ABSTRACT

TITLE: Approved and Adopted Comprehensive Amendment to the Germantown Master Plan

AUTHOR: The Maryland-National Capital Park and Planning Commission

SUBJECT: Land Use, Zoning, Transportation, Water Distribution and Sewerage System Policy Amendments to the 1974 *Germantown Master Plan*

DATE: July 1989

PLANNING AGENCY: The Maryland-National Capital Park and Planning Commission

SOURCE OF COPIES: The Maryland-National Capital Park and Planning Commission
8787 Georgia Avenue
Silver Spring, MD 20910-3610

NUMBER OF PAGES: 300

ABSTRACT: This document contains maps and supporting text to the Comprehensive Amendment to the Germantown Master Plan. New residential development is planned to encourage a predominance of single-family detached units with retail, employment, recreational, and educational opportunities in easily accessible locations. The Plan also recommends suitable sites for transferable development rights (TDR's). The recommendations of this Plan are also intended to protect sensitive environmental features, including mature vegetation, stream valleys, steep slopes, and floodplains and other wetlands, through the appropriate location and intensity of land uses, the establishment of conservation easements and stringent mitigation measures.

This document also amends the *Clarksburg Master Plan* by proposing two alternatives to the alignment of Midcounty Highway and Proposed Road A-19, and establishing two alternative alignments of the Corridor Cities Transit Easement. The land uses south of West Old Baltimore Road between I-270 and MD 355 are also amended.

Minor amendments were made to the *Functional Master Plan for the Preservation of Agriculture and Rural Open Space in Montgomery County*. This Master Plan amended the *Functional Master Plan* in two locations adjacent to the Germantown Planning Area and also revised the alignment ofproposed Midcounty Highway.

APPROVED AND ADOPTED COMPREHENSIVE AMENDMENT TO THE GERMANTOWN MASTER PLAN

JULY 1989

Incorporating Minor Amendments Approved and Adopted in December 1990

An Amendment to the 1974 Germantown Master Plan as amended; a portion of the 1968 Clarksburg Master Plan; two portions of the 1980 Functional Master Plan for the Preservation of Agriculture and Rural Open Space in Montgomery County; the 1978 Master Plan of Bikeways; the 1979 Master Plan for Historic Preservation; the General Plan for the Physical Development of the Maryland-Washington Regional District within Montgomery County; and the Master Plan of Highways within Montgomery County, Maryland.

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
8787 Georgia Avenue
Silver Spring, Maryland 20910

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

The Maryland-National Capital Park and Planning Commission is a bi-county agency created by the General Assembly of Maryland in 1927. The Commission's geographic authority extends to the great majority of Montgomery and Prince George's Counties; the Maryland-Washington Regional District (M-NCPPC planning jurisdiction) comprises 1,001 square miles, while the Metropolitan District (parks) comprises 919 square miles, in the two Counties.

The Commission has three major functions:

(1) The preparation, adoption, and, from time to time, amendment or extension of the General Plan for the physical development of the Maryland-Washington Regional District;

(2) The acquisition, development, operation, and maintenance of a public park system; and

(3) In Prince George's County only, the operation of the entire County public recreation program.

The Commission operates in each county through a Planning Board appointed by and responsible to the county government. All local plans, recommendations on zoning amendments, administration of sub-division regulations, and general administration of parks are responsibilities of the Planning Boards.

Montgomery County Master Plan Development Process

Planning Board submits, Executive recommends,
and Council approves:

Annual Work Report

Planning staff prepares, with Executive staff review:

Issues Report

Planning staff initiates community participation,
solicitation of Executive staff ideas, and then prepares:

Staff Draft Plan

Planning Board reviews Staff Draft, and,
with modification, sends to public hearing:

Preliminary Draft Plan

Planning Board reviews public hearing testimony,
receives Executive comments at Board worksessions,
and adjusts Preliminary Draft to become:

Final Draft Plan

Executive reviews Final Draft and forwards
to County Council:

Final Draft Plan With Executive's Recommended Revisions

Council holds public hearing and worksessions
and approves, disapproves, or amends
Final Draft with Executive Revisions
(Executive may veto and Council may override veto),
which is forwarded to M-NCPPC to become:

Approved and Adopted Master Plan

CERTIFICATE OF APPROVAL AND ADOPTION

This Comprehensive Amendment to the Germantown Master Plan; the General Plan for the Physical Development of the Maryland- Washington Regional District; and the Master Plan of Highways within Montgomery County, Maryland; has been approved by the Montgomery County Council, sitting as the District Council, by Resolution No. 11-1498 on June 13, 1989; and the Montgomery County Executive on June 26, 1989; and has been adopted by The Maryland-National Capital Park and Planning Commission by Resolution No. 89-11 on July 12, 1989, after duly advertised public hearings pursuant to Article #28 of the Annotated Code of Maryland, 1986 (1988 Supplement).

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

John W. Rhoads
Chairman

Gus Bauman
Vice Chairman

A. Edward Navarre
Secretary-Treasurer

PREFACE

This Comprehensive Amendment to the Germantown Master Plan has been approved by the Montgomery County Council and by the County Executive, and adopted by The Maryland-National Capital Park and Planning Commission.

Some specific elements proposed in this Master Plan are noteworthy. The most significant recommendations are:

- To change land uses and residential densities recommended in the 1974 *Master Plan* in order to address environmental issues in certain areas, modify the housing mix by giving greater emphasis to detached dwelling units, and increase densities near transit stations.
- To provide continued encouragement to research and development facilities as well as major corporate office development in the Employment Corridor.
- To develop a community-wide Townscape Design chapter, which provides guidance for establishing a distinctive identity and image for areas yet to be developed and strengthens the visual character of existing development;
- To concentrate retail activities in the Town Center, a Regional Shopping Mall, and the Village Centers in order to discourage strip commercial development along Germantown's major roadways;
- To require that development in two environmentally sensitive areas meet stringent criteria in order to protect the high water quality in Little Seneca Creek;
- To adopt a zoning text amendment to provide a greater variety of zoning tools for this and other master plans; and
- To develop, subsequent to the adoption of this Master Plan, a Town Center Design and Development Study which focuses on the creation of a vital "downtown" for Germantown.

ELECTED AND APPOINTED OFFICIALS

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Michael L. Gudis, President
William E. Hanna, Jr.,Vice President
Isiah Leggett, President Pro Tem
Bruce Adams, Council Member
Rose Crenca, Council Member
Neal Potter, Council Member
Michael L. Subin, Council Member

COUNTY EXECUTIVE

Sidney Kramer

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THE GERMANTOWN COMMUNITY

Germantown Citizens Association
Germantown Alliance, Inc.
Germantown Chamber of Commerce
Germantown Focus Group Participants

* Norman L. Christeller was Chairman of the Montgomery County Planning Board during the development of this Master Plan. His term ended just prior to its adoption.

NOTICE TO READERS

An area master plan, after approval by the County Council and adoption by The Maryland-National Capital Park and Planning Commission, constitutes an amendment to the General Plan for Montgomery County. As such, it provides a set of comprehensive recommendations and guidelines for the use of publicly and privately owned land within its planning area. Each area plan reflects a vision of future development that responds to the unique character of the local community within the context of a County-wide perspective.

Area master plans are intended to provide a benchmark point of reference with regard to public policy. Together with relevant County-wide functional master plans, they should be referred to by public officials and private individuals when decisions are made that affect the use of land within the plan's boundaries. It should be noted that master plan recommendations and guidelines are not intended to be specifically binding on subsequent actions, except in certain instances where an ordinance or regulation requires a specifically defined linkage to be established. The precise timing and character of public facility projects is determined annually through the Capital Improvements Program and the Operating Budget.

Master plans generally look ahead to a time horizon of about 20 years from the date of adoption, although it is intended that they be updated and revised about every ten years. It is recognized that the original circumstances at the time of plan adoption will change over time, and that the specifics of a master plan may become less relevant as time goes on. Any sketches or site plans in an adopted plan are for illustrative purposes only, and are intended to convey a general sense of desirable future character rather than any specific commitment to a particular detailed design.

Note: A Master Plan must use some specialized or unusual terms to describe characteristics such as traffic congestion, land forms for visual and acoustic separation, measures of noise intensity, and acronyms for documents related to the planning process. Appendix 1 contains an explanation for such terms used in this Plan. Brief descriptions of the zoning classifications used in this Plan are shown in Appendix 2.

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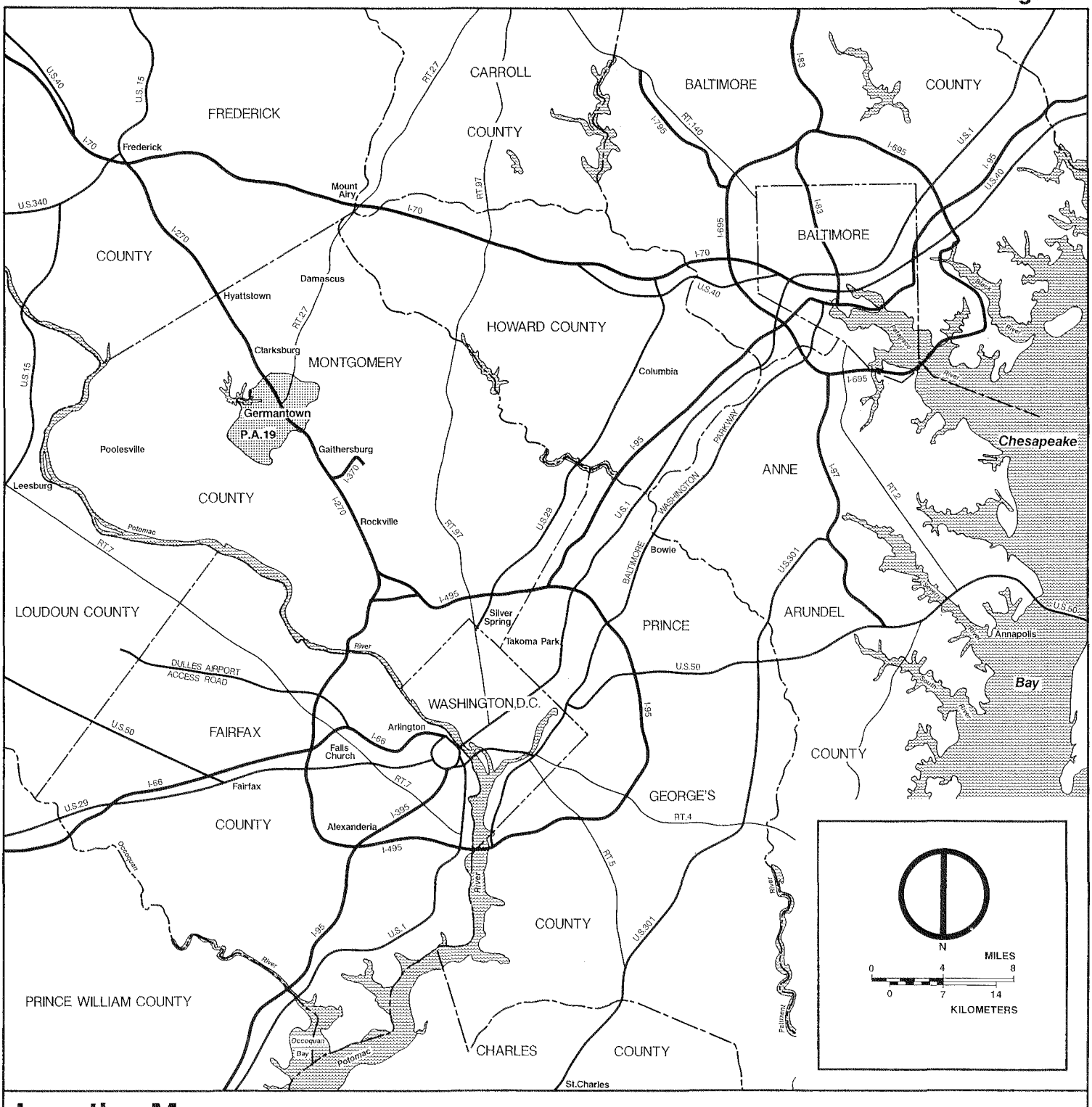
Figure 1



Location Map

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

THE MARYLAND-NATIONAL CAPITAL PARK & PLANNING COMMISSION
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In addition to the Planning Department, contributions were made to this Master Plan by staff of:

Montgomery County Council
Montgomery County Government, particularly:
- Department of Environmental Protection
- Department of Transportation
- Office of Planning Policies

Montgomery County Public Schools

Significant contributions were also made to the Germantown citizens and civic organizations that participated in the planning process.

Plan Highlights

This Plan directs the growth of the Germantown Planning Area. (See Figures 1 and 2.) Germantown's remaining vacant and uncommitted land provides a significant resource in meeting several important community and County-wide objectives. These objectives include:

- providing a greater sense of community identity for both current and future residents;
- providing opportunities for employment land uses for a variety of businesses and enterprises;
- increasing the County's total housing stock and concurrently providing an appropriate mix of housing types;
- providing a safe, efficient, and adequate transportation system;
- increasing transit serviceability, particularly in the Employment Corridor;
- providing such public facilities as parks and schools on a timely and adequate basis;
- encouraging the preservation of natural resources;
- encouraging the preservation of historic resources; and
- assuring that increased housing density is provided through the use of Transferable Development Rights (TDR's) to implement the County's Agricultural Preservation Program.

The designation of Germantown as a Corridor City has been firmly established by the *General Plan* and the *1974 Germantown Master Plan*. Although this new master plan amendment embraces the goals and objectives set forth in its predecessors, it recommends achieving those goals in slightly different ways.

The *1974 Master Plan* recommended that Germantown be surrounded by a greenbelt of publicly owned parks. Within the greenbelt eight distinct areas were identified: the Town Center District, an Employment Corridor, and six Villages — Churchill, Gunners Lake, Clopper, Kingsview, Middlebrook and Neelsville.

Since 1974, two villages — Churchill and Gunners Lake — have developed almost fully; two more — Clopper and Middlebrook — are approximately half developed; the remaining two — Kingsview and Neelsville — are mostly undeveloped.

The Town Center has developed only partially and not as contemplated in the previous plan. It currently includes two supermarket shopping centers — Sugarloaf Centre and Germantown Commons — providing a variety of retail and commercial uses, as well as some office uses.

The Employment Corridor is approximately 25 percent complete; Fairchild Industries, Department of Energy, Hughes Network Systems, the Century XXI, and the Bellemead office buildings represent the current major developments.

This new amendment of the *1974 Master Plan* recommends changes and refinements in each of the following eight areas.

Townscape Design

Objective: To develop a greater sense of community identity and a positive sense of place.

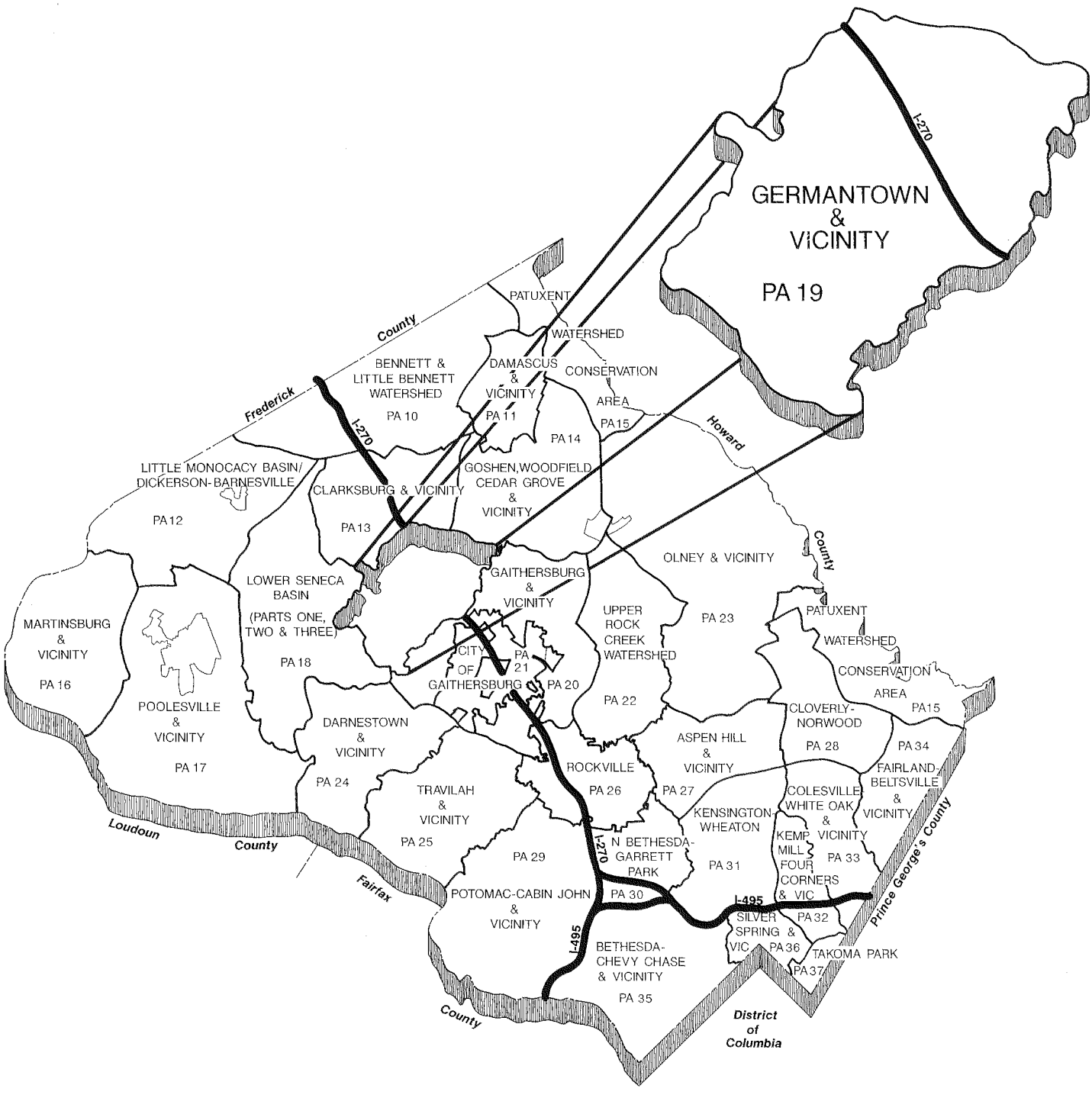
With regard to Townscape Design, the Plan:

- Recommends that community activity be focused in the Village Centers, the Town Center and the potential regional mall.

  Implementation: *Land Use Plan, Zoning Plan, and Use and Density Provisions of the Zoning Ordinance and Zoning Plan*

- Recommends general design guidelines for the Town Center, the Employment Corridor, and Village Centers.

Figure 2



Planning Area Map

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

Implementation: *Development Plan Review, Subdivision Regulations, Site Plan Review, Capital Improvements Program, and Private Participation*

- Recommends specific development guidelines for 58 Analysis Areas.

  Implementation: *Development Plan Review, Subdivision Regulations, Site Plan Review, Capital Improvements Program, and Private Participation*

- Recommends implementing specific guidelines for landscaping Germantown's roadways, including street trees and landscaped medians along major and arterial roads.

  Implementation: *Capital Improvements Program, Site Plan Review, and Private Participation*

- Recommends preparation of a Streetscape Design Study which focuses on the visual quality of the street and its edges.

  Implementation: *Montgomery County Planning Department, and Montgomery County Department of Transportation*

- Recommends establishing and completing pedestrian and bicycle connections throughout the community.

  Implementation: *Development Plan Review, Subdivision Regulations, Site Plan Review, Capital Improvements Program, and Private Participation*

Land Use

Objective: To provide a wide range of housing and employment opportunities accompanied by a complete range of public facilities, services, and amenities.

With regard to Land Use, the Plan:

- Recommends the Corridor City development pattern as recommended in the *General Plan* and *1974 Master Plan.*

  Implementation: *Land Use Plan, Zoning Plan, and Use Provisions of the Zoning Ordinance*

- Recommends an expansion of the Village Center and Town Center hierarchy as expressed in the *1974 Master Plan.*

  Implementation: *Land Use Plan, Zoning Plan, and Use Provisions of the Zoning Ordinance*

- Recommends that the Town Center be the principal activity center for Germantown.

  Implementation: *Town Center Design and Development Study, Development Plan Review, Project Plan Review, Site Plan Review, Capital Improvements Program, and Private Participation*

- Recommends a Regional Shopping Mall in Neelsville Village so that a suburban mall can be built to enlarge the variety of retail activities in Germantown as well as to serve Upcounty regional shopping needs.

  Implementation: *Land Use Plan, Zoning Plan, and Use Provisions of the Zoning Ordinance*

- Recommends retail uses be located in the following activity areas: (a) the proposed Regional Mall, (b) the Town Center, (c) the Village Centers, and (d) the Urban Villages; and discourages strip commercial development along Germantown roadways.

  Implementation: *Land Use Plan, Zoning Plan, and Use Provisions of the Zoning Ordinance*

- Recommends that a single-family detached residential character be established in selected areas to provide a broader mix of housing types so that Germantown can evolve into a full "life cycle" community.

  Implementation: *Land Use Plan, Zoning Plan, Use and Density Provisions of the Zoning Ordinance, and Subdivision Regulations*

- Recommends an increase in the total number of housing units by 16 percent, from 32,000 to 37,000 units.

  Implementation: *Land Use Plan, Zoning Plan, and Use and Density Provisions of the Zoning Ordinance*

- Recommends an increase in the proportion of single-family detached units, from 18 percent (as recommended in the *1974 Master Plan*) to 29 percent.

  Implementation: *Land Use Plan, Zoning Plan, Use and Density Provisions of the Zoning Ordinance, and Subdivision Regulations*

- Recommends a decrease in the proportion of single-family attached units from 54 percent to 31 percent.

  Implementation: *Land Use Plan, Zoning Plan, Use and Density Provisions of the Zoning Ordinance, and Subdivision Regulations.*

- Recommends that appropriate residential parcels achieve increased density through the use of Transferable Development Rights Receiving Areas with a potential of 2,300 TDR's, thereby implementing the recommendations of the County's *Functional Plan for Preservation of Agriculture and Rural Open Space.*

Implementation: *Land Use Plan, Zoning Plan, TDR Sections of Zoning Ordinance, Subdivision Regulations, and Site Plan Review*

- Recommends the development of a new type of comparison shopping center in the Town Center, as well as a more traditional Mixed-Use Center.

  Implementation: *Land Use Plan, Zoning Plan, Development Plan Review, and Site Plan Review*

- Recommends the development of an 1,100-acre Employment Corridor along I-270 as a planned employment center with offices, multi-family residences, and a limited amount of retail development.

  Implementation: *Land Use Plan, Zoning Plan, Use and Density Provisions of Zoning Ordinance, Subdivision Regulations, and Site Plan Review*

- Recommends that a full spectrum of employee services, particularly child day-care, be provided at appropriate locations throughout the Employment Corridor.

  Implementation: *Zoning Plan, Use Provisions of Zoning Ordinance, County Department of Family Resources, and Private Participation*

Environment

Objective: To protect natural resources while permitting intense Corridor City Development.

With regard to Environmental considerations, the Plan:

- Emphasizes the protection of Little Seneca Creek and of Little Seneca Lake and recommends the establishment of stringent watershed management practices.

  Implementation: *Zoning Plan, Use and Density Provisions of the Zoning Ordinance, and Subdivision Regulations*

- Recommends private conservation easements up to 400 feet wide in selected environmentally sensitive areas.

  Implementation: *Subdivision Regulations*

- Recommends the expansion of the sewage collection and water service systems into all areas of Germantown.

  Implementation: *Water Supply and Sewerage Systems Plan, WSSC, and Capital Improvements Program*

- Recommends the expansion of the sewerage collection system into environmentally sensitive areas only if stringent mitigation measures are implemented.

  Implementation: *WSSC, Capital Improvements Program, Subdivision Regulations, and County Department of Environmental Protection*

- Recommends that protection of existing water quality of receiving streams be a principal objective of the stormwater management facilities to be provided in connection with new development.

  Implementation: *Stormwater Law and Regulations, Subdivision Regulations, Capital Improvements Program, Montgomery County Department of Environmental Protection, and Private Participation*

- Provides development guidelines that encourage the preservation of mature trees.

  Implementation: *Subdivision Regulations, Revisions to Grading Ordinance, Site Plan Review, and Private Participation*

Transportation

Objective: To provide a roadway and transit system that adequately serve the planned land uses at acceptable levels of service.

With regard to Transportation elements, the Plan:

- Recommends that Germantown be designed as a community with transit-serviceable land uses.

  Implementation: *Land Use Plan, Zoning Plan, Setback Provisions of Zoning Ordinance, Subdivision Regulations, and Site Plan Review*

- Recommends the construction of and/or improvements to the roadways as indicated in the Master Plan.

  Implementation: *State Consolidated Transportation Program, Capital Improvements Program, and Private Participation*

- Recommends construction of transit service along the Corridor Cities Transit Easement and the construction of transit stations in Germantown with related parking, access facilities, and enhanced feeder bus service to be further defined by the Corridor Cities Transit Easement Study.

  Implementation: *Capital Improvements Program and Montgomery County Department of Transportation*

- Recommends revisions to the alignments and classifications of several roadways proposed in the *1974 Master Plan* and in the *1968 Clarksburg Master Plan*, such as Midcounty Highway, Observation Drive, and Mateney

Road, as well as modifications to the recommended number of lanes of some roadways.

Implementation: *Master Plan of Highways, Roadway Classifications Table, and Subdivision Regulations*

- Recommends that Great Seneca Highway, Midcounty Highway, and the southern portion of Clopper Road be designated as "landscaped greenways."

  Implementation: *Capital Improvements Program*

- Recommends the use of a variety of roadway cross-sections at locations that are appropriate to the character of the adjacent land uses.

  Implementation: *Master Plan of Highways, Roadway Classifications Table, and Subdivision Regulations*

- Recommends wider rights-of-way for selected major highways in order to accommodate visual and acoustic buffers, landscaped areas, and stormwater management facilities, as well as enabling environmentally sensitive roadway design and alignment.

  Implementation: *Master Plan of Highways, Roadway Classifications Table, and Subdivision Regulations*

- Recommends the expansion and improvement of the Germantown commuter rail station and the provision of Park-and-Ride facilities to serve carpools, vanpools, and commuter buses.

  Implementation: *State Consolidated Transportation Program and County Capital Improvements Program*

- Recommends the development of sidewalks adjacent to roadways and hiker-biker trails through public open space areas.

  Implementation: *Subdivision Regulations, Site Plan Review, Capital Improvements Program, and Private Participation*

- Recommends the development of equestrian trails throughout Germantown's greenbelt of parks.

  Implementation: *Capital Improvements Program and Private Participation*

Community Facilities

Objective: To provide an adequate number of appropriately located community facilities.

With regard to Community Facilities, the Plan:

- Recommends the acquisition and the construction of 18 new local parks.

  Implementation: *Subdivision Regulations and Capital Improvements Program*

- Recommends the site acquisition and construction of six new elementary schools, two new middle schools, and a new high school, while reducing the number of elementary and secondary school sites recommended in the *1974 Master Plan.*

  Implementation: *Subdivision Regulations and Capital Improvements Program*

- Recommends that future elementary school sites contain a minimum of 12 acres.

  Implementation: *Subdivision Regulations*

- Recommends the development of private and public child day-care centers as well as before- and after-school programs.

  Implementation: *Capital Improvements Program, County Government Operating Budget, and Private Participation*

- Recommends alternative uses for excess school sites.

  Implementation: *Land Use Plan, Zoning Ordinance, Use Provisions of the Zoning Ordinance, and Capital Improvements Program*

- Recommends the location of public facilities such as elementary schools, parkland, and swimming pools as part of the Village Centers, whenever possible.

  Implementation: *Land Use Plan, Zoning Plan, Use and Density Provisions of the Zoning Ordinance, Subdivision Regulations, Site Plan Review, Capital Improvements Program, and Private Participation*

- Recommends appropriate locations for elderly housing and child day-care facilities

  Implementation: *Land Use Plan, Zoning Plan, Use Provisions of the Zoning Ordinance, and Private Participation*

Human Services

Objective: To provide an overview of the socio-economic characteristics of the existing and future Germantown community while highlighting the provision of day-care facility needs and housing for the elderly.

With regard to Human Services, the Plan:

- Recommends the provision of child day-care facilities at appropriate locations in Germantown.

  Implementation: *Capital Improvements Program, County Government Operating Budget, and Private Participation*

- Recommends the provision of housing for the elderly at appropriate locations in Germantown.

  Implementation: *Zoning Plan, Use Provisions of Zoning Ordinance, and Private Participation*

Historic Resources

Objective: To protect and preserve Germantown's historic and architectural heritage.

With regard to Historic Resources, the Plan:

- Adds ten historic resources to the Master Plan for Historic Preservation.

  Implementation: *Approved by County Council*

Implementation

Objective: To identify those regulations and procedures necessary to implement the recommendations as expressed in the Master Plan.

With regard to the Implementation strategy, the Plan:

- Recommends periodic status reports to monitor Plan implementation.

  Implementation: *Montgomery County Planning Department*

- Recommends the adoption of a zoning text amendment in order to implement the recommendations of this Plan.

  Implementation: *Approval by District Council*

- Recommends a comprehensive rezoning of the Germantown Planning Area to implement the land use and zoning recommendations.

  Implementation: *Sectional Map Amendment*

- Recommends support of the capital improvements needed to implement this Plan.

  Implementation: *Capital Improvements Program*

- Recommends construction of missing segments of the existing pedestrian/bicycle system.

  Implementation: *Capital Improvements Program and Montgomery County Department of Transportation*

- Recommends that the County fund a Town Center Design and Development Study in order to promote successful implementation of the goals and objectives for the Town Center.

  Implementation: *Montgomery County Planning Department and Montgomery County Executive*

- Recommends establishment of an Urban Maintenance District or other mechanism to assure the upkeep of the amenity features of the Town Center.

  Implementation: *Development Plan Review, Project Plan Review, Site Plan Review, and Private Participation*

- Recommends that consideration be given to expanding the Suburban District to include the Germantown Planning Area.

  Implementation: *Montgomery County Planning Department*

Planning Framework

The Germantown Planning Area is located in Montgomery County, Maryland, some 25 miles northwest of Washington, D.C., along Interstate Highway I-270. It contains approximately 11,000 acres within a three-by-five mile area. This planning area is bisected by I-270 and is bounded by Great and Little Seneca Creeks and their tributaries.

The *General Plan* for Montgomery County, known generally as *"On Wedges and Corridors,"* was adopted by The Maryland-National Capital Park and Planning Commission in 1964 and approved by the Montgomery County Council in 1969. Its purpose is to help establish overall policies for development of the Maryland-Washington Regional District and to relate these policies to the metropolitan framework.

The *General Plan* envisioned development radiating outward from Washington, D.C., in a series of corridor cities along the major transportation corridors, with wedges of lower density between them. The basic concept of the *General Plan* is to focus growth along the I-270 and I-95 corridors and to prevent urbanization of the wedges between these radial corridors. The intent is to preserve those areas for agriculture and open space uses and to provide low-density residential transitions from the more densely developed corridors. Gaithersburg, Germantown, and Clarksburg are the three corridor cities designated by the *General Plan* along I-270. Diagrammatically, a "corridor city" as originally envisioned in the *General Plan* was to have a single center of employment and shopping activities surrounded by residential development. The residential area decreased from high-density, adjacent to the core, to low-density, at the edge of the corridor city.

Several events have occurred since the late 1960's to alter this idealized concept for a corridor city. The rapid rail transit system envisioned in the *General Plan* has not been extended through the Corridor Cities and the roadway network proposed in the *General Plan* has been modified. These changes, plus the land use policies of the City of Gaithersburg, have resulted in a multi-nodal Corridor City development pattern. Despite these events, the principal purposes and objectives of the "wedges and corridors" concept are still valid and remain the basic policy guide for the County.

The intent of the *1974 Master Plan* was to fulfill the objectives of the *General Plan.* More specifically, the *1974 Master Plan* recommended that Germantown develop into a "new community" similar to new communities such as Reston and Columbia. Unlike these new communities, however, Germantown could not be developed by a single developer, because the land ownership was fragmented among many different parcel holders. To offset this problem, a new community was proposed where the County government would seek to coordinate the efforts of many individual landowners to create as cohesive a "new town" as could be achieved within the existing powers available. This approach was a "first" in the United States. Local government was going to attempt to guide and stage development through its planning, zoning, subdivision and capital programming processes.

The major objectives of the *1974 Master Plan* were to:

- support the development of Germantown as a distinct community having its own identity;
- surround Germantown with a greenbelt of parks;
- establish a Village Center and Town Center Concept;
- concentrate employment areas along I-270 and the B&O railroad;
- balance traffic generated by the land uses with the capacity of the transportation system;
- provide a broad range of housing types and prices; and

- provide policies for staged development, based on the provision of additional sewer service and transportation capacity.

This Plan confirms the spirit and intent of the *1974 Master Plan* while recommending modifications that respond to a series of changes that have evolved during the past thirteen years:

- The population characteristics of those now living in Germantown are significantly different from those projected during the development of the *1974 Master Plan.*
- The lifestyle and the composition of Germantown households are different from those anticipated in the *1974 Master Plan.*
- Townhouses and other single-family attached units have become the predominant housing type for reasons primarily related to the private sector market that produces the housing stock; as a consequence, single-family detached units currently represent a very small portion of the existing and approved housing stock.
- Some development has occurred in Germantown that is not consistent with the intent of the *1974 Master Plan;* therefore, more detailed development guidelines are needed to assure that the objectives of the *1974 Master Plan* are achieved.
- Experience now indicates that a new community, encompassing land in many ownerships and evolving over several years, requires stronger implementation measures than those of the *1974 Master Plan* in order to assure that the objectives of this kind of community can be realized.
- Two supermarket-anchored convenience retail centers have been built in the Town Center. These shopping centers have absorbed the market for retail uses in the Churchill Village Center and have delayed the development of the Gunners Lake Village Center.

One significant objective of this Master Plan is to improve the appearance of Germantown, which includes the predominance of attached homes, as well as the lack of landscaping and other visual amenities. It is important to understand the background of Germantown's recent development in order to put this objective into perspective.

Current development in Germantown, to a large extent, is a response to the economic forces that were present during its early years of growth, the late 1970's and early 1980's. During the late 1970's and early 1980's, the energy crises affected the entire housing market, and sewage treatment capacity limitations restricted the local market for development approvals. Housing prices throughout the County escalated rapidly. Interest rates rose so high that the market rate exceeded the legal limit in Maryland. In order to bring down interest rates, builders further increased housing prices.

The high interest rates and rising prices, coupled with Germantown's location on the suburban fringe, resulted in a strong market for townhouses. Housing at the developing edge of a metropolitan area is generally less expensive as the purchaser is trading price for a longer trip to and from work. Townhouses met the needs of first home buyers for a relatively affordable house. Thus, there was a strong market for townhouses during the period of Germantown's early growth. The duration of these economic conditions contributed to the existing predominance of townhouses in Germantown.

The economic uncertainties during Germantown's early growth created significant financial problems in the building industry generally, and in Germantown in particular — builders were concerned about their survival. Builders' attention focused on producing a readily marketable product. Builders' concern about quality and diversity of product were not considered as important when they were defaulting on their loans and declaring bankruptcy.

As a result, several subdivisions in Germantown were built by a succession of builders. Each successive turnover decreased commitment to and awareness of amenity features shown on site plans. In response to this condition, the Planning Board and County Council ultimately established requirements for site plan enforcement agreements signed by the developer and created staff positions for urban designers responsible for compliance with site plans.

Another factor affecting Germantown's present appearance is a result of its agricultural heritage. The extensive farming activities in Germantown have created bare fields with mature trees only in the stream valleys. As a result, the only vegetation in most subdivisions is that planted by the builders and the residents. It will take a few more years yet before these trees make a significant contribution to Germantown's appearance, but ultimately they will make a difference.

Many objectives expressed in the *1974 Master Plan* have been achieved, particularly in terms of public facilities. These successes are the result of the combined efforts of the community organizations, the Planning Board, the County Council, the County Executive, and the actions of the responsible agencies. The Germantown Campus of Montgomery College has been established; police and fire stations have been built; and the public ownership of the greenbelt of parks has increased. The Planning Board's staging of development has deferred development on land where public facilities were not programmed, or

where premature development would preclude the development of the Mixed-Use Center. Because of this previous withholding of zoning in a staged manner, the recommendations of this Plan to reduce residential densities in certain areas can still be implemented with a minimum of rezoning. Also, the designation of highway alignments in the master plan has enabled rights-of-way to be preserved by the Planning Board through the subdivision process.

On balance, it does not seem wrong to conclude that Germantown today is a qualified success, in terms of the master plan's objectives, but that it can and should be improved as it moves further towards completion. It is the intent of this Plan, through its various recommendations and development guidelines, to improve the visual and functional quality of Germantown.

This Plan modifies the *1974 Master Plan* in the following four areas:

Housing Mix: The intent of this Plan is to promote a mix of housing types that can accommodate families of varying ages and income levels and allow opportunities for them to continue living in Germantown as their needs and tastes change. At present, Germantown lacks an adequate supply of detached homes. The land use and zoning recommendations proposed in this Plan respond to this concern.

Specifically, this Plan recommends reduced residential densities in several environmentally sensitive areas to densities that result primarily in single-family detached units. Further, a range of lower densities are recommended so that a variety of lot sizes can be achieved. The Plan also recommends that the percentage of attached homes in most subdivisions be lower than is currently permitted.

Community Identity: The intent of this Plan is to develop a greater sense of community identity. (See Figure 3.) A positive sense of "place" at the Village and Town levels is very important. To date, community identity is focused on individual and fragmented subdivisions. The development guidelines and the recommendations of the Townscape Design chapter of this Plan respond to this concern. The importance of the visual appearance of Germantown is also reflected in the guidelines in that chapter.

In addition, each of the Village Centers, with the exception of Neelsville Village, is recommended to be developed under the Planned Development Zone. The requirement for both development plan and site plan review will provide detailed review of Village Center development. The Neelsville Village Center is recommended for a new RMX (Residential Mixed-Use) Zone, which will also provide for a detailed review of development plans through project plan and site plan reviews. The zones recommended for use in the Town Center are zones which require site plan review prior to development. The zones recommended for the Mixed-Use Center, the Retail and Service Park, and the potential Regional Shopping Mall require site plan review.

Community Facilities: The intent of this Plan is to provide appropriate locations for community facilities. Since the adoption of the *1974 Master Plan*, there have been significant demographic changes, as well as changes in the nature and scale of community facilities desired by residents. For these reasons, the number, location, and nature of community facilities have been re-examined to assure that the recommendations of this Plan meet the existing and anticipated needs of Germantown residents.

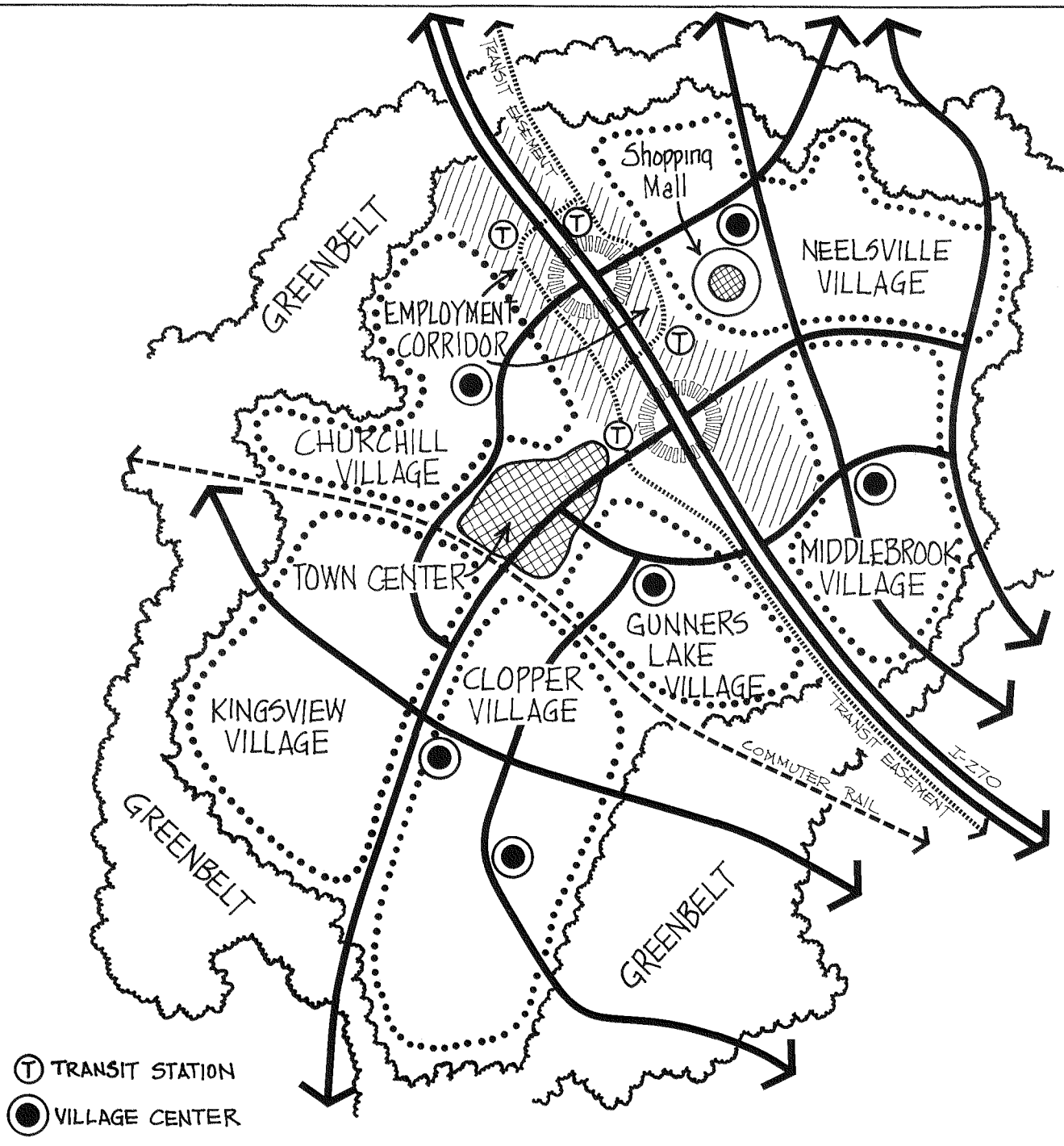
This Plan proposes the construction of six new elementary schools, two new middle schools, and a new high school. The total number of elementary schools recommended in Germantown has been reduced from 28 to 12. This reduction is a result of the reduced average number of school-age children per household, and the increase in the enrollment capacity at the new schools. The number of senior high and junior/intermediate schools also has been reduced from three to two of each. Because of the increased size of new elementary schools, the minimum size of the school sites is recommended to be increased from 10 acres to 12 acres, including 10 acres usable for school buildings, parking and recreation facilities.

The reduction in the number of school sites could adversely affect the adequacy of community recreation facilities because the estimates of the *1974 Master Plan* of local park needs took into account the recreational opportunities of school fields and courts. This Plan addresses this increase in local park requirements.

Balance Between Housing and Employment Opportunities: The intent of this Plan is to provide greater opportunity for people to both live and work in Germantown. A reasonable objective is that expressed in the *1974 Master Plan*: 25 percent of the resident work force of Germantown should also work there. The 1987 Census Update Survey,[1] however, indicates that only 10 percent of the resident work force works in Germantown. (See Figure 16.) This is due primarily to the fact that residential development has occurred at a faster pace than employment develop-

1 Research Division, Montgomery County Planning Board

Figure 3



Community Concept Plan

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

ment. The transportation analysis done for this Plan has estimated that about 30 percent of the resident work force will be working in Germantown by the time development is built out.

Although there is no direct means by which government in a free society can ensure the achievement of this objective, the recommendations expressed in this Plan will at least provide the opportunity for its realization. Furthermore, the recommended increase in the percentage of single-family detached housing and the provision of a broad mix of housing types and prices will increase the opportunity for more Germantown employees to live in the community.

In addition, the internal roadway system is designed to facilitate intra-Germantown travel which, in turn, will reduce work trip miles for those living and working in Germantown.

The comprehensive development of a new community is a complex undertaking at any time or place. It is particularly difficult in Germantown because of the fragmented land ownership pattern. With multiple developers, and limited police powers, it is not easy for government to ensure that a single, coherent development program for the entire 11,000-acre area can be achieved. It is certainly more difficult than if Germantown had been developed by a single owner as in other new communities. In those instances adjustments to the development program can occur on almost a daily basis.

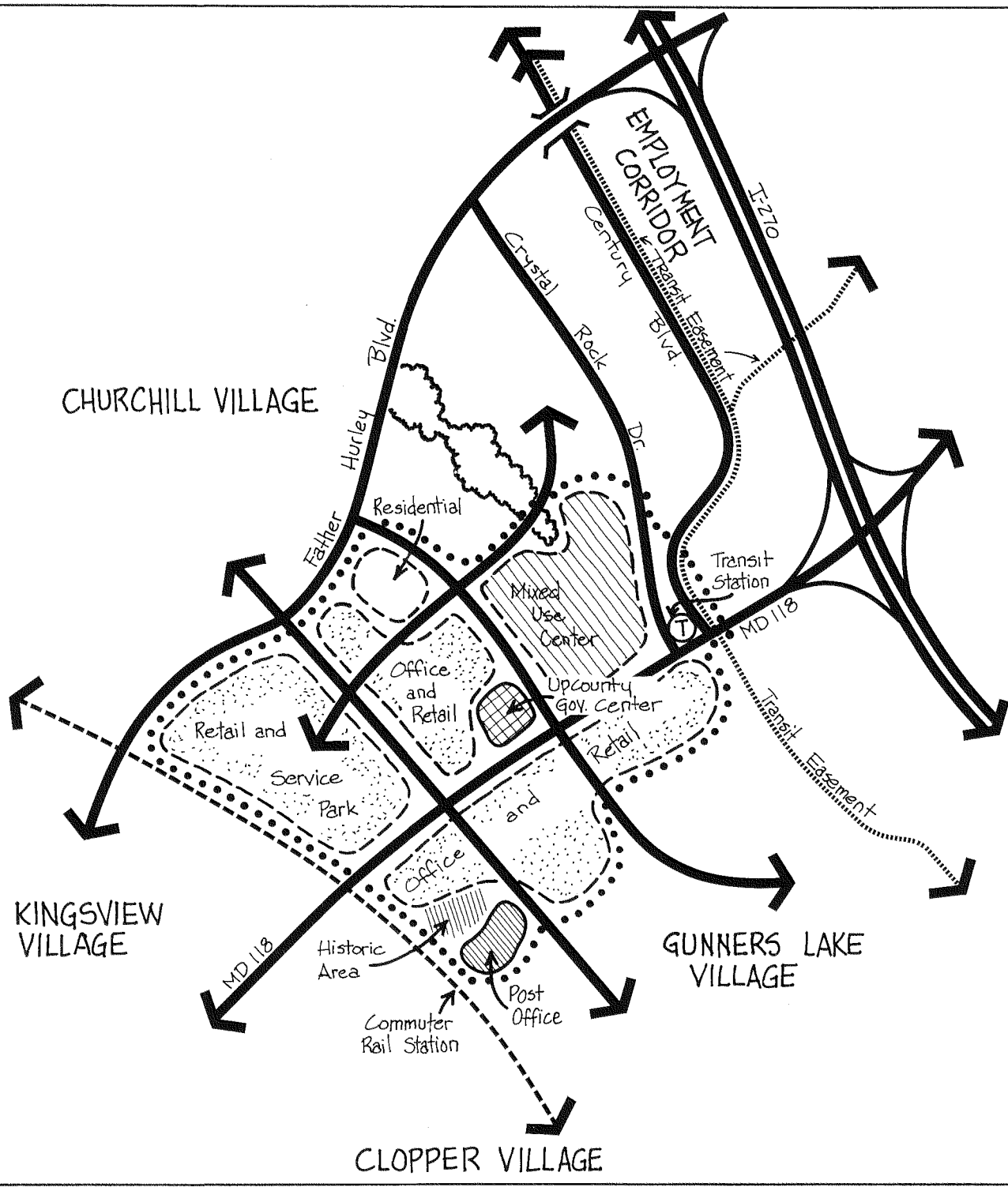
Furthermore, the sense of long-term commitment and accountability are inherently stronger in a new community built by a single developer instead of by a series of smaller developers. Smaller developers are generally more focused on the marketing needs of their individual subdivisions than on elements that would improve the quality of Germantown as a whole. The Germantown situation creates the need for an extra special public commitment to orchestrate the coordination of private development within well-defined public policy guidelines.

There are several factors beyond the control of the County government that could influence the outcome of this Master Plan. The likelihood and effects of these influential external factors are difficult to predict because they would result from actions or factors not subject to County government control, such as the actions of the Federal government, changes in energy supplies, and changes in lifestyle. In addition, technological research and invention are capable of changing patterns of everyday life but are also beyond the control of County government.

These larger political, environmental, economic, and technological factors are global or national in nature. While beyond the scope of this Master Plan, they would nonetheless significantly impact the County.

The *Comprehensive Growth Policy Study* considers several broad County-wide trends that are beyond the control and time frame of this Master Plan. The results of this Study may be useful in suggesting future modifications to the recommendations expressed in this Master Plan.

Figure 4



Town Center: Concept Diagram

Comprehensive Amendment to the Master Plan for Germantown
Montgomery County, Maryland
The Maryland-National Capital Park and Planning Commission

Townscape Design

The *1974 Germantown Master Plan* describes a vision for a new corridor city. Planned from the beginning, Germantown would avoid the sprawl and inconvenience of typical suburban development. Instead, development would be focused in a distinct series of activity centers surrounded by residential areas, all to be interconnected with a pedestrian pathway system and roadway network.

This Comprehensive Amendment to the Germantown Master Plan reconfirms the spirit of the *1974 Master Plan* and recommends development guidelines designed to implement the vision and establish a sense of community identity for Germantown, as expressed in 1974 and as modified by this Amendment.

This chapter establishes the overall visual and functional framework in which the land use decisions have been made and specific development guidelines have been prepared. The Concept Plans delineate the basic land use organization of each major element of Germantown.

This Townscape Design chapter describes Germantown in terms of Places (Employment Corridor, Town Center and Village Centers), and Linkages (Roadways, Mixed-Use Center Villages, and Pedestrian Paths). (See Figures 3 and 12.) Since the primary goal of the Master Plan is to develop a greater community identity, the Townscape Design chapter will focus on that goal in the framework of Places and Linkages.

The primary objectives of the Townscape Design Chapter are twofold. The first and overriding objective is to facilitate the development of an improved community identity and sense of place for Germantown. The second is to provide the necessary guidelines for the transition between the large scale master plan and the individual analysis area guidelines for specific activity areas.

The guidelines in this chapter have been developed to provide direction in the development of each site plan. These guidelines identify issues that should be included as primary design constraints for each site. Since the topography and existing vegetation vary from one location to another, there may be circumstances in which some latitude in the guidelines should be given. The guidelines will apply unless the Planning Board finds that other issues or public purposes outweigh their strict application.

Places

TOWN CENTER (Figure 4)

The 353-acre Town Center is the focus of community activity in Germantown. This area represents Germantown's "downtown" and will be the visual and functional center for the entire community. Its ultimate design will reflect the image of the Germantown community to its residents, employees, and visitors.

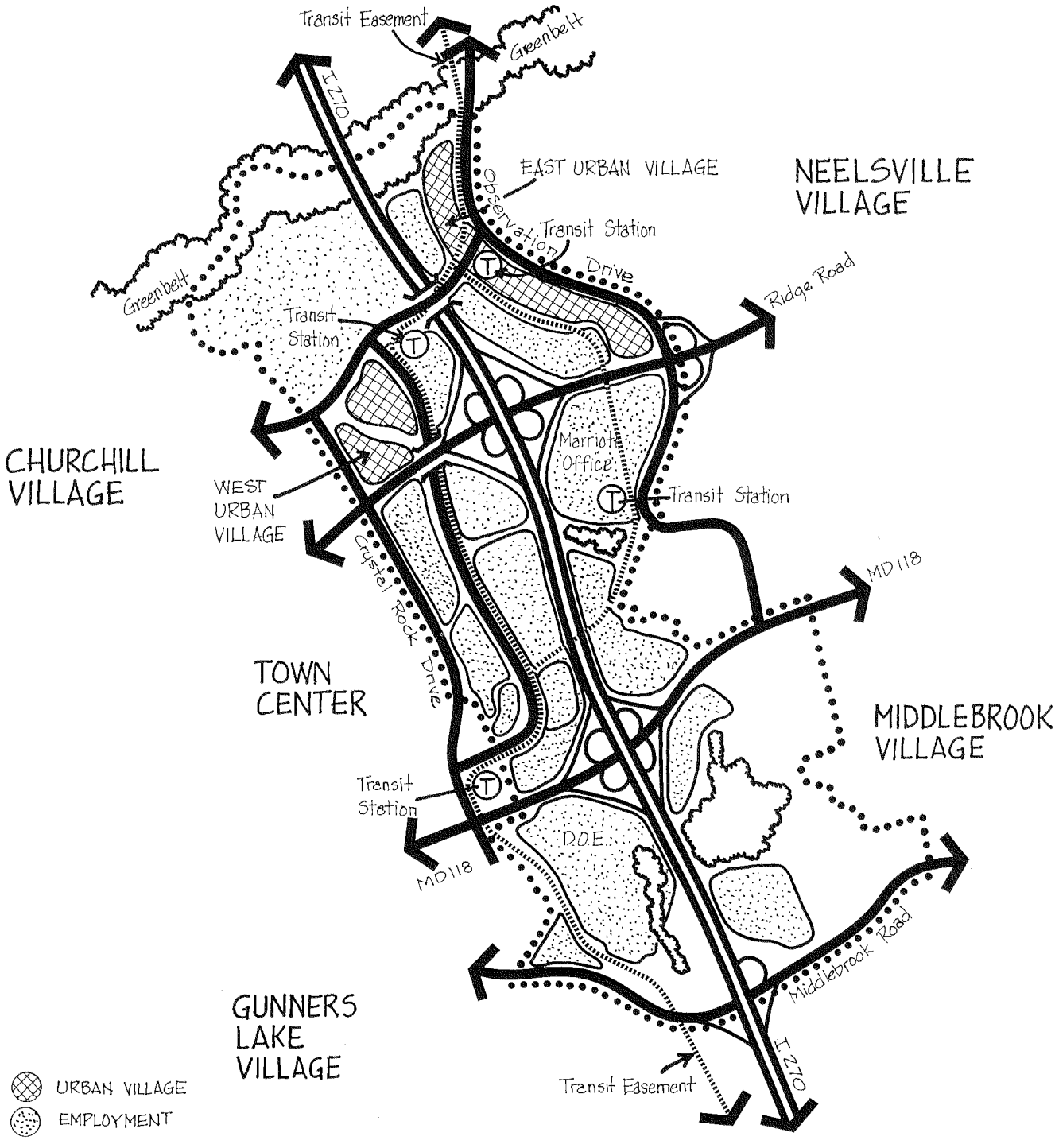
Objectives:

The Town Center should become:

- the location of a broad mix of land uses, including a cultural arts center, so as to create a focus for community activity in this large Corridor City;
- the central design element in the Germantown townscape which identifies Germantown and reinforces its community identity; and
- a major commercial area in Germantown offering a variety of shops; theaters; restaurants; multi-family housing; libraries, Upcounty Government Center and other public facilities; and public open space.

The following guidelines provide a design framework that will result in an identifiable, cohesive Town Center with a positive sense of place.

Figure 5



Employment Corridor: Concept Diagram

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

Guidelines

Functional:

- Create a pedestrian and bike path system that connects the Town Center to all forms of transit and land uses; separate vehicular and pedestrian traffic where possible.
- Design pedestrian connections to all areas with a common theme that is expressed through such features as furniture, pavement, lighting, and landscaping.

Visual:

- Create gateway landscaping and signage at major entrances to the Town Center.
- Establish a specific visual theme including lighting, landscaping, and street furnishings.
- Provide place-making elements such as sculpture, water features, clock towers, and gateways throughout the Town Center.
- Establish a place-making element at each corner of the intersection of MD 118 and Middlebrook Road.
- Require a building and parking setback of 30 feet along MD 118 through the Town Center.
- Soften all "edges" through the provision of extensive landscaping.
- Establish visual continuity along the street through elements such as low walls or rows of trees.
- Establish the visual quality of a landscaped, tree-lined boulevard along MD 118, since it functions as the Main Street of Germantown.
- Minimize the visual impact of parking areas from adjacent roadways through the use of berms, decks, fences, landscaping, and trellises.

MIXED-USE CENTER

The 58-acre Mixed-Use Center (sometimes referred to as the Town Center Core) is an essential element of the Town Center, having the broadest mix of uses in Germantown. The densities and built form in this area should be sufficiently compact and massed to create a sense of urbanity.

Objectives:

The Mixed-Use Center should convey an image of urban center and become the location for:

- a cultural arts center,
- a high density residential neighborhood, and
- a mix of land uses, including office, retail, and other commercial uses.

The Master Plan recommends that this Center be developed as a highly activated, mixed-use residential community with a cultural arts center as one of the hubs of community activity. The *1974 Master Plan* recommended that the Mixed-Use Center be developed as Germantown's downtown, with major retail activity as the focal point. A regional shopping mall is now designated for a portion of Neelsville Village. This Plan's designation of a large area in Neelsville Village as the location for a potential regional shopping mall, creates the prospect of a second regional focal point or activity center. The placement of the cultural arts center in the Mixed-Use Center is an important aspect of the essential effort to assure the viability of the Town Center as the principal community focal point.

The Mixed-Use Center would most appropriately be developed as a multi-family residential community with some office buildings, convenience retail uses, the cultural arts center, and a hotel. A concentration of multi-family residential uses is recommended given the site's proximity to the transit easement. Office development is recommended to be limited due to market and transportation constraints. A hotel could serve the Employment Corridor and would add some evening activity to the area. Convenience retail, restaurants, and services should be encouraged to locate in the lower floors of the office buildings to serve the needs of both office users and residents alike.

This area should be designed to communicate a clear, succinct image of downtown while maintaining a humane pedestrian-scaled environment.

EMPLOYMENT CORRIDOR (Figure 5)

The Germantown Master Plan has historically called for a well defined Employment Corridor. The Master Plan recommends integrated, multi-use activity centers rather than unrelated, single-use developments.

Objectives:

The Employment Corridor should provide for:

- the development of two urban villages with a mix of residential, employment, and retail services;
- a built form that reflects an urban environment and streetscape;
- pedestrian-oriented, transit-serviceable employment development;
- a broad range of retail service uses designed to serve the employees and residents; and
- a range of development densities that would provide a variety of employment opportunities and centers.

Guidelines

Functional:

Develop pedestrian systems that:

- reflect practical walking distances and tie building to building;

- are visible, unifying, and coherent, while providing an enjoyable walking experience;
- provide clear informational and directional graphics;
- provide employees with opportunities for active and passive recreation; and
- provide opportunities to improve transit serviceability.

Develop parking areas that:

- keep paving to a minimum, reduce on-site runoff, and provide on-site detention ponds as amenities;
- divide parking into small lots interspersed with natural land forms and landscape features;
- include an internal road system designed to minimize conflicts and facilitate pedestrian movement; and
- provide clear directional and informational graphics.

Visual:

- Provide landscape buffers to soften the public view of parking.
- Protect environment of stream valleys of Little Seneca Creek and its tributaries.
- Site buildings away from the edge of I-270 to create a park-like appearance.
- Give equal priority to views of structures and sites from secondary roads and from I-270.
- Minimize the use of reflective glass on buildings in those conditions in which the sun's reflection on an adjacent site may become a nuisance.
- Encourage corporate identity through entry signage.
- Design entry signage as part of streetscape planning.
- Provide clear informational and directional graphics, including gateway features.
- Use earth berms, walls, and setbacks to provide visual and noise separation, thus enhancing the utility of open space.

VILLAGE CENTERS (Figure 3)

The relationship between the Village Centers and community identity is significant. Both the *1974 Master Plan* and this 1989 Master Plan recognize that the Village Center is an essential form-giving element for each Village.

Objectives:

- Create identity and focus for the residential communities served by each Village Center.
- Create an opportunity for community interaction at the village scale.
- Provide an opportunity for retail and professional services that can be reached by walking or bicycling.

Guidelines

Functional:

- Provide a comprehensive pedestrian/bike system that links each Village Center to its supporting residential community.
- Provide "public uses" — open space, community building, senior citizen center, etc. — as an integral part of the Village Center.
- Use schools, churches and similar community-oriented facilities as transitional buffers between residential and retail uses.
- Give priority to the pedestrian in resolving potential auto/pedestrian conflicts.
- Provide for seating, open shelter, and public information as part of the village public open space.

Visual:

- Encourage integration of focal points into each Village Center.
- Limit commercial Village Center buildings to two stories while allowing architectural elements to be taller.
- Orient buildings in the Village Centers to minimize the potential for visual intrusion into residential areas.
- Minimize the use of metallic surfaces, reflective glass, and other materials foreign to a residential environment.
- Separate parking from adjacent land uses and roadways with landscaping.

VILLAGES

The village concept was incorporated in the *1974 Germantown Master Plan.* It is the primary planning unit in the village-town hierarchy of the master plan. The village is an essential element in the effort of this Master Plan to establish a positive community identity. The village is particularly important in this regard because it provides the "connective tissue" between individual subdivisions and the Germantown community as a whole.

Objectives:

Each village should:

- be distinguished by its own identity and character,
- provide a mix of housing types at varying prices and rental levels,
- have an identifiable activity area, and
- have a functional pedestrian/bikeway, sidewalk, and roadway system that facilitates inter- and intra-village circulation.

The following guidelines for each village focus on implementing the preceding objectives.

Churchill Village (Figure 6)

Much of the distinctive visual quality of Churchill Village has been established by Lake Churchill and Seneca Lake.

- Future development on the corner of Father Hurley Boulevard and Waters Landing Drive should be designed to emphasize the corner of the street, minimize the view of surface parking, and become a focal point of the vista along that portion of Father Hurley Boulevard.

Gunners Lake Village (Figure 7)

The character of Gunners Lake Village relies heavily upon the visual image of its namesake and its stream valleys.

- The widening of Middlebrook Road should be designed to include noise mitigation and reduce visual impacts on adjacent land uses.
- Parkway landscaping should be part of the design program for Great Seneca Highway from Middlebrook Road into Clopper Village.

Clopper Village (Figure 8)

- The landscaping recommended along the Great Seneca Highway in Gunners Lake Village should to be continued through Clopper Village to Seneca State Park.
- The stand of mature trees on the north side of Clopper Road and east of Great Seneca Highway should be considered and retained, if possible, when the adjacent site is developed.
- The Clopper Village Center should be designed to contribute to the concept of an entrance to Germantown and to provide distinctive building form and visual buffering of the surface parking.

Kingsview Village (Figure 9)

- Adjacent residential land uses and road improvements should provide for adequate pedestrian access to the Kingsview Village Center.
- A distinctive building form and screened parking should be priorities in the design program.

Middlebrook Village (Figure 10)

- The widening of MD 355 should be designed to include noise mitigation and reduction of visual impacts on adjacent land uses.
- There is a need for a grade-separated pedestrian crossing of MD 355 near Gunners Branch and Scenery Drive.
- The vacated right-of-way that will result from the realignment of Middlebrook Road is a potential opportunity for a "gateway" feature.

Neelsville Village (Figure 11)

- Visual integration of the proposed regional shopping mall into Neelsville Village is critical.
- The vacated right-of-way that will result from the realignment of MD 118 is a potential opportunity for special treatment to create a Germantown entry feature.

Linkages

The visual character of a community is composed of structures, natural land forms and vegetation, and roads. Roads are the location from which views and impressions of a community are created. A positive or negative perception of a community depends on the quality of the view from the road.

ROADWAY SYSTEM (Figure 12)

Objectives:

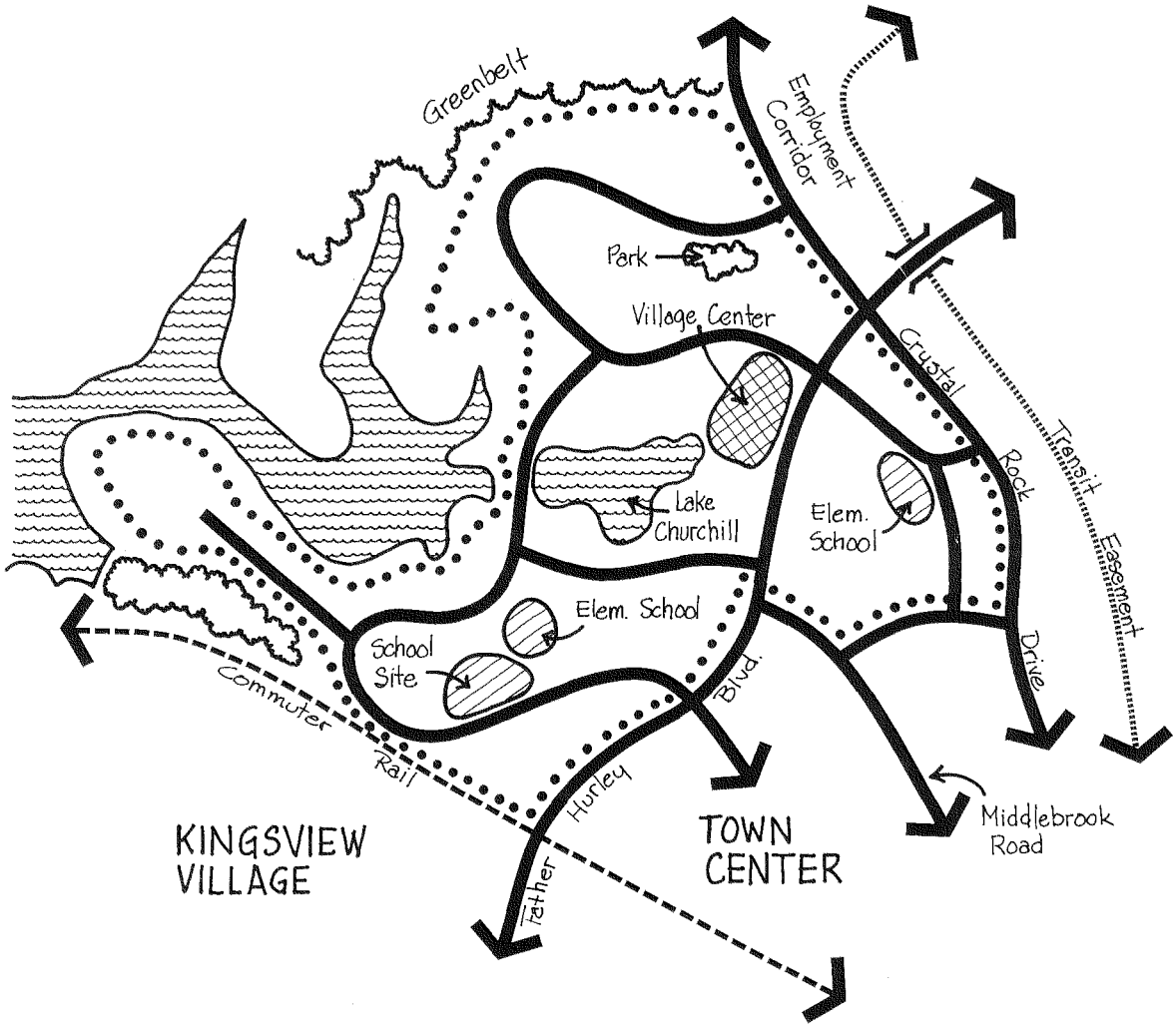
- Provide a roadway network that enhances the character of existing and new development.
- Design roadway alignments that respect the quality of the existing natural environment.
- Provide rights-of-way that are sufficiently wide to permit visual and acoustic buffers, both man-made and natural.

The major roadways of Germantown consist of a hierarchy of four road types including: limited access freeway, major highway, employment access road, and residential arterial.

The limited access freeway, I-270, has the widest right-of-way in the Planning Area and carries the greatest number of cars. I-270 links Germantown to points north (Clarksburg, Frederick County) and points south (Gaithersburg, Rockville, and the Capital Beltway — I-495). The right-of-way varies from 200 feet to 250 feet wide. Much of the right-of-way for what is now I-270 was established when the road became a Federal highway. Widening the right-of-way has been restricted in those areas where development exists, based on the earlier width. This Master Plan recommends a 300-foot-wide right-of-way in order to accommodate eight travel lanes and two two-lane collector-distributor roads as well as adequate separations and landscaping.

Eight major highways are located in Germantown, some of which are part of the historic road network, such as MD 355 (Frederick Road), MD 117 (Clopper Road), MD 27 (Father Hurley Boulevard/Ridge Road), and MD 118 (Germantown Road). Of the remaining major highways, Great Seneca and

Figure 6

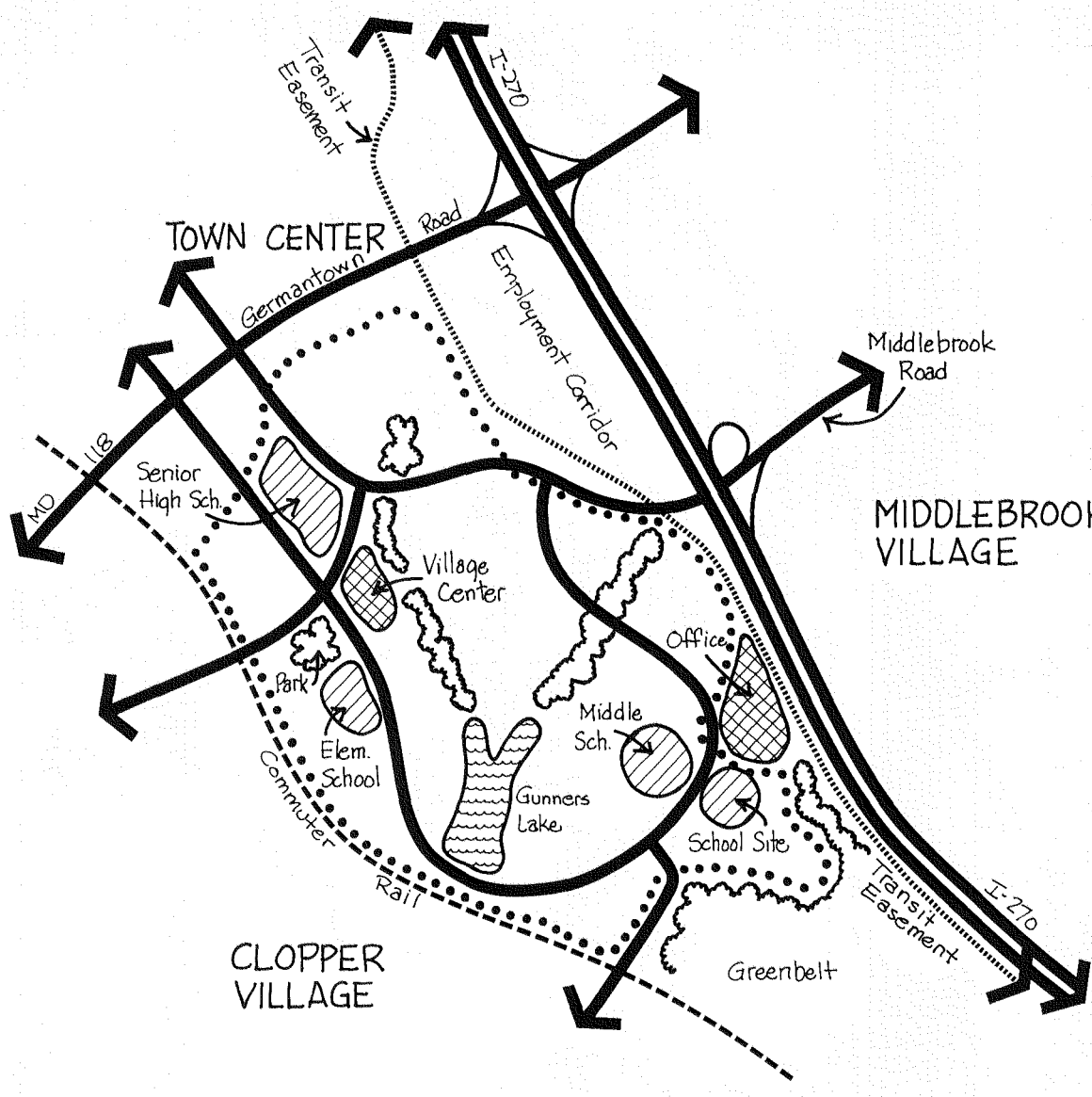


Churchill Village: Concept Diagram

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission



Gunners Lake Village: Concept Diagram

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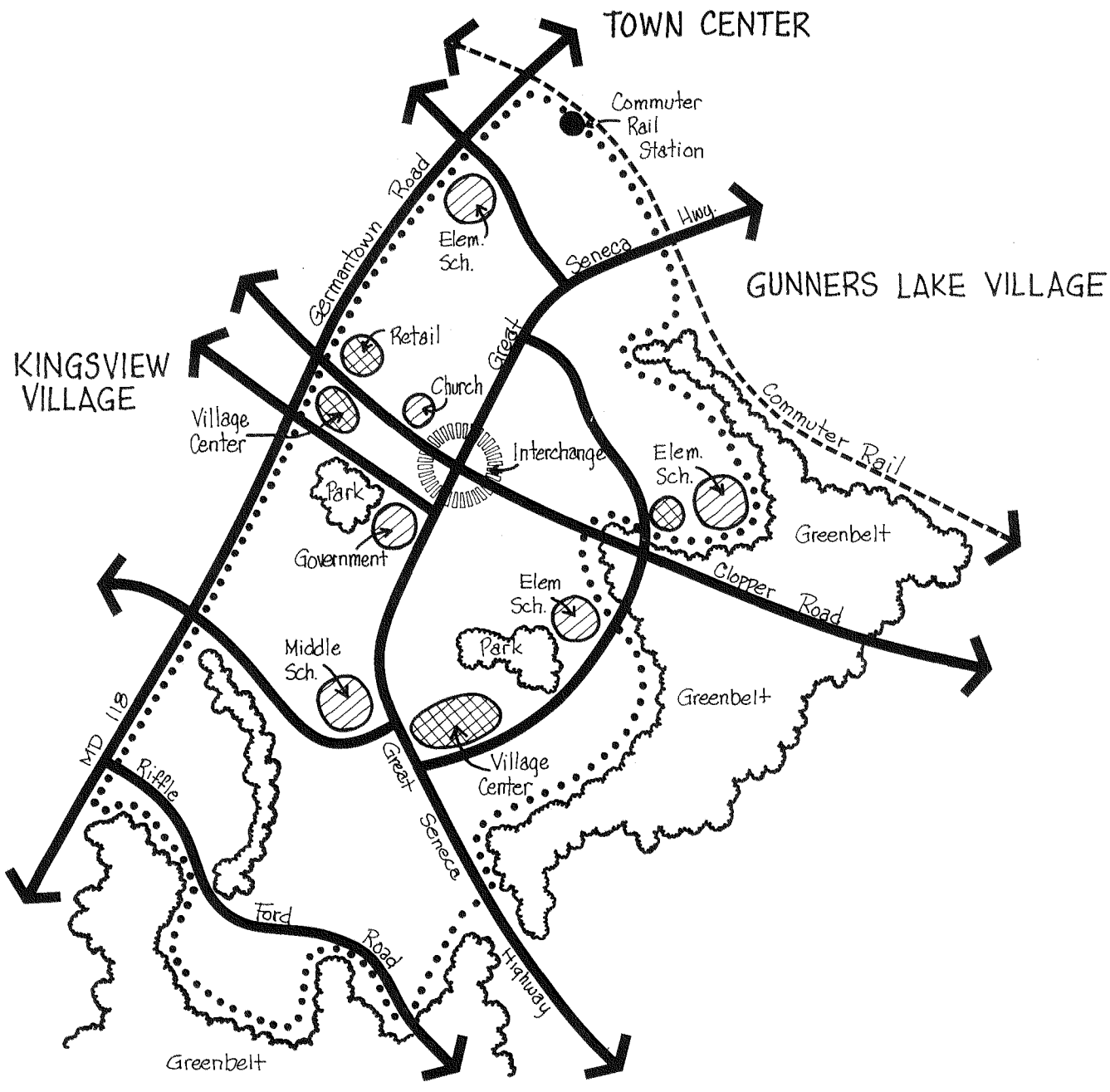
Figure 8



Clopper Village: Concept Diagram

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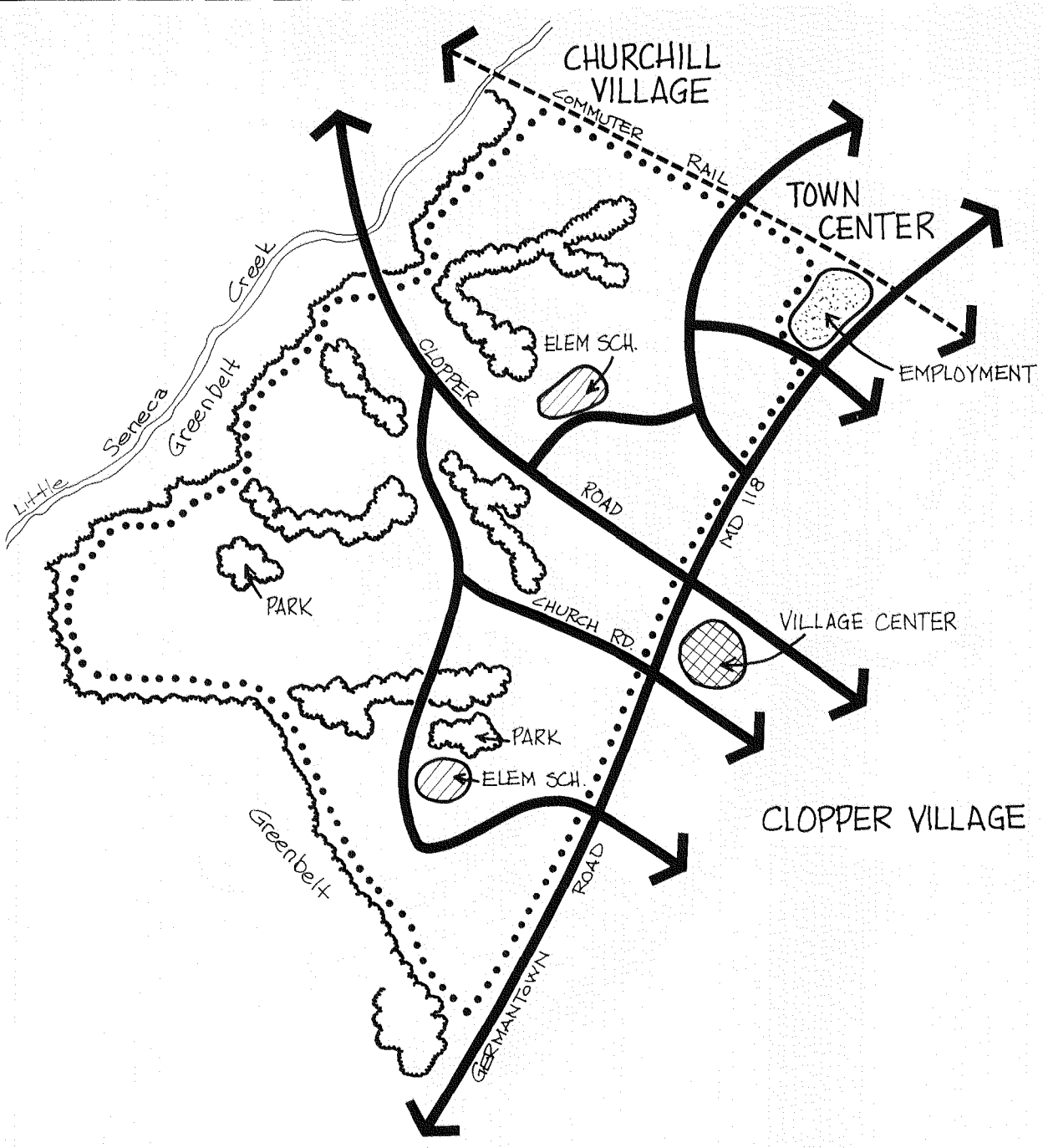

Kingsview Village: Concept Diagram

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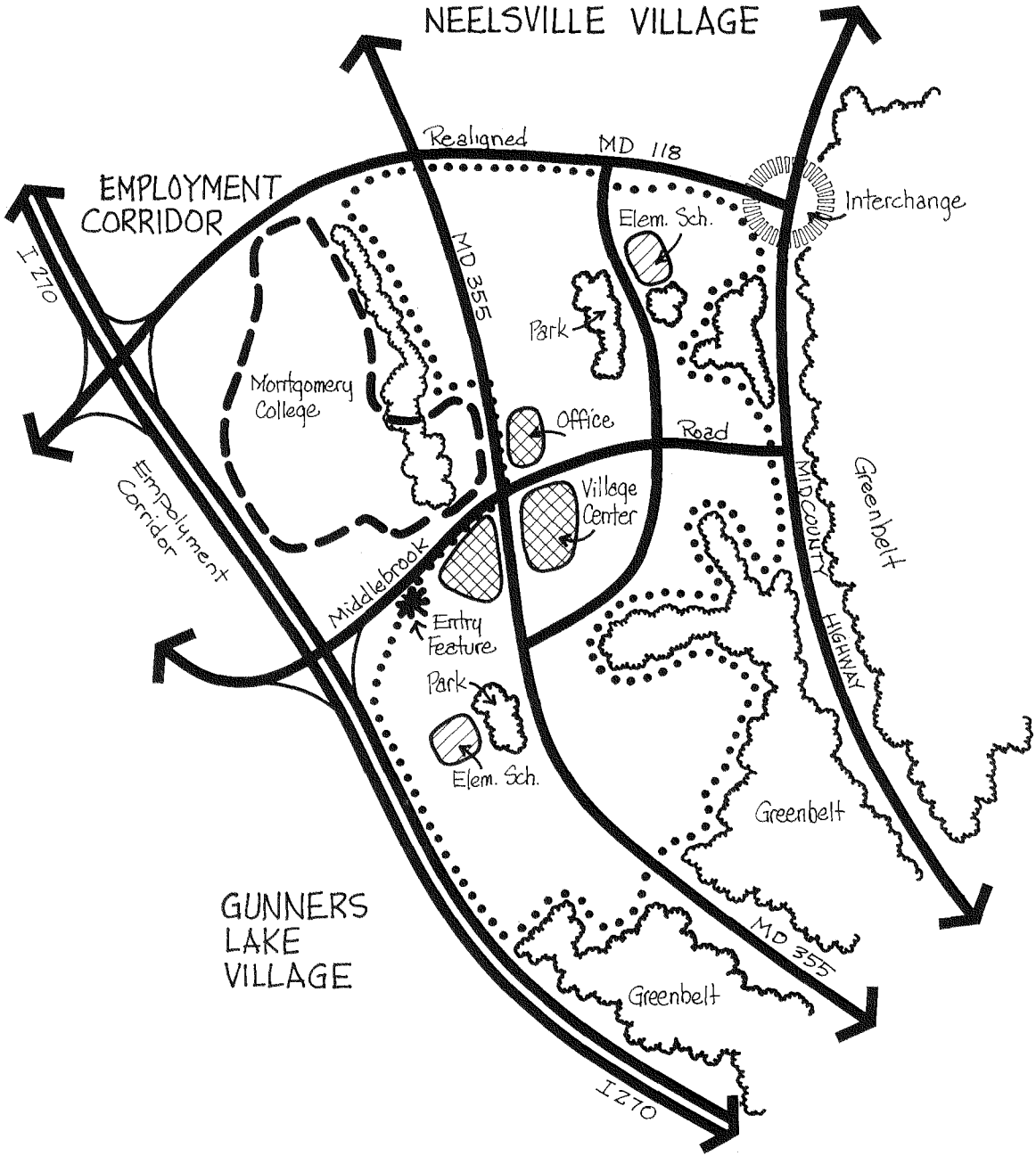
Figure 10



Middlebrook Village: Concept Diagram

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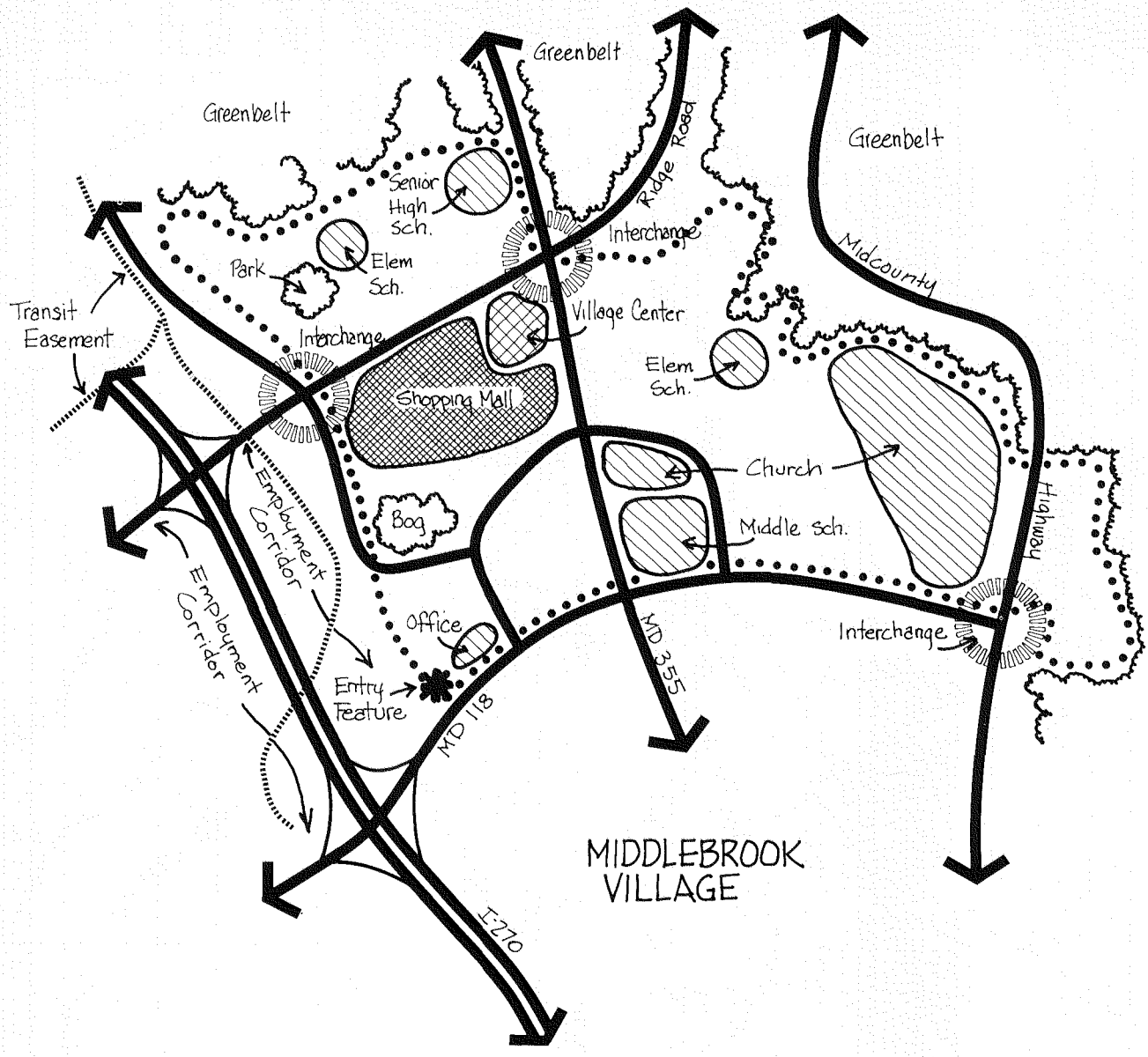

Neelsville Village: Concept Diagram

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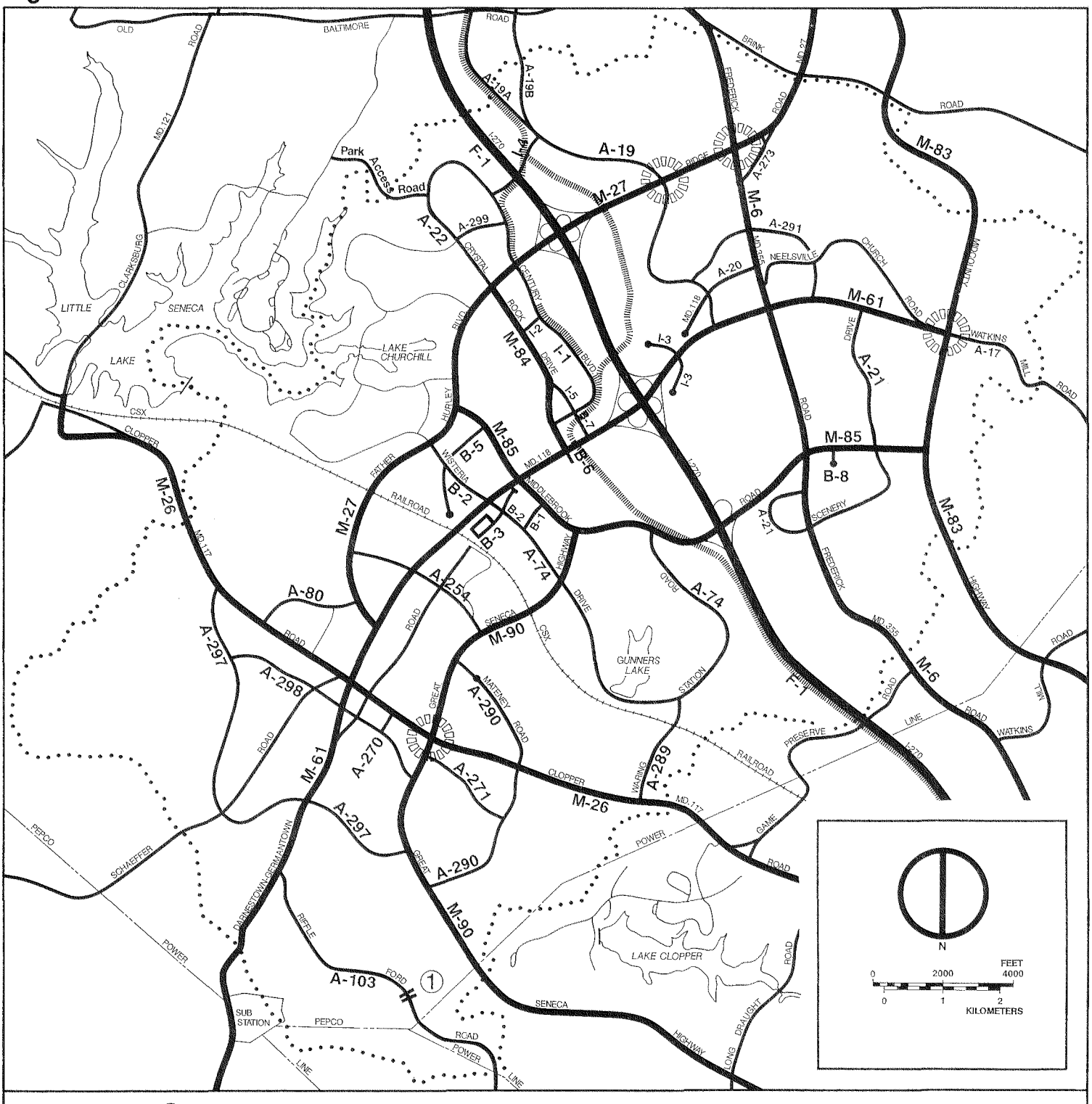
Figure 12



Roadway System

Grade-Seperated Interchange

Freeway

Major Highway

Arterial(A),Industrial(I),and Business District Roads(B)

May be closed when Great Seneca Highway is opened to traffic through Great Seneca Park (1)

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Midcounty Highways are commuter roads that link Germantown to employment areas beyond the planning area. Crystal Rock Drive, as a major highway, parallels the west side of I-270 between Father Hurley Boulevard and MD 118. The last, Middlebrook Road, links the east and west parts of Germantown separated by I-270. The new highways and realigned stretches of the older roads are planned for a 150-foot right-of-way with an ultimate design of six lanes.

The two other road types, the employment access roads and residential arterials, are local roads that convey traffic to and between the major highways. The rights-of-way vary from 80 feet to 120 feet in width depending on the presence of a median in the proposed road section and the number of proposed lanes.

Guidelines for setbacks and landscape treatment that affect roadside character are included as Appendix O in the Technical Appendix.

STREETSCAPE

To many, the visual quality of the street's edge establishes an image of the community. The kinetic experience of the street and the repetitive nature along its edge creates one of the primary elements which gives a community character and identity.

Streetscape is a term which is used to describe the street and its edges. The term normally includes signage, lighting, street trees, sidewalks, street furniture and paving. Accepting the fact that the street and pedestrian paths should function in a safe and efficient way, a streetscape plan would examine the role of each to support a humane environment as well.

A streetscape design program will be undertaken by the Urban Design Division of the Montgomery County Planning Department. While that design program is not included in this Plan, the objectives and guidelines set forth in this Plan are critical to the direction of that future work.

Objectives:

- Design a Streetscape Plan that creates a clear, positive image of Germantown, reinforcing its community identity.
- Develop a Streetscape Plan that will reduce visual clutter and provide order.
- Develop a Streetscape Plan that will increase pedestrian amenities and pedestrian safety.
- Develop a Streetscape Plan that reinforces the hierarchy of streets throughout Germantown.

Guidelines

Functional:

The Streetscape Plan should be designed:

- to be developed in stages and extended into internal public spaces by the private sector;
- to give a priority to pedestrians, with particular emphasis on handicapped access;
- to improve transit serviceability;
- to minimize the impact of street lighting on residential land uses; and
- to provide information, direction, and identity within Germantown.

Visual:

The Streetscape Plan should recognize the need to:

- place all utility lines below grade on all major roads;
- increase the amount of vegetation in general, and trees in particular, along the edges of streets;
- increase the visual interest of public places while providing visual continuity along the streets' edges; and
- create a clear statement and cohesive image of the character of Germantown through materials, street furniture, and lighting.

PEDESTRIAN/BICYCLE SYSTEM

This Master Plan underscores the importance of a pedestrian/bikeway circulation system. Pedestrian systems are considered to be crucial to the success of the village centers. Improving transit serviceability is contingent upon the development of visible, direct pedestrian pathways.

Objectives:

- Develop a comprehensive network of pathways, linking housing to recreational, retail and community facilities.
- Develop a pedestrian system that supports transit services.
- Develop a bikeway network along major roadways connecting activity areas.

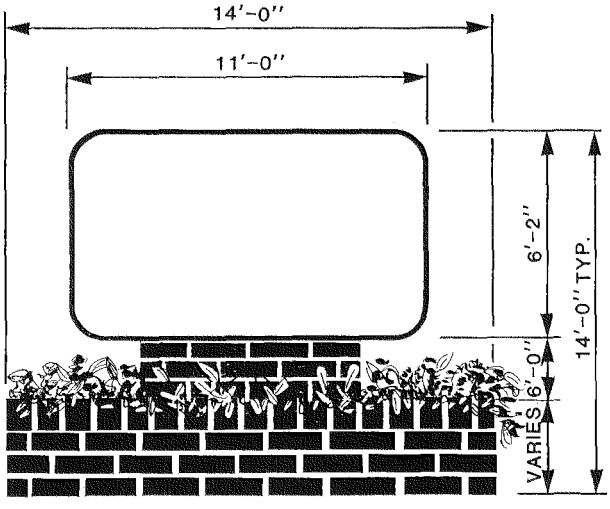
Guidelines:

- Construct sidewalks on at least one side of all closed section roadways.
- Construct incomplete segments of the existing system where connections are missing.

