LEESBURG AREA MANAGEMENT PLAN

Loudoun County, Virginia
November 1982

LOUDOUN COUNTY DEPARTMENT OF PLANNING, ZONING AND COMMUNITY DEVELOPMENT
LEESBURG AREA MANAGEMENT PLAN

An Element of the Comprehensive Plan

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Milton J. Herd, Director

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* Resigned prior to adoption of this Plan
ACKNOWLEDGEMENTS

A primary element of the Loudoun County comprehensive planning process is meaningful and substantive citizen involvement in the preparation of area plans. The plan for the Leesburg area was initiated by the "Issues and Options Report", developed by the staff in September of 1980. This report was designed to provide background information for the citizen-based Area Planning Committee which the Loudoun County Planning Commission appointed in January 1980. The dedicated group of individuals who made up the Committee worked diligently toward the preparation of a draft Strategy Plan for eventual Planning Commission review. The process required over six months of time with many evening meetings during which the Committee studied, discussed and generally reached consensus on such a plan. These citizens, demonstrating their interest in the future of Loudoun County, prepared a plan which will greatly affect the community in which they all have a stake.

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The Town of Leesburg's staff was periodically consulted on various land use issues and made a significant contribution to the preparation of this plan. KDA, Inc., consultant to the Town of Leesburg, was also helpful in the planning process.
Title: Leesburg Area Management Plan

Author: The Leesburg Area Planning committee
Loudoun County Planning Commission
Loudoun County Department of Planning, Zoning
and Community Development

Subject: Land use policies, programs and implementation
techniques for the area surrounding the Town
of Leesburg.

Date: November 1, 1982 (adopted by the Board of Supervisors)
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Number of Pages: 177

Abstract: This land use document consists of five plans covering
residential, environmental, design, commercial and
industrial issues with inventory, analysis and recom-
mendations for each section. There is an implemen-
tation section which outlines techniques for future
action. The Plan is a component of the Loudoun
County Comprehensive Plan.
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Leesburg Area Planning Chronology

STAFF DRAFT
Issues and Options Report
Loudoun County Planning Commission

Town of Leesburg Staff Review

FINAL DRAFT
Issues and Options Report

Citizens' Advisory Committee

PRELIMINARY DRAFT
Strategy Plan

Planning Commission Work Sessions
Planning Commission's Public Hearing

FINAL DRAFT
Area Management Plan

Transmission to Board of Supervisors

Work Sessions and Public Hearing

Adoption by Board of Supervisors November 1, 1982

Area Management Plan
INTRODUCTION

The purpose of land use planning for the Leesburg area is to provide a guide to aid citizens and government officials in making the difficult choices that will define how the area will grow in the foreseeable future. The Leesburg Area Management Plan analyzes the existing land use issues and provides a plan for both conservation and development that will retain the area's unique assets for the enjoyment of future generations, while permitting substantial, orderly expansion around the Town.

The Leesburg area is at a crossroads. The Town of Leesburg anticipates an increase in both residential and non-residential growth in the next decade. The County is committed to managed growth of public facilities (i.e., schools, sewer and water, roads, recreation, etc.) and to residential growth taking place within a context of environmental sensitivity. The basic land use issues that are critical to such managed growth are:

1. Growth Rate: How and when will the area accommodate residential growth and at what density?

2. Urban Design: How should new residential and commercial areas be organized in terms of size, scale and location in order to be compatible with the historic character of the Town and County?

3. Public Facilities: How, when and where will public investments be programmed?

4. Industrial and Commercial Growth: How and where will the area accommodate new industrial and commercial growth?

5. Agricultural Preservation: How should the agricultural industry in the area be preserved?

6. Environmental Integrity: How will the significant environmental features of the area be managed?

7. Transportation: How can the existing and future transportation network meet the demands of the future?
These issues all require care in balancing the potential conflicts generated by growth and its costs with the development philosophy expressed in the Resource Management Plan. That plan's policy explicitly promotes growth, when it occurs, to take place around existing village or town centers throughout the County in order to centralize public services (schools, sewer and water extensions, etc.) within identifiable growth center limits. As a method of implementing this important policy, an Urban Limit Line (urban growth boundary) has been recommended that will control the extension of public facilities (schools, sewer lines, etc.) by declaring property external to the line as limited in growth potential.

The Leesburg Area Management Plan recommends the most logical land use and growth pattern for the Leesburg area within the Plan's time frame of ten years. This plan has been compiled to ensure harmonious growth commensurate with the health, safety and welfare of the area's residents.

A recurring concern throughout the preparation of the Leesburg Area Management Plan has been the annexation of additional land by the Town of Leesburg. Such annexation would remove from the County the ability to manage growth in the area subject to annexation and could severely constrict the rural land management programs. There have been vocal proponents as well as opponents to the issue of whether an appropriate annexation area should be included in this plan. In addition, on March 10, 1982 the Town passed a resolution calling for the annexation of some 15.3 square miles of this study area. This proposal would extend the current Town limits well beyond the recommended Urban Limit Line to include not only the Balls Bluff National Cemetery to the north but also to include approximately one-half of the Sycolin watershed to the south. Because annexation involves issues beyond those addressed in this plan, no formal position or recommendation will be made with regard to what area might be appropriate for annexation other than to state that the proposed area outside of the recommended Urban Limit Line is clearly inappropriate for municipal jurisdiction and that the areas within the ULL should only be annexed subsequent to their development under the County's Comprehensive Plan and Zoning Ordinance. However, because any decision with regard to annexation will affect the delicate balancing of the competing land use issues discussed in this plan, the discussions, suggestions and recommendations contained herein should be followed in developing the County's position with regard to the Town's proposed annexation. Regardless of how the annexation issue is resolved, it is recommended that the land within the Leesburg Planning Area be developed in accordance with the recommendations contained in the County's Comprehensive Plan and Zoning Ordinance.
A major recommendation of the Plan is the implementation of an Urban Growth Area where development would be of higher density and served by public facilities in contrast with the rural areas of farms and large residential lots served by wells and septic systems. The limits of this urban growth would be established by an Urban Limit Line. (See Figure 1, page iv). The Urban Limit Line (ULL) is the geographical boundary that clearly distinguishes the more urban oriented areas (Town of Leesburg and its immediate environs) from the rurally based (farm) community. Basic to the Resource Management Plan is the tenet that new development would locate around the more urban areas where public facilities are available at the least public cost. The concept of the Urban Limit Line represents the specific implementation technique of the RMP that promotes residential and non-residential growth around designated urban growth centers (towns, villages). Figure 1, page iv defines the general growth areas for the planning area.

Many criteria were used in developing the Urban Growth Area and the Urban Limit Line. The basic criteria regarding the ULL were:

1. Proximity to the Town of Leesburg
2. Existing and proposed zoning districts
3. Watershed boundaries surrounding the Town
4. Gravity sewer service potential
5. Existing and proposed location of public facilities (i.e., schools, road improvements, recreation and other Capital Improvements Program items)

The definition of the Urban Limit Line is that point in the planning area which separates an urban development area with sewer service from a rural development area where no sewer service is planned over the anticipated 10-year life of the Plan. Future urban facilities (CIP items) will be concentrated within the Urban Growth Area (see Figure 1, page iv) to limit dispersion of residential and non-residential growth to areas where premature development will hinder the effective implementation of the RMP. New development (residential and non-residential) within the Urban Limit Line should pay its fair share of public costs for necessary facilities. The Town of Leesburg should support the Leesburg Area Management Plan and its recommendation to promote the reduction of capital costs. The planning and zoning process should secure required dedications and improvements to public facilities to provide a full range of amenities and facilities at lowest public cost. The density transfer program should be used by the Town of Leesburg whenever possible.
The Leesburg Area Planning Process

The specific purpose of the Leesburg Area Management Plan is to provide a detailed basis for implementation of the Resource Management Plan (RMP) on a local level. The RMP was adopted on the premise that the valued resources of the County could be saved for future generations and that growth, when it occurs, should take place in areas around existing communities. To implement this growth policy, the RMP encouraged increased levels of growth around towns and residential community centers, given the concurrence of the local citizens.*

To achieve this end, the Leesburg area planning process was divided into two stages. The first stage was the "Issues and Options Report" which was designed to make explicit the difficult land use issues facing the Town and County and to sketch alternative plan options which could provide a framework for detailed land use plans. The Town of Leesburg's staff reviewed the "Issues and Options Report" and substantive changes were made in the document. The report was reviewed by the citizens' Leesburg Area Planning Committee; goals for the area were adopted and strategies reviewed by its various subcommittees. From these goals and strategies, a draft strategy plan was drawn up as the first step in Part II of the planning process. This was the basis of the Plan compiled by the Planning Commission and adopted by the Board of Supervisors on November 1, 1982.

* Loudoun County Resource Management Plan (adopted May 21, 1979), page 219
CHAPTER I

DESCRIPTION OF THE LEESBURG AREA
CHAPTER I

DESCRIPTION OF THE LEESBURG PLANNING AREA

HISTORY

The Leesburg area has always been the social, judicial and political focus of Loudoun County. The Town of Leesburg was founded in 1758 at the critical junction of the Vestal's Gap Road (Route 7) and the Carolina Road (Route 15). The Vestal's Gap Road linked the port communities of Alexandria and Georgetown to the largely unsettled hinterland via gaps in the Catoctin and Blue Ridge ranges, while the Carolina Road, originally an Indian trail, was the westernmost north-south route of the original thirteen colonies. Today the Town of Leesburg retains as its core the original town, now a designated local, state and national historic site. In addition, the Town has expanded to the south and east and provides new shopping and employment centers as well as new residential communities. The central historic district still contains the traditional county governmental functions that have existed there since the 18th century. The historic district itself has become a focus for tourism, an important county industry.

BOUNDARY DESCRIPTION (see Figure 2, Page 2)

The Leesburg planning area comprises the Big Spring, Cattail Branch, Tuscarora, Sycolin and Goose Creek watersheds but excludes the Town of Leesburg. The planning area begins at the confluence of Limestone Branch and the Potomac River to the north. This northern boundary extends along Limestone Branch from the Potomac River to the Catoctin Ridge. The Ridge forms the entire western boundary of the planning area. Goose Creek provides the southern boundary as it flows east to a curve just north of Beaverdam Creek. The boundary leaves Goose Creek at this point and proceeds due east to Route 659. The eastern boundary of the planning area is marked by Route 659, following the approximate Goose Creek watershed and extending through the Xerox property to the Potomac River at the northern tip of Seiden Island. The Potomac River constitutes the northern boundary of the planning area from the Xerox property to Limestone Branch.

The entire planning area was divided into nine districts whose primary geographic boundaries are natural features or roads but which were established and defined because of similarities of land use within each district. The primary concern was for drainage areas, but other cultural boundaries were considered important.
FIGURE 2

LEESBURG AREA MANAGEMENT PLAN

PLANNING DISTRICTS

1. White's Ferry
2. Catoctin Ridge
3. Town of Leesburg
4. Edwards' Ferry
5. Upper Tuscarora
6. Lower Tuscarora
7. Airport
8. Goose Creek
9. Sycolin
10. Oatlands
White's Ferry, the northernmost district, is bounded by the Catoctin Ridge, Limestone Branch, the Potomac River, the Ball's Bluff Road and the northern limits of the Town of Leesburg. The major characteristic of the area is its limestone geology which puts certain restrictions on development. Currently the main uses are farming, residential and institutional.

Southeast of White's Ferry is the Edwards' Ferry District. The area is characterized by farmland and low density residential development but with a different underlying geology. Its eastern boundary is Goose Creek; its southern boundary Route 773 to the point where it turns north after which the boundary goes across country to Goose Creek. On the west the district is bounded by the Town limits, on the north by Ball's Bluff Road and on the northeast by the Potomac River.

The Goose Creek District is bounded on the north by the Potomac River and extends to the southern edge of the Planning Area. Its western boundary follows Goose Creek and it extends to the eastern ridge of the watershed at Route 659. This district has a number of significant diabase rock formations which are presently being mined. It also contains the water impoundment and water treatment facility of the City of Fairfax on Goose Creek. County policy towards this district is one of natural resource preservation. Consequently, residential development along Route 659 would be discouraged.

Upper and Lower Tuscarora Districts, named for the watershed they encompass, are slated for residential and nonresidential development. They are very close to the town on its southern and eastern boundaries in the general direction of development. Lower Tuscarora involves primarily industrial development, upper Tuscarora primarily residential. Both are bounded on the south by the Tuscarora watershed, on the north by the Town and the southern boundary of Edwards' Ferry District, on the east by Goose Creek and the west by Catoctin Ridge. The two are divided by the W&OD Trail.

The Airport District comprises roughly 1,000 feet in all directions from Godfrey Field. Development is restricted and should be compatible with the nature of the airport itself. The northern portion of this district and the present airport facility would be permitted central sewer extension in order to ensure the present airport's continued viability.

The Sycolin District, encompassing the Sycolin Creek watershed, is primarily in agricultural and large lot residential use. There is a limited amount of industrially zoned land in the northeast. It is rather less rural than the Oaklands District but should not be considered for public sewer and water extension.
The Oatlands District is the most rural of the districts and should be maintained as an agricultural area.

The Catoctin Ridge District stretches from the northern to the southern boundaries of the planning area along the ridge. Sewer should not be extended into this district. Thus, only large lot residential use is really feasible. There is some farmland in the north but the majority of this land is steep and wooded.

**TOPOGRAPHY AND GEOLOGY**

The Leesburg area occupies a low shelf of the Catoctin foothills. The topography falls away to the east and consequently the area's streams, Limestone Branch, Big Spring Branch and Goose Creek and its tributaries, Cattail, Tuscarora and Sycolin, flow in that direction. Tuscarora Creek crosses a portion of the Town in the southwest and its tributary, the Town Branch, traverses the Town from west to east. Northeast of the Town of Leesburg is the Potomac River, the boundary between Virginia and Maryland and the site of a local Civil War action, the battle of Ball's Bluff. This area is characterized by a geological formation unusual for this region. The underlying rock is a limestone conglomerate, a water soluble stone that erodes underground in large planes forming caves. The topography south of Leesburg, by contrast, is more gentle and was molded primarily by overland water flow and mature stream systems.

**TOWN OF LEESBURG**

The Town of Leesburg is an independent jurisdiction of approximately 8,360 people and is situated close to the center of the planning area. The Town occupies an area of roughly 2,375 acres or 3.75 square miles. As a separate legal jurisdiction, among other public functions, it maintains its own roads, decides on land use and zoning within its corporate limits, maintains subdivision control for a one-mile radius around the town limits (see figure 3, page 5) and operates a sewer and water facility. It does not finance and operate a school system. Leesburg is the county seat of Loudoun County and consequently many county institutions are headquartered within the Town.

**POPULATION**

The population of the Leesburg area, including the Town of Leesburg, in 1980 was estimated to be 11,280, based on the preliminary 1980 Census figures. Of this figure some 8,360 people are estimated to live in the Town of Leesburg itself with the remaining 2,920 people living in the actual planning area.
EXISTING LAND USE

The area chosen for analysis in the Leesburg Area Management Plan comprises some 31,010 acres of land or approximately 50 square miles, and three major watersheds, Tuscarora, Sycolin and Goose Creek. Land use character in the area is changing from predominantly rural and farm-based to urbanizing with some urban services and residential, commercial and industrial development. Figure 4, page 7 shows the land use for the area in 1980. Table 1, "Land Use in the Leesburg Area", shows the approximate amounts and percentage proportions of land use in 1978-1979.

The Town of Leesburg should cooperate with the County to promote the implementation of the density transfer program. Land use referral for future zoning applications should be the process whereby the Town could accept potential density transfers. The goal will be to promote a density pattern within the Urban Limit Line similar to the traditional Town development pattern, while reserving land in the rural areas of Loudoun County for agriculture and permanent open space.

TABLE 1

LAND USE IN THE LEESBURG AREA *
(Excluding the Town of Leesburg)
(Approximate Figures)

<table>
<thead>
<tr>
<th>Number of Acres</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Farms (over 20 acres)</td>
<td>14,930</td>
</tr>
<tr>
<td>Undeveloped Land (Unfarmed woodland, open space and undeveloped subdivided land)</td>
<td>8,940</td>
</tr>
<tr>
<td>Institutional (Educational, medical, equestrian, museum &amp; children's home)</td>
<td>2,980</td>
</tr>
<tr>
<td>Residential (Large lot &amp; single-family suburban**)</td>
<td>3,170</td>
</tr>
<tr>
<td>Quarries</td>
<td>470</td>
</tr>
<tr>
<td>Publicly owned land</td>
<td>340</td>
</tr>
<tr>
<td>Industrial</td>
<td>100</td>
</tr>
<tr>
<td>Churches</td>
<td>20</td>
</tr>
<tr>
<td>Wholesale/Retail</td>
<td>20</td>
</tr>
<tr>
<td>Multi-family</td>
<td>20</td>
</tr>
<tr>
<td>Auto sales and service</td>
<td>20</td>
</tr>
<tr>
<td>**</td>
<td>31,010</td>
</tr>
</tbody>
</table>

* Derived from the Loudoun County Commissioner of the Revenue through Real Estate Atlas, 1979 as updated with inspection of aerial photographs and field checks.

** Includes the 379 acres of residential property included in the annexation of January 1, 1981.
Clearly, farm uses predominate. The second greatest percentage is in undeveloped, transitional land with 28%. The 10% in institutional use is surprising but includes the large tracts of Morven Park and Xerox as well as the smaller Paxton Home, Children’s Rehabilitation Center and Springwood.

RESIDENTIAL LAND USE

The number of existing residential units outside the corporate limits of the Town of Leesburg is shown in Table 2. Much of the recent residential growth has been south of Leesburg on Route 15 on one-quarter acre, single-family lots served by the Town's sewer.

TABLE 2

HOUSING IN THE LEESBURG AREA*
(Excluding the Town of Leesburg)

<table>
<thead>
<tr>
<th>Type of Housing Unit</th>
<th>Number of Units</th>
<th>Percentage of Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-family (sewered)</td>
<td>239</td>
<td>27%</td>
</tr>
<tr>
<td>Multi-family</td>
<td>231</td>
<td>26%</td>
</tr>
<tr>
<td>Large lot single-family</td>
<td>413</td>
<td>47%</td>
</tr>
<tr>
<td>Total</td>
<td>883</td>
<td>100%</td>
</tr>
</tbody>
</table>

Many residential subdivisions and small divisions of land have developed within the proposed Urban Limit Line (see Introduction, p. iii). However, extensive large lot development means that considerable rural land is being converted to low density, rural residential use which is a popular development trend.

* Derived from the Loudoun County Commissioner of the Revenue through Real Estate Atlas, 1979, as updated by inspection of aerial photographs and field checks.
INDUSTRIAL AND EMPLOYMENT

Southeast of Leesburg and along Route 7, the land uses are predominantly of an industrial or office nature. The Federal Aviation Administration's major mid-Atlantic Air Traffic Control Center is located on Route 7 just east of Leesburg. The Virginia Trap Rock and Luck Quarry crushed stone works have attracted a number of secondary industries such as concrete block and bituminous road surfacing plants. Development on the north side of Route 7 has been discouraged by the high cost of bringing sewer under Route 7 to the properties.

COMMERCIAL

Extensive commercial development has been limited to the Town of Leesburg and the areas within the proposed Urban Limit Line, except for a few small shops and stores scattered along Route 15 to the south of the Town and to the east along Route 7. Ample zoning exists for extensive commercial growth in the area.

EXISTING ZONING (see Figure 5, page 10)

As Table 3 indicates, the majority of the area (80%) is zoned for single-family development on three acre minimum lots (A-3). The balance of the residentially zoned property ranges from the one-acre single-family zone (R-1) to the higher multi-family zones of PNH-30.
FIGURE 5

EXISTING ZONING

LEGEND

- STUDY AREA BOUNDARY
- STREAM
- POWER LINE

- R-1
- R-2
- R-4
- A-3
- C-1
- I-1
- TOWN ZONING
- PDH-30
- PD-CH
- PD-IP
- PD-GI

LEESBURG AREA MANAGEMENT PLAN
### TABLE 3

**ZONING IN THE LEESBURG AREA**

(Excluding the Town of Leesburg)

(Generalized)

<table>
<thead>
<tr>
<th>Zoning</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A-3</strong> (Agricultural/Residential - minimum residential lot: three acres)</td>
<td>24,310</td>
</tr>
<tr>
<td><strong>R-1</strong> (Residential - Minimum lot size: one acre)</td>
<td>2,500*</td>
</tr>
<tr>
<td><strong>R-2</strong> (Residential - Minimum lot size: one-half acre)</td>
<td>190</td>
</tr>
<tr>
<td><strong>R-4</strong> (Residential - Minimum lot size: one-quarter acre)</td>
<td>120</td>
</tr>
<tr>
<td><strong>PDH-30</strong> (Multi-family, townhouse/apartment)</td>
<td>70</td>
</tr>
<tr>
<td><strong>C-1</strong> (Commercial - retail)</td>
<td>250</td>
</tr>
<tr>
<td><strong>PD-CH</strong> (Planned Development - Highway Commercial)</td>
<td>50</td>
</tr>
<tr>
<td><strong>I</strong> (Industrial)</td>
<td>540</td>
</tr>
<tr>
<td><strong>PD-IP</strong> (Planned Development - light industrial)</td>
<td>720</td>
</tr>
<tr>
<td><strong>PD-GI</strong> (Planned Development - general, heavy industrial)</td>
<td>430</td>
</tr>
<tr>
<td><strong>Exempt</strong> (Federal, State and Local service/institutional)</td>
<td>1,830</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>31,010</td>
</tr>
</tbody>
</table>

2,500 acres of land to the north, east and south of Leesburg are zoned R-1. To the east of Route 15, some 185 acres of the Hoffman re-zoning project are zoned R-4 to accommodate up to 450 units. In the Catoctin foothills to the west of the Hoffman property, 175 acres of land are zoned R-2 with a proffered development maximum of 38 units. Closer to Leesburg, the 200 acre Country Club development is zoned R-4 while the neighboring apartments are zoned PDH-30. The golf course itself has retained the original A-3 zoning of the area.

East of the Route 7 Bypass, Cardinal Industrial Park and East Leesburg Hills, approximately 430 acres, are zoned PD-GI, while Leegate Industrial Park, comprising 371 acres, and Harper South, 158 acres, are zoned PD-IP. The PDH-30 residential zoning district exists south of Fort Evans Road (57 acres) in contrast to the surrounding non-residential property. Further east, across Goose Creek are the Virginia Trap Rock and Luck Quarry crushed stone enterprises which with their satellites, cover 522 acres of potential industry and are zoned I-1. A smaller parcel of PD-IP, 93 acres east of Godfrey Field, is intended to buffer the residential zones from aircraft noise.

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* The Town of Leesburg annexed on January 1, 1980, 379 acres of land previously zoned R-1 situated between Route 15 and the Leesburg Bypass to the south of Route 837. This acreage is included in these figures.
Loudoun County has pursued a policy of keeping commercial uses off Route 7 and this is reflected on the zoning map. East of Leesburg and between Edwards Ferry and Fort Evans Road, 227 acres are zoned C-1 along the Route 15 Bypass to the north. Two properties are zoned PD-CH on Route 7 east of Leesburg. These are 21 acres of wholesale/retail furniture showrooms and the eight acres of the McMichael property which the County rezoned largely to preserve the historic house in a new "country restaurant" use.

At the southern tip of the planning area, the Oatlands planning district is probably the most homogeneous district in terms of land use. It is primarily agricultural and large lot residential, zoned A-3. In the Gleedsville area on Route 650 there are approximately 20 single-family homes on smaller lots but, on balance, the area is made up predominantly of large tracts.
CHAPTER II

GOALS FRAMEWORK

INTRODUCTION

The purpose of the area plan's goals statement is to ensure that the County's land use actions (zoning, subdivision, fiscal) are in keeping with the agreed-upon goals. These goals are important as they define the framework for public and private decisions that affect the land use and design of the area surrounding the historic County Seat of Loudoun County. A comprehensive system of goals analysis is the first step in guiding the growth of the Leesburg area in a direction that will eliminate haphazard, premature or inefficient development.

Goals are described here under the significant land use categories: Residential, Commercial, Industrial, Environmental, Agricultural or Rural, Heritage Resources, Community Facilities and Transportation. Overriding goals from the Resource Management Plan are extracted from the RMP to provide the general context for planning analysis. Beyond these RMP goals, specific area goals for each district within the Planning Area have been formulated.
ENVIRONMENTAL GOALS

The basic goal of environmental planning is to provide a framework for future land use development that is both safe and responsive to existing environmental conditions. This process will prevent future development from occurring in hazardous areas and ensure that costs for construction, site development and public improvements are minimized.

I. GOALS INCLUDED IN THE RESOURCE MANAGEMENT PLAN (page 193)

A. MAINTAIN THE HIGH QUALITY OF LOUDOUN COUNTY'S ENVIRONMENT AS A UNIQUE LOCAL AND REGIONAL RESOURCE.

B. CONSERVE THE COUNTY'S RENEWABLE RESOURCES AT A RATE WHICH REPLACES THEM AT LEAST AS QUICKLY AS THEY ARE CONSUMED AND CONSERVE NON-RENEWABLE RESOURCES TO THE GREATEST EXTENT POSSIBLE.

C. COORDINATE HUMAN ACTIVITIES WITH THE CHARACTER AND LIMITATIONS OF THE NATURAL ENVIRONMENT SO AS TO LIMIT ITS DISRUPTION.

The environmental goals for the Leesburg Area Management Plan refine the three general RMP goals by:

1. Emphasizing the need for protection of significant environmental features such as steep slopes, floodplains and woodlands.

2. Formulating approaches to ensure that new development is cost effective and allows the natural systems to perform their useful public functions.
II. SPECIFIC GOALS FOR THE LEESBURG PLANNING AREA

A. All future planning, growth and land use decisions should maintain and protect the Leesburg area's hydrologic system and water resources, both surface and underground.

B. Slopes greater than 25% shall be preserved in their natural state allowing for only passive recreational uses.

C. Development on slopes of 15% to 25% will be discouraged; when development occurs it should be subjected to special restrictions such as grading requirements, stormwater management techniques, vegetation protection, etc., to ensure environmental stability.

D. 100 year floodplains should be preserved in their natural state except for uses permitted in the County Floodplain Ordinance (agriculture, passive recreation, etc.).

E. Naturally formed wetlands and natural habitats of endangered, rare or threatened plant or animal species shall be identified and located according to adopted County criteria and steps shall be taken to encourage their preservation.

F. Future developments in the Leesburg Planning Area should use stormwater management and drainage system design practices that minimize flooding, soil erosion and water pollution and respect the existing topography to the greatest extent possible.

G. Development within the limestone conglomerate formation* should be subject to performance standards which will:

   a. Protect the basic drainage and hydrologic system;

b. Prevent groundwater pollution;

c. Minimize ground subsidence or structural damage from sinkhole collapse. Other geological formations in the Leesburg Planning Area should be assessed for potential problems and suitability for various land uses.

H. Development in Class IV soil areas* should be subject to performance standards specific to each soil type that minimize building, road and foundation problems.

I. Proposed developments should protect existing trees and natural vegetation to the maximum extent possible and significant woodland should be conserved and controlled by the use of special performance standards.

J. Proposed developments within the NEF 30 noise zone around Godfrey Field should be required to use special noise proofing techniques in all residential, commercial, light industrial and office buildings.

AGRICULTURAL GOALS

I. GOALS INCLUDED IN THE RESOURCE MANAGEMENT PLAN

A. Agricultural Amenity:

PRESERVE THE CULTURAL, SOCIAL, ECONOMIC, ENVIRONMENTAL AND AESTHETIC AMENITIES PROVIDED BY AGRICULTURAL LAND USE TO BOTH LOUDOUN COUNTY AND THE REGION.

B. Conversion:

PROMOTE LAND USE AND FISCAL PLANNING EFFORTS WHICH HELP ALLEVIATE LAND USE AND ECONOMIC BURDENS ON AGRICULTURAL LAND SO AS TO AVOID ITS PREMATURE CONVERSION TO URBAN, NON-AGRICULTURAL USE.

* As defined in Interpretive Guide to Soils and Geology for Planning in Loudoun County, Virginia; Richard Weber; County Soil Scientist, 1979. These are: plastic soils with high shrink-swell potential (clay); wet soil with prolonged seasonal high water table less than 18" from the surface; rocky soil with rock outcrops (more than 15% of the land surface covered by stone and rock outcrop); soils with geomorphic instability such as in the limestone area or mountain colluvial with slippage potential; floodplain soils as defined by recent alluvial parent material.
C. Environmental Pollution:

ENCOURAGE AGRICULTURAL LAND USE PRACTICES WHICH MINIMIZE
ENVIRONMENTAL POLLUTION.

Area-specific goals have been formulated to support those in
the Resource Management Plan calling for the preservation
of the basic land resources which support the local agri-
cultural industry in the Leesburg area.

II. SPECIFIC GOALS FOR THE LEESBURG PLANNING AREA

A. Agricultural Lands:

The County shall attempt to preserve the lands which have
suitable agricultural soils and the lands located in suitable
farming areas within the Leesburg Planning Area, especially
within the Sycolin, Oatlands and White's Ferry Districts. As
it is the long-term policy and objective of Loudoun County to
preserve agriculture, a Density Transfer Program should be
used to implement this policy.

B. Agricultural Industry:

The County shall recognize agriculture as a unique, essential
and basic industry and shall encourage the permanent con-
tinuation of agricultural land uses and related businesses in
the Leesburg Planning Area.

C. Zoning Techniques:

The County will develop innovative zoning techniques for
application in those areas designated for agricultural reten-
tion, particularly techniques which promote the clustering of
new housing and the permanent retention of farmland.

D. Road Improvements:

The County will encourage the maintenance and improvement of
rural roads in designated farming areas in order to ensure
that farm machines and commodities can be efficiently
transported.

E. Agricultural and Forestal Districts:

Agricultural and Forestal Districts shall be encouraged
within designated farming areas.
HERITAGE RESOURCES GOALS

I. GOALS INCLUDED IN THE RESOURCE MANAGEMENT PLAN (page 194)

A. Cultural Heritage:

PRESERVE THE COUNTY'S CULTURAL HERITAGE AND SCENIC CHARACTER BY CONSERVATION OF HISTORICALLY SIGNIFICANT STRUCTURES, AREAS AND OPEN SPACES.

B. Open Space:

ESTABLISH LAND USES COMPATIBLE WITH HISTORIC AND OPEN SPACE AREAS.

C. Growth Pattern:

RE-ESTABLISH THE HISTORIC GROWTH PATTERN THAT HAS TAKEN PLACE IN THE COUNTY IN THE LAST 220 YEARS.

II. GOALS SPECIFIC TO THE LEESBURG PLANNING AREA

A. The County shall encourage the preservation of significant historic sites, structures and areas with particular emphasis given to those resources listed on the inventory compiled by the Virginia Historic Landmarks Commission.

B. The County shall encourage builders and developers to use traditional design and site planning characteristics in order to achieve harmony between new and existing development.

C. Inherent to the cultural and historical aspects of Loudoun County are its highways, particularly Routes 7 and 15 and their scenic views. Any new residential or industrial development should be designed in such a way as to protect the scenic qualities of these roads.

D. The County will encourage the density transfer of the development rights of designated historic properties to other properties within the ULL.
RESIDENTIAL GOALS

I. GOALS INCLUDED IN THE RESOURCE MANAGEMENT PLAN

A. Housing (page 195)

1. Recognize the direct relationship between the amount, cost and location of housing and the county's fiscal resources; encourage at appropriate locations an affordable variety of housing types, commensurate with demands created by current needs and future growth.

2. Manage the quality, quantity, location and rate of housing development in order to insure the efficient use and conservation of the county's natural and public resources.

B. Fiscal Resources (page 197)

Develop a planning and land use system which is synchronized with the capital improvement program, capital budget and operating budget, allowing the county to phase new development at a rate which will not unduly increase the county's property tax rate as well as permit the expansion of the county's revenue base.

C. Public Facilities and Utilities (Growth Management, p. 197)

Manage the location and timing of the construction of public facilities and utilities so as to reduce undesirable environmental and fiscal impacts.

II. SPECIFIC GOALS FOR THE LEESBURG PLANNING AREA

A. Growth Management Goals:

The County should ensure residential development in the Leesburg planning area of a type, density and character that is compatible with the growth pattern of the Town itself. This growth pattern should generate an orderly transition of land use intensities from the Town outward to the rural residential and agricultural areas, contributing to the County's tax base while promoting the economic and efficient delivery of public services through design standards and by coordinating development with capital facility construction.
One of the County's major goals, as previously established in the Resource Management Plan, is to foster new development of sufficient quality and quantity to provide adequate housing and employment opportunities for all present and future Loudoun County citizens. In order to achieve a balanced community, land conservation measures must also be included as an integral part of the continual development process. To this end, the County will strongly urge that conservation easements on designated agricultural and environmental land resources be proffered as public purpose dedications in return for achieving maximum allowable development densities. Such a process will mean that important rural land resources are conserved at the same time that urban land is developed, thus ensuring a balanced growth pattern in the Leesburg area and throughout the County.

B. Density Development Pattern:

Generally, higher density housing should be located closer to the Town, while lower density (one unit or less per three acres) should be located in planning districts further away from the Town which will not be provided with central sewer and water services.

C. Housing Type Variety:

Housing development around the Town of Leesburg should provide county residents with a full range of housing types, costs and ownership opportunities.

D. Community Focus of New Developments:

New residential development in the Leesburg Planning Area within the Urban Limit Line should be designed in the form of identifiable communities, concentrated around community centers.

E. Design:

The County should encourage the highest possible design standards that will foster a physical and social sense of place through appropriate road and path layout, location of open space, community spaces and uses, buffering between different uses and use intensities and careful regard for the unique environmental characteristics of each property and tract of land.
F. Complementary Planning:

The new communities around the Town of Leesburg should be designed and developed in a manner which complements and is compatible with existing uses and facilities within the Town. To this end the Town and the County should consult with each other on their planning decisions to promote orderly and compatible development.

G. Social and Historic Preservation:

New development in the Leesburg Planning Area should take place in a manner which will enhance and preserve the social and historical character of the Town and of the surrounding area. A complementary design character similar to that of the Town of Leesburg should be encouraged.

H. Energy Conservation and Efficiency:

New development in the Leesburg Planning Area should be designed and constructed in a manner to conserve energy and promote the most efficient use of energy resources.

These goals form the basis of the recommendations contained in the Residential section of the Plan.

COMMUNITY FACILITY AND UTILITIES GOALS

I. GOALS INCLUDED IN THE RESOURCE MANAGEMENT PLAN

Public Facilities and Utilities (pages 196 and 197)

A. Utility Standards:

Maintain a level of public utilities and facilities (now and in the future) which insures not only the health, safety and welfare of the county's population, but also maintains the highest community standards obtainable, within adopted budget constraints.

