



June 5, 2007

MEMORANDUM

TO: Montgomery County Planning Board

VIA: John A. Carter, Chief, Community-Based Planning Division *JAC*
Judy Daniel, Bethesda-Chevy Chase/North Bethesda Team Leader
Community-Based Planning Division *JD*

FROM: Claudia Kousoulas, Senior Planner (301/495-4558)
Community-Based Planning Division *CK*

SUBJECT: Staff Draft Twinbrook Sector Plan Amendment to the North Bethesda/
Garrett Park Master Plan

STAFF RECOMMENDATION

- Approve the Staff Draft Twinbrook Sector Plan as the Public Hearing (Preliminary) Draft Plan.
- Set a Public Hearing Date. A Public Hearing has been tentatively scheduled for July 26, 2007.

INTRODUCTION

As a part of the reconsideration of master plans in the MD 355 Corridor, this staff draft is a comprehensive review and update of the Twinbrook area of the 1992 North Bethesda/Garrett Park Master Plan. The Plan process was initiated with a community design charrette and staff continued to work with Twinbrook area property owners, business owners, and nearby residents through a series of focus groups and public workshops. The planning staff of the City of Rockville also participated to ensure that recommendations from the City and the County create a unified community surrounding the Metro station.

The Staff Draft recommendations reflect directives of existing county and state plans and policies, the community vision of Twinbrook within the North Bethesda community, and the vision of the Wedges and Corridors Master Plan for Montgomery County.

At community meetings the issues of greatest concern were community connectivity, redevelopment opportunities, the potential for mixed-use development, and supporting small businesses in the southern part of the Plan area.

SUMMARY OF THE SECTOR PLAN

Twinbrook is envisioned as a community of employment, residential, retail, and technology uses in an urban environment. Convenient to transit, employment, and services, Twinbrook will integrate its land use, urban design, environmental, transportation, and community facilities to create a distinct community connected to the resources of the Washington region.

The goals of this Plan are to:

- Create Twinbrook as a distinct place along the Metro Red Line
- Provide new opportunities for housing
- Reduce the impact of development on the natural environment
- Increase connectivity in the road network
- Provide an improved system of pedestrian and bicycle connections
- Encourage high quality design for buildings and the public realm
- Establish a development envelope balanced with infrastructure capacity

The Plan's recommendations are designed to implement the vision of Twinbrook as a community of advanced technology and industrial employment with residential opportunities linked by extensive pedestrian routes and marked by public open spaces. It recommends zones that allow flexible development in response to market demands to fulfill a mixed-use vision. The zoning recommendations increase residential potential, provide some increase in commercial density, and allow for retail uses. Several sites are recommended for the use of transferable development rights, for both residential and commercial use. In combination with increased requirements for public amenities and streetscaping, the Plan's recommendations will create a lively, urban neighborhood.

This Plan also expands the bikeways, trails, and pedestrian systems recommended in the 1992 Plan, connecting them to City of Rockville proposed routes, to the Metro station, and to the regional park system.

CONCLUSION

The staff recommends approval of the Staff Draft as the Public Hearing Draft, and that the Public Hearing date be set for July 26, 2007.

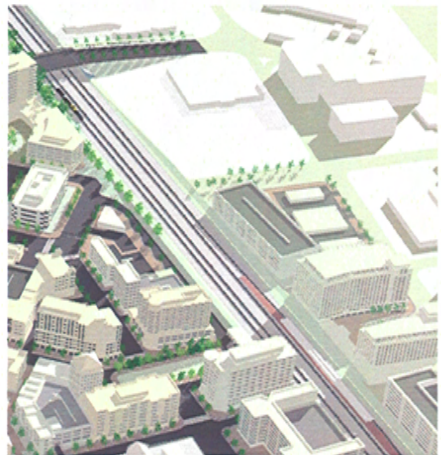
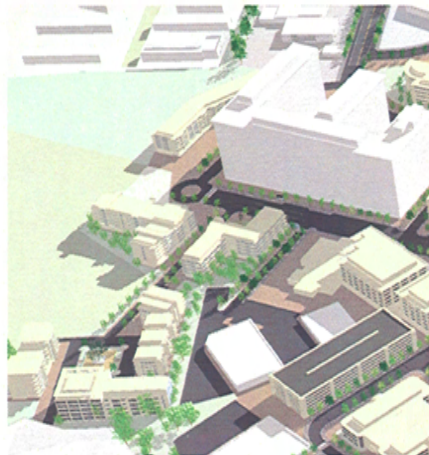
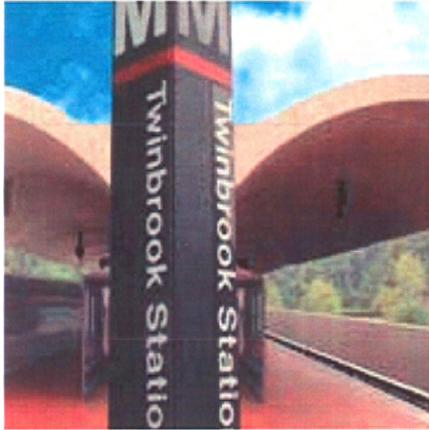
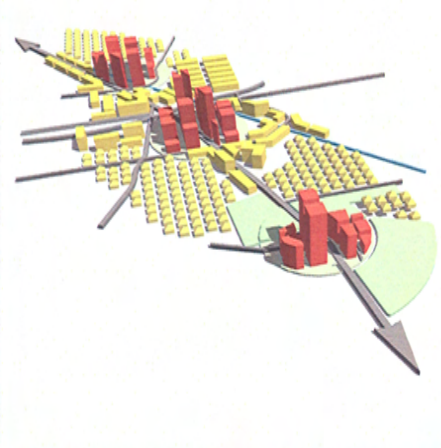
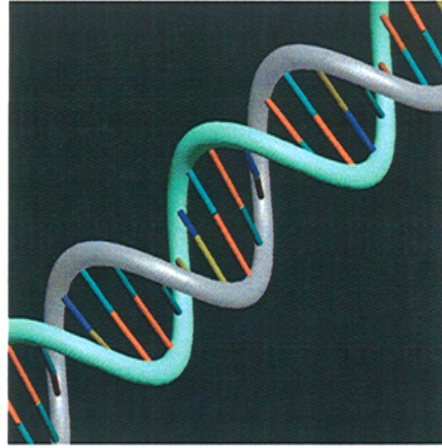
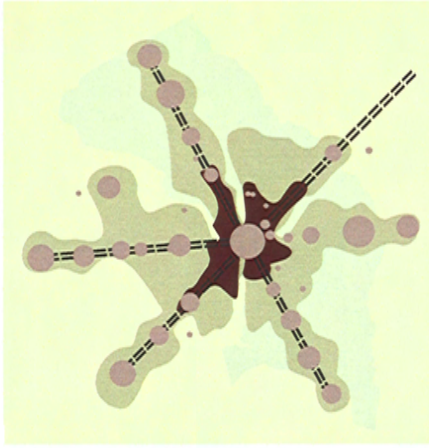
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Attachment

STAFF DRAFT

Twinbrook Sector Plan

A New Community in the Technology Corridor



6/6/2007

Staff Draft

Twinbrook Sector Plan

*An Amendment to the North Bethesda/Garrett Park
Master Plan*

Prepared by the Maryland-National Capital Park and Planning Commission
Date

Approved by the Montgomery County Council
Date

Adopted by the Maryland-National Capital Park and Planning Commission
Date

ABSTRACT

TITLE: Staff Draft of the Twinbrook Sector Plan
An Amendment to the North Bethesda/Garrett Park Master Plan

SUBJECT: A redevelopment plan for the Twinbrook Metro Station area

DATE: June 2007

SOURCE OF

COPIES: The Maryland-National Capital Park and Planning Commission
8787 Georgia Avenue
Silver Spring, MD 20910-3760

ABSTRACT: This document contains the text and supporting maps of the *Twinbrook Sector Plan*. It is a comprehensive amendment to the approved and adopted 1992 *North Bethesda/Garrett Park Master Plan*. It also amends the *General Plan (On Wedges and Corridors) for the Physical Development of the Maryland-Washington Regional District Within Montgomery and Prince George's Counties*, as amended.

The Plan makes recommendations for land use, urban design, environment, transportation, and community facilities to be implemented through zoning that is intended to guide development.

CERTIFICATION OF APPROVAL AND ADOPTION

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 (On Wedges and Corridors) for the Physical Development of the Maryland-Washington Regional District in Montgomery and Prince George's Counties;
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 subdivision regulations, and general administration of parks are responsibilities of the Planning Boards.

The Maryland-National Capital Park and Planning Commission encourages the involvement and participation of individuals with disabilities, and its facilities are accessible. For assistance with special needs (e.g., large print materials, listening devices, sign language interpretation, etc.), please contact the Community Outreach and Media Relations Division, 301-495-4600 or TDD 301-495-1331.

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NOTICE TO READERS

A sector 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. It provides a set of comprehensive recommendations and guidelines for the use of publicly and privately owned land within its plan area. Each sector plan reflects a vision of future development that responds to the unique character of the local community within the context of a countywide perspective.

Sector plans are intended to provide a point of reference with regard to public policy. Together with relevant master and functional plans, sector plans 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.

Sector plans generally look ahead 20 years from the date of adoption, although they are intended to be updated and revised every ten to fifteen years. The original circumstances at the time of plan adoption will change, and specifics of a sector plan may become less relevant as time passes.

THE SECTOR PLAN PROCESS

STAFF DRAFT PLAN — This document is prepared by the Montgomery County Department of Park and Planning for presentation to the Montgomery County Planning Board. The Planning Board reviews the Staff Draft Plan, makes preliminary changes as appropriate, and approves the Plan for public hearing. After the Planning Board's changes are made, the document becomes the Public Hearing (Preliminary) Draft Plan.

PUBLIC HEARING DRAFT PLAN — This document is a formal proposal to amend an adopted master plan or sector plan. Its recommendations are not necessarily those of the Planning Board; it is prepared for the purpose of receiving public hearing testimony. The Planning Board holds a public hearing and receives testimony on the Draft Plan. After the public hearing record is closed, the Planning Board holds public worksessions to review the testimony and to revise the Public Hearing Draft Plan as appropriate. When the Planning Board's changes are made, the document becomes the Planning Board Draft Plan.

PLANNING BOARD DRAFT PLAN — This document is the Planning Board's recommended Plan and it reflects the revisions made by the Planning Board in its worksessions on the Public Hearing Draft Plan. The Regional District Act requires the Planning Board to transmit the sector plan directly to the County Council with copies to the County Executive. The Regional District Act then requires the County Executive, within sixty days, to prepare and transmit a fiscal impact analysis of the Planning Board Draft Plan to the County Council. The County Executive may also forward to the County Council other comments and recommendations regarding the Planning Board Draft Plan within the sixty-day period.

After receiving the Executive's fiscal impact analysis and comments, the County Council may hold a public hearing to receive public testimony on the Sector Plan. After the record of this public hearing is closed, the Council's Planning, Housing, and Economic Development (PHED) Committee holds public worksessions to review the testimony and makes recommendations to the County Council. The Council holds its own worksessions, then adopts a resolution approving the Planning Board Draft Plan, as revised.

ADOPTED PLAN — The Sector Plan approved by the County Council is forwarded to The Maryland-National Capital Park and Planning Commission for adoption. Once adopted by the Commission, the Plan officially amends the various master plans, functional plans, and sector plans cited in the Commission's adoption resolution.

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Introduction

PLAN CONCEPT

Redevelopment since 1992 has begun to change Twinbrook's character. The Twinbrook Station project will introduce a new level of mixed uses and density. This Plan seeks to meet that change with complementary uses and connections, fulfill long-standing County policies, and meet the goals of the 1992 Plan to direct density and mixed uses to areas with transit access.

As part of the I-270 Technology Corridor, redevelopment in Twinbrook has the opportunity to create a technology node that builds on existing government agencies and private businesses, makes use of adjacent light industrial sites for incubator activities, and develops a community profile with housing and retail near Metro and park connections.

The Plan's recommendations are designed to implement the vision of Twinbrook as a community of advanced technology and industrial employment with residential opportunities linked by extensive pedestrian routes and marked by public open spaces. The Plan recommends zones that allow flexible development in response to market demands to fulfill the mixed-use vision. The recommendations increase residential potential, including the use of TDRs, provide some increase in commercial density, and allow for retail uses. Combined with increased requirements for public amenities and streetscaping, the Plan's recommendations will create a lively, urban neighborhood.

Based on land uses and geography, this Plan divides the area into three districts. The sites west of Twinbrook Parkway adjacent to Twinbrook Station make up the Metro Core Area. This Plan proposes redevelopment in keeping with the mixed neighborhood character of Twinbrook Station, with an emphasis on housing. The Plan identifies sites east of Twinbrook Parkway around Fishers Lane and Parklawn Drive as the Technology Employment Area, and proposes uses that build on already existing technology uses, complementing them with high quality design in the public realm. South of Parklawn Drive, the Plan identifies the Light Industrial Area, proposed to continue with amendments to the I-4 Zone that will allow existing businesses to evolve in place. Throughout the area, the Plan makes recommendations for pedestrian connections and public spaces oriented to the Metro station and regional parks and trails.

PLAN PURPOSE

While the 1992 Plan recognized the area's proximity to Metro and made redevelopment recommendations, the zoning no longer is able to create the desired urban pattern surrounding the Twinbrook Metro Station. The O-M zoning in the Metro Core limits density and uses, particularly retail, required to be internal to the building. The industrial zoning in the Technology Employment Area does not enable the mix of laboratory, office, and light manufacturing uses required by advanced technology uses. Likewise, the industrial zones do not have streetscape and amenity requirements that contribute to creating a convenient and attractive working environment. In the Light Industrial Area, zoning lot size requirements limit the ability of entrepreneurial businesses, both advanced technology and traditional light industrial uses, to evolve and remain viable.

This Plan's recommendations for TOMX zoning offers flexibility, encouraging the creation of a community that integrates mutually supportive activities. Technology businesses can combine office and research functions in one building. Residents can live in housing convenient to transportation, parks, jobs, and shopping. Industrial uses will be able to make business improvements on existing small lots, and continue to supply jobs and service in this convenient, mid-County location. The TOMX zones also require streetscape and public amenities, ensuring that the proposed mix of uses will co-exist in a convenient and attractive environment.

Land Use in the Twinbrook Plan Area

Land Use	Existing	1992 Proposed	2007 Proposed
Residential (total)	0	416 du*	500 -1200 du
- TDRs (105)	0	0	315 du
- Workforce housing	0	0	50-120 du
- MPDUs	0	52	180 du
Commercial	4.0m sf	5.2m sf	5.3m sf

*The Twinbrook Station project in the City of Rockville will generate 1,595 units.

This Plan augments the existing street network, incorporating commercial/industrial streets that were not an available option in 1992. These streets will help reduce the impact of development on individual intersections and establishes design elements that will contribute to the urban, pedestrian character of Twinbrook.

This Plan also expands the bikeways, trails, and pedestrian systems recommended in the 1992 Plan, connecting them to City of Rockville proposed routes, to the Metro station, and to the regional park system.

PLAN GOALS

Twinbrook is envisioned as a community of employment, residential, retail, and technology uses in an urban environment. Convenient to transit, employment, and services, Twinbrook will integrate its land use, urban design, environmental, transportation, and community facilities to create a distinct community connected to the resources of the Washington region.

Create Twinbrook as a distinct place along the Metro Red Line.

The Twinbrook Sector Plan makes recommendations for three mutually supportive districts.

- The Metro Core Area west of Twinbrook Parkway, an area of mixed uses focused on the Metro station and its emerging neighborhood.
- The Technology Employment Area along Fishers Lane and Parklawn Drive, with mixed uses featuring advanced technology and biotechnology activities in an area of high quality public design.
- The thriving goods and services businesses in the Light Industrial Area around Washington and Wilkins Avenues.

Provide opportunities for housing.

The Plan encourages a range of new housing near Metro and jobs, improving the balance of jobs and housing in the I-270 Corridor and fulfilling the 1992 Plan's housing recommendations. The Plan recommends housing in the Metro Core area, building on the emerging Twinbrook Station neighborhood.

Reduce the impact of development on the natural environment.

The Plan proposes mixed-use development near the Metro station to create a walkable environment that encourages fewer vehicle trips. Redevelopment will require improved stormwater management techniques, an increase in the requirement for pervious surface, and substantial tree cover, which will transform an area of paved parking lots into one of mixed public spaces and buildings.

Create a connected road network.

A grid street pattern with a range of route options will be created through redevelopment and will improve traffic flow and intersection impacts.

Provide an improved system of pedestrian and bicycle connections.

The Plan recommends routes that connect within and through the area, to the Metro station, and to adjacent regional parks and trails.

Encourage high quality design features.

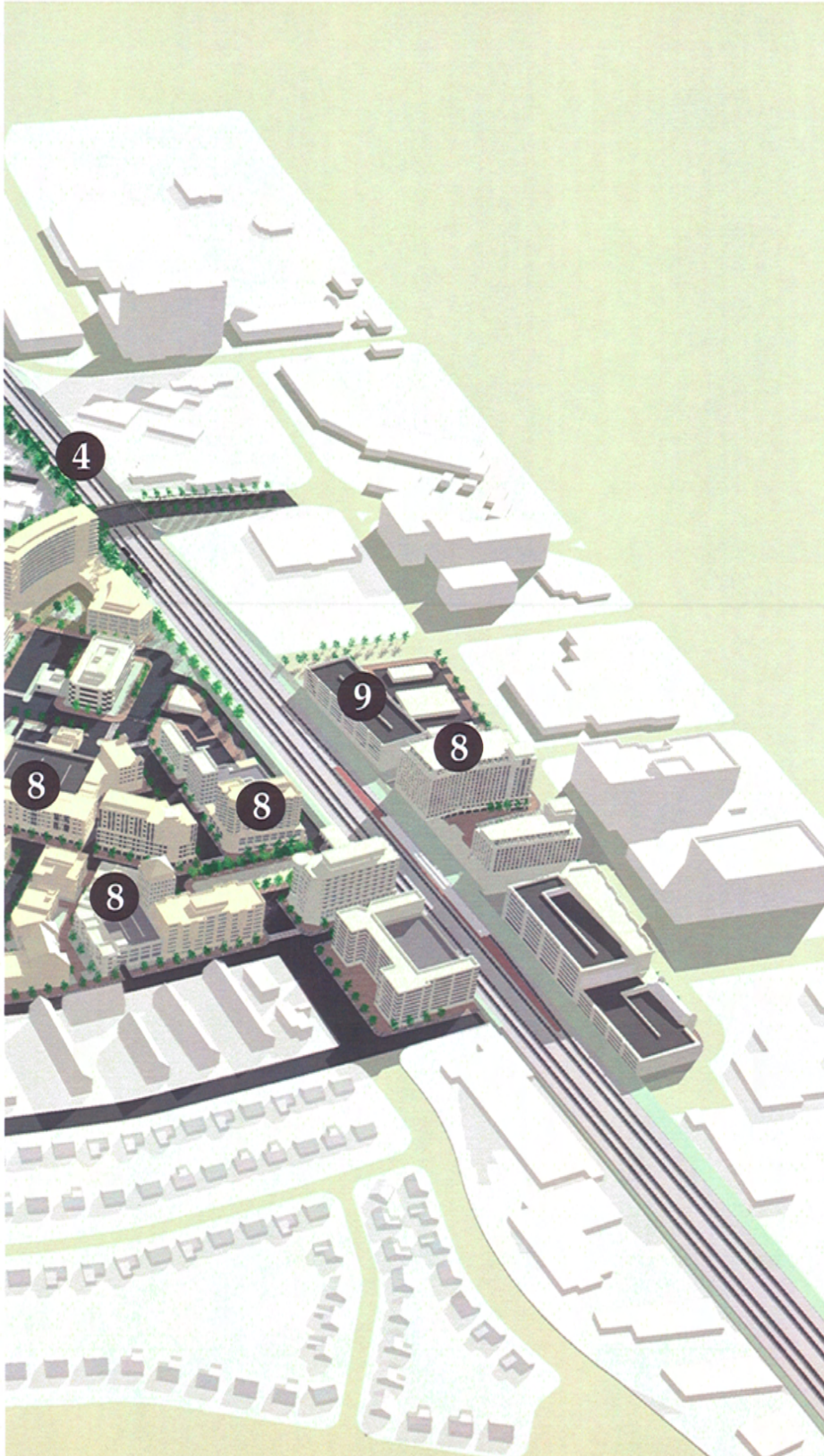
The Plan's recommendations will provide an upgraded public environment by incorporating parks, streetscaping, public open spaces, connections, and the natural environment into redevelopment that will serve future employees and residents.

Establish a development envelope balanced with infrastructure capacity.

The mixed uses, road network, and community facilities proposed in this Plan maintain a balance while allowing for redevelopment that will make best use of the Metro system.

Twinbrook Illustrative

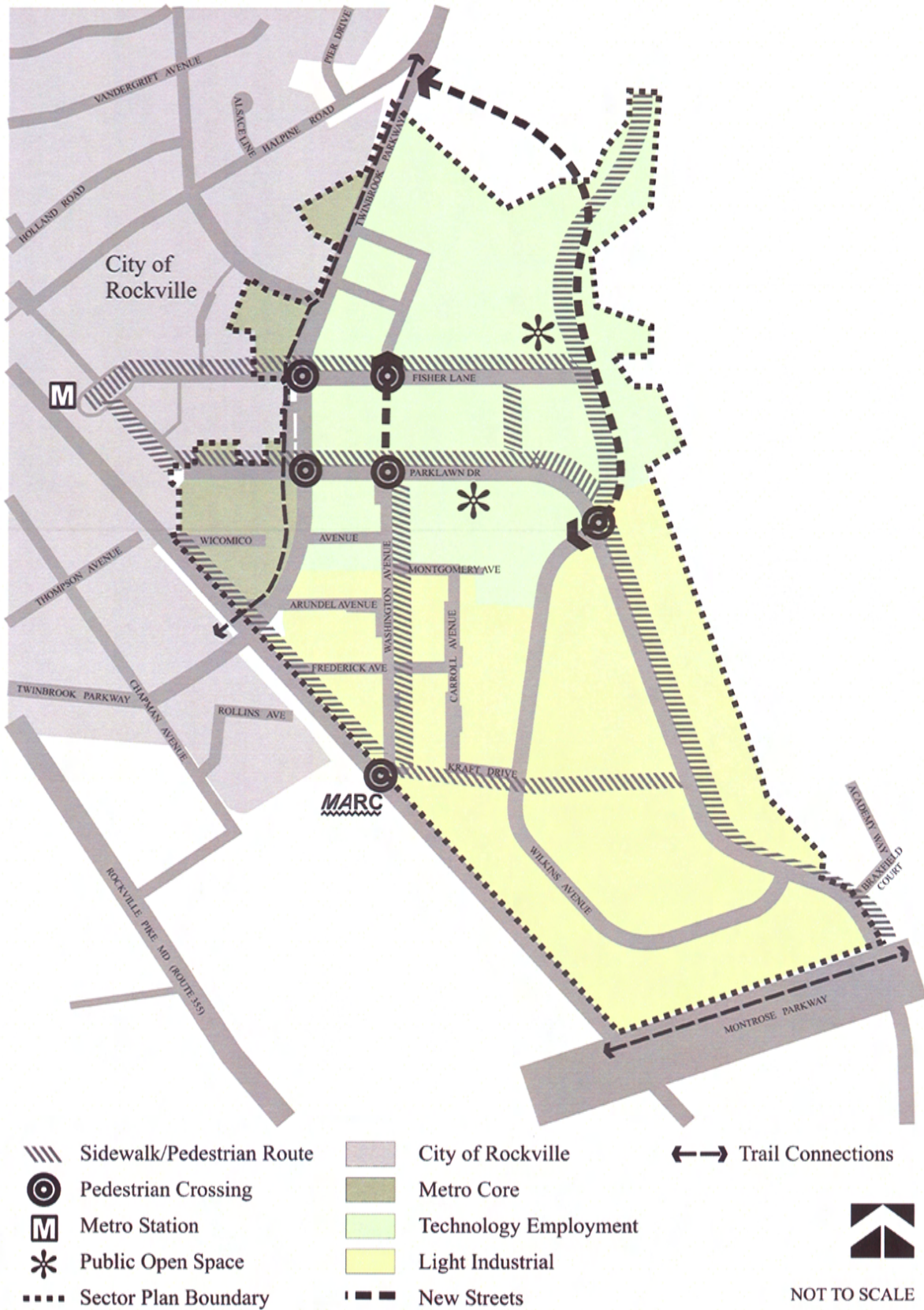




The Twinbrook Sector Plan creates three distinct but complementary districts linked by new and enhanced vehicle and pedestrian connections. The proposed mixed-use redevelopment will create living and working opportunities in a vital community marked by public spaces and amenities.

- 1 Metro Core Area – Mixed-use neighborhood of residential and commercial uses that extends the urban pattern of Metro area redevelopment.
- 2 Technology Employment Area – Provides a cluster of advanced technology uses connected to the Metro and a network of sidewalks, trails, and public use spaces.
- 3 Light Industrial Area - Complementary and thriving service and retail businesses that serve residents and other businesses.
- 4 CSX and Metrorail tracks.
- 5 Existing Parklawn Building.
- 6 Recently completed U.S. Pharmacopeia headquarters.
- 7 Fishers Place laboratory and office projects.
- 8 Twinbrook Station – a mixed-use redevelopment project in the City of Rockville that creates the Metro station as a community focal point.
- 9 New structured parking at the Metro station.
- 10 Proposed Boland Engineering building.

Twinbrook Plan Concept



PLANNING HISTORY AND CONTEXT

The 1992 North Bethesda/Garrett Park Master Plan

The Twinbrook area was last examined in the 1992 North Bethesda/Garrett Park Master Plan. That Plan compared the area to the adjacent City of Rockville, which had begun redeveloping land around the Twinbrook Metro Station with moderate density office buildings and townhouses, while County sites remained low-intensity uses.

The Plan recognized the area as an “underutilized yet potentially important asset...” and sought through rezoning, to introduce a residential component into the area, to retain industrial uses, and to improve the area’s urban design. The primary implementation tools recommended were the Transit Station-Mixed and Transit Station-Residential floating zones. These zones allow mixed uses, but require a cumbersome review process and offered a lower density potential than the underlying I-1 base zone. In redeveloping the area, property owners used the underlying I-1 Zone that offered them a simpler process, more density, and enough flexibility to meet market demands for office and laboratory space. As a result, the area redeveloped without the desired component of housing or urban design improvements. This Plan proposes Euclidean zones that allow mixed uses, require public amenities, and are shaped by plan recommendations.

