of owners, occupants, and their guests of land adjoining or neighboring such open space. There are three types of open space defined in this plan:

**Open Space, Active Recreation:** Areas dedicated to leisure-time activities, usually of a formal nature and often performed with others, requiring equipment and taking place at prescribed sites or fields. Examples include ballfields, tennis or basketball courts, swimming pools, tot lots, golf courses, dog parks, and other areas for recreational sports and games.

**Open Space, Natural:** Land left in a mostly undeveloped state. Examples include forests, meadows, hedgerows, and wetlands.

**Open Space, Passive Recreation:** Areas for activities that involve less energetic activities such as walking, sitting, picnicking, card games or table games. Examples include trails (hiking, biking, walking, or equestrian), picnic, community gardens, camping, hunting, or fishing areas. Passive recreation uses have fewer potential impacts on the site and on surrounding land uses.

**Open Space Preservation Program:** A program that seeks to balance the loss of open space to new development with the provision of easements or funds towards the purchase of publicly accessible and useable open space, to the extent permitted by Virginia Code Section 15.2-2303.4.

**Overlay Zoning District:** A zoning district superimposed on another, but having validity in governing the use of the property.

**Parks and Recreation:** Resources and services provided for the purposes of leisure, entertainment, and recreational pursuits. Resources are non-commercial public spaces and facilities like parks, nature preserves, open space areas, greenways, trails, and built structures for sport, recreation, or arts programs.

**Performance Standards:** A set of regulatory criteria or limits relating to certain characteristics that a particular use or process may not exceed.

**Perpetuity:** A state of something that is continuing or enduring forever. In planning, a limitation on property, which is not destructible by the persons who hold an interest in the property, is said to be held in perpetuity.
**Pervious:** Materials that permit water to enter the ground by virtue of their porous nature or by large spaces in the material. Also, permeable.

**Physiographic:** Pertaining to physical geography.

*Purchase of Development Rights (PDR):* A land conservation tool used to limit development on natural and/or agricultural lands and preserve natural and heritage resource elements in perpetuity. Under this program, the County compensates property owners who voluntarily agree to sell the right to develop and place a conservation easement on their land.

**Purchasing Power:** An estimate of the amount of money a household can affordably spend to purchase a home, measured as household income multiplied by three.

**Planning Commission:** Citizens appointed by the Board of Supervisors and empowered to prepare the Comprehensive Plan and to advise the Board on proposed land use changes for conformance with the Comprehensive Plan and the Zoning and Subdivision Ordinances.

**Pollution Management Program:** Program to help prevent water quality degradation and restore the health of lakes, rivers, streams and estuaries by promoting and funding measures to reduce and prevent nonpoint source pollution. Such programs may include watershed planning efforts, stream and wetland restoration and protection, and education and outreach.

**Prime Farmland (as defined by the U.S. Department of Agriculture):** Land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It can be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas.

**Proffer:** Voluntary promise or commitment given in writing by a landowner to construct certain improvements, to contribute towards mitigating impacts, or to develop property subject to specified conditions.

**Property Assessed Clean Energy Program (PACE):** Mechanism for financing energy efficiency and renewable energy improvements on private property created by the U.S. Department of Energy. PACE programs allow a property owner to finance the up-front cost of energy or other eligible improvements on a property and then pay the costs back over time through a voluntary assessment. The unique characteristic of PACE assessments is that the assessment is attached to the property rather than an individual.

**Public Facilities:** Public works supplied generally by a government organization. Examples include public roads, schools, water and sewer facilities, fire stations, and libraries.

**Public Water and Wastewater Systems:** Water and wastewater systems that include shared community water and wastewater systems that are owned and operated by Loudoun Water.
municipal systems operated by Towns and central water and wastewater systems operated by Loudoun Water.

**Pump-and-Haul:** A sewage disposal method in which a sewage holding tank is pumped out on a regular basis and the raw sewage is transported by vehicle to an authorized treatment plant.

**Q-R**

**Quality Development:** Unique and functional community design components that promote high quality of life, enrich areas, create distinctive visual character, and ensure a pedestrian-friendly environment.

**Quality of Life:** The standard of health, comfort, and happiness experienced by an individual or group.

**Questionable Soil:** Where the classification, strength, or compressibility of the soil are in doubt or where a load-bearing value superior to that specified in the International Building Code is claimed.

**Real Property:** Land and any immobile buildings or structures attached to the land.

**Recreation, Active:** A type of open space. Areas dedicated to leisure-time activities, usually of a formal nature and often performed with others, requiring equipment and taking place at prescribed sites or fields. Examples include ballfields, tennis or basketball courts, swimming pools, tot lots, golf courses, and other areas for recreational sports and games.

**Recreation, Passive:** A type of open space. Areas for activities that involve less energetic activities such as walking, sitting, picnicking, card games or table games. Examples include trails (hiking, biking, walking, or equestrian), picnic, camping, hunting, or fishing areas. Passive recreation uses have fewer potential impacts on the site and on surrounding land uses.

**Redevelopment:** The rehabilitation, removal and replacement, or adaptive reuse of existing structures or uses. This includes any development project that significantly modifies an existing developed site resulting in changes to its design, use, and/or intensity. Projects may involve razing existing structures and constructing completely new buildings and may require mitigation or remediation of the impacts of previous uses. A change in land use which would involve the removal and replacement, rehabilitation, or adaptive reuse of existing structures or uses. Redevelopment includes all development projects that make significant modifications to an existing developed site resulting in changes to its design, use, and/or intensity. Projects may include razing existing structures and constructing completely new buildings and may necessitate mitigation of previous uses.

**Revitalization:** Reestablishing the economic and social vitality of an area through a combination of targeted efforts and investments that may be coordinated with redevelopment, infill, and adaptive reuse projects.
vitality of a targeted area. Redevelopment, infill, and adaptive reuse are types of development that support revitalization.

**Rezoning:** A change in zoning district applicable to a given parcel or group of parcels of land.

**Ridgeline:** A ground line located at the highest elevation of a drainage divide for the major watersheds mapped by the County or other prominent ridgeline visible from the public right-of-way as identified during the land development process.

**Right-to-farm Act:** A State Act that offers protection to farmers against nuisance suits. Localities are prevented from enforcing nuisance ordinances that would disrupt normal farm practices.

**Riparian:** An area of land contiguous to a stream, river, lake or wetland that contains vegetation that, due to the presence of water, is distinctly different from the vegetation of adjacent areas.

**Riparian Forest:** Also called a riparian forest buffer when part of a larger stream buffer. A strip of land along a river or stream where forest and vegetation help to protect water quality, filter pollutants, regulate water temperature, enhance aquatic and wildlife habitats, and provide aesthetic value to the river or stream.

**River and Stream Corridor Resources (RSCRs):** These areas include:

- Rivers and streams draining 100 acres or more.
- 100-year floodplains (including major and minor).
- Adjacent steep slopes (slope 25 percent or greater, starting within 50 feet of streams and floodplains, extending no farther than 100 feet beyond the originating stream or floodplain).
- 50-foot Management Buffer surrounding the floodplains and adjacent steep slopes.
- Wetlands, forests, historic and cultural resources, and archaeological sites that fall within the area of one or more of the above elements.

**Rural Character:** A term broadly applied to the appearance and experience associated with natural and man-made environments comprised of any combination of agricultural, forestal, environmental, scenic, historic and/or cultural elements that define a rural setting or landscape.

**Rural Economy:** A collection of traditional and non-traditional rural business uses that are dependent on the rural land base for its agricultural productivity, scenic quality, and rural character to sustain business activities. Rural economy uses include but are not limited to agriculture; crop and livestock production; forestry; horticulture and specialty farm products; farm markets and wayside stands; the equine industry; orchards; vineyards; farm
wineries; cideries and breweries; farm restaurants; hospitality services such as bed and breakfasts, country inns, banquet/event facilities, and rural resorts; and private camps and parks.

§

Scenic Highway/Virginia Byway:

**National Scenic Highway:** A road located within a protected corridor and having recreational, historic or scenic interest.

**Virginia Byway:** A road or part of a road having high aesthetic or cultural value or leading to an area of significant historical, national or recreational interest. Designation by Virginia Department of Transportation on recommendation of the Commission on Outdoor Recreation with approval of local Board of Supervisors. Designation does not imply any particular protection of the roadway from development or structural improvements.

**Scenic Rivers (Sec. 10-167(b) Code of Virginia):** Rivers, streams, runs and waterways, including their shores and immediate environs which possess great natural and pastoral beauty.” Designated by an Act of the General Assembly on recommendation of the Commission on Outdoor Recreation, and overseen by a local committee appointed by the governor of Virginia.

**Self-Sustaining Communities:** Communities planned, built or modified to be economically, environmentally, and socially healthy and resilient.

**Septic System:** Subsurface sewage disposal system that uses the natural absorption of soil to treat wastewater. The common use is to serve one dwelling, but could be designed to serve several homes. Drainfield refers to this soil absorption trench fed by pipes from the dwelling.

**Services:** Establishments primarily engaged in providing assistance, as opposed to products, to individuals, business, industry, government, and other enterprises, including hotels and other lodging places; personal, business, repair, and amusement services; health, legal, engineering, and other professional services; educational services; membership organizations; and other miscellaneous services.

**Setback:** The distance from a property line to a structure or use such as parking. Governed by the Zoning Ordinance or by covenants and/or easements or by proffers or conditions at the time of rezoning or special exception.

**Severely Cost-burdened Household:** A household that spends 50 percent or more of their income on housing (gross rent or mortgage).

**Shared Water and Wastewater Systems:** Water and/or sewage treatment systems that are designed to serve individual users or a number of residences such as a cluster located outside the central service area of eastern Loudoun.
**Silviculture:** The art and science of controlling the establishment, growth, composition, health and quality of forests and woodlands.

**Site Plan:** A plan, to scale, showing proposed uses and structures for a parcel of land. It includes such information as location of lot lines, streets, buildings, parking areas, landscaping, utility lines and topographic information.

**Special Needs Population:** Special needs populations include low income residents (incomes below the 30 percent Area Median Income (AMI)), elderly residents requiring congregate care, disabled residents, and the homeless.

**Special Taxing District:** A geographical area that pays a special assessment in order to provide a desired or necessary amenity or facility mutually beneficial to all the landowners of the district.

**Specimen Tree:** Any tree that has been individually recognized by the local governing body for its special status. A tree may receive this designation by virtue of its outstanding size and quality for its particular species, especially if it represents a locally significant native species. Trees associated with the character of a community, trees that are relatively rare in an area, whether native or not, may also be awarded this status. The category also includes other locally significant trees that are significant on account of their great age or are especially renowned for their aesthetic or community value. The function of a tree in a landscape may be sufficient to justify special status such as a landmark pair of trees that frame an entrance and/or serve as natural gateways to historic sites, towns, or villages.

**Spin-off Lot:** A subdivision option permitted by the zoning of a property, also referenced as the Principal/Subordinate Subdivision Option, which enables a property to be further divided into one or more smaller lots as identified in the Zoning Ordinance.

**Steep Slopes:** Surface formation with a vertical incline greater than 22.5 degrees or 25 percent, a sufficient steepness to cause problems such as erosion or increased flooding when disturbed for land development or other purposes. (See also moderately steep slopes.)

**Stormwater Run-off:** The portion of the total precipitation that does not sink into the soil but instead flows across the ground or other surface and eventually reaches a watercourse.

**Stream Buffer:** Defined as part of the River and Stream Corridor Resource. A minimum area of land directly adjacent to and on either side of a river or stream. The primary purpose of the stream buffer is to provide adequate filtration of pollutants and improve water quality.

**Stream Corridors:** Also referred to as River and Stream Corridor Resource (RSCR).

**Subdivision:** The division of a parcel of land into two or more new parcels. The process of subdividing is regulated by the Land Subdivision and Development Ordinance.

**Sustainable Site Design:** Create and sustain a high quality of community values and environmental responsibility in design and construction of buildings, infrastructure,
transport, and landscape. The construction methods employed should ensure that each step of the building process is focused on eliminating unnecessary site disruption (e.g., excessive grading, blasting, clearing) and resource degradation (e.g., stream siltation, groundwater contamination, air-quality loss). The strategies can harness features such as ventilating breezes, solar gain, and microclimates, and can mitigate unfavorable features such as cold, moist air drainage; desiccating winds; and increased stormwater runoff. The building process should be strategically charted in stages to avoid unnecessary site disruption, and to achieve an orderly construction sequence from site clearing to site finish. Such a strategy reduces costs and damage to the site. It requires close coordination between all sub-contractors.

Technical Assistance: Assistance provided by specialists in the form of sharing information and expertise, instruction, skills training, transmission of working knowledge, and consulting services and may also involve the transfer of technical data.

Technology Zone: Designated areas where local jurisdictions may grant tax incentives and provide certain regulatory flexibility to encourage new and expanding technology businesses.

Tourism Zone: Designated areas where local jurisdictions may grant tax incentives and provide certain regulatory flexibility for tourism-related development projects.

Town Center: A mixed-use, concentrated community, which integrates employment, commercial, residential, and public uses. A town center will emphasize pedestrian movement over vehicular movement to create a pedestrian-friendly environment and will offer a full complement of services and amenities.

Traffic Calming: Measures to reduce the speed of motor vehicles, alter driver behavior, and improve conditions for non-motorized street users. Includes both physical (e.g., raised crosswalk, traffic circle, speed bumps) and non-physical measures (community education and enforcement).

Transit: A shared mode of transportation, which often operates on a fixed route and fixed schedule, and is available to all who pay the fare; however, demand responsive transportation, which does not operate on a fixed route or fixed schedule is also a form of transit. Other examples include bus, light rail, and heavy rail.

Transit Oriented Development (TOD): Mixed-use neighborhoods designed to encourage and leverage transit ridership to create vibrant, complete communities. TODs often feature a rail or bus station at their center, surrounded by relatively high-density development decreasing in density as distance from the core increases. TOD neighborhoods encourage cycling and walking to maximize transit usage, feature streets with high levels of connectivity and traffic calming, and limit the land area dedicated to vehicular parking.
**Transit Station:** Structures housing both passengers and transportation systems’ operations and equipment.

**Transit Stop:** A location along the street or transit line that has simple facilities like signage and shelters.

**Transportation Improvement Plan:** A County transportation plan, which includes roads, car pools, public transportation and airport facilities, and which is designed to establish policies and priorities regarding county roads, public transportation, car pools, airports, and other transportation facilities.

**Tree Stand:** A plant community predominantly consisting of trees and other woody vegetation sufficiently uniform in species composition, age, arrangement and condition: an area to be distinguishable as a group from the forest or other growth in the adjoining area.

**Understory:** Low trees and large shrubs located below the canopy in a wooded area.

**Universal Design:** The simple design of both products and the built environment to be useable by people of all ages and abilities, and which promotes the ability for people to age in place. Also known as visitability.

**Unmet Housing Needs:** The lack of housing options for households earning up to 100% of the Washington Metropolitan Area Median Income (AMI).

**Unstable Soils:** Soils that because of their composition and unique landscape position have a higher than normal potential for erosion, particularly during periods of high rainfall.

**Urban Center:** A mixed-use community in the Urban Policy Area, developed in a manner that supports transit and pedestrian movement.

**Urban Growth Boundary:** The limit of central water and wastewater utility service, it marks the separation of distinctly different land uses and densities.

**Use-Value Taxation:** (sometimes referred to as “land use tax”) A program authorized by the state and implemented by localities at their option in which qualifying agricultural, forestal, and open space land is taxed at its use value rather than at its market value for development.

**Vacancy rate:** The proportion of rental units that are available for rent or otherwise unoccupied. When used in the context of rental housing units, vacancy rate is an indicator of supply in the home rental market.
**Visitability:** The simple design of both products and the built environment to be useable by people of all ages and abilities, and which promotes the ability for people to age in place. Also known as *universal design*.

**Very Low-Income Household:** A household with income between 30 and 50 percent of the Area Median Income (AMI).

**Watershed:** A broad area defined by natural hydrology that collects and discharges water into surface water bodies or that recharges groundwater or both. A watershed generally includes rivers, streams, lakes, wetlands, and the surrounding landscape.

**Wellhead Protection Plan:** A plan identifying and protecting the land area where subsurface water flows to public drinking water supply wells in order to protect groundwater from potential contaminants.

**Wetlands:** Vegetated areas where plants are rooted in water or water-saturated soil, or that regularly tolerate flooding for extensive time periods. Includes but is not limited to swamps and marshes. Many wetlands do not appear wet at all times.

**Zoning District:** A classification of land that designates and limits allowed uses, lot sizes, building setbacks and other land development regulations.

**Zoning Ordinance:** A local ordinance that defines and implements land use and design standards such as permitted uses, lot sizes, setbacks, etc.
Chapter 3 - Natural and Heritage Resources

Table of Contents
Chapter 3 - Natural and Heritage Resources................................................................. 1
Vision.............................................................................................................................. 2
Introduction................................................................................................................... 2
Topics............................................................................................................................. 3
  Water Resources ........................................................................................................ 3
  Geologic and Soil Resources ...................................................................................... 5
  Forest, Trees, and Vegetation ..................................................................................... 7
  Historic and Archaeological Resources .................................................................. 8
  Cultural Landscapes ................................................................................................. 10
  Plant and Wildlife Habitats ....................................................................................... 10
  Complementary Elements ........................................................................................ 11
  Sustainability ............................................................................................................. 12
Policies, Strategies, and Actions................................................................................... 14
Natural and Heritage Resources.................................................................................. 14
River and Stream Corridor Resources ....................................................................... 16
Soils and Geologic Resources..................................................................................... 23
Forests, Trees, and Vegetation..................................................................................... 25
Historic, Archaeologic, and Scenic Resources............................................................. 26
Natural Heritage Resources......................................................................................... 28
Complementary Elements.......................................................................................... 29
Sustainability................................................................................................................ 30
Reference Maps............................................................................................................ 33
Chapter 3 - Natural and Heritage Resources

Vision
Protect and enhance the County’s natural and heritage resources, which are fundamental to the health, safety, welfare, sustainability, and enjoyment of current and future generations.