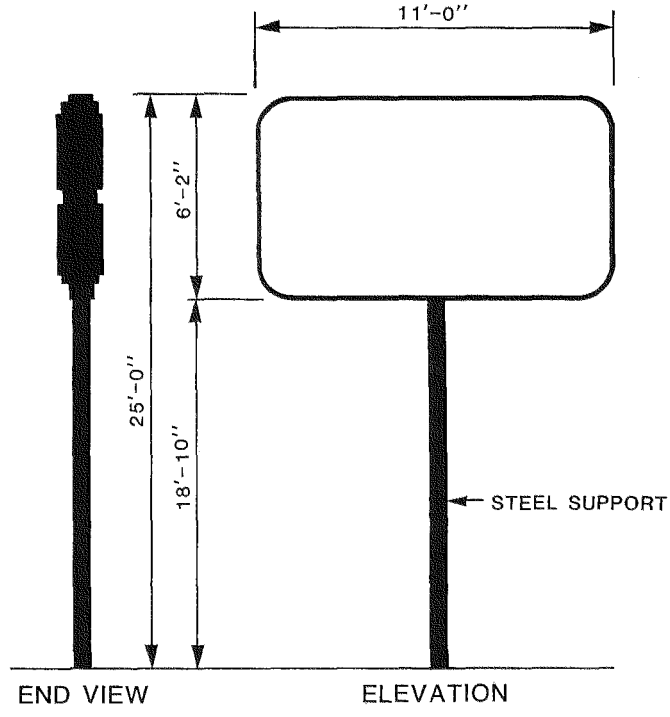
Signage (Figure 13)

Signs are controlled by Section 59-F-1 of the Zoning Ordinance, which regulates the size, location, height, and construction of all signs placed for public observance. The intent of the ordinance is that the display of signs be appropriate to the land, building, or use on which they are located, compatible with the character of existing architecture and the fabric of development. The signs are not to compete with more

Figure 13



MONUMENT SIGN
6'-2" x 11'-0" WITH BRICK BASE



PYLON SIGN

Signage

essential signs, create public confusion, or increase the potential for traffic accidents.

Large signs, including outdoor advertising structures or billboards advertising products or businesses not related to the site or buildings on which they are located, are not permitted.

To improve the quality, appearance, and consistency of Germantown's Main Street (MD 118), in the Town Center area, a strict signage policy is appropriate. Signs along this portion of MD 118 should be limited to a maximum size of 66 square feet and a maximum height of 14 feet. These signs, furthermore, are to be monument design rather than pylon design. The use of earth berms to increase the allowable height of signs should not be permitted. These restrictions shall be implemented through the site plan review process.

Land Use and Zoning

This chapter provides an explicit expression of the goals and objectives of this Plan, describes the Plan's land use and zoning recommendations, and defines an appropriate implementation strategy. These recommendations support the Corridor City designation of Germantown as expressed in the General Plan.

Approximately 25 percent of the land in the Germantown Planning Area either has been developed or has received development approvals. The remaining areas offer significant opportunities to influence the physical growth and future development of Germantown through the master plan process. Land use and zoning recommendations for these remaining areas are presented later in this chapter by Analysis Area for the Town Center, Employment Corridor, and each of the six Villages and the Village Centers. (See Figure 3.)

This Plan confirms the land use and zoning recommendations of the 1974 *Master Plan* for the land not included in the individual Analysis Areas.

Objectives

Further refinement of the Germantown new community planning effort is based on the following objectives:

- Focus higher residential densities near the Town Center and Village Centers and in the Employment Corridor and major roads where accessibility is greater, and lower densities along the edges of the planning area;
- Encourage a better housing mix with an increase of single-family detached units with retail, commercial, recreational, and employment opportunities in easily accessible locations;
- Preserve environmental features, including mature vegetation, stream valleys, steep slopes, and floodplains and other wetlands, through the appropriate location of land uses and the establishment of conservation areas and easements and through stringent design guidelines;
- Develop an identifiable Germantown townscape to facilitate a sense of community identity;
- Focus retail, recreation, and cultural development in the Town Center and in the Village Centers;
- Establish the location of a potential regional shopping mall; and
- Encourage pedestrian access to shops, schools, recreation facilities, and employment areas.

In summary, Germantown is planned to produce a strong, viable economic base and to offer a wide range of housing and employment opportunities for a diverse population in an aesthetic environment, providing a complete range of facilities, services, and amenities.

Germantown – a New Community

Germantown now has reached a turning point in its growth and development. The intent of this Plan is to sustain the 1974 "new community" initiative by proposing a series of recommendations that form an effective partnership of private and public interests along with old and new ideas.

This Plan is a guide to the public and private sectors. It sets forth policies and recommendations, but it is not automatically self-fulfilling. The recommendations must be undertaken and carried forward by the combined efforts of the public and private sectors.

In order to maximize the potential for both the developed and yet to be developed areas, the following actions are necessary: a) modify the Germantown housing mix; b) create a well defined Townscape; and

TABLE 1
MIX OF HOUSING TYPES IN GERMANTOWN

Mix of Housing Types	TOTAL	SFD	SFA	MF
Existing + Approved Dwelling Units (January 1, 1987)	19,199 18%	3,545 51%	9,843 30%	5,811
1974 Master Plan + Existing + Approved (Dwelling Units)	32,011 18%	5,775 54%	17,183 28%	9,053
1989 Master Plan + Existing + Approved Dwelling Units	36,783 29%	10,735 31%	11,258 40%	14,790
Change from Existing Plus Approved	17,584	7,190	1,415	8,979
Change from 1974 Plan	4,772	4,960	(5,925)	5,737

SFD: Single-Family Detached.
SFA: Single-Family Attached.
MF: Multi-Family.

(Percentages may not total to 100% due to rounding.)

Source: Community Planning North Division, Montgomery County Planning Department.

c) establish specific development guidelines for individual areas. Each of these actions is discussed below.

MODIFY THE MIX OF HOUSING

The majority of residential construction in Germantown has been of single-family attached units or townhouses.[2] The result is less diversity of housing type than intended in the 1974 *Master Plan;* and a very monotonous, generally undifferentiated townscape.

This Plan recommends policy changes to assure a broader mix of housing choices in Germantown. Without these changes, too many properties would be developed with 40 percent or more attached units. This would result in fewer than 20 percent single-family detached units in the end-state housing supply. (See Table 1.)

The predominance of single-family attached units is the result of the following combination of factors:

- The low- to moderate-density Euclidean zones allow an increase of 20 percent in density for providing moderately priced dwelling units and permit at least 40 percent of the units to be attached units. Because of the amount of environmentally sensitive land, which reduces buildable area, and the strong market for attached units, a high percentage of attached units were constructed during the first decade of Germantown's rapid growth.
- The 1974 *Master Plan* recommended several parcels for development in the R-T (Residential Townhouse) Zones or for single-family, attached residential in the Development Plans of Town Sector and Planned Development Zones. These parcels have, with one exception, been developed entirely with single-family attached units.
- During the later 1970's and early 1980's, a significant number of new households were formed by the baby boomers who needed starter housing.
- Germantown is located on the edge of suburban development where lower priced units are normally developed; these units have predominantly been single-family attached units.
- The high mortgage interest rates during the late 1970's reduced the buying power of new families, which increased the demand for lower priced homes. This further strengthened the market demand for single-family attached units.
- The low profitability of multi-family residential units compared with the high

2 Between 1974 and 1985, over 8,000 dwelling units were constructed; approximately 1,100 of these are single-family detached, 4,100 are single-family attached, and 2,800 are garden apartments. (See Table 1.)

profitability of single-family attached units encouraged some land, intended for multi-family residential, to be developed with single-family attached units.

In order to achieve a more desirable mix of housing types and lot sizes, this Plan recommends:

- reducing the recommended residential land use densities on selected properties,
- reducing the housing unit yield from the existing zoning on selected properties, and
- utilizing the recent amendment to the Subdivision Regulations, which requires that subdivisions conform to master plan guidance. This Master Plan recommends a lower percentage of single-family attached units in most locations.

CREATE A WELL DEFINED TOWNSCAPE

Given the importance of this objective, a Townscape Design chapter has been included in this Plan. This Master Plan recommends that a Town Center Design and Development Study be undertaken which focuses on creating a vital "downtown" for Germantown. In addition, a Streetscape Plan is recommended to be developed that creates a clear, positive image of Germantown, reinforcing its community identity. The Streetscape Plan focuses on the visual quality of Germantown's streets and their edges.

ESTABLISH SPECIFIC DEVELOPMENT GUIDELINES

In order to better define and interrelate the various elements of the Germantown community, development guidelines have been established. The guidelines in the Townscape Design Chapter are applicable to all relevant development. Specific development guidelines have been proposed for 58 Analysis Areas. (See Figure 15.) These specific development guidelines should be applied to all new development in the relevant Analysis Area.

Major Community Elements

The 1974 "new community" concept provides the framework for specific land use and zoning recommendations — the Town Center, Employment Corridor and six Villages (including their Village Centers). Each of these areas is separate and identifiable; each plays a vital role in terms of new community development and identity. A description of development objectives for each area follows.

TOWN CENTER (Figure 4)

The Town Center is recommended to be a lively and diverse place that encourages people to come and to "stay awhile" and enjoy its amenities. In addition, the Germantown Town Center District provides:

- one of the community's two major market centers and offers a variety of shops, cultural facilities, restaurants, offices, public facilities, and public open spaces;
- a focal point for community services as well as informal community activities;
- a strong community focus by concentrating higher density residential development, which, in turn, provides a population base to support facilities in the Town Center;
- ease of access to users through the roadway network and a comprehensive path and sidewalk system from within the area and from outside; and
- a positive relationship between existing development and new development.

Existing development in the Town Center does not yet create a pleasing, coherent image; it is highly fragmented. Throughout the Town Center are scattered a wide variety of uses: a police and fire station, a four-story office building, a church, scattered commercial buildings, and two large convenience retail shopping centers — Sugarloaf Centre and Germantown Commons.

Proposed Town Center Design and Development Study

To date, only 110 acres of the Town Center are committed to development. Enough uncommitted land remains to create a vital Town Center in terms of function and form. In order to ensure that these remaining lands are developed in a more coherent manner and to ensure that public expenditure in the Town Center is effectively directed, a major urban design and development study will be undertaken by the Montgomery County Planning Department in coordination with the community and County Executive staff.

The Town Center Design and Development Study is a critical community identity element that focuses attention on Germantown's downtown. This Study will provide a detailed urban design and development plan for shopping, residential, employment, cultural, governmental, and open space uses with special emphasis on an integrated pathway system and the street environment in downtown Germantown.

Important elements that also will be explored in the Study include identification of: a) alternative methods to obtain and allocate additional traffic capacity in the Town Center, b) a strategy to attract businesses to the Town Center and promote Town Center activities, and c) alternative methods to involve the business community in the capital/operating aspects of a cultural arts center. Public investment needed to implement

master plan recommendations and the findings of this Study will be an important element as well.

Recommendations regarding the Town Center focus on four key areas: (a) the mixed use center; (b) the retail and services park; (c) the historic area; and (d) the transit station area.

Mixed-Use Center

This area offers a significant opportunity to create an identifiable and distinctive "activity center area" in the Town Center. The 58-acre area is strategically located on the north side of MD 118 between Crystal Rock Drive and Middlebrook Road. A report prepared for the Council by the Legg Mason Realty Group identified this area as the "core" of the Town Center. Specific development guidelines have been established that encourage a diversity of uses designed to fully activate the area both day and night. The guidelines are included in the discussion of individual Analysis Areas.

As the major activity center, a sufficient infusion of cultural, retail, residential, and community uses is needed in order to avoid becoming predominantly an office center. A cultural arts center (or a similar public amenity) is an essential component to establish the Town Center as the principal focal point of the community. The retail component should provide specialty shops, restaurants, indoor recreation (such as health clubs), and entertainment, which will extend activity in the Mixed-Use Center beyond office hours on weekdays and on weekends.

The 1974 *Master Plan* recommended that Germantown's major retail center be located within what is now called the Mixed-Use Center. This recommendation recognized the significance of comparison shopping as an activating use that would enhance this area as a major community focal point.

This Plan continues the Corridor City concept of a Town Center that is the principal community activity center. Market considerations, however, have led to the designation of Neelsville Village as the preferred location of a regional mall that the 1974 *Master Plan* had recommended be located in this area. This shift to a second focal point creates the need to activate the Town Center in a different way. Great care must be taken to avoid allowing the regional mall to reduce the significance of the Mixed-Use Center and remainder of the Town Center as a community focal point. During the County Council's consideration of this Master Plan, it hired a consultant (the Legg Mason Realty Group) to determine whether a Regional Mall in Neelsville Village would have a detrimental effect on the Town Center. The Council reaffirmed the Plan's goal to have the Town Center serve as the focal point of community activity. Legg Mason's report to the Council concluded that the Regional Mall would not significantly effect the development of the Town Center and that limiting certain potentially competing activities (e.g., entertainment and restaurant uses) in the Regional Mall could increase the potential for a successful Town Center. Limitations on certain uses within the regional mall are discussed later in the Plan.

The Executive Summary of the Legg Mason report is attached as Appendix N.

An important element in the original proposal for the new mall was inclusion of a cultural arts center. Locating this adjacent to the mall would almost certainly undermine the vitality of the Town Center. The Plan strongly recommends that the cultural arts center be located within the Mixed-Use Center and endorses development of a new Residential-Mixed Use Zone with a requirement that such amenities be provided where recommended by the master plan. (See Implementation chapter.) Locating the cultural arts center in the Mixed-Use Center will strengthen the Town Center as Germantown's primary community activity center.

Retail and Service Park

This Plan recommends the development of a 76-acre area in the western portion of the Town Center as a comparison shopping center designed to meet the specialized needs of the entire Germantown community. The proposed center is designed to contain a well-planned shopping experience that provides a broad, if not unique, variety of uses such as general merchandise stores, department stores providing discount and moderately priced merchandise, small retail shops, hardware and building material stores, indoor recreation (such as bowling or roller skating), a grouping of fast food and family restaurants, and automotive and business services.

The recommendation for this unique type of shopping center stems from the following events:

- Since the preparation of the 1974 *Master Plan*, department stores providing discount and moderately priced merchandise have evolved nationally as a major component of the comparison retail market; this area is a suitable location for such stores.
- Since the preparation of the 1974 *Master Plan*, the Rouse Company, in Columbia, Maryland, developed a highly successful shopping and service complex similar to this proposal.
- A market study, prepared by the Montgomery County Planning Department's Research Division, indicates a potential market for a total of between 660,000 and 1,000,000 square feet of comparison shopping in Germantown; this Plan recommends that up to 400,000 square feet be developed at this location.
- Many of the proposed uses are inappropriate for locations in the Village Centers or scattered along Germantown's roadways because of building scale, traffic implications, and, often,

the nature of the operation. The clustering of these uses in one well-designed area, with excellent accessibility, provides yet another opportunity to define a sense of "place."

This area is suitable for development in the proposed Residential-Mixed Use (R-MX) Zone. Specific development guidelines have been established and are included in the discussion of individual Analysis Areas later in this chapter.

Town Center Historic Area

Another element vital to Town Center development is the Town Center Historic Area. The Town Center Historic Area includes two historic resources: the Madeline V. Waters House (#19/13-1) and the Pumphrey/Mateney House (#19/13-5). This area is recommended to provide a passive and pastoral environment within an intensively developed Town Center, which can coexist and, in fact, flourish.

Adaptive reuse may be appropriate for the historic resources and the other existing structures in the Historic Area, perhaps as craft and antique shops or even a restaurant. Since this area is suitable for development with medium office intensity uses in the O-M Zone, appropriate development guidelines have been developed that foster the positive integration of old and new.

Transit Station Area

Analysis Area TC-2 is proposed to be the site of the transit station serving the Town Center. The station and this site will become important visual and functional elements in the overall make-up of the Town Center. This site should be carefully designed as a joint development of office, transit and high density housing to act as a major gateway to Germantown and its downtown.

EMPLOYMENT CORRIDOR (Figure 5)

Germantown's Employment Corridor is concentrated in a 1,100 acre area located along both the east and the west sides of I-270. The amount of uncommitted land, 840 acres, is strategically located, given its proximity to I-270 and the proposed Corridor Cities Transit Easement. The character of existing employment development and ownership patterns provides a high quality environment for corporate headquarters, research and development firms, and high-density residential development. The Employment Corridor offers an opportunity to create two identifiable and distinctive Urban Villages. These Villages would be nodes of high-density residential development in proximity to employment uses and proposed transit service. The Urban Village concept can transform the Employment Corridor from a single dimension workplace to one which includes "Village Activity Areas."

In addition to the Urban Village development, a mix of employment uses that responds to the anticipated economic development potential is reflected in the Employment Corridor. A demand exists for small scale, low-density research and development uses as well as higher-density, high technology industrial activities and corporate headquarters. This mix of employment uses can be accommodated in a range of 0.25 to 0.5 FAR. The new R&D Zone was designed to accommodate small scale, low-density research and development uses, while the amended I-3 Zone provides for higher-density industrial activities, which is more likely to be appropriate where transit is available.

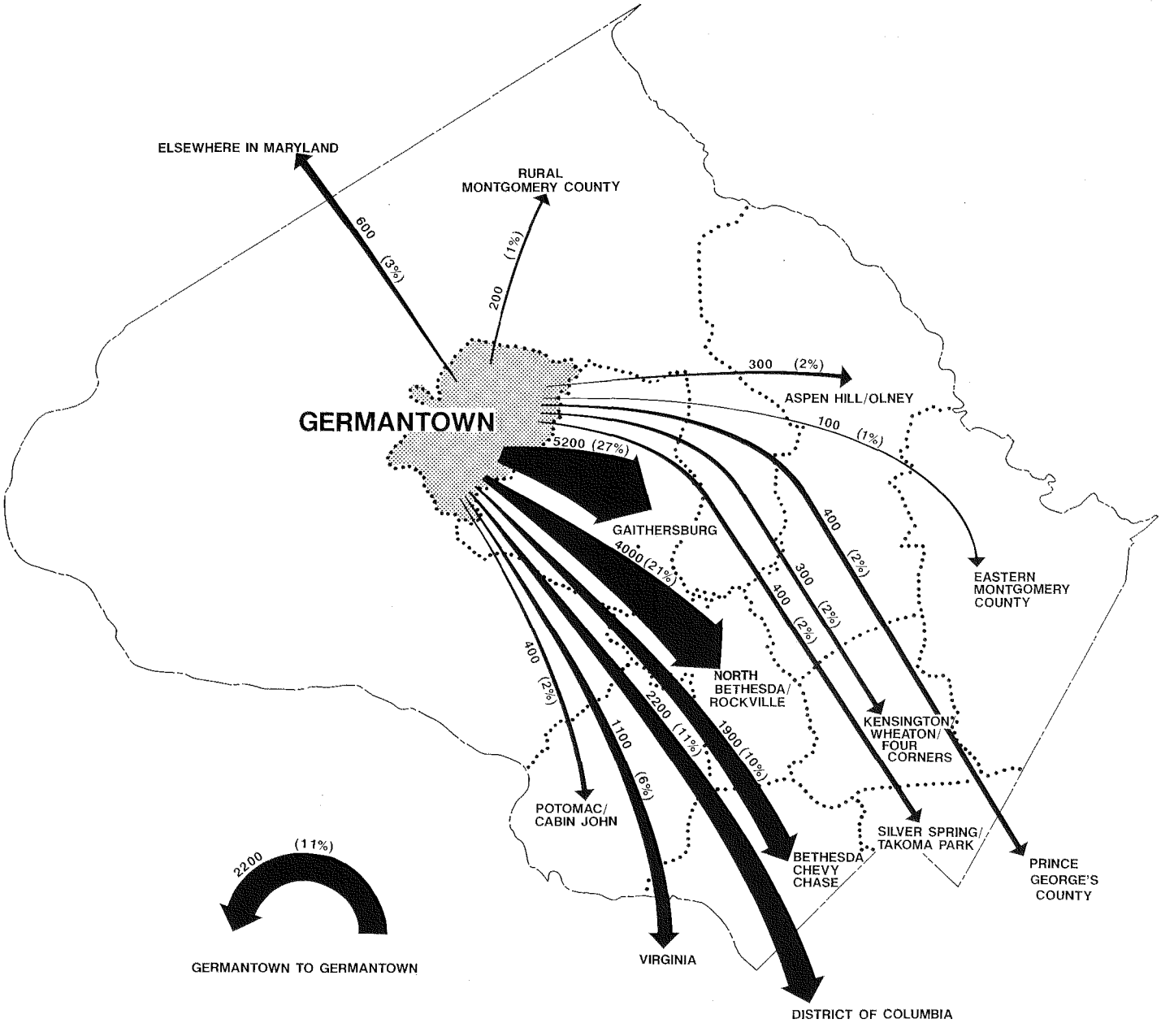
Although it is anticipated that the ultimate development of the Employment Corridor will take many years to complete, perhaps as many as 25 to 30, current market dynamics are creating increasing pressure for near-term development.

The issues addressed by this Master Plan include the form this growth should take, the relationship between existing and future development, and the relationship of new development to public services. The following are the objectives of Employment Corridor development:

- Continue the 1974 *Master Plan* designation of the Employment Corridor as a major employment resource in the County.
- Identify locations within the Employment Corridor for the establishment of Urban Villages with multi-family residences and limited convenience retail and service facilities.
- Maintain the character of existing neighborhoods surrounding the Employment Corridor by providing compatible uses adjacent to them.
- Increase transit serviceability by locating office buildings close to transit routes.
- Provide, as much as possible, the opportunity for people to both live and work in the same community, thereby creating more efficient use of transportation systems, and public facilities and amenities, and reducing the amount of work trip miles.
- Encourage some retail shopping and service opportunities for employees at or near their place of employment.
- Encourage provision of diverse employment opportunities in recognition of Germantown's role as a Corridor City.
- Provide for greater density of development in areas close to the proposed transit stations.

An important Employment Corridor objective focuses on the desirability for people to both live and work in the same community. Although the 1974 *Master Plan* suggested that a minimum of 25 percent of the resident work force should work in Germantown, this

Figure 14



Work Locations of Germantown's Employed Residents

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

SOURCE:1987 Census Update Survey
Montgomery County Planning Department

TABLE 2
END-STATE RELATIONSHIP OF EMPLOYMENT OPPORTUNITIES TO EMPLOYED RESIDENTS

Projected number of employed residents at end-state.

	Average Number of Number of Households at End-State	Calculated Employees Per Households*	Resident Workforce
Single-Family Detached	10,735	1.82	19,538
Single-Family Attached	11,258	1.61	18,125
Multi-Family	14,790	1.34	19,819
TOTAL	36,783		57,482

Projected number of employment opportunities.

Office	68,000
Retail, Industrial and Other	10,000
TOTAL	78,000

Ratio of projected employment opportunities to employed residents.

78,000 ÷ 57,482 = 1.36

Ratio of projected jobs to households.

78,000 ÷ 36,783 = 2.12

* *1987 Census Update Survey, MCPB.*

Source: Montgomery County Government, Office of Planning Policies, December, 1988.

Plan recognizes that there is no mechanism to assure meeting this objective. The provision of a strong employment base will help fulfill its realization.

In 1987, only ten percent of the resident work force was employed in Germantown. This was due, in part, to rapid residential growth and the slower pace of employment development in Germantown, combined with a rapid growth of employment in the Rockville and Gaithersburg areas. Table 2 indicates, however, that the projected employment opportunities are expected to exceed the projected number of people in the resident work force at whatever date this Plan is built out, assuming that the average number of employees per household does not significantly increase between now and then. Thus, this Plan provides an adequate amount of employment development.

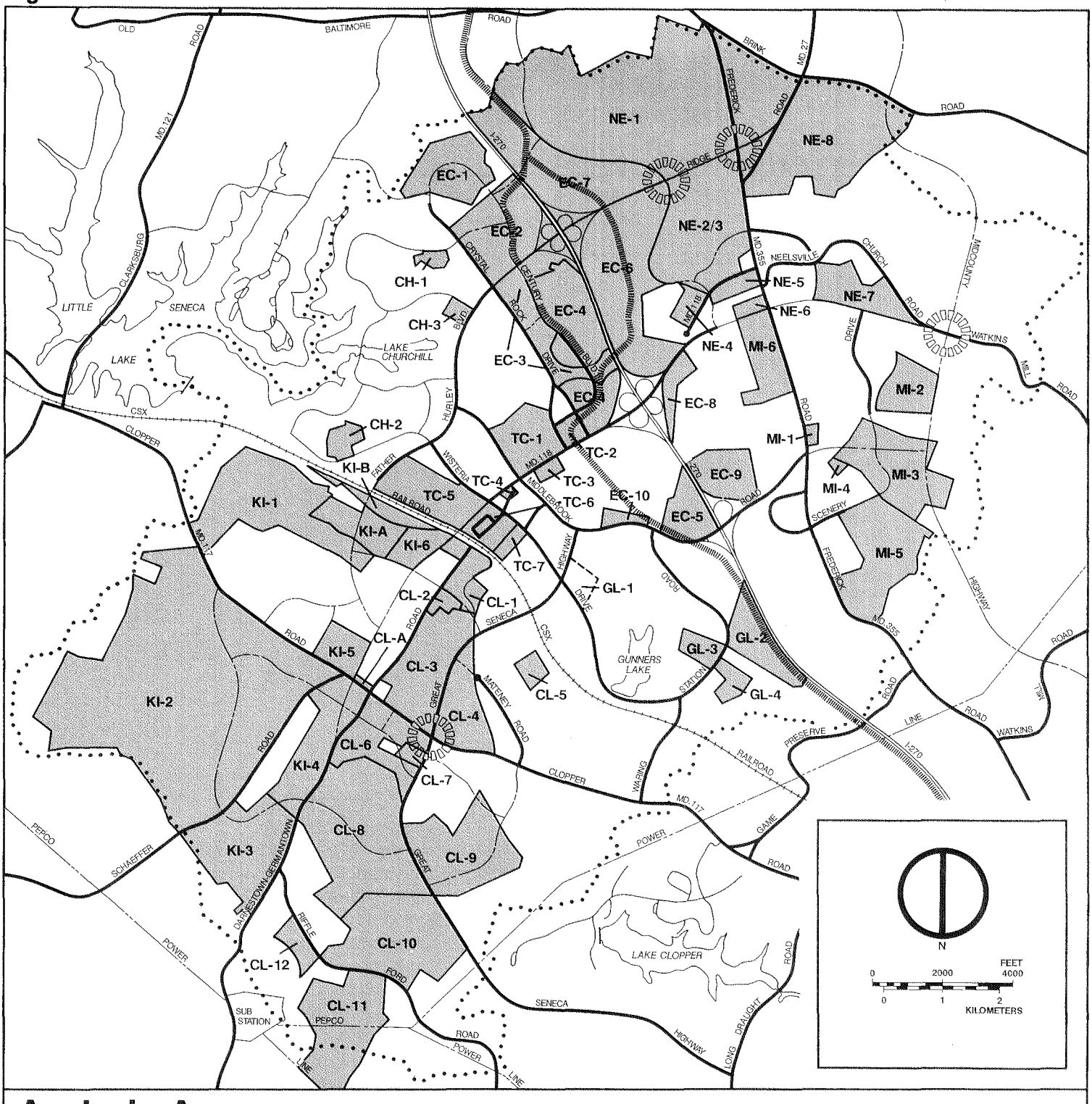
Figure 14 illustrates the distribution of commuters from Germantown to their jobs, based on the 1987 Census Update Survey. As can be seen, a dominant residence-work pattern is emerging based primarily on trips within the County, particularly along the I-270 Corridor. Germantown's residents are beginning to follow a County-wide trend in seeking employment close to home. Where housing and ample job opportunities occur near each other, a high coincidence of residence and work place results. The more people who live and work in Germantown, the fewer miles will have to be traveled in the peak hours. People will also have more time and energy to spend with their families and friends, as well as for leisure and civic activities. Table 2 indicates that the end-state development of Germantown will provide approximately 1.3 jobs for each employed resident and over 2.1 jobs per household.

VILLAGES AND VILLAGE CENTERS

The 1974 *Master Plan* recognized that the design of a "new community" offers a major opportunity to create a living environment that enhances the quality of life. Community identity was recognized as a significant factor in creating a meaningful living environment.

When the Village Concept was introduced in 1974, it was intended to provide a sense of community identity. In addition, the concept provides opportunities for citizen activity on a human scale.

Figure 15



Analysis Areas

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

Each of the six villages — Churchill, Gunners Lake, Clopper, Kingsview, Middlebrook, and Neelsville — was intended to serve a population of 14,000 - 21,000. Included within each of the villages is a Village Center. Village Centers serve as the local activity area by providing a combination of retail, public, religious, service, recreation, and community uses at locations convenient to village residents.

To date, however, a strong sense of community identity has not evolved for each village. Two villages are now nearing completion, Churchill and Gunners Lake. They have evolved as a series of individual and fragmented subdivisions, lacking any sense of "place" This lack of Village and Village Center identity is the result of two factors:

- Germantown developers have marketed their subdivisions in a fragmented fashion; they have not joined together to promote village identity.
- There are few landmarks that differentiate village from village or even identify a village.

As Germantown continues to grow close to an ultimate population of approximately 92,000 people, the Village Concept will become increasingly important. Development of Villages, Village Centers, and pedestrian/bikeway systems, as in Montgomery Village, Columbia, and Reston, can promote a positive sense of community identity that provides the basis for physical, social, and political well-being.

Some issues of the Villages and Village Centers have been considered in the Townscape Design chapter and Appendix O. These issues include land use relationships as well as functional and visual design concerns.

In terms of Village Center development, two retail centers that should have located in Churchill and Gunners Lake are located in the Town Center. The Middlebrook Village Center is now completed. The proposed Gunners Lake Village Center has received site plan approval for 115,000 square feet of retail space. Appendix B describes the retail trends that affect the location and size of village retail centers in Germantown.

Land Use and Zoning Recommendations

For planning purposes, most of the undeveloped portion of the Germantown Planning Area has been divided into site specific Analysis Areas. (See Figure 15.) The Analysis Areas are grouped into three broad categories — Town Center, Employment Corridor, and Villages (including their Village Centers). This section provides a brief description and planning rationale for each of the three categories, then provides land-use, zoning, and development guidelines for each of the Analysis Areas. Some issues have been considered in the Townscape Design chapter. These issues include land use relationships as well as functional and visual design concerns.

The Analysis Areas are presented starting with the Town Center (TC) and the Employment Corridor (EC) followed by the six villages: Churchill (CH), Gunners Lake (GL), Clopper (CL), Kingsview (KI), Middlebrook (MI), and Neelsville (NE).

Town Center (Figure 16 and Table 3)

TOWN CENTER OVERVIEW

The development of a cohesive Town Center with a strong sense of place can be provided by linking retail and office activity centers to residential and open space uses through an integrated pedestrian, bikeway, and automobile circulation system.

Because of the importance of the Town Center to the Germantown community, development in accordance with zones which require site plan review is strongly recommended. Floating zones require the property owner to submit to the Planning Board a detailed site plan showing how the property will develop. Such a procedure allows the issue of compatibility with adjoining development to be fully addressed through the site plan review process. Such mechanisms will significantly enhance the achievement of the guidelines recommended for the Town Center District and its Analysis Areas through the site plan review process. Development of the mixed-use option of the proposed R-MX (Residential Mixed Use) Zone also requires site plan approval.

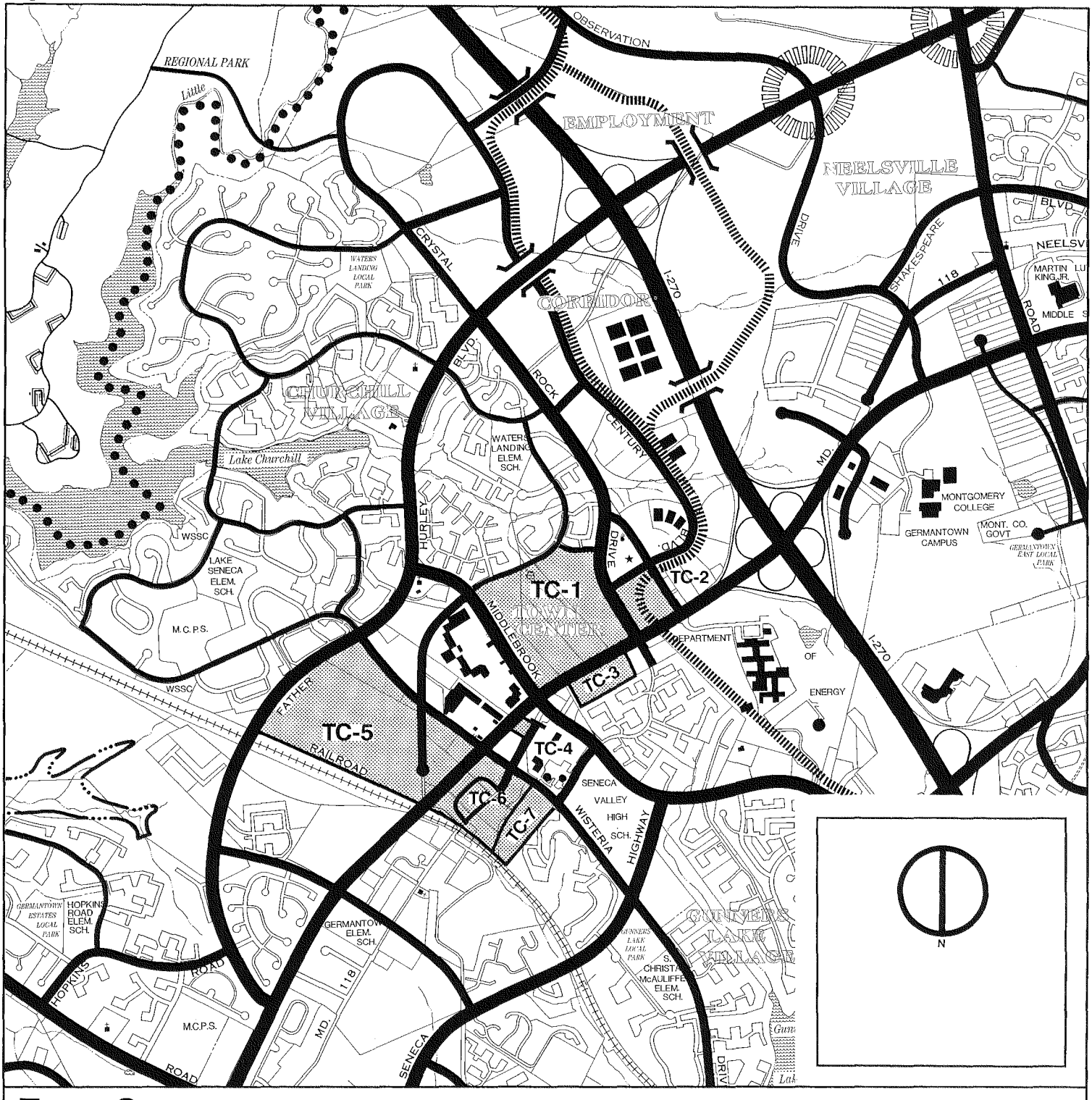
With the exception of a small 5-acre C-2 (General Commercial) zoned area, the entire uncommitted portion of the Town Center (196 acres) is recommended to develop using the following floating or project plan zones:

- TS (Town Sector)
- R-MX (Residential Mixed Use)
- O-M (Office Building-Moderate Intensity)
- C-T (Commercial Transition)
- C-3 (Highway Commercial)
- P-D (Planned Development)

The establishment of an urban maintenance district or other mechanism to assure the upkeep of the amenity features of the Town Center will be evaluated as part of the Town Center Design and Development Study.

Some issues of the Town Center have been considered in the Townscape Design Chapter. These issues in-

Figure 16



Town Center: Analysis Areas

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

TABLE 3

TOWN CENTER: LAND USE AND ZONING RECOMMENDATIONS

ANALYSIS AREA NO.	ACREAGE	1974 RECOMMENDED LAND USE; EXISTING DEVELOPMENT; & EXISTING ZONING	MASTER PLAN RECOMMENDED LAND USE & RECOMMENDED ZONING BASE / OPTIONAL	POTENTIAL UNITS BASED ON RECOMMENDED ZONING BASE / OPTIONAL[1]	NET TDR'S OVER BASE	COMMENTS
TC-1	59	Regional Center, Library, Common Green, Offices, Residential (44 units per acre); Undeveloped Except for Branch Bank; Town Sector	Mixed-Use Center; Town Sector	800 units	—	Recommended Mixed-Use Center, Cultural Arts Center; Offices; Retail; Multi-Family Residential; Hotel; Urban Park.
TC-2	10	Commercial Offices; Undeveloped; I-1	Office, Residential, Transit Station and Parking; C-5/PD-44	500 units	—	Recommended for 217,000 square feet of office development, joint public/private development of up to 500 high-density residential apartments and a transit station with parking, bus bays and a kiss-n-ride area.
TC-3	8	Highway Commercial; Undeveloped; C-3	Office, C-5/C-T	—	—	
TC-4	1	Highway Commercial; Undeveloped Except for Commerical Use in Converted Residence; C-3 (west) and Town Sector (east)	Office; C-5/C-T (west); Town Sector (east)	—	—	
TC-5	76	Employment; Undeveloped Except for Residences and Mini-storage Along Waters Road; I-1	Residential, Retail and Service Park; R-MX	500 units	—	Recommend Comparison Shopping Center for department stores and other retail and restaurants; Auto Services Center; and Indoor Recreation Center and residential apartments. Historic Resource:: Madeline V. Waters House (portion).
TC-6	23	Service Commercial; Undeveloped areas, Residences, C&P Telephone Switching Building, Veterinarian Clinic, Site of Future Medical Clinic (Special Exception) and Commuter Rail Parking Area; R-200 and O-M	Office; R-200/O-M (19 acres); and O-M (4 acres)	—	—	Historic Resources: Madeline V. Waters House (portion) and Pumphrey/Mateney House.
TC-7	10	Service Commercial; Undeveloped, C-T	Post Office; C-T	—	—	Recommend as future location of Germantown Post Office.

[1] *Unless otherwise noted, the number of potential dwelling units indicated are the maximum permissible, without the density increase for providing Moderately Priced Dwelling Units (MPDUs. Any subdivision of 50 or more units must include 12.5 percent MPDU's, in which case a density increase of up to 20 percent and optional development standards and unit types are permitted. Densities do not reflect cluster densities.*

clude land use relationships as well as functional and visual design concerns.

TOWN CENTER ANALYSIS AREAS

Analysis Area TC-1

This 59-acre area is located on the north side of MD 118, between Crystal Rock Drive and Middlebrook Road. With the exception of a small modular bank building, the area is vacant. Although this area is not in a single ownership, unified development is imperative. It may, however, be necessary for the Cultural Arts Center to be built prior to the development of the other portions of the Mixed-Use Center. This Area is in the Town Sector Zone and is shown for commercial development on the Development Plan. Since it is located in the Town Sector Zone, a Supplementary Plan is required. In order to achieve an integrated plan, a Supplementary Plan should only be approved if a development proposal for the entire 59-acre area is submitted. If this is not possible, any proposed plan should be reviewed in relation to the remaining area.

Since this Analysis Area is recommended to be the Mixed-Use Center, the Supplementary Plan should include a diversity of uses designed to activate this area. The following uses are highly desirable: cultural arts center, multi-level offices, comparison and convenience retail uses, restaurants, hotel, entertainment facilities, indoor recreation (such as health clubs), multi-family residences, and public open space. The retail and entertainment component is a key factor in achieving a lively core area and should offer goods and services such as specialty shops that appeal to residents and employees. The uses in the Mixed-Use Center should be those which extend the activity of the area beyond office hours on weekdays and weekends. The Supplementary Plan should reflect the following specific objectives:

- Create a distinctive image as seen from surrounding streets, through the arrangement of buildings, parking, and open space.
- Encourage a scale and mix of uses that achieve a focal point of activity for Germantown.
- Provide for a Cultural Arts Center (which includes a 500 seat auditorium with stage, classrooms for performing and visual arts, and display space for visual arts) or an equivalent public amenity, which can serve as a focal point for the Town Center.
- Locate a hotel with restaurants as part of the Mixed-Use Center.
- Orient multi-level office buildings (totaling up to 400,000 square feet) along MD 118 and provide a sufficient building setback for landscaping.
- Provide community-oriented retail uses that are fully integrated with the office and residential use, yet highly visible from surrounding streets.
- Concentrate parking by incorporating decks and/or underground parking where appropriate.
- Locate surface parking areas, which are well-screened from surrounding roads and residential areas, in a series of small parking lots separated by landscaped areas.
- Depress service and loading docks below grade or locate them in unobtrusive areas so that they cannot be seen from surrounding streets or interfere with pedestrian use and enjoyment of the Core.
- Locate multi-family residential buildings, with up to 800 units (or more if feasible), adjacent to existing residential areas.
- Develop a public "urban park" in the stream valley to create a connection to the open space area in the adjoining residential area; the "urban park" is intended to provide a natural setting for picnic lunches and courts for basketball, tennis, and volleyball that are accessible to both employees and residents.
- Provide a location for community festivals and events.
- Provide for elderly housing within the multi-family residential area in proximity and easy pedestrian access to convenience retail services.
- Create a network of open space providing passive recreation areas.
- Create a system of pedestrian paths and bike trails that encourage use of the open space network, facilitate access to adjacent uses, and provide on-site circulation.
- Encourage architectural diversity while maintaining unifying architectural elements and materials as well as lighting, street furniture, and landscaping materials.
- Design night lighting that responds to the architecture of the buildings, especially those visible from I-270.
- Signage should conform to the guidelines of the Townscape Design chapter.

Analysis Area TC-2

This undeveloped 10 acre parcel is presently zoned I-1 and the site is proposed to be the primary transit station serving the Town Center and west Germantown. This site is also in a highly visible and accessible location at the principal entrance to Germantown from I-270. Accordingly, the site should be carefully planned and integrated into the overall design and functional theme of the Town Center. Proposed for this site is office development of up to 217,000 square feet based on a density of 0.5 FAR, joint public/private development of up to 500 high-density residential apart-

ments, and a transit station facility including parking, bus bays, and a kiss-n-ride area. Surface parking should be discouraged and oriented away from MD 118 and Crystal Rock Drive. Until transit is developed, the site could be used, in part, as a park-and-ride facility.

The C-5 Zone is recommended as the base zone for this Analysis Area since the setbacks and green area requirements of the I-1 Zone are inadequate for such a visible location. This Analysis Area is recommended for the PD-44 Zone. Approval of the PD zoning should be based on the following factors:

- Development here should be carefully planned and integrated into the overall design and functional theme of the Town Center.
- A portion of the site should be dedicated as part of the Corridor Cities Transit Easement, including the right-of-way, station and parking garage.
- Development of the site to include: 1) office buildings up to a 217,000 square feet density at a 0.50 FAR, 2) a transit station facility with parking for 1000 cars, 3) up to 500 residential apartments, including MPDU's, built above the transit parking facility, 4) some supporting retail uses, and 5) open space for the apartment residents above the parking deck(s).
- Approval of the PD zoning should be based on the development plan's demonstrating that the office, transit and housing components can be adequately accommodated in a phased development.
- Lighting, landscaping and berming of this facility should be compatible with that of the Town Center. Further, this area is an appropriate location for a gateway sign for Germantown.

Analysis Area TC-3

Analysis Area TC-3 is located south of MD 118 between two parcels on Crystal Rock Drive on the east and an existing restaurant on the west. Access to this area is provided by a service drive along the southern edge of the property; access is not permitted from MD 118. This 8-acre area currently is zoned C-3 in accordance with the Highway Commercial recommendation of the 1974 *Master Plan*. Development in the C-3 Zone is generally fragmented with access lanes and parking areas around single use buildings, such as drive-in restaurants. Such a development pattern is inappropriate for a major entryway into Germantown. Further, such retail uses should be clustered in the Retail and Service Park, and the Village Centers.

This Analysis Area is recommended for low intensity commercial office use. The Plan, therefore, recommends the C-5 Zone as the base zone for this Analysis Area (see Implementation chapter). The site is appropriate for development under the C-T Zone. With the owner's consent the C-T Zone may be granted through the Sectional Map Amendment.

This Analysis Area is appropriate for office buildings up to three stories in height in order to form a transition between the Town Center and the adjacent garden apartments. Any retail uses in this Analysis Area should not establish a fragmented development pattern and should not conflict with the intent of the Village Centers and the Town Center.

Planning for this Analysis Area should reflect its strategic location on a major entryway into Germantown. Building setbacks, landscaping along the commercial and road edge, and the screening of parking areas are important to achieve a visually pleasing entryway. These elements are also necessary in order to achieve compatibility with existing and proposed uses along this portion of MD 118.

Development in this area also should be carefully designed to assure compatibility with the adjoining Colony Garden Apartment development. Particular attention should be paid to achieving a landscaped buffer and reducing the impact of lighting on the apartment units. Existing trees on the eastern edge of the property should be retained.

Analysis Area TC-4

This Analysis Area is located northeast of Wisteria Drive, between Walter Johnson Drive and Relocated MD 118. This 1-acre area is zoned C-3 in accordance with the Highway Commercial recommendation of the 1974 *Master Plan*. A commercial use is operating currently in a converted residential building.

As noted with Analysis Area TC-3, fragmented retail development, which often occurs in the C-3 Zone, is inappropriate along this visually important portion of MD 118 in the Town Center. Additional uses of this nature are not appropriate in light of this Plan's emphasis on the clustering of retail and related uses in the Village Centers.

This Analysis Area is recommended for commercial office development up to three stories in height. The C-5 Zone is recommended as the base zone. The area is appropriate for rezoning to the C-T Zone, which may be granted through the Sectional Map Amendment, given the owner's consent.

This Analysis Area is located on Germantown's "Main Street," MD 118, in the Town Center, and is adjacent to an urban park. In order to achieve visual compatibility with existing and proposed uses, particular attention should be focused on building setbacks, landscaping along the road edge, and providing visual buffering of parking areas.

Analysis Area TC-5

Analysis Area TC-5 is generally bordered by Relocated MD 118, the B&O railroad tracks, proposed Germantown Drive (M-27), and Wisteria Drive. This 76-acre area is zoned I-1, in accordance with the light industrial use proposed in the 1974 *Master Plan.*

Proposed for this site is development of 500 residential multi-family units and 400,000 square-feet of comparison retail in addition to automotive and business services. The proposed center should contain a broad mix of uses including department stores that sell discount and moderate priced merchandise, general merchandise and hardware stores, smaller retail stores, public plazas and open space, an indoor recreation and entertainment center (including activities such as bowling and roller skating), automotive and business services, and fast food and family restaurants. This type of shopping and service opportunity is important to meet the needs of the Germantown community.

This area should be rezoned to the new R-MX (Residential-Mixed Use) Zone. This area may be appropriate for a special exception to allow outdoor automobile sales and automotive services if these uses are carefully screened and located away from the frontage of MD 118 or other highly visible locations. A Youth Center (or other public amenity identified by the County) also would be appropriate for this area.

This Analysis Area is in multiple ownership and assembling the entire property into a single ownership and the subsequent development of a unified plan are strongly encouraged.

The Development Plan and site plan for this Analysis Area need to be compatible with the landscaping and building setbacks along relocated MD 118 noted in the Townscape Design chapter. The view from MD 118 should be compatible with other portions of MD 118 and promote a positive image for the Town Center. These plans also should establish internal compatibility among the uses and adequate access into the property. Visual buffers are needed to screen the view of parking areas and automotive uses from the Father Hurly Boulevard and Relocated MD 118. Specific development guidelines will be prepared as part of Townscape Design and Development Study.

Located at the southeast corner of this Analysis Area is the Madeline V. Waters House (*Master Plan* Site #19/13-1), the northern portion of an historic resource that has been designated on the *Master Plan for Historic Preservation.* Although the Waters House burned, several mature trees remain. All of these trees should be preserved and the site of the Waters House should be incorporated into the green space of any future development. This green space will provide a reminder of Germantown's history, a visual relief to the built and paved environment in the Town Center District, and a quiet place for people to rest and relax.

The Madeline V. Waters House site is at a strategic location that, if handled carefully, can be an important area of visual transition between the retail uses of the Town Center and the Germantown Historic District. Historic designation does not preclude the development of the Waters House site, but it does provide an opportunity to guide that development in a way that will be an asset to the Historic Area and to Germantown as a whole. (For more detailed information on, and analysis of this property, refer to the Historic Resources chapter of this Plan and to Appendix L.)

Analysis Area TC-6

Analysis Area TC-6 is the Town Center Historic Area and includes the properties fronting on existing MD 118, northeast of the railroad tracks. Included in this 23-acre area are the C&P Telephone Company building and the expansion of the commuter train station parking area. The Pumphrey/Mateney house (*Master Plan* Site #19/13-5), an historic resource in the Germantown Historic Area, is located in this area, near the railroad tracks. Two parcels and a portion of another are zoned O-M in conformance with the Service Commercial recommendation of the 1974 *Master Plan;* the balance of the area is zoned R-200.

The southern portion of the Madeline V. Waters House historic resource (*Master Plan* Site #19/13-1) is also located in this Analysis Area. A double row of evergreen trees remain on this site. The tree-lined entry drive to the historic house should be retained in the future development of this portion of the Analysis Area. For more detailed information, and analysis of the Pumphrey/Mateney House and the Madeline V. Waters House, refer to the Historic Resources Chapter and to Appendix L.

This Plan recommends that this Analysis Area be a quiet, green, pedestrian-oriented enclave that provides relief from the intense development of the Town Center. It should establish a strong visual and functional link to the Germantown Historic District directly across the railroad tracks. (See Analysis Area CL-1.) When Relocated MD 118 is open to traffic, the existing railroad bridge will be either closed to automobile traffic or replaced by a pedestrian bridge. This will serve to limit traffic and further enhance the passive environment.

As shown on the Zoning and Highway Plan, this Analysis Area is recommended to be served by a one-way loop road branching off a divided arterial road. The intent of this recommendation is to provide appropriate access while preserving existing trees and reducing the impact on two historic resources within the Germantown Historic District.

Other issues of the Town Center Historic Area have been considered in the streetscape portion of the Townscape Design chapter.

This Plan recommends retaining the existing R-200 Zone as the base zone. This Area is appropriate for low-intensity office uses in order to retain and enhance the existing visual character of this area. This area could be appropriate for the O-M (Office Building-Moderate Intensity) Zone, but the following issues of compatibility need to be addressed:

- preservation of the existing single-family detached residential character; and
- retention of existing trees.

One avenue to address these compatibility issues would be a rezoning application for the O-M Zone using the optional method of application and a schematic development plan. Furthermore, special exception uses should not be approved if they conflict with the intent to achieve a passive pedestrian environment in this area.

If the C&P Telephone Company property or the commuter rail station parking area cease being in public use, they would also be appropriate for low-intensity office uses under the O-M Zone.

Analysis Area TC-7

This C-T zoned ten-acre area is located immediately southeast of Analysis Area TC-6. Its zoning is in conformance with the Service Commercial recommendation of the 1974 *Master Plan*. It is recommended to be the site of the new Germantown Post Office. Since the site has significant slopes and a floodplain area to the west, the developable area is limited. A two-level building would take advantage of the sloped site. Two points of access from Wisteria Drive are recommended in order to separate customer traffic from delivery traffic. A regional stormwater management facility has been proposed which includes a portion of this area.

The development plans for this property need to address issues of compatibility with the adjoining garden apartments. A visual and acoustic separation should be constructed between these two uses.

Employment Corridor
(Figure 17 and Table 4)

EMPLOYMENT CORRIDOR OVERVIEW

This Plan recommends the Town Sector, I-1, I-3, R&D and MXPD Zones be implemented in the Employment Corridor because they present the County with the best opportunity to develop this key area to the greatest advantage. Planned Development (PD) Zones are recommended for two areas of multi-family residential development.

The Employment Corridor offers an opportunity to create two identifiable and distinctive Urban Villages. These Villages would be nodes of high-density residential development in proximity to employment uses and proposed transit service. The Urban Village concept can transform the Employment Corridor from a single dimension workplace to one with "Village Activity Areas." These Urban Villages are designed to provide a diversity of uses appropriate to meet the daily needs of the residents as well as extending community activity well beyond office hours. The Master Plan proposes that the Urban Villages be developed in a density range of 20-35 dwelling units per acre.

In addition to the Urban Village development in the Employment Corridor, a mix of employment uses that responds to the anticipated economic development potential should be reflected. A demand exists for small scale, low-density research and development uses as well as higher-density, high technology industrial activities and corporate headquarters. This mix of employment uses can be accommodated in a range of 0.25 to 0.5 FAR.

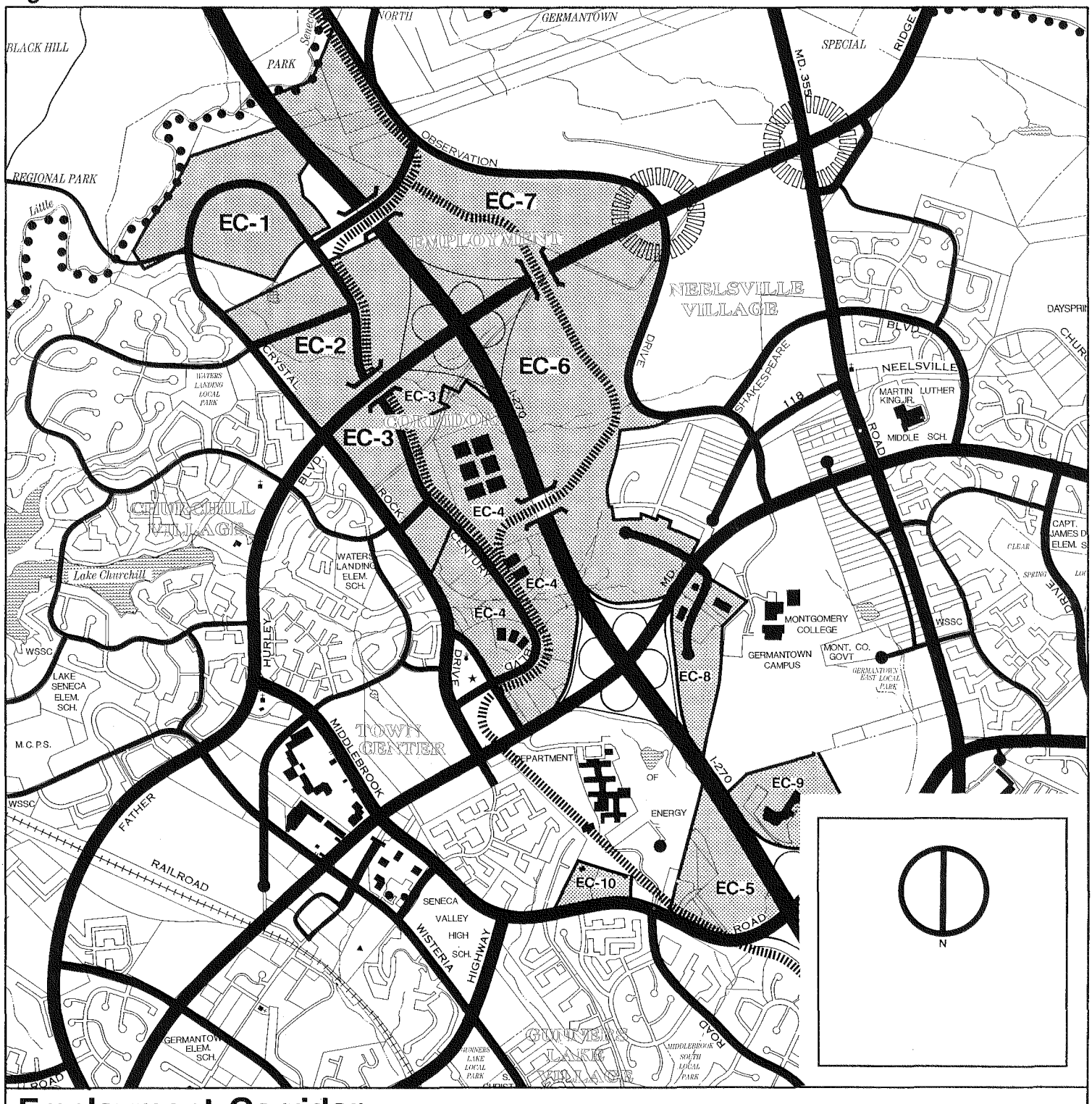
In order to achieve the objectives established for the Employment Corridor, all of the land should be in a zoning classification where the intensity, nature, and location of new buildings can be guided through development plan and site plan approval and/or through the specific requirements of the zone. In addition, approvals of landscaping, lighting, and screening should be provided. These approvals are not required in the I-1 Zone unless the application is for a building of more than three stories. Also, the requirements of the I-1 Zone are not sufficient or appropriate for locations along the Transit Easement or in highly visible locations.

Undeveloped properties that are currently zoned I-1 are recommended to be rezoned to the R&D or I-3 Zone and, where appropriate, to MXPD. In these instances, the Plan recommends the R&D Zone as the base zone since the setbacks and greenspace requirements of the I-1 Zone are inadequate and not supportive of transit suitability.

Most of the I-1 zoned land is located in the Little Seneca Creek Watershed. Under the provisions of the I-3 Zone, development intensity and the extent of impervious surface can be restricted, which assists in protecting the water quality in that watershed.

In order to support employment and residential development east and west of I-270, it is recommended that the proposed transit alignment divide into two separate alignments for its segment through the Employment Corridor as shown on Figure 38. The I-3 Zone is located so that denser development can be serviced by the transit.

Figure 17



Employment Corridor: Analysis Areas

Comprehensive Amendment
to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

TABLE 4

EMPLOYMENT CORRIDOR: LAND USE AND ZONING RECOMMENDATIONS

ANALYSIS AREA NO.	ACREAGE	1974 RECOMMENDED LAND USE; EXISTING DEVELOPMENT; & EXISTING ZONING	MASTER PLAN RECOMMENDED LAND USE & RECOMMENDED ZONING BASE / OPTIONAL	POTENTIAL UNITS UNITS BASED ON RECOMMENDED ZONING BASE / OPTIONAL[1]	NET TDR'S OVER BASE	COMMENTS
EC-1	75	Residential[2] (3, 6, and 12 units per acre) and Elementary School; Undeveloped; Town Sector	Employment; Town Sector	—	—	Total jobs 5,200
EC-2	108	Employment; Undeveloped; I-3	Employment and-Multi-Family Residential; I-3/MXPD (39 acres) and R-30/ PD-22 or MXPD (56 acres)	1,250 units (including MPDU's)	—	West Urban Village Suitable for rezoning to MXPD Zone Transit Station location
EC-3	84	Employment; Undeveloped;I-1	Employment; R&D/ I-3 or MXPD (0.25 FAR) (35 acres) and R&D/I-3 or MXPD (49 acres)	—	—	Suitable for rezoning to MXPD Zone in conjunction with Analysis Area EC-2
EC-4	120	Employment; Undeveloped; I-1	Employment; R&D/ I-3 (92 acres) and I-1 (28 acres)	—	—	
EC-5	40	Employment; Undeveloped; I-1	Employment; I-1	—	—	
EC-6	188	Employment; Un-; developed; I-1 (44 acres) I-3 (113 acres) and R-200 (31 acres)	Employment; I-3 (113 acres) and R&D/I-3 (75 acres)	—	—	
EC-7	200	Employment; Undeveloped; I-1 (60 acres), I-3 (32 acres) and R-200 (108 acres)	Employment and Multi-Family Residential; R&D/I-3/ MXPD (72 acres) R&D/MXPD (24 acres), and R-30/ PD 35 or MXPD (104 acres)	2,500 units (including MPDU's)	—	East Urban Village Suitable for rezoning to MXPD Zone Transit Station location
EC-8	32	Employment; Hotel and Office Buiildings, Two Undeveloped parcels; I-3	Employment; I-3	—	—	
EC-9	41	Employment; Developed; I-3	Employment; I-3	—	—	
EC-10	11	Employment; Developed and Undeveloped; I-1	Employment; I-1	—	—	

[1] *Unless otherwise noted, the number of potential dwelling units indicated are the maximum permissible, without the density increase for providing Moderately Priced Dwelling Units (MPDU's). Any subdivision of 50 or more units must include 12.5 percent MPDU's, in which case a density increase of up to 20 percent and optional development standards and unit types are permitted. Densities do not reflect cluster densities.*

[2] *Master Plan Amendment adopted 11/86 changed land use to Employment.*

In order to achieve a mix of employment uses, portions of the Employment Corridor are recommended to be developed under the provisions of the R&D Zone. Use of the MXPD Zone in the Employment Corridor is recommended in Analysis Areas that include residential development because it provides flexibility in the mix of uses and building locations. In order to assure that excessive traffic is not created, building area limitations have been created for certain analysis areas.

In light of the importance of the Employment Corridor to this Plan, development guidelines have been included in the Townscape Design chapter.

EMPLOYMENT CORRIDOR ANALYSIS AREAS

Analysis Area EC-1

This undeveloped 75-acre area is located just south of Little Seneca Creek and west of I-270. Multi-family residential units are planned across Crystal Rock Drive from this area. It is in the Town Sector Zone and is recommended for employment use on the Development Plan and in the 1974 *Master Plan*, as amended. This Plan continues that recommendation.

An historic resource on the *Locational Atlas and Index of Historic Sites*, the Waters Log House Ruins (*Atlas* Site #19/2), is identified as being in this area. However, it is not recommended for historic designation by the Historic Preservation Commission or this Plan. For more detailed information on this site refer to the Historic Resources Chapter and to Appendix L.

Full development of this parcel should not exceed 0.4 FAR (1,400,000 square feet, 5,200 jobs). The Planning Board recently approved a preliminary plan for 400,000 square feet of development on a portion of this site, conditioned on provision by the developer of certain traffic improvements in order to assure that development does not exceed the capacity of the transportation system in this area. The approval of preliminary subdivision application 1-87012 limits development to 800 employees (400 peak hour trips).

Proposed Century Boulevard (I-2) is recommended to be extended north of Father Hurley Boulevard (M-27) to merge with Crystal Rock Drive to provide needed access. Additional access is provided by proposed road I-4 which crosses I-270 and connects Century Boulevard with Observation Drive (A-19). In order to assure that excessive traffic congestion is not created, development on this property should be limited to 1,400,000 square feet of building area (5,200 employees) at an overall 0.4 FAR.

Extreme care needs to be exercised to minimize the environmental impact of extensive employment development on Little Seneca Creek. Both water quality and stream channel protection measures need to be instituted. A stormwater management pond is proposed along Crystal Rock Drive. In addition, tree preservation, especially along the southwestern edge of the property, is strongly recommended.

The following development guidelines should be considered when reviewing development proposals for this Analysis Area:

- Create a visual node through the height and location of the buildings.
- Locate and orient buildings to maximize views of the open spaces, such as the golf course, parkland, and plazas.
- Strive for significant areas of undisturbed open space and for limited amounts of impervious surfaces.
- Adhere strictly to the MCPB Staff Guidelines for the Protection of Slopes and Stream Valleys.
- Enhance and preserve the floodplain as part of an open space network.
- Provide a visual buffer along Crystal Rock Drive across from residential areas.
- Provide access from both Crystal Rock Drive and from master planned road I-1 (Century Boulevard) extended.
- Accommodate the Corridor Cities Transit Easement right-of-way as part of this development.
- Provide a minimum of 50-foot setbacks for buildings and parking areas from adjacent parkland and residential areas.

Analysis Area EC-2

This area is presently zoned I-3 in conformance with the 1974 *Master Plan* and is located just north of Father Hurley Boulevard (M-27), on the west side of I-270. Waters House, a garden apartment subdivision, is located across Crystal Rock Drive from this undeveloped area. This analysis area, individually or in conjunction with Analysis Area EC-3, south of Father Hurley Boulevard, is suitable for planned development under the MXPD Zone.

A tributary of Little Seneca Creek crosses the property diagonally from southeast to northwest. Therefore, water quality, stream channel, floodplain management, and stream valley protection concerns will need to be addressed comprehensively.

The transit easement crosses this property and a station is recommended between employment and residential uses along Century Boulevard.

It is anticipated that 850,000 square feet of building area (3,400 employees) would be developed on the 39 acres of I-3 zoned land in this Analysis Area. The portions of Analysis Areas EC-2 and EC-3 to be zoned I-3 may be combined for density purposes. The remaining 69 acres are recommended as the location of the West Urban Village. Multi-family residential develop-

ment at a density of 22 units per acre is recommended with a maximum of 1,250 units, including MPDU's. The 69 residential acres are recommended to be rezoned to the R-30 Zone and are suitable for rezoning to PD-22 (or MXPD). Century Boulevard will divide the employment and residential uses and actual acreages may vary depending on the final alignment of Century Boulevard.

The Highway Plan indicates the extension of Century Boulevard north of Father Hurley Boulevard (M-27) through the property to proposed road I-4 in Analysis Area EC-1. Due to the proximity of the ramps of the M-27 interchange, Century Boulevard will not intersect with Father Hurley Boulevard but cross underneath. Waters Landing Drive also extends through this Analysis Area between Crystal Rock Drive and Century Boulevard.

The following development guidelines should be considered when reviewing development proposals for this Analysis Area:

- Create a visual node in this area through the height and location of the buildings.
- Respond to the topography and the stream valley in development plans for this area.
- Retain significant amounts of undisturbed open space and allow limited amounts of impervious surface.
- Provide gateway landscaping and signing along M-27 and at its crossing of Century Boulevard.
- Provide a significant landscaped buffer as part of the office/industrial development to provide compatibility with adjacent residential development.
- If feasible, maintain the golf course as part of the open space network.
- Provide a transit station location and accommodate the proposed transit easement right-of-way; include pedestrian and bike path connections to adjacent residences and employment areas.
- Limit residential development to 1,250 multi-family residential units, including MPDU's.

Analysis Area EC-3

Analysis Area EC-3 is an undeveloped area of 84 acres located south of Father Hurley Boulevard (M-27) between I-270 and Crystal Rock Drive. Existing duplex and single-family detached residences are across Crystal Rock Drive from this area. Closer to I-270, this Analysis Area adjoins the Fairchild Industries property. This property is zoned I-1 in conformance with the 1974 *Master Plan* and is suitable, in conjunction with the property north of M-27, (Analysis Area EC-2), for planned development under the MXPD Zone.

The Analysis Area should be classified in the R&D Zone as the base zone, since the setbacks and green area requirements of the I-1 Zone are inadequate adjacent to residential uses. The eastern 31 acres and the southern 18 acres of this Analysis Area are appropriate for development in the I-3 Zone at 0.5 FAR. The western 35 acres are appropriate for the I-3 Zone, but development should be limited to 0.25 FAR in order to assure that excessive traffic congestion is not created. With the concurrence of the owner, the I-3 Zone could be granted through the Sectional Map Amendment.

The northeastern corner of this area is crossed by a tributary of Little Seneca Creek. Therefore, water quality, stream channel, stream valley protection, and floodplain management concerns will have to be addressed comprehensively.

The development in this Analysis Area could result in 1,480,000 square feet (5,900 employees) based on the recommended development intensity. Development on the southern 18 acres may be limited due to its shape and environmental constraints. Development capacity from this Analysis Area may be shifted to other portions of Analysis Area EC-3.

Development guidelines for EC-2 should also be applied to development proposals for this Analysis Area, with two exceptions. There will not be a transit station in EC-3 and, if feasible, streams, as well as ponds, should be preserved.

Analysis Area EC-4

This Analysis Area is composed of several recorded lots. The area is zoned I-1, in accordance with the 1974 *Master Plan*. It is located on both sides of Century Boulevard, north of MD 118. The existing Century XXI office buildings, the Bellemead office buildings, and the Fairchild buildings are part of this Analysis Area.

This Master Plan recommends rezoning the undeveloped lots and the Fairchild property to the R&D Zone as the base zone, since the setbacks and green area requirements in the I-1 Zone are inadequate for such a visible location. These lots are appropriate for development under the I-3 Zone. This zone may be granted, with the owner's consent, through the Sectional Map Amendment. Lots with existing development, Bellemead and Century XXI, are recommended to retain the I-1 zoning classification.

In order to assure that excessive traffic congestion is not created, there should be no additional development on these lots retained in the I-1 Zone. In particular, the building area on four lots — "K," "L," "M," and "N," on the west side of Century Boulevard opposite Fairchild Industries — should be limited to 253,000 square feet. This building area is that approved on Site Plan 8-88076. In addition, development on parcel N332 (0.51 acres), located on the east side of Aircraft Drive at

MD 118, should be limited to its existing use, a gasoline station. The anticipated development in this Analysis Area may total up to 2,700,000 square feet of building area (10,800 employees). This amount includes approximately 400,000 square feet of existing development on those lots recommended to retain the I-1 zoning classification.

The following development guidelines should be considered when reviewing development proposals for this Analysis Area:

- Locate and orient buildings to maximize views of the open spaces, such as the golf course and plazas.
- Provide gateway landscaping and signing at the intersection of Century Boulevard and Crystal Rock Drive.
- Enhance and preserve the golf course and floodplain as part of an open space network.
- Provide a visual buffer along Crystal Rock Drive across from existing and planned residential areas.
- Limit development to the current building area on those lots recommended to retain the I-1 Zone.
- Provide for the proposed transit easement right-of-way.

Analysis Area EC-5

Analysis Area EC-5 is located at the northwest quadrant of Middlebrook Road and I-270. It contains 40 acres and is zoned I-1 in accordance with the recommendations of the 1974 *Master Plan*. This area is located south of the existing Department of Energy facility and across Middlebrook Road from a single-family detached subdivision. A stream valley crosses the property parallel to I-270 and another crosses the southeast corner. This Analysis Area is highly visible from I-270 and extreme care needs to be taken in its development.

This Analysis Area includes five recorded lots and an approved preliminary plan of subdivision in the I-1 Zone. Because of these development approvals this Master Plan recommends retaining the I-1 zoning classification.

In order to assure that excessive traffic congestion is not created, development in this Area should be limited to a total of 700,000 square feet of building area, including existing and future construction, (2,800 employees) at an overall floor area ratio of 0.4.

These figures include anticipated building areas for the undeveloped property and also reflect the building area limitation placed on the record plats for the eastern portion of the Analysis Area.

The following development guidelines should be considered when reviewing development proposals for this Analysis Area:

- Restrict development from the stream valley.
- Install significant landscaping along Middlebrook Road at this important gateway location.
- Limit development to a total of 700,000 square feet of building area (2,800 employees) at an overall floor area ratio of 0.4.

Analysis Area EC-6

Analysis Area EC-6 is located on the eastern side of I-270 and extends from MD 118, north to M-27. It is classified in both the I-1 and I-3 Zones in conformance with the recommendations of the 1974 *Master Plan*. Observation Drive (A-19) and an existing single-family residential area form the eastern edge.

Two tributaries of Little Seneca Creek cross this area. Water quality and stream channel protection measures need to be implemented in these areas. The eastern edge of this Analysis Area has been modified in response to the realignment of Observation Drive (A-19) in the northern portion of this area. This realignment, in part, is in response to a significant wetland area in Analysis Area NE-3.

This Master Plan recommends rezoning the I-1 portion of this area to the R&D Zone as the base zone, since the setbacks and green area requirements in the I-1 Zone are inadequate for such a visible location and not supportive of transit serviceability. Development under the I-3 Zone is appropriate for the entire area. Rezoning to the I-3 Zone can be achieved, given the owner's consent, through the Sectional Map Amendment. Development in this Analysis Area may result in up to 4,100,000 square feet of building area (16,400 employees) at an overall density of 0.5 FAR.

This Analysis Area provides the appropriate location for a transit station including parking and bus access. The Corridor Cities Transit Easement Study recommends that the eastern transit easement cross I-270 into this Analysis Area and then generally parallel I-270 as it extends north into Analysis Area EC-7. The specific alignment of the Transit Easement between I-270 and M-27 will be determined at the time of preliminary subdivision plan approval.

The following development guidelines should be considered when reviewing development proposals for this Analysis Area.

- Create visual nodes through the height and location of the buildings.
- Achieve significant areas of undisturbed open space and limited amounts of impervious surface.
- Provide protection for the streams crossing the subject property.
- Provide gateway landscaping and signing along Ridge Road (M-27) at the western side of its interchange with Observation Drive (A-19),

and along MD 118 at the northern side of its intersection with Goldenrod Lane (I-3).

- Provide a station transit location and accommodate the proposed transit easement right-of-way; include pedestrian connections to adjacent employment areas.
- Orient and locate buildings to take advantage of the transit station.

Analysis Area EC-7

Analysis Area EC-7 is bounded by I-270, the Germantown Planning Area Boundary, Observation Drive (A-19) and Ridge Road (M-27). It is classified in both the I-1 and I-3 Zones in conformance with the 1974 *Master Plan*. Observation Drive (A-19) separates this area from a single-family detached residential area to the east.

The eastern and western alignments of the Corridor Cities Transit Easement meet in this area, making it an ideal location for a transit station. Automobile access is provided by Observation Drive (A-19) extending north from Ridge Road (M-27).

This Analysis Area is recommended for both employment and high-density residential uses. The western portion, which fronts on I-270, is recommended for employment use, while the eastern portion further from I-270 is recommended for residential use. That portion of the employment area north of Proposed Road I-4 (43 acres) is recommended for the R&D Zone at 0.5 FAR and the 81 acres south of Proposed Road I-4 are recommended for the I-3 Zone. With the owner's consent, the I-3 Zone can be granted through the Sectional Map Amendment. The residential area contains 104 acres and is recommended for rezoning to the R-30 Zone and is suitable for the PD-35 Zone. This Analysis Area is also suitable for the MXPD Zone.

Two alternative alignments of Proposed Road A-19 are included in this Plan. The alignment selected will affect the amount of land appropriate for multi-family development. Should an eastern alignment be selected for A-19, the residential portions of this area that are west of the alignment are appropriate for rezoning to the PD-35 Zone, but only if an environmental review indicates that constraints can be mitigated. No change in zoning should be permitted prior to this review. The selection of the western alignment would increase the area of the East Urban Village from 104 acres to 117 acres.

The size of these areas are based on the current alignments of Observation Drive, Proposed Road I-4, and the proposed Transit Easement and may change depending on the final alignments.

Based on the above recommendations, approximately 926,000 square feet of building area could be developed in the northern employment area (1,700 employees) and 1,600,000 square feet of building area (6,300 employees) in the southern employment area. The number of residential units should be limited to 2,500 units, including MPDU's. Residential and employment development should be clustered off the portion of the Greenbelt Park at the north of this Analysis Area.

The following development guidelines should be considered when reviewing development proposals for this Analysis Area.

- Create a visual node through the height and location of the buildings.
- Retain significant areas of undisturbed open space and allow limited amounts of impervious surface.
- Provide a transit station location and accommodate the Transit Easement right-of-way; include pedestrian and bicycle connections to adjacent residential and employment areas.
- Provide a significant landscaped edge along Observation Drive (A-19).
- Provide gateway landscaping and signing west of the interchange of Observation Drive (A-19) and Ridge Road (M-27) and at Observation Drive and the Planning Area boundary.
- Provide up to 2,500 multi-family residential units, including MPDUs.

Analysis Area EC-8

This 32-acre area is zoned I-3 in conformance with the 1974 *Master Plan*. It is located along Goldenrod Lane southeast of the MD 118/I-270 Interchange. There are two office buildings and a hotel within this area, as well as two vacant parcels.

At 0.5 FAR, development in this Area may yield up to 575,000 square feet of building area (2,300 employees).

The following development guidelines should be considered when reviewing development proposals for this Analysis Area:

- Preserve existing, mature trees.
- Provide a landscaped buffer along the developed areas of Montgomery College.

Analysis Area EC-9

This 41-acre property is a recorded lot which is the location of Hughes Network Systems. It is zoned I-3 in conformance with the 1974 *Master Plan*.

At 0.5 FAR, development on this property may be yield up to 900,000 square feet of building area (3,600 employees). This limitation reflects the approved development on this lot.

The following development guidelines should be considered when reviewing development proposals for this Area:

- Preserve existing, mature trees.
- Provide a landscaped buffer along developed areas of Montgomery College.

Analysis Area EC-10

This 11-acre Analysis Area is located between Middlebrook Road and the Department of Energy property. It is zoned I-1 in conformance with the 1974 *Master Plan*. A group of three 2-story buildings is being completed and a mini-storage facility is in operation. A communications tower is also located in this Analysis Area.

An historic resource on the *Locational Atlas and Index of Historic Sites*, the Log Cabin/Middlebrook Road (*Atlas* Site #19/12), is identified as being in this area. However, it is not recommended for historic designation by the Historic Preservation Commission or this Plan. For more information on this site, refer to the Historic Resources Chapter and to Appendix L.

In order to assure that excessive traffic congestion is not created, total development (including existing and future construction) in this Area should be limited to 200,000 square feet of building area (800 employees) at an overall floor area ratio of 0.4.

The following development guidelines should be considered when reviewing development proposals for this Analysis Area:

- Preserve existing, mature trees.
- Provide a landscaped buffer adjacent to residential areas.
- Limit development to 200,000 square feet of building area (800 employees) at an overall floor area ratio of 0.4.

Churchill Village

CHURCHILL VILLAGE OVERVIEW (Figure 6 and Table 5)

Churchill Village is located west of I-270, north of MD 118, east of the Baltimore and Ohio Railroad, and south of the greenbelt. This Village is bounded for a long distance on the west by Little Seneca Creek and Lake Seneca in Black Hill Regional Park. Lake Churchill, built on a tributary of Little Seneca Creek, is located within this Village. These lakes and the remaining mature trees provide much of the visual character.

Churchill Village will be one of the most densely populated villages (8.8 D.U./acre). This residential density establishes Churchill's more urban character, particularly along its southern edge where it borders the Town Center. Although single-family attached units, townhouses, and garden apartments are predominant, a limited number of custom single-family detached homes along Lake Seneca are now available.

The Village is classified in the Town Sector Zone and is being developed in accord with the approved Development Plan. The Development Plan is in accord with the 1974 Land Use Plan, although some areas are developed at lower densities. Serving an end-state population of approximately 12,700 persons, the Village is almost completely developed; only 132 acres of the total 741 acres remain to be built out. The development of that land will increase the number of households from about 3,500 to over 5,500.

Churchill Village will not be served by a Village Center with a retail component, since two major shopping centers (Sugarloaf Centre and Germantown Commons) are already located in close proximity in the Town Center. This Plan recommends that the general area designated for a Village Center, located at the intersection of Father Hurley Boulevard and Waters Landing Drive, serve as a community oriented activity area including a health club, a community building with meeting rooms and adjoining swimming pool and tennis courts, and a church with housing for the elderly.

Some issues of Churchill Village have been considered in the Townscape Design Chapter. These issues include land use relationships as well as functional and visual design concerns.

CHURCHILL VILLAGE ANALYSIS AREAS (Figure 18 and Table 6)

Analysis Area CH-1

This 10-acre undeveloped property is zoned Town Sector and designated as the location of a future elementary school on the Churchill Town Sector Development Plan and in the 1974 *Master Plan*. This property is surrounded by residential uses and a community recreation facility. The Montgomery County Public School staff has now determined, however, that this site will not be needed for school use. The Plan recommends that the property should be dedicated to the Montgomery County Parks Department for development as a local park unless the Waters Landing Homeowners Association wants to develop, maintain, and control the use of the property. Ballfields should be constructed to meet the recreational needs of the community and to provide those which would have been built in conjunction with the elementary school. This Plan does not recommend approval of a Development Plan amendment, which would not provide for the recreational facilities intended for this property. It may be acceptable to modify the location of the recreational facilities through a development plan amendment.

Analysis Area CH-2

Analysis Area CH-2 is a 17-acre undeveloped area zoned Town Sector, owned by Montgomery County Public Schools. It is located adjacent to Lake Seneca Ele-

TABLE 5

CHURCHILL VILLAGE: RESIDENTIAL DEVELOPMENT

Mix of Housing Types	Total	SFD	SFA	MF
Existing + Approved Dwelling Units (January 1, 1987)	4,436	820 18%	2,122 48%	1,494 34%
1974 Master Plan + Existing + Approved Dwelling Units	5,418	820 15%	2,213 41%	2,385 44%
1989 Master Plan + Existing + Approved Dwelling Untis	5,358	820 15%	2,202 41%	2,336 44%
Change from Existing Plus Approved	922	0	80	842
Change from 1974 Plan	(60)	0	(11)	(49)

Residential Land Area (Acres)	Total	Committed	Uncommitted
	741	609	132

Acreage does not include dedicated rights-of-way or existing parks and schools.

SFD: Single-Family Detached.
SFA: Single-Family Attached
MF: Multi-Family.

[Percentages may not total to 100% due to rounding.]

Source: Community Planning North Division, Montgomery County Planning Department.

mentary School in a community of single-family detached homes. It is recommended as a Junior High School site both by the Development Plan and the 1974 *Master Plan*. Although this area has not been declared surplus, it is possible that it will not be needed for a public school facility in the future. Should this occur, ownership of the property is recommended to be transferred to the Montgomery County Parks Department for development of a variety of recreational uses with a portion of the site being available for a child day-care center. Regardless of how this site is developed, this Plan recommends that ballfields and courts be constructed to meet the recreational needs of the community.

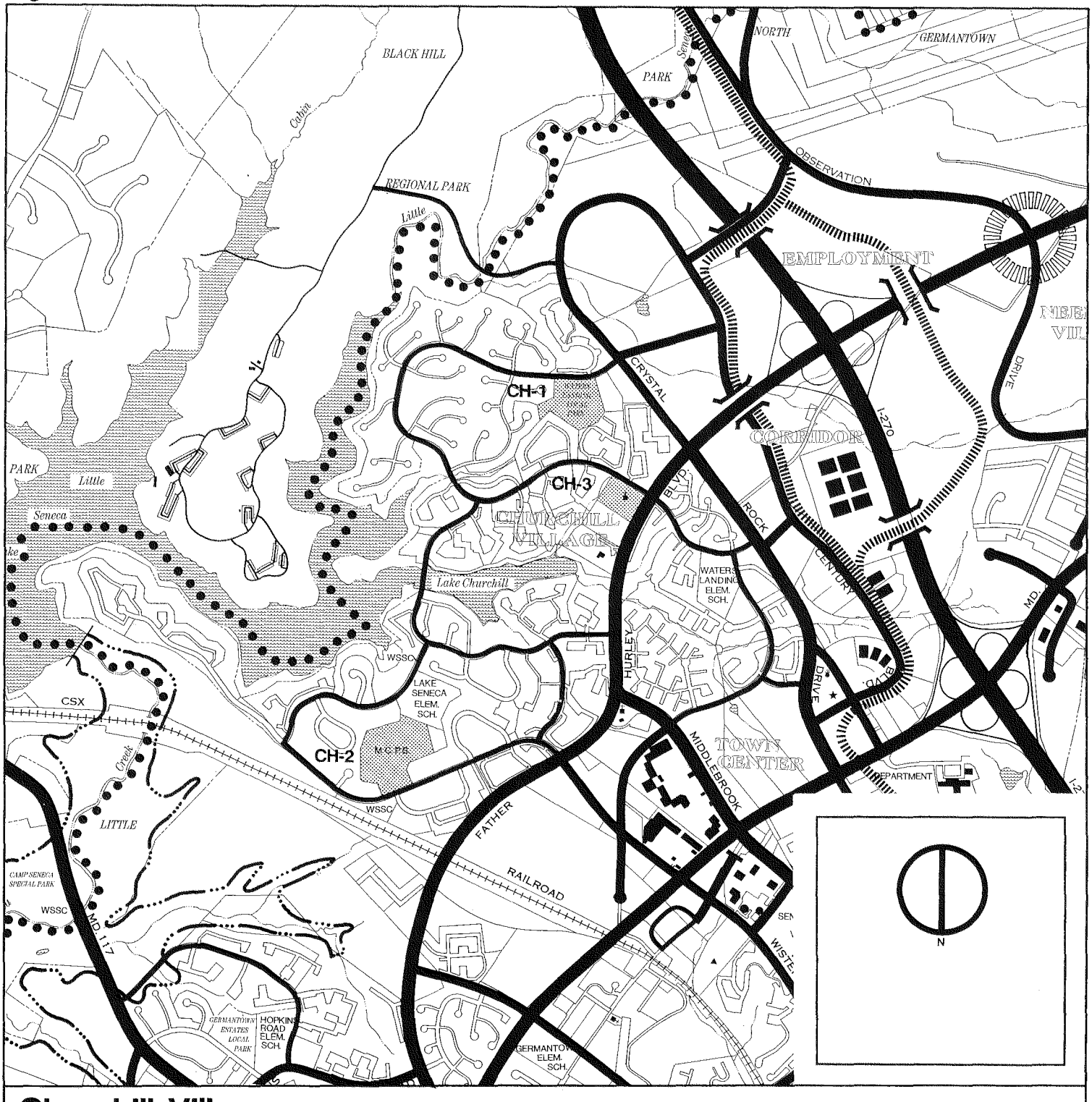
Analysis Area CH-3

This 7-acre Analysis Area, located at the western quadrant of the intersection of Father Hurley Boulevard and Waters Landing Drive, is zoned Town Sector. It is an undeveloped, wooded area adjacent to townhouses and garden apartments. A previous amendment to the 1974 *Master Plan* changed the designation of this area from a Village Center to Community Center. The difference between a Village Center and a Community Center is that a Community Center is not required to provide a supermarket-based retail center. This change was made because the proximity of the two convenience shopping centers in the Town Center significantly reduced the ability to attract suitable tenants to the Village Center. A market analysis [3] confirms the low probability of achieving a retail center with a grocery store as a major tenant at this location. Development should reflect the importance of its highly visible location along Father Hurley Boulevard in order to strengthen the visual image for Churchill Village.

This Analysis Area is appropriate for a church and/or elderly housing.

3 In 1987, a market analysis was prepared in 1987 by the Research Division of the Montgomery County Planning Department for comparison and convenience retail uses in Germantown.

Figure 18



Churchill Village: Analysis Areas

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

TABLE 6

CHURCHILL VILLAGE: LAND USE AND ZONING RECOMMENDATIONS

ANALYSIS AREA NO.	ACREAGE	1974 RECOMMENDED LAND USE; EXISTING DEVELOPMENT; & EXISTING ZONING	MASTER PLAN RECOMMENDED LAND USE & RECOMMENDED ZONING BASE / OPTIONAL	POTENTIAL UNITS BASED ON RECOMMENDED ZONING BASE / OPTIONAL[1]	NET TDR'S OVER BASE	COMMENTS
CH-1	10	Elementary School; Undeveloped; Town Sector	Local Park; Town Sector	—	—	Local Park by Montgomery County Parks Department
CH-2	17	Elementary School; Undeveloped; Town Sector	Park/Recreational Area; Town Sector	—	—	Recommend ballfields and other recreational facilities by Montgomery County Parks Department
CH-3	7	Village Center Commercial; Undeveloped; Town Sector	Church and/ory elderly housing; Town Sector	100 units	—	Establish visual image for village

[1] *Unless otherwise noted, the number of potential dwelling units indicated are the maximum permissible, without the density increase for providing Moderately Priced Dwelling Units (MPDU's). Any subdivision of 50 or more units must include 12.5 percent MPDU's, in which case a density increase of up to 20 percent and optional development standards and unit types are permitted. Densities do not reflect cluster densities.*

Gunners Lake Village

GUNNERS LAKE VILLAGE OVERVIEW (Figure 7 and Table 7)

Gunners Lake Village is located south of MD 118, east of the B&O Railroad, west of I-270, and north of the greenbelt.

Natural features provide a significant visual statement for this Village. Two major stream valleys, Gunners Branch and one of its tributaries, pass through the Village. A lake has been developed on Gunners Branch at its intersection with a tributary, and a large natural area has been preserved along the tributary. A small stormwater management pond has been built at the upper end of the tributary. Achieving a sense of identity in the northern portion of this Village will be a challenge, since it is fragmented by major roads and the 30-acre site of Seneca Valley High School. Wisteria Drive/Waring Station Road provides a major roadway link that helps unify the southern portion of the village.

The development of the 864-acre Gunners Lake Village is virtually complete. Developed primarily in the Planned Development Zones, residential density is relatively high (approximately 9.1 D.U./acre) and the character is dense, particularly along the B&O Railroad where the greatest concentration of garden apartments in Germantown occurs. The predominant housing types are garden apartments and townhouses. Development is in accord with approved Development Plans and with the recommendations of the 1974 *Master Plan.*

The projected end-state population, based on this Plan of approximately 11,400 persons, will be served by a Village Center located at Wisteria Drive and Great Seneca Highway.

A new middle school, one of two needed to serve Germantown, is proposed to be located on the 20-acre

TABLE 7

GUNNERS LAKE VILLAGE: RESIDENTIAL DEVELOPMENT

Mix of Housing Types	Total	SFD	SFA	MF
Existing + Approved Dwelling Units (January 1, 1987)	4,948	355 7%	2,321 47%	2,272 46%
1974 Master Plan + Existing + Approved Dwelling Units	5,062	355 7%	2,435 48%	2,272 45%
1989 Master Plan + Existing + Approved Dwelling Units	4,948	355 7%	2,321 47%	2,272 46%
Change from Existing Plus Approved	0	0	0	225
Change from 1974 Plan	(114)	0	(114)	0

Residential Land Area (Acres)	Total	Committed	Uncommitted
	518	481	37

Acreage does not include dedicated rights-of-way or existing parks and schools.

SFD: Single-Family Detached.
SFA: Single-Family Attached.
MF: Multi-Family.

[Percentages may not total to 100% due to rounding.]

Source: Community Planning North Division, Montgomery County Planning Department.

school-owned site abutting the Waring Station subdivision.

Some issues related to Gunners Lake Village have been considered in the Townscape Design chapter. These issues include land use relationships as well as functional and visual design concerns.

GUNNERS LAKE VILLAGE ANALYSIS AREAS (Figure 19 and Table 8)

Analysis Area GL-1

This Analysis Area has been deleted from the Plan since a site plan for Village Center retail development has been approved and is now under construction.

Analysis Area GL-2

This undeveloped Analysis Area contains 37 acres located along Waring Station Road adjacent to two single-family communities. It is also adjacent to I-270 and the Corridor Cities Transit Easement. Its R-150 zoning is in conformance with the recommendations of the 1974 *Master Plan*.

This property is at a prominent, gateway location as it is the first area in Germantown visible on the west side of I-270 when traveling north. Any development on this property will be highly visible from I-270.

The development area is severely constrained due to the amount of land required for the alignment of the Corridor Cities Transit Easement and due to noise impact from I-270 and the transit easement. Further, a significant portion of the parcel is undevelopable due to the steep slopes of a stream valley. Approximately eight acres appear developable. The remaining land adjacent to I-270 would be an appropriate location for an entry feature for Germantown.

The property might well be appropriate for office use under the O-M (Office, Moderate Intensity) Zone but there are significant issues of compatibility which must be addressed. These issues include:

- Visual buffers need to be provided on the edges adjoining existing residences.
- Views of parking should be effectively buffered from adjoining residences and I-270.
- Lighting impacts on adjoining residences should be minimized.
- Fully adequate parking should be provided on-site so that employees and visitors will not park in the adjoining residential communities.
- Best management practices (BMPs) should be employed in order to protect the stream valley.

One avenue to address these issues would be the filing of an rezoning application for the O-M Zone using the optional method of application and the use of a schematic development plan.

The office building should be of an appropriate scale and design to fit the site's prominent landmark location. A cafeteria within the building is encouraged in order to reduce lunch-hour traffic.

An alternative use of the property could be low-density, single-family detached units set well back from I-270. Townhouse development is not recommended due to the area's high visibility and noise impacts. Low-density, single-family detached units would be compatible with the adjoining residential communities. Given the topography of the site and the relative elevation of I-270, a landscaped berm to buffer the noise and visual impacts from the vehicles on the transit easement and I-270 may not be feasible. Such a small percentage of the site remains suitable for development that it could not accommodate the maximum number of single-family units permitted under the existing R-150 Zone or under the less dense R-200 Zone, unless all of the units were single-family attached. Therefore, this Master Plan recommends that the property be reclassified to the RE-1 Zone, in order to assure that only a limited number of single-family detached units are built in this area, and that the cluster option be permitted. Since this area is under 50 acres, a waiver will be needed to allow for the cluster option.

As noted in the Transportation Chapter, this Analysis Area will be studied as a potential station along the Transit Easement. If this area is designated as a transit station, a master plan amendment should be considered to determine if multi-family residential development would be appropriate.

Analysis Area GL-3

Analysis Area GL-3 is an undeveloped 20-acre parcel. It is zoned R-200 and was recommended as a junior high school site by the 1974 *Master Plan*. Its location is next to the Waring Station subdivision and across Waring Station Road from the Woodlake subdivision.

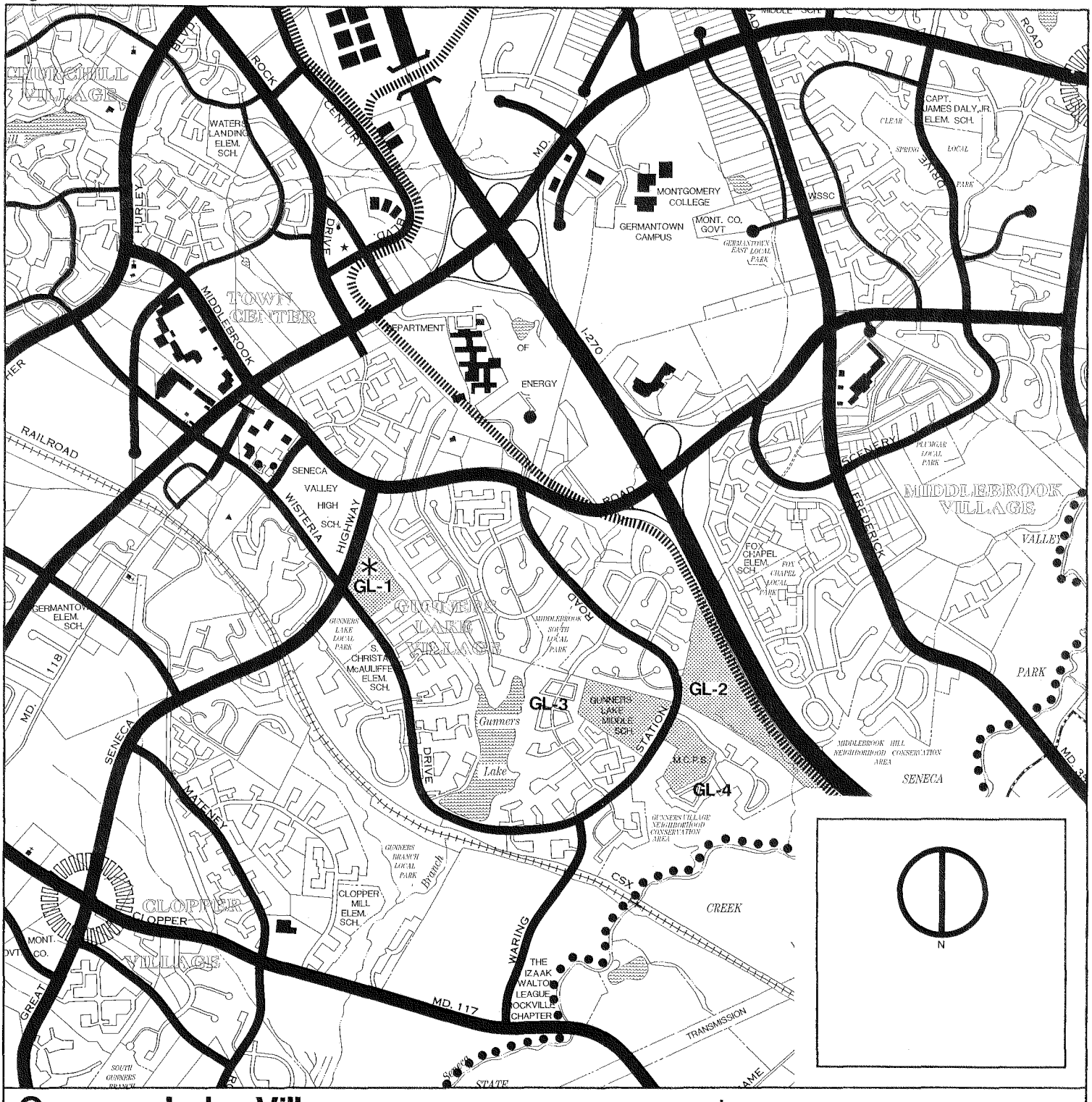
MCPS will use this site for one of three middle schools projected to be needed in Germantown. This Master Plan recommends that a portion of the parcel be developed with ballfields, regardless of whether it is necessary to build a school on this site.