The 1992 Plan recognized another significant feature of the area, the Parklawn Building, then tenanted by the federal government’s Department of Health and Human Services. At that time, the 1.3 million square foot building housed almost 6,000 employees. The government’s lease will end in 2009, and the agency is seeking improved space, either in the building or elsewhere. This Plan seeks to ensure that future redevelopment of the building and site contributes to the desired mixed-use urban environment and continues the development of technology uses.

The 1992 Plan also identified and created an “industrial sanctuary” on sites south of Parklawn Drive, rezoning them from I-1, which allows office uses, to I-4, a strictly light industrial zone. While this has maintained the industrial uses, many of the smaller lots cannot expand or improve their businesses under the I-4 Zone’s current development standards, and may be forced to relocate.

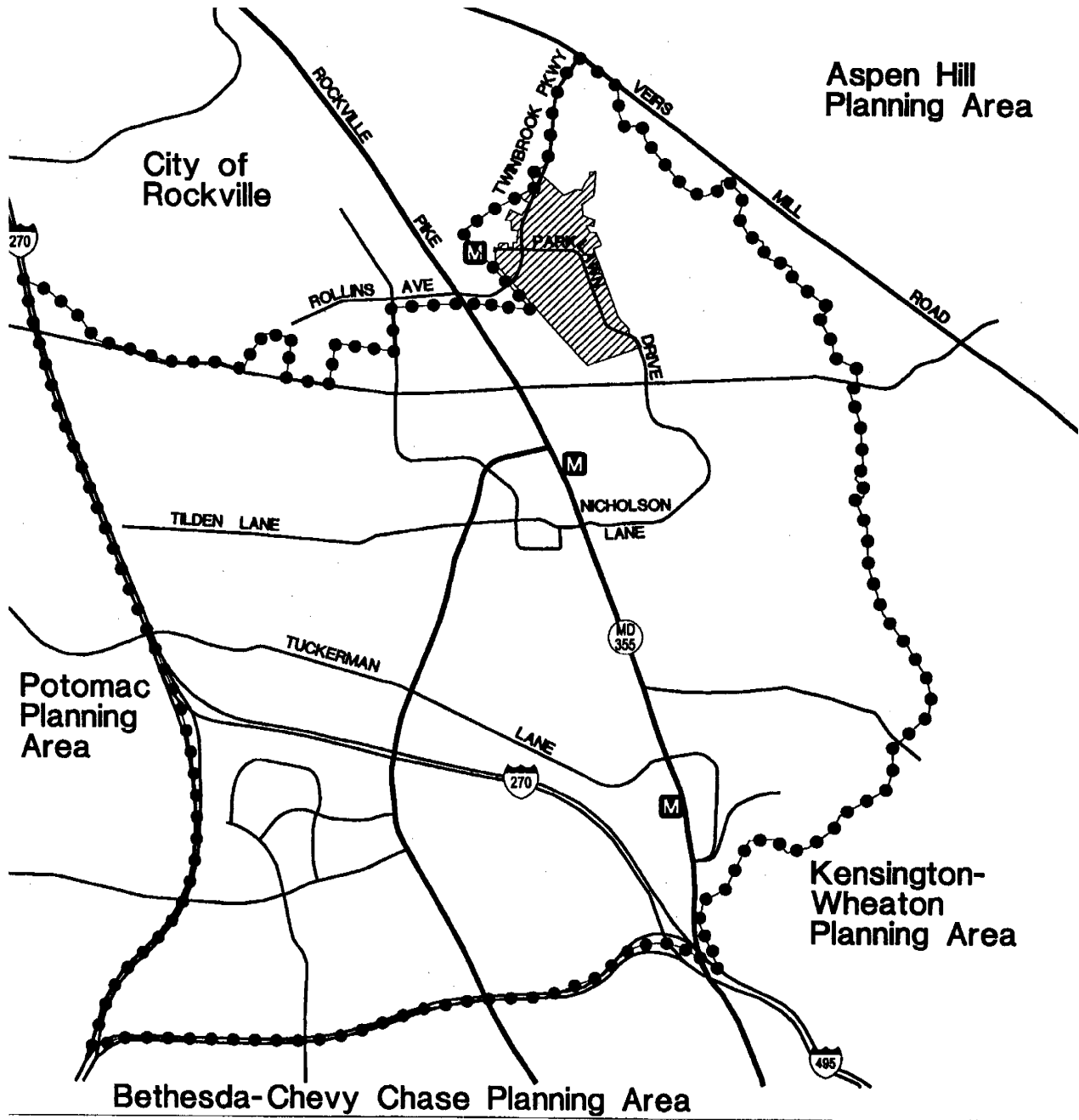
2000 Planning and Design Charrette

In 2000, the M-NCPPC worked extensively with community members and consulting architects and planners in a charrette process that developed an Initial Concept Plan for the Twinbrook area. The concept plan included an identifiable center, a public space at Metro, new residential development, a transit center, and higher densities at the Metro core.

Since that charrette, the JBG Companies teamed with WMATA to create Twinbrook Station, a mixed-use development on Metro and private property that will meet many of the charrette’s goals. The project accommodates Metro buses and parking, includes nearly 1,600 residential units, and organizes mixed office and retail uses around a central green. Since its design and approval, Twinbrook Station has been annexed by the City of Rockville, but has become a driver of change in the Twinbrook Plan area.

Other desired elements of character and use identified by the charrette included a mix of uses, an expanded circulation network, and an emphasis on streetscape design and urban design standards. This Plan fills out the charrette recommendations with mixed-use zones that build on the pattern established by Twinbrook Station.

North Bethesda/Garrett Park Master Plan Area



 Twinbrook Sector Plan Area

 Metro Stations

 North Bethesda/Garrett Park Master Plan Area



The Plan's recommendations for a network of roads, sidewalks, and paths, and significant streetscape and urban design improvements will foster the creation of a varied land use character in each of the Plan's districts.

To address the changes since the 1992 Plan, to meet the goals of the 2000 Charrette, and to more effectively achieve the desired mix of uses, this Plan recommends Euclidean zones that allow mixed use and that require significant public amenities to create the desired community. This Plan also recognizes the value of maintaining the existing industrial uses and the jobs and services provided in the southern portion of the Plan area. Accordingly, it expands the Plan boundary to address all the area's industrial uses and recommends amendments to the I-4 Zone in Transit Station Development Areas (TSDAs) that would allow businesses to upgrade in their current locations.

Plan Boundary

The area addressed by the Twinbrook Sector Plan is located in the North Bethesda planning area, three miles north of the Beltway, and adjacent to the Metro Red Line. The Twinbrook area's northern edge abuts the City of Rockville. The eastern boundary is adjacent to Parklawn Memorial Park. The Twinbrook area's southern boundary is along the future Montrose Parkway right-of-way, and the CSX/MARC rail line defines the area's western edge.

This Plan expands the Twinbrook area defined in the 1992 Plan, nearly doubling it to 154 acres. The eastern boundary has been extended to include the Parklawn Building's northern parking lot. This nine-acre site's access is from Fishers Lane, creating a potential Metro connection.

The boundary has been further adjusted to reflect the City of Rockville's June 2005 annexation of land east of the Metro station.

The area's southern boundary now includes the entire light-industrial zoned land along Wilkins Avenue and Parklawn Drive. Including these properties allows the Plan to address the light industrial area as a whole and to incorporate current facility planning recommendations for the future Montrose Parkway.

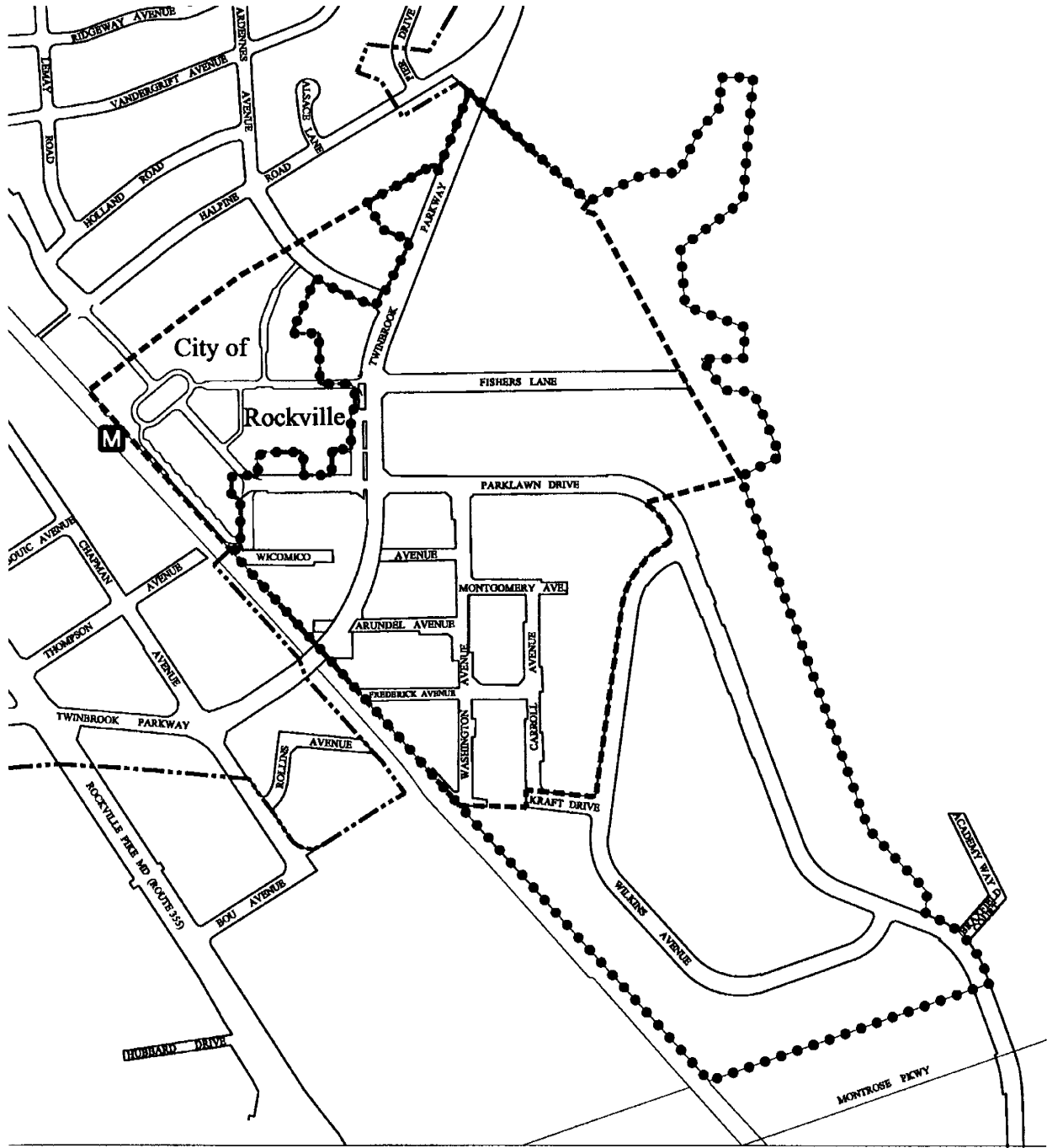
Finally, this Plan designates the entire area covered by the Twinbrook Sector Plan as a Transit Station Development Area. The recommended TOMX Zones are allowed only in areas designated by a master plan as transit station development areas, and Road Code business street standards would be applicable.

Relationship to the MD 355/I-270 Corridor

Beginning with the *General Plan*, expanded upon in the *1970 North Bethesda Garrett Park Master Plan*, and continuing through successive plans, the County has recognized the MD 355/I-270 Corridor as a distinct place. Plan recommendations strive to support the corridor's advanced technology and biotechnology centers with transit-accessible communities of residential and commercial options, while continuing the County's strong tradition of linked open spaces and parks. Located along the Metro Red Line, Twinbrook will be one of a number of transit-oriented communities in the MD 355/I-270 Corridor.

The County has undertaken the MD 355/I-270 Corridor project to coordinate issues that cross planning area boundaries. The project will examine the character of corridor communities, support advanced technology uses, balance jobs and housing, enhance mobility, address environmental needs, and coordinate public facilities.

Plan Area Boundaries – 1992 and 2006



----- 1992 Plan Boundary

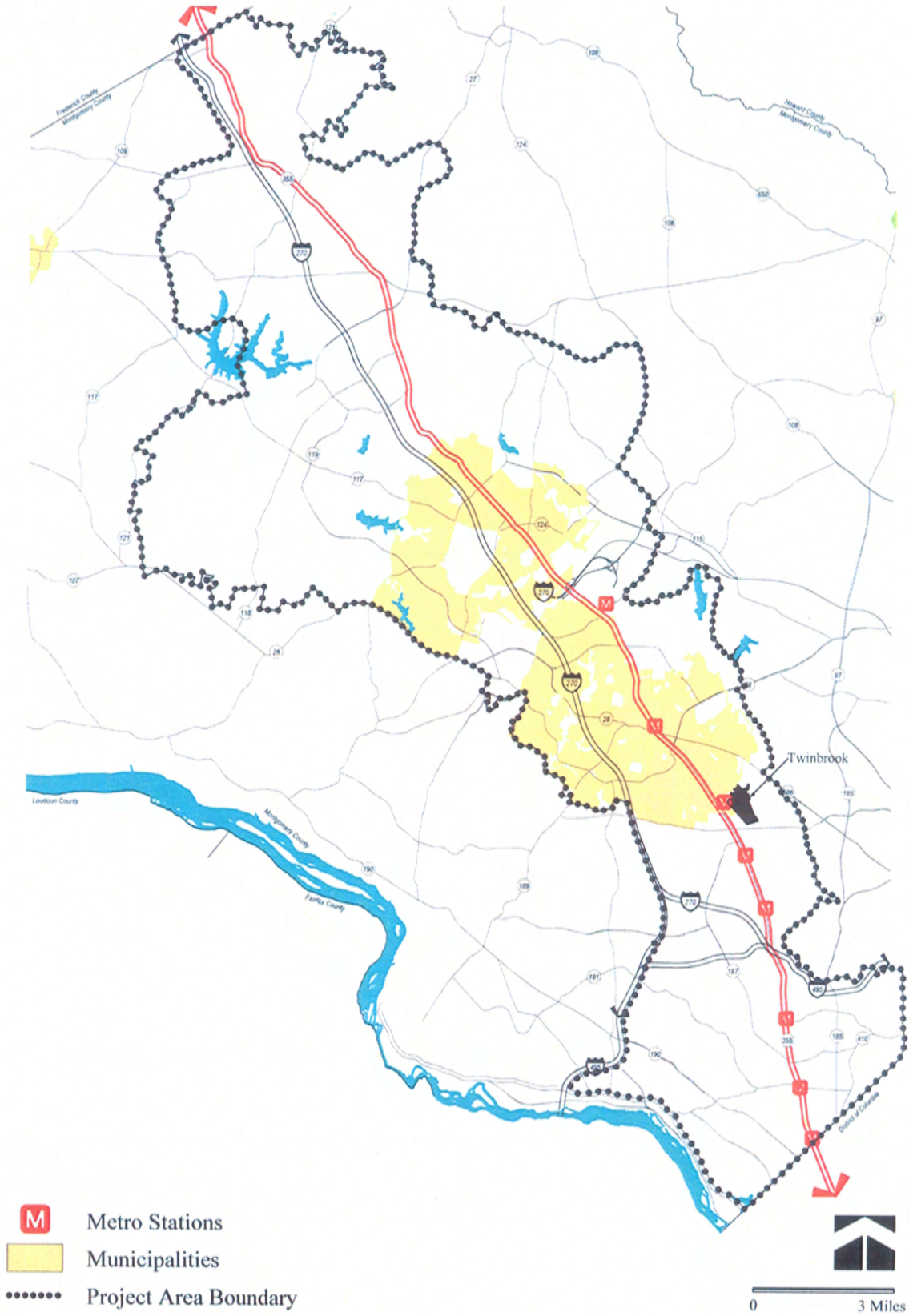
M Metro Station

..... 2006 Sector Plan Boundary

----- City of Rockville



MD 355/I-270 Corridor



This Plan's recommendations fulfill countywide policies in the MD 355/I-270 Corridor by supporting its concentration of biotechnology and advanced technology uses and by adding housing incentives to help balance jobs and housing. The Plan also addresses community character with design and environmental standards for street oriented, high quality redevelopment.

Relationship to the City of Rockville

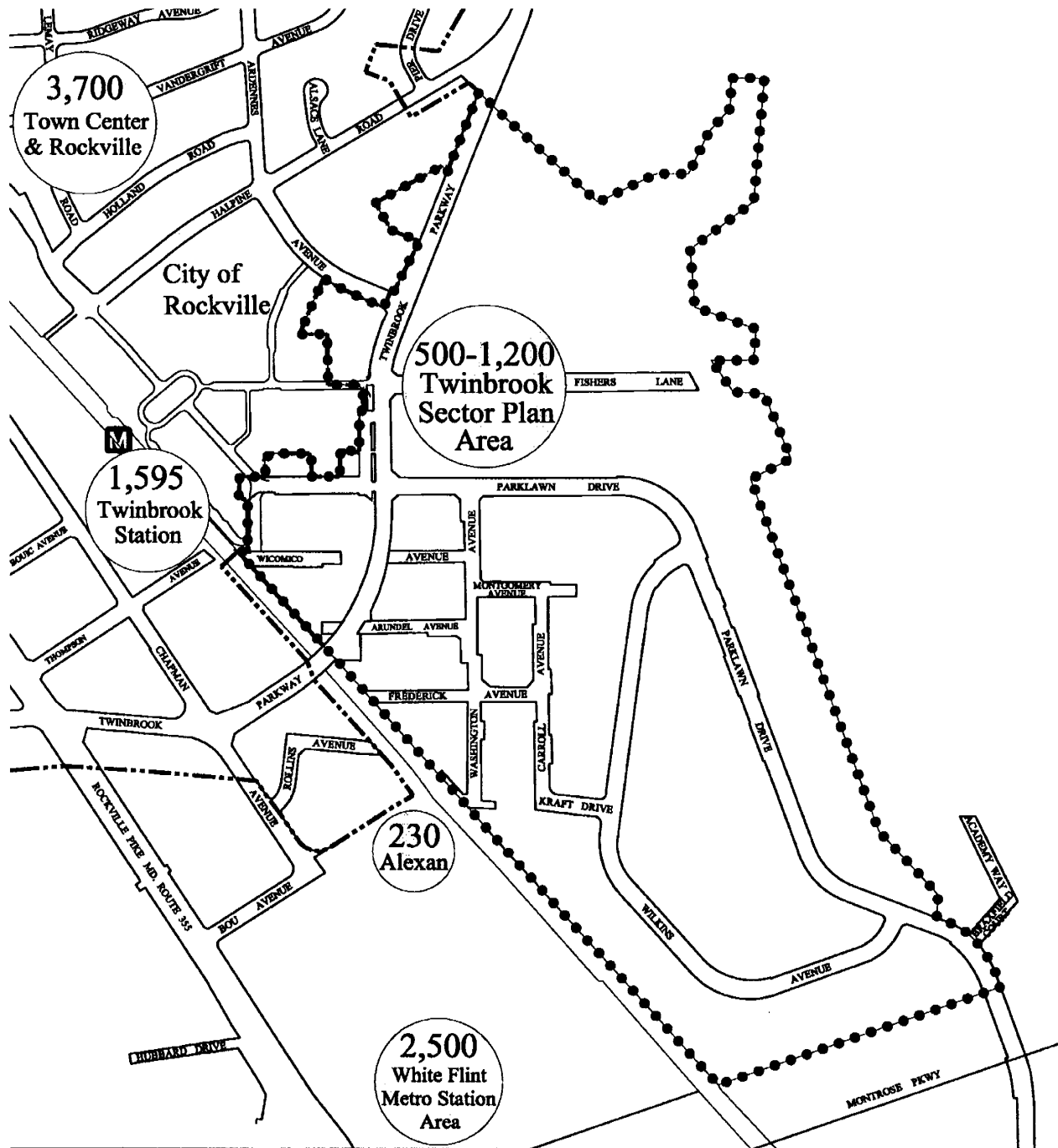
The Twinbrook Sector Plan area lies within the City of Rockville's Urban Growth Area and includes land that abuts the City's current boundaries. In June 2005, the City annexed the roughly sixteen acres east of the Metro station proposed for redevelopment as a mixed-use community, Twinbrook Station, a project that achieves some of the goals identified in previous City and County planning efforts.

The City of Rockville is completing its own master planning for areas adjacent to the Twinbrook Metro Station. In the *Rockville Pike Corridor Neighborhood Plan*, which abuts Twinbrook at the Metro station, the City has designated the area west of the CSX tracks as a Metro Performance District and has developed urban design goals and development guidelines intended to focus significant commercial and residential densities at the Twinbrook Metro Station. Commercial developments are allowed a maximum FAR of 1.25 under optional method zoning, and mixed-use developments can achieve higher total densities by adding a residential component. For example, offices, retail, and housing at Twinbrook Station will be built at an FAR of approximately 1.40.

The *Twinbrook Neighborhood Plan* abuts the northern edge of the County's Twinbrook Plan area and is designed to maintain the existing residential communities, allow further study of industrial land use policy, and explore traffic calming, pedestrian safety, and policies that enhance the area's environmental quality.

Just as the City and County share the land surrounding the Metro station, they share of vision of its redevelopment, with density and activity focused to create a distinct neighborhood of varied uses and public spaces.

Potential Housing Units in the Twinbrook Vicinity



Metro Station



2005 Twinbrook Sector Plan Boundary



City of Rockville



0 600'

Demographics

The Twinbrook Plan area has no resident population, but 2000 Census data for the larger surrounding North Bethesda planning area provides a profile of similar Metro Red Line communities. North Bethesda residents tend to be older and more educated than the County average; 76 percent have a bachelor's degree or higher. At \$79,620, the area's median household income reflects this level of education. Slightly more than half of North Bethesda residents work in the County and prefer to drive to their jobs, with an average commuting time of close to 30 minutes.

About half of North Bethesda households are married couples. One-third of the households are single-person households. This percentage jumps for those living in high-rise apartments to 61.4 percent. North Bethesda households generate the smallest percentage of school-age children (5.3 percent in high-rise and 11.8 percent in garden apartments). More North Bethesda householders own their home or apartment than rent.

There are about 18,000 housing units in North Bethesda, primarily multi-family, ranging from single-family attached townhouses to buildings with 20 or more units. More than half of North Bethesda householders live in multifamily housing (54.3 percent), in contrast to the I-270 Corridor (32.0 percent) and Countywide (30.8 percent). Households in all locations and apartment types typically have at least one car.

Another nearly 6,000 dwelling units have been approved or are proposed for the North Bethesda area, and include the 1,595 units at Twinbrook Station, 2,500 units among various projects in White Flint, and 662 units proposed in adjacent areas of the City of Rockville.

Land Use and Zoning

EXISTING LAND USE AND ZONING

The Twinbrook Plan area's existing development patterns and character are a mix of commercial and light industrial uses and large surface parking lots, with an emerging presence of laboratory and advanced technology uses. The area remains without a resident population and the amenities to serve them.

The 1992 Plan envisioned Twinbrook as an area of residential and industrial uses and recommended retaining a significant portion of the area for light industrial uses with redevelopment and employment uses focused on land nearest to the Metro station. To those ends, it confirmed the I-1 and I-4 industrial zones. To encourage mixed-use development, the Plan also allowed the application of the TS-M, TS-R, and O-M floating zones.

The 1992 Plan increased the area's density, recognizing its proximity to Metro, but limited by road capacity and traffic standards. This Plan roughly maintains the level of commercial redevelopment, but significantly increases the amount of housing to create the desired mixed-use profile and make best use of nearby transit.

Metro Core Area (West of Twinbrook Parkway)

Sites in this 27-acre area west of Twinbrook Parkway are focused around Wicomico Avenue and the western ends of Fishers Lane and Parklawn Drive. They contain a mix of commercial and light industrial uses that are well within walking distance of the Metro station. The area abuts the Twinbrook Station project and is suited to continue its housing, mixed-use, and pedestrian-oriented pattern.

The 1992 Plan recognized the area's proximity to Metro and recommended it for mixed-use redevelopment under the TS-R and O-M floating zones. Since the 1992 Plan, some sites have been absorbed into the Twinbrook Station project

Twinbrook Station developed under the TS-R floating zone applied at the applicant's request. The area's proximity to the Metro station, WMATA's interest in redeveloping its parking lot, and the low-density base zone (R-90) encouraged its redevelopment into the mixed-use residential and commercial community envisioned for Metro station areas. The project has since been annexed by the City of Rockville.

Of the Metro Core Area sites that remain in the County's jurisdiction, one has developed using the recommended O-M floating zone and others remain in light industrial use.

The haphazard mix of uses reflects the variety of zoning. They are all single use zones and some, such as the R-90, are no longer relevant in an urban area. The uneven zoning pattern makes it difficult to redevelop with uses and densities appropriate to the Metro station. Further, the existing recommendation for an O-M floating zone is cumbersome to apply and does not allow housing or the desired neighborhood retail uses. Remaining sites recommended for TS-R are too small to develop under the zone and have no options for assembling.

Technology Employment Area (Fishers Lane and Parklawn Drive)

This 52-acre area east of Twinbrook Parkway is a mix of office and laboratory uses, some of them recently developed. The National Institutes of Health (NIH) and other federal agencies have located here, near the Metro Red Line, and between the NIH Bethesda campus and the Shady Grove Life Sciences Center.

The area's most prominent building is the 1.3-million square foot Parklawn Building, built in the early 1970s under a contract with the federal government, at a higher density than currently allowed or considered (an FAR of 5.16). Prior plans for the area made no recommendations for changing the building or its use, given the federal government's long-term lease. The Food and Drug Administration's relocation to White Oak leaves Health and Human Services as the only tenant. With the agency's lease due in 2009, the building use may change. It may be upgraded as office space or reconfigured for mixed uses.

Associated with the Parklawn Building are sites to the north and south used as employee parking lots. The nine-acre northern lot, accessible only from Fishers Lane, was not included in the 1992 Plan and remains in the R-200 Zone with a special exception for use as a parking lot. The site is surrounded by a cemetery and garden apartments. The roughly four-acre southern lot is zoned I-1. Both lots have redevelopment potential and combined with redevelopment of the Parklawn Building, have the potential to change the area's character.

