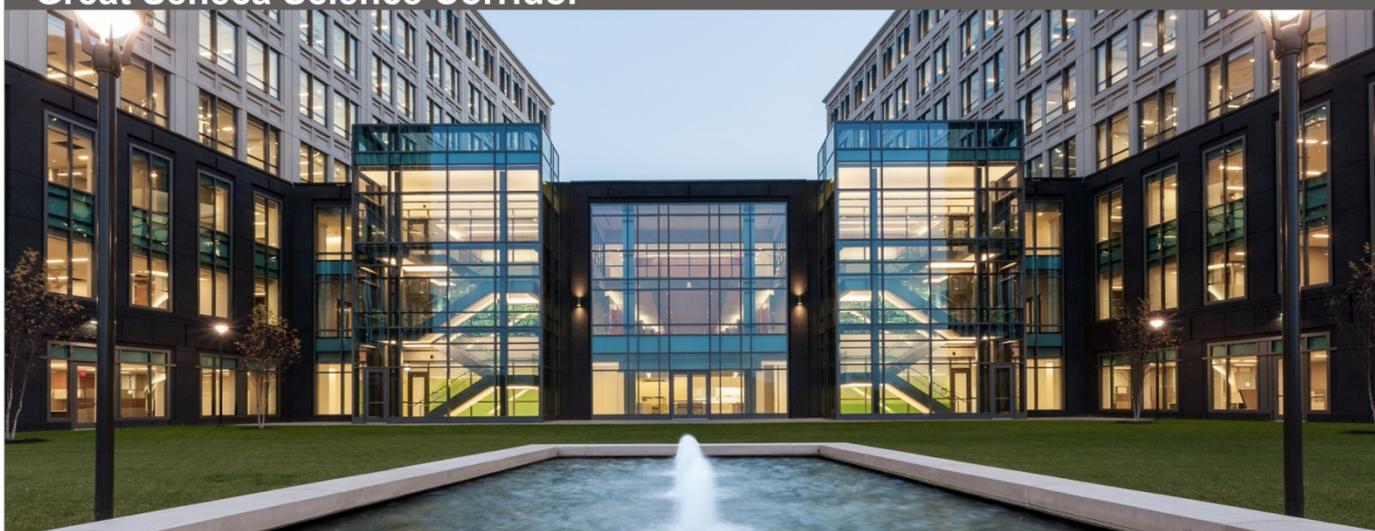


Biennial Master Plan Monitoring Report

Great Seneca Science Corridor

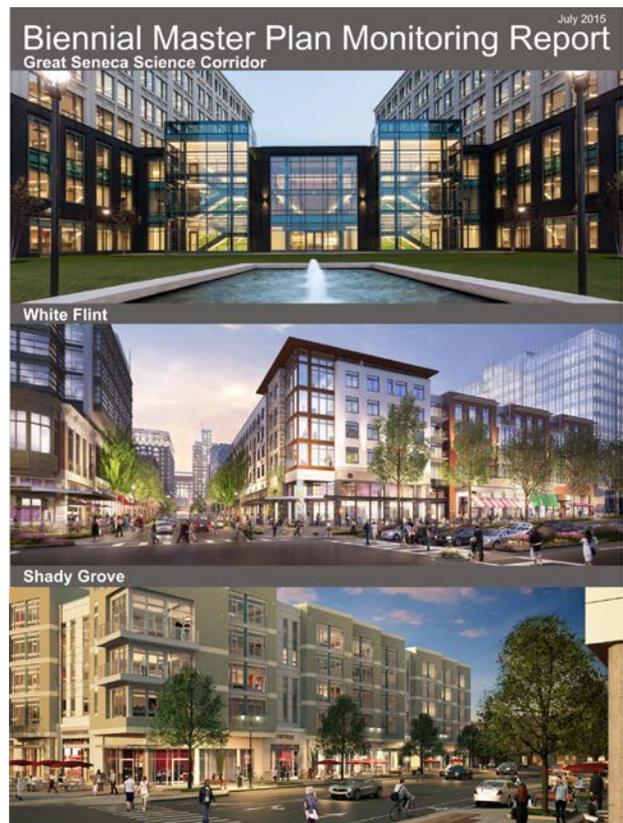


White Flint



Shady Grove





Abstract

This report meets the White Flint Sector Plan and Great Seneca Science Corridor Master Plan requirements for monitoring and providing the County Executive and County Council with advance guidance regarding implementation of these Plans for FY2017-2022. This report also includes a review of Shady Grove Sector Plan staging and progress on the County Executive’s Smart Growth Initiative.