Analysis Area GL-4

Analysis Area GL-4 is zoned R-200 and located on Waring Station Road within the Woodlake subdivision. This partially wooded area was recommended as an elementary school site by the 1974 *Master Plan*. Should Montgomery County Public Schools surplus this 10-acre elementary school site, this Plan recommends that ownership of the property be transferred to the Montgomery County Parks Department and that it be developed as a local park.

Regardless of how this site is developed, this Master Plan recommends that ballfields and courts be constructed to meet community recreational needs.

Figure 19



Gunners Lake Village: Analysis Areas

* Analysis Area GL-1 has been deleted from this Plan.

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

TABLE 8

GUNNERS LAKE VILLAGE: LAND USE AND ZONING RECOMMENDATIONS

ANALYSIS AREA NO.	ACREAGE	1974 RECOMMENDED LAND USE; EXISTING DEVELOPMENT; & EXISTING ZONING	MASTER PLAN RECOMMENDED LAND USE & RECOMMENDED ZONING BASE / OPTIONAL	POTENTIAL UNITS BASED ON RECOMMENDED ZONING BASE / OPTIONAL[1]	NET TDR'S OVER BASE	COMMENTS
GL-1		Since a aite plan has been approved for this Analysis Area, it is deleted from further consideration				
GL-2	37	Residential (4 units per acre); Undeveloped; R-150	Office; RE-1	—	—	Recommend moderate intensity office building or major institutional building Suitable for office use under the O-M Zone if issues of compatibility can be met
GL-3	20	Junior High School; Undeveloped; R-200	Middle School Site; R-200	—	—	
GL-4	10	Elementary School; Undeveloped; R-200	Potential School Site; R-200	—	—	

[1] *Unless otherwise noted, the number of potential dwelling units indicated are the maximum permissible, without the density increase for providing Moderately Priced Dwelling Units (MPDU's). Any subdivision of 50 or more units must include 12.5 percent MPDU's, in which case a density increase of up to 20 percent and optional development standards and unit types are permitted. The number of dwelling units also does not reflect cluster densities.*

Clopper Village

CLOPPER VILLAGE OVERVIEW (Figure 8 and Table 9)

Clopper Village is bounded on the east by the Baltimore and Ohio Railroad, on the north by Relocated MD 118, and on the west and south by the greenbelt. Great Seneca Highway enters this Village on the southeast and bears north, roughly parallel to MD 118, until it terminates at its intersection with Middlebrook Road in Gunners Lake Village. Since most of Clopper Village was gently rolling farmland, trees exist only on the steeply sloped edges of the stream valleys and adjacent to stream channels which were not farmed. Two streams flow through the area, one on each side of Clopper Road. The visual character of the area is derived primarily from views along the roadways.

Several subdivisions have been built in Clopper Village. The predominant housing type is single-family attached dwelling units (2,283) followed by garden apartments (1,033). Existing development is in accordance with the 1974 *Master Plan*.

The remaining undeveloped areas of Clopper Village offer an opportunity to broaden the mix of housing types and to provide a full-service Village Center with up to 170,000 square feet of a commercial retail stores and professional offices; most of this area (approximately 90%) should be developed as retail uses. In addition, the Village Center should also include a middle school, an elementary school, a local park, and such uses as child or elderly day-care centers, churches, and private and/or community recreation facilities.

A second Village Center, serving predominantly residents of Kingsview Village, is recommended to be located at the southern corner of the intersection of MD 118 and Clopper Road.

In keeping with the Corridor City concept, this Master Plan recommends lower densities at the edges of the planning area with higher density units adjacent to village centers and locations of high accessibility.

TABLE 9

CLOPPER VILLAGE: RESIDENTIAL DEVELOPMENT

Mix of Housing Types	Total	SFD	SFA	MF
Existing + Approved Dwelling Units (January 1, 1987)	3,549	233 7%	2,283 64%	1,033 29%
1974 Master Plan + Existing + Approved Dwelling Units	6,165	483 8%	4,204 68%	1,478 24%
1989 Master Plan + Existing + Approved Dwelling Units	7,742	2,960 38%	2,889 37%	1,893 25%
Change from Existing Plus Approved	4,193	2,727	606	860
Change from 1974 Plan	1,577	2,477	(1,315)	415

Residential Land Area (Acres)	Total	Committed	Uncommitted
	924	681	243

Acreage does not include dedicated rights-of-way or existing parks and schools.

SFD: Single-Family Detached.
SFA: Single-Family Attached.
MF: Multi-Family.

[Percentages may not total to 100% due to rounding.]

Source: Community Planning North Division, Montgomery County Planning Department.

This Master Plan provides zoning for an additional 5,000 housing units in Clopper Village. When Clopper Village is fully developed, 20,900 people are projected to live there.

Some issues related to Clopper Village have been considered in the Townscape Design chapter. These issues include land use relationships as well as functional and visual design concerns.

CLOPPER VILLAGE ANALYSIS AREAS (Figure 20 and Table 10)

Analysis Area CL-1

This 39-acre Analysis Area, which includes the western portion of the proposed Germantown Historic District (*Atlas* Site #19/13), is located on both sides of MD 118, west of the B&O Railroad tracks to Proposed Road A-254 (Mateney Road). Current development includes several single-family detached residences, the Germantown commuter rail station, a church, and a medical clinic in a converted residence. A townhouse subdivision is currently under construction adjacent to this Area. The majority of the area is zoned R-200 (Low Density Residential) but portions are zoned C-1 (Local Commercial), I-1 (Light Industrial), and C-O (Commercial Office); all of these zones are in accordance with the recommendations of the 1974 *Master Plan*, as amended.

This Master Plan recommends changing the non-residential zoning classifications to the R-200 Zone in order to retain the existing residential visual character of this historic area. Four properties, however, are suitable for either higher intensity residential use or low-intensity office use:

(1) The property along the railroad tracks, between existing and relocated MD 118, is appropriate for transition uses under the C-T (Commercial Transition) Zone, but the following issues of compatibility need to be addressed at the time of subdivision and site plan review:

- Maintenance of overall compatibility with residential land uses planned for other parts of this Analysis Area.
- Preservation of the existing single-family detached residential character and setbacks.
- Provision of visual buffering of parking areas.
- Retention of existing trees.
- Limitation of building height to two stories.
- Provision of building setback equal to that of adjacent building.

(2) The area between the above property and the existing RT-6 Townhouse subdivision is suitable for the RT-6 (Residential Townhouse — six units per acre) Zone, but the following issues of compatibility need to be addressed:

- Provision of building and parking setback similar to existing residences.
- Provision of visual and acoustic buffer along relocated MD 118.
- Visual screening of parking areas.
- Retention of existing trees.

One way to address these compatibility issues would be through a rezoning application for the RT-6 Zone, using the optional method of application and the use of a schematic development plan.

(3) The property at 19320 Mateney Road, the historic commercial building adjacent to the commuter rail station, and a portion of parcel P209 west of Mateney Road, a total of approximately 6,100 square feet, should be rezoned to the C-T (Commercial Transition) Zone. This property is suitable for special exception uses such as a newsstand and/or delicatessen in order to meet the needs of the commuters. The uses are intended to be provided in the historic building. Adequate off-street parking should be provided on this property. Existing mature trees should be retained.

(4) The property at 19323 Germantown Road and the adjoining vacant lot are suitable for low-intensity office uses and should be rezoned to the C-T (Commercial Transition) Zone, but the following issues of compatibility need to be addressed at the time of subdivision and/or site plan review:

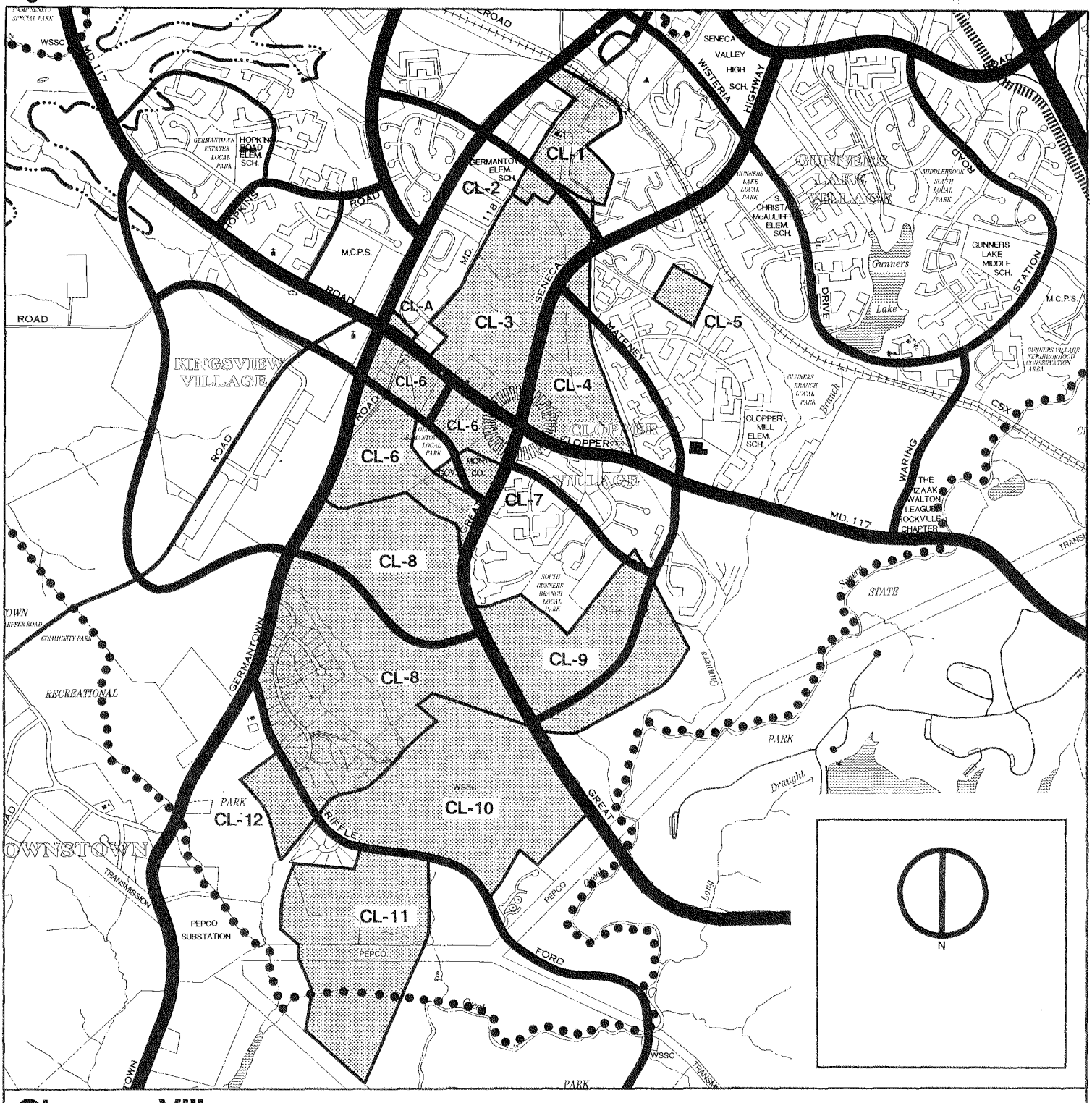
- Preservation of the existing single-family detached residential character and setbacks.
- Visual screening of parking areas.
- Retention of existing trees.

Further, the area adjoining the railroad station is suitable for special exception uses. Special exception uses that conflict with the intent to maintain the single-family detached residential character of the area are not appropriate. Any special exceptions considered for this area should be of a scale compatible with the existing single-family detached residences.

This Master Plan recommends that a streetscape be designed and implemented along existing MD 118, from Proposed Road A-254 to Wisteria Drive, to complement the streetscape proposed for Analysis Area TC-6. (See Townscape Design Chapter.) In order to provide an inviting and pleasant area, this streetscape should include landscaping, lighting, pedestrian areas, and seating areas. The existing bridge over the B&O Railroad tracks will be retained as a pedestrian connection or replaced by a new pedestrian bridge.

The Germantown Historic District, which is identified on the *Locational Atlas and Index of Historic Sites* (*Atlas* Site #19/13), is recommended for inclusion in the *Master Plan for Historic Preservation* by the Historic Preservation Commission and this Plan. The District includes properties on the south side of existing MD 118,

Figure 20



Clopper Village: Analysis Areas

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

TABLE 10

CLOPPER VILLAGE: LAND USE AND ZONING RECOMMENDATIONS

ANALYSIS AREA NO.	ACREAGE	1974 RECOMMENDED LAND USE; EXISTING DEVELOPMENT; & EXISTING ZONING	MASTER PLAN RECOMMENDED LAND USE & RECOMMENDED ZONING BASE / OPTIONAL	POTENTIAL UNITS BASED ON RECOMMENDED ZONING BASE / OPTIONAL[1]	NET TDR'S OVER BASE	COMMENTS
CL-1	39	Residential (2 units per acre), Commuter Rail Station, Local Commercial; Single-family Residential; R-200, C-1, C-0, and I-1	Residential; R-200 (36 acres); C-T (1 acre); and R-200/RT-6 (2 acres)	78 units	—	Historic Resources: Germantown Historic District, Upton Bowman House, and Wallich/Heimer House Portions suitable for office uses and for townhouses if issues of compatibility can be met Pedestrian promenade along existing MD 118
CL-2	7	Public use and residential (5 units per acre); Post Office and Single-family Home; R-200	Residential; R-200	13 units	—	Suitable location for child day-care center by special exception
CL-3	104	Residential (5, 11, and 28 units per acre), Junior High School, Local Park; Undeveloped Except for Existing Church and two Residences; R-200.	Residential; R-200/ TDR	208/667 units (including MPDUs)	358	Historic Resource: Grusendorf Log House Density limited to six units per acre Dwelling unit mix 250 SFD/50 SFA./300 MF on 93-acre property
CL-4	54	Residential (9 and 15 units per acre); Undeveloped Except for a Horticultural Nursery, R-200 (7 acres), R-90 (17 acres), R-60 (12 acres) and RT-12.5 (18 acres)	Residential; R-60 (14 acres); R-90 (38 acres); and R-200 (2 acres)	211 units		
CL-5	10	Elementary School; Undeveloped; R-200	Conservation Area; R-200	—	—	Recommend to be Bellefields Neighborhood Conservation Area owned by Montgomery Country Department of Parks
CL-6	105	Residential (7, 11, 15, 28 and 44 units per acre), Village Center Retail, Local Commercial; Undeveloped Except for Gas Station; R-200 (90 acres), R-30 (13 acres, and C-1 (2 acres)	Residential; R-200/ TDR (63 acres) and R-200/PD-11 (42 acres)	210/840 units	252	Density limited to six units per acre on the portion zoned R-200/ TDR Two acres suitable for rezoning to C-3 if issues of compatibility can be met
CL-7	10	Elementary School Undeveloped; R-200	Public; R-200	—	—	Appropriate public use to be determined in the future

TABLE 10 (Cont'd.)

ANALYSIS AREA NO.	ACREAGE	1974 RECOMMENDED LAND USE; EXISTING DEVELOPMENT; & EXISTING ZONING	MASTER PLAN RECOMMENDED LAND USE & RECOMMENDED ZONING BASE / OPTIONAL	POTENTIAL UNITS BASED ON RECOMMENDED ZONING BASE / OPTIONAL[1]	NET TDR'S OVER BASE	COMMENTS
CL-8	195	Scenic Easement; Undeveloped; RE-2	Residential; R-200/ TDR (195 acres)	390/1170 units	780	Density limited to six per acre Multi-family limited to 300 units for CL-8 and CL-9
CL-9	122	Scenic Easement; Undeveloped; RE-2	Village Center, Residential; R-200/PD-4	244/488 units	—	Village Center: Village Center retail, elementary school, local park, child day-care center, place of worship. 3Multi-family limited to 300 units for CL-8 and CL-9
CL-10	160	Residential (4 units per acre), Park-School; Undeveloped; PD-4	Public (WSSC); R-200	—	—	Future location of expanded wastewater treatment plant
CL-11	127	Residential (2 units per acre) (50 acres), and Greenbelt Park (35 acres, Pepco R.O.W (11 acres), and Outside of Planning Area (31 acres); Undeveloped; R-200 (96 acres) and Rural (31 acres)	Residential; R-200 (85 acres) and RDT (31 acres) plus 11 acres of Pepco right-of-way	171 units	—	
CL-12	19	Greenbelt Park and Residential; Undeveloped; R-200	Residential; R-200	38 units	—	
CL-A	1	R-200; Undeveloped; R-200	Employment; R-200	—	—	Suitable for rezoning for office uses if issues of compatibility can be met

[1] *Unless otherwise noted, the number of potential dwelling units indicated are the maximum permissible, without the density increase for providing Moderately Priced Dwelling Units (MPDU's). Any subdivision of 50 or more units must include 12.5 percent MPDU's, in which case a density increase of up to 20 percent and optional development standards and unit types are permitted. The number of dwelling units also does not reflect cluster densities.*

and the commuter rail station and parking area. This Plan recommends that special consideration be given to buffering the district so that there is a smooth, logical design progression between this historic enclave and the surrounding non-historic buildings and more intense uses. It is strongly recommended that any subdivision or site plan in the areas bordering on and adjacent to the historic district be given careful consideration in terms of its impact on the historic district.

For more detailed information on, and analysis of, this historic district, refer to the Historic Resources chapter and to Appendix L.

Analysis Area CL-2

The 7-acre Analysis Area CL-2 is located across existing MD 118 from Germantown Elementary School and adjacent to proposed roadway Mateney Road (A-254). It is zoned R-200 in conformance with the recommendation for residential development at 2 units per acre in the 1974 *Master Plan*. Currently it is occupied by the Germantown Post Office and a single-family detached residence. The United States Postal Service leases the post office site and is in the process of purchasing another site for an enlarged postal facility. This Master Plan recommends that this area retain its R-200 zoning.

Because of its location in a residential area and adjacent to an arterial road it would be suitable for a child or elderly day-care center, religious facility or other similar use. The existing post office site and building might well be able to be converted into a child day-care center.

The property is not suitable for special exception uses that are not compatible with the existing single-family detached character of this area. Retail or similar uses should be located at other, more appropriate locations.

Analysis Area CL-3

This undeveloped 118-acre Analysis Area is zoned R-200. It is located across existing MD 118 from existing single-family detached residences. Its western edge is adjacent to single-family attached and detached residences. Great Seneca Highway forms its southern boundary with Analysis Area CL-4, which is recommended for residential development at three units per acre. Clopper Road is the western edge of this area. Two streams cross the area which significantly reduces its developable area.

This area was recommended for development in Stage Three under the 1974 *Master Plan* since the programmed public facilities were not adequate to begin development. It, therefore, has not been rezoned into conformance with the 1974 Land Use recommendations.

This Analysis Area represents a significant resource for single-family detached and multi-family residences. The Master Plan, therefore, recommends residential uses under the R-200/TDR Zone at a density limit of six (6) units per acre for most of this Analysis Area. Parcel P359 (6 acres), at the intersection of Clopper Road and Great Seneca Highway, is appropriate for 100 percent multi-family units under TDR development at a density limit of 11 units per acre. On the 93 acres owned in the Analysis Area by NVLand, the number and mix of units should be 250 single-family detached, 50 single-family attached, and 300 multi-family units. This density of development and resultant mix of unit types is recommended because it is:

- compatible with existing and recommended land uses in the surrounding area; and
- consistent both with the intent of maintaining the water quality of the streams which flow through the area while also allowing residential development in recognition of the Analysis Area's accessibility.

This Plan recommends a 10-acre local park for this area. A community building and day-care center would be appropriate uses to serve the community in this subdivision. Ideally, these facilities should be centrally located on the property, adjacent to the local park.

The Grusendorf Log House (*Master Plan* Site #19/19), an historic resource designated on the *Master Plan for Historic Resources*, is located in the southern corner of this Analysis Area. When Clopper Road is widened, the resultant grading may well affect this historic property. As one of the last vestiges of Old Germantown, the Grusendorf Log House should be preserved and kept in its original location as a visual reminder of the small crossroads community from which Germantown has grown. If it is necessary, however, to move this historic resource as a result of roadway construction, it should be relocated in the immediate vicinity. For more detailed information on and analysis of this site, refer to the Historic Resources Chapter and to Appendix L.

Analysis Area CL-4

This undeveloped, 54-acre Analysis Area is in multiple ownerships, and zoned a combination of RT-12.5 (Residential Townhouse), R-60 (Medium Density Residential), R-90 (Residential, One-family Detached), and R-200 (Low-Density Residential). This zoning is in conformance with the recommendations of the 1974 *Master Plan*. It is a triangular area, located south of Great Seneca Highway and bounded by Clopper Road on the west and Old Mateney Road on the east. A portion of this area is subject to pending zoning case G-562, which requests rezoning to PD-7.

Adjoining this area are existing single-family attached units to the east, existing multi-family and

single-family attached units to the west, and Analysis Area CL-3 to the north, which is recommended for residential development at an average density of six units per acre.

The two streams in Analysis Area CL-3 join in Analysis Area CL-4. This confluence creates an appropriate location for a regional stormwater management facility, subject to further investigation by the Montgomery County Department of Environmental Protection (MCDEP) and the M-NCPPC. Most of the site is wooded along the steep slopes of the stream valleys. Given the reduced development area and the concern for maintaining the water quality of this tributary of Gunners Branch, careful design will be necessary, particularly on the northern portion of the site.

As a result, this Master Plan recommends this Analysis Area for residential development at three to four units per acre plus MPDU's. This overall density is compatible with the area to the north; the single-family attached units, constructed on the developable area, are compatible with adjoining development to the east and west. The 14.26-acre parcel at the intersection of Clopper Road and Great Seneca Highway is recommended for residential development at five units per acre under the R-60 Zone. The remaining portion of the Analysis Area should be zoned R-90 or PD-4 in order to achieve the objectives of this Plan. The use of the cluster option is encouraged.

A small parcel (4.69 acres) at the southeastern corner of this Analysis Area is recommended for R-90 Zoning, and the assemblage of this property with adjoining properties is strongly recommended. Should the property owner decide to develop this property individually, the number of units should be significantly reduced from the 19 units that would otherwise be allowed, due to the extent of environmentally sensitive areas on this parcel. This parcel is recommended for cluster development and may be fully developed with single-family attached units.

Preserving trees and restricting development from the edges of the stream valley are especially important in this area and must be considered at the time of development plan, subdivision, and site plan review. The portion of Clopper Road adjacent to this Analysis Area is part of the landscaped greenway. Further, given the curves of Clopper Road, this area is highly visible for travelers in both directions. Therefore, the view of this site and the landscaping along the edge are important. During site plan review, the Planning Board should consider the need to provide a significant buffer of existing trees (probably 100-200 feet) beyond the grading required for the widening of Clopper Road in order to achieve a visual buffer. Dwelling units may need to be set back further than 200 feet to provide noise mitigation. Berms are not recommended as they would cause further tree removal and because they would not be effective for noise attenuation as the land slopes down from Clopper Road.

Due to the extent of environmental constraints, development of all townhouses may be permitted in this Analysis Area. Townhouses and single-family attached units, however, should not be readily visible from the major roads. Further, backyards also should not be visible from those roads.

Analysis Area CL-5

Analysis Area CL-5 is an undeveloped 10-acre school site which has been declared surplus by the Board of Education. It is zoned R-200 in conformance with the 1974 *Master Plan*. Two single-family attached communities (Cinnamon Woods and Seneca Forest) border the area on all sides except for where it adjoins the stream valley park. It is totally covered with mature hardwood trees. Access to the area is provided by an easement to Cinnamon Drive. This Plan recommends that the County transfer ownership of this Analysis Area to the Montgomery County Parks Department to supplement the adjoining stream valley park and preserve the existing mature trees.

Analysis Area CL-6

This 105-acre Analysis Area is in the northwestern portion of Clopper Village. It adjoins existing and planned single-family detached areas to the west (across Clopper Road), and north (across MD 118). The area to the east and south is planned for low-density, single-family detached residential development. All of this area is zoned R-200 (Residential One-family, Detached) except for a 13-acre section zoned R-30 (Multi-family, Low-Density).

The Analysis Area was recommended for development in Stage Three under the 1974 *Master Plan* and, thus, except for the R-30 zoned parcel, zoning has not been brought into conformance with the land use recommendations of the 1974 *Master Plan*. (Refer to Implementation chapter.)

There are two major portions of this Analysis Area. They are separated by a stream valley and publicly-owned land. The western portion adjoins other areas recommended for a combination of single-family and multi-family residential development. The eastern portion is located adjacent to Clopper Road (M-26) and extends from Great Seneca Highway to existing MD 118.

The 42-acre eastern portion of the Analysis Area is recommended to include a Village Center to serve Kingsview Village at the southern quadrant of the intersection of MD 118 and Clopper Road. Due to existing and planned development and significant environmental constraints, no appropriate site for a Village Center could be located in Kingsview Village and it

was necessary, therefore, to identify a site in Clopper Village that is accessible to Kingsview Village residents. The proposed Village Center should include up to 170,000 square feet of retail development and professional office space with most of the area (approximately 90%) devoted to retail uses. The entire eastern portion of the Analysis Area is recommended for rezoning to the PD-11 Zone. The portion of the eastern section of the Analysis Area not developed as the Village Center is recommended for garden apartments at a density of 11 units per acre. In addition, a park-and-ride facility should be developed in the eastern portion of the Analysis Area.

The 63-acre western portion of the Analysis Area is recommended for a combination of single-family and multi-family residential development under the R-200/TDR Zone. This area is suitable for a density up to six units per acre exclusive of MPDU bonus density. Unless the Planning Board finds otherwise for environmental reasons, no more than 20 percent of the total number of single- family residential units should be attached. Multi-family units are appropriate adjacent to the retail portion of the Village Center.

This area is located at the headwaters of one of the tributaries of Great Seneca Creek. Off-site regional stormwater management facilities are recommended to serve this Analysis Area. Safe conveyance of runoff, together with the requirement of additional water quality best management practices (BMPs), will also have to be comprehensively addressed by MCDEP and the M-NCPPC at the time of subdivision review.

The wooded area immediately upstream from Great Seneca Highway is a possible location of a stormwater management facility (This is the portion of this Analysis Area that is currently zoned R-30.) Except for narrow areas along the eastern and western edges, this parcel is not appropriate for development since the remainder is stream valley and the adjacent steep valley walls. Further investigation is needed by MCDEP to determine if the existing road embankment of Great Seneca Highway can be used as the dam for a stormwater management facility.

A site at the west quadrant of Clopper Road and existing MD 118 is appropriate for the relocation of an existing gas station across MD 118. This gas station will be displaced by the widening of Clopper Road. The issue of compatibility with adjacent planned development needs to be addressed. One means of addressing this issue would be through a rezoning application for the C-3 Zone using the optional method of application with a limitation on uses and a schematic development plan.

Analysis Area CL-7

Analysis Area CL-7 is a 10-acre surplus school site which is located at the intersection of Great Seneca Highway and the proposed Hoyles Mill Road extension. It is zoned R-200 in conformance with the recommendations of the 1974 *Master Plan.* It adjoins the site of the proposed Old Germantown Local Park. Three acres of the northern portion of the Analysis Area should supplement the active recreation area to be developed in the proposed park. To this end, Montgomery County Parks Department has already indicated its interest in the property. No public use has, as yet, been identified for the remainder of the property. If such a use is not identified, the remainder of this property should also become part of the local park.

Analysis Area CL-8

This 195-acre Analysis Area extends from MD 118 to Great Seneca Highway; it is zoned RE-2 because the 1974 *Master Plan* recommended it as a scenic easement. The Scenic Easement designation was requested by the former owner since he intended to maintain the farming activities. The easement was never granted and the property has changed hands. This Master Plan recognizes that this Analysis Area and Analysis Area CL-9 are appropriate for residential and Village Center development. Due to the current ownership of most of CL-8 and CL-9 by one property owner and the Council's desire to maintain some flexibility in the development of these two Analysis Areas, certain development limitations described below apply to both areas combined. It would be highly desirable to have a joint subdivision plan for both areas. If this is not feasible for timing or other reasons, the Planning Board, when reviewing the subdivision plan for one Analysis Area, should consider the impact on the other Analysis Area.

This Plan recommends this Analysis Area for the R-200/TDR Zone at a density up to six units per acre. The overall density of CL-8 and CL-9 should not exceed five units per acre and the total number of multi-family units for both CL-8 and CL-9 should not exceed 300. The preferable location for the multi-family units is near the Village Center.

Unless the Planning Board finds otherwise for environmental reasons, no more than 20 percent of the total number of residential units should be single-family attached. The attached units should be located in the central portion of the area where their visibility will be reduced by the intervening dwelling units and vegetation.

This Master Plan recommends that an intermediate school be located in this area. Its 20-acre site should be identified at the time of subdivision approval. The timing of MCPS's construction of the school will relate to pupil enrollment in the attendance area.

A 10-acre local park is needed to meet the recreational needs of this portion of Germantown. It should be developed concurrent with the residential construction in this Analysis Area. A community building and

child day-care center are appropriate uses to be constructed by the developer of this Analysis Area. They should be located adjacent to the local park.

A regional stormwater management facility could be located in this Analysis Area. (See Figure 39.) It should be constructed in a non-wooded area on an unnamed tributary of Great Seneca Creek in the western portion of the area. A stormwater management facility at this location would not require either extensive grading or tree loss and could provide stormwater management protection for approximately one-half of this Analysis Area, plus additional portions of the watershed.

Analysis Area CL-9

This 129-acre Analysis Area is located south of Great Seneca Highway roughly between Riffle Ford Road and Clopper Road. It is zoned RE-2 in conformance with the Scenic Easement recommendation of the 1974 *Master Plan*. (See Analysis Area CL-8.) Except for some agricultural buildings, the area is undeveloped. One of these buildings, the William Cromwell House (*Atlas* Site #19/23), is identified as an Historic Resource in the *Locational Atlas and Index of Historic Sites*. It is not recommended for inclusion in the *Master Plan for Historic Preservation* by either the Historic Preservation Commission or this Plan. For more information on this site, refer to the Historic Resources chapter and to Appendix L.

This Analysis Area is recommended as the location of the Clopper Village Center. Development of this Village Center is recommended to be in the PD-4 zone with an R-200 base zone. The 1974 *Master Plan* recommended a property near the intersection of Clopper Road and Great Seneca Highway as the location of Clopper Village Center. This Plan recommends relocating Kingsview Village Center to the southern quadrant intersection of Clopper Road and relocated MD 118 (see Analysis Area CL-6). Therefore, this Plan recommends relocating Clopper Village Center away from the Kingsview Village Center at Clopper Road to this strategic location on Great Seneca Highway.

The retail component of the Clopper Village Center will be located along the eastern side of Great Seneca Highway at its intersection with Mateney Road. The Village Center should provide easy access to the homebound traffic generated by commuting residents of the village and by other commuters. Evening commuters returning to Germantown will be able to enter the village center easily by making a right-hand turn off Great Seneca Highway onto Mateney Road, and to continue on their way home by making a right-hand turn back onto Great Seneca Highway. This Village Center will meet the convenience needs of the residents of Clopper Village, other residents of Germantown, and commuter traffic moving through Germantown.

This Analysis Area is located at an important gateway to Germantown along Great Seneca Highway. The design of this Village Center should establish a meaningful visual event at this location. The orientation of buildings within the Clopper Village Center should enhance the image and character of the roads that lead to it. Since Great Seneca Highway is recommended to be a landscaped greenway, the Clopper Village Center should contribute to the landscape design along the road edge to maintain a strong visual connection to the parkway design recommended for Great Seneca Highway.

A mix of uses is proposed at Clopper Village Center. The Village Center should be limited to 170,000 square feet of convenience retail and medical and community related offices, with most of the space (approximately 90%) devoted to retail uses. In addition, such uses as a local park, child day-care centers, places of worship and community recreation facilities are appropriate.

The following development guidelines should be considered when reviewing development proposals for this Analysis Area:

- Creation of pedestrian and bicycle connections between the Village Center and the adjoining uses.
- Creation of buffers between the adjacent residential areas and the commercial uses of the center using public spaces or low-intensity offices, landscaped areas or recreation areas as transitions.
- Achievement of a landscape design along the edge of the Village Center that complements the parkway design of Great Seneca Highway and the natural landscape of South Gunners Branch Local Park.
- Screening of the backyards of residential units from Mateney Road.

The residential area immediately adjacent to the retail component of the Village Center would be appropriate for higher density residential development such as garden apartments or single-family attached units and the Plan recommend that most, if not all, of the 300 multi-family units allowed in CL-8 and CL-9 be located in this area. Further, the residential development in this Analysis Area is an appropriate location for a retirement community. A child or elderly day-care center and a community building should be constructed by the developer as part of the community facilities for this subdivision.

Analysis Area CL-10

Analysis Area CL-10 is zoned PD-4 in conformance with the recommendations of the 1974 *Master*

Plan. It is located north of Seneca State Park between Great Seneca Highway and Riffle Ford Road. This area was recently acquired by the Washington Suburban Sanitary Commission (WSSC) to expand the existing Seneca Wastewater Treatment Plant located at the southeastern edge of the area. This Plan recommends that this Analysis Area be rezoned to the R-200 Zone. This recommendation is consistent with adjacent zoning recommendations and in conformance with the intent of reducing residential densities toward the edge of the planning area.

Stormwater management and erosion control measures for the eastern portion of the property must be carefully planned and implemented to insure protection of existing off-site wetland areas. In addition, a minimum 500-foot-wide buffer, including landscaped berms, should be established along the edges of the property.

Analysis Area CL-11

Analysis Area CL-11 is an undeveloped, 127-acre area that lies on the southwest side of Riffle Ford Road. It is located on a stream that enters Great Seneca Creek below the Seneca Sewage Treatment Plant. A portion of the property lies outside the Germantown Planning Area and is in the Rural Zone; the majority of the area is zoned R-200.

A significant portion of this area (35 acres) was recommended to be part of the South Germantown Greenbelt Park in the 1974 *Master Plan*. The proposed park boundaries were subsequently amended to exclude this area.

The 31-acre portion in the Rural Zone should have been rezoned to the RDT Zone by Sectional Map Amendment (SMA) G-266, which implemented the Agricultural Preservation Plan. It is part of a 73-acre area that was inadvertently omitted from the SMA. Therefore, this area immediately adjoining the Germantown Planning Area, is recommended to be rezoned to the RDT Zone by the SMA following the adoption of this Plan.

The remaining 85 acres should remain R-200 zoning. Should the Seneca Wastewater Treatment Plant be expanded, consideration should be given to plant buffer needs, which could influence house siting on this parcel. PD-2 rezoning would provide the flexibility of design needed, but the number of single-family detached units should be maximized through the use of a waiver on the number of single-family attached units required.

Analysis Area CL-12

Analysis Area CL-12 is a 19-acre area containing an historic resource identified on the *Locational Atlas and Index of Historic Sites*, the C.T. Leaman House (*Atlas* Site #19/26). This resource is not recommended for inclusion in the *Master Plan for Historic Preservation* by either the Historic Preservation Commission or this Plan. For more information on the Leaman House, refer to the Historic Resources chapter and to Appendix L.

This Area is located west of Riffle Ford Road adjoining part of the South Germantown Greenbelt Park. The stream next to the property enters Great Seneca Creek downstream from the Seneca Sewage Treatment Plant.

This Analysis Area was recommended to be part of the South Germantown Greenbelt Park in the 1974 *Master Plan*. The proposed park boundaries were subsequently amended to exclude this area. This Master Plan recommends retaining the existing R-200 zoning of this Analysis Area.

Analysis Area CL-A

The Analysis Area is north of Clopper Road between Existing MD 118 and Realigned MD 118. The property is currently zoned R-200. It is surrounded on three sides by highways and has existing and proposed commercial uses to its south and east and townhouses to its north. Analysis Area CL-A was identified as the result of testimony received by the County Council from the property owner.

This one-acre area is appropriate for transitional uses under the C-T (Commercial Transition) Zone, but the issue of compatibility with the adjacent single-family residences needs to be properly addressed.

One avenue to address these compatibility issues would be a rezoning application for the C-T Zone, using the optional method of application and a schematic development plan.

Kingsview Village

KINGSVIEW VILLAGE OVERVIEW (Figure 9 and Table 11)

Kingsview Village is bounded on the east by the Baltimore and Ohio Railroad, on the south by relocated MD 118, and on the north and west by the greenbelt. The Village drains into Little Seneca Creek, which flows through the greenbelt. Major transportation access to Kingsview Village is provided by relocated MD 118, Clopper Road, and the proposed extension of Father Hurley Boulevard (M-27). At present, 889 acres (72 percent) are uncommitted.

Recent residential development has occurred in the eastern portion of the Village. Currently, there are 378 units in Kingsview, but an additional 1,400 units could be built on recorded lots east of Clopper Road. If these housing units were constructed, the resulting housing mix would be predominantly single-family attached.

TABLE 11
KINGSVIEW VILLAGE: RESIDENTIAL DEVELOPMENT

Mix of Housing Types	Total	SFD	SFA	MF
Existing + Approved Dwelling Units (January 1, 1987)	1,701	379 22%	1,322 78%	0 0%
1974 Master Plan + Existing + Approved Dwelling Units	5,251	1,879 36%	2,897 55%	475 9%
1989 Master Plan + Existing + Approved Dwelling Units	5,155	3,053 59%	1,497 29%	605 12%
Change from Existing Plus Approved	3,454	2,674	175	605
Change from 1974 Plan	(96)	1,174	(1,400)	130

Residential Land Area (Acres)	Total	Committed	Uncommitted
	1,231	342	889

Acreage does not include dedicated rights-of-way or existing parks and schools.

SFD: Single-Family Detached.
SFA: Single-Family Attached.
MF: Multi-Family.

[Percentages may not total to 100% due to rounding.]

Source: Community Planning North Division, Montgomery County Planning Department.

This Master Plan proposes to increase the opportunity for additional detached units west of Clopper Road. The western portion of the Village is particularly appropriate for single-family detached units to reflect the Corridor City concept of development, environmental concerns, and the need to increase the number of single-family detached units.

When the residential development of Kingsview Village is complete, 15,200 people are projected to reside there. Most of the development on the 889 acres of uncommitted land should be single-family detached homes.

This Master Plan also recommends that a community recreation center be developed on the 30 acre County-owned site on Clopper Road. This center should be designed so that a school can also be accommodated, should an additional school be required in the future. Present projections indicate that such a school will not be needed. This excellent site is large enough to accommodate a full community recreation center, complementary community uses, and a school sharing some recreation facilities, if needed.

Some issues related to Kingsview Village have been considered in the Townscape Design chapter. These issues include land use relationships as well as functional and visual design concerns.

KINGSVIEW VILLAGE ANALYSIS AREAS (Figure 21 and Table 12)

Analysis Area KI-1

This Analysis Area is located in the northeastern portion of Kingsview Village and adjoins Little Seneca Creek and the railroad tracks. The western edge borders the future portion of the Germantown Estates subdivision, which will have a mixture of single-family detached units, duplexes and townhouses. This undeveloped 171-acre property is zoned R-200 in conformance with the 1974 *Master Plan*. It has extensive environmental constraints due to the presence of a stream valley with steep slopes covering much of the land area, and to noise impacts from the railroad. The area is also traversed by Father Hurley Boulevard (M-27) with its additional impacts. Only about half of the total area can realistically be developed.

The northern portion of the property is recommended for single-family detached residential development and to retain its R-200 zoning. The southern portion of the property (35 acres) is recommended for garden apartment development under the R-200/TDR Zone. It is recommended for a density level of 11 in order to permit all of the units to be multi-family.

This analysis area is in service categories W-4 and S-4 (service between three to six years) of the *Comprehensive 10-Year Water Supply and Sewerage System Plan.* These categories are recommended to be changed to W-3 and S-3 (service within two years) since the property should be developed concurrently with the adjacent portions of Manchester Farms Subdivision (formerly Germantown Estates). This area is tributary to the sewage pumping station which will serve Manchester Farm.

Analysis Area KI-2

Analysis Area KI-2 is a large area (771 acres) bounded by Clopper Road, Schaeffer Road, and the greenbelt park. Under the 1974 *Master Plan* this Area has been in Stage Four of the Germantown Staging Plan. (Refer to Implementation Chapter.) Therefore, it has not been rezoned in conformance with the Land Use recommendations of the 1974 *Master Plan* and remains zoned R-200. All of the area is in agricultural use. Three tributaries of Little Seneca Creek drain the area.

The entire Analysis Area is recommended to retain its R-200 zoning classification and is appropriate for rezoning to the PD-2 Zone with a density limit of approximately 1.74 units per acre, excluding MPDU's. The purpose of the PD-2 Zone is to enable garden apartments to be used to meet the MPDU requirement instead of townhouses. For example, the dwelling unit mix on the 417 acre King's Crossing area is recommended to be 725 single-family detached units and 110 garden apartments. The use of garden apartments will produce less impervious surface than townhouses on a per-unit basis, which would be beneficial in this environmentally sensitive area. The use of garden apartments instead of townhouses will also improve the mix of housing types in Germantown.

This area drains to a section of Little Seneca Creek, a Class IV (Recreational Trout Waters) stream as defined by the State's Water Use Classification system. (See Appendix C.) The existing water quality in this section is considered to be very high as indicated by its potential for supporting a naturally reproducing trout population. Development in this Analysis Area will be subject to special environmental protection measures. (See Appendix D.)

The *Locational Atlas and Index of Historic Sites* identifies five historic resources in this Area: The Richter/King Farmhouse (*Atlas* Site #19/15), the Richter/King Farm (*Atlas* Site #19/16), and the Snyder/King Barn #2 (*Atlas* Site #19/24) are not recommended for inclusion in the *Master Plan for Historic Preservation* by the Historic Preservation Commission or this Plan.

The Leaman Farmhouse (*Atlas* Site #19/17-1) was recommended for placement on the *Master Plan for Historic Preservation* by the Historic Preservation Commission and the Planning Board, but this decision was not confirmed by the Council.

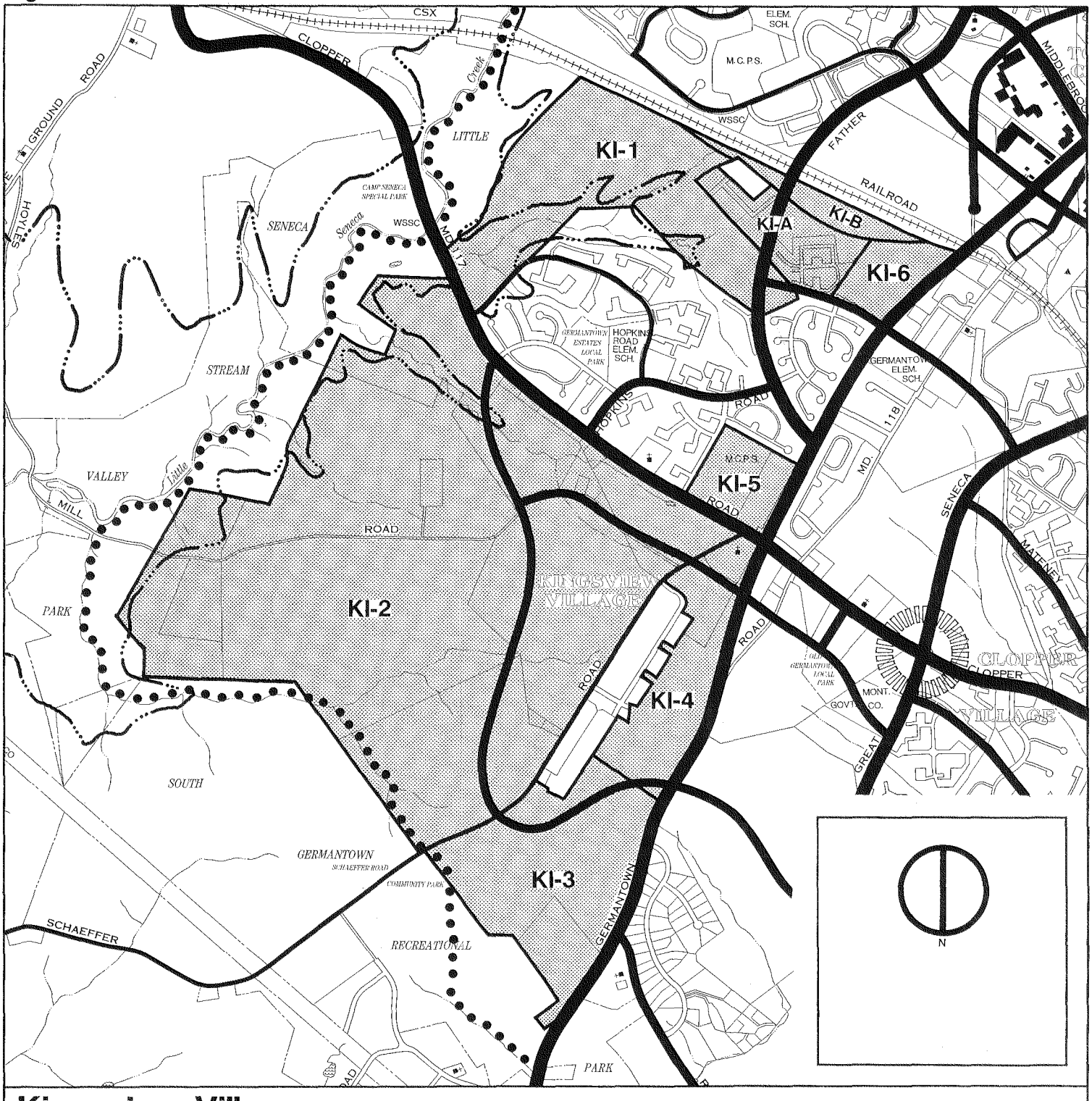
The Henry Musser Farm (*Atlas* Site #19/14) was recommended by the Historic Preservation Commission for historic designation, but the Planning Board did not concur with this evaluation and does not recommend it for *Master Plan* inclusion. The Council concurred with the Planning Board's recommendation.

For more detailed information on, and analysis of these sites, refer to the Historic Resources chapter of this Plan and to Appendix L.

The development of Proposed Road A-297 from Schaeffer Road to Clopper Road and the widening of Hoyles Mill Road create significant environmental issues. The principal impacts of extending arterial roads into the Little Seneca Basin include: additional increase in stormwater runoff; generation of large quantities of pollutants, particularly toxic metals; and the generation of large quantities of sediment. The negative impacts can be diminished if the following mitigation measures are incorporated in the planning, design, construction, and maintenance of the roadway:

- If at all possible, the direct discharge of concentrated roadway runoff to the receiving streams, especially via long pipes or concrete conduits, or over non-vegetated surfaces is to be avoided. For both water quantity and quality reasons, it is recommended that runoff should be conveyed through grass swales 200 feet or more in length leading to a safe outfall. Curb and gutter drainage should be completely avoided to reduce the volume of concentrated pollutant-laden runoff.
- Because of the negative water quality impacts associated with "first flush" runoff, water quality measures such as stone-filled infiltration trenches should be incorporated into roadway design.
- All runoff from the road should be safely conveyed and outfalled. Outfall structures should be designed to dissipate runoff to non-erosive levels. Where appropriate, velocity reduction-dissipating devices such as "plunge pools" and level spreaders should be incorporated into drainage system design.
- All clearing and grading activities shall strictly adhere to the U.S. Soil Conservation Services (SCS) guidelines pertaining to erosion and sediment control. Phased clearing and grading is strongly recommended. Furthermore, all

Figure 21



Kingsview Village: Analysis Areas

Comprehensive Amendment
to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

TABLE 12

KINGSVIEW VILLAGE: LAND USE AND ZONING RECOMMENDATIONS

ANALYSIS AREA NO.	ACREAGE	1974 RECOMMENDED LAND USE; EXISTING DEVELOPMENT; & EXISTING ZONING	MASTER PLAN RECOMMENDED LAND USE & RECOMMENDED ZONING BASE/OPTIONAL	POTENTIAL UNITS BASED ON RECOMMENDED ZONING BASE /OPTIONAL[1]	NET TDR'S OVER BASE	COMMENTS
KI-1	171	Residential (2 units per acre); Undeveloped R-200	Residential; R-200 (136 acres) and R-200/TDR (35 acres)	342/657 units	315	Density limited to 11 units per acres on R-200/ TDR portion
KI-2	771	Residential (2, 3, 4, 5, 15, and 28 units per acre) and Village Center; Scattered Single-Family Residential, Otherwise Undeveloped; R-200	Residential; R-200 or PD-2	1,342 units	—	Development subject to stringent environmental mitigation measures (See Appendix D)
KI-3	132	Residential (2 and 3 units per acre); Undeveloped; R-200	Residential; R-200/TDR	264/465 units including MPDU's	132	Dwelling units limited to 465 units including MPDU's
KI-4	73	Residential (2 and 11 units per acre); Undeveloped; R-200	Residential; R-200/TDR	146/292 units	146	Density limited to four units per acre
KI-5	30	Senior High School; Undeveloped; R-200	Recreation and/or school	—	—	Village Center: public recreation, village center commercial, and multi-family residential
KI-6	24	Employment; Undeveloped; I-1	Employment; I-1 (11 acres) and R-200 (13 acres)	—	—	Area recommended for R-200 is suitable for office use and buffer if issues of compatibility can be met
KI-A	38	Residential; Undeveloped; R-90 (23 acres) and RT-6 (15 acres)	Residential; R-90 (23 acres) and RT-6 (15 acres)/PD-15 (38 acres)	230 units including MPDU's	—	Area currently has 230 recorded townhouse lots
KI-B	21	Railroad Right-of-way; R-200	Employment; I-3 (0.25 FAR)	—	—	

[1] *Unless otherwise noted, the number of potential dwelling units indicated are the maximum permissible, without the density increase for providing Moderately Priced Dwelling Units (MPDU's). Any subdivision of 50 or more units must include 12.5 percent MPDU's, in which case a density increase of up to 20 percent and optional development standards and unit types are permitted. The number of dwelling units also does not reflect cluster densities.*

sediment traps should be designed to maximize trapping efficiency. The use of so-called "super traps," sediment traps which have storage capacities far exceeding those required by the SCS, is strongly recommended. The use of sediment basins, which are more costly but have a much higher trapping efficiency than sediment traps or "super traps," should be seriously considered. All erosion and sediment control measures are to be properly and expeditiously employed and maintained. Disturbed areas which will be left exposed to erosive forces for more than 30 days should be seeded and mulched in accordance with SCS guidelines.

- If possible, the use of fine sands and road salts during winter operations should be minimized, as these materials significantly increase the suspended and dissolved solids loads on receiving waters.
- All storm drainage and erosion/sediment control plans are to be reviewed and approved by the Planning Board's Environmental Planning Division as well as by the Parks Department.

The adherence to these measures may add additional cost to the construction and maintenance of the roadway.

Special guidelines for development in this Analysis Area are provided in the Environmental chapter and Appendix D.

Subdivision plan review should assure that roadways connecting to Proposed Road A-297 in this area are aligned along the ridges and that new stream channel crossings do not occur. An elementary school and a local park are recommended to be located in this Area near the intersection of Proposed Road A-297 and Schaeffer Road.

Analysis Area KI-3

Analysis Area KI-3 contains 132 undeveloped acres at the southwest corner of Kingsview Village. It is bordered by Schaeffer Road to the north, MD 118 to the south, and South Germantown Regional Park on the west. Areas recommended for future residential development lie to the east and across both adjacent roads.

This Analysis Area is appropriate for single-family detached residential development. It is recommended to be rezoned to R-200/TDR at a density level of three units per acre. In response to environmental and compatibility issues the total number of units, including MPDU's should be limited to 465. Unless the Planning Board finds otherwise for environmental reasons, no more than 20 percent of the units should be single-family attached.

Stormwater management outfalls should enter the Great Seneca Creek Basin.

Analysis Area KI-4

Analysis Area KI-4 is an undeveloped 73-acre area zoned R-200 in conformance with the recommendations of the 1974 *Master Plan*. This area is located west of Clopper Road between Schaeffer Road and MD 118 and adjoins the Kingsview Knolls single-family detached subdivision. It lies in an area near existing and future single-family residential units.

This Master Plan recommends this area for primarily single-family detached residences. This Analysis Area is recommended for the R-200/TDR Zone at a density level of four units per acre. Unless the Planning Board finds otherwise for environmental reasons, no more than 20 percent of the units constructed on this property should be single-family attached.

This Analysis Area is located in the Great Seneca Creek Watershed. The sewage flows and stormwater flows from this Analysis Area should all be directed into that watershed.

Analysis Area KI-5

This 30-acre Analysis Area is located at the northern corner of the intersection of Clopper Road and relocated MD 118. Existing townhouses and single-family detached homes border the area to the east and recorded lots for quadraplex residential units are across Kingsview Road to the north. It is zoned R-200 in conformance with the 1974 *Master Plan*. It was acquired in the early 1970's by Montgomery County Public Schools for a senior high school; MCPS is not certain at this point in time whether this site will be needed for a school site.

This excellent, highly visible site should remain in County ownership and developed as a community recreation center to serve west Germantown. The design should ensure that, if a school is needed in this area in the future, it can also be built on this site and certain recreation facilities shared.

Analysis Area KI-6

This undeveloped 24-acre analysis area is zoned I-1 for light industrial use, in conformance with the recommendations of the 1974 *Master Plan*. It is located north of relocated MD 118 between the railroad tracks and proposed Road A-254 (Mateney Road).

This property is the only industrially zoned area on the west side of the railroad. It is bordered on one side by existing single-family detached homes and townhouses. On another side are recorded townhouse lots. The uses permitted in the I-1 Zone are not compatible with a residential community.

Given the proximity of existing and approved single-family residential uses, this Plan recommends that compatibility with the adjacent residential areas be achieved in the following manner:

- Provision of a 50-foot undisturbed easement along the perimeter of the property on all sides except the railroad property boundary.
- Provision of on the sides, along MD 118 and A-254, a 200-foot deep area (including the easement) of moderate intensity offices.
- Limiting building heights to three stories along A-254 and for 600 feet along MD 118 northeast from A-254, with the tallest structure adjacent to the railroad.

The interior of the property is recommended to retain its existing I-1 zoning classification. The easement and office area are suitable for moderate intensity office development in the O-M Zone if the following compatibility issues can be addressed.

- Provision of an undisturbed easement 50 feet deep along the three edges of the property adjacent to residential areas.
- Preservation of mature trees to the maximum extent possible.
- Limiting building heights to three stories along A-254 and for 600 feet along MD 118 northeast from A-254.

Analysis Area KI-A

This Analysis Area includes two portions of the Germantown Estates subdivision. There is a total of 230 recorded lots in these two areas. In order to encourage additional multi-family residential development, this Analysis Area is recommended for rezoning for 100 percent garden apartment development under the PD-15 Zone. The number of units, however, should be limited to 230.

Analysis Area KI-B

This 21-acre Analysis Area is located directly south of the CSX Railroad right-of-way and west of relocated MD 118; it is currently owned by CSX Railroad. The property is surrounded by existing and proposed uses in the R-MX, PD-15, I-1 and R-200 Zones. This Analysis Area was identified as a result of testimony received by the County Council from the property owner.

This Plan recommends that the property be zoned I-3 with a 0.25 FAR. The base zone should be R&D; however, this area is not suitable for the optional method of development due to issues of compatibility with surrounding residential uses.

Middlebrook Village

MIDDLEBROOK VILLAGE OVERVIEW (Figure 10 and Table 13)

Middlebrook Village is bounded by I-270 on the west, relocated MD 118 on the north, and the greenbelt on the east and south. The Village is crossed by MD 355 and Middlebrook Road and the future extension of Midcounty Highway (M-83) is planned to be built along the eastern edge of the village.

Much of Middlebrook Village has been developed. Approximately 45 percent of the area remains for future residential development. These parcels extend along the eastern edge of the Village and on the western side of MD 355, north of Middlebrook Road. The predominant housing type is single-family attached, followed by garden apartments. In keeping with the Corridor City concept, the properties next to the greenbelt should be built with lower density residences. When Middlebrook Village is complete, approximately 13,000 people are expected to live there.

The Village Center is a large retail area which is located on both sides of MD 355 between Middlebrook Road and Gunners Branch Road/Scenery Drive. This area is in a combination of C-1 and C-3 zoning. Approximately 75 percent of the area is either developed or under construction. The uses in the Village Center will be predominantly convenience retail with some auto-related uses.

Some issues have been considered in the Townscape Design chapter. These issues include land use relationships as well as functional and visual design concerns.

MIDDLEBROOK VILLAGE ANALYSIS AREAS (Figure 22 and Table 14)

Analysis Area MI-1

This Analysis Area contains four acres and has recently been rezoned O-M (Office Building, Moderate Intensity) with a schematic development plan. It is located at the northeast corner of the intersection of MD 355 and relocated Middlebrook Road. It is bordered on the other two sides by existing townhouses.

The review of the site plan should address the following areas of compatibility:

- The buildings should be of the same character and scale as the adjoining residences.
- Adequate buffering should be provided between the proposed uses and the adjoining residences.

Analysis Area MI-2

Analysis Area MI-2 is a 43-acre area located north of the Quail Ridge townhouse subdivision between Blunt Road and the alignment of Midcounty Highway (M-83). It is zoned R-90 in conformance with the recommendations of the 1974 *Master Plan*.

This Analysis Area is an appropriate location for the development of a mixture of single-family detached and attached units in the R-200 Zone because it is located at the edge of the planning area and provides a transition between single-family attached units to the south and a stream valley and single-family detached

TABLE 13
MIDDLEBROOK VILLAGE: RESIDENTIAL DEVELOPMENT

Mix of Housing Types	Total	SFD	SFA	MF
Existing + Approved Dwelling Units (January 1, 1987)	3,688	901 24%	1,775 48%	1,012 27%
1974 Master Plan + Existing + Approved Dwelling Units	7,736	1,301 17%	4,475 58%	1,960 25%
1989 Master Plan + Existing + Approved Dwelling Units	5,180	1,291 25%	2,201 42%	1,688 33%
Change from Existing Plus Approved	1,492	390	426	676
Change from 1974 Plan	(2,556)	(10)	(2,274)	(272)

Residential Land Area (Acres)	Total	Committed	Uncommitted
	626	340	286

Acreage does not include dedicated rights-of-way or existing parks and schools.

SFD: Single-Family Detached.
SFA: Single-Family Attached.
MF: Multi-Family.

[Percentages may not total to 100% due to rounding.]

Source: Community Planning North Division, Montgomery County Planning Department.

units to the north. Approximately one-half of the area is affected by environmental constraints including floodplains and steep slopes. Most of the property is wooded. Because of the extent of environmental constraints, the percentage of single-family attached units may exceed 20 percent of the total. The single-family attached units, however, should not be readily visible from Midcounty Highway (M-83).

Stormwater management quantity controls located on this property do not generally appear feasible due to the severe topography. Water quality controls, however, along with stream channel protection measures provided in this Analysis Area, should be investigated by Montgomery County Department of Environmental Protection.

The floodplain and steep slope areas should be placed in scenic easements. This Plan recommends that this valley remain relatively undisturbed.

Analysis Areas MI-3

This undeveloped 113-acre Analysis Area is divided into several parts by proposed major and arterial roadways. The portion of the property north of the alignment of the Middlebrook Road extended (M-85) is zoned R-60 and the part south is R-200. This zoning is in conformance with the recommendations of the 1974 *Master Plan.*

Adjoining this Analysis Area are recommended and existing residential areas: garden apartments in Brandermill (west), townhouses in Quail Ridge (north) and future single-family houses in the proposed Seneca Park North Subdivision (south). Great Seneca Park Extension borders the property to the east.

This Analysis Area is the subject of an approved preliminary subdivision plan. The review of the site plan should take into account the recommendations of the Townscape Design chapter.

Analysis Area MI-4

This Analysis Area is zoned R-60 in conformance with the recommendations of the 1974 *Master Plan.* It is a 2-acre parcel, located on Blunt Road, adjacent to one edge of the Fox Chapel Shopping Center. It is currently occupied by a non-conforming commercial use. Given its proximity to the shopping center, it is an appropriate location for a transition use such as a child day-care center or low-intensity medical offices through the special exception process.

This Analysis Area is also suitable for low-intensity office uses under the O-M Zone; but compatibility with adjacent residential uses need to be addressed. One avenue to address this issue would be a rezoning application for the O-M Zone, using the optional method of application and a schematic development plan.

Analysis Area MI-5

This 108-acre property is zoned R-90, RT-12.5, and C-1 in conformance with the recommendations of the 1974 *Master Plan*. It is located on Scenery Drive and is bordered by two tributaries of Great Seneca Creek, the greenbelt park, Seneca Park townhouse subdivision and MD 355. Current development includes Plumgar Local Park on Scenery Drive, a restaurant (nonconforming use) and two single-family detached residences.

This Master Plan recommends the residential portion of this area for low-intensity residential development under the R-90 Zone. This density is recommended in order to achieve the following objectives:

- Residential densities should decrease toward the edge of the planning area.
- The water quality of streams and their tributaries should be better protected through the use of lower residential densities adjacent to them.
- A variety of lot sizes should be established at appropriate locations to provide greater diversity of housing types in Germantown.

Unless the Planning Board finds otherwise for environmental reasons, no more than 20 percent of the total number of units constructed in this analysis area should be single-family attached. These units should be located in the western portions of the area as a transition to the adjacent areas of higher density. A developer-built community building and day-care center as part of the community facilities of this subdivision would be appropriate.

The amount of commercial zoning should be reduced to assure compatibility with the adjacent residential areas. The depth of the commercial property should be reduced by 80 feet and rezoned to R-90. This portion of the property will accommodate the difference in elevation from the proposed gas station to the rear property line. Once rezoned, the residential density is recommended to be clustered onto the adjoining residential property. The vertical and horizontal distances thus provided will create an appropriate separation between the commercial and residential uses. In order not to create an increased setback requirement on the proposed remodeled gas station and car wash, the extent of rezoning leaves approximately ten feet of C-1 zoned land adjacent to the proposed lot.

Access to the commercial uses should only be from MD 355, not from Plummer Drive.

Analysis Area MI-6

This 51-acre Analysis Area is zoned R-60 in conformance with the recommendations of the 1974 *Master Plan*. It is bordered by Montgomery College to the west, Realigned MD 118 to the north, MD 355 to the east, and Oak Mill Apartments to the south. It is developed primarily with mobile homes and trailer parks. Also located in the Area is the Cider Barrel, the Germantown Inn and Pizza King restaurants, and offices of construction contracting firms; these are non-conforming uses.

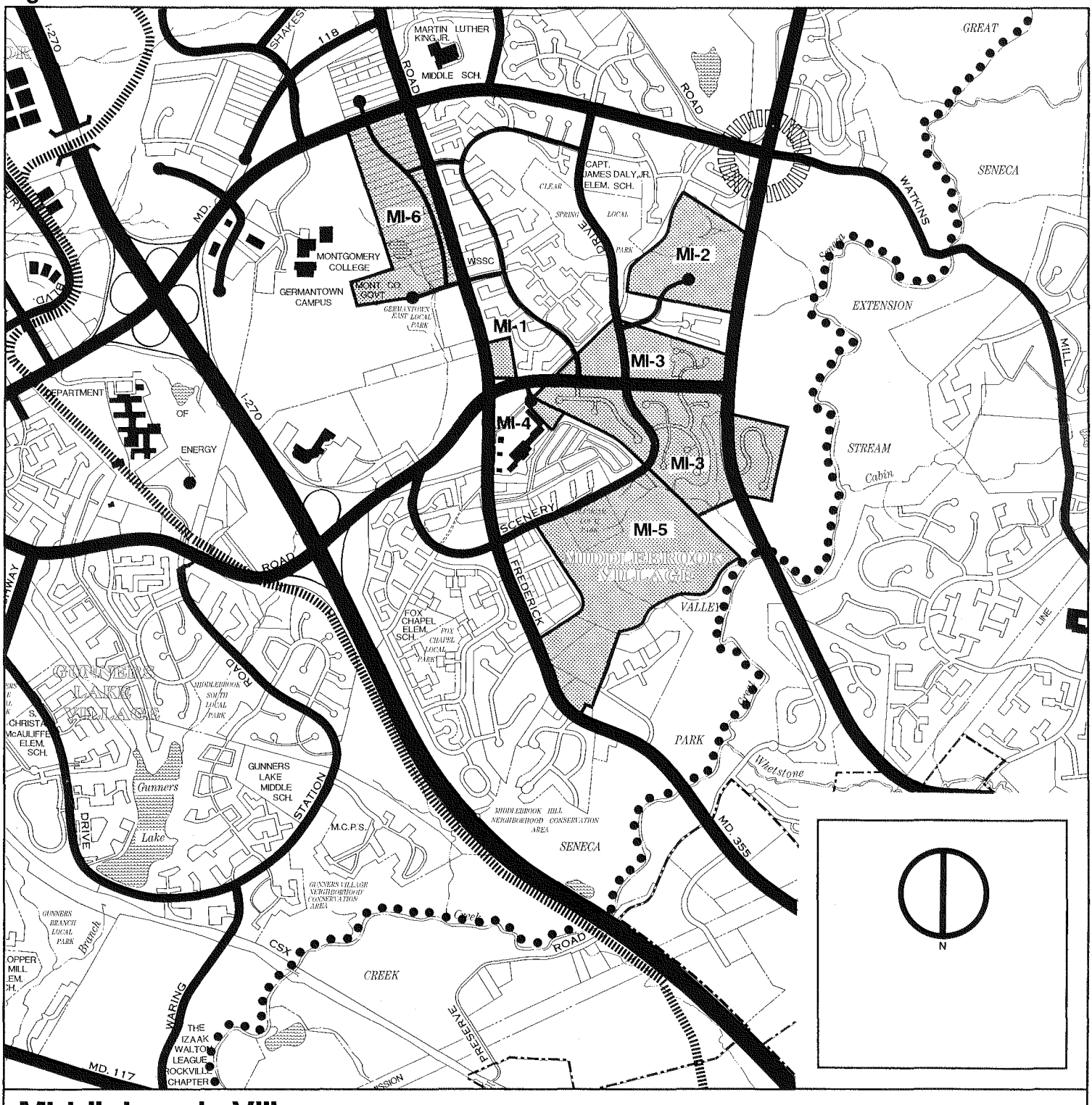
The Cider Barrel (*Atlas* Site #19/33) is an historic resource identified in the *Locational Atlas and Index of Historic Sites*. It is recommended for inclusion in the *Master Plan for Historic Preservation* by this Plan. The environmental setting suggested for this resource is the land under the Cider Barrel, the sign, and the adjacent fruit stand. The widening of MD 355 will bring the road very close to the Cider Barrel. Care should be given to not disturbing the structure or impeding its use as a retail operation. For more detailed information on, and analysis of the historical aspects of this site, refer to the Historic Resources Chapter and to Appendix L.

This Plan strongly opposes strip retail development along MD 355. The two exceptions are the Germantown Inn property, a portion of which is recommended for the C-4 (Limited Commercial) Zone, and the Cider Barrel, fruit stand, and parking area, which are also recommended for C-4 zoning.

The remaining portion of the Analysis Area is appropriate for single-family attached and multi-family residential uses and is recommended for R-60/TDR at a density of 12 units per acre, except the Cider Barrel Mobile Home Park area (approximately 17 acres), which is recommended for the R-60/TDR Zone at a density of 15 units per acre.

The current pattern of development has created several access points on the western side of MD 355. The Master Plan recommends that a service drive be developed generally parallel to MD 355 in order to consolidate the traffic into two access points with MD 355. (See Zoning and Highway Plan.) This service drive should ultimately extend to MD 118. This service drive will provide the ability to construct off-street parking and enable the Cider Barrel to continue its historic retail operations.

Figure 22



Middlebrook Village: Analysis Areas

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

TABLE 14

MIDDLEBROOK VILLAGE: LAND USE AND ZONING RECOMMENDATIONS

ANALYSIS AREA	ACREAGE	1974 RECOMMENDED LAND USE; EXISTING DEVELOPMENT & EXISTING ZONING	MASTER PLAN RECOMMENDED BASED ON RECOMMENDED ZONING BASE / OPTIONAL	POTENTIAL UNITS NET RECOMMENDED ZONING BASE / OPTIONAL[1]	NET TDR'S OVER BASE	COMMENTS
MI-1	4	Portion of Junior High School Site; Undeveloped; O-M	Office; O-M	—	—	Rezoned to O-M Zone by Local Map Amendment G-546
MI-2	43	Residential (3 and 5 units per acre); Undeveloped Except for a Single-Family Detached Home; R-90	Residential; R-200	86	—	
MI-3	113	Residential (2 and 5 units per acre); Undeveloped Except for Group of Farm Buildings; R-200 (78 acres) and R-60 (40 acres)	Residential; R-200 (78 acres) and R-60 (40 acres)	424	—	Number of units reflects approved Site Plan 8-88014
MI-4	2	Residential (9 units per acre); Non-conforming Automotive Repair and Residence; R-60	Office; R-60	—	—	Suitable for special exception uses or for low intensity office use under O-M Zone if issues of compatibility can be met
MI-5	108	Residential (5 units per acres) and Park-School; Undeveloped; R-90 (83 acres), RT 12.5 (23 acres) and C-1 (2 acres)	Residential and ; retail; R-90 (106 acres) and C-1 (2 acres)	385	—	
MI-6	51	Residential and Elementary School; Developed and Undeveloped; R-60 (46 acres) and R-200 (5 acres)	Residential and restaurant; R-60/ TDR (47 acres) and C-4 (4 acres)	235/615	380	Density limited to 12 units per acre except for approximately 17 acres which are limited to 15 units per acre Historic Resource: Cider Barrel

[1] *Unless otherwise noted, the number of potential dwelling units indicated are the maximum permissible, without the density increase for providing Moderately Priced Dwelling Units (MPDU's). Any subdivision of 50 or more units must include 12.5 percent MPDU's, in which case a density increase of up to 20 percent and optional development standards and unit types are permitted. The number of dwelling units does not reflect cluster densities.*

Neelsville Village

NEELSVILLE VILLAGE OVERVIEW (Figure 11 and Table 15)

This village is bounded on the west by the Employment Corridor, on the south by relocated MD 118 and on the north and east by the greenbelt. Neelsville Village is crossed by MD 355 (north-south) and proposed road M-27 (east-west). Midcounty Highway (M-83) is planned to extend along the eastern edge of the village.

Only three portions of the village have been developed: existing single-family homes in the southwest corner of the village, an on-going single-family detached subdivision just east of MD 355, and a R-200 subdivision at the eastern edge of the village. These represent a total of 608 homes.

A 1,200,000-square foot Regional Shopping Mall is recommended for a 100-acre site in the center of the Village. This site is bordered by Ridge Road (M-27), MD 355, Shakespeare Drive (A-270), and Observation Drive (A-19). A convenience retail center of 150,000 square feet is also recommended at the northeast corner of the site.

The remaining land (475 acres) offers the potential to develop a village with a mix of housing types and densities. The concept for this community includes a variety of single-family detached homes with some garden apartments near the proposed Regional Shopping Mall.

The objectives considered in establishing the density and zoning recommendations of this village are to:

- Protect the water quality in the streams and wetlands.
- Provide opportunities for a variety of residential lot sizes at appropriate locations to provide greater diversity of housing types.

TABLE 15

NEELSVILLE VILLAGE: RESIDENTIAL DEVELOPMENT

Mix of Housing Types	Total	SFD	SFA	MF
Existing + Approved Dwelling Units (January 1, 1987)	607	587 97%	20 3%	0 0%
1974 Master Plan + Existing + Approved Dwelling Units	2,861	937 33%	970 34%	954 33%
1989 Master Plan + Existing + Approved Dwelling Units	2,722	2,256 83%	148 5%	318 12%
Change from Existing Plus Approved	2,115	1,669	128	318
Change from 1974 Plan	(139)	1,319	(822)	(636)

Residential Land Area (Acres)	Total	Committed	Uncommitted
	734	259	475

Acreage does not include dedicated rights-of-way or existing parks and schools.

SFD: Single-Family Detached.
SFA: Single-Family Attached.
MF: Multi-Family.

[Percentages may not total to 100% due to rounding.]

Source: Community Planning North Division, Montgomery County Planning Department.

- Reduce residential densities toward the edge of the community.
- Provide transitions between areas of differing densities and types of land use.

In order to achieve these objectives, the land use recommendations have been reduced in selected areas. The result of these recommendations will be a lower density residential community with a variety of lot sizes and dwelling unit types.

The projected population for Neelsville Village is approximately 8,400 people. This community will be served by a convenience retail center, which is planned to contain 150,000 square feet of commercial area, professional offices, two elementary schools, a senior high school, a local park, park-and-ride lot, and such additional uses as child or elderly day-care centers, churches, and private and/or community recreation facilities.

Some issues related to Neelsville Village have been considered in the Townscape Design chapter. These issues include land use relationships as well as functional and visual design concerns.

NEELSVILLE VILLAGE ANALYSIS AREAS (Figure 23 and Table 16)

Analysis Area NE-1

This is an undeveloped 378-acre area located north of Germantown Drive (M-27) in the Little Seneca Creek Basin. It is bordered on the north by North Germantown Greenbelt Park. It is zoned R-200 in conformance with the recommendations of the 1974 *Master Plan*. Since this Analysis Area was recommended for development in Stage Four, it has not been rezoned in conformance with the 1974 Land Use Plan. (Refer to the Implementation chapter.)

This Plan recommends this area for residential development in the R-200 Zone. The northern portion of this Analysis Area includes the proposed North Greenbelt Park. Density from this dedicated parkland is anticipated to be clustered onto the southern portion of the Analysis Area. No more than 20 percent of the total number of residential units should be single-family attached. The attached units should be located in the central portion of the area where their visibility will be reduced by the intervening dwelling units and vegetation.

Two alternative alignments of Proposed Road A-19 are included in this Plan. The alignment selected will affect the amount of land appropriate for single-family development. Should an eastern alignment be selected for A-19, the residential portions of this area that are west of the alignment are appropriate for rezoning to the PD-35 Zone, but only if an environmental review indicates that constraints can be mitigated. No change in zoning should be permitted prior to this review. The selection of the eastern alignment would reduce the area of this Analysis Area from 378 acre to 365 acres.

In this Analysis Area, the Germantown Planning Area is recommended to be enlarged to the north. This shift also amends the Clarksburg Master Plan by reducing its area and changing the land use recommendations from residential to greenbelt park for the undeveloped land south of West Old Baltimore Road.

An elementary school and local park are recommended to be located in this Analysis Area. A community building and child day-care center are appropriate uses to be constructed by the developer of this Analysis Area. They should be located adjacent to the local park. Furthermore, this Plan recommends an additional senior high school be located in this area; its 30-acre site or a suitable alternative should be identified at the time of subdivision approval.

This Analysis Area drains to Little Seneca Creek upstream from Lake Seneca. Little Seneca Creek is designated as a Class IV stream by the Maryland Water Resources Administration because of its high water quality. Therefore, specific environmental criteria have been established for development in this Area. (See the Environmental Chapter and Appendix D.)

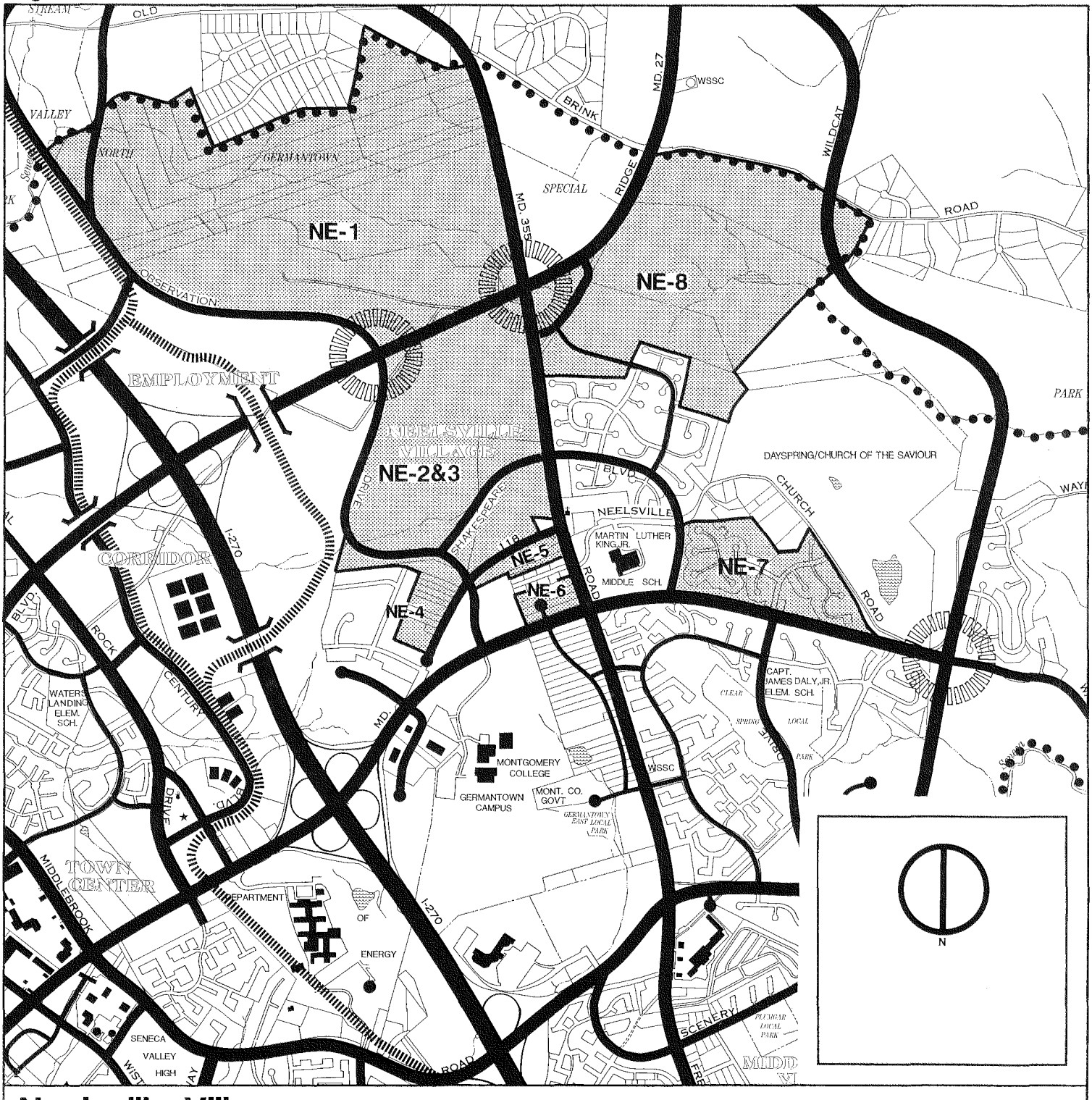
The Dr. William A. Waters House (*Master Plan* Site #19/1) is an historic resource located in this area. This resource is designated on the *Master Plan for Historic Preservation* and is significant to the County both architecturally and historically. Appropriate efforts should be made to encourage its preservation and sensitive adaptive reuse. The house might well be reused as a restaurant and/or community arts center. The environmental setting of this site is the entire parcel, but this setting can be reduced at the time of subdivision plan approval. For more detailed information on and analysis of this site, refer to the Historic Resources chapter and to Appendix L.

Analysis Areas NE-2 and NE-3

Because the proposed location of a regional mall encompasses both Analysis Areas, they should be considered jointly. The combined area of 201 acres is generally bordered by Ridge Road (M-27), MD 355, existing MD 118, and Observation Drive. (See Diagram.) It is zoned R-200 in conformance with the 1974 *Master Plan*. Except for an older house, Londonderry, the area is undeveloped.

A unique wetland, termed a bog, has been identified in the southwestern portion of Analysis Area NE-3. It covers seven acres and has a large cover of sphagnum moss. Canadian Burnet *(Sarguisorba Canadensis)*, a rare plant species in this physiographic region of Maryland, occurs there. A water source of the wetland is acidic and appears to be from springs and seeps. The Maryland Department of Natural Resources

Figure 23



Neelsville Village: Analysis Areas

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

TABLE 16

NEELSVILLE VILLAGE: LAND USE AND ZONING RECOMMENDATIONS

ANALYSIS AREA NO.	ACREAGE	1974 RECOMMENDED LAND USE; EXISTING DEVELOPMENT; & EXISTING ZONING	MASTER PLAN RECOMMENDED BASED ON RECOMMENDED ZONING BASE / OPTIONAL	POTENTIAL UNITS NET RECOMMENDED ZONING OPTIONAL / BASE[1]	NET TDR'S OVER BASE	COMMENTS
NE-1	378	Residential (4 and 7) units per acre) and Park-School; Undeveloped Except for Single-Family House; R-200	Residential; R-200	756 units	—	Historic resource: Dr. William A. Waters House
NE-2 and NE-3	201	Residential (7, 11, 22, and 28 units per acre) 2-Park-Schools, Elementary School and Village Center; Undeveloped; R-200	Regional Shopping Mall, Village Center Retail, Office and Residential; R-MX (165 acres) and R-200/TDR (36 acres)	175 units including MPDU's (This number does not include residential units on R-MX zoned area)	68	Park-and-Ride Facility Limited to 100 multi-family and 75 single-family units, including MPDUs
NE-4	16	Residential (2 units per acre); Medical offices in Residential Buildings, Medical Clinic, Residences and Undeveloped Lot; R-200	Residential; R-200	32 units	—	Additional special exception uses are strongly discouraged Recommended for Sewer and Water Service Category 3
NE-5	9	Residential (11 units per acre); Medical Clinic and 2 Residences; R-200	Residential; R-200	18 units	—	
NE-6	10	Residential (3 units per acre) Gas Station, Non-conforming Offices; Residences; R-200 and C-1	Gas Station and Residential; R-200/TDR (8 acres); and C-3 (2 acres)	16/64 units	60	Density limited to 8 units per acre Suitable for special exception uses
NE-7	65	Residential (5 units per acre); Undeveloped; R-60	Residential; R-60	200 units	—	Number of units currently shown on approved Preliminary Subdivision Plan I-87060
NE-8	241	Residential (5 units per acre), Park-School, and Junior High School; Undeveloped; R-200 (34 acres) R-200/TDR (64 acres), and RE-2 (127 acres)	Residential; R-200/TDR (95 acres); RE-2/TDR (140 acres); and C-3 (6 acres)	260/530 units including MPDUs	187	All units, including MPDUs, should be detached. Uses on C-3 zoned property are limited - see text.

[1] *Unless otherwise noted, the number of potential dwelling units indicated are the maximum permissible, without the density increase for providing Moderately Priced Dwelling Units (MPDU's). Any subdivision of 50 or more units must include 12.5 percent MPDU's, in which case a density increase of up to 20 percent and optional development standards and unit types are permitted. The number of dwelling units also does not reflect cluster densities.*

is conducting an analysis to define more specifically the hydrology of the bog.

Given the rarity of this wetland, it should be available as an opportunity for public education. An interpretive center should be developed so that the public can learn about and from this bog.

To protect this unique natural feature, this Master Plan recommends the use of stringent BMPs to control the quantity and quality of stormwater runoff from surrounding development that will drain to the bog area. Stringent practices during construction activities, such as phased clearing and grading and the use of sediment basins and over-sized sediment traps, are strongly recommended. Measures to promote the infiltration of surface water runoff and replenishment of any groundwater sources for the bog are needed. The specific BMP measures that should be employed will depend, to a certain extent, on the finding of Maryland Department of Natural Resources with respect to the hydrology of the bog area. The development review process for any development within the drainage area of the bog should include the review and approval by Maryland Department of Natural Resource's Natural Heritage Program staff, as well as Montgomery County Planning Department staff.

This Plan further recommends the creation of a vegetated buffer around the bog (approximately 200 feet; to be explicitly defined at the time of subdivision approval based on further environmental study) to promote the infiltration of surface water runoff and to provide an additional measure of filtering pollutants from stormwater runoff. Because the bog and other adjacent wetland areas are currently surrounded by crop fields and pasture, re-vegetating the recommended buffer area with appropriate trees, shrubs, and herbaceous plant material will be required of all new development that drains to the bog area.

All building structures, roads and other impervious surfaces must remain outside the recommended buffer area. This will also require the bridging of proposed A-19 over the western edge of the bog.

A Regional Shopping Mall is proposed for the northwestern portion of the combined area. At this location, it will be bordered by MD 355 and MD 27 (Ridge Road) which has direct access to both I-270 and Midcounty Highway. Thus, it will have excellent accessibility from all population centers north of Gaithersburg. The Regional Shopping Mall is recommended to contain up to 1,200,000 square feet of retail area. Also located on the 100-acre site should be a separate 150,000 square foot convenience retail center near the intersection of MD 355 and Ridge Road (M-27). In addition, there should be a 5-acre park-and-ride facility adjacent to Ridge Road. Residential development is also encouraged as part of the mixed-use project. The residential units should be located near the Transit Easement.

The proposed R-MX Zone is recommended for NE-2 and NE-3 with the exception of 36 acres in the southeastern corner. The Regional Shopping Mall and convenience retail center are recommended to be developed under the mixed-use optional provisions of the R-MX Zone.

The following development guidelines should be considered when reviewing development proposals for this Analysis Area:

- Providing well-identified entrances.
- Providing visual buffering along all edges of the mall area.
- Providing clear and safe pedestrian and bicycle connections.
- Providing access to mall entrances for bus transit service and a bus transfer area.
- Developing all commercial uses within NE-2 and NE-3 as integral parts of the planned retail centers.

The development of a Regional Shopping Mall at this location creates a need to strengthen the level of activity in the Town Center. It is important that the regional shopping mall not reduce the significance of the Town Center and, in particular, its mixed-use center as a community focal point. This Plan, therefore, strongly recommends that a Cultural Arts Center (or a similar public amenity) be provided in the Mixed-Use Center as the public facility and amenity related to the project plan approval of the regional shopping mall and convenience retail center. Further, movie theaters, other entertainment uses, and eating and drinking uses should be limited so that the Town Center (and, in particular, its Mixed-Use Center) can become established as a major community focal point. The limitation should be as follows:

Until five years after the issuance of use and occupancy permits for the Cultural Arts Center and 100,000 square feet of retail space in TC-1 or until 2005, whichever comes first, the following use limitations should apply:

- No movie theaters or other entertainment-related buildings or facilities (e.g., theaters, concert halls, etc.).
- No eating and drinking establishments in excess of 30,000 square feet, with 25,000 square feet to be located one or two identifiable food courts and the remaining 5,000 square feet at individual locations.
- No free-standing restaurants in Analysis Area NE-2 and NE-3.

The 39-acre area in the southeastern corner is in a different ownership than the rest of Analysis Area NE-

2 and NE-3. It is divided into two portions by Shakespeare Boulevard.

The maximum yield may not be achieved due to detailed design limitations and the need to provide internal open space and community recreation facilities.

If, for some reason, the Regional Shopping Mall is not developed, 60 acres in the northeastern portion of the combined area would be suitable for development of a Village Center. This Village Center should include a 150,000 square foot convenience retail area, garden apartment and/or single-family attached residences, professional offices, community recreation, a local park, and a 5-acre park-and-ride lot. Other compatible uses include religious facilities and child and/or elderly day care centers. The Village Center could be developed as a mixed-use center under the R-MX Zone or through rezoning to the PD-4 Zone.

The remaining area would then be recommended for residential development under the TDR option of the R-MX Zone at a density of six units per acre. Multifamily units should be located near the transit easement and/or near the retail component of the Village Center.

The 9-acre portion located north of Shakespeare Boulevard is recommended for the R-MX Zone so that it could be combined with the larger property and developed as part of the planned mixed-use center. If it is not acquired it would be appropriate for rezoning to the C-T Zone.

The portion south of Shakespeare Boulevard is recommended for the R-200/TDR Zone at a density level of 11 units per acre.

The maximum number of units in this 36-acre portion including MPDU's, should be 100 garden apartments in the northern part and 75 single-family detached units in the southern part. The MPDU requirement for both areas should be met in the northern part.

An historic resource identified on the *Locational Atlas and Index of Historic Sites*, Londonderry (*Atlas* Site #19/4), is located adjacent to MD 355. This resource is not recommended for inclusion in the *Master Plan for Historic Preservation* by either the Historic Preservation Commission or this Plan. Although Londonderry does not warrant historic designation, it should be adaptively reused as part of the development of this area.

Analysis Area NE-4

Analysis Area NE-4 is located on the north side of existing MD 118 between Goldenrod Lane and Observation Drive. It is zoned R-200 in conformance with the recommendations of the 1974 *Master Plan*. It contains 16 acres and the current development consists of a group of lots with single-family detached residences, a vacant parcel, and a medical clinic. Several of the residences have been converted to medical offices and facilities for charitable organizations. To the north of this Analysis Area is Meadowbrook Estates, a single-family detached subdivision. To the south across existing MD 118 is a property in the O-M (Office Building-Moderate Intensity) Zone. With the realignment of MD 118, the traffic will diminish and this area should then return to a single-family detached community.

There is a significant concentration of medical practitioners in the immediate area as special exception uses and resident practitioners. Therefore, additional special exception uses are strongly discouraged unless they are consistent with the low-density residential character of this area.

This Plan further recommends that the water and sewer service categories be changed so that the entire Analysis Area is in categories 1, 2, or 3.

Analysis Area NE-5

This Analysis Area is located on the southern side of existing MD 118 and it extends from MD 355 to Observation Drive. It is zoned R-200 and was recommended for the RT-10 zoning classification by the 1974 *Master Plan*, as amended. Current development consists of a medical clinic in a converted single-family detached structure and two single-family detached residences. To the south of the site is an undeveloped, R-20 zoned property and existing single-family detached residences in the R-200 Zone. The area to the north, Analysis Area NE-2, is recommended for single-family residential development under the R-200/TDR Zone. The Analysis Area fronts on existing MD 118; the traffic on this road will decrease significantly with the opening of relocated MD 118. Thus, the impact of traffic noise will diminish, increasing the appropriateness of this area as a single-family detached residential area. Therefore, this Master Plan continues to recommend this area for residential development at two units per acre under the R-200 Zone. Clustering into single-family attached units is not recommended.

Any special exceptions considered for this area should be of a compatible scale to the existing single-family detached residences. Special exception uses that conflict with the intent to maintain the single-family detached residential character of the area are not appropriate.

Analysis Area NE-6

Analysis Area NE-6 is a 10-acre area in multiple ownership situated along the western edge of MD 355 just north of the alignment of relocated MD 118. There are existing single-family detached residential units on Collins Drive which back onto this Analysis Area. There is an existing gas station on the southeast corner on an area of C-1 zoning. The remainder of the area is zoned R-200. The residential zoning is in conformance with the zoning recommendations of the 1974 *Master*

Plan. But the C-1 zoning is not reflected on the Land Use Plan or the Zoning Plan.

As shown on the Zoning and Highway Plan, an arterial road is proposed to provide access to this area from relocated MD 118.

The relocation of MD 118 adjacent to the site and the widening of MD 355 in the immediate area will significantly reduce the amount of C-1 zoned land for the gas station below that on which it can operate. Additional commercial zoning is needed in order to enable this existing use to remain. Although scattered commercial development is discouraged, it is not the intent of this Plan to put existing commercial uses out of business. Therefore, in this instance, this Plan does not oppose the continuation of this individual commercial use.

The southeastern corner of this Analysis Area could be appropriate for the C-3 (Highway Commercial) Zone in order to retain the existing gas station but the C-3 Zone permits several uses that would not be compatible at this location. Further, the issue of the compatibility of such a retail use relative to existing and proposed adjacent residential uses must be addressed. The extent of the area suitable for the C-3 Zone is that portion of the southern two parcels between MD 355 and the proposed arterial road; this area includes approximately 2.4 acres.

Development of the area appropriate for the C-3 Zone should respond to the following guidelines:

- Building and parking should be set back from the adjacent R-200/TDR zoned property at a distance equal to the minimum setbacks required for the adjacent R-200/TDR Zone.
- Adjacent residential uses should be protected from noise and visual intrusion by use of fences, walls, berms, landscaping or a combination thereof.
- If, at the time of site plan review, the Planning Board determines that a three-story building would not be compatible with adjacent development, the height of the building may be reduced to two stories.

The remaining portion of the area is recommended for the R-200/TDR Zone at a density of eight (8) units per acre. This area is also suitable for special exception uses as transitions between the potential gas station and adjoining residential uses. Consideration of requests for special exception uses should take the following compatibility into account:

- An adequate buffer should be provided between guidelines proposed uses and adjacent residences.
- All special exception use buildings should be of a single-family residential character.
- Parking areas should be visually buffered from adjacent roads and residential areas.
- Lighting should not create negative impacts on adjacent residential areas.

Analysis Area NE-7

This 65-acre area is located just north of relocated MD 118 (M-61) and east of Martin Luther King, Jr. Middle School; it is zoned R-60 in conformance with the recommendations of the 1974 *Master Plan*. This Analysis Area contains the headwaters of an unnamed tributary of Great Seneca Creek.

In order to achieve the following objectives, this Plan recommends that a site plan for this area should reflect the following guidelines:

- Given the extent of frontage along relocated MD 118 (M-61), it is important that adequate setbacks be provided from the edge of right-of-way for noise separation and landscaping.
- The backyards of units should not be visible to travelers on MD 118.

Analysis Area NE-8

This undeveloped, 225-acre Analysis Area is located north of the Stratford Knolls subdivision and south of Brink Road, including the proposed greenbelt park at the north edge of the planning area. The entire Analysis Area is zoned for residential development with 127 acres of RE-2 zoning, 34 acres of R-200 zoning, and 64 acres of R-200/TDR zoning. The area zoned R-200/TDR is recommended for a density of five units per acre. These zoning classifications are in conformance with the recommendations of the 1974 *Master Plan*, as amended.