Introduction
Abundant natural and heritage resources define Loudoun County’s unique sense of place. Loudoun County has a tradition of being in the forefront of natural and heritage resource protection in Virginia, which is evident in past planning efforts. The Loudoun County Choices and Changes Plan, adopted in 1991, grouped natural and heritage resources into categories that shared common elements, strengthening the relationships among them. The 2001 Revised General Plan retained the grouping of elements while also developing a Green Infrastructure strategy for the conservation, preservation, and restoration of these elements. The Revised General Plan also identified a conservation design process to allow for conservation of the Green Infrastructure elements while also providing for full development of the site. Loudoun 2040 continues to build upon the conservation design process to better protect and enhance the County’s natural and heritage resources.

Natural and heritage resources include the Potomac River edge, major rivers, stream corridors, floodplains, wetlands, steep slopes, ridges and mountainsides, forested and vegetative landscapes, limestone geology areas, farmlands, soil resources, important plant and wildlife habitats, historic and archaeological sites, scenic areas and corridors, designated heritage areas, battlefields, historic cemeteries, and cultural landscapes. Complementary elements, such as air quality, aural environment, and the night sky are also important to the health, safety, and welfare of Loudoun residents. Natural and heritage resources are tangible assets that make the County an appealing place to live, work, play, and learn while contributing directly and indirectly to Loudoun’s economy. Preserving, protecting, and enhancing these resources is critical to the County’s long term economic, environmental, and social sustainability.

Protect and enhance natural and heritage resources through the following:

Conservation
Careful management of natural features within the built environment.

Preservation
Retaining and protecting natural and heritage resources.

Restoration/Recapture
Enhancing natural and heritage resources wherever possible.

Education
Communicating the importance of natural and heritage resources.
This chapter provides guidance for the protection of natural and heritage resources in conjunction with the development and redevelopment of the County. These resources are important County assets and should be a primary consideration in the development of a site. Although many of the County’s best preserved natural and heritage resources are located within the Rural Policy Area, important resources have been identified in all parts of the County and are, in many cases, critical to the character of individual communities both east and west (See Natural Resources Map). The County has a history of protecting and preserving these important resources through policies, regulatory measures, land acquisition, and educational programs. The protection of these resources will not only provide environmental and heritage benefits but will enable residents to experience the natural environment within the context of the built environment. The protection of these resources is interrelated, creating a network of natural and heritage resources. For instance, the protection and preservation of existing forest cover adjacent to a stream helps to filter pollutants from entering the stream and provide for streambank stabilization, while also improving air quality, conserving energy, creating wildlife corridors, and protecting archaeological resources.

Updating and adopting zoning regulations and development standards to implement the objectives of this chapter will be important for protecting the health, safety, and welfare of Loudoun residents as well as preserving natural and heritage resources for the enjoyment of future generations.

**Topics**

**Water Resources**

River and Stream Corridor Resources (RSCR) consist of rivers and streams that drain 100 acres or more, associated 100-year floodplains, adjacent steep slopes, and a 50-foot management buffer surrounding the floodplains and adjacent steep slopes (See River and Stream Corridor Resources Map). RSCRs constitute the County’s largest natural ecosystem, supporting air quality, water quality, and biological diversity. If the floodplain and adjacent steep slopes are less than 100 feet beyond either stream bank, a 100-foot minimum stream buffer will protect the river and stream corridor. The buffers help to maintain stream bank stabilization, temperature moderation, flood control, and aquatic habitat as well as filter nutrients and sediments from upland disturbances and adjacent development. Because rivers and streams and their associated floodplains are dynamic, the buffers help to ensure that development adjacent to the floodplain today will not be in the floodplain in the future. The 50-foot management buffer can be reduced if it can be shown that a reduction does not adversely impact the floodplain, adjacent steep slopes, wetlands, and riparian forests of the river and stream corridor.

The County has two State-designated Scenic Rivers: Goose Creek and the segment of Catoctin Creek that runs from Waterford to the Potomac River. These scenic rivers are an important part of the County’s river and stream corridor system. The County also seeks to preserve the Potomac River shoreline.
Major water resource issues for the County include ensuring an adequate supply of drinking water, protecting groundwater and surface water from contamination and pollution, stormwater management, and preventing the degradation of water quality in the watersheds.

**Impaired Streams**

Many stream segments across the County have been designated as “impaired” by the Virginia Department of Environmental Quality (DEQ). In 2009, the County conducted an assessment of streams within all the County’s watersheds. The County assessment indicated impairments in over 75 percent of County streams (see Impaired Streams Map). One tool used by the State to help restore these degraded waters is the Total Maximum Daily Load (TMDL) program, which is defined by Section 303(d) of the Clean Water Act (CWA). The TMDL represents the amount of a pollutant that a waterway can assimilate and still maintain its health. The TMDL identifies the responsible pollutant and the suspected cause and source of the pollutant. Based on the results of the TMDL, DEQ may require the County to develop and implement a TMDL Action Plan to reduce pollutants. If required, actions may include stormwater pollutant reduction and mitigation projects, such as stormwater infrastructure retrofits, reforestation, stream restoration, and/or riparian plantings. Additionally, Loudoun County is located within the Chesapeake Bay Watershed and is currently subject to the Chesapeake Bay TMDL and the Chesapeake Bay Watershed Implementation Plan (WIP), which requires state jurisdictions within the watershed, including Virginia, to meet sediment, phosphorus, and nitrogen reduction goals by 2025.

Due to the length of the TMDL process and the number of impairments in the County, it may take decades before certain water quality restoration efforts achieve positive results. Additionally, given the anticipated rate of development within the County, many areas will likely have entitlements prior to the development of the local TMDL Action Plans. Therefore, a proactive approach towards water quality efforts will help to avoid costly and time-consuming processes to restore water quality to the required standards after development is completed. Actions and cooperation by all sectors including County Government, land developers, and property owners are needed to effectively control and meet required pollution standards to protect water resources.

**Watershed Management Planning (See Watersheds Map)**

The 2008 Comprehensive Watershed Management Plan (CWMP), provided a preliminary classification of the County’s 161 subwatersheds into categories of “improve,” “mitigate and maintain,” and “preserve.” The CWMP recommends approximately 90 specific watershed
management activities, some of which the County has already implemented.

The CWMP recommended a watershed management plan pilot project as the next step to achieving Loudoun County’s goal of effective management of the County’s water resources. The watershed management planning process is intended to address the many mandates that the County must meet in each individual watershed. These include the requirements of the National Pollutant Discharge Elimination System (NPDES), Municipal Separate Storm Sewer System (MS4) permit, watershed-specific TMDLs, and the Chesapeake Bay TMDL. The County developed the Upper Broad Run Watershed Management Pilot Project (UBRWMPP) in 2013-2014. The UBRWMPP assessed the current conditions within the watershed, developed watershed management practices that could be implemented to make progress toward TMDL or other pollutant removal goals for the Upper Broad Run watershed, and projected future conditions with and without the implementation of suggested watershed management measures. Lessons learned from the pilot project can be applied to the remaining County watersheds.

Surface and Groundwater Resources

Groundwater supply is the primary drinking water source for residents of Loudoun’s western towns and rural areas. Loudoun Water provides drinking water from the Potomac River and Goose Creek. Goose Creek receives water from Beaverdam Reservoir and Goose Creek Reservoir. The Town of Leesburg uses surface water from the Potomac River. The western towns provide water from wells, and Purcellville augments this with surface water from the J. T. Hirst Reservoir. As of 2018, there are over 15,000 private groundwater wells, mostly in western Loudoun. Increasing impervious land cover contributes to diminishing groundwater capacity and stream degradation, as rainwater that was once filtered through the soil to replenish groundwater and remove pollutants is now kept above ground. Stormwater is then carried via culverts and stormwater pipes directly to local streams bypassing the natural filtration process.

Geologic and Soil Resources

The eastern half of Loudoun County is located in the Piedmont physiographic province, and the western half is in the Blue Ridge physiographic province. The Bull Run fault, coextensive with the eastern edge of the Catoctin Mountain, forms the boundary line between the two provinces. Soils and geologic information are important considerations in land development, predicting potential impacts on erosion, water quality and quantity, and failing slopes, as well as insight into mitigating post-development problems.

Limestone

An area of approximately 18,000 acres (approximately 5.5% of the County) that lies predominately north of Leesburg and east of Catoctin Mountain is
characterized as karst terrain (See Limestone Overlay District Map). Karst terrain refers to areas where mildly acidic water has gradually dissolved the underlying limestone and other carbonate rocks, creating a landscape characterized by underground cavities, sinkholes, and springs. These areas are susceptible to increased cavity collapse, ground slippage, groundwater pollution, and threats to the stability of foundations and structures. In 2010, the Board of Supervisors (Board) adopted amendments to the Zoning Ordinance that established the Limestone Overlay District (LOD), which regulates development in karst areas.

**Prime Agricultural Soils**

Prime agricultural soils are soils that are best suited for conventional agricultural use. Nineteen percent of the County consists of prime farmland as defined by the U.S. Department of Agriculture. These soils are usually found in areas that are nearly level to gently sloping, well drained, and with access to water sources. Loudoun’s remaining best agricultural soils are generally located in the Rural Policy Area. Prime agricultural soils in Loudoun are often seen as desirable for residential development. Once this land-based resource is lost, however, it cannot be reclaimed. Because the County has emphasized the rural economy as an important part of its overall economic health, prime farmland and agricultural soils are especially valuable. Since the establishment of the Loudoun County Agricultural and Forestal District (AFD) Program in 1979, over 43,000 acres are enrolled within 23 Agricultural and Forestal Districts (AFDs)\(^1\) throughout the County.

**Mountainside and Steep Slopes**

Loudoun’s mountains are a valued environmental resource and distinctive feature of the County’s scenic beauty. Mountainsides contain headwaters to many of the County’s streams and are identified as a critical groundwater recharge area for western Loudoun County. Residents, visitors, and rural businesses value the scenic vistas that the hills and mountains provide. They are also highly sensitive to land disturbance and development. In addition to the destruction of prime viewsheds, uncontrolled land disturbance within these areas can cause major soil slippage, debris flows, or landslides. Disturbances that can initiate these land surface failures include removal of trees and vegetation; cutting, filling, or blasting of the soil and bedrock; and altering the soil moisture content by excessive groundwater withdrawal or changing surface water runoff. The Zoning Ordinance regulates these areas through the Mountainside Development Overlay District (MDOD). The MDOD contains land use restrictions and performance standards

---

\(^1\) As of September 25, 2017
to minimize the destruction of individual resources and the disturbance of the ecological balance of these resources. The boundaries of the MDOD are based on a range of both technical and aesthetic factors. Mountainside areas are divided into three areas depending on the elevation and the types of resources present as determined by weighted analytical criteria (Somewhat Sensitive, Sensitive, and Highly Sensitive). Policies in this Plan also encourage mountainside areas to be placed under permanent open space easement. Updates to the MDOD are included as an action step to bring the Zoning Ordinance and the Plan guidance into alignment.

Recognizing the importance of protecting steep slopes beyond the mountainous areas of the County, in 1993 the Board adopted an amendment to the Zoning Ordinance establishing standards for development on steep slopes. Since the adoption of the Steep Slope standards, several revisions have occurred, resulting in greater flexibility in the standards. Steep slopes and moderately steep slopes occupy an area of approximately 53,000 acres (approximately 16 percent of the County). Moderately steep slopes are areas with a 15 percent to 25 percent grade (identified by Slope Class D on Loudoun County soil maps). Steep slopes refer to more environmentally critical slopes with a grade greater than 25 percent (identified by Slope Class E on Loudoun County soil maps). Improper use and disturbance can trigger increased erosion, building failure, road failure, downstream flooding, and other hazards.

**Forest, Trees, and Vegetation**

The County’s forests and trees improve air and water quality, offer important habitat for birds, small mammals, and other wildlife, and provide buffers between communities. Forests and trees conserve energy by providing shade and evaporative cooling through transpiration. They also reduce wind speed and redirect airflow, reduce stormwater runoff and soil erosion, and can increase real property values. Riparian forests along streams provide the greatest single protection of water quality by filtering pollutants from stormwater runoff, decreasing stream bank erosion, and maintaining the physical, chemical, and biological condition of the stream environment. The County also has some of the state’s best hardwood stands for lumber and veneer production. Working forests in rural areas contain valuable stands of hardwood timber, while trees and forest resources in the more urban portions of the County help to make them attractive places to live, work, and visit.

The County supports the incorporation of existing tree cover into required buffers as well as the control and removal of invasive species. The use of existing vegetation to meet screening and landscape buffer requirements is preferred over the removal and planting of new vegetation. Action steps call for the submittal of a Tree Cover Inventory as part of development applications.
to evaluate existing tree cover and identify areas worthy of preservation. Forest resources are also protected through AFDs, easements, and other voluntary means, as well as through the implementation of the MDOD, LOD, and Steep Slope standards in the Zoning Ordinance.

**Historic and Archaeological Resources**

The cultural heritage of the County is reflected in its remaining rural landscapes, scenic road networks, historic structures, and archaeological sites. Identification, preservation, conservation, and sensitive reuse of these resources is critical for the retention of the County’s distinctive character. Where these resources have not yet been identified or studied, public and private resource surveys are increasingly important to inventorying and preserving them. Most of these elements will remain in private ownership and can be preserved through private stewardship, protective buffers, donation of open space easements, County historic district zoning standards, and context-sensitive site design. A number of incentive-based programs can also be used, including state and federal tax credit programs.

Since 1972, Loudoun County has helped protect its unique historic assets through the designation of local historic districts. There are six County-administered Historic and Cultural Conservation Districts (Aldie, Bluemont, Goose Creek, Oatlands, Taylorstown, and Waterford) and two County-administered Historic Site Districts (Welbourne and the Broad Run Toll House properties). The County has also designated a Historic Roadways District, the Beaverdam Historic Roadways District, which comprises a network of 32 rural roads (See Historic Districts Map). In addition, the incorporated towns of Leesburg, Middleburg, and Purcellville administer local historic districts through their zoning ordinances. There are also five National Historic Landmarks in the County, including Balls Bluff Battlefield, Dodona Manor, Oatlands Plantation, Oak Hill, and Waterford. Resource surveys have identified nearly 7,000 individual historic structures and archaeological sites in the County to date. The County has 88 sites listed in the National Register of Historic Places. The County last conducted a comprehensive architectural resource survey in 2004;
however, an analysis of the number of heritage resources that may have been impacted or lost in the interim has not been conducted. The County’s inventory of heritage resources is constantly expanding as property owners, developers, and preservation organizations document and record new resources.

Most of the County-initiated comprehensive survey work was completed in the early 2000s, such as the Post-Civil War Structure Survey (2003) and an African-American Historic Architectural Resources Survey (2004). The County also conducted surveys in 2016 for the Ball’s Bluff Battlefield Expansion Project and a Rural Schools Survey. The County and state database of surveyed resources is largely augmented through the Phase 1 archaeological and historic resources surveys that are required with legislative and preliminary subdivision applications, as well as private property owners requesting listing in the National Register of Historic Places.

There is a difference: local, state, and national historic designation

- National Historic Landmark (NHL) (5 in Loudoun County) – Honorary – deemed significant to all Americans because of their exceptional values or qualities, which help illustrate or interpret the heritage of the U.S. If a property is named a NHL, it is also listed on the National Register of Historic Places (NRHP) and the Virginia Landmarks Register (VLR).
- National Register of Historic Places (76 County historic districts and individual properties within Loudoun County) – Honorary – includes buildings, structures, sites, objects, and districts significant in American history, architecture, archaeology, engineering, and culture.
- Virginia Landmarks Register (2 in Loudoun County) – Honorary – eligible for but not automatically listed in the National Register if a majority of property owners submit notarized objections to the VDHR.
- Local Historic Designation (6 local historic districts, 2 individual historic properties, and 1 historic roadway district) – Regulatory – the only designation regulated by the County or incorporated Towns through zoning overlays. Does not regulate routine repairs and maintenance.

The Board adopted the Heritage Preservation Plan (HPP) in 2003 and a subsequent amendment to the HPP in 2009. The Board created the Heritage Commission (HC) in 2011 to implement many of the recommendations in the HPP. The HC brings a range of public and private sector experience and expertise to heritage issues. Since the adoption of the HPP in 2003, the County has recognized the need to focus attention on heritage resources associated with historically marginalized communities in the County. Because African American communities and Native American communities are not well represented in the historic written record, the County recognizes the importance of archaeological resources, oral histories, historic settlements, cemeteries, burial grounds, and places of worship to understand, preserve, and interpret the lives and contributions of these Loudoun residents (See African American Historic Communities Map). Development applications will be evaluated using both the HPP and this Plan.
Cultural Landscapes

Cultural landscapes include heritage areas and corridors, scenic byways and waterways, battlefields, and historic cemeteries. There are several roadways within the County that are designated as Virginia Byways. Goose Creek and a portion of Catoctin Creek are designated as State Scenic Rivers. In 2002 the County established the Beaverdam Creek Historic Roadways District to protect a cultural landscape that has changed little since Loudoun County’s formation in 1757.

A nationally recognized heritage area, The Journey Through Hallowed Ground, as well as a state-designated heritage area, the Mosby Heritage Area, fall within the boundaries of Loudoun County. The Journey Through Hallowed Ground follows Route 15/29 from Gettysburg in Pennsylvania (a designated National Byway), through Loudoun County, to Monticello near Charlottesville, Virginia. In 2008, the Board passed a resolution in support of the Heritage Area, and the County is a partner with The Journey Through Hallowed Ground project. The Mosby Heritage Area, formed in 1995, represents the cultural landscape and landmarks of three centuries of our nation’s history. The Mosby Heritage Area encompasses parts of five counties, including all of Loudoun County.

Plant and Wildlife Habitats

Plants and animals play an important role in nature’s lifecycle and its ecosystems. For wildlife habitats, large contiguous parcels of natural open space are preferable to more numerous but disconnected and smaller areas. The creation of a larger network helps ensure the viability of the habitat.
While many high-quality plant and animal habitats have already been lost or altered due to land development, the County still has several unique and natural habitat areas. The largest contiguous areas of forest and naturally vegetated land are on mountainsides, steep slopes, and along stream channels. These areas play a key role in preserving the abundance and diversity of the County’s remaining plant and wildlife resources. The integrated approach to preserving natural and heritage resources is intended to help prevent habitat fragmentation, while enhancing ecological connections with larger areas.