B. Growth Management:

Manage the location and timing of the construction of public facilities and utilities so as to reduce undesirable environmental and fiscal impacts.
C. Planning Cooperation:

COORDINATE PLANNING EFFORTS WITH THE INCORPORATED TOWNS IN THE PROVISION OF FACILITIES AND UTILITIES SO AS TO REDUCE UNDESIRABLE ENVIRONMENTAL AND FISCAL IMPACTS.

D. Regional Context:

PLACE ADVANCED PUBLIC FACILITY PLANNING EFFORTS IN A REGIONAL CONTEXT WHENEVER AND WHEREVER POSSIBLE.

II. SPECIFIC GOALS FOR THE LEESBURG PLANNING AREA:

A. Public Facilities and Utilities:

1. Location Limits:

Except for that portion of Potomac Park which was the subject of ZMAP 85-13 approved in 1985 and which lies west of the Goose Creek within the LAMP planning area, central sewer lines should be designed and constructed only within the Urban Limit Line unless required for public health and safety. Water lines are dependent upon the individual health situation and development purpose. The intent is to concentrate growth within the urban limit boundary.

2. Alternative wastewater disposal systems will not be encouraged in the Planning Area. However, beyond the ULL, alternative wastewater disposal systems will be considered for non-residential uses: (1) in circumstances of failing septic drainfields, (2) when needed to ensure the continued viability of existing institutions and (3) in cases where the location of a new institution in these areas would generate positive community benefits. The proposed system must comply with the rules and regulations of the State Water Control Board and State Department of Environmental Health.

3. Phasing Plan:* 

A time phasing plan should be established that will determine the logical sequence for water and sewer extensions into the designated watersheds and provide a basis for sound fiscal planning for public services.

4. Utility Provision:

The Town of Leesburg will be the sole provider of sewer and water service within the Urban Limit Line and for the Cattail Branch Service Area west of Goose Creek.

* The major element in the phased growth concept is the implementation of an Urban Limit Line. (See Figure 1, page  ) This line is essentially an urban growth boundary.
5. Sewer Design Preference:

Gravity sewer should be the preferred technique for sewer line extensions through 1992.

6. Cluster Design:

Cluster design for residential and non-residential land uses will be encouraged to minimize utility costs.

B. Neighborhood Schools:

1. Construction Timing:

School construction should be related to the projected population and consequent future enrollment estimates in the area.

2. Pedestrian Orientation:

New schools should be so located as to encourage safe and efficient vehicular access and to provide appropriate pedestrian accessibility so that the greatest possible number of children can walk to school.

3. CIP:

All new school development and construction projects shall be included in the Loudoun County Capital Improvements Program.

4. Community Identity:

Schools should be planned to promote concentrated residential development with a community focus.

C. Parks and Recreation:

1. Location:

Community recreation centers should be located to serve existing and future population concentrations.

2. Pedestrian Orientation:

A general plan for a bikeway/pedestrian system shall be adopted for the area and a detailed bikeway/pedestrian system and activity center shall be included in all residential and non-residential development and be linked to the W&OD Trail, if possible.
3. Multiple Uses:

School facilities, like all public facilities, should be designed to accommodate multiple uses such as community parks and recreational space for the benefit of the public in general and new schools should be developed as integral factors of neighborhood and community development.

D. Cultural Facilities:

Cultural Center:

The Leesburg Planning Area should be encouraged as a cultural center for the County with any multi-use public facilities to be located within the Urban Limit Line.

E. Government Facilities:

Central County governmental facilities should be located in the Town of Leesburg or its environs.

TRANSPORTATION GOALS

I. GOALS INCLUDED IN THE RESOURCE MANAGEMENT PLAN (Page 196)

A. Accessibility:

DEVELOP A TRANSPORTATION SYSTEM WHICH MAKES EMPLOYMENT CENTERS AND PUBLIC FACILITIES ACCESSIBLE TO ALL COUNTY RESIDENTS.

B. Environmental Design:

DEVELOP A TRANSPORTATION SYSTEM WHICH CAUSES MINIMAL HARM TO THE COUNTY'S ENVIRONMENTAL QUALITY.

C. Regional Needs:

DEVELOP A TRANSPORTATION SYSTEM WHICH CONTRIBUTES TO MEETING THE NEEDS OF THE REGION.
II. SPECIFIC GOALS FOR THE LEESBURG PLANNING AREA

TRANSPORTATION

A. Highway Design:

Local residential streets and highways should be designed to separate commuter trips from the local residential street traffic in order to promote neighborhood identity and safety.

B. Phasing Plan:

Primary and secondary road improvements, both public and private, should be phased or staged over time by the County in conjunction with the Town of Leesburg and the Virginia Department of Highways and Transportation.

C. Travel Alternatives:

Alternative modes of travel to the automobile should be encouraged in road planning and design and considered in the County zoning and subdivision review process.

D. Growth Control:

Roadway improvements in predominantly rural areas or within agricultural or historic districts should be sensitive to the promotion or retardation of residential or non-residential development.

E. Industrial Design:

Industrial development should connect with the major collector roadways and access should be consolidated wherever possible.

COMMERCIAL AND INDUSTRIAL DEVELOPMENT GOALS

I. GOALS INCLUDED IN THE RESOURCE MANAGEMENT PLAN

A. Resources:

THE COUNTY WILL ENCOURAGE THE LOCATION OF NEW INDUSTRIES WHICH ARE COMPATIBLE WITH THE EXISTING ENVIRONMENTAL, TRANSPORTATION AND WORK FORCE RESOURCES. (page 248, #7.)
B. Employment:

THE COUNTY WILL ENCOURAGE THE PROVISION OF EMPLOYMENT OPPORTUNITIES AND TRAINING FOR LOCAL YOUNG PEOPLE, PARTICULARLY THOSE WHO HAVE BEEN EDUCATED WITHIN THE COUNTY. (PAGE 248, #9.)

C. THE COUNTY WILL ENCOURAGE THE DEVELOPMENT OF EMPLOYMENT CENTERS THAT ARE ACCESSIBLE TO TRANSPORTATION SYSTEMS, INCLUDING THE TRAIL SYSTEM. (PAGE 247, #2.)

D. Cluster Development:

CLUSTERING OF RESIDENTIAL, INDUSTRIAL AND COMMERCIAL LAND USES IN PLANNED COMMUNITIES WILL BE ENCOURAGED IN ORDER TO REDUCE TRAVEL TIME AND TO GIVE NEW COMMUNITIES A STRONG IDENTITY. (PAGE 247, #3.)

E. Public Access:

THE COUNTY WILL ENCOURAGE THE LOCATION OF EMPLOYMENT CENTERS NEAR RESIDENTIAL AREAS AND PUBLIC FACILITIES IN ORDER TO MAXIMIZE PUBLIC ACCESS AND EFFICIENCY OF PUBLIC SERVICE FACILITIES. (PAGE 247, #4.)

F. Transition:

ESTABLISHMENT OF COMPATIBLE TRANSITIONAL LAND USES AS LINKS BETWEEN INDUSTRIAL CENTERS AND LOW DENSITY RESIDENTIAL AREAS WILL BE ENCOURAGED.

II. SPECIFIC GOALS FOR THE LEESBURG PLANNING AREA

A. Industrial Land Uses

1. Utilities and Services:

Those areas designated in this Plan for industrial and employment growth should be provided with central utility services.

2. Diversity of Employment:

The County will encourage the development of a compatible mix of industries and businesses to provide a wide range of employment opportunities.
3. Environmentally sound development:

   Development of clean, non-polluting industries and businesses will be promoted in character with environmental goals of the Resource Management Plan.

4. Mixed Use Development:

   The County will encourage the development of mixed use facilities which combine residential, commercial and office uses on a single site.

5. Accessibility:

   The County will encourage new employment facilities to be designed and located in such a manner as to provide safe, convenient and effective pedestrian, auto and bicycle access from surrounding residential and recreational sites, with particular emphasis on pedestrian linkages to the W&OD Regional Trail.

6. Labor Force:

   The County will encourage the establishment of new employment centers and businesses which will draw upon the existing labor force in the area rather than attract new residents from outside the County.

7. Zoning:

   Any industrially and commercially zoned land within The Urban Limit Line should be included in a planned development zone with appropriate standards and be compatible with adjacent uses. (PD-IP, PD-OP, PD-CH, etc.)

8. The County shall recognize agriculture as an important industry in the Leesburg area and shall encourage its continued viability.

B. Commercial Land Use Goals:

1. Location:

   The County shall encourage and promote the reinforcement of the commercial facilities located in Leesburg and encourage future commercial development within the Town. New commercial facilities should all be located within the Urban Limit Line as designated in this plan. No new
commercial uses shall be allowed on Route 15 unless within the Urban Limit Line. All new commercial development should be of a clustered design with no direct access to major roadways, thereby precluding "strip" commercial uses. New commercial facilities in developing communities should complement the commercial facilities within the Town.

2. Scale:

The size and scale of new commercial development should be directly related to present and future commercial retail needs of the service area around Leesburg.
CHAPTER III

LAND USE RECOMMENDATIONS
CHAPTER III

LAND USE RECOMMENDATIONS

ENVIRONMENTAL PLAN

INTRODUCTION

The Leesburg Area Management Plan's purpose is to apply the adopted goals and policies of the Resource Management Plan to a specific County area by proposing a future development and land use pattern. The Area Plan applies the general environmental goals of the RMP to the Leesburg area by recommending specific goals that address the significant environmental* features within the Planning Area.

One method of implementing the goals is to determine appropriate land uses for each significant environmental feature. Areawide and site specific strategies are recommended that will ensure that the Leesburg area's natural environment is adequately considered during the land use planning process. The procedure used to formulate these strategies is to research, map and understand to the greatest extent possible:

1. The individual features and processes that make up the natural environment;

2. The interrelationships and connections between these features and processes that combine to form one interdependent system;

3. The social and economic benefits and useful functions these features and processes provide to and perform for the citizens of the Leesburg area (i.e., drainage, sewage disposal, water supply, building and construction materials, wood products, recreation opportunities, etc.);

4. The effects caused by certain actions (i.e., urban development, agriculture) on the environmental features and processes.

* Significant environmental features are defined as: natural sites or features that have particular characteristics which should be preserved or specially managed because of their economic, educational or environmental importance to the welfare of the general public and the Leesburg Planning Area as a whole.
An example of these four points is illustrated in the case of woodlands on steep slopes as follows:

1. Both woodlands and steep slopes are individual features and are part of several natural processes such as the hydrologic cycle; oxygen-carbon dioxide cycle; soil formation-erosion process.

2. The woodlands and steep slopes are part of one system; if trees are cut down, the potential for higher runoff and erosion rates from steep slopes is increased.

3. Woodlands and steep slopes provide several useful functions and benefits to the area: they are often a scenic resource; they are essential elements of the natural drainage system; woodlands are a source of fuel or lumber.

4. Development by man can either enhance or damage the interrelated woodland slope system depending upon how well the system is allowed to continue to perform the useful functions listed in #3 above.

BACKGROUND

There are several distinct environmental features as well as various issues and problems, within the Leesburg area. Most of the area is part of the Triassic lowlands of the Piedmont physiographic province which has flat to gently rolling topography and elevations ranging from 250 feet to 400 feet. Just west of Town, the topography rises steeply from 400 feet to about 750 feet. This is the Catoctin Ridge, part of the Blue Ridge physiographic province. Another distinct area is the limestone conglomerate formation which underlies much of the area north of Leesburg. This type of limestone formation contains numerous springs, sinkholes and potentially a large quantity of groundwater, and is an extremely rare occurrence in Virginia east of the Blue Ridge Mountains.

Major soil types are: wet, poorly drained soil in the floodplains and low areas; belts of plastic jackland along Route 7 east of Town and in the southeastern portion of the planning area; limestone derived soil above the limestone conglomerate formation; soil with rock outcrops on the Catoctin Ridge and along Goose Creek east of Town; areas with loamy, well-drained soil, primarily southwest of Town in the Sycolin and Goose Creek watersheds. These distinctly different soil types have different problems and development suitabilities for urban land uses, agriculture, recreation, on-site sewage disposal and water supply.
There are six major watersheds within the planning area, all of which are part of the Potomac River Basin: Goose, Tuscarora and Sycolin Creeks; Limestone, Big Spring and Cattail Branches. Each of these watercourses has a designated 100 year floodplain and the present water quality within each varies depending upon the surrounding land uses.

Large blocks of forests and woodlands are found throughout the planning area in the floodplains and along the bluffs above watercourses, on the Catoctin Ridge, and in the flat, gently rolling sections north and south of Town. There are two major forest types: hardwoods and conifers. The hardwoods include oak, and hickory, and vary depending upon soil type and drainage. The conifers are mainly red cedar and Virginia pine.

Approximately 15% (7.6 square miles) of the total Leesburg planning area is nondevelopable land located within 100 year floodplains or on slopes greater than 25%.*

MAJOR ISSUES

The varied natural resources of the Leesburg area affect planning and land use decisions at both the areawide and site specific levels. For example, 100 year floodplains, steep slopes, and woodlands are scattered throughout the entire area and are interdependent parts of the areawide drainage and hydrologic cycle. These three environmental features have been mapped for the entire planning area and suitable land uses have been recommended which can easily maintain their basic functions. All development proposals (rezonings, site plans, etc.) for specific sites which have floodplains, steep slopes or woodlands should include maps of these features at an appropriate site scale and indicate:

1. The potential effects of the floodplain, steep slopes or woodland on the proposed development;

2. The impact the proposed development will have on the floodplain, steep slopes and woodland;

3. How the proposed development will incorporate the findings of #1 and #2 in the site design.

In summary, the significant environmental features found in the adopted goals should be considered at two levels:

* See Environmental Goals A and B, page 15.
1. In the Leesburg area planning process when making general land use recommendations; and

2. In site development planning for specific properties in the Leesburg area when designing, locating and constructing buildings and roads.

RECOMMENDATIONS

A. Areawide Recommendations

A means of implementing the environmental goals is to propose suitable land uses for each significant environmental feature. Following is a list of the significant environmental features addressed in the goals with alternative land uses. (Figure 7, page 34 shows the general location of these features.) Figure 8, page 35 shows their development suitability.

1. 100 year floodplain - passive recreation, agriculture, commercial forestry provided these activities are conducted in a manner that minimizes flooding, soil erosion and water pollution.

2. Wetlands as defined by U. S. Fish and Wildlife Service - passive recreation, buffer between incompatible land uses.

3. Slopes greater than 25% - passive recreation, buffer between incompatible uses.

4. Slopes 15% to 25% - rural residential on drainfield, passive recreation, single-family cluster development to preserve part of slope area.

5. Limestone conglomerate formation - rural residential on sites where subsurface investigations indicate that subsidence, drainfield failure or groundwater contamination is not a problem, active outdoor recreation, agriculture.

6. Class IV soil types - Development subject to special performance standards (see Environmental Goal H, page 15):

   a. "Jack" soil (plastic clays with high shrink/swell potential) - agricultural and commercial/industrial uses on central sewer in areas of the plan designated for future urban development, pasture and hay uses in agricultural/rural residential areas.
b. Rock soil (rock outcrop land with more than 15% of the land surface covered by stone or rock) - commercial/industrial uses on central sewer, undeveloped open space or passive recreation.

c. Wet soil (prolonged seasonal high water table less than 18" from the surface) - undeveloped open space, passive recreation buffer between incompatible uses.

7. Forests/woodlands on flat and gently sloping land - carefully planned low density residential development which preserves many existing trees. (Preservation efforts should focus on medium age trees which are usually found within the 10" to 16" diameter breast height category.), passive recreation, commercial forestry, buffer between incompatible land uses, removal of poor quality stands in, appropriate areas for development.

8. Forests/woodlands of the following types.

a. On slopes greater than 25%.

b. Within 100 year floodplains.

c. Significant woodlands or individual trees (defined by various factors such as location, size, species type, age, diversity, visual quality, historical or cultural importance, community perception).

Recommendations for these three forest/woodland areas are: passive recreation/open space in a single-family residential development.

9. NEF 30 or greater noise zone around Godfrey Field - non-residential uses, active outdoor recreation, agriculture.*

10. Highway noise zones (Route 7 Bypass and other areas) - adequate buffer zone of plantings, earth berms or setbacks.

* Godfrey Field - Leesburg, Virginia: Final Airport Master Plan; Henningson, Durham and Richardson; 1975; Sheet No. 4.
B. Issues and Recommendations by Planning District

The areawide development issues relating to the significant environmental features can also be examined by individual planning district. The following list of the planning districts includes the significant environmental features, the major potential problems and issues associated with development, along with recommendations that address these concerns:

1. White's Ferry:

   a. Significant Environmental Features:

      i. Limestone conglomerate formation with numerous springs and sinkholes.

      ii. Limestone Branch, Big Spring and Potomac River watercourses and floodplains.

   b. Potential Development Problems:

      i. Groundwater pollution or ground subsidence in the limestone area.

      ii. Deterioration of water quality in Limestone Branch and Big Spring (a State of Virginia designated natural trout stream) both of which drain into the Potomac above Leesburg's water supply intake.

   c. Recommendations

      i. Any development in the limestone areas should be rural residential in character and located on sites where subsurface exploration shows that drainfield failure, subsidence or groundwater contamination is not a problem.

      ii. Best Management Practices* should be used to control nonpoint source pollution in both residential development and agricultural operations.

* Practice that is determined by State of Virginia to be the most effective practicable means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals. (Source: Best Management Practices Handbook, SWCB, 1979.)
iii. Point source discharges should not be permitted on the Potomac River, Limestone Branch, Big Spring or any of their tributaries upstream from the Leesburg water supply intake on the Potomac. However, beyond the ULL, point source discharges will be considered for non-residential uses: (1) in circumstances of failing septic drainfields, (2) when needed to ensure the continued viability of existing institutions, and (3) in cases where the location of a new institution in these areas would generate positive community benefits. The discharge must comply with the rules and regulations of the State Water Control Board and State Department of Environmental Health.

2. Catoctin Ridge:

a. Significant Environmental Features:

i. Large areas with slopes 15% to 25% and greater than 25%.

ii. Tracts of woodlands, primarily hardwoods.

iii. Isolated pockets of rocky soil some of which are also subject to slippage (failure of slope causing collapse or landslide).

b. Potential Development Problems:

i. Erosion of ridgeside slopes.

ii. Soil slip or creep on some steep slopes.

iii. Increased downstream flooding and runoff below ridge.

iv. Disturbance of visual and scenic quality of ridge.

c. Recommendations:

i. Rural residential development should be located in areas where slopes are less than 15%.

ii. Require erosion control and stormwater management measures in all developments.

iii. Existing woodlands on steep slopes should be preserved to the maximum extent possible and unvegetated steep slopes in developed areas should be planted to reduce erosion.
3. **Town of Leesburg:**

   The Town of Leesburg is not included within the Area Plan, but development in other areas can affect environmental quality within the Town.

   a. **Significant Environmental Features:**

      Floodplains of Town Branch and Tuscarora Creek.

   b. **Potential Development Problems:**

      i. Flooding and runoff increases from development on the Catoctin Ridge.

      ii. Flooding and runoff increases in the downstream Tuscororora watershed from development within the Town.

   c. **Recommendations:**

      As stated under Catoctin Ridge, developments on the Ridge should use adequate erosion control and stormwater management methods.

4. **Edwards Ferry:**

   a. **Significant Environmental Features:**

      i. Potomac River and Cattail Branch floodplains.

      ii. Steep slopes along Potomac River, Cattail Branch and Goose Creek.

      iii. Woodlands of varying quality along Cattail Branch, Potomac River bluffs and floodplains, and Balls Bluff area.

      iv. Areas of wet soil.

   b. **Potential Development Problems:**

      i. Reduction of scenic character of Potomac River bluffs.

      ii. Downstream impact on visual quality and recreational uses in lower Goose Creek, a State designated scenic river.
iii. Drainage and flooding problems in wet soil.

c. Recommendations:

i. Require erosion control and stormwater management techniques in all developments.

ii. Potomac River bluffs where slopes are greater than 15% should not be developed except at very low density and under the cluster provisions of the Loudoun County Zoning Ordinance.

iii. Protect as many existing woodland areas as possible to aid in erosion and runoff control and maintain the scenic quality of the Potomac River bluffs.

5. Upper Tuscarora:

a. Significant Environmental Features:

i. Upper Tuscarora/Dry Mill Branch floodplain.

ii. Small area of steep slopes and woodlands east of Route 621, north of Route 654 and adjacent to the Route 15 Bypass.

iii. Jack and rocky soil on eastern and western edges of the Planning District.

b. Potential Development Problems:

i. Increased flooding, erosion and runoff within Upper Tuscarora Planning District from development on Catoctin Ridge.

ii. Potential of new development increasing flooding, runoff and erosion in Lower Tuscarora.

iii. Noise level increases along major roads such as Route 7.

c. Recommendations:

i. Those listed under Catoctin Ridge are applicable here.

ii. Proper stormwater management and erosion control methods in all developments.
iii. Protect steep slopes and woodland areas mentioned above as visual buffer between future developments along Route 7 and those along Route 643.

iv. Visual and noise buffering can be achieved through such land use techniques as the strategic location of visual screens, landscape buffers, earth berms, reverse frontage development and additional building setbacks from the road right-of-way. These techniques should be required along all arterial and major roadways and the W&OD Trail.

v. Commercial/industrial uses in jack and rocky soil subject to special performance standards.

6. Lower Tuscarora:

a. Significant Environmental Features:

i. Tuscarora Creek floodplain.

ii. Wooded steep slopes south of Tuscarora.

iii. Jack soil along Route 7.

iv. Diabase geologic formation along Route 7 and adjacent to Goose Creek.

v. Noise level increases along Route 7.

vi. Rocky soil south of Tuscarora Creek.

b. Potential Development Problems:

i. Building foundation and construction problems in jack soil.

ii. Flooding and runoff increases from upstream development.

C. Recommendations:

i. Commercial/industrial development in jack soil subject to special performance standards.

ii. Protect wooded steep slopes south of Tuscarora as a scenic view from Route 7.
iii. Locate potential sites for future quarrying within the diabase formation and protect quarry sites by adopting a Natural Resource Zoning Overlay District.

iv. Visual and noise buffering can be achieved through such land use techniques as the strategic location of visual screens, landscape buffers, earth berms, reverse frontage development and additional building setbacks from the road right-of-way. These techniques should be considered along all arterial and major roadways, but should be required along Route 15, the Route 15 bypass, Route 7 and the W&OD rail.

v. Require erosion control and stormwater management practices in all proposed developments.

7. **Airport:**
   a. **Significant Environmental Features:**
      i. Possible future NEF 30 noise zone.
      ii. Areas of wet soil.
   b. **Potential Development Problems:**
      i. Airport noise impact.
      ii. Development in areas of wet soil.
   c. **Recommendations:**
      i. Restrict uses within NEF 30 noise zone to non-residential uses, open space or active outdoor recreation.
      ii. Require special performance standards for development in wet soil.

8. **Goose Creek:**
   a. **Significant Environmental Features:**
      i. Goose Creek and Potomac River floodplains.
      ii. Jack soil and rocky soil.
iii. Steep slopes along Goose Creek.
iv. Woodlands, primarily hardwoods.
v. Fairfax City water supply impoundment.
vi. Diabase geologic formation along Goose Creek.

b. Potential Development Problems:
i. Construction difficulties in jack and rocky soil.

ii. Impact of development on water quality of water supply impoundment.

iii. Effect of development on scenic character and recreation uses along Goose Creek.

c. Recommendations:
i. Commercial/industrial development in jack or rocky soil subject to special performance standards.

ii. Maintain adequate buffer of existing woodlands around water supply impoundment. Uses within the buffer zone must fulfill performance standards that protect the impoundment's water quality.

iii. Require all developments that drain directly into or are upstream of the water supply impoundment to use Best Management Practices, so that the water quality of the impoundment will be maintained.

iv. No point source effluent discharges should be permitted on any tributaries of Goose Creek upstream from the impoundment.

v. Locate potential quarry sites within the diabase formation near the existing quarry.

9. Sycolin:
a. Significant Environmental Features:

i. Sections of jack soil in eastern portion.

ii. Areas of wet soil.
iii. Scattered tracts of woodlands.

iv. Sycolin Creek floodplain.

b. Potential Development Problems:

Building and construction problems in jack and wet soil.

C. Recommendations:

i. Protect existing woods to maximum extent possible for use as a visual buffer between incompatible land uses, or as a potential source of firewood and lumber.

ii. Commercial/industrial uses subject to special performance standards in jack soil located in the northeast section of the planning district; pasture and hay uses in jack soil located in other areas of the planning district.

iii. Use of wet soil as buffer zone or open space, or require special performance standards for development in wet soil.

10. Oatlands:

a. Significant Environmental Features:

i. Goose Creek floodplain.

ii. Large areas of woodlands.

iii. Belt of jack soil east of Route 621.

b. Potential Development Problems:

i. Impact on water quality of the water supply impoundment located downstream.

ii. Effect of County landfill on surrounding residential development.
c. Recommendations:

i. Require all developments with runoff draining into Goose Creek and its tributaries to use Best Management Practices to protect the water supply impoundment.

ii. No effluent discharges should be permitted on any tributaries of Goose Creek upstream from the impoundment.

iii. Use woodlands as visual buffers and maintain, as much as possible, the scenic character of Goose Creek.

iv. Provide an adequate vegetated buffer around the landfill to help reduce dust and methane gas migration.

v. Periodic testing should be performed on all wells located near the landfill to check for possible groundwater contamination.

vi. Pasture and hay uses on jack soil.

c. Stormwater Management Analysis

Runoff from new urban/suburban developments can increase flooding, erosion, sedimentation and pollution of watercourses. A carefully planned stormwater management program can help minimize these problems. Loudoun County recently adopted a new 100 Year Floodplain Zoning Ordinance (January, 1981) and has committed funds in the last several years to map the County floodplains. These efforts to protect the floodplains and maintain the County's water resources in a healthy and balanced state will succeed only if stormwater management is part of the planning and design process for watersheds where future growth and development is proposed. The initial and ongoing costs of a stormwater management program are a necessary expense that should be shared by the public and private sectors to prevent property and road damage caused by flooding and erosion, as well as eliminate the need for costly improvements to improperly designed stormwater systems that can cause this damage.

The Leesburg Area Management Plan has recognized the importance of this issue in Environmental Goal F (page 15):
"Future developments in the Leesburg Planning Area should use stormwater management and drainage design practices that minimize flooding, soil erosion and water pollution and respect the existing topography to the greatest extent possible."

A stormwater management analysis was performed for the Leesburg Planning Area by comparing storm runoff figures for existing and proposed land uses in the Tuscarora watershed. Much of the watershed is presently woodland, cropland, pasture or idle land. The proposed land uses include commercial, industrial and residential development south and east of Town along Route 7 and Route 15. The buildings, roads and parking lots within the proposed new developments will increase the total amount of impervious land area within the watershed. This increase in impervious area will increase the amount and velocity of storm runoff that will flow into Tuscarora Creek by reducing the amount of water that presently infiltrates the soil.

The analysis was conducted with assistance from the Loudoun Soil and Water Conservation District using a nationally accepted methodology developed by the Soil Conservation Service.*

Major steps in the process were:

(1) Division of the Tuscarora watershed into four sub-watersheds: A, B, C, D.

(2) Classification of each soil type according to its infiltration characteristics.

(3) Calculation of the number of acres within each existing and proposed land use.

(4) Comparison of the amount of impervious surface area for existing and proposed conditions. The final result shows the peak discharge** for the two year, 10 year and 100 year storms for both existing and proposed land uses.


** Highest amount of water runoff from a particular storm that flows into a watercourse, expressed in cubic feet per second.
Figure 9, page 48 locates the major drainage basins in the Leesburg Planning Area and the four sub-watersheds within the Tucarora watershed (A, B, C, D). The following table lists the percent of impervious land area and the peak discharge for each sub-watershed:

<table>
<thead>
<tr>
<th>Sub-Watershed</th>
<th>Existing Land Use</th>
<th>Proposed Land Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Impervious (CFS* Peak Discharge)</td>
<td>% Impervious Peak Discharge</td>
</tr>
<tr>
<td></td>
<td>2 yr. 10 yr. 100 yr.</td>
<td>2 yr. 10 yr. 100 yr.</td>
</tr>
<tr>
<td>A - 1,370 acres</td>
<td>0 248 596 1,128</td>
<td>No Change</td>
</tr>
<tr>
<td>B - 650 acres</td>
<td>66 807 1,414 2,213</td>
<td>No Change</td>
</tr>
<tr>
<td>C - 1,150 acres</td>
<td>6 225 503 913</td>
<td>17% 331 709 1,256</td>
</tr>
<tr>
<td>D - 1,800 acres</td>
<td>11 648 1,309 2,238</td>
<td>41% 1,577 2,909 4,690</td>
</tr>
</tbody>
</table>

The Plan proposes no land use changes in the upstream sub-watersheds, A and B. The downstream sub-watersheds, C and D, however, show dramatic runoff increases. The proposed land uses will increase the peak discharge for the two year storm** in C by 47% and in D by 143%.

These figures indicate stormwater management practices and techniques will be necessary in all proposed developments planned for sub-watersheds C and D (See recommendations on stormwater management for Upper and Lower Tucarora Planning Districts, pages 40 and 41 ). The stormwater management concept for a site can be initially proposed during the rezoning application stage and the specific techniques or structures can be developed for the preliminary and record plats.

* Cubic feet per second.

** Commonly occurring storm that largely controls stream channel erosion because storm flow fills the channel to the top of the bank. Stormwater management structures are designed to control the two year storm.
D. Air Quality Analysis

Air quality is generally not perceived as an issue in a low density, relatively small community such as Leesburg. The Town, however, is part of the larger Washington metropolitan region which has serious air quality problems due to high counts of ozone and carbon monoxide. Both of these pollutants are primarily caused by auto emissions. In addition, as Leesburg grows from about 10,000 people to about 18,000 in 1992, certain areas within the Town could experience air quality problems from increased local traffic.

Air quality will be an important issue in Virginia in 1982 as the Federal Clean Air Act requires the State Implementation Plan revision to be prepared by July 1, 1982. The Virginia Council on the Environment has stated that: "An urgent need exists to study the relationships between air quality control measures and land use."* In northern Virginia, rapid urbanization and the resulting increase in automobile use, will also increase air pollution. It is important for a growing urban fringe area such as Loudoun County to develop a better understanding of the relationship between air quality and land use growth patterns.

The Northern Virginia Planning District Commission (NVPDC) provided the County with useful information by conducting an air quality study for the Leesburg area (July, 1981). The study used a computer model to compare vehicle emissions generated by three basic future land use alternatives.**

The NVPDC study results indicate that clustered housing development produces lower air quality emissions than typical residential suburban development. This is because cluster development provides for closer proximity of shopping, educational and recreational facilities to residences and reduces the number of vehicles trips necessary by allowing for walking or bike riding to these facilities. The study shows that the use of planning techniques such as cluster development, planned communities and multiple use trails can help to reduce the three major harmful vehicle pollutants: hydrocarbons, carbon monoxide and oxides of nitrogen. Housing developments zoned PD-H should, therefore, have less of a negative impact on air quality than developments zoned R-1, R-2 or R-4.


** See "Issues and Options Report" available in Department of Planning, Zoning and Community Development.
AGRICULTURAL PLAN

INTRODUCTION

The Leesburg Planning Area has a significant agricultural industry with many large farms and about 11,000 acres of cultivated or pastured farmland. (See Figure 10, page 53.) Agriculture has historically been the largest and most basic industry in the County. It continues to be a major economic element in both the County as a whole and the Leesburg area, although urban growth is taking its toll, having caused substantial conversion of farmland to other uses during the last decade. In addition to the actual farming operations in its vicinity, Leesburg is a commercial and financial center for farmers and for farm support businesses in the area. This plan will deal with the land use implications of long term agricultural activities in the Leesburg area.

The soils in the area are generally good for crop and pasture uses. A large band of good agricultural soils runs north and south through the Leesburg planning area between Route 15 to the west and the diabase soils which lie to the east. (See Figure 11, page 53.) A significant amount of these good farming soils have already been subdivided into residential lots.

Agriculture can and should continue to be an important economic and industrial element in certain districts of the Leesburg Planning Area during the life of this Plan (10 years). The proposals of this plan will indicate where the County will place its priorities for encouraging agricultural land uses around Leesburg. Specific programs for farmland retention will be addressed in the forthcoming, County-wide Rural Land Management Plan.

The recommendations of the Leesburg Plan are meant to further refine and apply the policies which were set forth in the Resource Management Plan. The basic guiding principle of the RMP is to encourage the concentration of growth in and around existing communities, thereby reinforcing the compact, efficient pattern of growth which is historically evident in the County. In the Leesburg area, this would mean that planning recommendations should tend to permit growth within the Urban Limit Line surrounding the Town of Leesburg, but discourage growth in the more distant, rural areas, thereby keeping to a minimum the costs of extending and improving public facilities.

Agricultural uses will not, however, be discouraged from continuing within the Urban Limit Line until such time as their conversion to more intensive uses is appropriate.
The area plan goals and strategies for managing agricultural resources address the needs for new urban growth and farmland preservation as a balanced compromise. Certain areas are designated for utility extensions to provide for future growth (Tuscarora and Edwards Ferry Districts), and other areas are designated as priorities for farmland preservation efforts (Sycolin, Oatlands and White's Ferry Districts).

Generally, the goals and recommendations recognize that agriculture can and should remain a viable industry in the Leesburg area, even though some land will be converted to urban uses during the next ten years. The County will focus its farmland preservation efforts on those lands which are located predominantly in agricultural areas, while promoting residential and non-residential growth around the Town, where the urban services exist.

MAJOR ISSUES

The major issues in the Leesburg area revolve around the questions of where farmland conservation programs should be implemented, and what form these programs should take. Specifically, the major land use issues are:

1. Definition of the general priorities for farmland retention in the Leesburg area.

   The goals of this Plan state that the priority areas are the White's Ferry, Sycolin and Oatlands Planning Districts.

2. Prohibition of sewer and water extensions from designated farming areas in the Leesburg Planning Districts.

   In order to effectively carry out the goals of this Plan, sewer and water services should not be extended past the Urban Limit Line into the farming areas of White's Ferry, Sycolin and Oatlands Districts before 1992. (See Figure 10, page 53.)

3. Identification of the specific locations for major farmland retention efforts within each planning district.

   The policies for defining specific areas for application of conservation programs will be formulated in the forthcoming Rural Land Management Plan.

4. Identification of the kinds of farmland retention programs which the County should enact in the Leesburg Area: compensatory (purchase or lease of easements), and/or regulatory (zoning).

   Program implementations will be addressed in the Rural Land Management Plan.
5. Encourage amendments to state laws which will allow the use of growth management techniques such as transfer of development rights. Encourage state and federal legislative amendments to reduce the inheritance tax burden for farmland heirs.