The boundary of the Germantown Planning Area is recommended to be extended north to Brink Road. This change also amends the 1980 *Functional Master Plan for the Preservation of Agriculture and Rural Open Space*. The effect of the change is to place more residential land within Germantown by shifting the greenbelt park north to Brink Road. By doing so, the residential development can be clustered off the land to be dedicated for greenbelt park and still achieve a compatible density on the land to be developed.

The right-of-way of the current alignment of Ridge Road (MD 27), which crosses this area, is recommended to remain open as an arterial roadway. The triangular property between MD 355, existing MD 27 and proposed M-27 is recommended for limited retail use under the C-3 Zone. The uses appropriate at this location are limited to a convenience food and beverage store, a gas station, a car wash, and a bank. The development of this property should recognize its gateway location through the placement of the buildings, landscaping and berming, and building design. The building materials, roof line, and landscaping should be

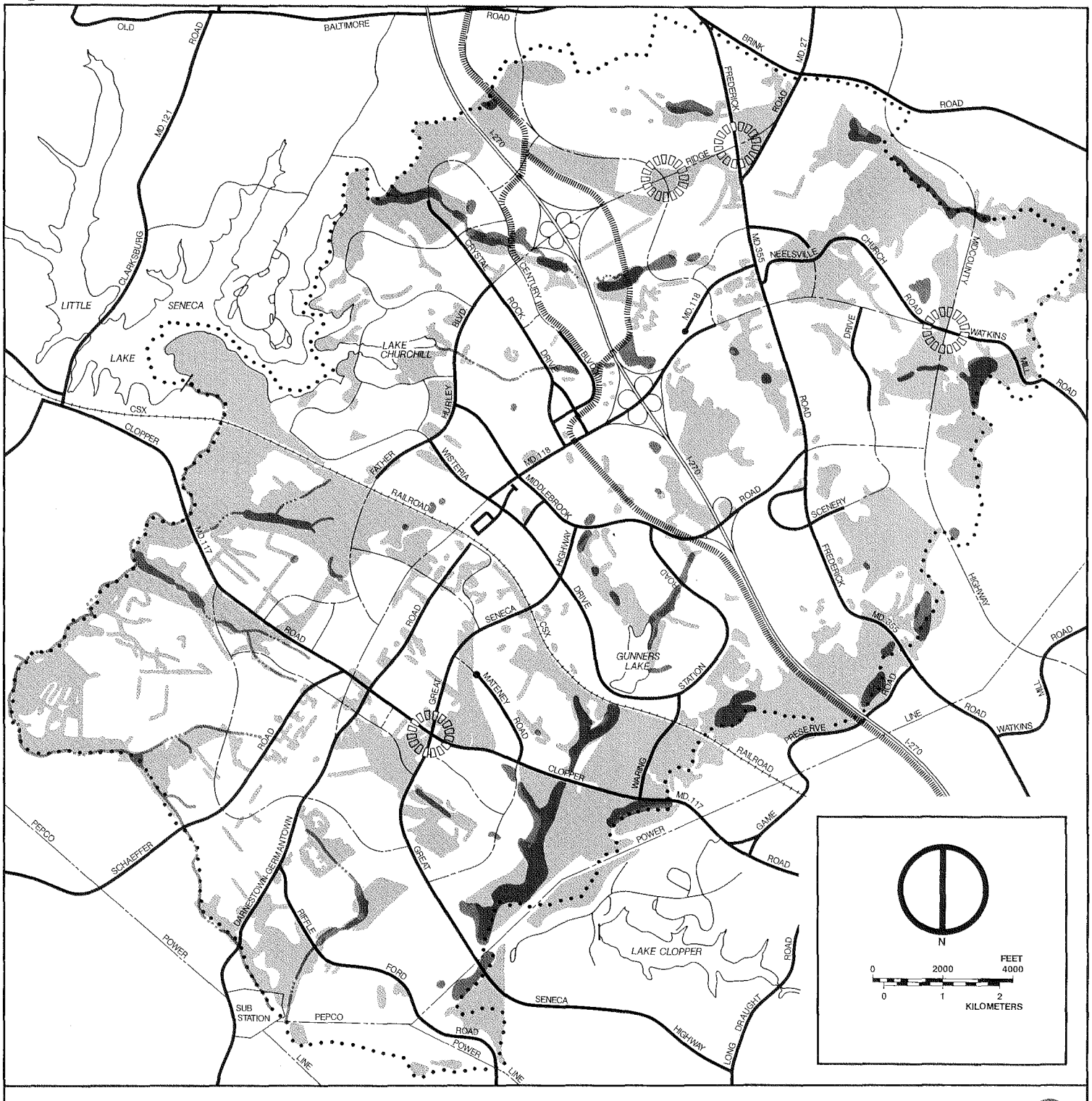
consistent with those of the convenience retail center across MD 355. Further, the development of this property should be compatible with the proposed residential development across MD 27 and particular care should be taken in the design, height, and location of exterior lighting fixtures.

This Master Plan recommends rezoning the remaining R-200 area to R-200/TDR and rezoning the RE-2 area to RE-2/TDR. An isolated two-acre area of RE-2 zoned land near M-27 is recommended to be rezoned to R-200/TDR. For purposes of development standards, the RE-2/TDR area is recommended for four units per acre and the R-200/TDR area is recommended for five units per acre. For compatibility and environmental reasons, however, the units from the RE-2/TDR area are recommended to be limited to 125, including MPDU's, and the R-200/TDR area to 375 units, including MPDU's. These dwelling unit limits have been established in response to compatibility and environmental issues, but the maximum yield may not be possible due to detailed design limitations and the need to provide internal open space and community recreation facilities. The residential development is recommended to be clustered in the southern portion of the area away from the proposed greenbelt park and the elementary school site.

All of the units built in this Analysis Area should be single-family detached, including MPDUs.

A ten-acre portion of this Analysis Area is zoned R-200/TDR and is recommended for development at three units per acre. This area was recommended as the location of an elementary school in the 1974 *Master Plan*. If the elementary school is not located on this property it should develop at three units per acre under the R-200/TDR Zone.

Figure 24



Environmentally Sensitive and Wooded Areas

[1] Approximate location of Nontidal Wetland Areas,subject to field verification.

[2] Wooded Areas

[3] Class IV Streams

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Source:

1.US Fish & Wildlife Service National Nontidal Wetlands Inventory Maps
2.Maryland Water Resources Administration
3.Montgomery County Topographic Survey, M-NCPPC,April 1985

Environmental Concerns

Germantown's natural setting can, and will, greatly enhance the quality of life, if properly respected. To derive the maximum potential from these important natural assets, the community and government must insist upon their proper conservation and use.

The recommendations expressed in this Plan are intended to respect the natural environment and to protect its most sensitive elements. An extensive environmental analysis was undertaken in Germantown to help formulate the land use and zoning recommendations. These recommendations also propose special regulatory and performance measures which are needed to protect stream quality.

The components of the environmental analysis include soil conditions, water quality, wetlands and floodplains, existing vegetation, slopes, noise attenuation, energy efficiency, and water supply and sewerage systems. In addition, a specific analysis of environmentally sensitive sites was conducted; the land use and zoning recommendations which resulted from this study are included in the Land Use and Zoning chapter.

Objectives

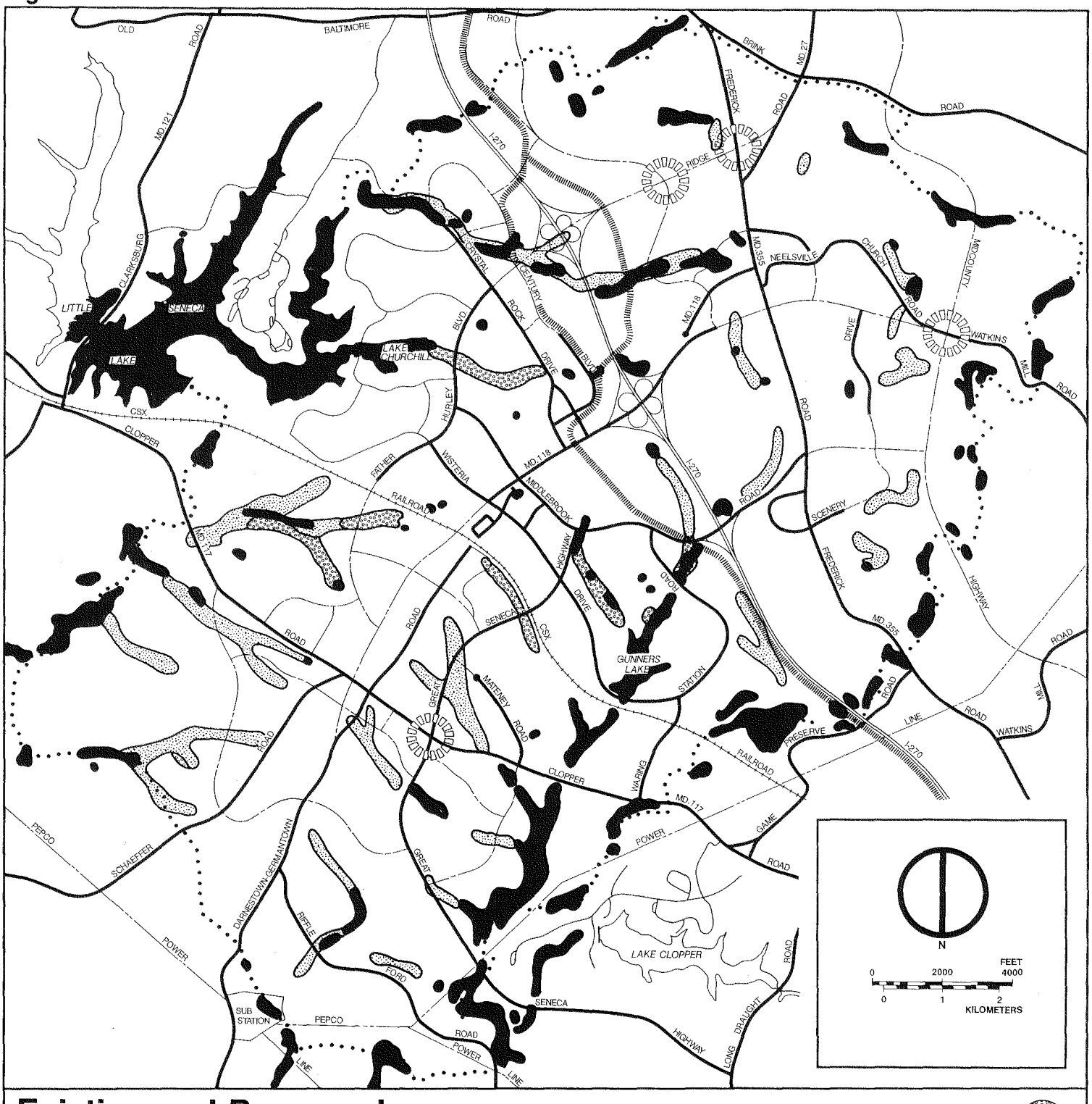
To protect and preserve the area's environmental resources, this Plan:

- Maintains the planning area's natural features, particularly stream valleys and other environmentally sensitive areas.
- Maintains and enhances the environmental, recreational, and scenic qualities along Great Seneca Creek and Little Seneca Creek and their tributaries.
- Maintains the environmental qualities of headwaters of stream basins to prevent increases of water pollution, flooding downstream, and stream erosion.
- Assesses, controls, and mitigates the environmental impacts of development to preserve natural features and ecological quality.
- Recommends a comprehensive system of stormwater management facilities in developing areas that preserve the natural stream environment and provide wildlife and recreational opportunities.
- Recommends protecting the other environmentally sensitive areas such as mature hardwood forests, wetlands, areas of unique vegetation, and prime wildlife habitat.
- Recommends providing for the employment of stringent erosion/sediment control and stormwater management and water quality best management practices (BMPs) for new developments within selected areas of the Little Seneca Creek Watershed.
- Recommends employing agricultural BMPs that are in strict accordance with the practices prescribed by the Montgomery Soil Conservation District.
- Recommends adequate noise attenuation for residences adjacent to major transportation facilities.

Environmentally Sensitive Areas

Every parcel of land proposed for development must be analyzed carefully to assure appropriate protection of environmental features and systems. A number of parcels requiring special care have been identified in the Land Use chapter. These environmentally sensitive areas tend to be those located near the headwaters of streams (Figure 24). Development in headwaters areas can increase water pollution and flooding impact at downstream locations. The planning area includes the headwaters of Gunners Branch and several unnamed tributaries of Great Seneca Creek and Little Seneca Creek. Where appropriate,

Figure 25



Existing and Proposed Conservation Areas,Easements and Nontidal Wetlands

Existing and/or Committed Common Open Space Areas

Proposed Conservation Areas and Easements

Nontidal Wetlands

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lower development densities are recommended for these areas, taking into account other policy objectives of the Plan. In these areas, the use of best management practices (BMPs) are especially important, but the use of BMPs are considered essential for all development. Any relaxation in the application of these practices would adversely affect stream quality.

Environmentally sensitive areas also include aquatic and wildlife habitats, wetlands, mature woodlands, and unique vegetation. Both the *Functional Master Plan for Conservation and Management in the Seneca Creek and Muddy Branch Basins* (referred to as the *Functional Plan*) and the *Seneca Phase II* and *III Watershed Studies* indicate various areas recommended for protection. These recommendations are incorporated by reference in this Plan.

Appendix E describes the guidance and regulations for land development contained in several local, state, and federal regulations, plans, and guidelines. All development proposals should be carefully evaluated before approval to assure their compliance with these documents.

Two large areas that are important future housing resources have been identified as having special environmental sensitivity. These are Analysis Areas KI-2 in Kingsview Village and NE-1 in Neelsville Village. Residential development in low to medium densities is recommended only if strict adherence to environmental guidelines can be assured.

WATERSHED DEVELOPMENT GUIDELINES (Figure 25)

Since the adoption of the 1974 *Master Plan*, the Little Seneca Creek Watershed has been designated as a Class IV Watershed by the Maryland Water Resources Administration (see Appendix D for descriptions of watershed classifications). The Class IV designation was made by the State in recognition that the stream is of sufficiently high quality to sustain a "put and take" trout population. Recent studies by State Fisheries indicate that the stream quality is at the high end of the range for Class IV streams, and the portion downstream from Lake Seneca might qualify for the higher quality Class III designation.

Lake Seneca, an emergency water supply reservoir, is located in the Seneca watershed. Although Lake Seneca is a major recreational and visual asset, it functions primarily as an emergency raw-water storage facility to supplement other regionally owned water storage facilities in case of a drought.

Maintenance of the high water quality in Little Seneca Creek and its tributaries, and Lake Seneca, requires extreme care in the formulation of land use, zoning, and stormwater management decisions affecting the watershed.

Accelerated land surface and stream channel erosion and deposition constitute two major problems which can result from development in the Little Seneca Creek Watershed. Although erosion and sedimentation occur at natural levels in the complete absence of human disturbances, it becomes a problem of greater intensity as human activities modify the landscape. In addition, development activities, particularly at levels allowed in the R-200 and higher density zones, can result in increased peak flows and nonpoint source pollutant loadings in receiving streams.

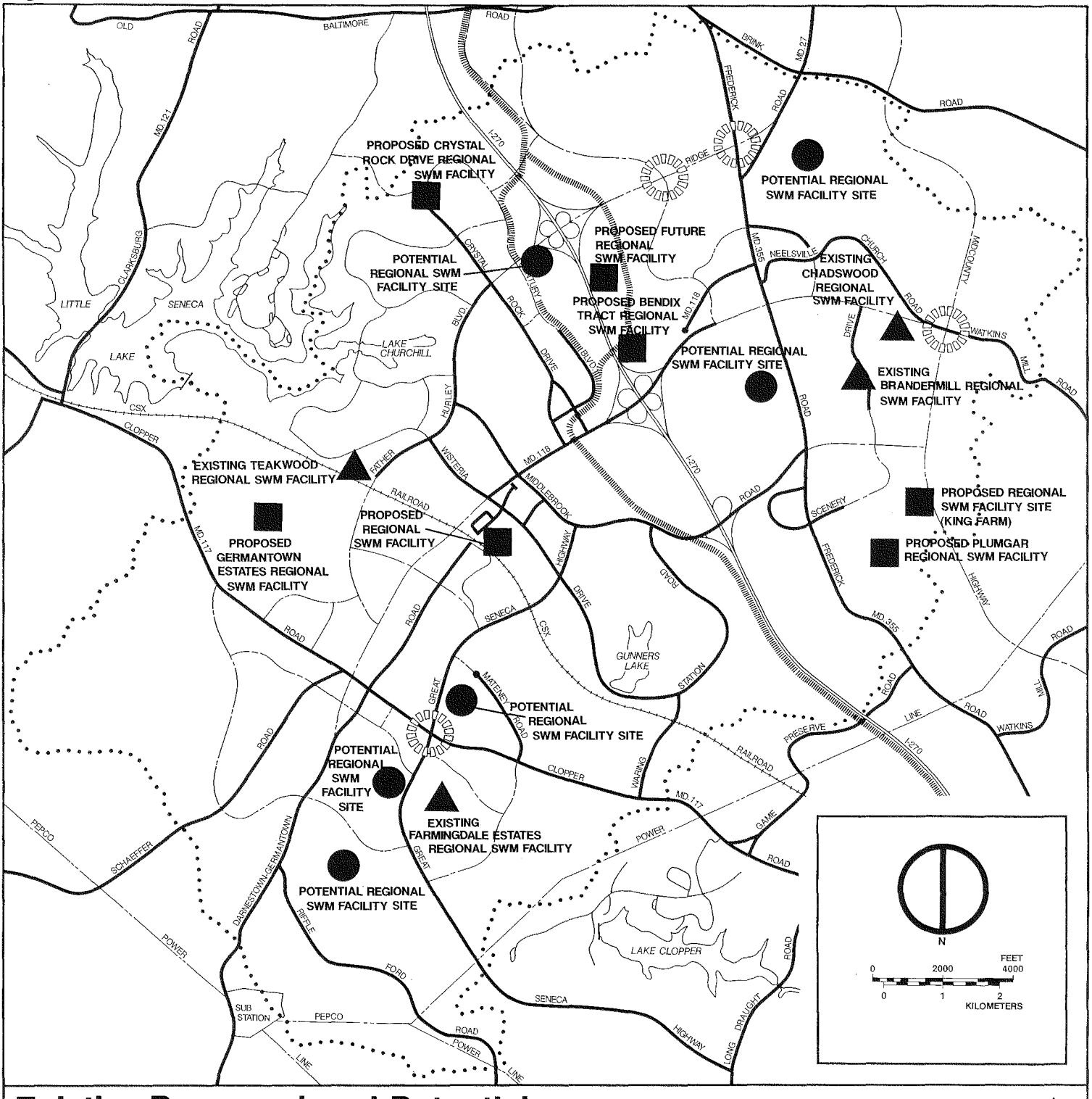
The land use and zoning recommendations of this Plan reflect the importance of the KI-2 and NE-1 Analysis Areas as valuable resources for achievement of the housing objectives of this Plan. They establish the maximum acceptable levels of development, taking into account the special environmental sensitivity of these areas. Actual development levels may need to be further constrained to avoid environmental degradation.

To ensure that development does not degrade the Class IV water or impair the quality of the Lake Seneca water supply, stringent watershed development guidelines and criteria are necessary. The stringent requirements include establishment of vegetated buffers along streams, stormwater management controls, best management practices, erosion and sedimentation control measures, water quality monitoring requirements, and environmental impact analyses. This Plan sets forth such guidelines and criteria and requirements in Appendix D.

The Planning Board and Department of Environmental Protection are directed to require strict adherence to the guidelines and criteria set out in Appendix D in their approval of development and stormwater management practices and in their enforcement of development sediment control and environmental regulations. If these criteria cannot be met, then the development intensity must be reduced to a level consistent with these criteria. The following are the objectives of this system of environmental controls:

- Determining the baseline stream water quality and maintaining and enhancing it through continuous monitoring, site inspection, and maintenance programs.
- Ensuring that environmental resource constraints are fully considered in establishing land use patterns in the stream corridors.
- Maintaining water quality and associated resources through the implementation of best management practices.
- Preventing the pollution of streams and lakes from runoff containing nutrients, pathogenic organisms, organic substances, heavy metals, and toxic substances.
- Maintaining and restoring a natural vegetative canopy along streams to ensure that, to the degree possible, summer stream tempera-

Figure 26



Existing,Proposed and Potential Regional Stormwater Management (SWM) Facilities

Existing Regioal SWM Facility

Proposed Regional SWM Facility (by DEP)

Potential Regional SWM Facility Site (Identified by M-NCPPC & DEP)

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tures do not exceed tolerance limits of desirable aquatic organisms.

- Minimizing the disturbance of the streambeds and preventing streambank erosion and sedimentation of waterways, and where feasible, restoring eroding streambanks to a natural or stable condition.
- Ensuring that runoff from developing areas is controlled such that it does not increase the frequency and intensity of flooding and the risk of threatening life and property.
- Retaining and preserving water quality attributes, open space, and visual amenities by establishing and maintaining buffer areas along stream corridors.

CONSERVATION EASEMENTS (Figure 25)

Conservation easements are generally recommended along the smaller stream valleys and other areas where important environmental assets exist and where park acquisition is not programmed. Conservation easements are intended to protect environmentally sensitive features in their natural state by restricting inappropriate uses within the area. They can usually be established without loss of the development density that would otherwise meet the environmental guidelines. Figure 25 illustrates the general location of the proposed conservation easements.

Protection of these sensitive areas will: (1) provide additional stream quality protection; (2) preserve woodlands, wetlands, specimen trees, and other natural features; (3) provide needed open space; and (4) protect wildlife habitats. The intended use of these areas is passive. Whenever possible, conservation easements should be included within the common open space of a subdivision. Where a conservation easement is partially on a private lot, the following restrictions should apply:

- No tree measuring over six (6) inches in diameter at breast height or thirty (30) feet in height and no mature and stable shrubs, except those which are diseased or dead, may be removed, cut down, or destroyed without prior written consent of the Planning Board.
- No structure(s) may be erected within the easement area.
- The dumping of grass clippings, leaves, brush, or any other foreign materials in these areas is prohibited, as is its use for designated pet walking areas.
- The use of existing open, non-wooded areas for small garden plots which do not exceed 1,000 square feet per lot and are not within 50 feet of a flowing stream, spring, wetland or other body of water is permitted.
- No alterations, excavations, grading or other changes shall be made to the general character and topography of the landscape without prior written consent of the Planning Board.
- The use of pesticides and fertilizers should be restricted to garden plots only.

The conservation easement will be conveyed to the M-NCPPC at the time of recordation of the subdivision. The Commission will become involved in compliance issues if a violation is reported. Once a violation is verified, the Commission will have the right to enforce the provisions of the easement by injunction or other appropriate mechanisms.

STORMWATER MANAGEMENT RECOMMENDATIONS (Figure 26)

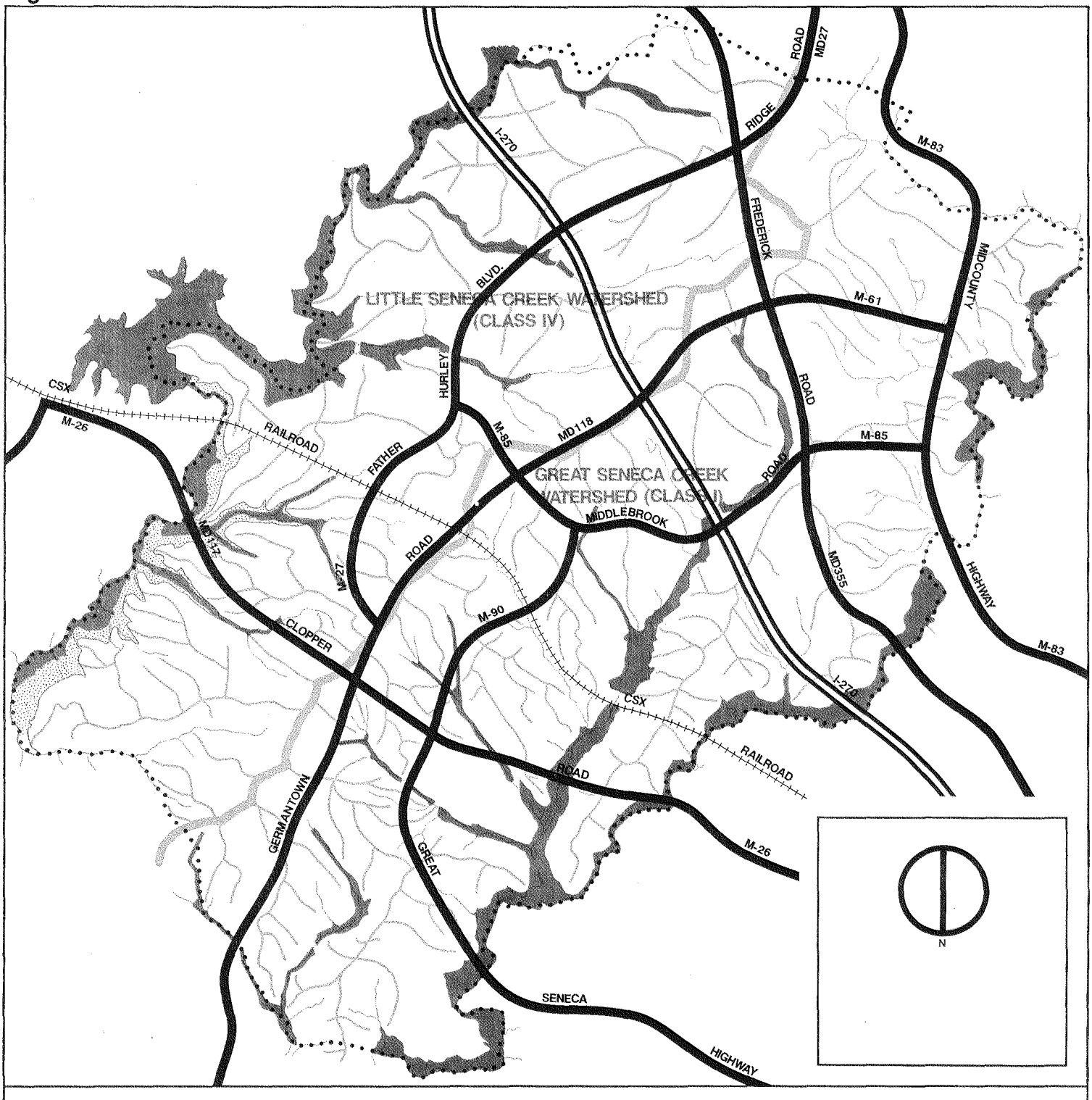
The recommendations in the *Functional Plan* use both the preventive approach, which manages the watershed to prevent problems before they occur, and the remedial approach, which attempts to solve existing problems. The *Functional Plan* includes such recommendations as:

- the employment of small and large scale stormwater management facilities;
- the acquisition or dedication of public parkland and conservation easements;
- structural improvements to bridges and conveyance systems;
- structural improvements to protect developed areas subject to flooding; and
- provision of remedial stream channel protection and/or water quality enhancement where deemed appropriate or necessary.

The locations of existing, proposed, and possible regional stormwater management facilities are shown on Figure 26. These facilities should be located and designed so that they may also function as scenic amenities. Site-specific analyses, with respect to cost-effectiveness and other considerations, will be needed prior to their inclusion in the County's Capital Improvements Program. Stormwater management facilities should be designed so as to fit into the natural contours of their location and, whenever possible, provide both wildlife habitat and recreational opportunities. For those areas where regional stormwater management facilities are not currently planned or recommended, the use of on-site controls must be comprehensively evaluated at the time of subdivision plan review.

Extraordinary BMPs are recommended for development in the Little Seneca Creek Watershed to protect and enhance stream water quality. State and County guidelines require a strict hierarchy in choosing appropriate BMPs. Infiltration practices should be considered first, then other off-line attenuation methods, retention (wet ponds) and finally detention (dry ponds). Since wet ponds are generally discouraged for Class III and Class IV watersheds because of thermal impacts, a combination of several BMPs or new

Figure 27



Watershed Areas, Floodplains and Danger Reach

100 Year Floodplain

Danger Reach of Little Seneca Lake

Ridges

Streams

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design approaches for wet ponds may be required to achieve necessary stormwater management.

DANGER REACH (Figure 27)

A small portion of Kingsview Village would be subject to flooding if the Lake Seneca dam were to fail. If this extremely unlikely event were to occur, the water behind the dam would flow down Little Seneca Creek, and up the tributaries. The projected highest elevation of the water establishes the edge of the danger reach.

Most of the Lake Seneca danger reach is not subject to residential development since it is within the park system and/or the 100-year floodplain. There is, however, land in Germantown, Boyds, and the Lower Seneca Basin Planning Area that could be developed despite its location within the danger reach.

This Plan recommends that future development adhere to the Dam Break Analysis Guidelines developed by the Environmental Planning Division of the M-NCPPC. These guidelines recommend that all dwelling units be located outside the danger reach; areas within the danger reach should be dedicated for use as open space or parkland.

An Emergency Warning Plan has been developed for Lake Seneca by the Washington Suburban Sanitary Commission, and approved by the State Department of National Resources which provides for notification and evacuation of residences located within the danger reach.

Water Supply and Sewerage Policies

In general, water and sewer service should be extended in accordance with the recommendations in this Plan and in conformance with the policies contained in the Montgomery County Comprehensive Water Supply and Sewerage Systems Plan.

WATER SUPPLY FACILITIES (Figure 28)

Community water service in Germantown is provided by the Washington Suburban Sanitary Commission (WSSC). Most of the water mains greater than 16-inch diameter proposed to serve Germantown have been installed. As development proceeds, additional water mains will be constructed where needed.

CIP projects W-37.27 and W-142.01 are included in the approved FY 1990-1995 CIP. Project W-37.27, Great Seneca Highway Water Loop, involves the extension of the 16-inch water main along Great Seneca Highway to its intersection with Mateney Road and will increase reliability of water service to the surrounding area. Project W-142.01, Crystal Rock Drive Water Main, involves the extension of a 36-inch water main along Crystal Rock Drive for service to development north of Lake Seneca.

In order to increase the number of single-family detached residential units, this Plan recommends the expansion of community water service to all areas recommended for development in Germantown. The extension of water lines has little potential for stream degradation. Unlike gravity sewers, water is forced under pressure; it can flow uphill. Thus, it is not necessary to lay water mains in stream valleys. Generally, water mains are placed along streets and cause little, if any, stream disruption. Water mains are also placed at a shallower depth than sewer lines, which results in less potential for stream degradation. Furthermore, the provision of community water eliminates potential health risks associated with well contamination by septic system failures and provides protection against fire hazards.

In general, water and sewer service should be extended simultaneously into areas recommended for development. Development not recommended for community sewer service is recommended, however, to receive community water service.

Any future needs for water storage facilities in Germantown will be identified through the Montgomery County High Zone Supply Facility Plan (W-90.01).

SEWERAGE FACILITIES (Figure 28)

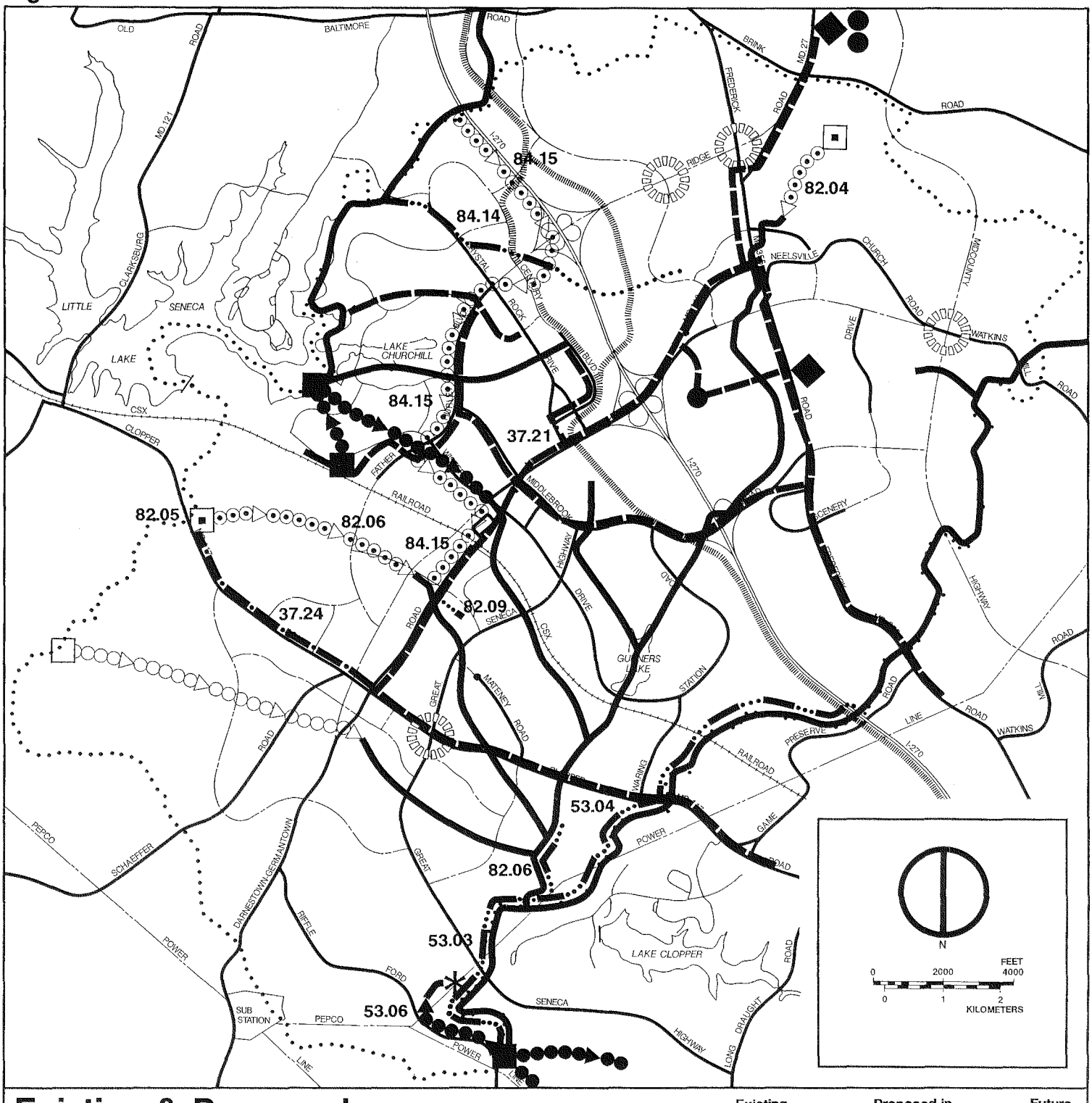
Community sewerage facilities in Germantown are owned and operated by the WSSC. Most of the major sewer facilities needed to serve Germantown are built or are currently programmed. As development proceeds, additional sewers and related facilities will be constructed as needed.

The Western Montgomery County Sewerage Facility Plan (Fall, 1988) addresses future sewer service in the Seneca and Muddy Branch Basins. A component of this plan is the rerating of the capacity of the Seneca Wastewater Treatment Plant from 5 mgd to 10 mgd (S-53.06). The existing plant is located adjacent to Riffle Ford Road at the southern edge of the planning area. The Seneca Creek Wastewater Treatment Plant is also programmed for two major improvements, including a new influent system (S-53.09) and a 3.2 million gallon retention basin (S-53.10). In order to provide an adequate buffer and land for possible future expansion, WSSC has acquired Analysis Area CL-10.

The Little Seneca Creek Branch "G" Part 1 sewerage line (S-84.17) is programmed in the current CIP. The facility consists of 1,040 feet of 18-inch sewer and is authorized for service to the Waters Landing portion of Churchill Town Sector.

In addition, Little Seneca Creek Branch "G" Part 2 (S-84.14) is currently shown on the dependent list of the CIP. However, the construction project has been recommended for the development authorization process in the proposed 1990-1995 CIP. The 1,660 feet

Figure 28



Existing & Proposed Major Sewer & Water Facilities

	Existing	Proposed in FY's 87-92 CIP	Future
WSSC Project Number		21.07	
Sewerage Treatment Plant	▲		
Sewerage Pumping Station	■	▣	□
Water Pumping Station	◆		
Sewerage Discharge Points	✳		
Water Storage Tanks	●		
Sewerage Intercepter Outfalls	———	———	·····
Treated Water Transmission Mains	———	———	
Sewer Force Mains	●▶●——●	○○▷○○	○○▷○

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of 18-inch diameter sewer would serve the Employment Corridor and the western portion of Neelsville Village.

Facilities that have been recommended for the proposed FY 1990-1995 CIP are the Great Seneca Creek Relief Sewer Part 1 (S-53.03) and the Little Seneca Creek Branch "G" Part 3 (S-84.14). The Great Seneca Creek Relief Sewer would consist of 1,374 feet of 42-inch sewer and 4,953 feet of 48-inch sewer along Great Seneca Creek from its confluence with Gunners Branch to the Seneca Creek WWTP. This relief sewer would serve the entire Germantown Planning Area. The Little Seneca Creek Branch "G" Part 3 would consist of 5,850 feet of 18-inch sewer main to serve the Employment Corridor and the western portion of Neelsville Village.

The provision of sewer facilities should be consistent with policies to protect the physical attributes of the watershed, sensitive headwater areas, and the character of the proposed low density residential areas. Since the Little Seneca Creek Watershed is of high quality and is classified as a Class IV Watershed (see Appendix C), strong protective water resource measures are needed. Major sewer extensions could result in detrimental, short-term impacts from construction and possibly long-term secondary impacts, depending on the density of the resulting development. Although community sewer service may well be extended in Little Seneca Basin, the design and location of the gravity sewer lines, force mains, and the pumping station must minimize the negative impacts on the water quality of Little Seneca Creek and the limited wooded areas in and adjacent to the stream valleys. Innovative design and extraordinary care in the construction of sewers will be needed if these objectives are to be meet. (See Appendix D for specific performance criteria regarding development in Analysis Areas KI-2 and NE-1.)

Noise Concerns

This Plan recommends the reduction of noise impacts from transportation-related activities through the use of setbacks, building placement, site design, and noise performance guidelines enforced through the subdivision and site plan review processes. Figure 29 illustrates projected roadway noise contours from I-270 and selected major highways.

ROADWAY NOISE (Figure 29)

Traffic on a number of roads in Germantown, both existing and proposed, will create noise impacts on adjacent parcels. Figure 29, Projected Roadway Noise Contours, provides a general indication of areas of maximum roadway noise impacts, based on anticipated traffic conditions with end-state development as recommended in this Plan. These contours do not take into account potential attenuation through natural or man-made features.

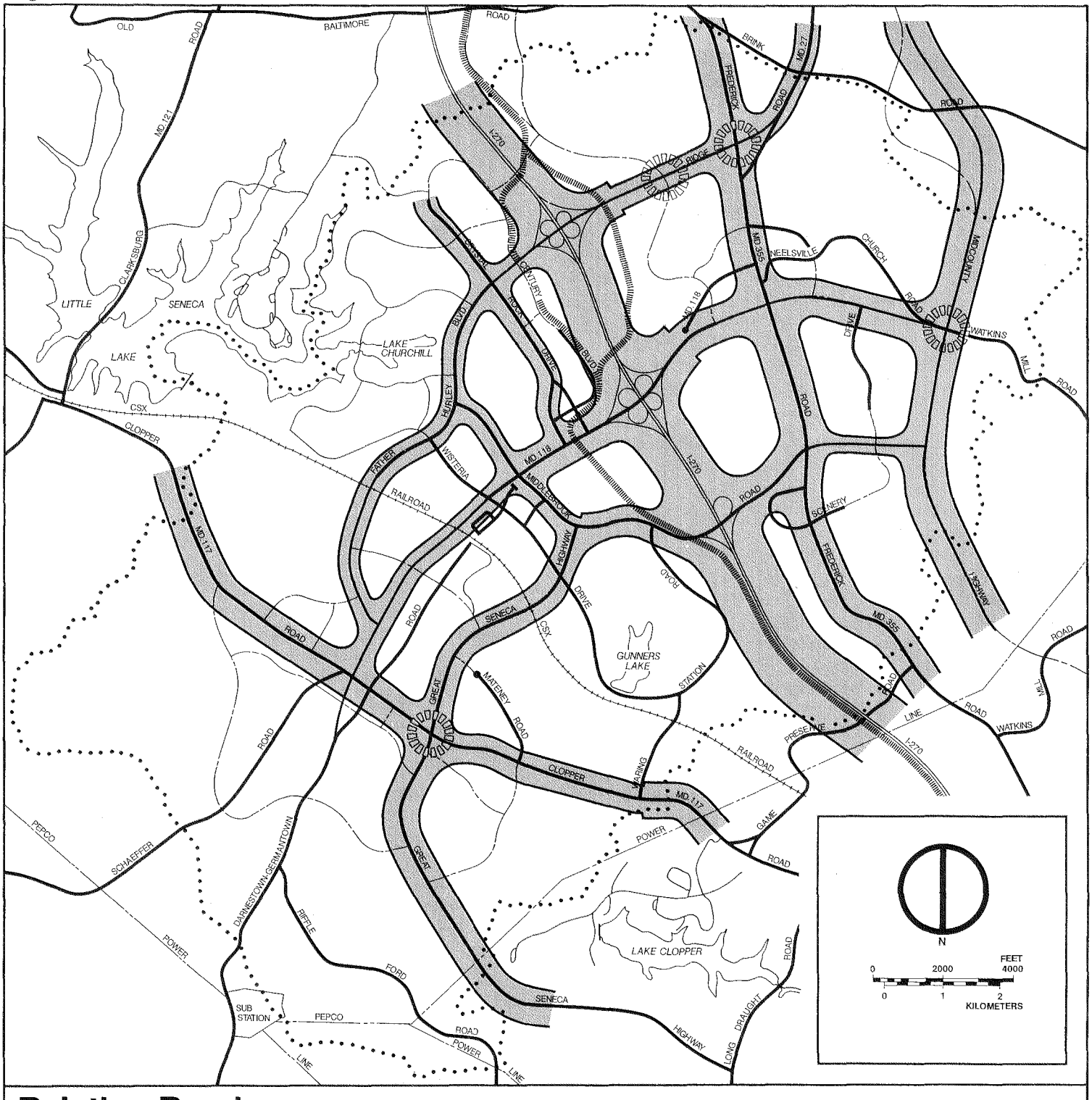
Provision of noise mitigation measures are the responsibility of State and County highway agencies, and private developers. As a general policy, the design of new and widened major highways will include an evaluation of noise attenuation measures to protect existing and approved developments. Cooperation and coordination between agencies and private developers are essential to the provision of cost-effective highway noise mitigation. The Montgomery County Planning Board will continue to include roadway noise as a consideration in its review of roadway design and throughout the land use planning and development approval processes. New development near existing and planned highways shall be guided by the techniques listed below, in priority order, to achieve the 60 dBA L_{dn} level:

- In high noise areas locate site-specific, noise-compatible land uses such as parking lots, garages, storage sheds, recreation areas, open spaces, stormwater management facilities, or any other use so that noise-sensitive residential dwellings may be placed away or buffered from highways.
- Recommend, when possible, development of non-residential land uses (commercial, office, industrial, recreation, and open space) in high noise areas.
- Construct landscaped berms or man-made barriers such as walls or acoustical fencing to reduce noise to acceptable levels.
- Orient multi-family and other attached structures so that the building acts as a barrier and buffers private outdoor areas (patios) from roadway traffic.
- If measures designed to produce a suitable exterior noise environment are infeasible or insufficient, interior levels of 45 dBA L_{dn} should be maintained through the provision of acoustical treatment of the building shell at the time of construction.
- Provide information to future residents of potential noise impacts. Under the master plan disclosure provisions of the Montgomery County Code, a home buyer has the opportunity to review the applicable master plan. Thus, the information provided in this Plan will assist in notifying prospective home buyers of proximity to noise generators.

RAILROAD NOISE

Noise impacts in Germantown are compounded by noise from the B&O Railroad, which passes through the area. Although a portion of the rail corridor has already been developed, there are undeveloped parcels adjacent to the right-of-way. On the average, 30 trains pass through the area on a typical weekday, each of which produces the most signifi-

Figure 29



Relative Roadway Noise Contours

24-hour unattenuated equivalent sound levels based on FHWA highway traffic noise prediction model results. Inputs include average daily traffic volumes and speeds from the EMME-2 transportation model. Shaded areas indicate sound levels of 65dBA LDN or higher from I-270 and all other shaded areas indicate sound levels of 60dBA LDN or higher from major highways.

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cant noise peaks in the area, ranging from 80-90 dBA at 150 feet. For the undeveloped parcels, this Plan recommends the same guidelines provided for highway noise plus a minimum building restriction line for both residential and nonresidential uses of 100 feet from the tracks, due to a vibration hazard, as recommended by U.S. Department of Housing and Urban Development.

Natural Features

THE LAND

All of the Germantown Planning Area lies within a physiographic region called the Piedmont Plateau. This region is characterized by a rolling to hilly topography which, in the planning area, ranges in elevation from 300 to 500 feet above sea level. Rock out-croppings are evident and a number of minor drainage channels cross the area, many of which contain spring-fed streams. Both the Great Seneca and Little Seneca Creeks have headwaters in the northern portion of the County and maintain year-round flows through the area.

Soils in the area are considered to be only moderately good for farming, since they are susceptible to erosion and can be cultivated only part of the time. These soils are not highly productive, but can be used for all common crops and for pasture. Suitability of soils for residential development using individual sewage disposal systems is limited to areas with slopes of less than 15 percent. Reforestation may be possible in areas proposed for permanent open space as most soils will support stands of pine and hardwood.

At the time of Preliminary Subdivision Plan review, the Montgomery County Planning Board may restrict construction on lands unsafe or unsuitable for development because of soil limitation. Limitations include seasonal high water table, poor drainage, wetland/hydric conditions, high shrink/swell potential, shallow depth to bedrock, extensive slopes, high susceptibility to erosion, or any combinations of these conditions. These conditions may well also restrict approval of individual residential sewage disposal systems.

A northeast-southwest trending ridge runs through the center of the area and is bounded on the east by the Great Seneca Creek and on the west by the Little Seneca Creek. The two major slopes which flank this central ridge are dissected by a number of small tributaries which flow away from the ridge to the two streams. This creates a general pattern consisting of a central ridge with several "finger" ridges extending out away from it on both sides, each separated by a small stream.

The upland slopes in the Germantown area along the central and finger ridges tend to be flat to gently sloping. The degree of slope increases toward the stream bottom and finally becomes level in the flat stream valleys. Because of the intense erosive action of the two bordering creeks and their adjoining tributaries, most of the steep slopes occur along their edges.

VEGETATION

The natural vegetation of the Germantown area is mixed hardwood forest. At one time the entire area consisted of mature hardwoods with the dominant species being white and red oak with some yellow-poplar, locust, hickory, and black walnut intermixed. Now relatively few areas remain in forest.

Most of the present mature growth forests are found on rough or steep areas, on areas that have become too eroded for cultivation, and on poorly drained soils on bottomlands and the floodplains of streams. (See Figure 24.) Agricultural activities resulted in a significant loss of forest.

Some areas which were cleared are now under going natural revegetation. These are primarily old fields that have become too depleted and eroded to support crops or pasture and are being allowed to revert to forest.

Forest vegetation is important for several reasons:

- visual quality,
- recreation potential,
- ameliorating effects on microclimate,
- erosion control,
- soil stabilization,
- wildlife habitat, and
- groundwater recharge.

This Plan encourages the preservation of existing forest areas, including preserving as many trees as possible on development sites, and recommends the reforestation of open space areas where possible.

WETLANDS

Wetlands in Germantown occur almost exclusively in the valley floors of streams. Some isolated wetland areas exist in and around individual ponds in the area. A wetland area of particular importance, containing rare plant communities, occurs in Analysis Area NE-3. The wetlands extend beyond the boundaries of the 100-year floodplain and include the area within the floodplains. The wetlands that are not on parkland are recommended to be protected by conservation easements and/or future park acquisition. (See Figure 25.)

Transportation Plan

This chapter makes recommendations regarding highways, mass transit systems, pedestrian connections, bikeways, and equestrian trails. The transportation system is one of the most important elements of the Plan. It is designed not only to address both regional and local transportation demand, but also to connect and integrate the various community activity areas. In addition, the transportation system is one of the major elements defining the visual image of Germantown.

A matter of concern during the Plan's preparation has been whether the Plan proposes a transportation system that can serve the end-state land use recommendations at an acceptable level of service (a measure of traffic congestion). To determine whether it could, the Montgomery County Planning Department staff has done an analysis of how well the end-state road and transit network would serve the end-state development pattern.

A description of the use of the computer model used in this analysis, with particular reference to Germantown, is contained in Appendix F. Transportation analyses were based on the land uses recommended by this Plan and the end-state transportation system. A detailed description of these analyses are included in the Appendix G; a related study on future travel characteristics in Germantown is contained in Appendix H.

The analysis concluded that, in order to achieve acceptable average levels of service, LOS C/D on the roadways and LOS E at selected intersections, limitations need to be placed on the extent of development in the Employment Corridor. Further, acceptable levels of service were predicted based on about 750,000 jobs County-wide, which included about 34,000 jobs and 22,500 dwelling units in Clarksburg.

This transportation network analysis assisted in establishing some of the land use and roadway recommendations of this Plan. Based on this analysis, the allowable size of new buildings has been limited in certain employment areas in order to reduce the likelihood of excessive congestion. Further, based on projected traffic volumes, a roadway noise impact analysis was conducted. (See Figure 29.)

Objectives

The intent of this Plan is to ensure convenience, accessibility, and flexibility of the area's circulation system. It is designed to:

- Plan Germantown as a community with transit-serviceable land use.
- Develop a highway network in coordination with the existing regional network that provides convenient access throughout Germantown and to the regional highway system.
- Develop quality public transportation systems and improve private ridesharing and carpooling programs to reduce dependence upon single-occupancy automobile commuting.
- Support efficient and accessible public transit and carpool/vanpool programs, with particular emphasis on non-peak public transit service to meet needs of employment corridor employees during lunch time.
- Encourage the provision of bikeways for commuter as well as recreational uses.
- Encourage the coordinated and timely development of public and private pathways in concert with road construction and land development throughout Germantown.
- Encourage landscaping along the edge of the right-of-way and in medians.
- Provide, on selected roadways, medians at least 20 feet wide in order to plant trees in the

median even where left-turn lanes are provided.

- Limit the number of recommended lanes on selected major highways in order to enhance visual roadway quality, enhance pedestrian circulation and to discourage through-traffic in residential areas.

Close coordination among the various county and state agencies is necessary in order to assure the implementation of these objectives.

Character of Roadways

In addition to capacity issues, the physical design of roadways is an important element in this Plan. The Townscape Design chapter recommends the creation of a Streetscape Design Plan that focuses on the character of roadways to further establish a sense of identity. The major roadway design components are: the width of the right-of-way; the number of lanes; the provision of sidewalks and/or bikeways; the landscaping, lighting, street furniture, and signage; the transit amenities such as bus stops and shelters along the road edge; and, if appropriate, the landscaping of the medians.

The recommended roadway classifications and cross-sections are shown in Table 17 and Figure 30. The cross-section for roadways with right-of-way widths of 80 feet or more for each element of the roadway system was selected so that it would not only provide the needed traffic capacity but also provide landscaping and sidewalks/bikeways that would complement the adjacent land uses and improve the visual quality of Germantown. Because of the importance of providing landscaping within the rights-of-way and providing sidewalks and bikeways, the following objectives have been established:

- Providing landscaped medians and street trees.
- Planting all street trees along each roadway at the same time, whenever possible.
- Providing sidewalks and/or bikeways along both sides of roadways, bus stops, and shelters, where appropriate.
- Installing sidewalks, bikeways, and street trees, where lacking, on any major roadway which has been widened to its ultimate paving width.
- Constructing all roadways with curbs and gutters except in areas zoned RE-1.
- Widening rights-of-way at intersections to accommodate free right-turn lanes or double left-turn lanes, sidewalks, and bikeways, and landscaping. (See Figure 31.)

The recommended Montgomery County roadway cross-sections are based on the following accepted practices of MCDOT and MDSHA:

- A minimum 6-foot wide area is needed for planting street trees.
- Sidewalks are 5 feet wide.
- Bikeways are 8 feet wide.
- Street trees are to be planted 45 feet apart for shade trees; 30 feet apart for small flowering trees.

Unless otherwise noted, the above standards apply to all roadways contained in Table 17.

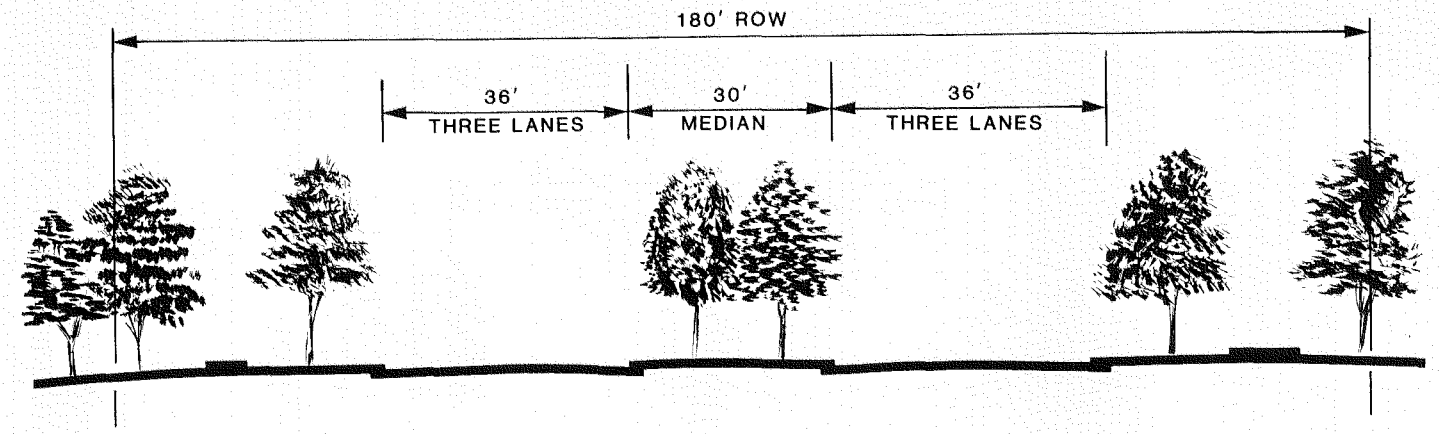
This Plan recommends that the right-of-way of an arterial road or major highway be widened at intersections with arterial and/or major highways. This increased width will provide space for an additional left turn lane and a right turn lane on the approach side of the intersection as well as an adjustment area on the departure side.

The amount of additional right-of-way on the approach side is 24 feet wide for 500 feet from the intersection with a 400-foot taper. On the departure side, the right-of-way is 12 feet wide for 200 feet with a 180-foot taper. (See Figure 31.) Both a divided arterial and a major highway with a 30-foot median can accommodate two left turn lanes; only 12 feet of additional right-of-way is needed in those cases. An undivided arterial road needs an additional eight feet of width to provide a median at the intersection for pedestrian and vehicular safety. The dimensions of intersection rights-of-way are shown on Figure 31.

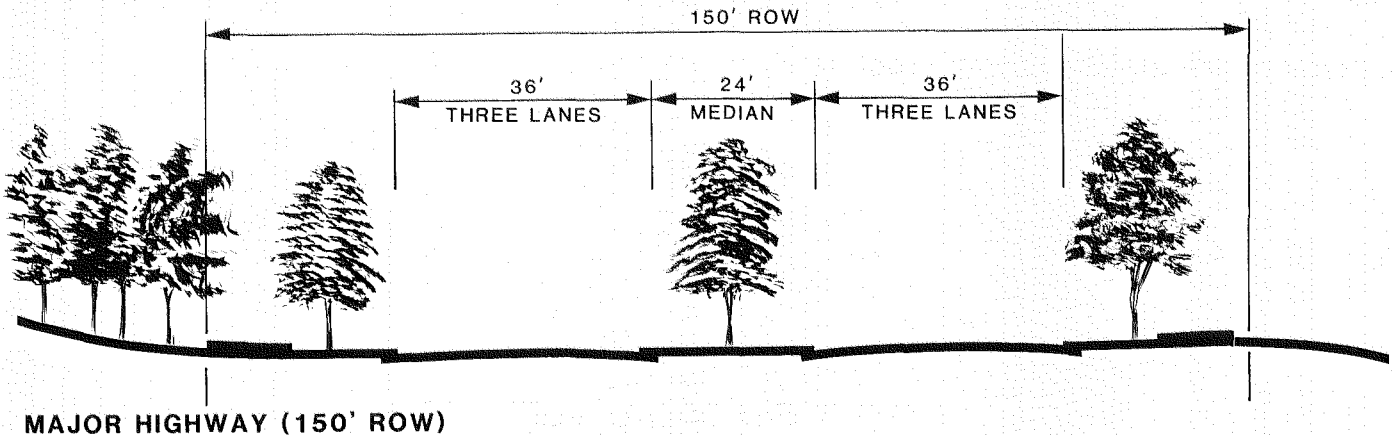
One of the limiting factors of traffic capacity occurs at the intersections. The wider right-of-way recommended here will enable additional turning movements to be added in the future without negatively affecting adjacent private property or the continuity of pedestrian/bikeway movement.

Also included in Table 17 are recommendations for the "greening" of selected roads in order to create a parkway image. These roads are Midcounty Highway, Great Seneca Highway, and the portion of Clopper Road from Seneca State Park north to Great Seneca Highway. Each of these roads crosses or parallels extensive portions of the greenbelt parks. Goldenrod Lane is also recommended for extensive landscaping as it is the edge between the Employment Corridor and Neelsville Village.

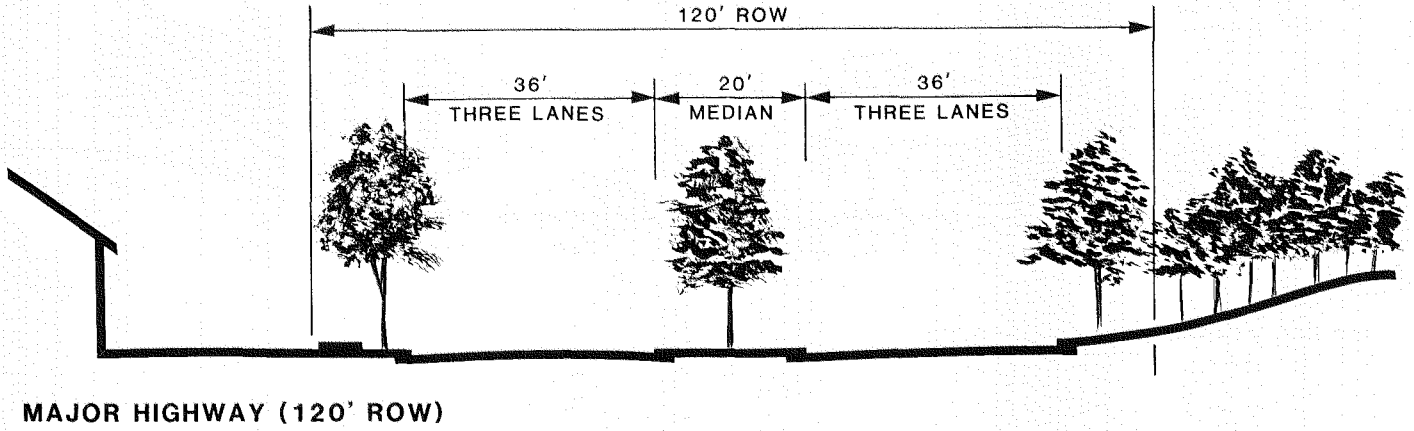
Street trees and landscaped medians, where appropriate, are recommended for major and arterial roads. These landscaped areas reduce the visual impact of multi-lane roadways as they pass through the community. In some instances, sound attenuation devices such as berms will be recommended as a result of a roadway noise study for situations where on-site noise mitigation measures are not practical.



MAJOR HIGHWAY (180' ROW)



MAJOR HIGHWAY (150' ROW)



MAJOR HIGHWAY (120' ROW)

Roadway Cross Sections

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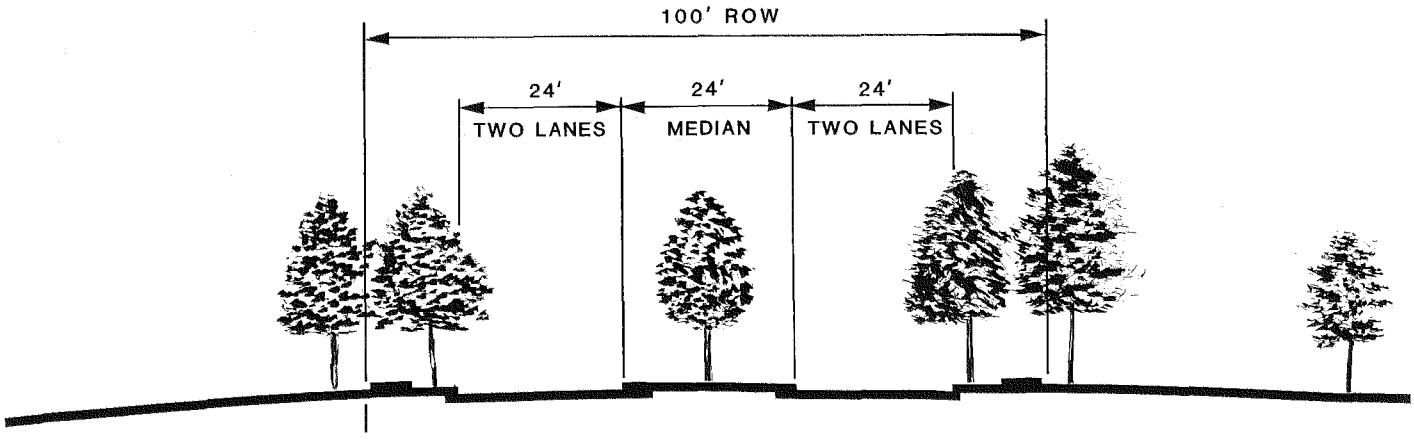
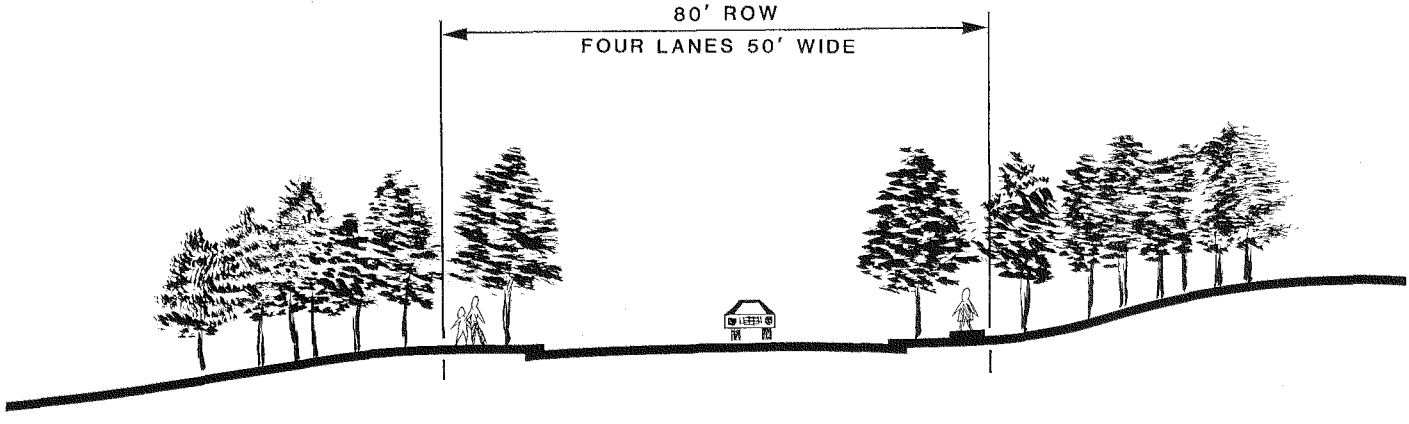
Figure 30



DIVIDED ARTERIAL ROADWAY (100' ROW)



ARTERIAL ROADWAY (80' ROW)

Roadway Cross Sections

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TABLE 17
ROADWAY CLASSIFICATIONS

Roadway Number	Route Number	Name		Limits	Minimum Right-of-Way Width	Recommended Number of Lanes	Other Recommendation
F-1	I-270	Washington National Pike		Planning Area Northern Boundary to Planning Area Southern Boundary	300'	8	• In addition, collector-distributor roads should be extended from Gaithersburg through to Clarksburg
M-6	MD 355	Frederick Road	A	Planning Area Northern Boundary to MD 118 relocated (M-61)	150'	6	• Provide 24-foot wide median • Emphasize landscaping of edges • Landscape median • Provide bike path on west side, sidewalk on the east side • Construct interchange at Ridge Road (M-27)
			B	MD 118 Relocated (M-61) to Planning Area Southern Boundary	150'	6	• Provide 24-foot wide median • Emphasize landscaping of edges • Landscape median • Provide sidewalks on both sides • When the subdivision for village center is approved, additional right-of-way may need to be dedicated to provide space for addition of turn lanes and the continuation of sidewalk and street trees
M-26	MD 117	Clopper Road	A	Planning Area Northern Boundary to MD 118 Relocated (M-61)	150'	6	• Construct as open section roadway • Provide 24-foot wide, closed section, median • Landscape median • Provide bike path on west side, sidewalk on the east side south of Hopkins Road (A-80)
			B	MD 118 Relocated (M-61) to Great Seneca Highway (M-90)	150'	6	• Provide 24-foot wide median • Plant trees in median • Plant street trees on both sides • Provide bike path on west side, sidewalk on the east side • Construct interchange at Great Seneca Highway (M-90)
			C	Great Seneca Hwy. (M-90) to Planning Area Southern Boundary	120'-150'	6	• Provide 24-foot wide median • Create parkway quality by providing extensive iand nformal landscaping of native plant material on edges and median • Provide bike path on south side • Provide sidewalk on north side between Great Seneca Highway and Allspice Drive

TABLE 17 (Cont'd.)

Roadway Number	Route Number	Name		Limits	Minimum Right-of-Way Width	Recommended Number of Lanes	Other Recommendations
M-27	MD 27	Father Hurley Boulevard	A	MD 118 Relocated (M-61) to Crystal Rock Drive (M-84)	120'	6	• Provide 24-foot wide median • Emphasize landscaping of edges • Landscape median • Provide sidewalks on both sides
		Father Hurley Boulevard/ Ridge Road	B	Crystal Rock Drive (M-84) to Planning Area Eastern Boundary	150'	6	• Provide a 24-foot wide median • Provide special landscaping treatment along edge of Village Center • Provide sidewalks on both sides • Construct interchanges at Observation Drive (A-19) and MD 355 (M-6)
M-61	MD 118	Germantown - Darnestown Road	A	Planning Area Western Boundary to Clopper Road (M-26)	120'	6	• Provide 24-foot wide median • Landscape median with trees • Plant street trees on both sides • Provide bike path on north side and sidewalks on the south side • When the subdivision for village center is approved, additional right-of-way may need to be dedicated to provide space for the addition of turn lanes and the continuation of sidewalk and street trees
			B	Clopper Road (M-26) to Aircraft Drive (B-7) and east side ramps of I-270 (F-1) to MD 355 (M-6)	150'	6	• Provide 24-foot wide median
			C	MD 355 (M-6) to Midcounty Highway (M-83)	150'	6	• Provide 24-foot wide median • Landscape median with trees • Plant street trees on both sides • Provide berms along existing residential areas to provide a visual and acoustic barrier • Provide bike path on south side and sidewalk on north side • Construct interchange at Midcounty Highway (M-83)
M-83	MD 115	Midcounty Highway		Planning Area Northern Boundary to Planning Area Southern Boundary	150'	6	• Provide 24-foot wide median • Create parkway quality • Landscape median and edges with native plant material in an informal design • Provide bike path on west side • Construct interchange at MD 118 (M-61)

TABLE 17 (Cont'd.)

Roadway Number	Route Number	Name		Limits	Minimum Right-of-Way Width	Recommended Number of Lanes	Other Recommendations
M-84	—	Crystal Rock Dr.		Father Hurley Blvd. (M-27) to MD 118 (M-61)	120'	6	• Provide 24-foot wide median • Landscape median with trees • Plant street trees on both sides • Provide bike path on west side and sidewalk on east side
M-85	—	Middlebrook Rd.	A	Father Hurley Blvd. (M-27) to MD 118 (M-61)	120'	6	• Provide 24-foot wide median • Landscape median with trees • Maintain street trees on both sides • Provide sidewalks on both sides
			B	MD 118 (M-61) to MD 355 (M-6)	150'	6	• Provide 24-foot wide median • Landscape median with trees • Provide street trees on both sides • Provide bike path on the south side and sidewalk on the north side.
			C	MD 355 (M-6) to Midcounty Highway (M-83)	150'	6	• Provide 24-foot wide median • Landscape median with trees • Provide street trees on both sides • Provide bike path on the south side and sidewalk on the north side
M-90	—	Great Seneca Highway		Middlebrook Road (M-85) to Planning Area Southern Boundary	120'	6	• Create parkway quality by providing extensive and informal landscaping of native plant material on edges and median • Provide bike path on the west side and sidewalk on the east side • Construct interchange at MD 117 (M-26)
A-17		Watkins Mill Road		Midcounty Highway (M-83) to Planning Area Eastern Boundary	80'	4	• Provide bike path on south side when widen to four lanes
A-19		Observation Dr.		Planning Area Northern Boundary to MD 118 (M-61)	100'	4	• Construct interchange at Ridge Road (M-27) • Construct as divided arterial with landscaped median • Plant street trees on both sides • Provide sidewalks on both sides
A-20		Germantown Rd. (Existing MD 118)		Sunnyview Drive to MD 355 (M-6)	80'	4	• Add sidewalks to both sides when widen to four lanes

TABLE 17 (Cont'd.)

Roadway Number	Route Number		Name	Limits	Minimum Right-of-Way Width	Recommended Number of Lanes	Other Recommendations
A-21		A	Scenery Drive	MD 118 Extended (M-61) to Middlebrook Road Extended (M-85)	80'	4	
		B	Scenery Drive	Middlebrook Road Extended (M-85) to MD 355 (M-6)	100'	4	• Provide double row of street trees on both sides
		C	Gunners Branch Road	MD 355 (M-6) at Scenery Drive to MD 355 (M-6) approximately 1100 feet to the north	80'	4	
A-22			Crystal Rock Dr.	Father Hurley Boulevard (M-27) north to Park Access Road	100'	4	• Plant street trees on both sides • Provide sidewalk on east side and bike path on the west side
A-74			Wisteria Drive/ Waring Station Rd.	Crystal Rock Drive (B-1) to Middlebrook Rd. (M-85)	80'	4	
A-80			Hopkins Road	Clopper Road (M-26) to Father Hurley Boulevard (M-27)	80'	4	• Provide sidewalks on both sides • Plant street trees on both sides
A-103			Riffle Ford Road	MD 118 (M-61) to Planning Area Southern Boundary	80'	2	
A-254		A	New Road	Father Hurley Boulevard (M-27) to Germantown Road (Existing MD 118)	80'	4	• Provide sidewalks on both sides • Plant street trees on both sides
		B	New Road	Germantown Road (Existing MD 118) to Great Seneca Highway (M-90)	100'	4	• Construct as divided arterial with landscaped median • Plant street trees on both sides
A-270			New Road	Hoyles Mill Road (A-298) to Clopper Road (M-26)	100'	4	• Construct as divided arterial with landscaped median and street trees on both sides
A-271			Dairymaid Drive	Great Seneca Highway (M-90) to Mateney Road (A-290)	80'	4	• The connection to Great Seneca Highway may be restricted depending upon the ultimate design of the Clopper Road/Great Seneca Highway interchange.

TABLE 17 (Cont'd.)

Roadway Number	Route Number		Name	Limits	Minimum Right-of-Way Width	Recommended Number of Lanes	Other Recommendations
A-273			Ridge Road	MD 355 (M-6) to relocated Ridge Road (M-27)	100'	4	• Construct as divided arterial with landscaped median • Provide sidewalks on both sides
A-289			Waring Station Road	Clopper Road (M-26) to Wisteria Drive (A-74)	80'	4	• Provide bike path on the west side
A-290		A	Mateney Road	Great Seneca Highway (M-90) northeast to Dairy-maid Drive (A-271)	100'	2 and 4	• Construct as divided arterial with landscaped median and street trees on both sides • Provide sidewalks on both sides
		B	Mateney Road	Dairymaid Drive (A-271) north to Great Seneca Highway (M-90)	80'	2	• Provide sidewalks and street trees on both sides
A-291		A	Shakespeare Drive	Observation Drive (A-19) to MD 355 (M-6)	100'	4	• Construct as divided arterial with landscaped median and street trees on both sides • Provide sidewalks on both sides
		B	Shakespeare Drive	MD 355 (M-6) to MD 118 Extended (M-61)	80'	4	• Provide sidewalks and street trees on both sides
A-297		A	New Road	Clopper Road (M-26) southwest to MD 118 (M-61)	100'	4	• Construct as divided arterial with landscaped median • Provide sidewalks on both sides • Plant double row of street trees on both sides • See Land Use Plan - Analysis Area KI-2
		B	New Road	MD 118 (M-61) southeast to Great Seneca Highway (M-90)	100'	4	• Construct as divided arterial with landscaped median and street trees on both sides • Provide sidewalks on both sides
A-298		A	Hoyles Mill Road	New Road (A-297 to MD 118 (M-61)	100'	4	• Construct as divided arterial with landscaped median • Provide sidewalks on both sides • Plant double row of street trees on both sides • Construct two lanes on one side and a bikeway on the other until traffic warrants additional lanes • See Land Use Plan - Analysis Area KI-2
		B	Hoyles Mill Road	MD 118 (M-61) to Great Seneca Highway (M-90)	100'	4	• Construct as divided arterial with landscaped median and street trees on both sides • Provide sidewalks on both sides

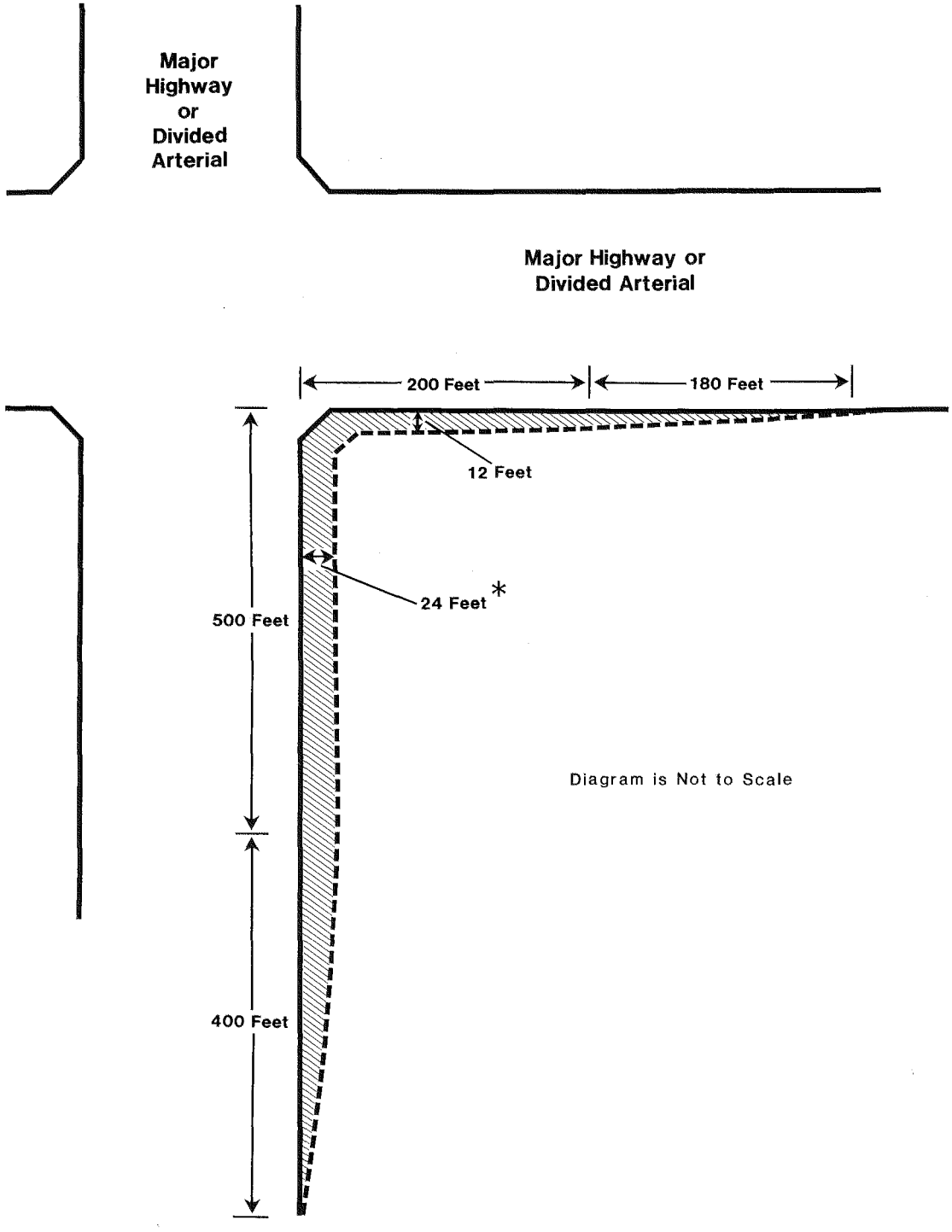
TABLE 17 (Cont'd.)

Roadway Number	Route Number	Name	Limits	Minimum Right-of-Way Width	Recommended Number of Lanes	Other Recommendations
A-299		Waters Landing Drive	Crystal Rock Drive (A-22) to Century Boulevard (I-1)	100'	4	• Construct as divided arterial with landscaped median and street trees on both sides • Provide sidewalks on both sides
B-1		Crystal Rock Drive	Wisteria Drive (B-2/A-74) to Middlebrook Road (M-85)	80'	4	
B-2		Wisteria Drive	Father Hurley Boulevard (M-27) to Crystal Rock Dr. (B-1)	80'	4	
B-3	A	Walter Johnson Drive	Wisteria Drive to end, approximately 750 feet southwest of Wisteria Drive	100' and 50'	4 and 2	• Construct a one-way, 2-lane loop road with a 26 foot pavement width connected to Wisteria Drive by a two-way, 4-lane divided roadway • Provide sidewalks on both sides • Plant street trees on both sides
	B	Walter Johnson Drive	Wisteria Drive, to end, approximately 750 feet northeast of Wisteria Drive (B-2)	80'	4	• Provide sidewalks on both sides when widen to four lanes or construct new portions • Plant street trees on both sides
B-4		Deleted from Master Plan by Amendment approved and adopted in 1980				
B-5		Locbury Drive	Middlebrook Road (M-85) to 1,000 feet south of Wisteria Drive (B-2)	80'	4	• Provide sidewalk on both sides
B-6		Crystal Rock Drive	MD 118 (M-61) to 400 feet south of MD 118 (M-61)	80'	4	
B-7		Aircraft Drive	MD 118 (M-61) to Century Blvd. (I-1)	80'	4	• Provide sidewalks on both sides when wide to four lanes • Plant street trees on both sides
B-8		Blunt Road	Middlebrook Road, to cul-de-sac 300 feet south	80'	4	• Provide sidewalks on both sides • Plant street trees on both sides

TABLE 17 (Cont'd.)

Roadway Number	Route Number		Name	Limits	Minimum Right-of-Way Width	Recommended Number of Lanes	Other Recommendations
I-1		A	Crystal Rock Drive	Park Access Road to New Road (I-4)	100'	4	• Construct as divided arterial with landscaped median and street trees on both sides • Provide bikepath on the west side and sidewalk on the east side
		B	Century Boulevard	New Road (I-4) to Waters Landing Drive (I-2)	100'	4	• Construct as divided arterial with landscaped median and street trees on both sides • Flexibility should be provided in the width of right-of-way (to an 80-foot minimum) and in the width of the median (to its elimination) particularly where the roadway passes under Father Hurley, across wetlands and at intersection • Provide bikepath on the west side and sidewalk on the east side
		C	Century Blvd.	Waters Landing Drive (I-2) to Crystal Rock Drive (M-84)	80'	4	• Add street trees and sidewalks to both sides of constructed segment and provide the same along extension
I-2			Waters Landing Drive	Crystal Rock Drive (M-84) to Century Blvd. (I-1)	100'	4	• Construct as a divided arterial with landscaped median and street trees on both sides • Provide sidewwalks on both sides
I-3		A	Goldenrod Lane	MD 118 (M-61) to end, approximatley 1,000 feet north of MD 118	100'	4	• Construct as a divided artrial with landscaped median and street trees on both sides • Provide sidewalks on both sides
		B	Goldenrod Lane	MD 118 (M-61) to end, approximately 1,000 feet south of MD 118	80'	4	• Construct sidewalk only on north side • Preserve existing trees within right-of-way on south side
I-4			New Road	Crystal Rock Drive/ Century Blvd. (I-1) to Observation Drive (A-19)	100'	4	• Construct as divided arterial with landscaped median and street trees on both sides • Provide sidewalks on both sides
I-5			Aircraft Drive	Century Boulevard (I-1) to Crystal Rock Drive (M-84)	100'	4	• Construct as divided arterial with landscaped median and street trees on both sides • Provide sidewalks on both sides

Figure 31



Intersection Rights-of-Way

Additional Right-of-Way to accomodate turn lanes

12 feet for major highways planned for 30 foot medians and for divided arterials. *

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Where roadways cross stream valleys and other environmentally sensitive areas such as those shown on Figure 26, there are opportunities to create open space vistas. These are also locations where extreme care must be taken to reduce the impact of road construction on these sensitive areas.

It has become increasingly apparent that the specifications in the 1974 *Master Plan* for four-lane arterials and larger roadways do not allow enough space within the right-of-way for visual and acoustic buffers, landscaped areas, stormwater management facilities, or for environmentally sensitive roadway design and alignment. A prime example is the section of MD 118 west of the B&O Railroad tracks, where the setbacks are inadequate and the right-of-way provides only minimal space to accommodate noise mitigation structures. To remedy this situation, the following guidelines are recommended when appropriate:

- On all preliminary plans of subdivision for new residential development, where right-of-way widths and alignments have been substantially determined through dedications, a roadway compatibility buffer should be provided. This buffer would be on private property at approximately 40 feet in width adjacent to the right-of-way. This area will be treated as open space and will be set aside for the purpose of providing visual, vegetative and/or physical barriers (such as berms and fences) to roadway nuisances, as well as slope easements needed for the grading of the roadway.
- In areas where dedications have not been substantially committed in terms of right-of-way widths, the following widths are recommended as the minimum by this Plan:

major highway	150 feet
divided arterial	100 feet

Specific recommendations on minimum right-of-way widths are shown in Table 17.

Since roadway character is important to the implementation of this Plan, it is imperative that the Montgomery County Planning Department staff review and comment on the design and engineering of major roadways, whether they are funded by public or private funds, to insure compliance with the Plan's objectives and guidelines. The Montgomery County Planning Board, under its mandatory referral authority, will review these projects at appropriate phases during design and engineering.

Further, this Plan recommends that on selected major highways the number of lanes be limited in order to discourage through traffic in residential areas, facilitate pedestrian circulation, and enhance visual roadway quality.

Transportation Analysis

An issue of great concern focuses on whether the Master Plan's end-state land use recommendations can be adequately served by the recommended transportation system of the Master Plan.

The following discussion presents the results of the transportation analysis of the Land Use Plan with respect to the effect on areawide and local congestion levels. The conclusions of the transportation analysis are presented first, followed by discussion of the findings with respect to a) the areawide analysis, and b) local area intersection analysis. It should be noted that this analysis is the first application of the Planning Board's computerized transportation model to the transportation analysis of an area master plan. Readers are referred to Appendix F for a discussion on the use of transportation models in particular, and specifically how this tool has been applied to the analysis for the Germantown Master Plan.

CONCLUSIONS

- A proposed end-state land use intensity, limited to a maximum 0.5 floor area ratio (FAR) for Analysis Areas in the Germantown Employment Corridor and a lower limit in some Analysis Areas, appears to be supportable by the proposed end-state transportation system that also accounts for estimates of through traffic and transit use. This recommended employment density of this Plan would yield approximately 59,000 employees in the Germantown Employment Corridor and a planning areawide total of about 78,000 employees for Germantown.
- End-state residential development of approximately 37,000 housing units in the Germantown Planning Area is recommended by this Plan. Approximately 3,800 of these units are proposed in the East and West Urban Village areas of the Germantown Employment Corridor. This level of residential development in Germantown would also be supported by the proposed end-state transportation system.
- It is recommended that the standard for an acceptable level of congestion for the Germantown Planning Area be set at an average level of service C/D. This corresponds to a Group III standard in the system adopted by the County Council in the Annual Growth Policy process. An areawide average level of service C/D would result under the recommended end-state land use/transportation scenario.

- Local intersections within the Germantown Employment Corridor would function at acceptable level of service (better than mid-point of LOS E), given the recommended end-state land use densities and transportation system. It should be noted, however, that some major intersections outside the Employment Corridor but within the Germantown Planning Area are projected to operate at unacceptable levels of service. These intersections are located along the MD 117 and MD 355 travel corridors. Through traffic from outside the Germantown area appears to be the major contributor to the traffic volumes at these locations.
- A fourth I-270 interchange, north of M-27, is not recommended as an element of the Germantown Master Plan, based on Planning Department staff analysis. There are three reasons for this recommendation: it is not feasible to implement a new interchange at that location; the contemplated arterial master planned network of arterials is projected to provide sufficient site access to the adjacent property; and the proposal would create significant negative impacts on adjacent land uses.
- No methodology for explicitly forecasting transit use has been applied in the transportation analysis so far. Instead, transit use levels between areas have been estimated that implicitly assume the active use of the transit easement beyond Shady Grove to Clarksburg, with service on its own right-of-way. Thus, it is assumed that the availability of transit service within the Germantown Planning Areas would be sufficient to warrant a Group III (average areawide LOS C/D standard) classification as outlined in the Annual Growth Policy. This reflects moderate transit availability similar to current transit service in areas such as Gaithersburg or Fairland/White Oak. Despite the uncertainty of the final alignment of the transit easement, coupled with the uncertainty of the precise nature of the service along its right-of-way, these implicit assumptions of transit use, and their impact on estimated congestion levels, appear reasonable.

SUMMARY

The transportation analysis for the Germantown Master Plan Amendment was carried out at two basic levels of detail: (a) an areawide analysis of the average congestion levels in Germantown; and (b) a local analysis of the expected congestion at a selected set of intersections in the vicinity of the major employment locations. The transportation analysis done for the Preliminary Draft Plan was refined several times during the Board's worksessions to account for changes in the location, mix, and intensity of the land use, and modifications to the planned transportation system. That overall transportation analysis is given in Appendix H. The summary results are given here.

Areawide Analysis

In order to assess future average congestion levels for the Germantown Planning Area, an approach was used that is comparable to that of the Annual Growth Policy to set Annual Staging Ceilings. This approach involves: (a) a regional transportation model, with extra detail in Germantown and adjoining areas; (b) setting a standard of an acceptable average level of congestion; and (c) a comparison of average congestion levels resulting from the proposed land use plan against the standard of acceptable congestion.

Regional Context of the Analysis:

Today, as well as in the future, traffic and congestion levels in the Germantown area depend on many things. Among them are the location, mix and intensity of local development and transportation facilities within the area. It is also recognized that development levels and transportation facilities in the larger region beyond the Germantown area also play a major role in the levels of traffic and congestion within Germantown. Therefore, in order to assess future congestion levels in Germantown, techniques that account for these larger, regional traffic patterns are needed. With that in mind, staff has adapted the regional transportation modeling system being used in the Countywide Annual Growth Policy for use in the areawide analysis of the proposed land uses within the Germantown area. While details of the modeling are given in Appendix F, it is helpful to identify here some of the regional context in which the model has been applied in this analysis.

In order to analyze the end-state development for the Germantown Planning Area, it is necessary to use comparable land use activity and master planned transportation facilities throughout the County and the greater Washington region. To do otherwise would result in travel patterns and traffic flows that would not be representative of Germantown's relative location in the larger region. As such, the analysis framework being used in the work on the assessment of the *General Plan* was adapted for use in this analysis. The *General Plan* assessment has been using a time horizon of approximately fifty years to represent end-state development. That time frame includes a build-out of the Master Plan of Highways network, as well as Countywide land activity based upon the cumulative zoning holding capacities of all of the current master plans.

The number of households that would result Countywide from the cumulative zoning in the

TABLE 18: CORRESPONDENCE BETWEEN TRANSIT AVAILABILITY AND AVERAGE LEVEL OF SERVICE STANDARDS

Average Level of Service Standards	Group Classifications	Public Transport Alternatives to Automobile Travel	Transit Services Available or Programmed: Auto Dependent System and/or Bus Based Systems and/or Fixed Guideway Systems				
			Park/Ride Access	Community and Local Bus Service	Regional Park/Ride Express Bus and High Occupancy Vehicle Priority Systems	Commuter Rail or Light Rail	Metrorail
*	I	Marginal	Marginal access to stations or bus routes outside of the area	Not available	Not available	Marginal amount of the area is within walking distance	Not Available
$\overline{C}$	II	Limited	Limited number of park/ride spaces	Limited coverage and frequency	Limited park/ride spaces or lots with local bus service	Limited park/ride access and walking access	Park/ride and kiss/ride access limited to nearby stations outside of the area
$\overline{C}/\overline{D}$	III	Moderate	Moderate number of park/ride spaces, limited kiss/ride service	Moderate coverage, service limited to policy frequencies	Moderate express bus service in conjunction with a system of park/ride lots	Moderate parking or walking access with system transfers	Moderate station coverage in the area with associated feeder access
$\overline{D}$	IV	Frequent	Moderate park/ride spaces and moderate kiss/ride service	Moderate coverage, combined policy and frequent demand-based service	Priority treatment for frequent express buses, local circulation feeder services in conjunction with a system of park/ride lots	Same as Group III above	More dense spacing of stations and bus routes
$\overline{D}/\overline{E}$	V	Full	Limited park/ride with full reliance on kiss/ride access	Full area coverage and a large number of routes with frequencies based on demand	Same as Group IV above	Same as Group III above	Full frequency and full reliance on kiss/ride, easier walking and bicycle access
*	VI	Expanded	Expanded park/ride with reliance on kiss/ride access	Expanded bus frequencies; 100 buses in PM peak	Same as Group IV above	Same as Group III above	Designated CBD; controlled parking; Transportation Mgmt. District

* *See Text of the Recommended FY 90 AGP for Methods and Standard of Measuring Traffic.*

Source: Montgomery County Planning Department.

master plans is a rather firm number, about 440,000 households. However, the number of jobs that could result from the cumulative non-residential zoning is a lot less certain. This is due to the way in which many of the commercial, office, and industrial zones are defined. They do not specifically limit the density, in terms of floor area ratio (FAR), to which a particular parcel can develop. One estimate, using a 0.8 FAR assumption, would result in as many as 1.5 million jobs Countywide. That would be a nearly four-fold increase over the approximate 0.4 million current jobs in the County. The transportation analysis for the Germantown Planning Area has used a reduced Countywide job total of about 0.75 million jobs. Most of the difference between the two employment estimates occurs in the Corridor Cities of Gaithersburg, Germantown, and Clarksburg. The effect of through trips on Germantown should be considered further in the analysis for the Comprehensive Growth Policy Study scenarios and the Gaithersburg Vicinity Master Plan Amendment Stage III (Shady Grove Study Area) update.

Standard of Acceptable Congestion:

The FY 90 Annual Growth Policy (AGP) has identified the Germantown Planning Area as one that currently has limited transit service available. That defines the area as a Group II area. The AGP sets the policy that a Group II area has an Average Level of Service Standard of LOS C for congestion. This transportation analysis recommends that the appropriate standard of acceptable congestion, for the time frame of the Germantown Master Plan, should be a Group III area with an Average Level of Service C/D Standard.

Table 18 is the same as the one used in the FY 90 AGP to show the correspondence between transit availability and Average Level of Service Standards. It is expected that the nature of the transit service that will be provided using the Corridor Cities Transit Easement, whether it is a bus-based system or fixed guideway system, would have moderate coverage and service frequencies, a moderate number of parking spaces, some areas accessible by walking, and moderate levels of feeder bus services. It is on this basis that the Germantown area should be considered a Group III area for the time frame of the master plan build-out.

There are several other reasons why Germantown should be considered a Group III area, with a standard of an average LOS C/D, at build-out. The basic reason for this classification is that it is expected that the transit service on the Transit Easement will not serve Germantown to the same extent that Metrorail currently serves an area such as North Bethesda. Transit usage to employment in Germantown and from residences in Germantown is not projected at this time to be as high as that of North Bethesda, for example. This is due, in part, to the locations of projected work places of Germantown residents and the projected resident locations of Germantown's future work force. (See Figure H-2.) As can be seen, about 25 to 30 percent of Germantown's future work force is projected to come from areas that could be served directly by the Transit Easement and about 50 percent of Germantown's employed residents would work in areas directly served by the Transit Easement. While transit service on the Easement could capture some significant percentages of these trip interchanges, the overall effect on total transit use is expected to be moderate. Further study related to the Transit Easement and to the Comprehensive Growth Policy may provide information that would revise these conclusions.

Another reason for a possible lower public transit use percentage relative to the North Bethesda area is lower than the expected need to transfer from the Transit Easement to Metrorail at the Shady Grove Metrorail station. The projected extra travel time and inconvenience to make this change, given the current design of the Shady Grove station, will be a disincentive to the use of this combination of services. It may be possible, however, to plan for and design a more effective integration of transit services than currently envisaged.

Although the extent of public transit service is not anticipated to be sufficient to warrant a Group IV designation, all efforts should be made to provide and encourage public transit and carpool/vanpool ridership. The Transit Easement is an important element of the transportation network in the I-270 corridor as it would provide service at least as far north as Clarksburg, and possibly as far as Frederick. Also important is the provision of an internal and external bus system. The internal system should provide connections between residential areas, transit stations, and employment opportunities. This system would support ridership on the Transit Easement and the commuter rail service; it would also provide public transit service for those who live and work in Germantown. The external system should provide transit linkages between Germantown and employment centers that are not served by fixed-route transit, such as Shady Grove West or the Davis Tract. It should also provide service from residential areas that are not served by the transit easement and Metrorail, to employment centers in Germantown.

Park-and-ride lots are also an important component of the transportation system. They facilitate the formation of carpools and vanpools for employees whose residences and work locations are not conveniently served by public transportation.

Intersection Level of Service

Level of Service

D

E

F

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It is possible that the results of the studies being worked on for the conceptual feasibility and project planning of the Corridor Cities Transit Easement could result in a higher level of transit service being decided on and programmed. If that turns out to be the case, then consideration of an amendment to this Master Plan would be in order to see: a) if a standard of Average LOS D should be used; and b) if it is used, then what the effect of that LOS would be on the recommendations of the Plan.

