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# TABLE OF CONTENTS

PURPOSE AND INTENT ........................................................................... v

CHAPTER 1: ENVIRONMENTAL RESOURCES ............................................ 1-1
  Background ....................................................................................... 1-1
  Water Resources ............................................................................ 1-1
    Policies .......................................................................................... 1-2
  Vegetation and Wildlife Resources .................................................. 1-3
    Policies .......................................................................................... 1-3
  Air Quality ....................................................................................... 1-4
    Policies .......................................................................................... 1-4
  Airport and Highway Noise ............................................................... 1-4
    Policy ............................................................................................ 1-5

CHAPTER 2: WATER AND SEWER ........................................................... 2-1
  Background ....................................................................................... 2-1
  Policies ............................................................................................ 2-2

CHAPTER 3: LAND USE AND COMMUNITY DESIGN ................................. 3-1
  Background ....................................................................................... 3-1
  Nodes ............................................................................................... 3-2
    Policies .......................................................................................... 3-3
  Interchanges ..................................................................................... 3-7
    Policies .......................................................................................... 3-8
  General Land Use ........................................................................... 3-8
    Policies .......................................................................................... 3-9
  Corridor Design .............................................................................. 3-20
    Policies .......................................................................................... 3-20
  Open Space ...................................................................................... 3-21
    Policies .......................................................................................... 3-21
  Proposed and Existing Development ............................................. 3-22
    Policies .......................................................................................... 3-22
  Interim Land Uses .......................................................................... 3-23
    Policies .......................................................................................... 3-23
  Quarries and Ancillary Land Uses ................................................... 3-24
    Policies .......................................................................................... 3-24
  Historic Resources .......................................................................... 3-25
    Policies .......................................................................................... 3-25
| TABLE OF CONTENTS  
<table>
<thead>
<tr>
<th>(Concluded)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHAPTER 4: TRANSPORTATION .................................. 4-1</td>
</tr>
<tr>
<td>Background ....................................................... 4-1</td>
</tr>
<tr>
<td>Policies .......................................................... 4-2</td>
</tr>
<tr>
<td>Rail ............................................................... 4-2</td>
</tr>
<tr>
<td>Policies .......................................................... 4-3</td>
</tr>
<tr>
<td>Bus ................................................................. 4-3</td>
</tr>
<tr>
<td>Policies .......................................................... 4-4</td>
</tr>
<tr>
<td>Park and Ride Lots .............................................. 4-4</td>
</tr>
<tr>
<td>Policies .......................................................... 4-5</td>
</tr>
<tr>
<td>Roads ............................................................... 4-5</td>
</tr>
<tr>
<td>Policies .......................................................... 4-6</td>
</tr>
<tr>
<td>Pedestrian Travelways .......................................... 4-7</td>
</tr>
<tr>
<td>Policies .......................................................... 4-8</td>
</tr>
<tr>
<td>CHAPTER 5: CAPITAL FACILITIES .............................. 5-1</td>
</tr>
<tr>
<td>Background ....................................................... 5-1</td>
</tr>
<tr>
<td>Policies .......................................................... 5-2</td>
</tr>
<tr>
<td>Recreational Facilities ....................................... 5-3</td>
</tr>
<tr>
<td>Policies .......................................................... 5-4</td>
</tr>
<tr>
<td>APPENDIX A: ROAD DESCRIPTIONS ............................. A-1</td>
</tr>
<tr>
<td>APPENDIX B: GLOSSARY OF TERMS ............................. B-1</td>
</tr>
<tr>
<td>APPENDIX C: PARK AND RIDE LOTS ............................ C-1</td>
</tr>
</tbody>
</table>
TOLL ROAD PLAN PURPOSE

Loudoun County has pursued the unique opportunity to plan a transit-oriented and economic development-oriented corridor. When the Dulles Greenway is completed, a 14.5 mile state-of-the-art toll road will connect Leesburg, the historical center of Loudoun County, with rapidly growing Washington Dulles International Airport and with the greater Washington metropolitan area. This privately constructed, owned and operated Toll Road will serve to reduce commuter traffic on crowded Route 7 and allows for roadway expansion and bus and rail service when demand warrants. The road itself is being built to the latest environmental standards and has been named the Dulles Greenway.

The completion of the road will be an economic development driving force that, coupled with the attraction of commercial growth to the Dulles Airport vicinity, will substantially develop the eastern section of the County. Presently, most of the land in the corridor is vacant, although many developments have been proposed and rezoned in the eastern segment of the planning area in anticipation of the road’s construction. During the development of the General Plan, the Planning Commission and Board of Supervisors identified the need to formulate more specific land use policies for land that straddles the roadway in order to receive maximum economic benefit from the development of the corridor. Although the eastern section of the County is currently undergoing suburban development, the next wave of development, to be triggered by the completion of the Dulles Greenway and the expansion of Dulles Airport, will bring urban, compact communities geared toward mass transit. Board objectives were identified as to what the Toll Road Plan might achieve, including encouraging concentrated, nodal development along the corridor; balancing this intense development with open space; ensuring the best economic use of the corridor; and planning for mass transit.

Development in the corridor will require an extensive supporting transportation network. In anticipation of the construction of the Dulles Greenway and its addition to the County’s transportation network, a preliminary working plan of a future area road network was devised in 1991. The Dulles Toll Road Corridor Study was drafted by County Transportation staff, the Virginia Department of Transportation, the Town of Leesburg, the Toll Road Corporation of Virginia and interested landowners and developers. The Corridor Study resulted from the concern over the inadequacy of the secondary feeder road network to accommodate increased traffic from planned land uses and the need to provide local access for properties adjacent to the Dulles Greenway. The Planning Commission suggested that the Corridor Study be reviewed, revised, and incorporated into the Toll Road Plan.

THE TOLL ROAD PLANNING AREA

The Toll Road planning area is roughly defined as the swath of land 1.5 miles on either side of the Toll Road. The actual boundaries of the planning area follow physical features, parcel boundaries and roadways. The planning area does not include land within the Dulles Airport property, the Route 28 Taxing District, or the corporate limits of Leesburg. In addition, the planning area boundary excludes the existing village of Ashburn and the planned community of Ashburn Village.
The planning area is unique in the County because it is defined by a linear road corridor which traverses several watersheds, including Goose Creek, a State Scenic River, Sycolin Creek and Broad Run. In addition, the Goose Creek Reservoir and approximately half of the Beaverdam Reservoir are included in the planning area. The existing settlement pattern in the area is scattered rural residential. Identifiable communities include Ryan, Waxpool, Sycolin and Ashburn Farm. Much of the planning area had been in agricultural use in the past. Agriculture is still prevalent in the western section of the planning area nearest Leesburg. The eastern part of the planning area, outside of the Ashburn Farm planned community, is primarily forested and open land.

Although a significant portion of the eastern section of the planning area has been rezoned for development, the planning area is largely undeveloped. To date, approximately 5,100 acres have been rezoned to commercial, industrial, office and residential uses. In addition, 846 acres of land have pending land development proposals that are on hold for various reasons. The zoned land use pattern is for industrial development in the Route 606 corridor, office and light industrial development between Broad Run and the Ryan vicinity and residential development near Ashburn. With the exception of the Luck Stone Quarry, no development activity has taken place between Route 659 and the Leesburg Urban Growth Area because this area was not planned for water and sewer extensions in the past.

The existing road network in the planning area originated from the scattered residential and agricultural pattern that historically predominated in the planning area. Most of the roads in undeveloped areas are unpaved, though developers have constructed some road improvements in the eastern section. The primary paved roads in the planning area include Route 659 running north-south along Belmont Ridge, Route 640/Ashburn Farm Parkway, Route 606 near Dulles Airport and Route 621 south of Leesburg. Other important but unpaved roads include Route 643 southeast of Leesburg and paralleling the Dulles Greenway, Route 625 through Ryan and Route 653 connecting Route 7 with Route 621 in the Leesburg Urban Growth Area.

The Leesburg Urban Growth Area was established by the General Plan to maintain and expand the historical role of Leesburg in the County by encouraging compatible growth adjacent to the corporate limits. Leesburg's Urban Growth Area abuts the eastern and southern corporate limits of the Town, with the southern boundary of the Urban Growth Area being Sycolin Creek. The County expects that the Town of Leesburg will provide utility extensions to the Urban Growth Area, which is slated as a potential annexation area to Leesburg. Coordination with Leesburg has been incorporated into the Toll Road planning process to ensure the development of a shared vision for the area. Coordination has focused primarily on land use and the planned road network.

RELATIONSHIP TO OTHER PLANNING DOCUMENTS

Loudoun County's comprehensive planning program provides the basis for land use and zoning decisions. The program consists of several interrelated components. Adopted in September, 1991, the Choices and Changes: Loudoun County General Plan embodies the County's fundamental goals and policies guiding the overall growth of the County. The General Plan serves as an "umbrella" document for more detailed land use guidelines for

Like all the area plans, the Toll Road Plan is meant to augment and make specific the policy direction set forth by the General Plan. The Toll Road Plan sets out new and modified policies that supersede any conflicting policies included in the General Plan, because the policies are specifically related to the special qualities of the planning area. Part of the Toll Road planning area traverses areas previously planned in the Dulles North Area Management Plan and the Leesburg Area Management Plan. In the Toll Road planning area, the goals and policies of the Toll Road Plan, because they have been derived from a more recent assessment of the conditions and resource opportunities, supersede the goals and policies of the previously adopted area plans which covered the same area.

**TOLL ROAD PLAN PLANNING PROCESS**

Planning for land development in Loudoun County has a strong tradition of citizen participation. Citizen committees are formed to advise the Planning Commission and the Board of Supervisors of the land use approach to pursue in a particular area of the County, because area plans will affect the character, development intensity, road locations, and public facilities of the planning area. The Board of Supervisors selected a specialized citizen's committee to advise the Commission and the Board as to how the unique Toll Road planning area should develop. The Board chose citizen members with expertise in land development, real estate, the environment, and transportation. Because the western part of the planning area includes the Leesburg Urban Growth Area, the Board felt that it was essential that the Town of Leesburg have representation on the committee. The Board requested that the Town choose representatives and Leesburg was represented by three members on the committee. The Goose Creek Scenic River Advisory Board was also represented on the committee. The committee also included non-voting representatives from the Loudoun County Sanitation Authority, the Metropolitan Washington Airports Authority, and the Virginia Department of Transportation.

The Toll Road Plan Technical Committee met weekly from mid-April, 1993 through December, 1993, to consider information provided in the Planning Area Background Report, and by adjoining jurisdictions, the Town of Leesburg, regional and State agencies, the Toll Road Investors Partnership, and technical resources. The Committee first considered citizen desires, then posed a set of 75 issue questions based on the issues raised by the public and by analysis of the technical input. The Committee crafted the Plan after discussing the issue questions and considering a variety of policy options for addressing each issue. The Plan policies, including the land use and transportation maps, were formulated by the Committee from their chosen policy options. The Toll Road Plan Technical Committee forwarded the Plan to the Planning Commission in January, 1994, following a final public comment session.
In order to identify issues of concern to citizens and to help identify planning solutions for the Toll Road planning area, the Toll Road Plan Technical Committee held a series of community workshops. The purpose of the workshops was to both inform County citizens of the Toll Road planning process and, more importantly, to solicit as much public comment as possible. The Committee used the input received at the May 3, June 7, and June 14, 1993 sessions as a basis for formulating issue areas to study in developing the Toll Road Plan mission, goals, and policies. Committee members also participated in the two public hearings for the Countywide Transportation Plan, to understand citizen concerns regarding general transportation issues. The basic concepts generated from citizen input during the public participation process included the desire for mixed use development along the Toll Road; the desire that development should be clustered in nodes of activity, with greenspace located between nodes and high densities located in the nodes; the desire that the Toll Road should develop in a parkway design; that rail should be constructed in the median of the Toll Road and other transit options should be provided; and that all development should be environmentally sensitive.

The Planning Commission held a public hearing on the Technical Committee’s draft of the plan on January 12, 1994. The Planning Commission formed a subcommittee to consider all issues raised by the public and by individual commissioners. Subcommittee review of the plan concluded in February 1995 after all issues had been addressed. The Planning Commission reviewed the subcommittee’s decisions, agreed to some minor revisions, and forwarded the revised plan to the Board of Supervisors on April 4, 1995.

MISSION STATEMENT AND PLAN GOALS

Upon consideration of public comment concerning the planning area and analysis of technical data, the specific mission, goals, and policies of the Plan have been tailored to the unique needs of the Toll Road planning area. The Plan establishes a 50 year vision of an urban corridor served by transit, but a 20 year horizon for growth in the planning area. The Toll Road Plan takes its primary direction from the mission and the goals set out in the General Plan.

A plan’s mission is its fundamental goal, its purpose or special function. The mission of the General Plan is to:

Enhance the quality of life and sense of community enjoyed by people who live and work in Loudoun County by providing guidelines and standards that ensure the orderly and balanced distribution of growth, sound fiscal and economic investment and the preservation of a healthy, functioning environment.

The mission of the Toll Road Plan, presuming that its distinct purpose is to draw and expand on the General Plan, is to:

Provide a complete living and working environment for the present and future population of Loudoun County by encouraging land use planning that takes advantage of the economic benefits offered by the Toll Road and preserves the natural environmental features of the Toll Road planning area.
A plan’s goals describe the desired future condition of the planning area and its policies describe the actions that will achieve the goals. The goals of the Toll Road Plan, like its mission, are meant to supplement and be applied in conjunction with the goals of the General Plan. There are eighteen goals.

1. Promote economic development which is compatible with the natural environment.

2. Maintain good air quality through sound land use and transportation planning and the conservation of natural resources.

3. Promote self-sustaining, mixed use communities that achieve a balance between residential and employment land uses throughout all phases of development.

4. Promote land use types and intensities which are complementary to transit center sites and interchanges.

5. Develop the Dulles Greenway corridor in a nodal development pattern by creating concentrated, urban places of high visual quality interspersed with open areas, enhanced by the natural amenities of the Toll Road planning area.

6. Create unique, compact, intense mixed-use nodes linked by mass transit along the Dulles Greenway by concentrating densities at transit stops, concentrating jobs, housing, and shopping, and integrating good pedestrian access to community features and transit services.

7. Promote multi-modal transportation services and programs, including pedestrian and bicycle travelways, park and ride lots, express bus and rail services, within the Toll Road planning area and the region.

8. Promote the design of each rail station site uniquely suited to the surrounding land uses.

9. Conserve the natural, archaeological and historic endowments of the planning area while promoting the provision of all necessary utilities and facilities in a manner which causes the least environmental, social and community dissonance.

10. Ensure that highway and aircraft noise impacts are prevented or mitigated through appropriate measures, such as land use, setbacks, berming and construction techniques.

11. Preserve naturally formed wetlands, natural habitat of endangered rare and threatened plant and animal species and protect existing trees and natural vegetation in the Toll Road planning area.

12. Promote engineering design practices that minimize flooding, soil erosion and water pollution and conserve the natural topography to the greatest extent possible.
13. Promote appropriate development, including interim land uses to assist the County in meeting the fiscal goals adopted in the General Plan.

TOLL ROAD PLAN FORMAT

The Toll Road Plan is divided into five chapters. The chapters include Environmental Resources, Water and Sewer, Land Use and Community Design, Transportation, and Capital Facilities. Each chapter includes a background description of the issue and the County’s strategy for addressing it. The Environmental Resources chapter presents the County’s protection and preservation approach for the Toll Road planning area’s reservoirs, vegetation and wildlife, and air quality. The chapter also includes policies to mitigate airport and highway noise. The Water and Sewer chapter lays out the County’s approach for serving the Toll Road planning area with public utilities. The Land Use and Community Design chapter includes the County’s development vision for the planning area. The Transportation and Capital Facilities chapters provide direction for addressing the County’s needs for adequate roads and transit facilities, and recreational, educational, cultural, human service and open space facilities based on the projected development of the planning area.
CHAPTER 1
ENVIRONMENTAL RESOURCES

BACKGROUND

Natural and environmental features are key elements that help define the character of Loudoun County and its diverse communities and landscapes. These features provide a framework for the built environment by potentially limiting development to certain areas while at the same time offering opportunities to enhance community character. Therefore, for reasons of health and safety, as well as design, the County seeks to manage its natural resources carefully. The Toll Road planning area includes a wealth of diverse environmental features that will influence community design and development.

WATER RESOURCES

The Toll Road planning area lies within the Goose Creek and Broad Run subwatersheds. The area generally north and west of Route 659 drains into Goose Creek directly or via Beaverdam, Sycolin or Tuscarora Creeks. The area south and east of Route 659 drains into Broad Run directly or via Beaverdam Run, Stallion Branch, Horsepen Run, or Indian Creek. In addition to these many streams, the planning area includes two existing water supply reservoirs in the Toll Road planning area: Goose Creek Reservoir and Beaverdam Reservoir. The Goose Creek and Beaverdam Creek Reservoirs are drinking water supplies for the City of Fairfax and the Loudoun County Sanitation Authority (LCSA).

Excluding the area within Dulles Airport and the Town of Leesburg, there are approximately 2,450 acres of floodplain in the Toll Road planning area. There are approximately 1,727 acres of major floodplain and 723 acres of minor floodplain. Major floodplain is located along the North, South, and main forks of Sycolin Creek, Goose Creek, Beaverdam Creek, Beaverdam Run and two unnamed tributaries, Broad Run, Stallion Branch, Horsepen Run, Indian Creek, and one unnamed tributary of Horsepen Run. Minor floodplain is located along unnamed tributaries that feed the major streams.

In addition to streams, reservoirs and associated floodplains, the National Wetlands Inventory maps show numerous wetlands in the Toll Road planning area. The wetlands are primarily associated with ponds and floodplain. Due to limitations in mapping, the maps do not identify all wetlands. The Loudoun County soils map shows approximately 4,280 acres of hydric soil in the Toll Road planning area. Hydric soils is one indication of the presence of wetlands. Some of the hydric soil areas may be classified as wetlands when studied in greater detail.

There will be hydrological changes as the Toll Road planning area develops. Urbanization of an undeveloped watershed has a profound effect on surface hydrology. Converting a watershed from woods and pasture to residential, suburban, and urban uses can double or
Toll Road Plan

Floodplain

- [Major Floodplain]
- [Minor Floodplain]
triple the volume and rate of surface runoff. Pavement and rooftops prevent rainfall from infiltrating into the ground while storm sewers and artificial channels accelerate the passage of runoff through the watershed. The results of uncontrolled urban runoff include sedimentation and erosion during construction, erosion of streambeds, increased flooding, and increased non-point source pollution. In addition, it is important to preserve natural floodplain areas in a vegetated, undeveloped state to prevent potential risks to lives and property and to protect the natural ability of a floodplain to filter and purify stormwater runoff.

To minimize the effects of development on water resources in the Toll Road planning area, the following policies are intended to support and enhance existing policies in the General Plan. Many of the water resources located in the Toll Road planning area are already protected by existing policies in the County's General Plan and Zoning Ordinance. In particular, the County supports the continuation of current policies protecting groundwater resources, floodplains, wetlands and water quality in the planning area. The policies in this plan seek particular protection for the Beaverdam and Goose Creek Reservoirs since these reservoirs provide drinking water to much of eastern Loudoun County, western Fairfax County, and the City of Fairfax.

POLICIES

1. Warehouse, manufacturing, industrial or other uses which generate, utilize, store, treat or dispose of solid, hazardous or toxic wastes or materials are prohibited in the Goose Creek or Beaverdam Creek Reservoir watersheds in accordance with State and Federal guidelines.

2. The County will require the use of Stormwater Management Best Management Practices (BMPs) in accordance with the Facilities Standards Manual (FSM) for all development in the Goose Creek and Beaverdam Creek Reservoir watersheds.

3. The County endorses the development and distribution of educational materials by the Soil and Water Conservation District, the Goose Creek Scenic River Advisory Board, and other agencies and private organizations concerning the protection of water quality for landowners in the Goose Creek and Beaverdam Creek Reservoir watersheds. The County encourages homeowners to properly store and use pesticides, fertilizers, and household hazardous materials.

4. The County will seek to preserve 100 year floodplains in their natural, vegetated condition. The County expects developers in the Goose Creek and Beaverdam Creek Reservoir watersheds to minimize floodplain disturbances and preserve or establish vegetated belts along stream channels.

5. The County will require a 300 foot vegetated buffer measured from the scar line around the Beaverdam Creek and Goose Creek Reservoirs in accordance with the General Plan.

6. The County will formulate a watershed protection plan by using a public and private group of citizens such as the Public Review Committee, which identifies what land
uses and density levels can be accommodated in the Goose Creek and Beaverdam Creek Reservoir watersheds without significantly degrading water quality in the reservoirs.

7. The County will depend upon State and Federal regulations to protect wetlands, including buffering and preservation.

VEGETATION AND WILDLIFE RESOURCES

The Toll Road planning area is characterized by three predominant land use types: suburban residential development, agricultural land and scattered forested areas. Agricultural land, stream valleys and forested areas support a variety of wildlife and plant life in the Toll Road planning area. As land use changes from predominantly forest and agriculture to more urban and suburban uses, large areas of wildlife and plant habitat will be lost and only the species that are most adaptable to survival in urban environments will remain.

There is one unusual habitat identified in the Toll Road planning area that supports a rare plant species. A diabase glade located on the west side of Goose Creek is considered to be "globally rare." The glade supports the unusual Trifolium virginicum ("Kate’s Mountain Clover"). The Virginia Division of Natural Heritage estimates that there are only approximately twenty populations or occurrences of Kate’s Mountain Clover in Virginia. The clover is a candidate for being listed on the State’s threatened species list. The diabase glade is a natural resource that the Toll Road Plan suggests should be preserved through the County’s Open Space Preservation Program.

The County must make special efforts to address the fragile balance between plant and wildlife habitat and development with policies that protect them. The policies in the Toll Road Plan seek to preserve and protect significant wildlife habitat by retaining food, water, cover, nesting and den sites in the planning area.

POLICIES

1. The County promotes the protection and creation of wildlife habitats by encouraging the incorporation of indigenous vegetation into the landscape design of new development in the Toll Road planning area.

2. The County promotes the preservation of existing vegetative cover and wildlife travel corridors (i.e., fence rows and stream valleys).

3. The County encourages that wildlife access to streams and other water sources be protected by preserving existing vegetation and by the planting of indigenous vegetation.

4. The County will encourage the study of uncommon wildlife species by qualified research organizations such as the Virginia Division of Natural Heritage (VDNH).
5. The County may depend upon State and Federal regulations to protect rare, unique or endangered wildlife species, and encourages the protection of rare, unique, and endangered species like the *Trifolium virginicum* (Kate's Mountain clover) by preserving the habitat in open space, passive recreation, or nature preserve areas.

