DULLES SUBURBAN CENTER

BACKGROUND

Location

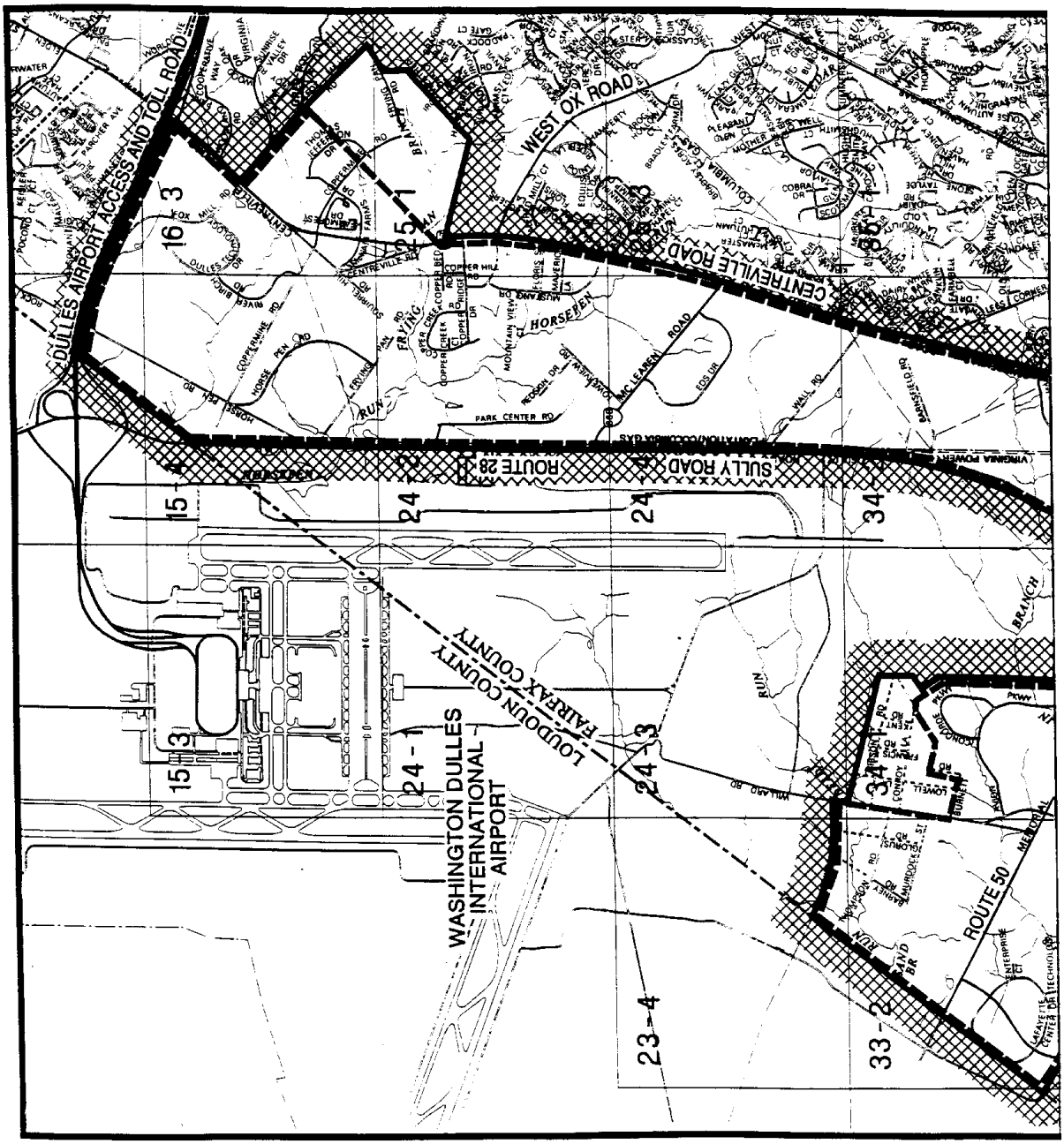
The Dulles Suburban Center is located in western Fairfax County, adjacent to the eastern and southern boundaries of the Washington Dulles International Airport (referred to hereafter as "Dulles Airport"). The Dulles Suburban Center extends from the Dulles Airport Access and Toll Road (DAAR) on the north to I-66 on the south (see Figure 1). The southwestern edge of the Suburban Center is contiguous with Loudoun County. With the exception of a small part of the Reston Transit Station Areas at the northeast corner, the Dulles Suburban Center is bordered to the north, south and east by residential neighborhoods. Major highways traversing the Center north and south are Route 28, Centreville and Walney Roads. Route 50 bisects the area from east to west.

For planning purposes, the Suburban Center has been divided into land units, found on Figure 2.

Route 28 Tax District

The boundary of the Dulles Suburban Center corresponds closely to that of the Route 28 Tax District; however, the Rockland Village subdivision (discussed later in Land Unit E-4), the Police Training Center (Land Unit F-3), and the eastern part of McNair Farms (Land Unit B), all of which are within the Suburban Center, are outside the Tax District. The Tax District was established by Virginia statute in December 1987 for both Fairfax and Loudoun Counties to provide for extensive private sector participation in paying for road improvements needed to serve airport-related economic development. The Tax District was established in response to concern about the large amount of anticipated development in the Route 28 corridor and the inadequacy of public funds to provide for the necessary major road improvements. The identified improvements are to occur in two multi-year phases; the current Tax District legislation provides funds for the first phase of improvements. In Fairfax County, Tax District funds have been used to widen Route 28 from two to six lanes and provide grade-separated interchanges at Route 50 and the DAAR. These improvements do not include widening other roads unless the widening is related to improving an interchange. Neither does the current funding provide for the full implementation of approved Virginia Department of Transportation (VDOT) plans for Route 28 expansion, such as the building of additional grade separated interchanges. Until the year 2005, the zoning district provisions that were in effect prior to December 1989, are in effect in the Route 28 Tax District. If the Tax District legislation is not reenacted to provide for the Phase II transportation improvements or otherwise amended, then the zoning in this area will come under the county's Zoning Ordinance current at the time.

The legislation established a procedure whereby the state would borrow funds for specific transportation improvements in the Tax District and the landowners would pay a special tax to cover the majority of the costs associated with the construction and financing of these improvements. The special tax is levied on all commercial and industrial land in the district and is based on the land's assessed fair market value. The tax rate cannot exceed 20 cents per 100 dollars of assessed value. The Tax District's obligation covers 80 percent of the cost of the transportation improvements. The remaining 20 percent and any shortfall is to be provided from state transportation funds.


DULLES AIRPORT ACCESS AND TOLL ROAD
WEST OX ROAD
CENTREVILLE ROAD
ROUTE 28
SULLY ROAD
WASHINGTON DULLES INTERNATIONAL AIRPORT
LOUDOUN COUNTY
FAIRFAX COUNTY
ROUTE 50
HORSEPEN
MC LEARREN ROAD
PARK CENTER RD
16 - 3
25 - 1
15 - 4
24
24
34
15 - 3
24 - 1
24 - 3
34
23 - 4
33 - 2

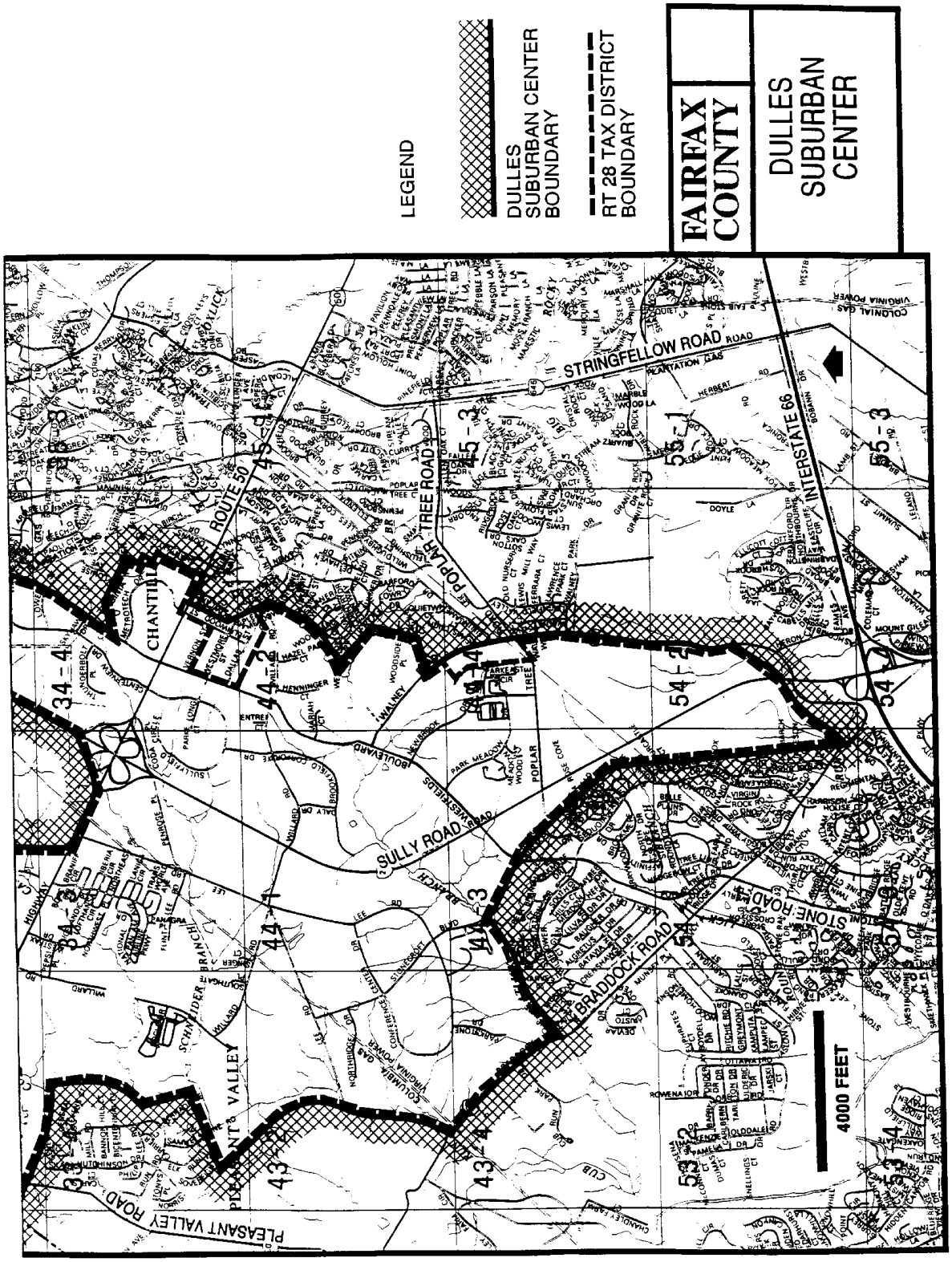
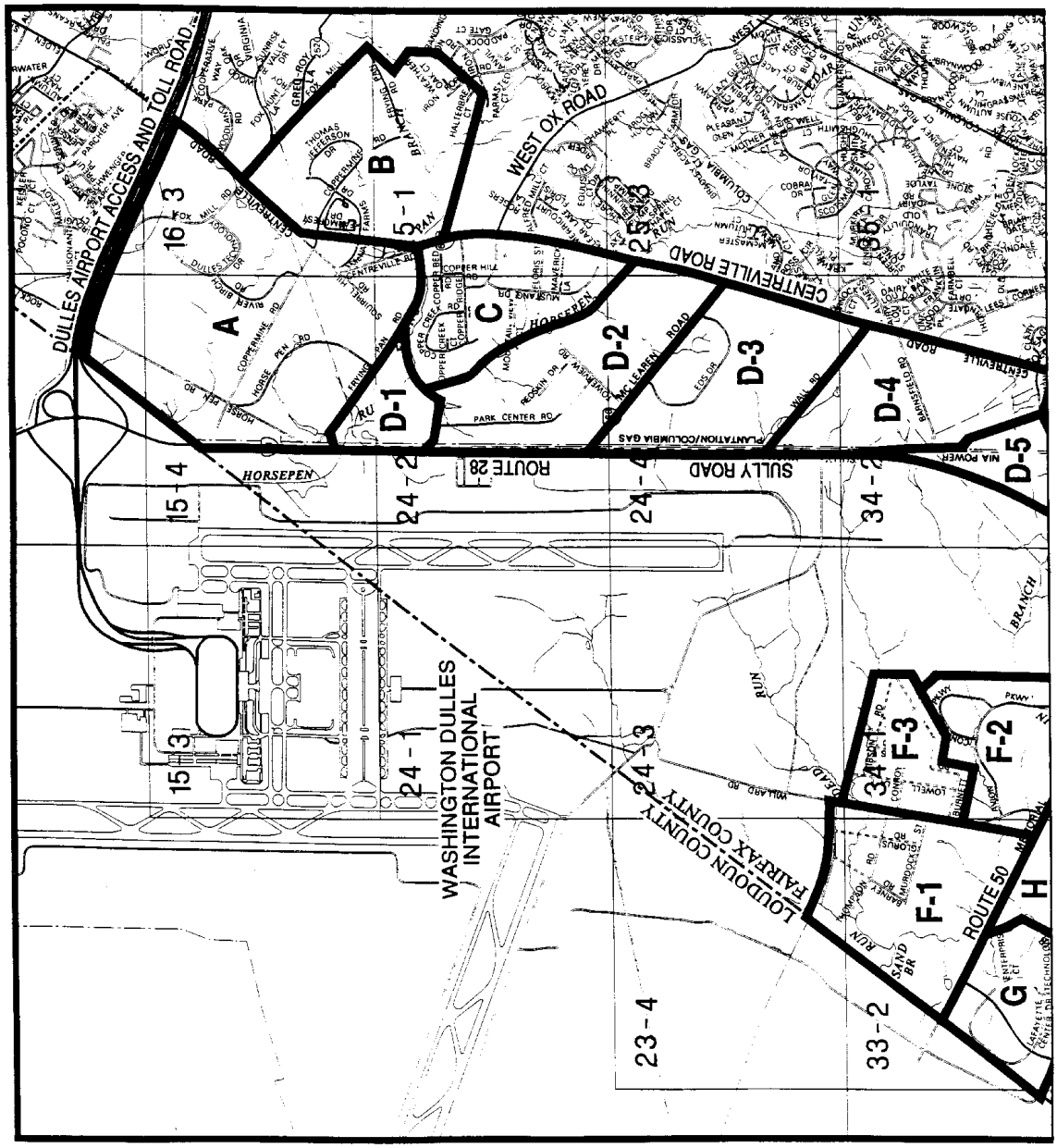

LEGEND
DULLES SUBURBAN CENTER BOUNDARY
RT 28 TAX DISTRICT BOUNDARY
FAIRFAX COUNTY
DULLES SUBURBAN CENTER
STRINGFELLOW ROAD
ROUTE 50
POPLAR TREE ROAD
INTERSTATE 66
SULLY ROAD
BRADDOCK ROAD
STONE ROAD
PLEASANT VALLEY ROAD
CHANTILLY
4000 FEET

FIGURE 1


DULLES AIRPORT ACCESS AND TOLL ROAD
WEST OX ROAD
CENTREVILLE ROAD
HORSEPEN
ROUTE 28
SULLY ROAD
ROUTE 50
WASHINGTON DULLES INTERNATIONAL AIRPORT
LOUDOUN COUNTY
FAIRFAX COUNTY
A
B
C
D-1
D-2
D-3
D-4
D-5
F-1
F-2
F-3
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34-3
33-2
23-4

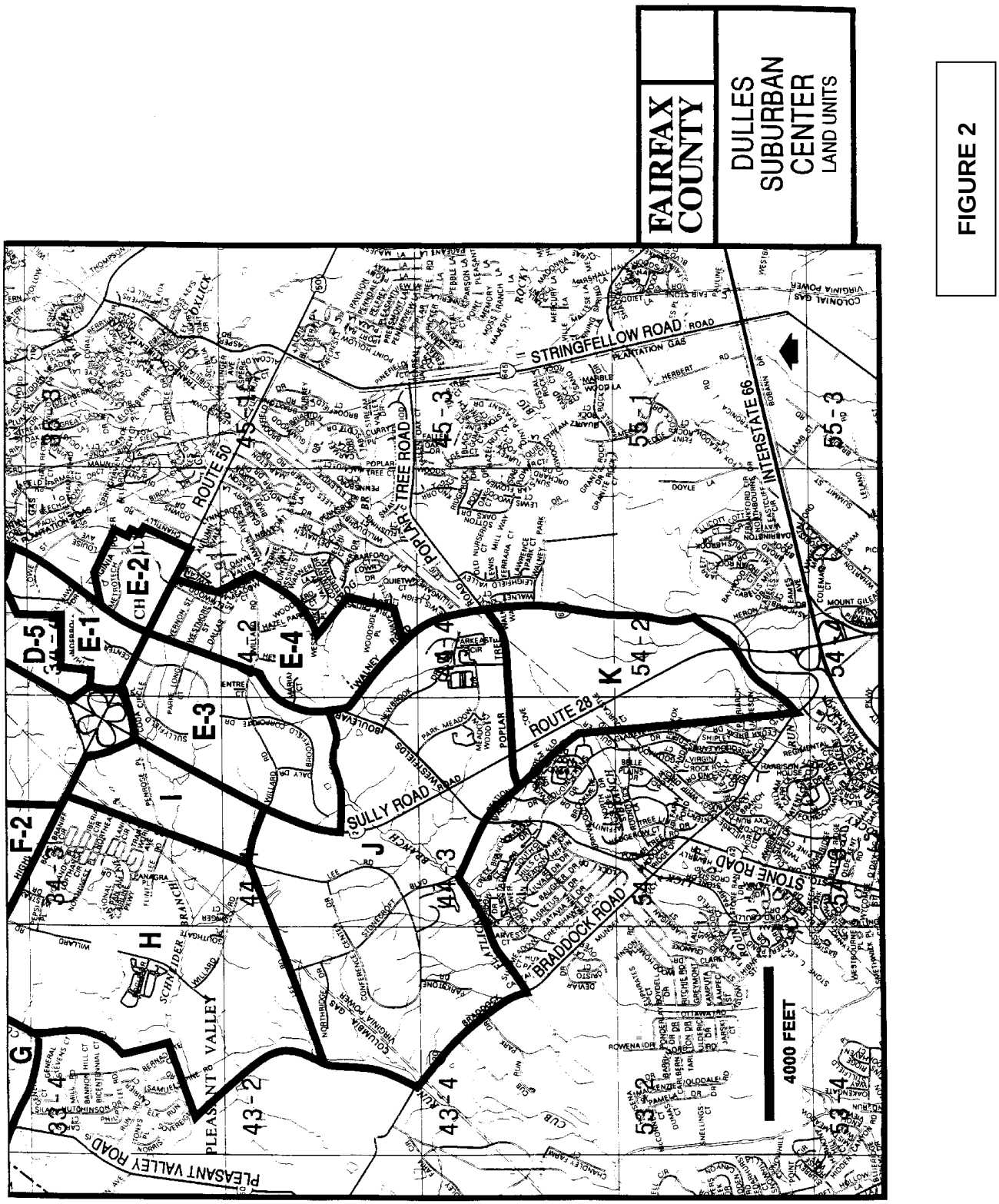
FAIRFAX COUNTY
DULLES SUBURBAN CENTER
LAND UNITS
STRINGFELLOW ROAD
INTERSTATE 66
ROUTE 50
POPLAR TREE ROAD
ROUTE 28
SULLY ROAD
BRADDOCK ROAD
PLEASANT VALLEY ROAD
STONE ROAD
4000 FEET
D-5
E-1
E-2
E-3
E-4
F-2
G
H
I
J
K
45-1
45-3
55-1
55-3
54-2
43-2
43-4
53-2
53-4
33-4

FIGURE 2

Land Use

The Dulles Suburban Center is approximately 6,340 acres in size. Approximately 1,820 acres, or 29 percent of the land, was developed as of January 1992. There are 1,100 acres, 17 percent, in public ownership.

Existing development is auto-dependent and scattered throughout the Dulles Suburban Center. The greatest concentrations appear along the eastern side of the Route 28 Corridor (Dulles Corner offices at the Dulles Airport Access and Toll Road; Electronic Data Systems (EDS) and the Renaissance Ramada Park at McLearen Road). At the intersection of Routes 50 and 28, the majority of development is located on the southern side of Route 50 and extends east and west of Route 28. Of the existing development, the great majority is in the combined categories of office and industrial use. In fact, much of the industrial development is developed in combination as industrial/flex use. As of January 1992, industrial, office and industrial/flex uses comprised 1,300 acres, 71 percent of total developed acres and 14.2 million total gross square feet of development. Major developments include Dulles Corner, Westfields, Lafayette Business Park, Sullyfield Business Park, EDS, Dulles Technology Park, and Avion.

Major public facilities include the county public safety facility to be located on 110 acres next to the southern and western boundary of Dulles Airport; Ellanor C. Lawrence Park, a natural preserve located along Route 28 north of Centreville and I-66; and the Sully historic site, located north of Route 50 along Route 28 adjacent to Dulles Airport. Other public facilities include the Floris Elementary School near the intersection of Centreville and West Ox Roads; a fire and rescue center in the same location and another on Walney Road just south of Route 50. Two former sewage treatment plants have been converted to other uses: Flatlick Treatment Plant is used as open space and a plant nursery operated by the Fairfax County Park Authority, and Cub Run Treatment Plant is used by the Department of Public Works and Environmental Services. Some public parkland associated with Environmental Quality Corridors (EQCs) has been dedicated in various locations throughout the Suburban Center, notably, in the Cub Run area south of Route 50 and surrounding the residential development in Floris.

Retail uses include the Sully Place, Sully Plaza and Sully Square shopping centers, community-serving facilities, located at the intersection of Centreville Road and Route 50. The Village Center at Dulles, in the McNair Farms planned development on Centreville Road near the DAAR, also contains a community-serving shopping center.

Copper Crossing, Kings Grant, Mountain View and Rogers Farm are single-family subdivisions developed with one-half and one acre lots in Floris (Land Unit C). Multifamily and townhouse residential units are located in Land Unit B and portions of Land Unit A.

A major factor in planning for the Dulles Suburban Center is the amount of land already zoned for higher intensity, nonresidential development. Approximately 4,800 acres or 76 percent of the study area is zoned for industrial and commercial uses. The remainder is zoned for residential and public facilities uses.

Planning History

Land in proximity to the Dulles Airport in Fairfax County has been planned for employment or industrial use since the Airport was envisioned in the late 1950s. Planning for the land adjacent to the Airport has been influenced primarily by the economic benefit of the direct relationship to the Airport, the excellent regional access and access potential and by the fact that residential uses are not

appropriate in areas impacted by aircraft noise. The configuration of the planned Dulles employment and industrial area has shifted over the years in response to changing aircraft noise contour projections; major planning elements, such as the "outer beltway" planned in 1970 as a north-south facility between Route 28 and Route 123; and changing needs projections for the type and extent of employment uses related to the Airport.

The late 1960s and early 1970s were a period of rapid development growth countywide. Up to 14,000 new residents were moving to the county each year and the western county was largely rural. In 1970, the first comprehensive plans for the Bull Run and Upper Potomac planning districts were adopted or adopted in principle. There was an emphasis in these plans on the potential for major employment opportunities, partly to help offset the cost of public facilities for residential development and because of federal government master planning to expand the airport facility and operations. Expanded aircraft noise contours had recently been developed by the Federal Aviation Administration (FAA), which included future supersonic transport (SST) operations. The new contour extended to an "outer beltway", planned in 1970 as a north-south cross-county highway following an alignment between Lees Corner Road and Stringfellow Road and joining the present Fairfax County Parkway alignment north of Franklin Farm which was included in the Bull Run and Upper Potomac plans. Residential use was determined to be not appropriate within noise impacted areas and expansion of the Dulles employment area eastward into this area was deemed to be appropriate.

In 1975, as a result of the PLUS program, the airport-oriented industrial use pattern was modified once again. The extensive nonresidential area planned north of Route 50 was reduced to an area generally west of Centreville Road. In the 1975 Plan, the nonresidential use planned south of Route 50, extended east of Route 28 to the Brookfield subdivision and south of Flatlick Run to Ellanor C. Lawrence Park. The "outer beltway" was removed from the Plan at this time.

The 1975 PLUS Plan recommendations for most of the Dulles Suburban Center were contained in a section of the Area III Plan called Areas Related to Dulles Airport and Access Road, which was divided into a northern sector and southern sector. The dividing line for these two sectors was Horse Pen Run. The uses planned for the northern sector were showplace development, including corporate headquarters, hotels, motels, convention centers and office buildings. Ancillary commercial services serving the primary employment uses were envisioned as part of the northern sector as well. In the southern sector more traditional industrial uses were planned, including light manufacturing, freight distribution facilities, warehousing, and office use. A golf course was planned in the southern sector to serve employees in the area and provide an open space amenity which would help to protect the Sully historic site. A variety of general policies were adopted in conjunction with these uses pertaining to: compatibility of industrial use with residential use; restriction of residential development in noise impacted areas; coordination among developments; circulation and access; addition of major public facilities, including use of the Dulles Airport Access Road (DAAR) for commuter traffic; and expansion of sewer capacity.

In 1982, in order to implement the Occoquan Basin Study recommendations, the county rezoned some land within the planned Dulles employment area from residential to an industrial zoning district where these uses were proposed in the Occoquan Basin study. This created a complete pattern of nonresidential zoning for the Dulles employment area in the Occoquan Basin (the area south of Horse Pen Run).

Update of the Comprehensive Plan

On February 25, 1991, the Board of Supervisors authorized a study of the Route 28 Tax District to result in recommended changes to the Comprehensive Plan. For the Route 28 Tax District Study, the Board of Supervisors appointed a 21-member task force composed of major landowners, representatives of businesses, the Town of Herndon, the Fairfax County Planning Commission, and citizen organizations. The Task Force and county staff worked together for over one year to identify planning issues and objectives and develop land use and transportation recommendations that would serve as the basis for a 20-year Plan. The following Plan text is largely a result of that effort.

CONCEPT FOR FUTURE DEVELOPMENT

The Dulles Suburban Center offers an opportunity and challenge to create a high quality, well conceived, integrated, and functional multiple use employment and residential sector. Vision, creativity, reason, and public-private cooperation can be rewarded by fashioning a model community characterized by an exemplary quality of life featuring an optimal mix of employment, housing, environmental protection, transportation service, and other services, all while significantly enhancing the tax base.

Dulles Airport, a major economic catalyst for the Northern Virginia area, is adjacent to the Dulles Suburban Center. Future development within the Suburban Center will benefit from the proximity of the Airport and emphasize national and international business and commercial endeavors; tourism and visitor services; major recreation and entertainment features; mixed commercial and residential areas in urban settings with compatible facilities and amenities; and industrial service areas required to support the Dulles Airport and suburban area, and the metropolitan region. A variety of housing outside the airport noise contours in the Dulles Suburban Center and adjacent Planning Districts will serve this Center. Mixed-use development is planned within the Innovation Center Transit Station Area adjacent to the Dulles Airport Access Road, with uses similar to but more intense than other parts of the Center. This higher intensity core is envisioned to be served by Metrorail. A second node of mixed-use development is planned in the Westfields area to create a focal point for residents and employees.

The planned roadway system recognizes Route 28 as a major arterial, designed to facilitate through traffic and limit direct access onto Route 28 at major intersections. Travel within the Dulles Suburban Center is envisioned to be served by interconnecting roadways and transit that will link major development areas within the Center and provide connections to regional transit systems, planned to include Metrorail, along the DAAR and I-66. Parking facilities would be planned near these transit and development nodes and increased transit ridership would be encouraged by limiting parking in those areas planned for the highest intensity development.

PLANNING ISSUES

To achieve the Concept for Future Development for the Dulles Suburban Center, a number of significant planning issues must be addressed. Identified issues include an imbalance between zoned development potential and transportation capacity; preserving the opportunity for alternative transportation modes, including rail; integrating residential development into the Center; providing for a broader range of uses and for uses that are compatible with surrounding residential neighborhoods; and accommodating the future growth of Dulles Airport and the proposed Annex to the Air and Space Museum. These issues are outlined below.

Development Potential and Transportation Imbalance

A central issue affecting planning in the Dulles Suburban Center is the imbalance between the zoned development potential of the area and the capacity of the 1991 Countywide Transportation Plan. Of the roughly 6,300 acres that make up the Suburban Center, approximately 4,800 acres are zoned for commercial or industrial development. As of January 1992, existing nonresidential development totaled approximately 15 million square feet of space. It is estimated that the planned roadway improvements for the area, which include 33 (one-way) lanes of road capacity, can accommodate a development level of approximately 34 million square feet and still maintain acceptable levels of service on the roadways in the area (Level of Service D/E as estimated by the Department of Transportation).

The estimated maximum amount of nonresidential development that could occur, given "stable" development, proffered intensities, and by-right zoning, is over 140 million gross square feet of space. Because land is already developed at densities of one-third to one-half the allowable zoning, it is unlikely that all parcels would develop or redevelop to the maximum zoning envelope. However, the likely amount of development to occur in the Route 28 area is well beyond any level that could be accommodated by the currently adopted 1991 Countywide Transportation Plan. This makes it essential to evaluate and plan for transportation alternatives including rail, bus transit systems, transportation demand management systems, and HOV-lanes, among others.

Given the existing development level of 15 million square feet, if approximately one million square feet of new space were built and occupied each year on average, the capacity of the planned road system will be adequate for the next 10-15 years based upon construction of the planned system. Therefore, the imbalance between land use and transportation will not be perceived by residents or workers in the area until there is considerably more development. However, the potential transportation demand suggests that methods and techniques for reducing impacts on the road system should be of the highest priority. It is reasonable to expect that expanded transit and other transportation alternatives, such as transportation demand strategies, must contribute significantly to meeting this demand. Land use strategies should also be directed at this issue. Such strategies include planning for uses which generate fewer peak-hour trips than office development, discouraging land use sprawl, and encouraging higher intensity multi-use "nodes of development" that are better served by transit and transit-friendly project planning.

Preservation of Options for Rail and Other Transit

The long-term imbalance between the currently planned roadway network and the transportation needs of the Dulles Suburban Center may require integration of a rail transit system. A critical planning element is the identification and reservation of rights-of-way to assure internal access, and interface with other systems. Other options include providing greater and more frequent bus service to and from the area; shuttle bus service between different nodes of development within and outside the Route 28 area; greater use of transportation demand management strategies; a transportation management association; and rail.

The development of the mixed-use nodes must also take into account the need to provide public transportation transfer facilities. Such facilities would provide locations for the transfer of passengers to and from various transportation modes, as for example, between automobiles and buses, carpools, or rail vehicles, or between pedestrians and multiple high-occupancy vehicle options. Specific locations of these points of transfer will also need to be identified as soon as possible in order that sufficient areas can be reserved and/or accommodated in the development process.

Integration of Residential Development

One of the principal goals outlined in the Policy Plan is to expand housing opportunities in or near employment centers as a way to minimize the impacts of commuters on county roads and to make public transit more feasible as a transportation alternative. Planning for a mixture of residential and nonresidential uses in the county's employment centers should also aid in expanding the opportunity for affordable housing and higher density residential development in areas that can be served by transit and can offer access to retail and other services. In each of the Suburban Centers identified on the county's Concept for Future Development Map, residential uses have been planned where there have been opportunities for residential development as evidenced by vacant land suitable for residential and mixed-use development and public facilities. In the Dulles Suburban Center there is also vacant land available and a desire for mixed-use and residential development. However, there are constraints on planning for residential uses due to airport noise impacts, the current structure of the Route 28 Tax District, and compatibility of residential uses with existing and planned industrial uses.

Residential development is currently constrained by the structure of the Route 28 Tax District legislation. While the current Tax District enabling legislation would not preclude residential development, it excludes residentially zoned or developed land from Tax District payments. Rezoning commercial or industrial property to a residential zoning category would have the affect of removing this rezoned property from the Tax District. The tax burden on other landowners of the Tax District, the county and the public would increase, thereby posing a threat to the ability of the district to generate revenues sufficient to repay the roadway improvement bonds. Given this situation, an option for residential use is only planned in this area with the stipulation that no rezoning to a residential category shall occur until a mechanism is established by the county or the Tax District legislation is amended to allow for contributions from residential development to permit residential development without increasing the financial burden on other tax district landowners or the county without their consent. Residential development should be encouraged in commercially zoned mixed-use developments where there would be no tax loss from inclusion of the residential component.

In planning for residential uses, consideration must also be given to providing for a quality living environment in an area that will primarily be developed in nonresidential uses and where access will be limited. Residential developments will need to provide for recreational and other amenities on-site and be adequately screened and buffered to mitigate noise, light and other nuisances generated by nonresidential uses. Further, development will need to be designed so that traffic associated with nonresidential uses, including trucks, will not, in general, be traveling through residential neighborhoods. One exception may be where higher-intensity residential uses are planned as part of a mixed-use project.

Compatibility with Existing Neighborhoods

Given the scale and amount of development that could potentially occur in the Dulles Suburban Center, it is important that this development not negatively impact the surrounding residential communities. The majority of the existing communities adjacent to the Dulles Suburban Center are of a low density residential nature comprised almost exclusively of single-family detached homes. In most cases, these communities are separated from the Dulles Suburban Center by major roadways, public parkland or environmental features such as stream valleys. However, it is important that adequate screening and buffering and access design measures be incorporated into new development to mitigate any adverse impacts from noise, headlight glare, and cut-through traffic on existing residential development. Two residential subdivisions within the Dulles Suburban

Center, Rockland Village (Land Unit E-4) and Dulles Meadows Mobile Home Park (Land Unit H), should also be protected through compatible development and/or design treatment on adjacent land.

Accommodating a Broader Range of Uses

The Dulles Suburban Center is of sufficient land area and diverse enough in character to accommodate a broad range of uses. There is still a considerable amount of vacant land located throughout the area that can serve as a resource for future development of a variety of uses. An issue to be addressed in this Plan is the manner in which these different types of uses are integrated with existing and proposed development. The flexibility to accommodate a broad range of land uses must be implemented in such a way as to ensure high quality, compatible development in the area.

Future Growth of Dulles Airport

Growth of Washington Dulles International Airport is a major factor affecting planning for the Dulles Suburban Center and the quality of life in western Fairfax County. The Airport serves as a regional economic focal point. It is one of the region's major employers. Passenger service and cargo operations are major contributors to the region's economic well being.

Planning must accommodate the potential increase in Airport operations. The Airport Master Plan calls for five runways (two additions) which, on completion will permit a three-fold increase in flight operations, to 750,000 flights per year. However, construction schedules depend on many factors, not yet fully resolved.

While airport employment may be expected to increase, and additional growth may be induced by the international character of the airport, fundamental estimates of future employment, commercial office facilities, and industrial services are uncertain. Factors that may influence the rate of growth within the next twenty to fifty years include changes in aviation technology, level of investment needed, and changes in land use in the region.

Airport operations present constraints to development in terms of allowable building heights within flight paths and noise impacts. Policies related to building heights may be found in the Area III Plan Overview in the section "Allowable Height of Structures in the Vicinity of Dulles Airport." To provide for a healthy living environment, Fairfax County has adopted a policy which states that new residential development should not occur in areas with projected aircraft noise exceeding DNL 60 dBA. Fairfax County has also established an "Airport Noise Impact Overlay District" (ANIOD) around Dulles Airport. Location of noise contours around Dulles Airport is calculated by a computer model of airport operations. Specific variables are:

- Aircraft type, which include noise emanation patterns.

- Aircraft operating sequences which include arrival/departure patterns and frequency of operation.
- Time of day, and a weighting function that adjusts for day or night operations.

The ANIOD boundaries shown on the 1986 and 1992 Comprehensive Plan map were adopted for planning purposes in 1983. These boundaries were based on data related to "Stage 2" aircraft, which generate relatively high noise levels, and on estimates of future flight operations that were developed in the late 1970s. Because of federal legislation requiring U.S. airlines to phase in a new generation of quieter aircraft (“Stage 3" aircraft), and because of changes in projected future aviation operations at Dulles Airport, in 1993 the Metropolitan Washington Airports Authority revised its

noise contour projections for the area around Dulles Airport. The updated noise contour lines are substantially smaller in geographic extent than the corresponding contours shown on the 1986 and 1992 Comprehensive Plan map. Plan policy recommends that new residential development not be located in areas with projected aircraft noise exposures exceeding DNL 60 dBA. Where new residential development does occur near Washington Dulles International Airport, disclosure measures should be provided.

Location of the Smithsonian Air and Space Museum Annex

Dulles Airport is the location of the Udvar-Hazy Center of the Smithsonian National Air and Space Museum. The facility is a significant regional, as well as national, tourist attraction that could help to shape future land use and development in this area. This facility could provide the impetus for additional motel/hotel growth in the area, as well as other cultural uses that might be associated with the Museum, or developed around the theme of flight and space travel. Such a facility may provide additional justification for public transit in the Route 28 Corridor. The desirability of this location in the Route 28 Corridor for uses of this type has been clearly demonstrated. Therefore, this type of tourist use should be strongly encouraged in the Dulles Suburban Center in conjunction with tourist related facilities, including the appropriate retail, transportation, and hotel facilities to deal with them.

MAJOR OBJECTIVES

The following are the major objectives for planning in the Dulles Suburban Center.

Land Use

1. Promote a high quality of life for those who work and reside in or proximate to the Dulles Suburban Center.

2. Support development that emphasizes local, national and international business and commercial endeavors; tourism and visitor services; major recreation and entertainment features; mixed commercial and residential areas in urban settings with compatible facilities and amenities; and industrial service areas required to support the Dulles Airport and the surrounding area.

3. Support developments at major employment sites that incorporate retail facilities, day care services, and cultural facilities, with amenities complementing a Suburban Center setting.

4. Minimize undesirable visual, auditory, and environmental impacts.

5. Encourage a variety of housing opportunities within and near the Dulles Suburban Center.

6. Provide a balance of land uses, protect environmental and heritage resources, and provide public facilities and transportation services.

7. Assure that planned residential uses at the periphery of the Tax District are compatible in density with the established residential communities.

8. Provide flexibility for economic enterprises attracted to the Dulles Airport area.

9. Encourage project planning that emphasizes transit-friendly design.

10. Provide affordable housing as part of all future residential development and encourage a variety of housing types and prices.

Transportation

11. Promulgate a comprehensive transportation program that serves local travel needs within the Dulles Suburban Center and interconnects effectively with a regional metropolitan transportation system, including transit facilities. Specifically, plan for a regional transportation network that will serve the expanded Dulles Airport facility and will not preclude mode options and transportation capabilities to serve additional terminals on the southern portion of the Airport, if such facilities are ever planned and developed. Include planning options for serving any facility such as the Udvar-Hazy Center of the National Air and Space Museum.

12. Incorporate a provision for rail transit, including right-of-way, station(s) and stops, into the design of the development once a general alignment for a rail transit system has been determined.

13. Employ advanced and evolving technologies to increase use of existing roadway capacity and to facilitate use of public transit. Increase the number of commuters in the Dulles Suburban Center using transportation modes other than the single occupant vehicle (e.g., various types of rail, buses, car pools, van pools and bicycling).

14. Feature a transportation demand management component with specific operational objectives and implementation plans to achieve those objectives. The program should result in a reduction in single-occupant vehicle travel through increased transit ridership (rail, buses, van pools, car pools) and non-motorized transportation (cycling, walking). Incentives should be provided to encourage cooperation and reward success.

15. Provide trails which link all focal areas, public parking sites, and major recreational and public facilities.

16. Achieve Level of Service D, if feasible, as a measure of roadway performance. Identify ways to achieve this objective in the long term.

17. Locate parking facilities to service roadway access points and regional transit access points, and reduce parking in focal areas with limited vehicle access.

Economic Development

18. Promote economic stability and generate sufficient revenue to retire Tax District bonds over the short-term and long-term including any bonds issued to cover additional phases of transportation improvements.

19. Provide sites and opportunities for viable enterprises with attractive and diverse employment opportunities to promote economic synergy.

20. Enhance Dulles as an international airport and assure that future land uses outside of the Airport will be compatible with planned Airport expansion.

21. Provide sites and opportunities for national, international and regional businesses and commercial operations in the Dulles Suburban Center; provide tourism and recreation opportunities located within the Center, with convenient access to regional sites to encourage visitors to travel to this area for business and/or pleasure.

Environment and Heritage Resources

22. Protect the environment, preserve natural resources and open space. Meet or exceed federal, state, and local standards for water quality, ambient air quality, and other environmental standards.

23. Identify, study and protect heritage resources from degradation and/or destruction by public or private action.

24. Protect environmental assets, including Environmental Quality Corridors (EQCs) and Resource Protection Areas (RPAs) within stream valley parks and private "open space" in fulfillment of the Greenway concept while encouraging compatible use by the public where feasible.

25. Protect the natural environment by assuring connectivity through the Center and between adjacent districts: Design stormwater detention systems that blend with and augment features of the natural environment and which contribute to the aesthetics of their sites.

Parks and Recreation

26. Ensure the provision of adequate parklands and recreational facilities to meet the needs of the Dulles Suburban Center workforce, residents and visitors. Incorporate active recreation facilities in conjunction with both nonresidential and residential development.

27. Preserve the integrity of existing and future public parklands and protect significant natural and cultural resources therein from impacts of off-site development.

28. Develop a Dulles Greenway system to provide non-vehicular access to recreational facilities, transit areas, and major tourist attractions. This Greenway system should afford passive recreation opportunities and provide linkages to the countywide and regional trails network.

IMPLEMENTATION

Based upon the identified issues and objectives for the Dulles Suburban Center, several implementation strategies are recommended. These strategies provide for a Plan that is responsive to short-term market conditions and long-term, countywide goals and maintains the viability of the Tax District financial structure. The components of this strategy include:

- A multi-jurisdictional analysis of the Route 28 Corridor in the near term to evaluate the levels and timing of transportation demand, right-of-way alternatives for possible rapid rail, light rail and/or elevated mass transit systems, location of transit station(s) and stops, land use refinements that could support these systems without increasing commercial and industrial intensities for the overall Dulles Suburban Center, the economic feasibility of

the alternative systems and the prerequisite implementation mechanisms needed to successfully employ each system.

- Measures to increase housing to satisfy a variety of housing needs within the Center without violating airport noise policy or reducing the tax base within the Tax District.

- Monitoring proposed changes in the Airport noise contours and their impacts on land use planning.

- A system to monitor and evaluate the relationship between development and the supporting transportation and infrastructure.

- A performance based strategy for assessing optional uses within a long-term program designed to phase necessary infrastructure and services through commitments of both the public and private sectors.

- Cooperative review by the public and private sectors of previously approved development plans. This review should be undertaken in areas designated for higher intensity mixed-use developments in order to accommodate any planned transit system. Early action is needed to accomplish revisions before development patterns are established that preclude changes or make changes prohibitively costly.

- Development of a system to permit transfer of density within the Tax District in order to meet planning objectives without an increase in the overall density.

- Development and implementation of ordinance changes to permit and enhance mixed-use development.

Enhanced Public Transportation Corridor

In the next 10-15 years, the planned roadway network capacity will be adequate to provide for an acceptable level of transportation service in the Dulles Suburban Center. In the long term, other transportation measures, such as more frequent bus service, transportation demand management strategies, rail or new technologies, will be needed to attempt to maintain a balance between land use and transportation. Action should be taken in the near future to ensure that future options are not precluded by development that occurs in the Dulles Suburban Center over the next 10-15 years. To ensure that this occurs, Route 28 should be designated as an Enhanced Public Transportation Corridor and a detailed analysis of alternative transportation modes should be undertaken. This analysis should evaluate:

- Bus transit options including feeder bus systems;

- Potential park and ride sites;

- Transit service and support facilities;

- The potential for designated HOV lanes;

- Transportation and transit demand management program options and their advantages and limitations in terms of ridership potential, costs and funding;

- The long-term potential and feasibility of rail and other transit options and rail alignment options; and

- Alternative rail routes tied into feeder bus routes, and park and ride sites.

A principal concern is to ensure that development occur in such a way as to not preclude future transit options, particularly the option of rail transit. It is important that studies be undertaken to identify appropriate transportation transit alternatives for the area and analyze how these alternatives might be funded and implemented. The sooner that possible transit corridors or potential rights-of-way can be identified, the greater the likelihood that land can be reserved for this future option.

The concept of an elevated guideway transit system should be examined as a potential transit system to serve the Dulles Suburban Center and surrounding area. This type of system has particular promise in that it offers the ability to link employment centers in the Dulles Suburban Center with nearby residential communities in western Fairfax and eastern Loudoun Counties. This transit system is envisioned as a way to connect future Metrorail lines in the Dulles and the I-66 corridors. An analysis of this transit system concept should be part of any evaluation of transit options for the Dulles Suburban Center.

This corridor analysis should be considered in relation to the Route 50, I-66, Dulles, and Centreville Road Corridor studies. A variety of methods to fund the Route 28 study should be explored so that this study can proceed as expeditiously as possible. Although these studies cannot all be conducted simultaneously, their work programs should be closely coordinated and phased in an appropriate and logical manner. Recommendations regarding rail alignment should be presented as a part of these studies. Once this corridor study is completed and accepted by the Board of Supervisors, the Comprehensive Plan for the Dulles Suburban Center should be reevaluated and amended as appropriate.

Residential Development in the Tax District

Residential development in portions of the Dulles Suburban Center would help create a greater mix of uses, provide more housing close to employment centers, and provide for a use that generates less peak-hour traffic than might occur if land is developed by-right under the existing zoning. However, under the current structure of the Tax District, residentially zoned properties are not subject to the tax surcharge that has been established for owners of nonresidential property to fund roadway improvements. Therefore, if properties are rezoned for residential use, the economic viability of the Tax District is affected. An option for residential use is only planned in this area with the stipulation that no rezoning to a residential category shall occur until a mechanism is established by the county, or the Tax District legislation is amended, to allow for contributions from residential development without increasing the financial burden on other Tax District landowners or the county without their consent.

The objectives of providing more housing in the Dulles Suburban Center and maintaining the viability of the Tax District financial structure are not necessarily irreconcilable. Further study is needed of the potential to tax residential development or other options, such as the establishment of escrow accounts and/or proffered contributions to a transportation fund for lands rezoned to residential use in order to prevent additional financial burdens on landowners in the Tax District or the county without their consent. This study should involve appropriate representation from both Fairfax and Loudoun Counties since the Tax District legislation and the issues involved apply to both jurisdictions.

A second factor which currently limits housing opportunities within the Tax District is the impact of airport noise. Much of the land within the Tax District located to the south of Dulles Airport is within the adopted DNL 60 dBA airport noise contour. Small areas of the Tax District located to the east of Dulles Airport are also within this contour. New residential development is not recommended in areas with projected aircraft noise exposures exceeding DNL 60 dBA.

Monitoring of Development Trends

While there is a long-term imbalance between development potential and the 1991 Countywide Transportation Plan, the system will adequately serve projected short-term development. The capacity of the roadway system could be effectively increased if new development results in a mix of uses that generate fewer peak-hour trips than the Plan baseline recommendations and if existing and future transportation demand strategies can increase the number of commuters using non-motorized transportation and public transit. Further, the requirements of the Federal Clean Air Act and new technologies could make alternatives to the automobile more feasible. Working patterns may also change through greater use of computers and telecommunications that will allow people to work at home or otherwise minimize commuter travel.

There are other potential changes which, if implemented, could have a significant impact on planning for the Dulles Suburban Center. These include the development of residential uses in the Tax District and the construction of the future Air and Space Museum Annex at Dulles Airport. In order to monitor levels and types of development, the success of transportation system management programs, and the capacity of the transportation system, a development monitoring system should be established. Such a system would establish a baseline level of development and would track new development by use, intensity and traffic-generating characteristics for the Dulles Suburban Center, within land units and highway corridors. The system should also track proffers for transportation demand systems and evaluate their effectiveness. The monitoring system would provide an "early warning" that road capacity is likely to be exceeded within a five to ten year period. This would allow for a reassessment of potential transportation and/or transportation demand management alternatives and technologies with sufficient lead time to plan and implement appropriate corrective measures.

A monitoring system would also allow for an on-going evaluation of the developing land use pattern given the land use options and flexibility built into the Plan. As optional and baseline land use recommendations are implemented, the character of some portions of the Suburban Center may change and the Plan should be revisited periodically to ensure that the changes occurring meet the planning objectives for the Dulles Suburban Center.

Transfer of Development Rights

One of the key land use objectives for the Dulles Suburban Center is to limit land use sprawl and concentrate development in nodes that can be better served by public transportation. To achieve this, it is recommended that development intensity be permanently transferred from land located within the Tax District where lower intensity development is planned, to areas identified in the Plan as "core" areas or mixed-use focal points where higher intensity development is recommended. When evaluating areas proposed for a transfer of density, priority should be given to those sites in the Suburban Center that can be dedicated to Fairfax County to meet public needs.