The 1992 Plan maintained the area's I-1 zoning, but also recommended a TS-M overlay zone to encourage mixed-use redevelopment including housing. This floating zone allows the desired residential and mixed uses, but they were never applied because owners found they could redevelop the sites more easily under the Euclidean I-1 base zone and still meet market demand. Furthermore, the base zone allowed a higher density than the floating zone. The two buildings and parking garage at Fishers Place were developed under the I-1 Zone and U.S. Pharmacopeia's corner building was built under the existing C-O Zone. The option for housing in this area was never used.

Other sites in this area have potential for redevelopment and can contribute to building on the existing office and laboratory space to serve emerging needs of the biotechnology and advanced technology industries, while improving pedestrian connections and addressing access and security issues. But the I-1 base zone with the floating zone option does not create the desired mixed-use pattern. The zone is described in the Zoning Ordinance as intended for the planned development of "large employment centers," creating low-scale, suburban patterns on areas not less than two acres. It also sets retail limits and has no streetscape requirements, contrary to the desired pedestrian-scaled street.

Floating zones did not generate housing and will not generate the mix of laboratory and office uses vital to technology uses. Intended to allow a more flexible approach to development standards, floating zones require site plan and development plan review to ensure their compatibility with the location and surrounding uses. They are recommended in master and sector plans, but are undertaken at the request of the property owner and exist as an option until acted on.

Light Industrial Area (Washington Avenue and Wilkins Avenue)

The 62-acre area south of Parklawn Drive is a mix of light industrial uses, some serving technology uses, others are traditional light industrial and service commercial uses. It is also an area that can meet the needs of start-up businesses. The small lots surrounding Washington Avenue are the sites of the area's early development – the residential Spring Lake neighborhood, subdivided in 1892. While the 1978 Plan noted 13 remaining residential units, these have all since evolved into commercial and light industrial uses that provide jobs and services to neighboring businesses and residents. The 1992 Plan rezoned this area from I-4 to I-1 to limit the expansion of office uses.

Similar commercial and industrial uses continue in the area around Wilkins Avenue, but on generally larger sites, oriented and connected to Randolph Road and the future Montrose Parkway. The area includes light industrial uses, construction companies, and wholesale businesses. These industrial areas are some of the few remaining in the County and provide useful jobs and services. As in the 1992 Plan, this Plan recognizes the value of these uses and the limited options they have for relocation in the County.

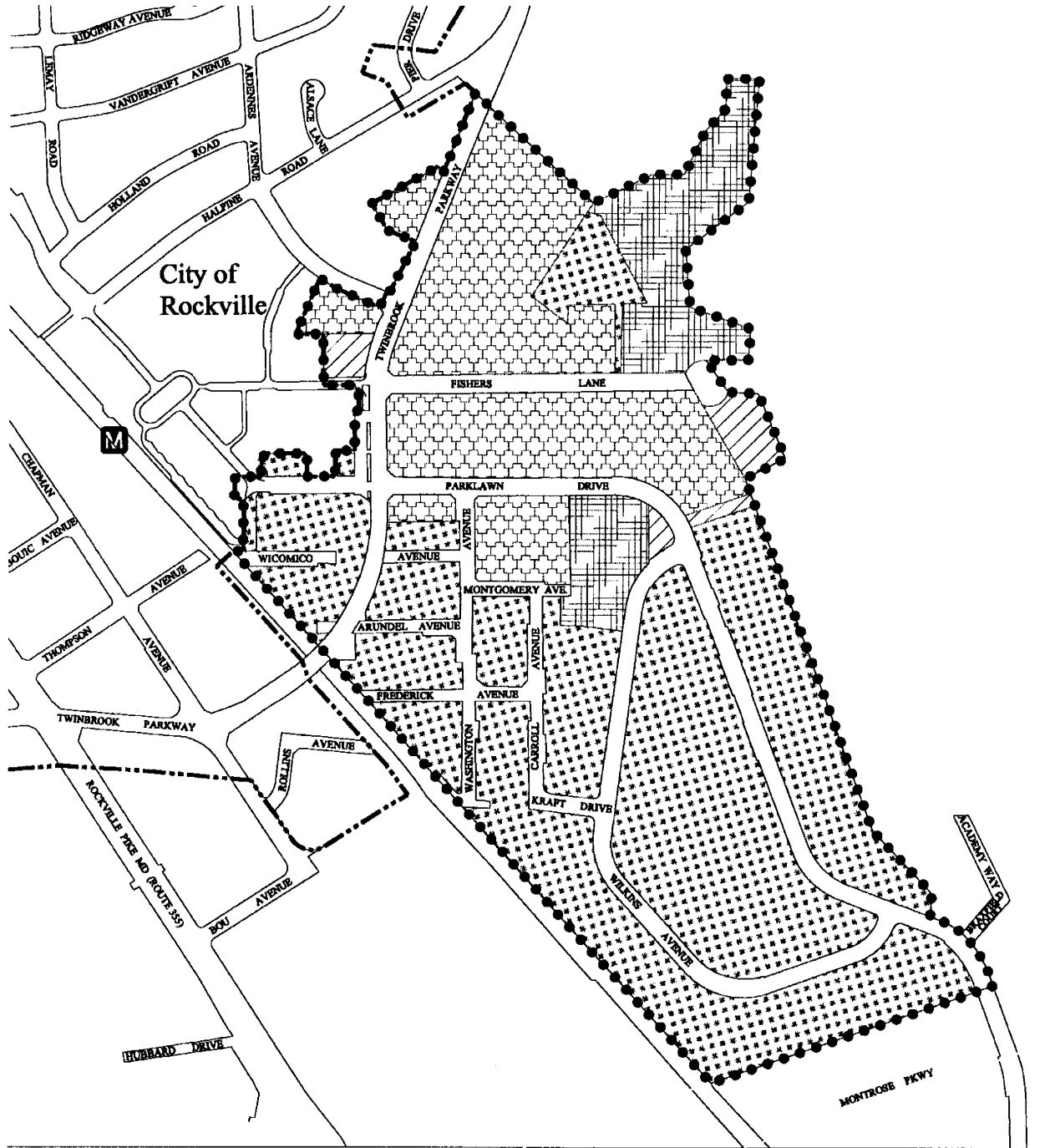
To help preserve them, the 1992 Plan rezoned the area south of Parklawn Drive from I-1 to I-4, which successfully limited office encroachment. But since that Plan, owners of smaller properties have found that the I-4 Zone's development standards limit their ability to upgrade and even modestly expand their businesses. The I-4 Zone's requirement for a minimum one-acre lot size creates a suburban pattern of large lots, with setbacks, green space, and parking requirements further limiting the building envelope on a given site. Without standards suitable for industrial uses on small sites, these light industrial uses may be forced to relocate.





Of the County's nearly 2,500 acres of industrial land, 109 acres, zoned I-1 and I-4, are located in Twinbrook. Because the County has a limited and decreasing amount of industrial land, and because this land provides valuable jobs and services, this Plan seeks to preserve Twinbrook's industrial potential, as did the 1992 Plan. The I-4 Zone's development standards should be amended in Transit Station Development Areas (TSDAs) to recognize the character of this small lot area, and allow businesses to evolve without relocating.

Twinbrook Zones – Existing and Proposed

Zone	Description	FAR	Minimum Lot Size/Height	Comments
Existing				
I-1	Light Industrial	none	none/42 ft, up to 120 ft	Allows office uses
I-4	Low Intensity Light Industrial	1	1 acre/42 ft	No office uses
R-90	Residential, One-family	n.a.	9,000 sf/35 ft	Suburban single-family
R-200	Residential, One-family	n.a.	20,000 sf/50ft	
C-O	Commercial Office	1.5 - 3	none/42 ft	No mixed uses
O-M	Office, Moderate Intensity	1.5	none/42 ft	No mixed uses
TS-M	Transit Station Mixed Use	3	40,000/master plan-site plan	FAR capped by master plan
TS-R	Transit Station Residential	2.5	18,000/master plan-site plan	plan
Proposed				
TOMX-1/TDR	Transit Oriented Mixed Use with TDRs	1	18,000 sf/50 ft	Height and density determined at site plan
TOMX-2	Transit Oriented Mixed Use	2	18,000 sf/master plan-site plan	through master plan
TOMX-2/TDR	Transit Oriented Mixed Use with TDRs	2	18,000 sf/master plan-site plan	guidance
I-4 (amended)	Light Industrial in TSDAs	1	Planning Board discretion	

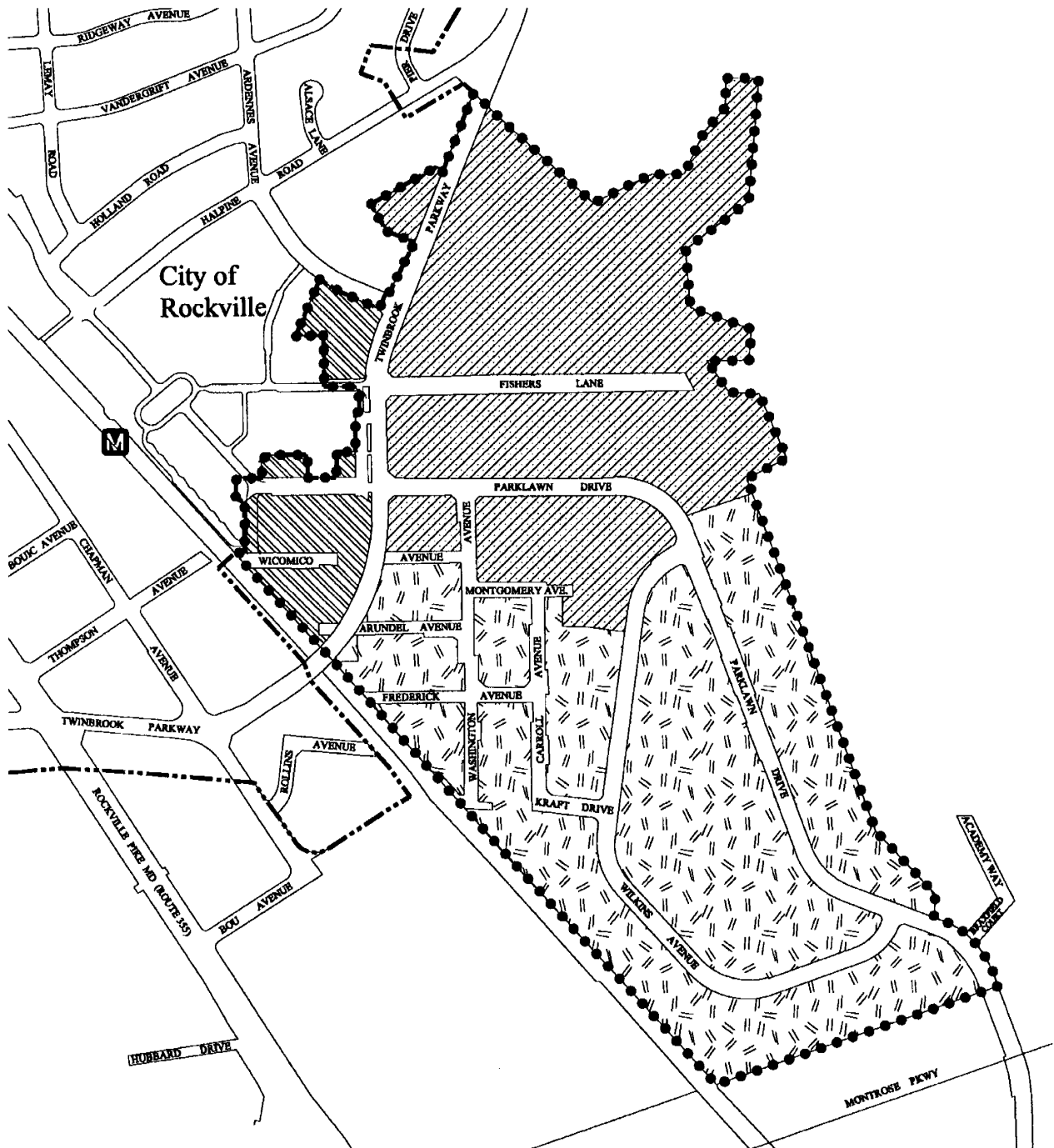
Existing Land Use



- M** Metro Station
- Sector Plan Boundary
- City of Rockville
-  Parking
-  Office
-  Retail/Mixed
-  Light Industrial



Proposed Land Use



Metro Station

..... Sector Plan Boundary

- - - - City of Rockville



Light Industrial Mix



Mixed Use: Office & Lab



Mixed Use: Residential



0 600'

PROPOSED LAND USE AND ZONING

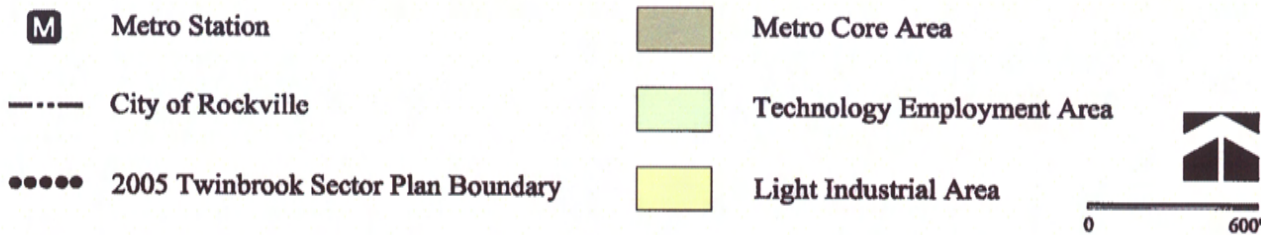
The Twinbrook Sector Plan area is within the orbit of change taking place at the Metro station and in the City of Rockville. The Plan's proposed mixed uses and complementary light industrial uses offer an opportunity to create a fully rounded community on both sides of the Metro station.

The 1992 Plan focused density at the Metro station and on the area's central block between Fishers Lane and Parklawn Drive, creating a spine of mixed-uses. While Twinbrook Station was approved at the Metro station, a more homogenous pattern of laboratory and office uses developed along Fishers and Parklawn east of Twinbrook Parkway. This Plan refocuses efforts to develop the remaining sites near Metro and insert mixed use potential through the center of the area.

In an effort to direct the desired development pattern, but allow for market flexibility, the Plan recommends the Transit Oriented Mixed Use (TOMX) zones. These zones allow a range of technology and commercial uses, along with housing. They also require significant public amenities and urban design improvements. The TOMX densities range from .5 to 2 FAR, lower than CBD zones but high enough to focus intensity at this transit station area. The recommended FAR varies with site location and the development undertaken, and the Plan places density caps on some sites to moderate trip generation. The Plan also proposes a TOMX/TDR option to encourage residential development.

The 1992 Plan limited office use in the light industrial areas by rezoning to I-4. This Plan goes further to retain and support industrial uses by recommending modifications to the zone that would allow redevelopment on the area's small sites. Allowing smaller lot sizes, narrower side and rear yard setbacks, and a residential component will provide development options that encourage continued industrial uses in an urban pattern and location.

Analysis Areas



Metro Core Area

The three areas west of Twinbrook Parkway are located near Metro and adjacent to Twinbrook Station, making them suitable for housing and mixed-use development. The proposed TOMX-2 and TOMX-2/TDR zoning offer incentives for smaller lots to assemble, creating a mixed-use neighborhood near the station. Designating two sites as Transferable Development Right (TDR) receiving areas helps meet the dual goals of locating housing near transit and preserving outlying open space and agricultural lands. The Plan also recommends urban design that will improve pedestrian and vehicle connections to the Metro station.

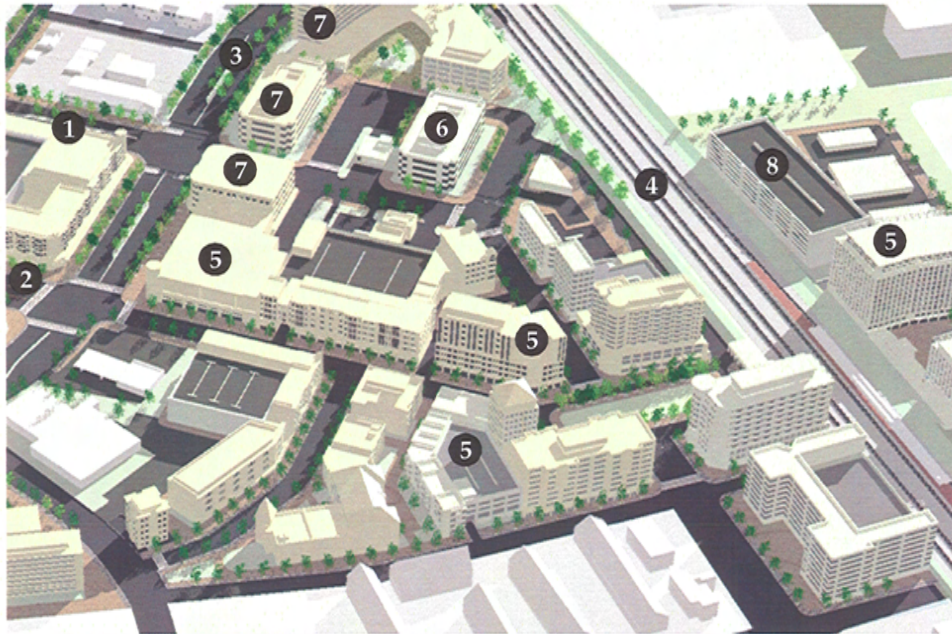
Area 1

While some of the properties in this roughly six-acre area have been assembled, others are the original small residential lots. They are situated around Wicomico Avenue and adjoin Twinbrook Station. Uses include a relatively new office building, parking lots, and various light industrial and commercial uses. The mix of lot sizes and uses reflects the area's mixed zoning designations.

The 1992 Plan recommended that some of this area be included in the TSR Zone at the Metro station, which would become Twinbrook Station, but not all of the lots were assembled. The area's central section, around Wicomico, was to maintain its O-M zoning, under which the existing office building was developed at a .56 FAR. The O-M Zone allows up to 1.5 FAR. A small triangle of land abutting the railroad tracks was recommended for rezoning from I-1 to O-M. This site has not redeveloped and retains its I-1 zoning.

Metro Core Area Illustrative

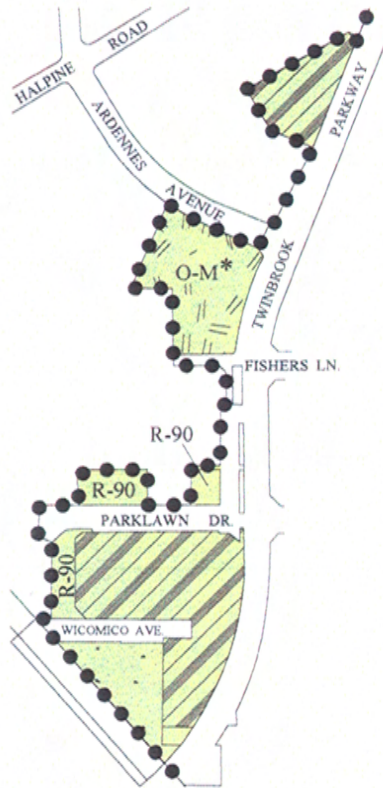
Perspective looking south between Twinbrook Parkway and the CSX Tracks



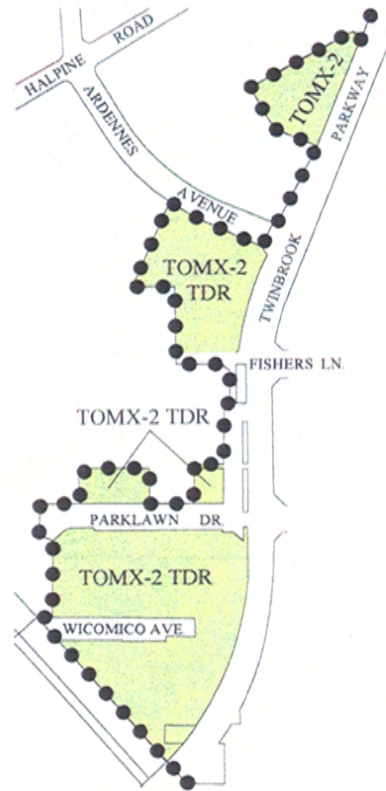
- 1 Parklawn Drive
- 2 Fishers Lane
- 3 Twinbrook Parkway
- 4 CSX Tracks
- 5 Twinbrook Station Projects (City of Rockville)
- 6 Existing Office Building
- 7 New Mixed-use Projects
- 8 New Metro Parking

Metro Core Area – Existing and Proposed Zoning

Existing Zoning



Proposed Zoning



Planning Area




●●●● Sector Plan Boundary


R-90 Residential, One-Family

TOMX-2 Transit-Oriented Mixed Use

TOMX-2/TDR Transit-Oriented Mixed Use, TDR

 O-M Office

 I-4 Light Industrial, Low Intensity

 I-1 Light Industrial

* O-M Floating Zone Option



NOT TO SCA

Rezoning these sites to TOMX-2/TDR will provide an incentive to assemble the lots and allow the active mix of residential, retail, and office uses that extend character of the Twinbrook Station project. Redevelopment should continue the street pattern and ensure vehicle and pedestrian connections to the Metro station. The full 2 FAR is appropriate in this area, since it is close to Metro, but any development above 1.5 must be applied to residential uses and secured through TDRs. The site could also redevelop completely with residential uses at 2 FAR with TDRs.

RECOMMENDATIONS

- Rezone sites from R-90, O-M, and I-1 to TOMX-2/TDR.
- Limit commercial development to 1.5 FAR, and allow up to 2 FAR for residential development with the use of TDRs.
- Encourage street-oriented retail where appropriate.
- Encourage redevelopment that contributes to a safe pedestrian crossing of Twinbrook Parkway, connections to Twinbrook Station, and creates a connected street pattern.

Area 2

This roughly two-acre area west of Twinbrook Parkway and north of Fishers Lane also adjoins Twinbrook Station. Its two properties contain a gas station and an office building. The 1992 Plan recommended this site for the O-M floating zone on an I-4 base zone, but the floating zone was never applied.

Given its prime location, the Plan recommends the area for relatively high intensity mixed-uses including residential development through TDRs. Rezoning would create a density and mix of uses comparable to the adjacent Twinbrook Station and redevelopment should create pedestrian connections and continue the Twinbrook Station pattern of buildings oriented to the street. The full 2 FAR is appropriate in this area, but any development above 1.6 must be applied to residential uses and secured through TDRs. The site could also redevelop completely with residential uses at 2 FAR with TDRs and a full complement of MPDUs and Workforce housing units.

RECOMMENDATIONS

- Rezone from I-4 to TOMX-2/TDR, to continue the pattern established by Twinbrook Station.
- Limit commercial development to 1.5 FAR and allow up to 2 FAR for housing with the use of TDRs.
- Encourage development to continue the neighborhood street pattern of buildings oriented to the street, streetscaping, and small urban open spaces.
- Ensure pedestrian connections to the Twinbrook Station project.

Area 3

These two sites, together slightly more than one acre, are farther north along Twinbrook Parkway and contain a mix of office and retail uses. An adjacent site on the southern portion of this block was annexed by the City of Rockville in 2003 and though currently vacant, is approved for an office building. The western side of this block, in the City of Rockville, is under consideration for about 240 apartment units.

Because the County sites are within easy walking distance of Metro, and because they are adjacent to proposed development of increasing density, the Plan recommends them for moderate intensity mixed-use.

RECOMMENDATIONS

- Rezone from O-M to TOMX-2 with a 1.5 FAR cap, consistent with uses and densities proposed for adjacent sites in the City of Rockville.
- Encourage development to continue the neighborhood street pattern of buildings oriented to the street with streetscaping and small urban open spaces.
- Ensure pedestrian connections to the Twinbrook Station project.

Technology Employment Area

These sites are along the central east-west axis of the Plan area and recommendations focus employment, residential, and retail uses in street fronting buildings. The eastern end of Fishers Lane will be anchored with a public open space and as sites redevelop they should create a connected street system to provide pedestrian access and alternative vehicle routes. Rezoning should create opportunities for re-use of the Parklawn Building, which is coming to a turning point in its life, and require design improvements and an urban environment that will serve into the future.

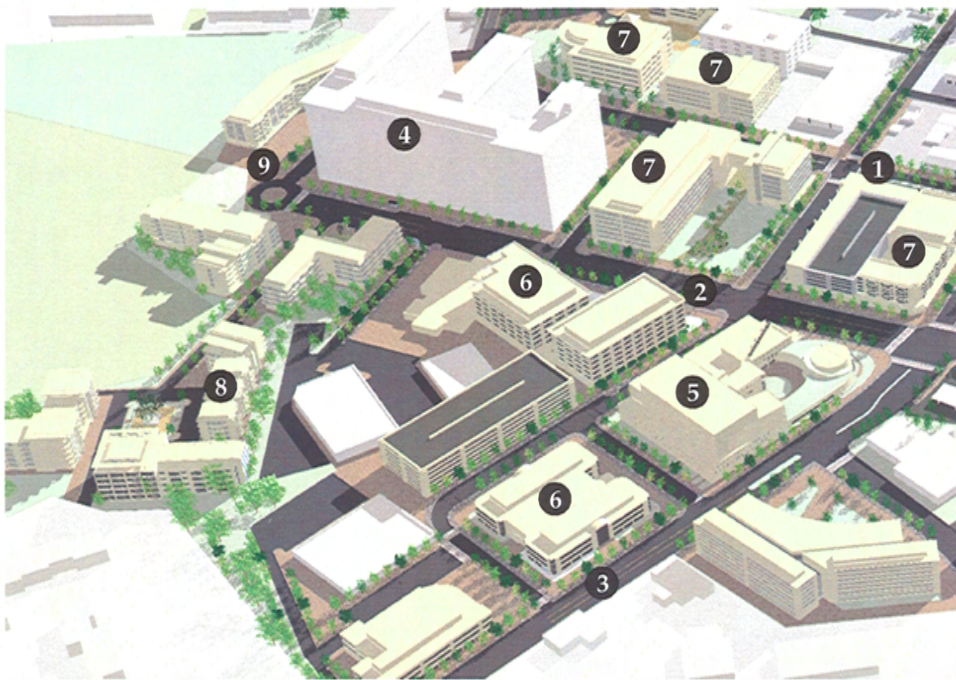
Area 4

In this area, the U.S. Pharmacopeia (USP) building and Fishers Place office projects were recently developed and under proposed rezoning would have no redevelopment potential. Other sites in this 19-acre area are zoned I-1 and are used as parking lots or built with light industrial and laboratory uses.