6. The County will encourage a compact, concentrated development pattern in order to protect the County's vegetative and wildlife resources.

AIR QUALITY

Loudoun County is part of the Washington Metropolitan Statistical Area (MSA). The Washington MSA is classified as a "serious non-attainment" area for ground level ozone. Gasoline powered vehicles are the primary source of the volatile organic compounds (or hydrocarbons) that result in increased ozone in the Washington MSA. The Clean Air Act Amendments adopted by the Federal Government in 1990 require the Washington MSA to reduce ozone levels significantly by 1999. The County, by General Plan policy, supports the State's Implementation Program for compliance with the Federal Clean Air Act. New development in the Toll Road planning area will have an effect on air quality since the automobile is the primary means of transportation in the County. In an effort to minimize the impact of additional development on air quality in the Toll Road planning area, the County seeks to closely coordinate land use patterns with transportation facilities and improvements.

POLICIES

1. In order to improve regional and local air quality, the County will encourage reduced automobile pollution by various measures such as encouraging concentrated development with a mix of integrated land uses, providing for appropriate densities to support transit and the development of transit facilities and services, such as bus and rail service, bicycle/pedestrian trails, and ridesharing.

2. The County encourages employers to provide flexible work schedules to reduce vehicle emissions.

3. The County requires the construction of support facilities for transit and other commuter transfer connections. See Map X on page XX.

4. The County encourages the construction of bicycle and/or pedestrian travelways to employment and retail centers.

5. The County encourages the development of conveniently located elder/child care centers, including at transit centers.

AIRPORT AND HIGHWAY NOISE

The Toll Road Plan noise policies build on existing General Plan policies which seek to mitigate the negative effects of noise through a variety of mechanisms tailored to address the specific type of noise. The highway noise policies are aimed at reducing noise through
noise absorption and attenuation techniques such as buffers, berms and landscaping. The policies also seek to minimize conflict by establishing a highway noise overlay zone that would establish setbacks and standards to reduce noise levels. In addition to specific noise attenuation standards that must be met by properties located within the County's airport overlay zones, the land use policies of the Toll Road plan support efforts to minimize conflicts between land uses by directing new residential development away from the airports.

POLICY

1. The County will amend the Zoning Ordinance to provide standards for highway noise mitigation in highway noise corridors for noise-sensitive uses, such as residences, schools, churches, hospitals, nursing homes, and parks.
BACKGROUND

Loudoun County's ability to manage growth depends on the County's ability to direct growth to where it is most appropriate and where infrastructure is planned or available. One of the most important influences on growth and development is the availability of sewer and water service. Because central sewer and water is generally a prerequisite for most forms of urban and suburban development proposed in the Toll Road planning area, it is important to assure that utility improvements are coordinated with proposed development.

The entire Toll Road planning area is either already served by public sewer and water lines or is planned for public sewer and water service in the future. The portion of the Toll Road planning area located east of Route 659 was planned for central utilities in the early 1980s during development of the Dulles North Area Management Plan (DNAMP) because soils in the area could not support the density and intensity of proposed land uses. Additionally, the entire Broad Run watershed, including portions of the Toll Road planning area, is subject to State Water Control Board policies that limit the use of certain alternative wastewater treatment systems because of stringent requirements regarding the quality of sewer plant discharge. The western portion of the Toll Road planning area, located in the Goose Creek watershed, was designated by the General Plan as an Urban Growth Area and is planned for a mix of urban and suburban uses by the Toll Road Plan. Therefore this area will require public sewer and water service in the future.

The Loudoun County Sanitation Authority (LCSA) was created in 1959 for the specific purpose of providing sewer and water service to unincorporated areas of Loudoun County and currently provides sewer and water service in the planning area to developments located east of Route 659. The LCSA has not finalized plans for sewer and water service for those portions of the Toll Road planning area between Route 621 and Route 659, outside the Leesburg Urban Growth Area. The LCSA has stated that there is little question that sewage plant capacity will be available to serve the area. The LCSA and Loudoun County currently have an agreement with the Blue Plains plant in the District of Columbia to provide sewer capacity until the year 2000 and negotiations are underway to extend the agreement to the year 2005. The LCSA predicts that a new sewage treatment facility planned for eastern Loudoun, the Broad Run Wastewater Treatment Facility, will be fully operational by the year 2000. The first phase of the Broad Run Wastewater Treatment Plant (ATW) will accommodate approximately 10 million gallons per day (mgd) of sewage capacity and at completion will accommodate 40-60 mgd.

The LCSA anticipates that the water capacity will be available to serve the County's needs in the Toll Road planning area from a number of sources. First, the County has an agreement with the City of Fairfax to obtain water from the Goose Creek Reservoir. Second, another agreement is in place between the LCSA and Fairfax County to obtain
water from the Corballis facility which is in Fairfax County. Third, the LCSA is planning a facility adjacent to the Potomac River in Loudoun County. These three sources will adequately meet the County's water needs. At the present, the County is finalizing plans to extend a water main from Route 659, west, to Route 621. This facility will provide service to County residents living in the vicinity of the County landfill and will also serve the western portion of the Toll Road planning area.

The responsibility for providing sewer and water service in the Toll Road planning area will be shared by the Town of Leesburg. The Town of Leesburg currently provides service within the corporate limits and the Town is designated by the General Plan to provide sewer and water service within the Leesburg Urban Growth Area, extending from the current corporate limits to Cucolin Creek. Several expansions of the Town's existing wastewater treatment plant are planned which will bring the ultimate capacity of the plant to 10 million gpd, enough for the wastewater needs of the Town until approximately 2010. This ultimate plant capacity may not meet the needs of all development projected in the Urban Growth Area. The Town has the option to expand its current facilities or to enter into an agreement with the LCSA to provide sewer and water service within the Urban Growth Area. Likewise the LCSA has the option of entering into an agreement with the Town or another provider to provide service west of Route 659.

The extension of sewer and water service in the western portion of the Toll Road planning area will be funded jointly by the LCSA, the Town, the development community or a combination of them. Over 80% of the improvements and extensions to the County's central sewer and water facilities in the 1980s were financed and constructed by the development community through sewer and water proffer agreements. It is LCSA policy to reimburse developers for improvements beyond what is required for their own development as users hook into the system. Due to the current economic downturn, the County also anticipates that some capital improvements may be funded through new innovative financing techniques such as sanitary districts and developer consortiums.

Recognizing the importance of sewer and water to successful development of the Toll Road planning area, the County proposes to provide flexibility to landowners as well as service providers. The policies recommend that the entire Toll Road planning area be designated for sewer and water service immediately, although phasing may occur within individual developments or due to market conditions. Additionally, the County may provide some opportunity for small scale business developments to occur prior to the completion of central public sewer and water facilities, through the use of alternative systems, to promote economic development opportunities in the corridor as soon as possible.

POLICIES

1. The entire Toll Road planning area will be designated for central water and sewer provision without utility or land use phasing. The County will encourage voluntary phasing through proffers or conditions associated with individual land development proposals.

2. All new residential and non-residential development in the Toll Road planning area will be served by central utilities.
3. The County may permit the development of interim small scale, non-residential uses on alternative wastewater treatment systems, if the property owner agrees to discontinue use of the system when central utilities are available. Applicants seeking a non-residential rezoning and proposing to use an interim wastewater treatment system will be required to demonstrate commitment to funding and constructing an appropriate share of the proposed permanent central sewer system.

4. Extensions of utilities to properties contiguous to the Toll Road planning area may be permitted in accordance with applicable General Plan policies.

5. The development community shall be principally responsible for financing central utilities for new development. The LCSA will continue to reimburse the development community as users tap into the system. The County may participate with the private sector in the provision of utilities through a variety of mechanisms in an effort to encourage preferred land use patterns.

6. The LCSA will be the primary provider of utility service for the Toll Road planning area. The Town of Leesburg will provide service to the Leesburg Urban Growth Area. Through a mutual agreement among the Town, the County and the LCSA, the Town of Leesburg may provide service to areas west of Goose Creek, while the LCSA will provide service to the rest of the Toll Road planning area.
CHAPTER 3

LAND USE AND COMMUNITY DESIGN

BACKGROUND

An underlying premise of the County's general land use strategy is to balance employment, transportation, and housing opportunities to provide the greatest environmental and economic efficiency. The Toll Road planning area provides a unique transportation and economic development opportunity to the County's land use strategy by offering such resources as the Dulles Greenway; nine planned interchanges with major north-south connector roads; the promise of transit facilities, including park-and-ride lots, bus service, and rail in the median of the Toll Road, and Dulles and Leesburg Airports. In order to take best economic advantage of these unique resources a concentrated, compact land use pattern has been devised to ensure economic growth in the planning area and support the viability of transit service.

The land use strategy for the Toll Road planning area is designed to promote compact development at interchange locations and transit facilities. This approach will optimize the opportunities offered by these locations on the Dulles Greenway. The highest intensity development in the planning area will occur at nodes, planned areas of the corridor served by transit (bus and, eventually, rail) and at the interchanges, where the north-south connector roads join the Dulles Greenway. These two different types of locations, associated land uses and transportation resources separate automobile-oriented land uses from transit-oriented land uses by providing the balanced land development scheme envisioned for the planning area. The development of nodes and interchange areas will promote the efficient use of land in terms of development pattern and service provision, the efficient, uncongested functioning of the Dulles Greenway and feeder road network, and the viability of transit for Loudoun County. The clustering of the highest densities in the planning area adjacent to the Toll Road should maximize its function as a transportation facility and ensure its economic development.

The location and definition of land use designations for the Toll Road planning area are based on the General Plan. The Plan calls for the development of the Business, Industrial, and Residential Communities explained in the General Plan. Given the important resources associated with the planning area, new concepts in land use have been determined, including Nodes, High Density Residential, and Business Employment. The planning area's relationship to Dulles Airport prompted modification of nearby land use designations. To promote the expansion of the Airport and capture the expected growth of ancillary businesses, the County designates the eastern end of the planning area as a Business Employment Community. In recognition that the intensity of uses anticipated for the Toll Road planning area will evolve over time, the County allows for the location of large scale, "special" uses which may have an impact on surrounding uses and for interim land uses.
Community design in the Toll Road planning area builds on the design principles and policies outlined in the General Plan, with additional guidance for design adjacent to the Dulles Greenway. The physical pattern of development will establish a sense of community by addressing convenience, comfort, service, stability, amenity, identity and character. The design of nodes will have a significant impact on the appearance of development along the road as well as the attractiveness of the corridor for economic development. The opportunity in the Toll Road corridor for concentrated development due to bus and rail service will generate physical form and community types that are unprecedented in Loudoun County. High density, pedestrian-oriented urban environments will be designed as pleasing environments to ensure their success. Property owners that have approved but unbuilt projects have the opportunity to maximize the availability of transit services through redesign of approved projects.

NODES

The purpose of nodal development is to concentrate land use intensities to limit sprawl and reduce public costs; to provide the "critical mass" needed to support bus and rail transit; to provide a development alternative which promotes the separation of automobile-oriented land uses from transit-oriented land uses; and to maintain the efficient operation of the Dulles Greenway. Nodes will be transit-oriented and may serve several different functions. A Node may develop as an employment center, consisting of offices and support services, or as a special destination, consisting of a convention center and hotels, or as an end-of-the-line transit center, consisting of a Regional park-and-ride lot. Nodes may also consist of a mix of high intensity land uses including residential, offices, large-scale institutions, entertainment and cultural centers, daycare and other business and residential support services. Nodes will provide for the mix of uses sufficient for people to live and work within the node and provide enough land use intensity to accommodate transit and create destination employment centers. The County envisions that nodes will be mixed use in character in all locations except for those located within Business Employment areas. These nodes will not have a residential component.

Nodes will be sufficiently separated along the Dulles Greenway to allow the development of low density land uses and the protection of sensitive environmental features between them. This will ensure that the node remains distinct and that the Toll Road is not overly congested. Nodes will be located between Toll Road interchanges so that conflicts with "through" traffic are eliminated, interchanges are not overburdened, and so that the nodes will eventually be served by rail transit operating from the Toll Road's median. The location of nodes will be determined when a proposed node meets a set of locational criteria. Depending on the planned location of the transit stop, nodes can be located on the north side or the south side of the Toll Road or could straddle the road. If a transit stop is located outside of the median of the Dulles Greenway, the node should be located completely on the same side of the roadway. If the transit stop is located within the median of the roadway, the node may be located on both sides of the roadway. A joint public-private partnership is encouraged in the planning of individual nodes and all property-owners are encouraged to work together in fashioning a unified development plan for nodal areas.
Nodes will be composed of a core and an outer-core. Transit stops will be located at the center of the core. The node will encompass an area no greater than a seven minute walk from node edge to transit stop to ensure compact development, with reliance on transit and pedestrian circulation. The highest land use intensities will be located close to the transit stop at the core of the node. Land uses diminish in intensity as they increase in distance from the transit stop. The node will be surrounded by a secondary area, providing for an additional density transition from the intense nodal development pattern to the less intense development outside the node.

The development intensity of a node will be phased when road and transit capacity can support it. The County will consider density increases when there is adequate transportation capability to handle the associated traffic increases. The County will continue to negotiate the phasing of the development intensity of nodes based on the phased improvement to the transit network planned to serve the node--roads, bus, and rail. Each density phase can be achieved when the next level of transportation capacity is planned, programmed, designed, and fully funded for construction either by public subsidy, a joint public/private venture, a consortium of property-owners, or the private sector, in order to ensure adequate transportation capacity.

POLICIES

1. High density development will occur in concentrated, mixed use nodes located along and fronting the Dulles Greenway.

2. The locations for nodes will be determined when a proposal for the development of a node complies with the policies of this Plan and meets these seven criteria.

   a. The location provides road access with adequate capacity and a network which supports bus transit to the transit stop located at the center of the node ensuring timely, efficient transit service.

   b. The location is between interchanges, so that the intensity of the nodal development is supported by two interchanges, and so that auto-oriented land uses are conveniently separated from transit-oriented land uses. When rail serves the node, the rail can either leave the median of the Toll Road or remain in the median and not be hampered by the configuration of the road network. Toll Road interchanges should not be congested by the high density land use planned for the node.

   c. There is sufficient land area to support the development needed to sustain bus and rail transit and the size meets the node size policies included in the Plan.

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1 The seven minute walk is an accepted transportation planning measurement of the time and distance that the average transit user will walk to the transit service.
d. The location has minimal environmental constraints, such as major floodplain, steep slopes, and reservoirs.

e. The location will not negatively affect established neighborhoods by promoting through traffic and other such intrusions to the neighborhood.

f. The location can clearly provide a transit opportunity which can be engineered to serve the node, including accommodating rail in the median of the Toll Road.

g. Because of the planned land use intensity, the location harms neither the planned regional road network nor planned regional transit facilities.

3. The first two nodes will be located to the west of the Route 606 interchange and between the Route 607 and Route 772 interchanges or where the rail station is located as shown on the Potential Node Location Map. Nodes located in the Business Employment area are anticipated to develop with a mix of non-residential uses. Proposals for the development of nodes in addition to these two, will be considered upon evaluation of the fiscal impact of the proposed node as well as conformance with the nodal development policies included in the Toll Road Plan.

4. The area located between the Route 606 and the Route 607 Toll Road interchanges could be considered for a potential node site.

5. Nodes may not be located between Goose Creek and Sycolin Creek until a Dulles Greenway interchange with Route 643 is designed and scheduled for construction.

6. The area which could accommodate nodes is depicted on the map on page XX.

7. Nodes will be located between the Dulles Greenway interchanges. Node edges will be located no closer than 1500' from the center point of an interchange.

8. Nodes will be located completely either on the north or south side of the Dulles Greenway.

9. The land use mix (measured as a percentage of the gross land area) in the nodes will generally comply with the following ratios:

<table>
<thead>
<tr>
<th>Land Use Type</th>
<th>Min. Req.</th>
<th>Max. Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Traditional or Urban neighborhoods</td>
<td>0%</td>
<td>50%</td>
</tr>
<tr>
<td>b. Regional office</td>
<td>0%</td>
<td>50%</td>
</tr>
<tr>
<td>c. Light industrial</td>
<td>0%</td>
<td>40%</td>
</tr>
<tr>
<td>d. Regional office/light industrial combined</td>
<td>20%</td>
<td>50%</td>
</tr>
<tr>
<td>e. Commercial retail and services</td>
<td>10%</td>
<td>30%</td>
</tr>
<tr>
<td>f. Public parks, civic and open space</td>
<td>15%</td>
<td>no max.</td>
</tr>
</tbody>
</table>
10. Nodes can be located opposite each other on either side of the Toll Road. In this situation, the transit facility may be located in the median of the Toll Road, serving both nodes.

11. Nodes should contain a mix of uses which includes three or more significant tax producing land uses that are mutually supporting.

12. The County will encourage the development of a mix of housing types, densities, and building types in nodes.

13. To allow design flexibility, modification of current buffering, screening and setback policy and regulations may be permitted when justification can be made that these modifications further the land use and community design goals outlined in this Plan.

14. Nodal land uses should be located within 1000' of each other to ensure a compact development pattern.

15. Automobile-oriented land uses such as building supply, nursery operations, auto dealers, large scale, single-story retail uses, truck terminals, warehousing, golf courses, service stations, furniture stores, drive-in restaurants and banks will not be located in nodes, but where designated in the General Plan.

16. The County will encourage the formation of public-private partnerships to ensure the integration of the mix of uses to be developed in nodes especially when multiple land owners are involved.

17. Nodes will be 40 to 160 acres in size.

18. To encourage revitalization, transit access, and compact development along the Toll Road, a small node, less than 40 acres, can be developed under certain circumstances: if the proposed node is located where there is existing or planned development which is complementary in use, design, and pedestrian connection to adjacent existing and planned uses. The County anticipates that the small node will be proposed to be developed on infill and redevelopment sites, where infrastructure and compatible existing development is in place.

19. The boundaries of a node will vary to correspond with physical and natural barriers that limit pedestrian connections and movement. Limiting factors may include topography, major arterials, floodplain.

20. Nodes will consist of a core and an outer-core.

21. Transit stops will be located in the center of the core.

22. Node core sizes will range from 25% to 50% of the node.

23. The core will contain the highest land use intensities in the Toll Road planning area. The core may contain a mix of land uses including employment and commercial retail
uses, restaurants and personal services, and residential uses. Use intensities will step-down from the core to the outer-core to the secondary area.

24. Nodal land use intensity shall be phased as alternative modes of transit are available. Use intensities may increase as the specified mode of transit is planned, scheduled, designed, and funded to serve the node. The density for nodal development when served only by roads is up to 16 net dwelling units per acre for residential development and up to .6 FAR for non-residential development contingent upon the availability of utilities, pedestrian and bicycle travelways, public facilities, conformance to the community design and growth management policies of the General Plan and the Toll Road Plan. When bus service and facilities are planned, scheduled, designed, and fully funded to serve the node, residential densities may increase above 16 net dwelling units per acre up to 32 net dwelling units per acre and a non-residential FAR above .6 up to 1.0 contingent upon the availability of utilities, pedestrian and bicycle travelways, public facilities, conformance to the community design and growth management policies of the General Plan and the Toll Road Plan. When rail transit and facilities are planned, scheduled, designed, and fully funded to serve the node, residential densities can increase above 32 dwelling units per net acre up to 50 net dwelling units per acre and a non-residential FAR above 1.0 to 2.0.

25. Core land uses should include convenience retail uses and civic uses, such as public plazas, libraries, day care and postal services.

26. Mixed uses are encouraged in multi-story buildings in the core.

27. The outer-core will consist of the land located between the core’s edge and the node’s edge.

28. Major access roads will be located on or near the periphery of the node to avoid conflict with transit services and pedestrian traffic. (Reference Policy 1 on page 4-4.)

29. Proposals for the development of a node should include a unified, coherent concept plan showing the type and scale of uses, densities and the physical and functional integration of proposed land uses, including the pedestrian connections between uses and transit stops.

30. The County will encourage the cooperation of all land owners in the development of nodes to ensure conformance with the nodal development concept set forth in the Toll Road Plan.

31. The secondary area will consist of the land located between the node edge and approximately 1/2 mile from the transit stop.

32. The secondary area is meant to provide a transition area between the high density node and the lower density development pattern outside of the nodes. Land uses located in the secondary area will include lower density residential uses and auto-oriented commercial and industrial uses inappropriate for a transit-oriented node.
Potential Node Locations

Note: The area between Rt. 606 and Rt. 607 has been designated as a potential node site based on the potential for a transit facility located on airport property.
33. Secondary areas should provide land uses which complement and support nodal land uses.

34. Large recreation facilities, park and ride lots and schools are appropriate for secondary areas.

35. The secondary area street network should complement and support the core area street network by providing multiple and direct vehicular and pedestrian connections to the node and to the transit center.

36. Secondary areas will be permitted to develop to a maximum density of six (6) dwelling units per net acre depending on the availability of bus service to the node, roads, utilities, and a full complement of public services and facilities.

37. Secondary areas will be permitted to develop to a maximum density of nine (9) dwelling units per net acre depending on the availability of rail service to the node, roads, utilities, and a full complement of public services and facilities.

38. In nodes and other areas planned for mixed-use development, the County anticipates that the residential component will be phased to be developed in conjunction with the non-residential component so that a mix of residential and non-residential uses is provided as the project is built-out.

INTERCHANGES

The land uses located at the interchanges of the Dulles Greenway are meant to serve the automobile-oriented land uses that require good road access. The interchanges offer locations providing good visibility from the Toll Road and office development, large shopping centers, and townhouses and apartments are planned to develop there. Higher intensity land uses, through clustering buildings, noise attenuation in construction, and other design techniques, can overcome the negative effects of locating next to a high speed roadway. The nine planned interchanges of the Dulles Greenway offer the opportunity for the development of a variety of land uses at use intensities provided for by the General Plan and the Toll Road Plan, including Industrial, Business, Business Employment, High Density Residential, and Residential.