RECOMMENDATIONS

A. General Areawide Recommendations:

1. REQUIRE THE CLUSTERING OF HOUSES IN DESIGNATED AGRICULTURAL OR FORESTAL AREAS

New residential development in agricultural areas could be required to cluster onto a small percentage of the site, thereby leaving the majority of the land open and available for farming.

2. ENCOURAGE THE DONATION OF CONSERVATION EASEMENTS TO THE COUNTY FROM OWNERS OF AGRICULTURAL OR FORESTAL LAND

The County could accept easements from interested landowners. The County would then enforce the provisions of these easements according to the specific criteria and terms of the legal agreements.

3. ENCOURAGE THE FORMATION OF AGRICULTURAL AND FORESTAL DISTRICTS

The County could urge landowners in designated agricultural areas to establish agricultural districts.

4. ENCOURAGE VOLUNTARY EXCLUSIVE AGRICULTURAL ZONES IN DESIGNATED AGRICULTURAL AREAS

The County could offer landowners the opportunity to join a voluntary exclusive agricultural zone which would allow only agriculturally related uses.

5. PRECLUDE THE EXTENSION OF CENTRAL WATER AND SEWER BEYOND THE URBAN LIMIT LINE AS DEFINED IN THIS PLAN

No sewer lines shall be extended into the three planning districts which are designated as priorities for farmland retention except those specific areas which are designated in this plan for pumped sewerage extension.
FIGURE 11

AGRICULTURAL SOIL SUITABILITY
(GENERALIZED)

LEGEND
- STUDY AREA BOUNDARY
- STREAM
- POWER LINE
- PRIME SOILS FOR CORN
- SECONDARY SOILS
- UNIQUE SOILS
  (ORCHARD, VINEYARD)
- SOILS LESS SUITED FOR AGRICULTURE

LEESBURG AREA MANAGEMENT PLAN

- 500 ACRES

LEESBURG AREA MANAGEMENT PLAN

- 54 -
3. Potential Countywide Programs:

The following general program and policy recommendations are potentially countywide programs and will be dealt with in more detail in The Rural Land Management Plan. The programs could be applied to the Leesburg area, but only as part of comprehensive countywide programs.

1. **REduce allowed density of residential development in the Sycolin, Oatlands and White's Ferry Planning Districts in this plan**

   The current allowed density in the three designated priority areas for farmland retention is one unit per three acres, A-3. In order to make cluster provisions more effective, the minimum lot size could be decreased, thereby reducing the allowed density to less than one unit per three acres.

2. **Purchase open space easements from owners of designated prime agricultural land.**

   The County could buy easements from landowners. These easements would run in perpetuity thereby keeping the land open forever. The easement purchase price would be roughly equal to the difference between total fair market value and use value.

3. **Lease open space easements from owners of designated prime agricultural land**

   The County could acquire short term easements (5 to 20 years) from landowners in return for annual cash payments (or other terms) to the landowners.

4. **Require special use permits for all non-agricultural uses in agricultural areas**

   The County could amend the Zoning Ordinance so that non-farm uses in the A-3 zone would require special permits.

C. Recommendations by Planning District:

1. **White's Ferry:**

   This district is a top priority for farmland retention efforts. Agricultural areas within the district will be defined in the Rural Land Management Plan. Sewer and water shall not be extended into this watershed except for the Scott Equine Medical Center and a small residential area fronting on the Old Waterford Road.
Easement programs may be applied here; clustering of residential units should be mandatory; allowable development density may be reduced and agricultural districts should be encouraged. A voluntary exclusive agricultural zone would be appropriate in this district. In addition, this district could be a potential sending zone for transferable development rights or a related kind of growth management program.

2. **Catoctin Ridge:**

   Sewer and water should not be extended into this area. Agricultural districts should be encouraged; clustering should be required; reduced density may be appropriate on steep slopes, but easement purchase programs would not be appropriate in this area. Easement donations should be encouraged, however.

3. **Town of Leesburg:**

   This area is designated for continued urban development, not for agricultural uses.

4. **Edwards Ferry:**

   This district is not a priority area for farmland retention. Clustering should be required and easement donations encouraged, but no other farmland retention efforts are appropriate.

5 & 6. **Upper & Lower Tuscarora:**

   These districts are not priority areas for farmland retention. Clustering should be encouraged and easement donations accepted, but no other farmland retention efforts are appropriate. This district could be a potential receiving zone for transferable development rights.

7. **Airport:**

   Not a priority for continued agricultural land uses.

8. **Goose Creek:**

   This district is not a priority for farmland retention efforts, but farming should still be encouraged by requiring clustering, precluding sewer and water extensions and accepting easement donations.

- 56 -
9. **Sycolin:**

This district is a priority area for farmland retention. Agricultural areas will be identified in the Rural Land Management Plan. Sewer and water facilities should not be extended into this area before 1992, clustering should be required, allowable density may be reduced, easement donations should be encouraged, easement lease and purchase may be appropriate here and agricultural districts should be encouraged. In addition, a voluntary exclusive agricultural zone would be appropriate in this district.

10. **Oatlands:**

This district is a top priority area for farmland retention efforts in the area. Agricultural areas will be identified in the Rural Land Management Plan. Sewer and water should not be extended here. Clustering should be required. Agricultural districts should be encouraged, development density may be significantly reduced. Easement donation should be encouraged and easement purchase or lease may be appropriate in this district. A voluntary exclusive agricultural zone would be appropriate in this area. In addition, this district could be a potential sending zone for transferable development rights or a related kind of growth management program.
HERITAGE RESOURCES PLAN

INTRODUCTION

The Leesburg Planning Area is rich in tangible resources which give evidence of the local cultural heritage. In addition to the historic fabric of downtown Leesburg, there are many significant sites and structures scattered throughout the area. Land use planning should strive to preserve such structures from degradation as the character of the Leesburg area changes.

BACKGROUND

About 60 of these sites have been identified by the Virginia Historic Landmarks Commission.* Most are privately owned but only four are within any County designated historic district.

Most of these sites are house and farm structures, but there are other kinds of elements as well, including mill sites, remains of canal locks on Goose Creek, churches, ruins, and a Civil War battle site. There are also some potentially valuable archaeological sites in the area.

MAJOR ISSUES

The major issues regarding heritage resources include the following:

1. Priorities for preserving historic and scenic resources in the Leesburg area are needed.

2. Policies and regulations should be instituted to ensure that new facilities and structures will sensitively accommodate and protect the existing heritage resources.

3. The County government should play a strong role in encouraging preservation of heritage resources in the Leesburg area.

* Loudoun County Historic Site Inventory, of the Virginia Historic Landmarks Commission, by John G. Lewis, former Regional Representative.
LAND USE RECOMMENDATIONS

There are three kinds of priorities for heritage preservation efforts. The first basic priority for preservation efforts should be for those approximately 60 sites in the area which have been identified and surveyed by the Virginia Historic Landmarks Commission although several of these structures have already been destroyed. The current V.H.L.C. inventory of historic sites and structures in the Leesburg area (outside corporate limits) has been compiled, surveyed, researched and recorded by the Virginia Historic Landmarks Commission. This list is only a large sample of sites and the selection of particular sites is not based upon a rigorous or quantitative ranking system. It does, however, represent the judgement of the V.H.L.C. Field Representative as to those sites which are either highly significant in an architectural or historical sense, or are imminently threatened with destruction, or both. The Virginia Historic Landmarks Commission is an agency of the Commonwealth of Virginia with headquarters in Richmond.

The second kind of priority should be for those sites which have structures which are in good condition or which have remains that may have significant educational or archaeological value.

The final priority should be for those sites and structures which are most vulnerable due to encroaching development or whose owners lack the financial resources to protect them from other kinds of physical or economic threats.

These priorities will often overlap and sometimes conflict, but taken together, they provide the guiding direction for preservation efforts in the Leesburg area.

Generally, the historic elements in the Leesburg area are rather spread out and not clustered together in areas that would easily lend themselves to inclusion in a County designated historic district. The County can, however, designate individual historic sites under its Historic District Ordinance. There are various methods which could be used to help preserve these resources, such as easements, revolving funds, fee simple purchase, State and National Register designation, and sensitive site development practices when building new structures adjacent to designated historic sites. The County should consider giving density credits to developers who give easements or otherwise preserve significant historic resources within or adjacent to new developments.
FIGURE 12

HISTORIC SITES

(Figure refers to text, pages 61-65 for names of sites)

LEGEND

- STUDY AREA BOUNDARY
- STREAM
- POWER LINE
- HISTORIC SITE

*From inventory compiled by the Virginia Historic Landmarks Commission
Recommendations by Planning District:

1. White's Ferry:

   Priorities for preservation efforts. Sites at the following locations:*

   a. Limestone Quarter - #295, private residence
   b. White's Ferry - #104
   c. Raspberry Plain - #290, private residence
   d. Wynkoop House - #297, private residence
   e. Springwood (House) - #298, institutional, former residence
   f. Big Spring - #255
   g. Rockland - #96, private residence
   h. Little Spring Farm - #299, private residence
   i. Dry Hollow Farm - #289, private residence
   j. Balls Bluff Cemetery (Property of U.S. Government) and the 80 acre battlefield site (privately owned)
   k. Locust Hill - #85, private residence
   l. Greenwood Farm - #582, private residence
   m. Morven Park (State and National Register) - #87, museum, former residence

Recommendations:

l. The County should designate Morven Park and the Balls Bluff Cemetery and 80 acre battlefield as historic site districts as provided for by the County's Zoning Ordinance.

* Numbers correspond to Figure 12, page 60. Loudoun County Historic Sites Inventory, Virginia Historic Landmarks Commission, John G. Lewis, former Regional Representative.
2. Preservation easement donations should be sought by the County for all sites listed above except that White's Ferry should be a secondary priority for easement acquisition.

2. **Catoctin Ridge:**

Priorities for preservation efforts. Sites at the following locations:

a. Echols Tenant House - #382 A
b. Elmwood - #382 B
c. Ft. Johnson - #404
d. Shenstone, Main House - #593, private residence
e. Shenstone, Original House - #100, private residence
f. Graydon - #277
g. Dry Mill Farm - #145, private residence
h. Myers House - #153, private residence
i. Dry Mill Bridge - #238, owned and maintained by VDH&T
j. Bradfield Heights - #300, private
k. Woodburn (State and National Registers) - #105, private residence
l. Shadow Mountain - #111, private residence
m. Mountain Gap School - National Trust for Historic Preservation, museum

**Recommendations:**

1. The County should designate Woodburn as a Historic Site District as provided for in the County Zoning Ordinance.

2. The County should seek easement donations from the owners of all the sites listed above.

* ibid.*
3. **Leesburg:**

The Town of Leesburg will carry out preservation efforts for this district. The County should strongly support, encourage and cooperate with the Town in its preservation efforts.

Sites within this district which are on the VHLC Inventory and The State and National Registers are:*

a. Paxton Home (Carlheim) - #380, Children's Home

b. Exeter (State and National Registers) - #77, destroyed by fire

4. **Edwards Ferry:**

Priorities for preservation efforts. Sites at the following locations:*

a. Cattail Ordinary - #403, private residence

b. Archaeological site near Goose Creek - #79

**Recommendations:**

The County should seek easement donations on the above sites, particularly the archaeological site

5&6. **Upper & Lower Tuscarora:**

Priorities for preservation efforts: sites at the following locations:*

a. Ft. Beauregard - #352

b. Woodlea - #401, private residence

c. Greenway - #402, private residence

d. Lombardy Farm - #392, private residence

e. Caradoc Hall - #256, private, vacant

f. Stone Harper House - #254, private, vacant

* ibid.
g. Eastbound Goose Creek Bridge on Route 7 - #242, owned by VDH&T

h. W&OD Trail - #276, park

Recommendations:

The County should seek easement donations for those properties listed above, except for the W&OD Trail which is owned by the Northern Virginia Regional Park Authority.

7. Goose Creek:

Priorities for preservation. Sites at the following locations:

a. Coton - #155A, owned by Xerox Corporation
b. Forrest Farm - #600, private residence
c. Luten Bridge - #269, abandoned
d. Canal lock sites on Goose Creek - #155H, ruins

Recommendations:

The County should seek easement donations from owners of the above properties.

8. Airport:

None

9. Sycolin:

Priorities:

a. Dunrobin - #364
b. Bleakhouse Farm - #348, ruins
c. Rokeby (State and National Register) - #97, private residence

* ibid.
Recommendations:

1. The County should designate Rokeby as a Historic Site District.

2. The County should seek easement donations on the above listed properties.

10. Oatlands

Priorities for preservation efforts. Sites at the following locations:

a. Gleedsville, Village of - #624
b. Church of Our Saviour (Episcopal Church) - #70
c. Oatlands (National Trust for Historic Preservation) - museum
d. John O'Daniel Sons - #248
e. Morrisworth - #366, private residence
f. Murray's Ford - #376 A, private residence
g. Cochran's Lock & Mill Site - #377, ruins
h. Little Oatlands - private residence
i. Oatlands Hamlet - private residence
j. Oatlands Mill Site
k. Oatlands Miller's House

Recommendations:

The County should seek easements on the above listed properties except those owned by the National Trust for Historic Preservation and Little Oatlands and Oatlands Hamlet which are already protected by preservation easements.

*ibid.*
RESIDENTIAL PLAN

INTRODUCTION

The Leesburg area is anticipated to be one of the prime growth areas in Loudoun County in the next decade. There are some 4,100 housing units in the Town of Leesburg and in the surrounding planning area and of these approximately 3,660 are located within the Town or adjacent to it and are connected to Leesburg's water and sewer utilities.

The Leesburg Planning Area and the Town of Leesburg can expect to grow by some 1,500 - 2,500 new units in the next ten years, assuming past County growth distribution patterns and trends continue. (Of these units, approximately 120 - 200 per year would be located in or immediately around the Town of Leesburg.) The Resource Management Plan and the area specific goals suggest that this growth should be encouraged to locate in or immediately around the Town of Leesburg as part of the growth management philosophy embodied in the RMP. These residential goals and the proposed strategies to realize them will be outlined in this plan.

BACKGROUND

A. Residential Development

A principal theme of the Resource Management Plan is the concept of centralizing residential, community facility, commercial and employment centers in and around existing communities in Loudoun County. Achieving this goal would reduce the costs of serving the new developments with the necessary community services. Clustering of community functions and residential growth would furthermore reduce the travel costs.

There are approximately 25,400 acres of agricultural/rural residential zoned land in the Leesburg area. Most of this land is outside the Upper Tuscarora and Edwards' Ferry Districts. In these two districts some 2,500 acres of land are zoned R-1 or single-family, one acre lot minimum, with smaller amounts of land zoned R-2, one-half acre lot minimum, (185 acres) and R-4, one-quarter acre lot minimum (116 acres). In addition, some 71 acres of land are zoned multi-family/townhouse/garden apartments.

In contrast to this extensive amount of residually zoned land, less than 10% of the area has actually been developed for residential use. With sewer extensions, the Upper Tuscarora and Edwards' Ferry Districts can accommodate extensive residential growth. South of Leesburg in the Country Club area some 480 units, half single-family half multi-family units, have already been developed with town water and sewer. In the Upper Tuscarora
District further south of Leesburg, there has been limited one-acre single-family development with individual wells and septic systems along Routes 654, 621 and 643. A similar type of housing has developed north of Leesburg off Route 15 in the northern part of Edwards' Ferry and southeastern section of White's Ferry. In all, approximately 200 dwellings have developed in recent years in the Leesburg area independently of town water and sewer, many of them in the Sycolin and Oatlands Planning Districts.

B. Zoning Patterns and Proposals

In the past ten years, Loudoun County has been approached with a number of land development proposals within the Tuscarora and Edwards' Ferry Districts. Table 5, page 68, summarizes the major proposals and their disposition. It is evident from the table that the area immediately around the Town of Leesburg has already been subject to many land use actions which constrain and will condition future land use decisions in the area.
## TABLE 5

**RESIDENTIAL DEVELOPMENT PROPOSALS IN THE IMMEDIATE LEESBURG (TOWN) AREA**

<table>
<thead>
<tr>
<th>Proposed Name</th>
<th>Existing Zoning</th>
<th>Proposed Zoning</th>
<th>Requested # Units/ Acreage</th>
<th>Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Rezonings</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobern ZMAP 199</td>
<td>R-1</td>
<td>PDH-12</td>
<td>1,504 units/3.4 per acre</td>
<td>Application</td>
</tr>
<tr>
<td>Carrvale* (Annexed Area)</td>
<td>R-1</td>
<td>R-4</td>
<td>potential 700 units/2.1 per acre</td>
<td>Annexation awarded by Court</td>
</tr>
<tr>
<td>Oliver Hoffman ZMAP 288</td>
<td>A-3</td>
<td>R-4</td>
<td>600 units/2 per acre</td>
<td>475 units/1.6 per ac. approved in a composite R-4 and R-2 development</td>
</tr>
</tbody>
</table>

| **B. Subdivisions** | | | | |
| Meadowbrook | R-1 | 70 units/0.3 per acre | 200 | Pending |
| Country Club Apts. | PDH-30 | 231 units/14.4 per acre | 16 | Built Out |
| Country Club and Leesburg Estates | R-4 | 385 units/2.7 per acre | 144 | 65% built |
| Potomac Highlands | R-1 | 282 units/0.6 per acre | 475 | Pending |

The above proposals include garden apartments, single-family detached units on one-quarter acre, one acre and three acre lots, townhouses and multi-family units.

* The annexation of 1980 changed the allowed zoning density from one dwelling unit per acre to four dwelling units per acre.
POPPULATION PROJECTIONS

The Loudoun County Department of Planning, Zoning and Community Development has projected future residential growth from building permit activity over the past decade. The number of dwelling units projected over the coming decade (1982-1992) is dependent upon many complicated factors from economic trends to rezoning activity within the Urban Limit Line surrounding the Town of Leesburg. Low density residential growth in the planning area will continue to be popular on a lot by lot basis; large low density subdivisions not within the urban boundary will be limited under the precepts of this plan. (See Table 6)

The projections assume a constant household size of 2.95 persons per unit and a vacancy rate of 3%. The overall county growth rate was seen as 4.2% in the 1980-1984 period, 3.5% in the 1985 - 1989 period and 3.1% thereafter. The Leesburg Area and Town are assumed to capture some 21% of this growth.

<table>
<thead>
<tr>
<th>Date</th>
<th>Additional Units</th>
<th>Total Units</th>
<th>New Population</th>
<th>Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>175</td>
<td>4,096</td>
<td>501</td>
<td>11,280</td>
</tr>
<tr>
<td>1981</td>
<td>183</td>
<td>4,271</td>
<td>523</td>
<td>11,782</td>
</tr>
<tr>
<td>1982</td>
<td>190</td>
<td>4,454</td>
<td>544</td>
<td>12,305</td>
</tr>
<tr>
<td>1983</td>
<td>198</td>
<td>4,644</td>
<td>567</td>
<td>12,849</td>
</tr>
<tr>
<td>1984</td>
<td>207</td>
<td>4,842</td>
<td>592</td>
<td>13,416</td>
</tr>
<tr>
<td>1985</td>
<td>179</td>
<td>5,049</td>
<td>512</td>
<td>14,008</td>
</tr>
<tr>
<td>1986</td>
<td>185</td>
<td>5,228</td>
<td>531</td>
<td>14,520</td>
</tr>
<tr>
<td>1987</td>
<td>192</td>
<td>5,413</td>
<td>550</td>
<td>15,051</td>
</tr>
<tr>
<td>1988</td>
<td>199</td>
<td>5,605</td>
<td>569</td>
<td>15,601</td>
</tr>
<tr>
<td>1989</td>
<td>205</td>
<td>5,804</td>
<td>588</td>
<td>16,170</td>
</tr>
<tr>
<td>1990</td>
<td>189</td>
<td>6,009</td>
<td>542</td>
<td>16,758</td>
</tr>
<tr>
<td>1991</td>
<td>194</td>
<td>6,198</td>
<td>557</td>
<td>17,300</td>
</tr>
<tr>
<td>1992</td>
<td>--</td>
<td>6,392</td>
<td>--</td>
<td>17,857</td>
</tr>
<tr>
<td>TOTALS</td>
<td>2,296</td>
<td>6,392</td>
<td>6,577</td>
<td>17,857</td>
</tr>
</tbody>
</table>

Table 7 estimates growth for the Town, Planning Area and total area and suggests that the total area will grow by some 2,296 units in the 1980 - 1992 period while the population will increase by some 6,580 people to a total of 6,392 units and 17,860 people overall.
TABLE 7
POPULATION AND HOUSEHOLD GROWTH
1980 - 1982

<table>
<thead>
<tr>
<th>Date</th>
<th>Town of Leesburg</th>
<th>Planning Area</th>
<th>Total Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pop.</td>
<td>Housing Units</td>
<td>Pop.</td>
</tr>
<tr>
<td>1980, April 1</td>
<td>8,360</td>
<td>3,214</td>
<td>2,290</td>
</tr>
<tr>
<td>1992, Jan. 1</td>
<td>11,660</td>
<td>4,399</td>
<td>6,200</td>
</tr>
<tr>
<td>1980-1992</td>
<td>3,300</td>
<td>1,185</td>
<td>3,280</td>
</tr>
</tbody>
</table>

Goals in the Resource Management Plan and the area specific goals (page 19) suggest that this growth should be encouraged to locate in or immediately around the Town of Leesburg as part of the growth management philosophy embodied in the RMP. These residential goals and the proposed strategies to realize them will be outlined in this plan.

RESIDENTIAL DEVELOPMENT PATTERN

A basic tenet of the Resource Management Plan is that new residential development will be concentrated in and around existing community development areas. The area around the Town of Leesburg is defined as a primary growth area to accommodate residential growth because of the existing public facilities. More facilities will be required as development continues; costs of this new growth should be borne by the new growth itself.

Expansion areas for residential growth are clearly defined in Figure 1, page iv which portrays the growth scheme for the entire planning area.

The limits of urban growth will be established by an Urban Limit Line. (See Figure 1, page iv). The Urban Limit Line (ULL) is the geographical boundary that clearly distinguishes the more urban oriented (Town of Leesburg and its immediate environs) areas from the rurally based (farm) community. Basic to the Resource Management Plan is the tenet that new development would locate around the more urban areas where public facilities are available at the least public cost. The concept of the Urban Limit Line represents a specific implementation technique designed to promote residential and non-residential growth around designated urban growth centers (towns, villages).

Generally, the proposed residential densities for the planning area are as follows:
### TABLE 8

**DESCRIPTION OF GROWTH MANAGEMENT AREAS**

<table>
<thead>
<tr>
<th>Area</th>
<th>General Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Area (Town of Leesburg)</td>
<td>Urban density, infill development of similar density.</td>
</tr>
<tr>
<td>Urban Growth Area (Urban Limit Line Area)</td>
<td>Planned residential zones with varying unit types ranging from 1.5 to 8 units per net acre for medium residential density.</td>
</tr>
<tr>
<td>Rural Residential Area (Rural Fringe)</td>
<td>Residential development mixed with farming uses. Single-family development based on low density, rural residential development.</td>
</tr>
<tr>
<td>Agricultural/Rural Area</td>
<td>Very rural development with farming as land use base. Residential uses should complement farming land uses.</td>
</tr>
</tbody>
</table>

A. Urban Growth Area:

The Urban Growth Area is designed to accommodate varying residential unit types from single-family detached and duplexes to townhouses and multi-family housing on a planned unit development basis (PD zones). The PD zones will be allowed only if significant public facilities are proffered and creative cluster design criteria are employed.

The PD zones will allow varying unit types and higher densities than an ordinary subdivision. Given the projected growth rates and the magnitude of vacant developable land within the Urban Growth Area and the Town of Leesburg, totalling some 3,000 acres, there is considerably more than 30 years of development potential for residential land within the the Urban Limit Line. Table 9 summarizes land use policies and implementation recommendations within the Urban Growth Area.
TABLE 9  
SUMMARY OF RESIDENTIAL POLICIES AND RECOMMENDATIONS  
WITHIN THE URBAN GROWTH AREA  

Land Use Policies

1. Encouragement of variety of housing types.
2. Clustered development with open space criteria.
3. Self sufficiency in public facilities and utilities.
4. Density range based on existing support facilities; increased density (PD) based on additional supporting facilities.
5. Increased density in return for conservation easement donations.
6. Preservation of historic sites through rezoning, if necessary.
7. Allowance of moderate amount of commercial and office development.
8. Promotion of pedestrian circulation to activity centers.
10. Encouragement of provision of open space as a green belt transition to the Rural Fringe. (See Figure 15, page 86)

Implementation Recommendations

1. Proffer Ordinance.
2. Open space within subdivisions.
4. Donation of conservation easements.
5. CIP focus in this area.
6. Cluster Ordinance to promote clustering for open space in more urban areas.
7. Receiving zone for proffered easements.
8. Encouragement of mixed uses of residential and non-residential functions in community center areas to provide neighborhood identity.
B. Rural Fringe:

Just beyond the Urban Growth Area is the Rural Fringe area of farms, estates and single-family development without central sewer. The traditional farming industry would be preserved in this area. No increased density is recommended unless strict rural clustering criteria can be designed into the project. (See Figure 13, page 74 for an example.) This area could accommodate preservation easement proffers if a farmer and ULL landowner mutually agreed to such an arrangement. Table 10 summarizes land use policies and implementation recommendations within the Rural Fringe area.

<table>
<thead>
<tr>
<th>TABLE 10</th>
</tr>
</thead>
</table>

**SUMMARY OF RESIDENTIAL POLICIES AND RECOMMENDATIONS**

**WITHIN THE RURAL FRINGE AREA**

**Land Use Policies**

1. Preservation of open space and agriculture.
2. Promotion of harmonious mix of residential and agricultural land uses.
3. Preservation of rural character.
4. No sewer extensions into rural watersheds. Ultimately the Town of Leesburg will be the exclusive provider to the Cattail Branch Service Area.
5. Preservation of historic sites.

**Implementation Recommendations**

1. No rezoning to higher categories.
2. Rural subdivision clustering encouraged to protect farm uses.
3. Detailed design and location criteria should be established for clustered rural subdivisions.
4. Establishment of a green belt of large institutional, recreational and other open space uses in the vicinity of the Urban Limit Line.
FIGURE 13

RURAL DEVELOPMENT PATTERN

EXISTING FARM
( 226 acres )

TYPICAL 10 ACRE SUBDIVISION
13 LOTS

RURAL CLUSTER SUBDIVISION
22 LOTS
( 1-2 acres/lot )
190 acres remains in farm use

No Scale
C. Agricultural/Rural Area:

The Agricultural/Rural Area is defined as the prime preservation area due to environmental aspects, farming and the historic character of the area. This area will serve as a sending zone for residential development rights. Residential development would be limited to large lot, estate type development. Agricultural activities would remain the basic land use. Table 11 summarizes land use policies and implementation recommendations in the Agricultural/Rural areas.

| TABLE 11 |
| Summary of Residential Policies and Recommendations |
| Within the Agricultural/Rural Area |

**Land Use Policies**

1. Promote economic return on farming activity.
2. Maintain or increase farming activity.
3. Encourage formation of Agricultural Districts.
4. Allow no sewer extensions.
5. Limit location of CIP items that are inconsistent with agriculture.
6. Discourage residential development on prime agricultural soils.
7. Nuisance laws should protect farming activities.
8. Encourage preservation easement proffers in this district.
9. Encourage easement purchase or donation.
10. Preserve historic sites.
### TABLE 11 (cont'd.)

**SUMMARY OF RESIDENTIAL POLICIES AND RECOMMENDATIONS**

**WITHIN THE AGRICULTURAL/RURAL AREA**

**Implementation Recommendations**

1. Consideration of conservation and preservation programs to be identified in Rural Plan.

2. Donation of conservation easements.

3. Detailed design and location criteria should be established for clustered rural subdivisions.

4. Where residential development occurs, it should be on larger lots than are allowed by the current A-3 zoning category.

5. Establishment of the area as a sending zone for proffered easements.

In the Rural Fringe and Agricultural/Rural areas a major assumption is that residential development limits the viability of the farming enterprises. Pages 77 through 79 of this Residential Plan analyze the concept of Density Transfer and its significance to the Leesburg Area Management Plan. The intent of this program is to strengthen the viability and economic basis of farming in the rural areas while furthering other objectives of concentrated growth and cost effective public service provision.

**D. Density Transfer Concept and Procedure:**

The County may give density in the upper range established in this plan to developers proffering certain public facilities and/or amenities. Such proffers are voluntary on the part of the developer, and the amount of additional density granted by the County is discretionary on the part of the County.

Additional density could be granted to a site within the ULL if the developer conveys land for public purposes such as school sites, library sites, open space, etc.
Higher density could also be granted in return for the proffering of "off-site" open space for the public purposes of historic and/or agricultural preservation. If a developer elected to voluntarily acquire a conservation easement on a parcel of land outside the ULL but within the Planning Area which meets the County's criteria for being historically or agriculturally important as designated in this Plan, and to convey that proffer of easement to the County, the County could in turn grant a higher density for the developer's land which lies within the ULL. Such an "off-site proffer" would, in effect, be a proffer of an open-space resource outside the ULL to the County in order to compensate the public for reducing the existing open space resources on the development site within the ULL. The level of density granted would be directly proportional to the quality and quantity of the donated conservation easement. Such a proffer of a conservation easement and the resultant higher density could be considered a "Density Transfer" from a site which the County has designated as a priority for conservation to a site which the County has designated as a priority for development. The developer would not be required to hold fee simple title to the site outside the ULL.

General Policies and Criteria for Density Transfer Sites:

A. Planning Districts (in order of priority):

1. Oatlands
2. White's Ferry
3. Sycolin
4. Catoctin

B. Kinds of Areas/Sites/Land Resources (in order of priority):

1. Agricultural land:
   a. The land must be located in the Oatlands, White's Ferry, Sycolin or Catoctin Districts.
   b. Priority will be given to land which is in imminent danger of being developed, or which is outside but adjacent to the ULL, or which is in an area of active farms.
2. Historic and Scenic Properties:

The land must have at least one of the following attributes:

a. Be listed on the WHLC inventory.

b. Be listed on the State and/or National Register of Historic Places.

c. Be otherwise shown to have important local, state or national historical significance in and of itself, or to substantially contribute to the preservation and enhancement of such a property.

d. Be shown to be a significant component of an important and valuable scenic vista or viewshed.

C. General Criteria, Guidelines and Procedures for Density Transfers:

1. The transfer conservation site must be determined or be designated by the County (by an area plan or other action) to have significant public purpose value for agricultural, historic, environmental or vista preservation based upon its location, quality, size, configuration, character or potential use.

2. Density transfer credit will be granted at a rate equal to the existing zoning density of the conservation site, i.e., one unit per three acres on A-3 land. Only land outside the ULL will be eligible for transfer development credit. The density credit will then be transferred to the development site upon recordation of a proper preservation easement and upon approval by the County.

3. Land on the transfer (conservation) site which is in the 100 year floodplain or which consists of slopes equal to or greater than 25 percent is not eligible for any density transfer credit.

4. The transfer site shall have a minimum land area size of 50 acres per individual parcel. Significant historic properties will not have a minimum size.

5. The transfer program will only apply to rezonings to one of the "PD" classifications.
6. A fifty-acre gross development density will be allowed on the preserved land after easement is established. The easement shall be written so as to be in perpetuity.

7. The establishment of a conservation easement in return for the granting of increased density on a development site would be the "last proffer" in the rezoning negotiation process. The County will set a limit on the total units that may be transferred to a particular development site by the preservation easement proffer procedure, in accordance with the Comprehensive Plan.

8. All property transactions and recordations of easements shall be carried out by and between the owner or agent of the development site and the owner or agent of the conservation transfer property in conjunction with an easement receiving institution such as the Virginia Outdoors Foundation.

9. The County must approve any and all terms and conditions of the preservation easement proffer before approving the density transfer.*

D. Specific sites (Examples, not complete list and not in order of priority):

1. Properties adjacent to: Oatlands, Rokeby, Morven Park, Balls Bluff Cemetery, battlefield and entrance road, Woodburn

2. Balls Bluff Battlefield

3. Raspberry Plain Farm (White's Ferry District)

4. Rockland Farm (White's Ferry District)

5. Big Spring Farm (White's Ferry District)

* A model easement deed will be written and offered by the County for the use of landowners involved in this procedure.
COMMUNITY DESIGN

Introduction:

Community design is a term which refers to the character of the physical structure and organization of a community and which includes habitable structures, transportation elements, open space areas and the complex network of relationships between these diverse elements. The primary focus and concern of the community design process is to allow new development to be organized in such a way as to enhance community identity, promote energy conservation and to preserve the existing natural amenities as described in the Resource Management Plan and to achieve recommended Residential Goal E of the Goals section of this plan (page 20).

The pattern for new growth in the Leesburg area should follow the traditional pattern that has occurred here during the past two centuries of small clusters of urban centers grouped around a central community function such as a commerce center (shopping/offices) or governmental center (school/offices).

Community Design Elements and Guidelines:

Communities are composed of numerous elements, some of which are immediately recognizable such as roads, schools or shops and some of which are perceptible only indirectly through their effects such as community garden clubs, fraternal organizations, county sewer service programs and others. Inadequate or misplaced provision of the necessary space for these elements will severely affect the quality of life of community residents. Consequently, Loudoun County has a vital interest both in the provision and in the location of important community elements which include:

1. Community Centers:

   The community centers should be the focus of residential neighborhood activity and could include such governmental functions as schools, parks and libraries and commercial services such as professional offices and shopping for daily household needs, surrounded by a transitional zone of compact residential development. Community centers should also be the focus for non-governmental community activities such as fraternal and social clubs, theater groups or churches and space should be set aside for the eventual inclusion of these groups as they develop when the community is constructed. Community centers should be at the local transportation hubs of new communities and should be readily accessible to pedestrian traffic.
There are inherent differences in land use intensity between various functions within the community center and between the community center, its compact higher density residential area and the surrounding lower density residential areas. Therefore, open space, buffering and deliberate phasing down of land usage intensities should be employed in layout design.

2. Parks and Environmental Areas:

   Parks should be linked closely with both the pedestrian/bicycle circulation and the recreational trail system, forming a logical network within the Leesburg area as a whole. They may include both level, well drained areas developed for active recreation such as basketball, tennis and soccer and environmental areas such as woodlands and stream valleys for passive recreation. The Parks and Recreation component of the Community Facility Plan, page 120 identifies the graduated types of parks to be located in the Leesburg area. Neighborhood parks of about five acres in size should be closely associated with residential clusters of some 160 - 200 dwellings and should contain facilities for small children, multi-purpose courts and an open field for organized games. A community park of 20 acres might be provided by a larger planned community development of 1,300 - 1,500 dwellings and should contain areas for tennis, softball and swimming as well.