In order to facilitate the permanent transfer of density on a broad scale, it is necessary to adopt a Transfer of Development Rights (TDR) plan for the Route 28 area. However, as of 1992, enabling legislation in the State of Virginia to allow municipalities to use transfer of development rights has not been enacted. It is recommended that such legislation be sought. Following enactment, a more

detailed plan and program for implementing TDRs in the Dulles Suburban Center should be initiated by the Board of Supervisors. This plan should identify specific sending parcels and receiving areas.

Mixed-Use Ordinance

The land use plan for the Dulles Suburban Center recommends mixed use development for many of the land units. In some cases, the proposed mix of uses can be achieved by rezoning to the PDC or PDH categories of the county's Zoning Ordinance. In some cases, however, the Plan recommendation may be better facilitated by development of new mixed use districts. Once this Plan is adopted, the county should review and amend the Zoning Ordinance as appropriate to ensure that the Plan recommendations for mixed use can be achieved through rezoning.

Performance Based Strategy for Optional Uses

A performance based strategy for development in the Dulles Suburban Center is set forth below. This strategy provides the developer the opportunity for a broader range of uses if it can be clearly demonstrated that the uses will have lesser peak-hour impacts than would be generated if the site were developed at the baseline Plan recommendation and that the uses are compatible with adjacent development and of a high quality that will contribute to the image and economic vitality of the Dulles Suburban Center.

Under this approach, the Plan text for each land unit generally provides for a baseline recommendation and one or more optional uses. For each land unit, the baseline Plan recommendation generally provides for the continuation of existing uses and intensities. In some cases, these may be uses which primarily generate off-peak hour trips and these uses are planned to be retained. Where optional uses are specified, these uses generally generate fewer peak-hour trips, and can be developed compatibly with the surrounding area. Site-specific conditions may also apply to the baseline and optional use recommendations. Under the options, the overall intensity may vary as long as the identified performance criteria for traffic impacts and compatibility and site-specific conditions are met. Once a land use option is exercised through site plan or construction, any future redevelopment should also result in lesser impacts on peak-hour road capacity when compared to the baseline Plan recommendation.

With this strategy, both the county and the landowner benefit through the effective extension of capacity of the planned roadway network and a broader mix of uses creating a more desirable environment. The performance based approach is predicated on the understanding that this approach creates a forum for flexibility, negotiation and mutually beneficial development solutions. Development proposals must demonstrate that the proposed use will contribute to objectives for the Dulles Suburban Center.

The section below describes the elements for trip generation and compatibility which form the basis for the performance criteria. The actual performance criteria are contained in the section of the Plan titled "Performance Criteria for Optional Uses".

Trip Generation Elements

As described above, development potential in the Dulles Suburban Center is far in excess of the capacity of the planned road network. Allowing for optional uses that will generate fewer peak-hour traffic trips than generated by baseline development, or that will have a lesser peak-hour transportation impact, will effectively increase the capacity of the road network by spreading the trips throughout the day or by providing more of a balance between inbound and outbound trips.

Transportation Demand Management (TDM) programs that include innovative strategies to reduce single-occupancy vehicle use are appropriate and essential in the area.

In order for an optional use to be considered for approval, the applicant must demonstrate to the satisfaction of the Fairfax County Department of Transportation that the uses and intensities/densities proposed will result in lesser peak-hour traffic impacts than would be generated if the site were to develop at the maximum allowable intensity under the baseline recommendation of the Plan. The Fairfax County Department of Transportation and the Department of Planning and Zoning will provide the applicant guidelines for this demonstration.

Compatibility Elements

Compatibility issues relate to land uses, parcel consolidation, buffers, access and circulation, the mitigation of noise and other nuisances, design and landscaping.

Land Use

Proposed uses in the Dulles Suburban Center should be compatible with adjacent existing and planned uses in terms of height and scale. If nonresidential development occurs adjacent to residential uses, substantial landscaped buffers, screening, other landscape features, and/or other buffer treatments must be provided to mitigate adverse visual and noise impacts. Where residential development or mixed use development with a residential component is recommended as an optional use, projects should have sufficient acreage and number of units to create a high quality living environment through the provision of well-designed projects with recreational and other amenities for residents. Projects must provide affordable dwelling units.

Parcel Consolidation

Proposals for both baseline and optional uses should provide sufficient parcel consolidation to ensure that a development can meet all standards for setbacks, buffering and screening, open space, parking and recreational amenities; function in a well-designed, efficient manner; and not preclude the development of unconsolidated parcels in conformance with the Comprehensive Plan.

Buffers

Buffers between potentially incompatible land uses can occur at various scales - area-wide and land unit specific. At the area-wide scale, buffers can be land use types and/or intensities planned in positive relationships to one another. It is expected that transitions and buffers will occur so that the peripheral land uses of the Suburban Center are compatible in type and intensity to the adjoining areas to protect existing residential neighborhoods. Within individual land units, land use buffering should be encouraged wherever possible. Setbacks, berms, and vegetative or structural (walls and fences) screens are recommended as buffer treatments. Where appropriate, environmental quality corridors can be incorporated as natural buffer areas.

Access and Circulation

As a part of the process to consider optional uses, the applicant should demonstrate that adequate vehicular access and circulation can be accomplished. Likewise, it should be demonstrated that the optional use or uses help provide a circulation pattern that can efficiently

serve the area and will not result in adverse impacts to the surrounding area. If residential development is an optional use under consideration, the analysis of access and circulation should examine how the residential community will provide access to mass transit, public transportation, schools, parks and recreation facilities, and other community services.

Pedestrian circulation is an important issue that should be addressed through the development process. While the degree of pedestrian circulation provided on-site may vary, all optional uses should demonstrate that they will contribute to the implementation of a comprehensive network of trails and sidewalks for pedestrian circulation related to the Dulles Suburban Center.

Mitigation of Noise and Other Nuisances

Noise and light produced by an optional use must be examined to determine that it does not negatively impact adjacent residential or nonresidential uses. Measures such as landscape buffers, berms, walls and fences, pedestrian - scaled light poles, and the directing of light away from existing development should be used to mitigate any identified impacts.

Design and Landscaping Elements

Frequently in the land unit recommendations the term "high quality" is used to describe the character of development desired for the Dulles Suburban Center. For the purpose of evaluating development proposals, the quality of development for both baseline and optional uses will be defined in terms of the proposal's ability to achieve the "Design Guidelines for the Dulles Suburban Center," following the recommendations for Land Unit K.

PERFORMANCE CRITERIA FOR OPTIONAL USES

Within each of the land units of the Dulles Suburban Center, recommended land uses and intensities/densities are specified with a baseline Plan recommendation for development. In some cases, other uses that may be appropriate under certain conditions are also specified. These are called optional uses. Under the options, the overall intensity may generally vary as long as the identified performance criteria for traffic impacts, compatibility and site-specific conditions are met. In those instances where retail use is an option, a maximum intensity is specified to provide guidance as to the scale of retail development that is appropriate. Although not specifically referenced in each land unit, institutional uses and uses allowed by special permit and special exception may be considered as optional uses throughout the Dulles Suburban Center.

To develop property with an optional use, an applicant shall submit to the county a development proposal for a rezoning, special exception or special permit, as appropriate, with sufficient detail and information that fulfills the following items:

- Provides an analysis that demonstrates, to the satisfaction of the Fairfax County Department of Transportation, that the uses and intensities/densities proposed will result in lesser peak-hour traffic impacts than would be generated if the site were to develop at the maximum allowable intensity for the Plan baseline recommendation. In those land units where a range of intensities is specified (example: .50-1.0 FAR) the low end of the range should be used for calculating peak-hour trip equivalencies;

- Provides evidence that all compatibility elements are satisfied;

- Provides information that demonstrates that the proposed uses will contribute to the economic vitality of the area; and

- Provides excellence of design, as demonstrated by the development proposal's ability to respond to the Design Guidelines for the Dulles Suburban Center.

Development Elements: Transportation

In order for an optional use to be considered for approval, the applicant must meet the following applicable criteria for trip generation:

- For all options, the proposed use and intensity will have lesser peak-hour traffic impacts than would occur if the site were to be developed at the maximum intensity allowed in the baseline Plan recommendation. This should be demonstrated to the satisfaction of the Fairfax County Department of Transportation and the Department of Planning and Zoning.

- In assessing the peak-hour traffic impacts, conversion ratios for some common optional uses will be assessed according to the factors specified in the current edition of the Institution of Transportation Engineers (ITE) Manual. For example, the following conversion ratios, from the 4th edition of the ITE Manual, would be used in assessing the impacts of an optional use against a baseline recommendation of general office use. One million gross square feet of general office use will generate a level of afternoon outbound traffic that is similar to:

  1.4 million gross square feet of industrial flex space (a ratio of 1:1.4);

  3.0 million gross square feet of hotel space, (or 3700 rooms) (a ratio of 1:3.0);

  11.1 million gross square feet of townhouse space (or 6150 units) (a ratio of 1:11.1); or

  6.4 million gross square feet of multifamily space (or 6400 units) (a ratio of 1:6.4).

Compatibility Elements

Residential

Where residential development is to be considered as an option, the proposed development must:

- Be compatible with adjacent existing and planned development in terms of building heights, scale and density.

- Assure that development of adjacent lands can occur in a fashion which is compatible through joint application and/or demonstration that the zoning for adjacent lands would be compatible with the proposed use.

- Minimize human exposure to unhealthful levels of noise in accordance with the guidance provided by the Policy Plan under Environment Objective 4.

- Predominately residential projects as opposed to mixed-use projects should be approximately 10 acres in size to create a high quality living environment including recreational and other on-site amenities, at a minimum.

- Provide for affordable housing as outlined in the Plan text for the Dulles Suburban Center.

- Provide needed right-of-way for an integrated rail transit system for the Dulles Suburban Center, once a general alignment has been determined.

- If sites are identified, provide or participate in the provision of land, as may be practical, to achieve future school facility needs.

Nonresidential

Where nonresidential development is to be considered as an option, the proposed development must:

- Demonstrate that mitigation measures for noise, glare, lights and other nuisance aspects related to nonresidential development are adequate to ensure the proposed use will not adversely impact adjacent development. Mitigation measures may include the provision of berms and landscaping, limitation on hours of operation, limitation on the heights of light poles and other measures.

- Provide coordinated access.

- Provide for consolidation of appropriate parcels.

- Provide needed right-of-way for an integrated rail transit system for the Dulles Suburban Center, once a general alignment has been determined.

Design Elements

Where residential and nonresidential development is to be considered as an option, the proposed development must demonstrate high quality design. Design will be evaluated in terms of the ability of a development proposal to meet the Design Guidelines for the Dulles Suburban Center.

DULLES SUBURBAN CENTER AREA-WIDE RECOMMENDATIONS

LAND USE

The Plan for the Dulles Suburban Center recommends baseline and optional land uses to guide development in the area. To obtain the development flexibility afforded by the optional uses, applicants must demonstrate that all applicable performance criteria, as outlined in the implementation approach, are met. All land uses should reinforce the overall goals and objectives of the Plan in both their type and arrangement and should relate positively to the transportation system, as well as to one another, in order to achieve the highest collective development quality for the area.

Development should be consistent with the need to maintain and enhance the economic viability of the Route 28 Tax District. Where the Plan specifies residential use as an option, the appropriateness of this use is contingent upon a mechanism being established by the county to allow for contributions from residential development or the Tax District legislation being amended to allow for the taxing of residential development, to permit residential development without increasing the financial burden on other Tax District landowners or the county without their consent. This modification should involve the collective participation of property owners and local officials and community representatives from Loudoun and Fairfax Counties. Under no circumstances should residential use be considered for areas that are impacted by noise from Dulles Airport as set forth in the environment recommendations for Area III.

Existing stable neighborhoods within the Dulles Suburban Center that are planned for continued residential use should be preserved. Infill development in these areas should be of a compatible use, type and intensity in accordance with the guidance provided by the Policy Plan under Land Use Objectives 8 and 14.

Two residential communities, Rockland Village and Dulles Meadows are planned for future redevelopment. Until such time as a change in land use consistent with the Plan occurs, every effort should be made to protect these communities from any negative impacts caused by adjacent nonresidential development. Any attempts to consolidate Rockland Village for redevelopment should be in accordance with the Guidelines for Neighborhood Redevelopment as set forth in the Land Use section of the Policy Plan and should not result in new residential development in areas with projected aircraft noise exposures exceeding DNL 60 dBA.

Urban Design Principles

The principles of urban design to be followed in the Dulles Suburban Center are represented by four words: Function, Order, Identity and Appeal. Below is a brief discussion of these terms:

Function. If an area is designed well, it generally works well; it serves its purpose. Function can be achieved if:

- People can conduct their business easily, efficiently and safely, usually resulting in higher economic return; and

- The area has all the needed linkages (i.e., good access for pedestrians and vehicles) and has a clear and easily understood circulation system which reduces reliance on the auto.

Order. Good design is logical and well organized. It presents a coherent, clear image for the area. If an area has good order, it addresses the following:

- The average user can understand where he/she is and how to get around easily. There is a pattern or layout to the area that can be recognized and remembered; and

- The area displays visual unity that is manifested through a cohesive use of design elements. This cohesiveness is carried out through themes in landscaping, architecture, paving, building materials, and signage. This does not mean that everything looks the same, but that there are some common elements with variety when appropriate.

Identity. Good design helps an area take on a special character or strong image that provides a sense of place, or a pattern that makes it easy to distinguish it from other areas. An area with good identity exhibits the following characteristics:

- It uses landmarks or focal points to give the entire area a special focus or character (e.g., Dulles Airport);

- It strongly defines the area as a whole, as well as areas of special character, using gateways, edges, parks, buffers, and/or natural features as boundaries; and

- It uses special land use patterns, such as mixed-use districts, historic areas, and special shopping areas to achieve a separate identity for small areas within the larger area.

Appeal. Defining appeal is subjective, but an area which is visually appealing usually displays some of the following characteristics:

- The economic return of the area is high because people are attracted to it. The image of the area is positive, and human interaction is encouraged. A high level of activity exists, because users enjoy being there;

- A high degree of visual unity exists, not to the point of monotony, but with harmony of style, color and scale; and

- Visual diversity also exists, resulting from interesting differences and contrasts, such as unique building forms or skylines, views, or vistas.

Urban Design Objectives

The quality of the built and natural environment is an important consideration in planning for the Dulles Suburban Center because recent development has, for the most part, established a high standard for design. The intent of the following design objectives is to achieve the goal of protecting the existing high-quality built environment and the natural environment, while ensuring the compatibility of future development. Specific guidelines to be used in implementing these objectives are found in the section titled "Design Guidelines for the Dulles Suburban Center" after Land Unit K in the Suburban Center Plan text.

Design Objectives

1. Provide high-quality development that is functionally integrated, orderly, identifiable and attractive.

2. Create a positive and easily recognizable identity for the Dulles Suburban Center as a whole, and also for individual development units. Establish a sense of place and assist in orienting people to find their way to the area's workplaces, stores, and other facilities.

3. Design development to allow for pedestrian access between buildings, thus reducing reliance on the auto; provide open space for active and passive recreation, and visual relief; allow opportunities for shared parking; and generally make more efficient use of land, a valuable resource.

4. Create vehicular and pedestrian/non-motorized vehicle circulation systems that minimize conflicts between these different modes of travel, and that are clearly identified for easy use.

5. Protect adjacent residential neighborhoods from the impacts of new development by establishing landscaped buffers and other landscaping features, as well as maintaining high standards for architectural quality. Keep noise, glare and traffic intrusion at a minimum.

6. Protect and enhance environmental and heritage resources, integrating these features into development to the greatest extent possible.

7. Encourage parcel consolidation in order to realize the benefit of comprehensive urban design and circulation/access principles.

8. Create highway corridors that function well, are visually appealing, and provide clear linkages to the rest of the Dulles Suburban Center.

9. Promote a positive image for the Dulles Suburban Center in keeping with the high architectural and design standards for development of the area as a whole.

TRANSPORTATION

Transportation recommendations for the Dulles Suburban Center are shown on Figures 3 and 4. Travel within and through the Dulles Suburban Center is affected by land uses and transportation facilities in adjacent areas as well as throughout the Northern Virginia region. Therefore, the transportation network for this area is comprised of many elements which relate to the more extensive countywide facilities, services, and policies. Transportation planning must consider how state roads and other means of transit can be integrated with similar facilities inside the Dulles perimeters. In all future corridor and transportation studies particular attention should be paid to the possibility of rail transit.

General

The 1991 Fairfax County Transportation Plan for this area is largely dependent on completion of an improved highway network and extension of two radial rail transit lines. While these facilities are essential to satisfying future requirements, the capacity of the system is inadequate to accommodate at acceptable levels of service the transportation demand of planned and zoned development. This is particularly the case when demand projections rely principally on conventional

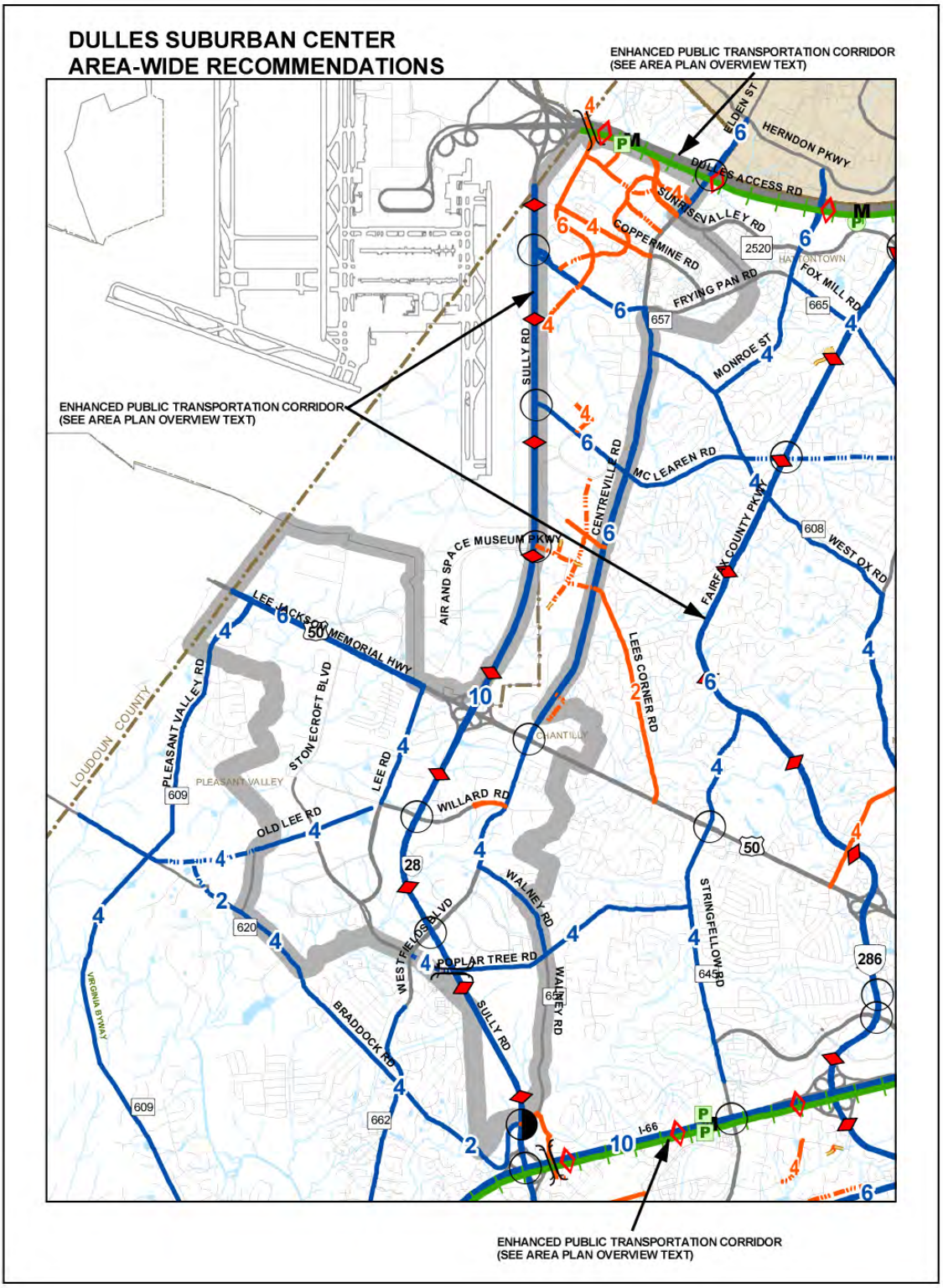
DULLES SUBURBAN CENTER
AREA-WIDE RECOMMENDATIONS
ENHANCED PUBLIC TRANSPORTATION CORRIDOR
(SEE AREA PLAN OVERVIEW TEXT)
ENHANCED PUBLIC TRANSPORTATION CORRIDOR
(SEE AREA PLAN OVERVIEW TEXT)
ENHANCED PUBLIC TRANSPORTATION CORRIDOR
(SEE AREA PLAN OVERVIEW TEXT)
ELDEN ST
HERNDON PKWY
DULLES ACCESS RD
SUNRISE VALLEY RD
COPPERMINE RD
FRYING PAN RD
FOX MILL RD
MONROE ST
SULLY RD
MC LEAREN RD
CENTREVILLE RD
FAIRFAX COUNTY PKWY
WEST OX RD
AIR AND SPACE MUSEUM PKWY
LEE JACKSON MEMORIAL HWY
LEES CORNER RD
LOUDOUN COUNTY
PLEASANT VALLEY RD
STONECROFT BLVD
LEE RD
WILLARD RD
OLD LEE RD
WALNEY RD
STRINGFELLOW RD
WESTFIELDS BLVD
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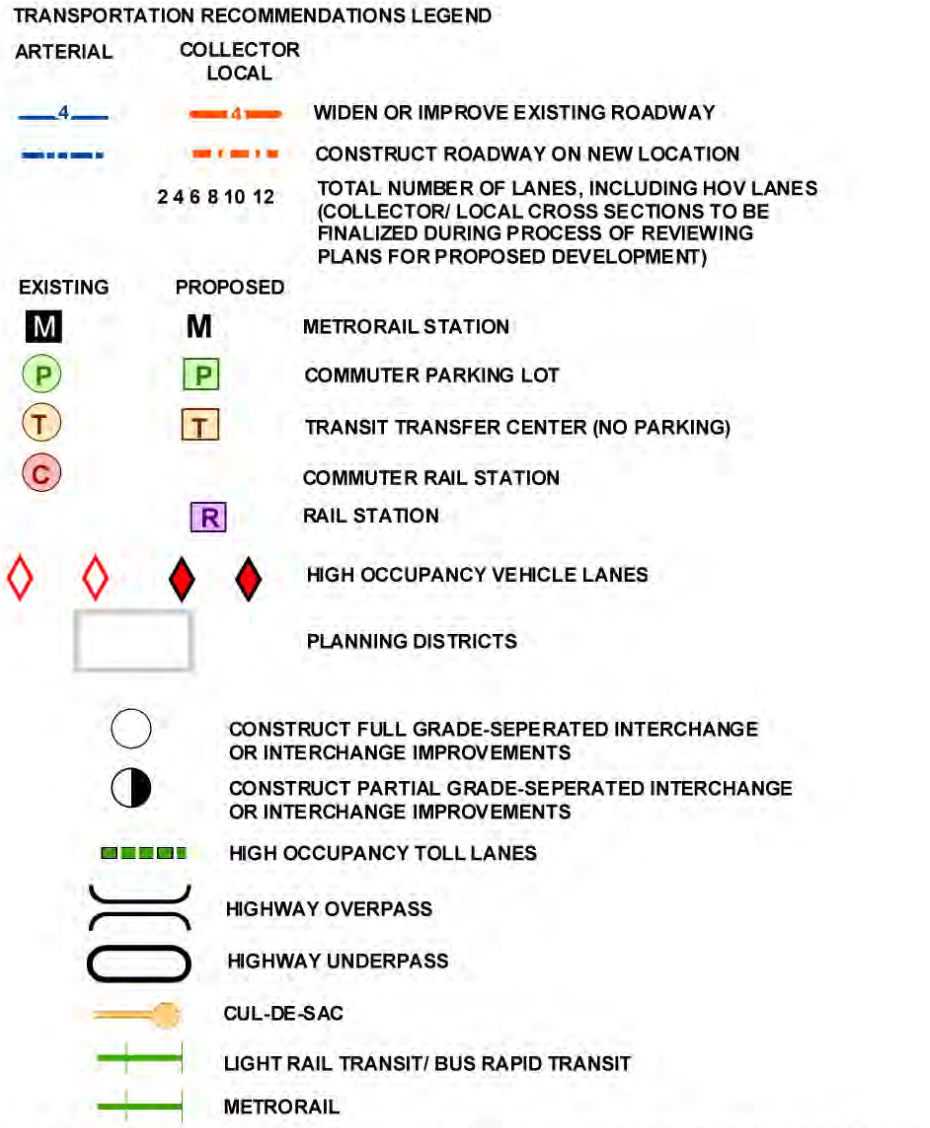
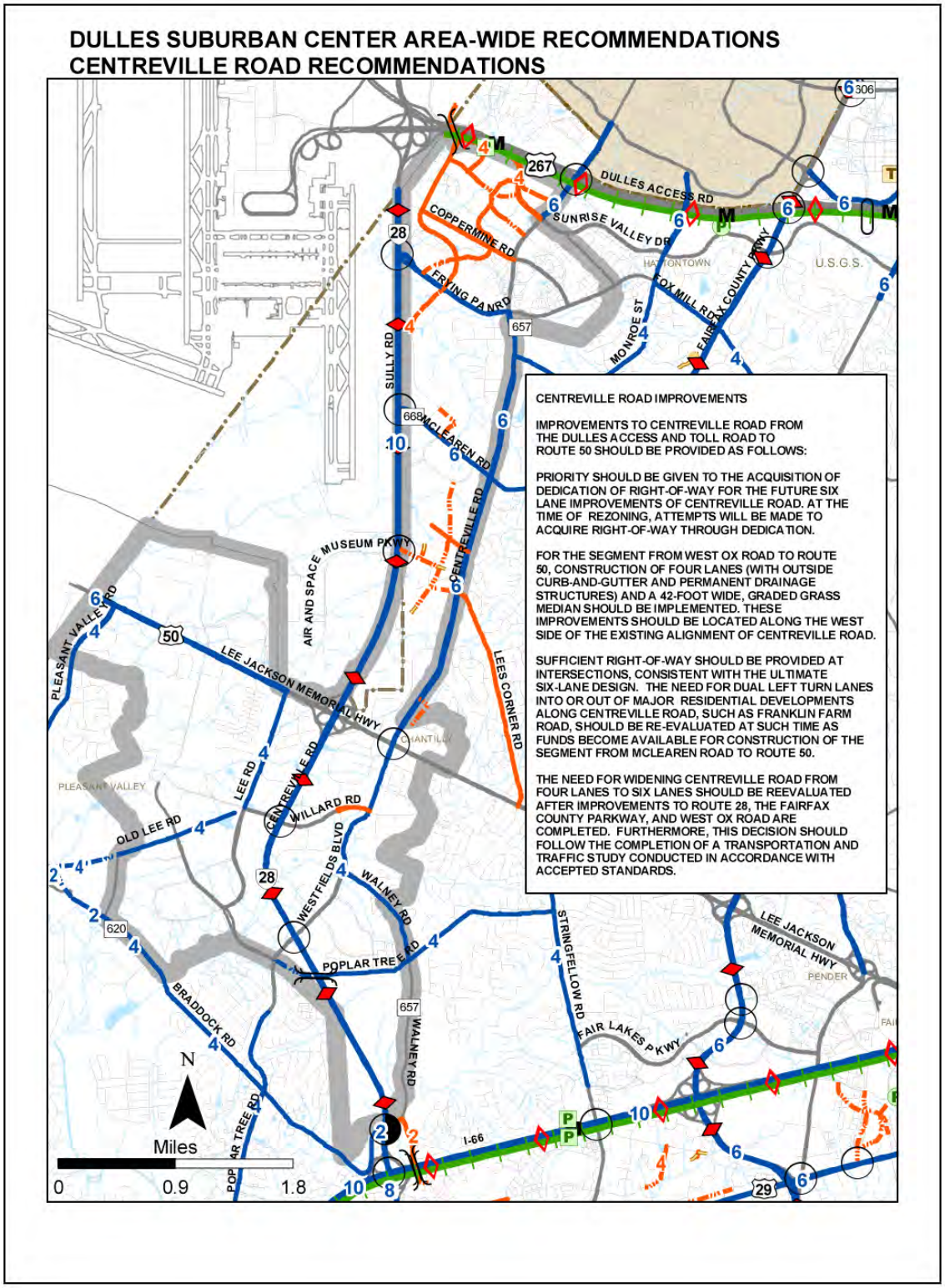
FIGURE 3



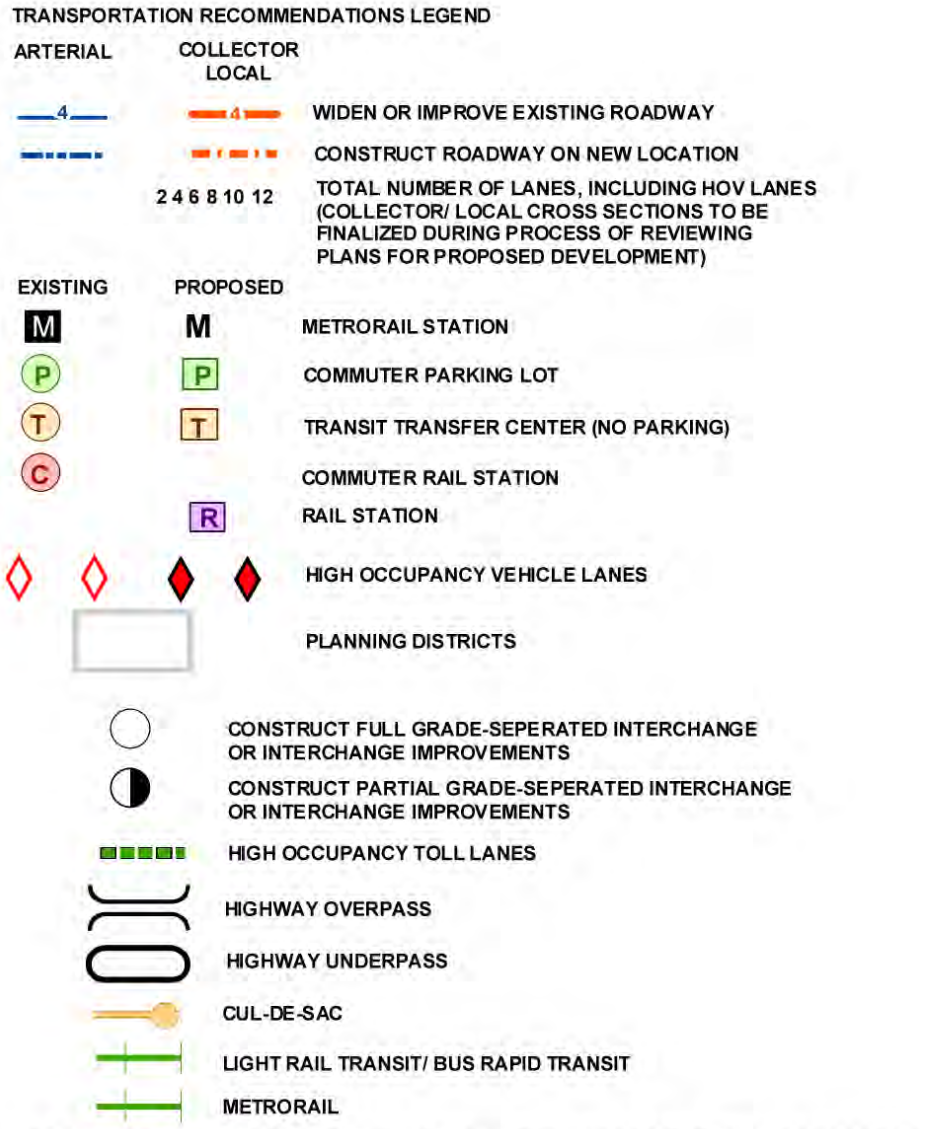
NOTE: IMPROVEMENTS TO ARTERIAL FACILITIES SUBJECT TO COMPLETION OF CORRIDOR STUDIES. SEE DISCUSSION IN AREA PLAN OVERVIEW TEXT. FINAL ALIGNMENTS SUBJECT TO COMPLETION OF APPROPRIATE ENGINEERING STUDIES.

HOV LANES TO BE CONSIDERED IN PROJECT DEVELOPMENT. HOV LANES TO BE PROVIDED IF WARRENTED BASED ON DEMAND FORECASTS AND CORRIDOR STUDY.

TRANSPORTATION RECOMMENDATIONS LEGEND **FIGURE 3**



CENTREVILLE ROAD RECOMMENDATIONS **FIGURE 4**



NOTE: IMPROVEMENTS TO ARTERIAL FACILITIES SUBJECT TO COMPLETION OF CORRIDOR STUDIES. SEE DISCUSSION IN AREA PLAN OVERVIEW TEXT. FINAL ALIGNMENTS SUBJECT TO COMPLETION OF APPROPRIATE ENGINEERING STUDIES.

HOV LANES TO BE CONSIDERED IN PROJECT DEVELOPMENT. HOV LANES TO BE PROVIDED IF WARRENTED BASED ON DEMAND FORECASTS AND CORRIDOR STUDY.

TRANSPORTATION RECOMMENDATIONS LEGEND **FIGURE 4**

and historical suburban trip generation rates that reflect a high percentage of single occupant vehicle (SOV) travel. Therefore, to fulfill quality of life and economic development objectives, it is essential to fashion a transportation system that can support the likely level of demand that will be generated by the improved pattern of transit-friendly land uses envisioned.

Special Requirements

1. A regional corridor analysis should evaluate the most promising systems now available, identify feasible routes and specific station sites for mass transit facilities, and estimate approximate system costs.

2. Public and private commitments essential for right-of-way acquisition and project design must be identified. Redesign of proffered development plans at already approved intensities should be encouraged and undertaken on a voluntary, no-fee, cooperative basis as a measure of public and private commitment.

3. A monitoring system is needed to evaluate actual and projected transportation demand against existing capacity and programmed expansion. Part of the monitoring system should be a triggering mechanism that will signal the need for additional capacity or other options to keep demand and capacity synchronized.

4. Procurement and/or preservation of right-of-way and station sites should be initiated in accordance with the Plan through the development process, once a general alignment for a rail transit system has been determined.

5. Maintenance facilities may be required for an integrated transit system. Such facilities should be designed to be compatible with existing and planned land use in the vicinity by using such techniques as buffering and screening.

6. A ring road on the Dulles Airport property should be considered as part of the master plan in order to provide the opportunity for more than one potential access point to the future Smithsonian Air and Space Museum Annex. This will help mitigate potential traffic congestion in adjacent areas and on Route 28.

7. Bus service linking residential, commercial and employment areas should be provided throughout the day to encourage residents and the workforce to shop and do business via transit.

Concept

The transportation system proposed for the Dulles Suburban Center should have the following characteristics:

- Be multi-modal in nature, employing an appropriate mix of rail, light rail, and buses;

- Be phased to provide necessary capacity as demand increases;

- Provide area transportation within the Dulles Suburban Center; linkage to adjacent employment and residential sectors; and ties to the radial system connecting to more distant destinations via connections to other roadway and transit facilities;

- Incorporate technological advances which facilitate transportation system management in order to obtain the most effective use of available capacity; and

- Feature an effective transportation demand management program that will encourage public-private cooperation in activities that reduce overall demand on the system.

Potential Transportation Strategies

The following text discusses possible strategies to implement the transportation concept. Effectiveness of the transportation plan requires some policy changes and amendments to county ordinances and regulations to allow Fairfax County to benefit from successful transportation programs employed by other comparable jurisdictions around the nation.

Implementation of this transportation plan should begin at once with authorization of a Route 28 corridor analysis conducted in conjunction with adjacent jurisdictions along the corridor. The analysis should be designed to identify means of adapting these concepts to the corridor, to evaluate the economic feasibility of employing the systems proposed, to lay a foundation for creating a phasing mechanism to relate demand to capacity, and to outline a procedure for effectively monitoring plan implementation.

Phased Multi-Modal System

The current and programmed capacity of the 1991 Transportation Plan provides adequate capacity to accommodate projected growth for up to 20 years. The Transportation Plan has limited capability for expanding roadway capacity without extensive and community disruptive land acquisition and/or significant change in travel behavior. Therefore, it is essential to evaluate potential revisions to the Transportation Plan to accommodate projected demand.

Construction of new transportation capacity should be triggered by projected demand in a timely manner to allow infrastructure to keep pace with demand. Because the highway network serving the Dulles Suburban Center will likely become inadequate over time, other transportation modes and measures will be needed to meet demand. Increased reliance must be placed on mass transit (bus, rail, light rail), HOV, and transportation demand management. The ultimate system must serve local community transportation needs, serve employment locations throughout the Dulles Suburban Center, as well as provide connections to the Metro transit system serving the greater metropolitan area.

Evolving Technology

The numerous evolving technologies for moving people should be closely monitored for potential efficient and cost effective adaptation within the Dulles Suburban Center. In view of the significant commitment made by the federal government to transit and the Intelligent Vehicle Highway System (IVHS) in the adopted Intermodal Surface Transportation Efficiency Act of 1991, serious effort must be expended to secure federal funding for transportation and land use studies and implementation programs authorized by the Act. Many of these measures could expedite traffic flow for both transit and automobile.

Transportation Demand Management (TDM)

Most transportation demand management programs require behavior modification on the part of some of the commuter population. TDM programs are aided most significantly by making available clean, reliable, affordable alternatives.

Current rideshare matching programs can be improved and expanded. Evaluation should be based on results. Car pool, van pool, and bus pool ridership can be enhanced by an appropriate mix of rideshare incentives and single-occupant vehicle (SOV) disincentives. Incentives include preferential treatment by employers, e.g. reserved parking, flextime, fare subsidies, and guaranteed ride home. Disincentives for SOV commuting may include paid or taxed parking and congestion pricing. Employers may also be offered incentives through reduced capital costs stemming from reduced parking requirements.

Improved project planning can also reduce travel demand. Affordable housing integrated with or proximate to employment is a significant and much needed measure. Longer distance commuters can benefit from transit-friendly project design. All employees can benefit from improved pedestrian-oriented urban design that features clustered office buildings and retail, service, and leisure amenities.

By the time additional transportation capacity is needed, active encouragement of telecommuting in the work place could also greatly reduce travel demand. The federal and state governments are setting a good example that Fairfax County should emulate for its own employees and encourage in the private sector.

Policies and Regulations

There are a multitude of actions in this area that could aid travel in the county. Some of these are:

1. Adoption of a Transit Zone District in the Zoning Ordinance to provide a new classification for areas within a one-half mile radius of a transit station. Increased intensity in mixed-use developments are needed here to make mass transit more economically viable. An associated ordinance equitably framed to permit density transfer from more distant parcels to the Transit Zone would help achieve the preferred pattern of land use. The objective of increased density around transit stations and reduced intensity between stations might also be achieved under the proffer system without new enabling legislation but is more cumbersome.

2. Parking regulations need further amendment. Consideration might be given to making a parking maximum out of today's minimum parking requirements as has been done elsewhere. Permanent parking reductions should be permitted for binding TDM commitments and for airport-oriented hotels and similar tourist-oriented enterprises.

Transit Guideway System

In order to meet the transportation demands that are anticipated for the Dulles Suburban Center and to address the imbalance between the zoned development potential of the area and the planned roadway capacity, a fixed-guideway transit system is recommended for consideration. An illustrative fixed-guideway transit system is shown on Figure 5. This illustration depicting various route options is provided as a basis for inclusion in the recommended Route 28 corridor analysis. A station should be considered at the Smithsonian Air and Space Museum Annex during the detailed

corridor analysis associated with this system. Dedication of right-of-way for such a system should be sought once a more specific alignment for such a system has been determined. In order to serve a greater number of people, this system could extend beyond the boundaries of the Dulles Suburban Center and Fairfax County. The regional aspects of this transit system should be incorporated into any future consideration of the feasibility of this proposal.

ENVIRONMENT

The western quarter of Fairfax County, including the entire Dulles Suburban Center, is located within a geologic feature known as the Culpeper Basin, an ideal landform for a major airport. The area is characterized by relatively level terrain, sluggish streams in broad, shallow floodplains and siltstone and sandstone bedrock located at or near the surface. Given the absence of mountain barriers or urban high-rises, the environment for aviation is almost ideal. It may be said that the geology of the Dulles Suburban Center area, which is also the cause of the area's environmental constraints, including broad floodplains, poorly drained wetland areas and shallow soils, also provides an ideal site for the most significant land use determinant in the Suburban Center, the Airport itself.

Within the Dulles Suburban Center, airport noise and environmental quality corridors (EQC) are the primary environmental constraints to development. The floodplain areas and areas of freshwater wetlands, which account for most of the environmental quality corridor areas in the Dulles Suburban Center, are the primary environmental resources which should be protected and incorporated into the development pattern. The Chesapeake Bay Preservation Ordinance should not have a significant impact on planning within this area. The Ordinance's Resource Protection Areas in which development would be restricted are contained within the EQC boundaries.

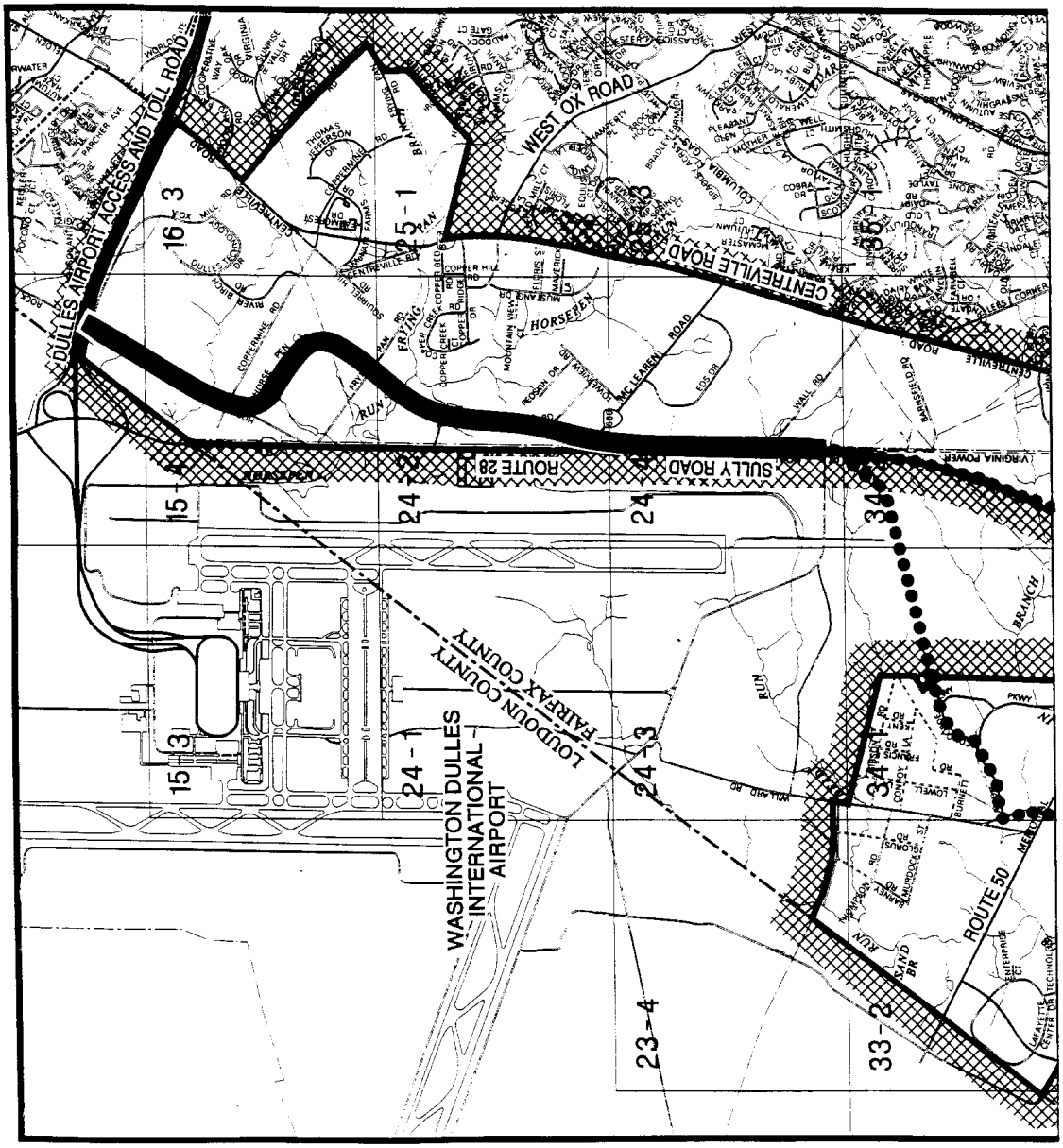
Environmental Quality Corridors

Most of the environmentally sensitive land within the Dulles Suburban Center is included within the Cub Run, Flatlick Branch, Frying Pan Branch, Cain Branch and Horse Pen Run Stream Valley Environmental Quality Corridors. One objective contained in the Policy Plan is to "Identify, protect and enhance an integrated network of ecologically valuable land and surface waters for present and future residents of Fairfax County." Policy A under this objective reads "For ecological resource conservations, identify, protect and restore an Environmental Quality Corridor system (EQC)."

Because most of the land within the Dulles Suburban Center is characterized by low relief, the stream valleys have broad floodplains and poorly drained wetland areas. Areas of 15 percent slope are uncommon. In general, the boundary of the floodplain is also the boundary of the EQC. Much of the wetland area is also located within the floodplains. There are also areas of isolated wetlands which do not qualify as components of the EQC system because they are not directly connected to a stream valley. Nevertheless, these isolated wetland areas, which are common south of the Airport, constrain development because they are subject to the requirements of the Federal Clean Water Act. Activities that result in destruction of these wetlands are regulated by the United States Army Corps of Engineers and the Environmental Protection Agency.