The County strives to protect, preserve, and create large-scale plant and wildlife habitats that overlap with other important resources and resource systems. The County will also protect rare, threatened, and endangered plant and animal species habitats in accordance with the Federal Endangered Species Act. Action steps call for legislative development applications that have the likelihood of one or more natural heritage resources to conduct a species assessment and develop a plan for impact avoidance in cases where the presence of the species is identified.

**Complementary Elements**

Complementary elements consist of elements that are not directly a part of the land-based environmental and heritage resources but complement them. They include air quality, aural environment and lighting, and the night sky.

**Air Quality**

In order to meet the federal goals of the Clean Air Act, the County offers an integrated land use approach that protects air quality by planning development in locations that are close to major transportation facilities and transit nodes, limiting gross densities in the Rural and Transition Policy Areas, and promoting and implementing alternative modes of transportation. Loudoun is included in the United States Environmental Protection Agency’s (EPA) Washington, D.C. nonattainment area for meeting national standards for air contaminants. The County has an active role on the Metropolitan Washington Air Quality Committee (MWAQC) and the National Capital Region Transportation Planning Board (TPB).
Aural Environment

Efforts to protect existing and future residents from increased levels of environmental noise have focused primarily on airport noise surrounding Washington Dulles International Airport (IAD) and Leesburg Executive Airport (see Airport Impact Overlay District Map). The Airport Noise Impact Overlay District imposes development restrictions within specified areas to protect existing and future residents as well as maintains the economic viability of these important transportation and economic development resources. Future Airport Noise Corridor studies could lead to updates to the noise contours surrounding IAD.

The County also has policies to protect noise-sensitive uses adjacent to major roadways, calling for appropriate noise mitigation measures to be incorporated into the overall project design when Noise Abatement Criteria (NAC) Hourly A-Weighted Sound Levels are approached or exceeded.

Lighting and the Night Sky

The County’s night sky is an asset that should be protected from excessive and improper lighting. The County recognizes the need for artificial lighting for the purposes of public safety and visibility, but such lighting should be designed and programmed to minimize light pollution. Action steps call for updating lighting standards that promote quality and energy-efficient lighting, preserve the natural beauty of the night sky, and minimize impacts on people, plants, and wildlife.

Sustainability

Sustainability seeks to achieve economic development, social equity, and environmental protection in a balanced manner. Sustainability is commonly defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Over the last several decades, Loudoun County has integrated sustainability into the community fabric to foster a high quality of life. The County will continue its leadership and infuse a sense of responsibility among all sectors of the community to take a more active role in sustainability.

Sustainable development calls for practices that are cost-effective, enhance human health and well-being, and protect and restore the environment. The County has developed and implemented the following programs and plans that demonstrate a commitment to a more sustainable community:

- **Clean Waters Initiative**, which hosts educational and partner projects, from floating wetlands, to native tree planting, to rain gardens, to pasture and crop management, to stream protection.
- **The Loudoun County Energy Efficiency and Conservation Program**, which provides leadership, guidance, education, and technical expertise to reduce energy consumption, improve energy efficiency, reduce energy costs, and facilitate energy conservation in County facilities.
- **Energy Strategy 2009**, a 30-year road map of energy strategies for the Loudoun County government and community.
• **Environmental Policy**, which provides outreach and guidance regarding pollution reductions set by the Total Maximum Daily Load (TMDL), which was established by the EPA for the Chesapeake Bay. Monitors environmental legislation and regulatory activity that may have an impact on Loudoun County operations and residents, including federal legislation such as the EPA’s Chesapeake Bay TMDL.

• **Stormwater Management Program**, which addresses the design, development, improvement, operation, inspection, maintenance, and oversight of the stormwater management system.

• **Water and Wastewater Program, established through Water and Wastewater Needs Assessment Implementation Plan**, is a program that recognizes the need for a detailed, systematic approach to solve existing and potential future water and wastewater problems in the county, including assistance and support for communities experiencing issues with deficient or absent water and/or wastewater systems.

The County monitors inefficient energy sources at government facilities and eventually shifts to an alternative source of energy. As an example, Loudoun County converted Purcellville Library’s oil HVAC system to electric and propane.

Energy use is the major human cause of greenhouse gases. The electricity sector is currently the largest emitter of greenhouse gases, followed by the transportation sector; industry, commercial, and residential fuel use; and agriculture. In 2007, the County Energy Strategy (CES) concluded that if Loudoun County remained on a business-as-usual track with its countywide growth – while accounting for some expected improvements in the efficiency of both existing structures and new construction – then by 2040 the County would require 46 percent more energy to manage the expected growth. Over the same period, total greenhouse gas emissions would increase by 50 percent.

The County enforces the 2012 International Energy Conservation Code (IECC), the most current model code establishing the minimum design and construction requirements for energy efficiency. County policies have a goal of constructing County facilities to Leadership in Energy and Environmental Design (LEED) Silver, or equivalent standards, where it makes sense to do so. Green building rating systems provide a consistent metric for measuring site development and building performance. Also, rating systems raise awareness of the environmental impacts of site development and buildings and help determine measures to minimize those impacts.

Loudoun County is a member of the Metropolitan Washington Council of Governments (MWCOG). MWCOG focuses on the following environmental planning areas: water resources, air quality, climate and energy, recycling and solid waste, and agriculture and forestry. Loudoun County assists in advancing the goals laid out in MWCOG’s Region Forward for clean water, air, and land, and a more sustainable region.

The County is committed to policies, strategies, and actions that protect natural and heritage resources and integrate the concepts of sustainability into greater community planning and development goals. As the County continues to grow, so will the opportunities and challenges related to preservation and conservation of natural and heritage resources. A proactive approach
to water quality could help to avoid costly and time-consuming processes to restore water quality as part of TMDL Action Plans. Through watershed management plans, the County has the opportunity to identify areas where management practices will most effectively enhance water quality. The County also has the opportunity to document efforts to promote sustainability, environmental stewardship, and protect the environment. The County should continue to support and build upon work that has already begun and consider the development of a sustainability plan or an annual report highlighting work that is being done. The Board can use this report to identify future goals. Essential to the preservation of heritage resources and cultural landscapes is proactive survey and evaluation of these resources as provided in the HPP. The following Policies, Strategies, and Actions reflect these concepts and more, balancing the environmental, social, and economic factors that will shape the County for future generations.

**Policies, Strategies, and Actions**

Unless otherwise specified, the following Policies, Strategies, and Actions apply Countywide.

**Natural and Heritage Resources**

*(See also Chapter 6, Fiscal Management and Public Infrastructure)*

**NHR Policy 1: Provide protection for natural and heritage resources.**

**Strategy**

1.1. Support mechanisms to further the goals of conservation, preservation, restoration, recapture, and education to protect the health, safety, and welfare of Loudoun residents.

**Actions**

A. Maintain a map of natural and heritage resources as part of an integrated system and contiguous network of natural and passive open spaces and active recreational sites.

B. Identify those properties that are not conducive to development due to sensitive environmental, cultural, and historical characteristics, and promote their preservation through various public and private programs (such as the Open Space Preservation Program, conservation easements, etc.).

C. Adopt zoning regulations and development standards that implement a conservation design or similar process applicable to land development.
D. Update the *Facilities Standards Manual*, the *Land Subdivision and Development Ordinance*, and other development standards to implement the natural and heritage policies in this Plan.

E. Use the conservation design process, Use Value Assessment Program, AFDs, public-private partnerships, and other regulatory and incentive-based efforts for the preservation, conservation, restoration, and management of the County’s natural and heritage resources. Explore and implement additional incentive-based approaches.

F. Retain conservation easements as a tool to protect open space areas in subdivisions and to ensure long-term maintenance and protection of the area. Such easements will be recorded as part of the subdivision process and include public access where appropriate.

G. Direct public investment and resources toward completing a natural and heritage resource network and recapturing natural and heritage resources in developed areas.

H. Require development proposals that impact one or more natural and heritage resources to offset impacts by enhancing and/or recapturing natural and heritage resources elsewhere onsite.

I. Require development proposals to create links to adjacent natural and heritage resources to create an integrated network and prevent habitat fragmentation.

**Strategy**

1.2. Promote private, state, and federal conservation programs and their allocated resources to advance conservation programs within the County through public and private means such as grants, voluntary easements, and dedications.

**Action**

A. Study and, if feasible, aid in the establishment of a public-private conservation foundation to facilitate communication, grants, easements, education, and partnership opportunities to conserve and protect natural and heritage resources.
Strategy

1.3. Act as a leader and educator in environmental design to achieve and sustain a high-quality built environment.

Action

A. Provide incentives for innovative design and support collaborative public-private-community partnerships for program implementation including provisions for awards of certificates of excellence in environmental design for the public and private sectors.

Strategy

1.4 Link natural and heritage resources to create opportunities for open space corridors for the enjoyment of current and future generations.

Action

A. Encourage protection of the following priority open space areas through conservation easements acquired by the County or others, participation in the Open Space Preservation Program, development design, and other means:

   i. Key green infrastructure features not already protected from development by conservation easements or regulation,
   ii. Rural areas immediately adjacent to the Towns, JLMAs, and Rural Villages that help form greenbelts and gateway buffers,
   iii. Areas adjacent to the Potomac, Catoctin, Bull Run, Goose Creek, and Broad Run floodplains to protect water quality,
   iv. Properties on the State or National Registers of Historic Places and within local historic districts,
   v. Corridors and sites identified for trails and parks and additions to existing parks provided they permit the construction of such facilities, and
   vi. Other areas of local natural, historic, or cultural significance including designated scenic rivers and roads.

River and Stream Corridor Resources

RSCR Policy 2: The County will protect natural ecosystems, restore water quality, serve Loudoun’s population, and support the built environment through healthy surface and groundwater resources.

Strategy

2.1. Establish and maintain a healthy river and stream corridor ecosystem that meets desired water quality standards, protecting from the damages of soil erosion and flooding while promoting biological diversity.
Actions

A. Amend zoning regulations and development standards, including but not limited to the Floodplain Overlay District (FOD) and Scenic Creek Valley Buffer sections, to address the objectives of the RSCR policies. Zoning regulations and development standards will establish performance standards and best management practice (BMP) requirements to ensure the health and biological integrity of the river and stream corridors and minimize adverse impacts.

B. Develop and implement a watershed management plan for each watershed, establishing development guidelines and performance standards to protect water quality. The County will follow the recommendations of the 2008 Comprehensive Watershed Management Plan.

C. Establish appropriate regulations for Catoctin Mountain, Short Hill Mountain, and the Blue Ridge Mountains to limit diversions of water from the Catoctin and Goose Creek headwaters and prevent stream pollution.

D. Maintain a working relationship with the Federal Insurance and Mitigation Administration of the Federal Emergency Management Agency (FEMA) for continued participation in the National Flood Insurance Program (NFIP). The County will also maintain its current status as a Cooperating Technical Partner in FEMA’s Flood Map Modernization program.

E. Work with the incorporated towns and Loudoun Water to establish overall water quality goals and specific standards for individual streams and river and stream corridors, consistent with County RSCR objectives and policies.

F. Coordinate with the Metropolitan Washington Airport Authority regarding water quality protection within the Broad Run watershed.

G. Promote and encourage community programs, such as the “Adopt-A-Stream” program, in order to keep river and stream corridors free of litter and debris and as a means of promoting public awareness of the County’s river and stream corridors.

H. Support the interstate 2014 Chesapeake Bay Watershed Agreement, a watershed partnership signed by the governors of Virginia, Maryland, West Virginia, Delaware, New York, and Pennsylvania, as well as the District of Columbia and the United States EPA. The County supports Virginia’s action towards meeting the Chesapeake Bay TMDL and WIP.

I. Support the mitigation of stream and wetland impacts and the creation of stream and wetland mitigation banks within Loudoun County to improve water quality in Loudoun.

J. Maintain the County’s Predictive Wetland Model and require submittal of digital wetland delineations in conjunction with land development applications in order to
develop a reliable wetlands inventory and map of wetland areas.

**Strategy**

2.2. Establish River and Stream Corridor Resource (RSCR) buffers to promote river and stream health (streambank/streambed stability, temperature moderation, nutrient removal, sediment removal, flood control, and aquatic food and habitat).

**Actions**

A. Amend zoning regulations and development standards to establish a minimum 100-foot stream buffer to protect rivers and streams when floodplains and adjacent steep slopes do not extend beyond either bank by 100 feet.

B. Amend zoning regulations and development standards to establish a 50-foot management buffer as part of the RSCR surrounding floodplains and adjacent steep slopes. Specific criteria for allowable reductions in the 50-foot management buffer should be included to ensure that reductions do not adversely impact the other elements of the RSCR. The RSCR 50-foot management buffer will not be added to the 100-foot minimum stream buffer.

**Examples of measures to help mitigate a reduction in the 50-foot management buffer:**

- Reforestation of open areas adjacent to the stream and floodplain;
- Increasing Tree Conservation Areas adjacent to the floodplain (especially when the floodplain is narrow);
- Buffering streams and wetlands outside of the RSCR;
- Enhanced stormwater and erosion and sediment control measures.
C. Develop and use incentives to encourage property-owners to establish and maintain a 100-foot minimum riparian stream buffer.

**Permitted Uses in the RSCR**

Permitted uses within the RSCR are intended to support or enhance the biological integrity and health of the river and stream corridor. These uses are intended to have minimal adverse effects on natural and heritage resources. Development of such uses requires mitigating impacts while complementing the hydrologic processes of the river and stream corridors including flood protection and water quality. New uses should be limited to:

a. Road crossings, rail crossings, bridges, and drive-way crossings
b. Public water and sewer
c. Local and regional stormwater management facilities within the minor floodplain river and stream corridor resource only (subject to BMP requirements)
d. Public lakes and ponds (subject to BMP requirements)
e. Public water supply reservoirs
f. Historic and archaeological sites
g. Paths and trails – including footpaths, biking or hiking paths, and horse trails (of a permeable material only)
h. Passive recreation – limited to hiking, biking, horseback riding, picnicking, camping, climbing, hunting, fishing, and wildlife viewing
i. Active recreation within the minor floodplain river and stream corridor resource only
j. Agricultural activities, but not structures – including crop planting and harvesting and grazing (subject to appropriate BMP requirements)
k. Silviculture – as required to care for forests and not commercial forestry (limited to forest preservation and tree planting, limited tree clearing and clearing of invasive species, tree trimming and pruning, and removal of individual trees (subject to appropriate BMP practice requirements)
l. Planting native vegetation (subject to appropriate BMP requirements)
m. Conservation – including stream restoration projects, wetland mitigation banks, facilities and activities; Adopt-A-Stream programs; scientific, nature, and archaeological studies; and educational programs
n. Raised boardwalks

**Strategy**

2.3 Protect and improve stream quality and watershed health by decreasing the amount of stormwater runoff and pollutants from reaching local waters.

**Actions**

A. Develop appropriate standards and regulations to protect natural streams from the harmful effects of increased stormwater volume, velocity, and pollutant loads resulting from development.

B. Encourage stormwater BMPs on-site or as close to the area being treated as possible to prevent increased nutrient and sediment runoff.
C. Establish incentives and/or a funding program for reforestation, SWM/BMP projects, and SWM/BMP retrofits.

D. Support the retrofiling of older stormwater systems and the rehabilitation of degraded areas to enhance pollution removal capabilities and create open space amenities.

E. Promote the use of low-impact development to replicate natural hydrologic patterns and alleviate the strain on centralized systems.

F. Support and incentivize reforestation for degraded forested areas in upper stream reaches that do not include Major Floodplain and promote natural regeneration within the limits of the Major Floodplain to mitigate the loss of native canopy coverage as a result of construction.

G. Maintain standards for activities that propose pollution sources such as the storing and dispensing of fossil fuels, chemical storage, and sale or transfer of potential contaminants.

Strategy

2.4. Protect and enhance impaired streams and their tributaries to improve water quality and provide ecological benefits while also providing opportunities for passive recreation.

Actions

A. Encourage the implementation of enhanced pollutant control measures and watershed management strategies such as: downspout disconnection; tree planting/reforestation, especially within riparian areas; storm drain marking; stream restoration; wetland creation; adding BMPs; enhanced stormwater management ponds; enhanced pollution/erosion control measures; coordination and outreach with the Virginia Department of Transportation (VDOT) and owners associations on use of sand and anti-ice materials in snow removal/road clearing operations; and stormwater pond water quality enhancements.

B. Actively participate in regional water quality initiatives to protect and improve water quality.

C. Comply with the Virginia General Permit for stormwater discharges from small Municipal Separate Storm Sewer Systems (MS4 General Permit).

D. Prepare and implement TMDL Action Plans, as necessary to meet TMDL requirements. The Action Plans, designed to improve the County’s surface water quality may include working with other entities, such as the Loudoun Soil and Water Conservation District (LSWCD) and Virginia Cooperative Extension-Loudoun (VCE-Loudoun).

E. Collaborate with the Department of Environmental Quality on any pollution impairment issues within streams and support volunteer water quality monitoring
efforts and coordination of these efforts with federal, state, and local water quality data collection.

Surface Water Resources

Strategy

2.5. Protect rivers and public drinking water reservoirs to ensure a clean, safe, and adequate supply of drinking water.

Actions

A. Protect public water supply reservoirs, Scenic Rivers, the Potomac River, and the Bull Run by establishing a 300-foot no-build buffer or the other elements of the RSCR buffer, whichever is greater. Areas outside of the no-build buffer are priority open space areas for the creation of a greenbelt. The greenbelt could be created through various mechanisms such as land donations, conservation easements, and other land conservation mechanisms.

B. Protect lands that are critical to the quality of key water supplies through easement, fee simple acquisition, regulatory measures, or other sufficient measures. Restore filtration and erosion control functions through the re-naturalization of these areas.

C. Develop and implement a watershed overlay district for all public water supply reservoir watersheds, establishing more stringent development guidelines and performance standards to protect water quality.