Comparison of Average Congestion Levels to the Standard:

As a result of the Germantown Master Plan Amendment process, nearly 40 land use density/transportation system alternatives have been analyzed. A selected subset of these alternatives were determined to warrant detailed analyses. Table G-1 presents a summary of the assumptions for each of these selected alternatives, as well as the expected areawide average level of service in Germantown. Based on these alternatives, a single land use/transportation scenario is recommended in this Plan.

The Preliminary Draft Plan stated that the land use intensity should be limited to a maximum of 0.5 FAR in the Analysis Areas of the Germantown Employment Corridor in order to achieve an areawide average level of service C/D. For analysis areas west of I-270, the intensity in some cases was reduced below 0.5 FAR in order to keep intersection levels of service within acceptable limits of mid-point of LOS E.

The recommendations of this Plan differ from those of the Preliminary Draft in that the intensity and mix of development in selected areas in Germantown have been changed. In particular, high density housing has been increased in the Employment Corridor while simultaneously reducing the amount of employment development. Further, the extension of Crystal Rock Drive has been removed from the transportation analysis because of the impact its construction would have on the environment and on Black Hill Regional Park.

Based on the evaluation of alternative scenarios, a land/use transportation alternative is recommended that achieves the land use planning objectives for the Employment Corridor and maintains the level of service standards for Germantown.

Results of the Areawide Level of Service Analysis:

The recommended end-state land use/transportation scenario includes 78,000 jobs and 37,000 households in the Germantown Planning Area and the Final Draft Plan roadway network, with the addition of a northern crossing of I-270, four grade-separated interchanges, one grade-separated intersection, and modification of several arterial roadways in the vicinity of the proposed regional shopping mall. As a subset of the planning area land use totals, development densities yielding approximately 59,000 jobs and 3,800 households are assumed for the Germantown Employment Corridor. The road network assumptions used in the recommended scenario are provided in Table 19 along with several potential projects which were considered but not included.

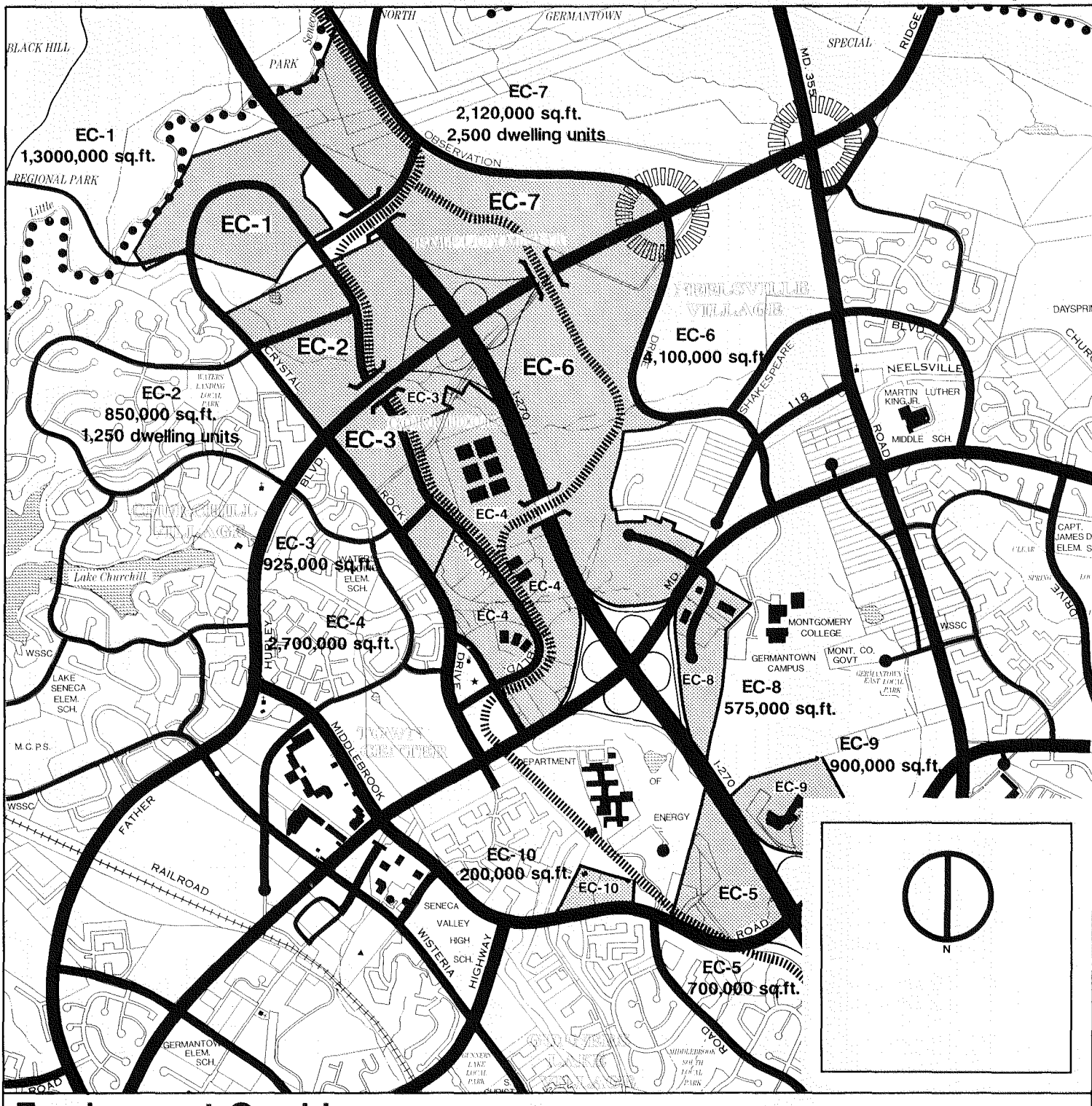
TABLE 19

SUMMARY OF ROADWAY ASSUMPTIONS FOR RECOMMENDED LAND USE / TRANSPORTATION SCENARIO

Roadway Projects Considered	Roadways Included *
Modification to A-291, A-270 and I-3 in the vicinity of the proposed Neelsville Mall	x
Northern Crossing of I-270	x
Interchange at North Crossing and I-270	
Collector Distributor Roads for I-270 fromFather Hurley Boulevard to Middlebrook Road**	
Crystal Rock Drive Extension	
Grade-Separated Interchange at:	
Father Hurley Blvd./Century Blvd	
Ridge Road/Observation Drive	x
Ridge Road/MD 355	x
M-83/MD 118	x
M-83/Middlebrook Road	
MD 117/Great Seneca Highway	x
Father Hurley Blvd./Crystal Rock Drive	
Grade-Separation at Father Hurley Blvd./ Century Boulevard	x

* *Included roadways are shown with an "x".*

The areawide average LOS C/D would be maintained under this scenario. This result is comparable to the LOS results achieved under the "Base Test" (See Appendix G). The road system's ability to accommodate the additional development beyond the "Base Test" can be attributed to the additional road capacity provided by the transportation projects indicated in Table 19, as well as the change in land use mix resulting in a lower jobs-to-housing ratio. This latter factor tends to produce shorter trips resulting in less travel in the Germantown area. However, since this scenario reflects somewhat more development than in the Preliminary Plan "Base Test," the same average areawide levels of congestion as in the "Base Test" are anticipated. Four grade-separated interchanges included in the recommended scenario provide only a



Employment Corridor: Anticipated Development

Analysis Areas and Anticipated End-State Residential Dwelling Units and Building Area in Square Feet

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TABLE 20

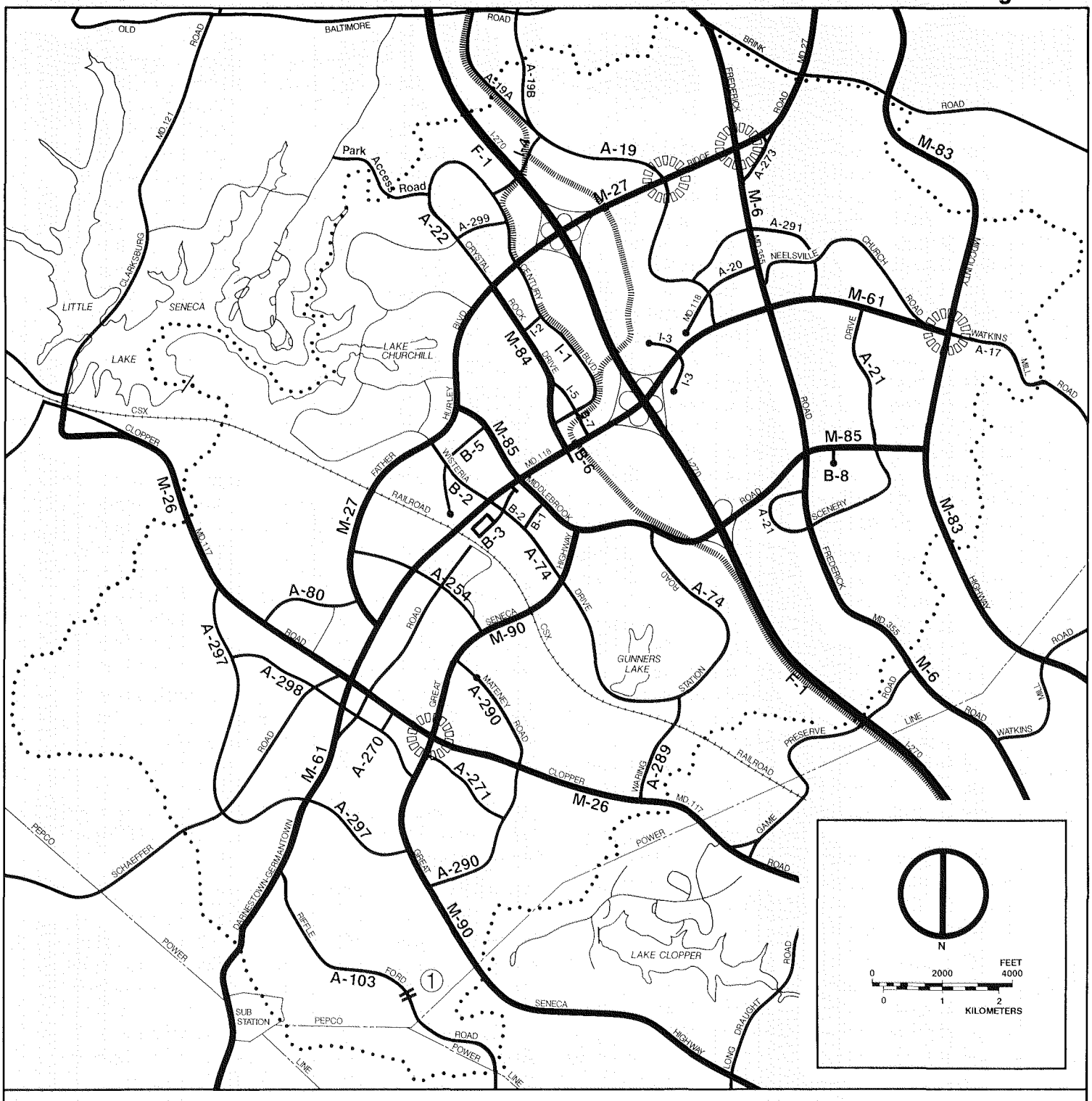
END-STATE BUILDING AREAS, JOBS AND RESIDENTIAL UNITS IN THE EMPLOYMENT CORRIDOR

Analysis Area	Total Acres	Employment				Residential		
		Acres	FAR	Bldg. Area*	Jobs**	Acres	Density	Units***
EC-1	75	75	.40	1,300,000	5,200	—	—	—
EC-2	108	39	.50	850,000	3,400	69	R-30/PD-22	1,250
EC-3	84	32	.25	350,000	1,400	—	—	—
		52	.50	1,130,000	4,500			
EC-4	120	105	.50	2,300,000	9,200	—	—	—
		15	.60	400,000	1,600			
EC-5	40	40	.40	700,000	2,800	—	—	—
EC-6	188	188	.50	4,100,000	16,400	—	—	—
EC-7	200	72	.50	1,600,000	6,300	104	R-30/PD-35	2,500
		24	.50	520,000	1,700			
EC-8	32	32	.50	575,000	2,300	—	—	—
EC-9	41	41	.50	900,000	3,600	—	—	—
EC-10	11	11	.40	200,000	800	—	—	—

* *The building area is an approximation based on the allowable FAR of the recommended zone, taking into account existing development in Analysis Areas EC-4 and EC-8.*

** *The number of jobs is an approximation based on an average of 250 square feet per employee in the I-3, I-1, and Town Sector Zones and 300 square feet in the R&D Zone.*

*** *The number of units include MPDU's.*



Roadway System

Grade-Seperated Interchange

Freeway

Major Highway

Arterial(A),Industrial(I),and Business District Roads(B)

May be closed when Great Seneca Highway is opened to traffic through Great Seneca Park ①

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marginal amount of areawide capacity; their prime function is to improve local intersection operations.

Local Area Intersection Analysis

An analytical technique comparable to the one being used in the Local Area Transportation Review in assessing traffic impacts of proposed subdivisions was also used in this local transportation analysis. The specific technique is the "Critical Lane Volume" method. As applied to the Germantown Master Plan analysis, it involves the use of: a) the areawide transportation model to obtain background turning movement estimates at the identified intersections; b) the sub-zone system to define "parcels" of the major employment locations; and c) the standard of acceptable level of congestion for intersections. The standard of acceptable intersection level of service for intersections used in this analysis is mid-point of LOS E, with a Critical Lane Volume summation of 1,525. This is the same standard being used in intersection analysis in the Local Area Transportation Review procedure.

Local intersections within the Germantown Employment Corridor would function at acceptable levels of service (better than the mid-point of LOS E) under the recommended scenario. The four grade-separated interchanges included in this Plan are some of those requested in the Executive staff's comments on the Preliminary Draft Plan. They are the ones that result in improvements to local congestion levels and appear more feasible to implement. However, it should be noted that in the event further study shows that one or more would be infeasible to implement, then the specific development intensity of nearby parcels within the Employment Corridor might not be able to achieve the amount assumed in the recommended land use scenario. Figure 32 depicts the results of the local area intersection analysis for the recommended scenario.

The results of the local area analysis for development at the recommended densities in the Employment Corridor show that the six intersections that would be prime access points to the proposed major Germantown Employment Corridor would generally have acceptable intersection levels of service, at LOS E or better. However, it should be noted that the MD 355 and MD 117 corridors are estimated to have unacceptable (LOS F) levels of intersection congestion. A more detailed examination of these unacceptable local levels of service along MD 355 and MD 117 corridors indicates that high levels of through traffic from outside the Germantown area appear to be the major contributor to those unacceptable local levels of service.

It is noted that, in projecting traffic volumes at the identified major intersections, the "background" traffic volumes were produced by using results from the sub-area transportation model. These background traffic volumes were then modified, using appropriate Institute of Transportation Engineers trip generation rates, in order to have a better estimate of the number of peak hour trips in the vicinity of the Employment Corridor. Similar procedures were used to estimate the "site related" traffic associated with different activity levels in the Employment Corridor. These modified background and site traffic volumes were then used to calculate the local intersection levels of service. In projecting levels of congestion at each major intersection, the most desirable geometric conditions for at-grade intersections were used.

Recommendations of the Master Plan

End-State Building Areas

The transportation analysis indicates that the proposed end-state land use intensity should be limited to a maximum of 0.5 FAR for each Analysis Area on the east side of the Employment Corridor. For Analysis Areas west of I-270, the limits in some cases have been further lowered to keep intersection levels of service within acceptable limits. The end-state building areas shown on Figure 33 and Table 20 are included in the text of the appropriate Analysis Areas.

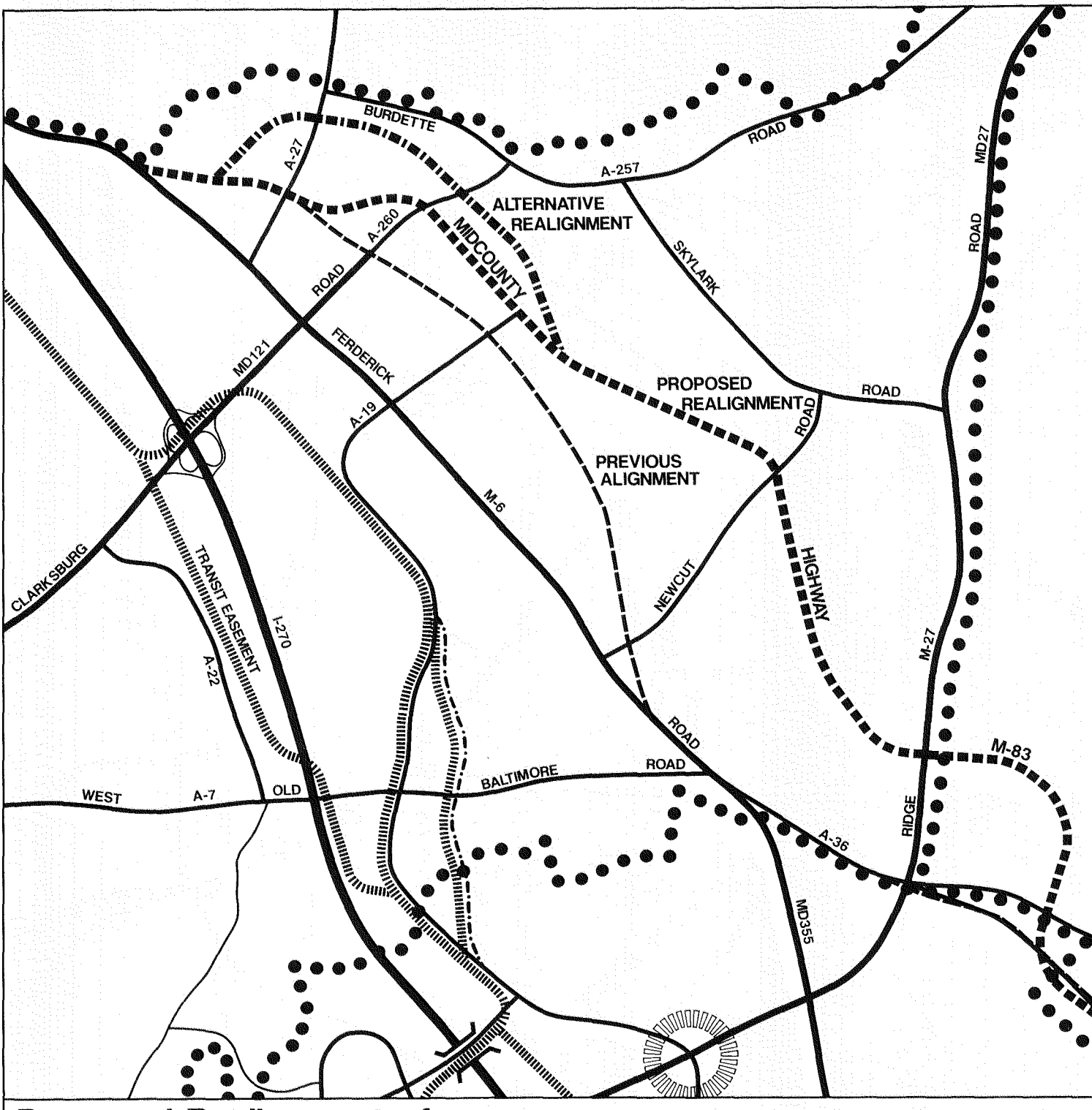
The parcels available for private development in the Employment Corridor are zoned I-1, I-3, or Town Sector. None of the zones contain a FAR limitation. Therefore, in order to achieve acceptable levels of service, a mechanism to limit end-state building areas (FAR) should be developed. The proposed comprehensive revision to the I-3 Zone and the new R&D Zone are recommended to meet this need.

Master Plan Staging Considerations

The transportation analysis evaluated the end-state development of Germantown when transit service on the easement would be available. Based on this transit service, Germantown is recommended to be a Group III area with an Average Level of Service C/D as the standard. Programming of transit easement service will be a major staging element in the development of Germantown. Until that service is programmed, Germantown should remain a Group II area with an Average Level of Service Standard of C. When that service is programmed, Germantown could be classified as a Group III area and additional development potential should become available for the later phases of development in Germantown.

HIGHWAY RECOMMENDATIONS (Figure 34)

The recommended classifications, minimum right-of-way widths, and number of lanes are indicated on Table 17 and shown graphically on Figure 36.



Proposed Realignment of Midcounty Highway (M-83)

M-83(MIDCOUNTY HIGHWAY)

Master Plan Alignment

Previous Alignment

Alternative Alignment

This realignment is an Amendment to the Clarksburg Master Plan and The Functional Master Plan for the Preservation of Agriculture and Rural Open Space in Montgomery County.

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Figure 36

Amendments to the Clarksburg Master Plan

- Revisions to the Alignment of M-83 with Two alternatives Near A-260
- Two Alternative Alignments of A-19
- Addition of Alternative Transit Easement Alignments

HIGHWAY CLASSIFICATIONS

Freeway
Major Highway
Arterial Roadway

TRANSIT EASEMENT

Alternative Alignments

PROPOSED ROAD A-19

Alternative A
Alternative B

M-83(MIDCOUNTY HIGHWAY)

Master Plan Alignment
Alternative Alignment

These and other alternative alignments are being studied as part of the Corridor Cities Transit Easement Study(See Master Plan and Figure 39).

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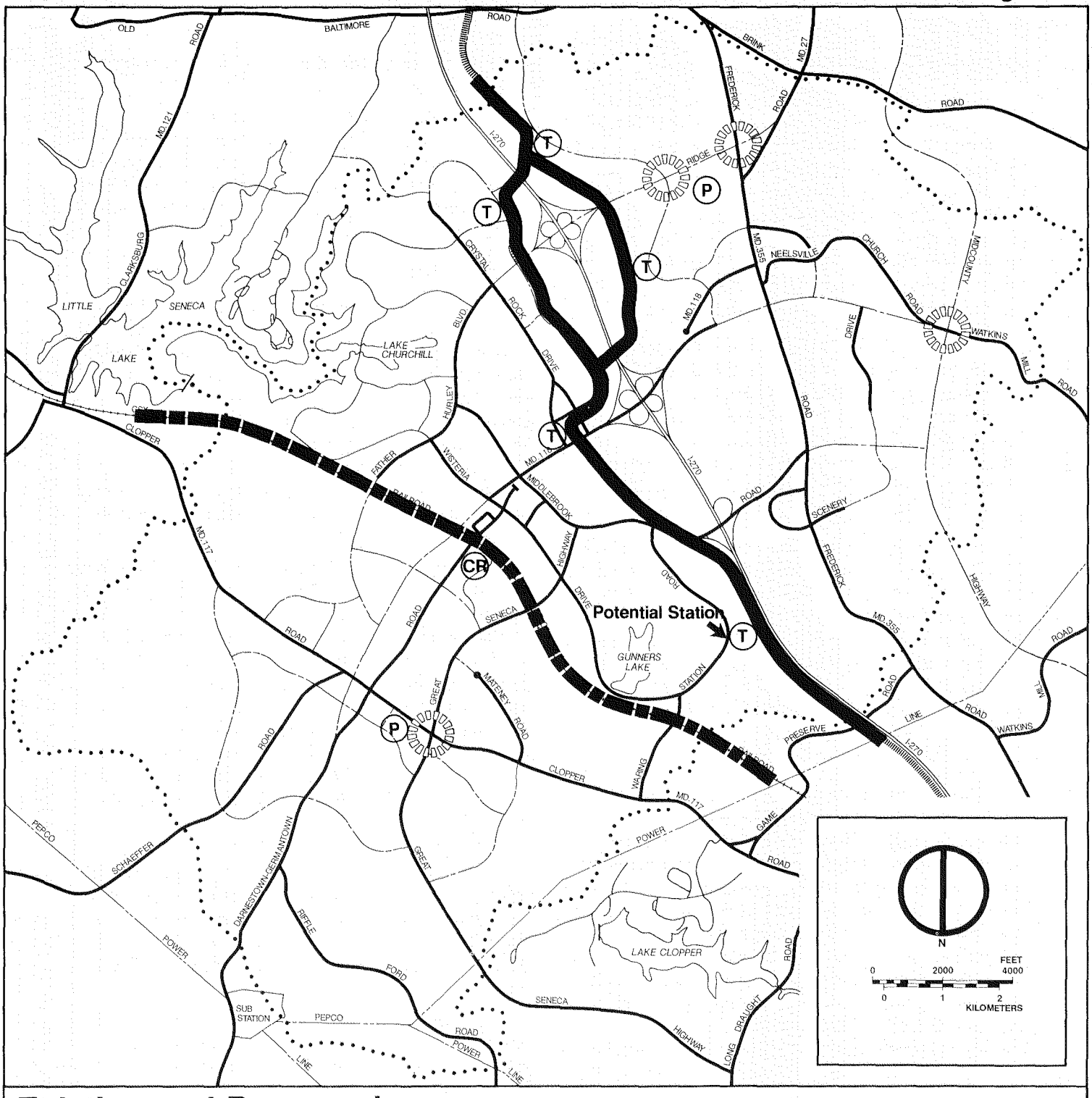

Existing and Proposed Transit Facilities

Commuter Rail

*Corridor City Transit Easement Alignment

Commuter Rail Station (CR)

Park-N-Ride Location (P)

Proposed Transit Stations (T)

*These and other alternative Alignments are being studied as part of the Corridor Cities Transit Easement Study-See Master Plan and Figure 39.

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I-270 and Related Interchanges

The widening of I-270 is one of the most important elements to the implementation of the Plan. I-270 traverses the planning area from north to south, and is recommended for widening to eight lanes through Germantown. In addition, a partial interchange at Middlebrook Road and a full-movement interchange at Father Hurley Boulevard/Ridge Road are recommended in this Plan. The completion of each of these interchanges will increase the traffic capacity of the roadway system serving Germantown.

Collector-distributor (C-D) roads are recommended to be extended from Gaithersburg, through Germantown, to Clarksburg to improve traffic flow, circulation and safety in and between the interchange areas of I-270. The design of the two proposed interchanges in Germantown and the establishment of the right-of-way of I-270 should accommodate the future construction of C-D roads.

A fourth interchange, between M-27 and Black Hill Regional Park, was considered. It is not recommended as a element of this plan because: it is not feasible to implement a new interchange at that location due to localized constraints, the planned transportation network is sufficient to provide access to the recommended land uses, and it would create significant negative impacts on land uses planned nearby.

Major Highways

Several major highways of four to six lanes provide a network that connects Germantown to locations in the region. In addition, they provide local access for trips within Germantown. Each roadway provides a necessary transportation link in the network and, therefore, the construction of each is essential to the implementation of this Plan. The road alignments and the number of lanes recommended in this Plan are intended to provide adequate capacity for the end-state development while minimizing the negative impacts of through-traffic on Germantown's residential communities. Appendix I describes the major highways in Germantown and their planned alignments:

Also included in this Plan is a road alignment change in the Clarksburg Planning Area. The 1968 *Clarksburg Master Plan* indicates that Midcounty Highway (M-83) intersects MD 355 at Brink Road, just north of the Germantown Planning Area. The amended alignment, shown on Figures 35 and 36, keeps Midcounty Highway parallel to MD 355 through the Clarksburg Planning Area, joining it north of Clarksburg. North of A-19, this Plan identifies two possible alignments which should be evaluated as part of the *Clarksburg Master Plan* process. This alignment change would increase the traffic capacity in Clarksburg.

This alignment change also amends the 1980 *Functional Master Plan for the Preservation of Agriculture and Rural Open Space* since the alignment now crosses Brink Road east of MD 355 and follows Wildcat Road until it turns west crossing MD 355. (See Figures 35 and 36.)

Arterial Roadways

Arterial, business district, and industrial roads have two- to five-lane cross-sections. They generally provide links between major highways and provide access from the major highways to the residential areas in the villages. The alignments of these roads have been designed to facilitate bus transit service. Appendix I describes the alignments of some of the significant arterial roadways. The Proposed Roadway System Map (Figure 33) shows the ultimate highway network just as the land use plan describes the ultimate development pattern.

Two alternative alignments to Observation Drive (A-19) between the Northern Crossing (I-4) and MD 355 are included in this Plan. The western alternative has fewer stream crossings and less anticipated wetland impact than the the eastern alignment. The eastern alignment crosses West Old Baltimore Road sufficiently far from I-270 so that its intersection would enable an interchange with I-270 to be constructed. The western alignment would be too close to I-270. The selection between these alignments will be made as part of the *Clarksburg Master Plan* process.

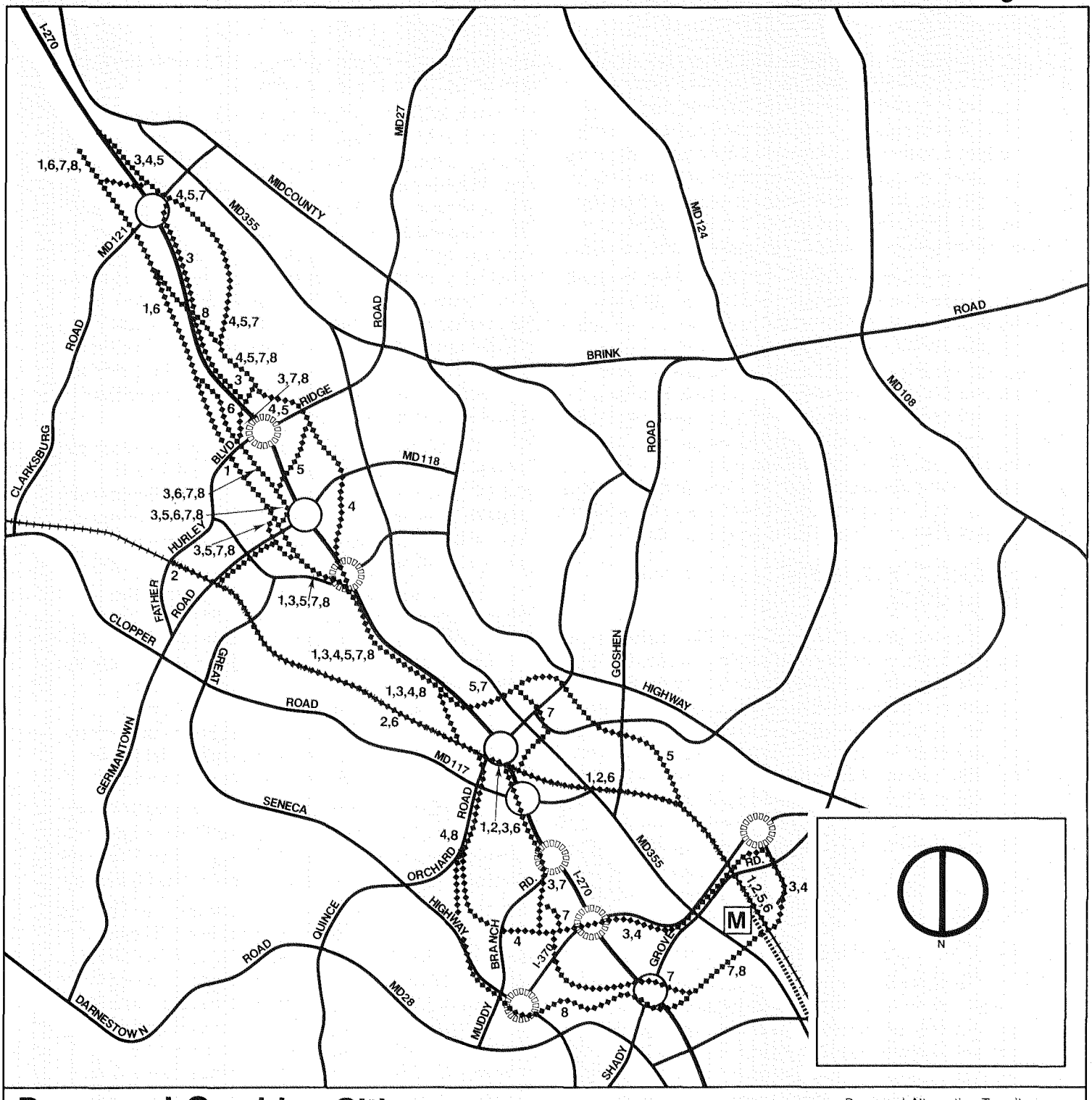
TRANSIT SERVICEABILITY

One of the most significant objectives of this planning effort is to provide a complementary roadway and transit system that serves this vibrant corridor city. The land use recommendations expressed in this Plan are intended to foster a transit-serviceable community.

Detailed planning for transit serviceable land use is evolving. The level of transit serviceability is thought to be the result of a number of interrelated elements such as:

- length of time to wait for the next bus or train;
- ease of access from residences to bus stops and transit stations; and
- ease of access from the transit service to the destination.

The following discussion outlines a number of objectives for land use or transit planning and operations that would enhance the use of transit. The higher the frequency of transit service, the more people will use it. The provision of a paved or sheltered place to wait also encourages use. Residential subdivi-



Proposed Corridor Cities Transit Easement Alignments

Proposed Alternative Transit Easement Alignments

Railroad

Existing Shady Grove METRO Station M

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Note: The numbers(1-8)next to the proposed transit alignments represents the total number under study.

sions need to be designed so that busses can easily circulate on collector streets and so that residents can walk or bike easily and directly to a bus stop. Shopping centers and major employment areas should be designed so that busses can stop near main entrances or at least so that a safe and direct pedestrian route is provided to the entrance from the bus stop. The two urban villages are recommended to be located on the transit easement in order to increase transit ridership.

As noted in the transportation analysis, internal and external bus systems should be provided. The transfer time should be minimized where these two systems connect. It is important to provide an integrated system of public transit services as well as park-and-ride lots for transit riders and carpoolers in order to meet the needs of the residents and workers in Germantown. Work that is still on-going as part of the Corridor Cities Transit Easement Study will be directed at elaborating on these ideas. In addition, recommended refinements of the setbacks in the I-3 Zone are designed to increase transit-serviceability.

TRANSIT RECOMMENDATIONS (Figure 37)

The components of the Transit Plan include transit easements, commuter rail services, regional and local bus service now being provided by the Ride-On System, and park-and-ride facilities. Use of transit services should be encouraged through the provision of safe pedestrian and bicycling connections between building entrances and the adjacent streets. Major buildings or groupings of buildings should be located close to adjacent roadways to reduce the distance transit riders have to walk. Further, in residential subdivisions sidewalks, pathways and bikeways should be provided to better connect residents to streets with transit service.

The Corridor Cities Transit Easement

The Corridor Cities Transit Easement is a proposed right-of-way 70 feet wide extending from the Shady Grove Metro station north through the corridor cities of Gaithersburg, Germantown, and Clarksburg (See Figure 38), with the potential for an ultimate extension to Frederick. This Plan recommends two alignments for the Germantown area as shown in Figure 37. Two alignments would allow transit to serve employment and residential uses on the east and west side of I-270, as well as the Town Center. At a future date, it will be necessary to determine whether the employment and residential population of Germantown can support two transit easements. If not, the Plan recommends that the preferable alignment be determined at that time.

These alignments are different from that shown in the 1974 *Master Plan*, but both alignments are substantially similar to ones being considered in the Corridor Cities Transit Easement Study.

It is important to assure that the right-of-way for future transit service be protected. The Corridor Cities Transit Easement Study began in the spring of 1988. It will identify and review alternatives in land use patterns, various transit types and specific alignments ridership estimates, environmental impacts, station and storage yard locations, and site analysis associated with the transit easement. This study is an important element of the parallel and subsequent master plans studies in Gaithersburg, Germantown, and Clarksburg, and has significant implications for the General Plan as well. It will provide a better basis for right-of-way reservation, and will provide guidance to subsequent project design studies.

The alignments might include at-grade crossings of major highways such as: Middlebrook Road (M-85), MD 118 (M-61), and Father Hurley Boulevard (M-27). The effect of such crossings on both the operation of transit service and the capacity of the roadway network will be explored in the upcoming study.

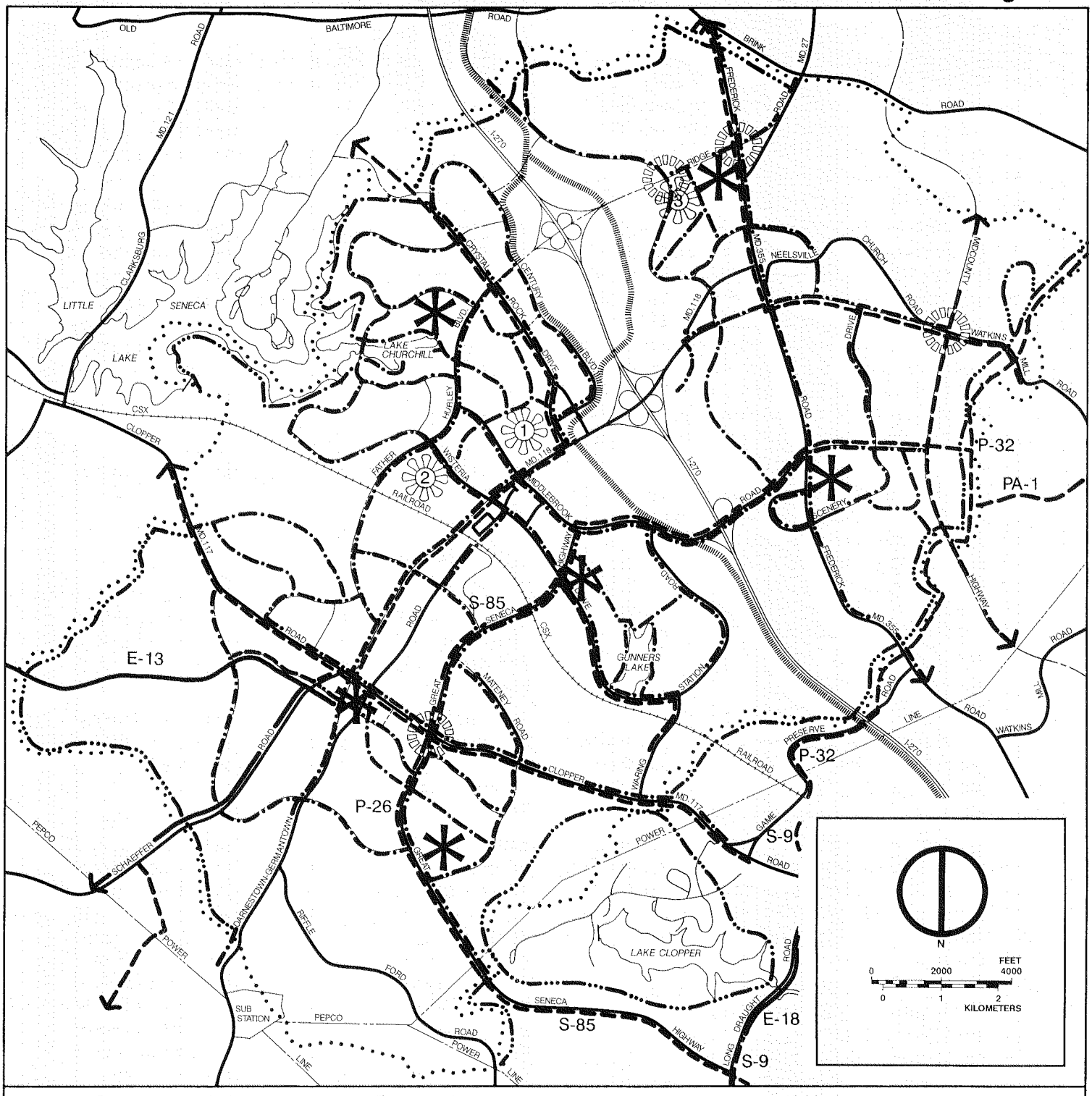
In addition to the preferred alignment, other alignments are being considered in the study. Since these alternative alignments are likely to affect the development in this area, the selection of a single alternative should be made as soon as possible. These alternatives are shown on Figure 38. The County Council, as part of the master plan process in Germantown, should determine the most appropriate alignment for the transit easement in Germantown.

In order to protect the right-of-way for the transit easement in Clarksburg, this Master Plan recommends amending the 1968 *Clarksburg Master Plan* in order to add two alternative alignments. (See Figure 36.)

Four transit station locations are proposed by this Plan. One location is adjacent to the eastern edge of the Mixed-Use Center, in Analysis Area TC-2. The second is located in EC-6, the Marriott site, close to proposed M-27, Goldenrod Drive and the regional mall. The third is located in Analysis Area EC-2, adjacent to Father Hurley Boulevard and Crystal Rock Drive in the west Urban Village. A fourth is in Analysis Area EC-7 near Observation Drive in the East Urban Village. Other possible locations for stations or transit vehicle stops will be considered in the Transit Easement Study. Analysis Area GL-2 is one possible location. An area of approximately 10 acres should be available at each of these sites for the station, parking, bus bays, and kiss-and-ride areas. Approximately 1,000 spaces could be provided at each station.

Commuter Rail

Commuter rail service provides an alternative to using automobiles to travel to several down-County business districts and to downtown Washington. The



Existing and Proposed Bikeways,Major Pedestrian Connections and Equestrian Trails

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BIKEWAYS

Existing and Proposed

MASTER PLAN OF BIKEWAYS DESIGNATIONS

E-Existing

S-Programmed

P-Proposed

PA-Proposed by Area Master Plan Proposed

NOTES:

- Location and design of proposed bikeways to be determined at time of roadway design and engineering.
- Bikeways shown in conjunction with roadways are not designated by A Project Number in all Cases.

EXISTING AND PROPOSED PEDESTRIAN CONNECTIONS

Sidewalks/Pathways

PROPOSED PEDESTRIAN TRAILS

Existing and Proposed

Village Centers

ACTIVITY NODES

1.Mixed-Use Center
2.Retail and Service Park
3.Regional Mall

Germantown commuter rail station is located near existing MD 118, just west of the B&O Railroad tracks. Based on a survey in March 1986 by the Maryland Department of Transportation, approximately 150 passengers board the six trains at the Germantown station each weekday morning. A 138-space parking area is currently under construction.

This service enables local residents using the rail line to have access to Metro by transferring at the Rockville or Silver Spring stations. Should the Silver Spring commuter rail station be relocated closer to the Metro station, the commuter rail line would form a more direct cross-County link between the two arms of the Metro Red Line. An intermodal (Metro/commuter rail) terminal at Silver Spring is being evaluated by the MdDOT. Ride-On bus service is provided between the Metro and commuter rail stations in Silver Spring.

This Plan recommends that the parking facilities at the commuter rail station in Germantown be expanded. Montgomery County DOT has acquired two parcels on the east side of the railroad tracks. State DOT is preparing plans for the construction of a 250-space parking facility on those parcels. The development of this area will enhance the use of commuter rail service.

Bus Service

Public bus service provides an additional alternative to the automobile for commuting, for trips within Germantown, and for trips to locations in Gaithersburg and Rockville.

Public bus transit service is currently provided in the Germantown area by the County's Ride-On system. The system has been incrementally expanded to include more frequent service and new routes. The system connects Germantown with employment areas in Gaithersburg and Rockville and to the Shady Grove Metro station.

As Germantown develops, there will be increased demand for Ride-On and/or Metrobus service in order to continue to provide an attractive alternative to automobile commuting. A transit center should be located in the Town Center to facilitate the transfer of passengers among several bus routes.

In order to increase accessibility for employees going to and from the transit stations, this Plan encourages the establishment of a shuttle bus service. This service could also provide lunchtime service to the Town Center. Funding for the service could come from a consortium of the major employers in the Employment Corridor.

Park-and-ride Lots

Two park-and-ride lots are recommended to be developed. (See Figure 37.) One site is adjacent to the Regional Shopping Mall site in Neelsville Village. This location would provide an opportunity for people traveling on MD 27 and MD 355 heading for I-270 to conveniently meet for carpools, vanpools and commuter buses that could go to locations not directly served by the transit easement.

The other lot is located along Clopper Road near its intersection with Great Seneca Highway. This intersection is anticipated to operate at an unacceptable level of service when Germantown is fully developed. (See Figure 32.) The projected congestion is due to through traffic from Boyds and Clarksburg. This park-and-ride lot is located to serve these commuters (as well as residents of Germantown) and reduce congestion.

The exact location and size of these lots should be determined at the time of subdivision approval and/or as the result of an appropriate capital project planning study.

PEDESTRIAN AND BIKEWAY PLAN RECOMMENDATIONS (Figure 39)

The bikeway recommendations expressed in this Plan incorporate and augment the 1978 *Montgomery County Master Plan of Bikeways*. The proposed locations and classifications of these bikeways are shown on Figure 39.

The Pedestrian Plan has been developed in conjunction with the Townscape Design chapter. The Pedestrian Plan has been guided by the following recommendations.

This Plan recommends that sidewalks be constructed on at least one side of roadways at the time of initial construction or widening. This is in accordance with current practice. The sidewalks should be funded as an integral part of the road project. In addition, pathways are recommended to be developed in community open space areas to enable residents an opportunity to enjoy the natural beauty of the area. Both the sidewalks and the pathways should provide pedestrian connections between residences and such destinations as parks, schools, shopping areas, transit stops, employment areas, and community centers. Although these pathways may be used by cyclists, they are not designated as bikeways and are not required to meet bikeway design standards. Where pathways go through open space areas within a subdivision, the common space should be a minimum of 20 feet wide to provide some privacy to the adjoining yards. The major pedestrian connections are shown on Figure 39.

As noted above, pedestrian connections should be provided to facilitate the use of transit services. These connections would include sidewalks and pathways to connect residents to streets with transit serv-

ice, to walkways between major buildings or groups of buildings and to adjacent streets.

In some areas of Germantown, the pedestrian network is incomplete. This Plan recommends that Montgomery County DOT work with the homeowners associations in providing connections to the sidewalks in the street rights-of-way. In some cases, site plan enforcement may be needed to extend pathways within communities so that they connect to sidewalks or other open space areas. In order to facilitate safe pedestrian movement at intersections, free-right-turns are discouraged.

Grade-separated pedestrian crossings should be studied at locations where major highways need to be crossed by children going to and from schools. As activities at the schools are not limited to the times when school crossing guards are present, a conflict exists. One means of relieving the conflict is a grade-separated pedestrian crossing. The use of such a crossing is dependent on a number of detailed site conditions, such as whether one side at least is at the same elevation of the crossing as it passes over the street or whether a barrier exists that prohibits crossing the street at-grade. Although these conditions are too detailed for a master plan effort, this Plan does recommend that grade-separated crossing should be explored as part of plans to widen or construct roads at the following locations:

- Relocated MD 118 west of proposed road A-254, between Germantown Elementary School and the residential community to the north.
- MD 355 near Gunners Branch Road, connecting residential areas to Fox Chapel Elementary School and to retail services.

EQUESTRIAN TRAILS SYSTEM

There are a number of equestrian trails in Montgomery County which have been established and maintained by user groups on an informal basis. Figure 39 shows the general locations of the existing and proposed equestrian trail system in the Germantown area.

The continued use and enjoyment of these trails is being threatened by future development. Therefore, this Plan recommends that an attempt be made to accommodate these trails as development occurs. Section 50-30 of the Subdivision Regulations was amended in 1982 to provide that the Planning Board, through subdivision process, may require dedication to public use of right-of-ways or platting of easements for equestrian trails. The Plan recommends further that those portions of the equestrian system located on public lands be continued with appropriate regulations and user group maintenance.

Community Facilities

This chapter makes recommendations regarding public schools, public parks and recreation, and other community facilities such as post offices, libraries, government centers, police stations, and Montgomery College. These community facilities are the locations at which needed services are provided to residents of Germantown and the Upcounty.

Objectives

Public community facilities, such as schools and parkland, should be adequate to serve the end-state population projected by this Plan. Specifically, the objectives of this Plan are to:

- Provide community facilities that promote the health, safety, and welfare of a variety of users including the elderly, the handicapped, and children.
- Provide conveniently located parks and other facilities for both active and passive recreation to meet the needs and interest of various segments of the community.
- Promote access to recreational opportunities and facilities.
- Provide appropriate facilities to meet the general and specialized educational needs of area residents.

This chapter describes in detail several existing and planned community and public facilities in the Germantown Planning Area. To facilitate an understanding of the major conclusions, the following points should be highlighted: (1) the Germantown area generally has adequate park and recreational facilities to serve the existing population, except for ballfield recreational areas; (2) the end-state population will need additional local parks, of which nine are included in the current Capital Improvements Program (CIP); and (3) the number of future elementary school sites has been reduced from 28, shown on the 1974 *Master Plan*, to 12, since families, on the average, are having fewer children. The number of secondary schools has been reduced from three senior high schools shown on the 1974 *Master Plan* to two. Six junior high schools have been reduced to three middle schools.

Public Schools (Figure 40)

The Germantown area is currently served by one high school, two intermediate, and six elementary schools. As indicated in Table 21, these schools are currently in the Seneca Valley and Watkins Mill clusters. Eight of these schools are located in the Germantown Planning Area, while one of the schools is located outside the planning boundaries with a service area that includes part of the planning area.

TABLE 21
PUBLIC SCHOOLS BY HIGH SCHOOL CLUSTER

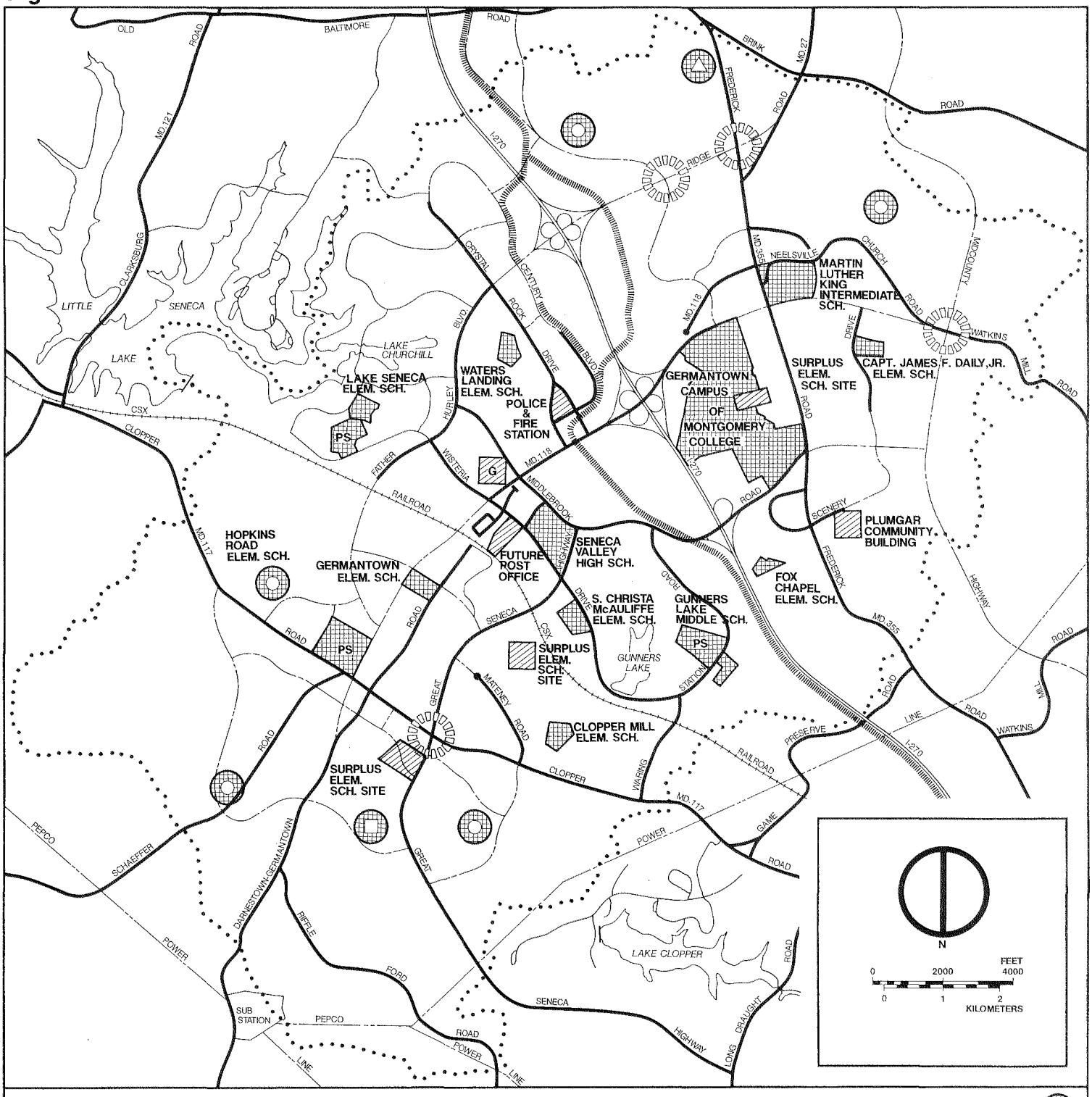
High School Cluster/ School Name	Date Orig.	Modernized	Site Size (Acres)	Number of Classrooms
SENECA VALLEY CLUSTER				
Seneca Valley High	1974		32.8	75
Martin Luther King	1981		31.6	43
Clopper Mill Elem.	1986		9.0	29
Fox Chapel Elem.	1974		10.6 PK	28
Germantown Elem.	1935	1978	8.0	21
Lake Seneca Elem.	1985		10.6	26
McAuliffe Elem.	1987		10.6 PK	33
Waters Landing Elem.	1988			33
WATKINS MILL CLUSTER				
*Montgomery Village	1968		15.1	38

* *Not located inside planning boundaries, but has a service area that includes part of the planning area.*

NOTE: PK denotes an adjacent park site; park acreage is in addition to that shown.

SOURCE: Requested FY 90 Capital Budget and the FYs 90-95 Capital Improvements Program, November 1, 1988, Montgomery County Public Schools.

Figure 40



Existing and Proposed Community Facilities

Proposed Elementary Schools

Proposed Middle Schools

Proposed Senior High Schools

Existing Public Schools

Other Facilities

Site owned by Montgomery County Public Schools (PS)

Proposed Upcounty Government Center,Library and Area 3 Offices of Montgomery County Public Schools (G)

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NUMBER OF SCHOOL SITES[4]

The average number of elementary school-age children per single-family detached household has declined from 0.90 in the early 1970s to 0.48 in the mid-1980s. This change, combined with the increase in enrollment capacity in the new elementary schools, results in a significant reduction (from 28 to 12) in the number of elementary schools needed for end-state development. The secondary school yield also dropped from 0.50 to 0.42, which reduces the number of senior high schools needed from three to two.[5] Public school needs are analyzed in Appendix J.

ELEMENTARY SCHOOLS NEEDS

There are six existing elementary schools and two under construction; an additional elementary school is recommended for construction in the FY 90-95 Capital Improvements Program. In addition, three more elementary schools, for a total of 12, will be needed to accommodate the enrollment of end-state Germantown development.

The enrollment policy for elementary schools has changed since the adoption of the 1974 *Master Plan*. Elementary school capacity at individual schools has increased from 400-500 students to approximately 690-740 students. This increase requires greater building area and more parking area. Also, additional classrooms are needed for specialized programs. The 10-acre elementary school sites acquired for the smaller schools cannot easily accommodate the larger facilities. This Plan, therefore, recommends that the size of future elementary school sites should be a minimum of 10 usable acres (or, generally, 12 total acres). Further, new school sites should not be constrained by unusual topographic features and they should generally be level to facilitate the development of larger school buildings and ballfields.

SECONDARY SCHOOL NEEDS

Seneca Valley High School, Martin Luther King, Jr. Junior High School, and Ridgeview Junior High School currently meet the secondary school needs of Germantown residents.

Although existing and programmed secondary school capacity should accommodate Germantown's enrollment for the next six to ten years, additional capacity will be needed to accommodate the end-state development of Germantown. An additional four-year senior high school and two middle schools are expected to be needed. The proposed locations for these schools are shown on Figure 40.

USE OF SURPLUS SCHOOL SITES RECOMMENDED IN 1974 PLAN

Three elementary school sites, owned by Montgomery County Public Schools (MCPS), have been declared surplus, and other sites may be in the future. The recommended use for each of these sites is presented in the Land Use and Zoning Chapter.

Schools provide important community recreational facilities. This Plan has evaluated alternative uses, particularly local-use parks, for surplus school sites. As fewer schools with accompanying ballfields are being constructed, there is a greater demand for parks to provide active public recreation facilities.

Public Parks And Recreation (Figure 41 and Appendix K)

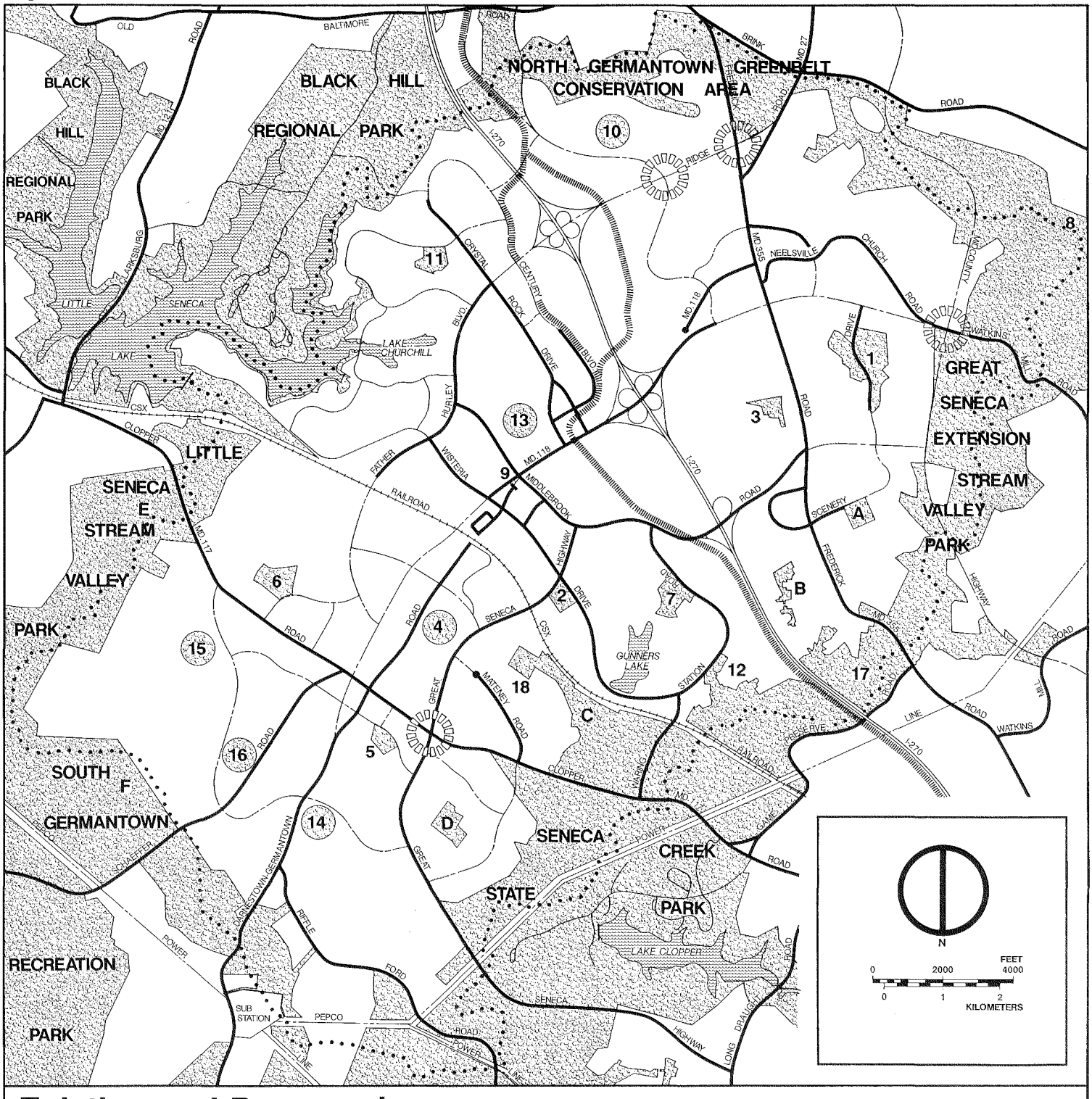
Germantown is surrounded by a wide greenbelt of large parks and has an interior scattering of smaller local parks. The Germantown greenbelt, as shown on this Plan and on the Park Acquisition Map, is composed of Seneca State Park and County stream valley, regional, and conservation parks. The intent of the system of greenbelt parks is to provide an effective visual and physical border which establishes the edges of the Germantown Community. As planned, it varies from over a mile in width to 500 feet, with most sections ranging from 1,500 to 2,000 feet. Its boundaries have been established to protect the stream valleys, steep slopes, and wooded areas around Germantown, to provide locations for active recreational facilities, and in consideration of existing property lines and development. Thus, although most of the greenbelt will remain in its natural state as a conservation park, some areas have been designated as locations for active recreational facilities. Such facilities have already been developed in South Germantown Recreation Park and Black Hill Regional Park.

Recreation facilities are also available at Germantown's public schools and at the Germantown Campus of Montgomery College. Most of the larger

4 The future school needs recommended in this Plan were developed in close cooperation with Montgomery County Public School planning staff.

5 When the 1974 *Master Plan* was adopted, secondary education was provided in junior high schools (grades 7-9) and senior high schools (grades 10-12). This Montgomery County Public Schools policy has been changed, and middle schools (grades 7 and 8) and senior high schools (grades 9-12) are being constructed.

Figure 41



Existing and Proposed Public Parkland

EXISTING LOCAL PARKS
- A Plumgar
- B Fox Chapel
- C Gunners Branch
- D South Gunners Branch
- E Seneca Day Camp
- F South Germantown

PROGRAMMED LOCAL PARKS
1. Clear Spring
2. Gunners Lake
3. Germantown East
4. Clopper
5. Old Germantown
6. Germantown Estates
7. Waring Station
8. Blunt Road
9. Germantown Square

PROPOSED LOCAL PARKS
10. Millwood
11. Waters Landing
12. Gunners Village
13. Germantown Center
14. Cedar Creek
15. Kingsview
16. Schaeffer Road
17. Middlebrook Hill N.C.A.
18. Bellefields N.C.A.

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residential subdivisions also have their own privately-maintained recreation facilities.

The provision of adequate parkland and recreation facilities is an important goal for all areas of the County, and is especially important in Germantown because of its recent rapid rate of development and the large number of people living in townhouses and apartments. The parks provide open areas for recreation, nature observation, conservation, wildlife habitat preservation, and open space, and the definition of community form provided by natural features such as the several major streams and their tributaries.

The adopted Park, Recreation, and Open Space (PROS) Master Plan projects outdoor facility needs to 1995. The number of existing local recreation facilities and those needed in 1995 are shown below:

Facility	Number Existing	Number of Additional Needed by 1995	Total Number Needed by 1995
Ballfields	15	19	34
Tennis Courts	18	7	25
Park Playgrounds	4	14	18
Basketball Courts	12	21	33

The additional facility needs to 1995 can adequately be met by future school sites and park sites currently programmed for the Germantown area. The schools and park facilities beyond those in the CIP are estimated to be adequate for the recreational needs of the end-state population. This adequacy will be reviewed every five years, during updates of the PROS Plan.

The lighting of playing fields should only be initiated after extensive community input and careful design to assure that no negative visual or acoustic effects occur on adjacent land uses. Given the difficulty of adequately controlling illumination from tall lighting standards and the difficulty of controlling noise generated on- and off-site, this Plan recommends locating such facilities only in areas where residences are sufficiently distant.

Park proposals in Germantown have been examined in terms of the need to provide:

1. Adequate local recreation to serve each of the Germantown villages;
2. Larger scale regional recreation needs to serve the area as a whole; and
3. Adequate preservation of watersheds and conservation areas.

LOCAL RECREATION NEEDS

Germantown has several local parks where ballfields, tennis and basketball courts, and picnic and playground areas are available. (See Appendix K for acreage and available facilities.) At end-state development, at least two local parks will be available in each village except Churchill Village.

Churchill Village's parks currently are provided by the developer. In addition, local recreation facilities such as ballfields, tennis and multi-use courts are recommended to be provided on two parcels in Churchill Village. (See Analysis Areas CH-1 and CH-2.)

There are two local parks in Gunners Lake Village. Gunners Lake Local Park is located on a park-school site and Middlebrook Road Local Park is located at the tip of an 18-acre lake. Clopper Village also has two developed local parks, Gunners Branch and South Gunners Branch, both serving the southern portion of the Village. Three additional parks are planned for this Village. In Kingsview Village, Germantown Estates Local Park is programmed for construction. Two additional parks are planned for future development in the western portion of the village.

Middlebrook Village has two local parks in the southern portion of the area: Fox Chapel, a park-school; and Plumgar, which has a recreation center that provides community programs. A new local park, Clear Spring, is under construction in the northern portion of the Village. Germantown East Local Park, west of MD 355, is also programmed for construction.

In Neelsville Village, one local park is is recommended near the Dr. William A. Waters House, an historic resource.

Also, local recreation opportunities are currently provided by facilities in two larger parks: Camp Seneca and South Germantown Regional park. Camp Seneca has a recreation building and a playfield, with a multi-use court, playground, and lodge. South Germantown Recreation Park includes the Shaeffer Road Athletic Area, which will provide six athletic fields for Germantown residents. Current construction plans for the park include tennis and basketball courts, play equipment, football/soccer fields, and a shelter with restrooms.

PRIVATE RECREATION FACILITIES IN DEVELOPING AREAS

Many large residential developments are being constructed in Germantown. In such areas, developers should be encouraged to provide sufficient private neighborhood recreation areas and facilities that no additional public neighborhood parks need be developed.

Summer swim leagues are expanding into the Germantown area. All community swimming pools, therefore, should be sized for competitive swimming. The pools should be 25 meters long, preferably with 8 lanes, but with a minimum of 6 lanes. These lanes can also be used by adults for lap swimming.

The development of private open space areas to serve various age groups can be done relatively inexpensively by encouraging the provision of sitting areas, pathways, open play areas, and playgrounds in attractive open spaces.

Dedication of neighborhood parks may also be accepted, provided the site is suitable for the development of neighborhood recreation facilities and does not pose exceptional maintenance problems.

In non-residential developments, large office and commercial complexes should provide amenities for their employees and customers. These may include, for example, landscaping, sitting areas, and outdoor places to eat a bag lunch.

REGIONAL RECREATION NEEDS

Black Hill Regional Park will be Germantown's largest Regional Park. It includes a 500 acre lake, boating facilities, picnic areas, play equipment, a visitor's center, and trails.

Additional park facilities at South Germantown Regional Park are currently being considered for development after 1994. This Park might be appropriate for lighted fields in the future. As noted above, the lighting of fields should be carefully considered.

A portion of North Germantown Greenbelt Park could be an additional location for a grouping of ballfields. Specifically, the location is the cleared area in the triangle of land formed by MD 355, MD 27, and Brink Road.

A portion of Great Seneca Extension Stream Valley Park, adjacent to proposed Midcounty Highway (M-83), should be considered for development by the Montgomery County Parks Department into an area with parking areas, limited picnicking, walking trails, and a sledding run. Access could be provided across from roadways leading into residential areas to the west from Midcounty Highway.

PUBLIC RECREATION FACILITIES

The Montgomery County Department of Recreation has developed a community building in Plumgar Local Park. It has an indoor basketball court, meeting room, and catering kitchen.

In the FY 88-93 CIP, there is a project for a major community recreation building and outdoor pool with future expansion to include an indoor pool. Analysis Area KI-5 (the 30-acre school site on Clopper Road) is recommended to be a location for these facilities.

CONSERVATION NEEDS

The Germantown greenbelt of parks is made up of a number of large parks that provide both recreation and conservation areas. These include Seneca Creek State Park (operated by the Maryland Department of Natural Resources), and the following parks owned by the Montgomery County Parks Department: Black Hill Regional Park, South Germantown Recreation Park, Great Seneca Extension Stream Valley Park, and the North Germantown Greenbelt Conservation Park. Acreage and recreation facilities existing and proposed at each park are indicated in Appendix K.

Most stream valley and conservation land is preserved through the existing and proposed greenbelt of parks around Germantown. Thus, the greenbelt assists in watershed protection and reduction of flooding, sedimentation, and erosion.

Other Community Facilities (Figure 40)

The adequate provision of other public services such as police stations, fire stations, libraries, colleges, recreation facilities, youth facilities, elderly facilities, and parks is important to the development of a new community.

Demographic characteristics, utilization rates, and the delivery of these services have changed during the last 10 to 15 years. Therefore, the number, location, and size of these facilities were examined in the preparation of this Plan to assure that an adequate capacity is provided for the residents of Germantown.

The delivery of services is dependent on a number of factors such as size of client population; utilization rates; availability, location, and size of facilities; and operating budget allocations. The need for these facilities will change as the population of Germantown grows and matures. The number, location, and size of these facilities recommended in this Plan are based on information from the agencies responsible for the delivery of these services.

POST OFFICE FACILITIES

Postal services are available at the Germantown Post Office on existing MD 118, opposite the Germantown Elementary School. Germantown has outgrown this facility, and the U.S. Postal Service has identified a site for a new, larger post office in the Town Center, at the intersection of Wisteria Drive and Crystal Rock Drive. (See Analysis Area TC-7.)

LIBRARY SERVICES

The Gaithersburg Regional Library at Montgomery Village Avenue and Christopher Avenue currently serves Germantown. Library services in Germantown are provided at a store-front library in The Germantown Commons Shopping Center. The Childrens' Services staff serve public schools and other day-care centers on a scheduled basis. The community can also utilize the library at the Germantown Campus of Montgomery College.

A 16,500-square foot community library facility in Germantown is proposed for completion by 1990. This library will be a major component of the Upcounty Government Center, and will provide a full range of services, with a collection of approximately 65,000 volumes. A branch library, if needed in the future, should be provided at the Kingsview or Clopper Village Centers.

UPCOUNTY GOVERNMENT CENTER

The Upcounty Government Center will be located in the Town Center on a 5-acre site at the northwest corner of the intersection of Middlebrook Road and Relocated MD 118. The Center is currently under construction.

The Center will have a public library as its anchor program, and will include area Recreation offices, a child day-care center to accommodate approximately 70 children, the administrative offices of the Upcounty Government Center, a Health Center, Health Department offices, Social Service offices, and the Area 3 offices of Montgomery County Public Schools.

PUBLIC SAFETY

Police protection is provided by the Germantown District Police Station, which is located at Aircraft Drive north of MD 118. Currently 135 officers and other personnel are stationed in Germantown. Facility renovations are planned for the Germantown station in 1988. These changes will provide additional space to accommodate short- and long-term staffing increases in the District. Patrol staffing levels are primarily based on service area population, crime levels, and response time. These staff levels are reviewed and adjusted periodically to reflect growth in the area. This Plan anticipates a future expansion of the police station in response to continuing residential and nonresidential growth.

Fire, rescue, and emergency medical services are provided by the Germantown Station of the Hyattstown Volunteer Fire Department, located on Aircraft Drive north of MD 118, adjacent to the Police Station. This station has a staff of 10 career fire and rescue employees and 46 volunteers and is equipped with two fire engines, one 100-foot aerial ladder truck, one 4-wheel drive brush vehicle, one ambulance, and one paramedic chase car. The current CIP includes a project to construct a 5,500-square foot addition in 1988 which will provide adequate work and living space for the life of the facility. Staffing and equipment needs will be reviewed periodically and expanded to reflect growth in the area.

MONTGOMERY COLLEGE

The Germantown Campus of Montgomery College is located on approximately 200 acres, bordered generally by I-270, Relocated MD 118, MD 355 and Relocated Middlebrook Road. There are three major facilities on the campus: Humanities Building, Science Building and Gymnasium. In addition, child day-care services are offered in two relocatable buildings. The courses, programs and facilities available are a significant resource to residents in Germantown and the upcounty area.

Additional courses, programs, and facilities are explored periodically. The residents and business community are involved in this process.

Human Services and Land Use Issues

Much of Germantown's residential development has occurred between 1980 and 1987; that is, more than 6,570 housing units, or more than 60 percent of the entire residential housing stock, has been constructed during the past six years. This rapid growth has brought significant demands on social services, particularly in the area of child day-care. The increasing number of dual career households and single-head-of-household families has extended this need for before- and after-school programs for children who have no adult or older sibling at home.

The programming and delivery of human services are the responsibility of County Government and private service organizations. The *Profile of the Germantown Area, Human Services Issues*, developed by the Department of Family Resources, addresses in detail the human services issues and needs in the Germantown Planning Area. It is appropriate, however, for this Plan to recommend locations at which these services might be provided. Offices and facilities of several County agencies (Recreation, Health and Social Services), as well as a child day-care center and the Area 3 offices of Montgomery County Public Schools, will be provided at the Upcounty Government Center. Other human services such as elderly day-care, teen programs, child day-care, and recreation will be provided at other locations throughout Germantown.

This Plan identifies appropriate locations for the provision of human service facilities. These sites are chosen because of their accessibility by public transit as well as automobile and because of the ability of an appropriately scaled facility to be compatible with proposed land uses in the immediate area. This identification of locations is made in order to encourage the provision of facilities needed to meet the needs of Germantown's residents.

Demographic Characteristics

The people of Germantown are experiencing both physical change in their living environment and widespread social change taking place not only in Germantown but throughout the nation. The 1984 Census Update Survey, conducted by the Montgomery County Planning Department, indicated that since the 1974 *Master Plan* was adopted, a series of demographic changes have occurred Countywide, including:

- more dual-career households;
- more single-parent households;
- more households without children; and
- more single person households.

These changes have affected the structure of suburban households and the lifestyles of these families. Their quality of life is inextricably tied to the constant changes going on around them. These characteristics, along with the widespread phenomenon of high female work force participation, must be taken into account when locations for human services are recommended in the Germantown community.

Based on the 1984 Census Update Survey, Germantown families are younger, with more and younger children, less affluent, less apt to have graduate degrees, and have a higher percentage of two-worker households than County-wide averages. As might be expected, Germantown has experienced increased school demand, especially at the elementary school ages.

There is also a very strong unmet need for child day-care facilities, particularly for infants, and for before- and after-school programs for older children.

Child Day-Care

NEEDS

The number of working parents and the projected increases in the number of children of appropriate ages in Germantown (see Table 22) indicate a need for additional child day-care facilities and opportunities. Within Germantown, 60 percent of women with children under six years old are working either full- or part-time, according to the 1987 Census Update Survey. The many requests for child day-care services for infants and comments from providers of services suggest that there is a significant need for both infant care and school-age care facilities and opportunities in the area.

Despite the projected increases in children up to ten years old over the next ten years (1990-2000) the rate of increase tapers off through the following ten years (see Table 22). Additional child day-care facilities and opportunities should be explored to meet the increasing needs of the next decade.

FACILITIES

The Germantown Planning Area is served by a wide variety of child day-care facilities, programs, and arrangements, including:

- family day-care homes;[6]
- group child day-care centers (both part- and full-time);[7]

TABLE 22

AGING OF GERMANTOWN'S POPULATION (NUMBERS AND PERCENTAGES 1985-2010)

Age Range	Year 1985	1990	1995	2000	2005	2010
75 & older	105 0.4%	427 1.0%	891 1.6%	1,327 2.0%	1,774 2.5%	2,207 3.1%
65-74	504 2.1%	1,232 2.8%	1,854 3.3%	2,468 3.8%	3,075 4.4%	3,628 5.1%
40-64	3,802 16.0%	8,500 19.0%	12,457 21.9%	15,576 24.0%	17,885 25.5%	19,180 26.9%
20-39	11,786 49.6%	20,218 45.3%	23,293 40.9%	24,702 38.1%	25,450 36.3%	24,648 34.5%
10-19	2,465 10.4%	4,628 10.4%	6,953 12.2%	8,629 13.3%	9,459 13.5%	9,648 13.5%
5-9	1,775 7.5%	4,210 9.4%	5,446 9.6%	5,827 9.0%	6,026 8.6%	5,977 8.4%
0-4	3,344 14.1%	5,459 12.2%	6,116 10.7%	6,327 9.8%	6,449 9.2%	6,132 8.6%
TOTAL	23,781 100.0%	44,674 100.0%	57,010 100.0%	64,855 100.0%	70,118 100.0%	71,420 100.0%

Source: Montgomery County Planning Department, Research Division Demographic Model, 1985-2010, COG Round 4, Intermediate Forecast, July 1988.

6 Registered family day-care providers may provide care for 4-6 children in their own homes. It has been estimated that approximately one-third of all family day-care providers are registered and the remainder operate without monitoring.

7 Licensed group day-care centers, serving more than six children, operate in a wide variety of facilities in the Germantown Planning Area, including religious institutions, community centers, open schools, and buildings designed as day-care centers. The vast majority of before- and after-school day-care programs operate in joint occupancy programs in public schools.

- care at home by a parent or person hired to provide care; and
- informal care arrangements ranging from care by extended family members to no supervision whatsoever.

Within Germantown, as of August 1988, there are 14 licensed group day-care centers. The County Government, as part of a Countywide program, is in the process of identifying a site for a modular child day-care facility in Germantown. A child day-care program will also be provided at the Upcounty Government Center. In addition, the County has identified a site for after-school teen programs in Analysis Area TC-6.

A Germantown Child Day-Care Location Survey (1986) was designed and conducted by the Montgomery County Planning Board staff to provide information which has been used in the preparation of the this Plan, as well as staff recommendations for site plans and special exception applications for child day-care centers.

The overall preference for child day-care location was indicated either at or near home,[8] or at or near work, but not in between. Based on the survey results, this Plan recommends that child day-care facilities be developed in conjunction with recreation facilities in residential communities and at appropriate locations within employment areas.

This Plan specifically recommends that child day-care facilities be included in community centers within subdivisions and at employment concentrations. Other sites should be explored as Germantown develops.

Elderly

NEEDS

Although Germantown's elderly population is modest, it is expected to increase as Germantown continues to grow and its population matures and housing opportunities are broadened. An area of concern iss on the area's long-time residents, who may be losing their sense of identity as the area's character and traditions transform from rural to suburban.

Demographic modeling indicates that the percentage of individuals in the 20-39 age group will decrease in the future, and the total number and the percentage of people over 65 will increase. This outlook for an accelerated rate of elderly growth indicates a potential for a population group whose prospective needs will provide a significant challenge to a caring community. (See Table 22.)

FACILITIES

Housing for the elderly will be needed in Germantown, as will nursing homes. Programs and day-care centers for the elderly parents of Germantown residents may also be be needed. Some Analysis Areas are identified as being particularly appropriate for such facilities.

Housing for Special Populations

People who are physically and mentally handicapped can often be cared for best in a noninstitutional setting such as home communities with others with similar special needs. Such people generally are those who need supervision or assistance to function in the larger community. As long as the parking does not create an adverse impact on the adjoining neighbors, such homes should be appropriate for any residential community. Efforts, however, should be made to avoid an over-concentration of such homes.

8 Locations at or near home include at home, at a neighbor's house, at a local community center or religious facility, and at a local elementary school.

Historic Resources

The *Master Plan for Historic Preservation* and the Historic Preservation Ordinance, Chapter 24A of the Montgomery County Code, are designed to protect and preserve Montgomery County's historic and architectural heritage. When an historic resource is placed on the *Master Plan for Historic Preservation*, the adoption action officially designates the property as an historic site or historic district, and subjects it to the further procedural requirements of the Historic Preservation Ordinance. Amendments to area master plans that evaluate historic resources for designation also amend the *Master Plan for Historic Preservation.*

Designation of historic sites and districts serves to highlight the values that are important in maintaining the individual character of the County and its communities. It is the intent of the County's preservation program to provide a rational system for evaluating, protecting and enhancing the County's historic and architectural heritage for the benefit of present and future generations of Montgomery County residents. The accompanying challenge is to weave protection of this heritage into the County's planning program so as to maximize community support for preservation and minimize infringement on private property rights.

The following criteria, as stated in Section 24A-3 of the Historic Preservation Ordinance, shall apply when historic resources are evaluated for designation in the *Master Plan for Historic Preservation*:

(1) Historical and cultural significance:

The historic resource:

a. has character, interest, or value as part of the development, heritage or cultural characteristics of the County, State, or Nation;

b. is the site of a significant historic event;

c. is identified with a person or a group of persons who influenced society;

d. exemplifies the cultural, economic, social, political or historic heritage of the County and its communities; or

(2) Architectural and design significance:

The historic resource:

a. embodies the distinctive characteristics of a type, period or method of construction;

b. represents the work of a master;

c. possesses high artistic values;

d. represents a significant and distinguishable entity whose components may lack individual distinction; or

e. represents an established and familiar visual feature of the neighborhood, community, or County due to its singular physical characteristic or landscape.

Implementation

Once designated on the *Master Plan for Historic Preservation*, historic resources are subject to the protection of the Ordinance. Any substantial changes to the exterior of a resource or its environmental setting must be reviewed by the Historic Preservation Commission and an historic area work permit issued under the provisions of the County's Preservation Ordinance, Section 24A-6. In accordance with the *Master Plan for Historic Preservation* and unless otherwise specified in the amendment, the environmental setting for each site, as defined in Section 24A-2 of the Ordinance, is the entire parcel on which the resource is located as of the date it is designated on the *Master Plan.*

Designation of the entire parcel provides the County adequate review authority to preserve historic sites in the event of development. It also ensures that,

from the beginning of the development process, important features of these sites are recognized and incorporated in the future development of designated properties. In the case of large acreage parcels, the amendment will provide general guidance for the refinement of the setting by indicating when the setting is subject to reduction in the event of development; by describing an appropriate area to preserve the integrity of the resource; and by identifying buildings and features associated with the site which should be protected as part of the setting. It is anticipated that for a majority of the sites designated, the appropriate point at which to revise the environmental setting will be when the property is subdivided.

Public improvements can profoundly affect the integrity of an historic area. Section 24A-6 of the Ordinance states that an Historic Area Work Permit for work on public or private property must be issued prior to altering an historic resource or its environmental setting. The design of public facilities in the vicinity of historic resources should be sensitive to and maintain the character of the area. Specific design considerations should be reflected as part of the Mandatory Referral review processes.

In the majority of cases, decisions regarding preservation alternatives are made at the time of public facility implementation within the process established in Section 24A of the Ordinance. This method provides for adequate review by the public and governing agencies. In order to provide guidance in the event of future public facility implementation, the amendment addresses potential conflicts existing at each site and suggests alternatives and recommendations to assist in balancing preservation with community needs.

In addition to protecting designated resources from unsympathetic alteration and insensitive redevelopment, the County's Preservation Ordinance also empowers the County's Department of Environmental Protection and the Historic Preservation Commission (HPC) to prevent the demolition of historic buildings through neglect.

The Montgomery County Council passed legislation in September 1984 to provide for a tax credit against County real property taxes in order to encourage the restoration and preservation of privately owned structures located in the County. The credit applies to all properties designated on the *Master Plan for Historic Preservation* (Chapter 52, Art. VI). Furthermore, the Historic Preservation Commission maintains up-to-date information on the status of preservation incentives including tax credits, tax benefits possible through the granting of easements on historic properties, outright grants and low-interest loan programs.

Germantown's Historic Resources (Figure 42 and Table 23)

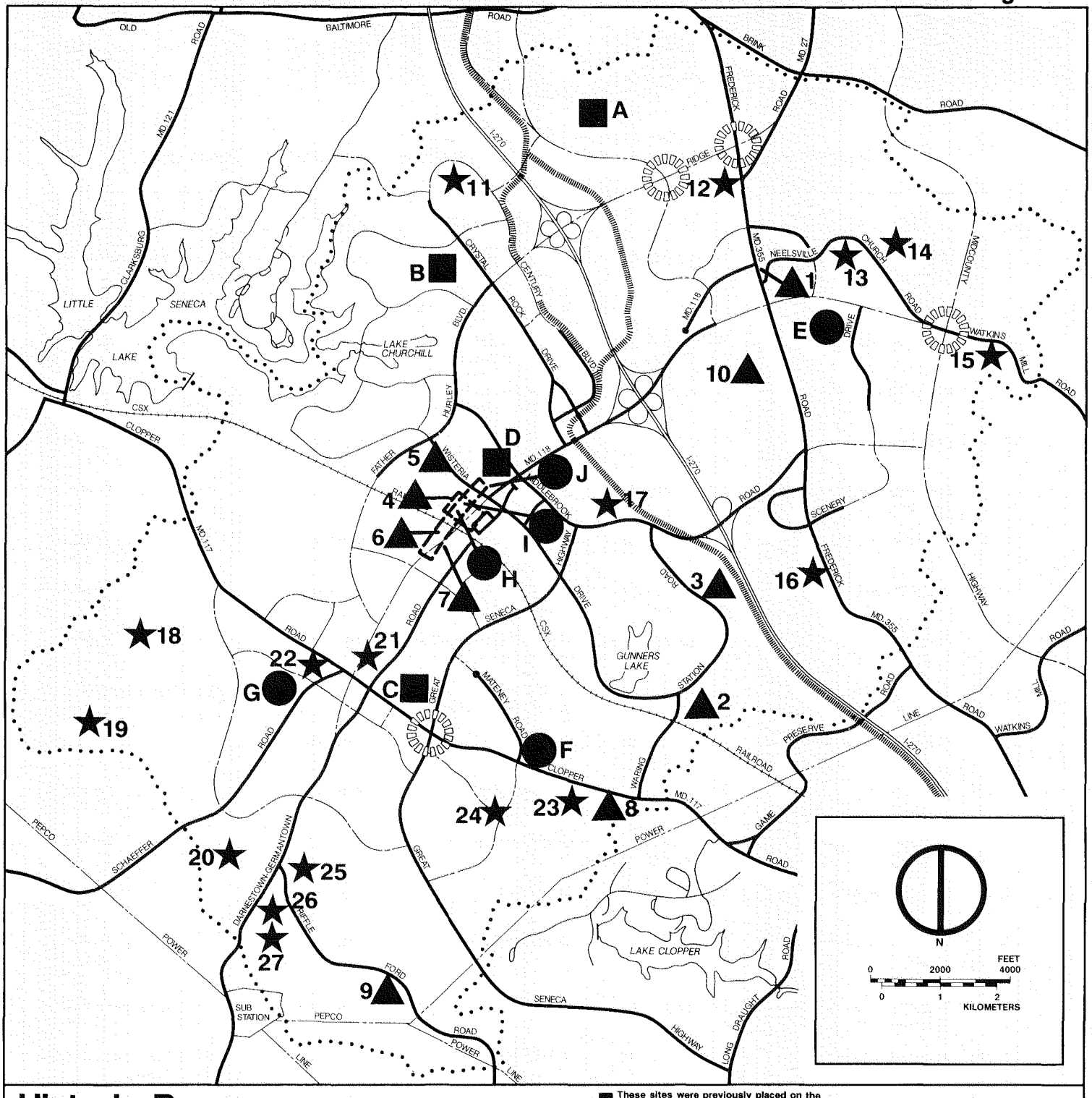
Table 24 lists all historic resources within the Germantown Planning Area. The ten resources with positive recommendations are now included in the *Master Plan for Historic Preservation*. This table highlights each site's name, address, physical condition, HPC recommendations, and whether the Plan recommends its inclusion on the *Master Plan for Historic Preservation* (positive) or its removal from the *Locational Atlas* (negative). Some of the sites listed in the table have been acted upon in earlier amendments and will not be considered in this Master Plan. Their status is noted in Table 23.

More detailed information and analysis regarding each individual historic site is included in Appendix L. In addition, resources, that are located in Analysis Areas and are affected by planning issues in those areas, are referenced in the appropriate sections of the Land Use Chapter of this Plan.

20th Century Historic Sites

On an increasingly frequent basis, the Historic Preservation Commission has been asked to consider 20th century sites, not listed on the *Locational Atlas* for *Master Plan* designation. As a result of this interest, a survey of 20th century historic resources is being conducted to provide a context in which to evaluate these structures. The survey will identify the architectural styles, themes, and historic context of the first half of the 20th century in Montgomery County. Upon completion of the survey, the 20th century resources will be documented and evaluated for designation on the *Master Plan for Historic Preservation*.

This Plan acknowledges the potential for designation of 20th century resources to the *Master Plan for Historic Preservation* that may be identified in the Germantown Planning Area.



Historic Resources

■ These sites were previously placed on the Master Plan for Historic Preservation:

A	Waters (Dr. William A.) House	19/1 (1979)
B	Waters (Brick) House	19/3 (1979)
C	Dunn Log House (Grusendorf)	19/19 (1979)
D	Madeline V. Waters House	19/13-1 (1985)

● These sites were previously deleted from the Locational Atlas:

E	Ward (E.G.) Log House	19/8
F	Musser Barn and Cemetery	19/20
G	Snyder/King Barn	19/18
H	Liberty Milling Co. Silos	19/13-3
I	Pumphrey's Store	19/13-2
J	Germantown Bungalows	19/13-4

▲ As part of this plan, these sites have been added to the Master Plan for Historic Preservation:

1	Neelsville Presbyterian Church	19/5
2	Waring Viaduct	19/10
3	Waring/Crawford Farm	19/11
4	Germantown Historic District	19/13
5	Pumphrey/Mateney House	19/13-5
6	Upton Bowman House	19/13-6
7	Wallich/Heimer House	19/13-7
8	Clopper's Mill Ruins	19/21
9	Gassaway (John H.) Farm	19/27
10	Cider Barrel	19/33

★ As part of this plan, these sites have been deleted from the Locational Atlas:

11	Waters Log House	19/2
12	Londonderry	19/4
13	Trundle Farmhouse	19/6-1
14	Briggs Farmhouse	19/6-2
15	Watkins Mill Site	19/7
16	Ricketts Cemetery	19/9
17	Log Cabin/Middlebrook Road	19/12
18	Henry Musser Farm	19/14
19	Richter House	19/15
20	Richter/King Farm	19/16
21	Old Germantown Historic District	19/17
22	Leaman Farmhouse	19/17-1
23	Strider Log Meathouse	19/22
24	Cromwell (William) House	19/23
25	Snyder/King Barn (2)	19/24
26	Germantown Baptist Ch. and Cem.	19/25
27	C.T. Leaman House	19/26

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

TABLE 23

GERMANTOWN'S HISTORIC RESOURCES
(See Figure 43 for locations and see Appendix L for more detailed descriptions and analysis of individual Historic Sites)

Site #	Site Name	Address	Physical Condition	HPC Recommendation	Plan Recommendation*
19/1	Waters (Dr. Wm.A.) House (Pleasant Fields)	21200 Waters Road	Occupied Residence Bank barn-poor condition House-good condition Exterior work being done.	Included on Master Plan for Historic Preservation in 9/79	
19/2	Waters Log House	Waters Road (near I-270)	Ruins - only end chimneys remaining	Negative	Negative
19/3	Waters House (brick)	Waters Landing	Existing Foundation; Commemorative Park	Included on Master Plan for Historic Preservation in 1979	
19/4	Londonderry	21100 Frederick Road	Fair Condition/ Altered/Moved	Negative	Negative
19/5	Neelsville Presbyterian Church	20701 Frederick Road	Good	Positive	Positive
19/6-1	Trundle Farmhouse	11200 Neelsville Church Road	Good Condition/ Altered	Negative	Negative
19/6-2	Briggs Farmhouse	11301 Neelsville Church Road	Good Condition/ Altered	Negative	Negativ
19/7	Watkins Mill Site	Watkins Mill Road	Mill building burned down; frame house	Negative	Negative
19/8	Ward (E.G.) Log House	MD 355	Good Condition Barn: Good Condition	Removed from Locational Atlas 1/84	
19/9	Cemetery (Rickett's)	End of Rambling Road	Overgrown	Negative	Negative
19/10	Waring Viaduct	Waring Station Road & B&O Railroad	Excellent Condition	Positive	Positive
19/11	Waring/Crawford Farm	19100 Waring Station Road	Good Condition	Positive	Positive
19/12	Log Cabin/Middlebrook Road	Middlebrook Road	Demolished	Negative	Negative
19/13	Germantown Historic District	Mateney Road, west of railroad tracks	Good Condition	Positive	Positive
19/13/1	Madeline V. Waters House	19500 MD 118	House burned down	Included in Master Plan for Historic Preservation in 5/85	
19/13-2	Pumphrey's Store	19401A MD 118	Poor Condition	Removed from the Locational Atlas by action of the the Planning Board (1/9/86).	
19/13-3	Liberty Milling Co. Silos	MD 118 and Mateney Road	Demolished	Silos removed from the Locational Atlas by action of the Planning Board (2/6/86). The land remains within the Germantown Historic District (#19/13).	
19/13-4	Germantown Bungalows	19441, 19445, 19449, 19501 and 19511, MD 118	Demolished	Removed from the Locational Atlas by action of the Planning Board (2/13/86).	
19/13-5	Pumphrey/Mateney House	19401 Germantown Road		Poor Condition	Positive	Positive
19/13-6	Upton Bowman House	19219 Germantown Road		Good Condition	Positive	Positive
19/13-7	Wallich/Heimer House	19120 Mateney Road	Good Condition	Positive		Positive

TABLE 23 (Cont'd.)

Site #	Site Name	Address	Physical Condition	HPC Recommendation	Plan Recommendation
19/14	Hoyle Farm/Log Cabin aka Henry Musser Farmhouse	14615 Hoyles Mill Road	Fair Condition/ Altered	Positive	Negative
19/15	Richter Farm House	15000 Hoyles Mill Road	Good Condition	Negative	Negative
19/16	Richter/King Farm	14210 Schaeffer Road	House: Demolished; Barn: Poor Condition	Negative	Negative
19/17	Germantown (Old) District	Intersection of Germantown & Clopper Roads	Altered	Negative	Negative
19/17-1	Leaman Farmhouse	13820 Clopper Road	Good Condition	Positive	Negative
19/18	Snyder/King Barn #1	MD 118, South of Clopper Road	Ruins	Removed from Locational Atlas 1/84	
19/19	Grusendorf Log House	13315 Clopper Road	Attached non-historic building burned; log house fair condition; Roof collapsed - needs stabilizing	Included on Master Plan for Historic Preservation in 2/81	
19/20	Musser Barn & Cemetery	12811 Clopper Road	___	Removed from Locational Atlas 1/84	
19/21	Clopper's Mill Ruins	Clopper Road at Great Seneca Creek	Ruins	Positive	Positive
19/22	Strider Log Meathouse	Clopper Rd. (Seneca State Park Office)	Gone	Negative	Negative
19/23	Cromwell (Wm.) House	"Williams Range" off MD 118 in 18100 block	Poor Condition	Negative	Negative
19/24	Snyder/King Barn #2	MD 118 & Riffleford Road	Demolished	Negative	Negative
19/25	Germantown Baptist Church and Cemetery	17710 Riffleford Road	New building	Negative	Negative
19/26	Leaman (C.T.) House	17600 Riffleford Road	Excellent Condition	Negative	Negative
19/27	Gassaway (John H.) Farm	17200 Riffleford Road	Good Condition	Positive	Positive
19/33	Cider Barrel	20410 Frederick Road	Good Condition	Positive	Positive

* *The 10 resources with positive recommendations are now included in the Master Plan for Historic Preservation.*

Implementation

Germantown now has reached a turning point in its growth and development. If the government was to allow development to proceed as it has in the past, Germantown would retain its existing character. To the contrary, this Plan proposes the formation of an effective partnership of private and public interest, new and old ideas, so as to revitalize and sustain Germantown's new community heritage.

This Chapter focuses on the actions which should be taken to implement and supplement the recommendations of the Plan. If Germantown is to develop in an orderly fashion — in the proper places, at the proper times, and in the proper sequence — a series of decisions about zoning, capital improvements, subdivisions and other County policies and programs must be made. Moreover, it will be necessary to establish a continuous process of monitoring development so that these policies and programs can be fine-tuned.