POLICIES

1. Land use at interchanges shall be in accordance with the land use map on page XX.

2. The future interchange of Route 643 with the Dulles Greenway is planned to include High Density Residential in its two southern quadrants at the time that the interchange is designed and scheduled for construction. Until then, the land use designation for the interchange area is Residential Community.
GENERAL LAND USE

The County promotes the development of sustainable mixed-use communities in the Toll Road planning area, as envisioned by the General Plan. However, two new land use designations that are not mixed use communities, Business Employment Communities and High Density Residential Communities, are also planned for the corridor. The three distinct community types defined by the General Plan and applicable in the planning area include Residential, Business and Industrial Communities. More specifically, Suburban Communities, allowing densities up to three dwelling units per net acre; Traditional Communities, allowing densities up to four dwelling units per acre are permitted in the planning area. Although Traditional Communities are the preferred development pattern in the Toll Road planning area, Suburban Communities may be located within the area where they are compatible infill development or adjacent to existing Suburban Communities. Nonresidential development, such as Regional Office, Regional Commercial, Light Industrial Business Communities; and General Industry, Extractive Industry, and Heavy Industry Industrial Communities, as defined by the General Plan, can also be developed at certain locations in the Toll Road planning area. In addition, special uses such as large scale sports, tourist, institutional or employment facilities, may be located within the planning area as envisioned by the General Plan.

Two new community types are afforded as well, given the specific land development goals identified for the planning area. The new community types include High Density Residential and Business Employment. High Density Residential Communities allow densities up to 24 dwelling units per net acre and can include a Residential Neighborhood Center (as defined by the General Plan). High Density Residential Communities will involve the development of townhouses and apartment units and will be located at interchanges of the Toll Road where road access is sufficient to handle the traffic impacts.

Business Employment Communities will develop much like Business Communities, but without a residential component. Property in Business Employment Communities may be developed as either Regional Office Communities or as Light Industrial Communities. The eastern end of the Toll Road planning area is designated for Business Employment uses to provide ample land for expected airport-related development, to limit residential encroachment on the Airport and adjacent industrial uses, and to provide opportunities for combinations of regional office, light and flex-industrial uses near the Airport. The County recognizes the importance of Dulles Airport for future economic development. Approximately 55% of the nonresidential development anticipated in the County will result from industrial or flex-industrial uses, most of which will be Airport-related. Demand for this type of development is expected to be strongest in the eastern end of the planning area, hence the reason for the special designation of Business Employment in that area.
POLICIES

1. The County will encourage the development of mixed land uses as described in the General Plan for the entire Toll Road planning area. The land use pattern will generally conform with the land use map on page XX.

2. The County will promote the development of Business Employment uses, including office and light industry, close to the Dulles Airport which include a mix of compatible and mutually supporting uses. Business Employment Communities are designated on the land use map on page XX.

3. The land use mix (measured as a percentage of the gross land area) in the regional office areas of Business Employment Communities will generally comply with the following ratios:

<table>
<thead>
<tr>
<th>Category</th>
<th>Min. Req.</th>
<th>Max. Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Traditional or Urban neighborhoods</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>b. Regional office</td>
<td>50%</td>
<td>70%</td>
</tr>
<tr>
<td>c. Commercial retail and services</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>d. Light industrial</td>
<td>0%</td>
<td>40%</td>
</tr>
<tr>
<td>e. Public and civic</td>
<td>5%</td>
<td>no max.</td>
</tr>
<tr>
<td>f. Public parks and open space</td>
<td>5%</td>
<td>no max.</td>
</tr>
</tbody>
</table>

4. The land use mix (measured as a percentage of the gross land area) in light industrial areas of Business Employment Communities will generally comply with the following ratios:

<table>
<thead>
<tr>
<th>Category</th>
<th>Min. Req.</th>
<th>Max. Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Traditional or Urban Neighborhoods</td>
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</tr>
<tr>
<td>b. Commercial retail and services</td>
<td>0%</td>
<td>10%</td>
</tr>
<tr>
<td>c. Regional office</td>
<td>15%</td>
<td>40%</td>
</tr>
<tr>
<td>d. Light industrial</td>
<td>50%</td>
<td>75%</td>
</tr>
<tr>
<td>e. Public and civic</td>
<td>5%</td>
<td>no max.</td>
</tr>
<tr>
<td>f. Park and open space</td>
<td>5%</td>
<td>no max.</td>
</tr>
</tbody>
</table>

5. To provide incentives to attract airport-related uses, the County will establish Airport Economic Enterprise Overlay Zones. The purpose of the zones is to promote the development of uses which support, are compatible with, and enhance airport operations.

6. The County will apply the goals and objectives of the County’s Economic Development and Growth Strategy to the Toll Road planning area.

7. The County will promote the development of High Density Residential uses with densities up to 24 dwelling units per net acre at specified interchanges of the Dulles Greenway. High Density Residential Communities are designated on the land use map on page XX.
8. The land use mix (measured as a percentage of the gross land area) of High Density Residential Communities will generally comply with the following ratios:

<table>
<thead>
<tr>
<th>Category</th>
<th>Min. Req.</th>
<th>Max. Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Traditional Neighborhood</td>
<td>0%</td>
<td>30%</td>
</tr>
<tr>
<td>b. High Density Residential</td>
<td>50%</td>
<td>88%</td>
</tr>
<tr>
<td>c. Public and Civic</td>
<td>2%</td>
<td>no maximum</td>
</tr>
<tr>
<td>d. Public Parks and Open Space</td>
<td>10%</td>
<td>no maximum</td>
</tr>
</tbody>
</table>

9. High Density Residential Communities may include a Residential Neighborhood Center as defined by the General Plan.

10. The County anticipates that high density residential and non-residential development will evolve from low or moderate density development along the Dulles Greenway when transit facilities are available to accommodate a more dense and compact development pattern.

11. The County will facilitate the phasing of development linked to the capacity of the road system and to the availability of transit. Overall, residential density and floor area ratio (FAR) caps should be determined which are tied to adequate roads and transit.

12. Residential developments can include local commercial, employment, open space, civic uses, and recreational facilities. The following five criteria should be used to evaluate the different uses.

   a. Employment uses may include office and light industrial uses provided:
      i. Activities such as storage, assembly, and display are completely enclosed and there is no noise, vibration, odor, or other undesirable emissions;
      ii. Industrial traffic does not pass through residential neighborhoods;
      iii. Proposed designs feature a pedestrian-oriented scale, and convenient access for local residents;
      iv. Associated activities such as parking, signs, lighting, waste storage, and loading activities are located and designed to minimize any negative impact on adjacent uses; and
      v. Activity and operational schedules are compatible with the residential community.

   b. Open space, including natural areas, tot lots, athletic fields, parks and greens should generally be dispersed so they are conveniently located to most people in the neighborhood. In addition, the following two locational criteria apply.
i. Athletic fields should be located along collector roads and should be buffered from adjoining residents, although trails or sidewalks should provide a connection with the neighborhood.

ii. Greens and other maintained, passive parks should serve both a recreational and design function by being located in high visibility areas or in conjunction with civic uses such as schools, churches or community buildings and Neighborhood Commercial Centers where the green can serve as either a "mall" for the center or as a buffer for adjoining homes.

c. Civic uses that are appropriate within residential communities include houses of worship, community centers, elementary schools, government human services offices and facilities such as a senior cafe, daycare facilities, branch libraries, and similar uses. In addition, the following four locational criteria apply.

i. Civic uses should be located at prominent locations within the neighborhood such as the end of a street, ridgeline, or street intersection.

ii. Where possible, such uses should be located in conjunction with a Neighborhood Commercial Center.

iii. Parking, signs, lighting, and loading areas should be located and designed to have minimal undesirable impact on surrounding areas.

iv. The scale of civic uses should be compatible with the residential and pedestrian nature of the surrounding neighborhood. Large scale civic or institutional uses requiring more than fifteen buildable acres, either individually or in a multipurpose facility, should be located on the periphery of an individual neighborhood or in employment areas on roads that can accommodate the anticipated traffic volume.

d. Residential neighborhoods exceeding one hundred acres in gross area may include a Neighborhood Commercial Center. The total area dedicated to the Commercial Center(s) shall not exceed 3% of the area of the proposed development. The following four location and design criteria apply.

i. A Neighborhood Commercial Center is intended to be a compact grouping of commercial business, civic and residential uses providing convenience goods and services to residents in adjoining neighborhoods. It is also intended to create a sense of place and identity for the community.

ii. Neighborhood Commercial Centers should be located on a collector road serving adjoining Residential Neighborhoods, generally in the geographical core of an individual neighborhood or between adjoining...
neighborhoods, but shall not directly access an arterial road. Where a development proposes more than one Commercial Center, they should be clearly separated by distance or major barrier that will prevent the centers from developing into a strip development.

iii. Approval of a request to rezone property to establish a Neighborhood Commercial Center shall be contingent on the adequacy of roads and utilities, compatibility with adjoining residential development, and enhancement of a pedestrian-oriented environment.

iv. Individual Neighborhood Commercial Centers shall be limited to a single property or contiguous properties comprising approximately five acres.

e. A Town Center is a mixed use commercial development built on 30 to 60 acres of land in conjunction with larger residential developments of at least 300 acres and contingent on five criteria.

i. A Town center is intended to be a compact, pedestrian-oriented, mixed-use center that can serve as a focal point for a large residential area. A Town Center should clearly relate to adjoining neighborhoods by means of pedestrian and vehicular access, provision of recreational, cultural and social services and the compatible design of structures and landscaping.

ii. A Town Center must be at least 10,000 feet away from another Town Center and at least 4,000 feet away from a Neighborhood Commercial Center. The distance shall be measured between the two closest points. This separation may be reduced where a permanent natural or manmade barrier provides clear visual separation and eliminates the possibility of different centers merging into a commercial strip.

iii. A Town Center should be situated in one quadrant of the intersection of two arterial or major collector roads or on one side of a single arterial or major collector. The majority of the served residential community should not be separated from the Town Center by an arterial road or major collector.

iv. Approval of a request to rezone property to permit a Town Center shall be contingent on the provision of appropriate civic uses and services, the impact on existing neighborhoods and compliance of the proposal with the community design goals and policies of the County.

v. Individual commercial uses within a Town Center should not have a single-level floor area significantly larger than 20,000 square feet, with the exception of grocery stores.
13. Light Industrial and office uses are encouraged in compact parks and clusters adjacent to the Dulles Greenway, and in other non-nodal areas designated Business Community on the Land Use Map.

14. Industrial and office uses will be limited to those which do not require substantial outside storage and which have negligible harmful emissions (i.e., noise, odor, vibration).

15. Light Industrial and Regional Office developments should include employment, open space, civic uses, residential, local commercial and recreational facilities. Four criteria should be used to evaluate the different uses.

a. Residential development may be permitted in Light Industrial and Regional office developments as indicated on the land use map.

i. Residential developments may have a maximum density of 24 units per acre contingent on the availability of adequate roads, utilities, and public services and amenities, as well as compatibility with surrounding uses.

ii. Residential uses should be protected from the impacts of truck traffic generated by industrial and office development. Development proposals for new light industries shall include a plan to minimize the impact of industrial truck traffic on residential communities through appropriate routing and operational restrictions.

iii. The principal access to residential uses should not require residents to travel through employment areas except along collector streets.

iv. The residential component of the Light Industrial and Regional Office development should not be the prominent visual feature when viewed from adjacent major collector or arterial roads or from the Dulles Greenway.

v. Buffering of residential uses from employment uses in the same Light Industrial or Regional Office development shall be accomplished through transitional uses such as civic, recreational, open space, or neighborhood commercial centers. However, clear connections between different uses shall be maintained through pedestrian links, complementary design and other means.

b. Open space uses such as natural areas, athletic fields and maintained parks and greens should generally be dispersed so they are conveniently located to most people in the neighborhood. In addition, three locational criteria apply.

i. Athletic fields should be located along collector roads and should be buffered from adjoining uses to mitigate the effects of lighting, noise, traffic and other associated activities.
ii. Greens and other maintained, passive parks should serve both a recreational and design function by being located in high visibility areas, or in conjunction with civic uses or Neighborhood Commercial Centers where the green can serve as either a "mall" for the center or as a buffer for adjoining uses.

iii. Natural areas should serve as buffers between different uses or communities.

c. Civic uses that are appropriate may include houses of worship, community centers, middle and high schools, government offices and facilities. In addition, four locational criteria apply.

i. Smaller scale civic uses serving a local function should be prominently located, close to or within the residential component of an industrial or office development.

ii. Where possible, smaller civic uses should be located in conjunction with a Neighborhood Commercial Center;

iii. Larger scale civic uses requiring more than fifteen acres of land, or those which serve a regional function should be located within the industrial or office areas where traffic, noise and safety conflicts can be minimized.

iv. Parking and associated activities such as signs, loading, and lighting should be located and designed to have minimal negative impact on surrounding areas.

d. Light Industrial and Regional Office developments may include a Commercial component. Four locational and design criteria apply.

i. Commercial development is a compact grouping of commercial business uses, intended to create a sense of place and identity for the community.

ii. Commercial uses should be located on a collector road serving adjoining development, generally on the periphery of an individual industrial or office park or between adjoining parks.

iii. Smaller scale commercial uses similar to those proposed in a Neighborhood Commercial Center may serve as a transitional use between the residential community and the office or industrial areas of the development.

iv. Approval of a request to rezone property to establish a commercial use shall be contingent on the adequacy of roads and utilities and compatibility with adjoining development.
16. Regional Commercial uses are defined as large scale retail uses, other than grocery stores, with primary markets outside the Toll Road planning area and that require individual building footprints in excess of 50,000 square feet of gross leasable floor area, and shopping centers in excess of 150,000 square feet.

17. The County may approve the construction of a Regional Commercial development subject to five criteria.

   a. The proposed use has direct access to an arterial or major collector road without routing traffic through a residential community.

   b. The proposed use respects the ultimate arterial or major collector road alignment proposed in this Plan.

   c. Utilities are available to accommodate the use.

   d. Detrimental impacts on adjoining communities are minimized.

   e. The use does not interfere with the function of adjoining light industries or offices.

18. Regional Commercial developments should include employment, open space, and civic uses. The following criteria should be used to evaluate the appropriateness of the different uses:

   a. Open space uses such as natural areas, athletic fields and maintained parks and greens should generally be dispersed so they are conveniently located to most people in the neighborhood. In addition, three locational criteria apply.

      i. Athletic fields should be located along collector roads and should be buffered from adjoining uses to mitigate the negative effects of lighting, noise, traffic and other associated activities.

      ii. Greens and other maintained, passive parks should serve both a recreational and design function by being located in high visibility areas or in conjunction with civic uses.

      iii. Natural areas should serve as buffers between different uses or communities.

   b. Civic uses that are appropriate may include houses of worship, community centers, middle and high schools, government offices and facilities. In addition, three locational criteria apply.

      i. Smaller scale civic uses serving a local function should be located at prominent places close to adjacent residential development to serve as a transition or buffer.
ii. Larger scale civic uses, requiring more than fifteen acres of land or those which serve a regional function should be located within the commercial area of the development, but along its periphery where traffic, noise and safety conflicts can be minimized.

iii. Parking and associated activities such as signs, loading, and lighting should be located and designed to have minimal impact on surrounding areas.

c. Light industrial and office uses may be included in a Regional Commercial development. Three locational and design criteria apply.

i. Industrial traffic should be separated from commercial customer traffic.

ii. Smaller scale office uses may serve as a transitional use between the Regional Commercial community and adjacent uses.

iii. Signs, parking, outdoor storage, loading and similar activities and features should be located away from adjacent residential uses surrounding the development.

19. Commercial shopping centers of less than 150,000 square feet of gross leasable floor area (gla) should locate in a Neighborhood Commercial Center or Town Center.

20. Commercial shopping centers of greater than 150,000 square feet of gross leasable area should locate only in areas designated Business Community on the Land Use Map.

21. Food stores and supermarkets should locate only in Neighborhood Commercial Centers or Town Centers.

22. Land bordering Route 606 and the area around the Luck Stone Quarry on Goose Creek will be designated for industrial uses.

23. Industrial Communities may include employment, open space, civic, commercial and recreational facilities. Three criteria should be used to evaluate dissimilar uses.

a. Open space, such as natural areas, athletic fields and maintained parks and greens should generally be dispersed for convenient user access. In addition, three locational criteria apply.

i. Athletic fields should be located along collector roads and should be buffered from adjoining uses to mitigate the effects of lighting, noise, traffic and other associated activities and to prevent unplanned pedestrian traffic to nearby uses.

ii. Greens and other maintained, passive parks should serve both a recreational and design function by being located in high visibility areas or in conjunction with civic uses.
iii. Natural areas should serve as buffers between different uses or communities.

b. Civic uses that are appropriate may include large scale government offices and facilities of an industrial nature. In addition, three locational criteria apply.

i. Civic uses should be located where traffic, noise and safety conflicts can be minimized.

ii. Parking and associated activities such as signs, loading, and lighting should be located and designed to have minimal impact on surrounding areas.

iii. Pedestrian activities associated with civic uses should be clearly separated from nearby industrial uses.

c. Industrial Communities may include a commercial component. The total area dedicated to commercial uses shall not exceed 30% of the area of the proposed development. Four locational and design criteria apply.

i. Commercial development should be a compact grouping of commercial business uses primarily intended to serve industries in the vicinity.

ii. Commercial uses should be located on a collector road serving adjoining development, generally on the periphery of an industrial or office park, or between adjoining parks.

iii. Smaller scale commercial uses similar to those proposed in a Neighborhood Commercial Center may serve as a transitional use between industrial and surrounding uses.

iv. Approval of a request to rezone property to establish a commercial use shall be contingent on the adequacy of roads and utilities and compatibility with adjoining development.

24. Heavy industrial uses are generally defined as manufacturing, resource extraction, refining and similar industries which by virtue of scale, associated emissions or activities, are not compatible with other types of development.

25. Heavy industry uses may locate in areas designated Industrial Community on the Land Use Map.

26. Residential communities should be protected from the negative impacts of traffic generated by heavy industries. Development proposals for new heavy industries shall include a plan to minimize and mitigate the negative impact of industrial traffic on residential communities through appropriate routing and operational restrictions.

27. In evaluating heavy industrial proposals, the Board of Supervisors shall determine that the following three criteria have been met:
a. Adequate public utilities and roads are provided;

b. The use has mitigated the negative impacts on the surrounding land uses and the natural and cultural environment; and

c. The use complies with the goals and policies of the County’s Comprehensive Plan.

CORRIDOR DESIGN

The County’s vision for the Toll Road corridor is to promote a high quality built and natural environment, for a pleasing experience on the Dulles Greenway. Landscaped buffers and trees will abut the roadway to provide an attractive natural buffer between the road and the buildings constructed in the corridor. The preservation of a limited amount of open space along the corridor will provide a functional and aesthetic enhancement for the roadway.

Although several options for corridor design exist, the Dulles Greenway corridor, which includes the land visible from the roadway itself, is envisioned with landscaped setbacks from the road right-of-way. The preservation of existing vegetation, supplemented by additional indigenous vegetation is the preferred method of creating a parkway sense distinctive to Loudoun County. A building setback in the corridor will provide for parks or recreational amenities to be located adjacent to the roadway. In nodal areas, reduced setbacks will provide an urban sense of place in areas of concentrated development. The reduction in required setbacks that applies to nodal areas will not apply to areas adjacent to interchanges. Although these areas may contain higher densities, these uses should not crowd the interchanges.

POLICIES

1. The minimum building and parking setback for new development adjacent to the Toll Road right-of-way including the fillets or connectors between rights-of-way lines at planned or existing intersections and all interchanges will be 150 feet.

2. Within all setbacks, minimal disturbance of existing natural resources is encouraged to provide an attractive natural buffer between the road and adjacent development. Additional vegetation may be added to enhance existing vegetation patterns, providing that the new vegetation is indigenous to Loudoun County. Disturbance of existing natural resources and/or planting additional vegetation will not be allowed along the corridor adjacent to the diabase glade.

3. Building and parking setbacks greater than 150 feet are strongly encouraged.

4. Applicants are permitted to locate pedestrian, bicycle and exercise trails within and adjacent to the setback.

5. Open space along the corridor is encouraged, particularly adjacent to sensitive environmental features. The purchase of open space easements in these areas is the encouraged method of ensuring that open space occurs in the corridor.
6. The County’s vision for the Toll Road corridor is to promote a high quality built and natural environment.

7. To reinforce the urban character in nodal areas, the building setback adjacent to the Toll Road may be reduced to the minimum required in the underlying zoning district. Flexibility should be provided for zoning district setbacks in nodal areas.

OPEN SPACE

The County has placed a high priority on the preservation of open space. The General Plan addresses open space with several policies, backed with proffer guidelines, which apply in the Toll Road planning area. The Toll Road planning area will contain some of the most concentrated development in the County and will balance this with open space resources that maintain the high quality of life for residents and employees in the planning area. Priority areas for open space in the planning area include those adjacent to Goose Creek, Broad Run and Sycolin Creek, the rural areas at the western and southwestern edge of the planning area, the part of the Phase III area located in the Toll Road planning area, environmentally-sensitive areas like the diabase glade. Density transfers are encouraged from those areas identified in the General Plan as well as any area outside a UGA zoned for rural residential use (CR-i, CR-2, etc.) and from those parts of the Dulles South planning area not served by utility extensions. Preservation of open space can be accomplished through on-site density transfers from land adjacent to a floodplain or environmentally, historically, or visually significant land areas. Off-site density transfers through the purchase of open space easements for land that is environmentally, historically or visually significant will be accomplished within the planning area as well.

POLICIES

1. The County encourages that open space be an integral part of new residential and non-residential communities in the Toll Road planning area. Therefore, all new development projects and applications for rezonings will be reviewed for compliance with open space requirements outlined in the Zoning Ordinance and the Open Space policies and Open Space Proffer Guidelines in the General Plan.

2. The County will seek to preserve natural and open space resources in the Toll Road planning area through on-site and off-site density transfers in conjunction with the Open Space Proffer guidelines included in the General Plan. Natural and open space resources include the rural areas at the western and south-western edge of the planning area, the Phase III planning areas located in the Toll Road planning area, environmentally-sensitive areas like the diabase glade, Goose Creek, Sycolin Creek, and Broad Run.

3. The County will use cash contributions to secure permanent conservation easements in priority open space areas and unique habitats such as the diabase glade near Goose Creek.

4. Densities ranging from four (4) dwelling units per net acre up to and including 50 dwelling units per net acre may be considered by the County for voluntary
participation in an open space preservation program. In addition to meeting the proffer guidelines outlined for densities up to four (4) units to the acre, the County anticipates that 5% of all units will be associated with the open space preservation program defined by the General Plan.

5. The County encourages the clustering of development away from areas designated for open space preservation. See Map XX on page XX.

6. Density transfers are encouraged from those areas identified in the General Plan as well as several other areas of the County. Transfer areas include areas located outside of Urban Growth Areas which are zoned for rural residential use (CR-1, CR-2, etc.) and the part of the Dulles South planning area not planned to be served by utility extensions for the next eight years.

7. The County encourages the Toll Road Investors Partnership II to plant and maintain wildflowers and other appropriate ornamental landscaping in the median of the Dulles Greenway until the median is developed for another use.