The 1992 Plan recommended the TS-M Zone in this area to create mixed uses, and anticipated nearly 500,000 square feet of new development. Instead, under the I-1 base zone with no FAR limit, Fishers Place was built at 715,200 square feet and an FAR of 1.42. The 1992 Plan also described USP as built out and this Plan recommends rezoning this site capped at its current FAR to reflect the current use and density.

Technology Employment Area Illustrative

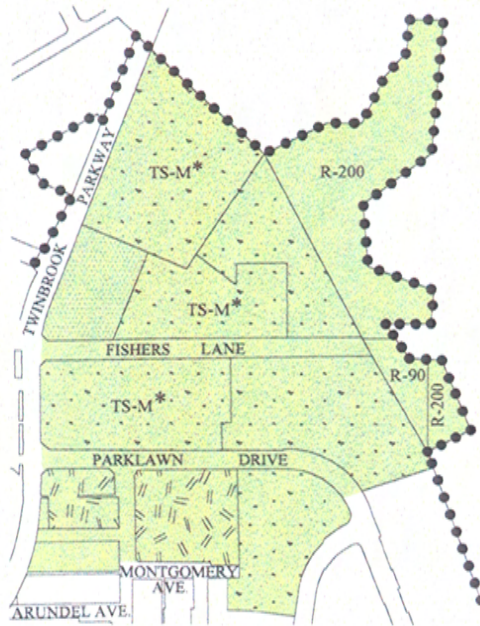
Perspective looking south located west of Twinbrook Parkway and along Fishers Lane



- 1 Parklawn Drive
- 2 Fishers Lane
- 3 Twinbrook Parkway
- 4 Existing Parklawn Building
- 5 Existing U.S. Pharmacopeia
- 6 Existing Fishers Place (Offices and Laboratories)
- 7 New Technology Buildings
- 8 New Housing
- 9 New Fishers Lane Park

Technology Employment Area – Existing and Proposed Zoning

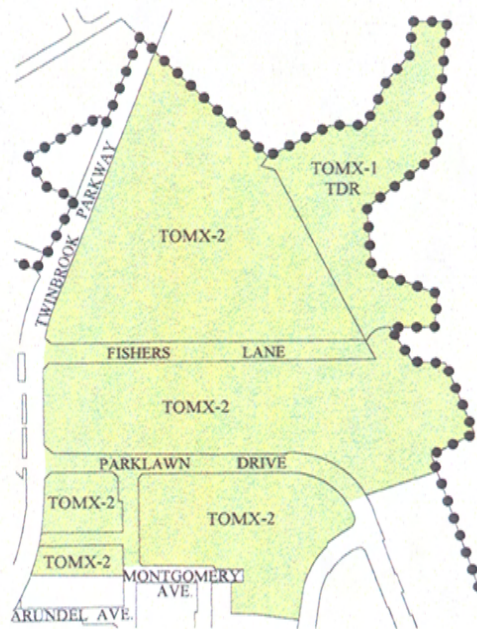
Existing Zoning






Planning Area



Proposed Zoning



●●●●●	Sector Plan Boundary		I-4	Light Industrial, Low Intensity
R-90	Residential, One-Family		I-1	Light Industrial
R-200	Residential, One-Family		C-O	Commercial Office
TOMX-2	Transit-Oriented Mixed Use	*	TSM	Floating Zone Option
TOMX-1/TDR	Transit-Oriented Mixed Use, TDR			



The remaining sites are recommended for a 1.5 FAR cap, which would provide redevelopment incentive with projects that complement the existing offices and would contribute to creating street and pedestrian connections.

RECOMMENDATIONS

- Rezone the USP site from C-O to TOMX-2, with a 1.83 FAR cap.
- Rezone Fishers Place from I-1 to TOMX-2, with a 1.5 FAR cap.
- Rezone remaining sites from I-1 to TOMX-2, with a 1.5 FAR cap.
- Encourage redevelopment with mixed uses in a grid street pattern with buildings oriented to the street.

Area 5

This slightly less than nine-acre site is used as a parking lot for the Parklawn Building and is accessible from the eastern end of Fishers Lane. It was not included in the 1992 Plan and has retained its R-200 zoning from the area's early development. Given its distance from Metro, it is appropriate for lower intensity redevelopment. This Plan proposes a new TOMX-1/TDR Zone on this site.

Rezoning the site to TOMX-1/TDR is a substantial density increase that provides incentive for redevelopment and a TDR opportunity. Redevelopment will provide significant public improvements, including a public space at the end of Fishers Lane, and sidewalk and trail connections.

RECOMMENDATIONS

- Rezone this site from R-200 to TOMX-1/TDR, allowing a mix of commercial and residential uses.
- Limit commercial development to .5 FAR with TDRs required for development above .3 FAR. The site can also develop with all residential uses at 1 FAR also using TDRs.
- Route the proposed extension of Wilkins Avenue away from the stream valley buffer.
- Provide stream restoration or off-site mitigation to minimize the impact of redevelopment.
- Make a sidewalk connection from the planning area north through the site that preserves the potential to connect to Rock Creek Park.
- Create an anchoring public open space at the eastern end of Fishers Lane.

Area 6

The two sites in this roughly six-acre area are highly visible and accessible. The sites are developed with office uses. This Plan continues the 1992 Plan's recommendation for mixed commercial development in a pattern that contributes to the area's pedestrian environment.

The site in this area facing Twinbrook Parkway deserves particular attention. Though the road is a major auto thoroughfare, at this point its western side will be fronted with the street-focused development of Twinbrook Station and pedestrians from Fishers Lane and Parklawn Drive will be crossing to the Metro station.

Accordingly, the land use and urban design recommendations for the east side should create a street-focused, pedestrian environment along this block.

RECOMMENDATIONS

- Remove the option for a TSM floating zone.
- Rezone from I-1 to TOMX-2, with a 1.5 FAR cap on commercial development, with up to 2 FAR for residential development with TDRs.
- Create a street-focused pedestrian environment along Fishers Lane, Parklawn Drive, and Twinbrook Parkway.

Area 7

This roughly ten-acre area includes a small, residentially zoned site at the eastern end of Fishers Lane and the Parklawn Building. Built at 5.16 FAR on eight acres, the building is a dominant presence in the area, generating a significant number of employees, but at a density beyond what is currently allowed. The 1992 Plan recognized the building's size and made no recommendations for rezoning, recommending only that no further special exceptions for parking on adjacent sites be issued.

The Parklawn Building is currently occupied by the federal Department of Health and Human Services. The agency's lease is coming due and they may stay in the building if it is upgraded or they may relocate. If the agency stays, the building would be upgraded, but federal security standards would limit accompanying mixed uses and a main street style redevelopment. If the agency relocates, the building would likely be reconfigured for mixed-uses, including residential.

This Plan recommends rezoning the building to TOMX-2 allowing re-use that would keep the building viable and generate employees, residents, and street activity at an urban scale. Any redevelopment should make vehicle and pedestrian connections within and through the Plan area and should contribute to streetscape and urban design improvements, including urban park and open spaces.

RECOMMENDATIONS

- Rezone the Parklawn Building and surrounding sites from R-90, R-200, and I-1 to TOMX-2, with a 1.5 FAR cap.
- Improve the visibility and accessibility of the existing pedestrian connection on the building's west side.
- Encourage redevelopment in a main street pattern of mixed uses.
- Encourage a redevelopment pattern that allows the existing shuttle bus route to continue and expand to the south.
- Create an anchoring public open space at the eastern end of Fishers Lane.
- Provide stream restoration or off-site mitigation to minimize the impact of redevelopment.

Area 8

Redevelopment of these sites south of Parklawn Drive, approximately ten acres, should contribute to the mixed-use pedestrian environment. The area includes the Parklawn Building's nearly four-acre southern parking lot. Other sites are developed with small light industrial businesses and office buildings.

To retain industrial uses, the 1992 Plan rezoned portions of this area to the I-4 Zone. This Plan instead, treats the street-fronting blocks on Parklawn Drive and around Wicomico Avenue as one unit, drawing density and mixed uses along both sides of the street. Redevelopment should be in an urban pattern, with buildings edging the street, should create significant streetscaping including public space, and should contribute to vehicle and pedestrian connections.

RECOMMENDATIONS

- Rezone from R-90, I-1 and I-4 to TOMX-2, with a 1.5 FAR cap on commercial redevelopment, and residential redevelopment up to 2 FAR.
- Work with private property owners to build a sidewalk along Washington Street.
- Consider consolidating open space requirements to create public spaces connected to streetscape.
- Provide stream restoration or off-site mitigation to minimize the impact of redevelopment.

Light Industrial Area

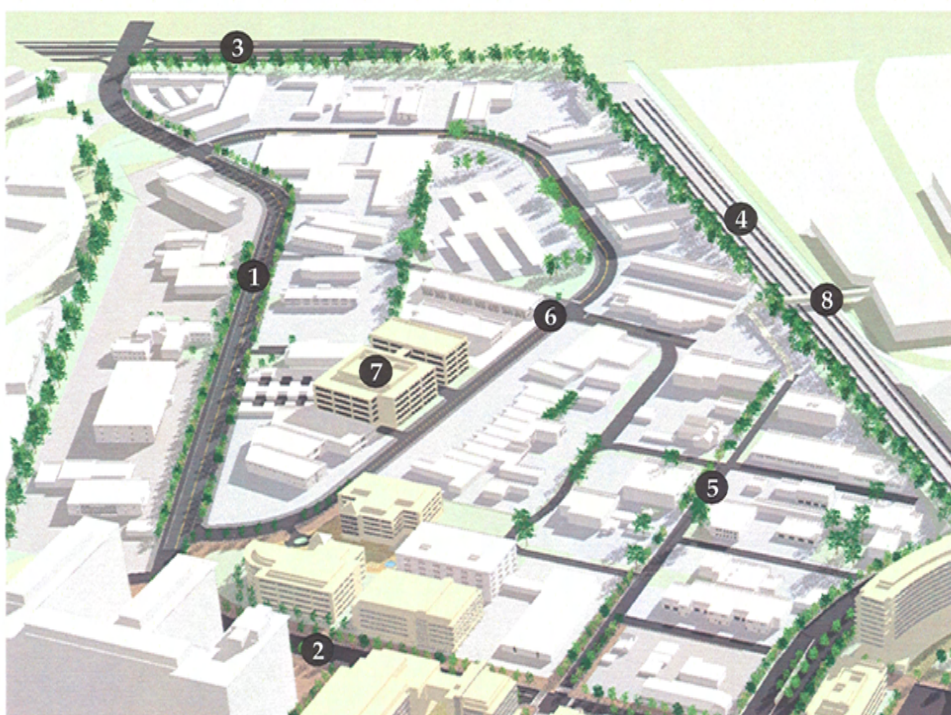
The sites in this area include the smaller properties surrounding Washington Avenue and the larger ones around Wilkins Avenue. Both areas are well located to make use of transit, and to serve adjacent technology uses and local residents.

Area 9

Some of the sites in the remaining, southernmost portion of the Plan area were not included in the 1992 Plan, others were zoned from I-1 to I-4 to limit office encroachment. This Plan recommends amending the I-4 Zone to create development flexibility on the area's small lots. The Plan also recommends connections and open space improvements that will serve current and future uses.

Light Industrial Area Illustrative

Perspective looking south between Parklawn Drive and the CSX tracks



- 1 Parklawn Drive
- 2 Twinbrook Parkway
- 3 Montrose Parkway
- 4 CSX Tracks
- 5 Washington Avenue
- 6 Wilkins Avenue
- 7 Boland Engineering Industrial Building
- 8 Potential MARC Station

Light Industrial Area – Existing and Proposed Zoning

Existing Zoning





Planning Area



Proposed Zoning



- Sector Plan Boundary
-  I-4 Light Industrial, Low Intensity
-  R-90 Residential, One-Family



NOT TO SCALE

RECOMMENDATIONS

- Amend the I-4 Zone to allow urban development patterns and small business development.
- Consider parking waivers in this area for users that foster transit ridership, recognizing the area's proximity to transit.
- Incorporate outlots at the ends of Frederick and Arundel Avenues into a pedestrian route along the CSX tracks and under Twinbrook Parkway, connecting to the Metro station.
- Create a pedestrian crossing of the CSX tracks at the southern terminus of Washington Avenue and along the CSX tracks under Twinbrook Parkway.
- Ensure sidewalks along Washington Avenue and a sidewalk connection from Parklawn Drive to the Montrose Parkway hiker/biker trail.

Urban Design

OVERVIEW

This Plan's urban design goals are to create an urban scale, walkable community with connections to transit, parks, and services and with amenities and facilities for residents and employees.

The 1992 Plan, working within different boundaries, focused its pedestrian recommendations on the Metro and MARC stations, and on creating an area-wide pedestrian network. This Plan continues to emphasize pedestrian connections throughout the planning area, makes specific recommendations for street character, and identifies opportunities for public amenities and streetscaping on sites with redevelopment potential. Urban design choices should take every opportunity to incorporate the form and function of the natural environment.

The Plan's recommendations for TOMX zones require that development be shaped by the goals of the master plan. Accordingly, site-specific guidance for urban design is provided and applies to both standard and optional method projects.

OBJECTIVES

- Establish a network of streetscaped vehicle and pedestrian routes that connect within and outside the Plan area.
- Define appropriate amenities and facilities to be provided through redevelopment and encourage high quality design for all redevelopment.
- Encourage urban design improvements that generate benefits for the natural environment.

EXISTING CONDITIONS

Based on geography and land uses, the Plan area is divided into three districts with distinct uses and characters that combine to create a well-rounded community.

West of Twinbrook Parkway, the Metro Core Area is a mix of office, retail, and industrial uses. Twinbrook Parkway, by virtue of its overpass, traffic, and topography is a route through the planning area, but also a barrier, particularly for pedestrians.

East of Twinbrook Parkway, the Technology Employment Area of Fishers Lane and Parklawn Drive has begun to redevelop and has the potential for more office and laboratory projects. Its parallel streets are a defining feature and the Plan's recommendations aim to create them as active streets, lined with commercial, retail, and residential uses, making a direct connection to the Metro station. The 1992 Plan likewise identified these two streets as paths running between the Parklawn Building and the Metro station.

The Light Industrial Area to the south will undergo less redevelopment and should remain a functional commercial area. Some of the area is built in a traditional street grid, while other sites are in a suburban pattern of buildings set in parking lots. Development throughout the area is an opportunistic pattern of large

offices, small businesses, and light industrial uses that has proceeded with little attention to the public realm or the natural environment. Projects should create pedestrian routes and public open spaces, including a sidewalk along Washington Avenue and an east-west pedestrian route that spans the area, eventually connecting to the Metro station.

TOMX ZONE DESIGN STANDARDS AND GUIDELINES

The TOMX Zones are intended to create “distinct and compact mixed use centers for housing and employment,” in accordance with guidelines in master and sector plans. Allowing mixed uses and requiring significant public amenities under both standard and optional methods of development helps create a pedestrian-oriented, mixed-use environment.

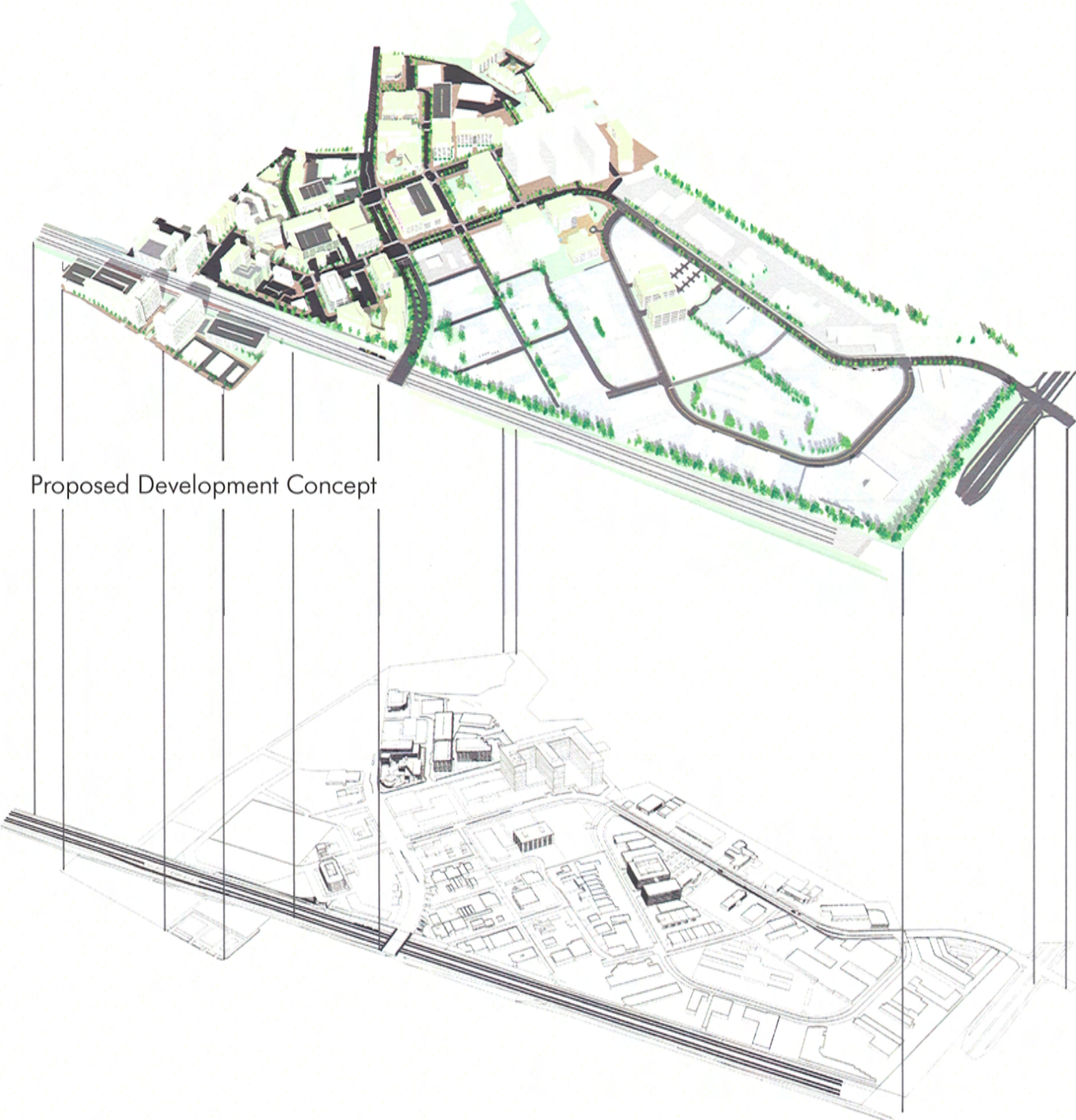
These zones’ required improvements are intended as amenities beyond the minimal public facilities needed to accommodate development. The broad list of acceptable public amenities is intended to create public open spaces, give attention to the character of streets, create pedestrian routes, and enhance the natural environment. For example, fountains can serve as visual design features as well as be placed to mask noise and help mitigate heat islands. Shared mid-block parking facilities can contribute to streetscape with retail frontage, green facades, etc. Security elements, as necessary, should also be provided in the context of streetscape enhancements between buildings and the curb, such as raised planters, decorative walls and fencing, hardened street furniture, bollards, and light fixtures.

The zones’ guidelines for site planning require street-oriented buildings; side, rear, or below-grade parking; activating street facades and uses; continuous, safe, and landscaped pedestrian routes; and screening of loading and mechanical structures. Guidelines for streetscape include lighting, street tree planting, street furniture, and enhanced crosswalks.

The TOMX zones also require that specific decisions about amenities be guided by master and sector plan recommendations. In Twinbrook, the density and proximity of retail, office, laboratory, and varied residential spaces require attention to project design.

In the Metro Core District, new development should create a high quality pedestrian environment that will enhance the connections to the Metro station. Redevelopment in the Technology Employment Area will require new building types to serve 21st century employers. As their businesses evolve, advanced technology and biotechnology users will require a changing mix of changing uses that are not permitted in the 1992 Plan. These projects often include conference spaces, offices, laboratories, and limited manufacturing of prototypical products, nearby or sometimes in the same building. High quality interior and exterior spaces can support collaborative efforts that drive innovation. The TOMX zones encourage innovative design, flexible uses, and a streamlined development process that all support business development.

Existing and Proposed Development Concept



Proposed Development Concept

Existing Development

DISTRICT RECOMMENDATIONS

Metro Core Area

Development on these sites west of Twinbrook Parkway should continue the street and community character established by Twinbrook Station. With the Metro and dense mixed uses, this entire area should become a center for the Twinbrook neighborhoods in Rockville and the County. It should be a walkable area, where people can do errands and also enjoy the mix of uses and public amenities. Development should also make pedestrian and vehicle connections to Metro and to other parts of the Plan area.

Areas 1, 2, and 3

- Establish varied building heights, but no higher than those at Twinbrook Station, with 10 to 12 stories near the Metro station, stepping down to four and five stories along Twinbrook Parkway.
- Establish a mix of uses, including street-oriented, neighborhood serving retail and office uses. Residential uses should be created through TDRs.
- Provide a variety of urban open spaces.
- Locate buildings close to the street with parking in the rear or center of the blocks.
- Create shared parking when possible.
- Redevelopment should be compatible with the height, use, and connections of surrounding uses.
- Make improved sidewalk connections to the recreation center north of the sites on Twinbrook Parkway.
- As redevelopment occurs south of Wicomico Avenue, provide a pedestrian path to the Metro station from Frederick Avenue, under Twinbrook Parkway.

Technology Employment Area

This area is envisioned as an active commercial and residential community with a mix of laboratory, office, technology, and retail uses designed with a streetfront focus and connections to the Metro station. The proposed zone allows a mix of uses from storage and small-scale manufacturing to corporate headquarters uses that can accommodate a changing business environment. The goal is to improve the area's urban environment, build on its existing concentration of technology uses, and create an employment district with a high quality public and private realm that can serve residents and employees. An internal network of streets should make pedestrian and vehicle connections that create safe and pleasant routes to Metro and other destinations. Streetscape should be substantial and can be transferred to create visible and useful public open spaces, particularly along Parklawn Drive. Buildings of varied height and character should define Fishers Lane and Parklawn Drive.

Area 4

- Overcome Twinbrook Parkway's effect as a pedestrian barrier by improving the safety of pedestrian crossings at its intersection with Fishers Lane. Consider both operational and design features.

- Fishers Lane should be lined with buildings oriented to the street and treated with streetscape features that connect to the public open space at the eastern end of the street.
- Place buildings along Twinbrook Parkway to create a wide and buffered sidewalk.
- Create a connected grid of new streets throughout this large block that are defined by buildings, streetscaping, and public spaces.
- Development should be compatible with adjacent garden apartments.

Area 5

- Create a public space at the eastern end of Fishers Lane to mirror the public open space proposed at the western end in Twinbrook Station.
- Create sidewalk and path connections through this site that connect with the proposed trail connection to the north.
- Contribute to a street grid that serves vehicles and pedestrians.
- Add park space at the north end of the site to pull the proposed park connection into the Plan area and to further buffer the adjacent stream.
- Development should be compatible with adjacent garden apartments.

Area 6

- Create the extension of Washington Avenue north across Parklawn Drive to Fishers Lane as a pedestrian-friendly environment lined with buildings and streetscaping, and marked with public open space.
- Land uses and building arrangement along the block of Twinbrook Parkway between Fishers Lane and Parklawn Drive should mirror pedestrian-scaled uses across Twinbrook Parkway at Twinbrook Station.
- Establish streetscape and contribute to a new urban park along Parklawn Drive, west of Twinbrook Parkway.
- Improve the pedestrian crossing at Parklawn Drive with Twinbrook Parkway.

Area 7

- Create a public space at the eastern end of Fishers Lane to mirror the public open space proposed at the western end in Twinbrook Station.
- Build the extension of Wilkins Avenue with streetscaping and sidewalks and contribute to a street grid.
- Improve access to and visibility of the existing pedestrian route at the eastern end of the Parklawn Building.
- Any reconfiguration of the Parklawn Building should incorporate street orientation, pedestrian connection, a shuttle bus route, and public spaces into the design.
- Contribute to a new urban park along Parklawn Drive, west of Twinbrook Parkway.

Area 8

- Contribute to a new urban park along Parklawn Drive, west of Twinbrook Parkway.
- Buildings along this southern frontage of Parklawn Drive should be oriented to the street, with parking to the rear or side. Street frontage should include pedestrian amenities and streetscape.
- Redevelopment in this area should make street and landscaping connections with the proposed northern extension of Washington Avenue.
- Consider adding a pedestrian crossing on the south side of the intersection of Parklawn Drive and Twinbrook Parkway.

Light Industrial Area

The mix of light industrial and retail uses in the area around Washington and Wilkins Avenues should be maintained with an opportunity for businesses to evolve in place. Redevelopment is intended to be on the existing small sites, not on assembled lots and accordingly improvements to the public realm will be minimal. Vehicle and pedestrian connections should build to follow the existing street grid pattern and cross-section. Connections across this area to the Metro station will be incremental, but vital to linking residents and employees to transit, shopping, and parks facilities.

Area 9

- Ensure a sidewalk connection to the hiker-biker trail proposed for the Montrose Parkway.
- Encourage redevelopment projects to contribute to the area's environmental and urban design goals, including accommodating stormwater management.
- Undertake a capital improvement project for sidewalks along Washington Avenue, working with property owners, and recognizing that this is and will continue to be an important pedestrian route to the Metro.
- Ensure a pedestrian and bicycle connection at the southern end of Washington Avenue across the CSX tracks to connect with the Montrose Crossing shopping center.
- Create a pedestrian connection to the Metro station beneath Twinbrook Parkway along the east side of the railroad tracks. Work with the County-owned outlots and private owners to create a safe and feasible route.
- Explore the potential for a mid-block pedestrian connection between Wilkins Avenue and Parklawn Drive to improve pedestrian access to bus service.