The tools available to implement the Plan's proposals and related County policies are:

- Master Plan
- Sectional Map Amendment (SMA)
- Zoning Text Amendments
- Capital Improvements Program (CIP)
- Water Supply and Sewerage System Plan
- Subdivision Regulations
- Annual Growth Policy (AGP)
- Transfer of Development Rights (TDR)
- Historic Preservation Incentives

Master Plan

A master plan is a guide to the public and private sectors. It sets forth policies and recommendations, but it is not automatically self-fulfilling. The recommendations contained in a master plan must be undertaken and carried forward by the combined efforts of the public and private sectors. It is the responsibility of the public sector to take the lead in implementation and to guide the direction and pace of the private sector. This Plan recommends the preparation of status reports periodically to monitor the pace of Master Plan implementation.

In order to coordinate private development with the delivery of capital improvements, the 1974 *Master Plan* established a development sequence (staging) plan and designated four development stages to guide the development of Germantown. These stages established linkages between the provision of major capital projects (such as sewer mains and major highways) and the approvals for private development.

The staging approach was established so that land would not be recommended to be rezoned to a higher density through comprehensive rezoning until the designated development stage was reached. The sewer and water service categories of the *Comprehensive Ten-Year Water Supply and Sewerage System Plan* were recommended to be in conformance with the staging recommendations. Further, staging directs that capital improvements projects such as parks and schools should not be programmed for areas in later development stages.

Much of the land in Germantown (approximately 8,400 acres) already has been placed in the current development stages (Stages One and Two). Development in Stage Three would be dependent on increased transportation capacity. Sewer line extensions, which relate to Stage Four, are needed only in Clopper, Kingsview, and Neelsville Villages as the rest of Germantown is served by existing or programmed facilities or is to remain without public sewer service.

The intent of the 1974 *Master Plan* staging recommendations was to coordinate the provision of public

services with private development by way of a Development Sequence Plan. Since the roadway improvements contained in the current Capital Improvements Program and related developer funding agreements would eliminate the master plan staging limitations on much of Germantown, this Plan recommends that the Annual Growth Policy govern the staging of the remaining development of Germantown. The Annual Growth Policy is an effective mid-range staging mechanism. It encompasses the same public facilities considered in the Germantown Development Sequence Plan.

Thus, the master plan will no longer guide the timing of changes to the sewer and water service categories of the Comprehensive Water Supply and Sewerage Systems Plan. It should also be noted that being in service categories 1, 2, or 3 does not assure the ability to receive approval of preliminary subdivision plans, since approval is dependent upon compliance with the Adequate Public Facilities Ordinance.

Sectional Map Amendment (SMA)

This Plan recommends a zoning category for each parcel of land in the planning area. It recommends specific zoning changes for selected non-public properties, totaling 2,235 acres.

The filing of a Sectional Map Amendment (SMA) is recommended following adoption of this Plan. An SMA is a comprehensive rezoning process that zones all properties within the planning area to correspond with the zoning recommendations in the amended master plan. Once the comprehensive rezoning occurs, it becomes a benchmark for measuring "change or mistake" when considering local map amendment requests for euclidean zones.

The proposed changes in zoning recommended by this Plan are intended to implement its objectives:

- achieving a full-cycle community;
- protecting the environment, with special attention to the quality of Little Seneca Creek;
- encouraging retail uses in the Town Center and the Village Centers and discouraging "strip commercial" development; and
- reducing residential density toward the edge of the planning area.

Table 24 illustrates the differences, by zoning classification, between existing zoning and zoning proposed in this Plan. These differences include zoning changes for some areas of greenbelt parkland and a portion of the Germantown Campus of Montgomery College. These changes are recommended in order to make the zoning classifications consistent with that of adjoining private property.

TABLE 24
ACRES BY ZONE
COMPARISON OF CURRENT ZONING AND THIS AMENDMENT

Zone	Current Acreage*	Proposed Acreage by this Amendment
RE-2	417	98
RE-2/TDR	0	130
R-200	4,716**	4,025
R-200/TDR	42	947
R-150	87	157
R-90	438	241
R-60	398	386
RT-6	20	20
RT-8	34	34
RT-12.5	324	283
R-30	71	71
R-20	248	248
R-H	48	48
R-MH	74	74
PD-2	0	173
PD-3	0	45
PD-4	160	190
PD-9	389	389
PD-13	48	48
PD-15	17	17
PD-22	0	69
PD-28	0	51
TS	937	1,002
C-1	50	47
C-2	19	19
C-3	40	30
C-5	0	8
C-O	18	25
C-T	10	15
O-M	27	77
I-1	374	98
I-3	322	422

Note:

** Based on May 1987 Parcel File, Montgomery County Planning Board.*

*** Much of this acreage was recommended for higher residential densities in the 1974 Land Use Plan but has not been rezoned, as it was in later development stages.*

The adoption by County Council of an SMA to implement the zoning recommendations of this Plan, in some cases, will result in a downzoning from previously existing zoning designations.

All lots (other than those in the RE-1 and RE-2 Zones), including lots in subdivisions with approved preliminary plans, for which the final record plat has not been submitted and approved for recordation by the Planning Board, must conform to the development standards of the zone as imposed by the SMA. All new preliminary plans of subdivisions will, as of the date of the SMA, be reviewed by the Planning Board based on the development standards of the zoning imposed by the SMA.

The SMA is used to implement changes to Euclidean (base) zones, but it may also include, at the request of the property owner, floating zones, which do not require a development plan at the time of rezoning. The Planned Development (PD) Zone and the Mixed-Use Planned Development (MXPD) Zone require separate applications as local map amendments, as do floating zones accompanied by Schematic Development Plans.

This Plan recommends floating zones for a number of properties in the planning area, either to serve as a transition between residential areas and commercial centers or to provide a superior method of developing particular properties. Approval of a floating zone requires a finding of compatibility as well as site plan review by the Planning Board to assure a fine-grained examination of compatibility.

In order to address issues of compatibility, an owner may voluntarily apply for rezoning under the Optional Method of Application. The applicable zones in Germantown that have this provision are: O-M, C-T, C-3, C-Inn, I-3, and the R-T Zones. Under the Optional Method of Application, the owner files with the rezoning application a Schematic Development Plan which illustrates to what extent the owner will restrict the development standards or use of the property to less than the maximum permitted in the requested zone.

The areas recommended for rezoning as part of the Sectional Map Amendments are indicated on Figure 43 and Table 25.

Zoning Text Amendment

A zoning text amendment is proposed, which is necessary to implement the recommendations of this Master Plan. The need for this amendment became evident during the preparation of this Plan. The conditions identified in Germantown are Countywide in nature and this text amendment will result in a new zone which is appropriate at many locations in the County.

This new zone is in the process of being developed. For current drafts or more information, one should contact the Development Review Division of the Montgomery County Planning Department.

The Residential Mixed-Use (R-MX) Zone is a proposed new zone intended to accommodate planned retail centers and medium density residential uses, in accordance with recommendations contained in approved and adopted master or sector plans. Specifically, this zone will implement the recommendations of this Plan for the retail shopping mall in Neelsville Village and the Retail and Service Park in the Town Center.

This proposed zone is based on the CBD zoning model, which provides for both standard and optional methods of development. The standard method of development allows residential development under either the R-200 cluster method or R-200 MPDU method of development. There are two higher density optional methods proposed. One is a TDR option that incorporates the uses and standards of the R-200/TDR Zone. The other is a mixed-use option. Under this latter method of development, general commercial uses and medium density residential uses are allowed. Development proposed under the mixed-use option must be shown on a project plan and on a site plan.

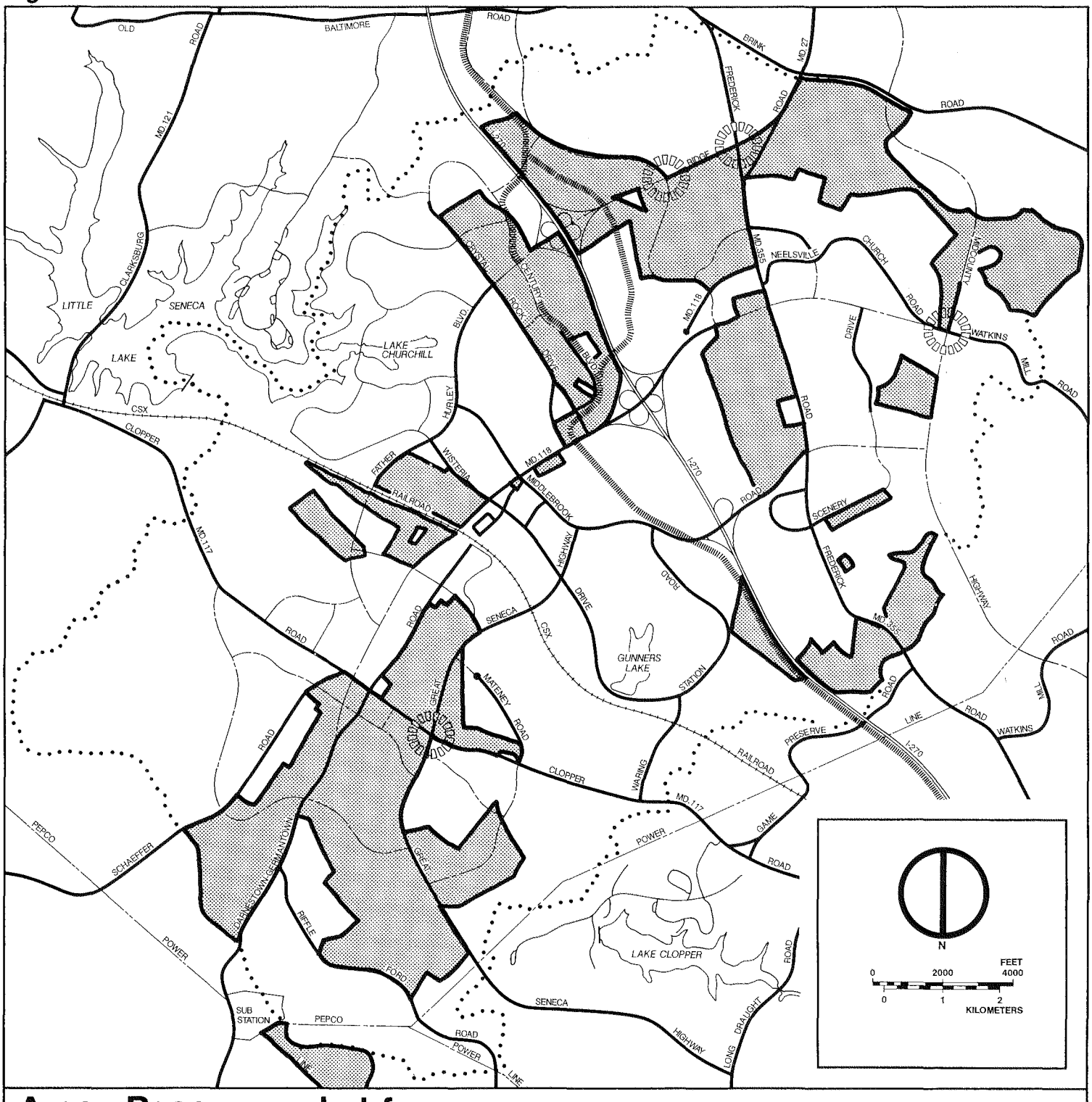
Three categories of planned retail centers are allowed under the mixed-use option of development. The smallest is a convenience center, which must not exceed 200,000 square feet in size. The middle size is a specialty center, which ranges between 200,000 and 600,000 feet in size. The largest category is a regional center, which is over 600,000 square feet in size. The land uses allowed in each category of a retail center are clearly designated in the proposed zone.

Capital Improvements Program (CIP) (See Appendix M)

The Executive Branch of County government is responsible for planning, programming, and budgeting for the County's mid-range needs. It does this through two interrelated six-year programs, which are annually updated. One is the Capital Improvements Program (CIP), which funds construction of all public buildings, roads, and other facilities planned by the County. The other is the Comprehensive Six Year Public Services Program and the Operating Budget, which funds County programs and coordinates them with capital expenditures. The Legislative Branch (the County Council) adopts both the CIP and the Operating Budget.

Projects that are currently scheduled and those which are recommended for future inclusion in the CIP are identified in Appendix M. The County or State agencies responsible for design and develop-

Figure 43



Areas Recommended for Rezoning by Sectional Map Amendment

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

TABLE 25

ANALYSIS AREAS RECOMMENDED FOR REZONING BY SECTIONAL MAP AMENDMENT

AREAS	SIZE (in acres)	FROM	TO	PENDING ZONING CASES
TC-2	10	I-1	C-5	
TC-3	8	C-3	C-T or C-5	
TC-4	1	C-3	C-T or C-5	
TC-5	76	I-1	R-MX	G-549
EC-2	1	I-1	R-30	
EC-2	69	I-3	R-30	
EC-3	84	I-1	I-3 or R&D	
EC-4	105	I-1	I-3 or R&D	
EC-6	44	I-1	I-3 or R&D	
EC-6	31	R-200	I-3 or R&D	
EC-7	82	R-200	R-30	
EC-7	53	I-1	I-3 or R&D	
EC-7	7	I-1	R&D	
EC-7	16	I-3	R&D	
EC-7	13	R-200	R-200 or R-30**	
EC-7	10	I-3	R-30	
EC-7	16	R-200	I-3 or R&D	
GL-2	37	R-150	RE-1	
CL-3	118	R-200	R-200/TDR	G-552, G-562, G-579
CL-4	12	R-60	R-90	G-562
CL-4	18	RT-12.5	R-90	G-562
CL-4	5	R-200	R-90	
CL-6	50	R-200	R-200/TDR	G-541,G-542
CL-6	2	C-1	R-200	
CL-6	13	R-30	R-200/TDR	
CL-8	195	RE-2	R-200/TDR	
CL-9	122	RE-2	R-200	
CL-10	160	PD-4	R-200	
CL-11	31	RURAL	RDT	
KI-1	35	R-200	R-200/TDR	
KI-3	132	R-200	R-200/TDR	
KI-4	73	R-200	R-200/TDR	
KI-6	13	I-1	R-200	
KI-B	21	R-200	I-3	
MI-2	43	R-90	R-200	
MI-5	*	C-1	R-90	
MI-5	23	RT-12.5	R-90	
MI-6	46	R-60	R-60/TDR	
MI-6	4	R-60	C-4	
MI-6	5	R-200	R-60/TDR	
NE-2 & 3	168	R-200	R-MX	
NE-2 & 3	26	R-200	R-200/TDR	
NE-6	10	R-200 & C-1	R-200/TDR	
NE-8	133	RE-2	RE-2/TDR	
NE-8	24	R-200	R-200/TDR	
NE-8	4	RE-2	R-200/TDR	
Total	2,149			

Note: Some areas of greenbelt parkland and a portion of the Germantown campus of Montgomery College are also recommended to be rezoned to classifications consistent with adjoining private property.

* *Less than one acre.*

** *Zoning for this area will be based on the final alignment of A-19.*

ment of each project are indicated in that table. The CIP assures that the projects necessary to fulfill the needs of the community, providing for orderly growth and development, are built at the appropriate time and in the proper location. The timetable for planning and construction of these projects should be coordinated with private development.

In order to provide additional funds for the construction of major highways and thus accelerate their construction, the County has designated Germantown as an Impact Fee District. Under this legislation, all developers of newly constructed projects are required to pay a fee at the time of building permit approval. The aggregate amount of these fees is projected to equal one-half of the cost of the remaining major highways needed to be built in Germantown that were not programmed as of Fiscal Year 1986. The fees are based on the projected number of dwelling units for residential development and the number of square feet of building area and type of use for non-residential development.

The description of each project should respond to the recommendations of this Plan in terms of their scope and nature. The funding should be adequate to provide for all aspects of the projects including landscaping, fencing, grading, and pedestrian and bicycle paths.

The initial CIP description is generally sketchy as to the scope of a project, its cost, and its construction timetable. Each project is reviewed annually by the citizenry and public officials. During this review, projects can be deleted, modified, or added. This procedure allows the flexibility needed to balance available resources and public priorities.

In order to implement several of the recommendations of this Plan, funds need to be provided for the construction and maintenance of special features. These features include community entry signs, special landscaping, and focal point elements (flags, clock towers, fountains, etc.). Many of the features recommended by this Plan will be funded by the Capital Improvements Program. The construction of features related to a particular subdivision should be funded by the developer and maintained by the owner. Others may be funded by local community groups.

The Townscape Design Chapter identifies special features that require additional funding. Based on this identification, estimates of the amount of funding required have been made. This Plan recommends that all available funding sources for such features be identified and explored, such as a developer consortium. If these sources are not adequate, this Plan recommends that either a special taxing district be considered by the County Council or that the Suburban District be expanded to include Germantown. In addition, an Urban Maintenance District should be evaluated as a mechanism to maintain the amenities in the Town Center.

Water Supply and Sewerage System Plan (Figures 44 and 45)

The *Comprehensive Ten-Year Water Supply and Sewerage System Plan* is the County's program for providing community water and sewerage service. Most of Germantown is either currently being served or scheduled to be served in the near future.

The six water and sewer category designations refer to the number of years until service is scheduled to be provided:

Category 1	Existing Service
Category 2	Service Authorized, Extensions in Final Planning
Category 3	Service Within Two Years
Category 4	Service Programmed for Three Through Six Year Period
Category 5	Service Planned for Seven Through Ten Year Period
Category 6	No Planned Service

Subdivision Regulations

Subdivision regulations govern the process of dividing land into parcels, blocks, and lots. They prescribe specific standards for streets, street connections, open space, and the size and configuration of building lots. In addition, the subdivision regulations describe the filing and procedural requirements that must be followed in securing the approval of the Planning Board. The subdivision regulations are part of the Montgomery County Code. A property must be on a recorded lot in order to receive a building permit. Thus, all of the land in Germantown that is not on a recorded lot or contained within an approved preliminary subdivision must go through the subdivision process in order to develop.

Methods of subdivision development are defined in the County's zoning ordinance. The zoning ordinance also prescribes variations and options to the standard regulations. Such variations include cluster development, optional methods of development, and the bonus provisions that accompany moderately priced dwelling unit development. The purpose of these options is to permit additional flexibility in site development as an incentive to meeting public goals. Cluster provisions permit smaller size lots and less rigid lot configurations in return for providing common open space and site plan controls. These controls provide greater protection for natural land forms,

more usable open space, and more environmentally sensitive patterns of development. During subdivision review the precise delineation of any conservation easements is prepared and the easements conveyed to the M-NCPPC.

Appendix D of the Plan includes proposed modifications to the subdivision regulations that would allow for greater protection of the water quality of streams throughout the County.

The Adequate Public Facilities Ordinance (APFO) is an important part of the subdivision regulations. The APFO requires that "public facilities... adequate to support and service the proposed subdivision" must be existing or programmed for construction before the Planning Board may grant approval of a preliminary plan of subdivision. The APFO helps assure that new development does not proceed unless needed transportation and other facilities are in place or imminent.

The subdivision regulations were recently amended to require the Montgomery County Planning Board to take the recommendations of the appropriate master plan into account when considering preliminary subdivision plans. This amendment strengthens the recommendations and development guidelines contained in this Plan.

Annual Growth Policy (AGP)

The Annual Growth Policy (AGP) provides guidance for the management of growth in Montgomery County. Under the AGP, the Countywide staging process:

1. Determines the capacity of public facilities to support private development encouraged by master plans and the marketplace; and
2. Permits only the amount of private development that can be accommodated by programmed public facilities.

Staging ceilings are established for both jobs and housing in each of the several policy areas of the County. The Germantown Planning Area is divided into two policy areas: Germantown East and Germantown West. I-270 forms the dividing line between them.

As established in the AGP, the Adequate Public Facilities guidelines are as follows:

- For staging ceilings and local area review, future traffic estimates are based on existing development plus the future development from all subdivisions for which preliminary plans have been approved.
- For staging ceilings, traffic capacity is derived from existing roads and roads in the CIP or CTP for which all construction expenditures are scheduled in the first four years of the program.
- For local area review (of individual intersections or links), traffic capacity is derived from existing roads and roads in the Approved Road Program, which are roads for which all construction funds are appropriated and which will begin construction within two years.

In order to be approved by the Montgomery County Planning Board, sufficient ceiling capacity and local area capacity must be available to accommodate the traffic from the proposed preliminary subdivision plan, plus all previously approved subdivisions. If the capacity is not sufficient, the applicant must wait until additional traffic capacity becomes available or propose improvements that will create sufficient capacity.

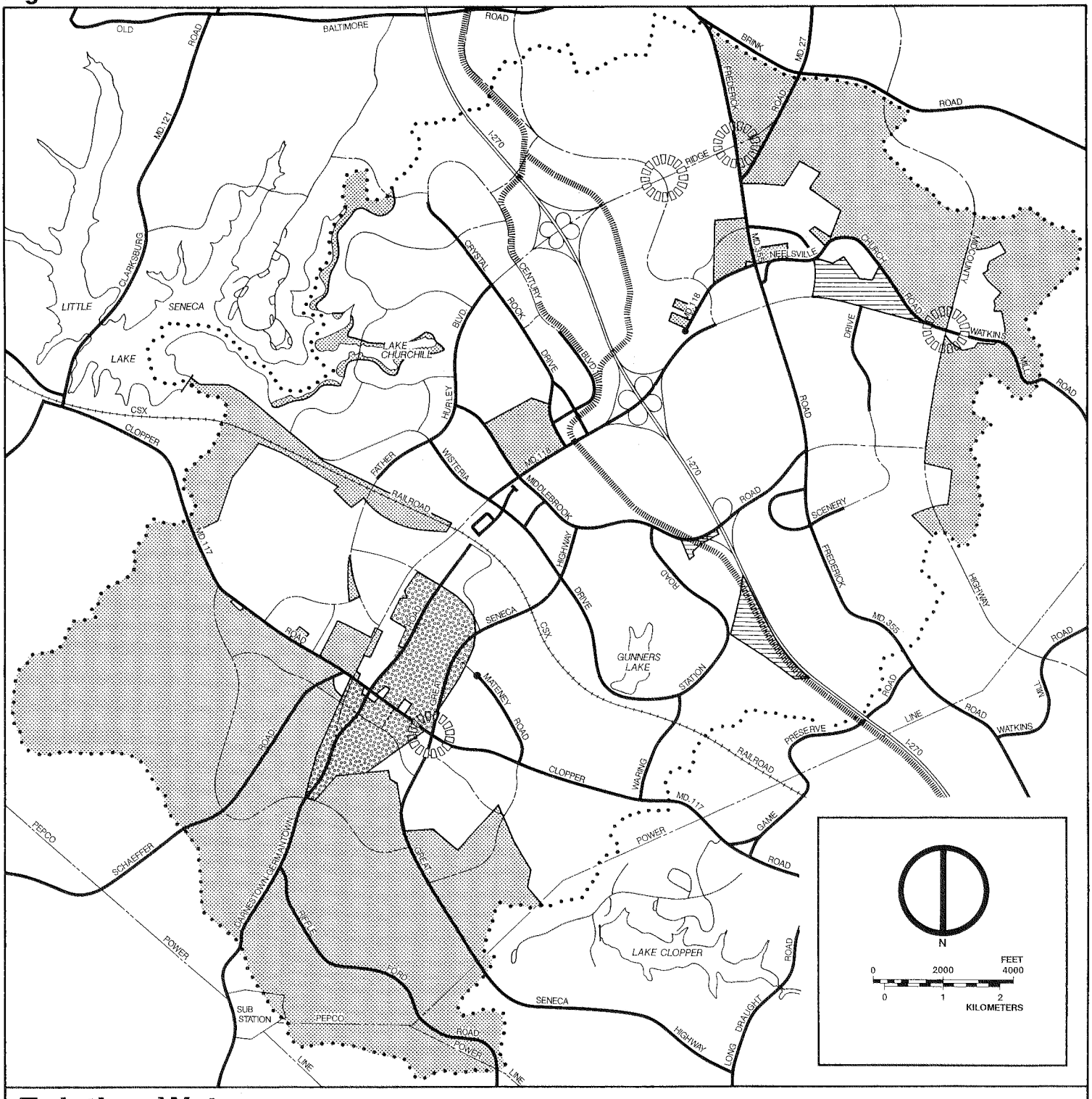
Transfer of Development Rights (TDR)

As part of the intent to preserve agriculture in Montgomery County, the Plan recommends certain properties as suitable for development using the TDR density option. The goal of the 1980 *Agricultural Preservation Plan* is to retain farmland in the upper portion of the County. To do so, allowable development of land must be discouraged or prevented. The *Agricultural Preservation Plan* developed two mechanisms for farmland preservation in the Agricultural Reserve: the first reduces permitted residential development in the Agricultural Reserve to a density of one dwelling unit per 25 acres, and the second creates a mechanism to transfer development rights from the Agricultural Reserve to other parts of the County.

For property in the Agricultural Reserve that is classified in the Rural Density Transfer (RDT) Zone, the owner may sell transferable development rights equivalent to one development right for each five acres of RDT property. Land designated as appropriate for TDR receiving areas in the Germantown Plan and other master plans may be developed at the higher density shown by the use of TDR's equivalent to the difference between the base density and the increased density. When the TDR's from a particular parcel of RDT land are sold, a perpetual easement is recorded in the office of land records on the RDT land limiting the number of future one-family residences.

The TDR approach permits development rights to be transferred from parcels in the Agricultural Reserve to designated "receiving areas" in other parts of the County. Receiving areas are those places to which development rights are transferred to increase residential density. The TDR process is illustrated in Figure 46.

Figure 44



Existing Water Service Categories

Existing Service or Service within 2 Years (Categories 1,2 and 3)

Service Between 3 to 6 Years (Category 4)

Service Between 7 to 10 Years (Category 5)

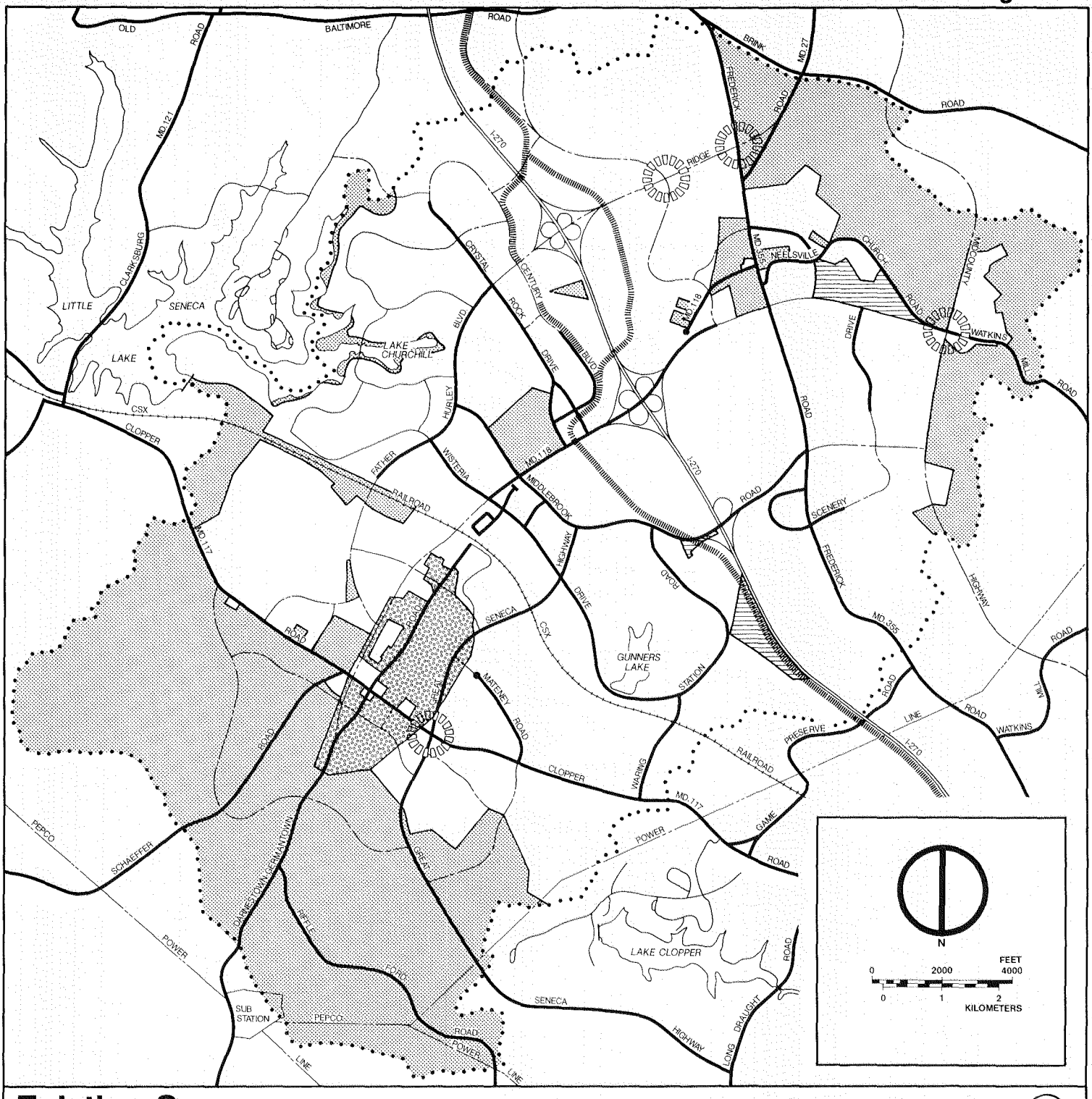
Service Beyond 10 Years (Category 6)

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

Note: The Master Plan recommends that public water and sewer service be provided to most of The Planning Area.(SEE TEXT)



Existing Sewer Service Categories

Existing Service or Service within 2 Years (Categories 1,2 and 3)

Service Between 3 to 6 Years (Category 4)

Service Between 7 to 10 Years (Category 5)

Service Beyond 10 Years (Category 6)

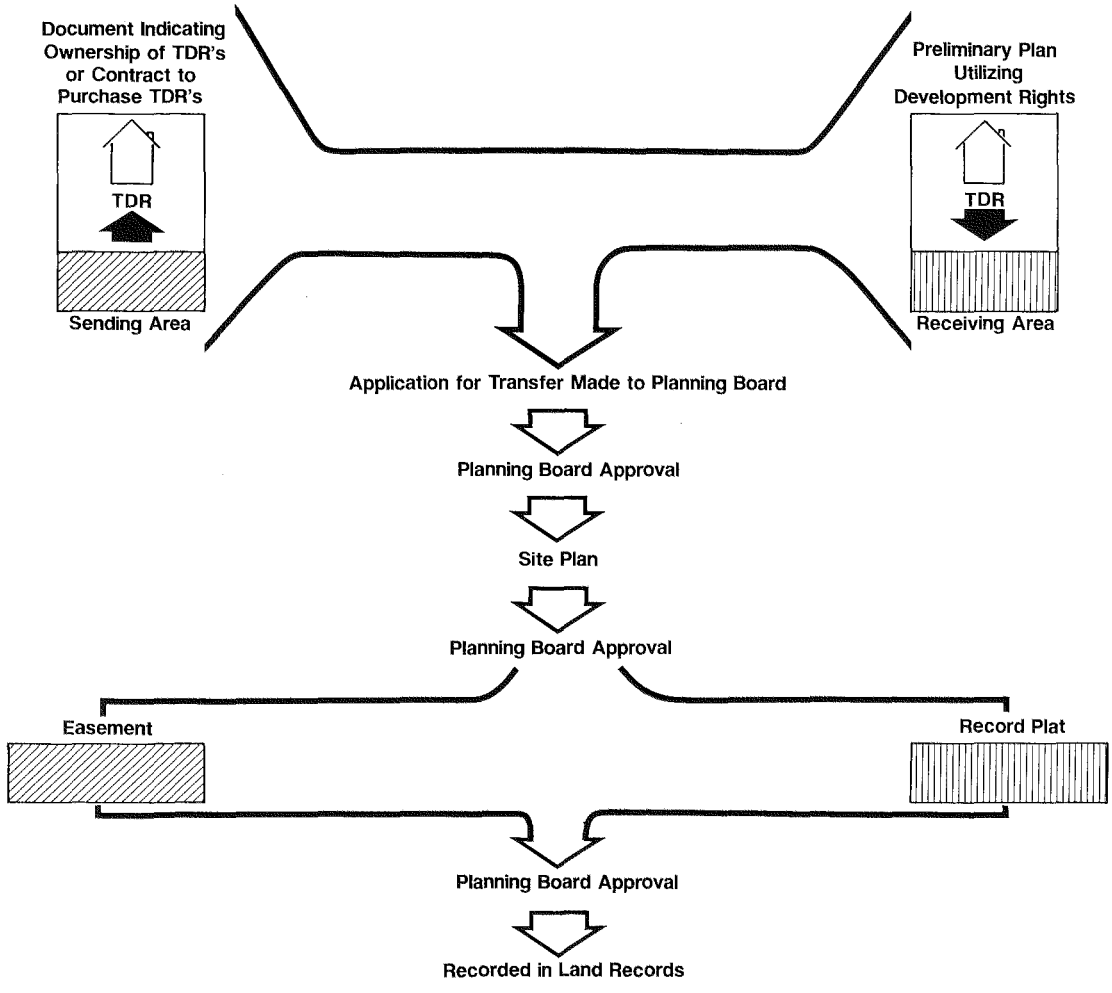
Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

Note: The Master Plan recommends that public water and sewer service be provided to most of The Planning Area.(SEE TEXT)

Figure 46



TRANSFERABLE DEVELOPMENT RIGHTS PROCESS

This illustration depicts, first, the ownership or contract to purchase development rights from a farmer in the sending area by a developer. The developer files, with the Montgomery County Planning Board, a preliminary plan of subdivision for property in the receiving area using at least two-thirds of the possible development rights transferable to the property. This represents the application for transfer. Once the preliminary plan of subdivision is approved by the Planning Board, the developer thens files a detailed site plan for the receiving property for approval by the Planning Board. Following site plan approval, the developer would prepare a record plat. An easement document limiting future residential development in the sending area is prepared, conveying the easement to the county. Upon approval of the easement document and record plat by the Planning Board, the easement and the record plat are recorded in the land records and the transfer of development rights is complete.

Transferable Development Rights Process

Each master plan, as it is developed, is examined to determine whether it should contain receiving areas and, if so, how many TDR's would be appropriate. The location of receiving areas must be consistent with the master plan's limitations on the ability and desirability of development in certain areas. These limits must be within the range of planned public facilities such as roads, utilities, parks, and schools. Development in receiving areas must be compatible with existing and planned development on adjacent or surrounding areas. They must also meet the Countywide criteria established for the designation of receiving areas and satisfy the development standards in the *Montgomery County Zoning Ordinance*; they will be included in the Sectional Map Amendment process for this Plan.

This Plan designates selected parcels as TDR receiving areas, and recommends them for the RE-2/TDR and R-200/TDR and R-60/TDR Zones. Without the purchase of TDR's, land classified in a TDR Zone may be developed up to the maximum density permitted in the corresponding non-TDR Zone. For example, land classified R-200/TDR could be developed up to the maximum density of the R-200 Zone (2.0 units per acre, plus a MPDU bonus density) without the purchase of TDR's. When TDR's are used, the maximum density in a TDR Zone is based on the individual zone but may be limited the recommendations of the Master Plan. Such recommendations are stated as the maximum units per acre, exclusive of MPDU bonus, but in several cases a further limitation specifies the maximum total number of units.

Historic Preservation Incentives

The procedures for the designation and preservation of historic resources through the *Master Plan for Historic Preservation* and the Historic Preservation Ordinance, as well as descriptions of the individual resources in Germantown, are included in the Historic Resources chapter.

There are several incentives that encourage the preservation and adaptive reuse of historic resources designated on the *Master Plan for Historic Preservation*:

- A number of federal and state incentives for designated historic properties including tax credits, tax benefits possible through the granting of easements on historic properties and outright grant or low-interest loan programs are noted in detail in Appendix A of the *Master Plan for Historic Preservation*.
- The Montgomery County Council passed legislation in September 1984 to provide for a tax credit against County real estate property taxes in order to encourage the restoration and preservation of privately owned structures located in the County. The credit applies to properties designated on the *Master Plan for Historic Preservation* either individually or as recognized resources within a designated Historic District. (Chapter 52, Art. VI.)

  The Montgomery County Historic Preservation Commission, together with the County's Department of Finance, administers the tax credit. Information concerning the eligibility requirements and application procedures for the credit is available through the Preservation Commission.
- In July of 1988, the Montgomery County Council passed legislation to establish a County historic preservation easement program. An easement may be required on either *Master Plan* or *Locational Atlas* properties and may include provisions to protect and conserve interior features of an historic resource, as well as exterior.

  The easement program is administered by the Historic Preservation Commission and additional information is available through the Commission.
- The County encourages preservation by such methods as historic site density transfer, subdivision, development plan and site plan review, planned development zoning, flexible application of the County's building code, sensitive design of public facilities in the vicinity of historic resources, property tax credits, facade and scenic easements, and "recycling" of historic structures through adaptive reuse.
- Public and private developers are strongly encouraged by the Montgomery County Planning Board to use historic names for roadways, schools, parks, shopping areas. These names would include the historic names of the six villages in Germantown.

Fiscal Considerations

The Comprehensive Amendment to the Germantown Master Plan calls for extensive new housing and employment opportunities to be realized at build-out. In particular, this Master Plan envisions some 17,560 more housing units at build-out along with a increase of over 69,050 jobs. This represents a 92 percent increase in housing and more than a sevenfold (742 percent) increase in jobs. Moreover, the mix of housing types will change, with single-family detached units increasing to about 30 percent of the housing stock (from 19 percent), single-family attached housing declining to 30 percent (from 51 percent), and multi-family housing units increasing to 40 percent (from 30 percent). Also, at build-out, office and research and development jobs will represent about 92 percent of all at-site employment compared to 82 percent today.

This great infusion of jobs and housing into Germantown will have a substantial impact on the revenues received by the County, chiefly in terms of property and personal income taxes, as well as the expenses incurred to build roads, schools and offer services needed by the residents and the at-place employees. This chapter discusses the revenue and cost — that is, fiscal consequences — of the overall recommendations for housing and jobs.

Fiscal considerations should not be the primary determining factor in assessing the appropriateness of the plan recommendations, because a master plan deals with a variety of worthwhile public policy goals and objectives that cannot be measured in dollars and cents. However, some indication of the magnitude of anticipated fiscal impacts is appropriate for public deliberation.

The Capital Improvements Program (CIP)

The Executive Branch of County government is responsible for planning, programming, and budgeting for the County's needs. It does this through two interrelated six-year programs, both of which are adopted by the County Council. One is the annually updated Capital Improvements Program (CIP), which funds construction of all public buildings, roads, and other facilities planned by the County. The other is the Comprehensive Six-Year Public Services Program (PSP) and the Operating Budget, which funds County programs and coordinates them with capital expenditures.

The CIP assures that the projects necessary to fulfill the needs of the community and to provide for orderly growth and development are built at the appropriate time and in the proper location. Each project's status is reviewed annually, at which time projects can be deleted, modified, or added. This procedure allows the flexibility needed to balance available resources and public priorities.

Projects recommended by this Master Plan Amendment are listed in Appendix M. This Master Plan provides guidance on the land use patterns and siting of public facilities in the Germantown area at the time of its ultimate build-out. Some of the recommended projects are programmed in the current (FY 89-94) CIP while others are not. This Plan defers to the County Council to determine the timing for construction of needed CIP projects based on recommendations from the County Executive. During annual

review of the CIP, the Executive and Council shall determine the level of fiscal commitment to a particular project for that year. Funding decisions necessarily will take place within the context of competing demand for finite resources.

Current Fiscal Situation

The population currently living in the existing housing stock of 19,200 units in the general Germantown area contributes approximately $58.8 million annually to County budget revenues.[9] These revenues flow from the property taxes paid by residential land owners, the personal income taxes collected by the State and provided to the County, real property transfer tax and recordation fees, and other miscellaneous fees and charges paid by residents to the County.

A rough estimate of current County expenditures to serve the area's households is $64.5 million annually. These expenditures include operating and debt service expenditures for education, transportation, public safety, and other general government expenses.

The estimated 9,300 employees in the Germantown area, occupying about 2.6 million square feet of office, research and development and retail space, produce some $5.1 million in annual revenues, chiefly from property taxes. The County spends an estimated $3.1 million annually to provide roads, safety and similar services to these employees. The net fiscal impact associated with nonresidential development is a positive $2 million per year.

The net positive fiscal impact from nonresidential development, when combined with the net negative impact associated with residential development, yields an overall net negative impact of approximately $3.7 million per year. This situation is not unusual or unexpected considering that the area is predominately residential in character. Moderate income residential areas do not usually generate enough revenues to balance the high costs of providing public education and other public services. What is interesting about the results is that the difference between the positive and negative impacts is relatively modest — less than 10 percent.

Possible Future Fiscal Impacts

The expected growth in both housing and employment will have a significant impact on County revenue and expenditures associated with Germantown. This will come about due to both scale and category changes. Scale changes occur because the Master Plan allows for a 92 percent increase in housing and a 742 percent increase in employment.

The category changes are expected for both residential and nonresidential development. The changing emphasis on single family detached housing is expected to be associated with a higher average household income in Germantown (net of inflationary effects) at build-out compared to today's condition. Moreover, proposed developments such as Marriott and the regional mall are expected to result in nonresidential property values in Germantown that increase faster than the Countywide averages (also net of inflation). Both of these category changes have been accounted for in the fiscal impact analysis below.

At build-out, when Germantown has some 36,783 housing units, it is estimated that the population residing in the housing stock will generate $113 million in revenues to the County each year. Correspondingly, this population will likely place demands on the County for services that are projected to cost $124 million per year. The net fiscal impact associated

9 The revenue and expenditure estimates are approximations of the fiscal impact of the population of the 19,200 housing units in the Germantown area. The estimates were generated using a mathematical fiscal impact model (REDI) that uses information about the households in the Germantown area obtained from a 1984 Census Update Survey conducted by the Planning Board staff.

The model, in allocating unit costs and revenues to the household population, differentiates those costs and revenues by geographic area. Thus, the total costs and revenues are reflective of the annual fiscal expenditures by the County in the Germantown area, as well as the revenues received by the County from households with income in an appropriate range for the area and with housing types and values assigned using the 1984 Census Update estimates.

Fiscal impact models, including this REDI model, cannot provide precise expenditure and revenue estimates because of the problems in modeling the real world, in posing the proper assumptions, and in obtaining reliable data for input to the model. Providing an order of magnitude of current fiscal expenditures and revenues in the Germantown area is all that is possible.

All revenue and cost data cited in this chapter are given in constant 1988 dollars.

with residential development is then estimated at negative $11 million per year.

For nonresidential property the situation is just the opposite, as estimated revenues are projected to exceed forecasted costs. The revenues are estimated to increase to $43.8 million per year with expenditures at $26.7 million. The net fiscal impact is thus estimated at $17.1 million per year.

Combining the net fiscal impacts for residential and nonresidential development in Germantown at build-out, when it has a stronger nonresidential character, the estimated overall net fiscal impact is a positive $6.1 million annually. This compares to an overall net fiscal impact of negative $3.7 million today when the area has a strong residential orientation.

Appendix 1

Glossary of Terms

ADEQUATE PUBLIC FACILITIES ORDINANCE (APFO): The APFO, adopted in 1973, is a law which promotes orderly growth by synchronizing development with the availability of the public facilities (roads, sewer, water, schools, police) needed to support it. Refinements to the ordinance were adopted in 1986.

The APFO is a part of the Subdivision Ordinance and is administered by the Planning Board at time of subdivision, after review by other agencies, including the County Executive. The subdivision regulations require that public facilities exist or be programmed for construction within a defined time period before subdivision approval can be granted. These facilities, therefore, would normally be included in the Capital Improvements Program (CIP), as described below. Criteria and guidelines for administration of the APFO are included in the Annual Growth Policy, adopted annually by the County Council.

ANNUAL GROWTH POLICY (AGP): A policy document adopted annually by the County Council intended to facilitate and coordinate government's powers in limiting or encouraging growth and development in the County. The AGP addresses conflicting policies of various agencies that may be serving different public interests, and provides guidance in resolving differences. It includes criteria and guidance for the administration of the APFO, and recommended development capacity Staging Ceilings for each policy area of the County. The overall purpose is to chart, each year, a direction for government which will enhance the quality of life of the County's present and future residents.

The AGP is prepared by the Planning Board based on its comprehensive land use process, data collected through administration of the Adequate Public Facilities Ordinance, and through population and housing projections. It is prepared in close coordination with the Executive's CIP, and is transmitted to the County Executive in Final Draft Form, after public hearings. The County Executive submits his modifications in writing to the County Council, and Council must adopt the AGP by June 30 of each fiscal year. (The legislation providing for the AGP was adopted by the County Council in May, 1986.)

BUFFERING: Isolation or separation of different land uses by a third land use, by open space or by a physical separator such as a wall. Low density offices and townhouses are frequently used to buffer commercial and detached residential areas.

CAPITAL IMPROVEMENTS PROGRAM (CIP): A six-year comprehensive statement of the objectives of capital programs with cost estimates and proposed construction schedules for specific projects. The CIP is submitted annually to the County Council by the Executive.

The CIP is the tool through which locally funded public facilities such as sewers, local roads, storm drains, schools, libraries, parks, etc., can be scheduled and built, in coordination with and guided by the Annual Growth Policy and area Master Plans. It is used in conjunction with the APFO in terms of programming for public facilities needed to service subdivisions.

CONSOLIDATED TRANSPORTATION PROGRAM (CTP): The State Highway Administration's five year construction program for roads and other transportation facilities within the State of Maryland. This program is an important consideration in transportation planning by the County since many of the major roads in the area are State highways.

DEVELOPMENT PLAN REVIEW: Some zones require approval of a development plan at the time of rezoning. The Planning Board evaluates ("reviews") the development plan, which shows the layout, unit mix,

uses, building densities, circulation, parking and open space layout for a proposed development project. Where a development plan is required, the subsequent site plan must be in conformance with it. The preparation of an acceptable development plan helps to assure that the intent of the master plan is achieved.

EASEMENT: A contractual agreement to allow temporary or permanent use of and/or access through a property.

END-STATE DEVELOPMENT: Future land use as prescribed by the most recent master plan, assuming total implementation of that plan. In actual practice, development densities rarely exceed 80 percent of maximum allowable density.

EUCLIDEAN ZONES: See Zoning

FLOATING ZONES: See Zoning

FLOOR AREA RATIO (FAR): The ratio of the gross floor area of a building to the area of the lot on which it is located. Parking and unoccupiable space in the building are generally excluded from the computation. For example, a building with gross floor area of one acre on a two acre lot would have a Floor Area Ratio of 0.5.

HOMEOWNERS ASSOCIATIONS: When development occurs under the cluster provisions of the subdivision regulations, a homeowners' association is frequently required to assure the maintenance and operation of private open space, recreational facilities, private streets, and other common space in the subdivision. The homeowners association generally levies a fee in the form of a property assessment to maintain these facilities. It also must provide a management structure to supervise facility maintenance.

IMPERVIOUS SURFACE: Land surface through which water cannot penetrate, usually because of pavement or buildings.

INFRASTRUCTURE: The built facilities, such as streets, bridges, schools, water and sewer lines, other utilities, and parks, that service a community's developmental and operational needs.

LEVEL OF SERVICE (LOS): A traffic engineering term that describes relative operating conditions and congestion levels on a segment of roadway or at an intersection. There are six levels, ranging from free flowing conditions (level of service "A") to very heavy traffic, extremely unstable flows, and long delays (level of service "F").

LOCAL MAP AMENDMENT: A change of zoning, normally sought by the owner or other person having a proprietary interest. Applications for local map amendments may be filed only during the months of February, May, August, and November, and are considered according to procedures specified in the zoning ordinance. A local map amendment can include more than one tract of land. Land can be combined for purpose of rezoning. Approval of a local map amendment normally requires the affirmative vote of a majority of the County Council. If the proposed rezoning is contrary to the zone recommended in a master plan, however, approval requires affirmative vote of five Council members, unless the Planning Board has recommended in favor of that approval, in which case a four-vote majority of the Council is sufficient for approval.

MANDATORY REFERRAL: Under the Regional District Act "no road, park, or other public way or ground, no public (including Federal) buildings or structures, and no public utility whether publicly or privately owned shall be located, constructed, or authorized in the regional district until and unless the proposed location, character, grade and extent thereof has been submitted to and approved by the [Maryland-National Capital Park and Planning] Commission." (Art. 28, #7-112 of the Regional District Act) One of the major purposes of this review authority is to assure that public land acquisition and development are compatible with surrounding development, both existing and planned. Mandatory referral results in recommendations that are not binding on the public agency but it does provide an opportunity to encourage the agency to modify their proposals, where necessary, in order to improve their compatibility.

MASTER PLAN: A document which guides the government and private individuals in the way an area should be developed. In Montgomery County, master plans amend and detail, for portions of the County, the recommendations of the County's General Plan.

MIXED-USE DEVELOPMENT: The integration of different, usually compatible or mutually supportive, land uses on a site or into a single building or complex.

NONTIDAL WETLAND: An area that is inundated or saturated by surface water or groundwater at a fre quency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation; provided, however, that the Maryland Department of Natural Resources, in designating a nontidal wetland, shall use the approach (i.e., hydrology, soils and vegetation) enumerated in the April, 1988 Revised Interim Final Draft "Wetland Identification and Delineation Manual" developed by the United States Environmental Protection Agency, and any subsequent amendments thereto.

ON-SITE STORMWATER MANAGEMENT: Stormwater management techniques applied within a given site boundary, usually near the source of stormwater runoff.

ONE-HUNDRED YEAR ULTIMATE FLOODPLAIN: The floodplain that would result from a 100-year-frequency flood, calculated on total development in a watershed.

PLANNED DEVELOPMENT ZONING (PD): A group of "floating" zones that allow a broad range of housing types, flexibility of design, a mix of land uses and which encourage better land planning with greater efficiency, convenience, and more amenities than conventional, or enclidian, zoning categories. A development plan must be approved at the time of zoning.

PLANNING: The orderly, reasoned process of evaluating the existing and future needs of an area and its residents, and the preparation of alternatives and recommendations to meet those needs.

SCHEMATIC DEVELOPMENT PLAN: A development plan for Planning Board review and County Council approval submitted as part of an application for the rezoning of land into floating zones at the option of the applicant. Such schematic development plans limit development to that specified in the application.

SECTIONAL MAP AMENDMENT: A comprehensive rezoning, initiated by the Planning Board or County Council, covering a section of the County, and usually including several tracts of land. It normally follows a master plan study. It may propose various zones to be applied to various individual tracts. The County Council must hold a public hearing on a proposed sectional map amendment. Since enactment of a sectional map amendment is considered a legislative action of the government, and is intended as a comprehensive implementation of public policy, it does not require a finding of a change in the character of the neighborhood or a mistake in the original zoning. Approval is by majority vote of the council.

SETBACK: The required minimum distance between a proposed structure or parking area and property lines or other buildings. Setbacks are specified in certain zones.

SITE PLAN: A detailed plan, required in certain zones, that usually shows proposed development on a site in relation to immediately adjacent areas. It indicates roads, walks, parking areas, buildings, landscaping, open space, recreation facilities, lighting, etc. The Planning Board must approve the site plan before building permits can be issued.

SITE PLAN REVIEW: Detailed site plans carry out the policies and recommendations of the master plan. As there is flexibility in the layout of buildings and other features on the site, the Planning Board and its staff carefully review (evaluate) site plans, allowing ample public input.

Site plan review is required of all floating zones and of optional development provisions of other zones. Further, facilities that fall under the provisions of the County parking ordinance (part of the Zoning Ordinance) are also subject to site plan review for the parking areas.

Site plan review is more detailed than development plan review. It examines such elements as building mass and location, parking area design, grading, landscaping, lighting, fencing and signage. Through this review, issues of compatibility with adjacent land uses can be resolved.

SPECIAL EXCEPTION: Most zoning classifications include a set of permitted uses and a set of "special exception" or conditional uses. These are uses that, because of the level or nature of the activity associated with them, need to be carefully reviewed before being allowed to be developed on land in that zoning classification. In residential areas, for example, special exception uses include, among others, day-care centers for more than six children, medical clinics and horticultural nurseries. Gas stations are always special exception uses. Hotels are special exception uses in most industrial zones.

The Zoning Ordinance contains, for each special exception use, a set of criteria that must be met by an application. The applications are reviewed by staff of the Montgomery County Planning Department and recommendations are made by The Montgomery County Planning Board. The decisions regarding each application are made by the Montgomery County Board of Appeals.

STAGING: An element of a master plan and the County's growth management system that coordinates the schedule of public facility construction with the pace of private development.

STORMWATER MANAGEMENT: See On-Site Stormwater Management.

SUBDIVISION: (1) The division of a lot, tract, or parcel of land into two or more lots, plots, sites, tracts, parcels or other divisions for the purpose, whether immediate or future, of sale or building development. (2) The recombination of lots previously created into a new configuration.

TEN-YEAR COMPREHENSIVE WATER SUPPLY AND SEWERAGE SYSTEM PLAN: The program of the Washington Suburban Sanitary Commission, subject to approval by the County Council, for the provision of water and sewage service in Montgomery County.

TWO-YEAR STORM: A storm with a 50 percent statistical probability of being equaled or exceeded in a given year.

VEHICULAR CAPACITY: A measure of the maximum number of vehicles that can pass through a given road segment, or intersection, during a given time period under prevailing roadway conditions. Also see Level of Service.

WATERSHED: The area contained within a topographic divide above a specified point on a stream; the area that drains into that stream.

ZONING: Zoning regulates the use of land. All land in Montgomery County (except public rights-of-way) is zoned. Within each zone, the County zoning ordinance permits certain uses by right and permits others conditionally. The ordinance also excludes certain uses from each zone. Zoning is the division of a municipality or county into districts which are for the purpose of regulating the use of private land. These zones are shown on an official atlas which is part of the zoning ordinance. Within each of these districts, the text of the zoning ordinance specifies the permitted uses, the bulk of buildings, the required yards, the necessary off-street parking, and other prerequisites to obtaining permission to develop.

Maryland law permits the use of two types of zones, euclidian and floating zones. There are important distinctions between the two which affect the manner in which they can be employed.

EUCLIDIAN ZONES: A Euclidian zone is a zone that contains fixed standards. Certain uses are permitted in these zones, but they are subject to rigid requirements such as: lot size; front, side, and rear setbacks; and maximum height. Application for a euclidian zone may be made either by the property owner or by the government, and thus it may be applied by sectional map amendment or local map amendment (see Zoning Map Amendment).

Maryland law provides that a local map amendment rezoning to a euclidian zone is permissible only if there has been a change in the planned character of the neighborhood since the last comprehensive rezoning or a mistake in the original zoning. All zones in Montgomery County that are not identified as floating zones (see next paragraph) are Euclidian zones.

FLOATING ZONES: A floating zone does not contain fixed standards. Findings of change or mistake, required for granting a Euclidian zone, do not have to be made before the application for a floating zone can be granted. Instead, the County Council must find that the proposed rezoning is compatible with surrounding uses and meets other requirements set forth in its "purpose clause."

All floating zones require Planning Board approval of a site plan for development of the property prior to the issuance of a building permit.

ZONING MAP AMENDMENT: A change to the regulations of a given zone or zones, as stated in the text of the zoning ordinance.

Appendix 2

SUMMARY OF ZONING CLASSIFICATIONS

Zone	Minimum Lot Size/ Major Use	Maximum Density (Units Per Acre)/ Building Height
	Residential Zones	
RE-2	Single-family Detached	0.4/Acre
RE-2/TDR	Single-family Detached	Varies from 0.5 to 4.0/acre as determined by the Master Plan.
RE-1	Single-family Detached	1.0/Acre
R-200	Single-family	2.0/Acre
R-200/TDR	Single-family	Varies from 2.0 to11.0/acre as determined by the Master Plan.
R-150	Single-family	2.6/Acre
R-90	Single-family	3.6/Acre
R-60	Single-family	5.0/Acre
RT-6	Single-family Attached	6.0/Acre
RT-8	Single-family Attached	8.0/Acre
RT-10	Single-family Attached	10.0/Acre
RT-12.5	Single-family Attached	12.5/Acre
R-30	Multi-Family	14.5/Acre
R-20	Multi-Family	21.7/Acre
R-H	Multi-Family	43.5/Acre
R-MH	Mobile Home	7.0/Acre
	Commercial Zones	
C-1	Convenience Commercial	30 Feet
C-2	General Commercial	3 Stories/42 Feet
C-3	Highway Commercial	3 Stories/42 Feet
C-4	Limited Commercial	3 Stories/40 Feet
C-5	Low Density Commercial Office	35 Feet/0.25 FAR
C-O	Commercial Office	3 Stories/42 Feet
O-M	Office Buildings	5 Stories/60 Feet
C-T	Commercial Transition	35 Feet
C-Inn	Country Inn	2-1/2 stories

SUMMARY OF ZONING CLASSIFICATIONS (Cont'd.)

Zone	Minimum Lot Size/ Major Use	Maximum Density (Units Per Acre)/ Building Height
	Employment Zones	
I-1	Light Industrial	10 Stories/120 Feet
I-3	Industrial Park	100 Feet 0.5 FAR*
I-4	Light Industrial, Low Intensity	3 Stories/42 Feet
R&D	Low Density Research and Development	50 Feet/0.30 FAR
	Planned Development and Mixed-Use Zones	
TS (Town Sector) Variable	Variable	
PD (Planned Development) Variable	2 to 44/Acre	
MXPD (Mixed-Use Planned Development) Variable	Variable	
R-MX (Proposed)	Variable	

* *Optional Method permits increase to 0.6 FAR with extensive traffic mitigation.*

** *Optional Method permits increase to 0.5 FAR*

NOTES

1. *The Montgomery County Zoning Ordinance gives the specific provisions for each zone. In certain instances, dwelling unit types and building heights may be changed.*
2. *Densities indicated are the maximum permissible, without the bonus for inclusion of Moderately Priced Dwelling Units (MPDU's). These densities do include the cluster option where applicable. Maximum density can only be obtained on land with dedicated rights-of-way and the capability to accommodate required lot sizes. Any subdivision of 50 or more units must include 12.5 percent MPDU's, in which case a density increase of up to 20 percent and optional development standards and unit types are permitted.*
3. *In order to utilize the cluster provisions of the Zoning Ordinance, a developer must receive the approval of the Montgomery County Planning Board. The property must be posted and a public hearing must be held on the application prior to the Planning Board's action*

Appendix 3

Table 3-1

THEORETICAL MAXIMUM DWELLING UNITS/POPULATION IN GERMANTOWN

	Dwelling Units	Population
1974 Master Plan Theoretical Maximum[1]	34,788	109,933
1974 Adjusted Maximum[2]	32,011	82,632
Difference from the 1974 Theoretical Maximum	2,777 (8%)[3]	27,301 (25%)[4]
Theoretical Maximum of 1989 Master Plan	36,783	91,624
Difference from the 1974 Theoretical Maximum	1,995 (5%)	18,309 (20%)
Difference from the 1974 Adjusted Maximum	-4,772 (-13%)	-8,992 (-10%)

1 *The number of households is based on Churchill Town Sector Development Plan and considering net residential densities of 1974 Land Use plan as follows:*

2-5 = SFD; 7-11 = SFA; 15-44 = MF.

2 *The number of households is based on existing and approved residential master units as of 1/1/87 and on land use recommendations of the 1974 Master Plan for the remaining residential area. Population figures are based on population-per-household figures, by housing type, in Germantown from the 1984 Census Update Survey.*

3 *The difference in the number of dwelling units reflects the fact that in the areas which have developed fewer units were built than would have been permitted under the recommendations of the 1974 Master Plan.*

4 *The lower population figure represents both the reduction in dwelling units and the reduction in average household size from 1974 to 1984.*

Table 3-2

COMPARISON OF 1974 MASTER PLAN AND 1989 MASTER PLAN: ACREAGE

Land Use Classification	1974 Master Plan		1989 Master Plan	
Open Space	3,643		3,566	
M-NCPPC Parks		1,940		1,987
State Parks		790		790
Conservation Areas		913		789
Schools	488		279	
Institutional Uses	392		442	
Residential Uses	4,695		4,955	
Commercial Activities	207		412	
Mixed-Use Center				
Retail and Service Park				
Regional Shopping Mall				
Village Centers				
Other Retail				
Employment	694		693	
Industrial Office Park				
Commercial Office				
Light Industrial				
Total	10,119		10,347	

Table 3-3

PROPOSED LAND USE BY VILLAGE
(in acres)

Area	Open Space	School	Institutional	Residential	Retail	Office	Total
Town Center	11	–	41	8	134	111	305
Employment Corridor	95	–	187	173	1	500	956
Churchill	149	19	14	741	5	3	931
Gunners Lake	147	60	–	518	12	37	774
Clopper	241	47	18	924	41	1	1,272
Kingsview	242	49	12	1,231	0	24	1,558
Middlebrook	131	20	0	626	49	6	832
Neelsville	66	84	170	734	170	11	1,235
Total All Areas	1,082	279	442	4,955	412	693	7,863

PROPOSED LAND USE BY VILLAGE
(relative percentages)

Area	Open Space	School	Institutional	Residential	Retail	Office	Total
Town Center	4%	0%	13%	3%	44%	36%	100%
Employment Corridor	10%	0%	20%	18%	0%	52%	100%
Churchill	16%	2%	2%	80%	0%	0%	100%
Gunners Lake	19%	8%	0%	67%	1%	5%	100%
Clopper	19%	4%	1%	73%	3%	0%	100%
Kingsview	15%	3%	1%	79%	0%	2%	100%
Middlebrook	16%	2%	0%	75%	6%	1%	100%
Neelsville	5%	7%	14%	59%	14%	1%	100%
Total All Areas	14%	3%	6%	63%	5%	9%	100%

Table 3-4

RESIDENTIAL LAND USE
COMPARISON OF 1974 MASTER PLAN AND 1989 MASTER PLAN

Area	Residential Acres		Dwelling Units		Average Dwelling Units Per Acre		Population	
	1974 Plan	1989 Plan	1974 Plan	1989 Plan	1974 Plan	1989 Plan	1974 Plan	1989 Plan
Town Center	30	–[1]	1,036	1,928	34.5	–[1]	2,102	3,335
Employment Corridor	–	173	–	3,750	–	21.7	–	6,488
Churchill	741	741	7,264	5,358	9.8	7.2	12,932	12,708
Gunners Lake	518	518	5,288	4,948	10.2	9.5	15,209	11,377
Clopper	792	924	7,099	7,742	8.9	8.4	22,627	20,902
Kingsview	1,231	1,231	5,380	5,155	4.4	4.2	19,245	15,225
Middlebrook	626	626	4,310	5,180	6.8	8.3	14,025	13,149
Neelsville	757	734	4,411	2,722	5.8	3.7	15,590	8,440
Total All Areas	4,695	4,947[2]	34,788	36,783	7.4	7.0[2]	109,933	91,624

[1] *1,800 residential units may be constructed as part of mixed-use developments.*

[2] *The acreage and dwelling units from the Town Center are not included.*

Table 3-5

POPULATION, LOCAL PARKLAND, AND PUBLIC SCHOOLS BY VILLAGE

Village	Population	Local Parkland		Public Schools		
		Number	Size (Acres)	Elementary	Intermediate	Senior High
Town Center	3,335	2	17	0	0	0
Employment Corridor	6,488	0	0	0	0	0
Churchill	12,708	2	26	2	0	0
Gunners Lake	11,377	4	40	1	1	1
Clopper	20,902	7	188	3	0	0
Kingsview	15,225	3	28	2	0	0
Middlebrook	13,149	4	64	2	1	0
Neelsville	8,440	2	20	2	0	1
Total All Areas	91,624	24	383	12	3	2

TECHNICAL APPENDIX

Appendix A
Master Plan Amendments: 1979-1986

	Description of Major Land Use and Zoning Effects of Each Amendment	Date of Council Actions
1.	Established floating park symbols on village and neighborhood centers.	9/74
2.	Changed staging and zoning recommendations in a portion of Clopper Village.	1/76
3.	Changed staging and zoning recommendations in portions of Clopper and Kingsview Villages.	12/77
4.	Changed staging and zoning recommendations in portions of Neelsville Village.	6/79
5.	Changed staging and zoning recommendations in portions of Churchill, Gunners Lake, and Kingsview Villages.	8/79
6.	Deleted Proposed Road B-4 in Town Center.	2/80
7.	1982 Amendments: changed staging and zoning recommendations in Clopper and Neelsville Villages and changed land use and zoning recommendations for a portion of Middlebrook Village.	10/82 and 2/83
8.	1985 Amendments: changed staging and zoning recommendations in a portion of Town Center, and in portions of Churchill, Clopper, and Neelsville Villages.	11/86

Appendix B
Retail Trends and Implications

The nature and location of retail services constitute a major component of the quality of a community. Residents need to be able to purchase the goods they desire at locations that are convenient and accessible.

Except for previously existing retail facilities, the 1974 *Master Plan* recommends that retail services be concentrated in Village Centers and in the Town Center. Convenience goods, those which are generally purchased at least once a week, should be sold in Village Centers, while comparison items should be sold in the Town Center and the proposed Regional Mall. This Master Plan recommends continuing this organization of retail locations.

Changes have occurred since the adoption of the 1974 *Master Plan* that are responded to in this Plan. These changes include the increase in two-income families and other changes to our lifestyles, the increase in the number of goods available, a local decrease in the number of supermarket chains, and the construction of retail centers at locations that were not anticipated in the 1974 *Master Plan*.

Convenience Retail in Village Centers

Village Centers are designed to meet more than just the retail needs of the community. Social, recreational, educational and civic activities are planned to occur in Germantown's village centers. The Village Center retail activities are generally anchored by a major supermarket complemented by several other convenience stores and family restaurants, which focus on a pedestrian area.

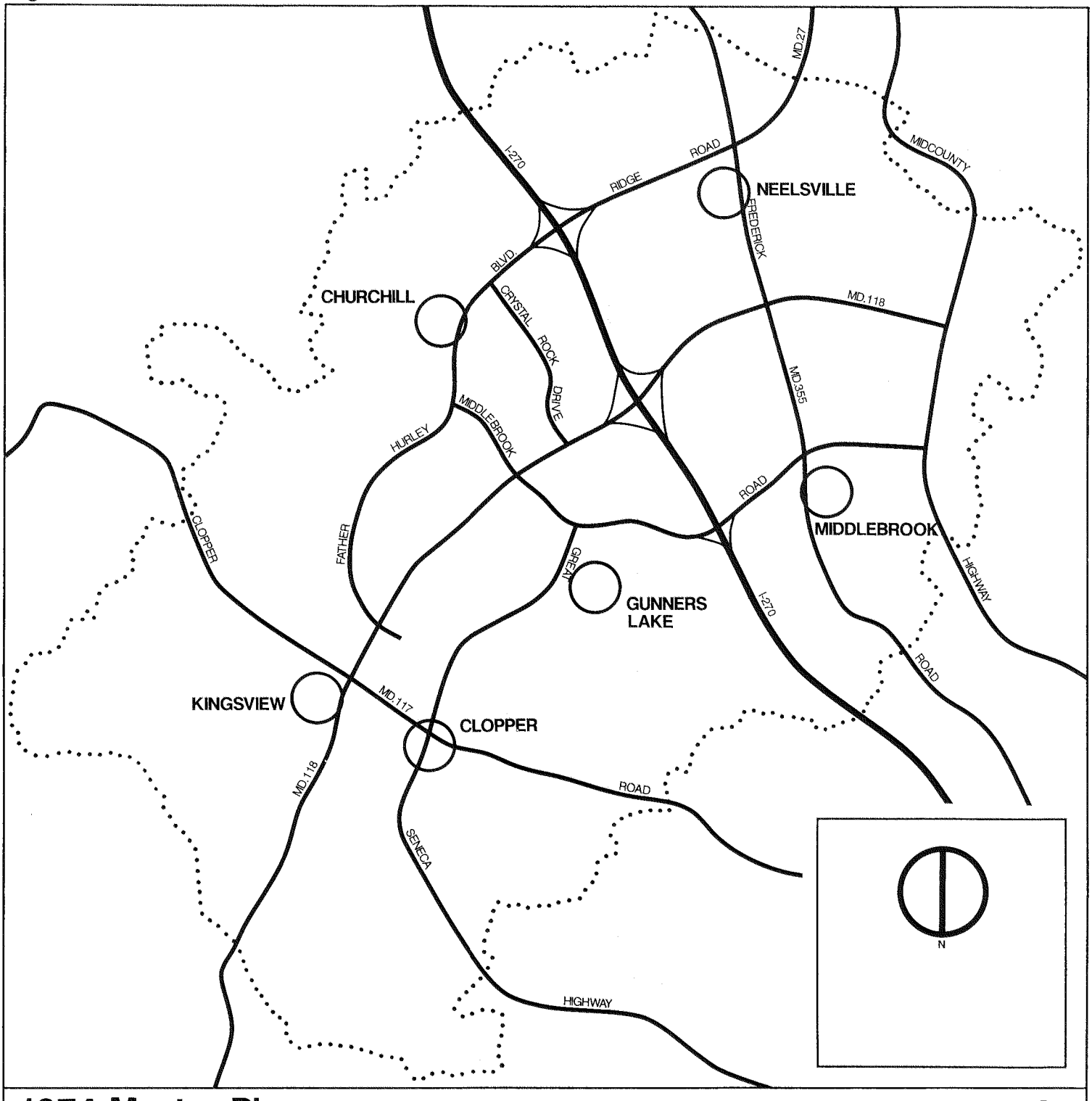
This concept of clustering retail uses serving a similar market area has grown out of the new community planning of the late 1960s. It differs from the small to medium sized "informal" groups of stores located along roadways prevalent into the 1980s. These scattered centers often lack any cohesive identity other than the limited range of products and services they offer.

The Village Center concept has evolved dramatically over the past ten years in response to changes in the American lifestyle and shopping patterns. We now demand more variety of products, more convenience and increased amenities. This evolution has resulted in retail centers occupying 10 to 15 acres of land rather than the 8 to 10 acres seen in the early 1970s. The increased building and site requirements of these centers are in response to the following factors:

- increases in the variety of goods and services provided at a center and within each store;
- increased demands for improved vehicular, and pedestrian circulation within the site;
- increased demand for aesthetic design, including landscaped areas around the edges of the center, in the parking areas, and within the pedestrian areas;
- provision of properly located parking in sufficient supply; and
- inclusion of amenities including community meeting facilities, active recreational facilities, religious facilities, elderly and child day-care facilities, and medical facilities.

As a result of this evolution, consumers have come to expect variety, convenience, beauty and safety in retail facilities. The prototype stores have also responded with combined food and drug stores now typically occupying buildings over 50,000 square feet in area. Further, the 70,000 to 100,000 foot retail center

Figure B-1

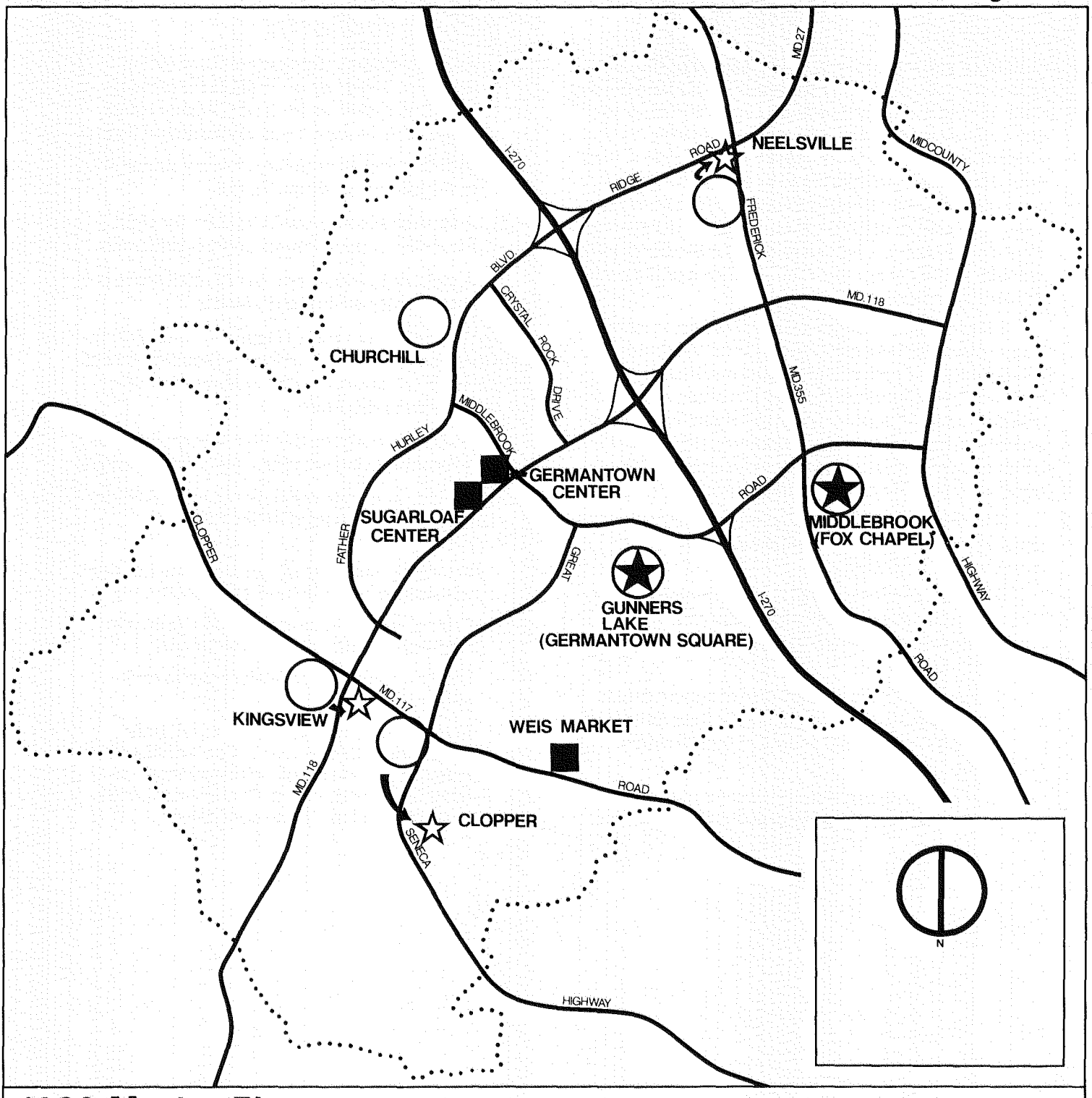


1974 Master Plan- Village Center Locations

Village Center Locations

Comprehensive Amendment
to the Master Plan for Germantown
Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission



1989 Master Plan-
Village Center Locations

Village Centers

Existing Location

1989 Master Plan-Recommended Location

1974 Master Plan-Recommended Location

Other Convenience Retail Centers

Existing Location

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

of 10 to 15 years ago is now in the 100,000 to 150,000 square foot range. In order for retailers and land developers to respond to the needs and expectations of today's consumer and still achieve an acceptable economic return, a larger market base population than that of ten years ago appears to be required. Given a constant household density, the geographic trade area today will tend to be larger for a village center than it would have been ten years ago because the stores individually are larger and the total retail area of the center has also increased.

Larger centers with increased trade areas result in longer distances between centers. Thus, vehicular accessibility and convenience to the resident shopper become more important. As time has become an increasingly scarce resource, particularly to two-income and single-head-of-household families, the ability to combine trips to one location is very desirable. This trend reinforces the village center concept.

The following sets forth the major observations regarding the evolution of convenience retail centers over the past 10 to 15 years:

1. The trend in neighborhood shopping centers (those anchored only by a supermarket) is toward larger centers at greater distances from each other.
2. Since 1972, the median size of supermarkets nationally has increased by 33.5 percent (from 17,600 square feet in 1972 to 23,500 square feet in 1987).
3. The increase in size is the result of supermarkets becoming more specialized and responsive to consumer demands and providing items previously only available in specialty food stores, such as fresh fish, freshly baked goods, delicatessen items, and gourmet foods.
4. Visibility and accessibility are very important in the location of a retail center.
5. A location before a traffic light on the right hand side of homebound traffic is preferable.
6. A yield of 10,000 square feet of retail space per acre remains an industry standard.

The following two maps (Figures B-1 and B-2) indicate the changes in the planning and construction of convenience retail centers in Germantown from the 1974 *Master Plan* to this Plan.

Based on this analysis, this Plan incorporates the following recommendations regarding Village Centers:

- Provide adequate convenience retail facilities that can be supported by the resident population.
- Relocate remaining village centers to locations with higher visibility and accessibility.
- Enlarge retail building area and site area in response to national and local trends.
- Locate a convenience retail center in each village.
- Integrate other facilities such as religious institutions, daycare, recreation, service office uses, parks and schools with convenience retail facilities in Village Centers to improve community identity and convenience.

Appendix C
Explanation of Water Class Uses

The Maryland Water Resources Administration has established four distinct water class uses for the surface waters of the state, each having a specific set of standards. The water class uses are:

CLASS I: WATER CONTACT RECREATION & AQUATIC LIFE

Waters which are suitable for water contact sports, play and leisure time activities where the human body may come in direct contact with the surface water, and the growth and propagation of fish (other than trout), other aquatic life, and wildlife.

CLASS II: SHELLFISH HARVESTING
(None in Montgomery County)

Waters where shellfish are propagated, stored, or gathered for marketing purposes, including actual or potential areas for the harvesting of oysters, softshell clams, hardshell clams, and brackish water clans.

CLASS III: NATURAL TROUT WATERS

Waters which are suitable for the growth and propagation of trout, and which are capable of supporting natural trout populations and their associated food organisms.

CLASS IV: RECREATION TROUT WATERS

Waters which are capable of holding or supporting adult trout for put-and-take fishing, and which are managed as a special fishery by periodic stocking and seasonal catching.

Appendix D

Water Quality Standards and Criteria for Development

The quality of Little Seneca Creek, particularly the segment downstream of Lake Seneca, will be directly affected by development of the land area that drains to it. The quality and use of this stream will be directly affected by development that occurs on Analysis Areas KI-2 and NE-1.

The intent of the Master Plan is to establish a balance between two objectives in Germantown—first, to provide housing at appropriate Corridor City densities, and secondly, to protect the high water quality of selected streams. Environmental performance criteria have been established in response to both of these objectives. In Analysis Areas KI-2 and NE-1 these criteria require the use of extraordinary best management practices.

Without adherence to the performance criteria and extraordinary best management practices, the maximum residential density recommended for Analysis Area KI-2 would be one unit per two acres.

The intent of the performance criteria is to permit residential development to occur up to the density limit of the R-200 or PD-2 zoning classification (2.4 units per acre), if a package of environmental mitigation measures is implemented which meets the stated criteria. *If the performance standards and criteria cannot be met, then the mitigation measures must be strengthened and/or the development intensity reduced to a level consistent with the criteria.* This site-specific approach provides developers an opportunity to develop a package of mitigation measures that will allow more dwelling units than could be built without those mitigation measures. The mitigation package would respond to the unique environmental characteristics of the property: soils, slopes, geology, extent and nature of vegetation, relationship to natural drainage courses, etc.

Development and other land disturbances in Analysis Areas KI-2 and NE-1, because of their proximity to and potential impact on the existing high water quality of Little Seneca Creek, deserve special attention and should be conducted in accordance with the guidelines and requirements set forth below.

These guidelines and requirements are organized in three sections:

- D-1 Those which are specific to the environmental situation of Analysis Areas KI-2 and NE-1.
- D-2 Proposed additions to the subdivision regulations and related "Guidelines for the Protection of Slopes and Stream Valleys," to be renamed "Guidelines for Environmental Management in Montgomery County."
- D-3 Proposed amendments to the County's Stormwater Management and Sediment Control Regulations administered by the Department of Environmental Protection.

Sections D-2 and D-3 are incorporated in this Master Plan until such time as new regulations incorporating the substance of these amendments are officially adopted.

D-1: Master Plan Specific Guidelines

MASTER PLAN PERFORMANCE STANDARDS[1]

The following standards shall be met by the developer in Analysis Areas KI-2 and NE-1 to assist in maintaining the existing high water quality.

Imperviousness

Overall, development shall not result in more than 20 percent total impervious surface (e.g., structures, roadways, parking areas, paths).

Stream Buffer

a. A minimum stream buffer of 150 feet on each bank of a tributary perennial stream and a minimum stream buffer from each bank of the mainstem of Little Seneca Creek are required.

b. Additional buffer width greater than the minimum set forth above may be required based on factors including:

- protection of mature forest stands or other areas of environmental value such as wetlands;
- types and density of vegetative cover and soil holding ability; and
- slope of land adjacent to the stream or defining the stream valley.

c. The stream buffer shall remain undisturbed, with the exception of reforestation, bank stabilization, stormwater management facilities, and road and utility crossings. Stream access should be carefully managed to protect water quality.

Vegetation and Tree Cover

a. All disturbed areas shall be revegetated as soon as possible as recommended by the Montgomery County Soil Conservation District. Emphasis should be placed on reforestation of disturbed areas.

b. In cooperation with the M-NCPPC Environmental Planning Division and the forestry and fisheries divisions of the Maryland Department of Natural Resources, the developer shall prepare and implement a reforestation plan for the stream buffer area. The primary objectives of reforestation are to provide shade and cooler water temperature and additional sediment and nutrient removal from stormwater runoff. Standards for revegetation of the stream buffer are set forth in the Subdivision Regulations.

Steep Slopes

a. Physical development should avoid areas where the slope equals or exceeds 15 percent. Steep slopes (i.e., 15 percent or more) should be incorporated into the site's open space. Wooded slopes equal to or greater than 15 percent should not be disturbed.

b. Additional measures (as recommended by M-NCPPC in consultation with DEP) may be required where moderately or severely erodible soils exist.

SUGGESTED BEST MANAGEMENT PRACTICES

Best management practices (BMPs) shall be utilized, as outlined in the "Guidelines for Environmental Management in Montgomery County," to reduce sediment and pollutant loading in receiving streams.

IMPACT ASSESSMENT REQUIREMENTS

Performance Monitoring

Performance monitoring and reporting must be conducted by the developer or his agent to ensure that existing high water quality is maintained. The scope, location and timing of such monitoring and reporting is set forth in the proposed "Guidelines for Environmental Quality in Montgomery County."

Environmental Impact Analysis

In order for the Montgomery County Planning Department to evaluate a development proposal, applicants for development in the KI-2 and NE-1 analysis areas shall submit an environmental analysis of the natural features, the impact of the proposed development on water quality, and the proposed mitigation measures. The scope of the analysis is set forth in the environmental impact analysis requirements of the proposed "Guidelines for Environmental Quality in Montgomery County."

1 Variances from the Master Plan Standards, Best Management Practices, and Impact Assessment Requirements may be granted on a case-by-case basis by the Montgomery County Planning Board if it can be demonstrated that other measures, with innovative BMP's, would maintain the existing high water quality of Little Seneca Creek.

D-2: Proposed Amendment and Guidelines

This section sets forth a proposed amendment to the Montgomery County Subdivision Regulation and the establishment of "Guidelines for Environmental Management in Montgomery County."

SUBDIVISION REGULATIONS

The following paragraph is recommended by staff for inclusion in the Subdivision Regulations. Guidelines for achieving County-wide watershed objectives will be adopted by the Planning Board with specific reference in Section 50-32(e) of the Subdivision Regulations.

> *The Board may require environmental management measures that it finds necessary to protect the water quality of County streams in the context of the development density proposed or approved. Such measures may include the delineation and protection of slopes, stream buffers, and wetlands, as well as the utilization of best management practices. For areas designated in area or functional master plans as requiring special protection, or in other areas defined in the Guidelines as environmentally sensitive, additional measures such as environmental impact analysis, afforestation/reforestation,[2] and performance monitoring may be required. Where appropriate, enforcement shall be through binding agreement between the applicant and M-NCPPC ensuring implementation of all required measures. The Board shall publish "Guidelines for Environmental Management in Montgomery County" to provide guidance for the implementation of these measures.*

GUIDELINES FOR ENVIRONMENTAL MANAGEMENT IN MONTGOMERY COUNTY

The current staff slope and stream buffer guidelines will be expanded and retitled, "Guidelines for Environmental Management in Montgomery County."

The following guidelines are divided into two sections based on the following criteria of applicability: Section I shall be required for all preliminary subdivision and site plans. Section II would only be required when an environmentally sensitive or special protection area has been identified in:

1) A master plan, functional master plan, Comprehensive Ten-Year Water and Sewerage Plan, or watershed technical study;
2) Areas that are within Class III watersheds and/or subwatersheds;
3) Within the Little Seneca Creek Watershed; and
4) In proposed subdivision plans where field investigations have identified the presence or predominance of any of the following environmental features:
   - unique wetland, seeps, springs, bogs, recharge areas, or sole source aquifer.
   - tree coverage on more than 30% of the site and this environmentally sensitive area cannot be incorporated into open space.
   - steep areas with erodible soil, including an area with 20% of the land having greater than 25% slope, and an area with 30% of the land being greater than 15% slope.
   - where dwellings are proposed on fill or floodplain soil.
   - proposal associated with high degree of imperviousness (greater than 30%) that will result in further deterioration of the receiving waters, especially where state's anti-degradation policy may apply.
   - subdivision proposals greater than 100 acres in size and with 400 feet of Class III and Class IV streams.
   - commercial, industrial, and institutional development dealing with hazardous substances.

GUIDELINES FOR ALL AREAS

(Required for all subdivisions)

Performance Standards

The following standards shall be applied to all plans:

- *Streams, springs, and seeps shall be maintained in a natural condition whenever possible so that the hydraulic regimen and State water quality standards for receiving waters can be maintained.*
- *Deposition of any material such as excavated rock, topsoil, stumps and shrubs, and building material within the designated stream buffer on the preliminary/site plan is prohibited.*

2 Afforestation means the establishment of a tree cover on an area from which it has always or very long been absent, or the planting of open areas which are not presently in tree cover. Reforestation means the replanting of trees on recently forested land.

Best Management Practices

As required under, and to conform to, applicable County and State laws and regulations, the applicant shall identify best management practices (BMPs) to reduce sediment and pollutant loading in receiving streams. Additional BMPs may be recommended on a case-by-case basis. The BMPs shall be incorporated into the Stormwater Management Concept Plan required with the preliminary plan submission:

- *A State waterway permit from the Water Resources Administration must be obtained before any construction or alteration:*
  - *(a) in Class III streams;*
  - *(b) in Class IV streams with watersheds greater than 100 acres; or*
  - *(c) in Class I streams with watersheds greater than 400 acres.*

Any necessary permits from federal or state government (e.g., Section 401 or 404 permits) must be obtained before any disturbance of wetlands or waters.

- *To maximize the potential use and success of infiltration techniques, buildings, parking lots and other development should be located on soils with a low infiltration capacity, to the extent feasible. Pervious soils should be maintained as open space, conservation easements, parkland, or stormwater facility sites to the greatest extent consistent with other land use and zoning objectives. Parking lots should not be located within the stream buffer or 100 year ultimate floodplain.*
- *When a development site consists of both cropland and forestland, it is preferable to develop the area of cropland.*
- *Road and public utility stream crossings and stream buffer encroachments should be minimized. Where stream crossings and buffer encroachments must occur, they should be placed away from environmentally sensitive areas, and combined to minimize disruption in the stream valley. Clear bridge spans should be used to cross watercourses whenever possible, particularly in Class III and IV watersheds. Culverts may be permitted on a case-by-case basis if it can be demonstrated that the benefits would outweigh any negative impacts.*
- *Sewer mains and pumping stations should be sited and constructed in such a manner as to protect ground and surface waters. Sewer lines and pumping stations should be located as far as practical from streams while still maintaining needed elevations and gradients to provide reliable service.*
- *Wherever possible, natural drainage systems should be utilized instead of hydraulically efficient structural drainage. No modification of existing natural drainage should occur except for bank stabilization, swales, habitat improvement measures, and unavoidable infrastructure improvements (roads, sewer lines, stormwater management, etc.).*
- *To the extent feasible, natural drainage ways should be shaded in Class III and IV streams to prevent high temperature stormwater from being discharged into the receiving streams.*
- *Additional erosion control measures (as recommended by M-NCPPC staff in consultation with DEP) may be utilized where moderately or severely eroded soils exist.*
- *Use of porous materials is encouraged in large parking areas to limit impervious surface, particularly in areas of occasional use.*

GUIDELINES FOR SENSITIVE AREAS

(Required only under certain circumstances)

The items contained in this section would only be required when an environmentally sensitive or special protection area has been identified in a master plan, functional master plan, Comprehensive Ten-Year Water and Sewerage Plan, or watershed technical study; or

Any combination or all of the following items may be required depending on the specific property being evaluated.

Evironmental Impact Analysis

In order for the planning staff to evaluate a development proposal, applicants for development may be required to submit an environmental analysis of the natural features, the impact of the proposed development, and the proposed mitigation measures. Appropriate analyses and models should be utilized to assess impacts and efficiency of mitigation measures. Depending on the location and type of development, the applicant may be required to provide information including but not limited to any or all of the following items:

Analysis of Natural Features

a. *Topography:*
   - *natural terrain of the site; and*
   - *slopes that equal or exceed 15 percent.*

b. *Soils/Geology:*
   - *soil types including drainage characteristics, susceptibility to erosion, and areas of moderate and severe erodibility, including erodibility factor (K);*
     - *depth of seasonal high water table (for individual water and sewerage systems);*
     - *geologic conditions; and*
     - *areas suitable for infiltration.*

c. *Vegetation:*
   - *inventory of site vegetation emphasizing streamside vegetation; and*
   - *wetland areas, mature wooded areas, and areas demonstrating stress (erosion, poor soils, steep slopes, etc.).*

d. *Physical Habitat (Stream Environment):*
   - *presence or absence of perennial/intermittent streams;*
   - *stream characteristics:*
     - *location and base flow of receiving stream;*
     - *stream gradient;*
     - *substrata;*
     - *habitat suitability for trout, other game fish, and their supporting organisms;*
     - *biological conditions, including existing macroinvertebrate populations (i.e., species composition and abundance) and phytoplankton populations;*
     - *stream bank condition; and*
     - *areas of channel or streambed erosion.*

e. *Groundwater:*
   - *groundwater characteristics (e.g., depth, yield, and storage) for individual water systems;*
   - *location and characteristics of springs and recharge areas.*

f. *Hydraulics:*
   - *existing drainage area and drainage characteristics of the site;*
   - *existing and future channel velocities; and*
   - *ultimate 100-year floodplain as defined by M-NCPPC/FEMA 1"=200' maps plus 25' building restriction line.*

g. *Water Quality:*
   - *existing water quality data through baseline monitoring.*

Analysis of Proposed Development

a. *Size and Location of Development:*
   - *proximity of physical development to the stream channels;*
   - *proximity to headwaters for perennial/intermittent streams, springs and wetlands;*
   - *area of physical development (i.e., ground coverage including buildings, roads, parking areas, walks, and other transportation ways); and*
   - *estimate of impervious surface.*

b. *Proposed Stormwater Management Plan:*
   - *stormwater management concept plan including the types of conveyance and measures to augment groundwater recharge to maintain sufficient base flow of streams.*

c. *Proposed Sewerage and Water Systems:*
   - *proximity of water and sewer lines to the stream channels; and*
   - *location of pumping stations and force mains.*

d. *Proposed Site Maintenance Plan:*
   - *erosion and sediment control measures recommended for use during and after construction; and*
   - *proposed management plans for land application of substances (e.g., fertilizers, pesticides, etc.) and the deposition of residuals (e.g., refuse, vegetative debris, etc.).*

e. *Impact on Water Quality as Measured by the Following:*
   - *temperature;*
   - *dissolved oxygen concentration;*
   - *turbidity;*
   - *fecal coliform density;*
   - *biological oxygen demand;*
   - *nutrients (soluble and insoluble);*
   - *pH;*
   - *toxics (including heavy metals); and*
   - *total residual chlorine.*

In addition, the analysis should identify and describe proposed measures to mitigate or eliminate impacts of the above parameters due to the development.

Afforestation/Reforestation

- *At the direction of the Board, the applicant shall develop and implement an afforestation/reforestation plan for the stream buffer area, in cooperation with the M-NCPPC Environmental Planning Division, Montgomery County Department of Parks, and the Forestry, Park, and Wildlife Service of the Maryland Department of Natural Resources. The primary objectives of afforestation/reforestation are to provide shade and cooler water temperature, additional sediment and nutrient removal from stormwater runoff, and improved wildlife habitat. The emphasis shall be placed on locating larger caliper trees and dense shrubs within the buffer area closest to the stream. Other areas of the buffer shall be allowed to reforest naturally.*
- *Where development occurs on cropland, former croplands outside of the developed areas should be afforested. The type and extent of afforestation/reforestation would be reviewed on a case-by-case basis and during the preliminary/site plan stage.*

Performance Monitoring

Performance monitoring and reporting may be required of the applicant or his agent at the direction of the Planning Board to ensure that existing high water quality is maintained during and after development activity. The monitoring results shall be used to collect baseline data on existing water quality, to estimate the likely impact of development on water quality , and to assess actual impact on water quality during construction and at project completion. Monitoring data shall be reported to the M-NCPPC Environmental Planning Division. The scope, location and timing of monitoring

and reporting is provided below. The Board may at its discretion waive or add other requirements to the scope.

- *The applicant (or the M-NCPPC as an agent of the applicant with applicant funding) shall provide bi-monthly (i.e., every two months) grab samples with field measurements of flow, pH, turbidity, temperature, and dissolved oxygen; and laboratory analyses of major pollutant constituents as specified by prior agreement in the approval of preliminary/site plans. Quarterly reports shall be provided to the M-NCPPC Environmental Planning Division.*
- *For projects constructed in the Class III and IV watersheds, monitoring and reporting shall begin at the initiation of grading and continue for a period of 18 months after the development is completed.*
- *Monitoring and reporting will be conducted in a manner to provide needed data on best management practices. A minimum of three samples will be collected during each sampling session, including one at the upper reaches of the development site, one at the development site, and one at the lower reaches of the development site. At least eight of the bi-monthly samples must be collected during storm flow resulting from rainfall events of 0.75 inches or greater.*
- *The applicant may be required to conduct biological monitoring in combination with physical monitoring. Biological monitoring shall be conducted for aquatic invertebrates to determine the overall impact of development on the stream system (indicator organisms can provide information of the extremes of pollution experienced by a stream system). Bio-assay testing shall be conducted prior to grading, during construction and at completion of the development project. Scheduling of testing during construction shall be determined as part of the subdivision/site plan approval.*
- *The analysis shall be conducted at the applicant's expense and in coordination with the M-NCPPC. The applicant will be responsible for selecting a state certified analytical laboratory and for using standard field sample collection methods.*

Sediment and Erosion Control Best Management Practices

All disturbed areas should be revegetated as soon as possible as recommended by the Montgomery County Soil Conservation District. Emphasis should be placed on reforestation of disturbed areas.

Development Agreement

When required by the Planning Board, the applicant/owners of the property shall enter into a binding agreement with the M-NCPPC to ensure that the development is constructed in accordance with the appropriate standards and requirements contained herein and other County environmental standards, and the stormwater management facilities are properly constructed and maintained.