Airport Noise

Much of the Dulles Suburban Center is included within the Airport Noise Impact Overlay District (ANIOD) of the Zoning Ordinance. The ANIOD was established to ensure the achievement


DULLES AIRPORT ACCESS AND TOLL ROAD
WEST OX ROAD
CENTREVILLE ROAD
SULLY ROAD
ROUTE 28
ROUTE 50
WASHINGTON DULLES INTERNATIONAL AIRPORT
LOUDOUN COUNTY
FAIRFAX COUNTY
16 - 3
25 - 1
15 - 4
24 - 2
24 - 1
24 - 3
34 - 4
34 - 3
15 - 3
23 - 4
33 - 2

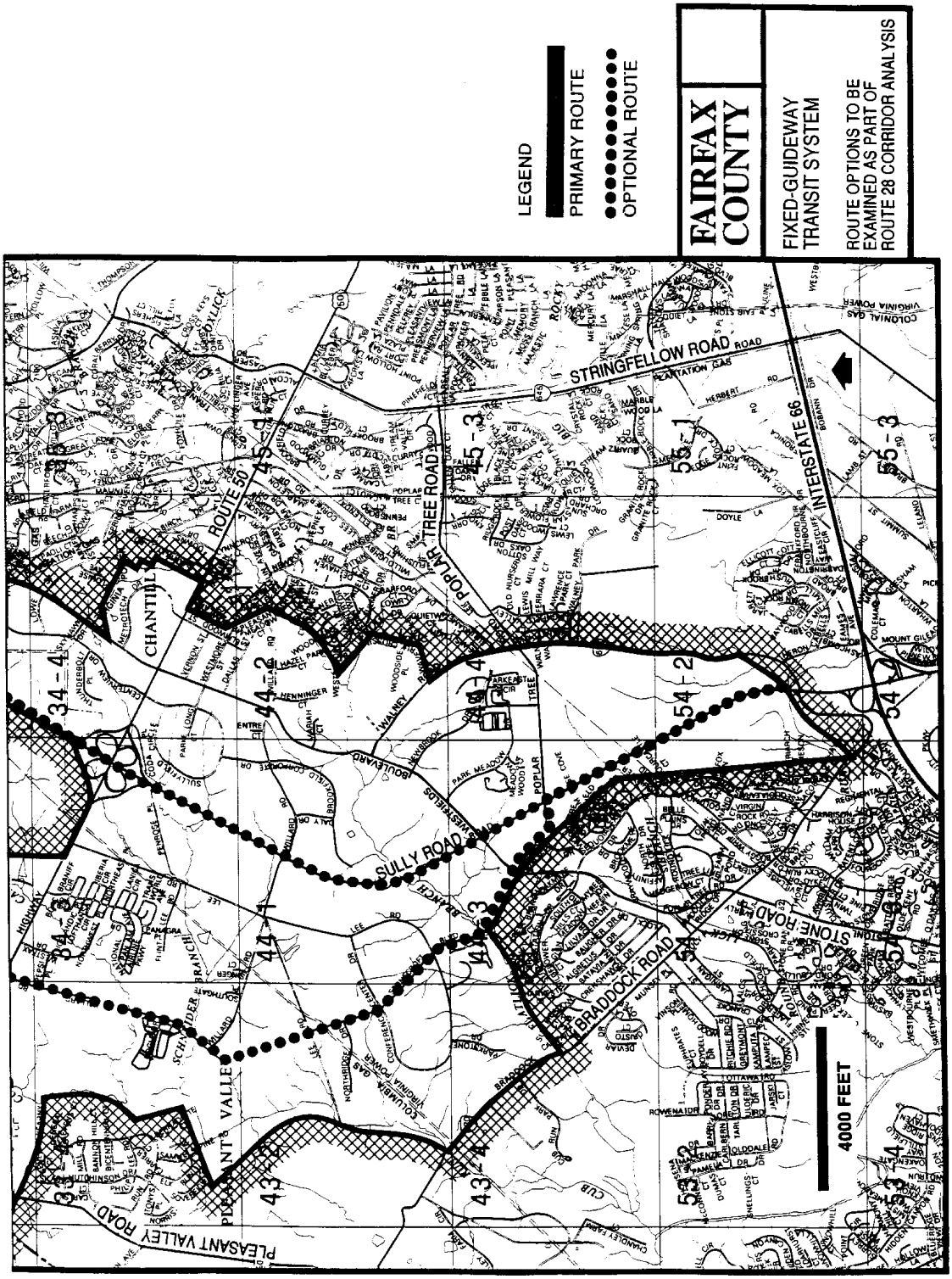
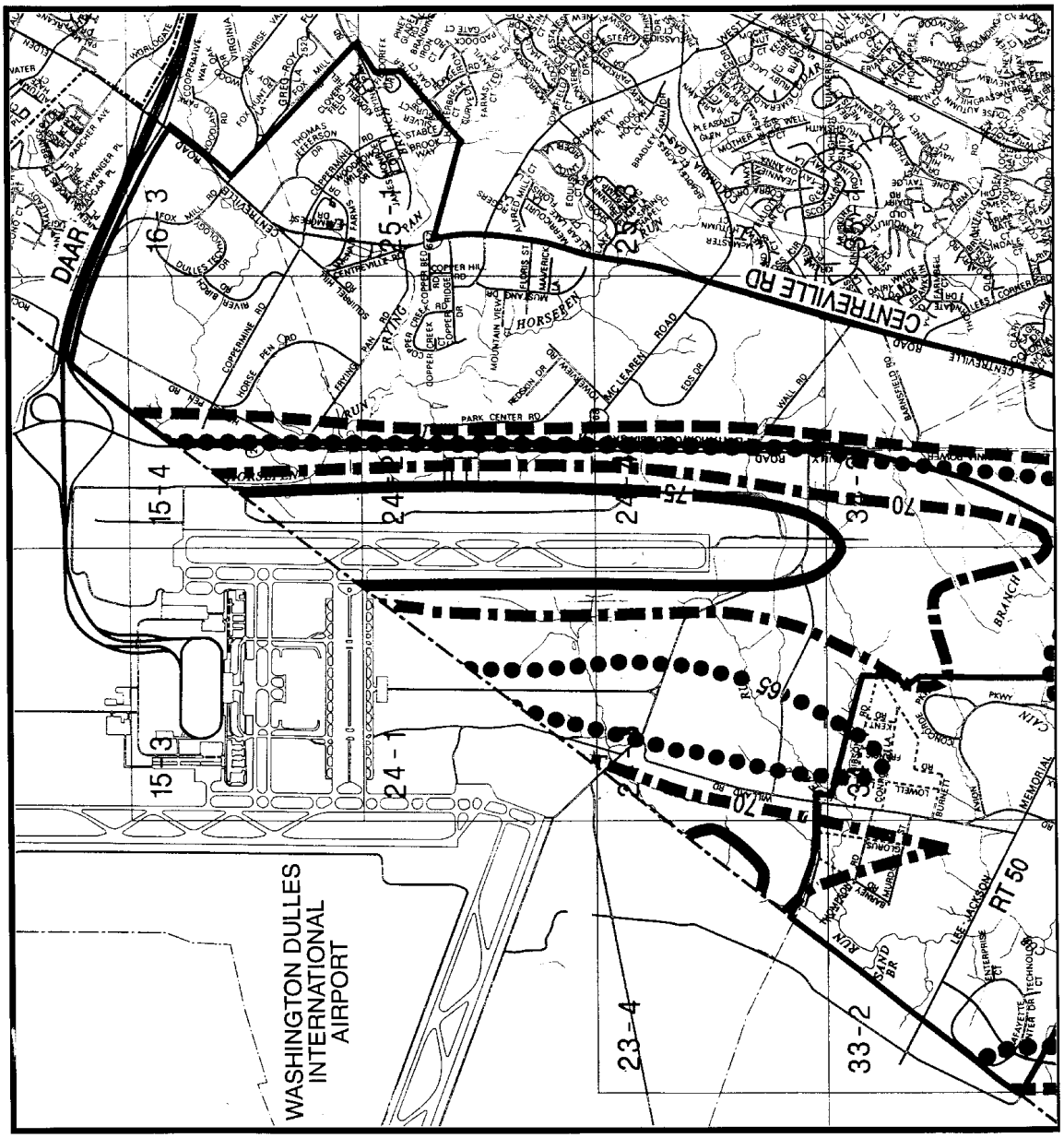

LEGEND
PRIMARY ROUTE
OPTIONAL ROUTE
FAIRFAX COUNTY
FIXED-GUIDEWAY TRANSIT SYSTEM
ROUTE OPTIONS TO BE EXAMINED AS PART OF ROUTE 28 CORRIDOR ANALYSIS
STRINGFELLOW ROAD
POPLAR TREE ROAD
ROUTE 50
INTERSTATE 66
SULLY ROAD
BRADDOCK ROAD
PLEASANT VALLEY ROAD
CHANTILLY
4000 FEET

FIGURE 5


WASHINGTON DULLES
INTERNATIONAL
AIRPORT
DAAR
CENTREVILLE RD
PARK CENTER RD
HORSEPEN
RT 50
LEE JACKSON
MEMORIAL
BRANCH
15-3
15-4
16-3
24-1
24-2
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33-2
23-4
70
75
65

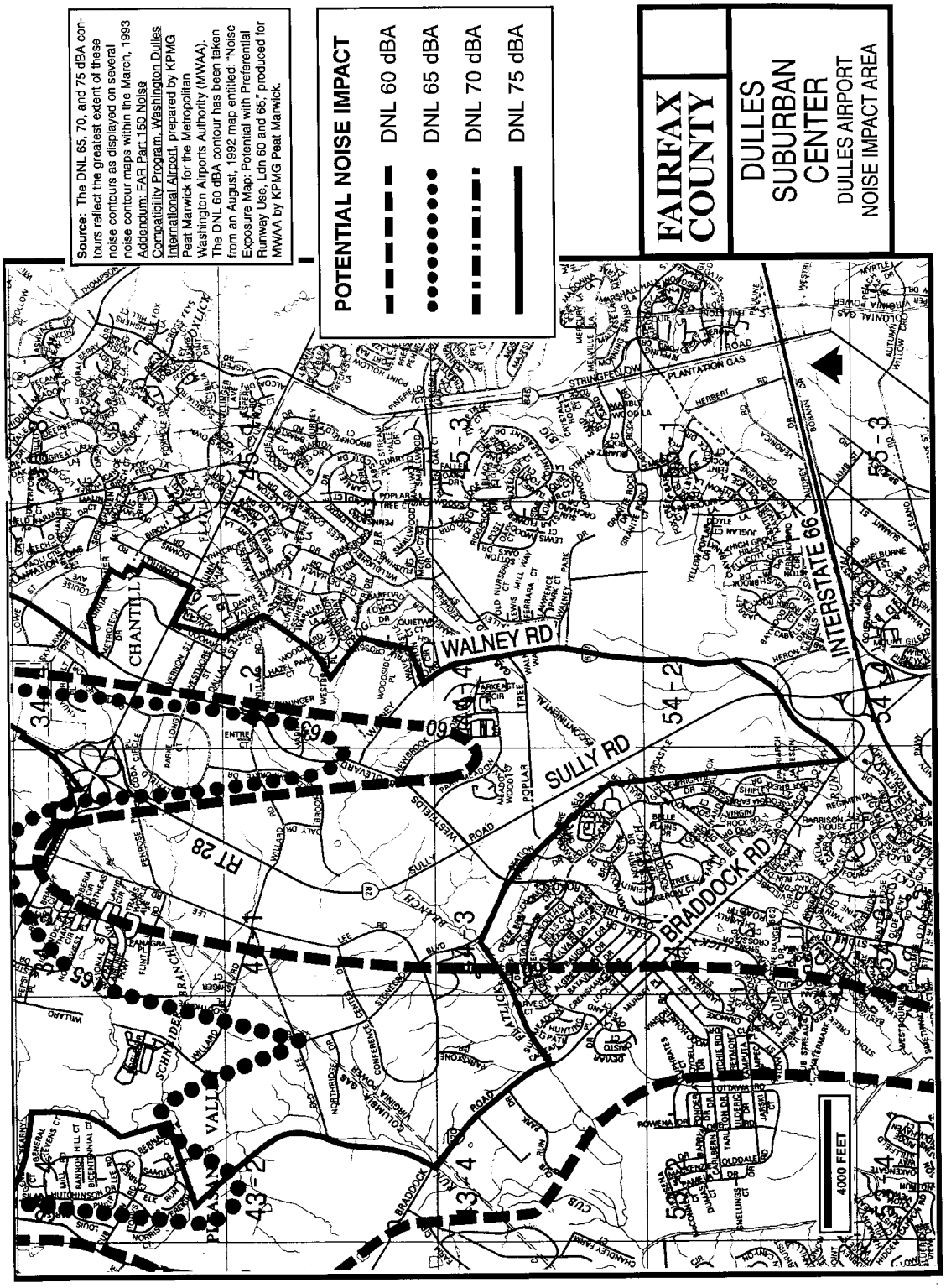

Source: The DNL 65, 70, and 75 dBA contours reflect the greatest extent of these noise contours as displayed on several noise contour maps within the March, 1993 Addendum: FAR Part 150 Noise Compatibility Program, Washington Dulles International Airport, prepared by KPMG Peat Marwick for the Metropolitan Washington Airports Authority (MWAA). The DNL 60 dBA contour has been taken from an August, 1992 map entitled: "Noise Exposure Map: Potential with Preferential Runway Use, Ldn 60 and 65," produced for MWAA by KPMG Peat Marwick.
POTENTIAL NOISE IMPACT
DNL 60 dBA
DNL 65 dBA
DNL 70 dBA
DNL 75 dBA
FAIRFAX COUNTY
DULLES SUBURBAN CENTER
DULLES AIRPORT NOISE IMPACT AREA
WALNEY RD
SULLY RD
BRADDOCK RD
INTERSTATE 66
RT 28
CHANTILLY
4000 FEET

FIGURE 6

of interior noise guidelines suggested within federal noise compatibility documents for residential and other uses that are constructed within ANIOD and to prohibit residential and certain other noise sensitive uses from areas subject to particularly severe impacts from aircraft noise. While new residential development is permitted within ANIOD, such development is not recommended in areas with projected aircraft noise exposures exceeding DNL 60 dBA. Where new residential development does occur near Washington Dulles International Airport, disclosure measures should be provided. Figure 6 presents a map of the Dulles Airport noise contours as they relate to the boundaries of the Dulles Suburban Center. The DNL 65 dBA, DNL 70 dBA, and DNL 75 dBA contours reflect the greatest extent of these contours as displayed on several noise contour maps within the March, 1993 Addendum: FAR Part 150 Noise Compatibility Program, Washington Dulles International Airport prepared for the Metropolitan Washington Airports Authority (MWAA). The DNL 60 dBA contour was taken from the long-term potential DNL 60 dBA contour map provided to the county by MWAA.

A more extensive discussion of noise compatibility planning and Dulles Airport noise impacts is contained in the Area Plan Overview for Area III under the heading "Land Use Planning Within the Dulles Airport Noise Impact Area."

Additional area-wide environmental recommendations are as follows:

1. Preserve the Horse Pen Run and Frying Pan Branch Stream Valleys through dedication to, or acquisition by, the Fairfax County Park Authority.

2. Water quality recommendations presented at the beginning of the Area III section of the Plan should be applied to those lands within the Occoquan Basin.

3. The clustering of development, where compatible, is strongly advised because it increases open space and has a beneficial effect on water quality in the Occoquan Basin.

4. Aircraft noise mitigation recommendations presented at the beginning of the Area III section of the Plan should be applied to those lands within the Dulles Airport Noise Impact Area.

5. Highway noise mitigation should be provided for noise-sensitive land uses to ensure a healthful living and working environment in which speech and activity interference is minimized in both interior and exterior areas.

HERITAGE RESOURCES

The Dulles Suburban Center contains both known and potential heritage resources. A list of those heritage resources included in Fairfax County's Inventory of Historic Sites is listed on Figure 7. Maps of those resources are shown in the Bull Run Planning District on Figure 5 and the Upper Potomac Planning District on Figures 5 and 6. The Inventory is open-ended and continues to grow. For information about these and other historic sites, consult the Fairfax County Department of Planning and Zoning.

There are numerous heritage resources in this sector including standing structures as well as both prehistoric and historic archaeological sites. The Horse Pen Run drainage area has been occupied almost continuously since 8,000 B.C.

FIGURE 7
INVENTORY OF HISTORIC SITES
DULLES SUBURBAN CENTER
(Inventory as of 2013)

Name	Location	Planning Sector	Parcel Number	Date
Bailey House*	13825 Sunrise Valley Drive Herndon	UP6	15-4 ((2)) 15A	c. 1903
Bowman Store* N, V	2628 Centreville Road Herndon	UP6	25-1 ((1)) 13	c. 1893
Cabell's Mill	5235 Walney Road Centreville	BR3	54-2 ((1)) 2	c. 1800
Cabell's Mill Miller's House/Middlegate	5235 Walney Road Centreville	BR3	54-2 ((1)) 2	c. 1800
Floris Colored School, New *	2525 Squirrel Hill Road Herndon	UP4	15-4 ((1)) 32	1932
Floris Presbyterian Church	2472 Centreville Road Herndon	UP6	16-3 ((1)) 7	1906
Hutchison, John, House	4201 Pleasant Valley Road Chantilly	BR2	33-2 ((11)) 300	c. 1757-1785
Hutchison, John, Cemetery	4201 Pleasant Valley Road Chantilly	BR2	33-2 ((11))	c. 1757
Hutchison, Silas, Saw and Grist Mill Dam and Ruins	15012 Old Lee Road Chantilly	BR2	43-2 ((1)) 1	c. 1852-1862
Keyes House*	2516 Squirrel Hill Road Herndon	UP7	15-4 ((1)) 28	1884/1885
Manassas Gap Railroad Independent Line*	Western corner of county at Bull Run	BR3	52-3 ((1)) 3	1854-1862
Manassas Gap Railroad Loudoun Branch*	3650 Historic Sully Way Chantilly	UP6	34-2 ((1)) 14	1854-1862
Middleton, John, Farm*	13801 Frying Pan Road Herndon	UP6	24-2 ((1)) 1	1871

FIGURE 7
INVENTORY OF HISTORIC SITES
DULLES SUBURBAN CENTER
(Inventory as of 2013)
(continued)

Name	Location	Planning Sector	Parcel Number	Date
Mosby's Rock	2525 Squirrel Hill Road Herndon	UP6	15-4 ((1)) 32	Significant 1863-1865
Murphy, Hazel, Farm*	13900 Frying Pan Road Herndon	UP6	15-4 ((1)) 25	1852-1854
Old Ox Road Trace*	Near Squirrel Hill Road Herndon	UP6	15-4 ((1)) 32	1729
Peck House*	3106 Centreville Road Herndon	UP6	24-4 ((1)) 6C2	c. 1853
Ratcliffe-Hanna House N, V	2346 Centreville Road Herndon	UP6	16-3 ((1)) 39A4	c. 1820
Sully N,V,H	3601 Sully Road Chantilly	BR1	34-2 ((1)) 13	From 1794
Turley Hall*	3318 Centreville Road Chantilly	UP6	34-2 ((1)) 10A	c. 1821
Walney	5040 Walney Road Centreville	BR3	44-4 ((1)) 3	c. 1780

* Indicates demolition: potential remains for archaeological site.
N National Register of Historic Places
V Virginia Landmarks Register
H Historic Overlay District

Basic countywide heritage resource preservation policies are applicable throughout the Dulles Suburban Center. Site designs that minimize the disturbance and avoid the destruction of significant heritage resources are desired. It is expected that property owners will consult and work with Fairfax County staff to determine the presence or absence of significant heritage resources and take appropriate preservation, recovery and recordation action in accordance with the countywide policies before development plans are approved.

Other heritage resources including those protected by Historic Overlay Districts, or listed in the National Register of Historic Places or the Virginia Landmarks Register, and may be identified in the text and recommendations section.

The Fairfax County Inventory of Historic Sites, the Virginia Landmarks Register, the National Register of Historic Places, and the county's Historic Overlay Districts promote the recognition of sites with historic, architectural and archaeological significance. Designation confers public recognition and can offer incentives for preservation to the property owner.

The county Inventory of Historic Sites includes properties which meet certain eligibility criteria and are officially designated by the county's History Commission. In addition to historic, architectural or archaeological significance, property that serves as a focus of community identity and pride may also be recognized. The benefits of designation include public recognition of the structure's significance and enhanced support for preservation. Owners of properties included in the Inventory may meet with the county's Architectural Review Board on a voluntary basis to review proposed changes to their properties. Project review and approval by the county's Architectural Review Board may be required in accordance with the guidance provided by the Policy Plan under Land Use Appendix 9 Residential Development Criteria 8 Heritage Resources.

The Virginia Landmarks Register and National Register of Historic Places also officially recognize properties meeting specific criteria. Like the county Inventory, benefits of designation include public recognition and enhanced support for preservation. In addition, projects that are funded or sanctioned by federal government agencies may require review to determine if they will have any effect on properties listed in or eligible for listing in the National Register of Historic Places. Alternatives must be explored to avoid or reduce harm to the historic properties.

The county's Historic Overlay District is a zoning tool used to regulate proposed new construction and changes to existing structures in areas containing heritage resources to ensure compatibility with the resources. Site design, facades, demolition, and building materials must be reviewed and approved by the county's Architectural Review Board.

In those areas where significant heritage resources have been recorded, an effort should be made to preserve them for the benefit of present and future generations. If preservation is not feasible then the threatened resources should be thoroughly recorded and, in the case of archaeological resources, the data recovered in accordance with countywide policies.

Prior to any zoning action, the Department of Planning and Zoning should be consulted as to what architectural surveys are necessary to document any on-site cultural resources. Staff from the Cultural Resource Management and Protection Branch of the Park Authority should be consulted to develop a scope of work for any on-site archaeological surveys prior to any development or ground disturbing activity. Should architectural or archaeological resources be discovered that are potentially eligible for inclusion in the National Register, further survey and testing should occur to evaluate these resources as to their eligibility. If such resources are found to be eligible, mitigation measures should be developed that may include avoidance, documentation, data recovery excavation and interpretation.

PUBLIC FACILITIES

Existing public facilities located within the Dulles Suburban Center and those for which a future need has already been identified and prior approval received are included on Figure 8. Major expansions of existing facilities (with the exception of federal or state facilities) or uses of land that are distinctly different than the use of the public facility must be considered by the county Planning Commission through provisions outlined in Section 15.2-2232 of the Code of Virginia. For these existing facilities minor expansions which are in keeping with the character of the facility may be considered in conformance with the Plan.

- An adequate water supply and water distribution system should be provided for fire protection services.

- The Regional Stormwater Management Plan should be implemented as identified by the Department of Public Works and Environmental Services.

Additional public facilities may be identified as future needs in the Suburban Center. Such facilities are included for informational purposes and in most cases will require a 2232 Review public hearing before the county Planning Commission prior to being established unless they are specifically identified in the Plan text. Those facilities for which a specific location for future construction has been identified are also listed in the land unit recommendations and are considered a feature of the Comprehensive Plan upon review of the Planning Director and concurrence by the Planning Commission. If a feature shown determination is made, these projects will not require a future 2232 Review public hearing.

PARKS AND RECREATION

Existing parks are shown on Figure 9. Parklands located within, or close to, the Dulles Suburban Center currently provide over 1000 acres of public open space with diverse natural, cultural and recreational resources. Three large Countywide Multiple Purpose Parks -- Ellanor C. Lawrence, Frying Pan, and Richard W. Jones -- "anchor" the area on the southern, northeast and southwest corners. Two Heritage Resource Parks -- Sully Historic Site and Frying Pan Meeting House -- are both listed on the Virginia Landmarks Register and the National Register of Historic Places.

The Cub Run Stream Valley, on the western boundary of the Suburban Center, contains some of the most extensive and sensitive natural and cultural resources to be found in the county and is a major wildlife and recreational corridor to the Occoquan River shoreline. The extensive public parkland along this stream valley underscores its importance in the preservation of biological diversity, heritage resources and recreation opportunities. Within the designated Suburban Center area, however, a critical segment in Land Unit H remains vulnerable to the impacts of future adjacent development. Significant archaeological resources are also known to exist within the Cain Branch tributary.

The Dulles Greenway System

The location and distribution of existing open space resources within the Suburban Center provide the framework for a "Dulles Greenway" system of environmental and recreational corridors to conserve and connect valuable natural, cultural, historic and recreational resources at both the local and regional level and to facilitate non-vehicular access to these resources. The Dulles Suburban Center is positioned to become the keystone of a planned Northern Virginia Regional

FIGURE 8
DULLES SUBURBAN CENTER
EXISTING PUBLIC FACILITIES

Schools	Libraries	Public Safety	Human Services	Public Utilities	Other Public Facilities
Floris Elem., Carson Middle		Chantilly Fire Station Co. 15 Frying Pan Fire Station Co. 36	A New Beginnings Northwest Mental Health Center	Upper Cub Run Treatment Plant (abandoned) Flatlick Treatment Plan (abandoned)	

*Federal and state facilities are not subject to the 2232 review process.

FIGURE 9
DULLES SUBURBAN CENTER
EXISTING PUBLIC PARKS

Neighborhood	Community	District	Countywide	State/Federal
	Floris School Site		Ellanor C. Lawrence Sully Historic Site Cub Run S.V. Flatlick S.V. Frog Branch S.V. Cain Branch S.V. Frying Pan Branch S.V. Horsepen Run S.V. Schneider Branch S.V.	

Greenway system connecting the Potomac and Occoquan River shorelines and extending westward through Loudoun County and eastward through Fairfax and Arlington Counties.

The Greenways concept has gained national attention as a result of the recommendation of the President's Commission on Americans Outdoors that "communities identify and establish corridors of private and public lands and waters to provide people with access to open spaces close to where they live and to link together the rural and urban spaces in the landscape." Establishment of Greenways is also a priority in the Virginia Outdoors Plan, which is the basis for allocation of state and federal funding for parks and recreation projects.

Specific objectives of the Dulles Suburban Center Greenway, to be comprised of both public and private lands and waters, are to:

a. Provide people with access to open spaces and recreational opportunities close to where they live and work;

b. Protect and enhance ecological and heritage resources;

c. Provide a continuous pedestrian and open space network linking the places where people live, work and play, both within and adjacent to the Suburban Center; in particular, provide local trails as part of countywide and regional trails and greenway plans; and

d. Incorporate urban design features where appropriate.

The Greenway as shown on Figure 10 includes the following components:

Major Public Parks within or adjacent to the Dulles Suburban Center include Frying Pan Park, Floris Community Park, Frying Pan Meeting House, Sully Historic Site, Richard W. Jones Park and Ellanor C. Lawrence Park. Stream Valley Park components are discussed below. Additional properties acquired by the Fairfax County Park Authority (FCPA) in the future may be incorporated within the Greenway. Design and development of these properties will be in accordance with FCPA park planning policies and procedures.

Stream Valley Parks include designated Environmental Quality Corridors which, in accordance with county policies, are intended to serve several purposes. Management objectives are defined as follows:

Sensitive Area Corridors. Some or all of a stream valley component may constitute a "genetic corridor" which should be managed primarily to protect and enhance biological diversity and wildlife movement. Contiguous archeological sites should also be incorporated within this component. Disturbance of land should be limited to pedestrian trails located to minimize impacts on sensitive resources. Major portions of the Cub Run and Cain Branch Stream Valley Parks are designated as Sensitive Area Corridors.

Multiple Use Corridors. This component is intended to provide a buffer for designated Sensitive Area Corridors and to afford expanded passive recreation opportunities within the EQC or adjacent to it. Developed facilities may include walking and bicycle trails, seating areas, small picnic or open play areas, interpretive wayside exhibits and landscaping, provided there is no net degradation of water quality or loss of habitat value. Within the Suburban Center, portions of the Frying Pan, Horse Pen, Schneider Branch, Flatlick Stream Valley Parks and Cub Run Stream Valley Park outside the genetic corridor are included in this component.

Countywide Trails: Countywide trails include Stream Valley Park trails which primarily serve a recreational function and Bicycle Transportation/Pedestrian Walkways, which are the principal non-vehicular transportation corridors located adjacent to public roads. These two types of trails are more particularly described in the Trails section.

Urban Parks: Plazas and mini-parks oriented to use by Suburban Center residents, workforce and visitors. Informal activities and programmed events in these areas are intended to enhance leisure opportunities and social interaction. Dulles Corner Central Park is an example of this component; similar facilities are planned for the Westfields complex.

Development of such a greenway system, comprehensively integrated with other land uses, can return significant benefits to both the public and private sector in the Dulles Suburban Center. The positive impacts of carefully and imaginatively planned open space on real estate values, public health, resource preservation, and energy and infrastructure investments make development of the proposed Greenway system an important element in the total environment of this Suburban Center.

Active Recreation

Despite the relatively extensive amount of parkland in the vicinity of the Dulles Suburban Center, there are currently major deficiencies in active recreation facilities in this area of the county. Athletic fields are available at only two locations within the Suburban Center: the planned six field complex at Ellanor C. Lawrence Park and two fields at Floris Elementary School. These facilities are already scheduled to maximum capacity and there remains a large unmet demand from the surrounding residential communities.

The type and intensity of development envisioned for the Suburban Center will generate a strong demand for facilities to serve the adult workforce. Research indicates that:

- Walking and jogging consistently rate as the most popular outdoor adult recreation activity.

- Typically 10-15 percent of the corporate workforce will participate in organized sports activities such as adult softball, football/soccer, and volleyball; and on a daily basis the same proportion of the workforce will utilize a diversified range of indoor and outdoor active and passive recreation facilities. Hence, approximately 20-25 percent of the entire workforce may be expected to utilize recreation facilities if available in proximity to the workplace.

- According to the National Golf Foundation, the Washington D.C. area is among the most poorly served areas in the country when it comes to public golf course holes per capita. The Dulles Suburban Center area represents one of the last areas of Fairfax County with sufficient undeveloped land to meet the existing and projected demand for golf. The proximity of business development further supports the potential for golf facilities in this area and there are numerous indirect benefits that can be gained by including golf in Suburban Center planning. The provision of a public/private golf course would, for example, preserve open space, help reduce a documented recreational deficiency and possibly increase the value of other properties within the immediate area.

The advantages of integrating outdoor recreation facilities into employment centers are numerous:

- Increased employee satisfaction and productivity as a result of easy access to facilities;

- Potential reduction in peak hour traffic congestion/transportation demand, as employees stay after work hours to play;

- Reduction of impacts from evening active recreation on adjacent residential areas by siting lighted facilities within areas planned for commercial and industrial development;

- Reduced public land acquisition and development costs through cooperative use of parking facilities and interim use of vacant land held for future development; and

- A "critical mass" of users is present to support public and private revenue generating recreation facilities.

The projected levels of growth and development for the Dulles Suburban Center require additional public parkland and facilities to serve this population. In accordance with Policy Plan recommendations, properties are identified within some land units as "pooled sites". These are defined as community serving recreation sites created through public-private land dedication and acquisition to serve residents and workers and to protect significant natural and heritage resources.

The private sector has made a substantial commitment to providing corporate recreation facilities within the Dulles Suburban Center. The urban park developed at Dulles Corner and the extensive trails incorporated within the Westfields development are the types of facilities that are essential to the development of a greenway system. If additional residential land uses are introduced into the Dulles Suburban Center, there will be a need to develop more residentially-oriented Neighborhood and Community Park facilities as well as the Urban Park plazas and other public open spaces prescribed by urban design guidelines.

Recommendations

In view of constraints on public funding for the acquisition and development of park lands in the 1990s, an expanded "toolkit" of joint public and private sector mechanisms for the provision of recreation opportunities and resource protection and enhancement should be explored. These include, but are not limited to, purchase of development rights, wetlands mitigation funds, purchase of land with leaseback arrangements, development of negotiated bidding arrangements and other appropriate mechanisms.

Site specific recommendations for parks and recreation are contained in the Land Unit Recommendations section. Area-wide recommendations for parks and recreation are summarized as follows:

1. Public, private and corporate interests within the designated Dulles Suburban Center and adjacent Fairfax and Loudoun Counties and the Town of Herndon should cooperate in the development of a Greenway system that serves recreation, environmental and historic preservation, transportation and tourism, and economic vitality in the Dulles area.

2. To insure that long term recreation and resource protection needs will be met, the Fairfax County Park Authority should seek acquisition of additional properties located in Land Units A, D1, D2, D4 and H. A variety of acquisition mechanisms should be utilized to optimize the use of public funding and provide appropriate incentives to property owners to negotiate the transfer of identified properties.

3. The potential for joint public/private sector development of recreation facilities should be

explored wherever feasible. These projects could include golf courses, interim and/or permanent athletic fields, and indoor recreation and leisure services facilities in leased space within commercial or industrial structures.

4. Land should be identified and set aside for future public or public/private golf course development; this land could be an integral part of the envisioned Greenway system. Feasibility studies should be conducted to determine the optimum number of, and location for, golf facilities in the Dulles Suburban Center.

5. Private sector development and operation of athletic fields and other active outdoor recreation facilities for employee use should be encouraged in cooperation with the Park Authority.

6. Master planning and detailed site design for outdoor recreation facilities (public and private) should be coordinated with appropriate transportation officials in order to mitigate the impacts of external noise to the extent possible.

7. Phase I archeological surveys should be required for all new development in the vicinity of identified and/or likely heritage resource areas.

8. The present Sully Historic Overlay District boundaries should be retained except that all of Sully Historic Site property managed by the FCPA should be included within the historic overlay district.

9. The Countywide Trails Plan within the Dulles Suburban Center and surrounding areas should be revised in accordance with the proposed Greenway network of pedestrian trails and walkways.

10. The Fairfax County Park Authority should develop a Parks and Recreation Facilities Requirements Plan for implementation in the Dulles Suburban Center.

TRAILS

Trails planned for the Dulles Suburban Center are delineated on Figure 10 as part of the Dulles Greenway, the Countywide Trails Plan and the proposed regional greenway system. While some of the segments have already been constructed, the figure portrays the ultimate generalized system for the area. It is expected that development within each land unit will incorporate pedestrian and bicycle access to these main trail routes consistent with urban design guidelines.

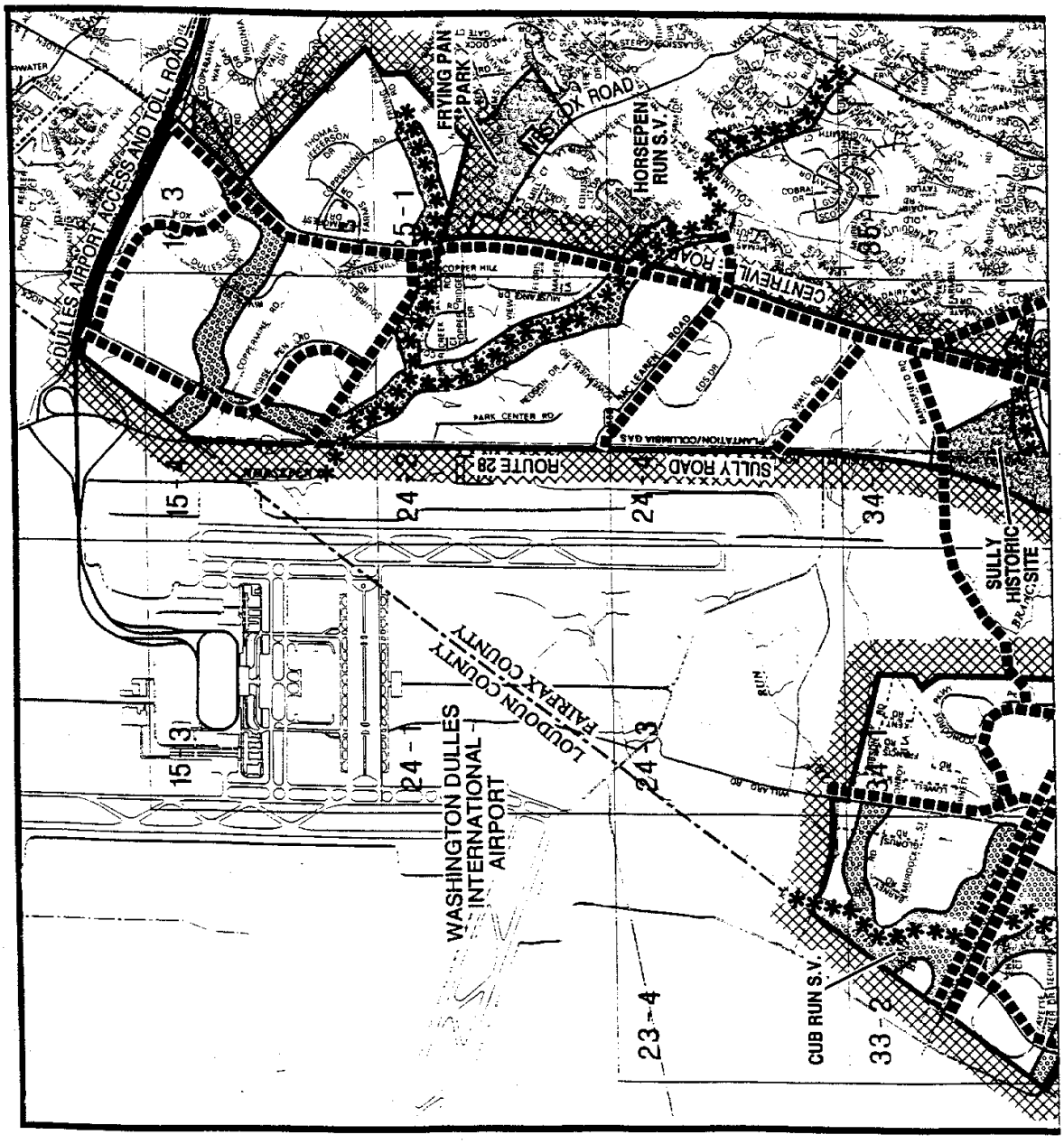
Figure 10 specifies the classification for each trail segment which represents the primary function of that trail. Two categories of trails are identified:

Stream Valley Recreational Trails primarily serve a recreation function, providing non-vehicluar access to public parklands and other points of interest. Multiple-purpose trails for both pedestrian and bicycle use may be developed in Multiple Use Corridors. The Fairfax County Park Authority is only responsible for maintenance of trails within public park boundaries.

Bicycle Transportation/Pedestrian Walkways primarily serve a non-vehicular transportation function, linking together employment centers, retail uses and transit areas and nearby public and private open space and recreation facilities. In high density residential and office settings, these trails may therefore serve a dual transportation and recreation function. These "urban pathways" may be developed within VDOT rights-of-way or on private property with public access easements.

To the greatest extent possible, urban design features should be incorporated into the development of this Greenway component to provide high quality, visually attractive and functional transportation routes.

An implementation program is included for specific land units, where appropriate, to encourage employees and employers to consider the benefits of short range commuting by cycling or walking to promote such programs. There is an opportunity to provide a definitive character and identity for the Dulles Suburban Center by incorporating a variety of urban design features into the development of this trail classification, provided that mechanisms for their maintenance can be devised.


DULLES AIRPORT ACCESS AND TOLL ROAD
FRYING PAN PARK
WEST OX ROAD
HORSEPEN RUN S.V.
CENTREVILLE ROAD
ROUTE 28
SULLY ROAD
SULLY HISTORIC SITE
WASHINGTON DULLES INTERNATIONAL AIRPORT
LOUDOUN COUNTY
FAIRFAX COUNTY
CUB RUN S.V.
15-3
25-1
24-1
24-3
23-4
33-2
34-1

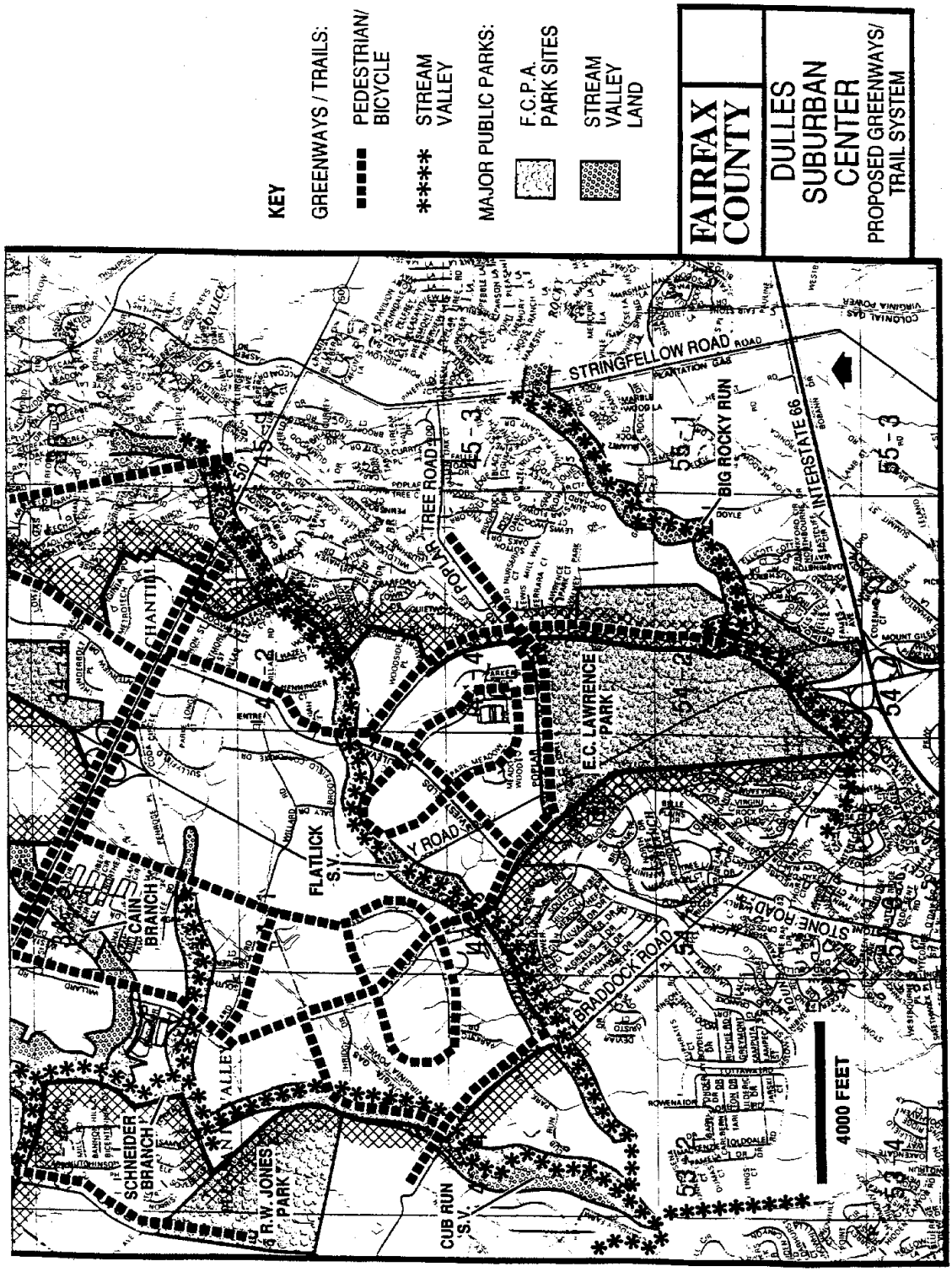

KEY
GREENWAYS / TRAILS:
PEDESTRIAN/ BICYCLE
STREAM VALLEY
MAJOR PUBLIC PARKS:
F.C.P.A. PARK SITES
STREAM VALLEY LAND
FAIRFAX COUNTY
DULLES SUBURBAN CENTER
PROPOSED GREENWAYS/ TRAIL SYSTEM
STRINGFELLOW ROAD
INTERSTATE 66
BIG ROCKY RUN
POPLAR TREE ROAD
E.C. LAWRENCE PARK
FLATLICK S.V.
BRADDOCK ROAD
STONE ROAD
CUB RUN S.V.
SCHNEIDER BRANCH
CAIN BRANCH
R.W. JONES PARK
4000 FEET

FIGURE 10

DULLES SUBURBAN CENTER LAND UNIT RECOMMENDATIONS

The recommendations which follow provide site-specific guidance for development of the Dulles Suburban Center, over the next 10-20 years and beyond.

In order to fully achieve the vision for the long-term development of the Dulles Suburban Center, implementation mechanisms must be developed to allow for residential development without reducing the tax base of the tax district in the short and long-term; to permit and enhance mixed-use development; and to permit transfer of density within the district without an increase in the overall zoning envelope. Density transfer mechanisms, which could include transfer development rights, concurrent rezonings to affect recommended Plan intensities or other mechanisms not yet identified, are crucial for implementing the envisioned land use pattern of higher intensity nodes of development focused around transit stations and the containment of "suburban sprawl". Exploring options to allow for contributions from residential development in the Tax District or amending the Tax District legislation to do this both in a manner that will not increase the financial burden on other Tax District landowners or the county without their consent, should proceed expeditiously. Development of Zoning Ordinance Amendments to allow for mixed-use development should also proceed. Enabling legislation to allow transfer of development rights should be sought immediately so that this mechanism can be considered as one option, among others, for creating higher intensity nodes of development. Other density transfer mechanisms should also be evaluated for use and enabling legislation sought when needed. This work should proceed to coincide with or follow soon after the completion and adoption of the Enhanced Public Transportation Corridor Study for Route 28 which should identify more specific transit station locations in the Dulles Suburban Center. Since the development of these implementation mechanisms must, of necessity, be a careful and deliberate process, the recommendations that follow do not attempt to outline specific mechanisms or processes.

For the purpose of organizing land use and other site-specific recommendations, the Dulles Suburban Center has been divided into a series of land units. These land units are lettered A through K and are shown on Figure 11. Individual land unit maps are included with the text for each land unit.

In order to achieve the planning objectives for the Dulles Suburban Center it is necessary that new development and redevelopment be responsive to general criteria and site-specific conditions which focus on mitigating potential impacts. Development proposals at the baseline or optional levels must be responsive to the following development criteria, which apply to all sites in the Dulles Suburban Center:

1. Provision of a development plan that provides high quality site and architectural design, streetscaping, urban design and development amenities. High quality site and architectural design will be evaluated in terms of the ability of the proposal to meet the Design Guidelines for the Dulles Suburban Center.

2. Provision of a phasing program which includes on- and off-site public road improvements, or funding of such improvements to accommodate traffic generated by the development. If, at any phase of the development, further mitigation of traffic generated by the development is deemed necessary, provision and implementation of a plan which reduces development traffic to a level deemed satisfactory to the Department of Transportation through Transportation System Management (TSM) strategies and Transportation Demand Management Programs (TDMs).

3. Provision of design, siting, style, scale, and materials compatible with adjacent development and the surrounding community, and which serves to maintain and/or enhance the stability of existing neighborhoods.

4. Provision of affordable housing as a part of any mixed-use project or residential development either through compliance with the Affordable Dwelling Unit Ordinance, if applicable, or an appropriate proffer of units or land or a contribution to the Housing Trust Fund, if the Affordable Dwelling Unit ordinance is not applicable. Affordable housing provided pursuant to such a proffer should be located within the Dulles Suburban Center. Any funds provided in lieu of actual units should be placed in a separate fund for use only within the Dulles Suburban Center.

5. Parcel consolidation and/or coordination of development plans with adjacent development to achieve Comprehensive Plan objectives. Parcel consolidations should be of sufficient size to insure projects that function in a well-designed efficient manner, meet all Plan and Zoning Ordinance requirements for setbacks, screening and buffering and do not preclude the development of unconsolidated parcels in conformance in the Plan.

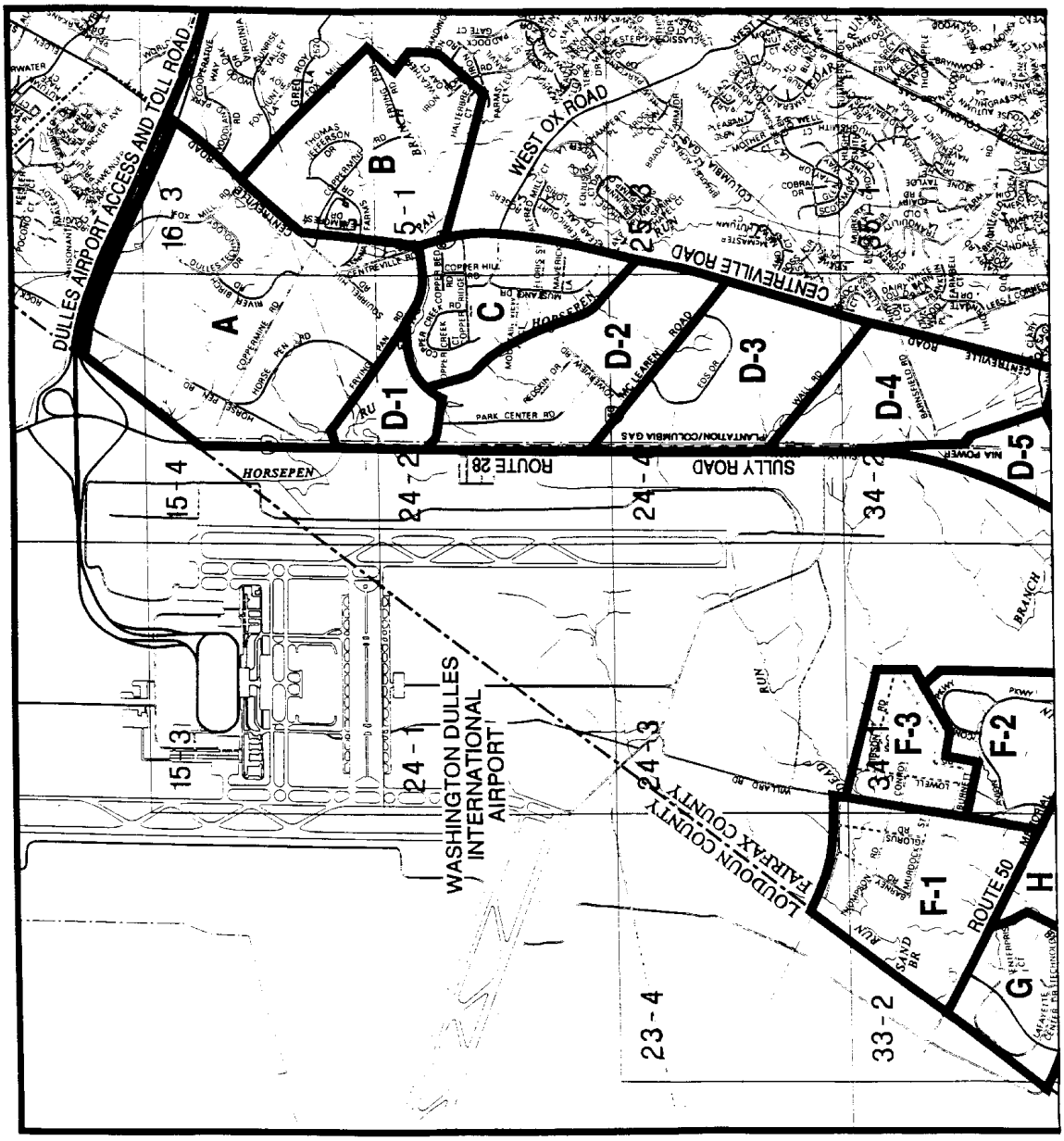
6. Provision of the highest level of screening and landscaping for all parking.