CONNECTIONS

The Plan's proposed density and use changes must be supported by connected systems of sidewalks, bike routes, and streets to make Metro truly accessible. In this relatively small Plan area, attention to detail will help create effective connections that are essential to making Twinbrook a functioning residential and commercial transit-oriented community. The system and character of sidewalks, paths, and streets proposed through redevelopment will offer a variety of travel options.

Pedestrian System

A successful pedestrian environment is a collaboration of public and private design efforts and the accumulation of many decisions. The following recommendations are intended to focus attention on those details and identify improvements in the public and private realms to create streets to serve pedestrians, transit users, drivers, residents, shoppers, and employees.

This Plan recommends a local network of sidewalks lining Twinbrook streets, but also makes regional connections with paths and sidewalks to Metro and to regional park trails. Routes through the area can also connect residents in the Plan area and beyond it to commercial services along Rockville Pike.

- Construct streetscaped sidewalks throughout the Plan area. They should be 8 to 10 feet wide, set off the curb, and buffered with street trees.
- Redevelopment projects should devise a streetscape plan that coordinates all aspects of the street and building relationship to create pedestrian safety, comfort, and convenience.
- Buildings should be sited and designed to create clear streetfront entrances and active street facades.
- Sidewalks and bike routes should connect to open spaces in the Plan area, to Metro, and to regional trails, parks, and destinations.

Street Character

Streets are the most important open space elements in defining the public realm and creating memorable places. Using buildings to create spaces defines the street as public space and provides an interesting pedestrian environment. Streets should include amenities, landscaping, and sidewalks, but most importantly, should make desired connections.

The County's current evaluation of the Road Code will establish standards that support the goals of the Twinbrook Plan for safe and pleasant pedestrian routes and street crossings for the business streets in the this Transit Station Development Area.

Some streets in the Light Industrial Area date from the land's initial subdivision as a residential community, and are built to older standards. These streets function adequately and should be allowed to remain with minimal improvements, to allow small lots to redevelop without undue burden.

All other new and existing streets in the area of the Twinbrook Plan should be designed to meet the needs of pedestrians, with the following features.

- Facades located to create a continuous building line along the street with the occasional defined and usable open space
- Closely spaced street trees in a lawn panel where parking is prohibited. Trees should be given extensive soil treatment and irrigated with graywater, where possible
- On-street parking and a minimal number of driveway cuts

- Utilities relocated underground and within the street right-of-way on highly visible streets
- Street crossings that are smoothly paved, visible to drivers and pedestrians, buffered from traffic, and unencumbered by utilities

Along with the features listed above, the design of the following four streets should be distinctive to the areas they serve and the functions they perform.

Plan of Twinbrook Parkway
Between Washington Avenue and the Parklawn Building



Plan of Fishers Lane
Between Fishers Lane and Parklawn Drive



Street Sections



Twinbrook Parkway at Fishers Lane
120' ROW - 6 Lanes Divided



Parklawn Drive at Washington Avenue
80' ROW - 4 Lanes Divided



Parklawn Drive at Wilkins Avenue
80' ROW - 4 Lanes



Fishers Lane at Washington Avenue
70' ROW - 2 Lanes



Other Streets
60' ROW - 2 Lanes

Twinbrook Parkway is a visible arterial road. From the southern Rockville City Limits to Ardennes Avenue, it should be a six-lane, divided road. From Ardennes Avenue north to the boundary of the Plan area, it should be a four-lane, divided road. Its right-of-way should include bike lanes and sidewalks set off from the curb by a lawn panel of street trees.

Twinbrook Parkway should serve through traffic as well as pedestrians, particularly at its intersections with Fishers Lane and Parklawn Drive, where building massing, frontage, and uses are encouraged to be pedestrian oriented. Features should include:

- Buildings sited to frame public space and to allow for sidewalks on both sides of the street and using reflective paving materials if possible
- Pedestrian crosswalks at the intersections with Fishers Lane and Parklawn Drive should be clearly marked, provide adequate distance from stopped cars, and made handicapped accessible
- Signal timing that allows safe pedestrian crossings at morning and evening rush hour
- Combined vehicular entrances to minimize driveway cuts
- Pedestrian refuge in the median

Illustrative of Twinbrook Parkway at Fishers Lane



Fishers Lane is a commercial-industrial street with a 70-foot right-of-way that should include two vehicle travel lanes, on-street parking, sidewalks, and streetscaping. It is envisioned as a pedestrian-oriented street lined with activating retail and service uses, connecting to the Metro station. The street should focus more on the pedestrian experience and less on the vehicle. Its intersection with Twinbrook Parkway is a significant pedestrian crossing and should be marked by wide sidewalks. Features should include:

- Retail, employment, formal public spaces and other activating uses lining the street
- Wide sidewalks on both sides of the street using reflective paving materials if possible
- An anchoring feature at the eastern end of the street that includes a major green open space incorporating complementary environmental and design features
- On-street parking with single-station parking meters, shared parking facilities, and combined vehicle entrances to minimize curb cuts.

Illustrative of Fishers Lane with Urban Park



Parklawn Drive should maintain its classification as a four-lane arterial road for its length from Montrose Parkway to the Metro station. Its vehicle and pedestrian function should be improved with four lanes and include a wide sidewalk and bike lane. Sidewalks on both sides of the street should be set off from the curb edge by a lawn panel and street trees. Pedestrian crosswalks should be provided at Twinbrook Parkway and Wilkins Avenue.

Its intersection with Washington Avenue should be marked and landscaped for safe pedestrian crossing and Metro access. Achieving this will require additional right-of-way. With future traffic generated by Montrose Parkway, design recommendations will ensure that the road also serves as a safe and pleasant pedestrian route. Features should include:

- Retail, employment, formal public spaces and other activating uses lining the street
- Wide sidewalks on both sides of the street using reflective paving materials if possible
- Possible on-street parking opportunities with single-station parking meters
- Realignment to the south, away from the Parklawn Building, to improve site security and create a safe pedestrian crossing, only if necessary to meet the tenant’s security needs.
- Shared parking facilities and combined vehicle entrances to minimize driveway cuts.

The streetscape of both Fishers Lane and Parklawn Drive should connect with the proposed pedestrian connection between the two streets. Planting patterns, street furniture, and crossing points should all mark and support this pedestrian space.

Illustrative of Parklawn Drive at Twinbrook Parkway



Washington Avenue runs from the southern end of the Plan area north through an area of light industrial uses, crossing Parklawn Drive and Fishers Lane. It is planned as a connection to Twinbrook Parkway. Improvements should recognize the changing character of the land uses along the road and its importance as a pedestrian link.

- Work with business and property owners south of Parklawn Drive through the CIP to determine an appropriate route and character for a sidewalk.
- Ensure that redevelopment does not preclude pedestrian connection across the CSX tracks.
- Redevelopment along Washington Avenue in the block between Parklawn Drive and Fishers Lane should use buildings to define Washington Street and provide sidewalks and significant streetscaping.

BUILDINGS AND THE PUBLIC REALM

An area's success relies on the interlocking functions and characters of buildings, spaces, and systems that support people and their activities. Buildings in Twinbrook will make significant contributions to re-shaping the area's character and while they will need to meet the County's evolving green building standards, they should also offer high quality design that contributes to defined open spaces, streetscapes, and walkability.

The TOMX Zones allow the type of mixed uses to serve advanced technology businesses that need flexibility as their work evolves. The zones also seek to create a supportive public realm as guided by master plan recommendations.

The public realm is shaped by streets, sidewalks, and public spaces, but is also formed by the relationship between public and private buildings and spaces. While each of the Plan's districts have a different character and activities, their public realms should be shaped to suit those uses and reinforce their character.

Metro Core

This area, closest to Metro should have a character similar to the adjacent Twinbrook Station project. The mix of uses should generate a market street character, with tightly spaced buildings.

- Buildings heights ranging from four and five stories to ten and twelve stories
- Building facades, entrances, and windows oriented to the street
- Distinctions between residential and commercial buildings
- Support the activities of the street, with seating, shelter, and retail services integral to building design

Technology Employment Area

This area of technology employment, streetfront, convenience retail, and housing will be built to be street oriented, but with a campus like feel on larger lots with public open spaces.

- Varied building heights
- Building facades and entrances oriented to the street
- Distinctions between residential and commercial buildings

Light Industrial Area

Unlike the two other districts, this area will undergo minimal redevelopment and lot assembly and will have fewer opportunities for significant reshaping.

- Buildings should be oriented to the street and make connections to sidewalks
- Place parking to side or rear
- Low rise buildings

PUBLIC AMENITIES AND FACILITIES

The TOMX Zones require a significant component of public amenities, recognizing that, along with land uses, they contribute to defining the character of a place. This Plan proposes specific, large public open spaces that will anchor a network of smaller spaces, both created through redevelopment. They are designed to serve both residents and employees with places for the informal activities of public life.

The zone's requirement for 20 percent public use space is significant, and those spaces should be high quality environments that will serve well into the future, that will provide an attractive setting for technology businesses, and that will serve as meeting points between the varied land uses allowed in the zone.

At the same time, the Plan's recommendation to maintain the existing light industrial uses under an amended I-4 Zone recognizes a business area in which improvements to the public realm are less important.

- Public spaces should be intensively designed to offer varied recreation and open space options on small sites.
- Public spaces should function to support and enhance the natural environment with design features that also perform environmental functions, such tree coverage and pervious surfaces.
- Allow public space requirements on separate sites to be combined to create larger spaces or design with more function and visual impact than individual sites.

1. Fishers Lane Streetscaping and Intersection Improvements

Though this intersection is marked with special paving, redevelopment will increase the number of people crossing to and from Metro. Pedestrian safety issues that can be addressed in design and operations should be examined. Improvements here should also be coordinated with Parklawn Drive's intersection with Twinbrook Parkway and should contribute to creating the east side of Twinbrook Parkway between the two streets as a pedestrian environment.

2. Sidewalk and Trail Connection to Rock Creek Park

This opportunity for a bike and pedestrian connection to a local and regional park should not be overlooked. It will be necessary to work with property owners to create a short easement between the Plan area and the park.

3. Parklawn Drive-Fishers Lane Pedestrian Connections

These routes already exist as a driveway and a somewhat hidden stairway. Both should be made more visible and accessible to create a comprehensive pedestrian route through the area that eventually reaches Metro.

4. Parklawn Drive Streetscaping and Intersection Improvements

As with Fishers Lane, the sidewalks, street character, and pedestrian crossing should be upgraded for safety and appearance through redevelopment.

5. Washington Avenue Sidewalk

The street is proposed to be extended to the north as a vehicle and pedestrian connection, and anchored at the south with a pedestrian crossing of the CSX tracks that also serves the extended Kraft Drive from the east. Accordingly, a sidewalk along the street, through the Light Industrial Area will create a complete pedestrian network.

6. Frederick Avenue-Wicomico Avenue Pedestrian Link

A desire line path has already been created here to link to Metro, but it is a dangerous route, climbing up an embankment and crossing Twinbrook Parkway at mid-block. This route should be safely established beneath the Twinbrook Parkway overpass and through redevelopment of the Wicomico Avenue area.

7. Kraft Drive-Bou Avenue Pedestrian Link

Extending Kraft Drive to meet the southern end of Washington Avenue completes one link in an east-west pedestrian route through the Plan area.

8. Wilkins Avenue-Parklawn Drive Pedestrian Link

This route through private property would complete another link in an east-west pedestrian route and create a shortcut for walkers to bus stops on Parklawn Drive.

9. Parklawn Drive-Montrose Parkway Trail Connection

The Montrose Parkway will make a vehicle connection with Parklawn Drive, and designs should include a safe and separate pedestrian and bike route from existing sidewalks to the proposed trail.

10. Twinbrook Station Green

Though outside the Plan area, this green is a significant space that marks the Metro station and provides a community focus. It will be mirrored by a similar, green open space at the eastern end of Fishers Lane.

11. Fishers Lane Park

This is one of the large public open spaces proposed in the Plan and while at the intersection of proposed streets and driveways, should be large, visible, and predominantly green.

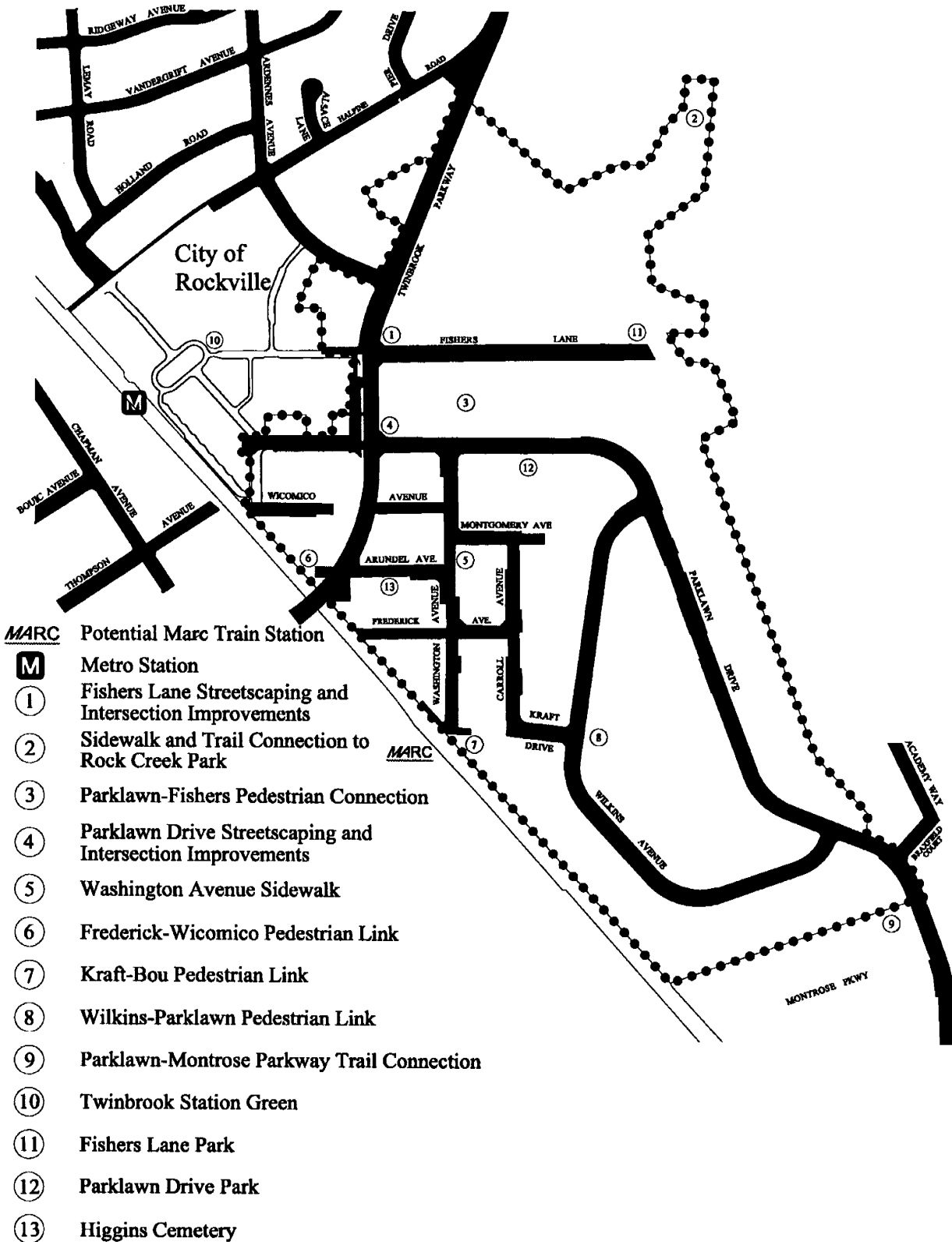
12. Parklawn Drive Park

This park is the second large public open space proposed in the Plan and will be created at some point along the length of Parklawn Drive. It should coordinate with the pedestrian space at Washington Avenue and should be visible and predominantly green.

13. Higgins Cemetery

This historic site is privately owned and maintained, but is a significant open space in this largely developed Plan area. Any redevelopment of sites and paths adjacent to it should respect the cemetery's design and boundaries and complement them whenever possible.

Public Amenities and Facilities



Environmental Resources

OVERVIEW

This Plan updates the 1992 Plan with specific recommendations for the Twinbrook Plan area that reflect the latest policies on smart growth, stormwater management, recycling, green building, and green urbanism. The Plan's recommendations respond to the particular conditions and opportunities in Twinbrook and encourage the use of emerging technologies that can contribute to the area's environmental quality. These efforts build sustainability by decreasing the use of non-renewable energy sources, encouraging sustainable best management practices, creating pedestrian and transit access, promoting stormwater infiltration, and improving air quality.

This Plan recognizes Twinbrook's dense, developed character and through rezoning and redevelopment, strives to improve environmental sustainability. The Plan's recommendations address both environmental function – primarily air and water quality – and the community's appearance by incorporating features such as green open spaces and tree-planting, into land use, transportation, park, and urban design recommendations. Redevelopment of the area should create a recognizably green setting in function and appearance where residents and employees can walk between work and transit and to community services and retail.

Metro station locations such as Twinbrook already create environmental benefits by redeveloping built environments, using existing infrastructure with proximity to transit, and thereby containing the impacts of development.

This Plan's environmental goal is to move beyond the benefits of the location by encouraging green building and site design. It recommends the TOMX Zones that introduce mixed uses with Metro proximity, increase green space requirements, a requirement for site plan review, and encourage complementary environmental and urban design improvements.

OBJECTIVES

- Increase pervious surface to improve the quality and reduce the quantity of stormwater run-off, mitigate heat island effects, and contribute to a green and pedestrian-friendly environment.
- Encourage on-site stormwater management techniques that make best use of new technologies suited for dense, urban environments.
- Buffer noise through building placement, site design, and urban design features.
- Improve air quality through development decisions that increase tree canopy, pervious surfaces, and the use of reflective materials that decrease automobile use, and that encourage the use of renewable energy sources.
- Encourage energy efficiency by encouraging development decisions through every phase of planning, building and site design, construction, and operation.

EXISTING CONDITIONS

Twinbrook has changed significantly from its original natural state and from its early development as a 19th century railroad village to become a center of office and light industrial uses along a busy rail line. Its continuing evolution with mixed-use redevelopment should contribute to restoring portions of natural function and appearance as sites are redeveloped.

The Plan area is approximately 80 percent impervious with a majority of the imperviousness devoted to automobile use (42 percent surface parking lots and 11 percent roads). This imperviousness has allowed uncontrolled run-off that contributes to poor water quality in the Rock Creek watershed. Between 1951 and 1970, the area's streams were buried and piped to accommodate development. This left no open streams in the Plan's area and contributed to erosion and poor water quality in the nearby Rock Creek mainstem.

The Environmental Protection Agency (EPA) has designated Montgomery County an area that does not meet minimum air quality standards and it recently downgraded the County's air quality from serious to severe air pollution, due in large part to heavy automobile use. The EPA has also issued six air emissions permits in the Twinbrook Plan area, which allow monitoring and mitigation of local air pollution sources.

Twinbrook also has significant noise volumes from a variety of sources including Twinbrook Parkway and other roads, and from the Metro and CSX service on the rail tracks. Once built, the Montrose Parkway East will be another source of noise. Although a certain level of noise is inevitable in urban locations, targeted mitigation can reduce overall noise levels.

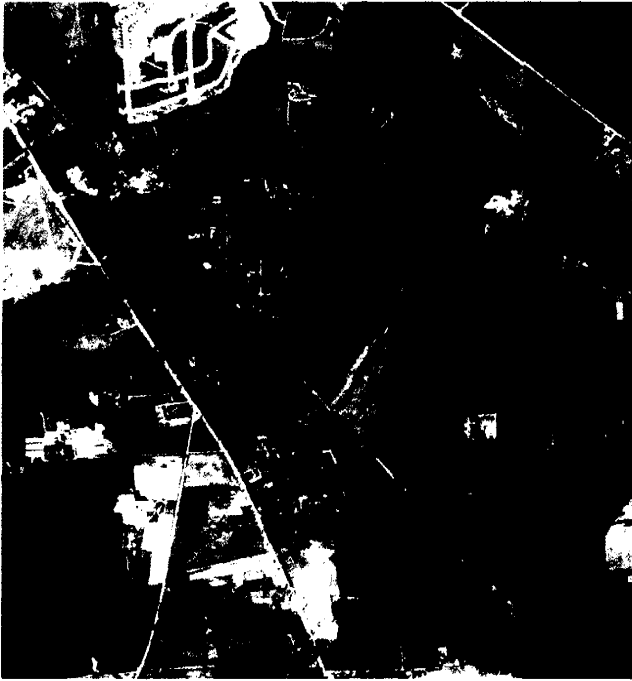
The pedestrian system proposed in this Plan is intended to have a transportation function – connecting to Metro and other parts of the planning area, and a design function – creating and connecting public spaces. The pedestrian system also has an environmental function in encouraging walking that replaces short auto trips and adding more opportunities for tree planting and pervious surfaces.

Most Twinbrook streets have sidewalks, although they are often narrow, unshaded, cluttered with street furniture, unprotected from auto traffic, and pass by blank building facades or parking lots. This Plan strives to create an improved pedestrian network that encourages walking.

The 20 percent public use space requirement of the TOMX Zones is a significant increase over the 10 percent required by current zones. Recommended for 60 acres of the Plan's total 154 acres, it will generate 12 acres of visible and accessible open space. The recommendation that 85 percent of that public use space be pervious will create roughly ten acres of high quality pervious ground that is well located to serve environmental and design purposes. Further, the zones' requirement for streetscaping and the recommendations for planting street trees in panels will add more pervious surface.

Twinbrook also has environmental advantages; its proximity to Metro makes it ideal for transit-oriented redevelopment. Nationally recognized environmental building standards award points for many features of proposed redevelopment in Twinbrook, including proximity to transit and use of existing infrastructure at a higher intensity.

Environmental Change



1950



1970



1979



2000

RECOMMENDATIONS

These recommendations are based on Twinbrook's specific environmental opportunities and should be applied in combination with land use, park, transportation, and urban design guidelines for green streets, trails, pedestrian and transit services, parks, and open spaces.

Pervious Surface/Water Quality

Redevelopment will generate new site layouts and re-use of parking lots, creating an opportunity for more pervious surface, contributing to improved air and water quality.

- Require that 85 percent of the proposed public uses spaces recommended for Fishers Lane and Parklawn Drive be pervious surface.
- Allow decreased street pavement width on new streets on the redeveloped sites in favor of pervious surface to control stormwater runoff from roads.
- Support urban design recommendations for green and pervious public spaces and for a streetscape plan that includes massed tree plantings and significant green spaces.
- Create a connected system of usable green open space retreats along pedestrian routes, including parks along Fishers Lane and Parklawn Drive, a mid-block connection between those streets, the historic cemetery.
- Require redevelopment of Area 5 to set aside open space that marks the proposed trail connection, provides green space within the Plan area, and further buffers the adjacent stream.
- In locating the proposed Wilkins Avenue extension, prevent additional stream or stream valley buffer road crossings.

Stormwater Management

Although Twinbrook's natural water flow has been long altered, redevelopment in urban areas with increased density can offer opportunities to apply new technical solutions to treating the quality and quantity of stormwater run-off.

- Encourage on-site building and site design solutions to hold and filter stormwater, following Division of Permitting Service's preference for on-site percolation that replicates the natural hydrologic system.
- Encourage public and private projects to use emerging technologies in building, site, and road design that incorporate stormwater treatment features into urban design and streetscape options. They can include, but not be limited to: green streets, water features that buffer noise and capture stormwater, graywater cisterns, and open spaces that can capture, reuse, and filter stormwater.
- Incorporate stormwater management into required green spaces, using it as a design feature and making it accessible for maintenance.

- Encourage green roofs. They are proven to help mitigate heat island effect, to help filter and retain stormwater runoff, and improve air quality through transpiration.

Noise

Noise is inevitable in an urban environment, especially along busy streets and transit routes. Redevelopment can buffer and minimize noise impacts to contribute to a more comfortable pedestrian environment.

- Encourage site and building design that locates public and other occupied spaces away from noise sources.
- Design public amenities, like parks, open spaces, and water features, that further buffer noise.
- Wherever possible, locate structured parking adjacent to Metro/MARC tracks to mitigate noise.
- Encourage new development to integrate noise mitigation measures at the earliest possible stage.

Air Quality

Small local decisions as well as larger policy efforts contribute to improving air quality. This Plan encourages redevelopment that can contribute to improving air quality.

- Support a safe and pleasant pedestrian and bicycle network that encourages residents and employees to replace short auto trips with walking, transit, and bicycling.
- Encourage building and site design features such as green roofs, reflective pavement, water features, and pervious surfaces that can modulate heat island effects.
- Encourage a significant portion of non-roof hardscape to be shaded within five years of occupancy or to be paved with reflective materials.
- Encourage open space to be planted and pervious.
- Encourage expanded bus shuttle service through the Plan area and to MD 355, using hybrid or alternative-fueled vehicles, to reduce short trips and diminish traffic congestion and vehicle emissions.
- Encourage street trees in the area to achieve 30 percent canopy coverage of redeveloped areas, as well as landscaping and other green elements in road and sidewalk design.

Energy Efficiency

- Encourage redevelopment projects to incorporate site design features that promote energy efficiency.
- Connect redevelopment projects to each other through public park, urban design, transportation, and urban design improvements to maximize pedestrian connections and environmental benefits.
- Encourage redevelopment projects to reduce energy use through site and building design and building operation decisions.

Transportation

OVERVIEW

The transportation recommendations support the Plan's goals to improve the pedestrian network and to improve the form and function of the natural environment. The recommendations address both the location and character of the area's sidewalks, ensuring a connected network and a safe and pleasant pedestrian environment. The proposed transportation network and development pattern are focused on Metro to foster transit use.

The 1992 Plan shared the goal of creating vehicle connections, establishing a network of pedestrian routes, and maximizing transit access. It made specific recommendations, focused on Montrose Crossing and the area of Twinbrook Station, both now outside the Plan boundary. Nonetheless, this Plan recognizes those destinations and makes connection recommendations. This Plan also makes road standard recommendations that support the urban design goals for the area and encourage redevelopment to create a grid street system for vehicle and pedestrian connections.

The Plan's specific recommendations for pedestrian routes, street design, and local connections treat the pedestrian environment and Metro proximity as primary goals.