D. Develop and implement a Potomac River shoreline management plan and seek to coordinate this effort with adjacent jurisdictions (local, state, and regional organizations, advisory boards, and citizen groups). This Plan should include:
   i. The boundaries of the study area,
   ii. A comprehensive natural resources inventory,
   iii. Existing and proposed private/public water access entry points,
   iv. Policy recommendations for river corridor management and protection,
   v. A process for integrating the participating groups, and
   vi. A plan for acquiring and managing open space corridors along the Potomac River.

E. Establish appropriate standards and land uses in consultation with Loudoun Water and/or incorporated towns to protect drinking water supplies.

F. Develop a community-based Source Water Protection Plan in cooperation with Loudoun Water.
Groundwater Resources

Strategy

2.6. Preserve and protect groundwater quantity and quality.

Actions

A. Develop and implement a comprehensive groundwater protection strategy to ensure adequate and sustainable water supply.

B. Initiate and maintain a comprehensive pollution management program to protect groundwater resources.

C. Local wellhead protection plans will be taken into consideration during review of development applications to maintain drinking water quality and protect groundwater from contamination.

D. Limit the installation of additional wells and limit the number of additional households and irrigation systems that are dependent on wells through water conservation efforts and through the use of communal and/or central water systems where feasible and as approved by Loudoun Water.

E. Ensure the location, depth, and rate of extraction of individual wells do not impact the quality and quantity of municipal wells.

F. Assess the recharge and consumption rates for groundwater in each watershed by analyzing data from groundwater level monitoring and stream flow measurements. If negative impacts are detected, the information will be presented to the Board of Supervisors for appropriate action.

G. Develop standards for uses that consume and/or require the usage of large quantities of water in those areas that could affect neighboring wells and aquifers.

H. Provide education to school children and homeowners on the use and consumption of groundwater for areas of the County that are not connected to the central water supply.

Additional Notes:

- The RSCR performance standards, BMP requirements, and list of permitted uses will apply to the no-build and transitional buffer, except adjacent to existing or planned drinking water reservoirs where stormwater management facilities are not permitted.
- The limits of the 300-foot no-build buffer for reservoirs is based on their projected high water mark where expansion is proposed.
Soils and Geologic Resources

SGR Policy 3: Preserve and protect the County’s soils, unique geologic characteristics, farmland, steep slopes, mountainsides, and ridgelines recognizing their sensitivity to land disturbance and development as well as their contribution to healthy ecosystems and the quality of life valued by residents and visitors.

Limestone Geology Areas

Strategy

3.1. Protect limestone geology areas susceptible to sinkholes, cavity collapse, ground slippage, pollution, and other hazards.

Actions

A. Maintain performance standards for lands within areas underlain by limestone — including minimum setback distances from Karst features (e.g., sinkholes and rock outcrops) — to ensure structural stability and prevent adverse impacts to environmental and public health.

B. Limit density and intensity of development within areas underlain by limestone, especially on sites proximate to identified Karst features.

C. Require communal water and wastewater systems built to Loudoun Water standards for new development in areas underlain by limestone.

D. Encourage and support potable water supplies in any portions of the limestone overlay district and/or where subsurface karst geology exists to install treatment technology that treats groundwater to a surface water level of treatment standard, following Loudoun Water’s Engineering Standards Manual, as a condition of approval.

E. Identify pollution sources and establish appropriate standards for reducing pollution in areas underlain by limestone.

Prime Agricultural Soils

Strategy

3.2. Preserve and protect prime farmland and agricultural soils, recognizing their importance to the overall economic health of the rural economy.

Action

A. Develop a public education program that will focus on communicating advantages associated with private protection of Prime Agricultural Soils.

B. Encourage the retention and conservation of prime agricultural soils within open space areas.
Steep Slopes, Moderately Steep Slopes and Mountainside Areas

Strategy

3.3. Protect steep slopes, ridgelines, and mountainside areas against destabilization, erosion, building and/or road failure, downstream flooding, and other hazards and to maintain the scenic and rural nature of these areas.

Actions

A. Manage development in mountainside areas using performance standards and regulations to minimize negative environmental impacts; minimize land disturbance; protect the ridgelines; maintain woodlands, plant, and wildlife habitats; and preserve natural features and rural character as requirements for approval of the location of proposed development.

B. Prohibit land disturbance on naturally occurring very steep slopes, with limited exceptions such as access easements to existing lots where no other access is possible. Agricultural or silvicultural activities, excluding structures, may be allowed provided that a County approved Farm Management Plan or Forest Management Plan, whichever is applicable, is implemented. Apply performance standards to protect soils, vegetation, and other environmental features when roads are permitted or allowed by special exception.

C. Apply performance standards to protect moderately steep slopes to include BMPs and locational clearances for clearing and grading. Develop incentives to locate development outside of moderately steep areas.

D. Preserve forests and native vegetation on very steep slopes. Limit clearing to only essential clearing that is necessary for home construction, road construction, and utility installation on moderately steep slopes.

E. Protect ridgelines through updates to the Mountainside Development Overlay District or the development of a Ridgeline Protection Overlay District.

F. Require special exception approval for the subdivision of properties into three or more lots in Sensitive and Highly Sensitive Mountainside Areas.

G. Seek the expansion of passive outdoor recreational opportunities in mountainside areas, including the development of public park sites and improving access to existing recreational facilities such as the Appalachian Trail.

H. Review and amend zoning regulations and development standards to ensure consistency with the objectives of the mountainside area policies.
I. Establish performance standards for unavoidable development on questionable soils as defined by the International Building Code.

Forests, Trees, and Vegetation

FTV Policy 4: Preserve, protect, and manage Loudoun County’s forests and trees for current and future use and enjoyment, recognizing these resources provide many benefits, such as improving air and water quality; offering important habitat for birds, small mammals and other wildlife; providing buffers between communities; conserving energy; reducing wind speed and redirecting airflow; and reducing stormwater runoff and soil erosion.

Strategy

4.1. Preserve, protect, and manage forest resources for their economic and environmental benefits.

Actions

A. Require applicants to submit a Tree Cover Inventory as part of all development applications and, where applicable, require applicants to submit a Tree Conservation Plan for designated Tree Conservation Areas; such Tree Conservation Plan should demonstrate a management strategy that ensures the long-term sustainability of these designated areas and address the removal and monitoring of invasive woody vegetation and insects.

B. Incentivize and encourage the preservation of existing trees within required landscape buffer areas and for screening of uses.

C. Require the removal of invasive plant species during the development process.

D. Develop and adopt a Tree Preservation Ordinance.

E. Inventory and map trees and native vegetative resources to be preserved or managed in accordance with County standards and create and maintain a database of these resources to include, but not be limited to, old growth forests, significant tree stands, specimen trees, heritage trees, and State or National Champion trees.

F. Participate in community tree projects such as the Arbor Day Foundation’s Tree City USA Program.

Strategy

4.2. Promote tree planting and preservation to reduce the heat island effect, manage stormwater run-off, and improve water quality, air quality, and wildlife habitat.

Actions

A. Prioritize the planting of native vegetation, specifically along those corridors that
provide connections to other natural and heritage resources.

B. Develop Countywide goals and objectives for the creation, maintenance, and preservation of the County’s tree canopy.

**Historic, Archaeologic, and Scenic Resources**

HASR Policy 5: Loudoun County’s distinctive cultural landscapes encompass scenic and heritage resources, including Scenic Rivers and Byways, historic buildings, archaeological sites, battlefields, and historic cemeteries. These resources are foundational elements of the County’s changing landscape that together tell the story of the formation and settlement of the County. The County will protect and enhance these resources, recognizing them as relevant, character-defining elements of both the natural and built environments.

**Strategy**

5.1. Preserve cultural and scenic character through conservation and preservation of designated heritage areas, battlefields, cemeteries, scenic corridors, Scenic Rivers, the Potomac River, significant geological features, archaeological sites, historic structures and their settings. Convey the benefit of these resources to the public through public education in collaboration with private landowners and preservation organizations.

**Actions**

A. Evaluate land development applications within the context of this Plan as well as those more specific policies contained in the Heritage Preservation Plan.

B. Evaluate the *Heritage Preservation Plan* every five years and update if necessary.

C. Require an archaeological and historic resources survey for all development applications. This survey must include a plan for recordation of identified resources and measures for preservation, mitigation, and adaptive reuse. The County will maintain a repository for artifacts recovered from required surveys; such artifacts will be used for research and public education purposes.

D. The County will update its cultural resource inventory through the land development process and County-sponsored historic surveys.

E. Evaluate the historic or archaeological value of inventoried resources based on criteria set forth in the Secretary of the Interior’s Standards, which include historic context and site integrity. The County will evaluate resources for consideration for state and National Registers. Identify, through survey and community outreach, locally important historic and archaeological resources that meet criteria for listing on the County Heritage Register as outlined in the Heritage Preservation Plan.

F. Identify, delineate, and map historic cemeteries, burial grounds, and graves to ensure
they are protected from destruction or neglect. Ensure that adequate buffers are provided around these sites to protect them during the development process.

G. Identify African American and Native American cultural resources to fill voids in the County’s database of heritage resources and create policies and programs that protect, preserve, and interpret these resources for the benefit of County residents.

H. Maintain the County’s database by using the inventory of cultural resources as a dynamic body of data to be reevaluated as needed.

I. Conduct a staff assessment to determine historic significance prior to issuing a demolition permit for a structure that is 50 years old or older.

J. Work with local communities to protect and enhance the character of cultural landscapes and historically significant sites through the designation of County Historic and Cultural Conservation Districts.

K. Preserve and protect significant cultural and scenic resources from development impacts by promoting private or public acquisition and/or conservation easements.

L. Where consistent with the applicable provisions of the Virginia Code Section 15.2-2303, applicants may provide cash contributions to the County for the enhancement and/or improvement of historic features within Loudoun to fulfill the open space guidelines if the historic feature is in the same planning subarea identified in the latest Capital Needs Assessment and the County agrees to or requests the exchange.

M. Prioritize the adaptive reuse of historic structures that are of local, regional, or national significance as the primary method of preserving the County’s diverse collection of historic architecture within the framework of sustainable development.

N. Amend zoning regulations and development standards to ensure the viability of adaptive reuse, particularly in the County’s villages where the ability to reuse historic structures is vital to the historic character and vitality of these communities.

O. Prepare and implement corridor management plans, including identifying and defining viewsheds for the County’s Scenic Rivers to protect their natural and scenic quality.

P. The County does not permit diversion of Scenic Rivers under any circumstances.
Natural Heritage Resources

NHR Policy 6: Preserve, protect, and create a network of privately and publicly protected open space, favoring large contiguous areas rather than smaller disconnected areas, maintaining green infrastructure assets, preventing habitat fragmentation, and reinforcing the unique character of the diverse communities in the County.

Strategy

6.1. Conserve and protect natural heritage resources including rare, threatened, and endangered plant and animal species; species of greatest concern; exemplary natural communities, habitats, and ecosystems; and other natural features of the County.

Actions

A. Utilize open space requirements, passive recreation, nature preserves, incentives, and regulations to protect areas of natural biodiversity and rare, threatened, and endangered plant and animal species, and plant communities to foster the implementation of the Federal Endangered Species Act and the Virginia Wildlife Action Plan.

B. Development applications will identify Loudoun County’s natural heritage resources through coordination with the Virginia Department of Conservation and Recreation (VDCR) – Division of Natural Heritage and the Virginia Department of Game and Inland Fisheries (VDGIF). For those development applications that have a likely presence of one or more natural heritage resource, the County will require the applicant to conduct a species assessment. In cases where the presence of the species is identified, the County will require the applicant to develop and submit a plan for impact avoidance.

C. Ensure that the study of natural heritage resources is conducted by qualified research organizations such as the VDCR and VDGIF, and develop implementation strategies for the preservation of identified natural heritage resources.

Wildlife Habitats

Strategy

6.2. Conserve and protect wildlife habitats, wildlife travel corridors, and access to streams and water sources through the preservation of natural resources such as native vegetation, forest cover, woodlands, floodplains, streams and stream corridors, wetlands, and undeveloped areas associated with steep slopes.

Actions

A. Require development proposals to create links to adjacent open space and natural resources to help prevent habitat fragmentation and foster biodiversity.
B. Identify essential wildlife corridors and encourage protection of these areas through conservation easements acquired by the County or others, participation in the Open Space Preservation Program, development design, and other means.

C. Ensure that new development, redevelopment, and infill development incorporates existing native vegetation and plantings of native vegetation into the landscape design.

D. Encourage the preservation and plantings of native vegetation to protect pollinators, migrant birds, and other wildlife.

E. Promote and support the establishment of public and private nature preserves throughout the County as part of the protection and enjoyment of natural and heritage resources.

Complementary Elements

CE Policy 7: The County promotes healthy air and low levels of noise and light pollution as essential elements for current and future residents.

Strategy

7.1. Preserve and protect air quality.

Actions

A. Comply with the requirements of the Federal Clean Air Act Amendments of 1990 through support of the State Implementation Plan (SIP).

B. Evaluate methods to reduce emissions of airborne pollutants including particulates, greenhouse gases, ozone precursors, and other gases known to adversely affect human and environmental health.

Strategy

7.2. Protect noise sensitive uses.

Actions

A. Continue to support the Washington Dulles International and Leesburg Executive Airports by continued and complete prohibition of new residential and other noise sensitive land uses from the areas located within the Ldn 65 and higher aircraft noise contours for both airports and by requiring non-noise sensitive land uses within these noise impact areas.

The Airport Noise Impact Area (ANIA) consists of three (3) components or aircraft noise contours:

(i) Within the Ldn 65 or higher
(ii) Between the Ldn 60-65
(iii) Outside of but within one mile of the Ldn 60
B. Continue to work with the Metropolitan Washington Airports Authority to understand and minimize the effects of airport operations and routes on existing noise sensitive areas within the 60 to 65 Ldn noise contour at Washington Dulles International Airport and minimize residential and noise sensitive development in noise sensitive areas.

C. Prohibit residential encroachment into the existing areas designated as within the Ldn 65 or higher aircraft noise contours to ensure that residential development will not create pressure for reductions in the intensity of service or prohibit the expansion of service at the airport.

D. Continue to enforce and update with the most current information, as appropriate, the Airport Noise Impact Overlay District included as part of the Loudoun County Zoning Ordinance.

E. Require roadway noise studies for residential, institutional, or other noise sensitive uses adjacent to existing or proposed arterial and major collector roads to ensure that forecasted noise levels fall within acceptable levels, or can be abated to meet County standards (See also Loudoun 2040 Countywide Transportation Plan, Chapter 8, Environmental and Heritage Resources).

Strategy

7.3. Prevent light pollution.

Actions

A. Update lighting standards to achieve the following:
   i. Promote the use of lighting for convenience and safety without the nuisance associated with light pollution;
   ii. Promote a glare-free environment through proper lighting performance standards to improve visibility and enhance public safety;
   iii. Promote appropriate lighting standards to conserve energy;
   iv. Develop appropriate lighting standards to prohibit unnecessary and intrusive light trespass that detracts from the beauty and view of the night sky; and
   v. Promote Dark Sky standards to prevent light pollution.

Sustainability

SUS Policy 8: Encourage sustainability efforts throughout the County.

Strategy

8.1. Support sustainability practices within the Loudoun County Government.
Actions

A. Update and implement the County Energy Strategy (CES) due to unpredicted growth in population and high energy demand uses, technological changes allowing improved energy storage, changing renewable energy markets, and the impacts of climate change.

B. Continue to evaluate the energy demands of government buildings as well as transportation needs and develop plans for energy efficiency.

C. Encourage benchmarking the energy use of existing and planned County buildings to establish a baseline for energy demand estimates.

D. Use the data from benchmarking the energy use to influence policy and regulations in the County.

E. Whenever feasible, build County-constructed facilities to LEED Silver, or equivalent, standards.

F. Continue to evaluate all sustainability efforts and improve efforts as new options and technologies become available.

G. Continue to monitor and support all efforts with MWCOG.

H. Support Loudoun Water in the expansion of the reclaimed water network.

I. Incorporate green infrastructure and BMPs into County Energy Strategy.

J. Prioritize government purchase and use of goods and services that have reduced impacts to human and environmental health.

K. Prioritize the use of Loudoun farm products in government purchase of food.

L. Develop a Sustainability Plan for the County that provides the framework to achieve economic development, social development, and environmental development in a balanced manner.

Strategy

8.2. Support energy efficient practices for all in Loudoun County.

Actions

A. Evaluate the energy demands of residential and non-residential buildings, including data centers as well as transportation needs and develop plans for energy efficiency.

B. Research and support opportunities for micro-grid energy and district energy systems.

C. Encourage the use of Commercial Property Assessed Clean Energy (C-PACE) and
research and support residential PACE program.

D. Prioritize public investment in energy efficient, clean products and infrastructure.

**Strategy**

8.3. Support sustainable economic practices within Loudoun County to strengthen economic growth and innovation.

**Actions**

A. Create partnerships with universities and private sector companies to foster growth of a sustainable economy that supports workers and students in the advanced technology and science industries.

B. Promote the production and access to sustainable, healthy local food.

C. Support and expand community gardens throughout the County.

**SUS Policy 9:** Encourage sustainable development practices, including long-term water conservation, green building principles, sustainable site design, renewable energy, preservation and adaptive re-use of historic structures, and integrated energy management planning.

**Strategy**

9.1. Promote water conservation through innovative, cost-effective reuse systems, domestic water saving devices, and low impact development techniques, which integrate hydrologically functional designs with methods for preventing pollution and educational programs.

**Actions**

A. Educate and encourage the harvesting of rainwater for non-potable use, such as landscape irrigation.

B. Establish incentives for sustainable development.

**Strategy**

9.2. Promote the use of salvaged, recycled, or locally produced materials whenever possible.

**Strategy**

9.3. Evaluate the establishment of Eco-districts within the County.

**Strategy**

9.4. Promote green building standards and green building.
Strategy

9.5. Support renewable energy.

Actions

A. Adopt solar zoning and permitting best practices for accessory use solar development.

B. Become certified as a “solar-ready” community under the Department of Energy’s SolSmart program.

Reference Maps

- Natural Resources (Map #2018-141)
- River and Stream Corridor Resources (Map #2018-142)
- Watersheds (Map #2018-143)
- Historic Districts (Map #2018-144)
- Airport Impact Overlay District (Map #2018-145)
- African American Historic Communities (Map #2018-201)
- Impaired Streams (Map #2018-203)
- Limestone Overlay District (Map #2018-204)
Chapter 5 - Economic Development

Table of Contents

Vision.......................................................................................................................................... 2
Introduction .................................................................................................................................. 2
Background .................................................................................................................................. 3
Targeted Cluster Strategy ...................................................................................................... 4
Trends and Influences ............................................................................................................ 5
Local Opportunities and Challenges .................................................................................. 5
Workforce ............................................................................................................................... 6
Globalization ............................................................................................................................ 7
Digitization ............................................................................................................................... 7
Tourism ................................................................................................................................... 8
Demographics .......................................................................................................................... 8
Policies, Strategies, and Actions ............................................................................................. 9
Chapter 5 - Economic Development

Vision
A diverse and globally competitive Loudoun economy.