7. Consolidation of vehicular access points to minimize interference with arterial roadways.

8. Provision of stormwater management by the use of Best Management Practices which contribute to Objectives of this Dulles Suburban Center Plan calling for design of stormwater detention systems that blend with and augment features of the natural environment and contribute to the aesthetics of their sites.

9. Provision of active and passive recreation facilities and specified components of the Greenway system.

In addition to these general development criteria, site-specific conditions may be identified as part of the following recommendations for each of the land units within the Suburban Center.


DULLES AIRPORT ACCESS AND TOLL ROAD
WEST OX ROAD
CENTREVILLE ROAD
HORSEPEN
ROUTE 28
SULLY ROAD
ROUTE 50
WASHINGTON DULLES INTERNATIONAL AIRPORT
LOUDOUN COUNTY
FAIRFAX COUNTY
A
B
C
D-1
D-2
D-3
D-4
D-5
F-1
F-2
F-3
G
H
16 - 3
5 - 1
25 - 3
35 - 1
15 - 4
24 - 2
24 - 4
34 - 2
15 - 3
24 - 1
24 - 3
34 - 1
23 - 4
33 - 2

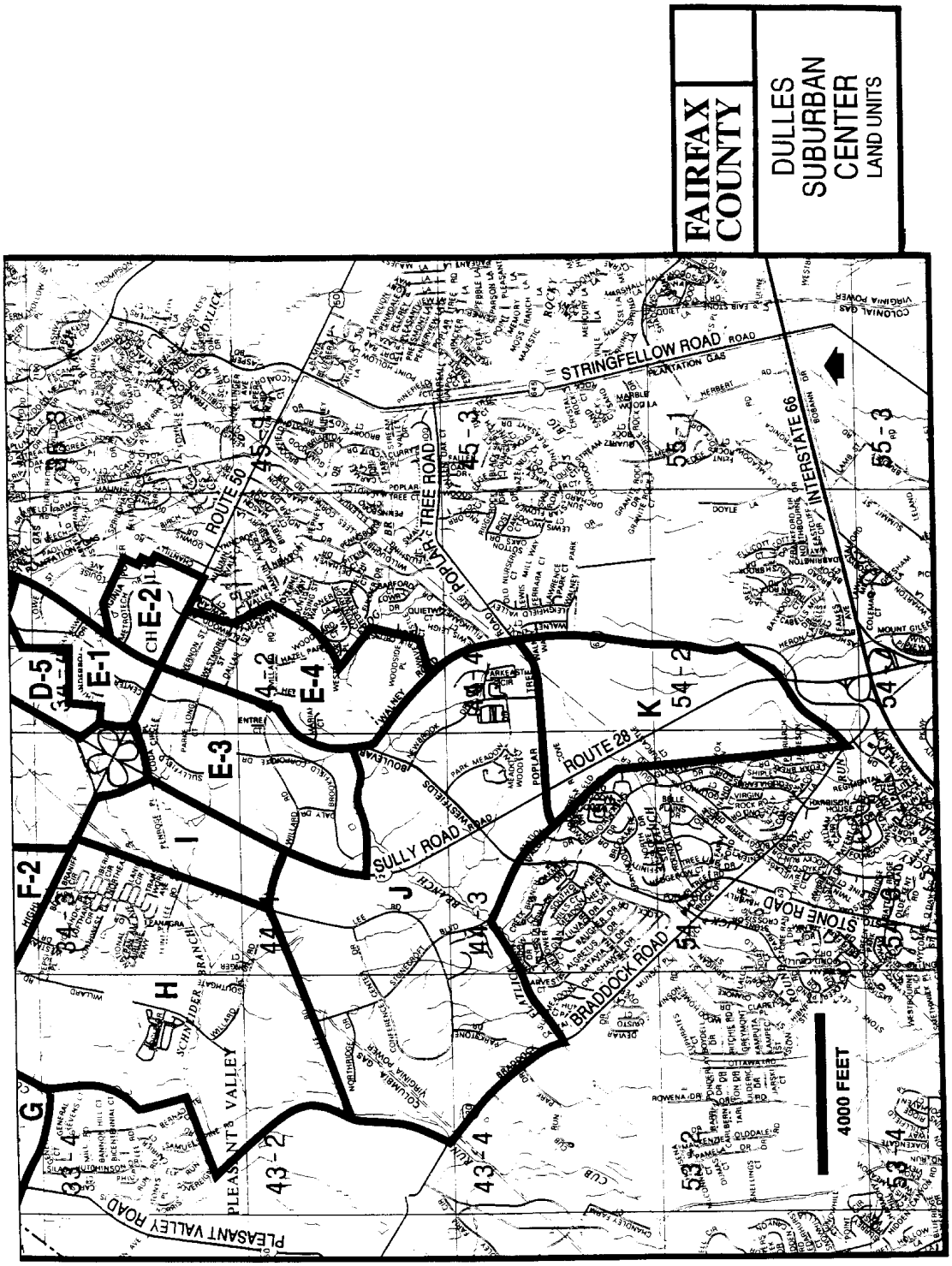

FAIRFAX COUNTY
DULLES SUBURBAN CENTER
LAND UNITS
STRINGFELLOW ROAD
INTERSTATE 66
POPLAR TREE ROAD
ROUTE 50
ROUTE 28
SULLY ROAD
BRADDOCK ROAD
STONE ROAD
PLEASANT VALLEY ROAD
PLEASANT VALLEY
4000 FEET
D-5
E-1
E-2
E-3
E-4
F-2
G
H
I
J
K
S

FIGURE 11

LAND UNIT A

CHARACTER

Land Unit A consists of approximately 645 acres located south of the Innovation Center Metrorail station as shown on Figure 12. It is bounded on the north by the Dulles Airport Access Road and Toll Road (DAAR, Route 267), on the east by Centreville Road, on the south by Frying Pan Road, and on the west by Route 28, Washington Dulles International Airport and the Loudoun County boundary. The majority of the land unit is located in the Route 28 Highway Transportation Improvements and Phase 2 Dulles Rail Transportation Improvements Tax Districts. Figure 12 illustrates the relationship of Land Unit A with the planned Innovation Center Station platform, including ¼ and ½ mile distances from the station platform.

Existing development includes a mix of office, multi-family and townhouse residential, hotel and retail uses. Institutional uses include several churches and the Lutie Lewis Coates Elementary School. There remain areas of vacant land, some of which are located near the Metrorail station and over 75 acres located along Frying Pan Road. The Merrybrook Run Stream Valley traverses the land unit and is a natural open space and park amenity for the area.

RECOMMENDATIONS

Consistent with the Concept for Future Development and County Transit Oriented Development policies, Land Unit A encompasses the highest planned intensities in the Dulles Suburban Center. The land unit recommendations are organized by the land units as shown in Figure 12. Within each land unit, the Plan provides recommendations for planned use and intensity. Land Unit A-1 is the area north of the Merrybrook Run Stream Valley and is the southern portion of the Innovation Center Transit Station Area (TSA), shown in Figure 13, where a mix of uses in an urban form is encouraged within walking distance from the station. South of the Merrybrook Run Stream Valley (Land Units A-2, A-3, and A-4) is an area generally planned for a mix of uses at lower intensity levels. Land Unit A-5 is located north of Frying Pan Road and is planned for a mix of uses.

Land Use

The planned land use pattern in Land Unit A focuses most future growth within walking distance of the future Innovation Center Metrorail station which is generally considered to be within ¼ and ½ mile from the station. Intensities will be highest in areas with the closest proximity to the station, tapering down to lower density areas in the rest of the land unit. The land units south of the Merrybrook Run Stream Valley, A-2, A-3 and A-4, have been developed with a mix of office, hotel and residential uses in accordance with the plan and it is anticipated that these land units will maintain their existing character, uses and intensities.

This land unit is planned for a complementary mix of land uses including office, residential, hotel and support retail. Development in this land unit should provide for the incorporation of future transit related facilities and pedestrian and vehicular access to transit. The following table compares 2012 existing land use levels to the planned development potential.

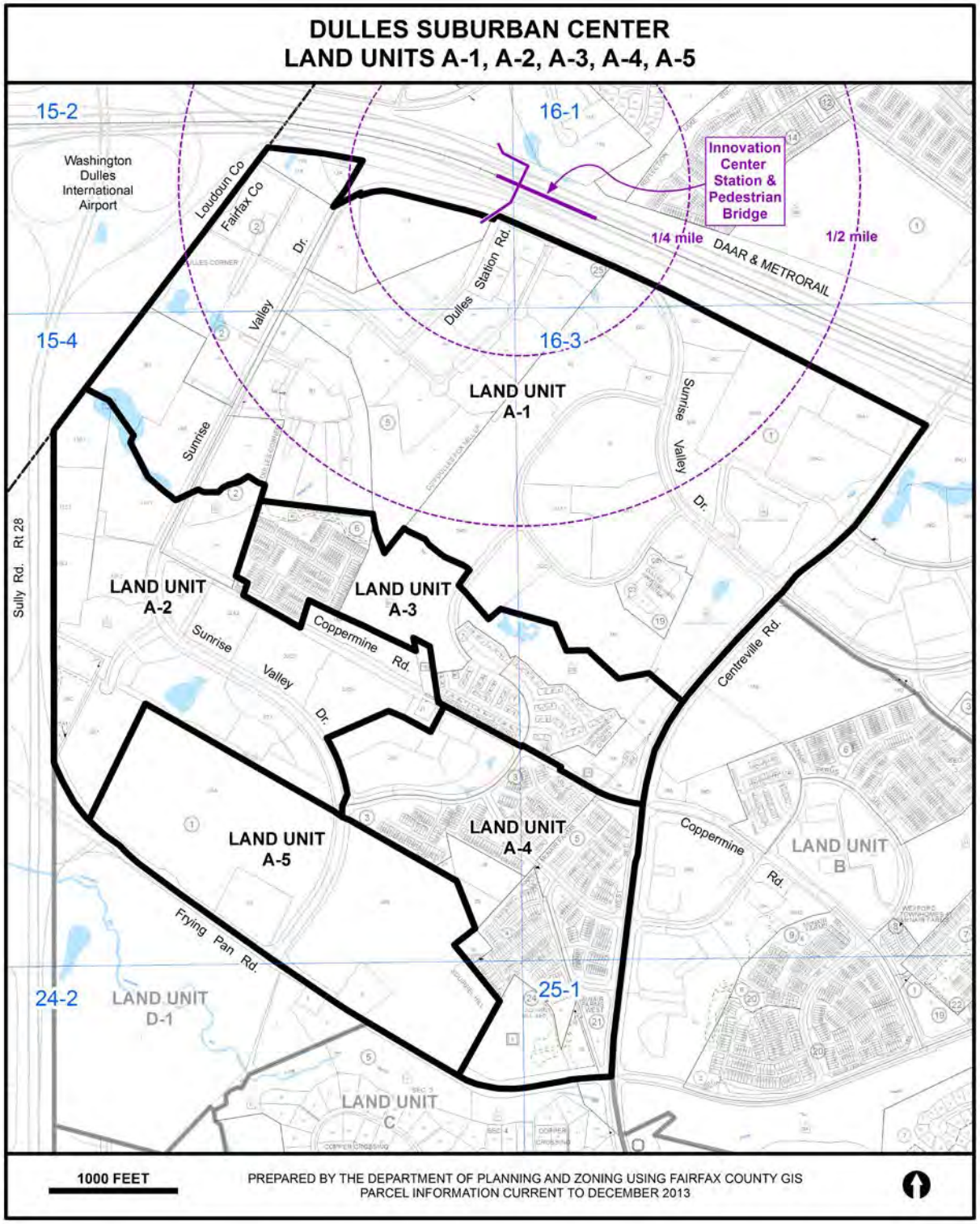

DULLES SUBURBAN CENTER
LAND UNITS A-1, A-2, A-3, A-4, A-5
15-2
16-1
15-4
16-3
24-2
25-1
Washington Dulles International Airport
Loudoun Co
Fairfax Co
Innovation Center Station & Pedestrian Bridge
1/4 mile
1/2 mile
DAAR & METRORAIL
Dulles Station Rd.
Sunrise Valley Dr.
Sunrise Valley Dr.
Sunrise Valley Dr.
Sully Rd. Rt 28
Coppermine Rd.
Coppermine Rd.
Centreville Rd.
Frying Pan Rd.
LAND UNIT A-1
LAND UNIT A-2
LAND UNIT A-3
LAND UNIT A-4
LAND UNIT A-5
LAND UNIT B
LAND UNIT C
LAND UNIT D-1
1000 FEET
PREPARED BY THE DEPARTMENT OF PLANNING AND ZONING USING FAIRFAX COUNTY GIS
PARCEL INFORMATION CURRENT TO DECEMBER 2013

FIGURE 12

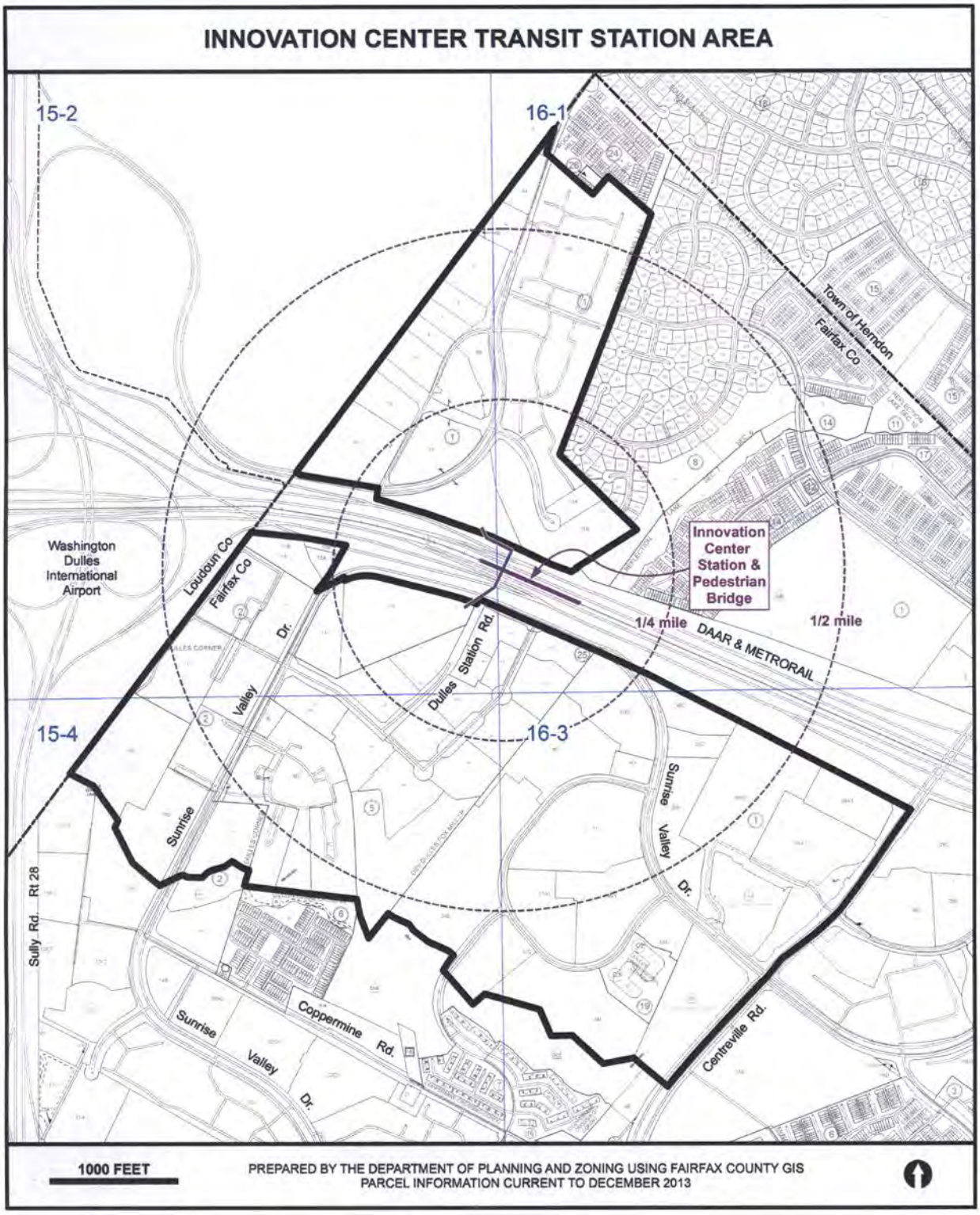

INNOVATION CENTER TRANSIT STATION AREA
15-2
16-1
15-4
16-3
Washington Dulles International Airport
Loudoun Co
Fairfax Co
Town of Herndon
Fairfax Co
Innovation Center Station & Pedestrian Bridge
1/4 mile
1/2 mile
DAAR & METRORAIL
Dulles Station Rd.
Sunrise Valley Dr.
Sunrise Valley Dr.
Sunrise Valley Dr.
Coppermine Rd.
Centreville Rd.
Sully Rd. Rt 28
1000 FEET
PREPARED BY THE DEPARTMENT OF PLANNING AND ZONING USING FAIRFAX COUNTY GIS
PARCEL INFORMATION CURRENT TO DECEMBER 2013

FIGURE 13

Figure 14: Planned Development Potential

Land Use	2012 Existing Land Use	Comprehensive Plan Development Potential
Residential	3,971,000 sq.ft. (3,309 units)	11,160,000 sq.ft. (9,300 units)
Office	4,755,000 sq.ft.	8,380,000 sq.ft.
Retail	4,000 sq.ft.	465,424 sq.ft.
Industrial	35,000 sq.ft.	0
Institutional	150,000 sq.ft.	150,000 sq.ft.
Hotel	858,000 sq.ft.	1,181,000 sq.ft.
Total	**10,089,000 sq.ft.**	**21,675,000 sq.ft.**

The development potential shown in the table above is based on quantification of the land use recommendations. These land use recommendations provide flexibility for a change of uses within certain parameters. For example, some areas are encouraged to include more housing when there is a corresponding reduction in office use. Additional retail uses are encouraged when they contribute to the area's vibrancy and convenience. Ground floor retail uses result in fewer peak hour trips than office uses. Land Unit A is home to several churches. Additional institutional uses or expansions of existing facilities could be considered through the Special Exception and Special Permit processes. Land Unit A is home to Coates Elementary School. Additional public facilities or expansion of Coates would be evaluated based upon guidance from the Public Facilities section. Additional hotel uses are encouraged and also result in fewer peak hour trips than office uses. Generally the Plan seeks to encourage a vibrant mix of uses that is balanced with the infrastructure.

In reviewing development proposals, the following land use guidelines should also be considered:

- Parcel Consolidation - Parcel consolidation should be encouraged when it results in a logical assemblage of parcels of sufficient size to allow projects to function in a compatible, well-designed, efficient manner. Parcel consolidation should not preclude the development of any unconsolidated parcels in conformance with the Plan.

- Coordinated Development Plans - Coordinated development plans may be an alternative to parcel consolidation. Coordinated development plans refer to two or more concurrent and contiguous development applications that demonstrate coordination of site design, building locations, urban design, open space amenities and signage, inter-parcel access where appropriate, roadway realignment or improvements, and parking facilities.

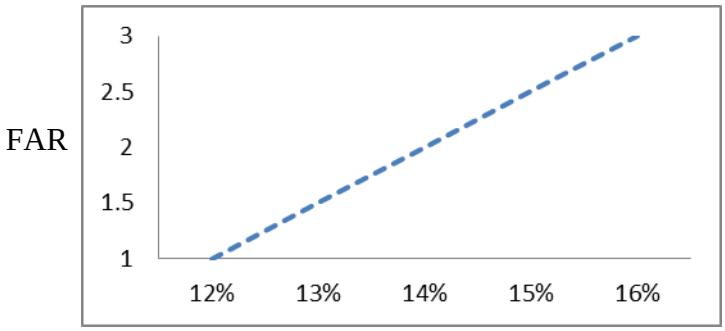
- Compatible Development - All development proposals will need to ensure that projects function in a compatible, well-designed, efficient manner; are consistent with the land use guidance and development potential of the individual subunits; are compatible with the development on adjacent properties; reflect coordinated phasing of improvements as needed (for example, frontage improvements); are consistent with the overall intent of the land use concept to achieve a desired urban form and mix of uses; and do not preclude adjacent parcels from developing in conformance with the Plan.

- Existing Uses and Buildings - New uses and the replacement or expansion of existing buildings that achieve the long-term recommendations of the Plan are encouraged. In some instances, existing development may not be consistent with the long-term vision for this area.

This Plan is not intended to interfere with the continuation of existing land uses or buildings. If improvements to the open space or pedestrian systems that are identified in the Plan are not feasible due to an existing building's location on the site, alternative streetscape and other design improvements intended to implement the Plan's vision may be considered.

- Affordable and Workforce Housing - Future development should conform to county policies on affordable housing which includes conformance to the Affordable Dwelling Unit Ordinance (ADU) and the Policy Plan's Workforce Housing (WDU) Policy and Guidelines. Proposals seeking up to a 1.0 FAR should meet the current policy objective of approximately 12 percent of total units as Workforce Dwelling Units (WDU). The exception is proposed intensity higher than 1.0 FAR which should provide a greater contribution. Proposals for development between a 1.00 and a 3.0 FAR should provide at a minimum proportionally 12 percent to 16 percent of total units as WDUs as shown in Figure 15. The residential use should integrate a variety of housing types, consistent with WDU guidelines, such as units for families, senior housing and residential studio units. In addition, bonus units or bonus square footage, as provided for in the WDU policy, is excluded from the planned intensity.

Figure 15: Percentage of WDU



Non-residential development in the TSA should contribute $3.00 per non-residential square foot unless superseded by Board of Supervisors action on a countywide policy. This amount is to be adjusted annually based on the Consumer Price Index and may be contributed to a housing trust fund that will be used to create affordable and workforce housing opportunities near Metrorail stations. The contribution may be made over a period of time to be determined at the time of rezoning but not less than 25 cents per non-residential square foot each year. Such developments may provide an equivalent contribution of land or affordable units in lieu of a cash contribution. Non-residential contributions could also be used to fund affordable housing opportunities in the TSA through a partnership. If non-residential floor area is achieved through a bonus for providing WDUs, the bonus floor area should not be included when calculating the contribution amount. Ground level retail located in office, hotel, and residential buildings should also not be included when calculating the contribution amount**.** In addition, educational as well as other institutional and governmental uses should not be included.

Land Unit A-1: Innovation Center Transit Station-South

Land Unit A-1 is the southern portion of the Innovation Center Transit Station Area, is 330 acres and is developed with a mix of office, hotel, residential and support retail uses. This area is planned for transit-oriented development (TOD) which focuses growth within walking distance of

the Metrorail station. Intensities should be highest in areas with the closest proximity to the station, recognizing that relatively new existing development is approved for intensities significantly below the plan and may not redevelop in the future. To provide guidance on how intensity should gradually decrease with distance, the land unit is divided into three areas as shown on the table below. For purposes of tiered planned intensity, the ¼ mile and ½ mile radius is measured from the center of the platform where it meets the bridge.

Figure 16: Land Unit A-1 Tiered Planned Intensity	
Distance From Metrorail Station	Range of Intensity (FAR)
Tier 1: Within ¼ Mile	2 to 3 FAR
Tier 2: ¼ to ½ Mile	1 to 2 FAR
Beyond ½ Mile	0.75 to 1.5 FAR

The mixed-use recommendations that follow seek to establish parameters for future development by providing percentages for residential and non-residential uses. These percentages are meant to be guides and may need to be adjusted on a case by case basis in order to further other planning objectives such as implementing the grid of streets and securing land for parks and public facilities. If a property is split between two Tiers, intensity should be based on the proportion of property in each area. Furthermore, this balance among uses may not always be achievable, at least on an interim basis, due to market demand or other economic factors. In such cases, appropriate commitments should insure that interim development does not alter the character of the Transit Station Area and that ultimately a mix of uses will be in place consistent with Plan guidance.

Tier 1: Within a ¼ Mile of Metrorail

The Tier 1 area is within a ¼ mile of the Metrorail station and is planned for intensity within a 2.0 to 3.0 FAR range. The area is planned for a balanced mix of residential, office, hotel and retail uses. The percentage of office uses can be up to 45 percent of development in Tier 1. Individual developments may have flexibility to build more than 45 percent of office if other developments are built or rezoned with a use mix that contains proportionally less office. The residential component in Tier 1 should be on the order of 50 percent or more of total development. Hotel, ground level retail and support service uses add to the vibrancy and enhance the mixed use environment and are encouraged in the broader mix of uses. Support retail uses should be located in office, hotel or residential buildings and be complementary to other uses with the object of allowing residents and employees to minimize daily reliance on the automobile.

Tier 2: ¼ to ½ Mile of Metrorail

The Tier 2 area includes property within a ½ mile from the Metrorail station and is planned for intensity within 1.0 to 2.0 FAR. The area is planned predominantly for residential uses with a mix of other uses including office, hotel and supporting retail. In Tier 2, the residential component should be on the order of 50 percent or more of total development. The percentage of office uses can be up to 40 percent of development in Tier 2. Individual developments may have flexibility to build more than the stated percentages if other developments are built or rezoned with a use mix that maintains these proportions for the entire Tier 2 Area. Hotel, ground level retail and support service uses add to the vibrancy and enhance the mixed use environment and are encouraged in the broader mix of uses. Support retail uses should to be located in office, hotel or residential buildings and be complementary to other uses with the object of allowing residents and employees to minimize daily reliance on the automobile.

Tier 3: Beyond ½ Mile

Tier 3 includes the area north of the Merrybrook Run Stream Valley that is beyond a ½ mile radius from the Metrorail station. The area is planned for an intensity within .75 to 1.5 FAR range for residential uses with a mix of other uses including office, hotel and supporting retail. In Tier 3, the residential component should be on the order of 45 percent or more of total development. The percentage of office uses can be up to 50 percent of development within Tier 3. Individual developments may have flexibility to build more than the stated percentages if other developments are built or rezoned with a use mix that maintains these proportions for the Tier 3 Area. Hotel, ground level retail and support service uses add to the vibrancy and enhance the mixed use environment and are encouraged in the broader mix of uses. Support retail uses should be located in office, hotel or residential buildings and be complementary to other uses with the object of allowing residents and employees to minimize daily reliance on the automobile.

Land Unit A-2

Land Unit A-2 is approximately 110 acres and is planned for and developed with a mix of land uses including office, hotel, support retail and residential uses at an intensity of .50 to 1.0 FAR. Other uses include a church, the Mount Pleasant Baptist Church and Norton Family cemeteries and park uses such as a baseball diamond and stream valley park land. This area is planned to maintain the existing character, uses and intensities and provide an appropriate transition to the adjacent existing and planned residential communities.

Land Unit A-3

Land Unit A-3 is approximately 65 acres and is developed with townhouses and multifamily residential. Other uses include Lutie Lewis Coates Elementary School and a church. The northern part of the sub-unit consists of the Merrybrook Run Stream Valley. This land unit is planned for residential uses at a density of 8-12 du/ac and is planned to maintain the existing character, uses and intensities. Opportunities to provide multi-purpose trails to the north should be sought to improve accessibility to the Metrorail station.

As an option, almost 5 acres (parcels 16-3((1)) 6A, 6B and 36) located at the intersection of Centreville Road and Coppermine Road may be appropriate for a mix of uses at .50 to 1.0 FAR including a combination of office or hotel and retail uses to include eating establishments, financial institutions and other service uses, excluding automobile intensive uses and drive through uses except as may be associated with financial institutions.

Land Unit A-4

Land Unit A-4 is approximately 85 acres and is developed with garden apartments west of River Birch Road, townhouses and two churches to the east of River Birch Road. This land unit is planned for residential uses at a density of 12-16 du/ac. This area is planned to maintain the existing character, uses and intensities and provide an appropriate transition to the adjacent existing and planned residential communities.

Land Unit A-5

The approximately 80 acres of vacant land (Parcels 15-4((1))25, 26A, 26B and 24-2((1))5) which are located northeast and northwest of the intersection of Sunrise Valley Drive and Frying Pan Road, are planned for mixed use, which may include residential, office, hotel, and community serving retail, at .50 to 1.0 FAR. The residential component should be on the order of 55 percent or more of total development. The percentage of office uses should be up to 40 percent of development. Individual developments may have flexibility to build more than the stated percentages if other developments are built or rezoned with a use mix that maintains these proportions for Land Unit A-5. Hotel, support retail and services uses are encouraged in the broader mix of uses. A maximum of 300,000 square feet of retail use may be appropriate. However, no more than 150,000 square feet of retail use should be located in either quadrant. The retail use should be an integrated component of a mixed use development. In addition, mixed use proposals should include commitments to provide land and/or facilities that are sufficient for local-serving park facilities to support a variety of park experiences consistent with the Urban Parks Framework. Building heights and mass should be carefully designed to be compatible with the adjacent single-family residential neighborhoods. The extension of River Birch Road is a critical connection in this subunit. The road may be designed and configured differently from that shown on the Conceptual Street Network in Figure 17. Local road connections or inter-parcel access from this subunit to the surrounding road network or parcels should occur. This is illustrated by the local road connection, which can be configured differently, shown in Figure 17 for subunit A5.

Transportation

The vision for Land Unit A promotes a mix of land uses served by a multi-modal transportation system. Various planned transportation improvements will facilitate this vision, while accommodating current and future travel needs within and around the transit station. The improvements should balance future land uses with supporting transportation infrastructure and services, address the long term needs of the area, include a road network that can accommodate all modes of transportation, and provide infrastructure and facilities that will support intermodal connectivity along the network.

The following recommendations are intended to help improve circulation within, around, and through this area. While the transportation recommendations support the development near the transit station, these recommendations also will facilitate regional travel through the area. The transportation recommendations are divided into eight sections: Land Use/Transportation Balance, Monitoring System, Public Transportation, Road Network and Circulation, Bicycle Facilities, Transportation Demand Management, Parking Management, and Funding of Transportation Improvements and Services.

Land Use/Transportation Balance

Maintaining a balance between the land uses in Land Unit A and the transportation system is essential in order to preserve an acceptable level of accessibility in and around this area as development occurs over time. To maintain a balance, the increase in development should coordinate the provision of transportation infrastructure with programs to reduce vehicle trips.

Within the area, preference should be given to the maintenance of a high level of service for all modes including transit, vehicles, pedestrians and bicyclists. To achieve this, consideration should be given to safety and security, direct pathways, topography, and the achievement of a balance between traffic delay and a pedestrian friendly environment. Impact studies should quantify the Level-of-Service (LOS) for all applicable modes by applying up-to-date standard techniques. It is the intent to maximize the use of non-vehicular modes of transportation in Land Unit A in the future.

Monitoring System

Maintaining a balance between land use and transportation is dependent on a number of factors. The transportation infrastructure, modal split levels, and vehicle trip reduction levels needed to maintain this balance have been analyzed extensively based on known conditions at the time of developing this Plan guidance. However, these conditions might change in the future which could result in changes in the number, frequency or direction of vehicle trips. For this reason, it is considered essential to monitor built and approved development and vehicle trips in the area over time and determine if the balance of development over time, vehicle trips and delay and the provision of transportation infrastructure have been maintained. This review should occur at least every five years or based on changes in circumstances and should be the primary responsibility of the county with survey input and assistance from landowners and tenants where available.

Public Transportation

Metrorail - The introduction of Metrorail service along the Dulles Airport Access Road and Toll Road is an integral factor to providing increased mobility and reducing vehicle dependency for employees and residents in this area. Focusing the densest development around the Innovation Center Metrorail station is vital to promote the use of public transportation and achieving the vision for Land Unit A.

Local Bus Service - There is existing Fairfax Connector bus service that serves both local riders and people commuting through Land Unit A. These routes will be modified to provide convenient and reliable feeder service to the surrounding area from the Innovation Center Station.

Road Network and Circulation

The road network and circulation recommendations provide additional transportation guidance and recommendations for development within Land Unit A. For new streets not built to their full cross-section, right-of-way should be provided for the ultimate cross-section including pedestrian and bicycle facilities as identified in the Plan. The streets should provide a level of connectivity and accommodate all modes of transportation to the fullest extent possible. Road planning should balance the efficiency of through movements with the need for reasonable access to existing and planned uses. Existing property access points should be retained to the greatest extent possible.

In the planning and design of transportation projects, it will be necessary to balance the competing needs of many stakeholders starting in the earliest stages of project development. The design of a facility should be safe and function for all users regardless of the mode of travel they choose. Flexibility in design may be considered to achieve plan objectives.

Network Level of Service

An overall LOS E is the goal for the intersections within the street network in the Innovation Center TSA. In instances where a LOS E standard cannot be attained or maintained with planned development, remedies should be proposed to offset impacts (using approaches described below) with the purpose of improving mobility for all users within the TSA.

As a first approach, the network should be evaluated to determine if increased operational efficiency is possible to achieve without decreasing pedestrian walkability and safety. The widening of roads by adding exclusive turn lanes and/or through lanes will not be desirable in, some cases, since it will increase street widths at intersections and therefore work against creating an attractive environment for pedestrians. In lieu of additional lanes, it is preferable to add links to the street grid where applicable and possible to promote the build out of the grid of streets and to create additional

diversionary paths for vehicles; doing so is intended to decrease the traffic at problem locations in the vicinity of a proposed development. If this approach does not attain the recommended LOS, or is not feasible, other approaches should be considered, such as:

- Decrease future site-generated traffic by changing the mix of land use within the parameters of the applicable land use guidelines (e.g., replacing a higher peak hour trip generating land use with a lower one).
- Increase transit use through the provision of additional and improved services.
- Optimize the application of TDM measures which might include greater transit use, walking, and bicycling.
- Condition development on the completion of offsetting improvements.
- Consider financial contributions of significant value dedicated to addressing deficiencies in the TSA as on offsetting improvement. These should not be used as a credit against other contributions toward off-site transportation improvements.

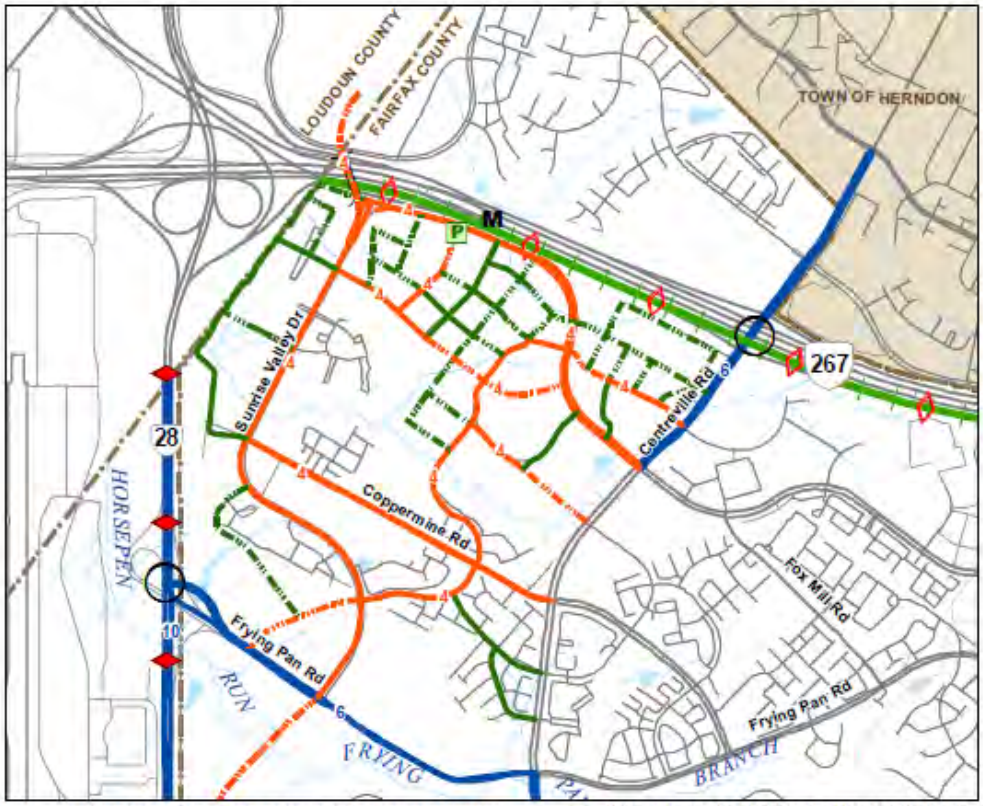
Road Transportation Improvements

The following list of roadway network improvements are recommended to achieve the vision for Land Unit A and enhance connectivity through the area by creating multiple and enhanced connections.

- River Birch Road extension to Frying Pan Road
- Additional Centreville Road crossing at McNair Farms Drive
- New bridge over Dulles Toll Road to Loudoun County
- A grid of streets in the Transit Station Area
- Widen or improve Coppermine Road (4 lanes, Sunrise Valley Drive to Centreville Rd)
- Widen or improve Frying Pan Road (6 lanes)
- Widen or improve Sunrise Valley Drive (4 lanes, Centreville Road to Innovation Center Station)
- Widen or improve Centreville Road (6 lanes, Sunrise Valley Drive to Town of Herndon) and maintain and improve pedestrian and bike crossing in proximity to or along Centerville Road.

A fundamental purpose of this conceptual grid of streets is to provide alternative paths for vehicles, pedestrians, and bicyclists and, therefore, reduce congestion and increase connectivity in this area. A conceptual illustration of the enhanced street network is shown on Figure 17. In planning the grid of streets, consideration should be given to avoiding intersections with acute or awkward angles; minimizing exclusive turn lanes; and designing block sizes generally within a 400 foot to 600 foot range. Any block longer than 600 feet should contain a mid-block pedestrian connection where possible.

DULLES SUBURBAN CENTER, LAND UNIT A
CONCEPTUAL STREET NETWORK



NOTE: THERE SHOULD BE REASONABLE FLEXIBILITY IN THE FINAL LOCATION AND CONFIGURATION OF NEW STREET CONNECTIONS SO AS TO ACCOMODATE PROPERTY SPECIFIC LAND PLANNING THAT OTHERWISE IMPLEMENTS AND REFLECTS THE COLLECTIVE GOALS AND OBJECTIVES OF THE PLAN.

NOTE: WHERE THE OVERPASS CONNECTS WITH THE STREET NETWORK WITHIN THE SUNRISE VALLEY DRIVE RIGHT-OF-WAY, SUNRISE VALLEY DRIVE SHOULD REMAIN CONNECTED.

N

Miles
0 0.25 0.5

Existing	Proposed	
M	M	Metrorail Station
P	P	Commuter Parking Lot
◊ ◊	♦ ♦	High Occupancy Vehicle (HOV) Lanes
	4	Widen or Improve Arterial Roadway (Number Indicates Proposed Number of Lanes Including HOV or HOT Lanes)
		Construct Arterial on New location
	4	Widen or Improve Collector (Number Indicates Proposed Number of Lanes)
		Construct Collector on New Location
		Widen or Improve Local Street (Number Indicates Proposed Number of Lanes)
		Construct Local Street on New Location
		(Cross sections to be finalized during process of reviewing plans for proposed development)

Full Interchange Improvement (Study Required)

High Occupancy Toll (HOT) Lanes

Proposed Highway Overpass

Proposed Cul-de-Sac

Rail Transit or Bus Rapid Transit (BRT)

NOTE: IMPROVEMENTS TO ARTERIAL FACILITIES SUBJECT TO COMPLETION OF CORRIDOR STUDIES. SEE DISCUSSION IN AREA PLAN OVERVIEW TEXT. FINAL ALIGNMENTS SUBJECT TO COMPLETION OF APPROPRIATE ENGINEERING STUDIES.

HOV LANES TO BE CONSIDERED IN PROJECT DEVELOPMENT. HOV LANES TO BE PROVIDED IF WARRANTED BASED ON DEMAND FORECASTS AND CORRIDOR STUDY.

FIGURE 17

In addition to the list of road transportation improvements above, other intersection improvements may be required within the land unit in order to ensure acceptable traffic operations. Each roadway improvement should be independently evaluated not only for its transportation utility from a cost-benefit perspective, but also for its environmental implications such as effects on storm water management, water quality, noise or parks and its integration into the area's urban context.

Street Types - Street types respond to the need to accommodate transit, pedestrians, bicycles, and vehicles. Street types in Land Unit A have been identified, with a conceptual overview from curb to curb by each type's functionality. The cross-section for each street type contains flexibility to be able to respond to particular needs in different locations. Streetscape diagrams are located in the Urban Design section.

The design guidelines for street types should be followed in the instance of providing new private or public roadway connections or when proposing improvements to the existing roadway network. Minor arterials primarily function as through traffic carriers. The collector streets collect traffic from the local streets and route them to principle and minor arterials, while the local streets allow internal circulation and connectivity within the area.

The existing and planned roadways in Land Unit A are categorized as follows according to the Fairfax County Guidelines for Functional Classification of Roadways. The Urban Design section includes the streetscape recommendations.

1. *Arterials on the Periphery* –Some arterials are through corridors and occur on the periphery of Land Unit A. These are Centreville Road and Frying Pan Road which provide for through traffic and are planned to be improved according to the Transportation Plan Map and the Countywide Bicycle Master Plan. Improvements should incorporate appropriate pedestrian facilities and streetscape including improved pedestrian crossings across Centreville and Frying Pan Roads and across the Dulles Toll Road.

2. *Minor Arterials– Type B* –These types of roadways carry shorter-distance through traffic, and carry less traffic volume than roads with higher classification. Some roads may carry higher vehicular traffic in the land unit that is more typical of a minor arterial.

   Curb to Curb Area:
   - Median width of approximately 8 to 22 feet if necessary to allow for safe pedestrian refuge. (May be wider for areas with frequent and/or heavy pedestrian crossings.)
   - 2-3 travel lanes per direction (11 feet for each lane)
   - 5-6 feet for on-road bike lane per direction, as shown on bicycle facilities map
     - If an on-road bike lane is not provided, then 1 extra wide travel lane per direction may be desirable, adjacent to the curb, to accommodate bikes (14 feet wide). The lane should be marked or signs posted indicating that bicyclists may use the outside lane.
   - 8 feet for on-street parallel parking if found desirable
   - A target posted speed of 30-35 miles per hour is desirable.

3. *Collector Streets* – Sayward Boulevard is an example of a collector in Land Unit A that routes traffic to major and minor arterials from the local streets.

   Curb to Curb Area:
   - A median is not preferred; however, if provided, the width should be approximately 8 to 22 feet
   - 1 to 2 travel lanes per direction (11 feet for each lane)
   - 5-6 feet for on-road bike lane per direction, as shown on bicycle facilities map

  - If an on-road bike lane is not provided, then 1 extra wide travel lane per direction may be desirable, adjacent to the curb, to accommodate bikes (14 feet wide). The lane should be marked or signs posted indicating that bicyclists may use the outside lane.
- 8 feet for on-street parallel parking per direction
- A target posted speed of 30-35 miles per hour is desirable, with the lower end of the target speed for collectors where high pedestrian and bicycle traffic is expected to occur. In some cases 25 miles per hour may be desirable.

4. *Local Streets*– Local streets in this area include the internal circulation roads and the new planned streets which connect the land uses to collector roads and allow internal circulation.

   Curb to Curb Area:
   - Medians are not desirable and should only be required when they are part of the urban design concept and the landscape or open space plan
   - 1-2 travel lanes per direction (10-11 feet for each lane)
     - The outside lane is a shared travel lane between bicyclists and vehicles. Local streets are low speed facilities that normally may not require bike lanes.
   - 7-8 feet for on-street parking per direction when provided (7 feet for residential areas; 8 feet for mixed-used commercial areas)
   - A target posted speed of 25 miles per hour is desirable.

The above guidance is for roads associated with redevelopment or new development. Flexibility should be provided for roads that transition to existing roads. In addition, if new roads cross environmentally sensitive land there should be flexibility in road design.

Bicycle Facilities

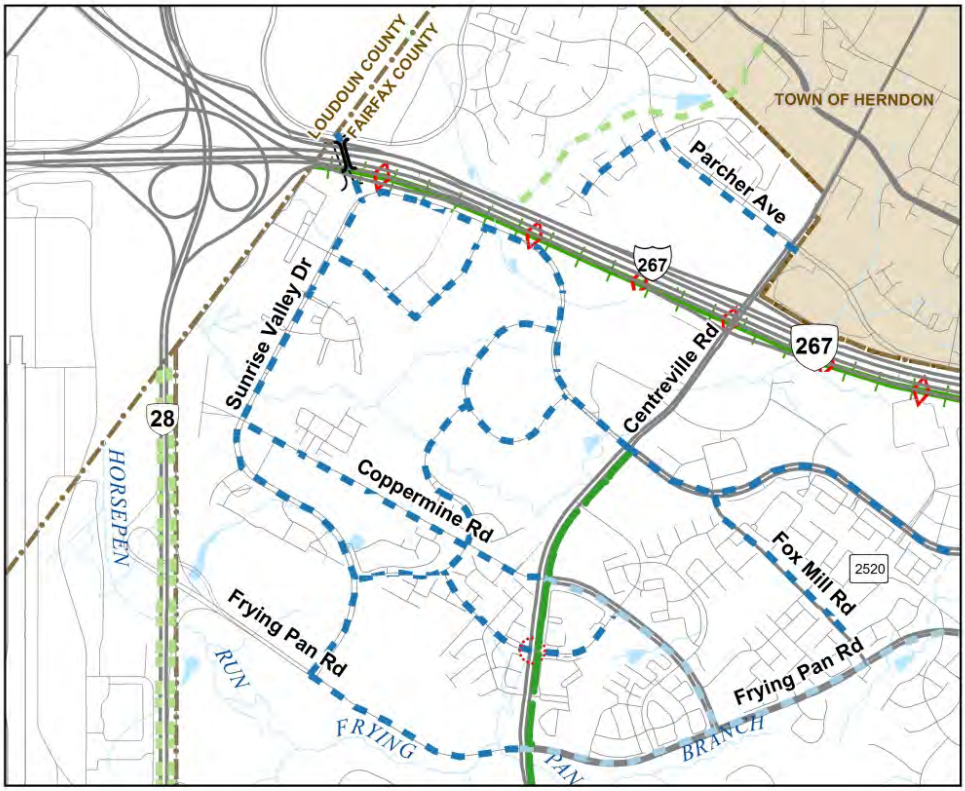
Bicycle and pedestrian facilities should be provided on roads consistent with Figure 18. Bicycle facilities are described in the text located in the Street Types guidelines under the Road Transportation Improvements section above. In an effort to encourage bicycling in Land Unit A, safe, secure, and convenient bicycle parking should be provided. The number of bicycle parking spaces should be determined based on the planned land uses.

Transportation Demand Management

Transportation Demand Management (TDM) refers to a variety of strategies aimed at reducing the demand on the transportation system, particularly at reducing single occupant vehicles during peak periods, and expanding the choices available to residents, employees, and visitors. Examples can be found in the county's Policy Plan. The result is a more efficient use of the existing transportation system. TDM is a critical component in achieving the Plan's goal of land use and transportation balance.

The objective of a successful TDM Program for Land Unit A will be to reduce the number of single occupant vehicle trips and promote the use of alternative modes of transportation or other programs to reduce the impact on the transportation network. These reductions are based on Institute Transportation Engineers' (ITE) trip generation rates and fall within the ranges shown in Figure 19, the TDM Trip Reduction Goals. In the TSA, recommendations are for reductions of at least 35 percent within one-quarter mile of the Innovation Center Station and at least 30 percent for the area between one-quarter and one-half mile from the station. TDM goals lower than those shown in Figure 19 may be considered, on an interim basis, prior to the opening of the Innovation Center Metrorail Station.