PROPOSED AND EXISTING DEVELOPMENT

The County recognizes that new development adjacent to existing neighborhoods can be both good and bad. Thus, the County recommends that landowners discuss their development plans with their neighbors. The County desires to minimize any potential conflicts at an early stage in the development process. A key issue in the discussion should be the extent and nature of proposed transitional features between the existing neighborhood and the new development. The County recognizes that the small clusters of housing in the Waxpool, Ryan and Sycollin settlements are vulnerable to the effects of proposed development as are the new communities, like Ashburn Farm, which are still experiencing construction.

A significant inventory of rezoned, undeveloped land exists in the Toll Road planning area. With the adoption of the Toll Road Plan, the County may designate different land use policies than applied when the land was rezoned. New land use designations in the planning area will not change the landowner's ability to develop his property as zoned. New policies will apply when landowners choose to rezone or amend their land use concept, once the Plan is adopted. The County promotes the conformance of the proposed development with the Plan at the time of rezoning.

POLICIES

1. Existing uses in the Toll Road planning area will be accommodated by the Toll Road Plan until rezoning is proposed by the landowner. At the time of rezoning, the County will encourage the proposed land use to conform with Toll Road Plan land use policies.

2. The County will encourage sensitive physical and land use transitions between existing dwellings, farms, businesses, and communities and proposed new development. Design features may include but not be limited to extensive buffering,
separation of street entrances, redirection of traffic and complementary site design, view protection, stormwater management, and the protection of valuable cultural resources.

3. Prior to the submittal of development plans to the County, developers of new projects are encouraged to discuss their development proposals, especially transition features, with landowners in adjacent neighborhoods.

4. The County will discourage high density redevelopment in established, planned residential communities such as Ashburn Farm. These areas will remain designated for Suburban or Traditional residential development as indicated on the planned land use map.

INTERIM LAND USES

Depending on the rate of construction and absorption of development, interim Land Uses may develop in the Toll Road planning area. Desirable interim uses generate low traffic and require low investment by the landowner. Proposals for Interim Land Uses will be evaluated for conformance with adopted policies, compatibility with surrounding land uses, and for transportation impacts. The existing agricultural uses, located predominantly along Route 621 as well as other places in the planning area, may continue, based on market conditions, as a de facto Interim Land Use until development is appropriate and feasible. The County encourages the continuation of farming as an Interim Land Use in the Toll Road planning area.

POLICIES

1. Interim land uses may be permitted in the Toll Road planning area if they:
   a. Are compatible with existing or proposed development and are permitted in the underlying zoning district by special exception;
   b. Are low trip-generation uses or are able to mitigate transportation impacts associated with the development through conditions of approval;
   c. Do not preclude eventual development of planned land uses;
   d. Are deemed clearly interim through a special exception condition to limit the length of time the use will be permitted;
   e. Are not excluded by development covenants or pre-existing proffer agreements or special exception conditions; and
   f. Are separated or screened or both by appropriate landscaped buffers or natural features.
Toll Road Plan

Zoned Land Use

- Residential
- Commercial
- General Industrial
- Industrial
- Flex-Industrial
- Office/Research and Development

* Pending Rezonings

SCALE: 1"=10,500
1:126,000
2. The Zoning Ordinance should be amended to permit a wider variety of interim uses in the Toll Road planning area, if they are compatible with permitted, planned and proposed uses.

3. The County encourages the existing agricultural industry in the Toll Road planning area to continue as long as local farmers wish to continue farming but will not prohibit the conversion of farmland to residential communities and employment uses.

QUARRIES AND ANCILLARY LAND USES

The Toll Road planning area contains a valuable natural and economic resource in the presence of diabase rock. This hard, brittle rock is used extensively in the construction of roads and buildings. A diabase quarry, owned by Luck Stone Corporation, presently operates in the planning area along Goose Creek. Naturally, quarries must be located where the diabase or extractive resource is located and surrounding land uses must be carefully planned around the quarry site. Although quarries are an economic benefit to the County and provide employment for residents, there are many negative impacts that require mitigation for the continued quality of life of surrounding residents. Quarry and ancillary industry operation generate noise and dust pollution, blast vibrations, significant large truck traffic, long hours of operation, visually unappealing character and the possibility of surface or groundwater contamination.

Because of the economic importance of the quarries, the County has encouraged the continued operation, and in some cases, expansion of quarry facilities due to the economic benefits. In the Toll Road planning area, an operating quarry and the existence of diabase resources, coupled with planned residential and commercial development in close proximity, require a policy approach to ensure their viability and to limit any negative effects on surrounding properties. The County provides for the operation of existing quarries and the development of new quarries in the planning area given certain criteria.

POLICIES

1. The County may permit additional diabase quarry sites in the Toll Road planning area, provided that the land is located in an industrial community, appropriate buffers are installed and maintained, surrounding land uses are compatible, and a road network that is designed to support industrial traffic is constructed. All new quarries are subject to the same locational and design criteria for evaluating quarry expansion.

2. Existing quarries and ancillary uses may be expanded if:

   a. Access to the quarry site or ancillary use is provided from roads which are designed and maintained for industrial traffic; the access is located to separate the industrial traffic from residential neighborhoods and other non-industrial developments; and the quarry site shall be accessed directly from a major collector;
Toll Road Plan

SCALE: 1"=10,500
1:126,000

Potomac River
VIRGINIA

W & OD TRAIL

RT.15
RT.15 Bypass

LEESBURG

RT.7

RT.28

FAIRFAX CO.

LOUDOUN CO.

DULLES INTERNATIONAL AIRPORT

Diabase Map
b. A minimum 1000' setback from the pitwall is maintained from any existing or planned residential districts or land bays allowing residential uses. In addition, the County will develop appropriate setbacks for ancillary uses.

3. Residential builders and developers with projects in proximity to operating quarry sites will advise homebuyers of the quarry’s existence.

4. Setbacks, buffers and other methods for reducing the noise, vibration, and visual impacts associated with quarries will be determined for those uses that may develop on properties adjacent to quarries.

5. The County will amend the Zoning Ordinance to provide standards for screening, clearing and grading, tree preservation, and the mitigation of environmental impacts associated with quarries and ancillary uses.

HISTORIC RESOURCES

Loudoun County is rich in historic sites and structures that represent the heritage of the County. The Toll Road planning area contains some significant structures that merit preservation. The County has identified the need to conserve historic sites and structures in the planning area. Within a developing corridor, this will be increasingly difficult over time. Rather than require preservation and restoration of sites in the Toll Road planning area, the County will encourage preservation, reuse or the continued use of historic sites and structures. Successful reuse of properties will be an amenity to a community. Surrounding development should not detract from these resources.

POLICIES

1. The County desires to preserve the historic and archeological sites and structures in the Toll Road planning area. The County encourages the preservation, adaptive reuse or continued traditional use of historic or archeological sites and structures located on properties subject to a development request. The adaptive reuse of historic structures should further the goals and policies of this plan and be agreeable to the County.

2. Development in the Toll Road planning area that is adjacent to historic and archeological sites and structures shall cause a minimum of disturbance to the historic context of the site. Negative impacts to a historic or archeological site, such as off-site traffic, parking or lighting, should be minimized or mitigated.
CHAPTER 4
TRANSPORTATION

BACKGROUND

Adequate transportation facilities and service are important in the overall quality of life in Loudoun County. The various transportation facilities and services are closely tied with and mutually dependent upon planned land uses in the Toll Road planning area. The existing road network is inadequate to accommodate increased traffic and will need significant upgrading. Transit service (pedestrian travelways, park and ride lots, bus service, rail) is also limited and will require development in stages.

The Dulles Greenway is the major element for improving the transportation network. It will serve automobile traffic and accommodate mass transit though a continuous limited access expressway from Leesburg to Washington, DC. The Dulles Greenway will improve access to the Toll Road planning area and aid in the economic development of Loudoun County and the region by joining with Route 7 and Route 50 as a major east-west facility and will help relieve congestion on Routes 7, 28, and 50. An extensive feeder and parallel road network is planned to serve the Dulles Greenway and provide access for adjacent property owners.

A variety of transit opportunities, such as carpools, vanpools, park and ride lots, bus service, and, eventually, rail, are anticipated in the planning area. Recent rezonings have proffered rideshare facilities and programs, including land and funding for park and ride lots and employer ridesharing services. Commuter buses will access the Dulles Greenway from feeder roads and connect with other regional transit facilities. The Dulles Greenway will accommodate feeder service for commuter buses and carpools from park and ride lots located on collector roads. As long term development occurs in the form of nodes, transit service and rail may be developed to connect with the planned rail system in the existing Dulles Toll Road Corridor.

The County recognizes the important relationship between land use and transportation. A concentrated, compact development pattern of high intensity land uses is best served by bus and rail transit. The automobile better serves land uses which are dispersed, such as lower density residential and large scale retail uses. Most of the existing and zoned development in the planning area is suburban, characterized by scattered land uses dependent on automobiles.

One of the key land use strategies for the planning area is a nodal development pattern at certain locations between interchanges along the Dulles Greenway. Nodes will be served by mass transit and will accommodate a transit stop at the center of the node. Nodes will be designed to easily accommodate pedestrian movement. For nodes to function efficiently, they must be served by a pedestrian network that provides access to the various land uses in the core. Automobile-oriented uses are to be located on the periphery of nodes. The location of nodes between interchanges with transit stops will minimize conflicts with
through traffic on the Dulles Greenway and should minimize dependence on the car by reducing trip length and providing alternative transportation modes.

POLICIES

1. The County will pursue available Federal and State funding and negotiate transit-related proffers during the land development process to provide for various mass transit facilities and programs. These facilities and programs may include bus transportation between transit centers, bicycle/pedestrian trails, bus shelters, park and ride lots, and the initiation of TDM programs, such as ridesharing, carpool or vanpool matching, and reduced rate or free transit passes.

2. In order to encourage the use of transit, the County will consider reducing the minimum required parking spaces for development in nodal areas. The reductions should be based on levels of automobile occupancy or transit ridership anticipated by transit contributions and services provided by the developer.

3. The County will encourage employers to establish programs to reduce single occupant vehicle use, including flexible work hours, use of carpools, van pools and bicycles, preferential parking near entrances and free parking for ridesharing vehicles and reduced rate transit pass programs.

4. The County should allow additional density to landowners who provide for transit related services and facilities over and above needed road improvements.

5. The County will encourage shared parking in mixed use developments.

6. The Zoning Ordinance should be modified to allow for a reduction in the number of required parking spaces when transit services are provided.

7. The County requires the construction of transit facilities to support transit services and improve transit connections for transit users. Transit facilities include bus shelters, bike racks, transit stations, park and ride lots, and signage. Transit facilities are designated on the Transit Facilities Map on page XX.

RAIL

The Dulles Greenway offers a special transit opportunity that will greatly influence development in the Toll Road planning area and distinguish this area from other developing areas in the County. At present, the Dulles Greenway is the only road in the County that is planned to accommodate rail service. The Toll Road Investors Partnership II has set aside sufficient land in the median of the Dulles Greenway to accommodate two rail tracks. Actual development of a rail system will require resolution of a number of issues, including determining exactly where rail stations can be accommodated, identifying funding sources, and timing development to support rail service. For these reasons, the County's policies relating to rail transit are designed to provide maximum flexibility in the design of a rail system that will support the County's vision for the Toll Road planning area.
The land use and development strategy for the Toll Road planning area is designed to take full advantage of this future transit opportunity by supporting compact, high density nodal development around rail stations. The plan allows for rail stations to locate either within the median of the Dulles Greenway or adjacent to the Dulles Greenway in areas possible for nodal development. In these cases, rail will veer from the median of the Dulles Greenway to accommodate a rail station as the focal point for a high density nodal community. Rail service will be supported and augmented by an integrated system of related transportation opportunities such as feeder bus service, park and ride lots located within a 1/4 mile of the station, and a network of roads designed to carry commuters to and from less densely developed portions of the planning area.

Successful implementation of rail service in the Toll Road planning area will require coordination among private landowners, the Toll Road Investors Partnership II, the County, and a variety of state and federal agencies. Funding for rail service will most likely come from a combination of sources including local, State or Federal revenues as well as development proffers or private investors. Since both the funding and timing of rail service in the planning area are uncertain, the County seeks to ensure that the highest density development is phased to coincide with firm commitments to plan, design, fund and construct a rail system.

The County supports a potential regional transit center that includes a regional park and ride lot, planned to be served by bus and, potentially by rail. A site at the north of the Dulles Greenway/Route 606 interchange on Airport property has been endorsed by the County as a likely location for a regional transit facility. The State will include the site in the Dulles Corridor Rail Study to determine its feasibility as a transit center. The County encourages that additional rail stations be located in nodes. Station locations will be determined as nodes are proposed for development.

POLICIES

1. The County will encourage the development of rail in the median of the Dulles Greenway. The rail may veer from the Greenway right-of-way to serve nodal areas adjacent to the Dulles Greenway.

2. The County will encourage the redevelopment of surface parking lots to more intensive uses in the vicinity of transit stops.

3. Transit stops should be designed to provide year-round pedestrian shelters, convenient automobile passenger drop-off areas, and secure bicycle storage areas.

4. Transit stops should be designed to provide safe and convenient bicycle parking.

BUS

At the present time, bus service is limited in the Toll Road planning area. It will be important to coordinate future bus routes with regional services to the east. Although no specific future bus routes are planned, it is anticipated that the Dulles Greenway will be heavily utilized by commuter bus service with stops at adjacent park and ride facilities and
high density areas. Local bus service is also anticipated to tie together major employment and retail centers and residential communities in the County. Potential funding sources include Federal, State and local sources, ISTEA funds, and development proffers.

Bus service will provide an important transportation link in nodal areas. A bus stop at the center of the node will provide regional links to and from the Dulles Greenway prior to rail service. Regional bus service will be supported by local bus service, pedestrian access and park and ride facilities located at the edge of the nodes. The location of bus stations and surrounding land uses are important considerations in the design of efficient bus service. For frequent and efficient bus service, at least 15 dwelling units per acre located within a quarter mile of the transit stop ensures enough riders. Speed and convenience are key ingredients for local and regional bus service to the transit stop and the Dulles Greenway.

POLICIES

1. The County will facilitate the efficient movement of transit vehicles in nodal areas by establishing a priority transit corridor.

2. Developers of Urban Neighborhoods in designated Business Communities not located in nodes or at interchanges, will provide transit facilities, such as bus service, stops, and parking, and a link to nodal transit services.

3. Regional and Community Commercial Retail centers and High Density Residential areas should provide facilities to accommodate local transit service.

4. Future local bus routes will be coordinated with regional transit services established in the east.

5. The Dulles Greenway should be heavily utilized for commuter bus service. Bus stops will be established at park and ride facilities and in high density residential areas.

6. When local bus service is available, it will link major employment and retail centers with residential communities.

PARK AND RIDE LOTS

The Toll Road planning area is served by a Countywide Rideshare program which encourages and facilitates the formation of carpools, vanpools, and park and ride lots. There are currently no constructed park and ride facilities in the planning area. A combination of land, partial funding, and commitments to construct park and ride lots have been proffered in recent rezonings east of Goose Creek. In addition, a regional facility, the Western Regional Park and Ride lot has been endorsed by the County at the Dulles Greenway/Route 606 interchange. A description of the various park and ride lot proffer commitments is shown in Appendix C.

Park and ride facilities have been funded through a variety of sources, including Federal, State, local gas taxes, and private developers. The County has stated that it wishes to maintain a strong commitment to park and ride development and has allocated gas tax funds.
for park and ride development which could be used for lots adjacent to the Dulles Greenway.

Park and ride lots will be located at visible and convenient places in the vicinity of, but not immediately adjacent to, intersections or interchanges. Adequate space for parking is important, especially for facilities serving the region. Regional park and ride lots are usually located at the end point on an express bus or rail line. Regional lots serve as collection centers for a large area, serving commuters who travel long distances to use transit. The plan promotes three regional park and ride lots, to be located in the western, central and eastern portions of the planning area. In residential areas, park and ride lots are located near the trip origination point. Park and ride lots serving nodes, will be located at least a quarter mile from the transit stop, in the secondary area surrounding the nodes to avoid traffic conflicts.

The County has endorsed the designation of two sites for the location of a major, regional park and ride lot, both on Airport property. One site, north of the Route 606 interchange in the Toll Road planning area, appears likely to provide the initial parking capacity needed for a regional park and ride facility. The County is considering endorsing the site to be included in the State's Western Regional Park and Ride Study for the development of an implementation program for the facility. The site may be suitable for the western origination point of a multi-modal (park and ride lot, bus, rail) transportation system being developed to serve the existing Dulles Toll Road corridor. Regardless of location, the County supports the development of a regional park and ride lot in conjunction with the development of the County's first rail station.

POLICIES

1. Park and ride lots will be located at convenient places along the Toll Road, in close proximity to interchanges and road intersections.

2. Regional lots that are planned to serve rail ridership should be sized to accommodate planned rail ridership.

3. Park and ride lots supporting transit centers in nodes will be located at least 1/4 of a mile from the transit stop or in the secondary area.

4. An eastern regional park and ride lot should be developed in conjunction with the first rail station in the corridor.

5. A centrally located regional park and ride lot should be located within the planning area.

6. A western park-and ride lot should be located within the Leesburg Urban Growth Area in close proximity to an interchange of the Toll Road.
ROADS

The existing feeder and parallel road network serving the Dulles Greenway cannot support commercial development and can accommodate little additional residential development. The existing road network was developed to serve an agricultural community. The roads are generally narrow, include unpaved substandard segments, and need to be upgraded significantly to meet anticipated traffic demands. Existing road segments, such as Routes 643, 659, and 772, will be overburdened and may require public funding to accommodate traffic demand.

Road network improvements are needed for compatible local access adjacent to the Dulles Greenway and to ensure that feeder roads to the Toll Road accommodate increased traffic for planned land uses. In most instances, the County supports the construction of four lane divided facilities with expansion of the major collector roads to six lanes. Facilities serving local traffic may include undivided sections and reduced design speeds, where constraints warrant.

The County considers alignment flexibility as important to easily accommodate future land uses and potential changes in the Dulles Greenway. The County has identified the need for more diverse funding sources to maintain or increase current road funding levels, because of the lag time between Dulles Greenway construction and completion and the improvement of feeder roads.

The Dulles Greenway will extend approximately 14.5 miles from the existing Dulles Toll Road interchange at Route 28, to the Route 7/15 Bypass in Leesburg. The mainline of the Dulles Greenway and its interchanges are proposed for phased construction. Initially, the mainline will be four lanes. Two additional lanes can be constructed to the inside of the divided highway when justified by traffic demand. The Dulles Greenway will access the secondary feeder roads with interchanges at Routes 606, 607, 772, (East Spine Road), Claiborne Parkway (West Spine Road), 659, 653, 654, and the Route 7/15 Bypass. Two of the interchanges, Routes 654, and 653, are not anticipated as part of initial construction. Routes 654 and 653 are conditioned by the economic feasibility of making the improvement when unacceptable levels-of-service develop. The County supports the construction of a future interchange at the intersection of Route 643 with the Toll Road as well. The future Route 643 interchange will require review and approval as an additional access point, in accordance with the Virginia Highway Corporation Act.

Several of the interchanges included in initial construction are proposed for construction to less than their full section. Three lane overpasses are planned at some locations. Should sufficient traffic volumes develop which require more capacity than provided by diamond interchanges, the opportunity exists for higher capacity single-point diamond interchanges to be constructed. All of these improvements are the responsibility of the Toll Road Investors Partnership II and must begin at the time that unacceptable levels of service in traffic flow develop. The commitment to improve is conditioned by the economic feasibility of making the improvement. A determination that an improvement cannot meet this condition could significantly harm the performance of the Dulles Greenway and the feeder road system.
Toll Road Plan

Feeder Road Network

- Four-lane Facility
- Four-lane Facility, expandable to six lane
- Six-lane Facility
Policies

1. The general locations for Toll Road planning area roads appear on the Planned Road Network Map on p. XX.

2. The County will encourage the continued improvement of the area road network to support development.

3. The County should maintain flexibility in the planned road network for areas where little or no development has occurred. The planned road alignments should be conceptual and the precise location of new roads determined in cooperation with VDOT, Loudoun County, and the development community by standard engineering practice.

4. The County will address immediate secondary road improvements for Route 643, Route 659, and the Route 625/643/772 intersection in conjunction with the completion of the Dulles Greenway by encouraging the use of VDOT secondary road program funds, Loudoun County road funds, and development proffered road funds for those improvements.

5. The County will continue to apply the road funding policies adopted in the General Plan and the Proffer Guidelines.

6. The County will pursue new, innovative funding sources such as the Inter-modal Surface Transportation Efficiency Act (ISTEA) legislation, in coordination with VDOT.

7. The County supports private road construction when VDOT standards are met. Private streets must be built to FSM standards when VDOT standards are not met. Private road approvals should include a clearly defined maintenance agreement in keeping with current County policies and a design which supports the community design goals of the TRP. The County will not maintain private streets.

8. The County supports additional local access from Route 606 to Dulles Airport for passenger and cargo traffic. The local access road should be a four lane road to accommodate the potential traffic and may be funded through a variety of sources including proffers from adjacent private development as well as federal and state funds.

9. The County encourages that a future interchange at Route 643 and the Dulles Greenway be planned for construction.

10. Major access roads will be located on or near the periphery of the node to avoid conflict with transit services and pedestrian traffic. Automobile access roads in nodes should be provided by parallel or intersecting arterials rather than by transit corridor.

11. An east-west connector road between Route 860 and Route 621 should be provided in the planning area south of the Toll Road when development warrants it.
PEDESTRIAN TRAVELWAYS

Higher densities, coupled with transit access, will require distinct and clear pedestrian amenities to facilitate pedestrian circulation among uses, buildings and transit stops. Concentrated development lends itself to pedestrian orientation due to the ease of traversing destinations with short distances. Prototypical suburban development has deemphasized functional pedestrian amenities due to the usually long distances involved. Pedestrian circulation facilities within these communities have functioned more as recreational amenities. Pedestrian travelways incorporated into site design for high density development and transit-related nodes reduce auto-related congestion for short trips and maximize access to uses and transit facilities within the area. Pedestrians require safe and convenient access among transit facilities and building entrances. The County promotes basic design guidelines for successful pedestrian circulation in nodes, including minimizing walking distances, connecting abutting land uses with travelways and providing safe travel through the separation of pedestrian facilities from automobile facilities. Successful pedestrian facilities are designed as attractive, clearly delineated travelways that adequately accommodate pedestrian travel.