Introduction
Loudoun County has emerged as a leading hub of economic activity in the Washington, D.C. Metropolitan Area. Two major economic drivers have helped Loudoun’s economy grow exponentially – Washington Dulles International Airport and the world-class digital fiber network – and a third economic driver is on the horizon with the Silver Line Metrorail expansion to Ashburn.

Three Economic Growth Factors

Growth remains constant in technology sectors such as aerospace, cybersecurity, and data centers. The federal government continues to fuel employment for almost one-third of the County’s rapidly expanding population. Loudoun continues to have a strong agriculture-based business sector, in large part due to the growth of value-added agricultural products. Start-ups and corporations that span all of these burgeoning industries are thriving due to Loudoun’s location in the region, proximity to Washington Dulles International Airport, a highly-educated workforce, and a business-friendly government.

Loudoun’s sustained economic growth generates significant local tax revenue from businesses that supports quality schools, parks, public facilities, infrastructure, and low residential tax rates. These assets help create a high quality of life for the County’s residents, workers, and visitors. The list of accolades for Loudoun’s economy is long, however there are eight “number ones” that set the County apart from the rest of the region, nation, and the world:
Eight Ways Loudoun County, Virginia is No. 1

1. **Top U.S. Household Income**
2. **Healthiest County in Virginia**
3. **Safest County in Northern Virginia**
4. **Purchasing Power**
5. **Most Wineries and Breweries in Virginia**
6. **Most Horses, Wine Grapes and Bee Farms in Virginia**
7. **Top Business Investment for Counties of Its Size**
8. **Top Data Center Market in the World**

Sources: U.S. Census, WTOP, MWCOG, SmartAsset, USDA, Loudoun County

The median household income in Loudoun is more than double the state average, and ranks number one nationally for jurisdictions with a population of 65,000 or greater. Part of that can be attributed to having one of the most educated workforces in the country (almost 60 percent have at least a bachelor’s degree), as well as one of the lowest unemployment rates in the region.¹

Loudoun also leads the U.S. in investment for counties of its size.² Since the start of Fiscal Year 2014, Loudoun has announced more than 344 deals, representing approximately 13.5 billion dollars of commercial investment and 16,280 jobs created or retained.³

Much of this economic growth is fueled by the world’s largest and fastest-growing data center hub, which is a strong revenue source for the County’s General Fund; for every dollar in services Loudoun County provides for data centers, it receives back more than $9.50 in tax revenue. Major industry leaders such as Amazon, Verizon Business, Google, Facebook, and Salesforce rely on the connectivity in Loudoun County.

In addition to the tech infrastructure, Loudoun has expanding economic roots in agricultural business including almost 1,400 working farms. The quantity and quality of breweries, wineries, grapes, bees, and horses outpace all other jurisdictions in the state. This has helped Loudoun develop into a tourist destination, with an annual economic impact from domestic tourism of more than 1.7 billion dollars and approximately 17,000 tourism jobs.⁴

**Background**

In 2000, the Board of Supervisors adopted a guiding strategy for a sustainable economy in the County’s Revised General Plan. This fundamental economic development strategy identified five goals for the Loudoun community: 1) foster a prosperous and diverse business environment, 2) create a globally recognized economy, 3) maintain sound fiscal health, 4) develop an innovative

---

¹ U.S. Census, 2012-2016 American Community Survey.
³ Loudoun County Department of Economic Development, 2018.
⁴ Virginia Tourism Corporation, 2018.
rural economy, and 5) become a world-class visitor’s destination. It also identified Loudoun’s primary competitive advantages:

- Washington Dulles International Airport;
- Location in the Washington, D.C. Metropolitan Area;
- Qualified workforce skilled in advanced industries;
- Quality of life;
- Infrastructure that enables access to the region; and
- Greenfield land zoned for commercial development.

The County refines its economic strategy regularly with assistance from specialized research consultants. Continually refreshing economic development Policies, Strategies, and Action items is essential since economic climate, county assets and constraints, and projected trends for the future are dynamic.

**Targeted Cluster Strategy**

Since 2008, the Board of Supervisors has focused economic development efforts on targeted clusters and overlays of businesses that have the largest employment sectors, demonstrated past growth, or have potential for future gains based on innovations and trends in the market. This economic development approach is based on industries that are more concentrated in Loudoun relative to the state/nation, and industries that are adding firms because of Loudoun’s strengths and opportunities. The County’s targeted clusters and sub-clusters are:

- **Cluster 1. Information & Communications Technology**
  - a. Data Analytics and Technology Advancement
  - b. Cybersecurity
  - c. Data Centers

- **Cluster 2. Highly Specialized Manufacturing**

- **Cluster 3. Agricultural Businesses**

Overlays that are targeted for business intensification include: (1) major projects, headquarters and associations; (2) small business and entrepreneurship; (3) international business attraction; (4) existing businesses (retention and expansion); and (5) Metrorail stations.

The Information and Communications Technology (IT) cluster continues to play a major role for Loudoun County in terms of employment, establishments, earnings, name recognition, and potential for future growth. The IT assets that Loudoun has cultivated over the last few decades including infrastructure (e.g. data centers), workforce, and general economic environment create a wealth of opportunities within the cluster for continued expansion.

The Highly Specialized Manufacturing cluster includes industries and companies that are producing goods that are high-value and specialized in nature and, therefore, typically need to be

---

5 Camoin Associates, Atlas Integrated and ACDS are different economic consultants that have helped the County develop marketing, agricultural business, and cluster development strategies.

made in small batches and shipped to their supply chain or final destination quickly. This cluster continues to be an emerging opportunity based on the County’s assets including Washington Dulles International Airport, existing manufacturing companies, a highly skilled labor force, and information technology strengths.\textsuperscript{7}

The Agricultural Business cluster is made up of farms that provide value-add agricultural products\textsuperscript{8}, traditional commodities, and agri-tourism. With direction and support of the Board of Supervisors, the County’s Rural Economic Development Council (Council) developed a blueprint for strategies that support the agricultural economy. Along with multiple stakeholders, and with the assistance of the County’s Department of Economic Development, the Council crafted the \textit{Rural Economy Business Development Strategy} to guide marketing, research, and education; create financial tools to support agricultural entrepreneurs; provide resources; and inform public policy.

To strategically grow existing industry clusters or develop new ones, the County devotes resources (people and research) to becoming cluster experts that can anticipate the needs of businesses in a targeted cluster. This is achieved proactively through knowledge, relationships, and earned reputation. Cluster experts communicate the County’s competitive advantages for a targeted industry, connect prospective businesses to other businesses or resources in their cluster, and seek solutions to any barriers to entry. The objective is to attract new businesses to the cluster so that the global competitive advantage of Loudoun is strengthened in the targeted industry.

\textbf{Trends and Influences}

Non-residential forecasts identify that short-term growth will be led by data center development. However, mid to long-term forecasts show data center construction slowing as land and resources become scarce. Diversifying the economic base, creating desirable places to attract new corporate headquarters, investing in the skill set of local workforce, marketing the County on a global scale, and promoting Loudoun as a tourism destination will help maintain a strong community for the next twenty years and beyond.

As part of the \textit{Loudoun 2040 General Plan} process, the County reevaluated its economic advantages, challenges, and opportunities based on existing local market conditions. Additionally, macro trends were analyzed that will impact economic development in the areas of workforce, globalization, digitization, tourism, and demographics.

\textbf{Local Opportunities and Challenges}

The IT cluster, which includes data centers, remains a strong local competitive advantage. Northern Virginia has an exceptionally high concentration of tech talent, as measured by the number of civilian employed persons in computer and mathematical occupations—more than Seattle and comparable to that in the entire San Francisco/Silicon Valley area. Out of the cities and counties in Northern Virginia, Loudoun County has the highest concentration of people employed

\textsuperscript{7} Camoin Associates, 2017.

\textsuperscript{8} Value-add implies that an agricultural business is taking a raw product and adding value in the manufacturing process to create a different product (e.g. craft beverages).
in computer and mathematical occupations. Other economic development advantages include: 1) Washington Dulles International Airport and future Metrorail stations; 2) business-friendly local regulations and services; 3) highly-educated workforce and top-notch schools; 4) farms and agri-tourism; 5) affluent and culturally diverse residents; and 6) exceptional quality of life.

Despite the high concentration of tech workers in the region, talent attraction is still one of the biggest challenges that existing and potential Loudoun businesses face. The emerging workforce desires walkable urban places with a mix of amenities and housing types. A recent survey by the County’s Nighttime Economy Advisory Committee found that the younger workforce wants 1) special events; 2) arts, cultural, and entertainment districts; 3) attainable and desirable housing; 4) mixed-use and walkability; and 5) multimodal transportation alternatives. Lack of housing options and traffic congestion for commuting has also been cited by many business leaders as a challenge for employee recruitment.

Workforce
As of 2017, the number of Americans on unemployment rolls has dropped to a 17-year low, which indicates the labor market nationwide is tightening and companies are facing challenges recruiting skilled workers. Some best management practices for economic development organizations to help address the expected talent shortage include: conducting a workforce sustainability study, collaborating with regional educational institutions, and developing industry-specific online portals for jobs.

The labor force participation rate in Loudoun is approximately 77 percent, which is higher than the national rate of 66 percent. Analysis of commuting pattern data illustrates just how interconnected the County’s employment and labor force is with the larger region – with the region relying on Loudoun and Loudoun relying on the region for workers and places of employment. Data shows that over 86,000 people come into Loudoun County each day from surrounding areas, over 123,000 Loudoun residents travel out of the County to their jobs, and over 54,000 live and work in Loudoun. The most common home or work location, besides Loudoun County, is Fairfax County. As of 2016, 50 percent of the County’s residents were working and living in Loudoun, which is a steady increase from approximately 41 percent in 2000.

Self-employment in Loudoun accounts for approximately 7 percent of all employment; this is higher than within Maryland and Virginia (5.5 percent) and slightly higher than the rest of the nation (6 percent). Most of the self-employed individuals are government contractors and/or in the IT sector. Opportunities exist to encourage new start-ups and transition willing and interested

---

9 U.S. Census, 2012-2016 American Community Survey.
10 Loudoun County Nighttime Economy Advisory Committee, 2016.
13 U.S. Census, 2012-2016 American Community Survey.
companies from self-employment/sole-proprietorship to employing staff, which will support innovation, research and development, and job growth in the county.\textsuperscript{16}

Loudoun County is home to seven institutions of higher education providing undergraduate, graduate, and continuing education opportunities. These include: George Washington Virginia Science & Technology Campus, George Mason Enterprise Center, Virginia Tech Equine Medical Center, Shenandoah University, Northern Virginia Community College, Strayer University, and Patrick Henry College. Local universities and colleges have partnered with local businesses and organizations to provide places for business ideas to incubate and grow, expand research and development opportunities, and provide targeted educational training opportunities. This continued collaboration strengthens the partnerships among government, business, universities, and public schools to ensure continued development of Loudoun’s highly skilled workforce.

As part of an international strategy, attracting immigrants to the workforce helps ensure a steady flow of skilled and unskilled workers. Loudoun County is well on its way to diversifying its local employment base, as one out of every four residents are foreign-born.\textsuperscript{17}

**Globalization**

The County’s economic development strategies need to be prepared for the global economy. One in five American jobs are tied to international trade, and 95 percent of consumers – three-quarters of the world's purchasing power – is found outside United States borders.\textsuperscript{18} Locally, the percentage of Loudoun’s gross domestic product devoted to exports (9.9 percent) is top five for the Greater Washington area. Loudoun is also top five in Greater Washington for numbers of jobs in foreign establishments.\textsuperscript{19}

Best practices for increasing foreign direct investment, attracting international companies, and recruiting international workforce are straight-forward: devote full-time staff to international trade missions and developing leads and recruiting abroad. Furthermore, globalization is no longer confined to the coastal cities, so the future domestic workforce (students) should be prepared early by emphasizing foreign studies and learning different languages.

**Digitization**

Digitization of the local government development process has become standard for larger local jurisdictions, which helps businesses start and expand easier and faster. Electronic plan submittals, business license portals, and online permit or entitlement tracking increase accountability and provide more certainty for the business community.

The continual shift to digital information, communication, and transactions results in steady demand for data storage infrastructure and IT workers. Loudoun is thriving in both business areas as 30 percent of the world’s physical data center buildings are in Loudoun County, and the

\textsuperscript{16} Ibid, 2017.
\textsuperscript{17} U.S. Census, 2012-2016 American Community Survey.
\textsuperscript{18} The Trade Partnership, 2015.
\textsuperscript{19} Brookings, 2014.
concentration of employees in IT as it relates to total County employment is stronger than the IT cluster in the states of Maryland and Virginia combined.

**Tourism**

Tourism and economic development are inextricably linked, as visitors to desirable destinations become repeat visitors, which can lead to relocation, entrance into the workforce, and potentially moving or starting a business. Loudoun County’s tourism industry is thriving and ranks third in overall visitor spending in the Commonwealth with $1.69 billion in 2016.\(^{20}\) Loudoun is uniquely situated in the Washington, D.C. region due to its agricultural economy in the western half of the County that also supports regional tourism. Northern Virginia generates the most agri-tourism revenue of all 10 state regions, contributing more than $552 million to Virginia’s $2.2 billion agri-tourism industry. Loudoun County farm businesses make up 51 percent of Northern Virginia’s agri-tourism venues.\(^{21}\)

Best management practices for aligning economic and tourism development include using consistent “destination” branding across multiple lines of government, building recognition for year-round activities, and identifying the local community as a progressive tourism destination in marketing materials to business prospects.

**Demographics**

The generation still entering the workforce is the biggest cohort in United States history.\(^{22}\) The demographic shift brings changes in consumer spending, office amenities needed to attract workforce, housing preferences, and political ideologies. In general, the newest generation of workers are unique because of technological aptitude and reliance, propensity towards social tolerance, and high educational attainment.\(^{23}\)

\(^{21}\) Virginia Tech, 2017.
\(^{22}\) Business Insider, 2015.
\(^{23}\) Pew Research, 2015.
Most innovative companies looking to attract the next generation of workers are seeking “urban” places for their expansion or relocation efforts because they cluster offices, retail, entertainment, cultural attractions, services, and housing options in close proximity. The emerging workforce desires this amenity-rich environment and expects transportation options such as walking, biking, or transit for commuting or consuming daily goods and services. Transit-oriented on-Metro developments in Northern Virginia have seen remarkable growth, and Loudoun County is poised to capture this trend with the opening of the new Metrorail stations.

The key demographics of Loudoun County, including the growing population, lower median age, high education levels, and high income levels present opportunities to support a variety of well-paying knowledge and skills-based industries in addition to creating the demand for high-quality place and related amenities. Being able to attract and retain employees in Loudoun County will ensure companies will continue to choose Loudoun for their business.

**Policies, Strategies, and Actions**

The following Policies, Strategies, and Actions help achieve the County’s economic development mission and vision, as well as the overall economic development priority set by the Board of Supervisors to grow the commercial tax base.

Across all departments and within each economic development policy emphasis is placed on providing a stable and predictable business environment through customer-focused solution-oriented public service. Unless otherwise specified, the Policies, Strategies, and Actions apply Countywide.
Policy 1: Diversify the economy by strengthening targeted industry clusters.

Strategies

1.1. Attract new businesses in key industries so that the global competitive advantage of Loudoun is strengthened in the targeted industry clusters.

1.2. Work with existing businesses proactively and retain businesses that may be considering leaving Loudoun by helping with relocation or expansion efforts.

1.3. Catalyze start-ups and entrepreneurial growth by providing quality resources.

1.4. Continue to sustain economic growth at and around the Washington Dulles International Airport and the Leesburg Executive Airport, including support of land use restrictions in noise-sensitive areas located within 65 Ldn noise contours.

1.5. Expand international relationships and attract foreign businesses within targeted clusters.

Actions

A. Embed staffing resources in each cluster/overlay to attract or expand businesses using industry expertise, relationships, and earned reputation.

B. Use marketing and research to create promotional materials, conduct market analysis, assist with site selection, and provide ombudsman services.

C. Provide assistance with the regulatory process and streamline when possible using electronic plan submittals and online portals to get clients to market more quickly, provided all public safety, health, and welfare regulations are met.

D. Create mechanisms for the rural economy to maintain its status as a regional agricultural leader and local advantage.

E. Focus on providing resources, networking/education events, and other programs to startup companies that place a high value on growth, including assistance with establishing additional incubators, accelerators, co-working spaces, and makerspaces.

F. Reserve adequate amounts of developable commercially-zoned land for cluster growth.

G. Strategically use economic incentives as needed for attraction and retention.

H. Ensure new development does not create flight obstructions, or otherwise impede flight operations at Washington Dulles International Airport and Leesburg Executive Airport, notwithstanding building and height standards recommended elsewhere in Loudoun 2040.

I. Require developments that are subject to Federal Regulation 14 CFR Part 77 to provide the County with certification from the Federal Aviation Administration (FAA) that it will not constitute a hazard to air navigation. In addition, developments will comply with any recommendation(s) found in an FAA decision that results in a no hazard determination.
Policy 2: Create desirable places in key corridors and employment centers.

Strategies

2.1. Ensure that the design and infrastructure of key economic corridors and employment centers creates desirable places for workers, businesses, residents, and visitors.

2.2. Support development projects near the Ashburn and Innovation Metrorail stations that provide a continuum of housing types, retail, entertainment, and employment options in a walkable environment.

2.3. Be flexible, customer-focused, timely, and open to interpretation in review and approval of commercial or mixed-use projects to keep pace with business innovations and reduce time to market.