DULLES SUBURBAN CENTER, LAND UNIT A BICYCLE FACILITIES



Existing Facilities
- Bike Lane
- Existing Off Street Trail

Spot Recommendations
- Bike Access Links
- Stream Crossing
- Road Crossing

Recommended Facilties
- Bike Lane
- Buffered Bike Lane
- Sharrow
- Climbing Lane
- Striped Shoulder
- Shared Roadway
- Shared Roadway w/ Safety Treatment
- Shared Use Path
- Cycletrack
- Policy Roads

N

Miles 0 0.25 0.5

EXISTING	PROPOSED	
M	M	METRORAIL STATION
P	P	COMMUTER PARKING LOT
T	T	TRANSIT TRANSFER CENTER (NO PARKING)
VRE		COMMUTER RAIL STATION
	R	RAIL STATION
		HIGH OCCUPANCY VEHICLE LANES
		HIGH OCCUPANCY TOLL LANES

- CONSTRUCT FULL GRADE-SEPERATED INTERCHANGE OR INTERCHANGE IMPROVEMENTS
- CONSTRUCT PARTIAL GRADE-SEPERATED INTERCHANGE OR INTERCHANGE IMPROVEMENTS
- HIGHWAY OVERPASS
- HIGHWAY UNDERPASS
- CUL-DE-SAC
- LIGHT RAIL TRANSIT/ BUS RAPID TRANSIT
- METRORAIL
- PLANNING DISTRICTS

NOTE: IMPROVEMENTS TO ARTERIAL FACILITIES SUBJECT TO COMPLETION OF CORRIDOR STUDIES. SEE DISCUSSION IN AREA PLAN OVERVIEW TEXT. FINAL ALIGNMENTS SUBJECT TO COMPLETION OF APPROPRIATE ENGINEERING STUDIES.

HOV LANES TO BE CONSIDERED IN PROJECT DEVELOPMENT. HOV LANES TO BE PROVIDED IF WARRENTED BASED ON DEMAND FORECASTS AND CORRIDOR STUDY.

FIGURE 18

Figure 19: TDM Vehicle Trip Reduction Goals for Office and Residential Development

Development	TDM Vehicle Trip Reduction Goals		
	0-1/4 Mile	¼ to ½ Mile	Beyond ½ Mile
Office	45%-35%	40%-30%	35%-25%
Residential	45%-35%	40%-30%	25%-15%

Note: The percent reduction is from the latest ITE peak hour trip generation rates

A large component of TDM will be the implementation of formal TDM programs by the various stakeholders within Land Unit A. Property owners wishing to develop under the plan, through the rezoning process, should consider joining a local Transportation Management Association (TMA) prior to establishing a TDM program. At a minimum, development proposals should include the following elements associated with their TDM program in addition to the minimum goals stated above:

1. Indication of the trip reduction goals to be achieved at each phase of development and the measures to be used in the program.

2. TDM implementation plans with monitoring provisions.

3. Provision of remedies if a TDM fails to achieve its objective within a reasonable period of time.

Parking Management

To facilitate the achievement of TDM goals and encourage transit use, shared parking for uses which have different peak demand periods, instituting paid parking, or other parking reduction strategies are encouraged. Additionally, shared parking between similar uses with both existing and new buildings should be explored, especially if the existing use is over parked. These parking strategies can serve to reduce vehicle trips and increase the cost-effectiveness of the provision of parking. For development within a half mile of the Metrorail station, a parking plan should be submitted along with a development application that demonstrates that the amount of parking that is provided is sized to support the development. Provisions for parking reductions and other incentives to lower parking should be utilized if it is supported by the parking plan. The use of higher parking rates in the first phases of a development followed by lower parking rates in subsequent phases can be considered. Parking agreements with neighboring sites can be considered on an interim basis. Residential uses should take into account the number of bedrooms per unit when establishing the amount of parking to supply. All non-residential uses should reduce their parking supply below the countywide minimum.

For office space, a maximum parking rate should be:

- 2.1 spaces per 1,000 square feet within one quarter mile of a Metrorail station
- 2.4 spaces per 1,000 square feet between one quarter and one half mile of a Metrorail station.

In instances where a higher office parking rate exists or is desired, a parking study or other appropriate justification can be submitted in order to consider a different rate for office use

Funding of Transportation Improvements and Services

Funding these transportation improvements through federal, state and county sources should be pursued; however, some combination of public and private sector funding will be necessary to cover the costs associated with these improvements and to expedite implementation. Additionally, these improvements may be implemented in stages by the private sector as development occurs. Further detailed examination of these funding options for each improvement identified and those that have not been identified is needed before a preferred funding approach is selected.

Environmental Stewardship

Promoting environmental stewardship in Land Unit A includes innovative stormwater management, the provision of green buildings and addressing noise sensitive uses. These practices will ensure that this area develops as a sustainable community, creating a healthy and environmentally responsible place.

Stormwater Management

Future development offers considerable opportunities to improve upon past stormwater management practices in furtherance of efforts to protect and restore local streams and to reduce pollutant loads entering the Potomac River and Chesapeake Bay. Low impact development (LID) techniques of stormwater management can serve to reduce runoff volumes entering local streams and can more easily be incorporated within densely developed areas than more traditional detention and retention ponds. These LID practices can include, but are not limited to, bioretention or biofiltration facilities (commonly known as rain gardens), vegetated swales, porous pavement, vegetated roofs, tree box filters and the collection and reuse of stormwater runoff.

Environmentally-friendly stormwater design should be an integral design principle that will be part of the conceptual stage of site development for all future development, recognizing that stormwater management measures may be phased with development. The stormwater design should first seek to minimize the effect of impervious cover, followed by the application of stormwater reuse, retention, detention, extended filtration and, where soils and infrastructure allow, infiltration to improve downstream waters. The incorporation of stormwater management strategies in parks and other open space areas within Land Unit A may support this approach while providing recreational amenities and there may be opportunities to incorporate LID practices within other open space areas.

Coordination of stormwater management controls among multiple development sites may also be effective in achieving stormwater management goals in an efficient manner. Stormwater management and water quality controls should be optimized for all future development projects consistent with the scale of such projects.

Any development proposals in the area should be reviewed on a case-by-case basis for the appropriate optimization of stormwater management and water quality controls allowing for flexibility in specific approaches taken to achieve these guidelines.

- Stormwater quantity and quality control measures should be provided with the goal of reducing the total runoff volume or significantly delaying its entry into the stream system. In furtherance of stream protection and/or restoration through replication of natural hydraulic conditions, the emphasis should be on LID techniques that evapotranspire water, filter water through vegetation and/or soil, return water into the ground or reuse it.

- LID techniques of stormwater management should also be incorporated into new and redesigned streets where allowed and practicable.

In addition, at a minimum, the following guidelines should be followed for any application for which a floor area ratio (FAR) of 1.0 or more is proposed:

1. For sites that have greater than 50 percent impervious cover in the existing condition, the total volume of runoff released from the site in the post-developed condition for the 2-year, 24-hour storm should be at least 25 percent less than the total volume of runoff released in the existing condition for the same storm. Furthermore, the peak runoff rate for the 2-year, 24-hour storm in the post-developed condition should be at least 25 percent less than the existing condition peak runoff rate for the same storm.

2. For sites that have 50 percent or less impervious cover in the existing condition, the total volume of runoff released as well as the peak release rate for the 1- and 2-year, 24-hour storm in the post-developed condition should be equal to or less than the total runoff volume and peak release rate in the existing condition for the same storm.

3. In addition to item 1 or 2 above, stormwater runoff associated with the development should be controlled such that either: (a) the total phosphorus load for the property is no greater than what would be required for new development pursuant to Virginia's Stormwater Regulations/the county's Stormwater Management Ordinance; or (b) an equivalent level of water quality control is provided.

As an alternative to items 1, 2 and 3 above, stormwater management measures may be provided that are sufficient to attain the Rainwater Management credit of the most current version of LEED-NC or LEED-CS rating system (or equivalent of this/these credit(s)).

As an alternative to the minimum guidelines above, stormwater management measures and/or downstream improvements may be pursued to optimize site-specific stormwater management and stream protection/restoration needs, consistent with the adopted watershed management plan(s) that is/are applicable to the site. Such efforts should be designed to protect downstream receiving waters by reducing stormwater runoff volumes and peak flows from existing and proposed impervious surfaces to the maximum extent practicable, consistent with watershed plan goals.

Green Building

The Policy Plan's Environment section provides guidance for green building practices and standards applicable to Suburban Centers and Transit Station Areas. Future development throughout Land Unit A should follow this guidance, with the exception of non-residential development within the Innovation Center TSA which should go beyond this guidance by achieving, at a minimum, LEED Silver certification or the equivalent. Achievement of higher levels of LEED certification, both within and outside of the TSA is also encouraged. A broad range of practices can be pursued in support of or in addition to green building certification. These include, but are not limited to: the provision of green roofs (also referred to as vegetated roofs), the incorporation of solar orientation and landscaping strategies for energy conservation, on-site renewable energy production, the use of low energy lighting fixtures, the use of recycled materials during construction, and the reuse of grey water where allowed. The application of these practices should be encouraged.

Noise

Proposed residential uses, outdoor activity areas and other noise sensitive uses may be affected by proximity to the Dulles Toll Road and Metrorail. In addition, a small portion of the Land Unit near Route 28 is located within an area with projected aircraft noise impacts above DNL 60 where current and/or projected future highway noise levels exceed DNL 75 dBA (a day-night weighted average noise level) or where projected aircraft noise exposures exceed DNL 60 dBA.

Broader planning goals for the Innovation Center TSA may suggest that sites near the Dulles Toll Road and Metrorail would be appropriate for residential development and/or other noise-sensitive uses, even where projected noise impacts may exceed DNL 75 dBA. However, design approaches may be available that would shield noise-sensitive areas from these impacts. Efforts should be taken to design noise-sensitive uses to minimize, if not avoid, the exposure of facades of noise-sensitive interior spaces to noise levels above DNL 75 dBA.

Where residential or other noise sensitive uses are proposed near rail and major highways, such proposals should only be considered with the provision of a noise study during the review of the development, appropriate commitments to noise mitigation measures and potentially commitments to the provision of disclosure statements and may necessitate a post-development noise study if feasible. The noise study during development review should clearly define the noise levels impacting the proposed uses as a measure of dBA DNL. The noise study should include noise contours and/or noise impacts at each façade of each affected building with current noise levels and future noise levels based on a minimum 20-year traffic volume projection for the roadway and other transportation noise sources. In addition, the noise study should identify differing noise levels that may affect building facades at different elevations.

For those studies that indicate noise levels in excess of DNL 65 dBA on proposed noise sensitive uses, appropriate mitigation measures should be provided with the goal of achieving DNL 45 dBA for interior space and DNL 65 dBA for outdoor recreation areas. Attenuation may include siting and orientation of the noise sensitive use, as well as the use of appropriate building materials and noise barriers.

In areas where projected noise impacts at affected building facades will exceed DNL 75 dBA, and for dwelling units where outdoor spaces including balconies will be projected to be exposed to noise levels that exceed DNL 65 dBA, disclosure statements should be provided to potentially affected residents and users within the impacted uses or units, which clearly identify the mitigated and unmitigated noise levels for interior space and the noise levels for any affected balconies in addition to noise mitigation for interior space and outdoor recreational areas. Post-development noise studies should be conducted in order to help staff evaluate the effectiveness of noise mitigation measures.

Urban Parks and Recreation

Growth and development increase the need for parks, recreation and open space that are essential amenities in Land Unit A and the Innovation Center TSA and are currently deficient. Parks provide visual breaks in the urban landscape and places for people to enjoy the outdoors, recreation and leisure pursuits. Public open space is especially important for residents of higher density housing who may lack access to private yards or recreation facilities. A diverse park system contributes economic, social and health benefits by providing a high quality of life for residents.

New parks should be planned and integrated in Land Unit A that range from places that support and foster social interaction to those that support individual sports and recreation activities. While many developments will include urban parks as amenities, contributions of recreational facilities will also be needed to ensure a park system that serves a wide range of needs. The provision of athletic facilities is especially important and challenging. Creative approaches to providing for sports needs will be necessary, including use of technology and scheduling to increase facility capacities and integrating facilities within development areas, on rooftops, over stormwater detention facilities, in utility corridors and other alternative locations.

Urban Park Service Level Standards and Typology

The Urban Parks Framework is in the Parks and Recreation section of the Policy Plan as Appendix 2. It was established to guide the creation of park systems in Fairfax County's urbanizing and redevelopment areas and is to be used to guide park development. This framework provides service level standards, design guidelines and a typology of urban park types to guide the creation of urban park systems in Fairfax County.

Ideally, urban areas contain a complement of urban park types in order to serve local leisure needs; support environmental and sustainability goals; and contribute to the area's sense of culture, liveliness, and identity. Urban park design elements may be combined in various ways to create a range of urban park types. While park types may be adjusted to fit an area's specific needs and concept, five distinct types of urban parks include pocket parks, common greens, civic plazas, recreation-focused urban parks and linear parks as described in the Urban Parks Framework. The urban park typology strives to provide a comprehensive range of amenities and uses, such as pedestrian-oriented by-ways, large open spaces for civic gatherings, and other recreation-oriented opportunities for organized sports and informal play.

Park service level standards guide the provision of parkland and facilities relative to specific county needs and land use context. For urban areas, the parkland service level standard is based on population and employees. In urban areas, park size is typically less than five acres and often under ½ acre. Service area is generally within a 5-10 minute walking distance (or ¼ - ½ mile) from nearby offices, retail and residences. New developments should provide 1.5 acres of urban park space per 1,000 residents and 1.0 acre of urban park space per 10,000 employees that is well integrated into the development and distinguished from site and public realm landscaping and streetscape features. A range of recreation facilities and park amenities should be incorporated into the urban park spaces to serve the recreation and leisure needs of nearby residents, workers and visitors.

Urban Park Implementation

Creation of an urban park network is essential, to successful redevelopment efforts and the vision for Land Unit A and the Innovation Center TSA. As a result of ownership patterns, urban park development will likely occur in a piecemeal pattern over time. Therefore, coordination and collaboration among landowners to create a connected system of needed park spaces is desirable. A comprehensive system of urban parks, if properly implemented, can contribute to a sense of place and help distinguish the area as a quality place to live, work, shop and visit. The Urban Parks Framework should be used to guide the design and location of the urban open space system. To accommodate the shift in development patterns, lifestyles and urban design, urban parkland should be provided in accordance with the urban park typology, framework and urban park land service level standards. Recreation facilities should be provided in accordance with adopted countywide facility service level standards to address recreation needs to the extent feasible.

It is important to pursue creative solutions to providing open space and recreation facilities in Land Unit A. Parkland can be publicly owned, privately owned, or provided through public-private partnerships. Creative urban park initiatives may include the use of building rooftops for park facilities; unique programming areas; recreation facilities and dedicated program space provided within commercial buildings, redevelopment at nearby parks, and forging new park-provider partnerships. With any of these creative approaches, visual and physical accessibility to the public is essential.

<u>Public Facilities</u>

Some existing public facilities located in and around Land Unit A may have adequate capacity

to accommodate planned growth; however, certain facilities will need expansions or modifications to continue providing adequate service. These facilities should be located within reasonable proximity of the land unit, in accordance with county policy. Providing adequate public facilities in some cases will require innovative urban solutions such as locating public facilities within buildings serving other uses. The provision of future facilities will need to be coordinated with the rate that planned development occurs.

Schools

Land Unit A is currently served by four public schools. These include Lutie Lewis Coates and McNair Farms Elementary Schools, Rachel Carson Middle School and Westfield High School. Coates Elementary is located within the Land Unit A.

Under the envisioned growth for the Innovation Center Transit Station Area, there will be a need for at least one new elementary school site to serve the area.

In addition, the Innovation Center Station Area and Reston/Herndon areas have student enrollments that are projected to significantly exceed the available capacity at the elementary, middle and high school levels. New elementary, middle and high school facilities, as well as capacity enhancements at existing facilities, will be required to accommodate the anticipated enrollment in these two areas. A high school located in or in the vicinity of Land Unit A would be well located to relieve overcrowding in existing schools as well as serve planned future growth in Land Unit A and the surrounding areas.

During the development review process, developers should provide for additional capacity to mitigate the impacts of new development. These contributions could be more traditional in nature, such as dedication of a school site, or might include more innovative urban solutions such as locating schools facilities with parks or within buildings serving other uses. Additionally, facilities such as vocational training, academy programs and/or adult learning centers that are currently provided at existing schools could be located in this area.

Telecommunications

It is anticipated that telecommunications services will be able to accommodate the planned growth in Land Unit A through continuous improvements in technology, funded by user fees. New buildings should be designed to accommodate telecommunications antennas and equipment cabinets on rooftops. Such design should be compatible with the building's architecture and should conceal antennas and equipment from surrounding properties and roadways by flush mounting, screening antennas, and/or concealing related equipment behind screen walls or building features.

URBAN DESIGN

Urban design is the discipline that guides the appearance, arrangement and functional elements of the physical environment, with particular emphasis on public spaces. An urban environment is comprised of many elements including; streets, blocks, open spaces, pedestrian areas and buildings. The following recommendations provide guidance for each of these elements, with a particular emphasis on creating a high-quality urban environment that is walkable and pedestrian-friendly. The goal of these recommendations is to support the transition of portions of Land Unit A from an auto-oriented suburban place into a cohesive, functional, pedestrian-oriented and memorable urban destination. The primary areas likely to transition are within roughly half a mile of the Innovation Center Metro station. The other areas are generally envisioned to largely remain the same, with the exception of the vacant land, which is envisioned to develop.

Urban Design Recommendations

The urban design recommendations provide direction for creating urban places within the area. These are organized into two sections, the Pedestrian Realm Recommendations and the Building and Site Design Recommendations.

Pedestrian Realm Recommendations

The pedestrian realm consists of publicly accessible places where people circulate on foot. Sidewalks connect pedestrians to their homes, places of employment, retail establishments, restaurants, parks, plazas, trails, and other public places. The pedestrian realm is the most visible space within the urban environment. It should be continuous but can vary in its character depending upon adjacent uses and the scale of the street. The design of the pedestrian realm should be integrated with and complimentary to adjacent land uses. The following recommendations address the Street Grid and Block Pattern as well as Streetscape Design.

Street Grid and Block Pattern

The street grid will be the primary organizing element of the area. In contrast to the existing pattern of large, suburban blocks, planned development should create smaller blocks through an interconnected system of streets. This street system will be more walkable, provide travel choices for pedestrians and motorists, and have breaks in building massing to help create a built environment that is appropriately scaled for pedestrian activity. See the Transportation section for more information on the planned street grid.

Streetscape Design

Attractive streetscapes include a well-designed road edge that contributes to area identity and provides a safe, high-quality pedestrian experience. The streetscape design should vary by the type of street and the adjacent land use, and should create a unifying theme along each of the roads to visually and physically link the various developments within the area. Elements of streetscapes include sidewalks, street furniture, streetlights, trees and other plantings, paving, crosswalks, bus shelters, bicycle racks, public art, and seating areas. The purpose of these elements is to enhance the quality of the pedestrian environment.

Below are general recommendations for all streetscapes, which are followed by design recommendations for each streetscape type (Through Corridors, Avenues, Collectors, and Local Streets). See the Transportation section for information on street types associated with each streetscape type.

Definition of Streetscape Zones: The streetscape is composed of three zones (see illustrated streetscape cross-sections). The landscape amenity panel is located next to the curb and includes trees, lighting, bus stops, bicycle racks, parking meters, traffic signs, refuge strips, and other urban living infrastructure. The sidewalk is reserved for pedestrian movement and should not contain any street furniture. The building zone is located between the sidewalk and the building facade. The character of the building zone is determined by the adjacent land use.

Underground Utilities and Stormwater Infrastructure: Utilities and stormwater infrastructure should be placed underground and should be coordinated with future roadway improvements and sidewalks to foster a pedestrian-friendly environment. Such infrastructure should be located under sidewalks, parking lanes, or the building zone; it should not be located under street trees.

Street Lighting: Street lighting should maintain the overall character and quality of the area,

provide adequate lighting levels that ensure public safety without creating glare or light spillage, and conform to LEED light pollution requirements and county ordinances.

Streetscape Maintenance: Streetscape improvements may be provided on a combination of publicly owned right-of-way and private property. When the public right-of-way is utilized to provide streetscape improvements, commitments should be made by the property owner to maintain the entire streetscape area. In addition, when the streetscape is not entirely within the right-of-way, additional right-of-way or a public access easement may need to be provided for the portion of the streetscape located on private property.

Pedestrian Crossings: At pedestrian crossings, special pavement or striping should be designed to create a well-delineated, ADA accessible and safe area for pedestrians to cross the street.

Median Landscape Strip: New streets in Land Unit A are not expected to include medians except where they would facilitate pedestrian crossings. Where medians are provided, they should be planted with attractive landscaping. Safety and sight distance should be taken into consideration.

On-Street Parking: Streetscapes with on-street parallel parking should have a small paved area adjacent to the curb known as a refuge strip. The refuge strip will allow passengers to exit parked cars without having to step into planted areas.

Planting in the Pedestrian Realm: Street trees should be planted in an environment that promotes healthy root growth, and should be spaced no more than 40 feet apart. Only those varieties that require little maintenance, are resistant to disease, and are adapted to extreme urban conditions such as pollution, should be used. In addition to trees, vegetation within planting strips should include supplemental plantings, such as ornamental shrubs, ground cover, flowering plants, and grasses. Supplemental plantings should occur in areas that are clear of vehicles parked on the street, and they should incorporate hardscaped pedestrian access points.

Low Impact Development Techniques: Streetscape design should include innovative stormwater remediation design elements such as bioretention, permeable pavements, and incorporation of water collection and storage.

Streetscape Design Flexibility: Flexibility will be needed where site constraints are present and where infill or expansion of buildings or other existing features limit the ability of a development to satisfy all streetscape recommendations, variation from the streetscape guidance may be permitted when the variation results in acceptable minimum sidewalk, landscape amenity panel and building zone widths and amounts of trees and landscaping.

Through Corridors

Through corridors include Centreville and Frying Pan Roads which will carry the largest volume of automobile traffic and will also accommodate buses, bicycles and pedestrians. If these roads are improved, pedestrian and bicycle facilities should be provided, along with streetscape improvements. These improvements should include improved pedestrian crossings across Centreville and Frying Pan Roads and across the Dulles Toll Road. In addition, the Countywide Bicycle Master Plan identifies further improvements.

Avenue, Collector, and Local Street Streetscapes

While avenues, collectors, and local streets serve different functions from a traffic perspective, their streetscapes are similar. The character of the streetscapes should generally be determined by the pedestrian activities generated by the adjacent land uses rather than the classification of the street.

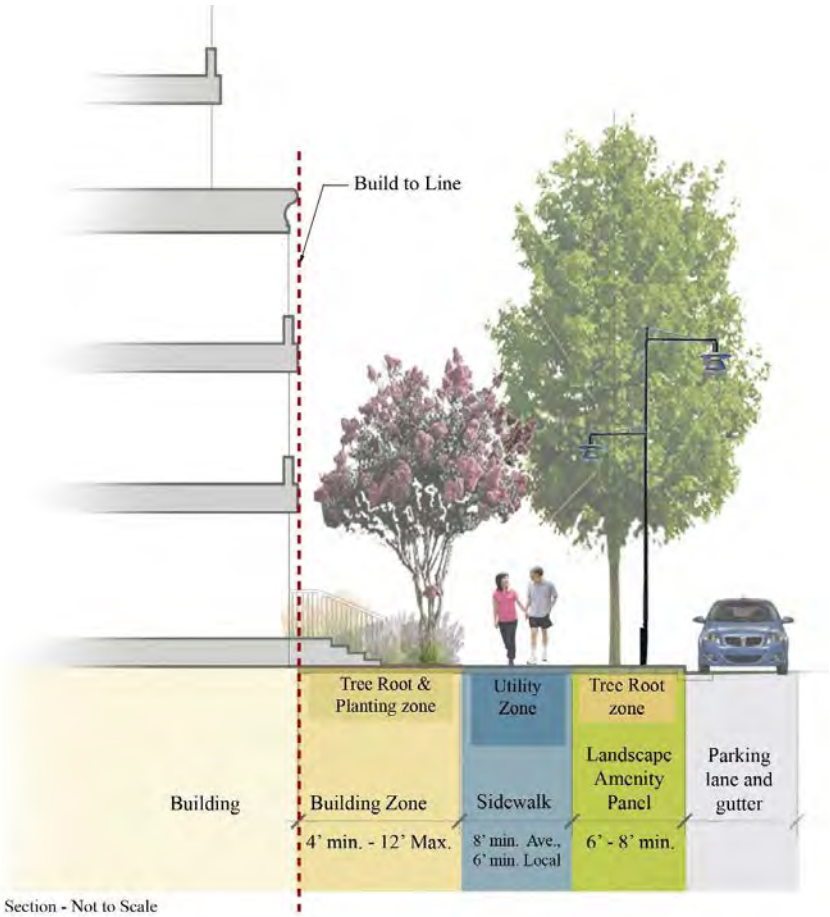
This category of streetscapes includes, among others, Sunrise Valley Drive, and Sayward Boulevard. See Figure 20. The following recommendations are provided for achieving the streetscape character for avenues, collectors, and local streets:

Landscape amenity panel: This zone should be a minimum of 8 feet wide along avenues and collectors and a minimum of 6 feet wide along local streets. Street trees should be evenly spaced in ordered plantings. Vegetation may also include shrubs and ground cover. Amenities such as bicycle racks and bus shelters should be provided as needed to serve the adjacent land uses.

Sidewalk: Sidewalks along avenues and collectors should be a minimum of 8 feet wide. Sidewalks along local streets should be a minimum of 6 feet wide.

Building Zone: The width of this zone should range from 4 to 12 feet. When ground-level retail is provided in a building, a portion of this building zone should be used for retail browsing or outdoor dining. Supplemental plantings (to include shade and flowering trees, shrubs, flowering plants, ground cover, and grasses) may be provided for buildings without retail uses.

Figure 20: Avenue/Collector/Local Street Streetscape with Residential Building, Section



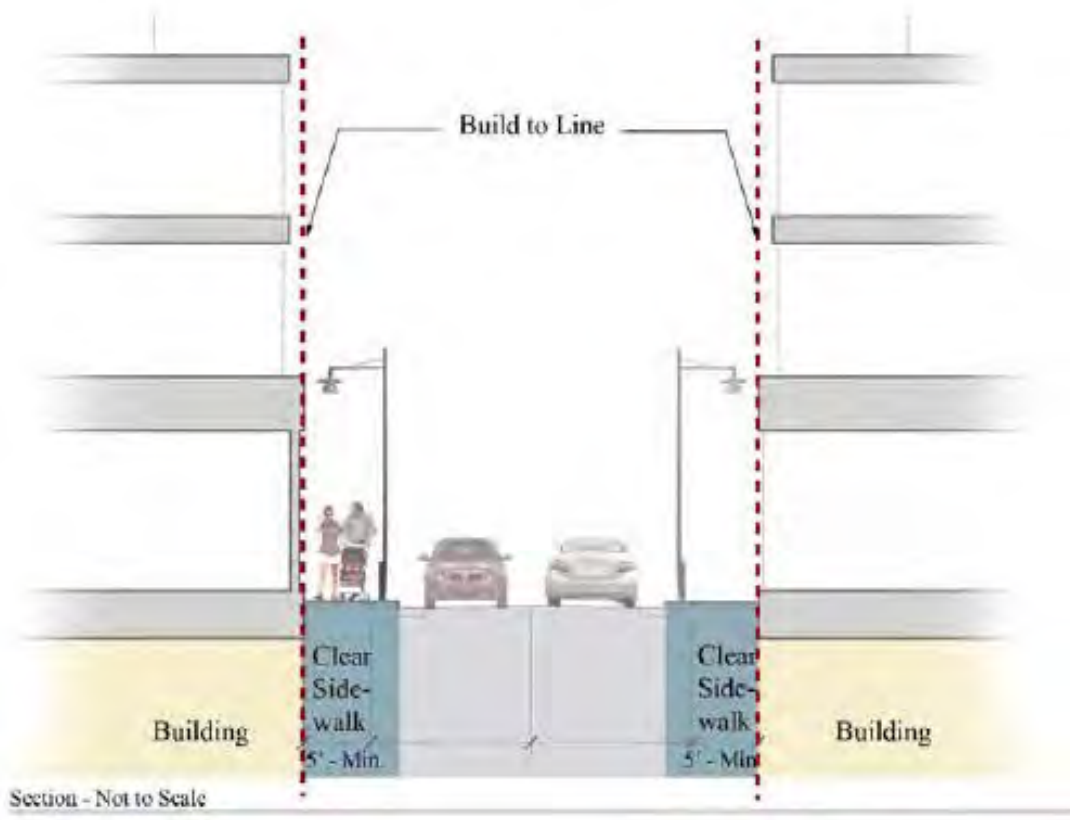
Note: This graphic depicts a residential building zone (8-12'). In commercial developments, the building zone will be smaller (4-8')

Service Street Streetscapes

Service streets are expected to provide access to parking, loading docks, waste management, utilities, and other back-of-house operations. While they do not primarily serve pedestrians, they should provide a minimum level of accessibility and safety for pedestrians where applicable. See Figure 21.

Sidewalk: A minimum 5-foot wide clear sidewalk should be provided adjacent to buildings. No poles, utilities, or other appurtenances should be located in the sidewalk clear area. Attractive street lighting should be provided to illuminate both the street and the sidewalk. In lieu of pole lights, attractive safety and wayfinding lighting may also be attached to the building face.

Figure 21: Service Street Streetscape, Section



Building and Site Design

Building and site design must support the pedestrian realm to create a vibrant urban environment. The location of a building on a site should not create a barrier to pedestrians by interrupting the pedestrian circulation system. Typically, buildings should be located close to the sidewalk to allow for active storefronts and other uses that engage pedestrians. Non-active uses like loading docks, mechanical rooms, utility vaults, and exposed parking decks, should be oriented away from through corridors, avenues, and local streets. These uses, which detract from the pedestrian

experience, should be located facing service streets or placed internally to the building envelope to minimize their negative impacts. The following recommendations address Build-to Lines and Building Frontages, Bulk and Massing and Step Backs, Blank Walls, Parking Design, Public Art, and Building Height.

Build-to Lines and Building Frontages

The build-to line is a theoretical line on the ground indicating where the facades of buildings should be located. The line ensures that the ground floors of all buildings on a block are in line with each other at the edge of the streetscape. Exceptions to the build-to line may occur where plazas, pocket parks, or spaces for public art are located. The build-to line generally applies to the podium (or base) of the building structure and excludes building towers, which may be set back further to allow for light and air to reach the street.

The building frontage is the portion of the building that serves to define and enclose the pedestrian realm. It aligns with the build-to line, and generally serves as a physical and visual boundary to the pedestrian realm. The building frontage typically separates exterior public space from interior semi-public or private space. The building frontage only applies to the floors of the building podium.

Existing uses and buildings that do not conform to the build-to line established by new development should investigate opportunities to create visual and physical linkages to conforming new buildings that address the pedestrian realm. These buildings may use walls, landscaping, or other architectural features to align with other buildings at the build-to line. Articulation along these walls can result in sculptural elements and maintain visual interest along the sidewalk.

Bulk and Massing and Step Backs

Planned development in Land Unit A will be urban in nature, and new buildings will generally occupy a majority of the block and be multiple stories in height. Sites should be designed with care to achieve the desired density goals, while remaining sensitive to the impact of development on the surrounding context. Guidance regarding building massing includes:

- Buildings should be designed with height variations to protect access to light and views and to allow for privacy.
- Buildings should be sited and spaced from one another in a manner that allows for light at the street level and minimizes long periods of shadow on the street, adjacent buildings, or public open space.
- Generally, buildings should be located towards the wider rights-of-way, where the street section can absorb the additional building height better than narrower streets.
- In general, ground-floor commercial uses should be accessed directly from the adjacent public sidewalk or building zone.
- Ground-floor residential uses, however, should be grade-separated from the public sidewalk to distinguish the units and to provide some privacy. This creates the opportunity for stoops, bays, porches or entries that establish a distinct transition between private residential developments and the pedestrian realm.

- Another related design feature affecting the pedestrian experience is the height of the building along the sidewalk. As a result, great care must be taken to preserve the proportion and scale of the street section so that it does not result in an overwhelming, dark, and windy pedestrian corridor.

- Step-backs are one tool that can be used to create an appropriate proportion of street width to building height. Step-backs result in building towers which are set back from the building frontage. As a result, pedestrians only perceive the first few floors of the building podium, and not the full height of the tower.

Blank Walls

Blank walls are solid walls without fenestration, entries or portals. When located at the ground floor, they are detrimental to the pedestrian experience and may disrupt pedestrian flow. Such conditions should not be permitted on any public street-facing facade. Active uses should be provided at the ground floor as much as possible. If blank facades cannot be avoided, strategies should be employed to mitigate their impacts. These may include the provision of applied architectural elements, material changes, or other similar features to provide additional building detail and visual interest.

Parking Design

The following recommendations address parking design. Parking access should be designed in such a manner as to minimize conflicts between vehicles pedestrians, and bicyclists and to take into account pedestrian and bicyclist safety. This may include reducing the number of parking access points and minimizing the widths of ramps and curb cuts where they intersect with the sidewalk.

- Vehicular access to parking lots and parking garages should be limited to local streets or service streets when feasible.

- Parking access should be designed to be attractive and coordinated with the site plan and architecture.

- Certain uses, such as retail, civic or entertainment, may require highly visible parking. In these cases, the design of the parking and its access should be reflective of the activity that will occur within the building.

- Underground parking is the least intrusive form of parking on the built environment. However, due to the area's geology, above-grade structured parking, or podium parking, may also be appropriate and will likely be the predominant type. Above-grade parking structures should be "wrapped" with active uses on all sides except along a service street.

- Exposed parking structures that are not wrapped with other uses may be unavoidable. In such cases, careful architectural detailing, lighting, and landscaping should be employed along the building frontage to mitigate the negative impacts of exposed parking levels.

- It is the long term vision to avoid surface parking. Surface parking should be avoided in most parts of Land Unit A, but may be considered in the interim or for short term parking or for passenger drop-off and pick-up areas.

- When provided, surface parking lots should be located to the side or rear of the primary use and should contain pedestrian connections that lead to the front door of the associated building.

- On-street parking makes sidewalks safer and provides necessary and sometimes more accessible residential and retail parking. Certain avenues, collectors, and local streets within Land Unit A should provide an opportunity for on-street parking. See Transportation section for additional guidance.

Building Height

Typically, building heights in Land Unit A will reflect the proposed intensity pattern. The tallest buildings may be located within 1/4 mile of the Metro station, with heights stepping down gradually as the distance from the stations increases. In addition, building heights in proximity to the Dulles Airport Access Road and Route 28 may be taller however building heights will be lowest in locations adjacent to existing townhouse and those single-family residential neighborhoods outside of Land Unit A. Careful design will protect view corridors and maintain access to sunlight at these sensitive locations. During the development review process, solar shading analyses (also called shadow studies) for all buildings should be provided to ensure that adjacent buildings and public spaces will have adequate access to light and air.

Public Art

Public Art should be a component of the effort to achieve quality urban design within Land Unit A. As one of the key urban design principles, the provision of public art will serve to create a unique identity for Land Unit A, and provide a gateway into the county from Dulles International Airport.

Interim Conditions

In many cases developments will be phased over time. Phased developments should prepare plans and supporting graphics that demonstrate how all interim conditions will meet Plan objectives, including those related to urban design.

LAND UNIT B

CHARACTER

Land Unit B consists of approximately 310 acres and is bounded on the west by Centreville Road, on the north by Fox Mill Road, on the south by Floris Community Park and Frying Pan Park, and on the east by the Sycamore Ridge single-family residential community and other land planned for residential use at 2-3 dwelling units per acre (Figure 22).

This land unit contains the McNair Farms multifamily, garden apartments as well as townhouses. In addition, local and community serving commercial uses at the Village Center at Dulles are located at the southeast quadrant of the intersection of Fox Mill and Centreville Roads. Both the apartments and the Village Center are part of a planned mixed-use development to include residential, office and retail uses. Within this land unit there is additional land planned for residential use and a public park.

RECOMMENDATIONS

Land Use

1. The portion of Land Unit B located north and west of Frying Pan Branch (except Parcels 16-3((1))19, 20 and 21) is planned for a mix of residential, commercial retail, office and public park uses and is being developed as McNair Farms. The recommended development is a mixture of residential uses up to 14 dwelling units per acre and a maximum of 327,000 square feet of commercial retail and office use. This mixed-use development is conditioned upon the following:

   - Substantial land consolidation is achieved. The area should be master planned and developed as a contiguous unit;

   - Good urban design principles should be used for development. This includes coordinated vehicular and pedestrian access and circulation; attractive living, working and activity spaces; a variety of housing types; architectural compatibility; landscaping; usable open space, and good visual and functional relationships among the various land uses;

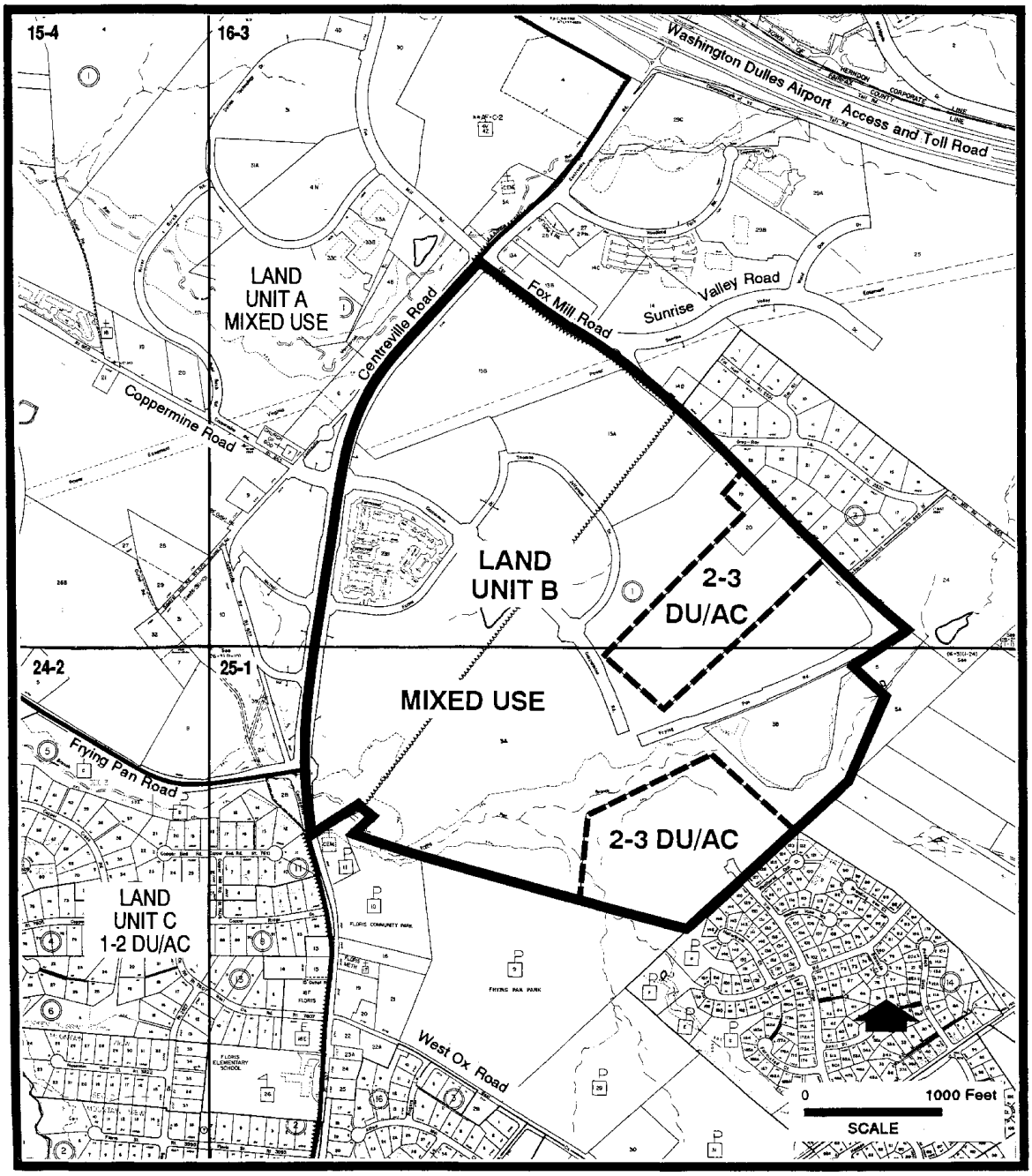
   - A mix of housing styles and types including single and multifamily units, prices and ownership forms is provided. A reasonable number of units must be marketed as rental units and incorporated into the overall design of the project; and

   - Provision is made for sites for day care facilities and an elementary school.

2. The three parcels south of Fox Mill Road (Parcels 16-3((1))19, 20 and 21) that were not incorporated into the planned development for this area are planned for development at 2-3 dwelling units per acre. As an option, residential use at 5-8 dwelling units per acre may be appropriate if the following conditions are met:

   - Full consolidation of all three parcels to achieve high quality development;

   - Dedication of adequate land to augment the school site and recreational facilities in conjunction with land planned as part of McNair Farms; and



LAND UNIT B **FIGURE 22**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

- Provision of housing unit types which are compatible with existing and/or planned residential development in the immediate area.

3. Parcels 25-1((14))(6)33-67 and (7)1-32 and B are planned and developed for public park and single-family, detached residential use at 2-3 dwelling units per acre. This will provide for development on this parcel that is compatible with the existing Sycamore Ridge community located to the east.

Parks and Recreation

Land Unit B is bordered on the south by Floris Community Park and Frying Pan Park. Frying Pan Meeting House, listed on the Virginia Landmarks Register and the National Register of Historic Places, is located in the northwest corner of Floris Community Park at Centreville Road. Adjacent land uses are planned to be compatible with the historic and agricultural character of these parks.

Greenways/Trails

The Frying Pan Run Stream Valley trail should be extended eastward from Land Units A and C to connect with Fox Mill Road Countywide Trail and then connect to the Monroe Street transit area. The Countywide Trail should extend south on both sides of Centreville Road between Fox Mill Road and West Ox Road to connect with a planned trail along West Ox Road and to the Monroe Street transit area site.

Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment, which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

LAND UNIT C

CHARACTER

Land Unit C consists of approximately 210 acres and is bounded on the east by Centreville Road; on the south and west by Horse Pen Run Stream Valley; and on the north and northwest by Frying Pan Branch Stream Valley (Figure 23). This land unit contains the stable, single-family, detached residential developments of Copper Crossing, Kings Grant, Mountain View and Rogers Farm. These residential developments are buffered by the Horse Pen Run Stream Valley which provides a natural transition to the nonresidential uses to the north and west in Land Units A and D. Additional development along Centreville Road in Floris includes a small convenience store, a fire and rescue station and the Floris Elementary School. This land unit also contains several undeveloped parcels, generally located in the southern portion.

RECOMMENDATIONS

Land Use

1. This land unit is planned for single-family, detached residential use at 1-2 dwelling units per acre and public park except for Parcels 25-1((1))18E pt. and 26, which are planned for Public Facilities as shown on the Comprehensive Plan Map. Infill development in this stable residential area should be of a compatible use and type and at a density of .5-1 dwelling unit per acre, in accordance with the guidance provided by the Policy Plan under Land Use Objectives 8 and 12.

2. Any enhancement of retail uses in Floris should demonstrate that these changes will be beneficial to the community, accommodate the planned widening of Centreville Road and not adversely impact adjacent, stable residential communities. In general, new retail uses, or expansion of the area currently used for retail uses, is not recommended.

Heritage Resources

Development should be sensitive to the numerous recorded and unrecorded heritage resources associated with the community of Floris.

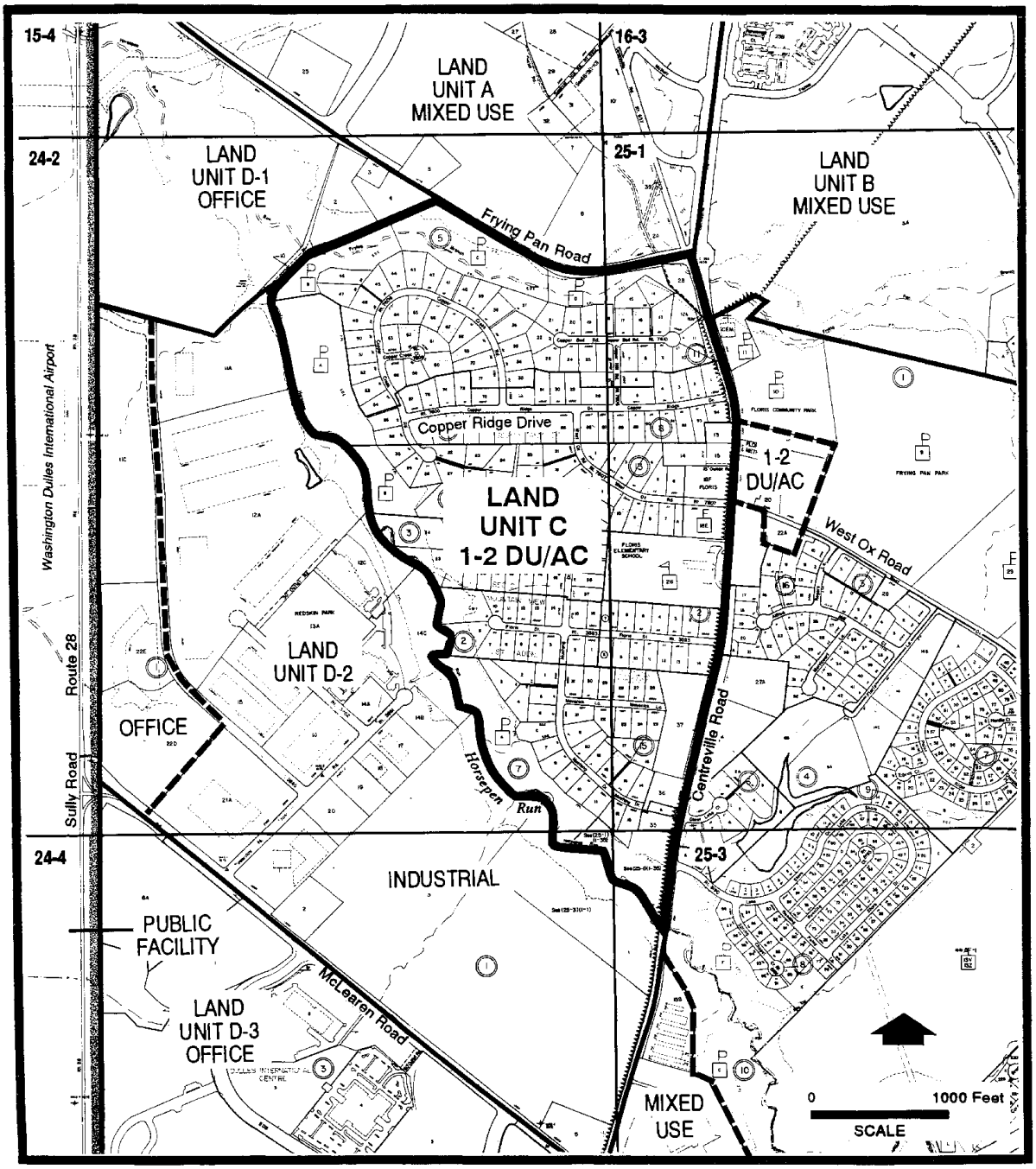
Parks and Recreation

1. The Frying Pan Branch and Horse Pen Run Stream Valleys should be dedicated to the Fairfax County Park Authority in accordance with the Stream Valley Policy and to further development of the Greenway system.

2. The athletic fields at Floris Elementary School should be upgraded to serve community needs.

Greenways/Trails

1. Stream Valley Trails through the Frying Pan Branch and Horse Pen Run EQCs along the northern and western boundaries of the land unit should be developed.



LAND UNIT C **FIGURE 23**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

2. A Countywide Trail should be developed on the west side of Centreville Road.

3. Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment, which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

LAND UNIT D-1

CHARACTER

Land Unit D-1 consists of approximately 75 acres and is bounded on the north by Frying Pan Road, the east by Frying Pan Branch Stream Valley Park, on the west by Route 28 and on the south by Land Unit D-2 (Figure 24). Horse Pen Run traverses the land unit, with approximately 50 percent of the land unit within the floodplain of the stream valley. The land unit contains the Middleton Farm and a few other structures and otherwise is not developed. Land Unit D-1 consists of the western portion of the land unit, which is approximately 68 acres and consists of parcels 24-2((1))1 and 10; and the eastern portion of this land unit which is 7.35 acres and consists of parcels 24-2((1))2, 3 and 4.

RECOMMENDATIONS

Western Portion of Land Unit – Tax Map 24-2((1))1 and 10

1. Tax Map 24-2((1))1 and 10 contain a considerable amount of EQC. Horse Pen Run Stream Valley traverses the northern portion of the area and is planned for public park use. The western portion of the land unit is planned for office use up to .15 FAR to provide development that is compatible with existing and planned adjacent land uses within this entire land unit, Land Unit D-2 and C. Dedication of the right-of-way for the planned roadway extension between Park Center Road and Sunrise Valley Drive to the county and of the EQC lands to the Fairfax County Park Authority should be provided. Stream restoration and revegetation of the Horse Pen Run EQC should be provided in consultation with county staff. In addition, all trails shown on the Trails Plan Map should be constructed in consultation with county staff.