OBJECTIVES

- Complete pedestrian links throughout the Plan area, coordinating them with building and design recommendations, establish new links that connect to the Metro station and nearby parkland, and improve existing links.
- Through redevelopment, complete the master planned bike route network in this area, connect to City of Rockville bike routes, and provide a route through the northern end of the Plan area, connecting to Veirs Mill Road and Rock Creek Park.
- Encourage complementary transit services that connect MARC, Metro, bus and flex-car services with pedestrian and bike routes.
- Develop new road connections in the local street system that provide alternative routes and relieve intersection congestion.
- Encourage shared and structured parking.

EXISTING CONDITIONS

As did the 1992 Plan, this Plan seeks to build on Twinbrook's existing network of transportation routes and modes, completing links and providing alternatives. This network has evolved with the area's land use, from a railroad village built on a grid of streets to a Metro-accessible employment center with office buildings set in parking lots.

Twinbrook continues to be a business location, with Metro proximity, access to the east via Randolph Road, and to the west and I-270 and the Beltway. Proximity to Rockville Pike also offers a route north and south. This central and convenient location continues to place demands on all travel modes in the area and this Plan supports the objectives of the 1992 plan to provide a balanced system, increase non-auto alternatives, and improve local circulation.

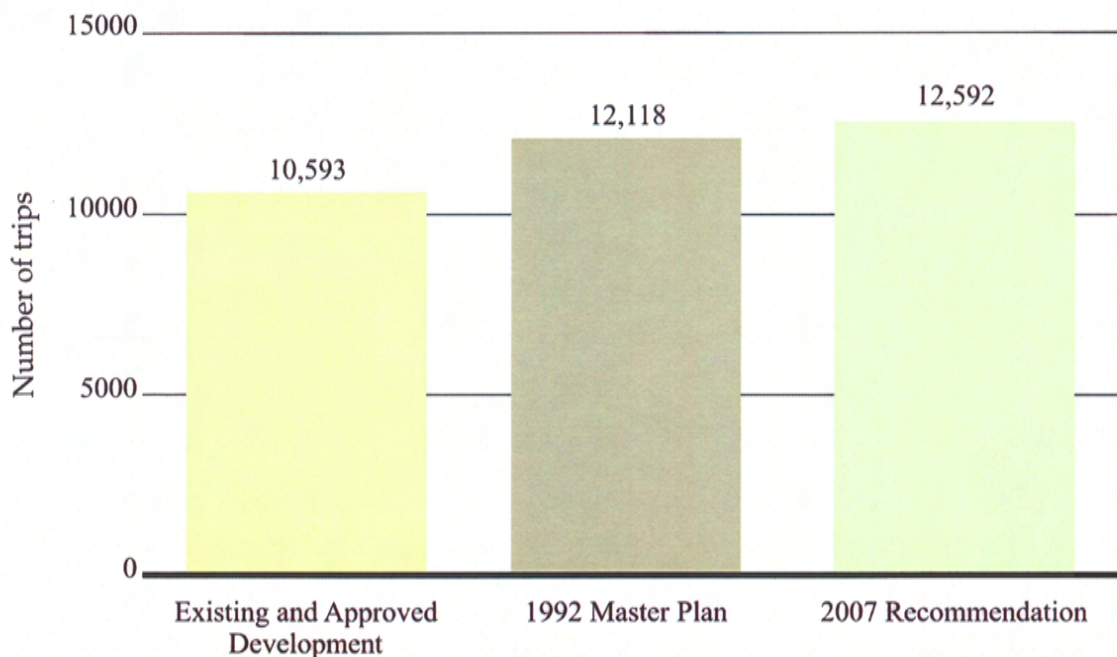
Along with the existing network, the proposed Montrose Parkway East runs along the Plan area’s southern boundary and intersects with Parklawn Drive.

To determine a development balance, road capacity was measured and modeled regionally and locally. The regional model develops baseline conditions of planned land use and road improvements while a local model measures development scenarios within the Plan area. In Twinbrook, these models generated two pieces of information: a cordon line analysis measuring trips in and out of the area and critical lane volume measuring intersection congestion. Both models include a completed Montrose Parkway.

The modeling used a number of land use scenarios that were measured against a baseline of build out of current Master Plan recommendations. Since the TOMX zones allow a wide range of land uses, modeled redevelopment scenarios included housing, industrial, and residential focuses.

This Plan’s land use recommendations could generate an increase in square footage over the 1992 master plan to accommodate the desired residential and technology redevelopment. Modeling projections indicate a three to five percent potential increase in trips generated, depending on build-out and land use. The Plan’s recommendations for road connections, pedestrian routes, and staging will help mitigate the increase in trips. Development staging recommended in the Implementation section also includes a cordon line cap that will set an upper limit on redevelopment.

Estimated Trip Generation



RECOMMENDATIONS

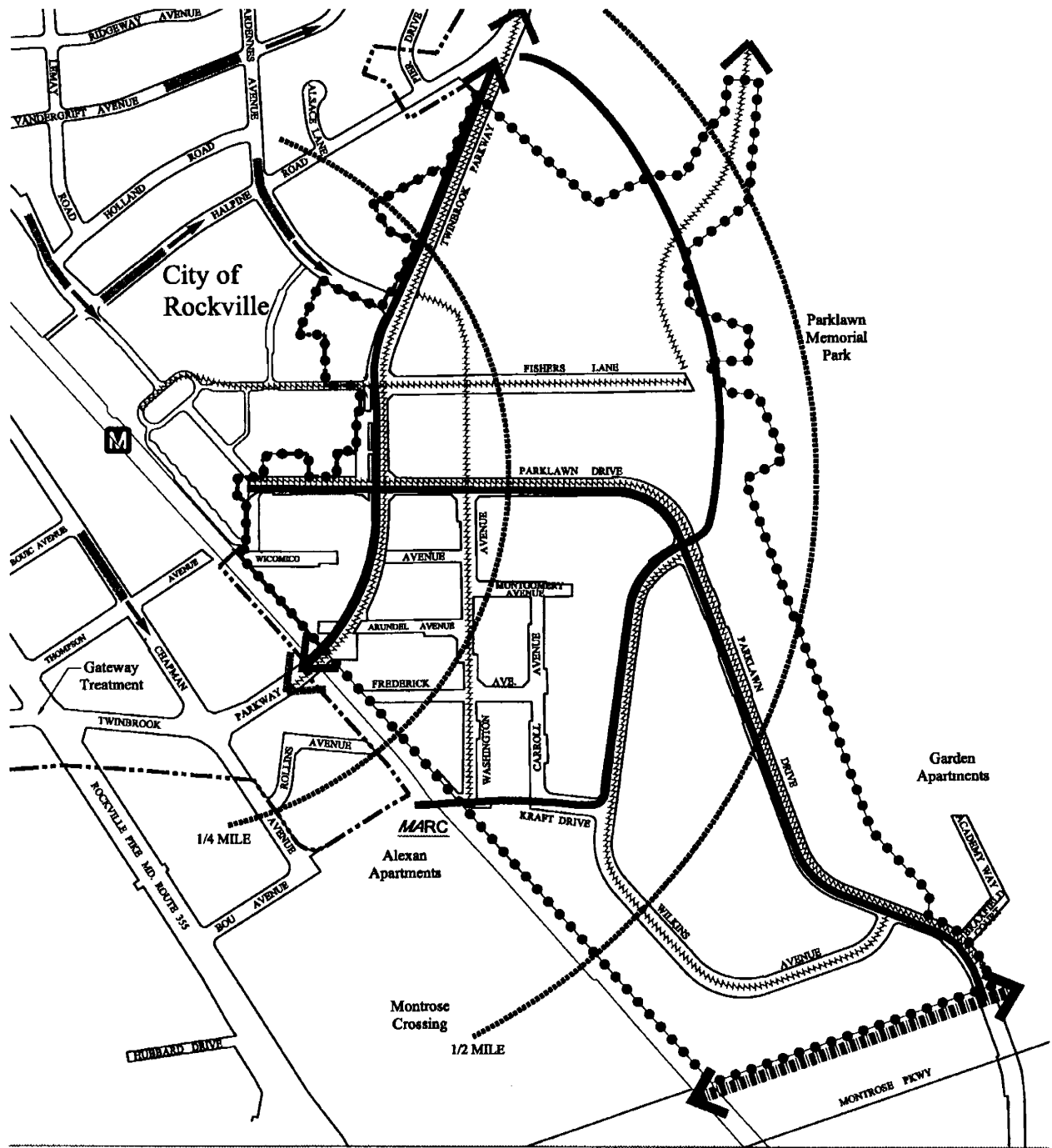
Pedestrian System

- Provide safe and effective pedestrian crossing treatments at all street intersections. Design intersections to include pedestrian-supportive characteristics such as reduced corner radii, accessible crosswalks at all intersection approaches, and special visible or textured crosswalk treatments. Particular care should be taken at the intersections of Fishers Lane and Parklawn Drive with Twinbrook Parkway.
- Provide sidewalks that are routed to provide convenient access, and that are shaded and buffered from traffic. Sidewalks should be faced with active building facades whenever possible.

Through redevelopment of sites along Fishers Lane and Parklawn Drive, create a fine-grained street grid with sidewalks that create an urban profile with buildings oriented to the street rather than parking lots.

- Create a landscaped, shared vehicle and pedestrian link that breaks the long block created by Parklawn Drive and Fishers Lane. This link should be animated by storefronts and doorways, and should take advantage of the grade change in its design. This link is intended to make a convenient pedestrian connection between two active streets.
- Establish a sidewalk and trail link through the northeast corner of the Plan area, connecting to Rock Creek Park and Veirs Mill Road and one to the south, connecting to the Montrose Parkway hiker-biker trail.
- Through redevelopment, consider a pedestrian route through the large block created by Wilkins Avenue and Parklawn Drive, to more conveniently connect pedestrians to the bus routes along Parklawn Drive.
- Provide safe and effective pedestrian and bicycle connections across and along the railroad tracks, at the following opportunities.
 - A pedestrian connection, either at-grade or elevated, between Washington Avenue and Bou Avenue (via Kraft Drive) would provide a direct connection across the CSX tracks between the Twinbrook Plan area and the residential and retail uses at Montrose Crossing and MD 355.
 - A pedestrian connection along the east side of the CSX tracks and beneath Twinbrook Parkway from Washington Avenue, via Frederick or Arundel Avenues, to Wicomico Avenue. The reduced walking distances and a grade-separated crossing of Twinbrook Parkway would encourage walking to Metro from this area. This path should be provided in a right-of-way or easement directly east of the CSX right-of-way. Work with property owners to make best use of County right-of-way to accommodate path and continued commercial operations.

Pedestrian and Bicycle Connections



Metro Station

MARC

Potential MARC Train Station



2005 Twinbrook Sector Plan Boundary



City of Rockville

Note: Walking time from Parklawn at Wilkins to Metro is 15 minutes.



Bike Route



Sidewalk



0 600'

Bicycle System

- Support the 1992 Plan’s recommendation for bike lanes along Twinbrook Parkway connecting Aspen Hill with Rockville and North Bethesda. This bike route is included in the *Countywide Bikeways Functional Master Plan*.
- Support this Plan’s recommendation for a trail connection north through the Plan area into parkland, Rock Creek Park and to Veirs Mill Road and a southern connection to the Montrose Parkway hiker-biker trail.
- Establish a network of bikeways within the Plan area that connect to the regional bike route system, including access via the proposed trail from the north end of the Plan area connecting to Rock Creek Park and Veirs Mill Road.
- Ensure a sidewalk connection from Parklawn Drive to the proposed bike route along the Montrose Parkway.

Ensure that redevelopment projects include the mapped bike routes in street cross-sections and site design, minimizing curb cuts, and including bicycle amenities, such as bike racks.

Bikeway Classifications

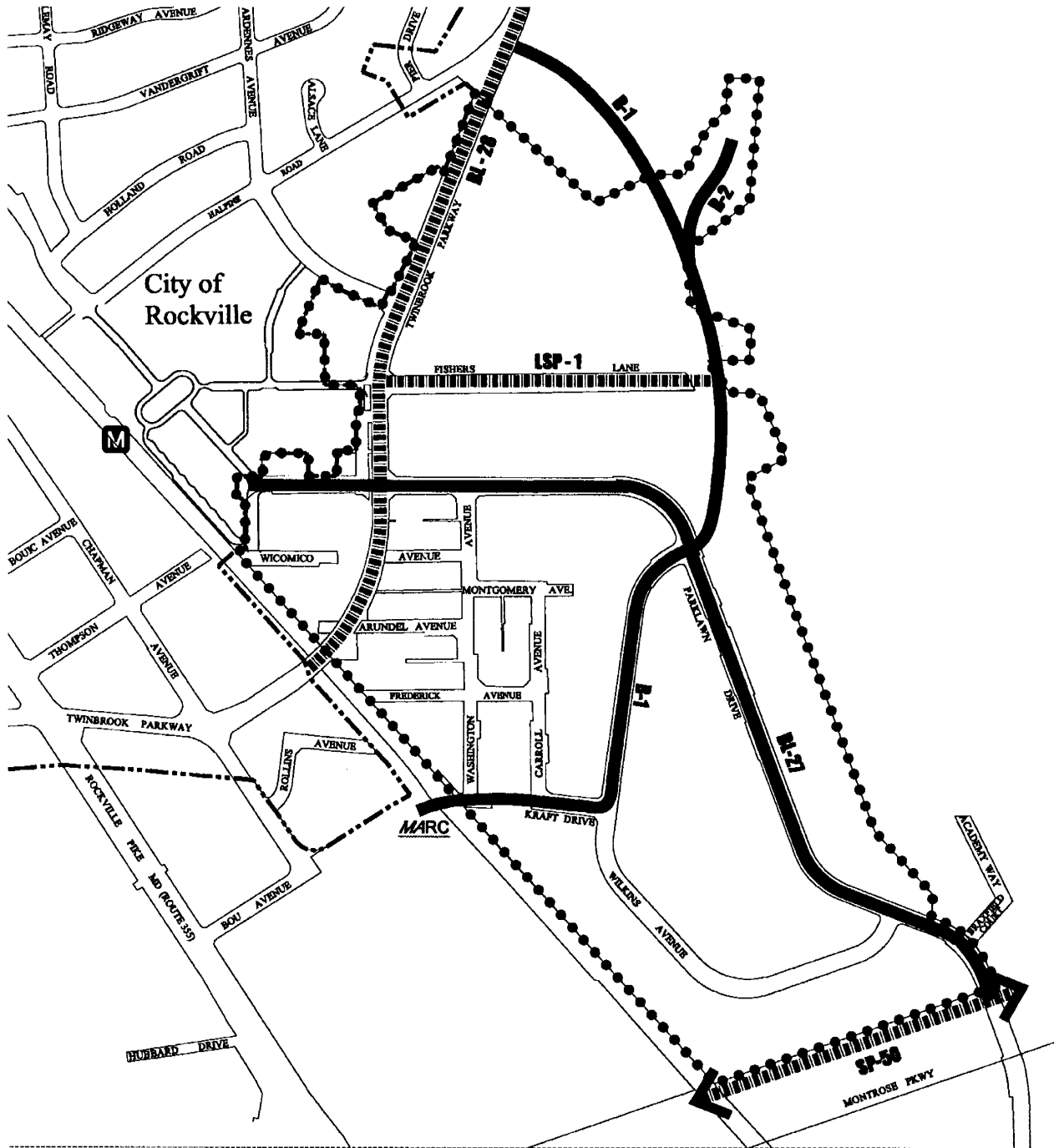
Bikeway Name	Route #	Type	Limits
Countywide Functional Master Plan Routes			
Parklawn Drive	BL-27	bike lane, class II	Nebel Street to Twinbrook Parkway
Twinbrook Parkway	BL-28	bike lane, class I	Frederick Road (MD 355) to Veirs Mill Road (MD 586)
Montrose Parkway	SP-50	shared use path, class I	Falls Road (MD 189) to Veirs Mill Road (MD 586)
Local Bike Routes			
Fishers Lane	LSP-1	shared use path, class I	Twinbrook Parkway to cemetery access road
Wilkins Avenue	B-1	bike lane, class I	CSX tracks via Kraft Drive and Wilkins Avenue Extended to Twinbrook Parkway
Wilkins Avenue Extended to Veirs Mill Road	B-2	bike lane, class I	Wilkins Avenue Extended through “thumb” parcel

The City of Rockville and the County use the same bike route standards and connect their routes to each other and to Metro. The following paths converge in the Twinbrook Plan area.

City of Rockville Bike Routes

Ardennes Avenue	signed shared roadway	Twinbrook Parkway to Rockville city limits
Fishers Lane	signed shared roadway	Through Twinbrook Station to Metro
Lewis Avenue	bike route, class III	Connection to Metro
Halpine Road	bike route, class III	Connection to Metro
Twinbrook Parkway	bike lane, class II	Continues County route

Bikeways



- SP-58** Bikeway Functional Master Plan Number
- M** Metro Station
- Sector Plan Boundary
- City of Rockville

- Class I Bikeway
- Class II/III Bikeway
- MARC Potential MARC Train Station



Public Transportation System

- Consider a new MARC station to serve the Twinbrook area.
- Ensure safe and pleasant pedestrian connections to transit stops and the Metro station from all parts of the Twinbrook Plan area, with attention to the details of sidewalk environment and crossings.
- Encourage expanded shuttle bus service that includes midday service, particularly connected to the Metro station and MARC services.

Future Transitway Alignments

- Confirm the 1992 Plan's support for a future transitway in the Montrose Parkway right-of-way. The 1992 Plan recommended that the eastern portion of the Montrose Parkway be designed as either a four-lane divided roadway or a three-lane roadway with a reversible lane. The Phase I facility planning for the Parkway confirmed that a four-lane divided roadway is needed. This Plan recognizes that the 1992 Plan's recommendation for a future transitway in the Montrose Parkway right-of-way should not affect either the recommended 300-foot right-of-way or the current facility design. The 1992 Plan transitway concept remains a potential long-term strategy. The current facility design emphasizes use of the 300-foot right-of-way as a green buffer between the four-lane Montrose Parkway and adjacent communities.

Transportation Demand Management (TDM)

- Support the established North Bethesda Transportation Management District (TMD), by rezoning for transit-friendly land uses, and by supporting the use of parking credits, waivers, and reductions as allowed in the Zoning Ordinance.
- Study expansion of the feeder and shuttle bus routes, including the use of alternative and hybrid fuel vehicles, to connect the Plan area to surrounding neighborhoods, to the Metro station, to the Rockville MARC station, to White Flint and to nearby retail centers. These bus routes can be a mix of complementary public and private services.

Road System

Interconnected streets provide vehicular, bicycle, and pedestrian access to Metro, other transit stops, public space, and other destinations. Twinbrook's secondary streets should connect with proposed pedestrian-only links and create a more finely grained street fabric. New streets should break-up longer blocks, shorten walking distances, and make walking convenient. Street design should include pedestrian amenities and green design features, as described in the urban design section.

- Through redevelopment create a street grid that makes vehicle and pedestrian connections throughout the area.
- Support the 1992 Plan's recommendation and the recommendations in the 2000 *Montrose Road Limited Amendment* to construct the Montrose Parkway from Montrose Road to Veirs Mill Road. This road section should include bicycle and pedestrian paths in initial construction.

- Support the eastern leg of the Montrose Parkway with the addition of an interchange at the intersection with Parklawn Drive, consistent with the Department of Public Works' (DPWT) completed Phase I facility-planning study.
- Construct a partial ring road, the eastern Wilkins Avenue Extension, with a 70-foot right-of-way, as an alternate vehicle route through the Plan area.

This road is envisioned in three sections. The southernmost, from Parklawn Drive to Fishers Lane allows vehicles, shuttle buses, bikes, and pedestrians an alternative to the intersection of Twinbrook Parkway and Parklawn Drive. The middle link, from Fishers Lane through the Plan area's northeast corner, should be routed to meet any security needs and to minimize environmental impacts. It provides access to redevelopment on that site and continues a through connection. The northernmost link, from the property line north to Twinbrook Parkway, provides access to the eastern portion of the planning area and completes the bypass of the Twinbrook Parkway and Parklawn Drive intersection.

These sections would be staged to coincide with redevelopment. The first two sections would be completed as part of site redevelopment. The third section, envisioned as a commercial street with a 70-foot right-of-way, is outside the Twinbrook Plan area. It would require coordination with properties outside the planning area and could be implemented as a private street. Its route should minimize impact on any adjacent residential development and should be outside the recommended stream buffer.

All segments of the road should include bicycle and pedestrian facilities and be built using green design elements, such as bio-swales and other techniques to address stormwater management.

- Extend Washington Avenue north to Twinbrook Parkway. This shared pedestrian and vehicle connection should be landscaped and would connect the northern and southern portions of the planning area.
- Extend Washington Avenue's southern end to Kraft Drive with a 70-foot right-of-way. This route would also eventually connect an at-grade pedestrian crossing of rail tracks at Bou Avenue extended.
- Connect Kraft Drive to Washington Avenue to add a link to an east-west pedestrian connection across the Plan area and to provide access to a future MARC station and crossing of the CSX tracks.

Roadway Rights-of-Way and Standards

Roads are classified by how much access they offer to adjacent properties. Classifications range from limited access freeways to local residential streets and each road type must be built to defined standards. The Twinbrook Plan area has two classes of roads: arterials for access to and through the area, and commercial/industrial streets that provide access to properties. The public streets not explicitly referenced in this Plan should be considered commercial/industrial streets and may be augmented or refined as redevelopment allows.

- Maintain the classification of Twinbrook Parkway as an arterial road and support a 120-foot right-of-way, rather than the 104-foot right-of-way in the 1992 Plan.
- Ensure that right-of-way truncations at intersections allow building placement close to corners, create adequate pedestrian spaces, and create safe sight lines.

- New streets serving local traffic in the Plan’s redeveloping areas should be built to create a connected grid and constructed or improved with a 60-foot right-of-way to commercial/industrial road standards.
- Streets in the Light Industrial Area should continue at their current rights-of-way.

Street and Highway Classifications

Master Plan of Highways	Name	Limits	Travel Lanes*	Min. ROW
Arterial Streets				
A-37	Twinbrook Parkway	Southern Rockville city limits to Ardennes Avenue	6, divided	120’
	Twinbrook Parkway	Ardennes Avenue to 950 feet north of Ardennes Avenue	4, divided	120’
A-64	Parklawn Drive	From 600’ west of Twinbrook Parkway to Montrose Parkway	4	80’
A-270	Montrose Parkway	MD 355 to Parklawn Drive	4, divided	300’
A-270	Montrose Parkway	Parklawn Drive to Rock Creek Park	4, divided	300’
Commercial/Industrial Streets				
B-1	Fishers Lane	City limits to Parklawn Memorial Park	2	70’
B-9	Wicomico Avenue	Wicomico Avenue to Parklawn Drive	2	70’
B-12	Washington Avenue	Twinbrook Parkway to Kraft Drive Extended	2	70’
B-13	Kraft Drive Extended	Washington Avenue to Wilkins Avenue	2	70’
B-14	Wilkins Avenue Extended	Fishers Lane to Parklawn Drive	2	70’
B-15	Wilkins Avenue	Parklawn Drive north to Parklawn Drive south	2	70’
B-16	Wilkins Avenue Extended	Fishers Lane north to Twinbrook Parkway	2	70’

* These are the number of planned through travel lanes for each segment, not including lanes for turning, parking, acceleration, deceleration, or other purposes auxiliary to through travel.

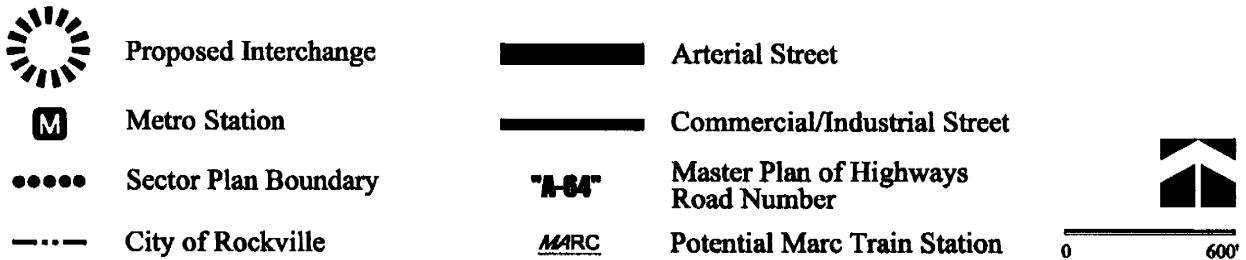
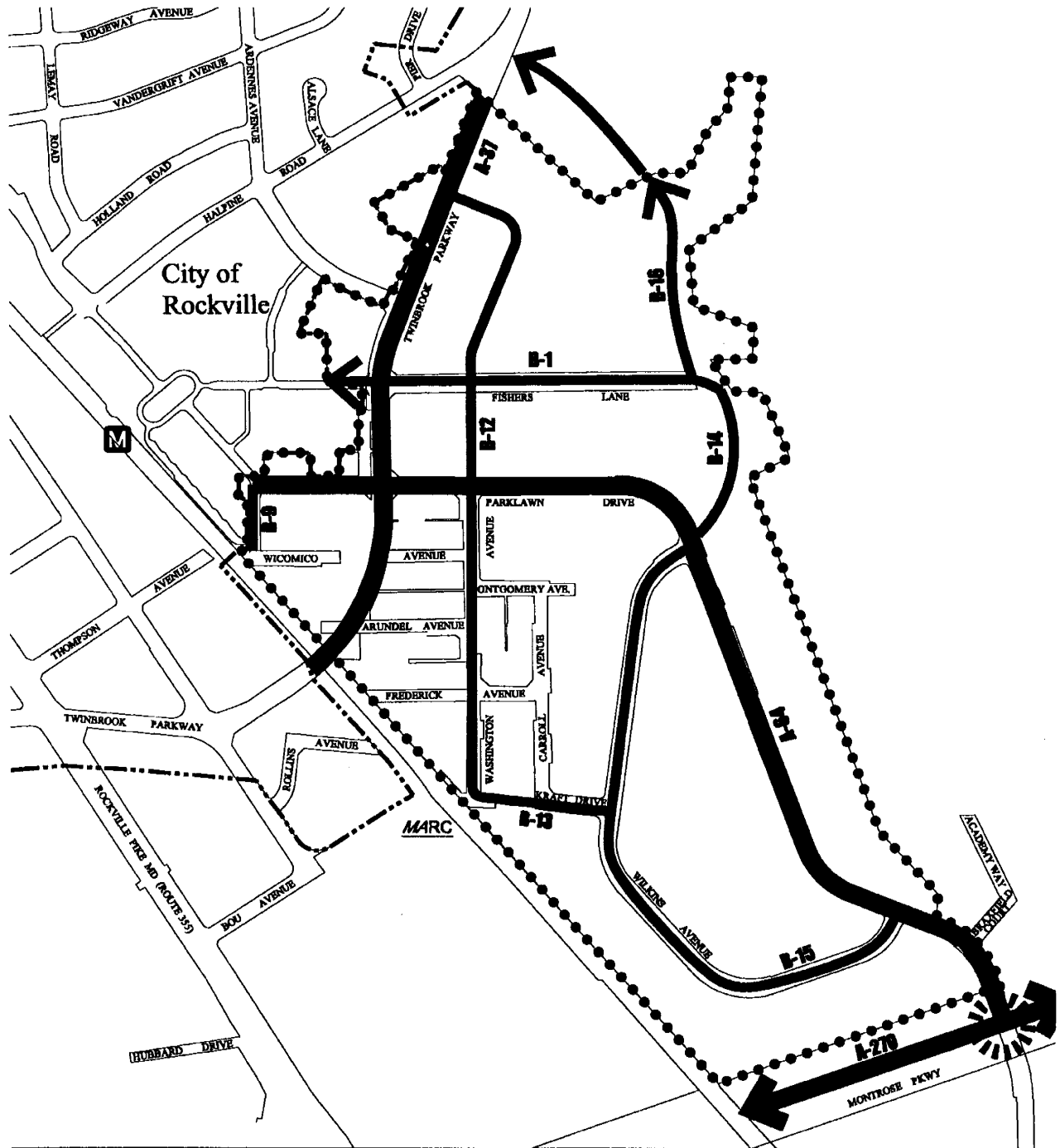
Parking Requirements

Parking supply management can influence commuter choices and auto use and can be managed by user fees such as metered on-street parking or by limiting available parking through planning and zoning policies. The 1992 Plan recommended increasing parking charges and decreasing parking supply as examples of programs that could be pursued to meet the mode share goals of the North Bethesda TMD.