POLICIES

1. New development will provide for internal and interparcel pedestrian and bikeway connections.

2. Development in the Toll Road planning area will incorporate a pedestrian travelway network that facilitates pedestrian circulation within a development, by providing safe, direct, clearly-defined links among transit facilities and the mix of uses located within a node, as well as connections among parcels.

3. Intersections and street crossings shall provide for pedestrian safety and convenience, including clearly marked travelways, signage, and pedestrian signals.

4. Site Plans for projects to be developed in nodes and in secondary areas should include clearly delineated pedestrian connections among uses.

5. Walking distances to transit stops should be limited to approximately 1/4 mile to provide good pedestrian access to transit services.

6. Buildings will be clustered to minimize walking distances among uses. It should be easy, quick, and safe to walk from building to building.
CHAPTER 5
CAPITAL FACILITIES AND SERVICES

BACKGROUND

One of the by-products of growth and development is the need for capital facility improvements. In an ideal setting, non-residential development tax revenues combined with residential property taxes would completely offset capital facility costs associated with new residential development. In Loudoun, and in similarly situated, rapidly growing localities on the fringe of metropolitan areas, residential development generally precedes non-residential development by several years. Generally, residential development does not pay for itself; in other words, property taxes and other revenues generated by new residential development do not cover the cost of providing services to new residents. Few fringe communities ever achieve a jobs/housing balance that results in excess revenues for funding capital improvement projects.

Funding capital facilities improvements will be a challenge to the County, particularly if residential development continues at a pace that far outstrips non-residential development. This situation is compounded by falling commercial and non-residential property values and by the expectations of the County's newest residents. Many of Loudoun’s new residents are relocating from more urban or suburbanized communities which offer access to a greater variety of programs and facilities.

In the Toll Road planning area, the County seeks a mix of residential and non-residential development as the first step toward addressing capital facility needs. Ensuring that facilities and services will be available in new residential and non-residential developments is another important step. Obviously, residential and non-residential development generate different capital facility needs. Typical suburban residential development usually generates the need for additional facilities such as schools, libraries, and parks if existing facilities are not available or do not have growth capacity. Non-residential development generally creates little demand for community services. Therefore, it is likely that additional residential development in the Toll Road planning area, particularly west of Route 659 where little development has taken place, will increase demands for a variety of capital facilities. Existing facilities in Leesburg and east of Route 659 and proffered facilities in Dulles North will assist in offsetting some of these demands.

Supporting new development with all the necessary public facilities and utilities can be costly. The current and projected operational funding capabilities of Loudoun County, as well as the Virginia Department of Transportation and other public agencies are, and will be, insufficient to provide new development with all the public facilities and utilities needed to support growth. Unfortunately, major delays in the provision of facilities and services would seriously hamper the marketing, sales and revenue projections of the development community. Consequently, the County anticipates that the development community will continue to cooperate with the public sector in the provision of public facilities and utilities which will be necessary to adequately serve the growth anticipated in the Toll Road planning area and other growth areas in the County.
Over the past several years, the development community has assisted in offsetting the costs of growth primarily through development proffers, although other mechanisms are also being explored. The majority of existing proffers in the Toll Road planning area are for properties east of Route 659, where a variety of residential and non-residential rezonings have occurred over the last several years. In general, proffers associated with non-residential rezonings have focused primarily on transportation improvements. Residential rezoning proffers generally include a wide variety of capital facilities and community facility commitments as well as transportation improvements. The County has accepted both cash proffers and donations of land or built facilities through proffer agreements. The County anticipates that the development community will continue to assist in providing public facilities and services through proffers, by using the proffer guidelines outlined in the County's General Plan and other innovative funding techniques such as special taxing districts.

The County seldom receives lump sum contributions up front, prior to construction. As the economy has contracted, more developers are phasing proffers or seeking to amend proffer agreements to add or modify phasing. The County provides flexibility to developers to continue phasing proffers to make the costs of development more affordable (to the County and the developer, builder, and homeowner) and ensure that facilities are not constructed before they are needed in the Toll Road planning area.

POLICIES

1. In accordance with General Plan policies, the County anticipates that the provision of public facilities and services in the Toll Road planning area will be a joint effort between the public and private sectors through a combination of conventional funding sources, such as state and local tax revenues and innovative funding mechanisms such as proffers, special taxing districts, and user fees.

2. The County anticipates that all residential and non-residential communities in the Toll Road planning area will contribute a fair share toward providing a full complement of appropriate public facilities and services such as adequate roads and utilities, recreational, educational, cultural and human services facilities, open space, and stormwater management facilities. To this end, the County anticipates that each request for residential and non-residential rezoning in the Toll Road planning area will include proposals to assist in offsetting the capital facilities and service needs generated by the new development.

3. Capital facilities proffers in the Toll Road planning area shall be evaluated in accordance with the General Plan capital facilities proffer guidelines.

4. Specific facility needs in the Toll Road planning area will be based on the County's adopted service plans, capital improvement program, existing proffers and specific land development proposals. (See appendix) Transit facilities and the preservation of Goose Creek as an environmental resource are priorities for establishing a Capital Improvement Plan for the area and for evaluating development proposals.

5. The County will encourage that essential public facilities and services such as adequate road access, utilities, fire and rescue facilities, and police protection be
provided in the early phases of a development. Other services and facilities should be phased in accordance with projected construction or development thresholds.

6. Existing proffer agreements that apply to properties in the Toll Road planning area may be amended by request of the landowner provided that such revisions further the goals and policies of this plan.

7. The County will continue to support volunteer fire and rescue service in the Toll Road planning area. Fire and rescue service and facilities will continue to be financed through a variety of mechanisms including private donations, fund raising efforts, and development proffers.

RECREATIONAL FACILITIES

A variety of recreational amenities have been proffered as part of residential rezonings in the Toll Road planning area, particularly east of Route 659, in the Dulles North area. In addition to the facilities and contributions that have been proffered to the County for public use, a number of recreational facilities have been proffered for the use of community residents. These facilities include neighborhood pools, tennis courts, tot lots, pedestrian trail systems, and multi-purpose courts and fields. These facilities will be maintained and operated by Homeowners Associations (HOA) and will not generally be available for public use. None of the non-residential developments in the Toll Road planning area have proffered park or recreational amenities. Local businesses and corporations often sponsor local little league teams or sponsor their own corporate teams that participate in the County's program through league play.

The County's Parks and Recreation Service Plan establishes four parks and recreation service districts in the County. The Toll Road planning area is located in the central district. It is the County's intent to provide regional, rather than neighborhood or community, recreational services from four central park locations. This approach creates economies of scale and efficiencies in the County's ability to provide service. A regional park site for the central planning area has not been identified, however; the Banshee Reeks property, owned by the County, is a possible site. The Service Plan also anticipates that local recreational needs will be met through neighborhood or community (HOA or other private group) facilities and amenities that are located within residential communities.

As new development occurs in the Toll Road planning area, especially west of Route 659, additional demands on park and recreation services will be created. Some of this demand can be met by publicly owned facilities that have been proffered in the planning area or through regional facilities outside the planning area such as Claude Moore Park, Ida Lee Park, or the Cascades Sportsplex. If current trends continue, large residential communities will probably continue to provide neighborhood or community facilities such as tot lots, pools, tennis courts and other features as community amenities. Smaller developments or high density compact communities would most likely rely on publicly owned or operated regional facilities. Therefore, rather than building facilities on-site, these types of developments might contribute cash contributions toward regional improvements.
POLICIES

1. The County will support a variety of public and private recreational opportunities and amenities in the Toll Road planning area.

2. The County will encourage that residential communities be designed to include appropriate neighborhood oriented recreational amenities such as tot lots, swimming pools, tennis courts, pedestrian trails and sidewalks, small parks etc. These facilities would be typically owned, maintained and operated by Homeowners’ Associations.

3. As recommended in the Parks and Recreation Service Plan, the provision of regional, County owned and operated recreational facilities such as large County parks, including ballfields, olympic sized swimming pools and other facilities, will be a joint effort between the County and the development community. The County anticipates that these facilities would be funded through a variety of sources including bonds, tax revenues, user fees and proffers.

4. The County will encourage that non-residential developments include picnic areas, trails, open space and other recreational amenities.
APPENDIX A
ROAD DESCRIPTIONS

ROADS INTERCHANGING WITH OR CROSSING THE DULLES GREENWAY

Route 7/15 Leesburg Bypass: The Leesburg Bypass exists as a four lane divided, controlled access facility between Route 15 South and Route 7 East in the vicinity of the Dulles Greenway interchange. It is planned to become a limited access highway. The Bypass is a primary arterial within the corporate limits of Leesburg.

Tolbert Lane (old Route 654): Currently a two lane facility, Tolbert Lane's collector road function is planned to be replaced by the Battlefield Parkway, which will be on a new alignment. A bridge across the Dulles Greenway has been constructed as part of initial Dulles Greenway construction. Tolbert Lane is located within the corporate limits of Leesburg.

Battlefield Parkway: Battlefield Parkway is planned as a six lane divided facility with interchanges at the Dulles Greenway, Route 7, and Route 15 north of Leesburg. The Parkway will be primarily located within the corporate limits of Leesburg.

Route 653: Currently a two lane unpaved road, Route 653 will be initially constructed as a bridge over the Dulles Greenway. A future interchange with the Dulles Greenway is planned to accommodate this major collector facility on a new alignment. (See description for Crosstrails Boulevard).

Route 648: This two lane unpaved road will be realigned to intersect with Route 643 south of the Dulles Greenway as part of the planned Route 643/Route 648 bridge consolidation.

Route 860 Corridor: Proposed improvements include a new four lane divided corridor between Route 643 and Route 50 on a new alignment. This corridor is planned east of existing Route 860 and would serve as an important regional road connection between Route 50 and the Dulles Greenway.

Crosstrails Boulevard: This planned improvement includes a new four lane corridor on an improved alignment between the Dulles Greenway interchange at Route 653 and Route 7. Expansion capability to six lanes is planned. This connection will enable improved access for adjacent land owners and provide an important regional connection.

Route 704 Extension: Proposed improvements include a four lane divided road between the Route 653/Dulles Greenway interchange (Crosstrails Boulevard) and Route 15 at the intersection with Route 704. This will provide a direct connection between the existing Route 15/Route 704 intersection with the Route 653/Dulles Greenway interchange.

Airport Area Connector: Located east of the Dulles Greenway between Route 654 and Route 653, this planned connector provides access to land bays between the Leesburg Airport and the Dulles Greenway. This connector would prevent excessive cul-de-sac lengths in this area. This is planned as a four lane divided road.
Route 643: Presently a two lane road with unpaved sections, the alignment of Route 643 will be impacted by the construction of the Dulles Greenway. East of Goose Creek, Route 643 will be rerouted to the north, intersecting at Route 659 opposite the planned Ashburn Farm Parkway. The section between Route 659 and Route 772 at Ryan will become discontinuous, providing local access only. Route 643 will cross the Dulles Greenway at two locations, one immediately west of Goose Creek and the other immediately east. Route 643 west of Goose Creek is planned to become a four lane divided major collector road with an interchange at the Dulles Greenway/Route 643 intersection.

Route 659: Existing Route 659 is a two lane road with an interchange at the Dulles Greenway planned as a part of initial toll road construction. The interchange is planned with a future free flow design. Designated as both a major collector and a minor arterial, Route 659 is planned to become a four lane divided facility with expansion capability to six lanes.

West Spine Road: Portions of the West Spine Road are currently under construction. This major collector road is planned as a four lane divided facility with expansion capability to six lanes. A diamond interchange with the Dulles Greenway is planned as a part of initial toll road construction.

Route 625: This existing two lane facility will bridge across the Dulles Greenway. Route 625 is planned to be realigned between Route 659 and the Dulles Greenway as a part of the planned Broadlands development project. East of the Dulles Greenway, the corridor is planned as a four lane undivided facility, and will intersect with the Ryan Bypass.

Route 772: Currently a two lane road, Route 772 will interchange with the Dulles Greenway as a part of initial construction. The collector road function of Route 772 and its interchange with the Dulles Greenway is planned to be replaced by the future East Spine Road.

East Spine Road: The East Spine Road is planned as a four lane divided facility with expansion capability to six lanes. This major collector road will be an extension of the existing Ashburn Village Boulevard. Conversion to a single point urban diamond interchange is planned when greater capacity is required at the initial modified diamond interchange.

Transit Connector: There is a proposed connector across the Dulles Greenway between the Route 772 and Route 607 interchanges for the purpose of accessing a future high speed transit station on or adjacent to the Dulles Greenway. A four lane facility serving primarily transit vehicles is anticipated.

Route 607 Extension: No road currently exists at this location. An extension of Route 607 is planned, with a modified diamond interchange at the Dulles Greenway. This major collector facility is planned to extend into existing Route 772 and continue west to Route 659. It is proposed as a four lane divided road with expansion capability to six lanes. Conversion to a single point diamond interchange is planned when greater capacity is required.
"LPC" Loop Road: There is a proposed loop road across the Dulles Greenway between the Route 607 interchange and the Broad Run, as approved in the Loudoun Parkway Center development project.

Route 606: Present Route 606 is a two lane major collector road, with improvement plans to a four lane divided facility. Route 606 will interchange with the Dulles Greenway as a part of initial Dulles Greenway construction. The modified diamond interchange is planned for conversion to a cloverleaf design to accommodate increased traffic volumes.

ROADS PARALLEL TO THE DULLES GREENWAY

Route 643/640/625: The Route 643/640/625 corridor is nearly completed as a four lane divided facility with expansion potential for six lanes. This road will serve as a major collector road between Route 659 and Route 28. At Route 659, it will align opposite Route 643 to provide a continuous corridor to the Leesburg area for local traffic.

Route 625: The road is planned to be four lanes undivided from the Dulles Greenway to east of the Ryan vicinity, where it will intersect with the Ryan Bypass. The Route 625 corridor is intended primarily as a local access collector road with a reduced design speed.

Ryan Bypass: The Ryan Bypass will be a new corridor that extends from Route 659 as the proposed Broadlands Boulevard, across the Dulles Greenway into a short section of existing Route 643, pass north of Ryan, link to Route 625, and connect into the proposed Iverness Boulevard. The Ryan Bypass will serve as a major collector road and is planned to be a four lane median divided facility.

Route 643: At its eastern end, Route 643 will parallel the north side of the Dulles Greenway as a four lane divided facility between Route 625 and the LPC Loop Road.

Route 621: This is a two lane major collector secondary road which connects Leesburg and Route 606 in the vicinity of Dulles Airport. Future improvements to Route 621 would make it a four lane divided facility.

Route 640/625: The Route 640/625 corridor is nearly completed as a four lane divided facility with expansion potential for six lanes. This road will serve as a major collector road between Route 659 and Route 28. At Route 659, it will align opposite Route 643 to provide a continuous corridor to the Leesburg area for local traffic.

Route 645: Existing Route 645 is a short, unpaved dead-end road. Planned improvements would create a four lane divided facility from Route 659 to the east, extending south after its intersection with the East Spine Road, and crossing the Broad Run into Route 606 via Westwind Drive. This new corridor will serve as a major collector road.

East/West Spine Road Connector: A short connection between the Transit Connector and West Spine Roads is proposed south of the Dulles Greenway to provide continuity in the parallel road concept. It is being planned as a four lane divided facility.

Route 642: Located north of the Dulles Greenway, two lane Route 642 is planned to be improved to a four lane undivided road between Route 659 and the West Spine Road. East
of the West Spine Road, Route 642 will transition into a two lane facility into the old village of Ashburn.

OTHER ROADS IN THE TOLL ROAD PLANNING AREA

Route 641: Through the old village of Ashburn, Route 641 is planned as a two lane facility. South of Ashburn, Route 641 will transition into a four lane undivided road and continue south to intersect with existing Route 625.

Route 653: This facility is planned to become a four lane collector facility, connecting with the proposed Route 643/860 corridor at the Dulles Greenway and continuing north to Route 7 on the existing alignment. With a new Crosstrails Boulevard interchange, it is unlikely that this facility will have direct access to Route 7 in the future.

North-South Connector: A connection between the Route 704 Extension and Route 621 in the vicinity of the Woods Road is proposed south of the Dulles Greenway to provide local access with a potentially realigned Route 771 (The Woods Road). This will enable a connection to Route 15.

Miller Drive Extended: An extension from existing Miller Drive at Route 643 to Crosstrails Boulevard is proposed in order to provide access to the land area east of Route 643. This road is proposed as a four lane divided facility.

Kincaid Boulevard Extended: This facility is proposed to extend south from the Town of Leesburg to Miller Drive Extended in order to provide a logical connection in this area. It is planned as a four lane divided facility.
APPENDIX B
GLOSSARY OF TERMS

Open Space. Land in a largely natural state with few if any buildings or other structures located on it. There are two types of open space that the County wishes to incorporate into the development of the Toll Road planning area. The two types of open space are urban and rural. Urban open space is an unbuilt area, either landscaped or hardscaped, which is incorporated into the design of Nodes, High-Density Residential, Residential, Business, and Business Employment Communities. It offers public places for social interaction, provides visual relief from the size and mass of buildings, and provides prominence to an important civic use, such as a transit center, library, church, etc. Urban open space includes greens, squares, plazas, parks, pedestrian travelways. Rural open space is undeveloped land either in productive use or a natural state appreciated for its aesthetic, ecological, or public recreational benefits. Rural open space includes farms, forests, steep slopes, wetlands, stream valleys, reservoir watershed, floodplain, large parks, greenbelts.

Transit. A shared mode of transportation operating on a fixed schedule and a fixed route available for use by all persons who pay the fare. Transit modes include bus, light rail, and heavy rail.

Transit Center. A place where transit services connect in the transportation network and where passengers transfer between transportation modes. In the draft TRP, transit centers are planned to be located either in the core of nodes or at regional park and ride lot facilities and include rail stations and bus stations.

Transit Facility. Structures necessary for the provision of transportation services, such as a bus shelter, bike rack, rail station, park and ride lot.

Transit Station. Structures housing both passengers and transportation systems operations and equipment.

Transit Stop. A location along the street or transit line which has simple facilities like signage and shelters.
## APPENDIX C
### PARK AND RIDE LOTS

<table>
<thead>
<tr>
<th>DEVELOPMENT</th>
<th>LOCATION</th>
<th>PROFFERED SPACES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashburn Center</td>
<td>Flex Industrial area near East Spine Road, North of Dulles Greenway. Exact location to be determined by the applicant.</td>
<td>50 spaces</td>
</tr>
<tr>
<td>Belmont Forest</td>
<td>Near Route 659, north of the Dulles Greenway</td>
<td>50 spaces</td>
</tr>
<tr>
<td>Broadlands²</td>
<td>Southeast quadrant of the Route 659/Ryan Bypass intersection, south of the Dulles Greenway</td>
<td>30 spaces</td>
</tr>
<tr>
<td>Broadlands South</td>
<td>Northwest quadrant of the East Spine Road/East-West Spine Road Connector Intersection at a future shopping center</td>
<td>75 spaces</td>
</tr>
<tr>
<td>Broad Run Meadows</td>
<td>North-east quadrant of the Route 607 extended/Route 772 intersection</td>
<td>30 spaces</td>
</tr>
<tr>
<td>Loudoun Parkway Center</td>
<td>Northwest quadrant of the Route 607/Route 643 intersection</td>
<td>Dedication of 7 acres which may be used for a park and ride lot.</td>
</tr>
<tr>
<td>Western Regional Park and Ride Lot</td>
<td>Dulles Greenway/Route 606</td>
<td>750 spaces initially, up to 3,000 at buildout</td>
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</table>

²The Broadlands 30 space park and ride lot may be relocated, pursuant to a pending ZCPA.
<table>
<thead>
<tr>
<th>CASE #</th>
<th>PROJECT NAME</th>
<th>DATE ADOPTED</th>
</tr>
</thead>
</table>
Chapter 3, Land Use and Community Design, Page 3-8a
Amend Land Use Map
Toll Road Plan

Scale: 1" = 10,500
1:126,000

Potomac River
VIRGINIA

Interim Planning Area Boundary

W/200 Trail

RT.28

Note: The Interim Planning Area boundary is coterminous with the Goose Creek Watershed boundary (as adopted by the Board of Supervisors on 12/16/88).

Proposed Land Use

- Residential
- Business
- Industrial
- High Density Residential
- Community Shopping Center
- Business Employment
- Rural
- Business Community

Excluding Residential
38. In nodes and other areas planned for mixed-use development (including Business and Residential Community areas), the County anticipates expects that the residential component will be phased to be developed as in conjunction with the nonresidential component develops, so that a mix of residential and nonresidential uses is provided simultaneously throughout the project build-out as the project is built-out. The intent of this policy is to ensure the fiscal balance of a mixed-use project as it is constructed.
Chapter 3, Land Use and Community Design: General Land Use, Page 3-9

Amend Policy 1:

1. The County will encourage the development of mixed land uses as described in the General Plan for the entire Toll Road planning area. The land use pattern will generally conform with as depicted on the Land Use Map.

Add new Policies 2, 3, 4, 6, 7, and 8:

2. It is the County's view that the current pipeline of approved but yet unbuilt residential units in eastern Loudoun is sufficient to meet any market demand for the foreseeable future. As such, residential densities in the western portion of the Toll Road planning area outside of the Leesburg Urban Growth Area, as depicted on the Planned Land Use Map, are to be governed by the goals and the policies of the Rural Area specified in the General Plan. It is the policy and the intent of the County to prevent more intensive residential development through the extension of central utilities from the east to this western section of the planning area until such time as the Toll Road Plan is amended.

3. The area located west of the interim planning area boundary and east of the Leesburg Urban Growth Area boundary shall be governed by the Rural Area policies of the General Plan until such time as the Board of Supervisors adopts an amendment to the Toll Road Plan that provides for new land development policies for this area. The County anticipates serving the entire Toll Road planning area with central water and sewer facilities in the future.

4. The Board of Supervisors may initiate an amendment to the Toll Road Plan to permit urban development in the western section as depicted on the Planned Land Use Map provided all the following criteria are satisfied:

a. The County determines, based on updated County COG population projections and other data (such as forecasts for absorption), that the demand for housing will cause a need for an additional supply of land available for urban development densities.

b. The substantial majority of the land within eastern Loudoun (including Dulles North, Eastern Loudoun, Leesburg, and the Leesburg Urban Growth Area) is subject to approved subdivision and/or detailed site plan or is prevented from future development through open space or development easements.

c. Public sewer and water facilities are financed or in place to serve urban development in compliance with the Loudoun County Sanitation Authority's Master Plan.

d. The County determines, based on its Fiscal Policy, Capital Improvements Program and Operating Budget, that it can adequately fund needed facilities and improvements.
e. A fiscal impact analysis shows that the expansion of the planning area will have a minimal cost to the taxpayer.