3. Schools:

   Schools should be the major focus of neighborhoods and are a point of synthesis among governmental, educational and recreational functions. Safe pedestrian access is essential and is of special interest to the County since its alternative, busing, is very expensive and energy inefficient. Consequently, elementary school sites should be located within one mile of the most remote residence as measured along a safe, all-weather path system. Middle and high schools should be within one and one-half miles of the most remote dwelling. Elementary school sites in the Leesburg area should be 15 acres in size and should be both level and well drained. Middle school sites should be 30 acres in size and again both level and well drained. High school sites should have similar characteristics but should be 35 acres in size. Proximity between middle and high school sites has advantages in terms of extracurricular athletics and community events and the cost of maintenance personnel. Given the inevitable traffic associated with these facilities, middle and high schools should have safe access to collector roads.
4. Pedestrian Circulation:

The pedestrian and bicycle circulation system should link residential areas with community centers, schools and the shopping area in a systematic and safe manner through logical design and the use of grade separated sidewalks and bridge/underpasses when associated with vehicular routes and collector roads. The system would be distinguished from recreational trail systems which are also encouraged but which cannot be assured of year round use due to ice, flooding or other intermittent hazards. However, though distinct in purpose, these two systems should be integrated with one another and with such regional trail systems as the Northern Virginia Park Authority's W&OD Trail.

5. Vehicular Transportation:

The physical and visual dominance of the automobile should be reduced whenever possible. Clustering of housing units, road calibration in terms of ultimate traffic loads, off-street parking, a comprehensive pedestrian path system and close association of residential, commercial, educational and recreational functions would all contribute to reducing automobile dependence and road requirements. Curved streets and divided collector roads would contribute to reducing the visual impact of those roads required by development. Provision should be made in the community center for park-and-ride lots for van and car pooling.

6. Energy Conservation:

The County will encourage energy conservation in new buildings and subdivisions. Energy conscious plans should include the following elements:

a. Road and lot layout to maximize solar access in winter
b. Appropriate building orientation for solar gain in winter
c. Vegetative planting to reduce summer solar gain
d. Use of topography and vegetation to protect buildings from winter winds and conversely enhance the effect of cooling summer breezes

7. Variety of Residential Types:

The Resource Management Plan and this plan have established goals to "encourage at appropriate locations an affordable variety of housing types commensurate with demands created by current needs and future growth" (RMP, page 195). This goal finds justification in the need to shelter the many different income and social groups in Loudoun County.
The density ranges in Figure 14, page 84, combined with the criteria identified in Tables 13 through 16 illustrate overall residential development strategy within the Urban Limit Line. Higher density, traditional rental and/or condominium apartments, patio units or townhouses, will be located around the community focus areas in the upper Tuscarora and Edwards' Ferry Planning Districts. Tracts of land at a greater distance from these focal areas and near the edge of the Urban Growth Area will be developed in lower density, single-family detached housing types.

The large tracts of open land surrounding the Town, including the recently annexed Carrvale tract, are likely to be developed for the conventional middle income housing markets by major developers and builders. The County would encourage that these large tracts of land be designed as planned communities with a mixture of housing types, integrated in a harmonious way with the environment, community facilities, roads and with contiguous properties. Conversely, the generally smaller tracts of undeveloped land within the Town of Leesburg are likely to be developed by smaller building companies and developers for specialized markets such as the elderly or the historically oriented affluent. The County anticipates that the Town would refer such development to the County on a case by case basis in applications such as housing for elderly where co-operation would be beneficial or in circumstances where the tract is adjacent to the Town/County boundary.

**RESIDENTIAL DENSITY**

The designation of an appropriate residential density for each parcel of land within a particular planning district may be resolved by taking into consideration factors such as proximity to public facilities like necessary roads, community parks and schools, environmental conditions such as steep slopes, soil suitability and floodplains, adjacent uses and zoning and the preservation or contribution toward preservation of important community resources such as farmland, significant open space or historic sites. Furthermore, developers of new communities and subdivisions must take into account facilities already in place or planned by the County when working out their designs. Densities in the upper range shown on Figure 14, page 84 cannot be assigned in the absence of a full set of existing or already scheduled emplacement of supporting utilities and facilities and a detailed acre by acre environmental review. Overlaying these detailed site considerations are two major density ranges generated by the Urban Limit Line, urban densities within the ULL and rural densities outside the ULL. Within the ULL the County intends to oversee the development of an urban community with a full provision of public facilities needed to support and complement the new population. Loudoun County will, accordingly, encourage the design of community proposals which are focused on planned community centers incorporating commercial, office, employment and community recreational functions. Residential areas surrounding these core functions would be designed for higher density residential building types such as townhouses.
RESIDENTIAL DENSITY RANGES within the URBAN LIMIT LINE

*NOTE: GROSS DENSITY

LEGEND
- du/ac. DWELLING UNIT PER ACRE
- SFD SINGLE FAMILY DETACHED
- MF MULTI-FAMILY
- TH TOWNHOUSE
- E ELDERLY HOUSING
- MU MIXED USE
- ULL URBAN LIMIT LINE
- STREAM
and garden apartments. Residential area at a greater distance from the community core, though still within the ULL, would be designed for single-family detached dwellings.

Outside the Urban Growth Area, the intent is to encourage agricultural uses but permit low density rural residential development. While the density range within the ULL is inherently higher than that beyond the ULL, the County intends to soften the contrast by the location of open space greenbelts and institutional uses such as office facilities or parks along the periphery. (See Figure 15, page 86) There are various density implications of these public facility, environmental, land use, timing, public resources and Urban Limit Line factors which are discussed in the following housing options section.

Figure 14, page 86 designates the density ranges for land within the Urban Limit Line. The ranges represent general directions for development within the ULL and should not be taken as specific parameters or standards for development. Figure 14 will be reviewed along with the following detailed site criteria factors. The bracketed figures in the density ranges are intended for the implementation of the density transfer procedure. See page 77 for details.

1. Detailed site analysis of environmental conditions.

2. Proximity to existing and/or planned and funded community facilities, commercial and employment uses in the planning area and within the Town of Leesburg.

3. Appropriate density and development types of residential uses in the surrounding area including tacts within the Town of Leesburg.

4. Compatibility with existing and adjacent zoning and the Area Plan.

5. Sufficient vehicle trip capacity of existing roads, intersections and interchanges affected by the proposed development.

6. Proximity to existing or planned bicycle and pedestrian paths to local shopping, community centers and schools.

7. Central sewer and water availability in designated watersheds.

8. Provision of natural open spaces, parks and/or vegetation buffers between differing land uses.

9. Conservation of environmental, historic and agricultural land resources.
A more detailed explanation of the County's review procedure is outlined in the appendix, page 98 of this Residential Plan. The object of this review is to achieve the goal of a true community, possessing a functional complement of institutional, recreational and transportation facilities and utilities, sited so as to lessen environmental impacts such as stormwater runoff and erosion and designed to conserve and make the best use of whatever unique environmental and historical assets the site may have such as stream valleys, woodlands and historic sites and structures. The density ranges shown in Figure 14 indicate a basic minimum/maximum range and a bracketed maximum. In order to achieve the bracketed maximum (if desired), additional conservation easements must be proffered, sufficient to generate an additional one unit per acre density increment.

Table 12 summarizes the range of dwelling unit totals which the County anticipates will develop within the Town of Leesburg and the Urban Growth Area.

**TABLE 12**

**EXISTING AND POTENTIAL HOUSING UNITS IN THE URBAN GROWTH AREA**

(Within the ULL and the Town of Leesburg)

<table>
<thead>
<tr>
<th>Category</th>
<th>Location</th>
<th>Units Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Residential Units</td>
<td>Town of Leesburg</td>
<td>3,210 Units</td>
</tr>
<tr>
<td>Existing Residential Units</td>
<td>Immediately Outside the Town</td>
<td>480 Units</td>
</tr>
<tr>
<td>Potential Development:</td>
<td>Upper Tuscarora and portions of White's Ferry</td>
<td>2,700 - 4,860 Units</td>
</tr>
<tr>
<td>Potential Development:</td>
<td>Edwards' Ferry and portions of Lower Tuscarora</td>
<td>2,120 - 3,570 Units</td>
</tr>
<tr>
<td>Potential Development:</td>
<td>Town of Leesburg*</td>
<td>2,840 - 6,390 Units</td>
</tr>
</tbody>
</table>

* Based on vacant acreages and proposed development density in the Town's February 1982 draft Plan, page 89.
### TABLE 12 (cont'd.)

**TOTA LS**

Total Existing Housing in and Immediately Surrounding the Town of Leesburg: 3,690 Units

Total Potential New Housing in and Immediately Surrounding the Town of Leesburg: 7,660 - 14,820 Units

Holding Capacity Within the ULL: 11,350 - 18,510 Units

Table 12 indicates that the Town of Leesburg and its immediate vicinity have a holding capacity of some 11,350 - 18,510 dwelling units which could accommodate a population of 32,500 - 53,000 people. The 7,600 - 14,820 potential new units which could be located both within and immediately adjacent to the Town would provide many housing options for the 2,296 households anticipated to locate in the area during the next ten years.

**Multi-family Housing:**

In the past four years, the Leesburg area has grown by approximately 522 non-subsidized units: 341 single-family, 177 townhouses and four apartments. This is a percentage ratio of 65%, 34% and 1%. The figures for non-subsidized apartments is very low, but was compensated by the building of 100 HUD assisted Section 8 units for the elderly. This virtual absence of private multi-family development in Leesburg mirrors the experience of the Washington, D.C. area as a whole since multi-family housing "slipped from a healthy 41% of all units in 1971 to 16% in 1979" and "moreover, virtually all recent multi-family construction has been government financed at below market rates."*

Presently, the high interest rates and tax offsets are discouraging the creation of new apartment developments, but the need for such units will eventually have to be satisfied.

The following are criteria for the location of multi-family development within the Urban Limit Line:

1. Detailed site analysis of environmental conditions.

2. Proximity to community facilities, commercial and employment uses in the planning area and within the Town of Leesburg.

3. Appropriate density and development types of residential uses in the surrounding area including tracts within the Town of Leesburg.

4. Compatibility with existing and adjacent zoning and with area plan density ranges.

5. Sufficient vehicle trip capacity of existing roads, intersections and interchanges impacted by the proposed development.

6. Proximity to existing or planned bicycle and pedestrian paths to local shopping, community centers and schools.

7. Central sewer and water availability in designated watersheds.

8. Provision of natural open spaces, parks and/or vegetative buffers between differing land uses.

County strategy would be to permit multi-family and higher density development on those specific properties with development plans which would incorporate these criteria as well as the Zoning Ordinance specifications. For this reason, this plan will not designate specific new tracts of land for townhouse, apartment or major single-family detached uses.

RECOMMENDATIONS BY PLANNING DISTRICT

Following the general recommendations for each planning district, environmental constraints and development opportunities for specific large properties are noted.

1. White's Ferry

   a. North of the Urban Limit Line:

      No zoning changes to the existing agricultural/residential A-3 zoning district beyond the Urban Limit Line are proposed. The District would act as a transitional area with Morven Park, Springwood and large lot rural residences forming a buffer between the urbanized core of the area and the farms to the north such as Rockland, Big Spring and Raspberry Plain.

   b. Within the Urban Limit Line:

      Within the Urban Limit Line, residential/institutional development is recommended. These types of uses should complement the residential and medical character of existing facilities. While residential development of 1 - 3 units per acre would be
acceptable within the Urban Growth Area, the County would prefer the area to develop with institutional uses and thus continue a pattern established by the Loudoun Memorial Hospital, the Heritage Hall Nursing Home, the Loudoun Country Day School, Morven Park, the Morven Park Equestrian Institute and the Marion Dupont Scott Equine Medical Center.

2. Catoctin Ridge

   No alteration to the existing agricultural/rural residential A-3 zoning is proposed. The District has particular environmental features: steep slopes, rapid stream flow, hardwood trees which indicate that any development should proceed with particular care. The advantages of innovative rural clustering of residential units on the small plateaus in this district should be particularly considered. The proposal to develop a part of the Catoctin Ridge Planning District which formed a component of the Hoffman rezoning (ZMAP #288) runs counter to the policy of protecting important environmental features. Residential density transfer from the ridge to the flat areas will be encouraged to protect the environmental integrity of the ridge.

3. Town of Leesburg

   The Town of Leesburg is not within Loudoun County's land use jurisdiction but it is a factor in planning area residential location decisions and those decisions within the Town will affect the type, scale, density and location of housing surrounding the Town. There is potential accommodation for about 2,840 - 6,390 residential units within the Town, mostly as infill between existing development. A wide variety of single-family attached and detached and multi-family options appears to be most suitable, particularly for somewhat specialized markets such as the historically oriented purchaser the elderly or the custom built home market. There should be compatible land uses in White's Ferry, Edwards' Ferry, Upper Tuscarora and the Town of Leesburg where the Town and the districts are adjacent and relate to each other.

4. Edwards' Ferry

   Except for that portion of Potomac Park which was the subject of ZMAP 85-13 approved in 1985 and which lies west of the Goose Creek within the LAMP planning area, the properties outside the ULL are not recommended for sewer service within the time frame of this plan except properties which are already served by central water and sewer. Ultimately, the Town of Leesburg will be the exclusive provider of sewer and water to the Cattail Branch Service Area west of Goose Creek.
Environmental features which include steep slopes, floodplains, streams, historic features such as the Balls Bluff Cemetery and battlefield and older houses, adjacent commercial/employment uses and major roads will require careful design and buffering to ensure proper development of the Edwards' Ferry District. Given the need for many public utility systems and the absence of public facilities, and given the high degree of environmental, historical and land use sensitivity required for development, Loudoun County considers that the area would be best developed as a cooperating, interlocking set of planned community zones. In addition, development of this area should complement those uses presently located within the Town of Leesburg.

The major tracts of land to the east of Leesburg which are presently zoned C-1 would best be developed as an integrated planned community core with a mix of commercial, office employment, institutional and community facilities which would be surrounded by a compatible mix of townhouse and garden apartment developments. Required by these land uses is a full complement of public facilities and utilities. County approval of specific new zoning categories and districts will depend upon the character of particular development proposals. However, a range of 10 - 20 acres of neighborhood commercial, 20 - 30 acres of office employment functions and five acres of recreational and open space facilities might be appropriate. The balance of the acreage could be devoted to residential land uses. Developments similar to Hunters Woods in Reston, Virginia which comprises shopping options, a public library, a community recreational facility, professional offices, apartments for the elderly, garden apartment condominiums and townhouses could serve as an example. Given the magnitude of such development, major roadway improvements would be required on Route 7 and on the secondary roads that intersect Route 7. The residential properties north of Edwards' Ferry Road should not have direct access onto Route 15, but access should be through a new major collector road parallel to Route 15 that terminates in Route 773. Dedication for an interchange at Edwards' Ferry Road and the realignment of Fort Evans Road would be required at the onset of new development. Other traffic improvements are specified in the Transportation section of this plan.

Carr/Shrump:

The Carr and Shrump properties located between the California Road and Edwards' Ferry Road (both are Route 773) to Cattail Branch possess many environmentally critical and sensitive features: floodplains, small streams, some slopes of over 25% and some slopes in the 15% to 25% range, a number of acres with hardwood trees. The properties are adjacent to the Route 15 Bypass but will require major improvements to Route 773 and the proposed realigned Route 654 in order
to provide safe and effective vehicular access. These properties are designated to provide the community focus of residential development in the Edwards' Ferry and Lower Tuscarora Districts. Such residential development surrounding the community shopping and local office functions could include zero lot line patio, townhouse and garden apartment building types as well as apartments for the elderly with localized high net density characteristics. Stream valleys and steep slopes between these developments should be retained in a natural state. Residential densities should range from a single-family density of 1.5 - 3 units per acre along the edge of the Urban Growth Area to higher densities adjacent to the neighborhood commercial center. Multi-family development would be appropriate to serve the needs of special groups such as the elderly if highway capacity and other public utilities and facilities were available.

5. Upper Tuscarora

Residential development on central sewer and water is recommended for this planning district west of Route 654. To the east of the airport, densities should range from a low of one to two units per acre on the steep slopes along Route 654 to 1.5 - 4 units per acre for the areas that can be developed on flat land. Higher density attached and multi-family housing may be appropriate in some locations.

To the east of Route 15, the major tracts of land in this district should be developed as planned communities with a variety of housing types, single-family detached, patios and garden apartments with complementary community facilities such as schools, park sites, neighborhood shopping, roads and trails.

The Commercial section of this plan recommends that a moderately sized neighborhood shopping center should be located in this area, specifying appropriate ranges of size and compatibility with neighboring residential and non-residential functions.

A community focus area is planned in this sector of the Upper Tuscarora District, similar to that described for the Edwards' Ferry District. Townhouse and apartment development could also be integrated with the neighborhood center if appropriately buffered and served by roads and other facilities and utilities. This integration would lessen conflicts in land use and increase community benefits of convenience, land use harmony and housing type options. The area immediately below the northward flight path of Godfrey Field should be developed in a new non-residential land use which would be compatible both with the aircraft noise and with the surrounding residential uses. Proposed density ranges are from 1.5 - 3 units per acre for the outer
perimeter properties (Allman and Hoffman) to 1.5 - 4 units per acre for the remaining parcels. Higher densities up to five units per acre may be approved if additional proffers of conservation easements are made in conformance with the provisions indicated on pages 9 - 11.

Any development in the area bounded by Route 643 to the west, the Leesburg Bypass to the north and by Route 654 to the east and south should take place with an awareness of the steep slopes and native woodlands of the environment. The existing pattern of well sited and landscaped single-family houses on Route 654 is a suitable model for future development.

Development along the western boundary of the Upper Tuscarora District should address treatment of the Catoctin Ridge slopes with particular care given the composite environmental importance of steep slopes, woodlands, streams and floodplains. Concentration of dwelling units on the less delicate land with the balance of land dedicated to maintained and recreational open space would represent a preferred development pattern for the properties located to the south of Country Club Estates, to the east of the Catoctin District and to the west of Route 15. The Transportation Plan calls for improvements to Route 15 and an extension of a realigned Route 654 to cross the Allman tract which would limit the number of access points and intersections on Route 15 and provide better access to the Hoffman tract.

In terms of community facilities, these tracts provide several areas suitable for constructing an elementary school and a neighborhood park with some active recreational facilities like tennis and basketball courts and space for passive recreation. This would be particularly suitable along the streams and within the woodlands.

a. Allman/Hoffman:

The Hoffman tract's recent rezoning (ZMAP # 288) which proffered environmental, traffic and recreational features and cash trust funds in return for a density of 2.5 single-family detached units per acre, established a precedent for future development proposals on the Allman tract. The provision of other public facilities or the accomplishment of other public goals (such as farmland preservation through easement purchase) and development proposals to cluster residential units could permit gross densities of 1.5 to three units per acre. The Plan calls for single-family development in this part of the Urban Growth Area. No attached or multi-family development will be permitted. Additional easement proffers may be made to obtain a maximum of four units per acre.
b. Meadowbrook/Stowers:

These two properties located to the east of Route 15, to the south of the Leesburg Bypass and to the west of Route 643, contain small acreages of floodplain and are generally flat and well drained. On both properties sensitive and critical environmental areas are located on the northern edges, adjacent to the Route 15 Bypass. The properties do contain small acreages of woodland, also located mainly along the northern edges adjacent to the Bypass and on the eastern boundary of the Stowers property. These features should be preserved.

The Meadowbrook and Stowers properties are served by Routes 15, 621 and 643. The Transportation Plan calls for improvements to all of these roads. The realignment of Route 654 as a major collector road would cross these properties and provide for major east-west traffic movements.

Sewer and water lines presently cross the properties. The sewer line serves the J. Lupton Simpson Middle School and the water lines convey well water from the two Evergreen Mill Road wells northward to the Town of Leesburg. The properties are within the service radius of the middle school but would require the provision of additional elementary school sites to serve them. Ultimate development in the Urban Growth Area would generate the need for a high school. These properties, which are beyond the service radius of the existing Loudoun County High School in Leesburg, could provide such a high school site or the high school might be located on the playing fields of J. Lupton Simpson if replacement playing fields were acquired on the south side of existing Route 654. Such schools should be integrated with the residential neighborhoods by means of safe pedestrian paths. The paths on these properties should also link the residential neighborhoods with recreational areas which should incorporate both active and passive facilities. The environmentally critical and sensitive areas on these tracts may provide unique opportunities for community recreational facilities.

The Meadowbrook/Stowers properties are designated to provide the community focus of residential development in the Upper Tuscarora District. The focus area should combine educational, commercial and recreational functions and be surrounded by higher density residential development. A gross density of 1.5 - 4 units per acre with mixed use development should be considered the development range if fundamental transportation, environmental and community utility and facility factors are provided and up to five dwelling units per acre may be considered with conservation easement proffers. Net local densities could be higher in spots and development of attached and multi-family units could take place if other parts of the tracts are planned for a full range of community and recreational functions. A general density gradient should be designed into the properties.
with the higher densities generally located along the Bypass and around the community center and lower densities located along the edge of the Urban Growth Area.

6. Lower Tuscarora

The Lower Tuscarora Planning District is mainly zoned for employment and industrial uses. Residential land uses are incompatible with such uses and are thus not recommended. The exception to this general strategy would be the area immediately south of California Road (Route 773) and north of Route 7 which would round out the Edwards' Ferry residential communities planned in the post 1992 period. As with the Edwards' Ferry District in general, the Lower Tuscarora District will require major investments in collector and other roads, sewer and water lines and in public facilities in order to sustain the residential and employment uses envisioned by the Area Plan. These facilities should be integrated with those of Edwards' Ferry just as the existing PDH-30 zoned property and the currently A-3 and R-1 and R-2 zoned properties could be developed at possibly higher density if integrated with the communities to the north.

As with Edwards' Ferry, the need for public facilities and utilities and the high degree of environmental and land use sensitivity required for harmonious development suggests that the District would be most suitably developed as an interlocking set of planned communities in the northern area and planned employment development along and to the south of Route 7. The boundaries between different land uses will require particular design care and buffering to protect the residential communities from adjacent higher intensity uses.

a. Holden

The Holden property which is located on the south side of Route 773 east of the Route 15 Bypass is presently zoned PDH-30. This generally level site has many acres of Class IV jack and some Class IV wet soil. The Transportation Plan incorporates improvements to Route 773 and proposes creation of new access from Route 7 to Route 773, in the form of a realigned and extended Route 654. Residential development on this tract could incorporate a mix of zero lot line patio dwellings, townhouses and garden apartments and development should incorporate buffers and setbacks from surrounding office development to the south and the community center to the north. This property should not develop until the major access problems are solved. Either Route 654 could service this property or Route 773 could be upgraded to handle the traffic demand.
b. **Former Saunders Farm**

The former Saunders Farm is located to the east of the Carr/Shrimp and Holden properties and between the California Road (Route 773) and Route 7 within the ULL. The property has a gently sloping character and few trees. A distinct soil boundary crosses the old Saunders farm some 1,700 feet south of California Road and some 1,500 feet north of Route 7. Soils north of this boundary are Class I, II and III, while those south of the line are uniformly Class IV, jack and rocky.

The property can be sewered to the Town of Leesburg's plant by installation of sewer lines across the southern portion of the farm and under Route 7. There are presently no educational or other public facilities in this area. The Plan has identified the northern portion of this property as suitable for residential uses and as the boundary of that residential community which will focus towards the Carr/Shrimp community center to the west.

While the northern portion of the Saunders Farm is generally suitable for residential development in terms of environmental factors, the property is severely deficient in terms of essential road, sewer and public facilities such as schools and neighborhood parks. A development density of 1.5 - 3 units per gross acre would be suitable if the necessary off-site road improvements to Route 773 and its connections to Route 654 extended, Route 15 and Route 7 were made and if other public facilities and conservation easement proffers were incorporated in the plan. A maximum four units per acre may be allowed if additional easements are proffered.

7. **Airport**

No residential land uses are proposed for this district because they are incompatible with such uses as aircraft takeoff and landing, petroleum storage and associated commercial/employment uses.

8. **Goose Creek**

This area is recommended to remain as it is at present with major consideration given to preserving the integrity of the water quality of the City of Fairfax water impoundment on Goose Creek. The District should be viewed as a long-term natural resource area and management strategies developed to preserve it.
9. **Sycolin**

No alteration to the existing agricultural/rural residential A-3 zoning is proposed. The District should be considered as a transition between the urbanized area around Leesburg and the more rural Oatlands District. Consequently, residential development of the area would be permitted. County policy regarding such major growth inducements as paved roads will be formulated with the goal of assisting rural functions and the maintenance of essential health and safety provisions.

10. **Oatlands**

No alteration of existing agricultural/rural residential A-3 zoning is proposed. Low density residential development (10 - 25 acres) is recommended throughout this district. Actual densities will be determined by soils, proximity to historic/agricultural sites, clustering design and compatibility with adjacent lot sizes. County policy regarding major growth inducements such as roads would be similar to that specified for the Sycolin Planning District. In addition, the County will explore such programs as donation of open space easements and a preservation easement proffer program to further stabilize the ongoing agricultural and historical functions of this area in the forthcoming Rural Plan.
APPENDIX

RESIDENTIAL DEVELOPMENT DENSITY DETERMINATION

This Plan recognizes that it cannot state a specific number of units or density for any particular parcel of land since much depends on detailed environmental qualities of soil and underlying rock formations or topography; location of the land in terms of proposed community and neighborhood centers or the proximity of a parcel to public utilities as well as the contribution of a development to the preservation of public resources and benefits such as prime farmland outside the Urban Growth Area. Tables 13 through 16 indicate the factors which the County will include in a review of a specific parcel in connection with a zoning map amendment petition. These factors vary in inherent importance one from another and may vary in relative importance from one parcel to the next. Thus proposed alteration of one environmentally critical factor such as the 100 year floodplain will always rank higher than a proposal to modify an intermittent stream. However, if the intermittent stream crossed land with 20% slope, with wet soil characteristics and covered in mature hardwoods, the environmental importance of this stream might approach that of the 100 year floodplain just mentioned. Again, while adequate transportation is always important, the significance of "closing" a projected collector road loop may increase the importance of the transportation factor in one rezoning more than in another.

Tables 13 through 16 would be used in connection with Figure 6, page 29 showing proposed development patterns within the Urban Growth Area and Figure 14, page 84 showing residential density ranges and housing types which the County anticipates will be proposed within the urban limit line. On reviewing these factors in the light of community development objectives and on receipt of Planning Commission recommendations, the Board of Supervisors will exercise its legislative judgment in determining an appropriate density and/or floor area ratio for a particular parcel of land in a rezoning. The County anticipates that a rezoning application demonstrating adequate satisfaction of environmental, utility, community facility and heritage criteria would warrant a rezoning density near the base of the County's density range. A rezoning petition demonstrating a creative and effective use of environmental factors (such as woodlands and streams for parks and recreational purposes), accompanied by proffers of land for community facilities (such as schools, firehouses or church sites) and showing not only the provision of essential utilities but proffering to assist the County in attaining other objectives (such as historic conservation or farmland preservation easements) would clearly meet the criteria for granting density approaching the higher levels of the density range in Figure 14.
TABLE 13

DENSITY/UNIT TYPE DETERMINATION FACTORS

I. ENVIRONMENTAL FACTORS

F-1 and F-3 100 Year Floodplain

EFFECT

F-1 and F-3 zoned land should be deleted from density calculations.

AFFECTED PARCELS

Portions of the Hoffman tract and Meadowbrook in the Upper Tuscarora District; portions of the International Pavilion, Carr and Shrump tracts in Edwards' Ferry District; portions of the O'Connor, Conrad and Riley tracts in the White's Ferry District.

F-2 100 Year Floodplain

EFFECT

Acreage can be used as open space credit in density calculation if land is proffered for appropriate landscaping and maintenance.

AFFECTED PARCELS

Wherever applicable

Small and Intermittent Streams

Natural Standing Water and Wetlands

Outside the 100 Year Floodplains

EFFECT

The County encourages recognition of these environmentally sensitive features in the earliest development
design stages with appropriate steps taken to maintain the existing functions of the natural systems. The acreage involved can be used in density calculations and can be developed if appropriate engineering practices are employed. The County would prefer these stream beds to remain open as stormwater management areas with residences transferred elsewhere on the tract of land.

The actual density transferred from such areas would be a function of other environmental, community facility and utility factors, proximity to proposed community focus areas as the ULL, community design and so on.

**AFFECTED PARCELS**

Such streams and wetlands exist throughout the ULL and all tracts tend to possess some acreage in this category. The Hoffman, Allman and Stowers tracts in the Upper Tuscarora District, the International Pavilion, Carr and Shrimp tracts in Edwards' Ferry and land just east of the Leesburg Airport in the Lower Tuscarora Districts are major examples of this feature.

**CLASS IV SOILS**

**EFFECT**

Class IV soils share diverse characteristics antithetical to "customary" or standard development, e.g., shrink-swell soils require special road foundation techniques; consequently selection of suitable density would be a function of design/construction compatibility with the terrain, proximity to community facilities and utilities. The County encourages the recognition of Class IV soils at the earliest stages of design development in terms of dwelling unit type and road and utility construction. The density granted in a rezoning would reflect the County's judgment on the suitability of the design proposed.

An alternative method of development is as appropriately landscaped and maintained open space with density transferred elsewhere on the site.
AFFECTED PARCELS

The Hoffman and Allman tracts in the Upper Tuscarora District contain extensive areas of Class IV rocky, wet and jack soil. The Stowers tract also in Upper Tuscarora contains some wet and jack Class IV soil. Rocky Class IV soils characterize the steep slopes just east of Route 643 and south of the Route 15 Bypass. The International Pavilion, Carr and Shrump properties in the Edwards' Ferry District also contain some wet and jack Class IV soil.

Class I, II, III Soils

EFFECT

Class I, II and III soils are suitable for residential, commercial/employment and public facility uses. Such soils, if present on low slope terrain and in areas both designated for higher density uses and possessing a full complement of public facilities and utilities, could be developed with garden apartments, townhouses and patio houses. Flat, well-drained soils are also suitable for active recreational uses and for school sites and the County would permit the dwellings so preempted to be transferred elsewhere on the site.

AFFECTED PARCELS

The Meadowbrook and Stowers tracts in the Upper Tuscarora District contain many acres of such soils which are suitable for residential development of many types.

Mature Hardwoods - Mixed Woodlands

EFFECT

Woodland areas within the ULL are frequently associated with steep slopes, rock outcrops, streams and floodplains. Such areas would accordingly be included in density calculations only if they did not fall in the environmentally critical category. Otherwise, woodland areas would be used in residential density calculations. The County does encourage the recognition of such areas in the earliest design stages and would consider evidence of woodland preservation as an index of good community design.
AFFECTED PARCELS

Significant acreages of hardwoods exist on the Hoffman and Allman tracts and to a lesser extent on the Stowers tract in the Upper Tuscarora. The very rarity of such stands in the Upper Tuscarora area render these hardwood/mixed woodlands all the more valuable in terms of ultimate community development, and should be so recognized in the earliest design stages. Hardwoods are prevalent in the Tuscarora stream area just east of Route 643. In Edwards' Ferry, the Carr and Shrimp properties north of Edwards' Ferry Road are extensively covered with hardwoods. The steep slopes on the east side of the International Pavilion property are also extensively covered with hardwoods.

Slopes Over 25%

EFFECT

Delete such acreage from density calculations.

AFFECTED PARCELS

Steep slopes constitute the major reason for drawing the ULL at the base of the Catoctin Ridge. Such slopes also define the eastern boundary of the ULL in the International Pavilion, Carr and Shrimp properties.

Slopes of 15-25%

EFFECT

The County encourages recognition of these environmentally sensitive features in the earliest development design stages with clustered dwelling units, appropriate road layout, etc. The acreage involved can be used in density calculations and can be developed if appropriate engineering practices are employed. The County would prefer to see such slopes as landscaped and maintained open space with the residences transferred to elsewhere on the tract of land.

AFFECTED PARCELS

15-25% slopes exist throughout the ULL on many parcels of land. The Hoffman tract and various parcels of land just
east of Route 643 and south of the Route 15 Bypass in the Upper Tuscarora District and the International Pavilion, Carr and Shrump tracts in Edwards' Ferry contain noteworthy acreages with 15-25% slopes.

**Slopes 0-15%**

**EFFECT**

Slopes of 0-15% are suitable for residential, commercial/employment and public facility uses. Such slopes, if present on Class I, II, III soils and in areas both designated for higher density uses and possessing a full complement of public facilities and utilities, could be developed with garden apartments, townhouses and patio houses. Flat, well drained land is also suitable for active recreational uses and for school sites and the County would permit the dwellings so preempted to be transferred elsewhere on the site.

**AFFECTED PARCELS**

Portions of the Allman, Meadowbrook and Stowers properties in the Upper Tuscarora District and on the International Pavilion tract in the Edwards' Ferry District as well as the Holden tract in the Lower Tuscarora District possess such level to slightly sloping land.
TABLE 14

DENSITY/UNIT TYPE DETERMINATION FACTORS

II. UTILITY FACTORS

Collector and Arterial Roads

EFFECT

New development generates additional traffic, higher densities generating higher levels of traffic. Development proposals within the ULL should incorporate those transportation elements contained in the Area Plan. All development proposals will be evaluated in terms of projected traffic generation and the scale and traffic capacity of proposed collector and arterial roads serving the property both on and off the site. Allowance of higher residential density, within the ranges proposed in this plan, on a particular site will be a function of the transportation elements being in place, or already provided by other parties or by being proffered with land and/or funding assistance by the property developer involved.

AFFECTED PARCELS

The ULL possesses a minimum of collector and arterial roads. Major roads will be needed if the area is to develop significantly. The Transportation Plan calls for major improvements to existing roads and the realignment of Route 654 which affects the Hoffman, Allman, Meadowbrook and Stowers properties in the Upper Tuscarora District and the Holden, Carr, Shrum and International Pavilion properties north of Route 7 in the Lower Tuscarora and Edwards' Ferry Districts.

Sewer

EFFECT

Properties within the ULL are designated for sewer service.
AFFECTED PARCELS

Hoffman, Allman, Meadowbrook and Stowers in the Upper Tuscarora District and Holden, Shrum, Carr and International Pavilion properties in the Lower Tuscarora and Edwards' Ferry Districts would be served by central sewer.

Water

EFFECT

Properties within the ULL are designated for central water service.

AFFECTED PARCELS

Hoffman, Allman, Meadowbrook and Stowers in the Upper Tuscarora District and Holden, Shrum, Carr and International Pavilion properties in the Lower Tuscarora and Edwards' Ferry Districts would be served by central water.
TABLE 15

DENSITY/UNIT TYPE DETERMINATION FACTORS

III. COMMUNITY FACILITY FACTORS

Elementary, Middle and High Schools

Elementary Schools with sufficient school places should be located within one mile, Middle and High Schools one and one-half miles from the most remote dwelling measured along a continuous footpath system, open year round and safely segregated from vehicular traffic.