2.4. Encourage multimodal infrastructure design, especially within biking distance of Metrorail stations and near other employment and major hotel centers, which minimizes impact to development potential of land.

2.5. Support a diversity of available commercial products when planning land use to improve attraction of a multifaceted business base.

2.6. Accommodate all types of critical infrastructure when planning for transportation; complete streets, power, water, and fiber.

Actions

A. Establish State-endorsed “Technology Zones” for the encouragement of new and expanding technology businesses that enable reduction of user and permit fees, local tax incentives, special zoning treatment, and exemption from local ordinances.\(^\text{24}\)

B. Streamline the process for amending the Comprehensive Plan to allow for flexible and timely responses to evolving market conditions and technological innovation and to reduce project time to market.

C. Periodically update the County’s zoning regulations and design standards to keep pace with innovation in the marketplace.

D. Extend support to the Towns to plan for enhancing the economic base.

Policy 3: Invest in the skilled workforce needed for continued economic growth.

Strategies

3.1. Support continual growth of the workforce through recruitment assistance, training, and placement programs.

3.2. Proactively attract workforce, develop existing pipeline, and explore ways to increase access to qualified job applicants in targeted clusters.

3.3. Cultivate partnerships with schools, colleges, and businesses to link all levels of education (including K-12) to targeted industry needs.

3.4. Develop housing programs to create a continuum of housing types that are attainable and desirable to all levels of the workforce.

**Actions**

A. Collaborate with community and academic partners on connecting people to careers, expanding “learn by doing” programs, securing funding sources for training, and developing vocational training and industry certification and degree programs.

B. Actively engage local businesses to determine workforce challenges and needed skills.

C. Incentivize construction of attainable workforce housing using density bonuses, fee waivers, revolving loans, or assistance with required infrastructure.

D. Consider using the Economic Development Authority for property acquisition to bank land for public-private partnerships on workforce housing projects.

**Policy 4: Market the County as a world-class business ecosystem.**

**Strategies**

4.1. Market the County as a world-class place to do business using a variety of tools and communication platforms.

4.2. Promote gender and ethnic diversity of the local business community.

4.3. Market Washington Dulles International Airport as a destination portal to a diverse Loudoun economy.

**Actions**

A. Tailor messaging to decision makers and influencers who play a role in starting, expanding, or relocating businesses (e.g., owners, executives, site selectors, or brokers).

B. Post and respond on the County’s economic development website and social media channels in a timely fashion to maintain credibility.

C. Maintain economic development brands for custom professional-grade collateral.

**Policy 5: Support the promotion and development of Loudoun County as a tourism destination.**

**Strategies**

5.1. Collaborate with Visit Loudoun to support the development and enhancement of tourism and hospitality infrastructure, including hotels, bed and breakfasts, event facilities, and cultural attractions.

5.2. Encourage and support tourism destination development and marketing.
Actions

A. Establish State-endorsed “Tourism Zones” that enable the County to be eligible for gap financing from the State for tourism-related development projects. 25

B. Refresh online content and optimize for search engines regularly, translate into multiple languages, and focus design to reflect Loudoun’s unique personality and strengths.

Chapter 6 - Fiscal Management & Public Infrastructure

Table of Contents

Vision .......................................................................................................................................... 2
Introduction ................................................................................................................................. 2
Public Facilities......................................................................................................................... 3
Open Space Assets ................................................................................................................. 6
Utilities & Infrastructure ....................................................................................................... 7
Fiscal Management ............................................................................................................... 10
Policies, Strategies, and Actions ............................................................................................... 12
Emergency Services Development Standards ................................................................. 15
Open Space (see also Chapter 3, Natural and Heritage Resources) ................................... 16
Sewer and Water (see also Chapter 2, Towns and JLMA) ................................................... 18
Solid Waste Management ................................................................................................. 21
Electrical ............................................................................................................................... 22
Communication ..................................................................................................................... 22
Fiscal Management ............................................................................................................... 23
Reference Maps ........................................................................................................................ 28

Attachment I
Chapter 6 - Fiscal Management & Public Infrastructure

Vision
Provide high quality, efficient, and environmentally sensitive infrastructure systems supporting growth management goals and delivering innovative services to the community.

Introduction
Sustained growth since 2000 requires Loudoun County meet a significant demand for new public facilities, such as parks and recreation, fire and rescue, and schools. While the County has maintained a reputation for quality facilities and services and sound fiscal management, funding and competing priorities have led to a shortfall or delay in certain public facilities. As the County has grown, the increasing scarcity of land and the diversity of facility and service needs has further affected the County’s ability to meet demands. Service providers have employed various measures to adapt to these challenges. Schools are being designed to fit on smaller parcels. Libraries are sharing commercial space in Brambleton and Stone Ridge and Sheriff’s Office substations co-locate with Fire and Rescue stations. Loudoun 2040 supports continued innovation, particularly in co-location and site design to not only add new facilities but to better adapt to changing community design, particularly in compact mixed use and transit-oriented developments.

Loudoun County maintains close connection between land use and fiscal planning. Managing utilities, principally sewer and water, has directly influenced where new development occurs. Consistent policies and close collaboration with Loudoun Water has allowed the County to maintain an urban growth boundary and to subsequently focus other investments in roads and public facilities in eastern Loudoun. Loudoun Water’s strategy for a long-term water supply and its investment in high-quality water and sewer treatment has provided the County with a strong basis for growth decisions. Loudoun 2040 does not address the fiscal management and operational priorities of companies and authorities that operate key utilities serving County residents but are independent of the County. Nonetheless, the cooperative relationship between the Board of Supervisors (Board), Loudoun Water, the Virginia Department of Health (VDH), the Virginia Department of Environmental Quality (DEQ) and other entities continues to ensure a close connection between infrastructure and land use planning.

The County’s fiscal program requires the Board to adopt a ten-year Capital Needs Assessment (CNA) every two years following a recommendation by the Planning Commission regarding the consistency of proposed facility locations with the Comprehensive Plan, and adopt a six-year Capital Improvement Program (CIP) annually during the Board’s budget deliberations. The annual CIP funding plan and budget then align annual capital expenditures with County fiscal policy. The County has relied on proffers to mitigate capital and transportation costs, consistent with the authority granted through state enabling statutes. That funding mechanism has proven less effective in recent years due to state-imposed constraints on use of proffers as well as a changing development environment. Loudoun 2040 supports the continued use of proffers and proposes changing the capital cost calculation to address transportation needs and expanding the proffer
process to the Transition Policy Area. The Plan also encourages the Board to seek legislation authorizing a reasonable impact fee program that would apply to all residential building permits throughout the County.

Loudoun County maintains a strong commitment to preserving open space and agricultural land and protecting natural and heritage resources. Conservation easements in 2018 protect over 72,000 acres of land throughout the County. The County holds over 26,000 acres of these easements. Over the years, County policies have emphasized preserving open space in its natural setting, undisturbed, to protect the environmental value of the space. Loudoun 2040 recognizes the community desire and economic value to expanding public access to and enjoyment of open space through trails and recreational uses. A key objective is to create a connected network of parks, trails, and natural areas, which can offer expanded environmental, design, and recreational benefits.

**Public Facilities**

The County’s fiscal management strategy is designed to anticipate and accommodate the impacts of increased demand for public services and facilities. As discussed in the Fiscal Management section of this chapter, careful development forecasting—including its location, type, and timing—is essential to anticipating facility needs. The County projects the capital needs associated with development proposals to determine expected impacts on public facilities and to calculate anticipated contributions to mitigate a project’s “fair share” of those impacts. Major components of the land use picture in Loudoun are public schools, parks and recreation, libraries, and emergency services. These important elements of the community fabric typically require land proximate to new development.

**Loudoun County Public Library (LCPL)** is the information center of the community, providing free and equal access to innovative technologies and a full range of library resources to enhance the quality of life and meet the informational, educational, and cultural interests of the entire community. LCPL provides library materials, programs, technology, and services. It promotes the joy of reading and lifelong learning through early literacy programs, teen initiatives, humanities and arts events, technology training, and other educational opportunities.

LCPL currently has nine branches ranging in size from 4,000 square feet to 42,000 square feet. The Ashburn, Cascades, Lovettsville, Middleburg, Purcellville, and Rust branches are standalone facilities, while Gum Spring, Law Library, Brambleton, and Sterling share structures with businesses or other County facilities. LCPL Administration shares space in Leesburg with the Leesburg Senior Center.
LCPL continues to evolve to meet the needs and expectations of the community. The Library is expanding language learning services to non-native speakers. It also offers more Science, Technology, Engineering, and Math (STEM) programs, which are complemented by “maker spaces” that include 3D printers, robotics, recording studios, design software, computer labs, and other equipment for creating and learning. High-speed wireless internet access is essential to customers and is available at every facility. In addition, demand for conference and study rooms continues to rise; thus large, multi-purpose rooms are an essential component for current and future branches. Also, as the number of residents without personal transportation increases, locations that offer ease of access through public transportation are increasingly important.

LCPL recognizes the need to locate in high community activity areas and adapt to the County’s changing development patterns. For example, in recent years LCPL has opened facilities in commercial space in Brambleton Town Center and in Stone Ridge. Libraries have also located with or near senior centers, parks, and schools. Library programming is similarly evolving to accommodate community activities and educational programs that meet new needs of area residents.

The Department of Parks, Recreation, and Community Services (PRCS) operates a system of County-owned or maintained facilities that includes over 1,700 acres of open space, more than 60 miles of trails, 200 athletic fields, 27 parks (including three regional parks), 18 playgrounds, 10 community centers, six sports complexes, two indoor and two outdoor swimming pools, four historic/heritage sites, three adult day centers, and three senior centers. PRCS also operates a senior activity center, a recreation center, a nature preserve, a nature center, a performing and visual arts center, an industrial catering kitchen, and administrative offices.

PRCS and Loudoun County Public Schools cooperatively offer activities at County school sites. Programs and services comprise childcare, preschool, after-school care, sports and recreation, community outreach, aging services, youth services, adaptive recreation, summer camp, health and fitness, planning and development, facility maintenance, customer service, and environmental stewardship. Offerings include sports activities for youth and adults, instructional and interpretive classes, programs for senior citizens, visual and performing arts, child care, preschool, after school activities, trips, camps, special events, volunteer opportunities, educational and prevention programs for youth, and programs for individuals with disabilities. In 2018, annual park visits for special events totaled 875,000. Over 55,000 children participated on sports teams and over 156,460 meals were served to senior residents.
PRCS faces significant challenges securing additional parks and trails to meet the service demands of the County’s growing population. A lack of available land in eastern Loudoun, where the facilities are needed most, complicates the County’s ability to provide the desired facilities. A decreasing supply of land also means rising land values, which affects landowners’ contributions of land for parks facilities. Changing development patterns in eastern Loudoun, such as the urban development around the Metrorail stations and other high-density developments, will require new recreation concepts, and changing demographics will likewise necessitate new types of facilities. For example, the population of residents 55 years and older increased nearly 50 percent from 2010 to 2016, resulting in higher numbers of older adults seeking not only recreational programs, but also other support services. PRCS offers community outreach events and increasingly serves as a conduit for a variety of services to the senior population.

Loudoun County Public Schools (LCPS) is the third largest school division in the Commonwealth of Virginia. Each year, approximately 2,500 new students enroll and one-to-three new school facilities are opened to accommodate them. In 2018, LCPS served more than 83,000 students in 92 facilities including 15 high schools, 16 middle schools, 57 elementary schools, and four special purpose schools (Academy of Engineering and Technology, Academy of Science, C.S. Monroe Technology Center, and Douglass School).

The LCPS student Class of 2017 had an on-time graduation rate of 95.5 percent and earned more than $54.7 million in scholarships. The Virginia Department of Education reports that 100 percent of LCPS schools were fully accredited in 2017. The student body is ethnically and economically diverse, with 52 percent of the population reporting as African American, Asian, Hispanic, or multi-racial. Approximately 19 percent of the student population is identified as economically disadvantaged. This cultural and economic diversity raises the need for a variety of academic and extracurricular programs to assist students, particularly in elementary schools, which have the highest percentage of economically challenged students.

Increasing demand for services is placing significant pressure on the school system, which each year must hire hundreds of additional classroom teachers and staff, expand support systems, and open multiple new schools. Families continue to endure shifting school boundaries as new students are assimilated into the school system. Securing building sites for new schools that are cost-effective but that also reflect their important social and civic functions in terms of location and design is an ongoing challenge. Changing development patterns in eastern Loudoun further complicate these issues. In the past, the County has relied on the donation and timely delivery of proffered school sites from the development sector. However, the supply of sites has not kept up with demand or with the LCPS construction timetable.
Urban development around the Metrorail stations and other high-density developments will require innovative designs for new school facilities using less land and more vertical designs. Alternative school configurations that established urban communities have used successfully, such as shared space and public/private facilities, will become increasingly important.

As the population increases and continues to diversify, schools will likely continue to play a larger community role, such as accommodating a variety of non-school activities, sharing recreational facilities with the public, co-locating with compatible uses such as libraries, affordable housing and other services, and opening classrooms and space to other organizations.

Loudoun County Fire and Rescue (LCFR) delivers essential emergency and non-emergency Fire and Emergency Medical Services (EMS) from 19 stations, responding to more than 29,000 incidents annually. LCFR, as part of the Loudoun County Combined Fire and Rescue System (LC-CFRS), provides administrative, operational, and logistical support to the County’s 15 volunteer fire-rescue companies, the LC-CFRS Executive Committee, and its governance structure. Through the Oliver Robert Dubé Training Academy, LCFR coordinates the delivery of certification and continuing education programs for all System members. LCFR functions as the Public Safety Answering Point (PSAP) for the County’s 9-1-1 system and operates the County’s emergency communications system. The Fire Marshal’s Office (FMO) has a multifaceted mission that includes fire prevention; fire lane plans review; life safety education; community risk reduction; investigation of fires, explosions, and hazardous materials releases; and an oversight of the bomb squad.

LCFR has been in a consistent state of transition as the County has grown, moving from an all-volunteer system to a combined system, serving an increasingly suburban environment, and responding to growing service demands. As areas of the County transition to a more urban development pattern, LCFR will continue to adapt to different demands and environments. Compact and higher density development and the introduction of Metrorail will affect emergency response times and equipment and training needs, and introduce other new challenges. In rural Loudoun, ongoing areas of attention will include updating existing stations and meeting service demands associated with growth in the rural economy.

**Open Space Assets**

Open space assets as defined in this chapter include linear parks, trails, recreational areas, and passive open space. These assets make up much of the County’s network of natural resources and may be held in private or public ownership. The County, conservation partners, and individual property owners manage these elements through the regulation of protective buffers, performance
standards, and stewardship of open space easements

The open space assets addressed by this Chapter are aimed at enhancing and encouraging public interaction with the County’s network of natural resources through:

- A network of linear parks and other recreational resources along or extending from the banks of the Goose Creek, Broad Run, Bull Run, Catoctin Creek, Potomac River, and other river and stream corridors to form an interconnected system of linear open space.
- Trails within and among communities that offer potential for walking and bicycling, and connecting neighborhoods to parks, schools, and other community destinations.
- Forested areas along public rights-of-way, within neighborhoods, and elsewhere to filter air pollutants, provide shade, screen uses, and define communities and places.
- A network of active and passive parks of various sizes and functions throughout each community to beautify neighborhoods and offer opportunities for recreation.

Utilities & Infrastructure

Sewer and Water (See also Chapter 2, Towns and JLMA)

On May 27, 1959, the Board took action to create the Loudoun County Sanitation Authority as a public body politic and corporate under the provisions of the Virginia Water and Waste Authorities Act. This body, now known as Loudoun Water, is chartered by the State Corporation Commission and is responsible for providing water and wastewater service to unincorporated areas of Loudoun County. As a political subdivision of the State, Loudoun Water is not a department of the County government and receives no tax money from the County. All Loudoun Water income is received from customers as payment for water and sewer service or as connection (tap) fees from land developers. Loudoun Water is governed by a Board of Directors consisting of nine members, each appointed by the County Board. Members of the Loudoun Water Board of Directors serve four-year terms and can be reappointed.
Loudoun Water owns and operates water and wastewater treatment facilities and systems and has purchased capacity for wholesale water supply from Fairfax Water and wastewater treatment from DC Water. These water and wastewater systems serve the eastern region of Loudoun County. The Potomac River is the primary source of water for Loudoun County and the greater Washington, D.C. Metropolitan Area. Loudoun Water further benefits from using the Goose Creek, Beaverdam Creek Reservoir, and may use reservoirs created from retired rock quarries for storage in the future. With numerous water supply sources and local reservoirs, Loudoun Water has a resilient system to meet the demand for safe and healthy drinking water. To ensure the overall environmental quality of the water supply (watersheds and aquifers), Loudoun Water supports broad-based source water protection, management, and stewardship programs.

In the western region of Loudoun County, Loudoun Water currently owns and/or operates smaller water and wastewater treatment systems. Community water and wastewater systems are freestanding systems usually serving residential developments that were installed by developers and are now operated and managed by Loudoun Water. These systems are also funded in part by the County, which has an active program of rectifying public health issues in a number of historic villages. There are additional expenses and inefficiencies associated with building and operating such systems and historically the cost was borne by the relatively few system users. In April 2016, the Loudoun Water Board adopted a single rate for all customers; that is, those served by the central facilities as well standalone community systems, the costs of which are materially greater to install and operate. Land use policies going forward need to recognize the added cost burden that central system customers bear due to standalone community systems.

Incorporated towns in the County operate their own municipal water and sewer systems. Water is drawn from springs or wells and, in the case of Leesburg, also drawn from the Potomac River. Leesburg, Hamilton, and Round Hill have extended utilities into the surrounding Joint Land Management Areas (JLMA). Loudoun 2040 continues to rely on the town systems to serve development in the JLMA, both to encourage future annexation of JLMAs into the town and to encourage a development pattern similar to the town. Loudoun 2040 does not recommend extending municipal systems into adjacent rural areas except when necessary to resolve public health issues in existing communities.