5. At such time as the County initiates a plan amendment to consider urban densities in the western part of the Toll Road planning area, the County will consider designating the area located along both sides of the Toll Road for Business Employment and/or Keynote Employment uses. The County will also consider providing policy direction for the development of transitional uses along the edge of the planning area that will be compatible with the rural uses planned west of the planning area boundary.

6. The General Plan policies governing the development of Business Communities apply to the Business Community areas located in the Leesburg Urban Growth Area, including the density and mix prescribed by the General Plan.

7. The County will encourage the development of mixed-use Business Communities, including both Regional Office and Light Industrial projects, in the Toll Road planning area. Business Community areas should generally include a residential component as part of the land use mix of the project except for those areas specifically identified on the land use map.

8. The Business Community designated for the Broadlands as depicted on the Land Use Map will not include residential development, so as to be consistent with the approved Concept Development Plan in affect at the time of adoption of CPAM 1997-0007, TRP Density Review.

Amend Policy 7:

7.9. The County will promote the development of High Density Residential uses with densities up to 2416 dwelling units per net acre at specified interchanges of the Dulles Greenway. High Density Residential Communities are designated on the land use map.
Chapter 3, Land Use and Community Design: General Land Use, Page 3-13
Add new Policies 14 and 15:

14. The County promotes mixed-use development in the Toll Road planning area. Applications for mixed-use development must address the phasing of project development and it's fiscal impact to ensure that the project maintains a sound fiscal balance between proposed residential and nonresidential uses as the project develops.

15. The development phasing plan for a mixed-use project will establish a build-out relationship (in roughly the same proportions) between the residential and nonresidential components of the project.
CPAM 1997-0007, Toll Road Plan Density Review
BOS Adoption 12/16/98
Toll Road Plan

Chapter 3, Land Use and Community Design: Nodes, Page 3-6a
Amend Map - Potential Node Locations
Toll Road Plan

Potential Node Locations

Note: The area between Rt. 606 and Rt. 607 has been designated as a potential node site based on the potential for a transit facility located on airport property.
CPAM 1992-0010
Greenways and Trails Policies

Adopted September 21, 1994
SECTION I: BACKGROUND

A. INTRODUCTION

Greenways are areas of open space, usually linear, which connect and protect various natural, recreational, and cultural resources. They often follow linear landscape features such as streams, ridges, or abandoned railroads. Greenways can be publicly or privately owned, and may be open or closed to visitors. They are not necessarily parks or public land. Parts of a greenway may be a scenic resource or an important wildlife habitat, owned and maintained by a private landowner, with no public access. Other parts may include public trails for hiking, bicycling, or horseback riding. Greenways that include trails provide linkages for people to natural and community resources. They enable citizens to travel without motor vehicles to schools, community centers and parks.

Greenways serve a variety of functions, including recreation, alternative transportation, wildlife habitat, water quality protection, flood hazard reduction, aquifer recharge, erosion prevention, property value enhancement, economic development and scenic beauty.

The Loudoun Greenways plan encourages pathway connections which would provide our own residents with alternative transportation corridors, independent of car ownership. It is a comprehensive plan which takes a "big picture" look at Loudoun's future development. It recognizes the need for Loudoun's existing communities to develop resource corridors which unify the County, creating an amenity for the benefit of business and residential communities as well as the tourist industry.

B. CONTEXT AND PURPOSE

Loudoun County and its county seat, the Town of Leesburg, border the Potomac River in northern Virginia approximately 35 miles northwest of Washington, D. C. The County as a whole offers a wealth of historic and natural features and a blend of urban amenities, rural landscapes, and small communities.

Proximity to Washington and the presence of a major international airport, Dulles, in the southeast part of the County stimulate strong growth trends. While development provides welcome economic opportunities, many citizens are concerned about the effects of growth and the potential for loss of local recreational opportunities and valuable natural, scenic and historic resources. Greenways and trails are one method of preserving some of these features unique to the County.

The purpose of this plan is to acknowledge a commitment to the establishment of a county-wide system of greenways and trails. This system should link people and resources, put open space within a short walk of people's homes and connect major regional and national trails. Greenways can protect natural resources and do not necessarily contain trails or have public access. Where
trails provide a link between home and work, an alternative to auto dependent transportation can be provided.

C. RELATIONSHIP TO OTHER COUNTY DOCUMENTS

Loudoun County's Comprehensive Plan consists of several related documents with the General Plan performing the function of an "umbrella" document which establishes county-wide goals and policies. Chapter 8 of the General Plan addresses implementation as a continuing process with future actions which should be undertaken to implement the Plan.

County-wide Recommendation #21 is the action of adopting CPAM 1992-0010, Greenways Plan, as an element of the General Plan. The Greenways Plan would also add one more building block toward implementing policy recommendations for Water Quality Buffers (#5), Scenic River Corridors and Potomac Shoreline Protection (#10), Protection of Endangered and Threatened Habitats (#23), and Rural Transportation Strategies for Bicycle Routes (#18).

In recognition of existing County policy and public testimony which encourage a viable agricultural community, the following goals and policies will apply only to the rapidly developing areas of the County described in the following area plans: Eastern Loudoun Area Management Plan, Dulles North Area Management Plan, Dulles South Area Management Plan, Cub Run Area Management Plan, Leesburg Area Management Plan, and the adopted plans for the Urban Growth Areas of the western towns.

D. COMMUNITY PLANNING PROCESS

The documentation for the greenways and trails system is contained in the 1993 Greenways and Trails Master Plan for Loudoun County and Leesburg, Virginia. This plan was developed by a citizen-government partnership, through an open public process. As a result of a Memorandum of Understanding signed by the County of Loudoun, the Town of Leesburg, the directors of the Leesburg and Loudoun County Parks and Recreation Departments, representatives of the National Park Service's Rivers, Trails and Conservation Assistance Program, and the Northern Virginia Regional Parks Authority, a citizens' advisory committee was formed in the fall of 1989. The group represented the interests of businesses, development, landowners, conservationists and recreationists. The Plan was developed over a two year period and was based on regular public input from public workshops, presentations and public meetings. Documentation of specific public outreach is contained on page 69 of the 1993 Greenways and Trails Master Plan for Leesburg and Loudoun County, Virginia.
SECTION II: COMMUNITY GOALS

A. MISSION STATEMENT

The purpose of a greenways and trails system is to preserve the County's essential natural and historic resources as the County passes from rural to suburban, to provide recreation for a growing population, and to provide alternative transportation corridors.

B. GOALS OF THE GREENWAYS AND TRAILS SYSTEM

- Link neighborhoods and communities including schools, shopping areas, community centers, parks and other public facilities
- Link towns in Loudoun County.
- Provide recreational opportunities and alternate transportation corridors for foot traffic, cyclists and horseback riders.
- Protect historic resources.
- Protect rivers, streams, and drainage basins.
- Protect ecologically critical and sensitive areas.
- Maintain and link wildlife habitats.
- Provide natural flood and erosion control to discourage channelization.
- Include scenic roads.

SECTION III: POLICIES

A. RESOURCES

A sound greenways and trails system depends on the identification of the County's significant natural, cultural, recreational and community resources. The Citizens' Committee dedicated the first year of its effort to identifying and mapping those resources, using a variety of existing data and the knowledge of local citizens. These resources contribute greatly to the distinctive character of the County. They can serve as the hubs and spokes of a greenways and trails network and can provide a basis for making decisions on where greenways should be located. Listed below are the county resources agreed to by the Committee as significant features of the County. These resources are contained in the Geographic Information System Map created by the citizens. (resources described on pages 14, 15, and 16 of the Greenways and Trails Master Plan for Leesburg and Loudoun County, Virginia.)

- State Scenic Rivers
- Perennial Streams
- Floodplains
- Ridges
- Natural Heritage Sites
- Existing and Planned Parks
Greenways Policies

- Existing and Planned Trails
- Historic Sites and Districts
- Historic Settlements
- Schools
- Community Centers
- Discontinued Roads
- Scenic Roads
- Incorporated Towns

POLICIES

1. The inventory of cultural, historic and natural resources should be maintained with the County GIS and should be used for reference in greenway and trail planning.

2. Greenways should be a mechanism to protect important or sensitive resources.

B. PUBLIC PARTICIPATION

The process of turning a plan for greenways into a reality will require a cooperative effort involving many people and organizations. While the total land area of any proposed greenways network is relatively small, its benefits will be widely felt and its many parts varied in terrain, ownership, and proposed use. The County will play an integral role in establishing the system although it is unlikely that a single entity would have the means to acquire or manage an extensive system. Therefore, it is recommended that a network of greenways and trails be owned and managed through a partnership effort, rather than by a single agency organization. The system could be established piece by piece by a number of different entities using a variety of public and private conservation methods. Public agencies, private organizations, businesses, civic groups, clubs and individuals should participate in the creation and management of the system. It is assumed that exact locations of greenways and trails will be determined by the communities of interest.

POLICIES

1. Inform and educate the public about the opportunities generated by the greenways and trails system.

2. Encourage public involvement in the planning and development of the greenways and trails system.

C. DEVELOPMENT STRATEGIES

Members of the community have expressed concern about the loss of open space and the changing character of the County resulting from increased development. Greenways are a way to retain some rural landscapes and incorporate open space within developments. Citizens also
expressed a desire for trails between adjacent developments to allow walking and/or biking to neighbors' houses or other parts of the community. The greenways concept is a mechanism to guide the development process to create useful areas of open space.

POLICIES

1. Incorporate greenways and trails plans into the land development process and land use decisions. Creation of greenways and trails should occur primarily in the developing areas of the County with initial effort focused on the rapidly developing areas of the eastern portion of the County and around the western towns.

2. Create options and incentives which will encourage landowner participation in the establishment of greenways and trails.

3. Coordinate the establishment of greenways and trails with landowners using a variety of conservation methods. Three categories of landowners should be encouraged to participate in the greenways and trails system:
   
   - The development community: proffers of greenways and trails should be encouraged and referrals administered by the Planning Department with input from impacted agencies and citizens as needed.
   
   - Private landowners: voluntary donations, conservation easements, bequests, leasebacks, remainder interest and other non-coercive methods should be facilitated to encourage participation by private landowners.

   - Public land: negotiations of right-of-ways through land already dedicated to public benefit including, but not limited to, County, State and Federally owned land, utility easements, and roads discontinued for public maintenance.

4. Parcels under consideration as greenways or trails must meet one or more of the following criteria
   
   a. **Linkage:** The identified parcel will provide linkage between or to a significant natural, cultural or historic resource as defined on pages 14, 15, 16 of the Greenways and Trails Master Plan for Leesburg and Loudoun County and listed in Section III.A above.

   b. **Resource Protection:** The parcel contains an identified natural resource or species of value.

   c. **Recreation Enhancement:** The parcel will enhance recreational opportunities either by providing a connection to an existing park or recreational facility or providing in and of itself opportunities for hiking, biking or horseback riding.
d. **Economic Enhancement:** The parcel provides increased access to local business and shopping areas including but not limited to bed and breakfasts and tourist sites.

**D. TRANSPORTATION**

Greenways and trails that are designed to link communities and commercial areas can encourage some people to travel without motor vehicles, thus reducing traffic congestion on roadways. Planning for alternative transportation and recreational opportunities for foot traffic, cyclists and horseback riders is an important public responsibility to provide for increased user safety on transportation corridors. A greenways master plan can be an important element of compliance with the Clean Air Act of 1991.

**POLICIES**

1. Multi-use trails should be encouraged within major road corridors as shown in Appendix G of the *Greenways and Trails Master Plan for Leesburg and Loudoun County, Virginia*. Portions of this trail system should be incorporated as an element of the regional COG Bicycle Plan.

2. Loudoun County review of applications for discontinued roads should encourage appropriate conversions to the greenways and trails system.

3. Loudoun County should pursue grant funding of greenway and trail projects which can be combined with other transportation goals and policies.

**E. FUNDING, ADMINISTRATION AND MAINTENANCE**

Financial and management issues are critical to both the initial establishment of greenways and their long-term vitality. Local government funds for greenways may be scarce and greenways frequently must compete for funds with other uses such as developed parks. The mechanisms used for protecting land or securing public access can be a major factor determining the cost of implementing greenways. Public land purchase, the most expensive technique, is only one of a variety of possible techniques. Others include land donations, purchases or donations of easements, landowner agreements and acquisition by nonprofit groups.

Maintenance is one need that is often overlooked; greenway interests may focus on the establishment of the greenway and neglect to consider long-term maintenance. Long-term greenway success will require careful planning for funding and maintenance. Administrative overhead might be reduced if the system were managed by a private organization focused only on the greenway system.
POLICIES

1. Require that established greenways and trails adequately provide for long-term funding, maintenance, and administration for the implementation of the greenways and trails system through public-private partnerships.

2. When possible the County would jointly hold easements to guarantee long-term protection of land.

3. Assure that right of eminent domain is not utilized to establish greenways and trails.

F. ECONOMIC DEVELOPMENT

The Greenways Master Plan recommends the creation of a comprehensive greenways and trails system primarily based on such natural landforms as valleys and ridges. Other elements are based on an assemblage of linear open spaces of various kinds to create a green infrastructure for the County. Like other forms of infrastructure necessary for development, greenways are part of a good business plan. These key elements of a community's memorable image are increasingly becoming today's marketing tools for economic development.

Few communities today can ignore the economic benefit of tourism. Loudoun's primary tourist attractions are its natural and historic resources. The greenways could include a foot path, a horse path, a bike path or none of the above, simply providing visual respite to the urban resident. The W&OD Regional Trail is an example of a greenway which attracts visitors, businesses and residents to Loudoun. One such business, the Cornerstone Bed and Breakfast near Paeonian Springs derives as much as 50 per cent of its clientele from cyclists who ride out from Washington and Maryland to tour the Loudoun area.

In order to attract a balanced variety of businesses, provide hoasing options with desirable amenities for all income levels, and assist government in managing the resources of Loudoun County, it is time to plan for a greenway system.

POLICIES

1. Loudoun County should incorporate greenways and trails in economic development planning and promotion.

2. Coordinate with an overall tourism plan for Loudoun County.
CPAM 1996-0001
COUNTYWIDE RETAIL POLICY PLAN AMENDMENT

Adopted February 19, 1997
Amended Through March 15, 2011
I. BACKGROUND

The purpose of this Comprehensive Plan Amendment is to update existing retail commercial policies to accommodate changing trends and to provide consistent policy guidance for retail development in the County's Eastern Urban Growth Area. Loudoun County's Comprehensive Plan consists of the General Plan, several area management plans, strategic plans and related documents. The General Plan provides Countywide goals and policies for managing growth and development while area management plans and strategic plans outline more specific strategies for local planning areas or particular issues.

This plan amendment is a strategic plan for retail commercial development in the County's Eastern Urban Growth Area. It is intended to provide policy guidance to enable the County to capture the retail expenditures of Loudoun's citizens without having the County become a retail center for the Washington Metropolitan Area. It provides specific and comprehensive guidance about the function, location and design of commercial retail centers and uses. As such, these policies supersede General Plan and area plan policies relating to retail commercial development.

The initial recommendations for revisions to the County's retail planning policies were prepared by the Zoning, Comprehensive Planning Committee of the Loudoun County Planning Commission. The full Planning Commission reviewed the Committee's recommendations and certified the final plan amendment language on September 25, 1996. Relevant background data and key findings that shaped the proposed amendments are summarized below.

A. Retail Development Issues

Initial concerns about the County's current retail policies grew out of a series of recent applications seeking commercial retail development in the Route 7 Corridor. These applications raised fundamental questions about how retail centers are classified, where retail development should be located, how much retail development the County can support, and the impact of new retail commercial development on existing retail areas. As discussion of the applications evolved, it became evident that the County needed to take a comprehensive look at its retail policies to ensure that they remain a basis for sound and consistent decision making.

In May 1995, the Board of Supervisors committed to undertake work on a plan amendment to evaluate the County's retail policies. However, recognizing the need for additional information about the County's retail sector, the Board also requested that the Economic Development Commission (EDC) expand the scope of its annual retail study to include a retail demand analysis for Loudoun County. This retail demand analysis provided the technical and analytical framework for evaluation of the County's retail commercial policies and subsequent recommendations by the EDC and the Planning Commission. Key findings of that report and the EDC recommendations based on their findings are summarized below. The August 9, 1995 Retail Demand Analysis and Supporting Tables and Worksheets are Appendixes B and C of this plan.
amendment. The EDC's, November 9, 1995 Report - A Review of Loudoun County Retail Policies is Appendix D.

B. The Current Retail Environment

Retail sales in Loudoun County have increased substantially in the past several years, reflecting rapid growth and an increase in shopping choices. In 1994, retail sales in the County topped one billion dollars for the first time in the County's history. However, many Loudoun County citizens continue to shop outside of the County for comparison goods (apparel, home furnishings and fixtures, general merchandise, etc.) since there are limited opportunities to purchase these goods in Loudoun County today. The Retail Demand Analysis report prepared by Economic Development staff estimated "leakage" of retail sales to other jurisdictions for this type of merchandise at $78 million in 1995.

According to the Retail Demand Analysis, the majority of existing retail space in the County is neighborhood or community-oriented. Loudoun County (including the incorporated towns) contained approximately 3.7 million square feet of constructed retail space in June 1995. Based on the definition of regional retail center used in that report, none of the County's existing shopping centers are classified as regional commercial centers. The County's first regional commercial center, Potomac Run Center (470,000 square feet of retail anchored by several big box users) is currently under construction. An additional 400,000 square feet of large, freestanding commercial uses (Home Depot, Price Club, WalMart, Best) are also classified as regional in nature.

C. Loudoun's Retail Future

The 1995 EDC report recognized that relatively high income levels, rapid growth and other demographic characteristics have made the County increasingly attractive to many established and emerging retailers and heightened pressures on the County to allow additional retail commercial development. Loudoun has become a retail "hot spot", particularly for destination oriented retailers.

Based on 20 year population and income forecasts from the County's recent Zurn Initiative, the Retail Demand Analysis study concluded that an additional 7.1 million square feet of retail space would be needed by the year 2015 to satisfy retail demands within the County. An additional eight million square feet of retail space is already zoned but undeveloped. These projections are based on the assumption that within the Metropolitan Washington Area, a typical household can support 50 to 100 square feet of retail space.

Approximately one-third (2.9 million square feet) of the County's approved, but unconstructed, retail space is regional in nature and comprised of three projects in the Route 28 corridor: Dulles Town Center Mail (1.2 million square feet), Nattak Mall (850,000 square feet), and Dulles 28 Centre (833,000 square feet excluding the auto park). The remaining square footage is planned in neighborhood or community-oriented centers.
Taking this information at face value, it appears that Loudoun County has sufficient land zoned for commercial development to satisfy projected consumer demand through 2015; however, the County continues to hear from the retail community that the areas currently zoned for retail development are not located where the retailers want to be and that site selection is limited.

The EDC reviewed the Retail Demand Analysis information and reviewed the County's current planning policies to determine how well the County is prepared to address future retail development. The EDC concluded that the County's current retail policies were fundamentally sound but a few key policy revisions were needed. The EDC's key recommendations included:

- Emphasizing the Route 7/Route 28 intersection as the focus of the County's destination retail development to spur the synergy provided by the clustering of retail uses and allowing them to season before additional uses are approved;
- Defining the function and limiting the amount of retail uses allowed in Business Communities to protect the County’s vision of Route 7 and other major corridors for Keynote Employment development.
- Defining retail relative to its function and market responsiveness and ensuring consistency in County documents;
- Broadening the combinations of retail uses allowed in certain areas (i.e., industrial) to provide flexibility and reflect retail trends;
- Developing retail corridor identities by establishing design guidelines affecting signage and landscaping;
- Providing certainty to protect existing and zoned retail uses when land use changes occur.

D. Key Findings/Recommendations

The Zoning, Comprehensive Planning Committee received input and recommendations from a variety of sources during its policy deliberations. Key resources included the recommendations of the EDC, public input and discussions with members of the development community. The Committee also allowed public input at the beginning of each Committee meeting. The comments of all of these groups helped to shape the final recommendations of the Committee. In making its recommendations, the Committee sought, among other issues, to balance public and private sector interests; to assess traffic and visual congestion versus the need for visibility and access; to maintain sight of broad economic development objectives in the face of the short-term, "hot" retail market; to seek viable, supportable commercial retail and avoid speculative development.

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1 The full text of the EDC recommendations can be found on pp. 4-7 of Appendix D - "A Review of Loudoun County Development Policies" Loudoun County Economic Development Commission, November 9, 1995.
The Planning Commission held a public hearing on July 10, 1996, to receive public comment on the proposed plan amendment language. The Commission forwarded the plan amendment to the Board of Supervisors with a recommendation of approval on September 25, 1996.

Key policy recommendations are summarized below:

1. **Revise the County's Retail Hierarchy**
   The General Plan's current hierarchy of retail centers is not consistent with area plan documents and emphasizes center size rather than function. The revised policies emphasize function as the most important characteristic defining retail centers. A new retail matrix is proposed that recognizes the fundamental difference between retail uses that serve a regional market and need to be located along major corridors and those that are community-serving and that should be located within the areas they serve.

2. **Destination Retail needs to be Directed to Appropriate Areas in Principal Arterial Corridors**
   The policies clarify the definition of "destination retail" uses and provide specific policies regarding the location of these uses to keep inappropriate retail development out of residential areas. Policies limiting the development of destination retail to specific areas in the Dulles Greenway, Route 7 and Route 50 corridors will protect these areas as office/employment corridors consistent with the County's long-term vision.

3. **The County needs to Recognize and Provide Opportunities for New Forms of Retail Commercial Development**
   The EDC report highlights changing retail trends that will affect retail development in the future. The revised policies seek to accommodate limited accessory retail commercial uses in industrial zoning districts. The policies also clarify the intent of retail uses in non-residential communities and provide specific guidelines to accommodate big box and other large format retailers to ensure that uses are as attractive as they can be and appropriately located.

4. **Channel Community Serving Retail to Appropriate Locations and Consider Market Area As a Factor in Future Retail**
   The policies provide specific design and location criteria for retail uses located in residential areas to ensure that retail development does not negatively affect residential neighborhoods. Community-serving retail applications would also include a market analysis to help avoid market saturation and development of non-viable retail uses.

5. **Provide Incentives to Keep Existing Retail Areas Viable and Encourage Other Uses for Less Viable Retail Sites**
   New policies are recommended to expand the County's support for existing retail areas. A key policy recommendation is to allow for reduced fee rezonings or a
waiver of rezoning fees to allow less viable retail sites to be rezoned to a more appropriate commercial use.