Source of Copies

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

Online at

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montgomeryplanning.org/community/whiteflint/
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CONTENTS

Introduction	5
White Flint Sector Plan	9
Background	
Development Approvals	
Public Facilities and Amenities	
Transportation	
Recommendations	
Great Seneca Science Corridor Master Plan	35
Background	
Development Approvals	
Public Amenities and Facilities	
Transportation	
Recommendations	
Shady Grove Sector Plan	53
Background	
Development Approvals	
Public Amenities and Facilities	
Transportation	
Recommendations	
Maps and Illustrations	
Map 1: Sector and Master Plan Areas	6
Map 2: White Flint Sector Plan Area	10
Map 3: White Flint, Approved Sketch Plans	13
Map 4: White Flint, Existing and Proposed Public Facilities	18
Map 5: White Flint, Proposed Fire and EMS Station Location	19
Map 6: White Flint, Bikeway Network and Approved Sketch Plans	24
Map 7: White Flint, Street Network and Approved Sketch Plans	25
Map 8: Local Bus Service Coverage, North Bethesda Policy Area	27
Map 9: Great Seneca Science Corridor Master Plan Area	34
Map 10: GSSC, Bikeway and Roadway Networks and Development Approvals	38
Map 11: Life Sciences Center Open Space Network	41
Map 12: Shady Grove Sector Plan Area	52
Map 13: Shady Grove Existing and Proposed Public Facilities	60
Map 14: Shady Grove Existing and Proposed Transportation Network	62
Illustration 1: Countywide TPAR Analysis	8
Illustration 2: White Flint, Potential Elementary School Site	20
Illustration 3: Adequacy of the Main Roads in the North Bethesda Policy Area	26
Illustration 4: Route-by-Route and Average Adequacy, North Bethesda Policy Area	28
Illustration 5: White Flint, Metro West District, Planned Roadway Network	32

Illustration 6: Research and Development Village Policy Area TPAR Analysis	46
Illustration 7: Research and Development Village Policy Area TPAR Transit Adequacy	47

Tables

Table 1: White Flint Sector Plan Staging Allocation	17
Table 2: Great Seneca Science Corridor Capital Improvements Program	49
Table 3: Shady Grove Approved Development	59

Appendix

White Flint Transportation

Introduction

The three sector and master plans covered by this monitoring report—White Flint, Great Seneca Science Corridor and Shady Grove—are intended to transform typical, auto-oriented suburban areas into more dynamic, sustainable neighborhoods focused on multi-modal transit and mixed-use development. The challenges are many and complex, but the framework exists to implement the vision described in each plan. This report is a required tool to monitor and analyze the progress toward implementation.

Currently, the physical environments in these areas are dominated by roads, parking lots, relatively low and dispersed density, distinct and separate land uses, and a “9-to-5” economy. The sector and master plans for these communities envision them as places consistent with smart growth principles as follows:

- Mixed land uses.
- Compact building design.
- Range of housing opportunities and choices.
- Walkable neighborhoods.
- Distinctive, attractive communities with a strong sense of place.
- Preserved open space, farmland, natural beauty and critical environmental areas.
- Development directed toward existing communities.
- Variety of transportation choices.
- Development decisions that are predictable, fair and cost-effective.
- Community and stakeholder collaboration in development decisions.

The last two principles regarding development regulation and community input were incorporated into master plan recommendations for zoning and creation of implementation advisory committees. These mechanisms, in combination with the detailed recommendations of the master plans and design guidelines, will ensure development implementation that follows these principles.