EFFECT

Elementary and secondary schools are major components of all communities and serve particularly important community functions in new developments because of the high student generation associated with new communities. Development proposals will be evaluated in terms of student generation by elementary and secondary school grades and in terms of necessary school sites and safe pedestrian paths leading to these sites. Allowance of higher residential density, within the ranges proposed in this plan, on a particular site will be a function of projected student generation and existing and/or planned and funded educational facilities within the walking ranges specified above.

AFFECTED PARCELS

The Allman, Hoffman and Stowers properties in the Upper Tuscarora District are within one and one-half miles of the J. Lupton Simpson Middle School. However, these properties lack proximity and access to elementary and high school sites. The International Pavilion, Carr and Shrump properties north of Edwards' Ferry Road are within one mile of Leesburg Elementary School but access is not easy due to the Route 15 Bypass. Furthermore, this elementary school is unlikely to possess the necessary school seats if the properties annexed in 1980 are developed at proposed densities. The Edwards'Ferry properties are also beyond the one and one-half mile walking distance of middle and high schools.
Neighborhood and Community Parks

Neighborhood parks and recreational facilities should be located one-half mile from the most remote dwelling, measured along a continuous footpath system so designed that they may be reached safely by children on foot.

Community parks and recreational facilities should be located one to two miles from the farthest dwelling, measured along a continuous footpath system which may cross major roadways if appropriate pedestrian safety measures can be included.

EFFECT

Recreational facilities are particularly important in new residential communities, given the high percentage of child population associated with these developments and the inevitable loss of vacant or "marginal" land as the Urban Growth Area fills up. Development proposals within the ULL will be evaluated in terms of the recreational needs of the proposed community as identified in this plan and in terms of those sites and facilities available and/or proffered. Allowance of higher residential density within the ranges proposed in this plan on a particular site will be a function of projected population and existing and/or planned and funded recreational facilities.

AFFECTED PARCELS

The area within the ULL but outside the Town of Leesburg lacks such facilities. The W&OD Trail System between the Upper and Lower Tuscarora Districts could become a major link in a comprehensive recreational system both within and outside the Town of Leesburg. Red Rock Park (natural preserve) in the Edwards' Ferry District and the Country Club golf course do not represent community oriented recreational space of the type which will be needed within the ULL.
TABLE 16

DENSITY/UNIT TYPE DETERMINATION FACTORS

IV. FACTORS FOR DENSITY TRANSFER FROM AGRICULTURALLY OR HISTORICALLY SIGNIFICANT LANDS

EFFECT

If a developer records a preservation easement on important agricultural, historic or scenic land, a residential density bonus may be granted to his urban development site at the rate of one extra unit per every three acres of A-3 zoned land which is put under easement, excluding steep slopes and floodplains.

AFFECTED PARCELS

<table>
<thead>
<tr>
<th>Agricultural Sending Areas (Examples)</th>
<th>Historic Sending Areas (Examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rockland Farm</td>
<td>Lands adjacent to and/or including:</td>
</tr>
<tr>
<td>Big Spring Farm</td>
<td>Oatlands</td>
</tr>
<tr>
<td>Raspberry Plain</td>
<td>Rokeby</td>
</tr>
<tr>
<td>Other active farms</td>
<td>Woodburn</td>
</tr>
<tr>
<td>or lands with Class I or II soils</td>
<td>Balls Bluff battlefield</td>
</tr>
</tbody>
</table>

Development Areas (Examples)

| Stowers tract                        |
| Carr tract                           |
| Meadowbrook                          |
| Allman tract                         |
| International Pavilion tract         |
COMMUNITY FACILITIES PLAN

INTRODUCTION

Community facilities are of critical importance to the Leesburg Area Plan. The population growth is anticipated to be very high over the decade of the 1980's, and demand for public services will rise commensurately. The social, recreational and cultural needs of the Leesburg area are discussed in this section plus the important sewer, water and transportation needs for the area.

Capital improvement programming will follow from the recommendations made in the Area Plan and will greatly affect the fiscal resources of the County over the next decade.

Residential, industrial and commercial development require investments in a wide range of community facilities on the part of the County. These investments cover the provision of additional school seats, library and recreational facilities and general government services. This section of the Plan will analyze various elements of community facilities: sewer and water, transportation, schools, libraries, recreation, government facilities, landfills and solid waste and fire and rescue facilities. This plan will deal with the land use implications of community facilities planning. The Plan will explain the specific implications of suggested capital improvement projects and give specific recommendations for growth management in the Leesburg area.

SEWER AND WATER FACILITIES

BACKGROUND

Sewer and water systems in the Leesburg area are necessary to accommodate continuing residential and non-residential development. Residential service can be provided either by pipes from a central plant or by individual well and septic systems. Central systems can support much higher densities and can be extended into areas where individual systems are not practical, but the environmental, fiscal and growth impacts can be much more costly.
A. Sewer

Sewer service within the Leesburg Area Plan boundaries is provided in three ways: the Leesburg waste treatment plant, small individual facilities and individual septic systems.

The Leesburg wastewater treatment plant was built in 1970 and is located south of Route 7 about a mile east of Town. The plant currently has a design capacity to treat 1.3 MGD (million gallons per day) of domestic sewage at a secondary treatment level and is actually handling about 1 MGD. Treated effluent is discharged into Tuscarora Creek about 1 1/2 miles above its intersection with Goose Creek.

Plans exist to expand the plant to a 2.5 MGD capacity at a current cost estimate of approximately $4.5 million. The plant's treatment level may have to be upgraded from AST (advanced secondary treatment) to AWT (advanced waste-water treatment) in the 1980's to comply with the Virginia State Water Control Board's Dulles Area Watershed point source discharge effluent standards. In addition, calculations by the Virginia State Health Department in Culpeper indicate that expansion to 2.5 MGD may be less than the Leesburg area will actually need. Using Table 12's (page 87) holding capacity within the ULL of 11,350 - 18,510 dwelling units, Leesburg and the surrounding Urban Growth Area would eventually require 3.5 to 5.5 MGD of sewage treatment. However, the 1.2 MGD capacity increase could support approximately 4,000 additional housing units, two community (300,000 square feet) and four neighborhood (100,000 square feet) shopping facilities and office space for 5,000 employees.

There are eight small individual treatment facilities in the area: Goose Creek Industrial Park Plant, Rehau/DECO plant, Litton Bionetics Corp. stabilization lagoon (currently inactive), Goose Creek Country Club facility, Piedmont Motel facility and three private residential plants. These range in capacity from 3,400 GPD (gallons per day) to 10,000 GPD. Figure 5, page 10 shows the location of these facilities.

* The information in this section was taken from three studies done for the Town of Leesburg: (1) Wastewater Management Facilities Plan, STEP Section 201, Betz, Converse and Murdoch, Potomac Group, Inc., 1977; (2)Trunk Sewer Master Plan, Bengtson, DeBret, Elkin and Titus, January 1976; (3)Water System Study, Betz, Converse and Murdoch, 1973.
Presently only one sewer line in the planning area is managed by the Loudoun County Sanitation Authority. This is a line about 2500 feet in length leading to the Goose Creek sewage treatment plant which serves the industries in that area. All other waste is disposed of through septic systems which are approved by the Loudoun County Health Department based upon analysis of the existing soil and geologic conditions. A goal of the plan specifies that future package treatment plants should not be encouraged in the planning area.

B. Water

The entire Leesburg planning area is presently serviced by groundwater well systems. The Town is serviced by eight wells which currently supply approximately 1 MGD (million gallons per day).* The capacity of the eight wells varies from .06 MGD (gallons per minute) to .6 MGD.** The actual amounts pumped for March and April, 1980 averaged about 1 MGD.***

The Town is constructing a 2.5 MGD water supply plant on the Potomac River just off Route 773 (Edwards Ferry Road) which can service about 1 1/2 times the present population. The plant could be expanded to an eventual 10 MGD. An 18 inch water line from the plant which runs west along Route 773 to the Route 15 Bypass where it connects with an existing line has already been completed. Figure 6, page 29 shows the location of the new Leesburg water treatment plant. Leesburg already provides water and sewer service to approximately 700 units outside the town limits.

In other sections of the Planning Area, water is provided by individual well systems. As a general rule, those areas with possible septic problems will also present difficulties in siting wells that are economically feasible to construct and can provide the minimum yield recommended by the federal government of five gallons per minute per household.

Fairfax City Water Supply System (Goose Creek and Beaverdam):

The Goose Creek and Beaverdam reservoirs are owned and operated by Fairfax City. The 225 million gallon capacity Goose Creek impoundment is located in the southeast corner of the Leesburg Planning Area while Beaverdam is just upstream outside the study area. The present daily capacity of the impoundment is 9.5 MGD and the plant will soon be operating at 18 MGD. It is essentially a reserve body. Plans call for eventual expansion of the Goose Creek/Beaverdam facility to 27 MGD. The Loudoun County Sanitation Authority purchases water from Fairfax City primarily to service the eastern Loudoun area.

* Resource Management Plan, page 175 and Bengston/DeBell, p. 36.
** Town of Leesburg, Water Supply Division, January 1980.
*** Virginia State Department of Environmental Health, Culpeper.
MAJOR ISSUES

The major issues for sewer and water facilities in the Leesburg area are which planning districts will receive central utility service and which jurisdiction will provide that service. The issue of service for planning districts relates directly to the character of future land use activity in each planning district. Responsibility for sewer provision is a complicated issue that will define the future for the still more complex issue of annexation and political jurisdiction of property surrounding the Town of Leesburg.

Other issues relating to sewer and water are:

1. Development type, character and density.
2. Staged or phased development activities.
3. Cost of sewer and water to the user.
4. Which watersheds should receive service.

RECOMMENDATIONS

A. Areawide Recommendations:

The planning policy that is recommended in the Area Plan is to manage growth by developing the planning districts in a logical sequence. Certain districts have been recommended for central sewer, other districts have not. Small areas of exception to the sequence will be so designated by the Area Plan. Cost implications to the average user are not addressed in the Plan.

1. Sewer Service Provision:

The area within the Urban Limit Line will be serviced by central sewer and water. The planning districts outside that line, Sycolin, White's Ferry, Oaklands, Goose Creek and the southern section of the Airport District, are not designated for sewer service within the timeframe of this area plan (1994) except where water and sewer currently serve an existing parcel. The Town of Leesburg will ultimately be the exclusive provider of sewer and water facilities for the Cattail Branch Service Area west of Goose Creek in the Edward's Ferry Planning District.

2. Public Health Considerations:

Areas that are designated by the Department of Environmental Health as health problem areas with malfunctioning septic systems will be considered for cost effective and environmentally sound alternative wastewater disposal systems on a case by case basis.
FIGURE 16

LEESBURG AREA MANAGEMENT PLAN

LOUDOUN COUNTY
VIRGINIA

SEWER SERVICE AREA to 1994

MARYLAND

**Existing and Gravity Service: Sewer Service either existing (in place) or available for gravity flow at a later date**

**The Western portion of Xerox parcel lying west of Goose Creek will be served with sewer and water by the Town of Leesburg**

***Ultimately the Town of Leesburg will be the exclusive Provider of water and sewer facilities to the Cattail Branch Service Area***
3. It is understood that the Town has the authority to provide sewer service within the one-mile subdivision control subject to the County's Special Exception and Commission Permit procedures. It is clear that additional treatment capacity beyond the planned Step II expansion of the Town plant to 2.5 MGD will ultimately be required to service the area within the Town and the Urban Limit Line. Therefore, the Town and the County, through the Loudoun County Sanitation Authority, should work together to determine the most cost effective and environmentally sound method of providing sewer service to the area beyond the Town's current one-mile subdivision control.

B. Recommendations by Planning District:

The Urban Limit Line (ULL) is defined as the urban growth boundary beyond which central sewer service is specifically precluded. If and when the ULL is enlarged to include the Cattail Branch watershed, the Town of Leesburg will be the exclusive provider of water and sewer.

1. White's Ferry

Sewer service should not be extended into this area except for a small portion on the northern border of the Town of Leesburg. This area should only accommodate limited residential development and the Virginia/Maryland Regional College of Veterinary Medicine's Marian duPont Scott Equine Medical Center.

2. Catoctin Ridge

This area should not receive any central sewer service. (Approved exception is the rezoned Hoffman property.) Water service would be appropriate where feasible.

3. Town of Leesburg

A fundamental policy of the Comprehensive Plan is to encourage centralized residential and non-residential growth outward from existing community centers. Leesburg presently contains more than 650 acres of vacant land and high consideration should be given to promoting pumped or gravity sewer facilities throughout the undeveloped areas of the Town to promote development infill.

4. Edwards Ferry

This area should not receive sewer service during the period of this plan, except for the western portion with pumping capacity to the Town of Leesburg's sewer facility. Ultimately, the Town of Leesburg will be the exclusive provider of water and sewer facilities to the Cattail Branch Service Area.
5&6. Upper and Lower Tuscarora

These two planning districts are designated for extensive residential and non-residential growth. (pages 92 and 95). Commensurate sewer service is therefore encouraged throughout both districts.

7. Airport

This district is recommended as an exception to the watershed analysis in that the northern half of the area should accommodate growth with sewer service. Also the existing septic system for the airport is failing. Consequently, pumped sewer is appropriate before 1992 to reinforce the northern airport area and its continuing viability as an industrial development generator.

8. Goose Creek

This district has sewer service from Loudoun County's Sanitation Authority, north of Route 7, but no service is recommended south of Route 7 before 1992.

9. Sycamore

No sewer service is anticipated or projected before 1992. Nevertheless, sewer lines in this area should operate by gravity flow to the Upper Tuscarora Watershed trunk lines.

10. Oatlands

No sewer service is anticipated or projected in this important rural/agricultural planning district.

SCHOOLS

BACKGROUND

New residential development generates new students who must be accommodated either in existing or new schools. School construction necessarily follows development. For community design purposes, schools tend to become the focus for community activity and active recreation uses (see Recreation Plan, page 122) and thus they stimulate the formations of social groups and are instruments of community cohesion.

In the Leesburg area there are three existing elementary schools, one middle school and one high school. The three elementary schools draw students from a geographical area equivalent to that of the Area
Plan while the middle and high schools draw their students from a much larger area. The boundaries of this area are Furnace Mountain and the Route 15 Bridge to the north, Goose Creek and Lenah to the east and Middleburg to the west. Table 17 indicates that the Leesburg area presently enjoys a surplus of school places in all of its schools, but particularly in the elementary schools since the opening of Leesburg Elementary School in 1980. Anticipated future growth will absorb this capacity by 1992.

### TABLE 17

1981 SCHOOL CAPACITY AND OCCUPANCY IN THE LEESBURG AREA

<table>
<thead>
<tr>
<th>Use</th>
<th>Enrollment**</th>
<th>Unused Seats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity*</td>
<td>9/30/80</td>
<td></td>
</tr>
<tr>
<td>Elementary:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catoctin</td>
<td>741</td>
<td>596</td>
</tr>
<tr>
<td>Leesburg</td>
<td>653</td>
<td>402</td>
</tr>
<tr>
<td>Douglass</td>
<td>266</td>
<td>137</td>
</tr>
<tr>
<td>Middle:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Lupton Simpson</td>
<td>1,080</td>
<td>812</td>
</tr>
<tr>
<td>High:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loudoun County</td>
<td>1,170</td>
<td>972</td>
</tr>
</tbody>
</table>

A. School Population Growth

Two time frames need to be considered in the evaluation of future school needs in the Leesburg Area. Ultimate area residential buildout figures are necessary to determine additional elementary, middle and high school sites; 1992 projected development will

* Use capacity which differs from design capacity is an estimate of the actual number of students that could be accommodated by a particular school building given its special education and course offerings and particular class sizes. Use capacity is generally about 90% of design capacity for middle and high schools.

** Enrollment does not reflect special education classes at Douglass Elementary School.
indicate what actions the County would need to take in its Capital Improvement Porgram in order to keep pace with growth.

Table 18 below indicates the current school population, projected 1992 school population and that of ultimate residential buildout. The figures are based on 1,500-2,500 new units in ten years and 7,500-13,380 new units in the ultimate development.* The figures also assume that 60% of these units will be single-family, 30% townhouse and 10% apartments.** Student generation factors are also assumed for these housing types based on the 1980 School Census data. It should be noted that the middle and high schools currently attract 30% of their student population from beyond the study area, e.g., from Lenah, Aldie and Middleburg, that this ratio is assumed to continue in the future and that these additional pupils have been included in the following tables.

**TABLE 18**

CURRENT AND PROJECTED SCHOOL POPULATIONS SERVED BY LEESBURG AREA SCHOOLS

<table>
<thead>
<tr>
<th></th>
<th>Current Use Capacity</th>
<th>1992 Enrollment</th>
<th>Buildout Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary School</td>
<td>1,660</td>
<td>1,820 - 2,280</td>
<td>4,207 - 6,411</td>
</tr>
<tr>
<td>Middle School</td>
<td>1,080</td>
<td>1,110 - 1,300</td>
<td>2,434 - 3,450</td>
</tr>
<tr>
<td>High School</td>
<td>1,170</td>
<td>1,340 - 1,590</td>
<td>2,503 - 3,610</td>
</tr>
</tbody>
</table>

* Based on calculations from the draft "Residential Development Activity Report", prepared by the Loudoun County Department of Planning and Zoning.

** This approximate ratio of single-family detached 60%, townhouse 30% and apartment 10%, development approximates to Loudoun's past development experience.
B. Projected New School Construction

Table 19 lists current school capacity and the additional school places needed to accommodate projected students in 1992 and at residential ultimate buildout, based on the assumptions noted in the section above.

<table>
<thead>
<tr>
<th></th>
<th>Current Use Capacity</th>
<th>Unused Capacity</th>
<th>Additional Places by 1992</th>
<th>Additional Places at Buildout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary School</td>
<td>1,658</td>
<td>523</td>
<td>162 - 622</td>
<td>3,684 - 5,888</td>
</tr>
<tr>
<td>Middle School</td>
<td>1,080</td>
<td>268</td>
<td>30 - 220</td>
<td>2,075 - 3,182</td>
</tr>
<tr>
<td>High School</td>
<td>1,170</td>
<td>198</td>
<td>170 - 420</td>
<td>2,305 - 3,412</td>
</tr>
</tbody>
</table>

RECOMMENDATIONS

Table 18 suggests that Loudoun may need to build an additional elementary school by 1992 while the increased numbers of middle school and high school students could be accommodated through geographical catchment boundary changes or additions to the existing facilities. The table further indicates that the County will need to reserve land in the immediate Leesburg area for five to eight additional elementary schools, two to two and a half additional middle schools and two to two and a half additional high schools to accommodate ultimate growth beyond 1992. These new middle and high schools would need to be larger than the existing facilities or the present size of the catchment areas would need to be reduced which would require the construction of other schools elsewhere in the County.

The Upper Tuscarora Planning District is already served by the J. Lupton Simpson Middle School but anticipated development at buildout will require the location of two or three elementary schools and one high school. One or two elementary schools will be needed to serve the residential communities planned in the northeastern portion of the ULL in the Edwards' Ferry and Lower Tuscarora Planning Districts. The northeastern sector will also require the location of an additional
middle school. Currently each elementary school requires 15 acres of land while a middle school requires 30 acres and a high school requires some 35 acres. These properties need to be centrally located within the residential communities in order to achieve community goals, promote local use of active recreation spaces in non-school time and reduce busing. Consequently, the locations of the properties need to be identified at the earliest possible time and certainly should be a factor for consideration at any rezoning. School properties should be considered as suitable elements of a proper arrangement in a rezoning proposal around the Town of Leesburg in the designated growth districts, especially since location and purchase of these sites after 1992 would be very difficult and certainly costly.

The existing cooperation between the School Board and the Department of Parks and Recreation in the use of the playing fields is cost effective and practical and this facility sharing shall be required.

New facilities, both grounds and buildings, shall be designed for cooperative use of schools, the Parks and Recreation Department and community groups.

LIBRARIES

BACKGROUND

Loudoun County's library system has been severely strained by growth in the last ten years. The Thomas Balch Library in Leesburg which contains 2,725 square feet of space should have approximately twice the collection of books and three to four times the space (an additional 9,000 square feet) to meet State standards. Furthermore, the Thomas Balch Library cannot accommodate handicapped persons and needs additional toilet, cataloging and copying facilities. Major expansion on the present site to accommodate new area residents would be difficult.

State standards suggest that the library system provide 0.6 square feet of facility space, 0.9 square feet of parking and 2.5 volumes per person in the service area.* Every new home built in the Leesburg vicinity would accordingly project the library system into a growth of some two square feet of facility space, five to six square feet of land and nine additional volumes. 1,500 - 2,500 new homes by 1992 would thus project the Library into expansion of some 3,000 - 5,000 square feet on an additional one-third acre of land.

ISSUES

The major issues facing the Leesburg library will need to be addressed in the Recreation and Culture Service Plan which is now underway. The proposed Service Plan for the library system should seek to establish whether the library should remain in its present location or whether the general library functions should be relocated with Thomas Balch converted into a special archive for local historical documents.

The Service Plan will furthermore need to describe what service strategy and level of service the library system would seek to establish and by what date.

PARKS AND RECREATION

BACKGROUND

As growth and population increase, the Leesburg area will require additional parks and active and passive recreational facilities. The County Parks and Recreation Department presently is using land owned by either the Loudoun County School Board or others for league use in active outdoor sports such as softball, baseball and soccer. Passive recreation is provided at Red Rock Wilderness Overlook Regional Park on the Potomac, and the WOOD Trail, both owned by the Northern Virginia Park Authority.

Based on the projected population of approximately 18,000 for the planning area by 1992 and the current state standard of ten acres per thousand people,* the need will be for 155 to 185 total acres in park and recreation land. Ideally, this acreage should be equitably distributed and easily accessible to the various areas of population concentration and should include different sizes and types of parks. These are:

1. Neighborhood Park - Five acres; one-half mile service radius; facilities such as open field, playground for small children, multi-purpose courts.

2. Community Park - about 20 acres; one to two mile service radius; facilities such as play areas for small children, tennis, basketball, ball fields, picnic area, swimming.

3. District Park - about 50 acres; five to seven mile service radius; extensive variety of active and passive facilities.

4. Conservation Park - no specific size; only passive uses such as hiking, biking, picnicking; most appropriate in environmentally significant areas such as floodplains, stream valleys, or steep slope areas.

It is particularly important that future park sites be located in the Planning Area because Leesburg is the geographical and cultural center of the County.

Active Outdoor Recreation

One of the major components of a public park and recreation program is the provision of active outdoor recreational facilities. Listed in Table 20 are facility standards obtained from the Virginia Commission of Outdoor Recreation. These are based on: National Park and Open Space Standards by Buchner. Also included is the number of each facility that will be needed in 1992 based on the area's projected population of approximately 18,000.

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Standard</th>
<th>Population (Population)</th>
<th>Number Needed by 1992</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basketball Court</td>
<td>1 per</td>
<td>2,000*</td>
<td>8</td>
</tr>
<tr>
<td>Tennis Court</td>
<td>1 per</td>
<td>2,000</td>
<td>8</td>
</tr>
<tr>
<td>Baseball Field</td>
<td>1 per</td>
<td>6,000</td>
<td>3</td>
</tr>
<tr>
<td>Softball Field</td>
<td>1 per</td>
<td>3,000</td>
<td>6</td>
</tr>
<tr>
<td>Swimming Pool (25 meter)</td>
<td>1 per</td>
<td>10,000</td>
<td>1 or 2</td>
</tr>
<tr>
<td>Golf Course</td>
<td>1 per</td>
<td>25,000</td>
<td>1</td>
</tr>
<tr>
<td>Soccer Field</td>
<td>1 per</td>
<td>3,000</td>
<td>6</td>
</tr>
</tbody>
</table>

The lease between the County and Goose Creek Country Club for use of the swimming pool has expired so there is no longer any public swimming facility in the Leesburg area. According to the County Parks

* State standard was 1 per 500 which is more appropriate for use in urban areas.
and Recreation Department, the primary outdoor active recreation needs of the Leesburg area will be a swimming pool and lighted multi-purpose fields that can be used for baseball, softball and soccer.

**RECOMMENDATIONS**

1. As part of a comprehensive Parks and Recreation Service Plan, the County should establish the kinds of parks (neighborhood, community, district and conservation) and the number of different active outdoor recreation facilities (ballfields, tennis and basketball courts, etc.) needed to serve the projected 1990 Leesburg area population.

2. The County should acquire park sites in the Leesburg area in conjunction with other CIP projects such as purchase and dedication of school sites.

3. The County Parks and Recreation Department and School Board should establish policies and programs that clearly define the use and management of school sites for public recreation purposes.

4. The County should acquire through purchase, easement or other means or have dedicated to either a homeowner's association or the Northern Virginia Park Authority, the 100 year flood-plains of the major watercourses such as Goose Creek, Sycolin, Tuscarora and the Potomac. These stream valley corridors can fulfill the need for a system of bike and pedestrian trails and conservation parks, as well as accomplish the adopted environmental goal of protecting the area's water resources.

5. The County should investigate the feasibility of converting the sanitary landfill to a park for use after landfill activities are completed (around 1990).

6. The active outdoor recreation facilities that have the highest priority for acquisition are a swimming pool and lighted multipurpose athletic field.

7. A general plan for a bikeway/pedestrian system shall be adopted for the area and a detailed bikeway/pedestrian system and activity center, linked to the W&OD Trail, if possible, shall be included in all residential and non-residential development.
8. Under the provisions of the Loudoun County Zoning Ordinance for cluster developments and planned communities, a certain percentage of the site should be set aside for maintained active and passive recreation areas. This land should be well drained and on slopes from 0 – 5%. As recommended by the National Recreation and Parks Association, a minimum of 30 acres of land for recreation should be provided for every 1,000 people.

SOLID WASTE

BACKGROUND

The County Sanitary Landfill, located in the Oatlands Planning District, on Route 621, began operation in 1971 on a 102 acre site. Twenty-three acres of the site are currently being used for active filling purposes. In April 1981, the County Board of Supervisors approved the purchase of an additional 27 acres to bring the total to 129 acres. The Board also adopted a policy that no future expansion of this landfill site will occur. According to the Loudoun County Sanitary Landfill Study by Sterns, Conrad and Schmidt, First Phase, Spring, 1981, the disposal capacity will be used by 1990.

Based on the Board's adopted policy and the 1990 projected date for exhaustion of landfill capacity, the County will have to address its future solid waste needs soon. While the Leesburg Area Plan is only for 10 years, solid waste planning must occur before this date.

The Town of Leesburg owns a 23 acre site that has been designated by special exception for landfill use. The site is located on Route 860, approximately one-half mile south of the planning area's Goose Creek boundary.

RECOMMENDATIONS

1. The County will have to plan for its post 1990 solid waste needs. Two major areas of investigation should be:

   a. Location of suitable landfill sites within the County. Issues to consider are: soil type, topography, depth to water table and bedrock, drainage population projections and growth rates, zoning, transportation, surrounding land uses.

   b. Possibility for either a cooperative regional or a multi-jurisdictional solid waste solution, such as resource recovery.
2. The County should study the feasibility of converting the present landfill site when exhausted for landfill purposes to a County park.*

3. To ensure that the health and safety of surrounding residents is not endangered, the County should:
   a. Maintain an adequate vegetational buffer around the existing landfill to reduce the hazards of methane gas and dust migration.**
   b. Perform periodic testing of surrounding wells to monitor possible water supply contamination.**

FIRE RESCUE

BACKGROUND

The Leesburg Area is served by a volunteer fire station located on Loudoun Street and a volunteer emergency rescue station located on Catoctin Circle, both in the Town of Leesburg. The central concern of the Fire/Emergency Rescue Service is the provision of prompt and efficient service to all residents at a moment's notice. At present, the Leesburg area is well protected, but growth to the east and north of Town may pose a locational problem to the volunteers in providing adequate fire and rescue service.

ISSUES

The Fire/Emergency Rescue Service has been challenged over the past decade by growth pressures throughout the County. The need for financial assistance from the County has increased but the volunteer nature of the service has never been questioned. This trend is expected to continue in the Leesburg area over the life of this plan, with the volunteer aspect as the heart of the service.

Residential and employment/commercial growth around Leesburg will necessitate the acquisition of additional equipment and a substation. This station will require good access to and community visibility from the new residential areas since much of the volunteer support will need to come from them. However, it must be located in a position which can efficiently service the new industrial growth such as Leegate.

* Also mentioned under the Parks and Recreation section of this Plan.
** Both of these are also mentioned in the Environmental section.
RECOMMENDATIONS

A fire/rescue station site formed one of the proffers for the Leegate Industrial Park, located on Route 7, east of the Town. This reflected county concern to provide fire protection to anticipated employment and residential development east of Leesburg. The nature of a volunteer firefighting force, however, strongly suggests that a future fire station should be located in close association with residential development from which the volunteers would be drawn. Consequently, another fire station site in the Lower Tuscarora/Edwards' Ferry District should be sought. The new site should be located on the circumferential road which crosses Leegate and timing of construction will need to be determined by the pace of development and construction of the circumferential road.

GOVERNMENT FACILITIES

BACKGROUND

The impact of new residential development on County facilities is affecting the County in terms of physical space and programming requirements. Development creates demand for additional judicial, administrative, revenue, technical services and personnel who need facilities in order to carry out their tasks.

In terms of undeveloped land, the County owns ten acres of land within the Town. Part of this land is being used for parking, but it could be considered for expansion of County facilities.

MAJOR ISSUES

The major issues involving government facilities in the Leesburg Planning Area are locational. The projected population growth over the next decade will necessitate new County government facilities. Questions include: Should the County begin decentralizing its service to various locations in the County? What location would be most convenient for all the citizens of the County? If Leesburg, which is centrally located and is the historic County Seat, is to continue as headquarters for the entire County government, are all those facilities compatible with the land uses of the Town and with its historic character? Should some of the County's government functions be expanded outside the Town limits, but within the planning area? To reinforce the existing Town center is an important land use consideration and County governmental facilities are critical to the downtown identity.
RECOMMENDATIONS

All government facilities of Town and County should remain centralized within (or around) the Town and additions to the County facilities should be in an accessible area in the Town of Leesburg. Whenever possible, administrative, recreational, health, social and psychological services, libraries and the like should be centrally located in and around the Town of Leesburg if such a decision demonstrates a cost-effective delivery of public services and if Leesburg remains an integral part of the County.

FISCAL IMPLICATIONS

Based on the buildout population ranges and projected population increases in the 1980-82 period, the magnitude of necessary capital improvements during the life of the plan can be estimated in 1981 dollars. Table 16 below shows the magnitude of capital improvement costs generated by Leesburg's growth in the 1980-82 period and at full buildout. It should be noted that these costs do not include road, sewer and other major utility costs, though they do include Fire/Rescue capital costs. It should be noted that the population, and specifically the student generation ratios which were used to create Table 21, might change dramatically in the 30 - 40 years which may be needed to achieve buildout.

| TABLE 21 | ESTIMATED LEEsburg AREA CAPITAL COSTS |
| 1992 and at Buildout | |
| 1980-1992 | Buildout (Including Town of Leesburg) |
| 2,130 du. | 2-3 du/ac. |
| Additional Dwelling Units | --- | 7,660 | 14,820 |
| Additional Population | 5,090 | 21,919 | 42,407 |
| Schools | $3,995,000 | $73,185,000 | $98,472,000 |
| Libraries | 609,000 | 2,003,000 | 4,262,000 |
| Recreation | 761,250 | 2,751,000 | 5,322,000 |
| General Government | 1,534,680 | 5,545,000 | 10,724,000 |
| Fire/Rescue | 462,840 | 1,672,000 | 3,244,000 |
| Total | $7,362,770 | $85,156,000-$122,024,000 |

Table 21 assumes that these facilities would be financed out of revenue. Were the County to borrow funds through 8%, 20-year bonds, the costs above would double.
TRANSPORTATION PLAN

INTRODUCTION

The purpose of the transportation section of the Leesburg Area Plan is to provide the rationale for necessary road improvements to meet the existing and future travel demands. Adequacy of existing roadways is reviewed plus demand for new roadways is projected.

An important transportation element in the Leesburg Planning Area is Godfrey Field. Potential improvements around the airport are discussed.

BACKGROUND

The Leesburg vicinity is serviced by many secondary roads plus two major primary road facilities (Routes 7 and 15) which provide regional access to the area.* Capacity exists on the primary roads to handle growth in the next decade; the secondary roads will need realignment, redesign and general improvements to meet demands during the same time period. Many of the existing secondary roads in the Leesburg area are defined as "non-tolerable" by the Virginia Department of Highways and Transportation (VDH&T) as they are not built to a standard that will adequately and safely carry current traffic volumes. Any unpaved road with average daily traffic volumes in excess of 50 vpd is deemed non-tolerable by VDH&T and therefore in need of improvement.

* The Town of Leesburg maintains the roads within its corporate limits. The State maintains the balance of the roads in the planning area. VDH&T shares in the cost of maintenance and construction of the streets within the corporate limits of the Town.
**TABLE 22**

HIGHWAY INVENTORY - MAJOR SECONDARY ROADS

<table>
<thead>
<tr>
<th>Non-tolerable Roads</th>
<th>Hard Surface Roads</th>
<th>Roads Scheduled for Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routes:</td>
<td>Routes:</td>
<td>Routes:</td>
</tr>
<tr>
<td>820</td>
<td>621</td>
<td>773</td>
</tr>
<tr>
<td>654</td>
<td>643</td>
<td>653</td>
</tr>
<tr>
<td>773</td>
<td>653</td>
<td>643</td>
</tr>
<tr>
<td>653</td>
<td>655</td>
<td>654</td>
</tr>
<tr>
<td>643</td>
<td>698</td>
<td>621</td>
</tr>
<tr>
<td>769</td>
<td>654</td>
<td>698</td>
</tr>
<tr>
<td>740</td>
<td>649</td>
<td>650</td>
</tr>
<tr>
<td>698</td>
<td>650</td>
<td>797</td>
</tr>
<tr>
<td>651</td>
<td>704</td>
<td>699</td>
</tr>
</tbody>
</table>

The following traffic volumes were taken by the Highway Department in 1980 and represent the latest figures available.*

**TABLE 23**

AVERAGE DAILY TRAFFIC - 1980

<table>
<thead>
<tr>
<th>Route</th>
<th>From</th>
<th>To</th>
<th>Average Daily Traffic</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Broad Run</td>
<td>Route 15</td>
<td>11,305</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>15S Leesburg</td>
<td>6,390</td>
</tr>
<tr>
<td>7</td>
<td>15S</td>
<td>7W Leesburg</td>
<td>5,960</td>
</tr>
<tr>
<td>7</td>
<td>7W Leesburg</td>
<td>Clarks Gap</td>
<td>9,120</td>
</tr>
<tr>
<td>15 (Bypass)</td>
<td>15N Leesburg</td>
<td>7E Leesburg</td>
<td>3,675</td>
</tr>
<tr>
<td>621</td>
<td>654S</td>
<td>654N</td>
<td>1,469</td>
</tr>
<tr>
<td>643</td>
<td>654S</td>
<td>654N</td>
<td>665</td>
</tr>
<tr>
<td>650</td>
<td>771</td>
<td>651</td>
<td>107</td>
</tr>
<tr>
<td>704</td>
<td>15</td>
<td>797</td>
<td>1,494</td>
</tr>
<tr>
<td>820</td>
<td>699</td>
<td>662</td>
<td>151</td>
</tr>
<tr>
<td>662</td>
<td>703</td>
<td>704</td>
<td>1,187</td>
</tr>
<tr>
<td>698</td>
<td>Leesburg</td>
<td>.5 N of Town Limits</td>
<td>216</td>
</tr>
<tr>
<td>699</td>
<td>769</td>
<td>Leesburg</td>
<td>710</td>
</tr>
<tr>
<td>654</td>
<td>7</td>
<td>.35 S of Route 7</td>
<td>262</td>
</tr>
<tr>
<td>655</td>
<td>15</td>
<td>Landing</td>
<td>254</td>
</tr>
<tr>
<td>703</td>
<td>662</td>
<td>.75 N of 662</td>
<td>86</td>
</tr>
</tbody>
</table>

* Primary road traffic counts were taken by VDH&T in 1979.
MAJOR ISSUES:

The critical highway improvement issues in the Leesburg area will center around the secondary road improvements necessary to accommodate new commercial, industrial and residential growth. The goals are to separate residential from commuter and industrial traffic in order to reinforce community identity and to eliminate traffic conflicts.