II. GENERAL RETAIL POLICIES

Convenient, well designed, attractive shopping centers can act as activity centers for residential neighborhoods that contribute to community identity, sense of place and overall quality of life. Large scale retail centers that, by their nature, draw shoppers from a wide market area act as economic assets that augment and diversify the local tax base. For these reasons, the County intends to provide a full range of shopping opportunities within its boundaries to meet the consumer needs of its citizens.

Since there are differences of scale and function between retail uses that serve an immediate area and those that depend on a wider market, the County has divided retail activities into two broad categories that reflect these fundamental differences: Corridor Based Retail and Service Area-Based Retail. Corridor-Based Retail uses are automobile oriented and require a supporting road network that can accommodate high traffic volumes. Corridor-Based Retail activities will be directed to non-residential areas in existing and planned principal arterial corridors. Service Area-Based Retail will be designed and scaled for the intended service population and will act in a support capacity to the residential or employment area it serves.

1. Loudoun County seeks to maintain a robust retail sales sector to meet the needs of the growing population, while mitigating impacts on residential areas, traffic, and other forms of economic development.

2. The County seeks to capture 100% of Loudoun's retail sales expenditures.

3. Retail commercial development in the Eastern Urban Growth Area includes a variety of retail types divided into seven broad functional classifications. Four of these retail types are community serving, or Service Area-Based Retail and will be designed to respond to the particular characteristics of the residential or employment community being served: Neighborhood Convenience, Neighborhood, Community, and Employment Supportive. The other three retail types are broadly described as Corridor-Based Retail Uses. Destination, Freestanding, and Flex Retail uses are oriented along, but will not have direct access to, principal arterial corridors since they are auto-oriented. The Retail Types matrix on p. 22 provides a broad overview of these retail classifications. More specific descriptions, policies relating to each type of retail, and criteria for evaluating retail proposals by retail type are included on pp. 7-18.

4. Each application for a commercial retail rezoning must include a statement describing the catchment or market area to be served and a statement of justification that contains an analysis by the applicant of existing and proposed competing projects.

5. The County seeks to differentiate between Service Area-Based retail uses that serve specific residential or employment communities and Corridor-Based Retail which provides locations for destination retail. The size, format, and tenant makeup of retail uses will depend on the size of the catchment area and the characteristics of the site.
(i.e., access, type of community, location, function) as well as the nature of existing and planned retail uses serving the catchment area. The Retail Types Matrix (p. 22) summarizes guidelines for evaluating retail use proposals. The individual components of the matrix should be used as general guidelines for future retail development in conjunction with the policies contained herein. The text of these policies controls in cases of differences between the policies and the matrix.

6. The County seeks to prohibit strip commercial development. Strip commercial development is characterized by multiple entrances serving individual uses, minimal setbacks and landscaping, multiple signs and structures without a unified design scheme.

7. The County may consider rezonings of properties in the Village of Ashburn, the Village of Arcola, and the Old Sterling mini-plan area to allow for individually owned, small scale specialty or local commercial and business uses provided that the proposed use is designed to be compatible with the character of the village or the Old Sterling area.

III. CORRIDOR-BASED RETAIL POLICIES

Large scale retail uses demand a regional market, relying almost solely on automobile access. Therefore, they will be located outside of Residential Communities along planned and future principal arterial corridors where the County’s transportation network can best accommodate auto intensive retail uses (see maps pp. 23-26). Corridor-Based Retail uses include Destination Retail Centers, Freestanding Retail uses and Flex Retail uses, all of which act as destinations that attract customers from a regional market. Policies pertaining to Corridor-Based Retail uses are focused on mitigating the negative impacts of large scale retail development, accommodating new retail forms such as big box retail and warehouse clubs, and expanding opportunities for appropriate retail development in industrial areas.

A. General Policies

1. Corridor-Based Retail uses will not be permitted outside the County's designated Eastern Urban Growth Area.

2. Corridor-Based Retail uses will be prohibited in Residential Communities in the Eastern Urban Growth Area.

3. Corridor-Based Retail uses will be located in existing and planned principal arterial corridors subject to specific location, transportation, design and development criteria set forth below:
   a. Appropriate transportation infrastructure is or will be available to minimize disruption of traffic flows on principal arterials;
   b. The negative impacts of Corridor-Based Retail uses will be minimized;
c. Development of Corridor-Based Retail uses will be promoted at appropriate sites as designated on the maps on pp. 23-26.

B. Destination Retail

1. Destination Retail uses should be clustered to achieve a pattern of coordinated and complementary retail areas offering a wide range of retail services. Destination Retail areas offer a variety of comparative and specialty retail shopping goods and may include an entertainment component such as theaters. Destination Retail areas may include a variety of building configurations including multi-tenant shopping centers, enclosed malls or freestanding large superstores and big box retail uses. Destination Retail centers (generally ranging from 250,000 to 1.5 million square feet) typically serve a market area of 5,000 to 30,000 households that may include communities within or outside the County.

2. The Destination Retail land use designation specifies those areas where the development of Destination Retail uses can occur. (See the maps on pp. 23-26). Destination Retail areas overlay the existing land use designations of the General Plan (as amended), and applicable area plans (as amended) providing development options for properties located within the destination retail areas. For example, a property located in the Destination Retail overlay may be developed either in Destination Retail uses or in a use that conforms with the land use designation underlying the Destination Retail use designation.

3. The County encourages the clustering of Destination Retail uses in locations where planned and existing intersections and interchanges can support high traffic volumes.

4. The transportation implications of Destination Retail development will be evaluated on a site specific, corridor specific basis. However, all new Destination Retail uses must meet the following minimum criteria:

   a. No direct access to a principal arterial will be permitted. Access will be provided via major or minor collector roads or minor arterials.

   b. A minimum of two ingress and egress access points with two in-out bound lanes will be required. Additional access points may be required depending on the size of the proposed Destination Retail Center.

   c. Transportation impacts attributable to the proposed use need to be mitigated.

5. Destination Retail Centers will be designed and sited to mitigate impacts on adjoining land uses. Destination Retail Center traffic will not be routed through a residential development.

6. Buildings visible from principal arterials will incorporate recesses, off-sets, and other architectural details and building materials, and the like to avoid presenting blank walls to the roadway.

7. The County should consider the following criteria in the review of a Destination Retail Center application:
a. The proposed use respects the ultimate arterial or major collector road proposed in the Countywide Transportation Plan.

b. Utilities are available to accommodate the use.

c. Detrimental impacts on adjoining residential communities are mitigated.

d. The use does not interfere with the function of adjoining light industries or offices.

C. Corridor Policies

The Route 28 Corridor

1. All retail development within the Route 28 Corridor will conform to policies contained in the Route 28 Corridor Plan in Chapter 6 of the Revised General Plan. Retail proposals in the Route 28 Business areas will comply with the design guidelines contained herein.

The Route 7 Corridor

1. A node of Destination Retail is located at the southeast quadrant of the Route 7/ Cascades Parkway interchange.

2. The Route 7 corridor, west of Route 28, is intended to develop as the County's premier keynote office corridor. Therefore, no new Destination Retail uses will be permitted west of Route 28 in the Route 7 corridor.

3. No new direct access to Route 7 west of Route 28 will be allowed for any type of retail uses.

4. Provisions should be made for construction of the planned Route 7 north and south parallel roads (Riverside Parkway and Russell Branch Parkway) for Service Area-Based Retail Center applications. Primary access with connections to other arterial and collector roads should be provided.

5. The first occupancy permit for the Destination Retail center on Tax Map 80, Parcel 102 shall not be issued until after the issuance of the first occupancy permit for Phase I (which includes the 3 anchor stores) of the Dulles Town Center Regional Mall.²

6. A 150' building setback will be established along the Route 7 frontage of the Destination Retail center site unless the Applicant shows and the County agrees that allowing buildings within the 100' to 150' setback is permissible. The setback will be measured from the Route 7 six-lane right-of-way.

7. A 100' landscaped buffer will be established along the Route 7 frontage. The buffer should include trees, shrubs, and berming that will effectively and reasonably minimize the visibility of the Retail center and associated parking areas, dumpsters, and loading areas from Route 7.

² A definition and clarification of what Phase 1 entails will be provided by the property-owner.
8. Adequate building and parking setbacks, and buffers will be provided along the Algonkian Parkway interchange and/or ramps to shield the site from Algonkian Parkway.

9. Any side or rear building elevations which have their surface area parallel to Route 7 will have the facade covered generally with the same building materials as those used on the front of the building.

10. Dumpsters will be enclosed and the enclosures should be constructed of building materials that are compatible with the main structures.

11. Loading areas will be oriented to reduce their visibility from public roads and will be shielded by architectural features, walls, fences, or landscaping to minimize their visibility.

12. The site design and architecture of the Destination Retail center will be generally compatible with the planned Town Center adjacent to it. They will be generally compatible in setbacks, massing, height, scale, materials, facade treatments, landscaping, and signage. Sidewalks and street trees should be incorporated into the site design.

13. The additional trips associated with converting the land use on the Destination Retail site from planned office uses to retail will be mitigated, requiring improvements beyond those already proffered for the approved Dulles Town Center.

14. The ultimate planned road network may not accommodate the traffic generated by adding Destination Retail uses to the uses currently approved on the entire Dulles Town Center property. In which case, improvements beyond those currently included in the Countywide Transportation Plan will be required.

**The Dulles Greenway Corridor**

1. Destination Retail uses will be located in the eastern end of the Dulles Greenway corridor, extending east from the Route 772/Dulles Greenway interchange to the Dulles Airport property as depicted on the map on p. 25. Destination Retail uses will be located within approximately 2000 feet of the Toll Road interchanges in the area designated as Business Community and Business Employment Community on the Toll Road Plan land use map. Destination Retail uses will be located outside of potential node zones and will be subject to the land use, design, and transportation policies of the Toll Road Plan.

2. Destination Retail Centers will have access to a through, parallel, major collector road which connects to an arterial and/or major collector road.

3. Improvements and upgrades to the existing and planned Dulles Greenway interchanges should be provided by the applicant through the retail application process as warranted by the applicant’s pro-rata share of such improvements or upgrades.
D. Freestanding Retail Policies

1. Freestanding Retail uses are comprised of single-tenant, individual stores larger than 50,000 square feet and located on individual parcels not part of a retail center. Freestanding Retail uses will be located in areas the County has designated for Destination Retail Centers and share similar characteristics with such uses, including access points, market area, land use compatibility and floor area ratios, as described on the Retail Types Matrix on p. 22.

2. Freestanding Retail uses will be subject to the transportation policies for Destination Retail uses outlined on p. 8, and will be located in areas identified for Destination Retail as specified in the maps on pp. 23-26.

IV. SERVICE AREA - BASED RETAIL POLICIES

Service Area-Based Retail uses are located within or between the neighborhoods or the employment centers they serve and are not intended to attract customers from outside that area. They provide a community focus while fulfilling the convenience or routine shopping needs of the County's residents and workers. Service Area- Based Retail uses include Neighborhood Convenience, Neighborhood, and Community Retail centers located in Residential Communities, and Employment Supportive Retail centers located in Business and Industrial Communities. Policies pertaining to Service Area-Based Retail uses focus on the relationship of the retail use to the surrounding community,

A. General Policies

1. Service Area-Based Retail uses, including Neighborhood Convenience, Neighborhood, Community, and Employment Supportive types, will be located in the areas they serve since they are not intended to attract "drive-by" shoppers or function as destination retail.

2. Service Area-Based Retail uses will not have direct access to a principal arterial.

3. Service Area-Based Retail uses will be designed at a pedestrian-friendly scale, providing convenient internal pedestrian access for neighborhood residents or workers. Safe pedestrian access will be provided on-site with a clear separation between vehicular and pedestrian traffic.

4. Service Area-Based Retail uses will be separated from each other to prevent strip commercial development. Neighborhood Convenience and Neighborhood Retail Centers must generally be separated by a minimum distance of 4000' from any other Service Area-Based Retail Center to prevent the consolidation of centers into a larger commercial complex. Community Retail Centers must generally be at least 10,000 feet away from another Destination or Community Retail Center. The separation distance shall be measured between the two closest points. This distance may be reduced where a permanent natural or man-made barrier provides clear visual separation and eliminates the potential for retail uses to merge.
5. The **General Plan**, the **Toll Road Plan**, and the **Dulles South Area Management Plan** include land use ratios defining the mix of uses to be incorporated into the development of mixed-use communities. The percentage of commercial retail and service uses included in the land use mix ratios should generally guide the amount of commercial retail and service uses appropriate to develop in mixed use communities. However, the Service-Area Based retail policies included in **CPAM 1996-0001, Countywide Retail Policy Plan Amendment** define the characteristics of the commercial retail and services component of the land use ratio and may limit the commercial retail and service component in order to achieve the County’s retail development objectives.

### B. Neighborhood Convenience Retail Centers and Neighborhood Retail Centers

1. Neighborhood Convenience and Neighborhood Retail Centers will be located in Suburban, Traditional, Urban, and High Density Residential Communities generally internal to the residential neighborhood being served.

2. Neighborhood Convenience Centers are intended to serve immediate, convenience (sporadic or as needed) shopping needs for a limited variety of items or personal services. Although Neighborhood Retail Centers may also service convenience needs, these centers are intended to fulfill the planned routine daily and weekly shopping needs of neighborhood residents for items such as groceries as well as personal services. Neighborhood Retail Centers will be larger than Neighborhood Convenience Centers (generally 30,000-150,000 sq. ft.), but will offer limited comparative goods shopping. Specific characteristics defining the County’s objectives for the development of Neighborhood Convenience and Neighborhood Retail Centers are included on the Retail Types Matrix on p.22.

3. There are a few differences between the two neighborhood retail types. For example, Neighborhood Convenience Centers can be comprised of an individual, freestanding store (generally not over 5,000 sq. ft.) or a group of small stores (generally up to 30,000 sq. ft.) and typically serving a market area of between 500 and 3,000 households. Only carry-out or delivery restaurants will be permitted in Neighborhood Convenience Centers. Pad sites, full service fast food establishments and restaurants will be permitted in Neighborhood Retail Centers. Neighborhood Retail Centers (generally serving up to 3,000 households) will be developed as a focal point of the neighborhood, providing services that reinforce the neighborhood identity and may include civic uses.

4. Neighborhood Convenience and Neighborhood Retail Centers can include such uses as convenience stores, restaurants, gas stations, drycleaners, banks, medical offices and similar uses.

5. The design and siting of Neighborhood Convenience and Neighborhood Retail Centers will mitigate the impacts of parking, signs, lighting, waste storage, and loading on the adjacent neighborhood.

6. Access to Neighborhood Retail Centers will be provided by means of a minor collector or major collector road. Access to Neighborhood Convenience Centers
will be provided via major collector roads, minor collector roads and major subdivision streets.

7. All new Neighborhood Convenience and Neighborhood Retail Centers must meet the following minimum transportation criteria:
   a. Access will be provided at existing and planned median breaks, intersections or at consolidated access points, where appropriate.
   b. Entrances on undivided roads will be located at least 250 feet away from the centerline of the nearest arterial or collector road unless otherwise approved by VDOT.

8. Neighborhood Convenience and Neighborhood Retail Centers will be visually and acoustically buffered from the surrounding residences and traffic volumes and accessibility requirements will not conflict with residential vehicular and pedestrian traffic.

9. The retail component of a Neighborhood Core as described in the Dulles South Area Management Plan will be consistent with the primary characteristics of Neighborhood Commercial Centers outlined in the Retail Types Matrix, p. 22.

C. Community Retail Centers

1. Community Retail Centers are envisioned as focal points for civic and commercial activities serving several residential neighborhoods with a market area generally ranging from 2,000 to 8,000 households.

2. Community Retail Centers, which generally range from 100,000 to 400,000 square feet are intended to address a wide variety of daily and weekly shopping and personal needs (such as grocery shopping, drycleaning, video rental). However, these centers will also offer opportunities for comparison goods shopping such as clothing, household items, shoes and books. These centers may include pad sites such as banks, gas stations, etc. Specific characteristics defining the County's objectives for Community Retail Centers are included in the Retail Types Matrix on p. 22.

3. Community Retail Centers will be permitted in Residential Communities and in mixed use Business and Industrial Communities that include residential development. Community Retail Centers will generally be encouraged to locate at the edge of residential neighborhoods or between residential and non-residential areas to minimize potential land use conflicts and maximize convenient access from surrounding areas that will provide the market for such centers.

4. The transportation implications of Community Retail Centers will be evaluated on a site specific basis. However, all new Community Retail Center proposals must meet the following minimum criteria:
   a. No direct access to a planned or existing principal arterial will be permitted. Access will be provided via major or minor collector roads at existing and planned median breaks and/or intersections.
b. A minimum of two points of access will be required to better disperse traffic.

5. The retail component of a Town Center as described in the General Plan, the Toll Road Plan, or a Community Core as described in the Dulles South Area Management Plan will be consistent with the primary characteristics of Community Retail Centers outlined in the Retail Types Matrix, p. 22.

6. The retail component of a Node as described in the Toll Road Plan and urban center and Transit-related Urban Center as described in the General Plan will be consistent with the primary characteristics of Community Retail Centers outlined in the Retail Types Matrix (p. 22) and with the design policies included in the Toll Road Plan and the General Plan.

D. Employment Supportive Retail Centers

1. Employment Supportive Retail Centers are generally intended to provide convenient retail and personal support services such as office supply stores, copying/mailing facilities, restaurants, daycare centers, drycleaners, banks and similar uses to employees and businesses in adjacent office and industrial parks. Destination Retail and Freestanding Retail uses will not be permitted in Employment Supportive Retail Centers. Pad sites may be included in an Employment Supportive Retail Center. Specific characteristics defining Employment Supportive Retail Centers are outlined in the Retail Types Matrix on p. 22.

2. Regional Office Community and Business Employment Communities may include a retail component. The retail component will be limited to 5% of the gross floor area (measured in square feet) of the non-residential uses in the development.

3. The retail component of a Regional Office or Business Employment Community will be developed on a pro-rata basis in proportion to the nonresidential development as construction occurs. For example, for every 100,000 square feet of office space constructed, 5,000 square feet of retail space may be constructed.

V. EXISTING RETAIL AREAS POLICIES

Established shopping centers in Sterling Park, at Herndon Junction, CountrySide and individual retail establishments in the Route 28 and Route 7 corridors have served the shopping needs of eastern Loudoun residents for years. These older commercial areas will remain a visible and viable part of Loudoun's retail future, particularly if these areas are improved and well maintained. The County will provide incentives to encourage improvements that enhance the appearance of existing commercial areas and that keep these areas competitive in a changing retail environment. Where retail commercial development has occurred in a linear pattern along major transportation corridors, the County will encourage public and private investments to improve transportation safety.

1. Existing retail commercial areas will be protected and reinforced by County plan and practice where such uses are compatible with existing and planned land uses.
2. The County will implement a multi-faceted incentive program to encourage owners of existing retail commercial centers and businesses to renovate facilities on a routine basis and to add amenities that will modernize and improve the appearance and function of older retail centers and businesses. The incentive program will include:

a. Waiving site plan requirements for retail commercial centers and businesses seeking improvements such as additional landscaping, treed islands in parking areas, street trees along sidewalks and roadways, and retrofitting parking lots with pedestrian walkways, sidewalks and similar features that will make older centers more attractive and pedestrian oriented.

b. Encouraging new pedestrian-friendly, small scale, personal service and local office uses to locate in conjunction with established commercial centers where such improvements would enhance the function and appearance of the center and better serve the community. New structures should be located at the perimeter of existing parking areas to reduce the visual impact of large parking lots. The County will consider modifications of parking standards with appropriate justification (for example, reduced standards, shared parking) to facilitate such development.

3. The County will consider reducing or waiving rezoning application fees for owners of undeveloped commercially zoned property if the landowner desires to rezone the property to another non-residential use that is compatible with surrounding planned and zoned uses and that better implements the County's Comprehensive Plan goals (i.e., from CLI to PD-1P or from PD-SC to PD-OP). The County's intent is for less viable existing commercial sites to be re-evaluated at the owner's request for conversion to a more appropriate land use that expands the County's tax base.

4. The County will encourage existing retail centers and individual retail establishments to consolidate access points and share entrances and exits where feasible to minimize traffic congestion and conflict.

5. The County will encourage developers of non-retail projects, adjacent to established retail commercial areas, to consider the presence of the existing centers/businesses in the design of their projects by meeting with business owners and landowners from the adjacent retail area to discuss the proposed project. Additionally, the applicant shall address how the new project relates to the existing commercial area in terms of pedestrian access (if appropriate); providing buffers to reduce the potential for incompatibility between land uses and nuisance complaints; and coordinating and consolidating access points where appropriate.

VI. DESIGN GUIDELINES

The following guidelines apply to the development of any retail center. The guidelines are intended to emphasize the site development of retail uses that accommodate the customer, the retail business, and the adjoining land uses. They are also intended to
enhance the physical development of the County’s principal transportation corridors as well as the County’s neighborhood and office centers.

A. Building Placement and Design

1. All retail centers should include a site design that is compact and makes buildings the prominent feature of the site as viewed from adjoining roads.

2. It is desirable to have a green space to separate parking lots from sidewalks.

3. Buildings within a multi-building retail center should exhibit a unity of design through the use of similar elements such as rooflines, materials, window arrangement, sign location and architectural details.

4. Large freestanding stores, retail centers and restaurants should be encouraged to provide usable outdoor spaces.

5. Required drainage and stormwater management facilities, such as holding basins, drainage swales and culverts should be incorporated into the site design of the project. Natural drainage features should be conserved to the greatest extent possible.

6. Building massing should be varied to break down the scale of large buildings and retail centers. Long, flat facades are strongly discouraged. It is desirable that building facades should incorporate recesses, off-sets, angular forms or other features to avoid presenting a "blank side" to neighboring properties.

7. Pitched, mansard and other distinctive roof forms are strongly encouraged.

8. Rooftop mechanical equipment should be screened. Preferably, screening should be incorporated into the roof form. Ground mounted mechanical equipment should be screened.

9. Retail buildings should incorporate continuous arcades over the front walkway to provide weather protection for shoppers and create a pedestrian-oriented environment.

B. Circulation, Parking, and Loading

1. Pedestrian traffic, internal to the retail center, 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.

2. Sidewalks should be provided to Neighborhood Convenience and Neighborhood Retail Centers to accommodate benches, bikes, strollers, and planters.

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

C. Landscaping and Buffer

1. Large parking areas should be landscaped with trees and shrubs to reduce the visual impact, provide shade, and reduce the heat absorption of the parking area.