Loudoun Water’s Capital Improvement Plan is a 10-year roadmap for creating, maintaining, and funding present and future infrastructure needs. The Loudoun Water CIP is approved by the Loudoun Water Board of Directors. Capital water and wastewater improvements are complex and interrelated and often require a great deal of planning over many years to define their extent.

1 The Loudoun Water Capital Improvement Plan can be accessed at www.loudounwater.org.
location, and cost. The underlying strategy of the CIP is to plan for facilities necessary for the safe and efficient delivery of water, wastewater, and reclaimed water services in accordance with policies, goals, and objectives adopted by Loudoun Water. A critical element of a balanced Capital Improvement Plan is to preserve and enhance existing facilities as well as provide new assets to respond to growth of the community and changing service needs as outlined in Loudoun 2040 and other Board policies.

Waste Management
The Loudoun County Department of General Services, Waste Management Division operates the Solid Waste Management Facility (“landfill”) and provides recycling opportunities for residents and businesses. Landfill operations are fee-supported. The County also offers recycling drop-off centers, household hazardous waste collection events, collection of seven materials for recycling or diversion at the landfill, and educational programs. The County anticipates continuing operations at the Evergreen Mills Road landfill site and relying on continued recycling and commercial facilities to redirect a significant amount of waste material. International demand for recycled material is, however, a key factor in the success of recycling success. Continued review and updating the County’s Solid Waste Management Plan will provide the more detailed management and planning necessary to meet State requirements to anticipate future needs.

Energy and Communication
Electrical demand in the County has grown dramatically in recent years with the development of data centers in eastern Loudoun. Demand is expected to continue to grow with new data center construction, the operation of the Silver Line Metrorail, and other land development. Changes in data center technology have resulted in continually changing electrical demand increasing from 100 watts up to 300 watts per square foot. Demand for data center development within the County is anticipated to be strong for the foreseeable future.

Electrical and communication services are provided under the purview of state and federal agencies. This limits the County’s ability to mitigate certain impacts. For example, the County regulates the location of electrical substations but not the high voltage distribution lines to and from the substations. Similarly, the County may review the location of cell towers and monopoles for impacts on surrounding properties, but cannot prescribe locations and, therefore, cannot require broadband or communication service in underserved areas. The County does, however, work with the providers to encourage improved service and locations.

Rather than a centralized, regional substation to serve the County’s growing electrical demands, smaller substations have been constructed for individual providers. As demand for electrical power continues, consideration should be given to the appearance of substations and power lines and adequate screening of these facilities to reduce the visual impact upon the community.

Broadband internet service is an increasingly important asset to business in Loudoun as e-commerce grows throughout the nation. The lack of broadband service in western Loudoun is cited as a major constraint on the rural economy. It also puts western households and students in particular at a disadvantage. County efforts to extend broadband service have included regulatory changes to support new technologies. With limited control over market factors and federal regulation, the County will encourage landowners to put in place the conduits and other infrastructure to help minimize the cost of extending the service, and will explore other incentives...
to encourage network expansion.

**Fiscal Management**

Loudoun County uses an integrated approach to land use and fiscal planning. This approach uses economic and demographic forecasting models, as well as service and facility standards, to help determine current and future capital facilities needs in the County. The Board established Loudoun County’s Fiscal Impact Committee (Committee) in 1992. This advisory committee reviews assumptions about future growth and capital facility needs. The Committee provides recommendations to the Board on four key documents that the County uses to coordinate land use and financial planning: 1) long-range forecasts and demographic, economic, and financial information included in the Fiscal Impact Committee Guidelines; 2) Capital Facility Standards (CFS); 3) CNA; and 4) Capital Intensity Factors (CIF).

The capital facility planning and budgeting processes are different, but completely interrelated. CFS, CNA, and CIF are the three main aspects of the capital facility planning process that shape the CIP budget. The capital planning processes are integral in the development of:

1. Capital facility related cash, land, and in-kind proffer dedications to the County as a result of land use applications;
2. The development of the type, timing, and geographical placement of capital projects to be considered for funding in the CIP; and
3. The programmed use of proffers for capital facility development in the CIP.

**Capital Needs Assessment**

The CNA divides the County into ten planning subareas and uses the County’s forecasted population growth and adopted CFS to identify the type and quantity of facilities needed in each subarea. The CNA time period extends for ten years beyond the most recent CIP period. Using the population standards set by the CFS and factoring in facilities that already exist or are funded in the CIP, the CNA determines which facilities are needed to meet the adopted CFS standards. The CNA is generally updated every two years.

The population within each subarea drives the demand for facilities. In this way the County can identify more accurately where the demand is greatest and plan accordingly. The subareas define broad communities such as Leesburg and its environs or the three western towns along Route 7. However, the boundaries are based on Traffic Analysis Zones (similar to census tracts), which sometimes divide smaller communities. Furthermore, while the CNA is based on population, it does not account for the diversity of Loudoun’s population and the associated variations in facility needs and community desires. For these reasons, the Planning Commission, during their review of the FY 2020-2030 CNA, recommended the Board investigate a more community-driven planning approach that could address demographic differences, development constraints, and community expectations.

**Capital Facilities Standards**

The CFS determines the general size and scope of facilities by establishing a maximum land use area (acreage) and construction footprint floor area. As design and engineering of a facility progresses, and specific sites are chosen, acreage and floor area may differ from the CFS standard. County departments provide information on what standards to use for each of their facilities. The
CFS also establishes a population threshold (“trigger”) for each type of facility. A fiscal analysis of the 2040 Plan estimated 4,171 acres will be needed by 2040 using the 2016 adopted Capital Facilities Standards.

Example: The CFS determines a need for one fire station for every 25,000 persons in the Ashburn planning subarea. The current population forecast for Ashburn is 83,000 persons in 2017 and is projected to increase to 125,000 persons by 2023. As of 2017, the current need for fire stations is 3.32 (83,000 divided by 25,000). There are currently three fire stations existing in Ashburn and another one funded in the CIP (for a total of 4.0). The total need for fire stations will increase to 5.0 (125,000) by 2023, therefore, the CNA would identify one additional fire station by 2023.

**Capital Intensity Factor**

The CIF translates the anticipated capital cost and land requirements derived from the CFS into a per-housing-unit cost. The calculation determines costs per capita and costs per student, which then helps estimate the cost associated with different housing unit types based on average household sizes. The resulting cost per housing unit is valuable during development review to estimate impacts of individual applications and in proffer negotiations to determine a developer’s capital facility contributions.

1993 Choices and Changes General Plan standardized the County’s use of a CIF to calculate capital facilities proffers. The County, by policy, anticipated a landowner contribution of 25 percent of the anticipated capital impact of each residential unit over a base density of 1.6 units per acre. At that time, the CIF was a countywide number. With the adoption of the 2001 Revised General Plan, County proffer policy called for landowners to mitigate 100 percent of the capital facilities impact for each unit above a base density established by existing zoning or one unit per acre, whichever was lower. The County also developed a separate CIF for each policy subarea. The refinement acknowledged notable differences in land costs and other differences associated with constructing facilities in each subarea. The Board has also incorporated a separate CIF for age-restricted housing and additional housing types. Recognizing a pressing need for certain transportation improvements, the County also allows landowners to redirect capital facilities contributions to transportation infrastructure in certain situations.

**Capital Improvement Program**
The six-year CIP refines the County’s CNA-forecasted future capital facility growth, providing a six-year program of the County’s general government and public schools’ land, facility, and equipment needs, and a financing plan to implement each need. The CIP schedules land acquisition, design, construction, and capital equipment procurement for each project. Potential projects are evaluated in relation to each other to prioritize funding of specific projects. Essential improvements are planned in a manner commensurate with the County's ability to pay.

The CIP is developed biennially, with the six-year period moving out an additional two years every other fiscal year. The CIP is a multiyear plan that does not constitute or require an appropriation of funds beyond those for the current fiscal year. Funding decisions concerning the CIP are made in conjunction with decisions regarding the County's operating budget. Most new facilities require an ongoing commitment in operating funds for new employees, utilities, and other costs.

Going forward, the County will pursue additional refinements to the proffer guidelines to accommodate urban development concepts and more diverse housing into the CIF. In light of state legislation adopted in 2016 that limits the use of proffers, the County will also explore other mechanisms to diversify funding opportunities, including impact fees. Impact fees would apply equally to all residential units, whether permitted by-right or by rezoning. Additional state enabling authority would be necessary to effectively use impact fees; existing legislation is limited in scope and imposes difficult implementation requirements, leading very few localities to take advantage of this tool.

As part of its strategic planning efforts on growth management, the County will consider expanding discussion of net impacts, including the capital needs and costs of individual projects on countywide infrastructure and the economic and revenue benefits of new development. As such, the County would evaluate 1) the impact of a rezoning application on the local transportation network and public facilities, 2) what the application is or is not doing to mitigate the impact, and 3) what facilities exist and/or are funded to serve the subject property and surrounding area during the development review process. Additionally, the County is developing an analysis model to assist with evaluating the fiscal impact of future development.

**Policies, Strategies, and Actions**

Unless otherwise specified, the following policies, strategies, and actions apply Countywide. All of the Policies, Strategies, and Actions set forth in all of the following paragraphs of Chapter 6 shall apply and be applied by the County only subject to and in compliance with the limitations established by Virginia Code Section 15.2-2303.4 as applicable. In its consideration and acceptance of all proffers, the County will apply the standards of Virginia Code Sections 15.2-2297, 15.2-2303, and 15.2-2303.4, as applicable, to evaluate the reasonableness of proffered conditions, and for those applications subject to Section 15.2-2303.4, the County shall accept only those proffers permitted or deemed reasonable under Virginia Code Section 15.2-2297 and not deemed unreasonable under Section 15.2-2303.4.

**Fiscal Policy 1: Provide public facilities to meet identified needs.**

**Strategy**

1.1 Use the CNA Program to plan and coordinate facility needs and location criteria to ensure
adequate dispersal and timely availability of County facilities.

Actions
A. Support LCSB acquisition of needed sites through the fiscal planning and land development processes.
B. Co-locate public safety and other facilities whenever it will improve service efficiencies.
C. Make school-related open space and athletic fields available for joint use by PRCS.
D. Combine public open space and parks with public facilities and civic buildings, community centers, town centers, and other gathering places and include amenities such as seating areas, public art, playgrounds, gardens, etc.
E. Design public facilities to be a distinguishing feature of the community using sustainable materials, context-sensitive design, and attractive architectural features.
F. Design new public facilities to be functional and efficient to persons with diverse abilities, to reflect the physical character of the surrounding community, and to maximize the broader social and cultural role the facility can play in the community.
G. Establish an expansion plan for the Fire and Rescue Training Academy based on a needs assessment of the existing campus as the needs of LCFR and the County increase. Ensure the requirements of Fire and Rescue training remain a priority during the development of surrounding areas.

Strategy
1.2 Support continued use of existing public facilities through ongoing capital asset replacement, renovation, and modernization, particularly where facilities play an important role in social and economic activity of the local community or are historically significant.

Action
A. Maintain and modernize existing County facilities to meet current resource demands and customer needs; for example, improve library space for collaborative, hands-on learning (makerspaces) with computer labs and large, multi-purpose rooms to meet the growing community demand for spaces to host community events.

Strategy
1.3 Strategically locate facilities where they can serve the community efficiently and effectively.

Actions
A. Locate new facilities on sites that can accommodate future expansions and allow co-location with other public agencies with similar activities or clients when possible. Use the expansion space around new facilities for parks, commuter parking, and other interim uses that are compatible with the new facility until expansion is required.
B. Investigate co-locating County facilities with complementary uses that would create a mutually beneficial relationship; for example, locate schools with affordable
housing or libraries with parks and make other surplus County lands available for affordable housing projects.

C. Locate Fire and Rescue and Sheriff’s Office facilities in accordance with adopted response time goals and at the most strategic point in a proposed service area.

D. Locate libraries and other high traffic uses in highly visible, accessible locations with adequate automobile and pedestrian access; examples of such locations include mixed-use centers, towns, and villages.

E. Integrate housing, human services facilities, and other services for special needs populations in the Urban, Suburban, and Transition Policy Areas, Towns, and JLMAs to provide ease of access to associated commercial services, jobs, and amenities.

F. Link new facilities and adjacent neighborhoods with sidewalks, greenways, and trails.

G. Locate new public facilities in western Loudoun in close proximity to the Towns and JLMAs when suitable land is available and locations can meet response time and other service standards.

H. Establish and maintain effective levels of public open space in all residential and mixed-use communities.

I. LCSB will determine the need for new public school sites and facilities in Loudoun County. The County will coordinate with LCSB to identify suitable sites based on the Loudoun 2040 Comprehensive Plan and its land use and growth policies in concert with LCSB’s standards and levels of service as adopted by the Board of Supervisors.

J. The County will acquire school sites in advance of LCSB’s recognized short and long-term future needs to minimize school transportation costs and to structure future planned growth.

Strategy

1.4 Encourage partnerships that contribute toward significant, meaningful, shared public facilities.

Actions

A. Support and encourage partnerships that develop sustainable housing for special needs populations, including the elderly, the mentally and physically handicapped, low income persons, and the homeless.

B. Support the acquisition of land and development of facilities such as the Potomac Heritage National Scenic Trail.

C. Work with the United States Department of the Interior, the Virginia Tech Conservation Management Institute, the Virginia Department of Historic Resources, NOVA Parks, and other local, regional, and state organizations and the incorporated Towns to define and recommend areas for open space preservation and development of a trail network that links the County’s natural, historic, and recreational resources.
D. Work with homeowners’ associations (HOA) and other property owner associations (POA) to encourage greater public access to association open space and facilities.

E. Collaborate with Loudoun Water and NOVA Parks to support safe, compatible public access and recreation at water supply reservoirs.

F. In subdivision plans for villages and clusters in the Rural Policy Area, include a plan outlining the proposed use of associated open space and suitability for rural economy uses.

G. Coordinate recreation planning efforts with the Towns to prevent duplication of services.

H. Identify opportunities, such as public/private partnerships and co-location, to work with the private sector to provide public facilities.

I. Locate telecommunications facilities and equipment associated with public safety agencies in accordance with communication utility standards and the Comprehensive Plan.

**Emergency Services Development Standards**

**Fiscal Policy 2: Enhance efficient and effective public safety and emergency services response through the implementation of appropriate development standards.**

**Strategy**

2.1 Ensure adequate fire suppression for residential uses that are not served by an on-site water source and/or are located outside minimum response times of existing stations.

**Actions**

A. Create and maintain development regulations that require an adequate water supply, such as dry hydrants or tanks, for new residential subdivisions of more than five dwelling units when an alternative water source is not available on site.

B. Encourage and offer incentives to voluntarily provide sprinklers in new residential construction.

C. As part of residential rezoning applications in areas that are subject to approved small area plans or approved Metrorail service districts, recommend that sprinklers be installed in all new residential construction that is located outside of the recommended emergency services response times established in agency services plans.

**Strategy**

2.2 Ensure adequate and efficient access for emergency vehicles.

**Actions**

A. Eliminate non-contiguous street names, duplicate street names, and sound-alike street names, and ensure that addresses reflect the access location.
B. Coordinate with Virginia Department of Transportation (VDOT) to ensure that all new traffic signals are equipped with signal preemption equipment to provide priority access to emergency vehicles responding to a call.

C. Establish a program that retrofits existing traffic signals, subject to VDOT approval, with signal preemption equipment to provide priority access to emergency vehicles responding to a call.

D. Require development applications to demonstrate adequate access for emergency apparatus.

E. Ensure that development regulations address the installation and maintenance of emergency apparatus access roads for fire and rescue resources.

F. Discourage the use of “emergency access only” gates and other roadway barriers.

**Open Space (see also Chapter 3, Natural and Heritage Resources)**

Fiscal Policy 3: Retain the County’s unique combination of urban, suburban, and rural communities by using open space to protect natural resources and habitat, to create a network of high-quality active and passive recreation spaces, and to delineate our built environments.

**Strategy**

3.1 Use contiguous linear parks, connected trails, and natural open space corridors to improve public access to open space, encourage healthy lifestyles, and link destinations throughout the County.

**Actions**

A. Build on and encourage links to current planned trails and park areas, placing greater emphasis on connected, publicly usable, and accessible open space and identify desired locations and connections of future trails and parks to facilitate acquisition and development.

B. Establish programs and regulatory mechanisms to increase publicly accessible open space through easements, land dedications, and purchase; ensure that such programs and mechanisms are consistent with County facilities plans.

C. Incorporate open space amenities into the design of stormwater facilities and link such facilities by trails to create a network of water-based parks and greens.

D. Ensure that new developments extend publicly-accessible trails and linear parks into and through their projects with the intent of creating a network of public trails that is consistent with the County plans.

E. Language in HOA/POA bylaws should allow public access to some or all linear parks and trails, particularly those connecting to public facilities and to outside trails or parks.
F. Establish and maintain desirable levels of usable, public open space in all residential and mixed-use communities.

G. Increase the number of access points to key trail systems from adjacent neighborhoods and destinations.

H. Seek through public purchase, proffer, donation, or third-party easement, the preservation of natural areas and the development of linear parks, recreation space, and trails.

I. Continue the Open Space Preservation Program, to the extent permitted by Virginia Code Section 15.2-2303.4, linking the loss of open space associated directly with low-density land use to the provision of open space or funds towards the purchase of open space that provides publicly accessible and usable open space as follows:

   i. In the Suburban Policy Area, residential neighborhoods or land bays proposing densities lower than 6 dwelling units per acre or floor area ratios of less than 0.4 should augment required open space with voluntary participation in the Open Space Preservation Program providing:
      a. The equivalent of 40 percent public open space in the Suburban Neighborhood place type and 20 percent in the Suburban Compact Neighborhood and Suburban Mixed Use place types, consisting of onsite open space required by development regulations and additional usable and publicly accessible open space proximate to the development, or
      b. A cash contribution, equivalent to the value of the additional open space towards the Open Space Preservation Program.

   ii. In the Urban Policy Area, residential or mixed-use land bays proposing densities less than 12 dwelling units per acre or floor area ratios of less than 0.6 should augment required open space with voluntary participation in the Open Space Preservation Program providing:
      a. The equivalent of 20 percent open space consisting of on-site open space required by the zoning regulations and design standards and additional usable and publicly accessible open space proximate to the development, or
      b. A cash contribution, equivalent to the value of the additional open space towards the Open Space Preservation Program.

   iii. Link modifications reducing on-site open space, buffer widths, or landscaping requirements with the provision of an equivalent or greater amount of open space or an equivalent or greater cash contribution towards the Open Space Preservation Program.

   iv. Use open space easements or funding provided by projects in the Urban and Suburban, Policy Areas through the Open Space Preservation Program to extend existing public trails, provide active and passive parks or to protect priority sites (see 3.1.J., below).
J. Institute a program whereby the County facilitates acquisition of conservation easements by others by providing assistance such as a revolving loan program to reduce or defer the landowner cost of establishing conservation easements. The program should emphasize protecting the priority open space areas that are identified in this Plan that are not otherwise protected.