The off-site improvements to primary and secondary roads within the planning area should be borne by both the developers and VDH&T. Due to funding problems experienced by VDH&T, more improvements must be contributed by the private sector to promote highway safety and good road design.

All development, both residential and non-residential, will be reverse frontage in design on major or minor collector roads and on all primary roads within the planning area.

RECOMMENDATIONS:

A. Areawide Transportation Recommendations:

Many transportation issues are areawide or concerned with two or three planning districts. Areawide recommendations for the following corridors are as follows (See Figures 17, page 130 and 18, page 133 for recommended improvements):

1. Route 15 Corridor(from Route 621 to southern boundary of Planning Area)

   U.S. Route 15 is a primary north-south arterial road. In the Leesburg vicinity it is the major north-south highway for the area.

   South of Town:

   a. Controlled access design provisions should be incorporated into the roadway as the adjacent property develops.

   b. Four-lane improvements should be made from just south of Virts Corner to the edge of the Town.

   c. Scenic Byway designation should be sought from Route 704 to Goose Creek from the Commission on Outdoor Recreation and the State of Virginia.
d. Minimum building setbacks for the Route 15 Corridor will be as follows:

Within the Urban Limit Line: 100 feet
Outside the Urban Limit Line: 300 feet

These standards can be waived on Planning Commission recommendation based on topography and existing vegetation that would preserve the rural character of the entire corridor.

e. Widening of shoulders to improve safety and accommodate truck traffic. Add left turn lanes at routes 650 and 704.

f. At-grade intersections should be adequately spaced with a maximum of three between the Bypass and Virts Corner.

g. Adjacent property owners should dedicate right-of-way in order to improve the geometric design and sight distances at the intersection at Virts Corner (Routes 15, 650 and 654).

East of Town: (Route 7 Bypass to Limestone Branch)

a. Route 15 Bypass (east and north of Town) should be four-laned.

b. The Balls Bluff Road, from its intersection with the Route 15 Bypass to the battlefield above the Potomac River, should be maintained as a gravel surfaced approach to the historic site. This road should not be improved or used as an entrance to residential subdivisions in the Edwards' Ferry District.

c. The existing interchange with the Route 7 Bypass should be redesigned and improved for safety.

d. Grade-separated interchanges are necessary for any commercial development.

e. The Edwards' Ferry intersection should remain open and be made grade-separated.

f. Fort Evans Road intersection should be closed off when development commences.
North of Town: (U.S. Business Route 15)

a. Planned growth in this corridor does not indicate the need for four-lane improvements to U.S. Business Route 15.

b. Intersection with Bypass should be redesigned and improved; 100 foot setback on both sides of road.

c. Route 698 should be improved within the Urban Limit Line. The new residential and institutional development north of the Town of Leesburg should eventually have direct access from Route 15 North. Initially, the institutional development will access from Route 698 (Old Waterford Road) but internal design should accommodate access to Route 15 when the residential/institutional property to the south develops and the collector roadway to Route 15 is constructed.

d. Intersection with Bypass should be redesigned and improved; visual and noise buffering can be achieved through such land use techniques as the strategic location of landscape buffers, earth berms, reverse frontage development and additional building setbacks from the road right-of-way. These techniques should be considered along all arterial and major roadways, but should be required along Route 15, the Route 15 Bypass, Route 7 and the W&OD Trail. Noise barriers of concrete would not be appropriate.

2. Route 7 Corridor

The Route 7 Corridor east of town is seen as the "Gateway" to the planning area. The land uses are varied, but all types represent intensive land development and, therefore, are high traffic generators. The following specifications are encouraged:

The provisions of the Route 7 Corridor Study submitted by VDH&T in August 1977 are hereby adopted as proposed on Figure 18.

Amendments to the Corridor Study are:

a. Add grade separation of the W&OD Trail.

b. Eliminate the realignment of the eastbound lane from Route 653 over Goose Creek.

c. Add extension of relocated Route 654 north of Route 7.
FIGURE 18

LEESBURG AREA MANAGEMENT PLAN

TOWN OF LEESBURG

INTERCHANGE

FORT EVANS ROAD

UNDERPASS

INTERCHANGE

15

BYPASS

INTERCHANGE

773

CALIFORNIA ROAD

773

POW-30

POW-30

SIX-LANE DEDICATION

Cardinal Park

Legate

SIX-LANE DEDICATION

East Leesburg Hills

FOUR-LANE

VERDON HOOK TRAIL

Harper & North

Harper & South

Goose Creek

Country Club

653

643

654

LEESBURG AREA MANAGEMENT PLAN

ROUTE 7 CORRIDOR

PROPOSED IMPROVEMENTS

NORTH

SCALE

K I L O M E T E R

1.0

0 1000 2000 3000 4000

FEET

LEGEND

- URBAN LIMIT LINE
- NEW CONSTRUCTION
- POWER LINE
- CORPORATE LIMITS
- INTERSECTION TO BE CLOSED
d. Right-of-way for the additional east- and westbound lanes could be dedicated to VDH&T.

e. Add acceleration and deceleration lanes for any intersection with Route 7 unless waived by the Planning Commission and VDH&T.

f. Close cross-overs at Route 7 Bypass and existing Route 654.

g. See Figure 18, Page 133 for additional improvements and general locations.

3. Other Provisions of Route 7 Corridor

a. Limit need for signalization to keep the traffic flow as steady as possible.

b. The existing intersection of Route 654 with Route 7 should be closed and realigned to intersect with adjacent Leegate Industrial Park to the south and continue to California Road (Route 773) to the north.

c. The total number of at-grade crossovers between the Route 7 Bypass and Goose Creek should be limited to seven.

d. Route 654 should extend north from the Leegate Industrial Park in a direct line to Route 773 (California Road). All adjacent properties north of Route 7 should access off this major collector, four-lane divided highway.

e. The Route 7 Corridor will incorporate building setbacks in the Highway Overlay zone. Within the Urban Limit Line a minimum of 100 feet is required for setbacks. Outside the ULL a minimum of 300 feet is required for building setbacks.

f. Visual and noise buffering techniques should be considered. (See Environmental section, pages 36, 41, 42.)

4. Transit Considerations:

   The Leesburg area functions as a focus for transit activity with park-and-ride lots and private bus facilities operating in and around the Town. The following recommendations are suggestions to reinforce the viability of these transit facilities:
a. Park-and-ride lots should be incorporated into the Route 15 south area, within the Urban Limit Line, as development occurs.

b. New residential subdivisions should incorporate bus and transit facilities in their initial design plans, i.e., bus shelters, bus turn-around space and park-and-ride areas.

B. Recommendations by Planning Districts (See Figure 17, page 130 and figure 19, page 136.)

1. White's Ferry

Primary Roads Improvements:

a. Route 15: Improve per above specifications.

b. The Marion duPont Scott Equine Medical Center access point on Route 15 as explained on page 132, should be implemented when future development takes place in the area.

Secondary Roads Improvements:

a. Route 655: Improve vertical alignment by eliminating humps in the road.

b. Route 698: Improve with better alignment and hard surface beyond the Morven Park entrance.

White's Ferry Operation:

Encourage the continuing viability of the operation with improved access on Route 655 and parking facilities.

2. Catoctin Ridge

a. Route 699 should be improved with bridge relocation and alignment changes.

b. Route 820 should be hard surfaced as soon as possible.

c. Route 769 should be hard surfaced.

d. Route 733 should eventually be improved to an entirely new alignment out of the floodplain. In the interim, improved maintenance treatment is recommended.
FIGURE 19

LEANBURG AREA MANAGEMENT PLAN

RECOMMENDED TRANSPORTATION IMPROVEMENTS

SECONDARY ROADS

LEGEND
- STUDY AREA BOUNDARY
- STREAM
- POWER LINE
- NEW CONSTRUCTION
- FOUR-LANE ROADWAY
- TWO-LANE ROADWAY

* SEE FIGURE 17
for ROUTE 7 CORRIDOR IMPROVEMENT
East of the Town of Leesburg

500 ACRES

LEESBURG AREA MANAGEMENT PLAN
3. Edwards Ferry

Primary Road Improvements:

Route 15 per above.

Secondary Road Improvements:

Route 773 improved from Route 654 extended west to the Edwards Ferry intersection.

4. Upper Tuscarora

The goal in this area is to separate the western residential traffic from the industrial traffic to the east. A circumferential, four-lane roadway should be designed and incrementally built from Route 15 (at Country Club subdivision) to Route 7 (at the Leegate property).

Primary Road Improvements:

a. Route 15 specifications per above, including limited access design to Virts Corner.

b. Signalization and the extension of the median strip of Route 15 is recommended.

c. A park-and-ride lot is necessary to promote carpooling activities.

Secondary Road Improvements:

a. Intersection Route 643 and the Bypass should be redesigned and grade-separated.

b. Route 643 to the east of the airport should be designed and improved as a four-lane roadway to airport and as a two-lane roadway from the airport to Route 659. Sufficient right-of-way should be dedicated to accommodate these improvements.

c. Route 654 should be designed as a four-lane collector roadway from Route 15 to Route 7. The extension north of Route 7 to Route 773 should also be designed as a four-lane road. Route 654, south of Tuscarora Creek, should be realigned from Route 643 on a direct line north of the Middle School to Route 621. The intersection with Route 15 should be located at a point with the maximum sight distance, spacing and safety.
d. Route 621 should be improved to accommodate anticipated growth with right-of-way dedicated for a four-lane roadway within the Urban Limit Line.

5. **Lower Tuscarora**

**Primary Road Improvements:**

Route 7 should eventually be constructed to a six-lane road section. During the life of this plan only dedication of right-of-way is necessary in order to build the six-lane improvements at a later date.

**Secondary Road Improvements:**

a. Route 654 should be improved to a four-lane, divided roadway from Route 643 to Route 7 and north from Route 7 to California Road (Route 773) as a reverse frontage, four-lane road.

b. Route 653 should be improved to an adequate industrial standard as the area develops with the use of industrial access funds, if possible.

c. The W&OD Regional Trail should be grade separated crossing the Route 7 Bypass and the trail itself should be paved by the Northern Virginia Regional Park Authority within the entire Planning Area.

d. North of Route 7, opposite Harper South: This general area should be serviced by a single access point off Route 7 with service roads or cul-de-sacs providing access to the adjacent properties north of Route 7. Access through to Route 773 should be discouraged until this road is upgraded to an improved VDH&T standard. No additional crossover is recommended at this Route 7 intersection.

6. **Airport**

**Secondary Road Improvements:**

a. Route 654 per above specifications.

b. Route 643 per above specifications.
Airport Facility Improvements:

The Airport District is recommended for increased traffic and development; sewer is anticipated in the near future. The land use should follow a pattern of employment development to the east with open space/office to the north. Otherwise, an area of 1,000 feet surrounding the airport facility should preclude residential development through implementation of an overlay zone. (See Figure 6, page 29.)

Specifications:

a. Existing PD-IP should remain as defined.

b. No improvements to the proposed runway to the west of the airport during the life of this Plan.

c. Height limitations for land uses north of the airport.

7. Goose Creek

Secondary Road Improvements:

a. Route 659: Improve with industrial access funds as more industrial property develops.

b. Route 643: Improve existing two-lanes with right-of-way and alignment improvements as necessary.

8. Sycolin

Primary Road Improvements:

Route 15: Widening of shoulders for safety to accommodate significant number of trucks using Route 15. Left turn lanes at Route 704 is recommended.

Secondary Road Improvements:

a. Route 621: Improve with better alignment and widening from Simpson Middle School to Goose Creek.

b. Route 650: Improve with hard surface at Route 15 and better alignment to the north. Add left turn lane on Route 15 to improve access to Route 650.
c. Route 643: Improve per above specifications.

d. Route 651: Improve with hard surface east of Route 15 to Route 650.

9. Oatlands

Primary Road Improvements:

    Route 15: Widening of shoulders for safety to accommodate significant number of trucks using Route 15. A left turn lane at Route 650 is recommended.

Secondary Road Improvements:

    a. Route 621: Improve per above specifications.

    b. Route 650: Improve per above specifications.
COMMERCIAL PLAN

INTRODUCTION

An economically viable commercial/retail sector is a critical element of any community. Both shoppers goods and convenience items should be available to Leesburg area residents. Shopping areas will provide for community and social activities as well as commercial exchange.

Land use proposals should anticipate retail needs for future populations while being compatible with and complementary to existing commercial uses both within the Town and within the Urban Limit Line. New commercial facilities will be necessary within the Urban Limit Line and the following plan reflects such needs.

BACKGROUND

A. Existing Land Use:

There are currently developed within the Town of Leesburg approximately 500,000 square feet of shoppers and convenience commercial space, excluding auto-oriented uses. These land uses are concentrated in downtown or "historic" Leesburg and around the Leesburg Village and Leesburg Plaza community shopping centers. At this time the only commercial uses located in the planning area are the Leesburg Ford Dealership, Lowe's, Perry Supply Co. and EURAM Furniture on Route 7 and the Honda Bicycle and Exxon Service Center on Route 15 south of the Town.

B. Existing Zoning:

A large amount of vacant land zoned for retail commercial and highway uses is available within the planning area. Most of the property owned by International Pavilion is zoned C-1 Commercial and encompasses 225 acres directly east of the Route 15 Bypass between Edwards Ferry and Fort Evans (California) Roads. This property could accommodate upwards of 3,000,000 square feet of commercial space. The EURAM property on the north side of Route 7 one-half mile east of the Route 15 Bypass encompasses 20 acres of PD-CH zoning and could accommodate an additional 100,000 - 150,000 square feet of commercial space. Just to the west of the EURAM property on the south side of Route 7, the Cardinal Industrial Park includes 20 acres of highway commercial zoning, enough to accommodate 175,000 square feet of space. In addition, the adjacent
Leegate property could accommodate retail uses which would support and be compatible with the proposal for several million square feet of office uses. All these sites have readily available or extendable sewer and water service from the Town of Leesburg.

Other commercially zoned properties in the planning area include two 10 acre sites on the south side of Route 7 at the Leesburg Bypass interchange, the Caradoc Hall property east of EURAM at Route 7 which is limited to a restaurant/inn use, and rural commercial areas several hundred feet north of the intersection of Route 643 and Route 653 south of Godfrey Field and at the intersection of Route 15 and Route 704 south of Leesburg.

**MAJOR ISSUES:**

The aforementioned zoned but undeveloped sites could accommodate many of the retail commercial and office needs of the Leesburg area for many decades, but the rate and extent of their growth will depend on regional and national market forces and investment decisions. Therefore, the issues addressed by the Plan focus on the following questions within the ten-year time frame of this Plan. They include:

a. The proper location of such development.

b. Design criteria.

c. The continued viability of the Leesburg area's existing commercial enterprises.

**RECOMMENDATIONS:**

A. **Areawide Recommendations**

The general commercial development approach should be to promote the reinforcement of the commercial facilities and development potential within the Town while locating new commercial areas in the planning area outside the Town in locations and at scales directly related to the commercial needs of the Leesburg area. The large industrial parks along the south side of Route 7 are seen as the primary locations of regional office uses. Local office uses should locate adjacent to neighborhood shopping centers located and sized to serve the adjacent residential communities.
A population increment of 5,000 - 8,000 persons over the next ten years in the Leesburg area could create a commercial market for approximately 100,000 - 150,000 square feet of shoppers goods and a similar amount of convenience commercial uses (grocers, drugs, restaurants). A portion of this 200,000 - 300,000 square feet of retail and commercial space should be located in two moderately sized neighborhood commercial centers outside the current Town boundaries.

The neighborhood commercial centers should range in size from 60,000 to 100,000 square feet. The shopping areas should be located adjacent to, but not in the midst of residential areas, and commercial centers should not be located adjacent to schools or parks. The commercial centers should have direct access to arterial roadways that have existing traffic capacity, but not have direct access to Route 15, Route 7 or the Leesburg Bypass. Local office and institutional uses are appropriate in locations adjacent to the commercial areas, particularly when they form a land use buffer with residential uses. Strip or ribbon commercial development is to be precluded if at all possible. Shopping area design should take the cluster or plaza form, set back from the roadways, particularly from the Leesburg Bypass and Route 15. Strip commercial development should be avoided to help retain the identity of the Town. This can be achieved through such land use techniques as the strategic location of landscape buffers, earth berms, reverse frontage development and additional building setbacks from the road right-of-way. These techniques should be considered along all arterial and major roadways, but should be required along Route 15, the Route 15 Bypass, Route 7 and the W&OD Trail.

Shopping areas should also incorporate landscaped parking lots designed to reduce visual monotony and heat buildup. Commercial access should also be readily accessible from pedestrian pathways and trails linked to adjacent residential neighborhoods.

B. Recommendations by Planning District:

1. White's Ferry

This area is recommended to remain in low density agricultural/residential use, except for the institutional uses of Springwood and Morven Park, and a small residential area adjacent to the northeast boundary of Leesburg. No retail commercial sites are recommended in this area.
2. Catoctin Ridge

No new commercial facilities are recommended in this planning district due to the slopes and rural residential-forest preservation land use recommended for this planning district.

3. Edwards Ferry

More than 250 acres of this planning district are currently zoned C-1 Commercial. It is recommended that a portion (10-20 acres) of this property be retained in commercial zoning for a neighborhood shopping center to serve the adjacent potential residential communities to the northeast and west. Office park and other noncommercial and institutional uses are a more appropriate development pattern on the remaining 200 acres of commercially zoned land (see section on Industrial and Employment). A distinct design character similar to that of the historic Town of Leesburg is recommended both for office and retail uses.

4. Leesburg

Leesburg should continue to provide a location for a large proportion of the area's office, commercial and industrial uses, particularly auto service related uses and offices supporting and supported by the County government. Ample zoned land exists for such future uses within the Town.

5. Lower Tuscarora

While the EURAM property and north portion of the Cardinal Industrial Park, as well as the Small Business Investmentment Inc. site inside the Leesburg Bypass on the south side of Route 7, are zoned for retail commercial uses, it is recommended that these sites not be the location of neighborhood convenience commercial service such as food or drug stores. These high-traffic community service facilities should not be located along Route 7, but rather should be adjacent to residential areas. Regional service offices, motel/conference centers, home furnishings and restaurant uses in conjunction with motel/conference centers or as integral portions of an office park are the appropriate uses in the commercial areas in this district. The development of internal service roads is critical to the proper traffic functions in this area immediately east of Leesburg.
6. **Upper Tuscarora**

   A neighborhood scale commercial shopping center of approximately 60,000 - 100,000 square feet should be located between Route 15 and Evergreen Mill Road (Route 621). Adjacent locally oriented offices designed to be compatible and in scale with the neighborhood commercial center would also be appropriate in this area (See Industrial and Employment Plan, Page 150). Such a community commercial center would be designed to provide primarily local convenience shopping services to the potential 1,500 - 2,000 households in the area within one-half mile to the east and west. It should not front on or access to Route 15 (which should be protected by a visual buffer and set backs) and should be directly linked by new roads to the new residential communities to the east or west.

7. **Airport**

   Limited airport service retail/commercial facilities such as rental car uses and offices would be appropriate in the employment designated areas located around the runway areas and along Route 654 (see Industrial/Employment section). However, extreme care must be taken in the site location and design process to make such uses compatible with nearby residences. Such airport service uses could be accommodated in planned industrial parks.

8. **Goose Creek**

   No retail commercial uses are recommended, except for incidental sales related to the rock quarries.

9. **Sycolin**

   No new commercial zoning is recommended in this planning district due to the recommended rural residential and agricultural land use.

10. **Oatlands**

    No new commercial facilities are recommended in this planning district due to the recommended rural residential and agricultural land use.
INDUSTRIAL AND EMPLOYMENT PLAN

INTRODUCTION

Industrial and employment growth in the Leesburg Area is of great importance to the Town and the County in that it can provide local jobs for residents and a sound tax base for the County. The need for industrial growth is self-evident since a sound tax base is the basis for an improved level of public services.

Many external factors affect economic development including inflation, energy, federal actions and private sector economic health. An important facet of this area plan is the promotion of economic growth in a manner consistent with the existing character and identity of the Town of Leesburg and the Planning Area as a whole.

BACKGROUND

A. Existing Land Use

There are approximately 1,600 acres of industrially zoned land within the Leesburg Planning Area. Only a very small portion, approximately 20 acres, has been developed to date. Those developed properties include the Federal Aviation Administration Air Traffic Control Center and auto service uses on the adjacent PD-IP property, the Rehau Inc. property located east of the Route 15 Bypass off Edwards Ferry Road, and the Tri-County Asphalt and Virginia Trap Rock Quarry south of Route 7 off Route 653.

Other large employment uses in the area which are not zoned industrial include the Luck Quarry south of Route 7 off of Route 659 and the Xerox Training Center north of Route 7 at 659. Both of these operations are permitted by special exception in the A-3 Agricultural/Residential District. Other major employment uses in the planning area which are noncommercial and industrial or institutional in nature and which are located in the A-3 zoning district include the National Children's Rehabilitation Center west of Leesburg and the Morven Park Equestrian Institute and Springwood Psychiatric Hospital to the north in the White's Ferry Planning District. In addition, aircraft servicing operations are located south of Leesburg around Godfrey Field, the Town airport.

The two major industries in the area, tourism and agriculture, are dispersed throughout the vicinity and should be complemented rather than damaged by new economic growth. Both of these industries are basic to the local economy in that they bring in many dollars from outside Loudoun County but do not raise public service costs because they do not bring in new residents.
B. Zoning Patterns and Proposals

In the past three years approximately 1,000 acres of land, primarily located on the south side of Route 7 within two miles of the Route 15 Bypass have been rezoned to Planned Industrial Park (PD-IP) or Planned General Industry (PD-GI) categories. These properties include the Leegate Industrial Park (370 acres), Cardinal Industrial Park (50 acres) and East Leesburg Hills (319 acres). The property located off of Route 653 south of Route 7 is zoned for heavy industrial uses such as the existing quarry operations located nearby. In addition, an undeveloped PD-IP property is located to the west of Godfrey Field.

MAJOR ISSUES

With 1,600+ acres of land zoned for industrial uses, there is an adequate amount of land available for industrial and related employment uses in the Leesburg area. All the aforementioned industrially zoned properties, as well as those requesting rezoning, can be provided with central sewer and water from Leesburg and are either traversed by sewer and water lines or are within several hundred feet of such utilities.

At this time, the question of the future rate of employment growth and the most desirable mix of employment uses cannot be definitely answered. But it is the objective of this plan to spell out the proper location and relationship of employment uses to other land uses in the planning area, while not precluding a wide range of environmentally compatible employment uses. Therefore, the following land use recommendations primarily address the development issues of accessibility, zoning patterns, the proper provision of utility services, and proper, sensitive site design.

RECOMMENDATIONS

A. Areawide Recommendations:

   Industrial Development Criteria:

   1. Office and heavy industrial uses should have proper access to the major collector or primary roadways and they should share access points to those major collector roads in order to keep the number and frequency of such access points to a minimum.
2. All office and industrial land uses should be buffered from major highways. Parking areas for industrial and other employment uses should be clustered and visually hidden from State roads by the use of set backs, berms, fence screens, vegetation, proper siting and other design techniques. Parking areas should be landscaped in order to avoid visual monotony and reduce heat buildup. Pedestrian and bicycle trails and paths should be designed to provide convenient access from nearby residential areas to employment centers.

3. Parking areas for industrial and other employment uses should be clustered and visually hidden from State roads by the use of berms, fence screens, vegetation, proper siting and other design techniques.

4. Industrial development should be located on relatively flat land with a maximum slope of 5%. The design and layout should incorporate existing natural features such as streams, hills and woodlands.

5. Planned industrial developments should include related land uses for employees, such as restaurants, stores and open space park areas.

B. Recommendations by Planning District

Future industrial/employment land uses should be focused in the following areas: the south side of Route 7 east of Leesburg, adjacent to the Route 15 Bypass at Route 7 and between the north portion of the Leesburg Airport and Route 654. Smaller employment concentrations, primarily of local office nature, could be located adjacent to the community commercial centers between Route 15 and Evergreen Mill Road south of the Route 15 Bypass and adjacent to the Carr/International Pavilion/Rehau Plastics area east of Leesburg.

1. White's Ferry

This rural agricultural area is not an appropriate location for any additional non-agricultural related employment or industrial uses except for orderly expansion of Morven Park Equestrian Institute and Springwood Institute.
2. **Edwards Ferry**

Office park uses are proposed in the northeast and southeast quadrants of the California Road/Route 15 Bypass intersection. In addition to office uses, other employment uses which are less intensive in nature and more compatible with residences are proposed for land northeast of the Edwards Ferry/Route 15 Bypass intersection, and south of the Rehau Inc. property.

3. **Goose Creek**

No new employment centers north of Route 7 should be developed except those employment uses which are compatible with and supportive of the existing training center.

The area immediately adjacent to the Luck Stone Quarry on the south should be considered for future quarry expansion. Such expansion should be subject to special permit conditions upon detailed operational and reclamation plans with special emphasis given to mitigating any impacts on Goose Creek and the Fairfax City water impoundment.

4. **Lower Tuscarora**

This district should be the primary location of industrial and regional office uses in the Leesburg area. Most employment uses should be located on the south side of Route 7. Agriculturally zoned land on the south side of Route 7 should be considered for office or industrial park land use. The commercially zoned land on the south side of Route 7 which is bisected by the Route 15 Bypass should be considered for office use instead of the existing commercial zoning, in order to reduce turning movements and traffic entering Route 7 near the Route 7/Route 15 Bypass. On the north side of Route 7, no property east of the ULL should be zoned for employment. The proposed site of the Mintjens factory should be moved to a site adjacent to the existing EURAM commercial facility, preferably to the west or north within the existing PD-CH zoning district. The site should be properly screened. The property to the north of EURAM, presently zoned PDH-30 should be rezoned to accommodate a density of no more than eight dwelling units per acre if transportation improvements are provided and easements warranting density transfer are secured. Property between EURAM and the Urban Limit Line should be rezoned to the PD-OP zoning category to serve as a transition between the commercial property to the west and the A-3
zoning district to the east and the residential land uses to the north. Property on the north side of Route 7, now zoned R-2, west of EURAM is an appropriate location for office park uses. On the south side of Route 7, development plans for the western portions of the existing PD-GI and PD-IP properties known as East Leesburg Hills and Leegate should employ land use buffers, via maintenance of existing vegetation and/or use of berms and sensitive site design, thereby promoting land use compatibility with the residential areas directly to the west.

5. Upper Tuscarora

The locale of the proposed neighborhood commercial center on the Meadows Farm property between Route 15 and Route 621 is an appropriate site for local offices of a scale and nature compatible with adjacent commercial and residential areas. No other major employment uses should be located in this district except for the parts of East Leesburg Hills and Leegate which extend into the district.

6. Airport

The property north of the existing runway extending west to the existing PD-IP zone should be considered an appropriate site of light industrial and office park uses (see Figure 6, page 29). The southern portion of the property north of Route 654 is not an appropriate residential area and should be considered for employment, open space or other non-commercial, non-residential uses which would be compatible with intensive aircraft noise and landing/take off patterns. The northern portion of the property would be appropriate for residential uses. The area between the runways and the southwest intersection of Route 654 and Sycolin Road should also be considered for office and industrial park uses.

7. Sycolin

The existing I-1 zoned property served by a package treatment plant adjacent to the W&OD Trail should be considered for expansion to include the adjacent agriculturally zoned property to the west. However, such land is only to be seweried by gravity to the treatment plant and no other employment/industrial uses should be authorized in the Sycolin district.
8. Oatlands

   This rural, agricultural area is not an appropriate location for employment-industrial uses.

9. Catoctin Ridge

   The upland ridges are not appropriate locations for industrial or employment land uses except for planned expansion of the National Children's Rehabilitation Center.
CHAPTER IV

IMPLEMENTATION TECHNIQUES
CHAPTER IV

LAND USE PLAN IMPLEMENTATION

INTRODUCTION

An important functional component of the Leesburg Area Management Plan is a methodology to implement the land use changes and recommendations. Over the ten year life of the plan (1982 - 1992) a series of decisions must be made about proper zoning, subdivision design, capital improvement location, agricultural districts and other policies and programs that will define the Leesburg planning area's future identity. This section will define the implementation procedures in order to help locate the proper land uses within the proper zones.

ENVIRONMENTAL IMPLEMENTATION TECHNIQUES

1. On-site Density Transfer:

   Provide developers with additional residential units or floor space if a significant environmental feature is preserved on a site. Examples are historic sites and woodlands. This technique would be implemented under the provisions of the Loudoun County Zoning Ordinance for cluster developments and planned communities.

2. Performance Standards:

   Formulate specific standards that can be applied to all land development for the following: erosion and sedimentation, stormwater runoff, construction in Class IV soils. These standards would be contained in a Public Facilities Manual and would be implemented under the Loudoun County Subdivision and Site Plan Ordinance.

3. Land Dedication:

   Significant environmental features such as woodlands, slopes greater than 25% and stream valleys can be dedicated as public open space within developments.

AGRICULTURAL IMPLEMENTATION TECHNIQUES

Actions required to implement areawide recommendations:

1. Require Clustering In Agricultural Areas By:

   Adopting an amendment to the Zoning Ordinance which would establish a rural cluster zone. Provisions may include the
DENSITY TRANSFER
limiting of total percentage of site covered by impervious surfaces, maximum and minimum lot size requirements, and changes in allowable uses, required road frontage, septic field regulations, etc.

2. **Encourage The Donation Of Conservation Easements By:**

Adopting an ordinance which establishes an official County policy and program to design, accept, hold and enforce open space easements as provided for under the provisions of Article 10-152 and 10-158 of the Code of Virginia as amended.

3. **Encourage The Formation Of Agricultural And Forestal Districts By:**

Continuing the current policy of adopting all reasonable agricultural district applications which are submitted and which conform to overall County land use policy.

4. **Encourage Voluntary Exclusive Agricultural Zones By:**

Adopting an amendment to the Zoning Ordinance which establishes specific provisions for an agricultural zone. Such provisions would include the limiting of allowable uses to only those needed for agricultural activities, restricting or eliminating subdivision of land within the zone, and other necessary requirements.

5. **Preclude The Extension Of Central Water And Sewer Beyond The Urban Limit Line By:**

Not granting rezonings outside the ULL to densities or uses which would require central water and sewer facilities, and not funding, assisting in the construction, or allowing permits for any such facilities extensions.

6. **Reduce Allowed Density Of Residential Development In The Sycola, Oatlands And White's Ferry Planning Districts By:**

Either amending the Zoning Ordinance to include a zoning district with a larger lot size requirement for land lying in designated agricultural areas, or changing other provisions of the existing A-3 zoning district such as road frontage requirements, lot configuration, etc. to produce an effectively larger minimum lot size in farming areas.
7. **Purchase Conservation Easements From Owners Of Designated Prime Agricultural Land By:**

Establishing a program which would formally set forth the methods and procedures for defining acquisition priorities, eligibility criteria, funding sources, administrative matters and other necessary provisions for a successful easement purchase program. The first step would be to do a feasibility study which would show what various levels of funding could achieve and what the long-term net costs to the County taxpayers would be.

8. **Lease Conservation Easements From Owners Of Designated Prime Agricultural Land:**

The County must carry out the same kind of tasks as required for an easement purchase program as described in number 7 above.

9. **Require Special Use Permits For All Non-Agricultural Uses In Agricultural Areas By:**

Amending the A-3 District requirements in the Zoning Ordinance to include a provision which would require that non-agricultural uses would require a special use permit in those districts.

10. **Allow Density Transfers From Designated Conservation Areas to Designated Development Sites Through the Proffering of Conservation Easements:**

The County could transfer allowable development density from a farm to a development site within the ULL in return for a developer proffering a permanent conservation easement on the agricultural site.

**HERITAGE IMPLEMENTATION TECHNIQUES**

1. **Historic Sites:**

The County should designate as Historic Sites under the County's zoning ordinance, those sites which are listed on the National Register of Historic Places and the Virginia State Register.
2. County Easements:

The County should accept preservation easements on any of those properties identified by the Virginia Historic Landmarks Commission, and deemed by the County to be historically or archaeologically significant. The County should also encourage and promote such donations by private landowners to other agencies such as the Virginia Historic Landmarks Commission or the Virginia Outdoors Foundation. Under the provisions of Virginia's Open Space Land Act of 1966, the County may only accept such easements for open space preservation and thus could not accept easements on building facades.

3. Design Elements:

Within the Urban Limit Line, the County should encourage, through its Zoning and Subdivision Ordinances, that new development incorporate traditional and historic design techniques such as narrow streets, compact clustered development patterns, human scale design, mixed uses and pedestrian circulation, as specified in the Resource Management Plan.

RESIDENTIAL IMPLEMENTATION

The goal of the Leesburg Area Management Plan is to provide for full and balanced community growth within the urban growth area and to preserve and enhance agricultural functions beyond the Urban Limit Line. The areas immediately around the Urban Growth Areas are seen as still rural in character though with an increasing component of large lot rural residential estates. The Residential Section sets out the broad goals which the County has set for each district.