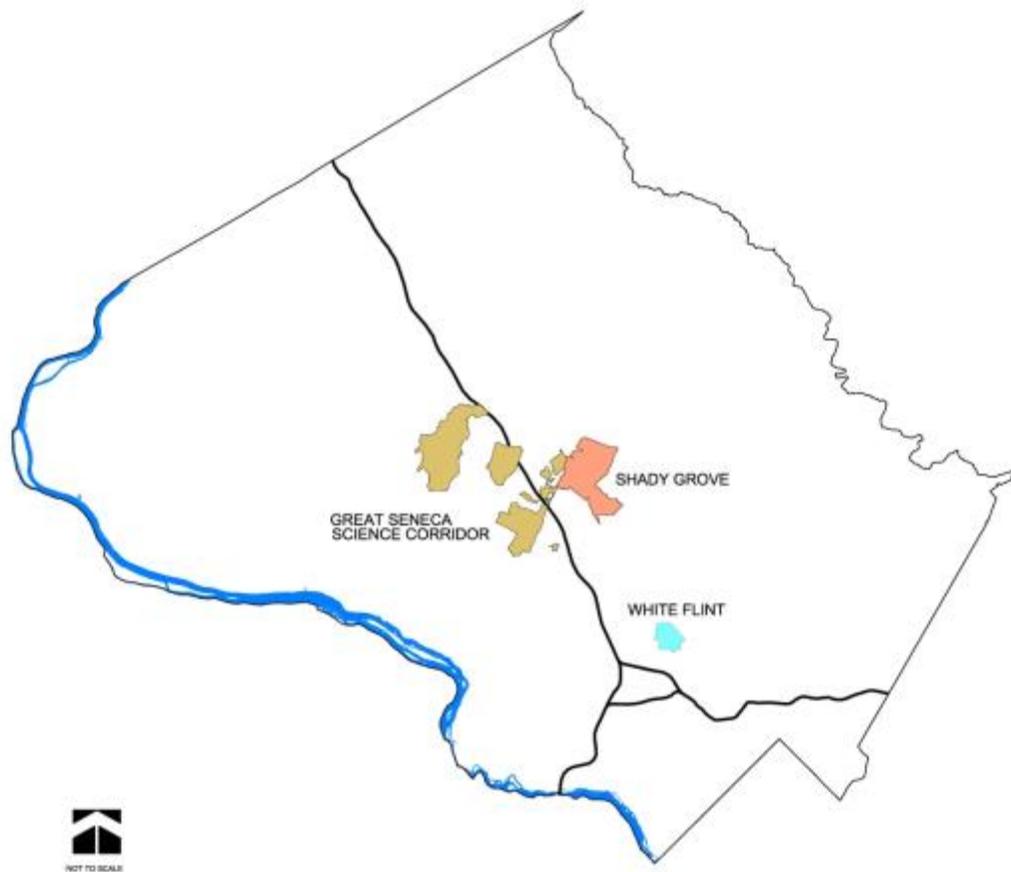
The realization of the plans will occur over a more than 20-year time frame, piece by piece, through both publicly funded projects and private development. Among other goals, this report provides context and illustrates how each project, whether public or private, is just one piece of a larger puzzle and shows where future projects will fill in the gaps. This “gap analysis” also provides a basis for the County’s Capital Improvements Program (CIP) recommendations and facility prioritization.

To ensure development doesn’t proceed more quickly than transit, public facility and environmental capacity, each of these plans establishes staging limits on development with specific triggers that must be satisfied before moving on to later stages. This report provides the status of these staging triggers and approved development, and it also expands the discussion to cover stakeholder issues that may not have been anticipated by the three plans.

The sections for each master/sector plan cover background, recent development activity, public amenity and facility status, and transportation conditions. The report makes specific recommendations for development priorities and CIP funding, and discusses the challenges to be faced in coming years.