The monitoring, maintenance, and enforcement agreement is to be submitted for approval with the record plat submission. An executed copy is to be recorded with the first record plats. In addition, there is to be appropriate language included in the Homeowners Association documentation referencing the covenant and the obligations to be undertaken by the Homeowners Association. During construction, and for the first four years following of construction, the responsibility for compliance with the agreement will remain with the developer. Thereafter, the Homeowners Association shall assume responsibility.

As part of this agreement:

The applicant must:

- *provide bi-weekly certification to M-NCPPC (with copy to DEP) during construction from an independent professional engineer that the clearing, grading and stabilization of the site are proceeding in accordance with the Maryland Standards and Specifications for Soil Erosion and Sediment Control.*
- *establish and maintain a cash escrow fund to finance the inspection and maintenance of the stormwater management (SWM) facilities.*
- *initiate and pay for bi-annual inspection, maintenance, and certification to DEP, ensuring that the facilities remain in proper working condition in accordance with the approved design standards.*
- *ensure that the stormwater management facilities are constructed in accordance with State and County sediment control practices and with the performance criteria and standards listed herein.*
- *grant the necessary easements allowing the county access to the facility in order to inspect and/or repair the facilities and verify engineer's certification.*

The homeowners association must:

- *maintain the stormwater maintenance fund at a predetermined level by assessing homeowners a portion of the association dues; measures to protect the water quality from misapplication of fertilizer and pesticide, improper refuse collection, vegetative debris, and animal wastes should be considered and adopted into the operating policies or covenants of the homeowner's association.*

Both applicant and homeowners association must agree to:

- *conduct conveyance system cleaning as often as necessary so the catch basins and ditches perform according to design standards.*
- *maintain the facilities in accordance with the agreement.*

If not, the County may perform all necessary repair and maintenance work, and the County may assess the developer/homeowners association or the cash escrow fund for the costs of the work and any applicable penalties.

D-3: Proposed Stormwater & Sediment Control Amendments

RECOMMENDED CHANGES TO STORMWATER REGULATIONS

Recommendation #1: *Amend Section 1.8 to include the following definitions: (Definitions Apply to ALL WATERS)*

Stream Buffer*—An undisturbed strip of natural vegetation contiguous with and parallel to the bank of a perennial stream (base flow channel) which is intended to:*

- *Protect hydraulically adjacent slope areas;*
- *Maintain or improve the water temperature regimen/water quality of a stream;*
- *Protect wetlands;*
- *Complement regulations pertaining to the 100-year ultimate floodplain;*
- *Provide or maintain wildlife habitat, open space, or both;*
- *Complement on-site erosion/sediment control measures and stormwater management measures by serving as a backup natural filter/trap; and*
- *Provide for the esthetic enhancement of stream valley areas.*

Nontidal Wetland*—An area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation.*

Recommendation #2: *Amend Section 2.A.1.b to add a sentence at the end of the first paragraph (ending with the word "Manual") to read:*

The Director may require applicants to submit soil boring information sufficient to demonstrate thorough analysis of the feasibility of stormwater management infiltration practices.

Recommendation #3: *Amend Section 2.A.1. to add a new Subsection 2.A.1.c as follows:*

c. Protection of Stream Buffer Areas

(1) Applicants are required to delineate stream buffer areas on stormwater management (SM) Concept Plans and related SM structural design documents submitted to DEP. (ALL WATERS)

(a) For those properties that go through M-NCPPC subdivision review and/or site plan review, the delineated stream buffer area shall be that approved by the Montgomery County Planning Board as part of subdivision or site plan approval.

(b) For lots recorded prior to April 1983, applicants must delineate stream buffer areas on the SM Concept Plan. Applicant proposed stream buffer delineations must be based on and consistent with the County's adopted "Guidelines for the Protection of Stream Buffer Areas." The Director may, after opportunity for comment from the M-NCPPC, waive this requirement in cases where its imposition would eliminate opportunities for development of previously approved and recorded lots or when other circumstances warrant.[3]

(2) The SM Concept Plan submission shall include information necessary to document compliance with the County's "Guidelines." (ALL WATERS)

(3) Grading and construction work involving permanent disturbances to stream buffer vegetation is prohibited in stream buffers delineated pursuant to Section 2.A.1.c.(1).(b). Construction of roads, bridges, drainage and stormwater management facilities, sewer lines, other utilities, trails, bike paths, etc. is exempt from this restriction. The Director may also waive this restriction if unusual circumstances warrant and stream protection objectives will not be jeopardized. (ALL WATERS)

(4) Reforestration, through natural succession, is required within stream buffers delineated pursuant to Section 2.A.1.c.(1).(b). As considerations of water quality, steep slopes, or other environmental conditions warrant, the Director may require additional plantings to accelerate reforestation within sensitive portions of the buffer area. Reforestation needs on M-NCPPC managed parkland will be determined by the Montgomery County Department of Parks. On other public lands, reforestation requirements for stream buffers, delineated in accordance with Section 2.A.1.c.(1).(b), will be determined by DEP upon consultation with the cognizant public agency.

(5) DEP may require the applicant to install preventative and/or remedial stream channel protection measures, such as gabions and other stream bank stabilization techniques, upstream and downstream of stormwater manage-

3 Criteria defining conditions for the granting of waivers to stream buffer requirements will be developed by DEP in consultation with M-NCPPC staff.

ment facilities. DEP will coordinate, with the Department of Parks, the review of stream channel protection measures proposed for location on or adjacent to M-NCPPC managed park property. For facilities proposed for location on M-NCPPC managed park property, the Department of Parks will review and approve SM facilities before final approval by DEP. (ALL WATERS)

(6) Stream buffer requirements in the adopted "Stream Buffer Guidelines" apply to all streams which either produce a perennial flow, have greater than 30-acre drainage areas, or are designated on the latest operative version of the 1": 200' scale topographic maps prepared by the M-NCPPC. In cases where more than one of these conditions exist, the most restrictive condition applies. (ALL WATERS)

Recommendation #4: *Amend Section 2.A.1 to add a new Subsection 2.A.1.d. as follows:*

d. Protection of Natural Springs and Seeps

(1) Stormwater Management (SM) Concept Plans shall identify all natural surface springs and seeps on the development site. Surface springs and seeps will not be piped unless extraordinary circumstances warrant the granting of a waiver of this requirement by the Director. DEP will inform applicants and closely coordinate with the M-NCPPC in instances where pending decisions on waivers could affect an applicant's ability to meet applicable conditions of subdivision as approved by the Planning Board. (ALL WATERS)

(2) Wherever feasible, surface springs and seeps should be diverted around SM structures and designs incorporated into SM Concept Plans that prevent temperature elevation of natural spring and seep discharges. (ALL WATERS)

e. Control of Runoff Velocities

Drainage systems shall be designed to reduce runoff velocities at outlets to non-erosive rates down to 4 feet/ second or less as conditions warrant. Drainage systems may include: dutch drains; drainage swales with check dams; stone-filled ditches; use of log check dams in small streams; and parallel pipes. (ALL WATERS)

f. Protection of Habitat Access for Aquatic Life

Construction of SM structures in wetlands and/or construction of in-stream SM structures which may prevent or impede natural movement of aquatic life will be done in conformance with State and Federal statutes and regulations. (ALL WATERS)

g. Coordination of SM Facilities Impacting Public Park Lanes

DEP will coordinate, with the Department of Parks, the review of SM facilities proposed for location on or adjacent to M-NCPPC-managed park property. For SM facilities which have discharge outfalls on or within 50' of tributary drainage to M-NCPPC-managed park property, Department of Parks approval of the discharge outfall is required prior to final approval by DEP. For SM facilities proposed for location on M-NCPPC-managed park property, the Department of Parks will review and approval SM facilities before final approval by DEP. (ALL WATERS)

Recommendation #5: *Amend Section 4.B.2 to revise coverage of fee structure for water quality waivers. Revisions would be based upon the following concept: (ALL WATERS)*

- *Revise regulations affecting water quality waivers to include fees covering all residential land use densities equal to or greater than 1.0 dwelling units/2.0 acres. (ALL WATERS)*
- *DEP will develop a new table for assessing waiver fees based upon zoning, related typical imperviousness, estimated runoff, and/or estimated pollutant loading (in lbs./acre/year).*

Recommendation #6: *Move Sections 5.B and 5.C to become new Sections 5.D and 5.E respectively. Create a new Section 5.B as follows:*

B. County Stormwater Management Objectives by Water Use Class

1. General Water Use Protection Objectives

County water quality control requirements are designed to support water use classifications designated in State Water Quality Standards and the nutrient reduction goals of the 1987 Chesapeake Bay Agreement. This is accomplished through: (a) policies set forth in the Comprehensive Ten-Year Water Supply and Sewerage Systems Plan; (b) County approved and adopted master plans, functional master plans, and watershed studies; (c) stream valley park acquisition; (d) careful siting of development through application of zoning powers and subdivision regulations; and (e) implementation of County Stormwater Management and Sediment Control regulations. Maryland also exercises regulatory and programmatic responsibilities in some of these areas. (ALL WATERS)

2. Class I Streams

Class I streams are protected to support general aquatic life, recreational opportunities, and agricultural, industrial and public water supply. County SM requirements seek to control peak runoff flows while removing nutrients, sediments, and other pollutants to the extent practicable. Infiltration measures, flow attenuation using swales and natural depressions, and "wet" ponds are the preferred order of SM controls. Where such measures are infeasible or impractical and wetlands protection considerations outweigh the benefits of wet ponds, "dry" SM ponds are generally acceptable. (CLASS I)

2a. Class I Watersheds Draining Public Water Supply Reservoirs

In watersheds which drain both to Class I streams and to public water supply (PWS) reservoirs, the primary concerns are the control of excessive sediment and nutrient

discharges. Sedimentation reduces reservoir storage capacity. Excess nutrients accelerate reservoir eutrophication, increase drinking water treatment costs, and reduce sport fishery potential and general recreational appeal. Preferred solutions are infiltration practices, capable of maintaining high levels of sediment and nutrient removal over a long term, and wet ponds. (CLASS I Waters That Are Also Tributary to PWS Reservoirs)

3. *Class III and Class IV Trout Waters*

Watersheds draining Class III and Class IV streams, require special SM approaches. In Class III streams, maintenance of high dissolved oxygen levels and cool temperatures is critical throughout the spring and summer seasons due to the permanent and reproducing nature of the trout fishery. Emphasis is on maximum use of on-site infiltration controls to remove pollutants and moderate temperatures before runoff is returned, as groundwater inflow, to streams. Other cooling techniques include reducing site impervious area and increasing shade area. (CLASS III)

Wet and dry ponds may not be located to discharge to Class III waters except as authorized by the Water Resources Administration of the Maryland Department of Natural Resources (DNR). The Director may further restrict the use of DNR-approved wet ponds unless the applicant can demonstrate that discharges will not adversely affect stream temperatures, significantly disturb wetlands, or impede fish migration and spawning. (CLASS III)

In Class IV streams, dissolved oxygen and temperature concerns are limited primarily to early spring when trout are annually restocked to support recreational fishing. SM control methods are similar to those used to protect Class III streams. Infiltration remains the preferred SM method. However, wet ponds or other control measures are not generally discouraged if designs and shading techniques provide a necessary level of temperature moderation. (CLASS IV)

The issuance of stormwater management waivers for areas tributary to Class III watersheds is strictly limited and, for Class IV watersheds, discouraged. (CLASS III AND IV)

3a. *Watersheds Having Class III or Class IV Designations Which Drain to Public Water Supply Reservoirs*

Where a Class III or Class IV watershed drains to both a trout stream and a PWS reservoir, the trout stream classification is applied in developing a SM Concept Plan. Infiltration is the preferred management method for temperature moderation and reduction of sediment and nutrient inputs. If acceptable to the state regulatory agencies, the Director may agree to the applicant's use of other alternate innovative SM controls (e.g., wet ponds with special discharge controls to moderate temperature). (CLASS III and IV Waters Which Are Also Tributary to PWS Reservoirs)

Recommendation #7: *Create a new Section 5.c. as follows:*

C. *Requirements and Criteria for Areas Tributary to Class III and Class IV Waters and to Public Water Supply (PWS) Reservoirs*

(NOTE: A table would be used here that includes the specific requirements listed below and identifies the applicable water use class as noted here at the end of each proposed requirement here in the margin: III, IV, and PWS.)

1. *The Stormwater Management (SM) Concept plan shall indicate the selection of infiltration or other appropriate SM measures leading to drainage conveyance systems. These measures shall be designed to infiltrate the "first flush" of runoff (initial 1/2" runoff) to capture and remove pollutants dissolved or suspended in runoff to the extent feasible. SM measures such a infiltration trenches, vegetated swales with check dams, vegetated filter strips, and oil and grit separators are acceptable to DEP. Infiltration measures acceptable to DEP are identified in Maryland's Standards and Specifications. (All CLASS III Waters Plus CLASS IV Waters in Little Seneca Watershed)*

2. *Wet or dry ponds cannot be located to discharge to Class III Waters unless specifically authorized by MD DNR. Temperature and dissolved oxygen content from proposed pond discharges may not cause violations to stream receiving water standards specified in Maryland Water Quality Standards. For DNR-approved wet ponds discharging to Class III waters and for all wet ponds discharging to Class IV Waters, the Director may further regulate the placement, design, and maximum drainage areas served as follows:*

   a. *SM Concept Plans shall place emphasis on maximum use of on-site control options. (CLASS III)*

   b. *Drainage areas serving wet ponds shall not exceed 250 acres. (CLASS III and IV)*

3. *If wet ponds are proposed in the SM Concept Plan, they shall be designed, where feasible, to facilitate shading by tree canopy to help lower pond and discharge temperatures as needed to maintain downstream receiving water standards. DEP may also require mature tree preservation and/or reforestation with specified species, sizes, and densities. (CLASS III and IV)*

4. *Because of the high levels of nutrient and sediment control provided, the use of wet ponds and SM infiltration measures is encouraged in watersheds that drain to public water supply reservoirs and that are not also designated as Class III streams. (CLASS I and IV WATERS Tributary to PWS Reservoirs)*

5. *Extended detention times for SM impoundments without a permanent pool (e.g., "dry ponds") must not exceed 24 hours. (CLASS III and CLASS IV Waters in the Little Seneca Watershed)*

6. *When dry pond structures are proposed for construction in open wetlands or in open stream valleys with*

perennial base flows, special additional measures may be required to ensure the integrity of the natural ecosystem. These measures may include:

a. leaving the existing land contours, natural vegetation, and base flow channels undisturbed wherever feasible;

b. limiting land disturbance areas to construction of the embankment and release structures only; and

c. shading of the base flow channel with special plantings. (CLASS III and IV)

7. The installation of any in-stream structures that will prevent or inhibit the natural movement of aquatic life is prohibited, unless it can be demonstrated that the benefits of such in-stream structures would significantly outweight any negative impacts.

(Applies to all CLASS III and CLASS IV Waters in the Little Seneca Watershed. On a case-by-case basis, the Director may also apply this requirement to other Class I or Class IV waters where severe impediments to unique spawning or aquatic life migration needs may result.)

8. Fines for violation of SM requirements in Class III or Class IV waters or in areas with drainage to public water supply reservoirs are double the fines for first time violations of these regulations. (CLASS III and IV Waters; ALL WATERS Tributary to PWS Reservoirs)

(NOTE: The County lacks authority, under the current County Code, to enforce this. A Code amendment would be needed.)

9. Use of maximum landscaping is encouraged, to the extent feasible, to reduce runoff and increase shading of impervious areas. For residential subdivisions having lot sizes of two (2) acres or greater, use of open section roads is also required. (All CLASS III Waters Plus CLASS IV Waters in Little Seneca Watershed)

10. Off-site SM structures must be dry ponds that include additional design features and/or facilities which protect or provide natural or man-made wetlands, shallow ponded areas, marsh, etc. (CLASS III)

11. When preferred SM practices are provided infeasible or impractical, DEP may require the applicant to install oil and grit separators as part of public storm drainage systems. If DEP requires this, the applicant will be required to sign a maintenance agreement which assigns all long-term maintenance responsibilities to an appropriate organization having a direct interest in the affected property. (CLASS III and IV Waters; ALL WATERS Tributary to PWS Reservoirs)

RECOMMENDED CHANGES TO SEDIMENT CONTROL REGULATIONS

(NOTE: Amendments in these areas are under consideration. However, suggested phrasing of regulatory language has not yet been developed.)

1. Require that stream buffer areas, designated on Stormwater Management (SM) Concept Plans be also designated on sediment control (SC) plans submitted to DEP (ALL WATERS)

a. For those properties that go through M-NCPPC subdivision review and/or site plan review, the designated stream buffer area shall be that officially adopted by the Montgomery County Planning Board as part of subdivision or site plan approval.

b. For lots recorded prior to April, 1983, applicants must identify, on the sediment control plan, proposed stream buffer areas. Applicant proposed stream buffer delineations must be based upon and consistent with the County's adopted "Guidelines for the Protection of Stream Buffer Areas." The Director may, after opportunity for comment from the M-NCPPC, waive this requirement in cases where its imposition would eliminate opportunities for development of previously approved and recorded lots or when other circumstances warrant.[4]

2. Temporary sediment control in stream buffer areas is discouraged. However, temporary SC controls may be acceptable to DEP when applicants clearly demonstrate that use of the buffer area represents the best method of sediment control and that reforestation provisions will be implemented. (ALL WATERS)

3. Indicate that DEP is responsible for enforcing the stream buffer areas as designated on the applicant's sediment control plan and SM Concept Plan. (ALL WATERS)

4. Increase trapping storage volume requirements to 3600 cu. ft./acre (1800 cu. ft./acre to be temporarily stored for 24 hours; 1800 cu. ft./acre to be permanently stored in pipe outlet traps, sediment basins, and rip-rap outlet traps with dewatering devices). (ALL WATERS)

5. Explore possible avenues for tripling of fines for violations in drainage to special waters. There would appear to be good environmental justification for this in Class III waters and economic justification as well in drainage up-

4 Criteria defining conditions for the granting of waivers to stream buffer requirements will be developed by DEP in consultation with M-NCPPC staff.

stream of water supply reservoirs and County off-site SM facilities. (CLASS III and IV Waters; All WATERS Tributary to PWS Reservoirs)

(NOTE: County lacks authority, under the current County Code, to enforce this. A Code amendment would be needed.)

6. Add the below regulations to implement the recommendations previously stated in this Appendix concerning sediment control that are not already addressed in existing sediment control regulations, in draft floodplain and SM regulations (regarding stream buffer protection), or in M-NCPPC draft tree preservation legislation and regulations.

a. Clearing and grading shall be planned and phased to expose the minimum practicable land areas at any one time during development. (ALL WATERS)

b. Avoid unnecessary clearing. (ALL WATERS)

c. Require that topsoil temporarily removed from a construction site be stored and redistributed in accordance with practices approved by the Montgomery Soil Conservation District. (CLASS III and IV Waters; ALL WATERS Tributary to PSW Reservoirs)

7. Require special plantings on graded slopes in excess of 25%. Require use of graded slope benches for every 15 feet in elevation change. Review grading plans to limit concentrated flows and provide sheet flow drainage. (ALL WATERS)

8. Prohibit, except for road embankments, constructed slopes in excess of 3:1 located in or immediately adjacent to stream buffer areas (CLASS III and IV Waters; ALL WATERS Tributary to PWS Reservoirs)

9. Indicate that DEP will coordinate, with the Montgomery County Department of Parks, the review of sediment control devices proposed for location on or having drainage immediately adjacent to M-NCPPC managed parkland. The Department of Parks will review and approve SC devices proposed for location on M-NCPPC managed park property before final approval by DEP. (ALL WATERS)

Appendix E

Summary of Environmental Regulation and Guidelines for Development Proposals

Development proposals are carefully evaluated before approval to ensure that they:

(1) minimize potential noise impacts;

(2) avoid floodplain impacts;

(3) protect and improve the quality of stream systems;

(4) conform to state and federal requirements in wetland areas;

(5) minimize erosion and sedimentation in receiving water bodies during construction;

(6) provide for proper management of stormwater to minimize long-term erosion of land surfaces and stream channels and promote water quality; and

(7) provide wildlife habitat and/or vegetated open space along stream valleys.

M-NCPPC STAFF GUIDELINES FOR TRANSPORTATION-RELATED NOISE

These guidelines present several approaches to minimize noise impacts from roadways and railways adjacent to proposed residential developments. The preferred approach uses site design to set back or buffer residential structures from noise impacts. When this is not feasible, earthen berms are recommended to act as physical barriers. Berms are preferred over acoustic walls and fences as physical barriers because they reduce noise more effectively, require less maintenance, and are more attractive. However, site constraints sometimes dictate the use of acoustic fences and walls. When the combined effect of the preceding approaches fails to meet appropriate standards, architectural techniques to minimize interior noise levels are specified. Each site requires careful analysis to identify the best approach; developers should consult with staff for assistance in meeting these guidelines.

FLOODPLAIN CONTROLS

Floodplain controls include: (a) Subdivision Regulations, Floodplains and Unsafe Land, MCC Section 50-32, and (b) *The Functional Master Plan for Conservation and Management in the Seneca Creek and Muddy Branch Basin*, M-NCPPC, October 1977.

Montgomery County Subdivision Regulations prohibit issuance of building permits within 25 feet of the 100-year floodplain. This floodplain is defined as the area inundated by stormwater runoff equivalent to that which would occur on the average of once in every hundred years after total development of the watershed. Maps of the 100-year floodplain are available for the areas shown in Figure B; floodplains not already mapped must be computed as part of any application for development in accordance with the "Staff Guidelines for the Delineation of One-Hundred Year Floodplains and Dam Break Analysis" (January 1988).

The Maryland Water Resources Administration regulates changes in the course, current, or cross-section of state waters through a permit program. In the Germantown Planning Area, streams are categorized by the state as either Class I (usable for water contact recreation and aquatic life) or Class IV (usable as recreational trout waters), as shown in Figure A. State waters include all Class I streams with drainage areas of 400 acres or more and all Class IV streams with drainage areas of 100 acres or more. Any development involving filling or modifications to the floodplains of state waters must receive a permit before proceeding.

The *Adopted and Approved Watershed Plan for Seneca Creek* provided the technical basis for the controls incorporated in the Subdivision Regulations Section 50-32, as well as clearly defining County floodplain policies discouraging the modification of these important public resources.

M-NCPPC STAFF "GUIDELINES FOR THE PROTECTION OF SLOPES AND STREAM VALLEYS" TO BE RENAMED "GUIDELINES FOR ENVIRONMENTAL MANAGEMENT IN MONTGOMERY COUNTY"

The guidelines provide specific strategies to meet watershed management objectives. They: (a) require undisturbed stream buffers along perennial streams; (b) strongly discourage any clearing or grading of slopes in excess of 25 percent; (c) specify that all development must strictly adhere to state erosion and sediment control requirements (see below); (d) underscore the state's prohibition against septic fields on slopes greater than 25 percent; (e) underscore the County's prohibition against structures within 25 feet of the 100-year floodplain; and (f) prohibit septic fields within 100 feet of perennial streams.

The guidelines specify wider buffers where streams are more environmentally sensitive or adjacent slopes are steeper. Recommended minimum stream buffers vary from 50 feet to 150 feet from each stream bank in Class I streams, and 75 feet to 175 feet in Class IV streams. Exact boundaries of stream buffers are determined during plan review, based on field inspections. Buffers are not to be cleared or graded and no structures may be located in these areas. Retention of recommended buffers is ensured through one or more of the following methods: preliminary or site plan conditions, dedication as parkland, inclusion in homeowners' open space or application of a conservation easement.

WETLAND REGULATION BY THE US ARMY CORPS OF ENGINEERS (COE) AND THE MARYLAND OFFICE OF ENVIRONMENTAL PROGRAMS

Section 404 of the Clean Water Act requires a COE permit to alter or fill waters of the U.S., including tidal and non-tidal wetlands. In conjunction with this permit, the Maryland Office of Environmental Programs issues Section 401 water quality certifications, to ensure that the project will not cause a violation of the state's water quality standards. Both approvals are necessary for fill activities such as road and bridge construction, culvert placement and filling for development if these activities occur in tidal or nontidal wetlands and waters. The nontidal wetland areas covered by this law include marshes, bogs, swamps, springs, intermittent streams, perennial streams, rivers, lakes, and adjacent wetlands.

STORMWATER MANAGEMENT REGULATIONS, EXECUTIVE REGULATION 93-84A

These regulations, based on state law and administered by the County Department of Environmental Protection, require stormwater management as an integral part of the development process. Stormwater management must accomplish two objectives: controlling the erosive force of stormwater runoff and reducing the level of pollutants contained in these discharges. On-site management of stormwater can sometimes be waived in exchange for a contribution to help meet County stormwater management costs or on proof of participation in a regional facility downstream. In developing a stormwater concept plan, control practices are to be considered in the following order: infiltration of runoff, flow attenuation using vegetated swales and natural depressions, retention facilities (wet ponds) and detention facilities (dry ponds). However, in the portion of Little Seneca Creek below Little Seneca Lake, wet ponds are discouraged in order to minimize the elevation of water temperatures unless they can be designed to maintain or reduce water temperatures to that of the receiving stream. Due to special concern for maintaining water quality through nutrient control in the watersheds of Little Seneca and Churchill Lakes, projects involving significant areas of paving may be required to incorporate best management practices such as oil and grit separators in excess of the minimum regulatory requirements. Guidance on preparing stormwater management concepts should be sought early in the development process through staff from both the Montgomery County Department of Environmental Protection and the M-NCPPC.

SEDIMENT AND EROSION CONTROL REGULATIONS, THE NATURAL RESOURCES ARTICLE, COMAR SECTIONS 8-1101 AND 8-203

These regulations administered by the County Department of Environmental Protection, require approval of an erosion and sediment control plan prior to any land clearing, grading or other earth disturbance, with exceptions for small projects, agricultural activities, single-family residences on lots larger than two acres, utilities, and certain federal and state projects. In the Germantown Planning Area, special attention is paid to minimizing impacts to Little Seneca and Churchill Lakes. This can sometimes require sediment control measures in excess of the minimum required by regulations. Guidance in preparing plans is contained in "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas," as well as from staff from both the Montgomery County Department of Environmental Protection and the M-NCPPC.

Appendix F

Using Models for the Transportation Analysis[5]

The interactions between transportation and land use reflect the behavior patterns of people. These interactions and behavior patterns have been observed for many decades throughout the United States and in many other countries. When looked at broadly and quantitatively in a metropolitan area, the collective patterns of people's interaction are repetitive and are, therefore, generally predictable. This general predictability can be used to develop analysis models that can be applied to predict future travel behavior in a Master Plan area such as Germantown.

Since the 1950s and 1960s regional planning agencies have been devising computerized transportation models of daily traffic for their regions. Computers have been needed to manage the large amount of data and calculations related to the forecasting of traffic. These forecasts are usually based on detailed estimates of the locational pattern of future households and jobs and assumed future transportation networks and services. The level of mathematics used in the modeling is generally quite basic, usually simple algebraic statements understandable to most people with high school and college educations. The large amounts of data being handled in the calculations, the many steps involved in linking parts of the models, and the use of jargon have often given the impression that these models are exceedingly complex. While the models may be thought of as complex in that they are constructed of many parts, with the investment of some time and effort they should be easily understandable by most Montgomery County residents. This Appendix has been written with that in mind.

An Overview of How Transportation Models Work

Figure F-1 presents the analysis context in which the transportation modeling system is being used in the Germantown Master Plan analysis. This figure represents several components of the process that is used in planning analyses. The relationship among these component parts would be the same irrespective of whether a computerized model or hand calculations are being used in the second box. Figure F-1 identifies six basic components:

Inputs. This includes data, assumptions and alternatives being analyzed.

Analytical Model. This is described in a subsequent section.

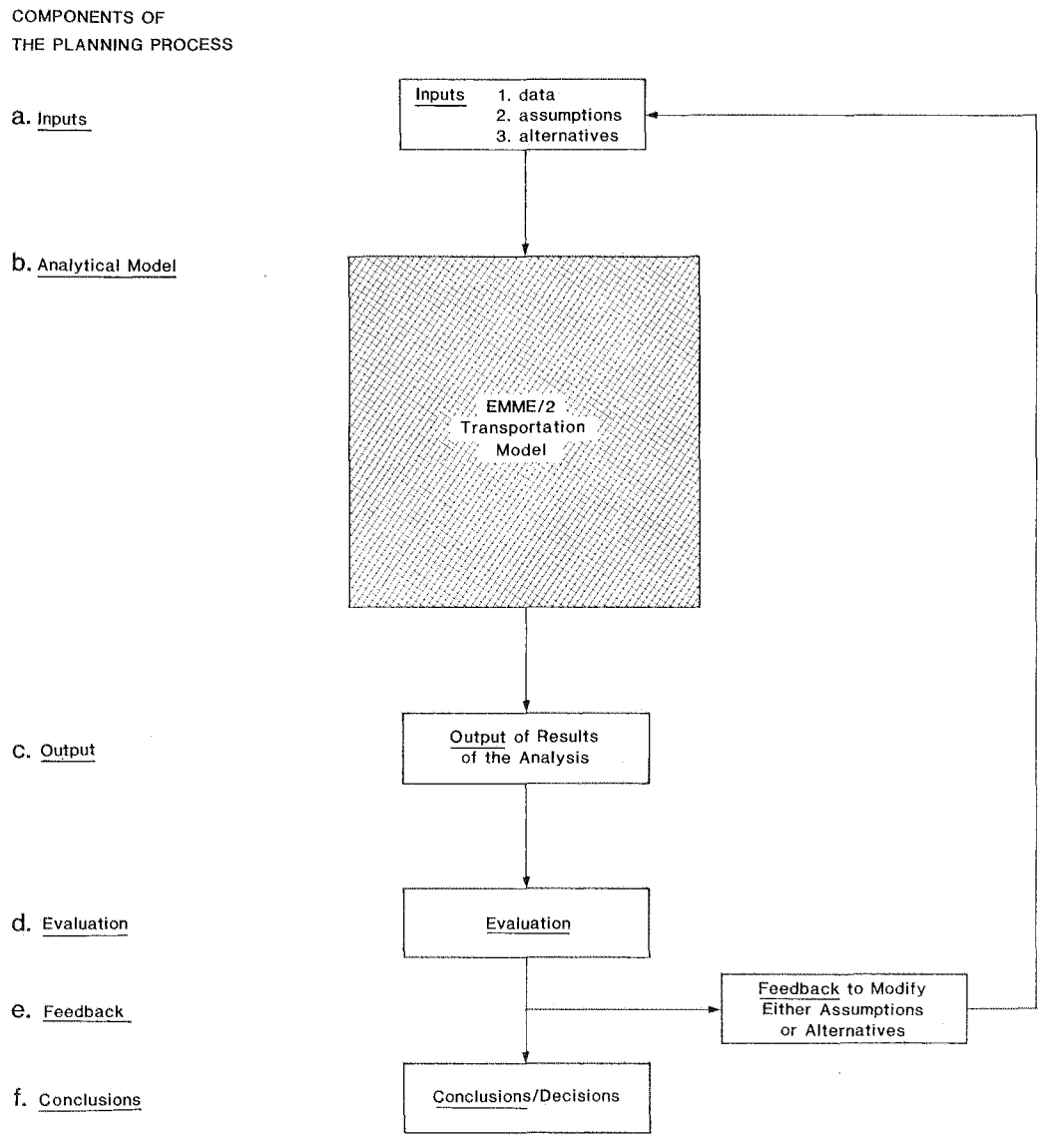
Outputs. Various tabular and graphical summaries of the results of the model analysis.

Evaluation. Interpretation of the results by comparing them to some previously defined expectation.

Feedback. This is used when the expectation of the previous component has not been met and a modification is made either to the assumptions or alternatives and the first four components of the process are repeated.

5 This appendix is an adaptation of the chapter describing the transportation model used in the Annual Growth Policy process, which was presented in the Planning Board's report: *Alternative Transportation Scenarios and Staging Ceilings*, December, 1987.

Figure F-1



Analysis Context in Using Transportation Model

Conclusion/Decisions. At some point in the process, conclusions and decisions need to be reached based upon the results and evaluation of the analysis outputs.

The General Structure of Transportation Models

Transportation models are generally structured to analyze the flow of trips of people and/or vehicles over highways and/or transit networks throughout a specified geographic area. The geographic area is usually divided into many small sub-areas, termed transportation zones. The networks are usually identified by (a) points of intersection on the network, termed "nodes," and (b) segments of the networks between the nodes, termed "links." These terms are schematically illustrated in Figure F-2. This structure of transportation models, of zones and networks, results in two basic sets of data, assumptions, and alternatives as input components of the modeling process. Some specific examples related to the model are given next.

Zone Data. The primary model data relating to zones is the number of households and the amount of employment, divided into four types (office, retail, industrial, and other). This primary zone data is supplemented by other data or assumptions, such as parking cost, access and egress times, or land area.

The model systems used by the M-NCPPC since the 1970's have been based on a 351-transportation-zone system describing the Washington metropolitan region. This consists of (1) 15 external stations, (2) 246 zones within Montgomery County, and (3) 90 large zones encompassing the remainder of the region. Figure F-3 shows the 246 zones within Montgomery County. The 90 zone regional geographic system is an aggregation of the approximately 1,200-zone system used by COG for the entire region.

The zone system has been broken into small subzones in order to be applied to the Germantown Master Plan analysis. The 9 zones within the Germantown area used in the County-wide zone system have been broken up into 41 smaller sub-zones, as shown in Figure F-4. In order to better model traffic in the Germantown area, zones in the adjoining Gaithersburg and Clarksburg areas were also divided up into smaller zones.

Network Data. The highway network database contains more than 8,000 one-way links describing the region's transportation system. Each link has numerous attributes coded to it describing, for example, its capacity, speed, length, and location. Roughly half of these links are within Montgomery County, where the network provides a moderate level of detail including all major and many secondary roads. As applied to the Germantown Master Plan analysis, additional detail has been coded into the highway network for the Germantown area as well as the adjoining areas in Gaithersburg and Clarksburg. The more detailed network for Germantown is shown in Figure F-5 and generally corresponds to each of the existing and proposed elements of the Master Plan roadway system described earlier in this report and in Appendix I.

In work still to be completed, the transit network will be coded "on top of" the highway network links. Transit speeds have, in most cases, been determined as a function of simulated automobile travel times on links and a unit of stop delay per mile of link distance. Rail lines are coded on their own right-of-way. Speed and delay factors are calibrated to observed transit schedules. About 350 to 400 transit lines, including some lines that are composites of several routes, have been coded for different years, including 1980, 1985, 1987, and 1993. Significant work is still needed to refine this network coding before a full transit model will be available for analysis. However, the current model system provides sufficient information to support a transit-sensitive AM peak hour highway model. In the interim, until the work on the transit model is ready, default mode shares are being used in the Germantown Master Plan analysis, as discussed in more detail below.

Specific Techniques Used Within the Transportation Model

Like most conventional regional transportation planning modeling systems, the model used in the Germantown analysis uses a four-step modeling procedure. These four-step procedures are common to most transportation planning analysis, whether it is done by computer or by hand calculations. The analysis techniques followed in these four steps are generally termed: (1) trip generation; (2) trip distribution; (3) modal choice; and (4) trip assignment. These steps are generally carried out in a sequential interrelated manner. However, there are many different techniques that can be used in each of these four steps. As such, a particular transportation model is composed of a specific set or combination of techniques that distinguish it from another model. Irrespective of which particular technique is used in a particular modeling step, each of the four steps is intended to answer one of the following basic questions, respectively:

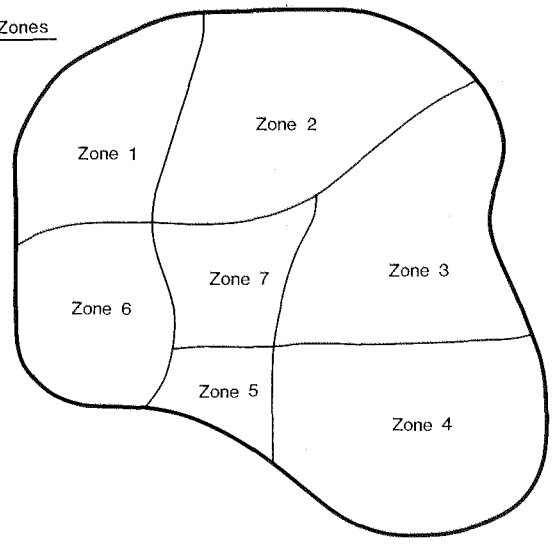
Trip generation. How many trips are there beginning and ending in each zone?

Trip distribution. What is the pattern, or distribution of trips, beginning in a zone and ending in each of the other zones?

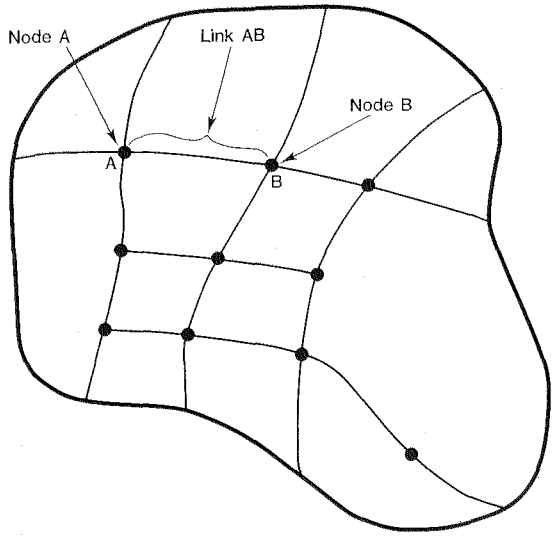
Modal choice. What proportion of the persons going between any zone pair will choose among the available modes of transportation? How many occupants will each vehicle trip have?

Figure F-2

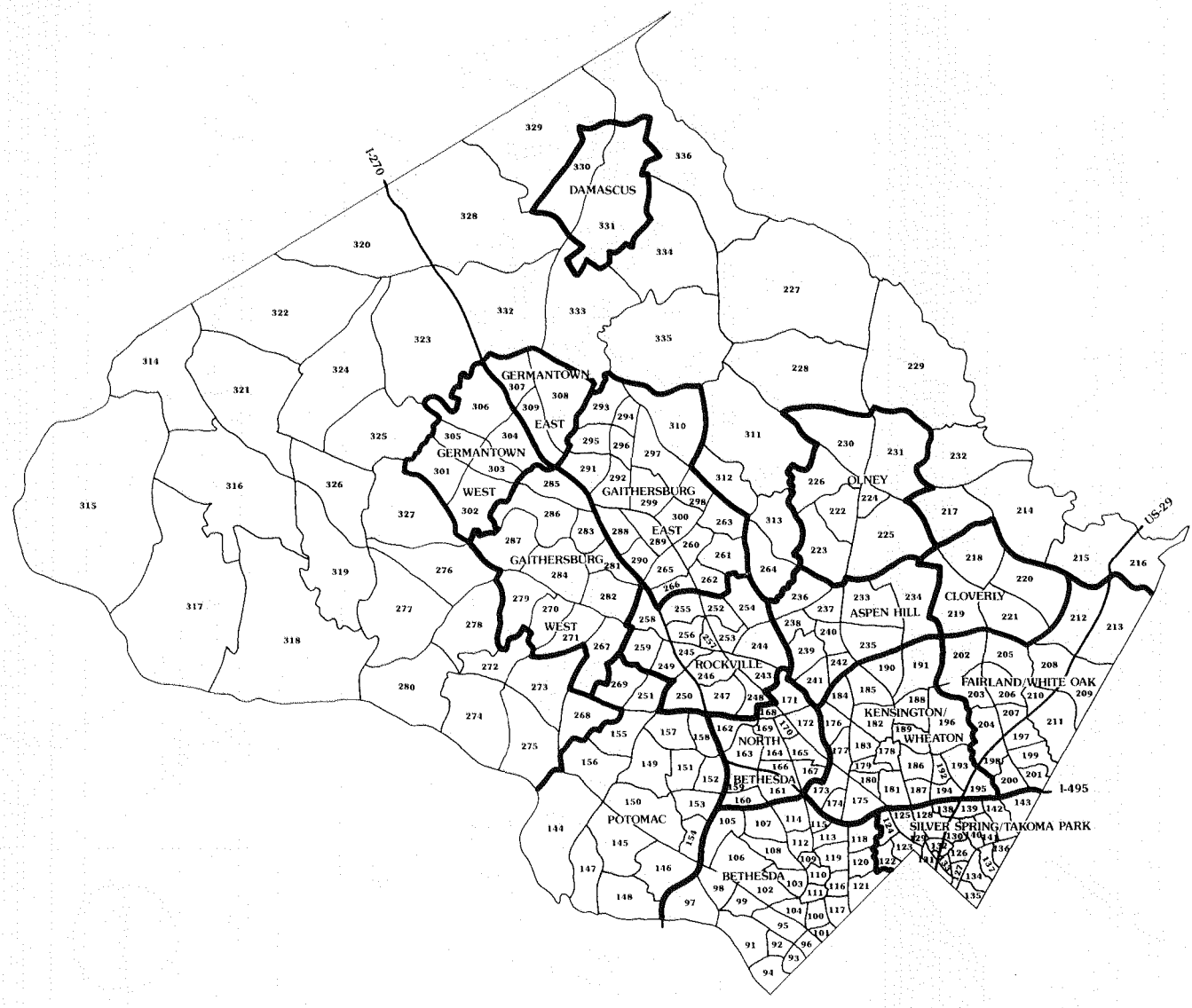
A:Transportation Zones



B:Transportation Network



Schematic Structure of Transportation Model



Policy Areas and Traffic Zones

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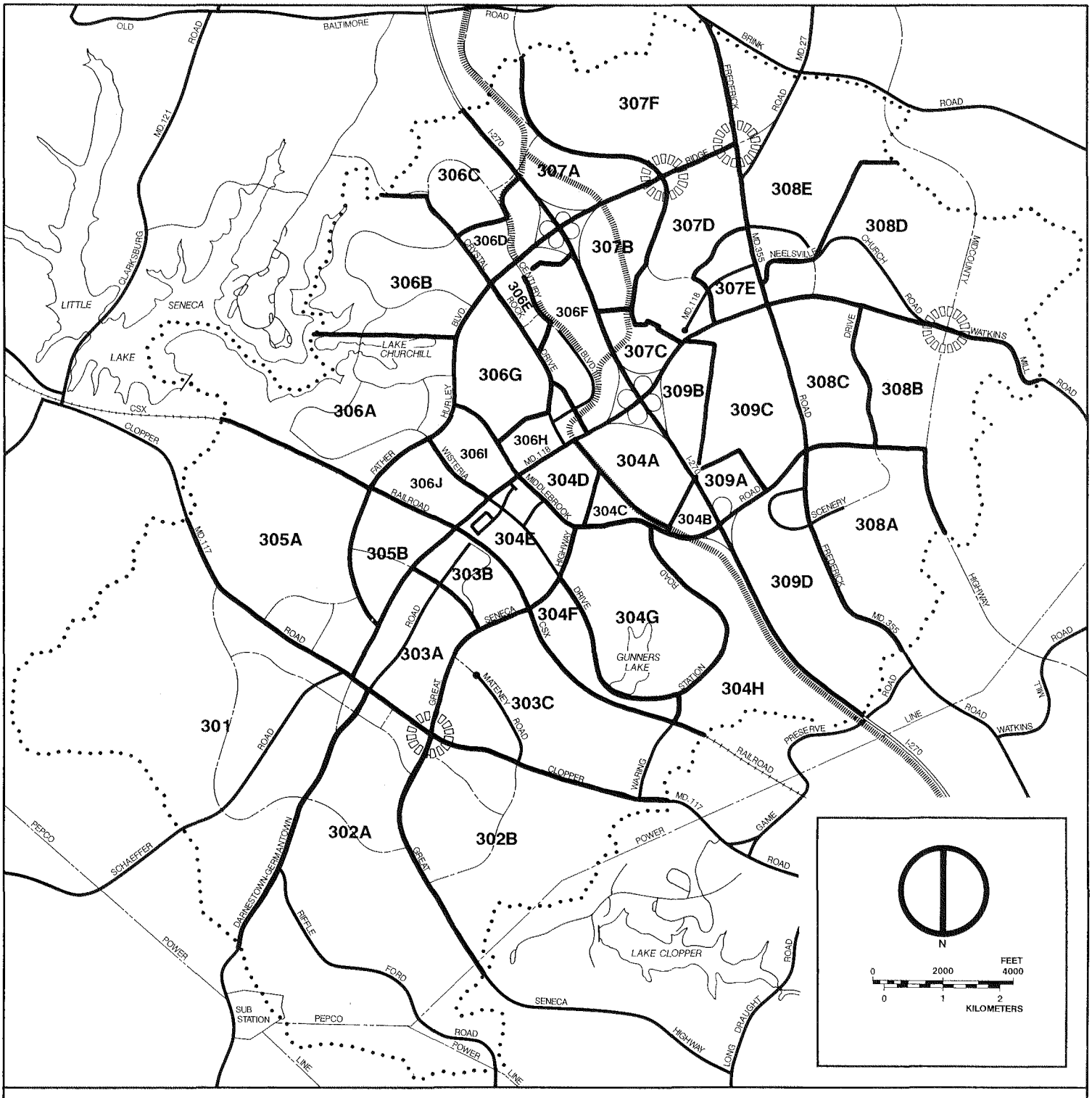
Figure F-4



Traffic Analysis Subzones

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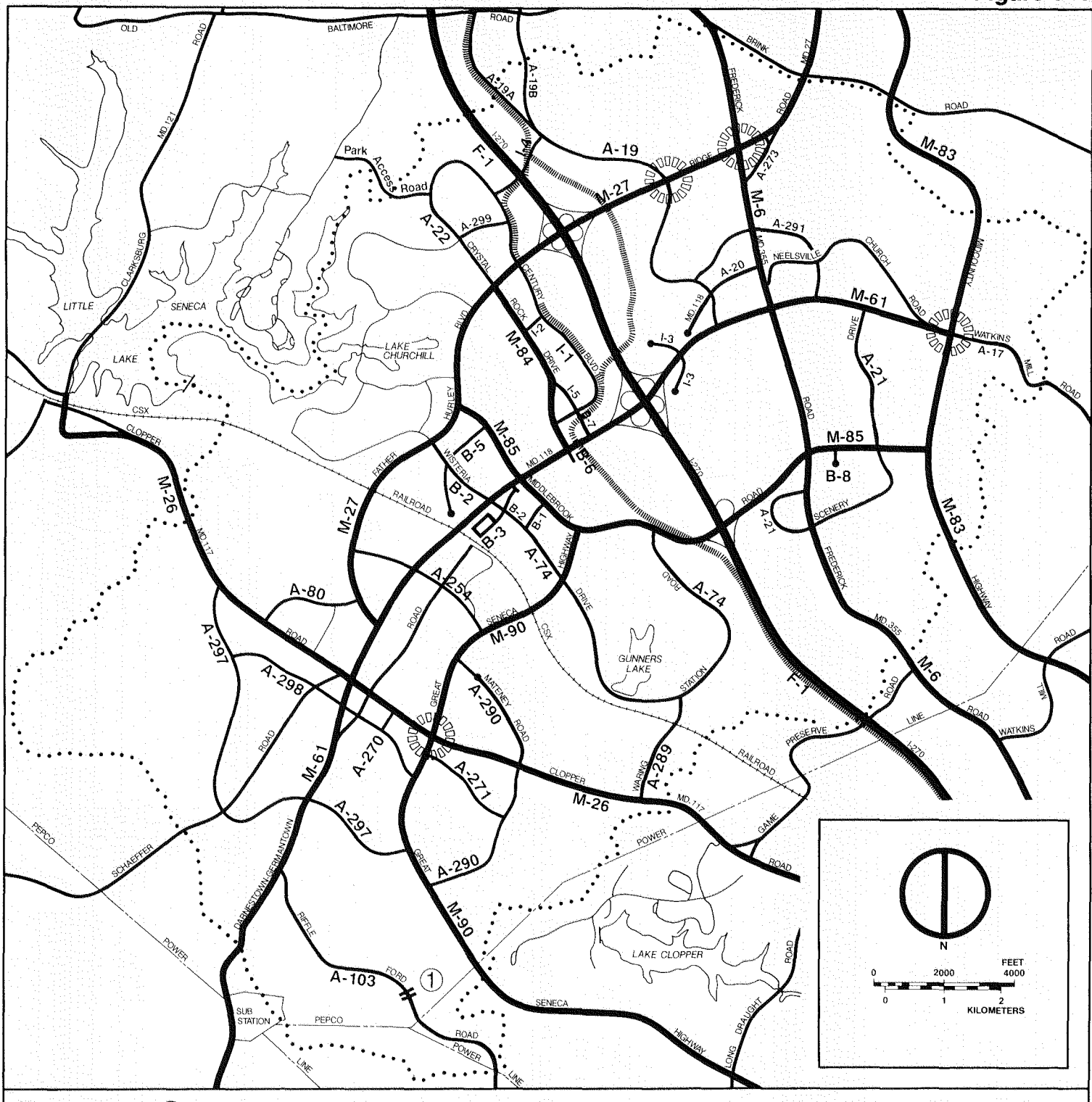

Roadway System

Grade-Seperated Interchange

Freeway

Major Highway

Arterial(A),Industrial(I),and Business District Roads(B)

May be closed when Great Seneca Highway is opened to traffic through Great Seneca Park (1)

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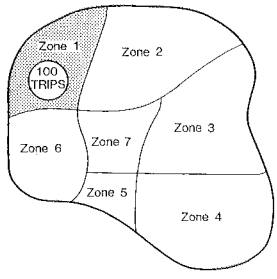
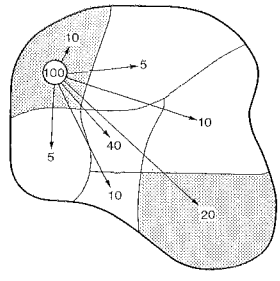
Figure F-6

1.Trip Generation:



Zone 1 generates 100 person trips productions

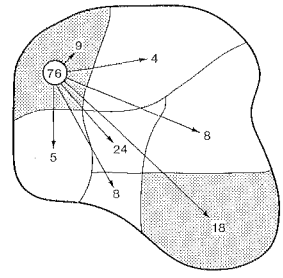
2.Trip Distribution:



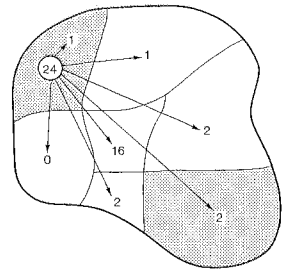
20% of the trips from Zone 1 are distributed to Zone 4,for example

3.Mode Choice:

A.Person Trips in Cars



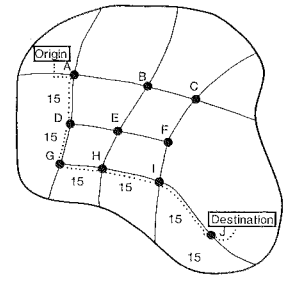
B.Transit Trips



2/20,or 10%,of the trips from Zone 1 to Zone 4 choose to use transit

4.Trip Assignment:

A.Vehicle Trips on the Network



15 vehicle trips are assigned to each link along route A-D-G-H-I-J between Zone 1 and Zone 4

Schematic Illustration of a Four Step Transportation Model

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Trip assignment. To what particular path or route on the transportation networks should the trips between any zone pair be specifically assigned?

Figure F-6 schematically illustrates these four steps for a simple model structure. This illustration shows that: (1) in the first step of trip generations, 100 trips are produced in zone #1, (2) in the second step of trip distributions, that 20 percent of the 100 trips produced in zone #1 have been distributed to zone #4, for example, (3) in the third step of mode choice, three-twentieths, or 15 percent of the trips from zone #1 to zone #4 choose to use transit, and with an auto occupancy of 1.2 the remaining 18 person trips would result in 15 vehicle trips, and (4) in the fourth step of trip assignment that the 15 vehicular trips going from zone #1 to zone #4 have been assigned to each link in the path through the network that goes from nodes A to D to G to H to I to J. Doing that process over and over, until all zone-to-zone pairs have been accounted for, results in an estimate of the traffic volumes on each link in the network.

As stated above, a particular transportation model is composed of a specific combination of techniques for each of these four steps that distinguishes it from another model. The modeling system used in the Germantown analysis allows for different techniques to be used for each of the steps. The following briefly describes some of the specific techniques that so far have been incorporated into the modeling system.

Trip generation takes land use data on households and jobs, by zone, and calculates daily zonal trip productions and attractions for several trip purposes (e.g. Home-Based Work, Home-Based Shop, Home-Based Other, and Non-Home-Based). The total number of trips is dependent upon what trip generation rates are used.

Trip distribution evaluates the relative attractiveness of each destination to all others and distributes the trips on the basis of a "gravity" technique. Zone-to-zone travel times are used by the gravity technique to convert generated trips into a pattern of trips between all zone pairs. Like Newton's Law of Gravity, from which the name of the technique is derived, the number of trips between an origin A and a destination B is inversely proportional to the travel time between A and B and proportional to the attractiveness of B relative to all other destinations. Socio-economic adjustment factors (K-Factors) are also applied in this step to account for interactions not readily captured by the simple assumption that travel time is the only determinant of people's behavior in establishing their patterns of trip making.

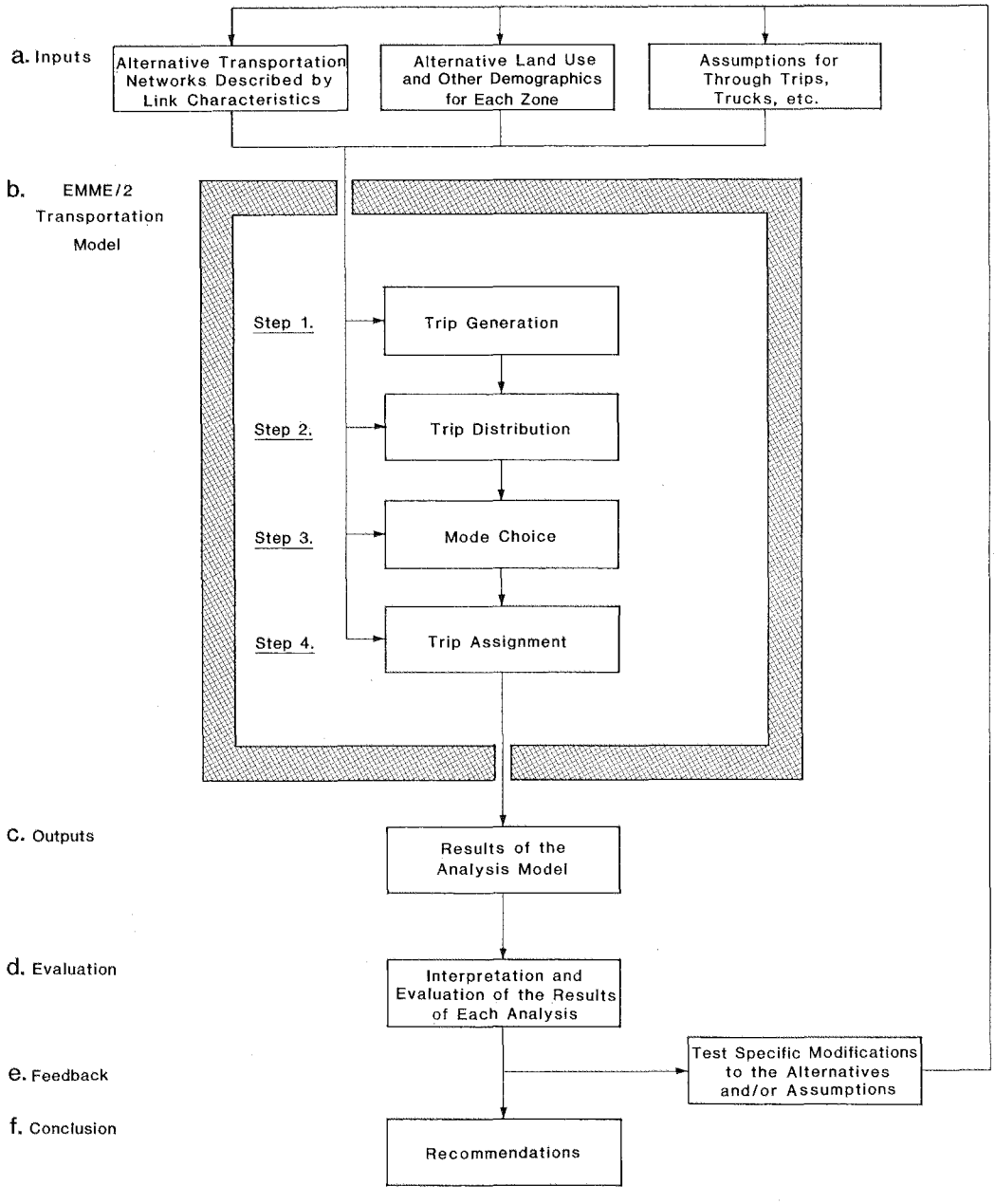
Modal choice techniques generally first evaluate the relative time and cost of traveling between each origin-destination zone pair. Then, using other empirical observed relationships, this technique calculates the percent of trips between each zone pair that will likely be made by automobile or by transit. These factors are used to split the Home-Based Work (HBW) person trip table into a HBW auto driver table and a HBW transit passenger table. The key components generally used to assess transit use and automobile occupancy are the relative travel time and travel costs from A to B by auto and transit, including parking and fares, for each mode.

In the application for the Germantown Master Plan, the mode choice technique of this type has not yet been used. In the interim analysis, default mode choice assumptions have so far been applied. They have been used to directly produce a trip distribution table representative of auto driver trips by modifying the person trip table by the assumed mode choice default values. The assumed default values were derived from several sources including: a) the 1980 Census, b) a recent simulation by COG of 1985 mode shares, and c) an earlier simulation by COG of an analysis of Metrorail build-out representative of conditions perhaps in the late 1990's.

Network assignment is accomplished by first combining the trip tables for the various trip purposes into composite daily or peak hour trip tables for highway vehicles and transit passengers and then assigning these to the highway and transit network, respectively. Different techniques exist for assigning these trips to individual roads or transit services, but these generally seek to minimize delay or travel time in selecting travel paths, including considerations of link capacity and congestion effects. The equilibrium traffic assignment technique is used in the modeling system used in the Germantown analysis.

Figure F-7 shows how these four basic steps within the transportation model relate to the analysis context previously given in Figure 1. The inputs involve: (1) network descriptions for each link, (2) land use and various demographic information for each zone, and (3) assumptions or data relating to items such as through traffic or the number of truck trips. As schematically shown in Figure F-7, these inputs can go to any combination of the different steps within the transportation analysis model depending upon the specific techniques used in constructing the model. This diagram of the general relationship among the analysis processes and model steps may appear to be complex to those not that familiar with analytic models. However, compared to the specific diagrams needed to develop the actual logic of the computer programs to do the modeling, this is a gross simplification. Various intermediate schematic diagrams of the modeling steps can be drawn, for technical review, that more clearly show the interrelationship among various specific inputs and steps of the modeling.

Figure F-7



Relation of the EMME/2 Model to the Analysis Context

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Appendix G
Summary of Transportation Model Analysis

As part of the Germantown Master Plan transportation analysis, over 50 transportation/land use alternatives were tested using the EMME-2 transportation model. For the most part, these alternatives looked at different assumptions regarding employment densities in the Germantown Planning Area and for the County as a whole. All land use assumptions for areas outside of Germantown were developed in the same context as that used in the Planning Board's General Plan analysis, which assumed a full buildout of the County. A selected number of these model runs looked at alternate road network assumptions within the context of the Master Plan of Highways network. For example, (1) Crystal Rock Drive Extended through Black Hill Regional Park to Clarksburg, and (2) a partial interchange at a crossing of I-270 north of Father Hurley Boulevard were two projects tested and subsequently dropped from consideration. Throughout the entire analysis, mode share (transit and rideshare) assumptions were consistent with those employed in the Planning Board's General Plan analysis.

Table G-1 presents a summary table of results from a selected set of the alternatives analyzed. The seven alternatives presented are those which staff considers most relevant in terms of providing the reader with a sense of the breadth of the work performed to date and an understanding of the overall results of the analysis. The following narrative discusses the results of each alternative and compares them to the standard of acceptable congestion for the Germantown Planning Area.

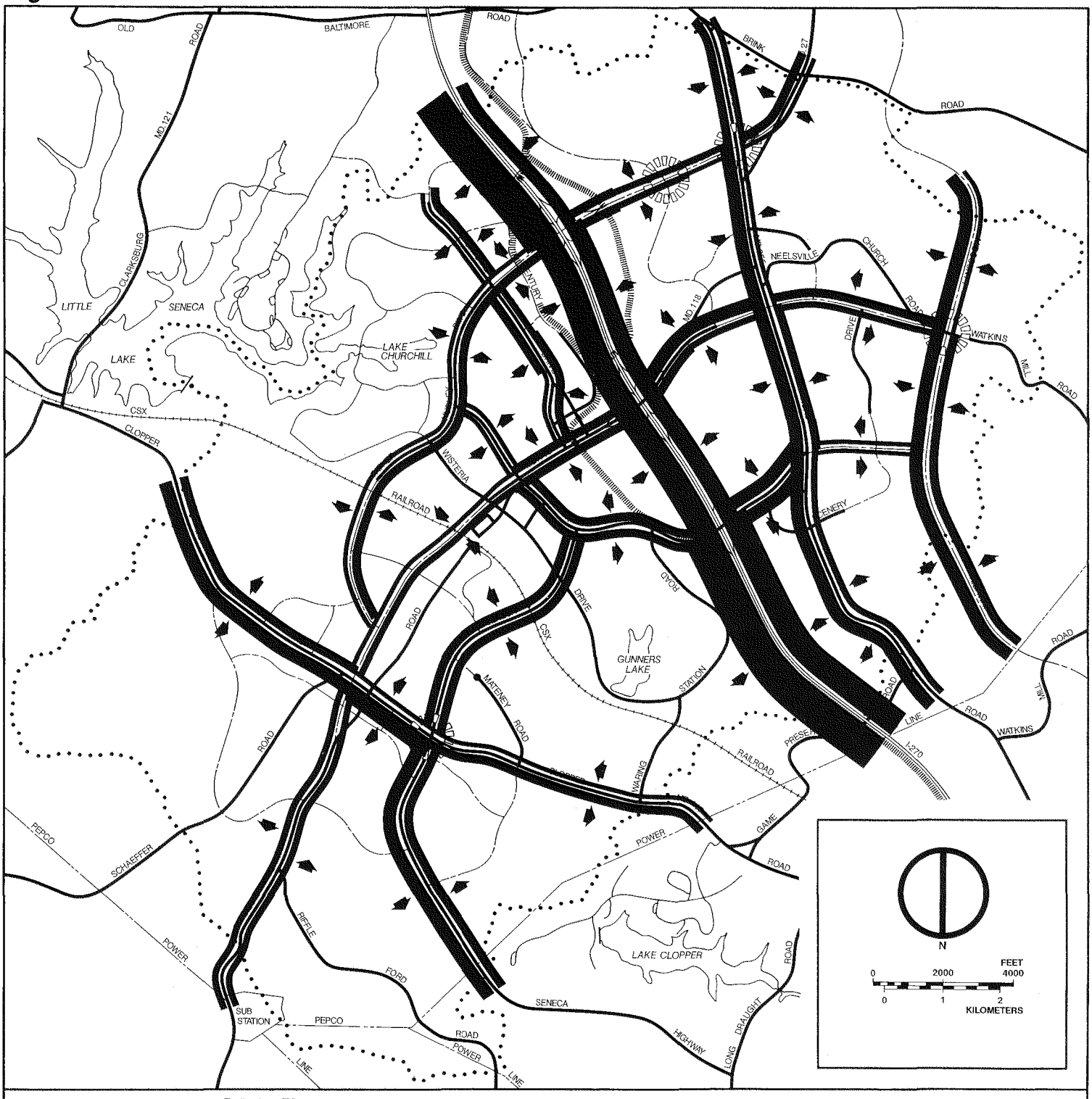
Alternative 1, which assumes a job yield in the Germantown area of 0.7 FAR, would result in about 80,000 jobs in Germantown. The resulting Average Level of Service of D would be be more congested than the standard of an average LOS C/D.

Alternative 2 used the same basic assumptions of employment density in Germantown as Alternative 1, and looked at the effect in Germantown of combining that employment level with a 20 percent reduction of housing and employment densities in Clarksburg. That would reduce the jobs in Clarksburg from about 45,000 to 36,000 and the dwelling units from about 30,000 to about 24,000. The areawide analysis showed that the overall average Level of Service would still be at Average LOS D, more congested than the standard of Average LOS C/D. Examination of some of the details of the transportation analysis does indicate some marginal reductions in average level of service. They are not large enough by themselves, however, to reduce and change the basic result of the previous Alternative.

Alternative 3 examined a reduction in the employment density within the Germantown Planning Area to a level of about 0.5 FAR. That level was derived by: (1) performing a local intersection congestion analysis on the results of Alternative 1, using the methodology discussed previously in the text; and then by (2) determining what employment level would result if those selected intersections were operating at acceptable levels of service. A level of about 0.5 FAR employment density would result in about 65,000 jobs in Germantown. Most of these jobs would be in the Germantown Employment Corridor, about 57,000 of the total. The resulting Average Level of Service was an Average LOS D, which would still be unacceptable.

Alternative 4 used the same basic assumptions of employment density in Germantown as Alternative 3, and looked at the effect of combining that with a 25 percent reduction in job and housing densities in Clarksburg. That would reduce the jobs in Clarksburg from about 45,000 to about 34,000 and the dwelling units from about 30,000 to 22,500 dwelling units. The areawide analysis showed that the overall Average

Figure G-1



Anticipated AM Peak Hour Patterns of Movement

Arrow Width Indicates Relative Traffic Volumes Based on Direct Output from the EMME-2 Transportation Model Based on End-State Development.

The Value Range from Less Than 500 for the Thinnest Line to over 7000 for the Widest.

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TABLE G-1
SUMMARY OF SELECTED RESULTS OF AREAWIDE TRANSPORTATION ANALYSIS

Analysis Alternative Based on Employment Density	Transportation Network Alternatives	Approximate Number of Jobs		Approximate Number of Households		Resultant Areawide LOS in Germantown
		County	Germantown	County	Germantown	
1) 0.7 FAR	Preliminary Draft	1.1 mil.	80,000[5]	.44 mil.	28,000	D
2) 0.7 FAR[1]	Preliminary Draft	1.1 mil.	80,000[5]	.44 mil.	28,000	D
3) 0.5 FAR	Preliminary Draft	1.1 mil.	65,000[6]	.44 mil.	28,000	D
4) 0.5 FAR[2]	Preliminary Draft	1.1 mil.	65,000[6]	.44 mil.	28,000	almost C/D
5) 0.5 FAR[3]	Preliminary Draft	0.75 mil.	65,000[6]	.44 mil.	28,000	C/D
6) 0.5 FAR[4]	Final Draft	0.75 mil.	72,500[7]	.44 mil.	36,000	C/D

1 *With modification resulting in 36,000 jobs and 24,000 households in Clarksburg.*
2 *With modification resulting in 34,000 jobs and 22,500 households in Clarksburg.*
3 *See footnote 2 plus higher transit use.*
4 *With modification resulting in 34,000 jobs and 30,000 households in Clarksburg.*
5 *Including 72,000 jobs in the Employment Corridor.*
6 *Including 56,000 jobs in the Employment Corridor.*
7 *Including 55,500 jobs in the Employment Corridor.*

Level of Service almost reaches the standard of acceptability of an Average LOS C/D.

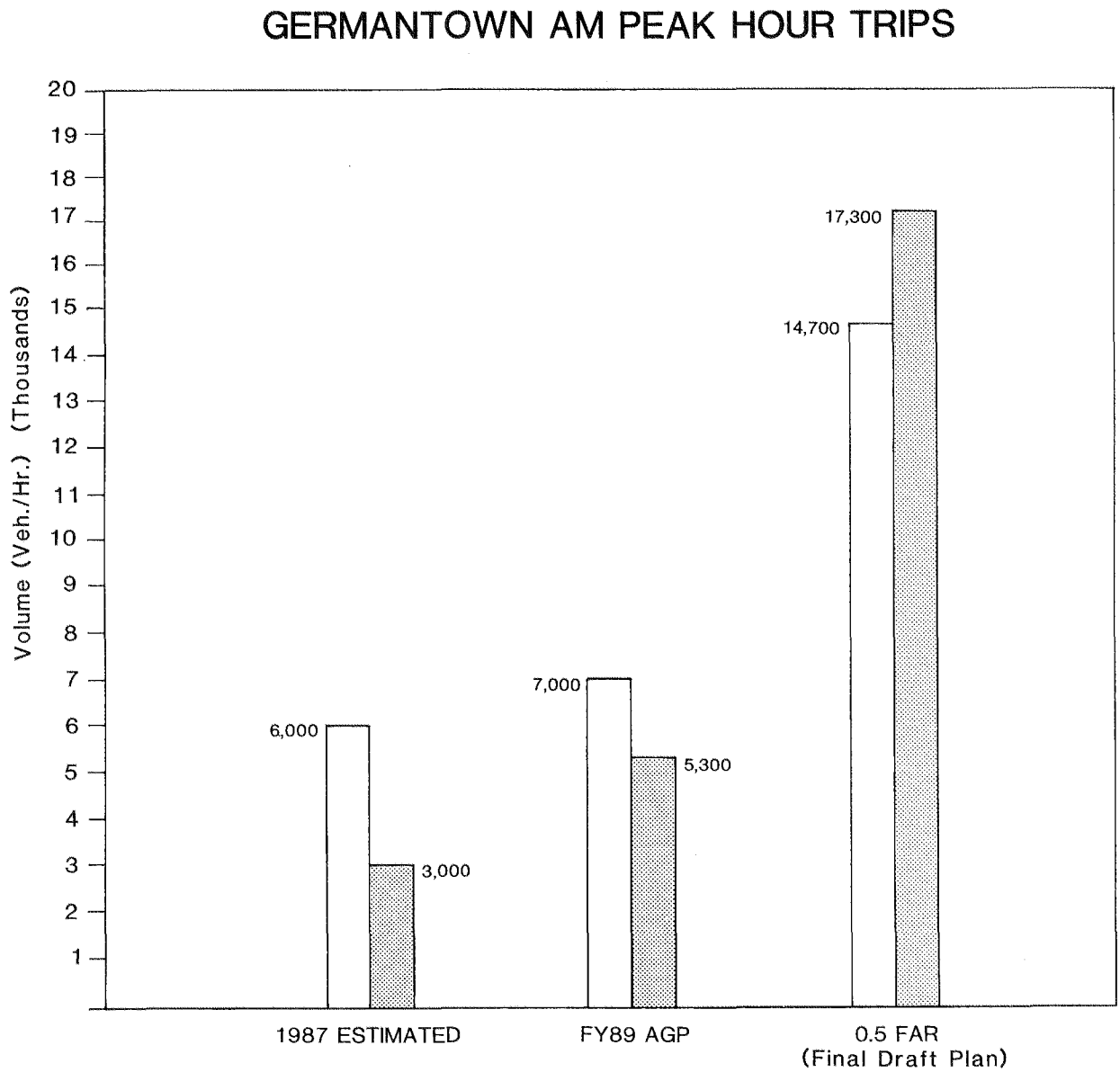
Detailed review of the results of the analysis shows that high levels of through traffic in the Germantown area, primarily coming from Frederick County, contributed significantly to those estimated future congestion conditions being higher than the standard in this alternative.

Alternative 5 also used the same basic assumptions of Alternative 3 in the Germantown Planning Area, but this time combined it with the assumptions that: (1) the County-wide employment yield would be about three quarters of a million jobs and that there would be the same assumptions in Clarksburg as Alternative 4; and (2) that there would be somewhat higher assumptions of transit use. The County-wide employment level assumption would be consistent with there being a job in the County for each of the resident workers which could be expected from the number of County-wide households. The results of this alternative indicate that the areawide Average Level of Service conditions in the Germantown Planning Area would be at the standard of acceptability of an Average LOS C/D. This Alternative was used as the "Base Test" in order to evaluate subsequent variations.

Alternative 6 assumed a higher level of development in the Germantown Planning Area than that assumed in Alternative 5. However, a somewhat lower job-to-household density mix was also assumed. This change resulted in an increase in jobs in Germantown from 65,000 to about 72,550, as well as an increase in households from 28,000 to about 36,500 dwelling units. In addition, several refinements were incorporated in the model system to reflect more accurately the Master Plan road system and account for the transportation capacity it would provide in Germantown and adjacent planning areas. Employment densities in Clarksburg, as well as County-wide employment and household yields, were the same as those specified in Alternative 5. Mode share assumptions were assumed consistent with those used in Alternatives 1 through 4. The results of this alternative indicates that the areawide average level of service conditions in the Germantown Planning Area would be at the standard of acceptability of an average LOS C/D.

Figure G-1 delineates the anticipated A.M. peak hour traffic volumes resulting from the master planned land uses.

Figure H-1



Trip Generation Results

Outbound Totals

Inbound Totals

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Appendix H
Future Travel Characteristics

This Appendix presents some of the results from the transportation analysis that illustrate several important characteristics of future travel associated with the Germantown Planning Area. These travel characteristics are discussed according to the four basic steps of transportation planning analysis: trip generation, trip distribution, mode choice, and trip assignment.

Trip Generation. How many trips in total are there beginning and ending in the Germantown Planning Area?

Trip Distribution. What is the pattern, or distribution, of those trips between Germantown and other parts of the region?

Modal Choice. What proportion of the persons going between Germantown and other locations will choose which of the available means (modes) of transportation? How many occupants will each automobile trip have on the average?

Trip Assignment. To what particular path or route on the transportation networks should the trips between Germantown and other areas be specifically assigned?

The following discussions generally answer these questions, in order to give a picture of future travel in the Germantown Planning Area. The detailed answers formed the basis on which the areawide and local intersection transportation analysis for the Germantown Planning Area was carried out.

Trip Generation

Figure H-1 shows the number of trips generated in the Germantown Planning Area for several development conditions. The figure shows three development levels: a) an estimate of 1987 conditions; b) that associated with the FY 89 Annual Growth Policy (AGP) Staging Ceilings; and c) the recommended Final Draft Master Plan alternative. There are several observations that can be made regarding these trip generation results.

The 1987 Estimated bars show that the majority vehicle trips are outbound in the morning, by nearly two to one over the inbound trips. While that situation is obvious to people familiar with Germantown traffic conditions today, it is shown here as a point of comparison with the projections of future trip generation results shown in the other bars in Figure H-1. The reason that the outbound trips are greater is the relatively higher amount of residential than commercial or employment land uses that have so far been built in Germantown.

The development level associated with the approved pipeline in the FY 89 AGP shows that the morning inbound trips will increase more than the outbound trips when compared to 1987 conditions. That will provide for a more balanced use of the available transportation capacity in both the morning and evening peak periods. However, because the inbound and outbound trips are more nearly equal, there will also likely to be more turning movement conflicts at the intersections within the area.

The resulting trips generated from the recommended Final Draft Master Plan Alternative at 0.5 FAR shows approximately a 100 percent increase over the outbound trips and approximately a threefold increase over the inbound trips when compared to the trips generated by the approved pipeline of the FY 89 AGP. This Alternative shows a predominance of inbound trips, reflecting Germantown's character as an employment center.

Trip Distribution

The previous section outlined the trip generation results: how many trips in total are there beginning

Figure H-2

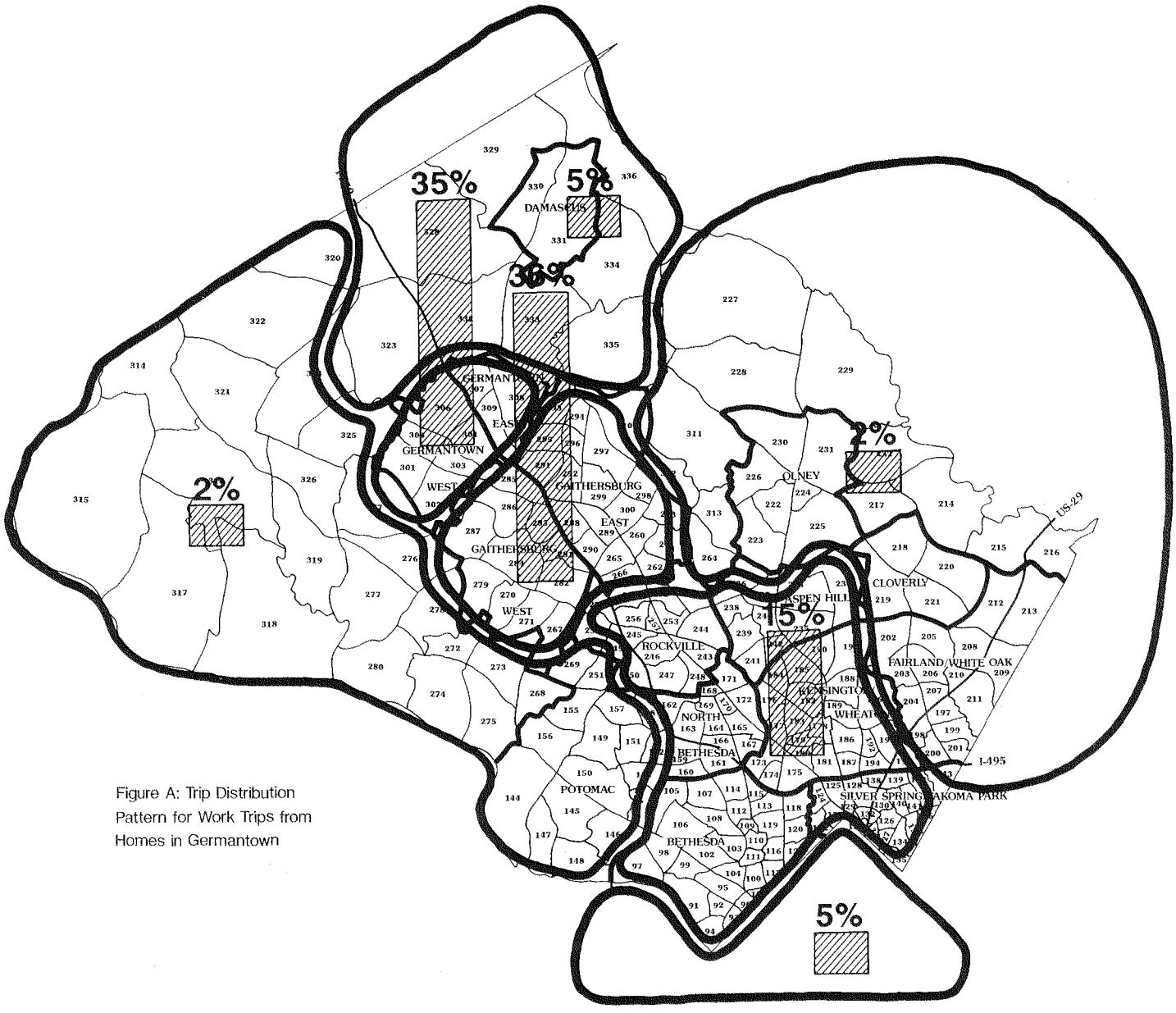

Figure A: Trip Distribution Pattern for Work Trips from Homes in Germantown

Projected Trip Distribution Patterns

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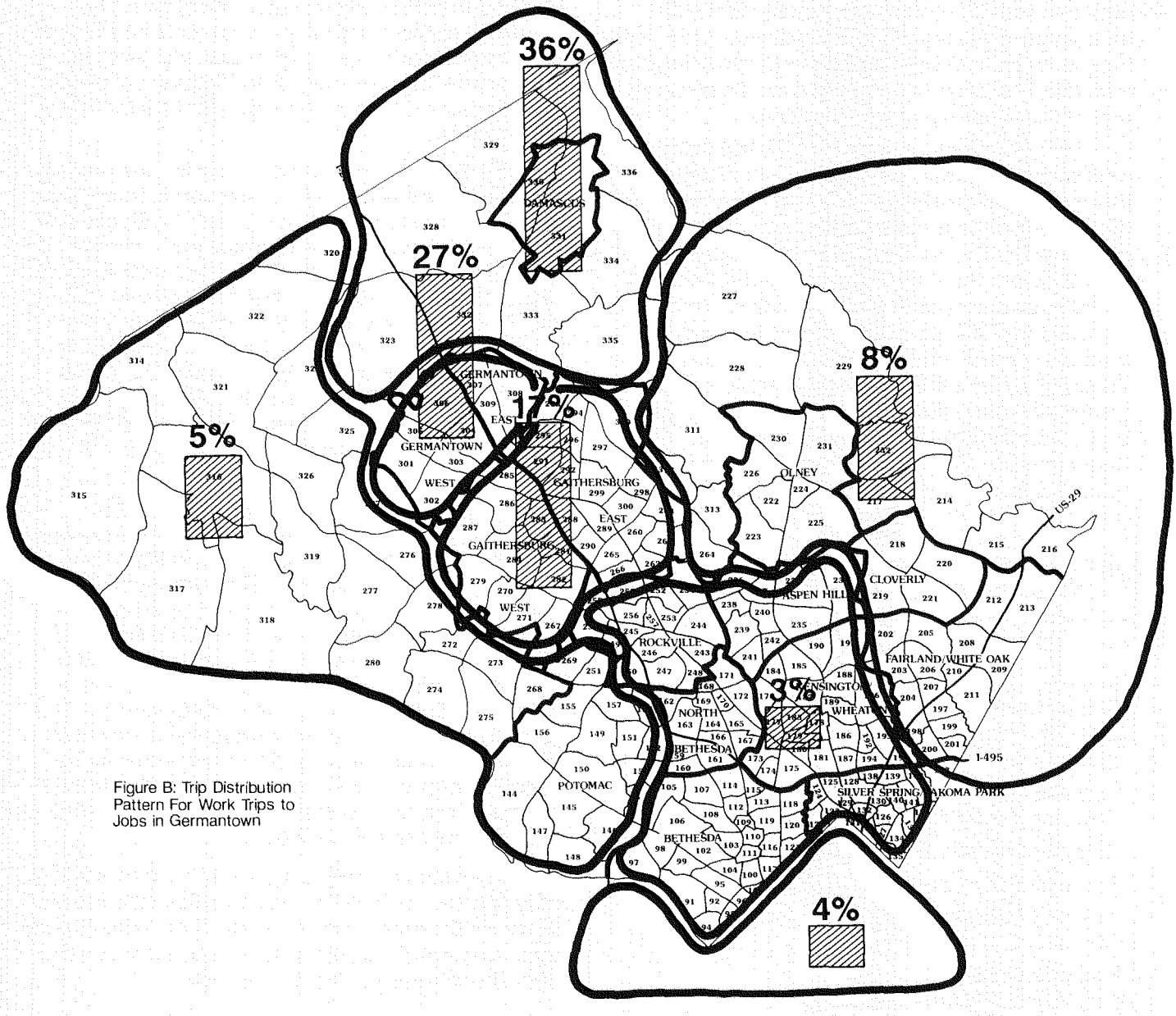

Figure B: Trip Distribution Pattern For Work Trips to Jobs in Germantown

Projected Trip Distribution Patterns

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and ending in Germantown? This section describes the pattern, or distribution, of those trips between Germantown and other parts of the region. While the transportation model develops independent trip distributions for each of the several types of trip being generated, this discussion focuses on the characteristics of trips between home and work locations.

Table H-1 gives a summary of the trip distribution results for the recommended Final Draft Alternative. It lists the percent distribution of home-to-work trips between Germantown and six other aggregations of geographic areas. The table also distinguishes between trips being produced by Germantown residents and traveling to other locations as shown in the first column, and trips being attracted to Germantown jobs by residents of other areas shown in the second column. These results are also given in Figure H-2, which graphically shows the pattern of trips from people living in Germantown and for people coming to jobs in Germantown.

TABLE H-1

A SUMMARY OF THE TRIP DISTRIBUTION RESULTS FOR FINAL DRAFT ALTERNATIVE

Between Germantown and the Following Areas	Percent Distribution of Home-to-Work Trips: Productions from Germantown	Attractions to Germantown
Germantown Area	35%	27%
Damascus, Clarksburg including Frederick County	5%	36%
Gaithersburg Area	36%	17%
Prince George's County	2%	8%
Western County including Potomac	2%	5%
Rockville,Bethesda, Kensington-Wheaton and Silver Spring Area	15%	3%
D.C. and Virginia Area	5%	4%
Total Trips	100%	100%

This material shows several important future travel characteristics. First, by the time of the buildout of the Germantown Plan, approximately 35 percent of the people who have jobs and live in Germantown will also work in Germantown. That contrasts with approximately 10 percent resident workers, as observed in 1987 by the Census Update. Correspondingly, those workers who live in Germantown would constitute nearly 30 percent of the job holders of people working in Germantown.

Secondly, for the people with jobs who live in Germantown, about 36 percent would work in Gaithersburg and 15 percent in the down-county area. The remainder of about 10 to 15 percent would be scattered to other areas to the north, south, east, and west. In other words, approximately 85 to 90 percent of people living in Germantown who work, will work in the I-270 Corridor.

Thirdly, for the people who work in Germantown, about 36 percent will come from the north, from Clarksburg, Damascus, and Frederick County, while about 17 percent will come from Gaithersburg and 3 percent from down-county. A relatively high proportion, about 8 percent, will come from eastern Montgomery County and Howard County. About 5 percent will come from the western wedge and about 4 percent from the District of Columbia and Northern Virginia. This shows overall that about 80 percent of the people who will work in Germantown will come from the upper part of the I-270 Corridor of Gaithersburg and north.

Mode Share Assumptions

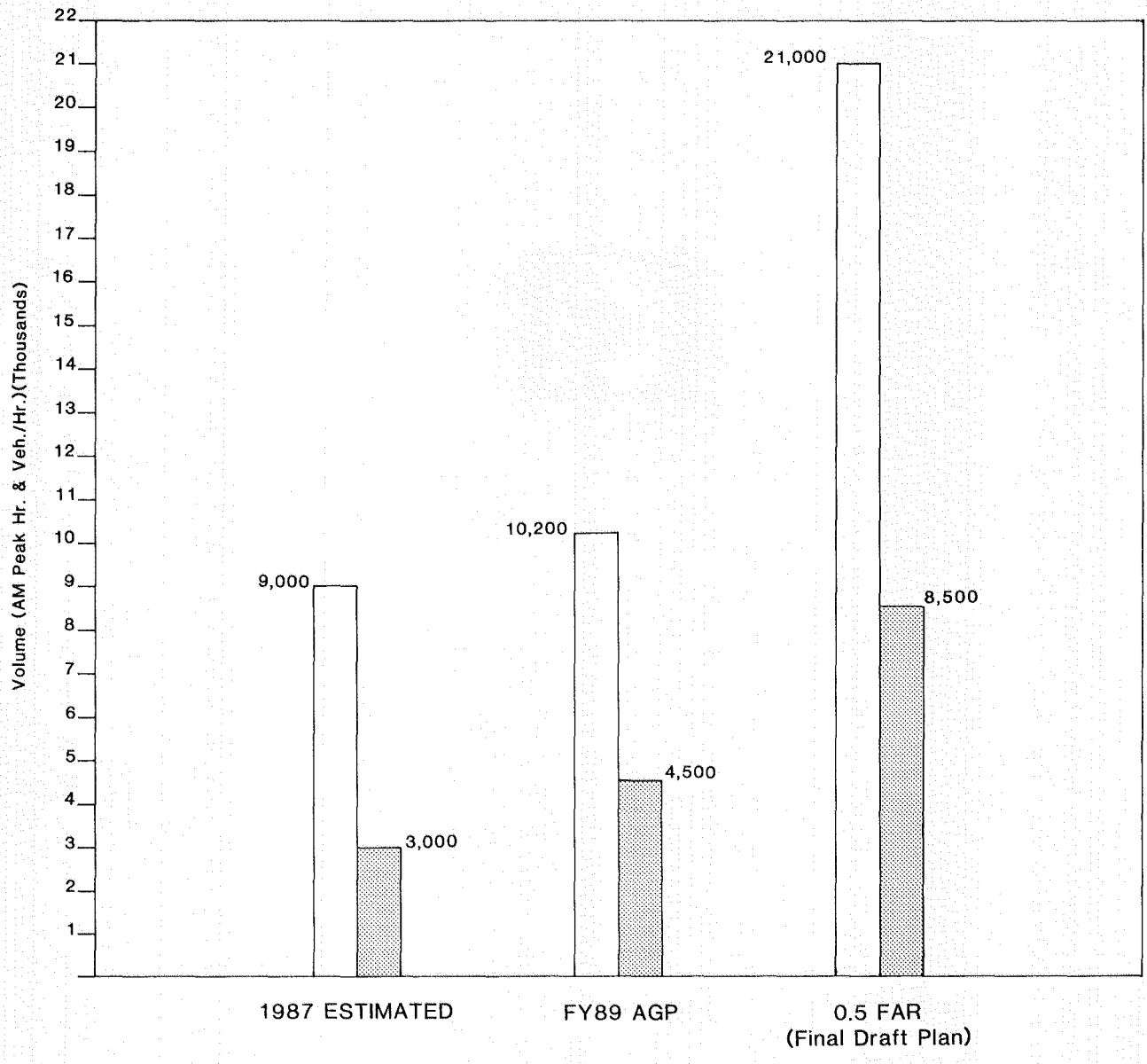
Non-auto-driver mode share percentages that have been used so far in this analysis are termed default mode shares. They were derived based on estimated impact of ridesharing and on utilization of Metrorail, commuter rail (MARC line), and transit facilities along the Corridor Cities Transit Easement extending north from Shady Grove to Clarksburg. A 34 percent non-auto-driver mode share was assumed for trips within Germantown and for trips occurring between Germantown and Gaithersburg. A 15 percent assumption was used for trips between Germantown-Gaithersburg and the Clarksburg policy areas.

When the mode share portion of the model is fully operational, it will be used to estimate future transit use. In the interim, transit use has been treated as an input assumption to the transportation analysis rather than as an output result of the analysis.

Trip Assignment

As a final step for transportation modeling, the sub-area transportation model assigns peak hour traffic volumes to the highway network. These assigned traffic volumes on several major roadways using the Great Seneca Creek as a screenline are shown in Figure H-3. It indicates that the proposed end-state land uses provide a somewhat more balanced directional traffic flow than 1987 estimates. The results of tests indicate that the proposed Master Plan land uses would result in about the same directional balance of traffic flow at the southern boundary of the Germantown Planning Area as those forecast under the Annual Growth Policy development level.

Figure H-3



Screenline Volumes

Outbound

Inbound

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Appendix I
Roadway Descriptions and Changes of Alignment

This Appendix contains verbal descriptions of the major highways and arterial roadways contained in the Germantown Master Plan. These are followed by descriptions of the changes in roadway alignments recommended by this Plan.

Roadway Descriptions

MAJOR HIGHWAYS[6]

MD 355 — Frederick Road (M-6): A north-south roadway, MD 355 is a continuation of Wisconsin Avenue and Rockville Pike. It parallels I-270 for its entire length in Montgomery County from Bethesda and Rockville north to the Frederick County line. In Germantown, it traverses Middlebrook and Neelsville Villages on its way north from Gaithersburg to Clarksburg. An interchange is recommended at its crossing of Ridge Road (M-27).

MD 117 — Clopper Road (M-26): MD 117 is another north-south roadway extending from Gaithersburg in the south through Clopper and Kingsview Villages to Boyds, north of Germantown. An interchange is recommended at its intersection with Great Seneca Highway (M-90).

Father Hurley Boulevard/Ridge Road (M-27): Father Hurley Boulevard/Ridge Road is a relocation of MD 27 from east of MD 355 across Neelsville, Churchill, and Kingsview Villages to its intersection with MD 118. A full-movement interchange is planned with I-270. This interchange will provide access primarily to the northern portion of Germantown and the Employment Corridor. It will also serve much of the through-traffic to and from Damascus, Frederick County and Carroll County, which now uses the interchange at MD 118. Additional interchanges are recommended at MD 355 (M-6) and Observation Drive (A-19).

MD 118 — Germantown Road (M-61): MD 118 provides east-west travel through Germantown from Midcounty Highway west to MD 28 beyond the edge of the planning area. Its interchange with I-270 provides access primarily to the central portions of Germantown, including the Town Center and the Employment Corridor.

The alignment north of MD 118 (M-61) has been modified as described below.

Midcounty Highway (M-83): Midcounty Highway, previously referred to as the Eastern Arterial, skirts the eastern edge of Germantown, just inside the greenbelt. It provides additional access to Montgomery Village and Gaithersburg as well as to the Shady Grove Metro station. Major connections to Midcounty Highway occur at its intersections with MD 118 and Middlebrook Road. An interchange is recommended at Midcounty Highway and MD 118 (M- 61).

Crystal Rock Drive (M-84): Crystal Rock Drive forms the edge between Churchill Village and the Employment Corridor between MD 118 and Father Hurley Boulevard.

6 The letters and numbers in parentheses, such as (M-61), denote the unique designation for each of the roads in Montgomery County's *Master Plan of Highways*. (See Table 17 of the Master Plan Text.)

Middlebrook Road (M-85): Middlebrook Road extends from Midcounty Highway northwest to its intersection with Father Hurley Boulevard, providing internal access for Germantown. A partial interchange with I-270 is programmed for Middlebrook Road. This interchange will provide access to the southern portion of Germantown, thus reducing reliance on the MD 118 interchange.

Great Seneca Highway (M-90): Great Seneca Highway, once referred to as the Western Arterial, will extend from Middlebrook Road in Germantown through Gunners Lake and Clopper Villages on its way south to Ritchie Parkway at MD 28. This highway will provide a parallel route to I-270 between Gaithersburg and Germantown. It will enable residents of the two "corridor cities" to take advantage of the employment opportunities in either area without adding further to the traffic volumes on I-270 or MD 28 west of I-270. Residents in Germantown will easily get to the Shady Grove Metro station via this highway and I-370. With the link to Ritchie Parkway, employment opportunities in Gaithersburg and Germantown will also become more accessible to Rockville residents. An interchange is recommended at Great Seneca Highway and Clopper Road (M-26).

ARTERIAL ROADWAYS

Watkins Mill Road (A-17) extends east from Midcounty Highway through Montgomery Village to MD 355, crossing Midcounty Highway.

Observation Drive (A-19) extends through the western portion of Neelsville Village from the northern edge of the planning area, crossing Ridge Road and passing the Regional Shopping Mall on its way to MD 118 and the entrance to Montgomery College. Two alternative alignments are indicated on The Highway Plan at the northern edge of the planning area. The selection of an alternative will be made as part of the Clarksburg Master Plan.

Germantown Road (A-20) is the portion of existing MD 118 between Sunnyview Drive and MD 355 in Neelsville Village.

Scenery Drive (A-21) provides internal circulation through the eastern portion of Middlebrook Village connecting MD 118 Extended to Middlebrook Road and MD 355.

Gunners Branch Way (A-21) extends Scenery Drive across MD 355 and forms a loop which ends at MD 355 1,000 feet to the north.

Crystal Rock Drive (A-22/I-1) extends north from its intersection with Father Hurley Boulevard along the western edge of the Employment Corridor and looping back to connect with Century Boulevard at Proposed Road I-4.

Wisteria Drive (A-74/B-2) extends through the Town Center, connecting Father Hurley Boulevard, the southern portion of Churchill Village to Great Seneca Highway and Middlebrook Road in Gunners Lake Village. In Gunners Lake Village it provides a loop road in conjunction with the eastern portion of Waring Station Road.