This Plan supports the 1992 Plan’s recommendation to limit parking supply in the Twinbrook Plan area by pursuing the Zoning Ordinance’s incentives based on Metro station proximity and by investigating opportunities for further restrictions or incentives in revisions to the Ordinance. Opportunities to replace surface parking with parking structures should also be pursued.

- Support the established North Bethesda TMD.
- Encourage shared and structured parking, located mid-block, built with green construction techniques and with retail or active streetfront facades.
- Set aside parking spaces for flex and zip car programs, both on-street and structured spaces, and in public and private facilities.
- Support and encourage the use of parking standards in Section 59-E of the Zoning Ordinance, including parking credits, parking waivers, and parking reductions.
- Locate parking garages in a way that does not interrupt pedestrian scaled street activity and that limits auto travel through pedestrian areas.

Street Classifications



Historic Resources

This Plan endorses all of the historic designations made in the 1992 Plan and adds the recommendation to designate the Higgins Cemetery (#32-50) in the Twinbrook Plan area to the *Master Plan for Historic Preservation*.

Even though the cemetery is not currently included in the *Locational Atlas*, which identifies resources potentially suitable for preservation, it has been identified and researched. Based on this research, this Plan recommends that the cemetery be protected by designation on the *Master Plan for Historic Preservation*.

OVERVIEW

The Higgins Cemetery, a small family burial ground, is located in the 5700 block of Arundel Avenue. The period of significance for the cemetery dates between 1816 and 1891. The plot holds at least 11 known burials of Higgins family members and possibly includes graves of several of their slaves.

The Higgins family is important in state and local history. James Higgins (1733-1816), a planter who served in the Maryland militia during the Revolutionary War, and his wife Luraner Becraft Higgins (1744-1819) were the first generation to be buried on the farm. Their son James Becraft Higgins (1772-1848) and his wife Mary Eleanor (1783-1845) are memorialized by a red sandstone monument placed in the center of the cemetery in 1866.

Granddaughter Luraner Higgins (1811-1883) and her husband George Knowles (1805-1881), who founded Knowles Station (now the town of Kensington), are also buried here. Other grandchildren and great-grandchildren of James and Luraner Higgins were interred here between 1869 and 1891.

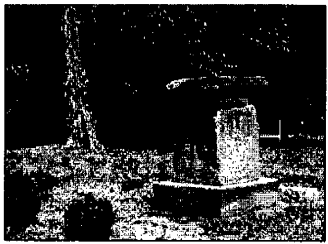
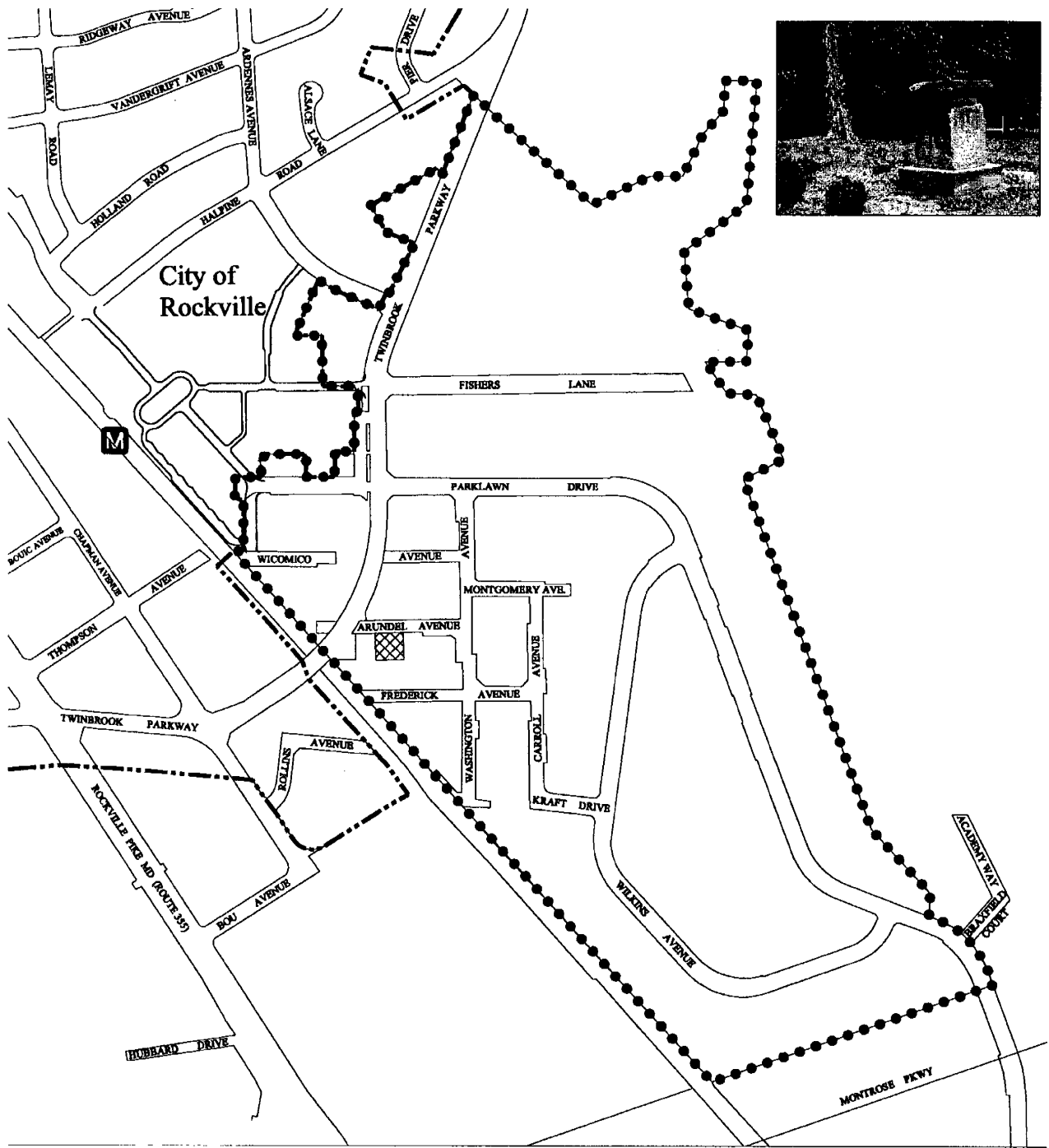
The Higgins Cemetery and farmhouse survived subdivision of the farm in 1891 as Spring Lake Park, but this marked the start of nearly a century of neglect. A grass roots community project led to incorporation of the Higgins Cemetery Historic Preservation Association, which took title to the property in 1999. Since then, the volunteer organization and its private and public partners have documented the property through research and archaeology, removed invasive trees and debris, prepared a master plan, and reconstructed the Higgins monument. Future plans are to repair additional gravestones, recreate the fence, install appropriate plantings, and install interpretive signs for future generations.

The environmental setting of the cemetery is the entire 14,400 square foot site.

RECOMMENDATIONS

- The Higgins Cemetery is recommended for addition to the *Master Plan for Historic Preservation*.
- Incorporate the cemetery into the area's urban design plans to create a useful and accessible community resource.

Higgins Cemetery



- M** Metro Station
- Sector Plan Boundary
- ▨ Higgins Cemetery
- - - - City of Rockville



Community Facilities

OVERVIEW

This Plan seeks to provide public services to employees and residents as part of building a well-rounded and well-served community. As a small planning area, without a current resident population, opportunity and demand for facilities in Twinbrook has been limited. This Plan recommends incorporating parks, paths, and other public facilities into redevelopment projects to provide community facilities to serve new residents and an increased employee population.

OBJECTIVES

- Use opportunities generated by redevelopment to create urban parks and open spaces to serve residents and employees.
- Ensure that changing public service needs are met.

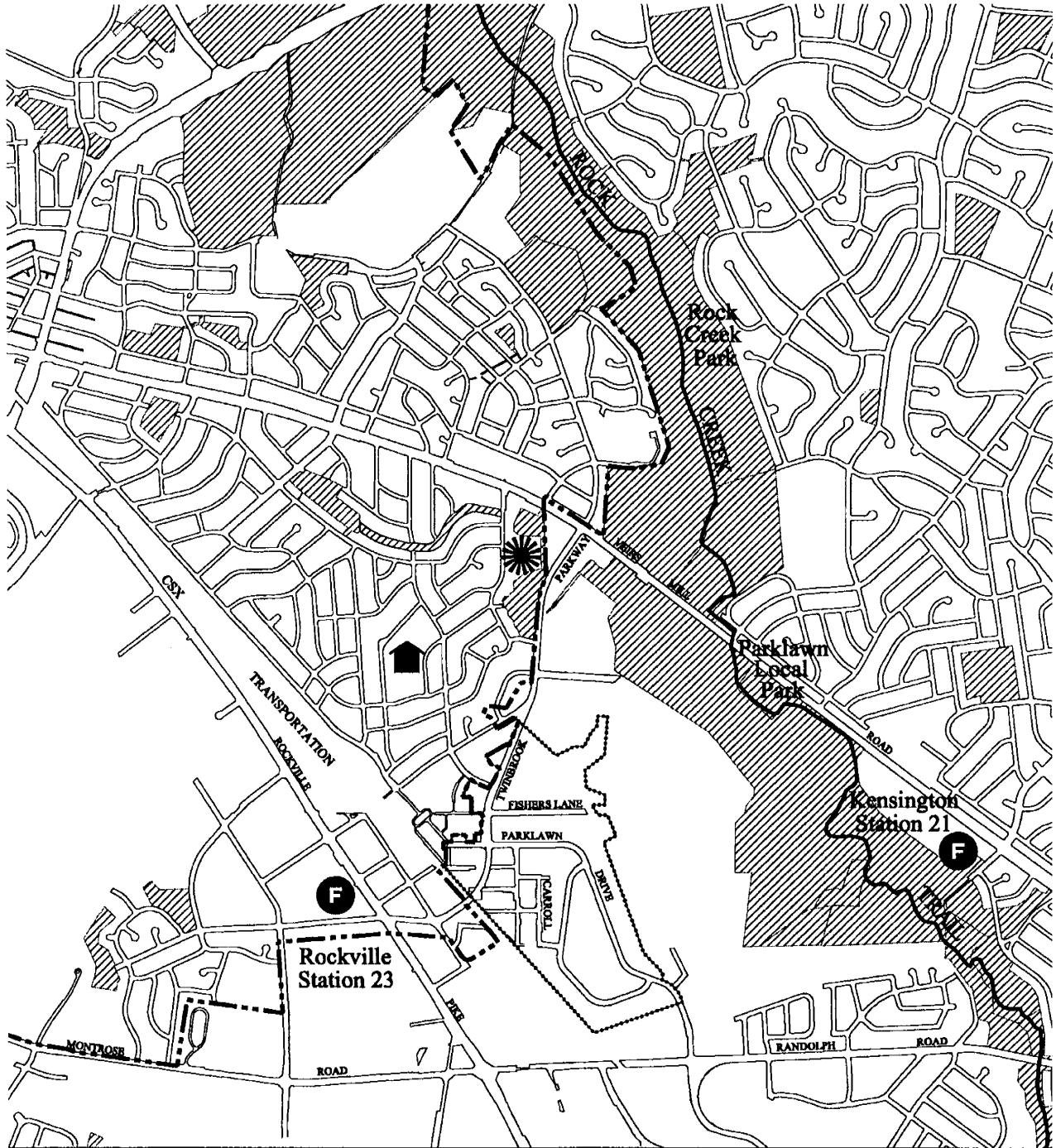
PARKS AND RECREATION







There is no existing parkland within the boundaries of the Twinbrook Plan. Near the area's eastern edge is Rock Creek Stream Valley Park, which abuts Parklawn Memorial Park and is accessible from Twinbrook Parkway. Its paved hiker/biker path extends 14 miles from Rock Creek Regional Park south to the District line. Nearby resources within the park include a group picnic area and a primitive camping area.

Twinbrook is also served by local parks in adjacent planning areas. Closest to the Plan area is the Twinbrook Local Park along Twinbrook Parkway, and though it is in the City of Rockville's jurisdiction, it is a recreation resource for future Twinbrook residents. The Parklawn Local Park on Veirs Mill Road includes two heavily used soccer fields. Winding Creek Local Park, also off of Veirs Mill Road, has been recently renovated and will eventually be connected to the Twinbrook Plan area via a bike route along Montrose Parkway and from there to the Rock Creek Stream Valley Park. It includes a playground, basketball court, and two soccer fields.

The Parklawn Memorial Park, a private cemetery on the Plan area's eastern boundary, also offers visual open space and is used informally for walking.

Community Facilities



- | | | | |
|---|-------------------|---|-----------------------------|
|  | Parks |  | Twinbrook Elementary School |
|  | Sector Plan Area |  | Twinbrook Recreation Center |
|  | City of Rockville |  | Fire Station |



Paths and Community Connectors

Park paths and trails should work with the system of sidewalks and pedestrian routes to make walking connections between the community and its parks. The 2003 *Park Users Satisfaction Survey* identified trail use (walking, biking, jogging etc.) has been identified as the most popular recreation activity of County residents of all ages and abilities.

Trail resources in the Twinbrook area include the Rock Creek Stream Valley Park Trail and the future Matthew Henson Trail that will connect the Rock Creek Trail with Northwest Branch and along streets to Wheaton Regional Park. A bike path along Montrose Parkway will make this trail network accessible from the planning area's southern boundary.

Improved walking connections are needed within the Twinbrook area. This Plan's sidewalk and trail recommendations will connect residents and employees to both Metro and the park system via a system of comprehensive streetscape improvements and privately provided urban open spaces.

Recreation Needs Assessment

Parks for Tomorrow (1998) indicates that urban residential areas including Twinbrook need several types of recreation including hiker/biker paths and community connectors, neighborhood recreation for new residential areas, and urban recreation and open space for existing and proposed businesses. This Plan's recommendations recognize that urban areas present distinct challenges and opportunities to provide park and recreation resources and strive to incorporate and create those resources with redevelopment.

The 2005 *Park, Recreation, and Open Space Master Plan* measures need based on residential population. Its assumptions are suburban in nature – that housing will be built on large tracts of land and that desired facilities are playing fields and courts. Accordingly, it indicated that the North Bethesda planning area, which includes Twinbrook, needs additional ball fields, soccer fields, and playgrounds. Large recreation areas cannot be provided in Twinbrook, given the scarcity and value of land in the planning area.

This Plan recommends facilities scaled to an urban area and provided through a combination of public and private efforts. Proposals include small urban public spaces, larger park spaces, and connections to nearby local and regional parks.

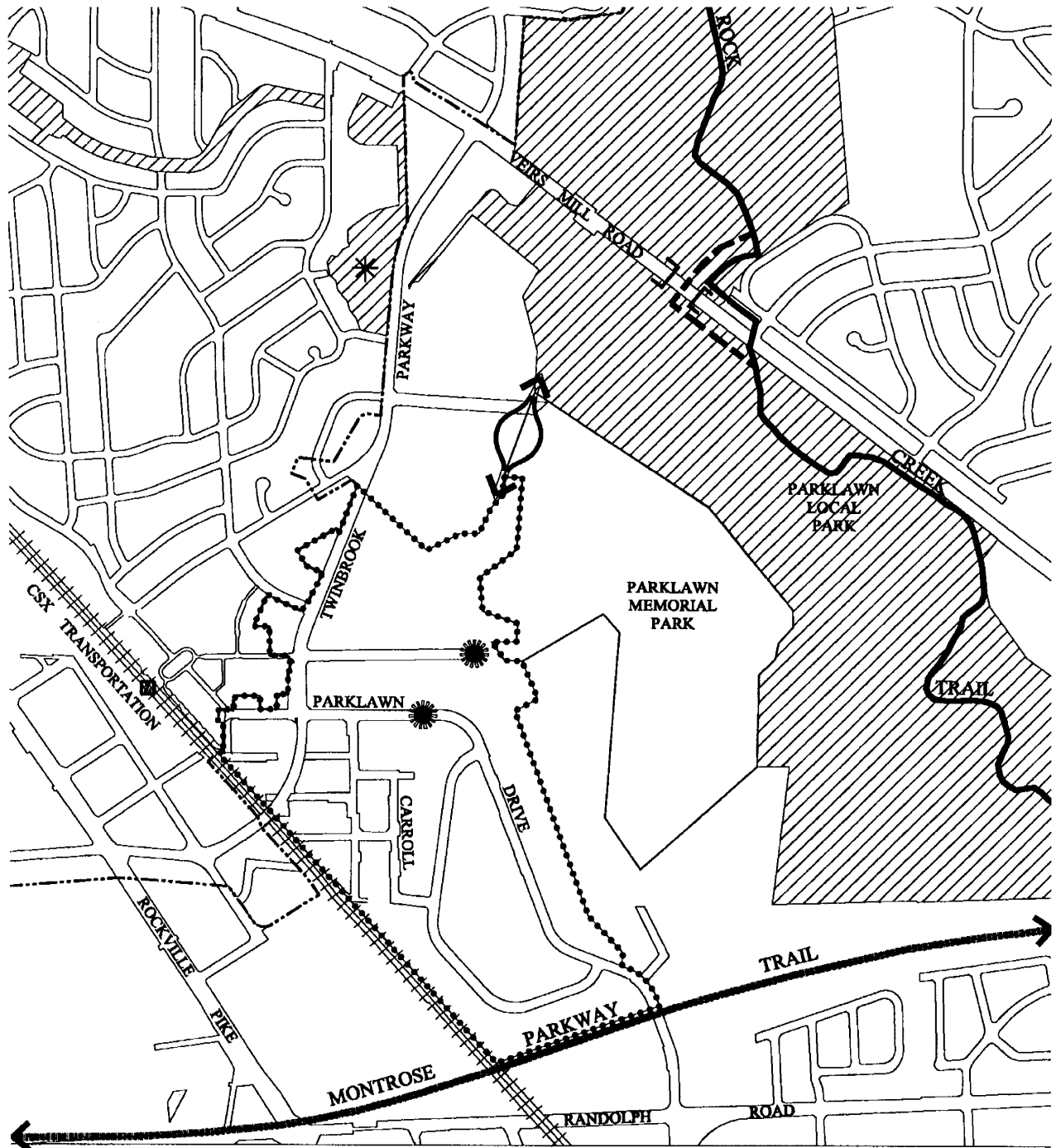
- Incorporate recreation facilities into residential and commercial development

A key to providing adequate, close-to-home recreation is ensuring that opportunities are incorporated into plans for new development, which should provide private recreation areas for all age groups, as appropriate. Private redevelopment should include:

- playgrounds for young children
- multi-use courts for children, teens, and young adults
- level grass areas for leisure and informal play to serve people of all ages
- adult recreation areas
- walking and bicycling paths.

In high-rise housing and transit station areas such as Twinbrook, indoor recreation areas will be essential. Project development should explore innovative approaches to providing these facilities, including rooftops and indoor facilities.

Existing and Proposed Park and Recreation Facilities



- M** Metro Station
- Sector Plan Boundary
- - - - City of Rockville
- ☀ Proposed Park Spaces
- * Twinbrook Recreation Center
- ↔ Trail Connections
- ◁ ▷ Proposed Trail Connection
- ▨ Rock Creek Park



RECOMMENDATIONS

- Incorporate landscaped open spaces into commercial and residential redevelopment that may be private, but are open for public enjoyment.

As sites redevelop, open spaces should be added. Landscaping, seating areas, and public art can improve the working and living environment. Environmental function should be designed into park facilities.

- Redevelopment of Area 5, north of Fishers Lane, should reserve significant open space at the site's northern end, to pull open space and a **possible** future park connection into the Plan area.
- Require two new urban parks.

A new urban park, privately developed and maintained, but open to area residents and employees should be created along Parklawn Drive as a public amenity space related to new development. It should complement the streetscape and urban design features, relate to the Parklawn-Fishers mid-block path, provide seating areas, and a gathering place.

A second park, also privately developed and maintained and open to area residents, should be located at the eastern end Fishers Lane, incorporated into pedestrian road improvements and connected to sidewalks and bike routes.

- Improve existing sidewalks and paths, and create new routes.

New and redeveloped areas should emphasize walkways and path connections to parks and recreation facilities inside and outside of the planning area. These routes should be wide enough for safety and lighted for night use.

Another potential route is a connection through Area 5, to the Veirs Mill Road pedestrian bridge and eventually to Rock Creek Park. This route presents environmental and engineering challenges, but it has the potential to connect Aspen Hill residents with the Twinbrook Metro Station and would be a commuting and recreation route that would serve an increasing resident and employee population. The paved path should be created through redevelopment as an amenity and through public funding on parkland. It should be routed to avoid the stream buffer and make best use of publicly owned land.

At the time of subdivision of Area 5, the value and specific characteristics of this path should be examined. This path highlights the need for a continuous sidewalk along the west side of Veirs Mill Road that would connect to the new bridge and for a pedestrian connection to the bridge from the existing east side sidewalk.

COMMUNITY RECREATION CENTERS

The Twinbrook Plan area is served by recreation centers in surrounding communities. The closest center is the Twinbrook Recreation Center just north of the Plan area on Twinbrook Parkway owned and operated by the City of Rockville. Its facilities include a gym and fitness room, game courts, computers, and community meeting rooms. Twinbrook is also within the service area of the Montgomery Aquatic Center in North Bethesda and could be served by a planned recreation center in the Rock Spring area.

RECOMMENDATIONS

- Support construction of the CIP planned recreation center in the North Bethesda area.

PUBLIC SCHOOLS

At present, without a resident population, the Twinbrook Plan area does not generate any students in the Montgomery County Public Schools (MCPS) system. The Plan's proposal to allow multi-family housing through the TOMX zones will likely generate students.

The MCPS regularly estimates student generation based on Census and other sample demographic information. The following estimates of demand are based on recommendations for more housing in the Twinbrook Plan area.

The potentially 1,200 units proposed by this Plan could generate an estimated 138 new students to be served. This does not include students generated in the approximately 1,600 dwelling units at Twinbrook Station.

Capacity Estimates

Schools in the Walter Johnson and Richard Montgomery high school clusters would serve residents in the Twinbrook Plan area. Space availability projections indicate a current shortfall at schools in both clusters. However, neither the shortfall nor students generated through future development are sufficient to require that an elementary, middle, or high school site be identified in the planning area.

Factoring in school improvement projects adopted in the *FY 2005 Capital Budget and the FY 2005-2010 CIP*, schools in the Richard Montgomery cluster will be at or near capacity for the forecast period, with Richard Montgomery High School having space available in 2007 through a modernization project. The elementary and high schools in the Walter Johnson cluster are not expected to exceed capacity until 2011 and 2009 respectively, when modernization projects will be complete.

MCPS bases these assessments on comparisons of projected enrollment and available capacity in future years, and on residential development of mid-rise projects with structured parking.

- Continue to work with MCPS throughout the Plan's implementation to ensure adequate school capacity is provided for future residential development.

FIRE, RESCUE, AND EMERGENCY MEDICAL SERVICES

The Twinbrook Plan area is currently served by fire, rescue, and emergency medical services (EMS) at Rockville Volunteer Fire Department Station 23 on Rollins Avenue and Kensington Station 21 on Veirs Mill Road. Rockville Station 3 on Hungerford Drive, just north of the Rockville Town Center, can also serve Twinbrook.

The Twinbrook plan area is located on the eastern edge of Station 23's service area and service to the area meets all the response goals set by the Montgomery County Fire and Rescue Service. Station 21 serves the Plan area's northeast corner.

New residences and businesses in Twinbrook will increase the day and nighttime populations, resulting in increased EMS incident call load, and may create demand for an additional EMS unit at nearby Station 23.

The EMS call volume will be particularly impacted should a significant number of elderly residents occupy the new residences.

While the need for additional fire-rescue facilities within the Twinbrook area is unlikely to increase during the next twenty years, the stations serving the area have no further capacity for additional vehicles and may require renovation/expansion should new services (e.g., a third EMS unit at Station 23) be added.

- Support the expansion of EMS capabilities at Rockville Volunteer Fire Department Station 23.

Implementation

The Plan's recommendations will be achieved through redevelopment shaped by rezoning and by land uses and urban design guidance. The zoning recommendations allow mixed uses and provide development standards appropriate to densely developed areas near transit. The density levels, mixed uses, and design guidance are intended to make the best use of Metro and to contribute to an active, pedestrian-scaled community.