Finally, this report is intended to provide an overview of implementing these critical sector and master plan recommendations. Assessments of development applications and proposed public facilities provide more detailed analyses of whether and how projects will implement each plan’s vision.

Map 1: Sector and Master Plan Areas



The Montgomery County Planning Board is responsible for developing a biennial monitoring program for the 2010 White Flint Sector Plan and the 2010 Great Seneca Science Corridor Master Plan. The White Flint Sector Plan states that the monitoring program must include “a periodic assessment of development approvals, public facilities and amenities, the status of new facilities, and the Capital Improvements Program (CIP) and the Subdivision Staging Policy [formerly called the Annual Growth Policy]...”.

According to the Great Seneca Science Corridor (GSSC) Master Plan, the Planning Board is required to establish a biennial monitoring program for the Life Sciences Center. In both plan areas, advisory committees made up of community, business and government representatives are charged with reviewing the progress of development and provision of public facilities.

In White Flint, “the program must include a comprehensive Local Area Transportation Review (or comparable analysis) that will identify and recommend for Council approval and action specific projects and services necessary to promote adequate transportation service. The program should conduct a regular assessment of the staging plan and determine if any modifications are necessary.” (White Flint Sector Plan, page 68)

In the GSSC Master Plan, the committee evaluates “the assumptions made regarding congestion levels, transit use and parking. The committee’s responsibilities should include monitoring the Plan recommendations, monitoring the CIP and the Subdivision Staging Policy, and recommending action by the Planning Board and County Council to address issues that may arise, including, but not limited to, community impacts and design, and the status and location of public facilities and open space.” (GSSC Master Plan, page 79)

The Shady Grove Plan does not include a reporting requirement to the Council, but it requires significant public investments associated with the County Executive’s Smart Growth Initiative and moving the recommended development into the next stage. Similar to the other plans, Shady Grove is a staged plan that limits residential and non-residential development, and requires infrastructure for each stage.

As part of the 2012-2016 Subdivision Staging Policy, a countywide Transportation Policy Area Review (TPAR) roadway adequacy analysis was conducted using a land use/transportation scenario based on the Round 8.0 Metropolitan Washington Council of Governments (MWCOC) Cooperative Land Use Forecast. The forecast assumes a transportation network reflecting anticipated projects and services will be available by 2022.