2. The street frontage of retail centers should be landscaped with trees to help create a green edge on both sides of the street.

3. Existing natural environmental features such as hedgerows, mature trees, and berms should be integrated into the landscape plan for retail centers, when feasible.

4. Retail buildings and parking areas should 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 should be buffered from adjacent retail uses by trees, fences and hedges.

D. Signs and Lighting

1. Signs for retail centers should be developed as an integral part of the overall center design. A unified graphic design scheme is strongly encouraged.

2. Lighting should 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 retail center.
Note: The individual components of this matrix should be used as general guidelines for future retail developments in conjunction with the polices contained herein.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Neighborhood Convenience</th>
<th>Neighborhood</th>
<th>Community</th>
<th>Employment Supportive</th>
<th>Destination (Regional)</th>
<th>Freestanding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Function</strong></td>
<td>Serves immediate, convenience shopping needs for a limited variety of items (such as milk, bread, gas) and personal services (such as dry cleaning). Fulfills sporadic or as needed shopping needs. Can be a stand-alone use such as convenience store, bank, gas station, etc.</td>
<td>Serves routine (generally planned) daily &amp; weekly shopping needs for items such as groceries as well as personal service needs. May also serve convenience needs. Offers little or no comparative goods shopping. Fulfills daily shopping needs. May include pad sites such as banks, gas stations, convenience stores, etc.</td>
<td>Serves a wider variety of daily &amp; weekly shopping and personal service needs, but also offers some comparative goods shopping for items; such as, apparel, shoes, and books. Fulfills weekly shopping needs. May include pad sites such as banks, gas stations, convenience stores, etc.</td>
<td>Serves convenience retail and personal service needs of employees in adjacent business or industrial parks/areas. May include pad sites such as banks, gas stations, convenience stores, etc.</td>
<td>Offers the widest variety of comparative and specialty goods and may offer an entertainment component. Not intended to fulfill daily or convenience shopping needs. Fulfills comparative or entertainment shopping needs. May include pad sites such as banks, gas stations, convenience stores, etc.</td>
<td>A single tenant individual store of 50,000 sq. ft. or greater that is located on a separate parcel of land that is not part of a shopping center.</td>
</tr>
<tr>
<td><strong>2. Center Size Range</strong></td>
<td>Generally stand alone uses up to 5,000 sq. ft.; multi-tenant center up to 30,000 sq. ft.</td>
<td>Generally 30,000 - 150,000 sq. ft.</td>
<td>Generally 100,000 - 400,000 sq. ft.</td>
<td>Square footage depends on total non-residential square footage.</td>
<td>Generally 250,000 - 1.5 million sq. ft.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>3. Location</strong></td>
<td>Generally internal to Residential Neighborhood being served.</td>
<td>Generally internal to Residential Neighborhood that is being served.</td>
<td>Generally at the edge of or between Residential Neighborhoods or between a Residential and Non-Residential Community.</td>
<td>Generally internal to Business or Industrial Community being served.</td>
<td>In existing and planned principal arterial corridors, outside of Residential Community (see maps and corridor specific policies).</td>
<td>In existing and planned principal arterial corridors, outside of Residential Community (see maps and corridor specific policies).</td>
</tr>
<tr>
<td><strong>4. Transportation Access Points</strong></td>
<td>Via minor collector, major collector roads, and major subdivision streets at a median break. No direct access to minor arterials or principal arterials.</td>
<td>Via minor or major collector roads at a median break.</td>
<td>Via minor or major collector roads or minor arterials at median break.</td>
<td>Via access points serving the Business or Industrial Community.</td>
<td>Along a principal arterial, but accessed via major collector roads or minor arterials at a median break proximate to a planned or existing interchange (see maps pp.18-19).</td>
<td>Along a principal arterial, but accessed via major collector roads or minor arterials at a median break proximate to a planned or existing interchange (see maps pp.18-19).</td>
</tr>
<tr>
<td><strong>5. Market Area Size</strong></td>
<td>Immediate Residential Neighborhood generally 500 - 3,000 households.</td>
<td>Immediate Residential Neighborhood generally less than 3,000 households.</td>
<td>Several Residential Neighborhoods generally 2,000 - 8,000 households.</td>
<td>Surrounding Business Community.</td>
<td>Several communities within County as well as communities outside County; generally 5,000 - 30,000 households.</td>
<td>Several communities within County as well as communities outside County; generally 5,000 - 30,000 households.</td>
</tr>
<tr>
<td><strong>6. Compatibility with Surrounding Land Uses</strong></td>
<td>Suitable as a component of Residential Community.</td>
<td>Suitable as component of Residential Community.</td>
<td>Suitable as component of Residential or mixed use community.</td>
<td>Suitable as component of Business or Industrial Community.</td>
<td>Incompatible in Residential Community.</td>
<td>Incompatible in Residential Community.</td>
</tr>
<tr>
<td><strong>7. Floor Area Ratio (FAR)</strong></td>
<td>.2 - .3</td>
<td>.2 - .3</td>
<td>.2 - .3</td>
<td>.2 - .3</td>
<td>.2 - .3</td>
<td>.2 - .3</td>
</tr>
</tbody>
</table>

Note: for the purposes of the matrix, 50-100 sq. ft. of retail is assumed for each household.
Retail Plan
Destination Retail Greenway

Legend
- Existing Roads
- Streams
- Parcels
- Town & Airport
- Destination Retail
- Proposed Two Lane Section
- Proposed Four Lane Section
- Proposed Six Lane Section
- Proposed Eight Lane Section

Note: The Destination Retail designation around the Dulles Greenway has changed: this map has been superseded by the Planned Land Use map in the Revised General Plan (adopted 7/23/01).

Map Number: 196 0011

1:36,000
1 inch = 3,000 feet
Retail Plan
Destination Retail Route 7

Legend

- Existing Roads
- Streams
- Parcels
- Town & Airport
- Destination Retail
- Proposed Two Lane Section
- Proposed Four Lane Section
- Proposed Six Lane Section
- Proposed Eight Lane Section

*Note: Cascades Town Center, as currently zoned, is a hybrid retail center and includes Destination Retail uses, Community Center Retail uses, Town Center uses, and civic and public uses.

Map Number: L96-0011
1: 36,000
1 inch = 3,000 feet
CPAM 1996-0003
Strategic Land Use Plan for Telecommunication Facilities

Adopted November 6, 1996
Strategic Land Use Plan for Telecommunication Facilities

Adopted as part of Loudoun County’s Comprehensive Plan November 6, 1996
Adopted by:
The Loudoun County Board of Supervisors

Dale Polen Myers, Chairman

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Jim Burton                  Elanore C. Towe
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SECTION I: BACKGROUND

A. INTRODUCTION

There are currently more than forty commercial public telecommunication antenna sites in Loudoun County (see “Existing and Proposed Telecommunication Antennas” map available through the County). Changes in commercial public telecommunication demand and technology have caused a great demand for additional antenna mounting facilities, mostly in the form of lattice towers or monopoles. The increased demand for these facilities poses a number of important land use issues for Loudoun County including facilitating collocation of antennas, ensuring appropriate siting and design, and mitigating impacts of telecommunication facilities.

The policies outlined in this document were developed by the Transportation, Subdivision, and Site Plan Committee of the Loudoun County Planning Commission to balance the public demand for commercial public telecommunication service with the County’s desire to avoid proliferation of towers and monopoles. Guidance is provided for the location and design of commercial public telecommunication facilities only, not amateur operations. The intent of these policies is to provide the overall land use strategy for allowing commercial public telecommunication service in Loudoun County, while mitigating any negative impacts.

B. GOAL AND OBJECTIVES

Goal:

Loudoun County recognizes that modern, effective, and efficient telecommunications is an essential part of creating an attractive economic development environment and meeting the desires of its citizens for high quality service. The County seeks to encourage improvements in telecommunications services while mitigating the impacts on its residents, nearby land uses, scenic beauty, and rural heritage.

Objectives:

1. To identify a hierarchy of areas where future commercial public telecommunication facilities can be located, while minimizing the proliferation of towers and monopoles;

2. To require collocation of commercial public telecommunication facilities on existing structures and towers;

3. To attempt to ensure compatibility of telecommunication facilities with nearby land uses;

4. To establish siting and design criteria to mitigate negative impacts;
5. To establish commercial public telecommunication tower and monopole removal policies; and

6. To establish a process by which an applicant can demonstrate their compliance with these policies.

7. To stay abreast of changing technologies that may reduce the need for new towers and monopoles.

C. COMMUNITY PLANNING PROCESS

The proposed policies were developed initially by the Transportation, Subdivision, and Site Plan Committee of the Planning Commission over a three month period in the spring of 1996 that included two public input sessions. As part of their review, the Committee heard presentations from citizens, telecommunication providers, the FCC, Leesburg Airport, and the County’s Fire and Rescue staff. The Committee then reviewed existing County policy and regulations and looked at the policy and regulations of several other jurisdictions.

On May 22, 1996, the Committee presented the recommended draft policies to the Planning Commission Committee of the Whole. The draft policies were then sent to referral agencies for review. The Planning Commission held a public hearing on the draft telecommunication policies on June 12, 1996 and made further amendments to the draft policies at their June 19 work session. The Board of Supervisors held a public hearing on these policies on September 4, 1996 and subsequently added two new policies and revised others. On November 6, 1996, the Board approved this comprehensive plan amendment establishing this document as part of the County’s comprehensive plan.

D. RELATIONSHIP TO OTHER COUNTY DOCUMENTS

Loudoun County’s Comprehensive Plan consists of the General Plan, several area management plans, strategic plans, and related documents. The General Plan provides the overall countywide goals and policies for managing growth and development while the area management plans and strategic plans outline more specific strategies for local planning areas or particular issues. These telecommunications policies are a strategic plan consisting of goals and policies for the siting and design of telecommunication facilities. As such, these telecommunication policies supersede Energy and Communication Policies 4, 5, and 6 on page 83 and Energy and Communication policy 2 on page 156 in the General Plan and apply in all areas of the County.
SECTION II. TELECOMMUNICATION POLICIES

A. LOCATION POLICIES

The location policies establish a hierarchy of preferred locations for new commercial public telecommunication facilities. The County’s first preference is to have new antennas collocate on existing tall structures, monopoles and towers in order to minimize the need for new towers and monopoles. When a telecommunication antenna cannot locate on an existing structure for technical or location reasons, the County then prefers that new towers or monopoles be located where they are most compatible with surrounding land uses.

The second level of preferred locations for new monopoles or towers is in industrial and employment areas, within overhead transmission line rights-of-way, and on public sites or volunteer fire and rescue company properties (see the “Public Facility Sites” and “Telecommunications By-Right Zoning” maps available through the County). The policies provide incentives, such as allowing monopoles as a by-right use, for applicants to locate in these preferred areas. In urban eastern Loudoun County, the policies encourage telecommunications antennas on light poles within the VDOT or Dulles Greenway right-of-way, and potentially on towers on existing low-rise heavy industrial buildings.

In order to protect the scenic rural beauty of Loudoun County, commercial public telecommunications towers and monopoles in rural areas will be allowed only by special exception. Furthermore, the County will not allow new towers or monopoles to locate in County designated historic districts.

Countywide Location Policies

1. To minimize the need for new towers and monopoles, the County prefers that new commercial public telecommunication antennas be located on existing buildings, towers, monopoles, water tanks, overhead utility transmission line structures and other tall structures wherever possible. Commercial public telecommunication antennas should be permitted by-right on all existing towers, monopoles, and other tall structures subject to performance standards to mitigate visual impacts.

2. Where it is not feasible to locate on an existing structure, the County prefers that new towers or monopoles be located

   a. In planned and zoned industrial and employment areas,
b. Within overhead utility transmission line rights of way where structures greater than eighty (80) feet in height already exist, and

c. On public sites or volunteer fire or rescue company properties where such facilities mitigate adverse impacts on the character and use of the public or public safety site.

3. In order to encourage location in industrial and employment areas, commercial public telecommunication monopoles up to 199 feet in height should be a by-right use, subject to performance standards to mitigate visual impacts, in areas that are both planned and zoned for industrial and employment uses (such as the GB, PDGI, PDSA, PDOP, PDIP, PDRDP and MRHI zoning districts but not the employment areas within PDH districts) provided that the monopole is not located within 750 feet of a residentially zoned property.

4. In order to facilitate use of volunteer fire and/or rescue company sites, telecommunication monopoles should be permitted as a by-right use up to 199 feet in height, subject to performance standards to mitigate visual impacts, on fire and/or rescue sites in rural and agricultural areas (specifically A3, A10, A25, all CR, and RC zoning districts). In addition, The County encourages use of other public sites where telecommunication uses should be permissible as an accessory use by special exception. Any Zoning Ordinance amendments should also consider adoption of visual impact performance standards to mitigate impacts on adjacent residential or other sensitive uses.

5. Except for areas where towers or monopoles are permitted by right, an applicant for a new commercial public telecommunication tower or monopole will demonstrate to the County that location on an existing tall structure is not feasible. An applicant will evaluate the feasibility of using existing or approved towers, monopoles, or other structures greater than 50 feet in height within a one mile radius of any proposed site in the Eastern Loudoun Urban Growth Area and within a two-mile radius elsewhere in the County. Technological, physical, and economic constraints may be considered in determining unfeasibility. Collocation may be determined to be unfeasible in the following situations:

a. Planned equipment would exceed the structural capacity of existing and approved towers or monopoles, considering existing and planned use of those towers, and such towers or monopoles cannot be reinforced to accommodate planned or equivalent equipment at a reasonable cost;

b. Planned equipment will cause interference with other existing or planned equipment for that tower or monopole, and that the interference cannot be prevented at a reasonable cost;
c. Existing or approved towers or monopoles do not have space on which planned equipment can be placed so as to provide adequate service; or

d. Existing or approved towers or monopoles will not provide adequate signal coverage.

6. The County encourages new towers and monopoles to locate in overhead utility transmission line rights of way where there are existing tall structures. The Zoning Ordinance should be amended to allow monopoles up to 199 feet in height by-right, subject to performance standards, within overhead utility transmission line rights of way where there are existing transmission support structures greater than eighty (80) feet in height.

Urban Location Policies

1. The County should revise the Zoning Ordinance to allow towers up to 40 feet in height on existing buildings in areas which are both planned and zoned for heavy industrial uses (such as MRHI and PDGI) subject to performance standards to mitigate visual impacts.

2. The County encourages the location of commercial public telecommunication antennas on light poles and other existing tall structures in the right of way of the Dulles Greenway and VDOT’s arterial roads.

Rural Location Policies

The County recognizes the importance of maintaining the natural scenic beauty and historic character of the rural and historic areas. As such, monopoles and towers are prohibited within the County’s Historic and Cultural Conservation Districts. As in urban areas, the County prefers locating new antennas on existing towers, monopoles or other tall structures. When existing structures cannot be used, new monopoles or towers should be sited within the right-of-way for overhead utility transmission lines where the visual impact of an additional tall structure would be minimal. Elsewhere, towers and monopoles should be located in rural areas only by Special Exception and subject to design criteria for mitigating visual impacts.

1. The County prefers that commercial public telecommunication antennas locate on existing tall structures where possible.

2. Except within overhead utility transmission line rights of way as specified in Countywide Location Policy six (6), commercial public telecommunication towers and monopoles will be permissible in agricultural-residential areas (such as the A-3, A-10, A-25, and CR zoning
districts) only by special exception and subject to performance standards to mitigate visual impacts.

3. Commercial public telecommunication towers and monopoles are prohibited within County designated historic districts.

B. DESIGN STANDARDS

This plan calls for design standards to address visual and land use impacts of commercial public telecommunication facilities. There are two main components of the design strategy. The first is to limit the need for new towers and monopoles by providing for collocation. The second is to mitigate visual impacts through appropriate setbacks, screening, and design. The policies will help minimize and mitigate impacts through appropriate siting and design and provide guidance for development of new Zoning Ordinance performance standards.

Tower and Monopole Design

1. Due to their reduced visual impacts, when technologically and physically feasible, monopoles are the preferred design.

2. Tower and monopole sites should be designed and constructed to the minimum height necessary to accommodate at least three providers on the tower or monopole and provide sufficient land area for additional equipment buildings unless doing so would:
   
   a. Create an unnecessary visual impact on the surrounding area; or
   
   b. No additional need is anticipated for any other potential user in this area; or
   
   c. There is some valid economic, technological or physical justification as to why collocation is not possible.

Countywide Visual Impacts

1. The visual impact of commercial public telecommunication facilities should be mitigated so as to blend with the natural and built environment of the surrounding area.

2. The specific communication facility design issues that should be examined in looking at visual impact are: the setting, color, lighting, topography, materials and architecture. Towers and antennas should be neutral in color to blend with the background, unless specifically required by the FAA to be painted or lighted otherwise.
3. To mitigate the visual and noise impacts of new equipment buildings and accessory uses, these structures should blend in with the surrounding environment through the use of appropriate color, texture of materials, topography, scale of buildings, landscaping and visual screening.

Rural and Historic Areas

1. New commercial public telecommunication facilities sited in rural and historic areas should conform with the following design considerations:

   a. Monopole or tower sites should be sited within areas of existing mature vegetation so that the maximum amount of the structure and associated buildings are screened;

   b. Monopoles or tower sites shall not be located along ridge lines but down slope from the top of the ridge lines to protect views of the Catoctin, Bull Run, and Hogback Mountains, the Short Hill, and the Blue Ridge;

   c. Monopoles or towers proposed where mature vegetative buffering or topographical conditions will not contribute to screening shall demonstrate that there is no existing mature vegetated area nearby that could be used instead. In all cases, the County encourages camouflaging the facility to mitigate visual impacts;

   d. Monopoles or towers should generally be sited toward the interior of a property rather than close to a property line unless a lesser visual impact would occur from locating it elsewhere. Visual impacts should be mitigated by measures onsite rather than relying on offsite conditions for mitigation.

2. When there is not a feasible location with existing mature vegetation then the preferred location for a new tower or monopole is close to existing tall structures.

3. Commercial public telecommunication towers or monopoles on the property of a structure or site that is listed on the National Register of Historic Places should show how the visual impact on views from or toward the structure will be mitigated. The applicant should provide visual imagery from several different perspectives to help determine the extent to which the facility could be designed to mitigate the visual impact on the historic structure or site.
4. Applicants proposing a telecommunication tower or monopole within one mile of a County designated Historic District or State Scenic Byway should provide both a visual impact analysis and justification why the tower or monopole could not be sited elsewhere.

Publicly Owned or Controlled Facilities and Volunteer Fire or Rescue Companies

1. Applicants for commercial public telecommunication towers or monopoles must demonstrate that there will not be any physical or technological interference with the existing or planned function of the public facility or volunteer fire or rescue company facility.

2. Required landscaping may be less stringent for public sites or volunteer fire or rescue company sites where the visual impact of the support building is otherwise mitigated or is consistent with the surrounding area.

By-Right Uses

1. Commercial public telecommunication monopoles in employment or industrial areas should locate toward the interior of a lot rather than along the common boundary with existing or planned residential areas and should mitigate visual impacts onsite rather than relying on offsite conditions for visual mitigation.

2. Within employment or industrial areas, commercial public telecommunication monopoles should be separated from residentially zoned property by a minimum of 750 feet. Along existing overhead utility transmission line rights of way, the 750 foot separation does not apply.

3. In some locations, such as in industrial areas, required landscaping may be less stringent where the visual impact of the support buildings is otherwise mitigated or consistent with the surrounding area.

Arterial Road Corridors

1. The County may consider allowing towers or monopoles in major and minor arterial road corridor setback areas if the tower can be sited within existing mature vegetation or the topographical conditions are such that the visual impact of locating within the setback is less than a nearby location that adheres to the setback.
C. SAFETY AND HEALTH POLICIES

This plan addresses two main issues related to safety and health. The first is the potential for conflict between new towers or monopoles and existing airports. The Metropolitan Washington Airports Authority (MWAA) and the Town of Leesburg have expressed concern with coordination between the commercial public telecommunication providers, the County, and the airport authorities. The Plan calls for a commercial public telecommunications provider to demonstrate to the County that they have contacted the appropriate airport authorities prior to submission of a land development application so that any potential airport issues can be addressed.

The second issue relates to the appropriate abandonment of a site no longer maintained for commercial public telecommunication use. The County has included a policy to require that a site no longer used for commercial public telecommunications be returned as nearly as possible to pre-existing site conditions.

Policies

1. Applicants for any commercial public telecommunications facility shall demonstrate that they have complied with applicable regulations of the FCC and the FAA. If a proposed telecommunications tower or monopole is higher than 200 feet or within (5) five miles of either Dulles or Leesburg Airports, the applicant will provide verification that he/she has notified the appropriate airport authority (Metropolitan Washington Airports Authority or the Town of Leesburg) and that the FAA has determined that the proposed facility is neither a hazard nor an obstruction to aviation.

2. An applicant or its successors shall remove all unused structures and facilities from a commercial public telecommunication site, including towers and monopoles, within 90 days of cessation of commercial public telecommunication use or the expiration of the lease, whichever occurs first, and the site should be restored as closely as possible to its original condition.

D. IMPLEMENTATION POLICIES

The implementation policies specify strategies for the County to execute this telecommunications plan. The policies give guidance to applicants proposing new commercial public telecommunication facilities as well as outline further actions the County intends to take to implement these policies.
1. The County should initiate a **Zoning Ordinance** amendment to develop regulations that comply with this plan. The **Zoning Ordinance** performance standards for commercial public telecommunication facilities should be revised to be in conformance with these policies.

2. The County should maintain maps of existing and proposed telecommunication facilities, public facility sites, and areas of by-right zoning for telecommunication monopoles for information purposes.

3. The Joint Annexation Committees for Purcellville and Round Hill should be encouraged to adopt the County’s commercial public telecommunication policies for their Urban Growth Areas.

4. Require all applications for future monopoles and towers to:
   a. Demonstrate that the location proposed has resulted from the systematic review of all options from the hierarchy of County location preferences and justify the option selected.
   b. Demonstrate compliance with all design criteria. The applicant should provide a photo-image or other similar visual simulation to show the proposed tower or monopole in relation to its surroundings. The applicant should provide such visual imagery from several different perspectives to help determine the extent to which the facility could be designed to mitigate the visual impact on area residences and roads.
   c. Address the terms and conditions under which collocation by other users would be acceptable.

5. Applicants for proposed new towers should notify in writing and meet with citizens in the vicinity of the proposed site at least three weeks prior to the Planning Commission public hearing.

6. Applicants for proposed new towers are encouraged to provide space on the tower for Loudoun County Fire and Rescue communication purposes.