2. As an option for the western portion of the land unit, office, hotel, recreational facilities and support service retail uses may be appropriate up to.40 FAR if all of the following conditions are met:

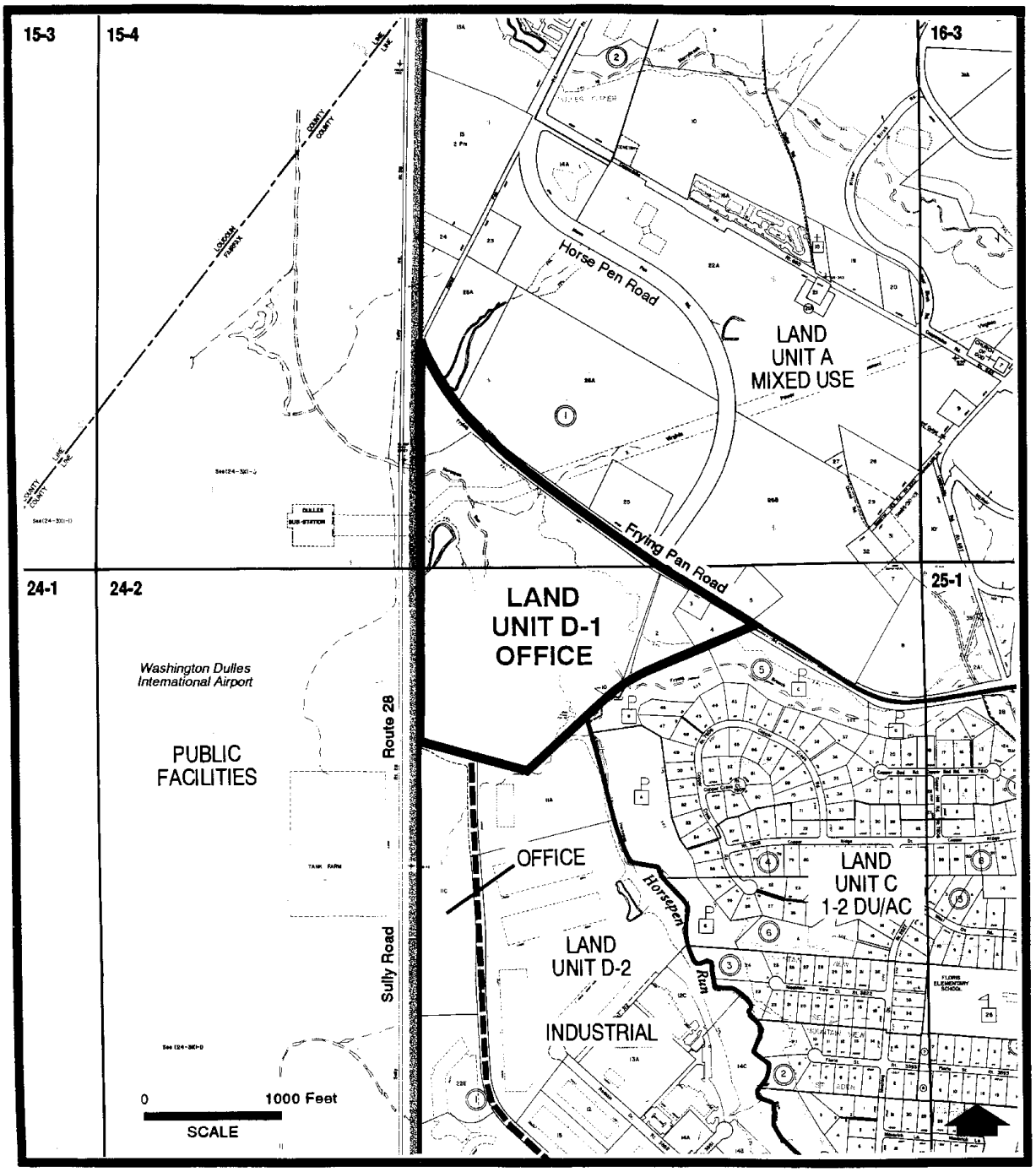
   - Full consolidation between Tax Map Parcels 24-2((1))1 and 10 is achieved;

   - With the exception of necessary road crossings and park improvements, all development should be south of the Horse Pen Run EQC;

   - The planned roadway extension between Park Center Road and Sunrise Valley Drive is constructed as a four lane divided roadway prior to any development beyond the current Comprehensive Plan base density of .15 FAR;

   - Any development beyond the current Comprehensive Plan base of .15 FAR should be phased to transportation improvements and trip reduction measures identified at the time of rezoning;

   - All EQCs and the area north of the Horse Pen Run Stream Valley are dedicated to the Fairfax County Park Authority and the land generally north of Horse Pen Run Stream Valley is developed for active recreational uses. Buildable recreational areas should be developed as a destination park to address recreation deficiencies in this area. Built facilities may include, but not limited to: ball fields, tot lots, destination playground, skate park, picnic pavilions, parking and other amenities. Lighting for recreational uses



LAND UNIT D-1 **FIGURE 24**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

should minimize light emissions that create sources of glare which may interfere with residents' and travelers' visual acuity. A continuous trail loop should be provided to connect this area with the development within the remainder of Land Unit D-1 and to Land Unit C, and designed in consultation with county staff;

- Appropriate screening is provided between any office development in this land unit and the existing residential development in Land Unit C to protect these stable residential communities; and

- The architecture, design and location of both principal and secondary structures and uses should ensure optimal views and overall appearance from Route 28 and further ensure a proper and reasonable transition to the existing residential uses in Land Unit C. In furtherance of these objectives, building heights should not generally exceed ten (10) stories, or approximately 150 feet for areas west of the Park Center Road/Sunrise Valley Drive extension and eight (8) stories, or approximately 120 feet for areas generally east of the same;

- A study of heritage resources is conducted and appropriate preservation measures taken. Recordation of significant heritage resources should occur.

- Support retail uses should be of a use and scale logically related to and supportive of the office and hotel uses and be physically or functionally integrated with other uses. Auto-oriented uses or stand-alone retail uses should not be permitted; however, eating establishments may be free standing. Such support retail should not be planned independently of the planned commercial uses, however phased development of commercial and retail uses is permitted

- Development should incorporate TDMs of a scope and level appropriate to the mix of uses and the available transit; and

- The planned road extension between Park Center Road and Sunrise Valley Drive should be designed to accommodate reasonably projected or anticipated transit needs; as first envisioned, bus stop locations should be provided along the planned extension, and be provided in a manner that has flexibility to support other forms of transit;

- Transit stop(s) should be included along the planned road extension;

- A contribution to help fund county acquisition of land for the development of recreational facilities in the vicinity is appropriate to help offset impacts. Such contributions should increase proportionately based on the amount of FAR approved above .35 FAR; and

- An all-weather crossing should be provided connecting stream valley trails within Tax Map Parcels 24-2((1))1 and 10 to stream valley trails within Land Unit C

<u>Eastern Portion of the Land Unit – Tax Map Parcels 24-2((1))2, 3 and 4</u>

3. The eastern portion of this land unit which includes Tax Map Parcels 24-2((1))2, 3 and 4 contains a significant amount of EQC. Horse Pen Run Stream Valley traverses the southern portion of the Tax Map Parcels 24-2((1))2, 3 and 4 and is planned for public park use. The remainder of the sub-unit is planned for office use up to .15 FAR to provide development that

is compatible with existing and planned adjacent land uses within this land unit and Land Units D-2 and C. In addition, all trails shown on the Countywide Trails Plan Map should be constructed in consultation with county staff.

4. As an option, the land within Tax Map Parcels 24-2((1))2, 3 and 4 may be consolidated with Tax Map Parcels 24-2((1))1 and 10 and used to support the development referred in Option 2 for the western portion of the land unit – Tax Map Parcels 24-2((1))1 and 10 above. Exercising such option requires that the area of all of the parcels within Land Unit D-1 be fully consolidated, and the entirety of Tax Map Parcels 24-2((1))2, 3, and 4 be dedicated and developed with park and open space uses. The intensity associated with parcels dedicated for park and open space can be transferred to the area located south of the EQC. Any recommended use with lighting should minimize light emissions that create sources of glare which may interfere with residents' and travelers' visual acuity.

Parks and Recreation

The EQC comprised of the confluence of the Horse Pen Run Stream Valley and Frying Pan Branch should be dedicated to the Fairfax County Park Authority in accordance with the Stream Valley Policy and to facilitate development of regional greenway trail linkages and trailhead support facilities. Additional land should be acquired by the Park Authority through cooperative public/private mechanisms for development of Community Park facilities to serve residents in the northern quadrant of the Suburban Center. The amount of land required to meet this additional need will depend on the extent and intensity of development which may be introduced into this area, but sufficient land suitable for development of active recreation facilities should be included.

Greenways/Trails

1. The stream valley trail along Frying Pan Branch should be developed. This trail is planned to connect with the Monroe Street transit area site and north to the Sugarland Run Stream Valley and the Town of Herndon's planned trail system.

2. The stream valley trail along Horse Pen Run should be developed and connect to Land Units C and D-2.

3. Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment, which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

LAND UNIT D-2

CHARACTER

Land Unit D-2 consists of 275 acres and is bounded on the north by Land Unit D-1, on the west by Route 28, on the east by the Horse Pen Run Stream Valley and Land Unit C, and on the south by McLearen Road (Figure 25). It contains a large concentration of warehouse and industrial hybrid uses, a large hotel and office complex.

RECOMMENDATIONS

Land Use

1. With the exception of Parcel 24-2((1))21A, the area that is east of Park Center Road and the area that is west of Rachel Carson Middle School is planned for light industrial and industrial/flex uses up to a maximum FAR of .35 to be compatible with existing development. Ancillary retail establishments to the primary industrial and industrial/flex uses may also be appropriate. East of Rachel Carson Middle School is planned for low intensity office use with a maximum .50 FAR, except for Parcels 24-4((1))5A and 5B, which are planned for retail use. Pedestrian connectivity from the school to the residential neighborhoods along Centreville Road shall be addressed when developing this area. This will include safe and convenient walking paths from Centreville Road to the school property to foster a more healthy and active environment for the student population. Careful attention should be made when addressing any future development and related impacts around Rachel Carson Middle School.

2. Parcel 24-2((1))22D is planned for hotel use up to .75 FAR and contains an existing hotel. Parcel 24-2((1))22E contains an existing office building and is planned for office use. Parcel 24-2((1))11C is planned for office use up to .50 FAR as a transition between the office use to the south and the planned office uses to the north. High quality design is essential for this highly visible location on Route 28.

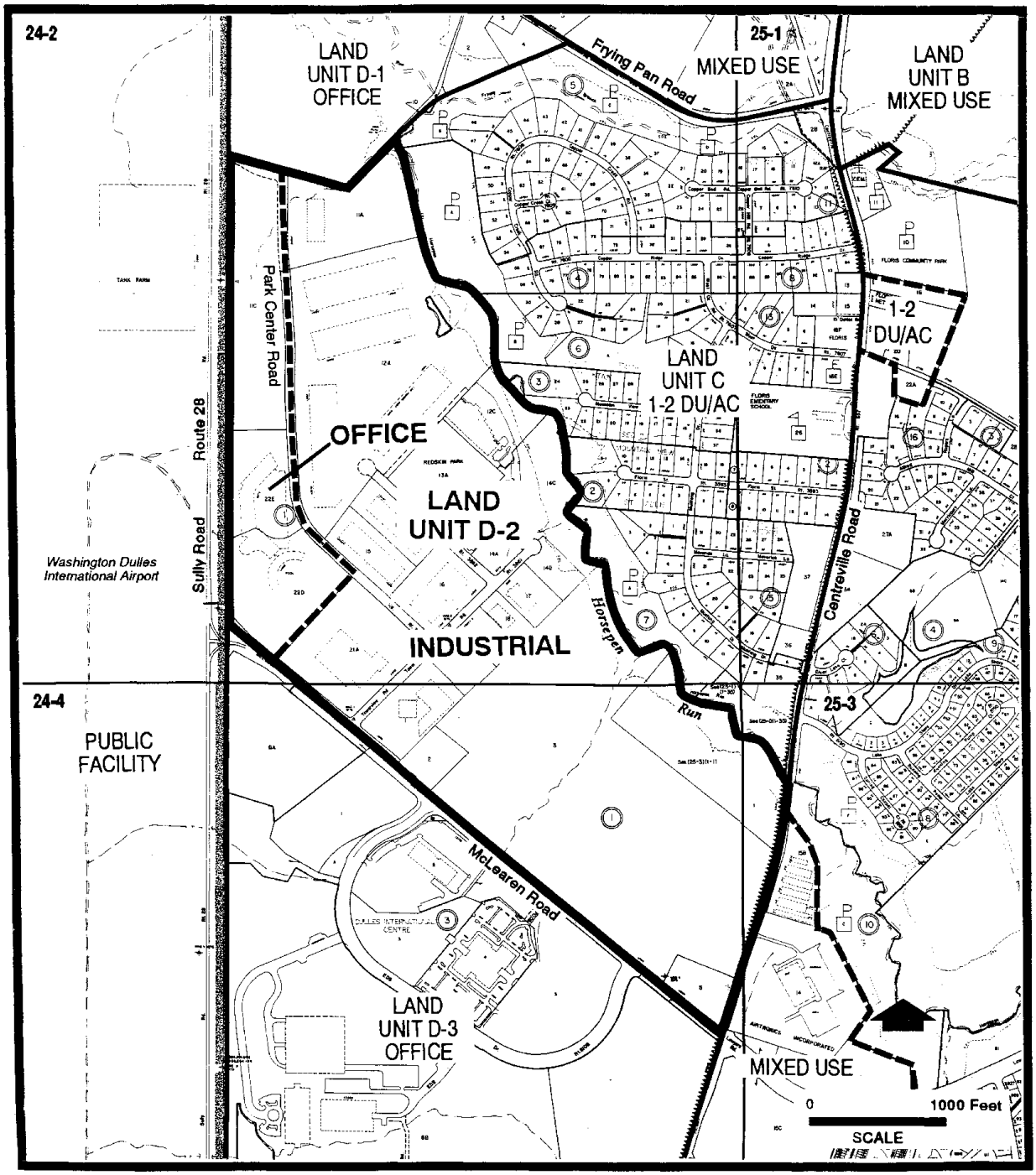
3. As an option, a mixed-use development to include hotel, conference center, trade or cultural facilities, may be appropriate for the undeveloped land west of Park Center Road. Major business, service, trade and cultural facilities oriented toward international corporate firms should be encouraged. This mixed-use option may be appropriate if the following conditions are met:

   - Uses should be oriented to Route 28 in such a way as to provide an attractive appearance along the corridor in this area;

   - Intensity, scale and height should be compatible with the existing hotel located within this land unit;

   - Retail uses may be incorporated into the development but only as an integral element. No strip commercial uses are recommended, because these would be incompatible with high-quality hotel or conference center uses;

   - Provisions for transit, including rights-of-way, should be incorporated into the design of the development; and



LAND UNIT D-2 **FIGURE 25**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

- The EQC portion of Horse Pen Run Stream Valley should be dedicated to the Fairfax County Park Authority.

4. For parcels 24-4((1))5A, and 5B, a service station and related uses may be appropriate if in keeping with the following:

   - A coordinated development plan should be presented at the time of development for the entire site;

   - Interparcel access should be provided between parcels 24-4((1))3A and 5A and 5B; and

   - Access to the service station is provided in a safe, convenient and efficient manner, and ultimately is restricted to right-turn only movements to and from Centreville Road and McLearen Road at such time as a median has been constructed on these respective roads.

5. As an option, Tax Map 25-3((1))1 may be appropriate for residential use at 4-5 du/ac. The opportunity for residential use on the parcel should not impede the implementation of the Plan's guidance that this land unit be developed for light industrial and industrial/flex uses. Accordingly, the following conditions should be met in order to exercise the residential option:

   - Provide buffering and screening to mitigate impacts such as noise, light and other nuisances from adjacent nonresidential uses;

   - Provide a site design that takes into account the adjacent school and possibility of future light industrial and/or industrial/flex uses on proximate parcels and to the extent possible, clusters development away from the southern border; and

   - Dedicate the EQC/RPA to the Board of Supervisors, with possible future dedication to the Fairfax County Park Authority.

6. Horse Pen Run provides a natural transition between the predominantly nonresidential uses within this land unit and the single-family detached subdivisions to the east in Land Unit C. This buffer area should be preserved and, where feasible, enhanced.

Transportation

To improve the area road network by alleviating traffic congestion and enhancing traffic safety along McLearen Road between Towerview Road and the proposed interchange of McLearen Road and Route 28, the planned four lane, undivided collector street, Park Center Road, should be extended eastward from its intersection with Towerview Road through lot 24-2((1))20, then curve southward through parcel 24-4((1))3 adjacent to the eastern boundary of lot 24-4((1))2 to intersect McLearen Road opposite its westernmost intersection with EDS Drive.

Parks and Recreation

The county should pursue the purchase or transfer of the former "Redskins Park" to the Fairfax County Park Authority as a way to provide a unique public active recreation resource. Existing indoor and outdoor facilities offer resources that could provide a wide variety of community recreation opportunities. All options for the acquisition of this property, either through fee simple purchase or some form of leasing mechanism, by the Fairfax County Park Authority for public recreational use should be investigated.

Greenways/Trails

Countywide trails should be developed on the south side of McLearen Road and west side of Centreville Road. Sufficient bike racks should be provided to support non-vehicular access to transit facilities on McLearen Road. A connection should be developed from the McLearen Road Trail, with safe crossing at Centreville Road, to the countywide trail on south side of Lawyers Road extended. The Stream Valley trail along Horse Pen Run should be developed to connect, with safe crossing at Centreville Road, with the planned stream valley trail outside the Dulles Suburban Center.

Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

LAND UNIT D-3

CHARACTER

Land Unit D-3 consists of 260 acres and is bounded on the north by McLearen Road, on the west by Route 28, on the east by Centreville Road and on the south by Wall Road (Figure 26). This area is partially developed with campus-style office development, industrial/flex and institutional uses (a private secondary school).

RECOMMENDATIONS

Land Use

1. This land unit is planned and approved for high-quality, campus-style office uses in the range of .50 to 1.0 FAR to promote development that is compatible with similar existing and approved development in this area. Consistent with the higher intensity recommended, the area near the intersection of McLearen Road and Route 28 should be considered as a future transit stop, given its central location and potential as a focal point along the Route 28 corridor. The higher intensity planned for Parcels 24-4((3))1-4 is contingent upon the provision of transit.

2. As an option, a training facility or hotel/conference center may be appropriate if integrated with existing office uses. These optional uses should be oriented away from Centreville Road.

3. As an option, mixed use up to .70 FAR may be considered within Land Unit D-3 to create a high quality mixed use node where office, retail, recreation and residential uses are provided. In addition to areawide guidance, this option should address the following site-specific conditions:

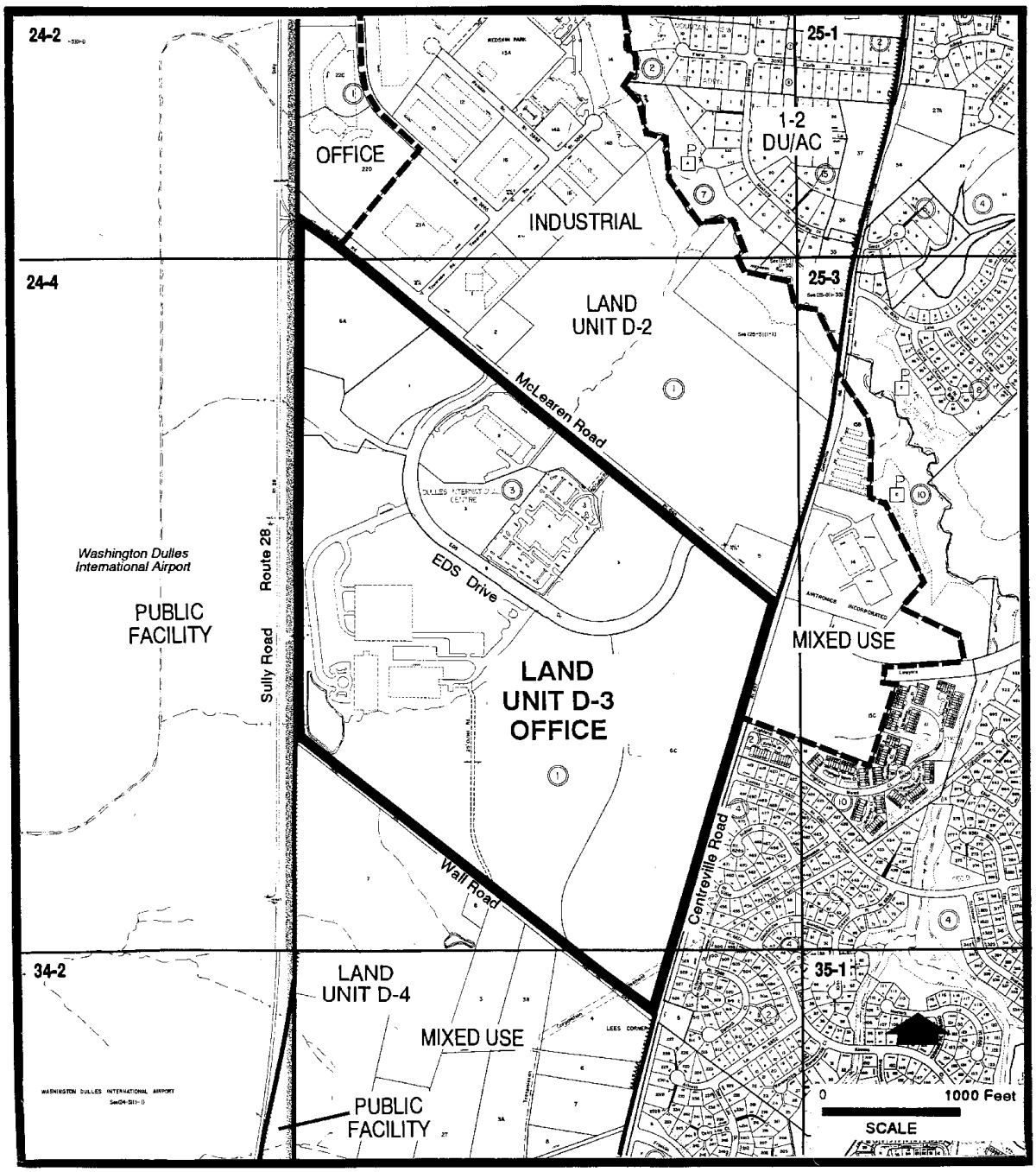
   - The development application should encompass the approximately 67-acre portion of the land unit south of EDS Drive, east of the EDS corporate complex, and bounded by Wall Road and Centreville Road.

   - The mixed use development should include one of the two following mix of uses (the percentages are approximate):

     A) - Retail use, 5-10%
        - Office use, 20-30%
        - Residential units, 50-70%

     B) - Retail/office use, 5-10%
        - Residential units, 90-95% [to include a maximum of up to 150 residential units, inclusive of affordable units and associated bonus densities, on Tax Map Parcel 24-4((1))6B4]

     In addition, other uses, such as institutional, may also be appropriate.



LAND UNIT D-3 **FIGURE 26**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

- If land use mix option B is chosen, no less than five acres of Tax Map Parcel 24-4((1)) 6B4 should be dedicated to the Fairfax County Board of Supervisors for a use such as a community center.

- If land use mix option B is chosen, "in-kind" contributions may be appropriate to mitigate the impacts of development on the school system. Examples of "in-kind" contributions include land dedication; opportunities for shared space in private buildings for activities such as community use, adult education, vocational training, academy programs; or other alternative arrangements that provide Fairfax County Public Schools with additional resources to accommodate its growing student population.

- The trip generation of the mixed use development should meet the *Performance Criteria for Optional Uses* found in the Dulles Suburban Center Overview, and result in significantly fewer peak-hour trips than the office use planned at the baseline.

- Retail use should be integrated with other uses. Restaurants are encouraged to serve both residents and visitors to the area. A grocery store and drug store are also desirable uses.

- Residential use should provide a mix of unit types, including live/work units, for a total of approximately 900-1000 units. Live/work units are defined as the combination of a private residence with a professional office, retail or other nonresidential use.

- An active recreation area with at least five athletic fields and provision of parking on or adjacent to the site or in a shared parking arrangement with adjacent uses. Facilities should be developed according to Fairfax County Park Authority standards in consultation with FCPA staff. This park should be dedicated to the Fairfax County Park Authority.

- A plaza in the village center should provide usable open space for public events and casual recreation use.

- Office use is integrated into the both the village center and elsewhere in the development.

- To ensure needed access and circulation for this development option, a public road connection between Wall Road and EDS Drive should be provided.

- Pedestrian links should provide a safe and pleasant walking environment.

- Parking should be mostly in structured garages. However, surface lots and on-street parking should be used to promote street activity and convenience to retail uses.

- Development along Centreville Road should be set back 50-100 feet, depending on the applicant's proposed land use, design and height of buildings, and the amount and quality of the landscaping provided.

- There may be a need for an additional high school in the western portion of the county served by Westfield, Chantilly and Centreville High Schools because of existing and projected overcrowding at this level. If a high school site has not been acquired by the time a rezoning application is under review, then the applicant must demonstrate that the school impacts of the residential development can be mitigated by other means that meet the approval of Fairfax County. Mitigation measures may include, but are not limited to:

1. Provision of land for additional facilities, such as vocational training, academy programs and adult learning centers, examples of programs that are currently provided at existing schools which could be relocated to the site that is the subject of the rezoning application;

2. Financial contributions that would facilitate the acceleration and/or construction of new facilities or the expansion of existing facilities;

3. Financial contributions for, or donations of, equipment and other items that increase the utilization or efficiency of existing facilities; and

4. Measures that facilitate the better utilization of existing school facilities from an operational standpoint or other solutions to increase utilization of under-capacity schools.

Greenways/Trails

Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment, which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

LAND UNIT D-4

CHARACTER

Land Unit D-4 consists of 157 acres and is bounded on the north by Wall Road, on the west by Route 28, on the southwest and south by the Sully Historic Site Park and on the east by Centreville Road (Figure 27). This land unit contains a portion of the Sully Historic Overlay District, a few scattered warehousing and industrial uses and a large outdoor storage operation north of Barnsfield Road. In addition, about two-thirds of the land unit remains vacant. Cain Branch of Cub Run crosses the southeastern portion of this land unit.

RECOMMENDATIONS

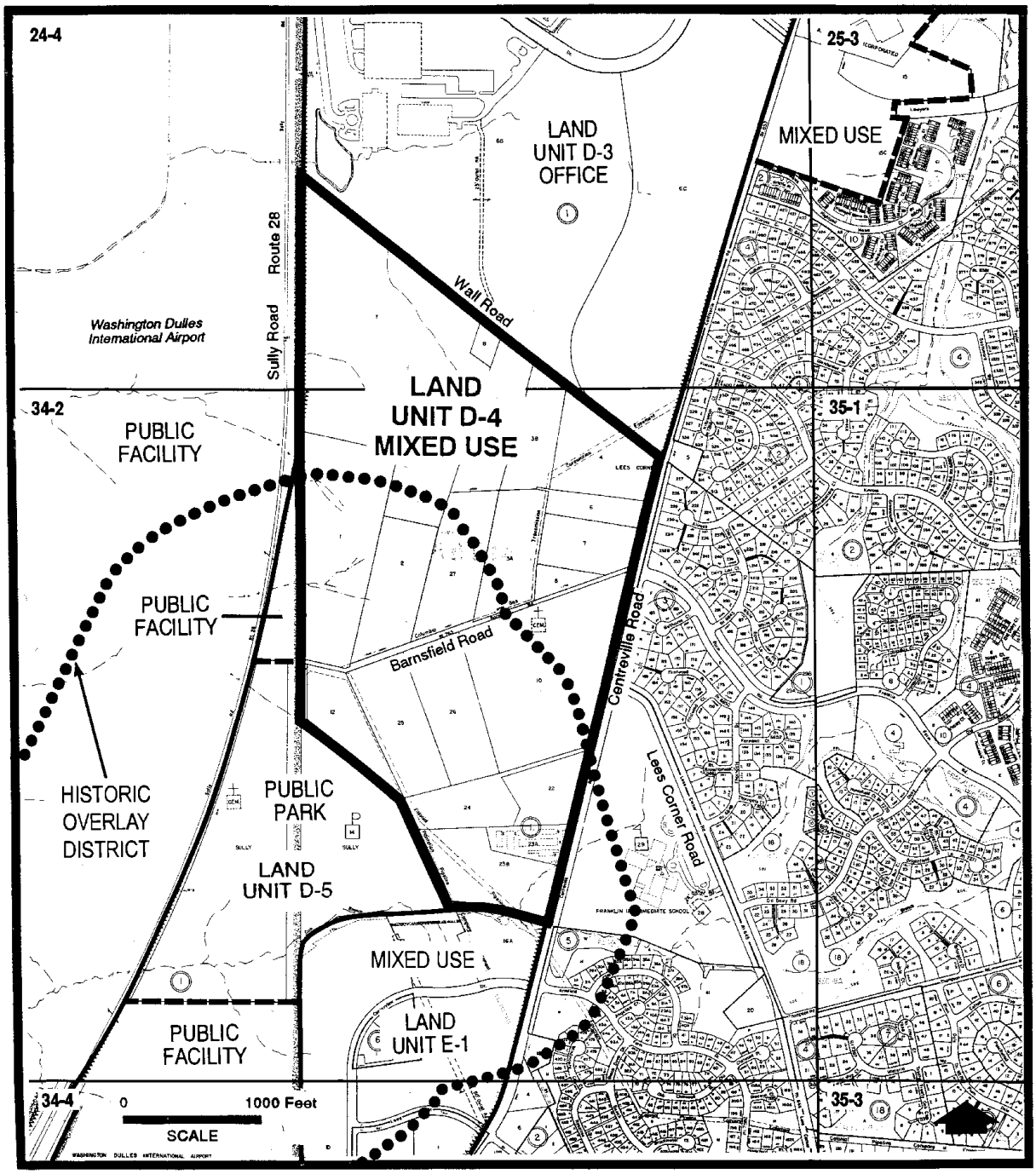
Land Use

1. The southern portion of this land unit lies within the Sully Historic Overlay District. Within this overlay district, certain regulations and restrictions apply to protect the Sully landmark and to control development and uses that would have visual and operational impacts on the Sully complex and its environs. These restrictions and regulations include limitations on commercial and industrial uses. Other regulations apply and are discussed in Land Unit D-5 with the complete provisions listed in Appendix 1, A1-300 of the Zoning Ordinance.

2. As regulated by the Zoning Ordinance provisions for the Sully Historic Overlay District, the portion of this land unit located south and east of the extension of Air and Space Museum Parkway is planned for high-quality, campus-style office and high-quality industrial/flex uses up to .35 FAR as its base Plan recommendation. Retail uses and support services may be appropriate only as secondary or ancillary uses to the office and industrial/flex primary uses. These ancillary service uses should not exceed 20 percent of the primary uses and should be designed to serve the employees and residents of Land Unit D-4. These ancillary and retail uses should not constitute a retail shopping center.

   As an alternative to this base Plan recommendation, Parcels 34-2((1))1A, 2, 3A, 6, 7, 8, 10A, 27 and 35, which total approximately 89.5 acres, may be appropriate for age-restricted residential use and limited commercial use, provided that consolidation, at a minimum, includes Parcels 34-2((1))1A, 2, 3A, 10A, 27 and 35. If Parcels 34-2((1))6, 7 and 8, however, are not part of this assemblage, these parcels are planned at the base plan level of office and industrial/flex use at .35 FAR. The residential portion of the development should encompass approximately 76 acres at a density up to 15 units per acre exclusive of ADU and bonus units. Commercial use consisting of retail, hotel and office use at an intensity up to .25 FAR may be appropriate on approximately 13.5 acres. For any development proposal under this alternative, the following conditions should be met:

   - Residential use is limited to housing restricted to those 55 years and older. A mix of unit types should be provided. Between 10 to 12% of the total number of units should be affordable dwelling units. These units may be integrated throughout the development or as an elderly housing component located within a single building provided that the building is integrated within the development through the use of architecture and open space. Consideration may be given to the development of some of the affordable units as work force housing;



LAND UNIT D-4 **FIGURE 27**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

- Retail, office, and hotel uses that will serve residents, tourists, and employees in the area should be of high visual quality that complements the Sully Historic Overlay District and the new residential development and should be oriented to both Air and Space Museum Parkway and Sully Historic Way. This retail should not be configured in such a way as to constitute a regional or community shopping center, a regional mall or a "big box" retail center;

- Development should occur in a manner that minimizes impacts on existing residential neighborhoods along the east side of Centreville Road. Building heights and building mass should be reduced in this area. Fronts of units should be oriented to Centreville Road and landscaping and screening should be used to provide an attractive streetscape and enhance the appearance of any development along Centreville Road. No retail sales or service uses should be located within 600 feet of Centreville Road;

- Transportation improvements should include the new entrance road to Sully Plantation and an internal roadway system that provides for the circuitous connection of Air and Space Museum Parkway with Centreville Road as called for in the Transportation section of this Plan;

- In instances where residential use under this option will be adjacent to areas zoned for industrial use, a minimum 50-foot wide landscaped buffer should be provided unless the property is committed to institutional, park and other more compatible use. In addition, disclosure regarding the proximity of these industrial properties should be provided;

- Amenities such as a community center, trails, recreation facilities, usable open spaces and other features should be provided to create a pedestrian friendly community with public open spaces such as plazas and parks provided throughout the development;

- Airport and roadway noise should be attenuated. Disclosure regarding the proximity to the Dulles Airport should be provided as set forth in the Policy Plan;

- Fences along Centreville Road, if any, shall be for decorative purposes only and should provide for views into the development;

- Low impact development techniques should be employed where feasible and stormwater management ponds or facilities should be designed to function as amenities through the use of landscaping and other features; and,

- Parcel 34-2((1))12 is dedicated to, or acquired for, the Fairfax County Park Authority to ensure protection of Sully Historic Site resources and preservation of the original plantation boundary line.

3. The portion of this land unit located north and west of Air and Space Museum Parkway, Parcels 34-2((1))33 and 34 and Parcel 24-4((1))8 are planned for office use up to .50 FAR. Hotel and support retail use may also be considered.

Development of public or private recreation uses in this land unit are appropriate to serve employees and nearby residents. Such recreational uses would greatly enhance the attractiveness of this area for private industry and nearby residents as well as complement the Sully Historic Site and district.

Transportation

Access to the current use on Parcel 34-2((1))23C within the overlay district is to be reoriented to the interparcel access road when the roadway is built.

It is appropriate to provide principal access from Route 28 for the primary use or optional use recommended in the Land Use recommendations above. Secondary access should be provided from Centreville and Wall Roads by indirect routing through the land unit. Route 28 should not be directly connected to Centreville Road via an extension of Barnsfield Road without further study and further modification of this Plan. Studies regarding secondary access to Centreville Road should continue to discourage business and commuter traffic from using residential streets of proximate communities located east of Centreville Road.

The Route 28/Air & Space Museum Parkway interchange provides for a new access to the Sully Historic Site to the south, as well as the termination of the Route 28 median break that used to serve the Sully site.

Heritage Resources

1. Part of the Sully Historic Overlay District lies within this land unit. Regulations and restrictions for this overlay district are discussed in Land Unit D-5. If there appears to be a conflict between Plan text and the provisions of the Sully Historic Overlay District, the overlay district regulations should be used to determine the appropriate guidance for the development of land within the historic overlay district.

   The provisions of the Sully Historic Overlay District have been adopted to protect Sully structures and grounds and to control development and uses that would have visual and operational impacts on the Sully complex and its environs. Industrial and commercial uses are limited to those specified by the Overlay Zoning District regulations. The maximum height of freestanding signs should not exceed ten feet and maximum building height is 65 feet within the outer 500 ft. of the historic overlay district boundaries subject to a Special Exception. All improvements, to include structures, signs, fences, street furniture, outdoor graphics, and public and private utilities, should be designed and installed to be compatible with the Sully complex in terms of mass, scale, color and visual impact. A planted buffer having a 200 foot minimum is required to be provided along lot lines which are contiguous to the Sully property. All proposed development within the historic overlay district must be reviewed by the Architectural Review Board and should be preceded by an archeological survey.

2. Turley Hall, a historic house, was located within this land unit south of Barnsfield Road. At a minimum, recordation of significant heritage resources on the site is recommended.

3. Development and/or roadway construction must protect the two known cemetery sites along the current Barnsfield Road: the Wilcoxsen family pre-Civil War cemetery and the nearby slave cemetery.

4. Archeological and historical studies should be conducted to determine the relationship between Sully and the Turley Hall site.

Parks and Recreation

It is desirable that development within the historic overlay district provide for dedication of Parcel 34-2((1))12, or a permanent open space easement thereon, to the Fairfax County Park

Authority to ensure protection of Sully Historic Site resources and preserve the original plantation boundary line.

Greenways/Trails

The countywide trail should continue south as an 8 ft. asphalt trail on the east side of Centreville Rd. and a 5 ft. concrete sidewalk on the west side of Centreville Road. It may be desirable to provide a pedestrian trail parallel to the Cain Branch Stream Valley eastward to the Benjamin Franklin Intermediate School to provide controlled access for student groups going to Sully.

Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment, which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

LAND UNIT D-5

CHARACTER

Land Unit D-5 consists of approximately 140 acres and is bounded on the west by Route 28, on the northeast by Land Unit D-4 and substantial amounts of vacant land, and on the south and southeast by Land Unit E-1 (Figure 28). This land unit contains the Sully Historic Site on land owned by the Fairfax County Park Authority and is located entirely within the Sully Historic Overlay District. The remaining area within this land unit is part of the Dulles Airport property. The Park Authority has a formal agreement with the Airport Authority to conduct archeological exploration on approximately 60 acres located within this land unit south of the Park Authority property.

RECOMMENDATIONS

Land Use

1. This land unit contains the Sully Historic Site and Heritage Resource Park which is listed on both the National Register of Historic Places and the Virginia Landmarks Register. Parcels 34-2((1))13 and 14 are planned for public park uses as shown on the Comprehensive Plan Map. This property is administered by the Fairfax County Park Authority, which operates it as a public Countywide Heritage Resource Park. The land adjacent to Cain Branch south of the park is planned for private open space. The remaining land in this land unit is planned for public facilities, governmental and institutional uses and is part of the Dulles Airport property.

2. This land unit is almost entirely located within the Sully Historic Overlay District and is subject to the provisions of the Sully Historic Overlay District. Regulations and restrictions for this district are discussed below.

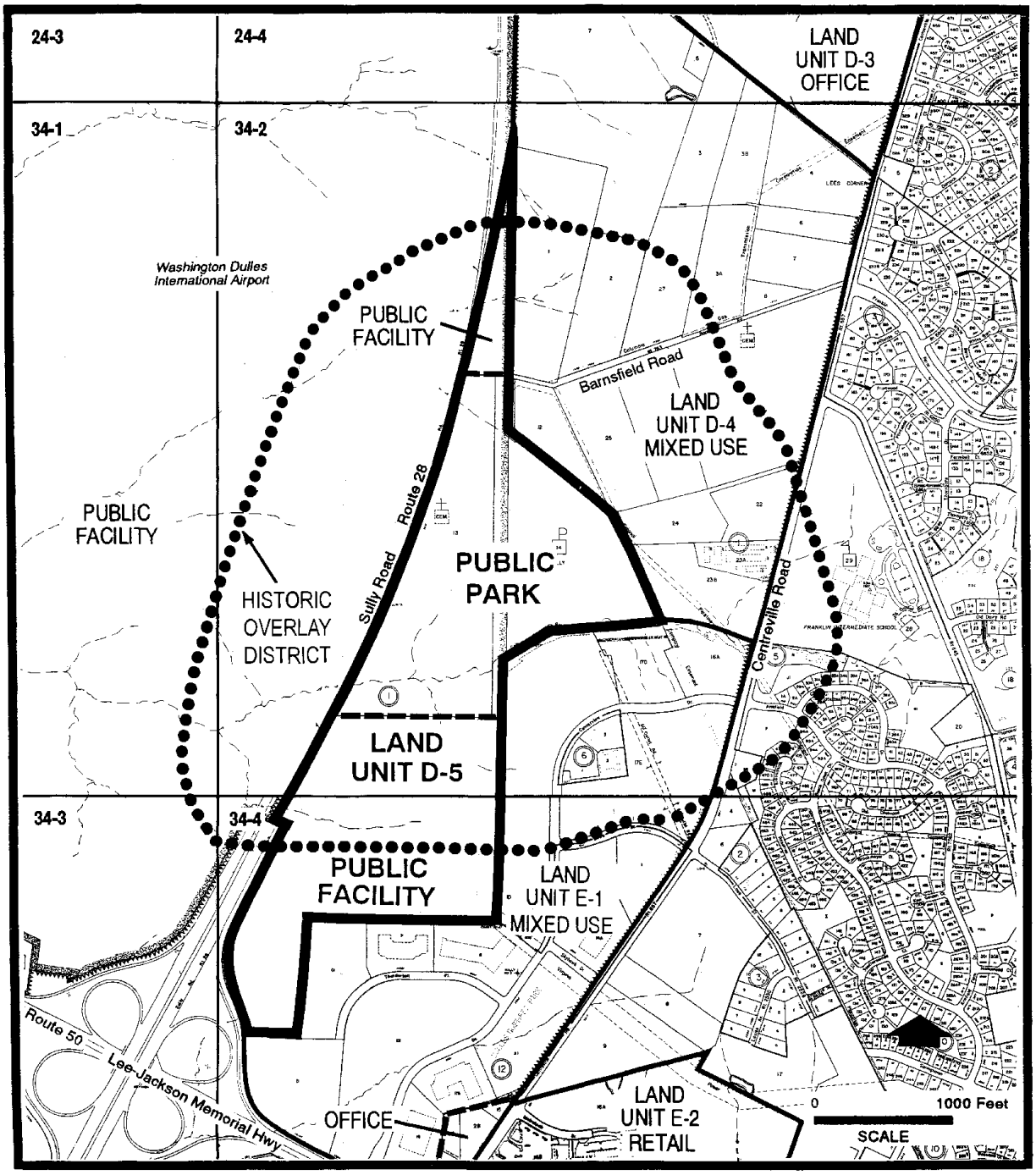
3. Land uses which support southern Dulles Airport sector development such as the future Smithsonian Air and Space Museum Annex or similar institutions and a future Dulles Airport southern terminal should be encouraged.

Transportation

Transit should serve the Sully Historic Site and a transit stop is desirable. Any transit facility in the area should be developed in such a way as to mitigate any negative visual impacts on the Sully Historic Overlay District.

Heritage Resources

Land Unit D-5 and portions of Land Units D-4 and E-1 are located within the Sully Historic Overlay District. The provisions of the Sully Historic Overlay District (Appendix 1, A1-300, Part 3 of the Zoning Ordinance) have been adopted to protect Sully structures and grounds and to control development and uses that would have visual and operational impacts on the Sully complex and its environs. Industrial and commercial uses are limited to those specified by the Overlay Zoning District regulations. The maximum height of freestanding signs should not exceed ten feet and maximum building height is 35 feet. All improvements, to include structures, signs, fences, street furniture, outdoor graphics, and public and private utilities, should be designed and installed to be compatible with the Sully complex in terms of mass, scale, color and visual impact. A planted buffer having a 200 foot minimum is required to be provided along lot lines which are contiguous to



LAND UNIT D-5 **FIGURE 28**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

the Sully property. All proposed development within the historic overlay district must be reviewed by the Architectural Review Board and should be preceded by an archeological survey.

Parks and Recreation

Complete development of Sully Historic Site, to include a new entrance road from the relocated Barnsfield Road interchange area and the planned visitor information and conference center. Seek conveyance to the Fairfax County Park Authority of all federal land currently administered by the Park Authority under agreement with the Metropolitan Washington Airports Authority.

Conduct archeological and historical studies to determine the relationship of Sully and Turley Hall. If significant Sully-related relationships or artifacts are discovered, seek expansion of Sully Historic Site Park to include appropriate parts of the Turley Hall property.

Greenways/Trails

Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment, which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

As a critical component of the Greenway system, non-vehicular access should be provided via the countywide trail between Sully and the future Smithsonian Air and Space Museum Annex across Route 28.

LAND UNIT E-1

CHARACTER

Land Unit E-1 consists of approximately 140 acres and is located in the northwest quadrant of the intersection of Route 50 and Centreville Road. It is bounded on the east by Centreville Road, Sully Historic Site on the north, Dulles Airport property and Route 28 on the west, and Route 50 on the south. The northern portion of the land unit is within the Sully Historic Overlay District (Figure 29).

Less than 20 percent of Land Unit E-1 was developed as of January 1992. Typical development is office and industrial/flex use and includes the Dulles Business Park. Strip commercial retail use exists adjacent to the intersection of Centreville Road and Route 50. Most of these retail uses will be impacted when planned interchange improvements are made. A motel has recently been constructed adjacent to the retail uses along Route 50. Some land within Land Unit E-1 is located inside the DNL 60 dBA noise contour associated with projected operations at Dulles Airport.

RECOMMENDATIONS

Land Use

1. This land unit, except for parcels 34-4((1))15, 28, 29, 31, 32, 33, 34, 35, is planned for campus-style office, and industrial/flex use up to a maximum FAR of .35 to be compatible with existing development. Ancillary retail use up to 20 percent of the total development may be appropriate within office or industrial/flex buildings. In no event, however, should retail uses be developed as free-standing uses or as a shopping center.

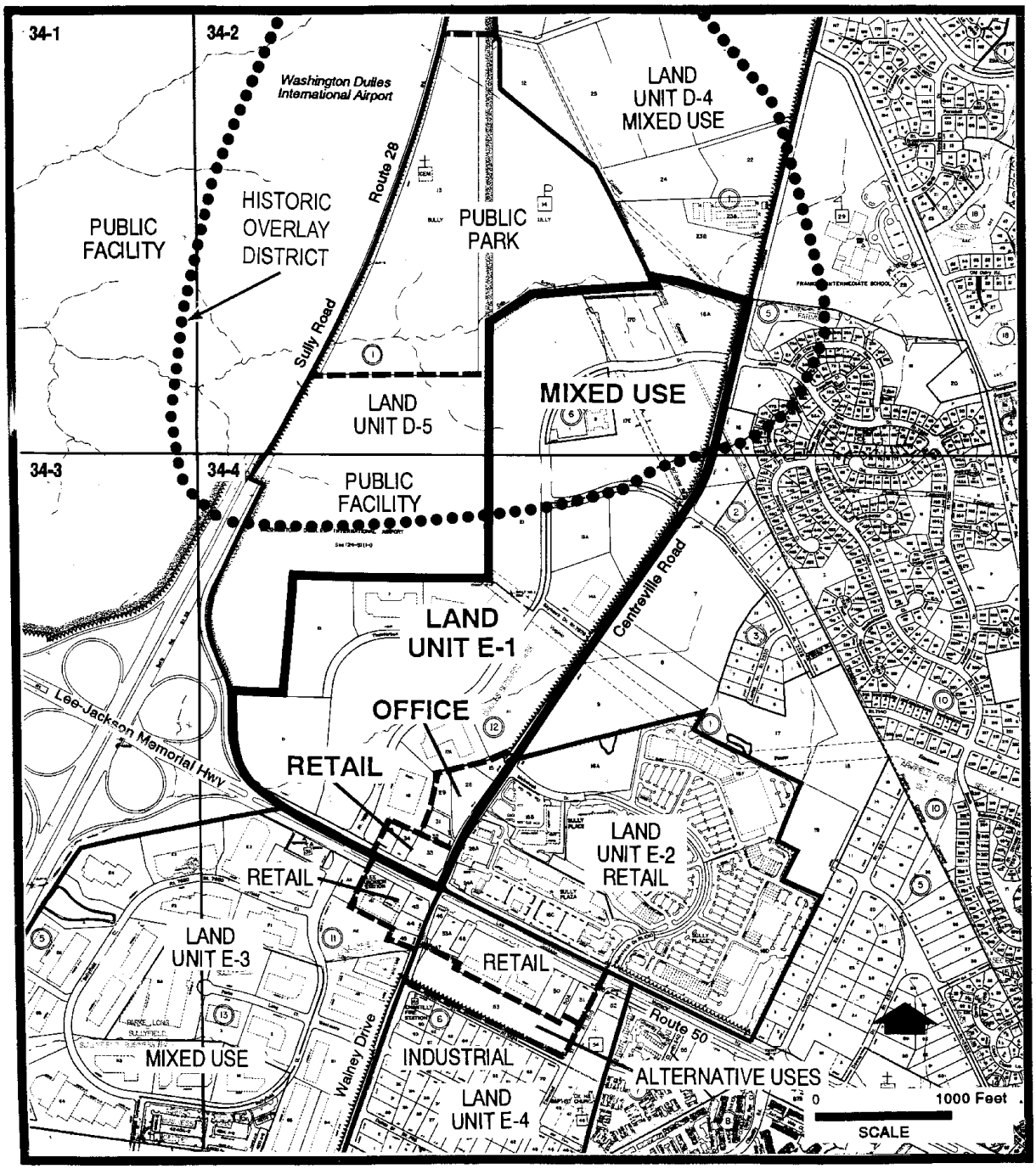
2. Parcels (Tax Map 34-4((1))15, 28, 29, 31 and 32), fronting on Centreville Road are planned for low intensity office use, including medical office, up to a maximum FAR of .25 if 1) all the parcels are consolidated, 2) circulation and access are coordinated, and 3) land is dedicated for the planned interchange, as appropriate. As an option, community-serving retail use may be appropriate if the same conditions are met.