Applying the mapped TOMX zones to areas closest to Metro rather than the current floating zones will more closely direct redevelopment, while still allowing market flexibility with mixed uses. TOMX in Twinbrook increases the potential for housing to encourage a mixed-use community. The urban design requirements and Plan guidance create extensive improvements in the public realm to create a walkable, urban style community.

Twinbrook's existing service and retail industrial uses are an important support function for residents and businesses. This Plan proposes amending the I-4 Zone in Transit Station Development Areas (also in White Flint and Silver Spring) to support the existing service and retail businesses by allowing smaller lot sizes and ancillary housing. These changes respond to the dense, more urban character of transit station industrial development that can flourish on smaller lots and be supported by complementary residential uses.

Implementation will also be accomplished through capital improvements projects and through the development review process, ensuring that public facilities will be supplied in a timely manner. The capital improvements projects are intended to create the public sector pedestrian links and spaces to complement and connect improvements made through private redevelopment.

The Plan's goals will also be implemented by applying its recommendations and guidelines through the development review process. Environmental, urban design, transportation, and park recommendations will improve environmental function, create a complete pedestrian system, create a street, trail, and sidewalk network, and connect the community to the park system.

ZONING RECOMMENDATIONS

The application of the mixed-use, higher intensity TOMX zones reflects the Plan's intent to provide a high quality, mixed-use community offering services and amenities for residents and employees. The zones are recommended at varied intensities, reflecting proximity to the Metro station, the character of adjoining uses, and the existing zoning.

All the TOMX zones allow the transfer of public use space, density, and uses between lots within the same transit station development area. In Twinbrook, transfers would be appropriate to maximize visible and accessible public open spaces and to cluster retail uses. Transfers could also distribute density between sites to create public open spaces, a mix of uses, and the desired urban pattern and character.

- Rezone sites as mapped to the TOMX-2 and TOMX-2/TDR zones.

These Euclidean zones are recommended to allow flexible redevelopment in Metro station areas outside Central Business Districts (CBDs) with densities and development standards appropriate for a transit station area. Their standards recognize the character of suburban Metro stations, suitable for a higher intensity mixed-use development, and the opportunity station-area development offers for increasing transit ridership.

These zones' standards and incentives create a mix of uses that includes housing, office space for advanced technology and biotechnology uses, and retail that offers jobs and meets the service needs of residents and employees ranging from an FAR of .5 to 2. The zones encourage an urban pattern through density, building coverage, and development standards, and ensure that mixed-use development is served by appropriate public facilities and amenities.

The TOMX-2 and TOMX-2/TDR zones are applied to sites closest to the Metro station with the TDR option to encourage residential development. In this zone, TDRs will be required for density used for any purpose exceeding 1 FAR; they will be valued at 1,200 square feet of buildable residential area.

ZONING ORDINANCE AMENDMENTS

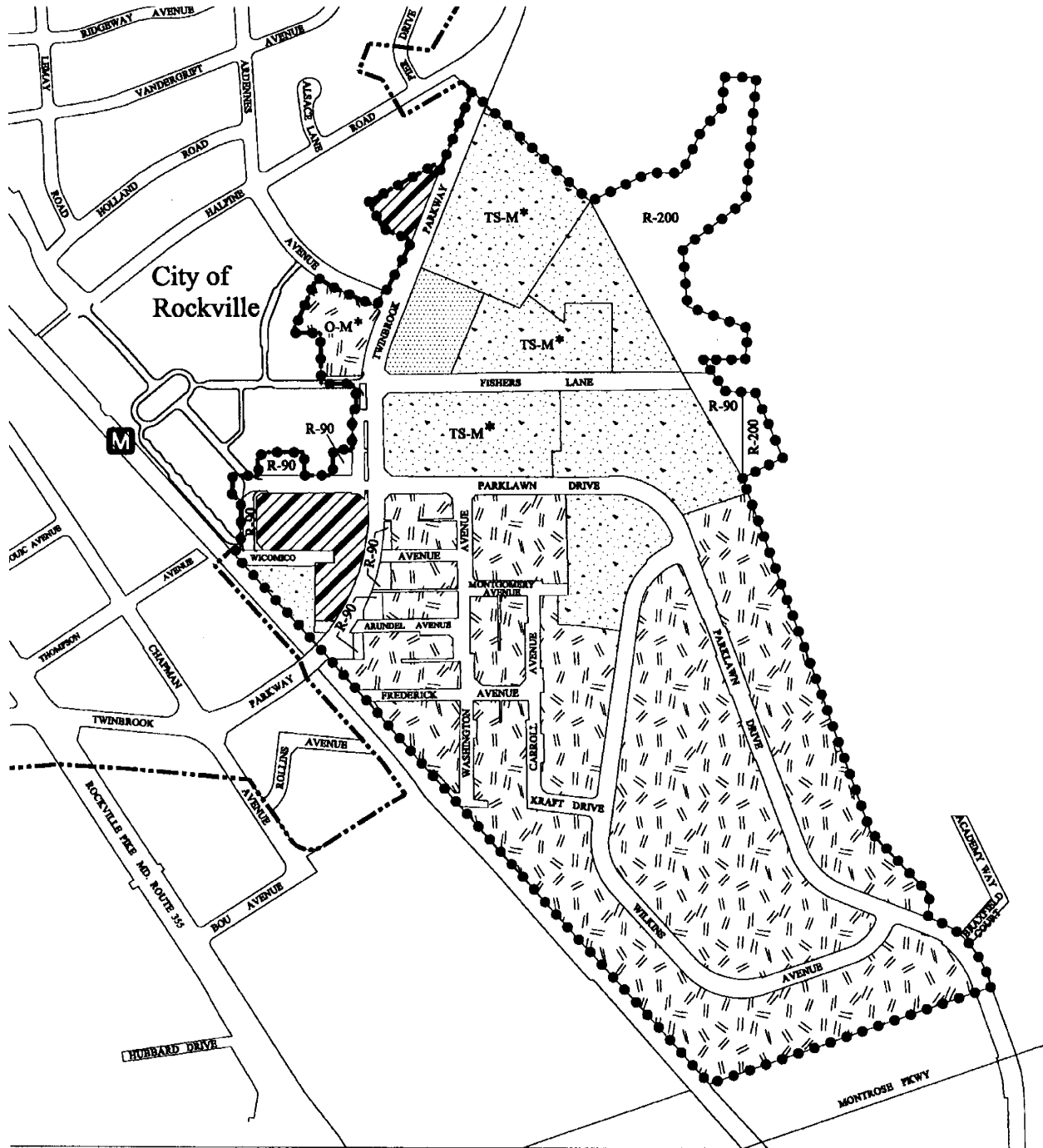
The Twinbrook Plan is an appropriate location for the TOMX-1/TDR Zone, which will be written as an amendment to the Zoning Ordinance.

- Establish and map the TOMX-1/TDR Zone as indicated.



The TOMX-1/TDR Zone encourages mixed uses and a complement of public amenities, but in areas farther from transit and at a lower density, ranging from .5 to 1 FAR. It is appropriate for sites bordering residential areas, and farther from the Metro station, but still with redevelopment potential. In Twinbrook, TOMX-1/TDR is proposed for the Plan's northeast corner on a site abutting existing garden apartments developments.

This zone introduces the option of commercial TDRs, based on FAR rather than a dwelling unit cap and governed by plan recommendations. On this site, TDRs are required for any development above .3 FAR and for any residential development above .5 FAR. Also on this site, commercial development is capped at .5 FAR.

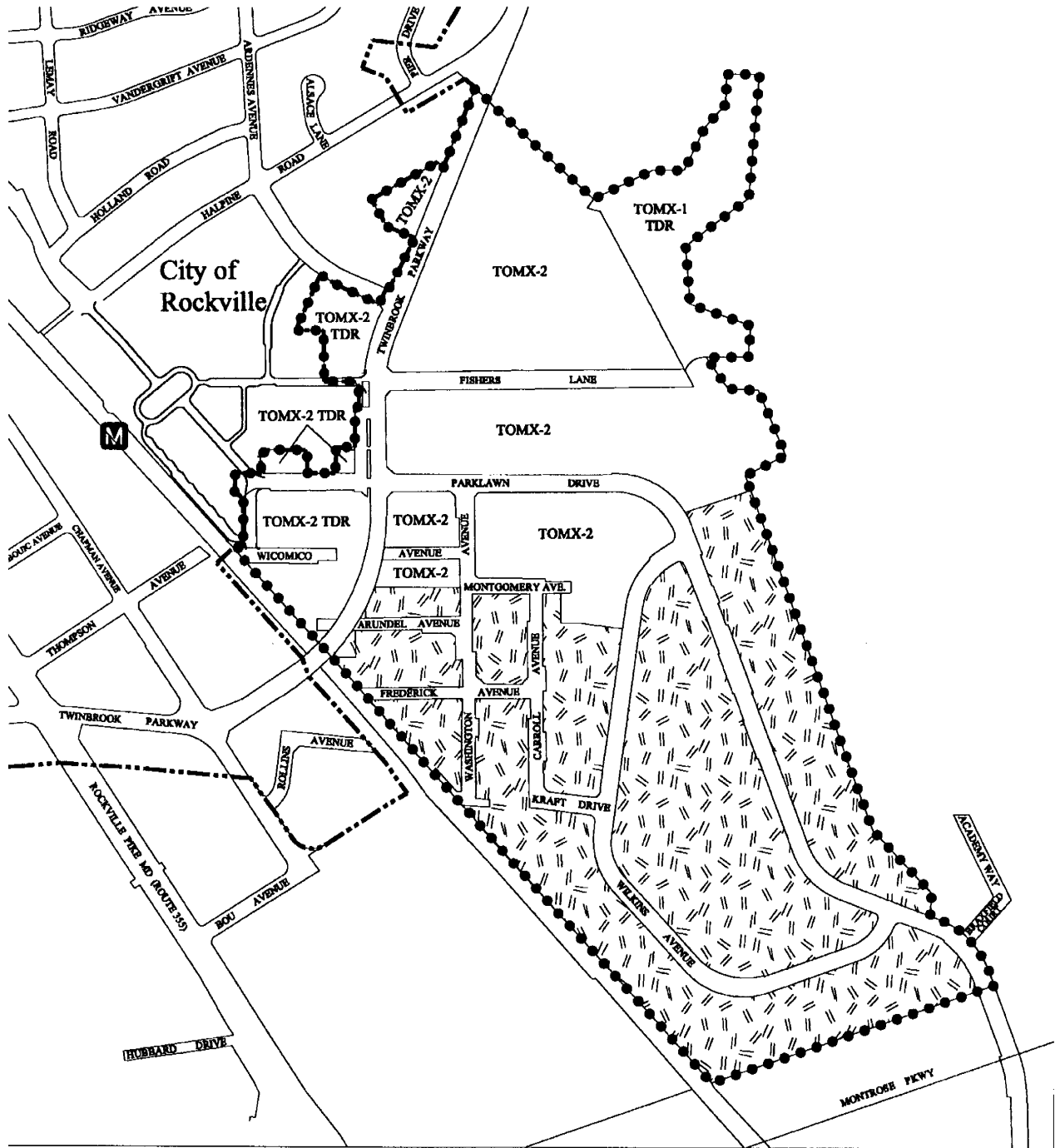
Existing Zoning




M Metro Station	I-4 Light Industrial, Low Intensity
●●●● Sector Plan Boundary	I-4 Light Industrial, Low Intensity/Recommended for O-M
----- City of Rockville	I-1 Industrial
R-200 Residential, One-Family	I-1 Industrial/Recommended for TSM
R-90 Residential, One-Family	O-M Office Building, Moderate Intensity
	C-O Commercial Office Building





Proposed Zoning



	Metro Station		I-4 Light Industrial, Low Intensity
	Sector Plan Boundary		TOMX-2 TDR Transit-Oriented Mixed Use, TDR
	City of Rockville		TOMX-1 TDR Transit-Oriented Mixed Use, TDR
			TOMX-2 Transit-Oriented Mixed Use





- Amend the I-4 Zone in Transit Station Development Areas with densities, uses, and setbacks appropriate to a transit-accessible area.

The Plan proposes modifying the I-4 Zone to allow development flexibility and provide limited accessory residential uses. The Plan’s goal to maintain the area’s existing light industrial/service use character is supported by recommendations for optional method standards and review that are less cumbersome than the special exception requirements that currently apply.

To support small businesses, the proposed modifications require site plan review for all development, but allow development on properties smaller than one acre, or multiple buildings on a lot with the approval of the Planning Board.

With proximity to transit comes the potential for limited live-work structures, providing upper floor housing for business owners, managers, or employees – if clearly subordinate to the main business. This type of unit will support the primary economic function of the area, not create significant housing resources.

Because the live-work units would be allowed by special exception only, additional standards would address compatibility, ownership, parking, and the units’ share and location in a given building.

Proposed Amendments to the I-4 Zone in Transit Station Development Areas

	Existing I-4	Proposed TSDA I-4
Minimum lot size	1 acre	Less than 1 acre
Setbacks	100’ from adjacent single family residential	n.a. in Twinbrook
	10’ from adjacent commercial uses	No change
	50’ from rail, utility r.o.w. or arterial road separating from residential	No change
	25’ from arterial road separating from commercial	May be reduced to 10’ at Planning Board’s discretion, and under optional method standards
Green space	20%	10%
Parking requirements	Per article 59.E: 1.5 spaces per 1,000 sf of building	Setbacks reduced to 10’
Building height	3 stories/42’	No change
Uses	Light industrial uses	Adds live/work accessory units
FAR	1 FAR	1 FAR

Proposed Zoning

District	Existing Zoning	Proposed Zoning	Comments
Metro Station Area			
Area 1, Wicomico Avenue 6 acres	R-90, O-M, I-1	TOMX-2/TDR	Cap commercial at 1.5 FAR. Above 1.6 FAR 20% use of TDRs. Foster residential near Metro in Twinbrook Station pattern
Area 2, north of Fishers Lane 2 acres	I-4	TOMX-2/TDR	Cap commercial at 1.5 FAR. Above 1.6 FAR 20% use of TDRs. Foster residential near Metro in Twinbrook Station pattern
Area 3, north of Ardennes Avenue 1 acre	O-M	TOMX-2	Cap FAR at 1.5. Comparable to adjacent uses in Rockville
Mixed Technology Employment Area			
Area 4, USP	C-O	TOMX-2	Recently developed at 1.83 FAR
Area 4, Fishers Place, Pollinger, parking lot	I-1	TOMX-2	Cap at 1.5 FAR to balance redevelopment with infrastructure. Cap Fishers Place at recently developed 1.5 FAR
Area 5, Northern HHS Parking Lot 9 acres	R-200	TOMX-1/TDR	Cap commercial at .5 FAR to encourage housing. Lower density farther from Metro
Area 6, between Fishers Lane and Parklawn Drive 6 acres	I-1	TOMX-2	Central location; mixed-use, pedestrian-friendly development Cap at 1.5 FAR to balance development with infrastructure
Area 7, Parklawn Bldg 10 acres	I-1, R-90, R-200	TOMX-2	Cap at 1.5 FAR to balance redevelopment with infrastructure
Area 8, south of Parklawn Drive 10 acres	I-1, I-4	TOMX-2	Cap at 1.5 FAR to balance redevelopment with infrastructure
Light Industrial Area			
Area 9, Washington Avenue	I-4, R-90	I-4 amended	Preserve existing industrial uses
Area 9, Wilkins Avenue	I-4	I-4 amended	Preserve existing industrial uses

This Plan recommends three sites for TDRs. On the two sites closest to the Metro station, TDRs provide incentive for residential development. TDRs on the third site, farther from Metro, introduce the potential for nonresidential TDRs. These three sites provide the potential for 105 TDRs, 21 of which could be used for nonresidential uses.

TDRs are valued at three dwelling units each or 3,600 square feet. The square footage value comes from the average size of a dwelling unit near Metro stations, times three units.

In Twinbrook, the TOMX-1 Zone is recommended for Area 5, with development up to 1 FAR with commercial development capped at .5 FAR. The optional method base FAR is .3 and development may be a mix of commercial and residential uses. Development between .3 FAR and .5 FAR can be a mix of commercial and residential development or commercial development, with TDRs. Here non-residential TDRs may be applied up to .2 FAR (the difference between the .3 FAR optional base and the Plan's recommended .5 FAR commercial cap) and would generate 21 TDRs, yielding either 75,408 square feet of commercial development or 63 dwelling units. Above .5 FAR, residential development is preferred and would generate 54 TDRs, yielding up to 162 dwelling units.

Areas 1 and 2 are recommended for TOMX-2 zoning, which allows only a 20 percent residential density bonus and only for residential use. These sites will generate 30 TDRs and yield up to 90 dwelling units.

PUBLIC IMPROVEMENTS FOR REDEVELOPMENT

In the Twinbrook area, intended for dense, mixed use development with an urban character, the details of development are important in creating the connections, open space, and amenities that complete the community. This Plan recommends parks, streetscaping, trail connections, and road projects tied to private redevelopment projects.

Redevelopment will proceed after County Council approval of the zoning text amendments and the completed sectional map amendments. Before development proceeds, the boundary of the North Bethesda TMD should be amended to include all TOMX zoned properties.

Analysis Area 1 (Wicomico Avenue)

- Establish the pedestrian route to the Metro station, intended for eventual connection beneath Twinbrook Parkway.

Analysis Areas 4 and 5 (Fishers Lane)

- Provide streetscape improvements along Fishers Lane.
- Contribute to a new urban park at the end of Fishers Lane.
- Provide Wilkins Avenue Extended connection.
- Provide trail connection to the Rock Creek Stream Valley Park through the Plan area's northeast corner to connect with the existing regional park and trail system.

Analysis Areas 6 and 7 (Fishers Lane and Parklawn Drive)

- Provide road and streetscape improvements along Fishers Lane.
- Construct a new urban park at the end of Fishers Lane.
- Provide intersection improvements at Twinbrook Parkway and Fishers Lane.
- Provide Wilkins Avenue Extended connection.
- Provide road and streetscape improvements along Parklawn Drive.
- Construct the extension of Washington Avenue from Fishers Lane to Parklawn Drive.

Analysis Area 8 (Parklawn Drive)

- Provide road and streetscape improvements along Parklawn Drive.
- Construct a new urban park.
- Provide intersection improvements at Twinbrook Parkway and Parklawn Drive.
- Participate in the established North Bethesda TMD for all employers with over 25 employees.

In about 15 years, an amendment to the Sector Plan will be warranted. Before any further zoning changes are considered, the following projects should be completed or fully funded for construction through the CIP.

- Provide a pedestrian underpass and bikeway connection to Metro along the east side of the CSX rail line at Frederick Avenue that will improve access to Metro.
- Provide third leg of Wilkins Avenue to Twinbrook Parkway.
- Construct Kraft Drive extension.
- Complete the Frederick-Wicomico pedestrian connection underneath Twinbrook Parkway.
- Implement the recommended pedestrian connection across the CSX tracks to Nebel Street extended.
- Construct bike lanes along Parklawn Drive from the shared use path on Montrose Parkway to Twinbrook Parkway and the Metro station.

CAPITAL IMPROVEMENTS PROGRAM

The Capital Improvements Program (CIP) allocates public resources among varying needs and populations. Determination of project funding is based on fiscal planning, projects' readiness for programming, and identification of needs.

Along with other County agencies, the M-NCCPC is responsible for identifying some of those needs in its master and sector plans. As noted in the CIP, "One objective is to give high priority to areas of the greatest employment and residential density when allocating public investment."

The following tables identify programmed CIP projects and CIP projects proposed by this Plan. School projects are listed according to the November 2006 Capital Projects Status Report.

Programmed Capital Improvement Projects, Fiscal Year 07-12

Project #	Description	Agency	Cost	Comments
Public Safety				
450105	Rockville Fire Station # 3 renovation	Fire/Rescue Services	500K through FY06	Pending close out or close out
470703	1 st District Police Station Rockville	Police	1,246K through FY06	Site selection, planning and design for new station
Transportation				
509922	North Bethesda Trail			Pending close out or close out
509587	North Bethesda Trail bridges			Pending close out or close out
500153	Twinbrook Station Access			Pending close out or close out
500717	Montrose Parkway East	DPW&T	2,287K through FY06	Fund planning stage of road segment that will travel from Parklawn to Veirs Mill
M-NCPPC				
038707	Montrose Trail		649K	Proposal for western portion of Montrose Parkway, eventual connection to eastern portion

Proposed School CIP Projects

Walter Johnson Cluster				
School	Project	Project Status	Completion	Comments
Walter Johnson HS	Auditorium	Approved	SY 2006-07	
	Modernization	Recommended	August 2009	
	Site work	Recommended	August 2010	
Ashburton ES	Classroom additions	Recommended	August 2008	To meet projected enrollment
Farmland ES	Classroom additions	Approved	SY 2006-07	
	Gymnasium	Approved	SY 2006-07	
	Modernization	Programmed	August 2011	
Garrett Park ES	Modernization	Programmed	January 2012	
	Gymnasium	Programmed	January 2012	
Luxmanor ES	Classroom additions	Recommended	August 2008	To meet projected enrollment
	Modernization	Proposed	TBD	
Richard Montgomery Cluster				
Richard Montgomery HS	Replacement facility	Approved	August 2007	To meet projected enrollment
	Site work	Approved	August 2008	
College Gardens ES	Modernization	Recommended	January 2008	
	Gymnasium	Approved	January 2008	

This Plan relies on redevelopment and private investment to achieve some improvements in the private and public realms. The Plan also recommends public sector investment to complete the desired improvements. In combination, public and private investment can ensure best use of Metro and coordination of transportation, urban design, and environmental recommendations.

Relevant agencies should pursue federal, state, and local grant and targeted program monies to complete these projects, such as Montgomery County's streetscaping grants.

Proposed CIP and Private Redevelopment Projects

Project	Description	Responsibility	Estimated Improvements
Land Use/Urban Design			
Fishers Lane Streetscape	Streetscaping	Private	Sidewalks, landscaping, amenities that serve design and environmental goals
Parklawn Drive	Streetscaping	Private	Sidewalks, landscaping, amenities that serve design and environmental goals
Fishers Lane/Parklawn Drive mid-block connection	Park/pedestrian space	Private	Connecting two large blocks to increase pedestrian access
New urban park	Along Parklawn Drive	Private	Designed to complement streetscape and located to complement mid-block connection
Fishers Lane public space	Public and usable open space	Private	Located at eastern end of Fishers, to serve employees and residents and create a link point for sidewalks and trail
Washington Avenue	Streetscape and sidewalk improvements	Public/private	Pedestrian connection to Metro
Environment			
Landscape Twinbrook Parkway outlots	Public and usable open space	Public	These lots should be reclaimed and landscaped for their environmental benefits and potential as public open space
Alternative fuel bus shuttle	Connect increased community of residents and employees to Metro	Public/private	Work with Ride-On and businesses to provide this service to encourage Metro use and minimize air pollution
Transportation			
Twinbrook Parkway street crossings	Pedestrian connections to Metro	Public/private	Safe street crossings are vital to increase walking and transit use
Trail and bicycle link to Veirs Mill Road	From planning area to regional parks	Public/private	Opportunity to make a trail link and preserve forest
Pedestrian connection over CSX	Between Washington Avenue and Bou Avenue via Kraft Drive	Public/private	Connects pedestrians to Montrose Crossing
Pedestrian connection under Twinbrook Parkway	Between Wicomico Avenue and Washington Avenue	Public/private	Pedestrian connection to Metro
Bike routes	Along Twinbrook Parkway, Parklawn Drive, Montrose Parkway, Fishers Lane, Ardennes Avenue	Public/private	As recommended in Bikeways Master Plan
Montrose Parkway	Segments and Parklawn Drive interchange	Public	Include bike and pedestrian routes and landscape buffering
Wilkins Avenue Extended	Completed in two segments – north and south of Fishers Lane	Public/private	Make vehicle and pedestrian connections, preserve stream buffer
Public, centrally located parking garage		Public/private	Constructed when density warrants
Historic Preservation			
Higgins Cemetery	Incorporate cemetery into area urban design and park plans	Public/private	Connect with Twinbrook Parkway outlot landscaping
Public Services			
MCPS			Review capacity as development proceeds
EMS/Fire			Review capacity as development proceeds

Appendix

PLANNING PROCESS

Community Outreach

The goal of the Twinbrook Plan's outreach was to engage a non-resident community and to ensure that all interests in the community were heard and addressed.

The primary constituency in the Twinbrook Plan area was the business community, since there is no existing residential population. But because the Plan area is adjacent to residential neighborhoods in the City of Rockville, staff worked with the City's planners and civic groups to define an interested residential community in adjacent neighborhoods. These groups, along with businesses in the Plan area, were the basis for the Plan's outreach effort.

Outreach efforts were designed to engage residents, businesses, developers, and government agencies in large meetings, small focus groups, and workshops. A range of meetings allowed for both focused and open discussion and offered a choice of dates and forums. Initial focus groups addressed the concerns of particular communities, including the technology businesses, the government tenants, the City of Rockville, and the small businesses. These meetings helped define the Plan's approach to land use and zoning issues by identifying issues such as the County's limited availability of light industrial land, security needs, and the desires of employees to walk safely to Metro.

At each type of meeting, participants' suggestions and comments were recorded and incorporated into the development of the Plan. The goal was to reach as many stakeholders as possible and to this end meetings were announced in the media, online, and through mailings. At each meeting, mailing lists were built to keep in contact with interested participants.

To define issues in the *Purpose and Outreach Report*, staff interviewed 80 business owners in the Plan area, met with developers, and talked to community members. These issues and opportunities began to shape the Plan concept.

As Plan concepts evolved, staff held public workshops and community meetings to discuss planning recommendations with residents, businesses, and property owners. Smaller focus groups allowed in-depth exploration of particular topics, including transportation congestion and connections, land use, and public facilities. Throughout the process, staff attended community group meetings in both the City of Rockville and the County, and met with interested parties and advocacy groups.

In 2006, staff invited interested participants to join an informal advisory group to review the Staff Draft Plan before its release to the general public and to the Planning Board. This group represented large and small property and business owners as well as residents from surrounding communities. Their varied points of view and experience allowed staff a focused review of the Plan and led to further refinements of its recommendations.

In preparation for the Planning Board's public hearing, staff distributed the document to interested participants, posted the plan on-line, and met with the public.

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Twinbrook Sector Plan

A New Community in the Technology Corridor



Montgomery County Department of Planning
The Maryland-National Capital Park and Planning Commission
www.mncppc.org