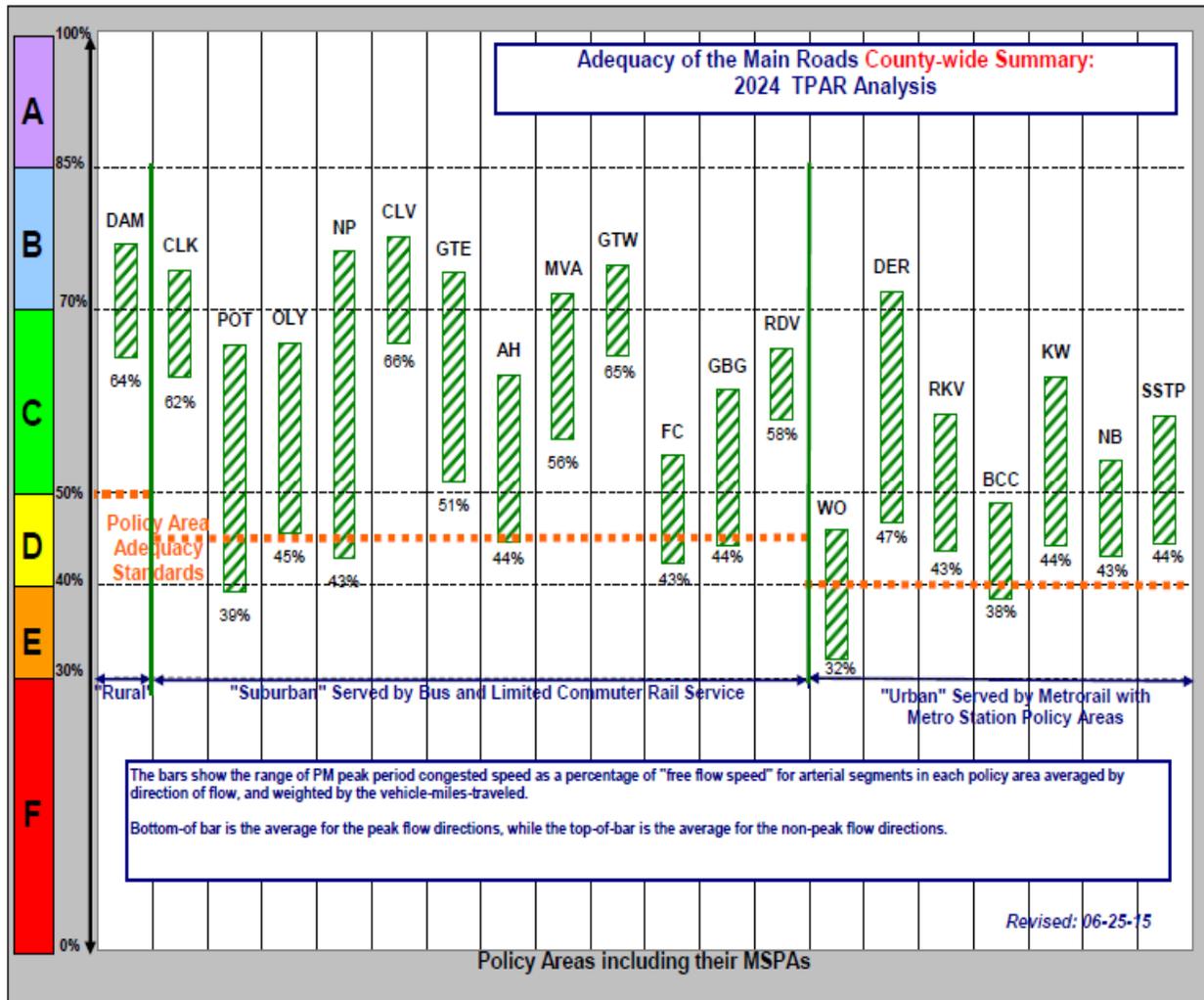
In the White Flint and GSSC plans, a specific TPAR analysis is provided. The countywide data is provided in Illustration 1. TPAR transit adequacy considers three facets of existing local bus service:

- Service coverage: measures the percentage of the policy area within 1/3 of a mile of transit services such as bus routes.
- Peak headways: measures the average time between arrival of transit vehicles at a stop during p.m. peak hours.
- Span of service: measures the transit system’s hours of operation.

All three measures must meet the established standards for a policy area to be considered adequate for transit.

Along with transportation standards, this report reviews progress of development approvals and the public amenities and facilities generated by development and CIP investment.

Illustration 1: Countywide TPAR Analysis



White Flint Sector Plan

Background

Plan Goals

The 2010 White Flint Sector Plan creates the framework to transform strip commercial centers and an auto-oriented suburban development pattern into an urban center with mixed uses supported by new public amenities, parks and open spaces, and a new street network. The proposed cultural and retail destinations in and around the civic core, the open space system and the walkable street grid unite to energize White Flint. The plan also proposes redesigning Rockville Pike (MD 355) as an urban boulevard with a median, street trees and space for future bus rapid transit (BRT).

The overall plan anticipates 9,800 new residential dwelling units and 5.69 million square feet of new non-residential development. The staging plan divides the total amount of development into three distinct phases with limits on residential and non-residential development, and required infrastructure for each phase.