3. Parcels in the northwestern quadrant of the intersection of Route 50 and Centreville Road (Tax Map 34-4((1))33, 34 and 35), fronting on Route 50, are planned for and generally developed with low intensity retail uses at an average FAR of .15. Development on parcel 35 (Chantilly Market) should be contingent on consolidation with at least parcel 34 and access should be via Centerview Drive.

4. Several hotels have been developed in this land unit. Hotel use is appropriate as an option to the office and industrial/flex uses under the following conditions:

   - The hotel use does not have direct access to Route 50 or Centreville Road; and

   - The hotel use will result in fewer peak hour trips than the planned office and industrial/flex uses at .35 FAR, in accordance with the "Performance Criteria for Optional Uses" found in the Dulles Suburban Center Overview.



LAND UNIT E-1 **FIGURE 29**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

5. Much of the land in the vicinity of the intersection of Route 50 and Centreville Road may be used to accommodate the planned interchange; therefore, any development of this area should dedicate land for the interchange as appropriate.

Transportation

If future studies determine that right-of-way is needed in Land Unit E-1 to facilitate development of an integrated transit system for the Dulles Suburban Center, then the needed right-of-way should be provided through dedication, easements or other mechanisms, as appropriate.

Heritage Resources

The Sully Historic Overlay District in the Zoning Ordinance provides development guidance in addition to the land use guidelines stated above in Land Use Recommendations. (See Zoning Ordinance, section A1-300). If there appears to be a conflict between Plan text and the provisions of the Sully Historic Overlay District, the overlay district should be used to determine the appropriate guidance for development of land.

The provisions of the Sully Historic Overlay District have been adopted to protect Sully structures and grounds and to control development and uses that would have visual and operational impacts on the Sully complex and its environs. Industrial and commercial uses are limited to those specified by the Overlay Zoning District regulations. The maximum height of freestanding signs should not exceed ten feet and maximum building height is 35 feet. All improvements, to include structures, signs, fences, street furniture, outdoor graphics, and public and private utilities, should be designed and installed to be compatible with the Sully complex in terms of mass, scale, color and visual impact. A planted buffer having a 200 foot minimum is required to be provided along lot lines which are contiguous to the Sully property. All proposed development within the historic district must be reviewed by the Architectural Review Board and should be preceded by an archeological survey.

Greenways/Trails

Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment, which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

The countywide trail should be developed along the west side of Centreville Road and along the north side of Route 50. Connections should be provided across Route 28 to enhance the continuity of non-vehicular circulation across Route 28 and along Route 50.

As a critical component of the Greenway system, non-vehicular access should be provided via the countywide trail across Route 50 to Sully and the future Smithsonian Air and Space Museum Annex.

LAND UNIT E-2

CHARACTER

Land Unit E-2 consists of approximately 85 acres and is located in the northeast quadrant of the intersection of Centreville Road and Route 50. It is developed in retail use and includes the Sully Plaza and Sully Place Shopping Centers (Figure 30).

RECOMMENDATIONS

Land Use

1. This land unit is planned for retail use with ancillary office use not to exceed 20 percent up to a maximum FAR of .25. This will provide a transition in intensity to the residential areas located to the north and east.

2. Free-standing, auto-oriented retail commercial and financial uses should be discouraged because of the potentially adverse visual impacts and because traffic related to free-standing uses can interfere with efficient auto and pedestrian circulation related to other commercial development in the shopping center as well as traffic movement on the two major highways.

3. Commercial development in this land unit should be designed to facilitate on and off-site pedestrian access and circulation thereby reducing dependence on the automobile and enhancing the neighborhood-serving nature of this retail development.

4. Much of the land in the vicinity of the intersection of Centreville Road and Route 50 may be used to accommodate the planned interchange; therefore, any development of this area should dedicate land for the interchange as appropriate.

5. Development in this land unit should incorporate substantial landscaped open space to screen and buffer retail use from adjacent residential use to the north and east and to provide a visual amenity within this type of retail shopping center.

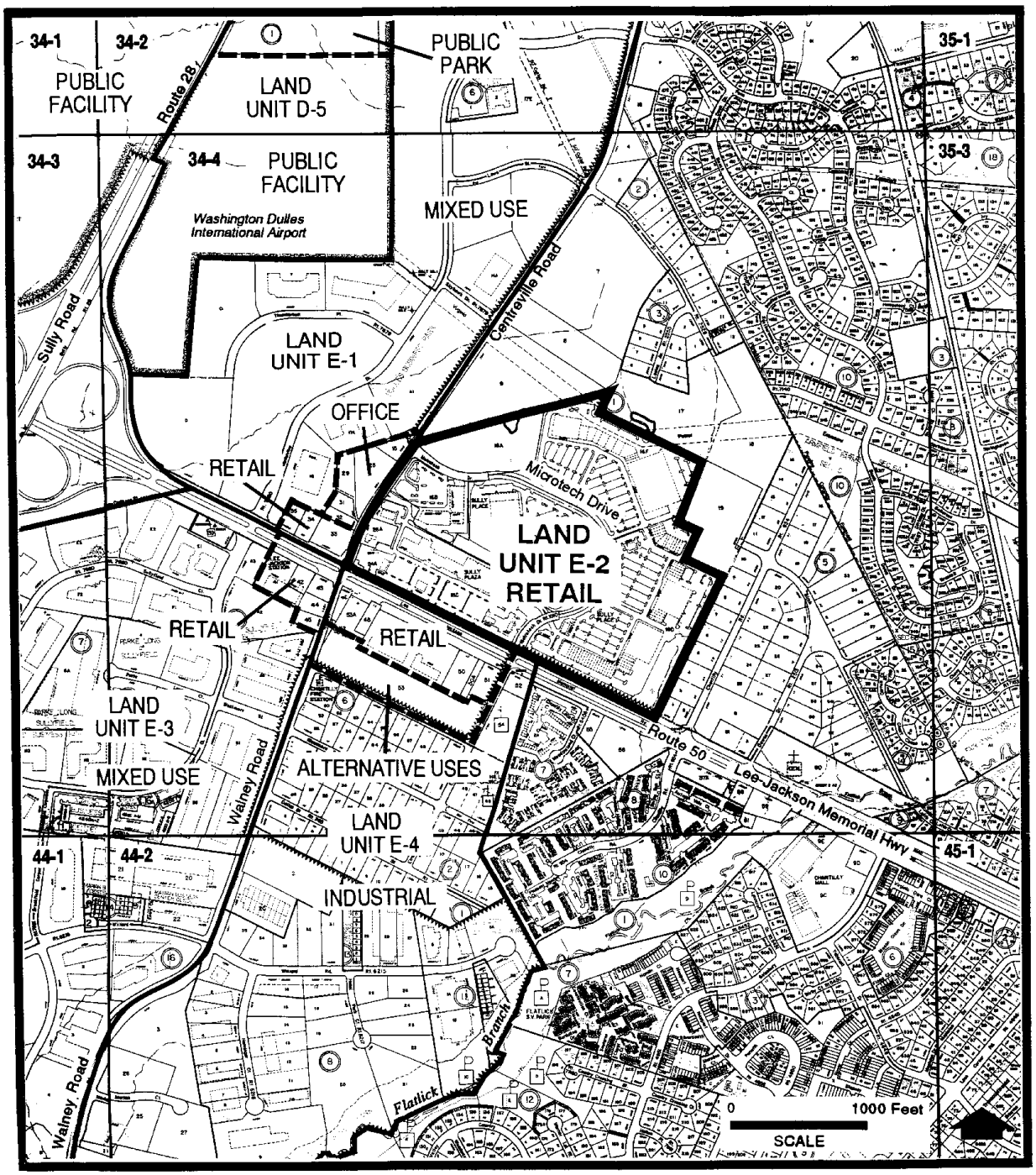
Environment

Wetlands in this land unit should be preserved as open space.

Transportation

1. Land that will be needed for the future interchange at the intersection of Centreville Road and Route 50 should be dedicated.

2. Direct access, that is, the exit and entrance to the Sully Place Shopping Center, should be improved on Route 50 and Centreville Road.



LAND UNIT E-2 **FIGURE 30**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

Greenways/Trails

Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment, which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

The countywide trail should be developed on the west side of Centreville Road and north side of Route 50.

Connections should be provided across Route 28 to enhance the continuity of non-vehicular circulation across Route 28 and along Route 50.

LAND UNIT E-3

CHARACTER

Land Unit E-3 consists of approximately 350 acres in the southeast quadrant of the intersection of Route 28 and Route 50. Flatlick Branch of Cub Run forms the southern boundary and Walney Road forms the eastern boundary (Figure 31).

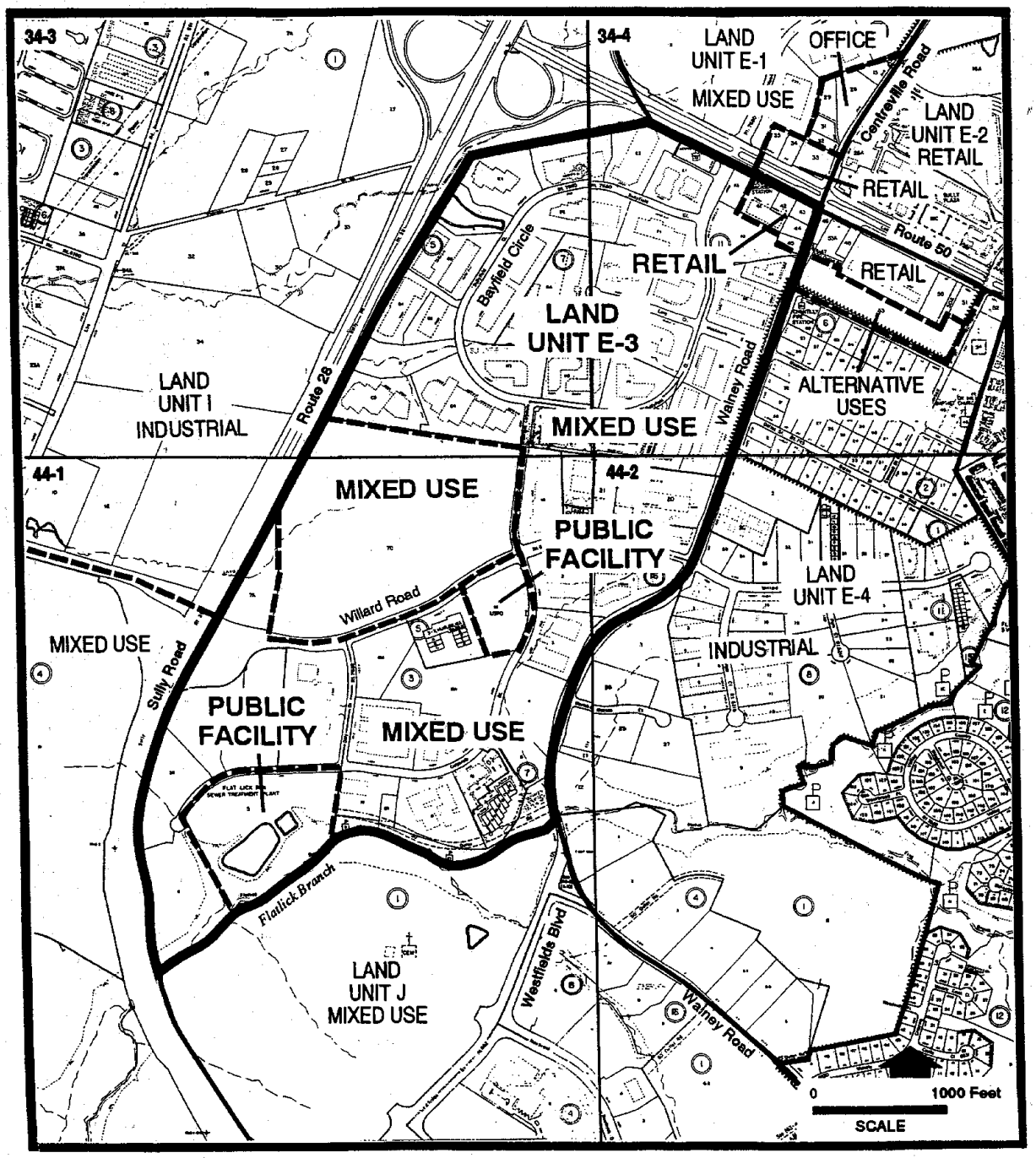
Most of the land unit is developed, primarily in retail, industrial, industrial/flex and campus-style office use. The industrial and industrial/flex uses are primarily located in the northern portion of the land unit oriented to the Route 50/Route 28 interchange. This portion of the land unit includes the Sullyfield Business Park, developed at an FAR of approximately .35. Office use is located in the southern portion of the land unit south of Willard Road and includes the Brookfield Corporate Center at a similar intensity. Approximately 40 acres of the land unit are developed with public uses, including the Chantilly post office and a Fairfax County Park Authority nursery operation. Chantilly Place Shopping Center is located at the northeast quadrant of the intersection of Route 28 and Willard Road. A small amount of retail commercial use is located at the intersection of Route 50 and Walney Road. Part of this retail area includes a small retail center, Lee Jackson Station. The remainder of the strip retail uses in this vicinity may be impacted by the future interchange improvement planned for this intersection.

RECOMMENDATIONS

Land Use

1. Except for Parcels 44-1((9))A-F, and Parcels 34-4((1))41-45, the area north of Willard Road is primarily developed as the Sullyfield Business Park. Sullyfield is planned and developed as a mix of office, retail and industrial uses at .35 FAR.

    - A mixed use center including office, retail, exhibition center and hotel uses, is planned for the northeast quadrant of the intersection of Route 28 and Willard Road (Parcels 44-1((9))A-F). Recognizing the synergy of the unique mix of uses approved for these parcels, an increase up to a maximum FAR of .70 could be appropriate for said parcels provided: 1) traffic impacts on surrounding road network, must be evaluated for any increase of development intensity above .35 FAR; addressed in conjunction with the any rezoning, proffer condition amendment and/or special exception application(s) seeking such an increase; 2) the redevelopment should contain a mix of office, retail, and hotel; and the exhibition center of no more than 310,000 square feet; 3) the site should redevelop in a manner that provides a grid of streets that promotes safe and improved on-site vehicular and pedestrian circulation and a coordinated, high quality, urban style of architecture; 4) plans for redevelopment should include additional safe and convenient site access from abutting streets that is appropriate to the type and intensity of the ultimate uses and pattern of development. As an alternative to the requirement to provide additional access point(s) referenced above, reconfiguration of existing access points, with the demonstration that such reconfiguration will adequately mitigate the proposed additional traffic, may be permitted; and 5) a portion of the site should be designed to incorporate access to the site for enhanced public transportation, which is anticipated to be provided in the corridor.



LAND UNIT E-3 **FIGURE 31**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

- Parcels in the southwestern quadrant of Route 50 and Centreville Road (Parcel 34-4((1))41, 42, 43, 44 and 45) which contains Lee-Jackson Station, are planned for retail use up to a maximum FAR of .25 if 1) all the parcels are consolidated, 2) circulation and access are coordinated, and 3) land is dedicated for the planned interchange, as appropriate.

2. The area south of Willard Road contains the majority of the Brookfield Corporate Center and is planned for campus-style office and industrial/flex development up to a maximum of .35 FAR to be compatible with existing uses and intensities. Ancillary retail use up to 20 percent of the total development, to serve employees, may also be appropriate and should be incorporated within the first floor of the office and industrial/flex buildings.

Transportation

1. Access to this land unit should be oriented to existing roadways that intersect Route 28.

2. Direct access to Parcel 34-4((11))A4 on Walney Road should be improved and not interfere with future intersection improvements.

3. If future studies determine that right-of-way is needed in Land Unit E-3 to facilitate development of an integrated transit system for the Dulles Suburban Center, then the needed right-of-way should be provided through dedication, easements or other mechanisms, as appropriate.

Greenways/Trails

The Flatlick Branch EQC is a major east-west connector of the Dulles Greenway, providing access between the Cub Run Stream Valley Parks, eastern land units, and, by extension, the Fairfax Center area. Dedication of land or open space easements to the Fairfax County Park Authority and construction of the remaining sections of the stream valley trail is recommended as a condition of development or redevelopment of adjacent parcels.

The countywide trail should be developed along the Route 50 frontage. Connections shall be provided across Route 28 to enhance the continuity of non-vehicular circulation across Route 28 and along Route 50.

As a critical component of the Greenway system, non-vehicular access should be provided via the countywide trail across Route 50 to Sully and the future Smithsonian Air and Space Museum Annex.

Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment, which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

LAND UNIT E-4

CHARACTER

Land Unit E-4 consists of approximately 250 acres and is located south of Route 50 with Walney Road as its western boundary. Elmwood Street, Chantilly Mews, Pinewood Meadows and Winding Brook townhouse subdivisions form part of the eastern boundary. Flatlick Run and Waverly Crossing single-family detached residential subdivisions form the eastern and southern boundaries (Figure 32).

Approximately one-third of the land unit is developed primarily as industrial and industrial/flex use. Public uses include a rehabilitation facility, a fire and rescue facility and a Fairfax County Water Authority facility. The remaining land is developed primarily in retail and office use. The retail use is located along Route 50, and includes the Pohanka auto dealership.

An older single-family detached residential subdivision (formerly Rockland Village) located in the northern portion of the land unit between Walney Road, Chantilly Mews and Pinewood Meadows has been redeveloped with single-family attached and detached housing, as well as multifamily housing.

RECOMMENDATIONS

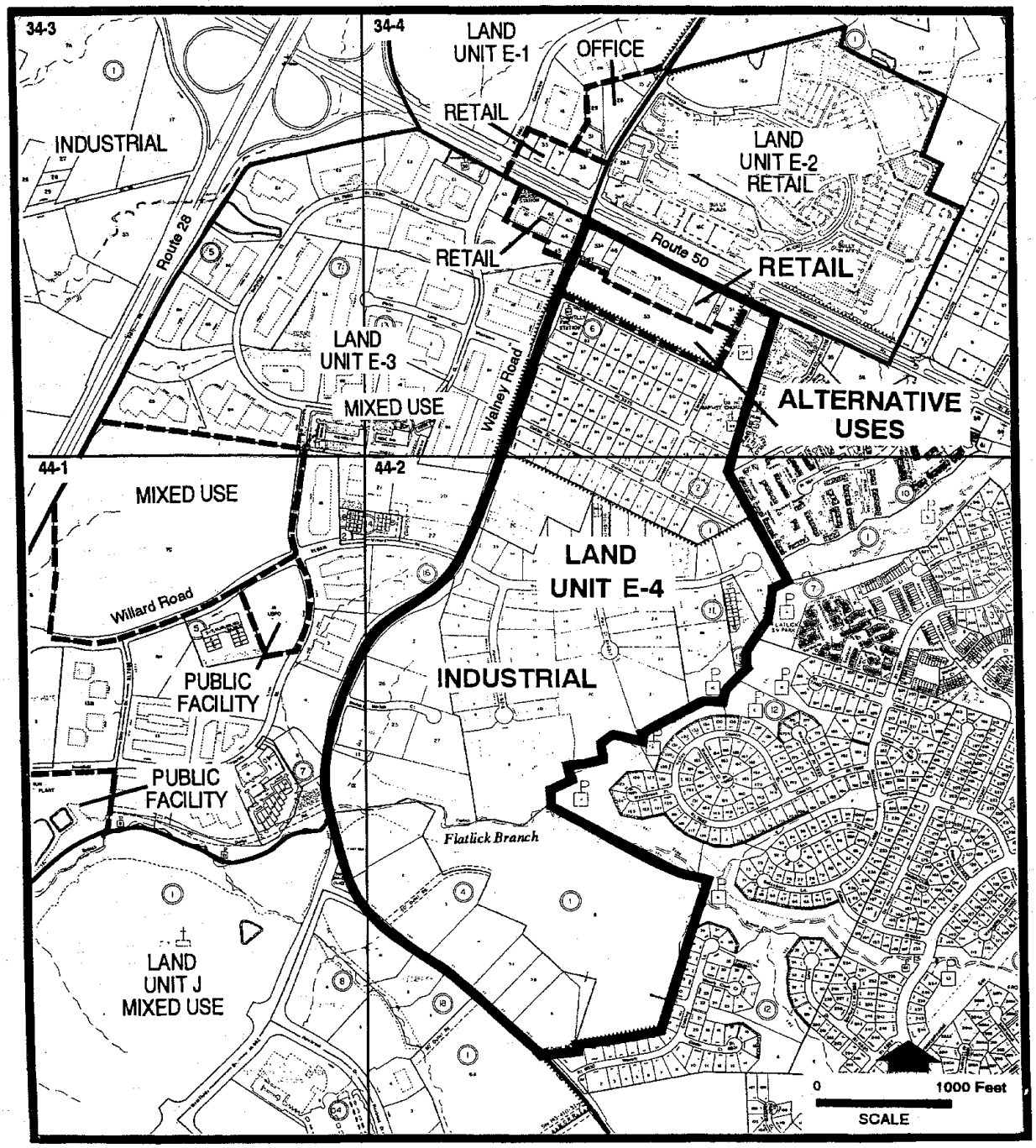
Land Use

1. Parcels in the southeastern quadrant of the intersection of Route 50 and Centreville Road (Tax Map 34-4((1))46, 47, 48, and 53A), are developed with low intensity retail uses at an average FAR of .15. Redevelopment for retail use up to a maximum of .25 FAR may be appropriate if these parcels are consolidated into a single development proposal, access is coordinated and land is dedicated for the planned interchange.

2. Community-serving retail use is planned for most of the land fronting on Route 50 between Walney Road and Elmwood Street (Parcels 34-4((1)) 49, 50, 50A, 51) at a maximum overall FAR of .25. Tax Map 34-4((1))52A is planned for retail use and developed as a bank. The parcel is planned to retain its existing intensity of .08 FAR. Landscaping should be provided on all perimeters of the site to enhance the visual attractiveness of development.

3. Additional retail or auto-oriented uses are not planned for and are not appropriate along Route 50 or Walney Road in this land unit, except as described above in recommendations #1 and #2 above.

4. Tax Map parcels 34-4((1))53 is planned for retail use up to a maximum FAR of .20. Building height should not exceed 35 feet. In addition, 35 feet of screening should be provided on Parcel 53 along Vernon Street to provide an appropriate transition to the residential neighborhood to the south. As an option, Parcel 34-4((1))53 may be appropriate for the expansion of existing auto dealerships located along Route 50 if the same conditions cited above are met.



LAND UNIT E-4 **FIGURE 32**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

5. Existing institutional and governmental uses include two churches and a fire station that are a part of the community. If redeveloped, residential use up to 16-20 du/ac should occur if the following conditions are met:

   - Substantial consolidation should occur in a manner that will provide for the development of any unconsolidated parcels in conformance with the planned use and intensity;
   - Infill development is compatible with adjacent residential uses;
   - Substantial buffers are provided to screen and protect adjacent residential areas against noise and lighting impacts;
   - Building heights do not exceed 35 feet adjacent to existing residential development on the eastern perimeter; and
   - Efficient access and coordinated circulation is provided.

6. The area generally extending south of Vernon Street to the south of Dallas Street, east of Walney Road, is planned for residential use. This area is not within the Route 28 Tax District and residential development will not affect the viability of the Tax District. Residential use may be appropriate at a density of 16-20 dwelling units per acre, if the following conditions are met:

   - Infill development is compatible with adjacent residential uses;
   - Development is designed in such a way that adverse impacts from adjacent nonresidential uses are ameliorated, incorporating such techniques as screening;
   - Building heights do not exceed 35 feet adjacent to existing residential development on the eastern perimeter;
   - Residential development is consistent with the county's adopted policies regarding residential development in areas impacted by noise from Dulles Airport; and
   - Access and circulation should be coordinated, particularly to prevent cut-through traffic between Walney Road and Route 50.

7. Land between the former Rockland Village subdivision and Flatlick Branch is planned for and largely developed with light industrial and industrial/flex use up to a maximum FAR of .35 to be compatible with existing development. Ancillary retail uses up to 20 percent to serve employees may be appropriate if they are integrated into buildings with other primary uses.

8. The land south of Flatlick Branch is planned for residential use at 2-3 dwelling units per acre. Residential development should be consistent with the county's adopted policies regarding such development in areas impacted by noise from Dulles Airport.

<u>Transportation</u>

1. Access for Route 50 frontage development should be only via Elmwood Street/Metrotech Drive.

2. Development access to Rockland Village should be oriented to Elmwood Street rather than Walney Road. If residential use is developed in Rockland Village then site design should discourage cut-through traffic from Walney Road to Route 50.

Greenways/Trails

Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment, which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

The Flatlick Branch EQC is a major east-west connector of the Dulles Greenway, providing access between the Cub Run Stream Valley Parks, eastern land units, and, by extension, the Fairfax Center Area. Dedication of land or open space easements to the Fairfax County Park Authority and construction of the remaining sections of the stream valley trail are recommended as a condition of development or redevelopment of adjacent parcels.

The countywide trail should be developed along the Route 50 frontage. Recognizing that providing continuous trails adjacent to the existing Route 50 right-of-way may not always be possible because of present interchange design, every effort should be made to provide other connections to enhance the continuity of the non-vehicular circulation along the corridor.

LAND UNIT F-1

CHARACTER

Land Unit F-1 is bounded on the north by Washington Dulles International Airport, on the east by Willard Road, on the south by Route 50 and on the west by the Loudoun County line (Figure 33). The land unit consists of approximately 265 acres of undeveloped land as of January 1992, approximately 50 percent of which is in the Cub Run floodplain.

RECOMMENDATIONS

Land Use

1. Land Unit F-1 is planned for office and industrial/flex uses along Route 50 and industrial uses on the northern portion adjacent to the Dulles Airport, with the exception of Cub Run EQC which is planned for public park use as shown on the Plan Map.

    a. The southern portion (along Route 50) is planned for high-quality campus-style office and industrial/flex use up to a maximum FAR of .35, consistent with the type and character of development established in adjoining units. Substantial setbacks, landscaping and screening should be provided along Route 50 and along Stonecroft Boulevard for an attractive appearance. Direct access to Route 50 should be permitted from Parcel 33-2((1))2 which is constrained on its eastern side by an EQC which traverses the parcel from north to south. In addition to existing access points, one new access point could be permitted to the balance of the land unit provided it does not impact environmentally sensitive lands. Substantial consolidation of small parcels is recommended and should be carried out in a manner that ensures that unconsolidated parcels have adequate access and can be developed in accord with the Comprehensive Plan. Architecture should also function as an element of design integration and architectural sketches should be made available for the public review process.

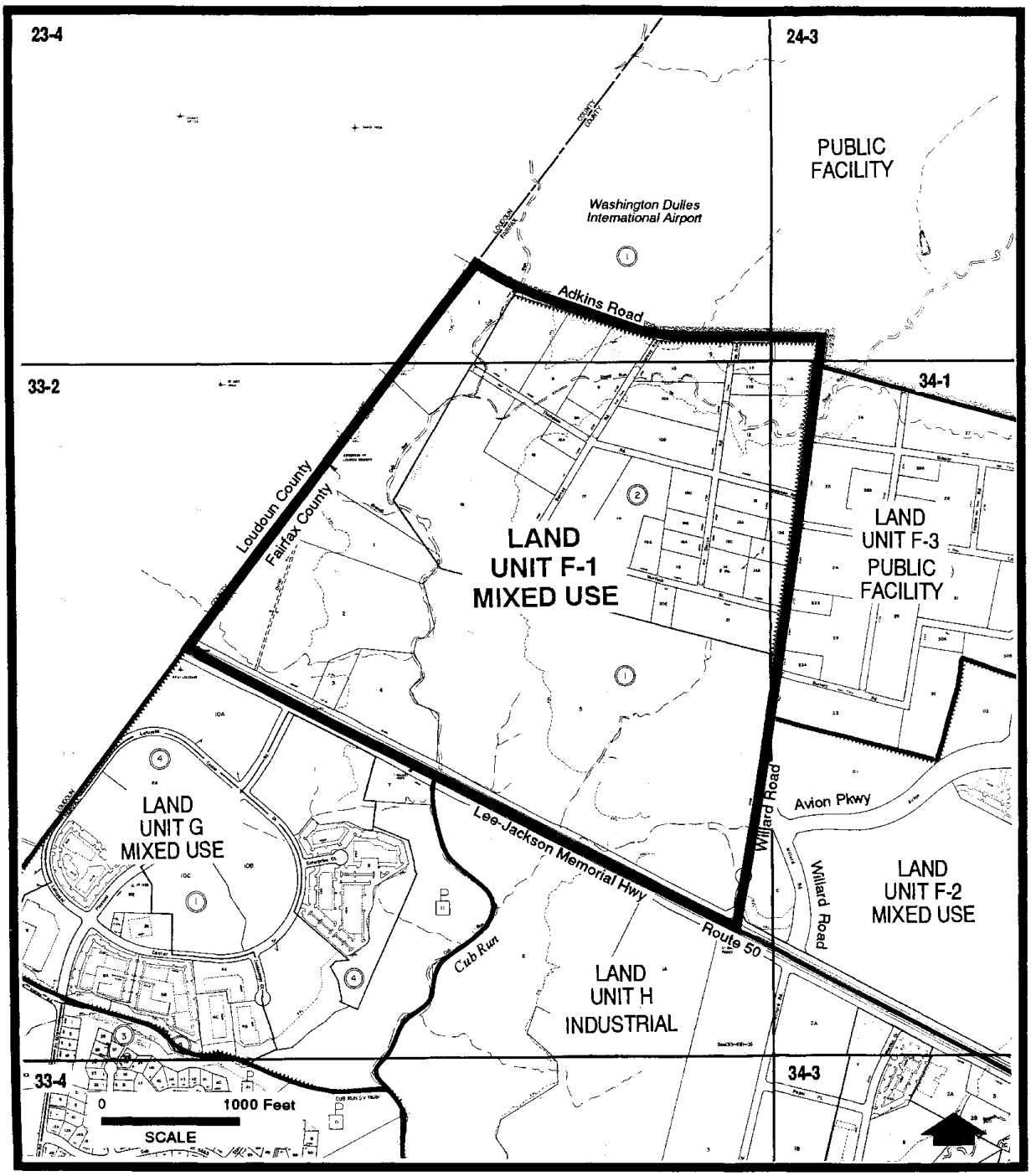
    b. The northern portion, which is east of the EQC and includes properties fronting Murdock Street and areas to the north, are planned for construction related and industrial uses up to .35 FAR. Outdoor storage should be screened from public view. Development applications for new and expansion of existing uses should perform an environmental assessment to mitigate any prior industrial contamination.

2. As optional uses, a hotel and/or conference facilities, restaurants, or cultural facilities may be appropriate. Given the extensive EQC in this land unit, public and/or private recreational uses, including a golf course, should be considered if developed in an environmentally sensitive manner.

Transportation

1. A commuter parking lot served by transit may be appropriate for this area.

2. If future studies determine that right-of-way is needed in Land Unit F-1 to facilitate development of an integrated transit system for the Dulles Suburban Center, then the needed right-of-way should be provided through dedication, easements or other mechanisms, as appropriate.



LAND UNIT F-1 **FIGURE 33**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

Greenways/Trails

Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment, which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

Stream Valley Recreational Trails: A trail connection should be provided to link the Cub Run Stream Valley Trail with the Sand Branch Greenway in Loudoun County.

Countywide Trail: Develop the countywide trail along Willard Road south from Dulles Airport and west along the north side of Route 50. If a commuter park and ride lot and/or transit service is located in the land unit, adequate support facilities for bicyclists and pedestrians should be provided.

LAND UNIT F-2

CHARACTER

Land Unit F-2 is bordered on the north by Land Unit F-3 which is planned for a future county public safety facility. To the east, Land Unit F-2 borders Dulles Airport, including the possible future site of the Annex to the Smithsonian Air and Space Museum. Land Unit F-2 is bounded on the south by Route 50 and on the west by Land Unit F-1 and Willard Road. This land unit contains approximately 170 acres, about 135 acres of which were vacant, as of January 1992 (Figure 34).

Existing development consists of one- to three-story buildings in a well-landscaped setting that preserves large amounts of existing vegetation and enhances the site with water features. Both low-rise office and industrial/flex uses are present. A clearly defined identity exists, due to a unified design for architecture, landscaping, signage, lighting, pathways and bridges. A small church and its cemetery occupy approximately three acres near the Route 28/Route 50 interchange.

Dulles Airport is the location of the Udvar-Hazy Center of the Smithsonian National Air and Space Museum, immediately east of Land Unit F-2. Access is from the interchange at Route 28 and Air and Space Museum Parkway. Although the Airport Master Plan includes alternative concepts for a possible future southern terminal, the 20-year Master Plan does not include a specific terminal site. If such a terminal is planned, Stonecroft Boulevard would be the probable future access to this facility.

RECOMMENDATIONS

Land Use

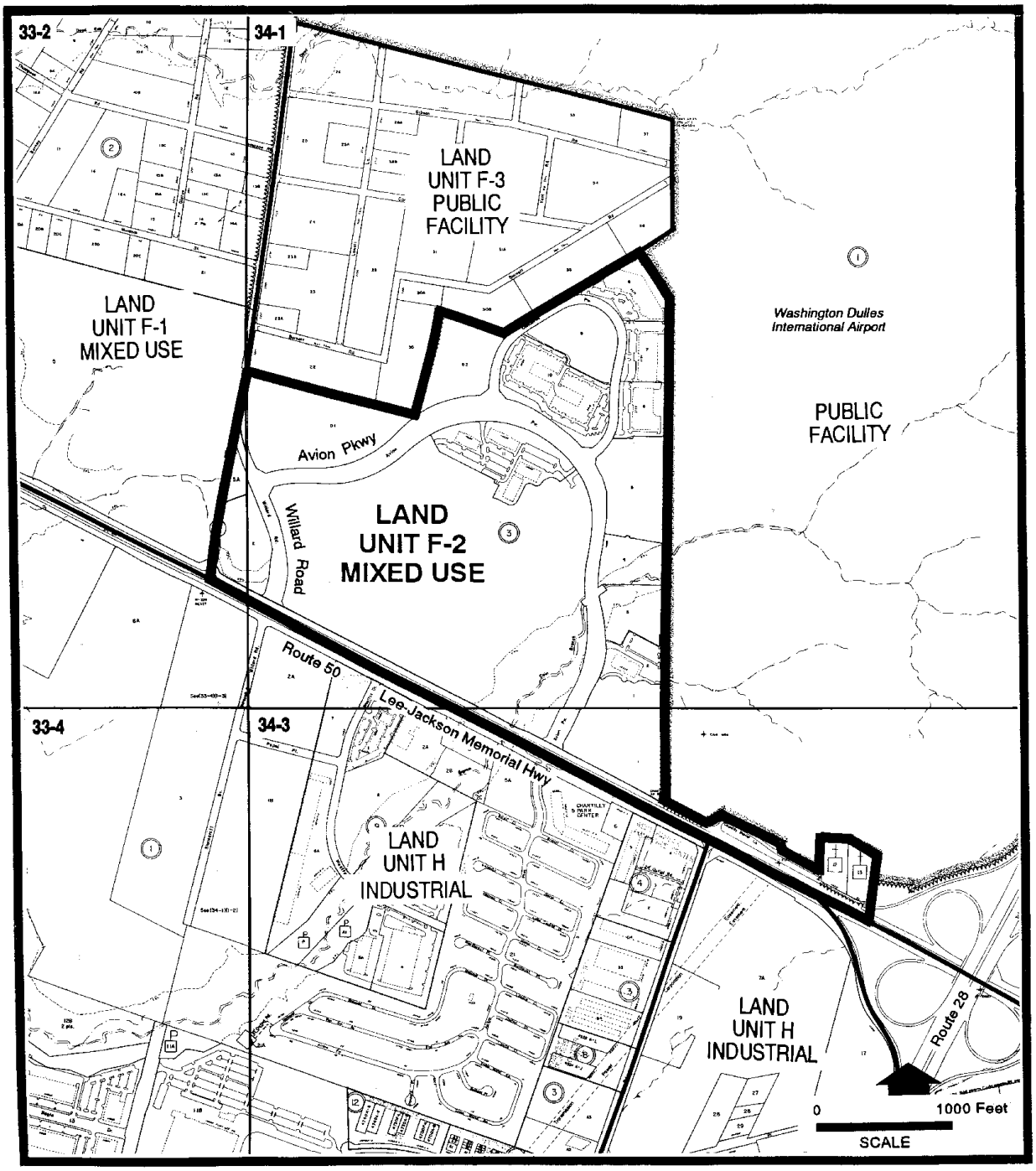
1. This land unit is planned for office and industrial/flex uses up to a maximum .50 FAR, continuing the existing character and type of uses. Ancillary retail uses, not to exceed 20 percent of total development, may be appropriate. Lodging, restaurants, and/or cultural uses should be considered as optional uses. Any new development should maintain and enhance the high-quality design of the existing development.

2. Conventional strip or freestanding commercial development is not planned and is not appropriate along Route 50 and Willard Road, except as specifically noted above in Land Use Recommendation #1.

Transportation

1. If future studies determine that right-of-way is needed in Land Unit F-2 to facilitate development of an integrated transit system for the Dulles Suburban Center, then the needed right-of-way should be provided.

2. Commercial retail uses are not planned and are not appropriate along Route 50.



LAND UNIT F-2 **FIGURE 34**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

Greenways/Trails

Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment, which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

The countywide trail should be continued west along the north side of Route 50. Connections should be provided across Route 28 to enhance the continuity of non-vehicular circulation across Route 28 and along Route 50. Trail connections to the proposed Smithsonian facility and to the Greenway parks south of Route 50 should be via Willard Road.

LAND UNIT F-3

CHARACTER

This land unit contains approximately 110 acres and is entirely owned by the Fairfax County Board of Supervisors (Figure 35). The county plans to co-locate in this land unit the Consolidated Public Safety Academy Facility and the Work Training Center, a minimum security correctional facility. The Public Safety Academy will consolidate public safety facilities currently scattered elsewhere in the county and in West Virginia.

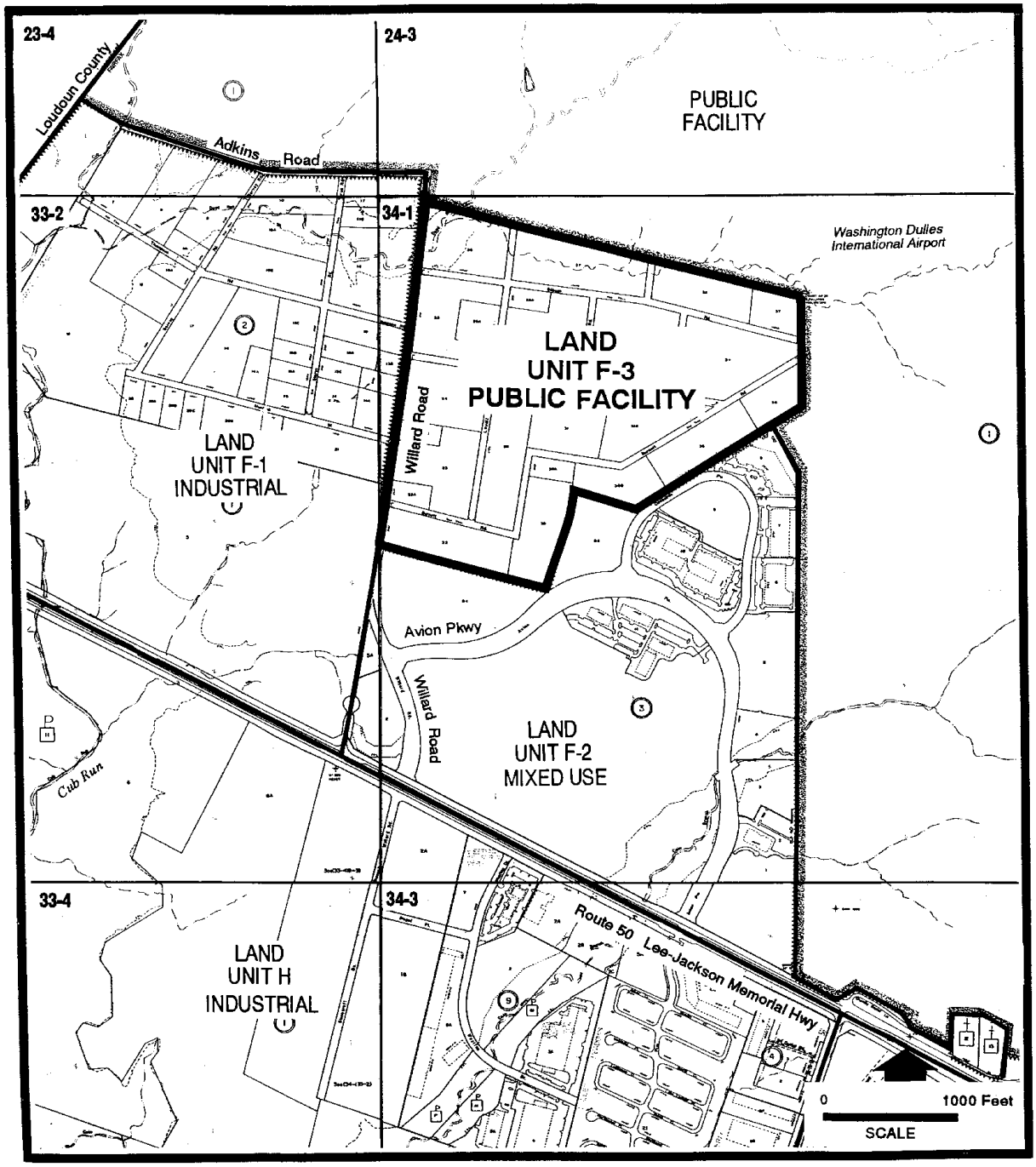
RECOMMENDATIONS

Land Use

1. This land unit is planned for public facility use, specifically for public safety training facilities, including a work training facility and medium security facility for minimum risk prisoners. This land unit should be developed in accordance with the plan, approved June, 1986 under 2232-C86-5, including all conditions for buffering and screening, noise mitigation and access. Any amendments to the approved plan should follow the same procedures, including public hearings, and provide for landscaping of a similar quality as adjacent development. Specific uses that may be developed at this facility, (according to the approved development conditions,) include a firearms training range; a driver training track and related facilities; and facilities for classroom training, outdoor practical exercises, and physical fitness training. An adequate buffer should be maintained around the facility to protect adjacent uses from any adverse impacts.

Transportation

If future studies determine that right-of-way is needed in Land Unit F-3 to facilitate development of an integrated transit system for the Dulles Suburban Center, the needed right-of-way should be provided through dedication, easements or other mechanisms, as appropriate.



LAND UNIT F-3 **FIGURE 35**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

LAND UNIT G

CHARACTER

This land unit is bounded on the west by Loudoun County, on the north by Route 50, on the east by Cub Run and on the south by the Pleasant Valley subdivision (Figure 36). The entire 151-acre land unit, developed under the name of Lafayette Business Park, includes industrial/flex and low-rise office development, with industrial/flex the predominant use. Lafayette Business Park extends into Loudoun County and is served by the same loop road. Coordinated urban design elements such as ornamental fencing and landscaping, signage, and lighting unify the appearance of the business park. As of January, 1992, approximately 95 acres were vacant.

Pleasant Valley Road bisects the land unit, connecting the residential areas to the south with Route 50. South of the land unit, Pleasant Valley Road is a two-lane country road, but it has been improved to four lanes in the business park. Adjacent residential areas are separated from the business park by the Cub Run Stream Valley Park.

This land unit contains prehistoric sites as old as 11,500 years, as well as historic period sites and structures. The John Hutchison House, a house listed in the Inventory of Historic Sites, has been preserved and integrated into the business park as the visitor information center.

RECOMMENDATIONS

Land Use

1. Land Unit G is planned for low-rise office, light industrial, research and development, and industrial/flex use to be compatible with the existing uses, up to a maximum FAR of .35. This development should occur in a manner that provides high quality design on well-landscaped sites and continues to protect adjacent residential neighborhoods from negative impacts. Mitigation measures should include landscape buffering, screening, and protection from lighting glare. Substantial setbacks, landscaping and screening should be provided along Route 50 for an attractive appearance.

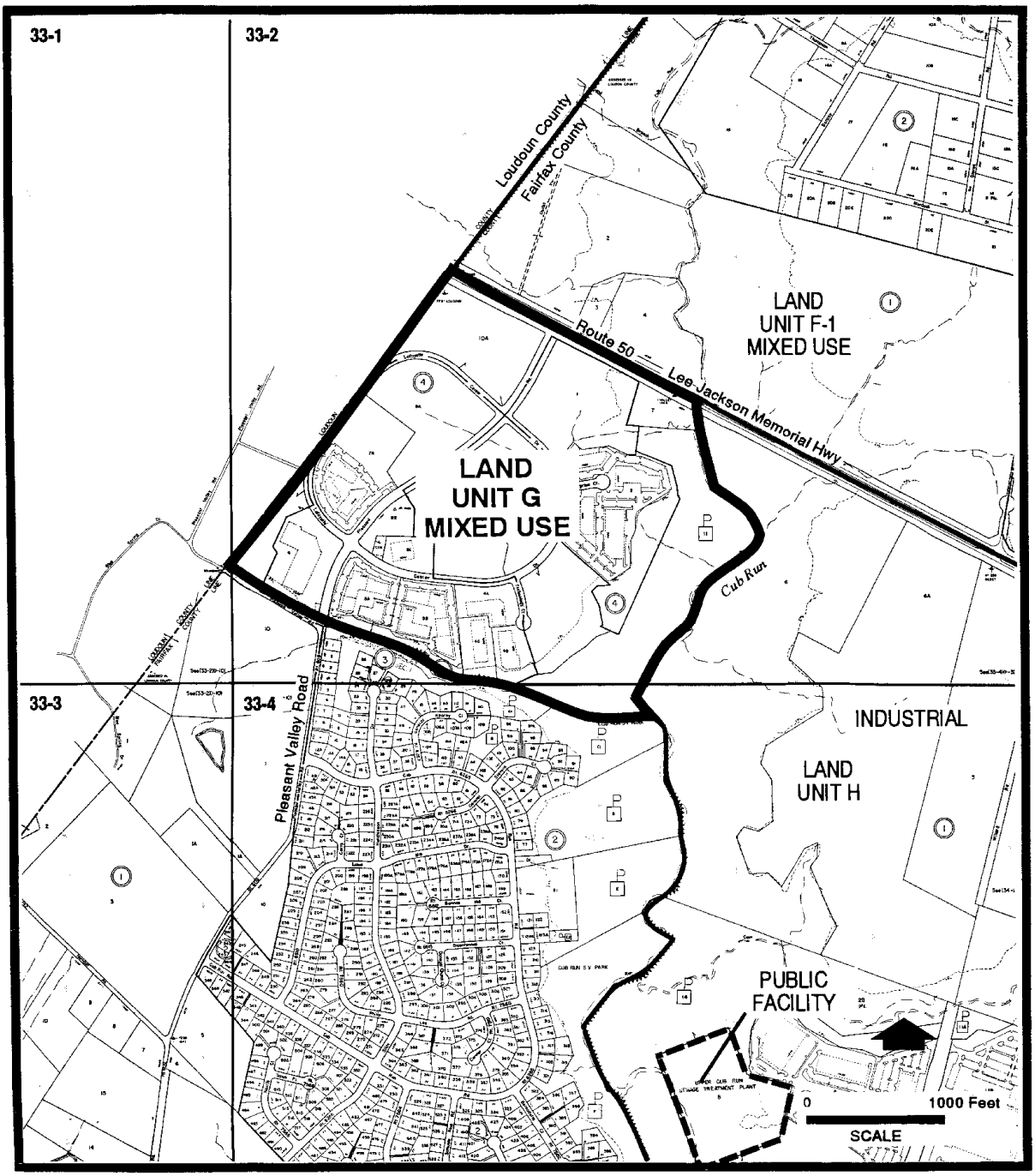
2. Commercial retail uses are not planned and are not appropriate along Route 50.