The following is a formula for determining both the allowable number of units and the effective net density of a residential development in a PDH zone. The first two steps of this formula provide a method for determining the allowable number of units:
TABLE 24

RESIDENTIAL DEVELOPMENT FORMULA FOR PDH ZONE

I. TOTAL TRACT AREA

Less: 100 Year Floodplain
Steep Slopes (25% and over)
Commercial Areas
Employment Areas

= GROSS RESIDENTIAL DEVELOPMENT AREA

II. GROSS RESIDENTIAL DEVELOPMENT AREA X ALLOWABLE DENSITY

= MAXIMUM ALLOWED UNITS FOR ENTIRE TRACT

The final two steps provide a method for more accurately identifying the real design density of a given project for descriptive and comparative purposes.

III. GROSS RESIDENTIAL DEVELOPMENT AREA

Less: School Sites
Institutional Sites
Parks

= NET RESIDENTIAL DEVELOPMENT AREA

IV. MAXIMUM ALLOWED UNITS (II) x NET RESIDENTIAL AREA (III)

= EFFECTIVE NET DENSITY
All development in the Urban Growth Area should meet the majority of the list of specific criteria in order to qualify for density or FAR at the upper end of the range designed for the property. The discretion of the Planning Commission and the Board of Supervisors will determine the proper density for an application, given the following criteria.

GENERAL DEVELOPMENT CONSIDERATIONS:

1. Comprehensive Plan Compliance
2. Existing zoning and land use patterns
3. Existing density
4. Proffered public facilities
5. Transportation facilities
6. Design amenities
7. Environmental impacts
8. CIP/Fiscal impacts
9. Agricultural/historic easements

SPECIFIC DEVELOPMENT CRITERIA:

1. Proposed concept plan compliance with adopted RMP, area plans
2. Design elements should be compatible with area densities and zoning patterns
3. Public Facilities proffers may include:
   a. School sites
   b. Fire and rescue sites
   c. Library facilities
   d. Cash contributions for designated community needs, e.g., community center, parks, schools
   e. Recreational facilities
   f. CIP designated facilities, e.g., bus garage
   g. Low and moderate income housing
4. Architectural amenities beyond the normal requirements
5. Historic or agricultural preservation conservation easements
6. Transportation improvements beyond basic design elements
7. Environmental management techniques that go beyond basic requirements
IMPLEMENTATION RECOMMENDATIONS BY PLANNING DISTRICT:

1. **White's Ferry**
   a. Encourage, within the Urban Limit Line, the location and/or expansion of institutional/medical/equestrian facilities with increased zoning density from the A-3 categories.
   b. Beyond the Urban Limit Line permit the development of large lot single-family residences which incorporate engineering and site planning provisions to abate and minimize environmental damage and disruption to existing agricultural uses.

2. **Catoctin Ridge**
   a. Permit the development of single-family residences on those small areas where the potential for erosion is minimal.
   b. Encourage analysis and development proposals which respond to the unique and delicate environmental characteristics of the district.

3. **Town of Leesburg**
   a. Assist the Town of Leesburg with technical, demographic and other assistance in the evaluation of land use proposals within the Town and within the one-mile subdivision jurisdiction if such assistance is requested by the Town.
   b. Encourage new residential infill development within the Town by means of agreements with the Town concerning utility rate structures, proposal evaluation criteria, road and other utility/public facility investments in the Leesburg Planning Area.

4. **Edwards' Ferry**
   a. Consider zoning the existing C-1 zoned properties to an employment/commercial zone incorporating office/institutional/commercial functions. The commercial center should encompass 10 - 20 acres for a neighborhood type commercial facility.

Encourage consideration on the part of the property owners of the major commercially zoned property in the Edwards'
Ferry District as an integrated, planned development, community focus area of commercial, office, institutional and community facilities surrounded by a compatible mix of townhouse and garden apartment developments. Such a development could be a feasible and positive addition to the Leesburg Area if accompanied by a full complement of public utilities and community facilities.

b. Consider the zoning of the area to the north of Edwards' Ferry Road (Route 773) and the commercially zoned property to two to three units per acre if necessary community facilities and public utilities can be incorporated in a development proposal which takes the sensitive environmental characteristics of the area into account. This development should relate to the community focus planned development to the south.

5. **Lower Tuscarora**

a. Encourage the inclusion of the existing PDH-30 zoned property and the presently zoned R-1 and R-2 properties to the east as integral components of the community which is focused on the rezoned commercial property to the north in the Edwards' Ferry District. The residential density of these properties would be determined by the underlying environmental conditions and by the supporting structure of public utilities and community facilities as well as provisions for land use buffering between these residential functions and those commercial/employment functions to the south.

b. Provide for the harmonious integration of the proposed residential community in Edwards' Ferry and Lower Tuscarora with the employment functions centered on Route 7 by the development of paths, collector roads and effective land buffers.

6. **Upper Tuscarora**

a. Encourage the consideration of this planning district as an integrated community with a variety of housing types with complementary community facilities and local shopping functions and supported by a functional system of public utilities.

b. The shopping/office/higher density residential focus of this integrated community could be located to the east of Route 621 and the J. Lupton Simpson Middle School.
depending on the adequacy of public facilities, notably major collector roads, and on the harmonious design of the different elements within this community focus development.

c. Residential development in the far eastern and far western portions of the Upper Tuscarora Planning District would be permitted if these incorporate engineering and site planning provisions to abate and minimize damage to the environment and conflicts with employment and agricultural uses in contiguous planning districts. Consider allowing increased density in return for the donation of conservation easements on farmland in the White's Ferry and Oatlands Districts which the developer may own or acquire.

7. Airport

No residential development should be allowed in this district given the incompatibility of this use with aircraft take off/landing, petroleum storage and associated commercial/employment uses. The County should adopt an airport overlay district similar to that for quarries. (See Industrial Implementation, p. 177)

8. Goose Creek

a. Permit the development of large lot single-family residences which incorporate engineering and site planning provisions to abate and minimize environmental damage and minimize disruption of existing natural resource extraction uses.

b. Discourage residential development within the quarry overlay zone. (See Industrial Implementation, p. 176)

c. Develop with the City of Fairfax Water Authority a system of engineering techniques, practices and strategies designed to protect water purity of the Fairfax water impoundment.

9. Sycolin

a. Permit the development of large lot single-family development in the District but encourage rural residential clustered development where this is feasible and could minimize environmental and adjacent land use impacts.
b. Landfill Site: The properties surrounding the Loudoun County landfill site on Route 621 are within the rural/residential area and zoned A-3. Further sub-division activity should provide sufficient buffer around the landfill to create both a visual and acoustical barrier for the residences. A berm and landscaping should buffer existing residences around the site. The Solid Waste Master Plan should be implemented with the addition of a berm designed to completely enclose and camouflage the working area of the landfill operation. The berm would vary in height and width depending on the visual barrier provided by the existing tree cover.

10. Oatlands

 Permit the development of large lot single-family development but encourage retention of rural/agricultural functions with the development of rural preservation programs (see Table 11 page 75, Summary of Residential Policies and Recommendations), within the Agricultural/Rural Area.

PUBLIC FACILITIES IMPLEMENTATION

1. Service Plans

 County agencies that provide services: School Board, Parks and Recreation Department, Libraries, Fire and Rescue, should all prepare Service Plans which will determine agency goals and purpose, capital facility needs and operational strategy. The Board of Supervisors passed a resolution mandating development of agency Service Plans in February, 1981.

2. Pending and/or regardless of service plan adoption the County will take the following actions:

a. Sewer and Water

   i. Monitor and/or assist the expansion of the present waste-water treatment facility to a capacity of 2.5 million gallons per day.

   ii. Participate in studies regarding the conversion of the sewer plant from AST (advanced secondary treatment) to AWT (advanced waste water treatment).

   iii. Identify long term sewer options to accommodate the Leesburg area's eventual sewer needs of 3.5 - 5.5 million gallons per day as development approaches holding capacity totals.
b. Schools

i. Seek funding and land acquisition for the construction of one additional elementary school in the 1987 - 1992 plan period.

ii. Reserve land for eventual construction of 4 - 7 additional elementary schools (for a total 5 - 8 in the Urban Growth Area) during rezonings of land in the Urban Growth Area.

iii. Seek funding for the enlargement of existing middle and high schools in the latter part of the plan period.

iv. Reserve land for eventual construction of two additional middle schools and two additional high schools during rezonings of land within the urban growth area.

v. Reserve land and obtain commitments to build all weather path systems to existing and proposed schools during rezoning and subdivision actions on land in the Urban Growth Area.

c. Library

i. Acquire a site for a central library facility and seek funding for its construction.

d. Parks and Recreation

i. Reserve and/or acquire active and passive parkland during rezoning actions on land in the Urban Growth Area.

ii. Reserve land and obtain commitments to build path systems between the parks and residential areas in the Urban Growth Area.

iii. Assist in the construction of recreational facilities identified on pages 122 and 123.

e. Solid Waste

i. Identify and acquire a post 1990 landfill site and/or

ii. Seek an alternative to present solid waste disposal such as an inter-County cooperative resource recovery facility.
f. Fire/Rescue

i. Reserve and acquire a site for a Fire/Rescue facility in Edwards' Ferry and lower Tuscarora Districts.

ii. Assist in the construction of this new facility if needed in the 1982-1992 period.

g. Government Facilities

i. Identify suitable land for future government facilities generated by growth.

ii. Acquisition of land parcels conforming to selection criteria developed in the County Government Service Plan.

3. Zoning

In rezoning applications, the County should use the specific guidelines and criteria of this Plan and the RMP for public facilities such as park and recreation land, fire and rescue stations, libraries and school sites. These guidelines are based on nationwide or state standards and should be administered in a clearly defined and fair manner.

**TRANSPORTATION IMPLEMENTATION TECHNIQUES**

Projected travel demand will increase markedly over the coming decade and major transportation improvements will be required.

**Table I9**

<table>
<thead>
<tr>
<th>TRIP GENERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Existing Trip Generation Estimate:</strong></td>
</tr>
<tr>
<td><strong>1992 Estimated:</strong></td>
</tr>
<tr>
<td><strong>1980-1992 Increase:</strong></td>
</tr>
</tbody>
</table>
Major new road improvements will be required both within the Town of Leesburg and within the designated Urban Limit Line surrounding the town. In order to meet the demand for road improvements many ordinance changes, legislative review, primary ranking by the Planning Commission and Board of Supervisors plus procedural changes will be required to effectively and efficiently meet this demand. These implementation techniques are:

1. **Transportation Improvement Program (TIP)**

   As was recommended in the Eastern Loudoun Area Management Plan, the County should implement a TIP for all road improvements. Primary and secondary improvements should be developed over time with specific funding allocations attached. Cooperation and approval of VDH&T is necessary.

2. **Priority For Road Improvements**

   Secondary road improvements within the designated Urban Limit Line (ULL) should be given priority over improvements outside the ULL.

3. **Park-and-Ride Lots**

   Development plans should be undertaken for approximately 200 bays in park-and-ride lots along the primary arterial roadways in the Leesburg area. These are specifically needed along Route 15 within the upper Tuscarora district and along Route 7 in the lower Tuscarora district.

4. **Design Criteria For Bus Accommodations**

   Transit considerations should be included in subdivision design plans for bus drop-off areas (with shelters) and bus turn-around space on residential streets.

5. **Route 15 Corridor**

   a. Limited access design provisions should be secured during the rezoning or subdivision process.

   b. Scenic By-way designation for Route 15 from Route 704 to Goose Creek should be sought.

   c. The Fort Evans Road intersection with the Bypass should be closed and realigned north to the Edwards Ferry intersection.
6. **Route 7 Corridor**

   a. The Route 7 Corridor Study for the Leesburg Area is hereby adopted under the provisions of the Comprehensive Plan. Improvements will be dedicated or constructed by private developers, both on-site and off-site, to promote safe and efficient access for any proposed development along the corridor.

   b. See Transportation Plan, Page 132 for detailed improvements.

7. **Proffer Items**

   Residential and nonresidential development will require public facility improvements to promote high transportation standards. Examples of transportation proffers are:

   a. Right-of-way dedication to VDH&T for road improvements on primary and secondary roads as demand arises: Routes 15, 7, 653, 654, 771, 898, 655, 699, 820, 704, 621, 651, 643, 733, 550, 773 and other secondary roads. Minimum ROW dedication for secondary roads is 25 feet from the center line of the road. Other design criteria are suggested in the text of this document.

   b. Interchange land dedication at Route 15 Bypass and Edwards' Ferry Road and Route 643 and the Bypass plus a partial interchange at relocated Route 654 and Route 7.

   c. Signalization at appropriate intersections

   d. Transit improvements:

      i. Bus shelters in major rezonings
      ii. Park-and-ride lots
      iii. Bus turn-around design for subdivision streets

   e. School Transit Considerations:

      Garage and warehouse facility in close proximity to the Leesburg Bypass (Routes 7 & 15).
f. Commercial Improvements: (Shopping Centers)

As noted earlier in this plan, a regional type mall (over 400,000 square feet) is not recommended. If built, it would require grade separated access on primary roads and signalized intersections on secondary roads.

g. Proposed Industrial Access Fund Projects:

i. Route 654 (realigned)

ii. Route 653
APPENDIX

PROPOSED LEESBURG AREA ROADWAY DESIGN SPECIFICATIONS

Specifications for right-of-way and road improvements are listed below as a guide for future residential and nonresidential development in the Leesburg area. Final design will require County and VDH&T approval.

**PRIMARY ROADS**

<table>
<thead>
<tr>
<th>ROADWAY</th>
<th>LOCATION</th>
<th>LANES &amp; WIDTHS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route 7 (including Bypass)</td>
<td>Goose Creek to Clarkes Gap</td>
<td>6 lanes with variable right-of-way</td>
<td>Dedication necessary for Route 7 Corridor Study</td>
</tr>
<tr>
<td>Business Route 15</td>
<td>North of Town</td>
<td>2 lanes with 80 ft. right-of-way</td>
<td>Dedication for right-of-way and interchange, reverse frontage, rural cross-section</td>
</tr>
<tr>
<td>Route 15</td>
<td>South of Town, Bypass to Virts Corner</td>
<td>4 lanes with 80 ft. right-of-way, 48 ft. pavement</td>
<td>Rural cross-section, R4R, Reverse frontage</td>
</tr>
</tbody>
</table>

**SECONDARY ROADS**

<table>
<thead>
<tr>
<th>ROADWAY</th>
<th>LOCATION</th>
<th>LANES &amp; WIDTHS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route 698 (Old Waterford Road)</td>
<td>Town line to end of pavement</td>
<td>2 lanes with 60 ft. right-of-way</td>
<td>Rural cross-section</td>
</tr>
<tr>
<td>Route 740</td>
<td>15 to end</td>
<td>2 lanes with 50 ft. right-of-way</td>
<td>Maintenance only</td>
</tr>
<tr>
<td>Access Road to veterinarian facility</td>
<td>15 to 698</td>
<td>2 lanes with 60 ft. right-of-way</td>
<td>Rural cross-section</td>
</tr>
<tr>
<td>Route 655 (White's Ferry Road)</td>
<td>15 to Potomac River</td>
<td>2 lanes with 60 ft. right-of-way</td>
<td>Dedication for improvements necessary</td>
</tr>
<tr>
<td>ROADWAY</td>
<td>LOCATION</td>
<td>LANES &amp; WIDTHS</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------</td>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Balls Bluff</td>
<td>15 to Balls Bluff cemetery</td>
<td>Cemetery access only</td>
<td>Use existing alignment, preserve tree lines, reverse frontage</td>
</tr>
<tr>
<td>Road</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Route 644</td>
<td>15 to end</td>
<td>2 lanes with 50 ft. right-of-way</td>
<td>Unpaved roadway</td>
</tr>
<tr>
<td>Route 837</td>
<td>15 to end</td>
<td>2 lanes with 60 ft. right of way</td>
<td>Paved roadway when development occurs</td>
</tr>
<tr>
<td>Route 773</td>
<td>15 to 15</td>
<td>2 lanes with 60 ft. right-of-way</td>
<td>Rural section</td>
</tr>
<tr>
<td>Route 653</td>
<td>7 to 643</td>
<td>4 lanes with 80 ft. right-of-way</td>
<td>Industrial design with rural cross-section</td>
</tr>
<tr>
<td>Route 654</td>
<td>7 to 643</td>
<td>2 lanes with 60 ft. right-of-way</td>
<td>Rural section, reverse frontage close Route 7 intersection</td>
</tr>
<tr>
<td>Route 654</td>
<td>773 to 7</td>
<td>4 lanes with 80 ft. right-of-way</td>
<td>Urban cross-section, reverse frontage</td>
</tr>
<tr>
<td>(extended)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Route 659</td>
<td>7 to 643</td>
<td>4 lanes with 90 ft. right-of-way</td>
<td>Long range plans for dedication</td>
</tr>
<tr>
<td>Route 643</td>
<td>7 to 659</td>
<td>4 lanes with 120 ft. right-of-way</td>
<td>Rural cross-section, reverse frontage</td>
</tr>
<tr>
<td>Route 621</td>
<td>Within the ULL</td>
<td>4 lanes with 90 ft. right-of-way</td>
<td>Rural cross-section</td>
</tr>
<tr>
<td>Route 621</td>
<td>Outside the ULL</td>
<td>2 lanes with 60 ft. right-of-way</td>
<td>Rural cross-section</td>
</tr>
<tr>
<td>Route 650</td>
<td>15 North to 15 South</td>
<td>2 lanes with 60 ft. right-of-way</td>
<td>Rural cross-section (realigned Virts Corner)</td>
</tr>
<tr>
<td>Route 651</td>
<td>15 to 650</td>
<td>2 lanes with 50 ft. right-of-way</td>
<td>Paved, rural cross-section</td>
</tr>
<tr>
<td>ROADWAY</td>
<td>LOCATION</td>
<td>LANES &amp; WIDTHS</td>
<td>DESCRIPTION</td>
</tr>
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</tr>
<tr>
<td>Route 771</td>
<td>650 to 621</td>
<td>2 lanes with 50 ft. right-of-way</td>
<td>Paved, rural cross-section</td>
</tr>
<tr>
<td>Route 733</td>
<td>15 to end of Planning Area</td>
<td>2 lanes with 60 ft. right-of-way</td>
<td>Realigned out of floodplain</td>
</tr>
<tr>
<td>Route 704</td>
<td>15 to 662</td>
<td>2 lanes with 60 ft. right-of-way</td>
<td>Rural cross-section</td>
</tr>
<tr>
<td>Route 699</td>
<td>Town line to 820</td>
<td>2 lanes with 60 ft. right-of-way</td>
<td>Rural cross-section</td>
</tr>
<tr>
<td>Route 654</td>
<td>7 to 15</td>
<td>4 lanes, R4R with 120 ft. right-of-way</td>
<td>Dedication for improvements</td>
</tr>
<tr>
<td>New road from Harper South extended north</td>
<td>7 to 773</td>
<td>4 lanes with 80 ft. right-of-way</td>
<td>Industrial standards</td>
</tr>
<tr>
<td>Route 15 parallel collector road</td>
<td>Balls Bluff Road to Route 773</td>
<td>4 lanes with 90 ft. right-of-way</td>
<td>Urban cross-section with reverse frontage and limited access points</td>
</tr>
</tbody>
</table>
COMMERCIAL IMPLEMENTATION TECHNIQUES

1. The most acceptable type and scale of new commercial facilities for the Leesburg area is the neighborhood shopping center (see definition on page 172). Two such centers could be accommodated outside the town boundaries as shown on Figure 6, page 29 within the Urban Growth Area, designed and located according to the criteria in #5, page 144. Two neighborhood centers are preferable to one large community center or a small regional center since:

   a. The estimated Leesburg population and related market area is not large enough to support a regional mall without negatively impacting the existing businesses in the town.

   b. The community design concept for the planning area incorporates two growth areas, south of Leesburg and northeast of Leesburg. Neighborhood commercial facilities and supportive office uses should form the focus for these new communities.

   c. The general community commercial services for the Leesburg area, including most auto services and department stores, should remain in the Town of Leesburg.

2. The C-1 commercial zoning district is a carry over from the 1959 Zoning Ordinance and remained substantially intact in the 1972 Ordinance. The standards of the C-1 district are inadequate to meet the needs and the desires of the County in the 1980's. There are no requirements for site planning and relatively few requirements covering such standard design elements as landscaping, buffering and parking lot design. It is proposed that the C-1 district be transformed into a new "General Commercial" district which would involve some of the design and site plan standards and procedures that are required for PD districts.

3. The majority of the 250+ acres of land currently zoned C-1 east of the Route 15 bypass should be rezoned as a commercial and office district, with 10 - 20 acres along Edwards Ferry Road for a neighborhood shopping center.
4. The Highway Corridor Protection Overlay Zone should be located adjacent to Routes 7 and 15 and the Route 15 Bypass in order to reduce the incidence of strip commercial development and encroachment on proposed interchange areas, as well as to allow areas for frontage roads and coordinated access points to commercial areas.

5. Neighborhood Centers Definition - The scale, location and design of recommended neighborhood centers should utilize the following criteria:

a. Size: 5 - 15 acres, 50,000 - 120,000 gross square feet to serve a population between 5,000 - 10,000 persons.

b. Tenants: Convenience stores, laundries, drug stores, grocery supermarkets, personal services, small scale retail outlets such as book stores and clothing shops, real estate and medical offices and community services.

c. Function: Mainly for daily and weekly convenience shopping and limited comparison goods shopping.

d. Location: Adjacent to but not in the midst of residential areas; not adjacent to schools or parks. Center should have direct access to arterial roadways, but not have direct access to Route 15, Route 7 or the Leesburg bypass.

5. Site Planning Standards for Commercial Development: A guide for developing a detailed ordinance:

a. Building Placement and Design

1. Scale, material and architectural treatment, particularly for neighborhood and community centers, should harmonize with nearby residential structures.

2. Natural drainage features such as swales and ponds should be conserved to the greatest extent possible.

3. Building lengths in strip and "L" centers should generally not exceed 500 feet, while a lesser dimension is preferable to conserve the neighborhood scale.
b. Traffic Access, Circulation, Parking and Loading

1. Small neighborhood centers may function adequately with only one point of access to an adjacent street; larger centers (over four acres) should have at least two points of access.

2. Entrances and exits must be located at least 100 feet from the nearest road intersection.

3. No structures or landscaping may obstruct sight distances from access points.

4. The site's vehicular and pedestrian circulation patterns should be separated where appropriate.

5. For neighborhood centers, no more than four rows of parking spaces should be located in front of the stores in order to reduce the visual impact of parked autos and allow clear visibility of shopping areas.*

6. Generally, parking spaces should be located within 350 feet of stores.**

7. Parking spaces should be designed primarily for small cars (approximately 8' x 16' spaces).

8. Drive-in window facilities for banks and restaurants must be placed in a manner which will accommodate a queue of 3-6 vehicles. Such a queue must not block parking spaces, access or circulation lanes.

9. Truck loading and maneuvering areas should not conflict with or block pedestrian or consumer vehicular access points or parking areas.

10. The interior circulation pattern must permit vehicular circulation to all parts of the site without forcing traffic onto the adjacent public road.

11. Easy, safe pedestrian access must be provided from nearby residential areas.


** ibid.
c. Landscaping and Buffering

1. Natural site environmental features such as hedgerows, mature trees and mounds should be integrated into the site landscape plan.

2. Parking areas should be visually screened from adjacent streets and residential areas by depressing the parking area several feet and/or by construction of earth berms. Wood or masonry fences and walls may be used if berms are not practical.

3. Parking areas should include landscaped tree and hedge areas of an extent to shade the parking areas, thereby reducing the heating and local climate effects of large paved areas.

4. All loading and storage areas must be screened from adjacent residential areas by earth berms, masonry walls, permanent wooden fencing, or dense landscaping.

5. The perimeter of all shopping areas should be landscaped with deciduous street trees along road frontages and opaque evergreen trees and hedges adjacent to residential areas. Detailed landscaping studies must be adopted and incorporated into a site plan ordinance.

6. Parking areas should not extend to the adjacent sidewalks. A minimum five foot green area should separate parking lots from sidewalks or adjacent streets in order to absorb water runoff and eliminate blockage of pedestrian access.

7. Required drainage and stormwater management facilities such as holding basins, drainage swales and culverts should be incorporated into the overall landscape design for the commercial area.

d. Signs and Lighting

1. Signs for shopping centers should be developed as an integral part of the overall shopping center design. Graphics and support structures should be harmonious in style and material with adjacent residential land uses.
2. Identification signs should not exceed the height of adjacent buildings, particularly in neighborhood centers.

3. Parking lot lights should be directed away from nearby residential areas and should be designed to be compatible with residential uses in terms of height, brilliancy, form, texture, and character.
INDUSTRIAL IMPLEMENTATION TECHNIQUE

The County can implement the recommendations for industrial and employment land uses by carrying out the following actions:

1. Review and amend as necessary, the PD-IP, PD-OP and PD-GI District Provisions of the Zoning Ordinance to ensure that each includes sufficient provisions for requiring that:
   a. Office and industrial uses share access points to major collector roads;
   b. Office and industrial uses be substantially buffered from major roadways;
   c. Parking areas be clustered and effectively hidden from state roads by berms, vegetation screens and/or other devices;
   d. Parking areas be substantially landscaped and shaded with trees and other vegetation;
   e. Pedestrian and bicycle paths be built to connect the buildings to major offsite pathways.

2. Amend the Zoning Ordinance to include a quarry overlay zone which would:
   a. Prohibit residential development within the overlay zone;
   b. Require a minimum 300' buffer of noise-containing berms surrounding each quarry site;
   c. Require submission of a detailed reclamation plan for the site;

3. Encourage application from landowners to request rezoning of the following tracts, and work with the landowners to obtain the necessary public facilities proffers for the sites:
   a. Agriculturally zoned land on the south of Route 7 and east of the Town should be rezoned to PD-IP or PD-OP;
   b. Commercially zoned land on the south side of 7 which is bisected by Route 15 bypass should be rezoned to PD-OP;

- 176 -
c. Property on the north side of Route 7, now zoned R-2, west of Euram should be rezoned to PD-OP.

4. Amend the Zoning Ordinance to include an airport overlay zone which includes at least the following kinds of provisions:

a. Prohibition of residential uses within the N.E.F. 40 noise zone;

b. Discouragement of residential uses within the N.E.F. 30 noise zone but if such uses are permitted, only very low density housing should be allowed;

c. Substantial sound proofing in all habitable structures so that within the interior of such structures the effective NEF is no greater than 20.

d. A minimum 300' buffer on the outer edge of, but within, the overlay zone. Such buffer shall be for visual and sound insulation and shall consist of both vegetation and earthen protective devices.
ROUTE 7 CORRIDOR PLAN

LEESBURG PIKE

FROM: LEESBURG CORPORATE LIMITS

TO: LOUDOUN - FAIRFAX COUNTY LINE

Prepared by: Virginia Department of Highways & Transportation - Transportation Planning Division
In cooperation with the Loudoun County Planning Department

Note: All alignments are subject to refinement until such time as they have been through the public review and site plan process and are ready for construction permit issuance.
PROPOSED TYPICAL SECTIONS
ROUTE 7 CORRIDOR PLAN

PARALLEL COLLECTOR ROADS AND NORTH/SOUTH COLLECTOR ROADS WITH INTERCHANGES

NORTH/SOUTH COLLECTOR ROADS WITHOUT INTERCHANGES

EXISTING E&W V/R, NW CONVERT TO LIMITED ACCESS

EXISTING E&W V/R

SEPARATE TWO LANE MAY BE REQUIRED AT WIDER INTERSECTIONS
"The County endorses the continuation of a limited access condition for Route 7 east to the Loundsboro Corporate Limits. The future of the Route 55 access will be addressed jointly with the County of Loudoun, the Town of Loundsboro and the Virginia Department of Transportation."
COUNTY OF LOUDOUN
MEMORANDUM

Date: September 17, 1985
To: Frederick P. D. Carr, Director, Planning and Zoning
From: Philip A. Bolen, County Administrator
Subject: Proposed Amendments to the Leesburg Area Management Plan

At the September 16 meeting on the motion of Mrs. Kavanagh, the Board of Supervisors voted 7-0-1 (Mr. Dodson absent) to approve the requested amendments to the Leesburg Area Management Plan for the area north of Route 7 on Goose Creek, as modified by the staff and Planning Commission.

Please follow through with the details of this Board action.

PAB/pc
Attachment
At a meeting of the Board of Supervisors of Loudoun County, Virginia, held in the Board of Supervisors' Meeting Room, 18 North King Street, Leesburg, Virginia, on Monday, September 16, 1985, at 1:30 p.m.

PRESENT:  Frank Raflo, Chairman  
James F. Brownell, Vice-Chairman  
Andrew R. Bird, III  
Ann B. Kavanagh  
Frank I. Lambert  
Steve W. Stockman  
Betty W. Tatum  

ABSENT:  Thomas S. Dodson  

IN RE:  PROPOSED AMENDMENTS TO THE LEESBURG AREA MANAGEMENT PLAN

Mrs. Kavanagh moved that the Board of Supervisors approve the requested amendments to the Leesburg Area Management Plan for the area north of Route 7 on Goose Creek, as modified by the staff and the Planning Commission.

Voting on the motion:  Supervisors Raflo, Brownell, Bird, Tatum, Kavanagh, Lambert, and Stockman - Yes;  None - No;  Dodson - Absent.

A COPY TESTE:

[Signature]

COUNTY ADMINISTRATOR FOR THE LOUDOUN COUNTY BOARD OF SUPERVISORS

mlt: 9/16/85
Staff Analysis: The environmentally sensitive area within the Goose Creek Planning District should be distinguished from the other lands more suitable for development, as indicated in staff modifications, as follows:

Under C. Residential Plan, modify applicant's request to read: "...except where properties which are already served by central water and sewer."

Under 8. Goose Creek, Page 96, change "the District quarries and Goose Creek itself to, "The environmentally sensitive lands within the district should..."

4) Applicant Request: "D. Community Facilities Plan. Areawide Recommendations A.1 (Page 112). 1. Sewer Service Provision: The area within the Urban Limit Line will be served by central sewer and water. The planning districts outside that line, Sycola, White's Ferry, Oaklands, Goose Creek and the southern section of the Airport District, are not designated for sewer service within the time frame of this area plan (1992), except in the northern section of Goose Creek Planning District, where water and sewer exists on a parcel under single ownership."

Staff Analysis: Under D. Community Facilities Plan. Areawide Recommendations A.1 (Page 112), change applicant's request to read: "...except where water and sewer currently serves an existing parcel."

5) Applicant Request: "Figure 16, Sewer Service Area to 1992, Page 113. The sewer service area on Figure 16 should be extended to the west of Goose Creek in order to include all of the Xerox owned property, as outlined in blue on copy of Figure 16 attached hereto."

"E. Commercial Plan. Recommendation by Planning District: 8. Goose Creek, Page 145. No retail commercial uses are recommended except for incidental sales related to the rock quarries, and support commercial uses, sized and located to serve a mixed use development."

"F. Industrial and Employment Plan. Recommendations by Planning District: 8. Goose Creek, Page 149, first paragraph. No new employment centers north of Route 7 should be developed except those employment uses which are compatible with and supportive of the existing training center and are consistent with the goal of comprehensive "Community Development" as expressed in the RMP and the adjacent UNAMP."

"Staff Analysis: Regarding Figure 16, page 113, state on the graphic that the western portion of the Xerox parcel lying west of Goose Creek should be served with sewer and water by the Loudoun County Sanitation Authority."

Under E. Commercial Plan, change applicant's request to read as follows: "...and support commercial uses, sized and located to serve a mixed use development north of Route 7, on property which is currently served by central water and sewer facilities."

The specific text and graphic amendments to the LAMP that are requested by the applicant are presented as follows, along with staff evaluation and recommendations for modifications to these amendments as noted (underlined portions are applicant's suggested changes or staff modifications):

1) **Applicant Request:** "A. Recommended Land Use Pattern Map, Figure 6, Page 29. Designate the Potomac Park site as 'mixed-use' as outlined in blue on a copy of Figure 6 attached hereto. This designation will match the recommendations of the DNAMP for the remainder of the Potomac Park site to the east of the LAMP area and is consistent with the RMP recommendation for 'community development'."

**Staff Analysis:** Such a change in the graphics of Figure 6 would achieve two purposes. It would make the LAMP consistent with the draft DNAMP and would clarify the ambiguity between Figure 6 of LAMP which shows the site as open space and the text which calls for "supportive" development (LAMP, p. 149), Figure 4 (LAMP, p. 7) which denotes the site as currently in industrial use, and Figure 16 (LAMP, p. 113) which designates the site as having central sewer service through the portion lying east of Goose Creek.

2) **Applicant Request:** "B. Agricultural Plan. Recommendations by Planning District: 8. Goose Creek, Page 56. This district is not a priority for farm land retention efforts, but farm land should still be encouraged, where appropriate, by requiring clustering, precluding water and sewer extensions (except where water and sewer exists on a parcel under single ownership), and accepting easement donations."

**Staff Analysis:** Based upon other recommendations in LAMP and policies in the RMP, the existing recommendation here to "preclude" water and sewer extension is not applicable to the applicant's property since it is already served by water and sewer. Therefore, this amendment would be generally appropriate. However, staff recommends that the applicant's amendment be modified so as to read as follows: "...except parcels which are already served by both central water and sewer...."

3. **Applicant Request:** "C. Residential Plan. Recommendation by Planning District: 4. Edwards' Ferry, Page 90. Residential development on central sewer and water with higher densities surrounding the small commercial center is recommended for this district to the north and east of the currently zoned C-1 and PD-IP land. The properties outside the ULL are not recommended for sewer service within the timeframe of this plan (except where water and sewer exists on a parcel under single ownership)."

"*Goose Creek, Page 96. The southern portion of this area is recommended to remain as it is at present with major consideration given to preserving the integrity of the water quality of the City of Fairfax Water Impoundment on Goose Creek. The District quarries and Goose Creek itself should be viewed as long-term natural resource areas and management strategies developed to preserve them. North of Route 7, the area should be allowed to develop in a manner consistent with the adjacent Dulles-North Area Management Plan."
In addition to the above amendments with suggested modifications, the staff recommends that an additional passage be added to #3., page 149 of the LAMP, to read as follows:

"The property lying north of Route 7 and east of Goose Creek is currently developed with a large institutional use, the Xerox Training Center. The property is served by the sewer and water systems operated by the Loudoun County Sanitation Authority. This property is suitable for additional office and institutional development of an environmentally sensitive nature. A moderate amount of residential uses would be suitable for the site in order to create a viable and balanced mixed-use community. The predominant character and use of the site, however, should remain institutional/employment.

Such additional development should respect and preserve to the maximum practical extent the environmentally sensitive and critical areas of Goose Creek and the Potomac River, particularly the steep slopes, floodplains and mature wooded areas.