Staging Triggers

All of the White Flint Sector Plan's recommended staging prerequisites have been implemented, including the designation of the plan area as a Bicycle and Pedestrian Priority Area. In phase one, all of the following must occur:

- Contract for the construction of the realignment of Executive Boulevard and Old Georgetown Road.
- Contract for the construction of Market Street (B-10) in the Conference Center block.
- Fund streetscape improvements, sidewalk improvements and bikeways for substantially all the street frontage within one-quarter mile of the Metrorail station: Old Georgetown Road, Marinelli Road and Nicholson Lane.
- Fund and complete the design study for Rockville Pike to be coordinated with the Maryland State Highway Administration (SHA), Montgomery County Department of Transportation (MCDOT) and Maryland-National Capital Park and Planning Commission (M-NCPPC).
- Achieve 34 percent non-auto driver mode share (NADMS) for the plan area.
- The Montgomery County Planning Board should assess whether the build-out of the White Flint Sector Plan is achieving the plan's housing goals.

Key Staging Updates

There are several updates from the 2013 Biennial Monitoring Report (BMR) for the White Flint Sector Plan Area.

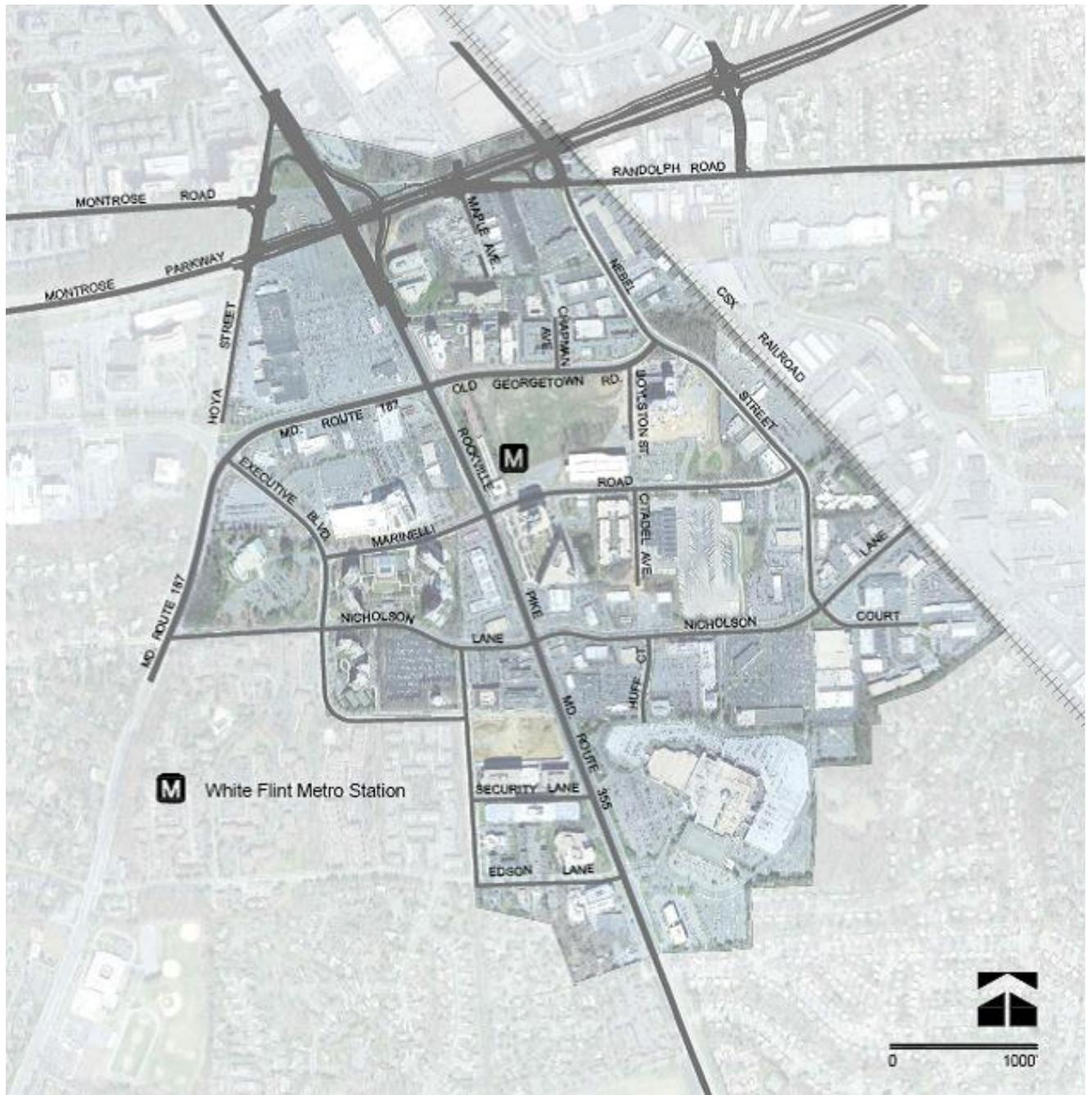
Non-Auto Driver Mode Share

The plan's first phase requires achieving a non-auto driver mode share (NADMS) of 34 percent for the plan area. Montgomery County Department of Transportation (MCDOT), using several different sources, has estimated that the NADMS for employees working in the plan area is approximately 30 percent and for residents is approximately 50 percent. MCDOT's annual commuter survey of employees working in White Flint in 2014 indicated the NADMS for the 3-hour peak period was 31.7 percent.

Bikeway and Pedestrian Connections

In 2014, Montgomery County Department of Transportation (MCDOT) installed the County's first separated bike lanes along Woodglen Drive, between Edson Lane and Nicholson Lane. Two additional

Map 2: White Flint Sector Plan Area



bike lanes were installed along Marinelli Road between Rockville Pike (MD 355) and Executive Boulevard, and another on Security Lane between MD 355 and Woodglen Drive.

Public Facilities

The County has acquired the State of Maryland property at the intersection of Maple Avenue and Randolph Road, east of Rockville Pike, for a future fire station and, potentially, other public uses.

Western Workaround

The White Flint District Workaround Project was separated from the White Flint West: Transportation CIP Project to further specify those projects that are identified as advance-funded and are in process. MCDOT has created several phases for the design and construction of the West Workaround; for example, phase one begins with the construction of the realigned Executive Boulevard and Market Street on the Bethesda North Marriott Conference Center property.