K. Encourage protection of the following priority open space areas through conservation easements acquired by the County or others, participation in the Open Space Preservation Program, development design, and other means:
   i. Key natural and heritage resource features not already protected from development by conservation easements or regulation;
   ii. Rural areas immediately adjacent to the Towns, JLMAs, and Rural Villages that help form greenbelts and gateway buffers;
   iii. Areas adjacent to the Potomac River, Catoctin Creek, Bull Run, Goose Creek, and Broad Run floodplains, to protect water quality;
   iv. Properties on or eligible to be listed on the State or National Registers of Historic Places and within local historic districts;
   v. Corridors and sites identified for trails and parks and additions to existing parks; and
   vi. Other areas of local natural, historic, or cultural significance including but not limited to designated scenic rivers and roads, ridgelines, and battlefields.

L. Amend the zoning ordinance and development regulations as needed to permit a percentage of the open space required on an individual site to be met through off-site permanent open space that creates a more usable, desirable, or environmentally significant open space (see 3.1.J, above) that is in the same planning subarea identified in the latest Capital Needs Assessment.

Sewer and Water (see also Chapter 2, Towns and JLMAs)
Fiscal Policy 4: The County will work with Loudoun Water, and the Health Department, to ensure timely provision of central, community, or on-site sewer and water in accordance with the land use policies of this Plan. The County will encourage water and wastewater service to be provided in the most efficient & effective manner possible and promote the use of the best utility system in accordance with the policies of this Plan.

Countywide Strategies

Strategy
4.1 Implement strategies to resolve sewer and water issues in existing communities.

Action
   A. Pursue funding sources to rehabilitate homes that currently lack adequate sewer and water systems.
Strategy
4.2 Define specific service areas for utility systems to protect the viability of County land use goals.

Actions
A. Establish the geographic limits of standards-based utility service, and ensure adequate capacity and supply safeguards through the Commission Permit process prior to expanding existing service boundaries, or adding new boundaries in the case of the Rural Policy Area.
B. Prohibit connection to water distribution and wastewater collection systems when such requires crossing land outside a defined water or sewer service area.

Strategy
4.3 Prohibit the use of any standalone or community system that does not ensure long-term safe, sustainable, and environmentally sound water supply and wastewater treatment.

Actions
A. Require development proposals outside of areas served by central system facilities to demonstrate a safe, adequate, and long-term sustainable potable water supply and sewage treatment capacity in accordance with the land use policies of this Plan.
B. Encourage concentrating development away from water supply reservoirs and water supply sources.
C. Implement a pollution prevention and mitigation program to protect and improve the County’s surface water quality.
D. Permit pump-and-haul operations only as a last resort and a temporary wastewater disposal method and only to address a proven public health issue.

Urban, Suburban & Transition Policy Areas – Central Sewer and Water
Strategy
4.4 Loudoun Water will be responsible for the provision of central water and sewer service in the Urban, Suburban, and Transition Policy Areas.

Actions
A. Collaborate with Loudoun Water to ensure safe and adequate long-term water supply and wastewater treatment systems to meet County development goals.
B. Facilitate development and efficient operation of retired quarries as water supply reservoirs and protect reservoirs by establishing effective and sustainable watershed protection measures.
C. Expand the use of Loudoun Water’s reclaimed water network.
D. Require new development in the Urban, Suburban, and Transition Policy Areas to connect to Loudoun Water’s central water supply and wastewater treatment systems.
E. Encourage existing residences and communities served by onsite or community facilities to connect to central water or sewer facilities when such facilities become available via long-term financing or other incentives.

F. Assist existing communities or residences to connect to a nearby central water or sewer system if on-site water supply or waste treatment capability has deteriorated to a point where there is a potential public health risk.

G. Construct new central wastewater and water lines and facilities in a manner that causes the least environmental risk and visual disruption.

**Rural Policy Area – On site and Community Systems**

**Strategy**

4.5 Protect the rural character of western Loudoun by considering the ability of an area to support onsite or community water and wastewater systems for any areas proposed for development.

**Actions**

A. Prohibit extension of central water and wastewater service into the Rural Policy Area, except as allowed herein to address a public health threat to an existing rural community.

B. Institute a wellhead protection program in all areas not served by central system facilities to ensure adequate water quality.

C. Discourage the use of groundwater for nonagricultural irrigation such as automated lawn sprinklers and swimming pools and other nonessential purposes.

D. Maintain oversight of siting, design, installation, and maintenance of conventional, alternative, and alternative discharging on-site sewage disposal systems.

E. Require the installation of technology that treats groundwater to a surface water level of treatment standard, in accordance with Loudoun Water’s Engineering Standards Manual, as a condition of approval for development of potable water supplies in any portions of the Limestone Overlay District and/or where subsurface karst geology exists.

F. Implement an inspection and maintenance program for conventional on-site sewage disposal systems and provide homeowner educational materials on this and related well and septic safety for residents in the Rural Policy Area, particularly in the Limestone Overlay District.

**Strategy**

4.6 Collaborate with the Health Department in conjunction with Loudoun Water to identify viable alternative water supply and wastewater treatment methods to individual well, septic and drainfield-based systems, including community treatment plants and onsite treatment to support clustered residential development.
**Actions**

A. Implement water and wastewater treatment and disposal standards for alternative systems that protect water quality.

B. Allow community water and wastewater systems in the Rural Policy Area:
   i. to serve rural economy uses and residential clusters as defined in this Plan,
   ii. to solve potential public health risks, and
   iii. to serve public facilities.

C. Support construction of community systems for existing rural communities facing a potential public health risk. In such cases, the community system may be available to undeveloped lots within the existing community to support development that extends the viability of the community and is consistent with the scale, density, and character of the community.

D. Require Loudoun Water to own and operate all public community water and wastewater systems with more than 15 connections.

E. Require a Commission Permit, establishing a defined service area, prior to the construction of any community water or wastewater system.

F. Permit the extension of municipal (town) sewer and water into the Rural Policy Area to serve public facilities or to address a potential public health risk.

G. Require financing of community water and wastewater systems by the developer or by those who will be directly served by the system. A financing plan will be required to address initial capital costs and operating costs. The system must be designed, organized, and operated to be financially self-sustaining to pay all costs incurred by Loudoun Water for operation and maintenance and to provide appropriate reserves. The County may provide financial assistance in the form of loans or grants to assist in the construction of such a facility for existing rural communities if the system is needed to solve a significant public health threat.

**Solid Waste Management**

Fiscal Policy 5: Continue to implement an integrated solid waste management strategy that prioritizes reduction, reuse, and recycling of solid waste above resource recovery, incineration, and disposal into landfills.

**Strategy**

5.1 The County Solid Waste Management Plan will identify the type and level of service to be provided in the community.

**Actions**
A. Continue to ensure that the County always has an acceptable means of local waste disposal through the County landfill operations, should other waste disposal alternatives fail or become ineffective.

B. Continue to seek private sector support for the provision of current and future Solid Waste Management Services.

C. Develop a hazardous waste education program and increase residential access to the safe disposal of hazardous waste to protect groundwater resources.

D. Reduce landfill waste by promoting recycling and composting.

**Electrical**

**Fiscal Policy 6: Support expanded electrical capacity through generation facilities that use clean burning and environmentally sound fuel sources and energy efficient design.**

**Strategy**

6.1 Encourage local electrical generation in appropriate locations throughout the County.

**Actions**

A. Establish zoning regulations and design standards that permit alternative electrical generation such as wind and solar generation by and for individual users.

B. Encourage the safe grouping and burying of utility lines and facilities.

C. Work with electrical providers to identify potential high voltage distribution lines and substation locations that minimize impacts on key travel corridors, sensitive cultural and historic resources, and existing residential communities or to place high voltage distribution lines underground when approaching such areas; and where possible, use existing transmission corridors and substation sites to expand capacity.

D. Encourage the use of design techniques that will minimize the visual impact of electrical substations adjacent to major travel corridors or residential communities including the use of stealth design techniques.

E. Continue to monitor and minimize energy use in County facilities and create a program that would encourage benchmarking energy use in private buildings.

**Communication**

**Fiscal Policy 7: The County supports the development of a high-quality wired and wireless telecommunications network to serve businesses, residents, and visitors.**

**Strategy**

7.1 The County’s Strategic Land Use Plan for Telecommunication Facilities and other regulations and standards will be regularly updated to address emerging technologies, to create an environment attractive to businesses, and provide high-quality services to meet the demands of the County.
Actions
A. Review and update the County’s Strategic Land Use Plan for Telecommunication Facilities to facilitate the expansion of fiber and broadband service throughout the County.

B. Adopt zoning regulations and design standards requiring open access conduit to all development projects to facilitate future broadband extensions.

C. Establish performance standards for wireless communication facilities to minimize the need for legislative action.

D. Incorporate the capacity to locate broadband and wireless facilities into the design, approval, and construction of all public facilities.

Fiscal Management
Fiscal Policy 8: The County will link the goals of the Board of Supervisors’ adopted Fiscal Policy and the County’s Comprehensive Plan.

Strategy
8.1 Maintain a diversified and stable revenue structure by balancing residential and non-residential development.

Actions
A. Seek further revenue diversification to increase fiscal stability and thereby mitigate tax burdens on Loudoun County taxpayers.

B. Direct the majority of public investments into currently developed communities, Towns and non-residential areas of the County where development is planned according to the Comprehensive Plan and give priority to the redevelopment and enhancement of existing infrastructure, capital facilities, and services.

C. Where permitted, continue to seek private sector support for improvements or provision of current and future public facilities and sites, including proposals of cash and in-kind assistance for public facilities in addition to the timely provision of dedicated sites.

D. Seek authority from the state legislature to establish impact fees and a reasonable implementation process applicable in areas of the County where rezonings are not anticipated or where the provision of improvements and facilities through proffers associated with rezonings for new residential development is restricted by State legislation.

Strategy
8.2 Capital facility planning and budgeting will reflect anticipated needs based on forecasted development.

Actions
A. Update financial and planning tools regularly to evaluate long-term land use, fiscal, and demographic issues under the oversight of the Board and its advisory committee, the Fiscal Impact Committee.

B. Maintain long-range forecasts of residential and non-residential development, population, households, and employment.

C. Develop demographic, economic, and financial data that are used as inputs to demographic forecasts and for fiscal impact modeling.

D. Develop and regularly update the CIF – the dollar amount of the capital facilities impact measured by unit type or unit characteristics and geographic location that is calculated using County CFS and demographic inputs. The County uses the CIF to assess the capital facilities impacts of new residential development and provides a guideline for proffer negotiations during residential rezonings.

E. Regularly refine CFS, including the type, acreage, and size of future capital facilities, along with “triggers” based on population, population characteristics, or other community factors.

F. Regularly refine the CNA, including the type and number of capital facilities needed over a ten-year planning period beginning at the end of the current six-year CIP.

G. Where permitted, ensure that the users or beneficiaries of a development will finance an equitable portion of public facility and infrastructure development costs that are directly attributable to a particular development project.

H. Evaluate, consistent with the Virginia Code Sec. 15.2-2283 and 15.2-2284, the adequacy of existing and planned public facilities and services when reviewing impacts of any legislative application for more intensive use or density. To fairly implement and apply this policy, the County will consider the following:
   i. existing facilities;
   ii. facilities included in the CIP;
   iii. the ability of the County to finance facilities under debt ratios and limits established by its fiscal policies;
   iv. CFS and the effect of existing and approved development, and the proposed development, on those standards;
   v. service levels of the existing transportation system – the effect of existing and approved development and the proposed development on those service levels and the effect of proposed roads which are funded for construction;
   vi. commitments to phase the proposed development to the availability of adequate services and facilities;
vii. the availability of non-profit or HOA facilities to provide equivalent public access and programming; and

viii. other mechanisms or analyses as the County may employ that measure the adequacy of such services and facilities for various areas or that measure the County’s ability to establish adequate services and facilities.

Strategy
8.3 Until such time as the General Assembly grants authority for other options, the County will consider landowner proposals of cash and in-kind assistance to mitigate capital facilities costs associated with new development, subject to the limitations established by Virginia Code 15.2-2303.4.

Actions
A. Consider proposals of the timely dedication of land, cash, and in-kind assistance from a landowner through proffered conditions submitted in accord with Virginia Code Sections 15.2-2303 and 15.2-2297, as applicable, in the provision of public facilities identified in the CIP or CNA.

i. The County expects that such proposals of public facility and utility assistance by developers will occur in conjunction with any rezoning request seeking approval of densities above the existing zoning regulations and design standards.

B. Ensure that an equitable and a proportionate share of public capital facility and infrastructure development costs that are directly attributable to a particular development project are financed by the users or beneficiaries.

C. Apply all of the proffer policies and actions and guidelines set forth in this document only subject to and in compliance with the limitations established by Virginia Code Section 15.2-2303.4 as applicable. In its consideration and acceptance of all proffers, the County will apply the standards of Virginia Code Sections 15.2-2297, 15.2-2303, and 15.2-2303.4, as applicable, to evaluate the reasonableness of proffered conditions.

D. For those land development applications subject to Virginia Code Section 15.2-2303.4, the County shall accept only those proffers permitted or deemed reasonable under Section 15.2-2297 and not deemed unreasonable under Section 15.2-2303.4.

E. Where and to the extent permitted by law, the County will structure residential proffer guidelines based upon the respective levels of public cost of capital facilities generated by various factors such as size, location, and type of dwelling units.

F. To assist the County in an equitable and uniform evaluation of developer proffers and other proposals, for proposed densities above the specified base density for each planning policy area, which otherwise conform with the policies of this Plan, the
County anticipates developer assistance valued at 100 percent of capital facility costs associated with such increased densities.

G. The County will consider differentiating between conventional suburban housing and other types of housing such as age-restricted, accessory, and micro units, and consider commitments to small unit sizes or affordability in estimating the capital facility needs and CIF.

H. Review the Capital Policy Subarea boundaries to ensure, to the extent feasible, that they do not divide existing communities and consider service standards that provide flexibility to respond to demographics, land availability, and other characteristics of specific communities.

I. Consider developing capital standards for roads to incorporate into the CIF or providing credit against the anticipated capital facilities proffers for transportation proffers that exceed the anticipated transportation impact mitigation of the proposed development.

J. Establish the boundaries for Small Area Plans, authorized under Code of Virginia Section 15.2-2303.4, encompassing the Urban Policy Area, Suburban Policy Area, Transition Policy Area, and Leesburg JLMA, and the three Silver Line Metrorail Stations within the County. The planned land use within these Small Area Plan boundaries will reflect the land uses developed in the Loudoun 2040 Comprehensive Plan for each policy area until such time as the Board adopts more detailed plans.

Strategy

8.4 Use the following capital facilities proffer guidelines to evaluate proposed capital facility proffers subject to and in compliance with the limitations established by Virginia Code Section 15.2-2303.4 as applicable.

Actions

A. Use the following definition of “Capital Facility Proffer” to evaluate proffers: “A contribution consistent with County policies and service needs, in cash or in kind (land or improvement), that benefits County residents at large and is agreed to as a condition of a rezoning.”

To be considered a proffer based on this definition, the following criteria shall apply:

i. The proffered facility is dedicated to the County or to a local, state, federal, or regional authority or otherwise satisfies a need identified in the CFS, CNA, or CIP;

ii. The measure of credit will be determined on a case-by-case basis and may not exceed what the County would expect to supply given the CFS and the population served at the date of official acceptance of the application or at the date of reactivation of an inactive application;

iii. The contribution has a quantifiable value;
iv. The value of land contributed for public use or use as a public facility site is recognized as a capital facility proffer;

v. Land for County facilities should be conveyed to the County or its designee;

vi. The contribution would not be required under existing statutes or ordinances; and

vii. The proffer is irrevocable.

B. Seek annual adjustments for proffers involving cash contributions based on the Consumer Price Index (CPI).

C. Base density thresholds beyond which capital facilities proffers will be anticipated are specified by planning policy areas as follows:

i. Rural Policy Area: The planned density for the Rural Policy Area is implemented by the existing zoning pattern and zoning amendments are not anticipated. However, for zoning map amendment applications within existing villages and other similar applications, include capital facility contributions for units above the density permitted by current zoning regulations.

ii. Transition Policy Area: Evaluate capital facilities proffers against the base density permitted by current zoning regulations.

iii. Suburban and Urban Policy Areas: Evaluate capital facilities proffers against the base density permitted by the current zoning regulations or a base density of 1.0 dwelling unit per acre, whichever is lower.

iv. Joint Land Management Areas: Evaluate capital facilities proffers against the base density permitted by the current zoning regulations or a base density of 1.0 dwelling unit per acre, whichever is lower.

D. To evaluate proffers for public use sites, determine the per-acre value of unimproved land by a market appraisal of the site compared to properties with the same densities proposed by the applicant. The appraisal shall be conducted by an appraiser agreed to by the County, paid for by the developer, and the results provided to the County. For improved sites, consideration will be given as applicable to:

i. Site-preparation including clearing and grubbing, grading, erosion control, and related engineering and permitting costs.

ii. Project infrastructure such as stormwater management ponds, sanitary sewer lines, and major off-site and on-site roadways serving the site.

iii. A proportional share of improvements directly related to providing access to the site (pedestrian underpasses, construction of adjacent streets, trails, and sidewalks).
**Reference Maps**

Existing Facilities (Map #2018-147)

Small Area Plan Boundaries: 2018 (Map #2018-154)

Trails and Parks (Map #2018-157)

Water/Sewer Service Areas: 2018 (Map #2018-158)