Waring Station Road (A-74/A-289) connects Middlebrook Road and Clopper Road through the southern portion of Gunners Lake Village.

Hopkins Road (A-80) connects Clopper Road and Father Hurley Boulevard in Kingsview Village.

Riffle Ford Road (A-103) extends southeast from MD 118 through the southern edge of Clopper Village on its way to MD 28.

A New Road (A-254) connects Father Hurley Boulevard, crossing MD 118, with Great Seneca Highway.

A New Road (A-270) extends between Clopper Road and proposed Hoyles Mill Road in Clopper Village.

Dairymaid Drive (A-271) connects Great Seneca Highway and Mateney Road in Clopper Village.

Old Ridge Road (A-273) is a portion of existing Ridge Road that will connect MD 355 with the realignment of MD 27 in Neelsville Village.

Mateney Road (A-290) extends in an arc from Great Seneca Highway south across Clopper Road to meet Great Seneca Highway again southeast of Clopper Road.

Shakespeare Boulevard (A-291) forms a loop connecting MD 118 Extended in the eastern portion of Neelsville Village to MD 355 and the Regional Shopping Mall in the western portion of Neelsville Village.

A New Road (A-297) will provide access to the western portions of Clopper and Kingsview Villages.

Hoyles Mill Road (A-298) is a realignment and extension of existing Hoyles Mill Road from Proposed Road A-297 in Kingsview Village south crossing MD 118 to Great Seneca Highway.

Waters Landing Drive (A-299) connects Crystal Rock Drive to Century Boulevard through the west Urban Village.

Crystal Rock Drive (B-1) connects Middlebrook Road and Wisteria Drive along the southern edge of the Town Center.

Walter Johnson Drive (B-3), a portion of the previous alignment of MD 118, extends approximately 750 feet east of Wisteria Drive to approximately 750 feet east of Wisteria Drive.

Locbury Drive (B-5) extends southwest from Middlebrook Road crossing Wisteria Drive and provides access to the properties southwest of Wisteria Drive.

Crystal Rock Drive (B-6) extends south from MD 118 for approximately 400 feet.

Aircraft Drive (B-7/I-5) extends north from MD 118, crossing Century Boulevard to Crystal Rock Drive.

Brink Road (B-8) extends south from Middlebrook Road at approximately 600 feet east of MD 355 to its end in a cul-de-sac.

Century Boulevard (I-1) provides access to the office buildings in the western portion of the Employment Corridor north of MD 118. This road extends from Crystal Rock Drive, paralleling I- 270, north under Father Hurley Boulevard connecting with Crystal Rock Drive again at Proposed Road I-4.

Waters Landing Drive (I-2) connects Crystal Rock Drive and Century Boulevard.

Goldenrod Lane (I-3) provides access to the portions of the Employment Corridor east of I-270 north and south of MD 118.

A New Industrial Road (I-4) provides access across I-270, connecting Crystal Rock Drive and Century Boulevard on the west to Observation Drive on the east.

CHANGES OF ALIGNMENT

Although this Plan recommends retaining the major elements of the roadway system recommended in the 1974 *Master Plan*, it does propose some modifications to it. These changes are in response to a number of factors, including reductions of residential density, environmental considerations, need for additional local capacity and through capacity, and problems with existing grades and the intent to improve the visual quality of Germantown. The road alignment changes are described below:

Interchanges with I-270: The 1974 *Master Plan* recommends that two full I-270 interchanges be built at Middlebrook Road and Germantown Drive. Since the spacing between the existing interchange at MD 118 and a full movement interchange at Middlebrook Road would not meet federal spacing requirements, the MD 118 ramps were recommended to be removed when the southern interchange was built. Since the adoption of the 1974 *Master Plan*, however, the Maryland State Highway Administration has included a partial interchange at Middlebrook Road in its I-270 widening project. The partial interchange removes the spacing issue. This Plan, therefore, indicates the retention of the MD 118 interchange as well as the addition of a full-movement interchange at Germantown Drive and the partial interchange at Middlebrook Road.

Number of Lanes of Major Highways: The 1974 *Master Plan* recommends that several major highways be built to eight lanes. Such wide roadways create barriers between Germantown's communities; in fact, they would splinter and further fragment the Villages and would be dangerous to cross by bicycle. They are difficult to cross by automobile or on foot. In order to mitigate this negative community impact, this Plan reduces their maximum width to six lanes. These roadways include Middlebrook Road from MD 118 to MD 355, MD 355 from Middlebrook Road to MD 118, and MD 118 from MD 355 to Middlebrook Road.

Interchanges: Grade-separated interchanges are recommended to be built at four intersections in order to accommodate peak-hour turning movements that would create unacceptable levels of services. The four intersections are located at:

- Great Seneca Highway and Clopper Road
- Ridge Road and Observation Drive
- Ridge Road and MD 355
- Midcounty Highway and MD 118

Midcounty Highway: The 1974 *Master Plan* and the 1968 *Clarksburg Master Plan* recommend that Midcounty Highway (M-83) intersect and join MD 355 at Brink Road, just north of the Germantown Planning Area. This Plan recommends changing the proposed alignment of M-83 so that it parallels MD 355 through Clarksburg. This alignment change increases the potential traffic capacity in Clarksburg. Related to this change is the reclassification of MD 355 to a major highway through Clarksburg and of Brink Road to an arterial roadway between MD 27 and MD 355.

Riffle Ford Road: The 1974 *Master Plan* indicates the alignment of Proposed Road A-103 (Riffle Ford Road), north of Schaeffer Road, as an arterial road through the western portion of Kingsview Village. The proposed alignment crosses three tributaries of Little Seneca Creek and would be needed to accommodate the traffic generated by the residential density recommended in the 1974 Land Use Plan. This Plan, however, recommends a New Road (A-297) that reduces the negative impact on the stream valleys. Roads connecting to A-297 should run along the ridges and not across the stream valleys.

Riffle Ford Road (A-103), south of MD 118, may not continue as a public roadway through Seneca State Park once Great Seneca Highway is open to traffic from Clopper Road to Quince Orchard Road. Given the residential densities west of Clopper Road that are recommended by this Plan, the deletion of Riffle Ford Road's crossing of the State Park should not create increased congestion on other roads in Germantown.

Mateney Road and New Road (A-297): The 1974 *Master Plan* recommends that Analysis Areas CL-8 and CL-9 be a scenic easement. In order to provide vehicular access to the residential and commercial development recommended by this Plan in these areas, an arterial roadway is recommended to traverse each of these areas. One roadway will be an extension of

Mateney Road (A-290) to Great Seneca Highway and serve Analysis Area CL- 9. The other (A-297) will serve Analysis Area CL-8 and start at Great Seneca Highway and extend north crossing M-61 at the edge of the area and continue across Schaeffer Road to Clopper Road.

The 1974 *Master Plan* recommends that Mateney Road end in a cul-de-sac north of its intersection with Cinnamon Drive. This recommendation results in no direct connection to Great Seneca Highway, the Commuter Rail Station, and the Town Center for three subdivisions of more than 1,000 households. This Plan recommends extending this roadway to the northwest, intersecting Great Seneca Highway west of A-254.

Century Boulevard: Proposed Road I-1 (Century Boulevard) is recommended in this Plan to extend north of Proposed Road M-27 (Father Hurley Boulevard) through the Employment Corridor, connecting to Proposed Road A-22 (Crystal Rock Drive). This roadway will provide additional capacity to the employment areas north of Germantown Drive (M-27). The 1974 *Master Plan* recommended that this road stop at Germantown Drive. Due to the limited distance between Crystal Rock Drive and the ramps of the M-27 Interchange with I-270, an at-grade intersection of Century Boulevard (I-1) with Father Hurley Boulevard cannot be accommodated. Therefore, a grade-separated intersection is recommended by this Plan.

Relocated MD 118: The alignment of Proposed Road M-61 (Relocated MD 118) is recommended to be slightly realigned just west of Clopper Road so that it intersects the existing alignment of MD 118 closer to Clopper Road.

Walter Johnson Drive: Within the western portion of the Town Center, the alignment of existing MD 118 (Walter Johnson Drive) is recommended to be changed into a one-way loop road serving Analysis Area TC-6. This change will help assure the preservation of two historic resources which are close to the existing right-of-way.

Scenery Drive: The 1974 *Master Plan* alignment of Scenery Drive, between MD 355 and Proposed Road M-85, crosses a portion of the Middlebrook Mobile Home Park. When the 1974 *Master Plan* was adopted, this area was undeveloped. Since then, mobile homes have been located in the area. Therefore, this Plan recommends a change in the alignment to avoid those homes.

Shakespeare Boulevard: A master plan amendment was approved in 1979 which changed the alignment of A-291 (Shakespeare Boulevard) east of MD 355. A complementary change is made in this Plan to the western portion of A-291.

Observation Drive: This Plan recommends that Observation Drive (A-19) be extended north from MD 118 (M-61), crossing Ridge Road (M-27) and extend to Clarksburg. In the 1974 *Master Plan*, this road became part of Shakespeare Boulevard. The alignment of A-19 is also amended to intersect M-27 further west to provide an appropriate separation from the ramps of the M-27 Interchange with I-270. The intersection of A-19 is recommended to be a full movement interchange in order to accommodate the anticipated high traffic volumes.

As A-19 approaches the northern planning area boundary, two alternative realignments are recommended. One is realigned further to the west in order to reduce the negative environmental impact of its construction. The other is realigned further to the east in order to intersect West Old Baltimore Road sufficiently far from I-270 to accommodate a potential interchange. The selection between the alignments will be made as part of the Clarksburg Master Plan process.

Goldenrod Lane: The alignment of proposed road I-3 (Goldenrod Lane) is recommended to end within the southern portion of Analysis Area EC-6, north of MD 118.

Appendix J
School Needs

The following tables have been prepared in order to provide further information regarding school need projections in Germantown. The results of this study indicate that the twelve elementary schools (grades K-5), three middle schools (grades 6-8), and two high schools (grades 9-12) shown in the Final Draft Plan are adequate to serve the projected public school population of Germantown.

Analysis

The demand for school capacity was calculated in three ways. One uses the yields (average number of school children per household) from the 1987 Census Update Survey for those who have recently moved into Germantown (movers). The second used the yields from a combination of movers and non-movers. These yields combine new residents and more long-term residents into one group. The third method used the demographic model to project the number of school children over time using the Intermediate Round 4 projection of residential development. The number of public school students is based on 94 percent of the highest projection of total children in the appropriate grade levels. The results of these three approaches are shown in Table J-1. The background data used in developing these numbers are shown on Tables J-2, J-3, and J-4.

The supply of school capacity is based on the aggregate capacity of the existing and programmed schools and the capacity of the additional schools planned in Germantown. These figures are shown on Tables J-1 and J-5. The combined capacity exceeds the highest projected demand in elementary schools. The supply of middle schools is 362 students less than the maximum projected, and the supply of high school space is 739 students less than the maximum projected.

The projected need for six elementary schools in addition to the six existing schools also appears reasonable when one compares the ratio of existing residential development to plan end development with the ratio of current school capacity to projected demand. At present, approximately 41 percent of the planned number of dwelling units (15,000 of 36,700) are occupied. See Table J-6. The present elementary school capacity represents 45 percent of the highest projection of elementary school students (3,396 of 7,569). These percentages are reasonably similar, indicating that the additional six schools, with larger capacities, should accommodate the children from the future residential development in Germantown.

The demographic model indicates that there is a peak demand which declines over time once Germantown is fully developed (see Table J-4). This decline creates a capacity to accommodate a rise in school child yields. Therefore, even if school child yields increase over time, the twelve elementary schools should provide adequate capacity. Further, it is possible to provide for a higher or earlier peak through the use of relocatable modular classrooms. For example, two modular classrooms at each of the twelve schools would provide additional capacity for 600 students, with each classroom having a capacity to accommodate 25 students.

TABLE J-1:
PROJECTED SCHOOL ENROLLMENT AND CAPACITY OF PUBLIC SCHOOLS

	Grades K-5	Grades 6-8	Grades 9-12
PROJECTED SCHOOL ENROLLMENT:			
Movers	7569	2635	3219
Movers/Non-Movers	7122	2719	3683
Demographic Model	6668	3527	4449
PROJECTED SCHOOL CAPACITY:			
Existing and Programmed schools	5408	1055	1855
Master Planned Schools	2960	2110	1855
Total	8368	3165	3710
DIFFERENCE:			
Between highest enrollment and capacity	799	-362	-739

TABLE J-2
PROJECTED SCHOOL ENROLLMENT:
SCHOOL CHILD YIELDS FROM MOVERS

1. Total School-Age Children from each housing unit (1987 Census Update Survey)

	Grades K-5	Grades 6-8	Grades 9-12
Single-family Detached	.3997	.1557	.1795
Single-family Attached	.2514	.0702	.0928
Multi-family	.0747	.0278	.0358

2. Children in Public School from each housing unit (1987 Census Update Survey)

	Grades K-5	Grades 6-8	Grades 9-12
Single-family Detached	.3580	.1394	.1608
Single-family Attached	.2370	.0662	.0875
Multi-family	.0715	.0266	.0343

Projected K-5 Students

7,569 = (.3580 x 10,735) + (.2370 x 11,258) + (.0715 x 14,790)

Projected 6-8 Students

2,635 = (.1394 x 10,735) + (.0662 x 11,258) + (.0266 x 14,790)

Projected 9-12 Students

3,219 = (.1608 x 10,735) + (.0875 x 11,258) + (.0343 x 14,790)

TABLE J-3
PROJECTED SCHOOL ENROLLMENT:
SCHOOL CHILD YIELDS FROM MOVERS AND NON-MOVERS

1. Total School-Age Children from each housing unit (1987 Census Update Survey)

	Grades		
	K-5	6-8	9-12
Single-family Detached	.3368	.1595	.2094
Single-family Attached	.2603	.0706	.1132
Multi-family	.0758	.0294	.0313

2. Children in Public School from each housing unit (1987 Census Update Survey)

	Grades		
	K-5	6-8	9-12
Single-family Detached	.3039	.1440	.1890
Single-family Attached	.2469	.0670	.1074
Multi-family	.0730	.0283	.0301

Projected K-5 Students

7,122 = (.3039 x 10,735) + (.2469 x 11,258) + (.0730 x 14,790)

Projected 6-8 Students

2,719 = (.1440 x 10,735) + (.0670 x 11,258) + (.0283 x 14,790)

Projected 9-12 Students

3,683 = (.1890 x 10,735) + (.1074 x 11,258) + (.0301 x 14,790)

TABLE J-4
PROJECTIONS OF DWELLING UNITS AND SCHOOL-AGE CHILDREN
DEMOGRAPHIC MODEL

	Houing Units			School Children		
Year	Single-Family	Multi-Family	Total	K-5	6-8	9-12
1985	6,776	2,254	9,030	2,221	541	1,054
1990	12,126	4,504	16,630	4,765	1,627	1,653
1995	15,926	6,504	22,430	6,372	2,493	2,500
2000	19,026	8,204	27,230	6,839	2,973	3,318
2005	21,926	8,504	30,430	7,094	3,156	3,602
2010	22,876	8,804	31,680	7,055	3,186	3,696
2015	22,876	8,804	31,680	6,836	3,158	4,106
2020	22,876	12,253	35,129	6,960	3,752	4,594
2025	22,876	12,253	35,129	6,337	3,158	4,733
2030	22,876	12,253	35,129	5,085	2,861	4,228
2035	22,876	12,253	35,129	4,505	2,388	3,658
Master Plan	21,993	14,790	36,783			
94% of Peak Number				6,668	3,527	4,449

TABLE J-5
CAPACITIES OF EXISTING AND PROGRAMMED SCHOOLS

School Type	School Capacity*
Elementary (Grades K-5)	
Germantown	488
Fox Chapel	618
Lake Seneca	631
Clopper Mill	654
S. Christa McAuliffe	797
Waters Landing	740
Capt. James Daly, Jr.**	740
Hopkins Road***	740
	5408
Secondary	
M.L. King, Jr. (Grades 6-8)	1055
Proposed Middle School (Grades 6-8)	1055
Seneca Valley (Grades 9-12)	1855
	1855

* *Based on Board of Education Requested FY 90 Capital Budget.*
** *To open Fall 1989.*
*** *To open Fall 1990.*

TABLE J-6
COMPARISON OF PLANNED DWELLING UNITS AND ELEMENTARY SCHOOL CAPACITY

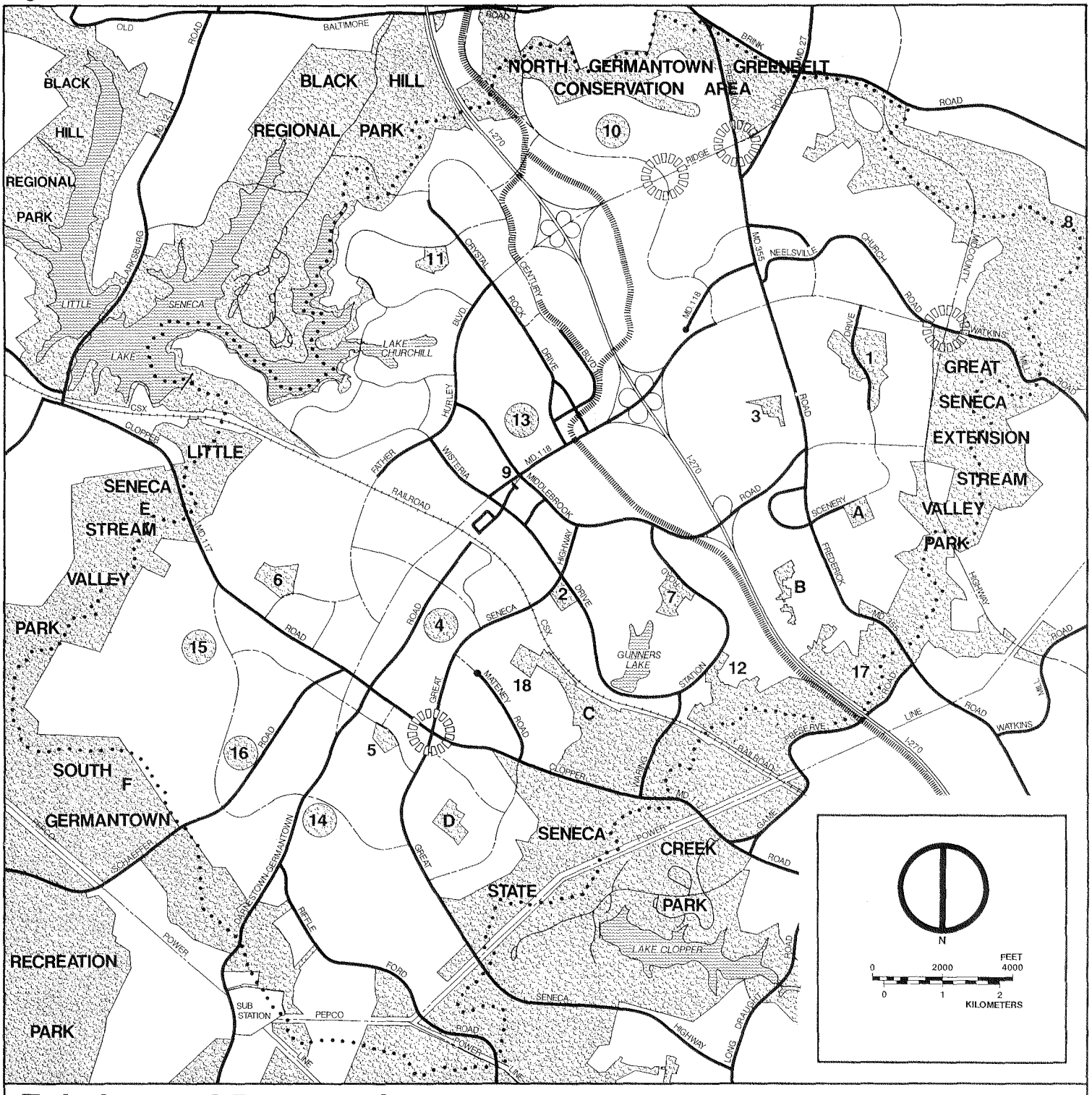
Dwelling Units	
Occupied (7/88)	15,000
Planned	36,783
Ratio of Occupied to Planned Units	41/100
Elementary School Capacity	
Existing Enrollment (2/89) (Grades K-5)	3,396
Highest Estimated Demand	7,569
Ratio of Existing Enrollments to Estimated Demand	45/100

Appendix K
Existing and Programmed Public Parks[7] *(Figure K-1)*

NAME OF PARK (with map designation)	EXISTING FACILITIES
LOCAL PARKS - Developed	
Middlebrook Village	
A. Plumgar Local (10 acres)	Recreation building, lighted basketball court, playground, softball field, and a fitness trail.
B. Fox Chapel Local (16 acres)	Multi-use courts, 2 tennis courts, 2 football/soccer fields, an open shelter, and a hiker-biker trail.
Clopper Village	
C. Gunners Branch Local (55 acres)	Playground, softball field with football/soccer overlay, basketball court, open shelter and 2 tennis courts.
D. South Gunners Branch Local (15 acres)	One football/soccer field, and playground equipment.
Kingsview Village	
E. Camp Seneca (15 acres)	Existing: Swimming pool, recreation building, open shelter, 1 playfield, lodge/dormitory, 1 multi-use court, and play equipment. Programmed: Construction of 5 campground cabins. (FY 93)

7 Park proposals reflect the facilities included in the Adopted FY 90-95 Capital Improvements Program. Facilities and acquisition programmed after FY 89 reflect current proposals and are swubject to change. New proposals recommended in this Plan are not included in this Appendix.

Figure K-1



Existing and Proposed Public Parkland

EXISTING LOCAL PARKS
- A Plumgar
- B Fox Chapel
- C Gunners Branch
- D South Gunners Branch
- E Seneca Day Camp
- F South Germantown

PROGRAMMED LOCAL PARKS
1. Clear Spring
2. Gunners Lake
3. Germantown East
4. Clopper
5. Old Germantown
6. Germantown Estates
7. Waring Station
8. Blunt Road
9. Germantown Square

PROPOSED LOCAL PARKS
10. Millwood
11. Waters Landing
12. Gunners Village
13. Germantown Center
14. Cedar Creek
15. Kingsview
16. Schaeffer Road
17. Middlebrook Hill N.C.A.
18. Bellefields N.C.A.

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

NAME OF PARK (with map designation)	EXISTING FACILITIES
Kingsview Village (Cont'd.)	
F. South Germantown Recreation	Existing: 2 softball fields, 2 baseball fields, 2 football/soccer overlays, 2 tennis courts, multi-use court, playground. Programmed: Shelter with restrooms. (FY 93)
Town Center	
G. Germantown Square	Existing: Gazebo, walkways, and sitting area.

LOCAL PARKS - Capital Improvements Program Proposals

Gunners Lake Village	
(2) Gunners Lake Local Park (9 acres)	(FY 89) - 1 recreation shelter, 2 soccer fields, and play equipment.
(7) Middlebrook South Local Park (11 acres)	(FY 90) - Soccer fields, multi-use court, and play equipment.
Clopper Village	
(4) Clopper Local Park (proposed acquisition of 10 acres in FY 91)	(FY 94) - Shelter, athletic fields, lighted multi-use court, and play equipment.
(5) Old Germantown Local Park (8 acres)	(FY 89) - 10-acre land acquisition; (FY 94) - A multi-use court, tennis courts, athletic field, and play equipment.
Kingsview Village	
(6) Germantown Estates Local Park (18 acres, park-school site)	(FY 91) - Athletic fields and play equipment.
Middlebrook Village	
(1) Clear Spring Local Park (39 acres)	(FY 87/88) - Recreation shelter, multi-use court, soccer field, softball field, play equipment, and fitness trail.
(3) Germantown East Local Park (8 acres)	(Beyond FY 95) - Athletic field, recreation shelter, multi-purpose court and play equipment.
(8) Blunt Road Local Park (part of Great Seneca Extension Stream Valley Park)	(FY 93/94) - Athletic fields, multi-use court, archery range, play equipment, picnic areas, tennis courts, and a shelter.

NAME OF PARK (with map designation)	EXISTING FACILITIES
CONSERVATION AREAS AND REGIONAL PARKS	
North Germantown Greenbelt	Acquisition: 197 acres existing, 338 acres proposed. Development: None currently proposed.
Little Seneca Creek Stream Valley	Acquisition: 448 acres existing, 552 acres proposed. Development: Proposed beyond 1995.
Great Seneca Extension Stream Valley	Acquisition: 1,324 acres existing, 779 acres proposed. Development: Proposed beyond 1994.
Black Hill Regional Park	Acquisition: 1,855 acres acquired, 57 proposed in FY 90; 505-acre lake owned by WSSC. Existing facilities include: lake, comfort station, boat ramp, boat rental, parking area, picnic area, play equipment, trails, shelters. Proposed facilities: Visitor center, additional picnic areas, playground, additional comfort stations, trails, additional shelters, docks, boat rental building, visitor center auditorium, and handicapped fishing pier.

Appendix L
Historic Resources

The Comprehensive Amendment to the Germantown Master Plan includes the resolution of the historic status of a number of historic resources in the Germantown Planning Area. The analysis of these sites within the area Master Plan will also serve as an amendment to the *Master Plan for Historic Preservation.*

Germantown historic resources are quite a varied collection of sites: everything from early log houses to mill site ruins to elaborate Victorian farmhouses to viaducts. The entire history of this part of the County is represented by the remaining structures—including its agricultural past, its economic development through the railroads and mills, and its growth as a residential community. It is essential that the best examples representing each era be preserved for future generations to interpret and appreciate.

There are many benefits to doing an analysis of historic resources in an area while simultaneously working on the broader land use, zoning and transportation issues within the same geographical boundaries. In addition to simply designating historic resources, the Plan can study, analyze and comment on the various planning issues which will influence the historic resources in the future.

The discussion in this appendix on Master Plan status for each historic resource in the Germantown Planning Area will, thus, include comments on (1) architectural/historical significance, (2) environmental settings, and (3) related planning issues.

This appendix also addresses planning issues that relate to historic resources already included in the *Master Plan for Historic Preservation.* Additional comments on Germantown historic resources are also included in appropriate sections of the land use chapters of the Germantown Master Plan and in the Historic Resources chapter.

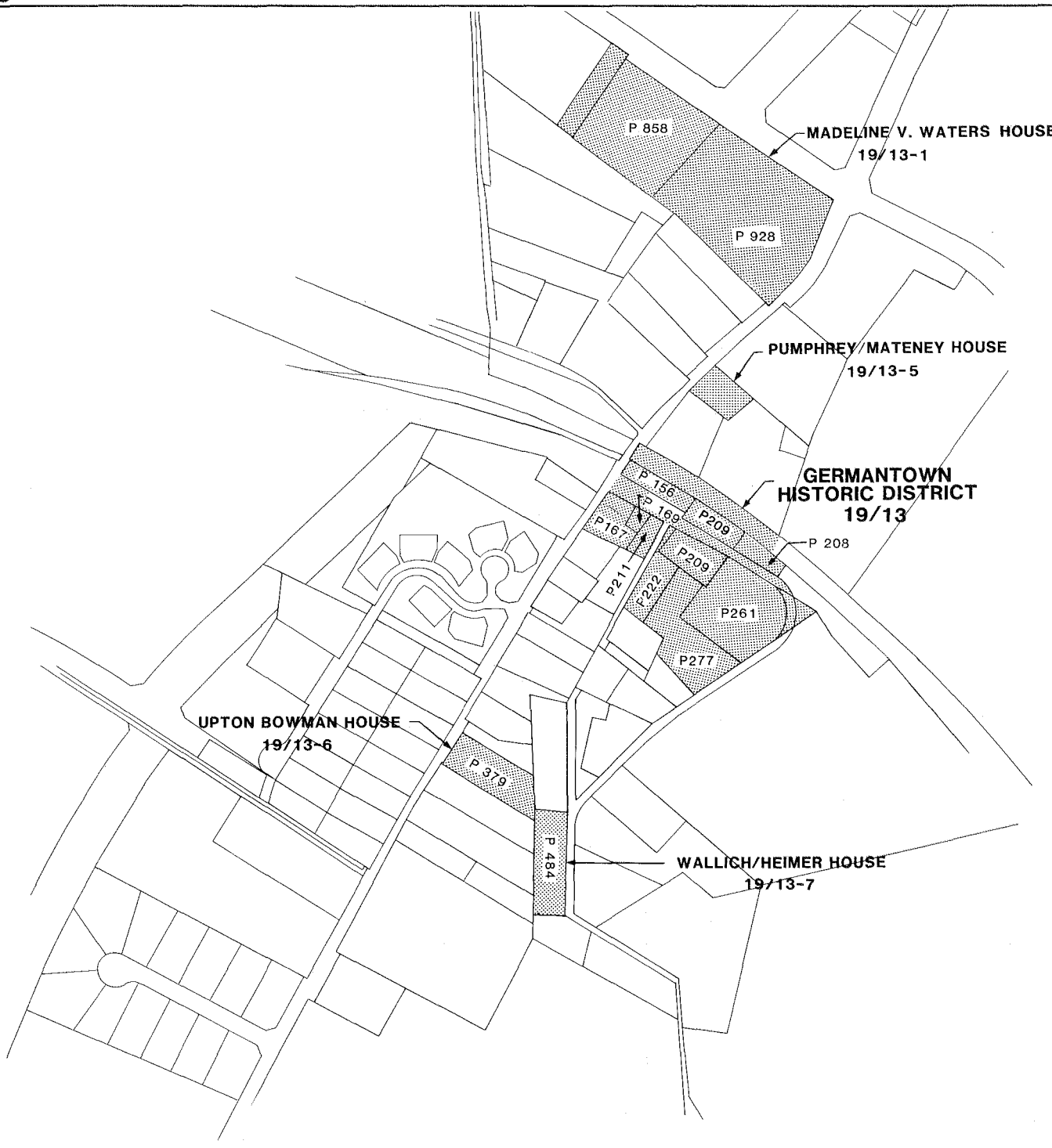
Several of the general concepts that directed the analysis of Germantown's historic resources were:

- the acknowledgment that the number of remaining historic resources in the Germantown area are not sufficient to create an overall historic ambiance, but that, instead, a number of "oases" that recall different aspects of the area's architectural and historical past can be created;
- the need to look at Germantown as a distinct community with a unique historical development that can be remembered and interpreted through the preservation of a representative set of historic resources; and
- the need to evaluate carefully and designate environmental settings around historic resources that will help to assure that future development can be coordinated sympathetically with the resources.

Through this comprehensive analysis it has become clear that there is one common denominator among all of Germantown's historic resources—they are all changing and being affected by the rapid growth of the Germantown area. If progress is to be made in maintaining—on a long-term basis—some sense of the historic and architectural character of the Germantown area, this analysis and designation of historic resources must be seen as only a first step in a larger process of preservation.

Some of the long-range issues which should be addressed in relation to Germantown's historic sites include the creation of buffers and sympathetic environments surrounding the sites, which will necessitate careful evaluation of subdivision plans that involve historic sites, and more efforts to development

Figure L-1



Germantown Historic District

And Adjacent Historic Resources

Comprehensive Amendment
to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

incentives which encourage the preservation and active use of historic structures, such as transfers of development rights, additional tax incentives, and preservation easements.

Historic District

#19/13 Germantown Historic District

This Plan recommends the Germantown Historic District for *Master Plan* designation. It is the one area in Germantown with an intact ensemble of historic resources that recall an overall historic ambiance. It is the heart of late 19th Century-early 20th Century Germantown and should be preserved as a important reminder of the area's history and identity. The collection of buildings—both commercial and residential—which remain in this proposed historic district today are the physical evidence of where, why and how Germantown originated.

The Germantown Historic District is important as it portrays a 19th Century rural railroad town. The 1873 opening of the Metropolitan Branch of the B&O Railroad was the primary factor for the shift of the Germantown settlement from the intersection of Germantown and Clopper Roads to the present location. Accessibility to the railroad enabled area farmers to more easily ship produce, grain, and milk to Washington. The milling and banking activities near the railroad added to the importance of Germantown as a center for economic activity.

Although several buildings have been lost through arson and neglect, there are enough intact historic structures remaining in the Germantown district to justify its designation. In particular, the 1922 bank and the 19th century Pumphrey House/Store are noteworthy. The collection of residential structures is also particularly outstanding, with strong uniformity of design and repetition of detail among the late 19th Century vernacular houses. These houses represent an important component of the Germantown settlement and typify the lifestyle of the townspeople. Each house with its associated outbuildings represents a person who worked in and was a part of this early town: Carlton Browning, the local postman; Upton Bowman, the mill owners; Henry Mateney, the local cattle dealer, etc.

The Germantown Historic District consists of the following properties:

19390 Mateney Road, Harris/Allnutt House (P 261)

19310 Mateney Road, Anderson/Johnson House, including scale (P 277 & 209)

19215 Blunt Avenue, Rayfield/Browning House, including board and batten shed (P 222)

East side of Mateney Road, former Mill Site (P 156)

West side of Mateney Road, Old Germantown Bank building (P 168 & 211)

East side of Mateney Road, B&O Railroad Depot (P 208)

It is recommended that any subdivision or site plan in the areas bordering on and adjacent to the historic district be given careful consideration in terms of its impact on the historic district. In addition, more detailed consideration of the buffering issue is needed, and the development of a "buffer" zoning classification or overlay zone to provide the necessary design guidelines and review may be warranted in the future.

A map of the district boundaries is in this appendix.

Individual Historic Resources

#19/1 Pleasant Fields/ Dr. William Waters House **21200 Waters Road**

This site was included on the *Master Plan for Historic Preservation* in 1979. Pleasant Fields is an extremely important historic site. It is significant to the County both architecturally and historically, and great efforts should be made to encourage the preservation and sensitive adaptive reuse of Pleasant Fields.

A preliminary plan has been filed for a residential subdivision that includes Pleasant Fields. In reviewing this plan, special attention should be given to the proposed integration of this historic resource into the overall scheme and to the potential uses proposed for the house.

#19/2 Waters Log House **Waters Road near I-270**

This 19th Century log house is not recommended for historic designation. In a recent field check, remnants of the log house—specifically, a chimney—were located.

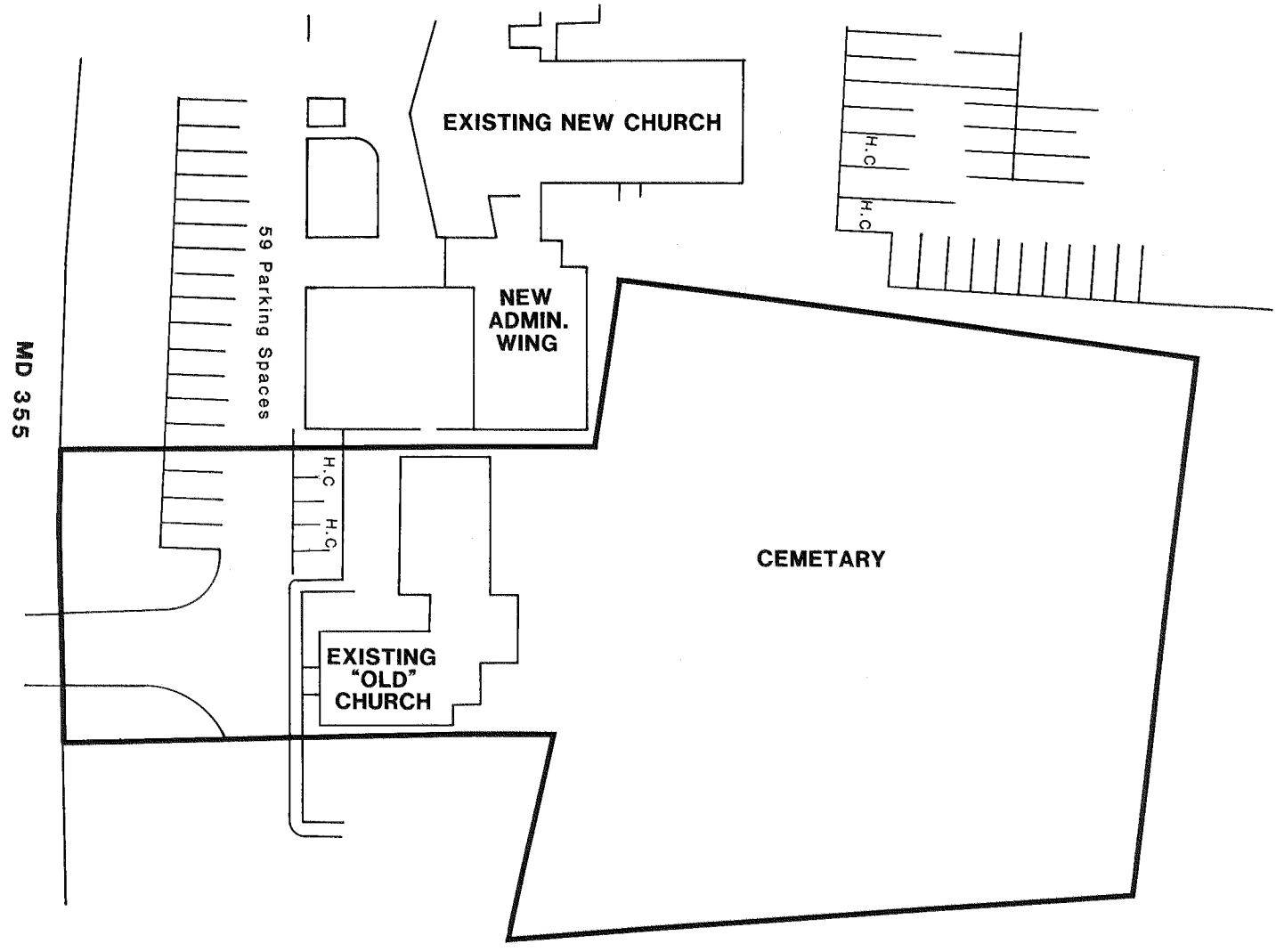
#19/3 Horace Waters Brick House **Waters Landing**

This resource was included on the *Master Plan for Historic Preservation* in 1979. The house subsequently burned and was demolished with Historic Preservation Commission (HPC) approval. The foundations of the house have been made into a park/amenity for the surrounding townhouses and apartments. There are no major planning issues related to this site.

#19/4 Londonderry **21100 Frederick Road**

Londonderry was built circa 1850 by Rev. James Sebastian Hamilton Henderson (civic leader and second pastor of the Neelsville/Darnestown Presbyterian Church). The house has been substantially altered and was relocated from the east to the west side of Rt. 355. Therefore, it is not recommended for placement on the *Master Plan for Historic Preservation.*

Figure L-2



Environmental Setting for Neelsville Presbyterian Church

(Site #19-5)

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Although Londonderry may not warrant historic designation, it is a relatively attractive structure which is located at an important intersection. This Plan suggests that some adaptive reuse of the house—as a restaurant or inn, for example—could be appropriate. The retention of Londonderry as part of the retail center is encouraged.

#19/5 Neelsville Presbyterian Church — **20701 Frederick Road**

This Plan concurs in the HPC's recommendation to designate this fine example of Gothic Revival design on the *Master Plan*. The Neelsville Presbyterian Church was built in 1877 with a sympathetic addition to the structure in 1929. Not only is this church significant for its place in the development of Presbyterianism in Montgomery County, but it is also unique architecturally. Gothic Revival detailing is evident in the steeply pitched roof, the arched windows, and the ornamental bargeboard in the front gable area. Of particular interest are the wooden buttresses which align both sections of the church building. Although these buttresses do not in all likelihood provide structural support to the building, they are a unique interpretation of a Gothic—and, usually, stone—design element in a wooden medium.In addition to the architectural and historical significance of the church, it is also important as a well-known landmark along Frederick Road.

The HPC recommended an environmental setting for this site of 2.5 acres, including the cemetery. This Plan recommends a reduced environmental setting of approximately 1.7 acres, a map of which is included in this appendix.

The widening of Route 355 will have no impact on the historic church or cemetery, since they are set well back from the right-of-way. There are a number of major developments planned for the portion of Germantown east of I-270. This proposed development will significantly change the existing character of this area. Thus, this Plan feels that the protection of Neelsville Presbyterian Church, through its designation as a landmark site and as a reminder of Germantown's past, is all the more important.

#19/6-1 Trundle Farmhouse — **11200 Neelsville Church Road**

The Trundle Farmhouse is a turn-of-the-century rural vernacular dwelling that has undergone considerable alterations, including the addition of aluminum siding and new bay and sash windows. These alterations have had a negative impact on the historical integrity of the house and it is not recommended for historic designation.

#19/6-2 Briggs Farmhouse — **11301 Neelsville Church Road**

This structure is an early-20th Century, wooden American Foursquare house. It is a good example of the style and is relatively unaltered, except for a large addition to the rear of the house. It is very well-maintained.

After careful analysis of this resource—taking into account the detrimental impact of the addition and the proliferation of wooden American Foursquares in other parts of the county—this Plan has not recommended the Briggs Farmhouse for historic designation.

#19/7 Watkins Mill Site — **Watkins Mill Road**

According to the 1974 research, only a shallow section of the race is visible and the mill building burned years ago. This is not one of the better mill sites in the County. This Plan finds this site does not warrant historic designation.

#19/8 Ward (E.G.) Log House — **Route 355**

This resource was removed from the *Locational Atlas* in 1984.

#19/9 Rickett's Cemetery — **End of Rambling Road**

Rickett's cemetery is an old family burial ground, but no structure is associated with it. No further concise history is referenced in the research. This resource is not recommended for placement on the *Master Plan for Historic Preservation*.

#19/10 Waring Viaduct — **B&O Railroad near Waring Station Road**

This triple-arched viaduct over Great Seneca Creek is recommended for placement on the *Master Plan*. It was constructed in 1906 and is an excellent example of this type of bridge. This viaduct was built to replace an earlier wood trestle bridge as a result of the straightening and double tracking of the line between Germantown and Gaithersburg. It is important for its association with the B&O Railroad, the construction of which was instrumental in the development of Montgomery County.

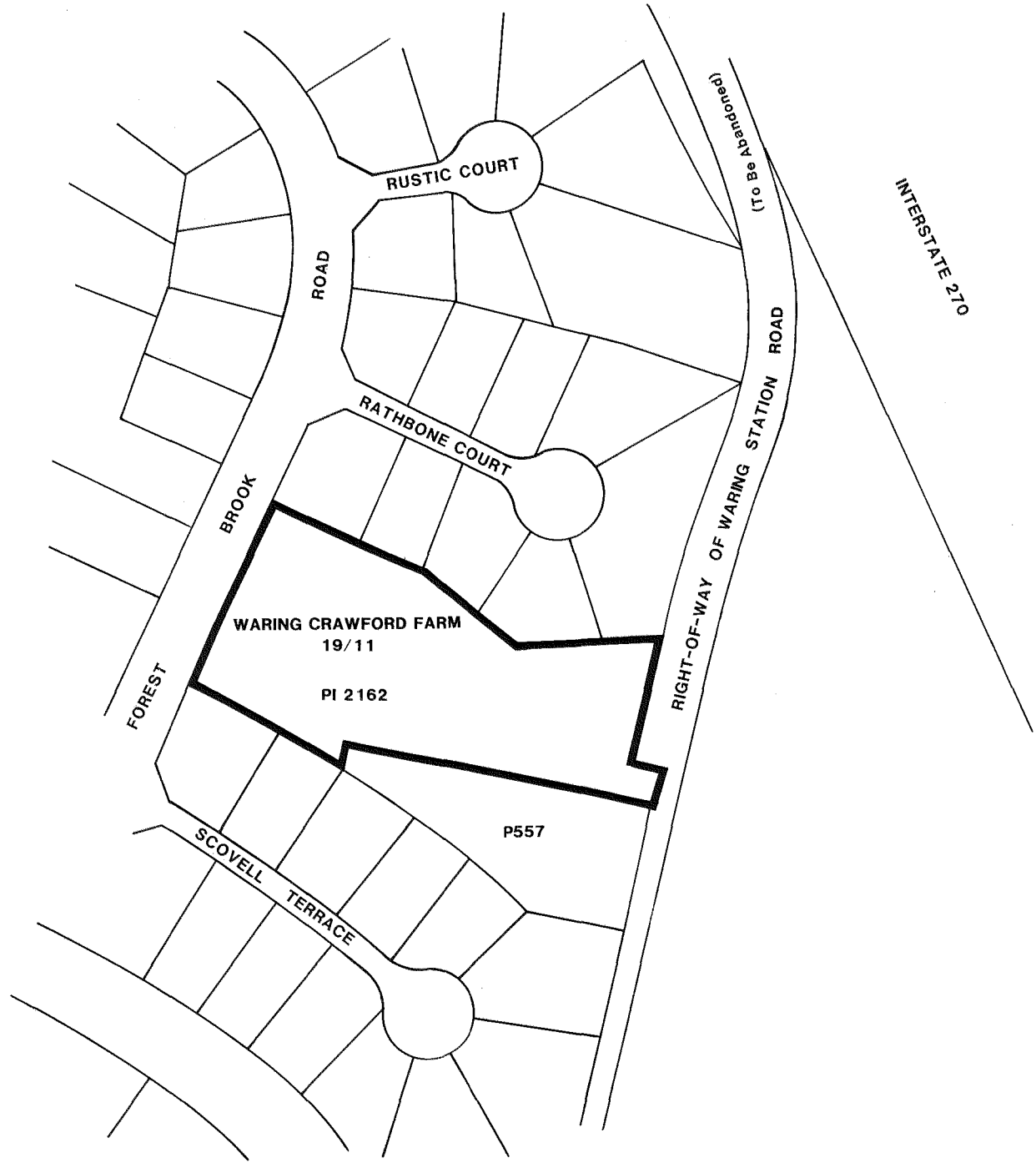
The environmental setting for this resource should include only the footprint of the viaduct structure. There are no significant planning issues related to this historic resource.

#19/11 Waring-Crawford Farm — **19100 Waring Station Road**

This Plan recommends the Waring-Crawford Farm for placement on the *Master Plan*. This is a particularly distinguished farmhouse with a number of unique architectural features: the front facade bay, the two-story tower with pyramidal roof, and the turned column posts with decorative brackets. Like many farms in the area, the Waring-Crawford house started as a log and frame structure and evolved into a more architecturally sophisticated residence. The original portion of the property was probably built in 1881.

The original environmental setting recommended by the HPC was the 84.88 acre parcel. Since the HPC's evaluation, this parcel has been subdivided and devel-

Figure L-3



Environmental Setting for Waring Crawford Farm
(Site #19-11)

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oped. The Waring-Crawford house has been included in this development on a larger-than-normal lot: approximately 1.7 acres. This lot is recommended as the environmental setting for the property and a map of this setting is included in this appendix.

The relocation of Waring Station Road will mean that access to the Waring-Crawford house will be from Forest Brook Road. This will reverse the orientation of the house so that the rear of the structure only will be visible from the public street. This orientation is unfortunate as the front of house is particularly interesting from an architectural standpoint. The concept of incorporating an historic property into a new development scheme is positive; however, it should be implemented in the future with greater sensitivity.

#19/12 Log Cabin/Middlebrook Road — Middlebrook Road

In 1983, the HPC found that this log house did not meet any criteria of the Ordinance. In a recent field check, it was found that the cabin no longer exists. Thus, this resource is not recommended for historic designation.

#19/13-1 Madeline V. Waters House — 19500 Germantown Road

This resources was included on the *Master Plan for Historic Preservation* in 1985. The Madeline V. Waters House burned soon after designation and was demolished. There are no remnants of the foundation of the house, although the allee of trees, which had led to house, remains.

This Plan strongly recommends that this site be retained on the *Master Plan for Historic Preservation* for two reasons:

1. The *Master Plan for Historic Preservation* has never been "re-amended" to remove a resource—even after that resource has been damaged or destroyed by fire (for example, the Horace Waters Brick House described above). To do so at this time would set a very dangerous precedent which could potentially encourage the neglect and destruction of other *Master Plan* sites in the County.

2. The Madeline V. Waters House site is a strategic location which, if handled carefully, can be an important area of visual transition between the Town Center and the historic district. Historic designation does not preclude the development of the Waters House site, but it does provide an opportunity to guide that development in a way which will be an asset to the historic district and to Germantown as a whole.

#19/13-5 Pumphrey/Mateney House — 19401 Germantown Road

This is a two-story frame house with Carpenter Gothic detailing. It has a gable roof with decorative trim at the gables and a front gable arched window. There is a projecting bay on the west side and a side porch with decorative trim.

Robert H. Pumphrey purchased the property in 1883 and built this structure soon after. He ran a store here during the 1890's until a separate building was constructed next door. The Pumphrey family lived in the house and were succeeded by the Mateney family, Mrs. Mateney being the daughter of Robert Pumphrey.

#19/13-6 Upton Bowman House — 19219 Germantown Road

The Bowman House is a two-story, stuccoed, cross-gable house with decorative bargeboards in the gable ends. It was built around 1901.

This structure is historically important as the home of Upton Bowman, builder and owner of the first Germantown mill. This steam-operated flour mill was located next to the railroad tracks and Bowman, along with his two brothers, operated this business from 1888 to 1917.

#19/13-7 Wallich/Heimer House — 19120 Mateney Road

This residence was built in 1913 and is a fine example of a vernacular house with Queen Anne influences. Particularly notable are the turreted projecting bay at the front corner, the shingle sheathing on the second story, and the classical columns supporting a pedimented front porch.

John Wallich, the original builder and owner, was a local carpenter.

#19/14 Henry Musser Farmhouse — 14615 Hoyles Mill Road

This Plan does not designate the Henry Musser Farmhouse on the *Master Plan*. This structure is a vernacular farmhouse built about 1890. Although it does exhibit elements of the Gothic Revival style, it is not unique or a particularly outstanding example of this locally common architectural type.

A preliminary subdivision plan has been filed on this property for a large residential subdivision. This subdivision plan does not propose the retention of the Henry Musser Farmhouse.

#19/15 Richter Farmhouse — 15000 Hoyles Mill Road

This house is a late example of the rural vernacular Gothic Revival style of architecture. It has been substantially altered with the addition of siding and a picture window. In addition, it is not a unique or outstanding example of the Gothic Revival style. It is not recommended for historic designation.

#19/16 Richter/King Farm 14210 Schaeffer Road

This structure is no longer standing. According to the research, this house was architecturally significant as a late Victorian building and is historically associated with the Lincoln assassination plot. One of the conspirators fled to this farm, where he was eventually captured by Union soldiers. HPC's research indicates that the house was badly damaged by a fire in 1982 and appeared beyond any reasonable expectation of repair. The house was evaluated by the HPC at the request of Housing Code Enforcement which wanted the owner to either repair it or tear it down.

The Richter/King Farm is not recommended for placement on the Master Plan. However, since it is evident from the research that this site bore significance for its architecture and still bears significance for its historical association with the Lincoln assassination, this Plan recommends that a plaque commemorating the site and its history be erected on the site.

#19/17-1 Leaman Farmhouse 13820 Clopper Road

This Plan finds that the Leaman Farmhouse does not warrant designation on the *Master Plan*. The original section of this two-story farmhouse was built of logs in the 1860's, probably by John Frederick Richter. It has been enlarged over the years and is a good example of a vernacular Victorian structure. Architectural features which are significant include a narrow, two-story projecting bay on the southeast corner of the house with a semicircular window in the gable end and a three-bay, one-story porch on the front facade which is supported by classical columns.

#19/18 Snyder/King Barn #1 MD 118, South of Clopper Road

This resource was removed from the *Locational Atlas* in 1984.

#19/19 Grusendorf Log House 13315 Clopper Road

The Grusendorf Log House was placed on the *Master Plan* in 1981. This resource has subsequently burned and is in very deteriorated condition. This Plan recommends that the log structure be renovated and integrated into any new development planned for the property. Moving the structure to a new location, for example, the Seneca Creek State Park, has been suggested. Although this is a possible option, it is less preferable than retaining the structure at its present location. The Grusendorf Log House is one of the last vestiges of Old Germantown and, if at all possible, should remain in its original location as a visual reminder of the small crossroads community that was the antecedent of Germantown today.

#19/20 Musser Barn and Cemetery 12811 Clopper Road

This resource was removed from the *Locational Atlas* in 1984.

#19/21 Clopper's Mill Ruins Clopper Road at Great Seneca Creek

This Plan recommends this site for designation on the *Master Plan for Historic Preservation*. The Clopper's Mill ruins are located within Seneca State Park and are the only remnants of the extensive holdings of Francis C. Clopper—an outstanding businessman in Montgomery County in the mid-1800's. Clopper was a prosperous owner of land, a woolen factory, and mills. He was also one of the principal backers of the Metropolitan Railroad in the 1850's and was instrumental in persuading the B&O to take over construction of the Metropolitan Branch after the original railroad failed. These ruins are significant as one of the few remaining distinguishable mills in the county, as a representation of the importance of mills in the agricultural development of the County, and for their association with Clopper.

The environmental setting is a rectangle of approximately 1 acre, extending from Clopper Road to the creek and including the mill and millrace.

The widening of Clopper Road could have a detrimental impact on the historic site. This Plan recommends that an effort be made to adjust the proposed alignment of Clopper Road to avoid the mill ruins.

#19/22 Strider Log Meathouse Clopper Road

The 1974 research indicates that this was a hewn-log meat house and the only remains of the old Taney farm. There is no remnant of the structure at the location designated on the *Locational Atlas*. However, a representative of the Maryland State Department of Natural Resources asserted that the structure was disassembled and moved to a location within the Montgomery County park system. Efforts to track down this structure have so far been unsuccessful. It is not located at the Brookside Nature Center—the log meathouse there was moved in from a different location. The Park Historian does not know the location of the Strider Log Meathouse and feels that it probably disintegrated.

This resource is not recommended for designation.

#19/23 Samuel Williams House Williams Range off MD 118

The HPC found that the Williams House was too greatly altered by deterioration to warrant placement on the Master Plan. According to the research, this circa 1860 house is a rural vernacular farmhouse associated with the Williams family, early settlers of the Germantown region. This Plan concurs with the HPC recommendation to not designate this resource.

#19/24 Snyder/King Barn #2 — **MD 118 at Riffleford Road**

The Park Historian reports that this barn "disappeared" 4-5 years ago. It is not recommended for historic designation.

#19/25 Germantown Baptist Church — **17640 Riffleford Road**

This church is a 1958 replacement of the original 19th century church and meets none of the Ordinance criteria. It is not recommended for *Master Plan* designation.

#19/26 C.T. Leaman House — **17600 Riffleford Road**

The Leaman House was built in 1867, with an addition built around 1895 by Christian Leaman, one of the early settlers of Old Germantown. The house is a good example of a rural vernacular farmhouse, but has been substantially altered by several major new additions. These additions have changed the basic form of the house and, for this reason, this Plan is not recommending the C.T. Leaman House for *Master Plan* designation.

#19/27 John H. Gassaway Farm — **17200 Riffleford Road**

This Plan recommends the Gassaway Farm for historic designation. This structure, built in 1872, is an unusual Victorian farmhouse with many fine decorative elements. Two two-story gabled sections are joined by a two-story galleried center section in an "H" plan. Some of the interesting architectural features include bracketed porch posts, scalloped bargeboards, and elaborate window treatments on the north facade. In addition to its architectural interest, the house is important for its association with John Hanson Gassaway. Mr. Gassaway was a leading citizen in the western part of the county in the 19th Century. He was president of Montgomery County Agricultural Society and operated a successful grain and fertilizer store in Germantown.

The environmental setting is the entire parcel of 6.95 acres, including the house, the bank barn, the corncrib, the fireplace, the windmill, and the slave quarters.

There are no potential land use or transportation conflicts associated with this property.

#19/33 Cider Barrel — **20410 Frederick Road**

This Plan recommends the Cider Barrel for placement on the *Master Plan*. This distinctive roadside landmark was built in 1926 as a retail outlet for Andrew Baker's agricultural products: primarily cider and fresh apples. The Cider Barrel has been well-known county feature for many years—the 1920's was a boom period when touring the countryside in private automobiles became a popular pastime and the Cider Barrel was always a favorite place to visit. It remains a successful business today. The structure is significant for its association with Andrew Baker, who was a prominent Germantown entrepreneur and who spearheaded the move to build the Germantown Bank in 1922, serving as one of its first trustees. The Cider Barrel was noted as a unique resource in the HPC's recent survey of 20th Century historic sites: "No examples of auto-related 'signature architecture' have been found in the County except for the Cider Barrel on Frederick Road north of Gaithersburg...".

The environmental setting is the footprint of the Cider Barrel and adjacent fruit stand, including the sign for the Cider Barrel.

The widening of Route 355 may have a detrimental impact on this historic resource.

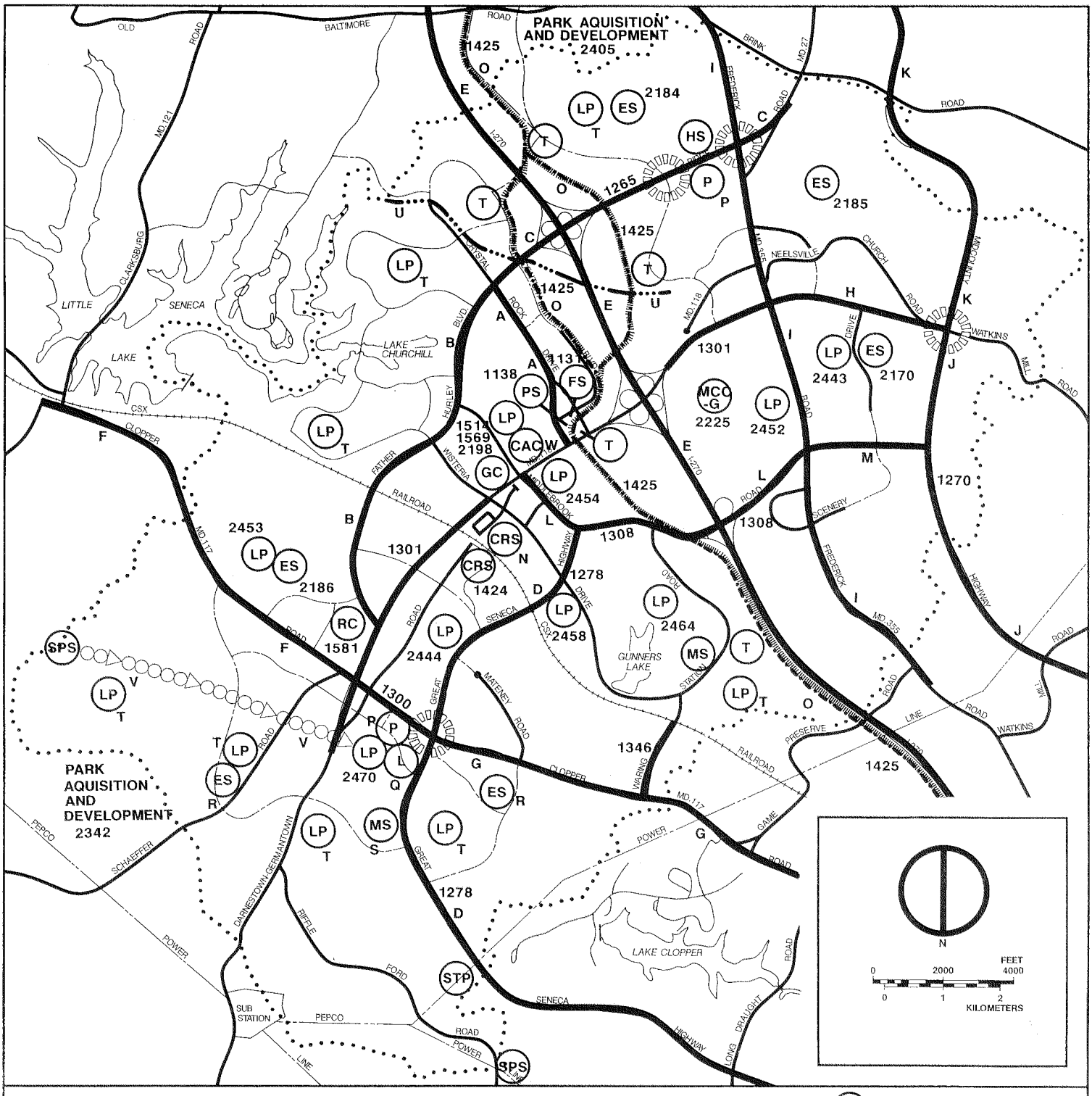
Miscellaneous Cemeteries

Citizens in Germantown have pointed out several old cemeteries: the Old Methodist Church cemetery on Clopper Road, the Musser cemetery near Weis Market, and the Arnold cemetery. None of these sites have structures associated with them.

It has been a general policy to not designate cemeteries which are not associated with a building of some sort and which are not noteworthy or unusual. This Plan reaffirms this policy, but notes that each cemetery should continue to be evaluated on a case-by-case basis.

Although this Plan does not recommend the designation of the Germantown cemeteries mentioned above, they should be taken into consideration and State laws governing cemeteries should be followed if new development will affect the plots.

Figure M-1



Capital Projects

- Roads
- Transit Easement Line
- Sewer Line(Gravity)
- Sewer Line(Force Main)
- (T) Transit Station
- (P) Park-n-Ride
- (LP) Local Park
- (ES) Elementary School
- (MS) Middle School
- (HS) Senior High School
- (L) Library
- (SPS) Sewage Pumping Station
- (STP) Sewage Treatment Plant
- (RC) Recreation Center
- (GC) Government Center
- (CAC) Cultural Arts Center

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

The Maryland-National Capital Park and Planning Commission

Appendix M
Capital Projects
(See Figure M-1 for Locations)

Map Number[1]	Description[2]	Responsible Agency	Estimated Project Cost (FY 90 Dollars)[3]	Status
PROJECTS IN CURRENT PROPOSED CAPITAL IMPROVEMENTS PROGRAM (FY 89-96)				
1131	Hyattstown Fire Station 29: Addition	County	$ 1,275,000	Design Stage
1138	Germantown Police Station: Renovation and addition	County	$ 3,539,000	Design is scheduled to begin in FY 90 with completion expected in FY 91.
Not Applicable	State I-270 Widening Project: Construct partial interchange at Middlebrook Road and widen I-270 from 6 to 8 lanes north to Middlebrook Road and from 4 to 6 from MD 118 to MD 121	State	$16,950,000	Final Design; advertised for bids July, 1988; estimate open to traffic summer of 1991
Not Applicable	Crystal Rock Drive: Construct 4 lanes between MD 118 and Germantown Drive	Private	$ 3,406,000	Completed
1270	Germantown/Montgomery Village Connector: Construct 4 lanes from Montgomery Village Avenue to MD 118 Extended (M-61), and 2 lanes to MD 355	County/ State	$26,102,000	Planning Stage
1265	Father Hurley Boulevard: 3 Phase Project to extend to MD 27 and widen to 7 lanes and construct full movement interchange with I-270	County	$12,118,000	Planning Stage

NOTES:

1 *These numbers are the page numbers of the project description forms of the approved FY 89-94 CIP.*

2 *Project names, scopes, and descriptions are as they appear in the approved FY 89-94 CIP, and may be changed in future CIPs.*

3 *Certain projects may be funded and/or constructed in whole or in part by private developers.*

Map Number[1]	Description[2]	Responsible Agency	Estimated Project Cost (FY 90 Dollars)[3]	Status
Not Applicable	Father Hurley Boulevard Widening: Widen from 2 to 4 lanes form Wynnfield Drive to Crystal Rock Drive	Private	—	Completed
1278	Great Seneca Highway Phase III: Construct 4 lanes from Middlebrook Road to Quince Orchard Road	County	$26,488,000	Phase IIIA is Operational: Phase IIIB is under construction between Great Seneca Highway and Quince Orchard Road
1300	MD 117 (Clopper Road): Widen to 6 lanes between Relocated MD 118 and Great Seneca Highway	County	$1,882,000	Preliminary Design Stage
1301	MD 118 Relocated: Construct 6 lanes from west of Clopper Road to Wisteria Drive and from I-270 to MD 355	County/ State	$20,950,000	Detailed Design Stage
1308	Middlebrook Road from Great Seneca Highway to MD 355: Widen from 2 lanes to 6 lanes from Great Seneca Highway to I-270 and construct 3 lanes from I-270 to MD 355; Construct Partial Interchange at I-270	County	$ 9,760,000	Phase I - Preliminary Design Stage Phase II - Construction Stage
1346	Waring Station Road: Widen from 2 lanes to 4 lanes from CSX Railroad to MD 117	County	$ 2,505,000	Phase I - Preliminary Design Stage Phase II - Planning Stage
1424	Germantown Commuter Rail Station: Construct new parking area and construct replica of 1891 Station	County	$ 1,946,000	Phase II - Parking Lot Completed July 1987 Phase III scheduled for completion Fall 1988.
1425	Shady Grove/Clarksburg Transitway Study	County	$ 250,000	Conceptual
1514	Upcounty Government Center	County	$ 7,686,000	Construct FY 89: Complete FY 90
1569	Germantown Library (co-location with the Upcounty Government Center)	County	$ 2,497,000	Design Stage Underway: Construction to begin in mid FY-89
1581	Germantown Recreation Facilities	County	$ 5,775,000	Site selection will be completed FY-90

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Map Number[1]	Description[2]	Responsible Agency	Estimated Project Cost (FY 90 Dollars)[3]	Status
2170	Clear Spring (Lake Seneca Area) Elementary School	MCPS	$ 7,655,000	Furniture and equipment.
2184	Germantown Area 1991 (Fox Chapel) Elementary School	MCPS	$ 8,008,000	Construction
2185	Germantown Area Elementary School 1993	MCPS	$ 7,069,000	Planning
2186	Waters Landing Elementary School	MCPS	$ 6,890,000	Planning
2190	Quince Orchard High School	MCPS	$25,987,000	Planning
2191	Kentlands (Quince Orchard Area) Elementary School	MCPS	$ 8,040,000	Planning
Not Applicable	Germantown Middle School	MCPS	$14,909,000	Planning
Not Applicable	Area 3 High School	MCPS	$ 1,125,000	Planning
2198	Administrative Office, Area 3 of Montgomery County Public Schools (Co-location with the Upcounty Government Center)	MCPS	$ 2,658,000	Planning
2225	Germantown Building No. 4, High Tech Instructional Building	Montgomery College	$11,248,000	Conceptual Stage
2443	Clear Spring Local Park	M-NCPPC	$ 270,000	Acquisition
2444	Clopper Local Park	M-NCPPC	$ 326,000	Acquisition and Development at the Conceptual Stage
2452	Germantown East Local Park	M-NCPPC	$ 352,000	Acquisition: Land in Parkland Status Development Deferred Pending Adequate Access
2453	Germantown Estates Local Park	M-NCPPC	$ 472,000	Acquisition: Completed Development: Conceptual Stage
2454	Germantown Square Park	M-NCPPC	$ 152,000	Acquisition: Property was transferred to M-NCPPC at no cost Development: Engineering Stage

NOTES:

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Map Number[1]	Description[2]	Responsible Agency	Estimated Project Cost (FY 90 Dollars)[3]	Status
2458	Gunners Lake Local Park	M-NCPPC	$ 492,000	Acquisition: Completed through Dedication Development: Engineering Stage
2464	Middlebrook South Local Park	M-NCPPC	$ 447,000	Acquisition: Complete Development: Preplanning Stage
2470	Old Germantown Local Park	M-NCPPC	$ 374,000	Acquisition: 8 acres in Park Status, 10 acres pending FY-88 Development: Conceptual Stage
2405	North Germantown Conservation Park	M-NCPPC	$ 899,000	Acquisition: 197 of the ultimate 535 acres Development: Not applicable
2342	South Germantown Regional Park	M-NCPPC	$ 2,946,000	Acquisition: 549 of the ultimate 657 is already in Parkland Status
2627	Seneca Creek Wastewater Treatment Plant (WWTP) Upgrade	WSSC	$25,552,000	Construction underway
2630	Seneca Creek WWTP Retention Basin	WSSC	$ 3,370,000	Under Construction
Not Applicable	Clarksburg WWPS Force Main	WSSC	$ 407,000	Preliminary Design
Not Applicable	Great Seneca Highway Water Loop	WSSC	$ 124,000	Preliminary Design

NOTES:

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3 *Certain projects may be funded and/or constructed in whole or in part by private developers.*

Map Number	Description[1]	Responsible Agency	Estimated Project Cost (FY 90 Dollars)[2]	Location[3]	Status
PROJECTS NOT INCLUDED IN CURRENT CAPITAL IMPROVEMENTS PROGRAM					
A	Crystal Rock Drive (M-84): Widen from 4 lanes to 6 lanes from MD 118 to Father Hurley Boulevard	County		TC EC CH	Expansion to support growth in the employment corridor.
B	Father Hurley Boulevard (M-27): Construct 6 lanes from M-61 to Wisteria Drive and widen to 6 lanes from Wisteria Drive to Crystal Rock Drive	County		TC CH KI	New construction from Relocated MD 118 to Wisteria Drive and widening from 4 to 6 lanes from Wisteria Drive to Crystal Rock Drive
C	Father Hurley Blvd./Ridge Road (M-27): Widen from 4 lanes to 6 from Crystal Rock Drive to MD 27	County		EC CH NE	Partially covered by Stage III of project described on Page 1263 of approved FY 89-94 CIP
D	Great Seneca Highway (M-90): Widen from 4 lanes to 6 lanes from planning area southern boundary to Middlebrook Road	County		GL CL	Expansion to support growth and reduce congestion
E	I-270: Widen from 6 lanes to 8 lanes from Middlebrook Road to Clarksburg; extend collector-distributor roads from Gaithersburg to Clarksburg	State		EC	State will begin project planning in FY 90
F	MD 117 (Clopper Road; M-26): Widen from 2 lanes to 6 lanes from Bouds, beyond planning area western boundary, to relocated MD 118	State		KI	State controlled expansion project
G	MD 117 (Clopper Road): Widen from 2 lanes to 6 lanes from Great Seneca Highway to planning area southeastern boundary, and beyond to Longdraft Road	State		CL	State controlled expansion project
H	MD 118 Extended (M-61): Widen from 4 lanes to 6 lanes from MD 355 to M-83	County		MI NE	Widening, to be constructed initially as a 4-lane highway (see page 1270 of FY 89-94 CIP)

NOTES:

1 *Project scopes, and inclusion in future CIP budgets, are subject to the approval process for public projects.*

2 *Certain projects may be funded and/or constructed in whole or in part by private developers; costs, where available, of projects not included in the current Capital Improvements Program are based on comparable projects in the FY 89-94 CIP.*

3 *TC = Town Center; EC = Employment Corridor; CH = Churchill; GL = Gunners Lake; CL = Clopper; KI = Kingsview, MI= Middlebrook; NE = Neelsville.*

Map Number	Description[1]	Responsible Agency	Estimated Project Cost (FY 90 Dollars)[2]	Location[3]	Status
I	MD 355 (M-6): Widen from 2 lanes to 6 lanes throughout the planning area	State		MI NE	State controlled expansion project to address north/ south congestion
J	Midcounty Highway (M-83): Widen Widen from 4 to 6 lanes from Montgomery Village Avenue, beyond planning area eastern boundary, to MD 118 Extended (M-61)	County		MI NE	Expansion to support growth growth (see page 1270 of FY 89-94 CIP)
K	Midcounty Highway: Widen from 2 lanes to 6 lanes from M-61 to planning area northern boundary and beyond to Clarksburg	County		NE	Expansion to support growth
L	Middlebrook Road: Widen from 4 lanes to 6 lanes from MD 118 to MD 355	County		TC GL MI	Expansion to support access to Town Center
M	Middlebrook Road: Widen to 6 lanes from MD 355 to Midcounty Highway	County		MI	Widening, to be constructed initially as a 4-lane highway (see page 1270 of FY 89-94 CIP)
N	Expand MARC Commuter Rail Station	State		TC	Additional expansion beyond 250 car lot and station replica under construction in Fall 1988
O	Construct Transitway north from Shady Grove Road Metro Station, beyond planning area southern boundary, to Clarksburg, beyond planning area northern boundary, stations with parking in Germantown	County		TC EC GL NE	Proposed 70 ft. right-of-way, and 4 transit stations south (GL-2), Town Center (TC-2) and north EC-6)
P	Construct 2 Park-and-Ride Facilities	County	$615,000 each	CL NE	2 sites; adjacent to Regional Mall, and along Clopper Road (M-26) near Great Seneca Highway
Q	Expand Library or construct new Branch Library in Clopper Village, if needed	County		TC KI	Library is component of Upcounty Government Center, which may limit expansion

NOTES:

1 *Project scopes, and inclusion in future CIP budgets, are subject to the approval process for public projects.*

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Map Number	Description[1]	Responsible Agency	Estiamted Project Cost (FY 90 Dollars)[2]	Location[3]	Status
R	Construct 2 elementary schools	MCPS	$ 7,330,000 each	KI CL	Actual sites, capacity, and timing subject to growth and inclusion in future CIP proposals from MCPS
S	Construct one middle school	MCPS	$11,662,000 ($14,989,000 MCPS FY 90 CIP request)	KI CL	Actual site, capacity, and timing, subject to growth and inlcusion of future CIP proposals from MCPS
T	Construct 7 local or community parks	M-NCPPC	$ 400,000 each	TC All villages	Actual sites to be designated
U	Extend sewer lines into Employ-ment Corridor and Neelsville Village	WSSC		EC	Additional information may be provided in the recommended FY 90-95 CIP budget
V	Construct sewage pumping station and force main to serve Analysis Area KI-2	WSSC		KI	Additional information may be provided in the Recommended FY 90-95 CIP Budget
W	Cultural Arts Center			TC	Possibility exists for private development of this public facility
Not Applicable	Complete needed sidewalk and pathway connections	County		TC EC All villages	Future CIP road projects should include sidewalks as described in plan

Additional projects to correct existing problems

Construct sidewalks on both sides of Waters Landing Drive from Hazelnut Court to Crystal Rock Drive.

Construct sidewalks on both sides of Father Hurley Boulevard from Middlebrook Road to Wynnfield Drive.

Construct a sidewalk on the east side of Middlebrook Road from Father Hurley Boulevard to MD 118.

Construct a sidewalk along existing MD 118 from railroad tracks to Germantown Elementary School.

Plant street trees along Middlebrook Road from MD 118 to Great Seneca Highway.

Plant street trees along Crystal Rock Drive from Father Hurley Boulevard to MD 118.

Install landscaping along Great Seneca Highway from Middlebrook Road to Dairymaid Drive.

NOTES:

1 *Project scopes, and inclusion in future CIP budgets, are subject to the approval process for public projects.*

2 *Certain projects may be funded and/or constructed in whole or in part by private developers; costs, where available, of projects not included in the current Capital Improvements Program are based on comparable projects in the FY 89-94 CIP.*

3 *TC = Town Center; EC = Employment Corridor; CH = Churchill; GL = Gunners Lake; CL = Clopper; KI = Kingsview, MI= Middlebrook; NE = Neelsville.*

Appendix N

Market Analysis - Germantown Town Center

Legg Mason Realty Group, Inc. (LMRG) was retained to advise the Montgomery County Council on whether the proposed Milestone Mall would seriously undermine the downtown focal point for the Town Center location specified in the Germantown Master Plan. Based upon the scope of work agreed upon and the documentation reviewed, LMRG has prepared a report of findings and recommendations. That report is summarized in this Appendix.

Study Purpose

The main purpose of the study is to provide the Montgomery County Council with an objective analysis concerning the viability of the proposed Town Center as it may be affected by the development of the proposed Milestone Mall. The County Council has expressed concern that a regional mall could detract from the Town Center and affect its viability as an appealing focal point for Germantown.

However, in addition to this main question, several secondary questions were raised during the development of the work statement for this project, which the study has attempted to answer.

Summary

1. The Germantown area is currently one of the fastest growing areas in Montgomery County. Population, income and employment growth are projected to continue in this area into the next century.
2. The Final Draft of the Comprehensive Amendment to the Germantown Master Plan provides an excellent framework from which a Germantown Town Center can be developed.
3. LMRG defines a Town Center as a compact and contiguous, high density, mixed use area which includes a balance of retail, office, entertainment and residential uses along with public open space.
4. The Town Center Core (TC-1) is not an appropriate site for the development of a regional mall.
5. Due to changes in consumer spending patterns and the retail industry, the Town Center Core would probably not attract large department stores, even if Milestone Mall is not developed.
6. Retail market supply and demand measurements are used to test general market support. These measurements are not meant to test the ultimate success of specific projects, which depends on a multitude of other factors including location, access, management, lease rates, and market perceptions.
7. The supply of neighborhood/community level shopping centers in Germantown will likely total 743,000 square feet by 1990.
8. Germantown and the surrounding market areas will support 796,800 square feet of neighborhood/community shopping center space by 1990.
9. Growth trends in Germantown indicate that almost 925,000 square feet of additional neighborhood/community retail space will be supportable by 2005.
10. Growth trends in Montgomery and Frederick Counties indicate that there is sufficient market support for the Milestone Mall. If the

Kentlands Mall is also developed, the market will support both malls by 2005.

Conclusions

The analysis performed by LMRG has resulted in the following conclusions, based on the questions included in the County Council's February 16, 1989, Request for Proposal.

1. **Can the Town Center function as a viable focal point of community activity as envisioned in the Master Plan, or will the regional mall be so dominant that the Town Center cannot serve its intended function?**

   LMRG concludes that the Town Center Core area (TC-1) can function as a viable focal point of community activity as envisioned in the Master Plan if it is developed as a balanced, mixed-use center. Retail uses should include a strong entertainment and restaurant presence in order to specialize this area and diminish the competition between the Town Center and the Mall.

   If entertainment and restaurant uses are not limited in the Milestone Mall, they may have a negative impact on the Town Center Core. However, if these uses could be phased properly in both locations, the negative impact and restaurant uses are limited in the Mall during the first several years that the Town Center is being developed, these uses will have the opportunity to establish a broad client base in the Town Center Core before competition can be placed in the Milestone Mall.

2. **If the Milestone Mall is not built (and no other land is designated for similar commercial use), to what extent will this enhance or diminish the viability of the town center?**

   Due to the current nature of retail operations and tenanting strategies, it is not likely that the absence of the Milestone Mall would significantly enhance retail development in the Town Center Core. As the study documents, the Town Center Core would probably not attract the general merchandise tenants originally envisioned in the 1974 Master Plan, even if the Milestone Mall was not developed.

   The study concludes that, if developed as a mixed use center, the Town Center will function separately from the Milestone Mall. Also, if Milestone is not developed, Germantown residents will continue to frequent Lakeforest Mall for their general merchandise and apparel needs.

3. **What are the specific conditions needed to make a Town Center viable?**

   The specific conditions needed to make a Town Center viable are detailed in the Town Center Section of the report and include the following:

   - an active and growing market;
   - a compact area uninterrupted by other uses;
   - a diverse and concentrated mix of uses that promotes weekday, weeknight and weekend activities; and
   - a quality environment that establishes a distinct sense of place.

   All of these conditions can be met by carefully planning the development of the Town Center Core parcel (TC-1).

4. **What types of retail, commercial, residential, and cultural development would result in a unique environment so as to achieve a viable Town Center?**

   The types of retail, commercial, residential, and cultural uses that would result in a unique environment include the following uses:

   - Retail — convenience and personal services for Town Center area residents and workers; entertainment uses such as movie theatres, dinner theatres, and health clubs; and synergistic uses such as eating and drinking establishments, both formal sit-down and informal ice cream and pizza parlors, and delicatessens;
   - Commercial — mid-rise office buildings offering retail on the first floor;
   - Residential — high-rise and mid-rise apartments and condominiums;
   - Cultural — a cultural arts center, an amphitheatre, public open space in parks, pedestrian paths and biketrails, and a water feature;
   - Hotel — a first-class high rise project.

5. **What is the market area for the Town Center and the Milestone Mall and what patronage is likely to come from Frederick County for each?**

   The market area for the Town Center Core encompasses all of Germantown, northwest Gaithersburg, and the outlying areas of northwestern Montgomery County including Boyds, Poolesville, Barnsville, Comus, Clarksburg, and Damascus. The Milestone Mall's market area includes all of these areas along with Rockville, Olney, Potomac and all of Frederick County. This larger market area reflects the significant attraction of consumers from a large area to a mall of the size planned at Mile-

stone. Due to the types of uses supportable within the Town Center (mostly entertainment, restaurants, convenience and personal service users), the market area is smaller for the Town Center.

LMRG estimates that patronage from Frederick County would account for approximately 10 to 15 percent of sales at the Milestone Mall. However, if the existing malls in Frederick County are not expanded and no new malls are developed, the rapid growth in southern Frederick County could greatly enhance sales in the Milestone Mall.

6. **In general, will there be sufficient market demand within the time-frame of the Master Plan to support those existing and planned commercial centers in the Germanown/ Gaithersburg area (Town Center, Milestone Mall, the Kentlands project, Lakeforest Mall, and others)?**

   In general, LMRG projects that there will be sufficient market demand within the time-frame of the Master Plan to support the existing and planned commercial centers in the Germantown area. Based upon the supply and demand figures we generated, along with reviewing the existing supply of retail space, LMRG concludes that Germantown will continue to grow as a vibrant, healthy retail market. In addition, the firm feels that the mall, either Milestone or Kentlands, that can attract anchor stores first may preclude or delay the development of the other project.

   Analyzing the projected demand for hotels in Germantown, LMRG concludes that while a first-class high rise hotel would be an excellent use for the Town Center Core, demand may be lacking into the early 2000s when market support would be sufficient to accommodate such a facility.

7. **What effects are the master planned Village Centers likely to have on the Town Center? To what extent will the Village Centers adversely impact the viability of the current Town Center (especially the Dunns Cabin proposal and the proposed center in the Kingsview Village)?**

   If the Village Centers had been developed as proposed in the 1974 *Germantown Master Plan*, the effect on the Town Center would have been minimal. The tenants currently located in the Sugarloaf and Germantown Commons Shopping Centers will have a negative effect on the development of retail and entertainment space in the Town Center.

   However, over the next 10 years, the demand should be more than sufficient to support the retail envisioned for all of central Germantown. The other Village Centers are intended to serve the needs of their neighborhoods and should not significantly impact the viability of the Town Center.

Town Center Critical Issues

After reviewing the current literature concerning successful, vital downtowns, and analyzing the recommendations and intent of the *Germantown Master Plan*, LMRG concludes that the Germantown Town Center Core should be developed according to the Town Center concept outlined in Table N-1. This balanced land use mix is outlined further in the Town Center Section of the report.

A development mix including the densities and uses proposed will create a small, economically supportable Town Center Core (TC-1) and provide for additional retail development opportunities on TC-5.

Since the development in the TC-1 area is considered the most critical aspect in creating a "vital" Town Center, LMRG recommends that the County Council consider the following issues:

1. The development of a cultural area center on the TC-1 parcel will have a considerable, positive impact on retail and related entertainment activity in the Town Center. This facility should be included in the initial phase of development on TC-1.

2. A public open space area in a central location of the TC-1 parcel will create a sense of place within the Town Center Core. A small lake on the parcel surrounded by pedestrian trails and small sitting areas will allow residents and employees to engage in outdoor activities during the warm weather months. If possible, an ice skating rink or other recreational facilities could be included to provide year-round activities.

3. Retail space should include a heavy emphasis on nightlife activities such as sit-down restaurants, a large movie theatre complex and a dinner theatre. These uses will create pedestrian traffic in the evenings and on weekends.

4. Other retail activities should include convenience goods and personal services for Town Center residents. Examples of these include a convenience food store, video rentals, dry cleaning, florists, drug stores, beer & wine stores, deli's, book stores, beauty salons, banks, travel agencies, and real estate offices.

Table N-1
GERMANTOWN TOWN CENTER CONCEPT LAND USE MIX

Area	Size (acres)	Office (sq. ft)		Retail (sq. ft.)		Residential (units)		Other Uses	
		Master Plan[1]	LMRG	Master Plan[1]	LMRG	Master Plan[1]	LMRG	Master Plan[1]	LMRG
TC-1	58	400,000	400,000	A.N.S.	125,000-175,000	800	800	Cultural Arts Center, Hotel	Cultural Arts Center, Public Park, Outdoor Skating
TC-2	10	0	0	0	15,000	600	400	Transit Station	
TC-3	8	A.N.S.	75,000	A.N.S.	5,000	0	0		
TC-4	1	A.N.S.	A.N.S.	0	0	0	0		
TC-5	76	0	0	400,000	400,000	1,000	400		
TC-6	23	A.N.S.	125,000	0	0	0	0	Pedestrian Enclave	Pedestrian Area with Low-Rise Offices
TC-7	11	0	0	0	0	0	0	Post Office	
TOTAL	187	400,000 +	600,000	400,000 +	550,000 - 595,000	2,400	1,600		

A.N.S. = Amount Not Specified

Sources: Legg Mason Realty Group, Inc.
The Maryland-National Capital Park and Planning Commission

[1] *Refers to the Final Draft Germantown Master Plan.*

5. General merchandise and apparel tenants should include retailers such as women's clothing, shoes, home accessories, records and tapes, jewelry and gift shops.
6. Professional services such as physicians and law offices could be located on the street level or above retail stores.
7. On-street parking should be provided on all streets within TC-1 to provide easy access to retailers. Public or private parking structures should be hidden from view, if possible, and walkways from any parking areas should be heavily landscaped and well lighted.
8. One of the critical aspects of successful Town Centers has been the management and promotion of activities. Scheduling events such as festivals, outdoor concerts and other promotional activities will draw people to the Town Center area. In Germantown, this could be accomplished through a coordinated public and private effort to attract performers and events to the cultural arts center and the public open space areas.
9. A plan that encourages pedestrian activity should include wide sidewalks and sidewalk cafes, which would attract people to the Town Center.

LMRG concludes that the development of the remaining TC parcels will probably not directly affect the success of the Town Center Core. The development parameters and recommendations provided in the *Germantown Master Plan* suggest that these areas be developed with a mix of uses compatible with areas surrounding the Town Center Core.

The following uses are appropriate for the remaining TC parcels:

Area	Use
TC-2	Transit station and high rise residential development
TC-3	Low-rise office space or office condominiums
TC-4	Low- to mid-rise office
TC-5	Retail and service park including automobile dealerships and freestanding buildings with retailers such as Hechingers, Toys-R-Us, auto parts, muffler shops, lube and oil shops, etc.
TC-6	Low- to mid-rise offices along with open space adjacent to the pedestrian promenade
TC-7	Post Office

Appendix O
Roadside Character

The following guidelines should be used for the review of development proposals which do not require site plan review. These guidelines should be considered by the Planning Board at subdivision. The Board may modify these guidelines to more appropriately address the needs of the individual site.

The roadway system provides more than linkages within and beyond the planning area; the view from the road forms the impression of the visual quality of a community. How a community appears from its roads often determines one's positive or negative perception of that community.

The setback of development from the public right-of-way and the landscape treatment within both the right-of-way and the setback area are elements that determine the character of roadways. The Transportation Chapter contains a Roadway Classification table (Table 17) that sets out the right-of-way widths as well as the elements within the right-of-way—street trees, location and width of sidewalks and bikeways, and landscaping treatment for the median. The setback and the landscape treatment outside the right-of-way for major road types in Germantown are discussed below.

I-270 (Figure O-1)

The existing development along the Germantown portion of the I-270 corridor has a building setback of 100 feet or greater. Where the I-3 zone abuts I-270, a setback of 100 feet for all buildings and parking is required. This plan recommends a setback of 200 feet for buildings and 100 feet for parking in the portion of the Employment Corridor zoned I-3. This will provide a consistent appearance for the majority of properties along I-270. Future residential development should also be located at least 200 feet from I-270. The landscape treatment should be carefully considered along I-270 as a part of the regulatory review process to create an appropriate roadside character.

Major Highways (Figure O-2)

All the major highways are planned for a cross-section of six lanes with a median. Where residential land uses abut these roads, noise intrusion and buffering of private outdoor areas are issues of concern.

Adjacent to residential uses, a landscaped earth berm is the preferred treatment to provide noise mitigation and opportunities for landscaped buffer. The alternative treatment is the use of noise walls and landscaping. Noise walls have structural integrity limitations and, whether made of wood or concrete, will have to be replaced eventually. For this reason, every effort should be made to use earth berms for noise attenuation adjacent to residential uses.

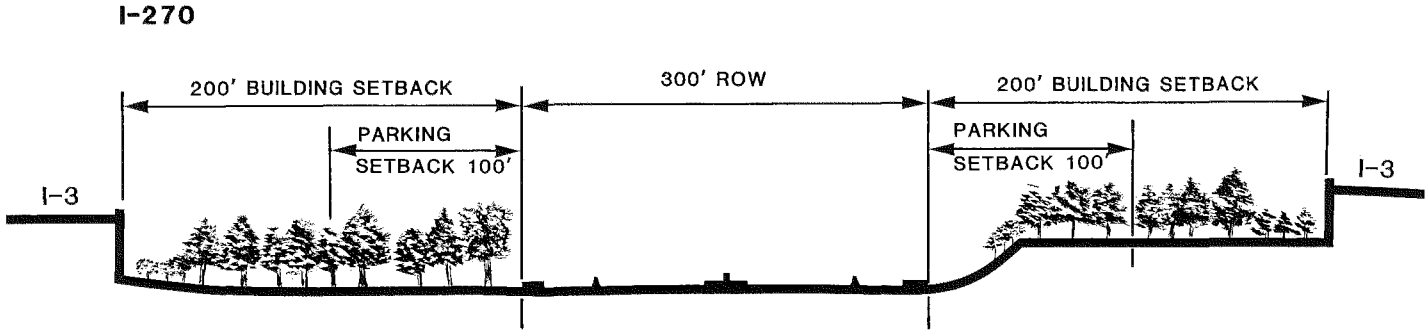
Forty feet is the minimum distance needed to accommodate a six-foot berm at a 3:1 slope. Topographical relationships between the road and the abutting property vary. More or less width may change the height of the berm necessary for noise attenuation.

Through the site plan review process, a setback of 100 feet or more should be considered where rear yards abut major roads. The space within the setback may include parking, roads, or rear yards. The intent is to provide sufficient distance between private yards and the street to allow for noise mitigation and for an area for landscaping.

Employment Access (Figure O-2)

The employment access streets of Observation Drive, Century Boulevard, and Crystal Rock Drive are planned with rights-of-way of 100 feet with medians.

Figure O-1



Setbacks From I-270

Comprehensive Amendment
to the Master Plan for Germantown
Montgomery County, Maryland
The Maryland-National Capital Park and Planning Commission

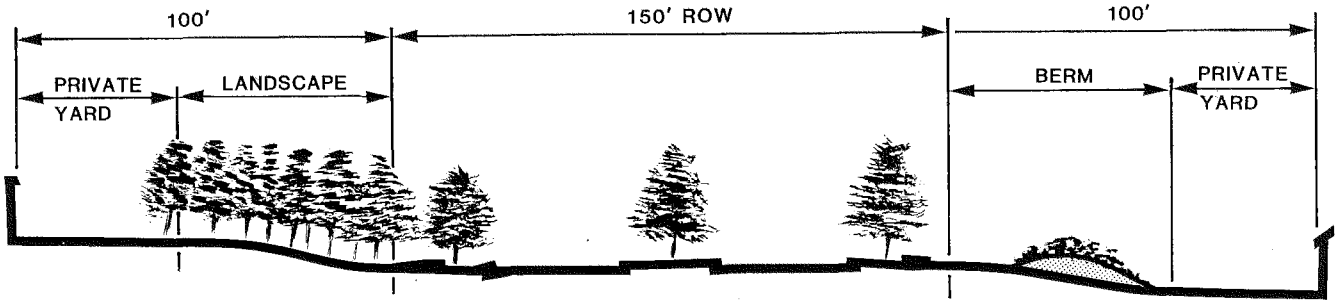
For arterial roads with an ultimate width of four lanes, the right-of-way is 100 feet, and for an ultimate width of six lanes, the right-of-way is 120 to 150 feet. Where these roads separate I-3 land uses from single-family residential land uses, an opportunity exists to create roads with unique character that can be implemented through the site plan review process. Buildings and parking in the I-3 Zone are required to be set back 50 feet from roads separating residential zoning uses from I-3 zoning; from single-family zoning and development, buildings should be set back 100 feet. During the site plan review process, residential properties should also be set back 100 feet to create space for private yards, opportunities for landscape, and noise attenuation to reduce the impact of these roads on adjacent residential development.

Residential Arterials (Figure O-2)

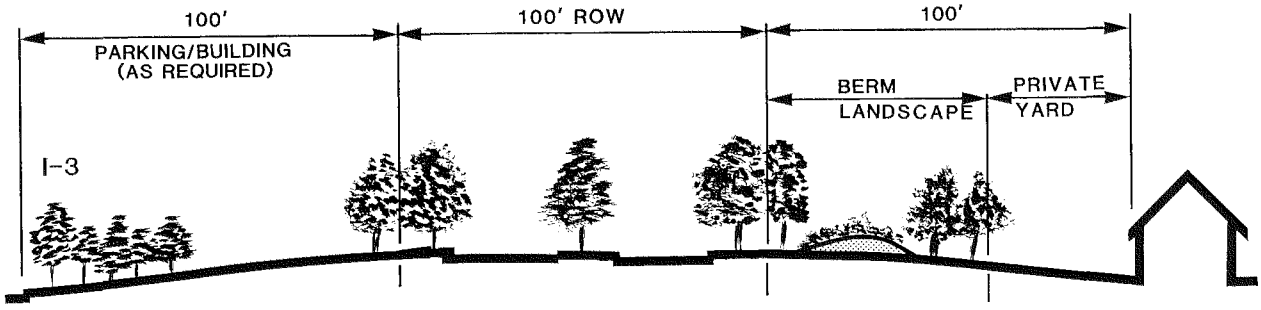
Residential arterials are planned with a right-of-way of 80 feet. An additional setback of at least 80 feet from any residential units abutting the road should be considered during the site plan review process to provide noise attenuation, setbacks for private yards, and landscape treatment. This will also help to establish a distinctive road character in Germantown. These highways, in contrast to major roads, generally will have less traffic and fewer residences on both sides.

Figure O-2

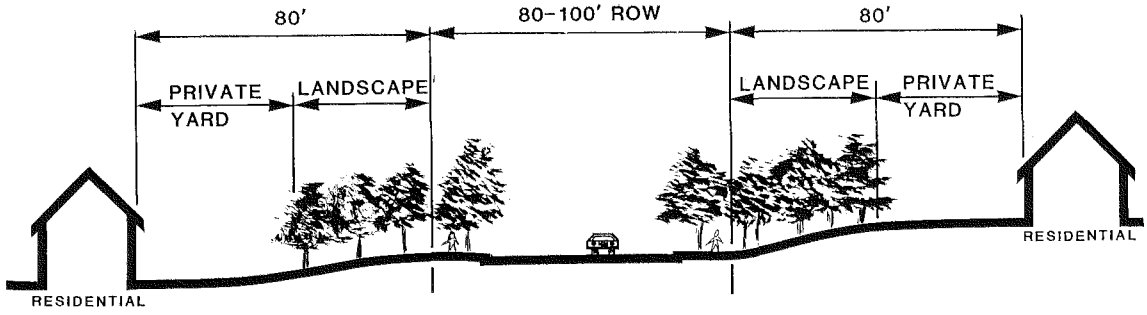
MAJOR HIGHWAY



EMPLOYMENT ROAD



RESIDENTIAL ARTERIAL



Residential Setbacks from Roadways

Comprehensive Amendment to the Master Plan for Germantown

Montgomery County, Maryland

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