3. Public and/or private recreational uses may be appropriate optional uses in this land unit.

4. Coordinated urban design elements between developments should be encouraged, including elements such as landscaping, signage, and lighting.

Transportation

A portion of this land unit is recommended as a possible location for a commuter park and ride lot to be served by transit.



LAND UNIT G **FIGURE 36**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

Greenways/Trails

Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment, which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

The Cub Run Stream Valley Park/EQC forms the western boundary of the Dulles Greenway and is also a major element of the planned Northern Virginia Regional Greenway system. Internal trails should be developed to connect with the Cub Run Stream Valley trail through existing parkland in Land Unit G and to the countywide trail route planned along the south side of Route 50. The stream valley trail should be located to avoid adverse impacts on sensitive resource areas. It is desirable for Fairfax County trails to connect with Loudoun County trails.

LAND UNIT H

CHARACTER

Land Unit H contains approximately 880 acres and is unique in that existing development is predominantly industrial in character, although nearly 500 acres were vacant as of January 1992 (Figure 37). This land unit contains soft drink and beer bottling plants; a regional package shipping facility; and wholesale, warehousing and storage facilities. These and other similar uses generate considerable truck traffic on the local roads. In the Westfax Industrial Park, one mid-rise hotel has been built which is nominally on Route 50, but oriented to and accessed on Westfax Drive. Some industrial/flex uses exist, as well as some low-rise office development, particularly in the southeast corner of the land unit on Lee Road. A small amount of strip commercial development exists along Route 50.

Land Unit H contains the Dulles Meadows Mobile Home Park. The mobile home park provides important affordable housing; however, the majority of this community is located inside the DNL 60 dBA noise contour associated with projected operations at Dulles Airport.

There are approximately 70 acres of public land in the land unit, including parkland along Cub Run and its tributaries. The former Upper Cub Run Sewage Treatment Plant has been converted to a county materials storage yard.

RECOMMENDATIONS

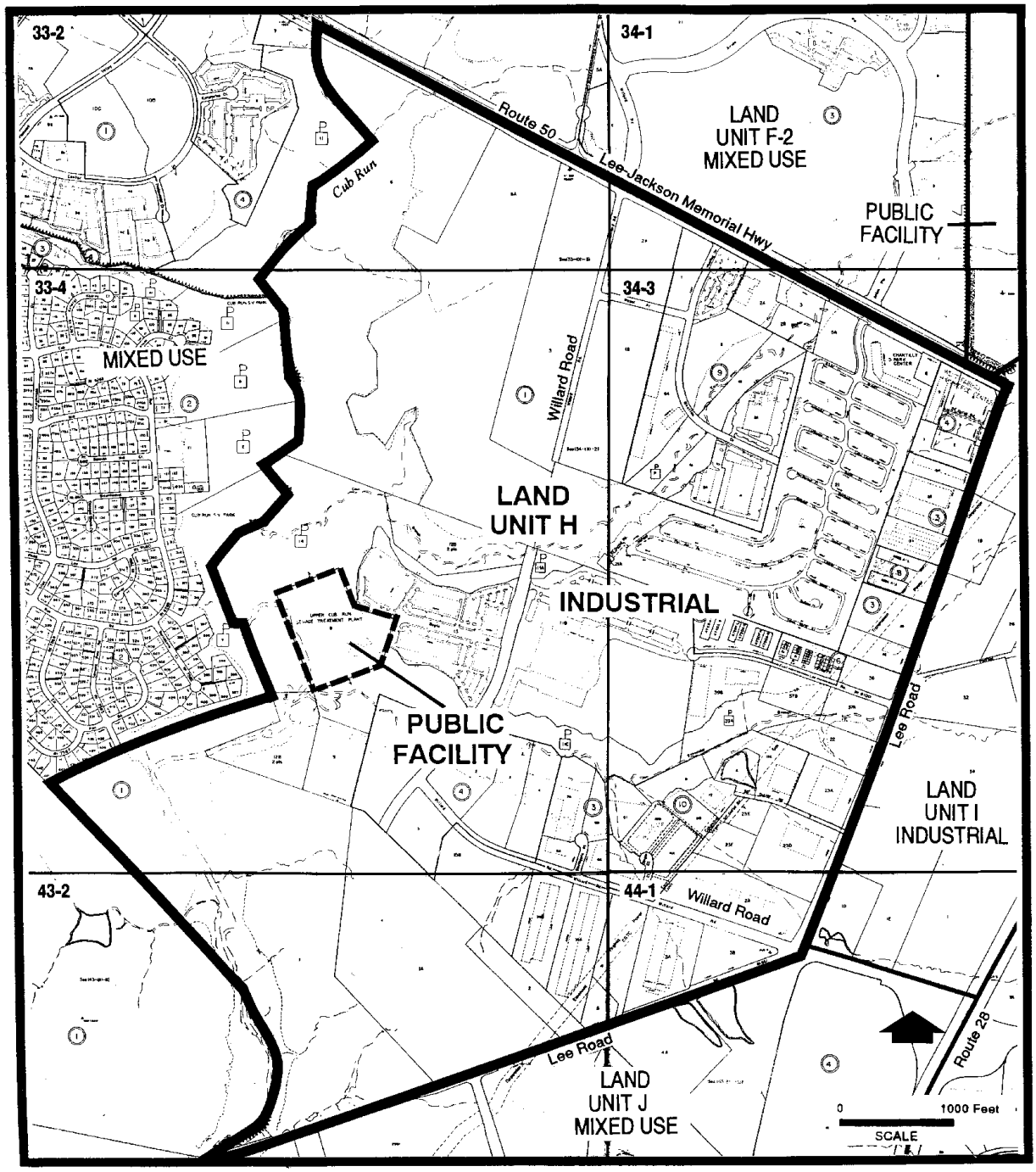
Land Use

1. Land Unit H is planned for industrial, research and development, and industrial/flex uses up to a maximum FAR of .35.

2. An auto park may be appropriate as an optional use on Parcels 33-2((1))6 and 6A, if the conditions listed below are met. An auto park is defined as a large tract of land that accommodates two or more dealers engaged in automobile sales and service, as well as related ancillary services.

   Conditions:

   - The auto park is a minimum of 50 acres in size;
   - A unified development plan is provided for the entire site, recognizing that development may be phased as dealerships are added to the park;
   - The primary uses in the auto sales park are all related to vehicle sales and service. Ancillary uses to serve customers may also be considered;
   - Substantial setbacks and a landscaped berm should be provided along Route 50 to screen view of the use from the road. A single freestanding sign to identify the auto park may be visible from Route 50; and



LAND UNIT H **FIGURE 37**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

- Development should be oriented to Willard Road, preferably with building placement designed to screen outside display and storage facilities from Route 50. Substantial setbacks, screening and landscaping should be provided along Willard Road to establish a campus-style setting. Signage at the auto park entrance(s) may be appropriate.

3. Industrial/flex use is appropriate in the southern portion of the land unit, along Lee Road and adjacent to the boundary of Land Unit J (Westfields International Corporate Center). Light industrial, research and development use and training may also be appropriate. Development should be integrated with existing or planned uses in the area.

4. Public and/or private recreational uses to serve the local community and employees may be appropriate optional uses in this land unit.

5. Dulles Meadows Mobile Home Park should be recognized as a viable residential area. This residential neighborhood should be protected; transitional screening requirements on adjacent industrially planned parcels should neither be waived nor modified. Dulles Meadows Mobile Home Park should not be expanded because it is largely within the airport noise impact area. If the Mobile Home Park is redeveloped to other uses, then relocation assistance to the tenants of the park should be provided in accord with the guidelines of the Policy Plan.

6. Strip or freestanding commercial development is not planned for and is not appropriate along Route 50. Landscaping and facade improvements, including consistent signage, should be encouraged to enhance the appearance of existing retail uses.

7. Parcel 34-3((1))1D is planned for industrial use as stated in Recommendation #1. As an option, auto dealership use (vehicle sales, rental and ancillary use) up to .35 FAR may be appropriate, if access is limited to the two existing points of ingress/egress; and streetscaping, signage and site design are similar to the auto park uses west of Stonecroft Boulevard.

Transportation

1. If future studies determine that right-of-way is needed in Land Unit H to facilitate development of an integrated transit system for the Dulles Suburban Center, the needed right-of-way should be provided through dedication, easements or other mechanisms, as appropriate. Land Unit H may be an appropriate location for maintenance facilities for an integrated transit system. Such facilities should be designed to be compatible with existing and planned land use in the vicinity, by using such techniques as buffering and screening.

2. A portion of this land unit is recommended as a possible location for a commuter park and ride lot to be served by transit.

Parks and Recreation

The Cub Run, Cain Branch and Schneider Branch EQCs are planned as public parkland. Portions of these stream valleys contain sensitive resource areas which should be protected through appropriate land management agreements with the Fairfax County Park Authority.

Portions of the undeveloped property bordering Cub Run Stream Valley immediately north of Westfields, Parcels 43-2((1))1 and 1A, may be suitable for development of active recreation facilities. This area is particularly well suited for park use because of its contiguity with the approximately 250-acre Richard W. Jones Park on the western side of Cub Run. The Fairfax County Park Authority should seek to acquire this property through dedication or a combination of dedication, easements, and use agreements.

Greenways/Trails

Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment, which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

LAND UNIT I

CHARACTER

Land Unit I consists of approximately 170 acres and is located in the southwest quadrant of the intersection of Route 28 and Route 50 (Figure 38). Lee Road forms the western boundary of Land Unit I. Almost all of the land in Land Unit I has been developed. Existing uses include a petroleum products depot, a research and development type structure, Chantilly Crossing Shopping Center, and several new office and industrial buildings. There is no direct access from this land unit to Route 28. Access to Route 50 is via Lee Road.

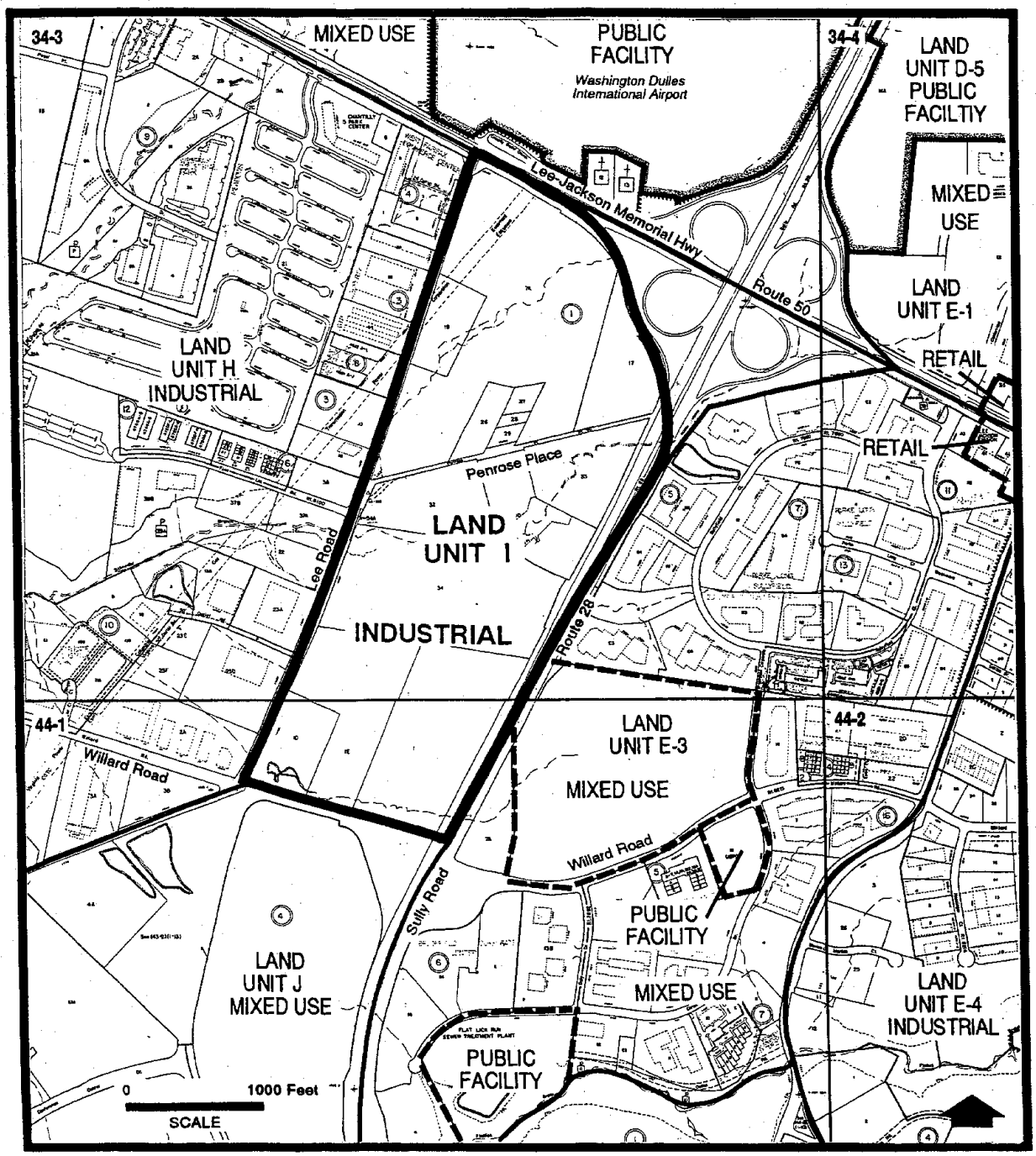
RECOMMENDATIONS

Land Use

1. This land unit is planned for light industrial and industrial/flex uses up to a maximum FAR of .35. Development should be of high quality and attractive, particularly along the frontage of Route 28. Light industrial use should be oriented to Lee Road to be compatible with existing development on the west side of Lee Road in Land Unit H and industrial/flex use should be oriented to Route 28 opposite similar use in Land Unit E-3. As an option, high quality hotel and/or a mixture of office and industrial/flex uses are also appropriate in this land unit because of its high visibility. These uses should complement the National Air and Space Museum Annex through providing a balanced mixture of tourist and employment uses. The area north of the Environmental Quality Corridor (EQC) is most visible to Route 50 and offers the greatest potential to provide high-quality tourist oriented uses to support the National Air and Space Museum Annex.

   Subject to meeting the elements listed under "Performance Criteria for Optional Uses," the land area north of Penrose Place and south of the EQC, as well as Tax Map 34-3((1))33, may be appropriate for a mixture of uses including retail, restaurant and/or recreational facilities. Restaurant uses may be appropriate north of the EQC only if the use is limited to high-quality eating establishments that incorporate excellence in design, sitting, style and materials. Drive through and/or fast food restaurants are not appropriate. Private recreational uses may also be appropriate north of the EQC. With the exception of Tax Map Parcel 34-3((13))3, for retail, restaurant and/or recreational uses, the following conditions should also be met:

   - A maximum FAR of .25;
   - Preservation of the environmental quality corridors which may be augmented by open space to preserve a minimum of 33% of the site;
   - Access is limited to Lee Road and Penrose Place;
   - Any development of the site must demonstrate to the satisfaction of the Fairfax County Department of Transportation that it does not impede traffic flow on Route 50 or the Route 50/Route 28 interchange and the interchange at Willard Road/Route 28; and
   - No more than four freestanding pad sites on the site.



LAND UNIT I **FIGURE 38**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

Retail use is not planned north of the EQC; however, retail uses may be appropriate as an alternative to the hotel and private recreation uses that are planned for Tax Map Parcel 34-3((13))3 if the following conditions are met:

- Limit development to a maximum of 67,500 square feet;
- Demonstrate that traffic generated by this use will not adversely impact nearby intersections;
- Provide high quality landscape and architectural design;
- Drive through and/or fast food restaurants are not appropriate;
- Provide signage that avoids the appearance of strip retail use; and
- Provide a commitment to active recreation (land or funding) to offset the loss of the planned private recreation use on this site.

2. The existing petroleum products depot, Parcel 34-3((1))30, should not be expanded.

3. As an option, properties located along George Carter Way (Tax Map 34-3((14))B, 2, 3, 4, 6 and 44-1((17))A, C, 1 and 5) may be appropriate for development with a mix of hotel (and/or accessory restaurant uses) and office uses up to an overall combined FAR of 0.70 because of its visibility at the intersection of Route 28 and Willard Road and its proximity to Dulles International Airport, retail opportunities, and employment centers. This option's development level is contingent upon meeting the following conditions:

   - Limit overall development up to a combined 0.70 FAR. No more than two (2) hotels may be constructed within this land area; however individual hotel use(s) may develop up to a 1.0 FAR;
   - Provide improvements to the intersection of Lee Road and Willard Road to mitigate traffic impacts;
   - Development of this site should be phased with the improvement of Lee Road to four lanes and the above mentioned intersection improvements at Lee Road and Willard Road;
   - Provide pedestrian connections to adjoining trails/walkways and transit stops;
   - Provide a unified and coordinated development plan and orient some of the development towards Lee Road;
   - Provide a comprehensive transportation demand management program in conjunction with any new development on the land area. The goal of such a program will be to reduce peak hour vehicle trips associated with the new office and hotel uses; and
   - Access to/from the properties will be provided via George Carter Way. No additional access will be provided to/from Lee Road. No direct access will be provided to/from Route 28 or Willard Road.

Transportation

1. Access to this land unit should be via Lee Road. Entrances along Lee Road should be consolidated.

2. The intersection of Willard Road with Lee Road or Route 28 should be considered as a location for a future transit stop.

3. If future studies determine that right-of-way is needed in Land Unit I to facilitate development of an integrated transit system for the Dulles Suburban Center, the needed right-of-way should be provided through dedication, easements or other mechanisms, as appropriate. Land Unit I may be an appropriate location for maintenance facilities for an integrated transit system. Such facilities should be designed to be compatible with existing and planned land use in the vicinity, by using such techniques as buffering and screening.

4. There should be no access to Willard Road, Route 50 or Route 28 from this land unit.

Greenways/Trails

Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

The countywide trail should be developed along the east side of Lee Road from Route 50 south to Willard Road and along the Route 50 frontage. Connections should be provided across Route 50 to enhance the continuity of non-vehicular circulation across Route 28 and along Route 50.

LAND UNIT J

CHARACTER

Land Unit J is comprised almost entirely of the Westfields International Corporate Center at Dulles, an approximately 1,100-acre campus-style development of office, conference center/hotel, industrial and industrial/flex space uses (Figure 39). Westfields has provided extensive landscaping, sidewalks, trails, a roadway network, recreation facilities, and other features for its planned development. Stormwater detention facilities have been enhanced to serve as ornamental ponds and large amounts of existing vegetation have been preserved. Large natural buffers exist between Westfield's nonresidential development and adjacent residential areas, taking advantage of the Cub Run and Flatlick Branch EQCs. A commuter parking lot is located on Stonecroft Boulevard, near its intersection with Westfields Boulevard.

The section of Land Unit J west of Route 28 has been partially developed for office and hotel/conference center use. The area east of Route 28 has been partially developed in office, industrial/flex and industrial uses, as of January 1992.

RECOMMENDATIONS

Land Use

1. Land Unit J is planned and approved for office, conference center/hotel, industrial/flex and industrial use at an average of .50 FAR except as noted in Land Use Recommendations #6 and #7 below. Future development should be consistent with the character of the existing development. High quality landscaping should be maintained throughout the land unit.

   It is desirable that development in this land unit be designed to enhance transit serviceability. This can be achieved by placing buildings closer together or to the road; designing them around plazas; utilizing approaches to bring employees within walking distance of transit facilities or otherwise facilitating transit-oriented development.

2. Mixed Use Focal Point

   Described below are two options under which higher intensity mixed-use development may be appropriate for portions of Land Unit J in the vicinity of the intersection of Stonecroft Boulevard and Westfields Boulevard. The intent of this higher intensity mixed use development is to create a focal point to serve Westfield's employees, visitors, and nearby residents. Focal point development should be unified on one site, not split by a major arterial such as Route 28. Under either of these options the following applies:

   - Access to this development should not be oriented to Route 28.

   - A parking maximum for commercial development in the focal point should be established at the number of spaces required for office use at 1.0 FAR in conventional development without public transportation. To offset the decreased supply of parking, employers should be encouraged to participate in a transportation demand management program (TDM) including such alternatives as carpools and vanpools.

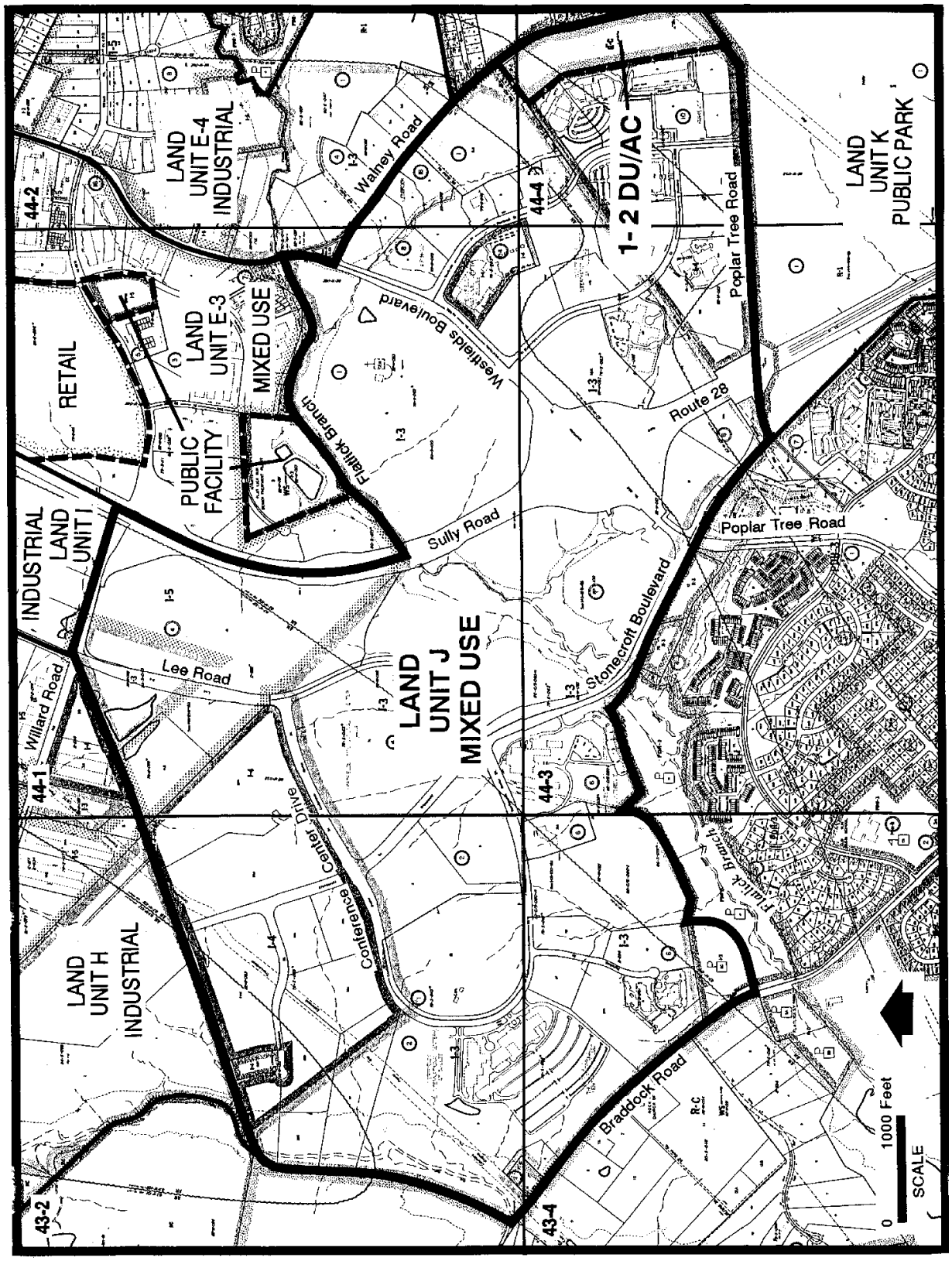


FIGURE 39

LAND UNIT J
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

- The quality of development should reinforce the showplace standards established by Westfields.

A limited amount of high-density residential development may be appropriate for incorporation within this mixed use focal point under either option under the following conditions:

- A mechanism is established by the county to permit residential development within the Tax District or the Tax District is amended to allow for the taxing of residential development without increasing the financial burden on other Tax District landowners or the county without their consent.

- Residential development should be consistent with the county's adopted policies regarding residential development in areas impacted by noise from Dulles Airport.

- Residential development should be limited to mid-rise or high-rise buildings with a sufficient number of units to ensure a high-quality living environment with active recreation and other site amenities provided so as to avoid the creation of an isolated pocket of residential use within this area that is planned predominantly for nonresidential uses.

Option A

A higher-intensity mixed use focal point may be appropriate within Land Unit J, including such uses as office, retail, and a hotel up to a maximum 1.0 FAR. The development should be designed to be transit friendly and to be served by public transit. This mixed use development should complement the higher intensity mixed use development planned in Centreville and in the Dulles Suburban Center Core (Land Unit A). The focal point development should be located between Route 28 and Stonecroft Boulevard astride Westfields Boulevard and limited to up to 50 acres in area and should not exceed 1 million square feet in gross floor area. The additional intensity (above .50 FAR) should be permanently transferred from within Land Unit J.

Option B

Should a transit stop/station be programmed and located within the vicinity of the intersection of Westfields and Stonecroft Boulevards, but not in the median of Route 28, then higher intensity may be appropriate as follows:

- Additional intensity over .50 FAR should be permanently transferred from within Land Unit J or from land already zoned for commercial or industrial development and located in areas between transit nodes in the Route 28 Tax District where decreased intensity is planned.

- Within a radius of approximately one-quarter mile of the transit stop/station site and within the Tax District boundary, a baseline intensity of 1.5 FAR is appropriate. Transition to lower intensities should commence within this area to ensure compatibility with adjacent uses.

- If higher densities permitted by transit can occur on both sides of Route 28, the higher densities on the side of Route 28 other than that of the transit stop/station can occur only if it is phased with integrated pedestrian access or integrated van/bus service between the development and the transit station.

- Residential uses should be permitted and encouraged as part of the mix of uses as added intensity at an overall FAR of 2.25.

3. Parcel 44-3((1))15 is approximately 50 acres located north of the intersection of Stonecroft Boulevard and Westfields Boulevard. A prominent feature of the property is the Environmental Quality Corridor that traverses the center of the property covering approximately 40% of the site. Like other property in Land Unit J, the property is planned for office, conference center/hotel, industrial/flex and industrial use up to an intensity of .50 FAR.

   As an option, a predominantly multi-family residential development may be appropriate up to an intensity of .50 FAR if it creates a high-quality living environment within the context of a larger area that is planned for nonresidential uses. Office and limited retail uses may be integrated into the development. The following conditions should be met to implement this option:

   - The majority of the development is residential and at least 80% of the units are in mid-rise multifamily structures with appropriate transitions provided between different uses and unit types.

   - The south side of the EQC is developed with an urban character with predominantly mid-rise residential development, with limited retail and restaurant uses encouraged to serve both residents and visitors.

   - Drive-through uses are discouraged.

   - The north side of the EQC is appropriate for multifamily residential, townhouse or office uses.

   - Site layout and building design create a pedestrian friendly environment oriented towards Stonecroft Boulevard that enhances and connects to the existing pedestrian network.

   - Phasing of the development should not lead to an interim condition where there is an isolated pocket of residential development on the north side of the EQC.

   - Development is sequenced such that infrastructure and public amenities to support the project, such as roads and parks, is completed with the first phase.

   - A buffer from Route 28 provides noise attenuation and visual screening with measures that include high quality landscaping that has a balanced mix of deciduous and evergreen trees and shrubs that are native species.

   - The development mitigates negative transportation impacts to Stonecroft Boulevard and nearby intersections.

4. A substantial undeveloped buffer of not less than 250 feet in width should be maintained between Braddock Road and Westfields. This buffer is intended to provide the transition between residential development south of Braddock Road and Westfields nonresidential development north of Braddock Road. The following conditions should be maintained:

   - This buffer should consist of existing and supplemental vegetation and land forms;

   - No development or parking is appropriate in this buffer area;

- The areas adjacent to trails and ponds should be considered to allow amenities for use by employees and residents;

- No road access to the nonresidential development should be cut through this buffer to Braddock Road; and

- The siting and height of nonresidential development should not create a negative visual impact on existing or future residential communities. However, height increases should be considered in order to preserve green space when there will be no adverse visual impact on existing communities.

5. Adjacent to Sully Station Shopping Center, are Parcels 44-3((6))21 and 21A. A hotel is already planned and approved for Parcel 21A. Parcel 21 is planned for a campus-style office and industrial park. As an option, Parcel 21 may be developed in neighborhood-serving retail and service uses, under the following conditions:

   - The parcel is planned and designed comprehensively to function as an integrated development that is compatible with both the hotel and Sully Station Shopping Center;

   - The development has pedestrian access to the hotel; and

   - Access is from Stonecroft Boulevard.

6. Parcel 44-2((1))6A is planned for office, industrial/flex, and industrial use at a maximum intensity of .35 FAR, to be consistent with existing development to the north and west and to provide a transition to the residential development on the east side of Walney Road. There should be no direct access from this parcel across Parcel 44-4((10))26.

   As an option, residential use at 5-8 dwelling units per acre may be appropriate under the following conditions:

   - A mechanism is established by the county to permit residential development within the Tax District or the Tax District is amended to allow for the taxing of residential development without increasing the financial burden on other Tax District landowners or the county without their consent;

   - There should be no direct access from this parcel across Parcel 44-4((10))26;

   - Residential development should be consistent with the county's adopted policies regarding residential development in areas impacted by noise from Dulles Airport; and

   - Residential development should comprise a sufficient number of units to ensure a high-quality living environment with active recreation and other site amenities provided so as to avoid the creation of an isolated pocket of residential use within this area that is planned predominantly for nonresidential uses.

7. Re-use of the existing house on Parcel 44-1((1))6 as a restaurant or pub is desirable. Minor structural changes to the building would be appropriate as long as the integrity of the building is retained.

<u>Transportation</u>

1. Rail transit should be considered along Route 28 and other alternative routes in the land unit.

2. If future studies determine that right-of-way is needed in Land Unit J to facilitate development of an integrated transit system for the Dulles Suburban Center, then the needed right-of-way should be provided through dedication, easements or other mechanisms, as appropriate.

3. If any future improvements to Poplar Tree Road on the east side of Route 28 are required, every effort should be made to protect E.C. Lawrence Park by obtaining any additional right-of-way (if needed) from the north side of Poplar Tree Road and minimizing impact on the parkland, to the extent possible.

Parks and Recreation

1. The Fairfax County Park Authority should cooperate with Westfields officials to provide active recreation facilities, especially athletic fields, to serve employee and local community needs.

2. Cub Run Stream Valley Park is located on the western boundary of this land unit. Portions of this EQC contain sensitive resource areas; however, development of the stream valley trail and other amenities such as wildlife observation, seating and open play areas within the outer perimeter of the EQC will enhance the passive recreation value of this natural resource.

3. Flatlick Stream Valley Park borders this land unit on the south. The 10-acre park site located adjacent to Braddock Road outside the floodplain is suitable for the development of active recreation facilities.

Greenways/Trails

Stream Valley Recreational Trails: Complete the Cub Run Stream Valley Trail through this land unit to connect with Flatlick Stream Valley Park. Completion of the Flatlick Stream Valley Trail through Westfields by means of a public access trail easement is desirable to connect with the recommended trail through Land Unit E-4.

Countywide Greenways/Trails: Internal trails within Westfields are an integral part of the Dulles Greenway and should provide continuity of access between the Cub Run, Flatlick Branch EQCs, and Ellanor C. Lawrence Park. A pedestrian/bicycle access across Route 28 to Ellanor C. Lawrence Park should be considered as part of the Phase II transportation improvements.

Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian or bicycle classification for each segment, which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

LAND UNIT K

CHARACTER

Land Unit K is comprised in its entirety of Ellanor C. Lawrence Park, a 611-acre site owned and managed by the Fairfax County Park Authority and classified as a Countywide Multiple Resources Park. Land for the park was donated by private citizens in the 1960s (Figure 40).

Under the terms of the Lawrence agreement, the property is irrevocably designated to the Fairfax County Park Authority. This agreement further stipulates the FCPA is bound to contest any eminant domain taking proceeding "in every fashion reasonably possible" and, under threat of forfeiture, constrains the FCPA in relinquishing any portion of the park property for any purpose other than as a public park.

The second largest single site in the FCPA system, the park contains a rich diversity of natural and heritage resources as well as active recreation facilities. Varied habitats including the Rocky Run stream valley, ponds, meadows, pine and oak forests support a large wildlife population. Deer, turkey, hawks, owls and songbirds inhabit the park and the spring wildflowers along Rocky Run are an annual attraction.

Nearly 70 archaeological sites have been recorded, documenting over 8000 years of human habitation on this site. Major historic resources include the Walney Visitor Center, a renovated 200-year-old farmhouse which serves as the primary point of visitor contact; Cabell's Mill, a renovated 19th century gristmill which is available for rental; and Middlegate, the Lawrence home which currently houses administrative offices.

Over 60 percent of the property is being administered as Managed Conservation Areas to protect and enhance significant ecological and cultural resources. The portion of the park located west of Route 28 is being developed with a complex of six athletic fields.

Public use of the park has been increasing at the rate of approximately 20 percent annually. Over 35,000 visitor contacts were made in 1991, through participants in interpretive programs, Visitor Center activities and attendees at some 100 private functions at Cabell's Mill. These figures do not include participants in organized sports or informal users of the park trails. Negative aspects of this increased usage include increased incidents of poaching and increased levels of vehicular traffic through the park.

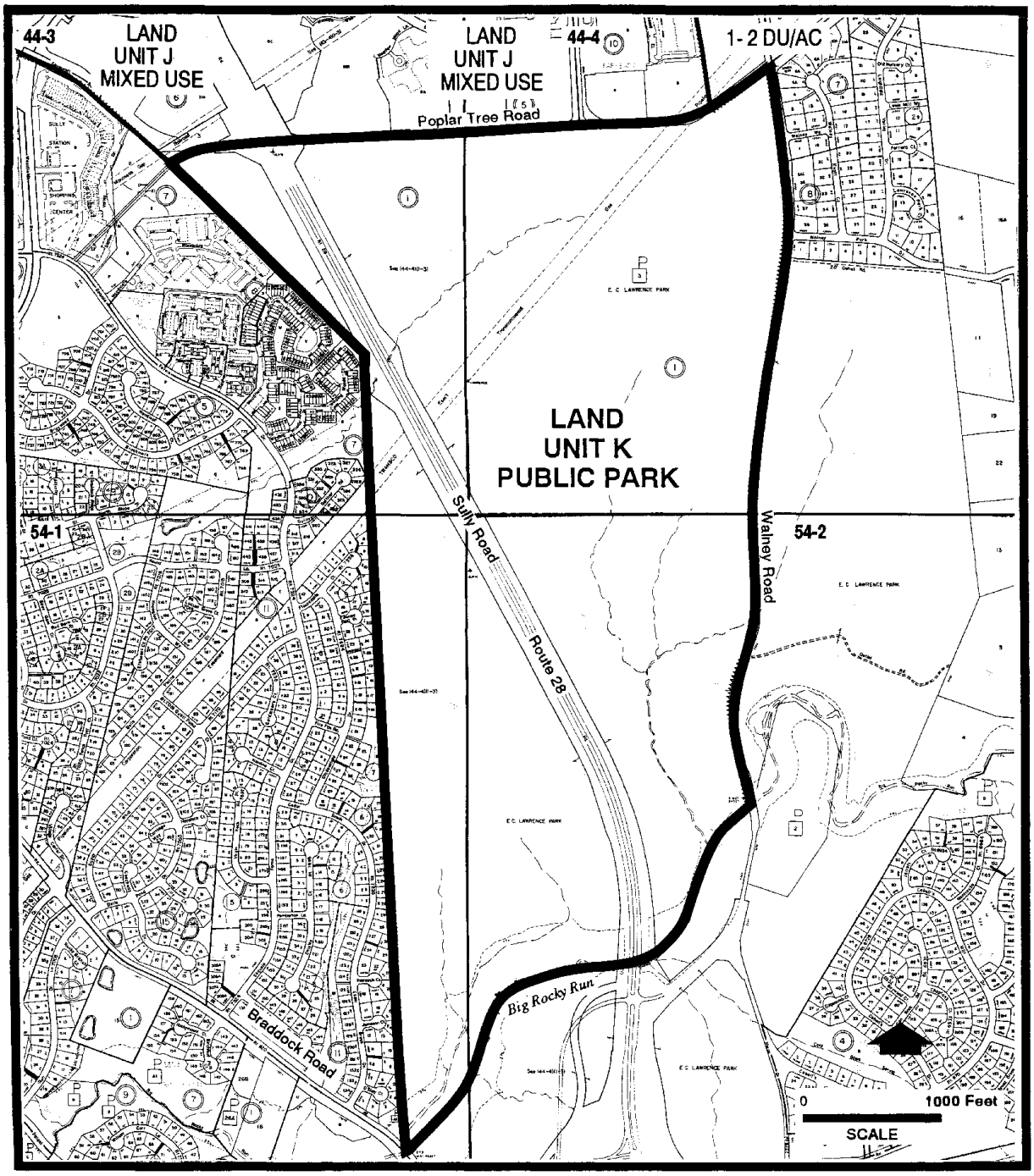
RECOMMENDATIONS

Parks and Recreation

1. Ensure that sensitive ecological and heritage resource areas of the park are buffered by compatible adjacent land uses.

2. Complete Resource Management Plans to protect and enhance significant ecological and heritage resources.

3. Provide trail linkages to the Dulles Greenway System and adjacent residential communities; consideration should be given to providing pedestrian/bicycle access across Route 28 as part of Phase II transportation improvements.



LAND UNIT K **FIGURE 40**
LOCATION AND COMPREHENSIVE PLAN MAP DESIGNATION

Transportation

Walney Road should be closed to non-park traffic in two phases: (1) as soon as possible, restrict through truck traffic; (2) in the long run, implement procedures for public road abandonment between the Visitor Center and Cabell's Mill/Middlegate when adequate access from Cabell's Mill subdivision to Stringfellow Road is completed.

Greenways/Trails

Trails planned for this land unit are delineated on Figure 10 and are an integral part of the overall county system. While some of the segments have already been constructed, the map portrays the ultimate system for the land unit. In addition, the map specifies either a pedestrian, bicycle or equestrian classification for each segment, which represents the desired ultimate function of that trail. For new trails, specific construction requirements are detailed in the Public Facilities Manual.

I. DESIGN GUIDELINES FOR DULLES SUBURBAN CENTER

Objective: The design guidelines are intended to facilitate the integration of new development with existing and future development, to ensure that the various land uses function well together from the point of view of the user, thus contributing to the overall positive image of the Suburban Center as a high quality area to live, work, shop or visit.

SITE PLANNING

General

- Provide buffers and screening where necessary to protect adjacent neighborhoods or other less intense uses, recognizing that preservation of natural beauty in transitional areas enhances the visual quality of the development.

- Where feasible, minimize areas of impervious surface through shared parking, decked or structured parking; or increased building height; or other measures as appropriate.

- Plan development to ensure substantial usable open space.

- Minimize the disturbance of environmental resources and topography, by integrating existing vegetation, trees and topography into site design.

- Preserve or recover and record significant heritage resources, integrating them into site design where feasible.

- Separate auto and truck traffic on site for light industrial development, providing separate truck parking, loading and vehicle maintenance areas. For plants with large truck traffic volumes, provide vehicle entrances and exits separate from those for visitors.

- Design retail shopping development in physically unified complexes, not as scattered free-standing structures.

- Design safe separate pedestrian and vehicular circulation patterns for retail development, to encourage shoppers to walk from store to store.

- Limit access to arterial roads from retail development, relying on service roads or access to secondary roads that have access to arterials.

Transit Access

- Provide pedestrians, including those with disabilities, with safe and convenient access between bus stops and building entrances, using the shortest route possible.

- Provide bus shelters that protect patrons from the weather, and that are safe, easy to maintain, and relatively vandal-proof.

- Plan transportation facilities, such as bus pullouts, in the initial design of the road network. Design roads to accommodate heavy-weight and large-vehicle requirements.

Vehicular and Pedestrian Access

- Provide separate auto and pedestrian circulation systems for a safe environment that encourages walking rather than auto use for short trips.

- Design safe pedestrian crossings at roads with good lighting and access elements such as ramps for persons with disabilities.

- Provide pedestrian links to adjacent development and to the regional and countywide trail systems, connecting local sites with the larger community and enhancing the continuity of the larger systems.

- Use a hierarchical system of internal drives and roadways; do not access parking directly onto major arterial roads.

- Encourage bicycle use with bicycle routes and secure convenient bicycle storage for use by commuters, recreational users, and people cycling to the local shopping center.

Parking and Loading Areas

- Encourage parking in either structures, decks or well-screened, off-street parking areas on the sides or at the back of buildings. If it is not possible to accommodate parking behind or beside buildings, minimize parking in front of buildings.

- Locate priority parking spaces for carpools and vanpools close to the employee entrance of the building or parking structure, to encourage ride-sharing.

- Integrate the design of parking structures with that for the buildings served. Landscape both on the parking structure and adjacent to it, to make the structure more attractive.

- Design Park and Ride Lots to be compatible with adjacent development and cause as little disruption as possible to the surrounding natural setting. Trees and other vegetation should be preserved as screening.

- Segregate service, maintenance and loading zones from employee and visitor vehicle parking areas.

- Screen parking lots to control the view from the street right-of-way, adjacent development, and buildings being served by the lot. Use plant materials, walls, fences or earth berms. Break up large parking lots into smaller lots by using planting areas as dividers.

- Locate or screen the lights within parking lots to minimize glare on adjacent buildings or residential areas.

Open Space/Environmental and Heritage Resources Protection

- Provide for a continuous open space system linking activity nodes internally and externally. Use natural environmental areas as transitions between developments, as visual amenities, passive recreation corridors, and as wildlife corridors.

- Increase the benefit from stormwater detention facilities by designing them as open space amenities, i.e., small parks with landscaping and seating and/or picnic areas.

- Use grass swales for surface drainage whenever possible rather than channelization.

Buffers and Screening

- Use natural landscape to create edges and provide buffering to help define development.

- Utilize architectural and landscape elements (such as walls, berms, trees, varying scales and building masses, etc.) as visual buffers between commercial and non-commercial uses, as well as to mitigate impacts of highway noise.

- Screen from public view rooftop mechanical equipment, materials storage, utility substations and the like.

- Mitigate the impact of blank walls on the side and back of retail buildings with landscaping, screening and buffering. Avoid long expanses of blank walls along major roads, when feasible.

Utility/Service Areas

- Place utilities underground to the extent possible. Keep utility corridors separate from landscaping corridors to avoid disturbing vegetation during utility maintenance.

- Provide for safe and well-screened on-site storage of refuse generated by commercial and industrial uses, including walled enclosures for dumpsters. Design recycling facilities to be accessible but well-screened.

ARCHITECTURAL DESIGN

Scale/Mass/Form/Facades

- When development is near existing residential areas, provide general consistency of scale and mass between residential and nonresidential development.

- Establish an architectural theme for multi-building complexes, utilizing similar materials and relating building elements such as entries, windows, and roof lines.

- Incorporate plazas at major building entrances or in the center of a group of buildings. Such plazas could feature special paving, seating, planting, water features such as fountains, and public art.

STREETSCAPE

Landscaping

- Provide a well-landscaped, high-quality image both toward the street and on any facade that can be seen from adjacent buildings or side streets.

- Provide color, texture and seasonal visual interest at major architectural and site focal points by using flowers and ornamental, deciduous and evergreen shrubs, trees, etc.

- Preserve existing high quality vegetation and integrate it with development to the greatest possible extent. Restore disturbed natural areas to be a visually appealing landscape.

- Select low-maintenance landscape materials for areas not likely to receive consistent maintenance.

Signage/Street Furniture

- Create a signage style for a given development complex and carry it out consistently at major roads entering the complex and at building site entries. Comprehensive sign systems that establish a distinctive theme and identity and eliminate visual clutter are desirable. Building-mounted signs and ground-mounted shopping center signs incorporated within a planting strip are encouraged. Freestanding and pole-mounted signs are discouraged.

- At major intersections, place street signs on mast arms overhead.

- Provide street furniture including utilitarian items such as benches, trash receptacles, and planters. Street furniture should be durable, require low maintenance, and be easily repaired or replaced.

- Use benches or other seating in courtyards, along pathways, near building entries, or in any other public area. Seating should be located so as not to impede pedestrian traffic.

- Place trash receptacles conveniently and strategically along major walkways, near building entrances, and in seating areas. Locate receptacles so as not to impede pedestrian traffic.

- Within the Sully Historic Overlay District all signs, fences, street furniture, outdoor graphics should be designed and installed to be compatible with the Sully Historic Site in terms of mass, scale, color and visual impact.

Lighting

- Develop a comprehensive lighting plan for a given development complex, in order to provide unity and a coordinated appearance, thus contributing to a positive sense of orientation and identity for motorists and pedestrians.

- Provide exterior lighting that enhances nighttime safety and circulation, as well as highlighting special features to act as landmarks for motorists.

- Design lighting in a manner that minimizes glare onto adjacent sites.

II. DESIGN GUIDELINES FOR THE SUBURBAN CENTER CORE IN LAND UNIT A

In addition to the design guidelines that are applicable to the entire Dulles Suburban Center, the following objectives and guidelines are specifically applicable in the core in Land Unit A. This core area ultimately will have the highest development intensities in the Suburban Center, as well as a future transit focus.

DESIGN OBJECTIVES FOR THE CORE:

1. Create a clearly recognizable identity that relates to Land Unit A's function as the urban core for the Dulles Suburban Center; define the area as a whole, as well as areas of special character.

2. Reinforce the order and legibility of the Core's circulation systems, to create a sense of place and allow people to move around easily within it.

3. Create a visually appealing environment where people can conduct their business efficiently and safely, so that the Core attracts a high level of activity, preferably both day and night.

GENERAL SITE PLANNING

- Create an urban development pattern by bringing buildings close to each other and to the road.

- Create a street-level mix of support service and retail uses that is visually attractive, and which will focus services for pedestrian convenience. The concept should encourage pedestrian activities and contribute to the vitality of the area.

- Create a comprehensive and well-marked system of safe and attractive sidewalks/trails that link adjoining buildings, plazas, shops, urban parks, greenways and recreation facilities.

- Incorporate parking into structures, either above- or underground, limiting surface parking only to small visitor lots, if necessary.

- Develop the area adjacent to any future transit station to take maximum advantage of the pedestrian access directly from the station to the workplace. The area adjacent to the transit station should be attractive and inviting to commuters, with clear signage to make movement easy and convenient between the station, the workplace and the retail facilities.

- Integrate support services in retail establishments, on the routes commonly taken by transit users, in order to capture those shopping trips on the way to and from the office.

- Incorporate urban parks, large or small, within convenient walking distance of office buildings, in order to provide open space as a readily accessible amenity.

- Encourage shared parking between uses with different parking needs such as hotels and offices, to use valuable land more efficiently and to reduce the amount of impervious surface.

- Build public spaces such as pavilions, plazas, and terraces for seasonal celebrations, fairs and other community events, thus adding important vitality and evening activity.

- Integrate parking decks and structures into the overall landscape to create a pleasing visual image. Perimeter plantings and spandrel planters on the decks/structures are encouraged to lend a softening effect to facades and add visual variety.

IDENTITY: CREATING A SENSE OF PLACE

- Reinforce the identity of the Core by developing a streetscape plan to be used on all public roads within the core. This could include consistent use of street trees species and styles of street furniture such as light fixtures, as well as special paving treatments at crosswalks.

- Enhance the identity and legibility of the Core by developing a comprehensive signage plan that identifies both entries to the Core from major roads, as well as street entries to building complexes, parks, trails, etc. This signage should include consistent sign colors, lettering and shapes, and perhaps a logo for the Core, to alert users that they are in a special area.

- Define the special character of smaller areas within the Core by using landmarks such as distinctive public art or focal points such as a public plaza.

- Define the Core at its major entry points, using landscaping, walls, berms, and other methods create gateways and edges to the Core.