The portion of the parcel which lies to the west of Goose Creek should be developed as an integrated part of the eastern portion. Sewer and water service to this western portion should also be provided by the Loudoun County Sanitation Authority.

A greenbelt area of low intensity land uses should be maintained as a distinguishing edge between this urbanizing area served by the Loudoun County Sanitation Authority and the area served by the Town of Leesburg's utility systems."
At a meeting of the Board of Supervisors of Loudoun County, Virginia, held in the Board of Supervisors’ Meeting Room, 18 North King Street, Leesburg, Virginia, on Monday, March 17, 1986, at 1:30 p.m.

PRESENT: James F. Brownell, Chairman
Betty W. Tatum, Vice-Chairman
Andrew R. Bird, III
Thomas S. Dodson
Ann B. Kavanagh
Frank I. Lambert
Frank Raflo
Steve W. Stockman

IN RE: COUNTYWIDE CAPITAL FACILITIES FUNDING POLICIES

Mr. Raflo moved that the Board of Supervisors direct the County Administrator to update the Resource Management Plan, the Eastern Loudoun Area Management Plan and the Leesburg Area Management Plan in the manner outlined in the Policy Item dated March 17, 1986.

Mr. Raflo further moved that the Round Hill Area Management Plan and the Waterford Area Management Plan, which are now under Planning Commission review, include a residential density/public facilities guidelines framework similar to the attached, and that such a refinement should be completed prior to the Board public hearings.

Voting on the motion: Supervisors Raflo, Brownell, Kavanagh, Dodson, and Tatum - Yes; Bird, Stockman, and Lambert - No.

A COPY TESTE:

[Signature]

COUNTY ADMINISTRATOR FOR THE LOUDOUN COUNTY BOARD OF SUPERVISORS

mlt:3/17/86
The County encourages the coordinated design of neighborhoods and communities possessing a full complement of public facilities and utilities. The County will establish a range of residential densities between 1.6 and 2.8 dwelling units per net acre (See Figure 23, page 55) plus an incremental density of 0.6 dwelling units per net acre for density transfer programs and an incremental density of 0.6 dwelling units per net acre for off-site road assistance making a total maximum of 4.0 dwelling units per net acre. The density granted by the County will be the function of a developer’s assistance in creating a full complement of public facilities and utilities - (see Appendix I: “Public and Private Sector Policy Guidelines for the Financing of Capital Facilities and Utilities”, on page 91 of this plan for further explanation regarding density and preferred assistance. The following paragraphs outline the densities which will be considered for various types of assistance:

a. 1.6 - 2.0 dwelling units per net acre will be considered by the County for conventional residential development with adequate road, stormwater and utility provisions and the provision of residential, block-scaled facilities such as a school path system, volleyball courts, tot lots and playgrounds.

b. 2.0 - 2.4 dwelling units per net acre will be considered by the County for clustered residential development with adequate road, stormwater and utility provisions, those facilities suggested for the residential blocks and the provision of neighborhood-scaled public facilities such as school sites, neighborhood or linear park sites and/or financial assistance through trust funds to support the creation of such facilities.

c. 2.4 - 2.8 dwelling units per net acre will be considered by the County for planned community development with a full complement of those roads, utilities and public facilities of a residential block, neighborhood and community-wide character and/or financial assistance through trust funds to support the creation of such facilities as delineated in this plan.

d. A density increment of 0 - 0.6 dwelling units per net acre will be considered in the rezoning process by the County at stages a, b, or c. in return for significant off-site road improvements which would be of countywide benefit.

e. A density increment of 0 - 0.6 dwelling units per net acre will be considered in the rezoning process by the County, at stages a, b, or c. In return for developer evidence of participation in agricultural conservation or recreational efforts associated with transfer of development density.

* Net acre in this instance is the tract area less lands in floodplain, lands with steep slopes of 25% or over, and lands to be devoted to commercial or employment use.
100 ACRE TRACT

TOTAL TRACT 100 acres
less floodplain -10 acres
less steep slopes - 6 acres
less commercial/employment - 6 acres

NET RESIDENTIAL DEVELOPMENT
ACREAGE FOR DENSITY CALC. 78 acres
APPENDIX 1

PUBLIC AND PRIVATE SECTOR POLICY GUIDELINES FOR THE FINANCING OF CAPITAL FACILITIES AND UTILITIES

Table 1, page A-4 reveals that supporting private development with all the necessary public facilities and utilities will require very substantial expenditures. The current and projected operational funding capabilities of the County, the Virginia Department of Highways, the Northern Virginia Park Authority and other public agencies are and will be insufficient to provide private development with all the public facilities and utilities identified in this plan. However, major delay in the provision of such facilities and services would seriously hamper the marketing, sales and revenue projections of the private development sector. Consequently, the County anticipates that the development community will cooperate with the public sector in the provision of public facilities and utilities identified in this plan.

Table 1 illustrates the unit cost for each new residential dwelling for education, fire and rescue, schools, and other public costs. This type of information allows the County to carefully review the potential fiscal impacts of a residential development proposal on the community in which it would be located and on the whole County. New residential projects need to provide their fair share of funding to assist in providing these public facilities if such facilities are to be created in a timely fashion.

The proper system made available through the rezoning process provides developers with a mechanism to provide funding which will assist in meeting the public facility and service needs of Table 1 which their projects generate. The County further anticipates private sector assistance in the provision of necessary public facilities and utilities such as fire/emergency rescue stations or roads from developers of nonresidential/employment uses. The extent of such assistance is expected to be a factor of the public facility and utilities needs generated by each nonresidential/employment project.

The County anticipates that the balance of these public facilities costs will be borne out of the operational revenues, user charges and debt service funds of the various public agencies.

Policies

1. The County anticipates that the provision of public facilities and utilities in the Dulles North planning area will be a joint effort on the part of the public and private sectors.

2. The County will consider development community proposals of cash and in-kind assistance in the provision of needed and mandated public facilities identified in the adopted Comprehensive Plan.
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<th>Item</th>
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<th>Total Residential Cost</th>
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</tr>
</tbody>
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* Table 1 is reproduced from a memorandum dated August 12, 1985 from Richard Calderon and Milton Herd, to Philip A. Bolen: "Capital Costs Associated with Development of the Dulles North Planning Area."

** The costs here represent just the construction of the sewage treatment facility for Dulles North and assume that the Blue Plains wastewater treatment plant will lack the capacity to serve the planning area. The costs of building major sewer trunk lines are not included nor is land acquisition since these costs are shared by developers in the private sector.

*** Public road construction and funding is the responsibility of the Virginia Department of Highways and Transportation.
3. The County expects that proposals of public facilities and utility assistance by residential developers would be in conjunction with their requests for development approval of residential dwelling densities above this plan's adopted density base of 1.6 dwelling units per net acre.

4. To assist the County in an equitable and uniform evaluation of developer proffers and other proposals for densities above a reasonable base of 1.6 dwellings per net acre which otherwise conform with this plan's policies, the County will establish the following guidelines:

a. Developer assistance valued at 20% of capital facility costs and 10% of major road costs per incremental dwelling unit above the base density of 1.6 dwelling units per net acre would merit additional density of up to 0.4 dwellings per net acre for a maximum density of 2.0 dwelling units per net acre.

b. Developer assistance valued at 25% of capital facility costs and 15% of major road costs per incremental dwelling unit above the previously reached density of two dwelling units per net acre would merit additional density of up to 0.4 dwellings per net acre for a maximum density of 2.4 dwelling units per net acre.

c. Developer assistance valued at 30% of capital facility costs and 20% of major road costs per incremental dwelling unit above the previously reached density of 2.4 dwelling units per net acre would merit additional density of up to 0.4 dwellings per net acre for a maximum density of 2.8 dwelling units per net acre.

The County will also consider two categories of density increments associated with the provision of major roads and residential density transfer. These incremental densities may be applied at levels a., b., or c.

d. Developer assistance valued at 30% of capital facility costs and 100% of major road costs per incremental dwelling unit would merit a density increment of up to 0.6 dwellings per net acre.

e. A density increment of up to 0.6 dwellings per net acre would be granted in return for developer evidence of participation in land conservation efforts associated with acquisition of open space/conservation easements.

5. The County will fund the balance of the capital facility and utility expenditures and the operational service expenditures associated with them according to existing countywide fiscal policies adopted by the Board of Supervisors on December 17, 1984 or as subsequently amended.
At a meeting of the Board of Supervisors of Loudoun County, Virginia, held in the Board of Supervisors' Meeting Room, 18 North King Street, Leesburg, Virginia, on Monday, October 3, 1988, at 1:30 p.m.

PRESENT: Betty W. Tatum, Chairman
         Charles A. Bos, Vice-Chairman
         Alice G. Bird
         Betsey Brown
         James F. Brownell
         Thomas S. Dodson
         Ann B. Kavanagh (Absent for the Vote)
         Steve W. Stockman

IN RE: ROUTE 7 CORRIDOR STUDY/ROUTE 7 CORRIDOR AMENDMENTS FOR
       THE EASTERN LOUDOUN AREA MANAGEMENT PLAN, THE DULLES
       NORTH AREA MANAGEMENT PLAN, AND THE LEESBURG AREA
       MANAGEMENT PLAN

Mr. Stockman moved to approve the adoption of the Route 7 Corridor Study and the related amendments to the Eastern Loudoun, Dulles North, and the Leesburg Area Management Plans (Attachment One and Two).

Seconded by Mr. Dodson.

Voting on the Motion: Supervisors Tatum, Bos, Bird, Brown, Brownell, Dodson, and Stockman - Yes; None - No; Kavanagh - Absent for the Vote.

A COPY TESTE:

[Signature]
COUNTY ADMINISTRATOR FOR THE
LOUDOUN COUNTY BOARD OF SUPERVISORS

plm:10/3/88
Date: October 4, 1988
To: William W. Wiggins, Director, Technical Services
From: Philip A. Bolen, County Administrator
Subject: Route 7 Corridor Study and Related Amendments to Eastern Loudoun, Dulles North and Leesburg Area Management Plans

At the October 3rd meeting on the motion of Mr. Stockman, seconded by Mr. Dodson, the Board voted 7-0-1 (Mrs. Kavanagh - Absent) to approve the adoption of the Route 7 Corridor Study and the related amendments to the Dulles North, Eastern Loudoun and Leesburg Area Management Plans.

Please follow through with the details of this Board action.

PAB:mjt
Attachment

cc: James R. Keene, Jr., Deputy County Administrator
ROUTE 7 CORRIDOR AMENDMENTS FOR THE EASTERN LOUDOUN AREA MANAGEMENT PLAN,
THE DULLES NORTH AREA MANAGEMENT PLAN,
AND THE LEESBURG AREA MANAGEMENT PLAN

I. Amendment to the Eastern Loudoun Area Management Plan: Page 178, delete existing paragraph 4, and replace with the following text:

"Route 7: Design of Route 7 will follow the provisions contained in the adopted Route 7 Corridor Study."

II. Amendment to the Dulles North Area Management Plan: Page 74, add to paragraph C Design:

"Design of Route 7 will follow the provisions contained in the adopted Route 7 Corridor Study."

III. Amendment to the Leesburg Area Management Plan: Page 132-134, delete the provision of Route 7 Corridor submitted by VDOT hereby adopted and replace with the following text:

"Design of Route 7 will follow the provisions obtained in the adopted Route 7 Corridor Study."
COUNTY OF LOUDOUN
MEMORANDUM

Date: April 30, 1987
To: Frederick P. D. Carr, Director of Planning, Zoning and Community Development
From: Richard Calderon, Planner III
Subj: AMENDMENT TO DNAMP/ELAMP/LAMP REGARDING VDOT ROUTE 7 CORRIDOR STUDY

DNAMP Route 7 Corridor Amendment

Policies IV B 3.C. Design (DNAMP page 74)

Route 7, Route 28 and the proposed, relocated Route 643/Toll Road Extended will be designed as limited access roads with grade separated interchanges and parallel collector roads at ultimate buildout. (See VDOT Route 7 Corridor Study adopted *-**-1987; VDOT Route 28 Corridor Study adopted *-**-1987 and forthcoming Toll Road Corridor Study for further detail.)

ELAMP AMENDMENT to the 1987 GENERAL ELAMP ROAD AMENDMENT — ROUTE 7 CORRIDOR

APPENDIX I

ROADWAY LOCATION LANES RIGHT-OF-WAY DESCRIPTION

Add to end of 1. See VDOT Route 7 Corridor Study
Adopted by County Board of Supervisors*-**-1987

LAMP Route 7 Corridor Amendment

2. Route 7 Corridor (LAMP page 132)

The Route 7 Corridor...generators.

The provisions of the Route 7 Corridor Study prepared by VDOT and adopted by the County Board of Supervisors on *-**-1987 are hereby adopted in the LAMP planning area to the east of the Leesburg corporate line.
LEESBURG AREA MANAGEMENT PLAN (LAMP)
TRANSPORTATION PLAN
Amended by the Board of Supervisors, September 16, 1985
Adopted Amendments to Page 129
October 10, 1989

MAJOR ISSUES:

The critical highway improvement issue in the Leesburg Area will center around the extension of the Dulles Toll Road to the Route 15 By-pass in Leesburg. The second important issue will be the secondary road improvements necessary to accommodate existing and new commercial, industrial and residential growth. The goals are to separate residential from commuter and industrial traffic in order to reinforce community identity and to eliminate traffic conflicts.

The off-site improvements to primary and secondary roads within the planning area should be borne by both the developers and VDOT. The County must be prepared to coordinate the development of its regional and local road networks with VDOT and others who may be prepared to construct and/or finance the improvements.

All development, both residential and non-residential, will be reverse frontage in design on major or minor collector roads and on all primary roads within the planning area.

RECOMMENDATIONS:

A. Areawide Transportation Recommendations:

Many transportation issues are areawide or concerned with two or three planning districts. Areawide recommendations for the following corridors are as follows (See Figures 17, page 130 and 18, page 133 for recommended improvements):

1. Route 15 Corridor (from Route 621 to southern boundary of the Planning Area.

U. S. Route 15 is a primary north-south arterial road. In the Leesburg vicinity it is the major north-south highway for the area.

a. Controlled access design provisions should be incorporated into the roadway as the adjacent property develops.

Information italicized and bold reflects Board of Supervisors recommended changes.
Information underlined reflects proposed amendments dated Sept. 8, 1989
b. Four-lane improvements should be made from just south of Virts Corner to the edge of the Town.

c. Virginia Byway designation should be sought from Route 704 to Goose Creek from the Commonwealth Transportation Board.
LEESBURG AREA MANAGEMENT PLAN (LAMP)
Amended September 16, 1985
Adopted Amendments to Page 134
October 10, 1989

4. Dulles Toll Road Extension:

The Dulles Toll Road Extension's function is to provide a limited access arterial facility to serve commuter, local and regional traffic in and through the County and will be paid for by the users. This road will provide an alternative arterial road to Route 7, thus, alleviating congestion on Route 7. The alignment of the road will be east/west connecting Dulles Airport with the Route 15 By-pass in Leesburg. The following issues are associated with the extension of the Toll Road:

1. The construction of the Toll Road does not change the adopted land use policies in the Leesburg Planning Area. The alignment of the road crosses rural/agricultural land which is not planned for urban/suburban development with central sewer and water service. Land uses adjacent to the road will remain rural in character, i.e., agricultural uses and residential uses at densities not to exceed 1 du per 3 acres.

2. The establishment of the Toll Road has no effect on the County's current plans not to extend utilities into the area.

3. The Toll Road is to be designed for the construction of six lanes at a minimum. Initial construction will be four lanes. All right-of-way necessary to accommodate six lanes should be reserved.

4. The County plans for a future mass transit facility to be constructed in the median of the Toll Road. The Toll Road builder shall reserve sufficient right of way for full access to the median for future transit facilities. The County will coordinate with affected landowners to accept dedication of land for future transit and parking facilities.

5. The road is planned as a limited access highway. Within this planning area, grade separated interchanges should be constructed initially at or in the vicinity of the Route 15 By-pass and Route 654. An interchange in the vicinity of Route 653 may be needed in the future to provide improved access to the Leesburg Airport. A Comprehensive Plan amendment would be required to change the designation of the interchange from "future" to "current" prior to giving final approval for its

Information italicized and bold reflects Board of Supervisors recommended changes.
Information underlined reflects proposed amendments dated Sept. 8, 1989
construction. The rural area south of the Town of Leesburg is designated as 
Agriculture/Rural Residential for the time frame of this plan or until the time the 
County may choose to amend that plan designation.

6. **Visual, air and noise buffering techniques are required to protect adjacent land** 
**uses. Buffers along the right-of-way should be planned which can include** 
**concrete barriers, earthen berms, and/or dense vegetation combined with a** 
**substantial setback within the right-of-way. Specific standards should be** 
**developed to mitigate the effects of the road on different land uses.** 
**During construction, the Toll Road builder shall provide appropriate buffers** 
**from existing residential and non-residential uses, and from similar land uses** 
**approved but not yet constructed prior to the Toll Road's construction, while** 
**buffers for future land uses will be provided by the affected landowner/developer.**

7. **The Toll Road will generate increased traffic on the local road system; therefore,** 
**improvements to these feeder roads must be addressed concurrently with the Toll** 
**Road's construction. Regardless of whether the road is constructed by VDOT or** 
**by others, Toll Road revenues should be used to fund the improvements to the** 
**secondary, feeder roads.**

8. **Existing roads should not disrupted, degraded or severed by the Toll Road unless** 
**such degradation is offset by improvements made by the Toll Road builders.**

9. **Potential elimination of interparcel access by the road's alignment shall be** 
**mitigated prior to construction.**

5. Transit Considerations:

The Leesburg area functions as a focus for transit activity with park-and-ride lots 
and private bus facilities operating in and around Town. The following 
recommendations are suggestions to reinforce the viability of these transit facilities:

*Information italicized and bold reflects Board of Supervisors recommended changes.*
*Information underlined reflects proposed amendments dated Sept. 8, 1989*
3. Edwards Ferry

Primary Road Improvements:

Route 15 per above.

Secondary Road Improvements:

Route 773 improved from Route 654 extended west to Edwards Ferry intersection.

4. Upper Tuscarora

The goal in this area is to separate the western residential traffic from the industrial traffic to the east. A circumferential, four-lane roadway should be designed and incrementally built from Route 15 (at Country Club subdivision) to Route 7 (at the Leegate property).

Primary Road Improvements:

a. Dulles Toll Road: The Dulles Toll Road Extension should be extended through this planning area and terminated at its intersection with the Route 15 By-pass. The Toll Road should be designed as a limited access highway with a minimum of six lanes. Adequate right-of-way should be reserved for six lanes, future transit facilities within the median and buffers.

b. Route 15 specifications per above, including limited access design to Virts Corner.

c. Signalization and the extension of the median strip of Route 15 is recommended.

d. A park-and-ride lot is necessary to promote car-pooling activities.

Information italicized and bold reflects Board of Supervisors recommended changes.
Information underlined reflects proposed amendments dated Sept. 8, 1989
Secondary Road Improvements:

a. Intersection Route 643 and the Bypass should be redesigned and grade-separated.

b. Route 643 to the east of the airport should be designed and improved as a four-lane roadway to airport and as a two-lane roadway from the airport to Route 659. Sufficient right-of-way should be dedicated to accommodate these improvements.

c. Route 654 should be designed as a four-lane collector roadway from Route 15 to Route 7. The extension north of Route 7 to Route 773 should also be designed as a four-lane road. Route 654, south of Tuscarora Creek, should be realigned from Route 643 on a direct line north of the Middle School to Route 621. The intersection with Route 15 should be located at a point with the maximum sight distance, spacing and safety.

Information italicized and bold reflects Board of Supervisors recommended changes.
Information underlined reflects proposed amendments dated Sept. 8, 1989
Airport Facility Improvements:

The Airport District is recommended for increased traffic and development; sewer is anticipated in the near future. The land use should follow a pattern of employment development to the east with open space/office to the north. Otherwise, an area of 1,000 feet surrounding the airport facility should preclude residential development through implementation of an overlay zone. (See Figure 6, page 29.)

Specifications:

a. Existing PD-IP should remain as defined.

b. No improvements to the proposed runway to the west of the airport during the life of this Plan.

c. Height limitations for land uses north of the airport.

7. Goose Creek

Primary Road Improvements:

Dulles Toll Road Extension: The Dulles Toll Road Extension should be designed as a limited access highway with a minimum of six lanes. Adequate right-of-way should be reserved for six lanes, future transit facilities and buffers.

Secondary Road Improvements:

a. Route 659: Improve with industrial access funds as more industrial property develops.

b. Route 643: Improve existing two-lanes with right-of-way and alignment improvements as necessary.

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Information italicized and bold reflects Board of Supervisors recommended changes. Information underlined reflects proposed amendments dated Sept. 8, 1989
8. Sycoln

Primary Road Improvements:

Dulles Toll Road Extension: The Dulles Toll Road Extension should be designed as a limited access highway with a minimum of six lanes. Adequate right-of-way should be reserved for six lanes. An interchange in the vicinity of Route 653 may be needed in the future to provide improved access to the Leesburg Airport. If the County makes such a determination, a Comprehensive Plan Amendment would be required to change the interchange designation from "future" to "current" prior to granting final approval for interchange construction. The rural area south of the Town of Leesburg is designated Agricultural/Rural Residential for the time frame of this plan or until the County may choose to amend the plan designation.

Route 15: Widening of shoulders for safety to accommodate significant number of trucks using Route 15. Left turn lanes at Route 704 is recommended.

Secondary Road Improvements:

a. Route 621: Improve with better alignment and widening from Simpson Middle School to Goose Creek.

b. Route 650: Improve with hard surface at Route 15 and better alignment to the north. Add left turn lane on Route 15 to improve access to Route 650.

Information italicized and bold reflects Board of Supervisors recommended changes. Information underlined reflects proposed amendments dated Sept. 8, 1989
At a meeting of the Board of Supervisors of Loudoun County, Virginia, held in the County Administration Building, Board of Supervisors' Meeting Room, 18 North King Street, Leesburg, Virginia, on Wednesday, September 21, 1994 at 9:00 a.m.

PRESENT:  George L. Barton, IV, Chairman
          Richard L. Roberts, Vice Chairman
          Charles D. Grant
          Joan G. Rokus
          Charles E. Scaggs
          Ready L. Snodgrass
          George E. Washington
          Steven D. Whitener
          H. Roger Zurn, Jr.


Mr. Scaggs moved approval of the recommendation of the Land Use Committee that the Board adopt Comprehensive Plan Amendment 1992-0010, the Greenways and Trails Policies, compiled by the Greenways Citizens' Committee, including limiting the location of trails to areas of the Eastern Loudoun Area Management Plan, Cub Run Area Management Plan, Dulles North Area Management Plan, Dulles South Area Management Plan, Leesburg Area Management Plan and the Urban Growth Areas of the incorporated Towns.

Seconded by Mr. Grant.

Voting on the Motion: Supervisors Barton, Grant, Rokus, Scaggs and Snodgrass - Yes; Roberts, Washington, Whitener and Zurn - No.

A COPY TESTE:

COUNTY ADMINISTRATOR FOR THE LOUDOUN COUNTY BOARD OF SUPERVISORS
PLM:RESEP21G.94
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 greenways 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
Greenways Policies

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

0 Link neighborhoods and communities including schools, shopping areas, community centers, parks and other public facilities.
0 Link towns in Loudoun County.
0 Provide recreational opportunities, and alternate transportation corridors for foot traffic, cyclists and horseback riders.
0 Protect historic resources.
0 Protect rivers, streams, and drainage basins.
0 Protect ecologically critical and sensitive areas
0 Maintain and link wildlife habitats.
0 Provide natural flood and erosion control to discourage channelization.
0 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.)
Greenways Policies

0 State Scenic Rivers
0 Perennial Streams
0 Floodplains
0 Ridges
0 Natural Heritage Sites
0 Existing and Planned Parks
0 Existing and Planned Trails
0 Historic Sites and Districts
0 Historic Settlements
0 Schools
0 Community Centers
0 Discontinued Roads
0 Scenic Roads
0 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:

   0 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.

   0 Private landowners: voluntary donations, conservation easements, bequests, leasebacks, remainder interest and other non-coercive methods should be facilitated to encourage participation by private landowners.

   0 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
Greenways Policies

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 housing 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.
GREENWAYS and TRAILS MASTER PLAN for
LEESBURG and LOUDOUN COUNTY, VIRGINIA

Greenways Advisory Committee
Final Report
1993

Leesburg/Loudoun County Greenways Advisory Committee • Leesburg Department of Parks and Recreation • Loudoun County Department of Parks and Recreation • National Park Service - Mid-Atlantic Regional Office - Rivers, Trails and Conservation Assistance Program
LOUDOUN COUNTY RESOURCES

State Scenic Rivers
Two creeks in Loudoun County, Goose Creek and a portion of Catoctin Creek, are designated in the Virginia Scenic Rivers system. This designation recognizes rivers of outstanding scenic, natural, and historical significance.

Source: Virginia Department of Conservation and Recreation; The 1989 Virginia Outdoors Plan.

Perennial Streams
Because of their linear nature and their value for wildlife habitat and recreation, streams are excellent locations for greenways.

Source: All of Loudoun’s perennial streams are identified in the Loudoun County Geographic Information System (GIS).

Limiting criterion: The Advisory Committee selected only those streams draining areas greater than 640 acres to map for greenway planning.

Floodplains
Floodplains are prime candidates for greenways because of potential flooding and the resulting regulations restricting development. (Floodplains are not shown on the small maps included in this document; they appear on the Loudoun County GIS Greenways and Trails Map.)

Source: Floodplains are mapped in the Loudoun GIS, for drainages both less than and greater than 640 acres.

Limiting criterion: The Advisory Committee selected 100-year floodplains located along perennial streams (selected as above) to map for greenway planning.

Ridges
Three ridges are dominant topographical features in Loudoun County. Their linear configuration, relatively natural condition, and environmental and regulatory constraints on development make these areas highly suitable for greenways.

Source: Three major ridges, Blue Ridge, Short Hill, and Catoctin Mountain, are mapped in the Loudoun GIS.

Natural Heritage Sites
Incorporating these sites into the greenway network, most likely as areas without public access, may be an appropriate way to protect them. When this inventory is completed, the
Greenways Advisory Committee recommends that these sites be added as potential elements of the greenway network. (Since the sites have not yet been determined, they do not appear on the maps included in this document or on the GIS map.)

Source: The Virginia Natural Heritage Program began an inventory of the locations of threatened and endangered species and special ecological communities in Loudoun County.

Existing and Planned Parks
Parks are key nodes in a greenway network.

Source: Regional and county parks, already established or proposed in the Loudoun County General Plan or Parks and Recreation Service Plan, Northern Virginia Regional Parks Authority (NVRPA) plans, or new development plans.

Existing and Planned Trails
Two existing long-distance trails, the Appalachian National Scenic Trail and the Washington and Old Dominion Trail, pass through Loudoun County. Only these major trails are shown on the small maps in this document; however, this category includes existing trails, greenways, and easements privately held by developments and homeowners associations, although these have not yet been mapped by the Greenways Advisory Committee. Loudoun County already has a number of such trails, but they are often unconnected. One purpose of a greenway and trail system is to bridge the gaps between these segments.

Source: National, regional, and local trails, already established or proposed in plans: National Trails System, Northern Virginia Regional Park Authority, Loudoun County, or development plans.

Historic Sites and Districts
These are essential parts of the distinctive character of Loudoun County. (Historic sites meeting these criteria but occurring within towns are not shown on the maps in this document.)

Sources: The National Park Service, the Virginia Department of Historic Resources, and Eugene Scheel, a noted Loudoun County cartographer and historian.

Limiting Criteria: Although there are hundreds of historic sites in Loudoun County, the committee decided on the following criteria to select the most significant and appropriate sites for inclusion in a greenway network: sites designated as National Historic Landmarks, sites listed on the National Register of Historic Places and open to the public, and historic districts - both those listed on the National Register and local historic districts designated by Loudoun County.
Historic Settlements
The Greenways Advisory Committee recognized the importance of linking these unincorporated settlements into the greenway network because of their historic value.

Source: Local historians have identified a number of settlements that have not been officially designated, but which are historically significant.

Schools
School property is open to the public and often serves as a community recreation facility. Schools could be linked to neighborhoods through a trail network; this would provide children with a safe way to walk or bike to school. (Schools occurring within towns are not shown on the small maps included in this document.)

Source: All public elementary and secondary schools within the Loudoun County School district.

Community Centers
These centers also contain public land and can be well served by trail links to communities. (Community centers generally occur within towns and are not shown on the small maps included in this document.)

Source: All public community centers mapped in Loudoun County General Plan and/or identified by Loudoun County Parks and Recreation Department.

Discontinued Roads
Discontinued roads are no longer maintained by the commonwealth of Virginia but continue as public rights-of-way. In many cases, these have excellent potential for trails and linkages. (Not shown on maps in this document.)

Sources: Early road maps in comparison with current maps, and Greenways Advisory Committee members Eugene Scheel and Lisa LaCivita, who are both very knowledgeable about Loudoun County history and current land use.

Limiting Criteria: Discontinued roads that link existing or proposed parks, and/or have scenic, historic, or environmental merit, and/or may be used for recreation.

Scenic Roads
Source: All scenic byways mapped in Virginia Scenic Byways system (listed in Appendix B).

Incorporated Towns:
Source: All towns mapped in Loudoun Geographic Information System.
APPENDIX G: LISTING OF PROPOSED BICYCLE ROUTES ALONG EXISTING ROADS

While many of the trails identified in the greenway system map are intended to allow for bicycle use, some of these trails will not allow for high speed bicycling or will not provide an adequate surface for lightweight thin-tire bicycles. Additionally, one primary source of funding and assistance for bikeways, the Virginia Department of Transportation, currently favors bikeways which are built in conjunction with road improvement projects rather than independent bikeways. For these reasons, the Greenways Advisory Committee has identified a network of bicycle routes along existing roads as described in the following Bicycle Committee Report. The committee recommends that separated bicycle trails be added to these roads as conditions permit and as funding becomes available.

The Advisory Committee worked with local bicyclists and the Loudoun County Sheriff’s Department to identify important bicycle routes. These routes provide transportation to most communities in the county. They already receive a significant amount of bicycle use.

The committee supports the establishment of these bicycle routes, but feels that bikeways along roads are a separate component from greenways and trails. The committee feels that implementation of these bicycle routes will primarily be the responsibility of other organizations, such as the Loudoun County Sheriff, or other plan documents, such as the county parks and recreation plan or transportation plan.

Bicycle routes could be established through a variety of actions. These include:

- Road improvements—paved, widened shoulders or separated bicycle paths along roads
- Education of drivers and bicyclists to encourage safe, harmonious coexistence and better knowledge of motor vehicle laws, rights and responsibilities of motorists and bicyclists
- Improved signage along roads used for bicycle routes
- Reduced speed limits on certain roads to improve bicycle safety
- Closure of certain roads to automobiles on special occasions, regularly or permanently

Bicyclists point out that much of the attractiveness of Loudoun County cycling comes from the county’s winding country roads, lined with ancient stone walls, shaded by large trees, and blending gently into the landscape rather than being forced upon it. This character is susceptible to alteration from road widenings, which sometimes eliminate walls and trees, and remove grades and curves, for the sake of increasing automobile road speeds. Similar impacts could result from the addition of bicycle trails to existing roads, and the committee recommends that new bicycle trails be constructed sensitively to maintain the traditional character of the roads.

Bicycle Committee Report:

Members of the Greenway Committee, local bicyclers, and representatives of regional bicycle organizations proposed additions to the Bicycle Plan. These recommendations are composed of two phases: short-term and long-term designations of bicycle lanes.
Short-term recommendations would be created as soon as feasible and would include:

South Eastern quadrant between Rt. 15 and 28:

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<td>659</td>
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Central quadrant, South between Purcellville and Middleburg:

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North Central quadrant between Rt. 287 and 15:

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<td>668</td>
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A follow up meeting with Lieutenant Quisenberry and Sheriff Isom found their highest priorities for bicycle designations and road improvements are:

1) Whites Ferry to Leesburg
2) 287 North from Purcellville
3) 637 to Church Road
4) 621 to 50
5) 690 to 734
APPENDIX I: DOCUMENTATION OF PUBLIC PARTICIPATION IN LEESBURG/LOUDOUN GREENWAY PLANNING

REPORT ON RESULTS OF GREENWAYS ADVISORY COMMITTEE SPEAKERS BUREAU
May 14, 1991

Greenways Advisory Committee members discussed the greenway and trail draft plan and map with approximately 500 people in the last two months. This was done by giving presentations to twenty community organizations, operating a booth for two days at the Leesburg Renaissance Fair, and staffing a display at the Sterling Recycling Center on Earth Day. The latter two events attracted almost 10,000 people, so in addition to speaking directly to about 500 people, the program was exposed to approximately 2,000 more people. We also gave out over 1,000 brochures, sold fifty draft maps and obtained the signatures of 177 citizens who support this project. In addition, draft maps and fact sheets were posted at libraries and community centers throughout the country, with postcards for sending in comments.

We have received an endorsement from the land use committee of the Chamber of Commerce and hope to receive the same endorsement from the entire organization. We also have garnered an additional fifteen citizens who want to be put on the Greenways Advisory Committee's mailing list. In addition, we are still negotiating or are scheduled to give three more presentations.

In summary, as a result of a sterling performance by the Greenways Advisory Committee, at least 2,000 more people are aware of our effort, and 500 of them are well informed and, for the most part, very supportive. Many more have seen the draft plan posted and have been invited to comment by telephone or postcard; some comments have been received.

A sincere thanks to the committee members who participated in this effort:

Gary Huff                        Lisa Lascivita
Charles Riley                   Rick Carr
Fred Lillis                     Linda Porter
Bill Neville                    Sharon Kearns
Jeanne Sandstrom                Chuck Jones
Jim Stup                        Sara McCracken
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

Lawrence S. Beerman
Jim Burton
Helen A. Marcum
David G. McWaters

Joan G. Rokus
Elanore C. Towe
Steve Whitener
Scott K. York

Prepared Initially by:
The Loudoun County Planning Commission

C. Terry Titus, Chairman

Robert F. Dupree
Karl Hellmann
George Kirschenbauer
David Olson

Alfred P. Van Huyck
Bernard J. Way
Teresa White
John Whitmore

With Staff Assistance From:

James P. “Irish” Grandfield, Project Manager
Jim Wasilak, Planner
Joel Gallihue, Planner
Larr Kelly, Assistant County Attorney
John Lassiter, Zoning Planner
Robert Burke, Fire Marshall’s Office

Loudoun County Department of Planning, 1 Harrison St. S.E.
P.O. Box 7000 Leesburg, VA 20175
(703)777-0246
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 additionally 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 tower 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 colocation. 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.