Rockville Pike BRT/RTS

Maryland State Highway Administration (SHA), Maryland Transit Administration (MTA) and MCDOT are conducting a MD 355 Corridor Study (North and South) to evaluate preliminary concepts for the implementation of the Countywide bus rapid transit (BRT) or rapid transit system (RTS).

Advisors

White Flint Sector Plan Implementation Advisory Committee

In September 2010, the Planning Board approved the White Flint Sector Plan Implementation Advisory Committee (IAC). The 24-member IAC comprises property owners, representatives from the County Executive Branch and residents from the plan area and surrounding communities. The IAC is responsible for monitoring the “Plan recommendations, identifying new projects for the Amenity Fund, monitoring the CIP and Subdivision Staging Policy, and recommending action by the Planning Board and County Council to address issues that may arise.” (White Flint Sector Plan, page 69)

White Flint Downtown Advisory Committee

Established by the County Council in 2013, the White Flint Downtown Advisory Committee coordinates community activities that promote and advance business interests, pedestrian and streetscape issues, and walkability in the Plan area. By September 2017, the committee will advise and make recommendations to the County Executive and County Council regarding the potential formation of an urban district in White Flint.

Recent activities of the committee have included the launch of the PikeDistrict.org website in April 2015 and branding and marketing for the Pike District. The committee and the Bethesda-Chevy Chase Regional Services Center have received approval from SHA for landscaping some medians of Rockville Pike (MD 355). The landscaping work commenced in May 2015. At the committee’s request, the County Council commissioned an Office of Legislative Oversight review of case studies of local business and community districts throughout the country. That report was completed in February 2015.

Stakeholder Concerns: Implementation Advisory Committee

The Implementation Committee has reviewed this report. Several committee members, including residents, property owners and business leaders, have the following comments and concerns:

- The lack of office space being built or proposed within the White Flint Sector Plan area. So far, the first phase of Pike & Rose has only 80,000 square feet of offices and the approved office for NoBe II was eliminated as part of a recent amendment. Committee members believe that the

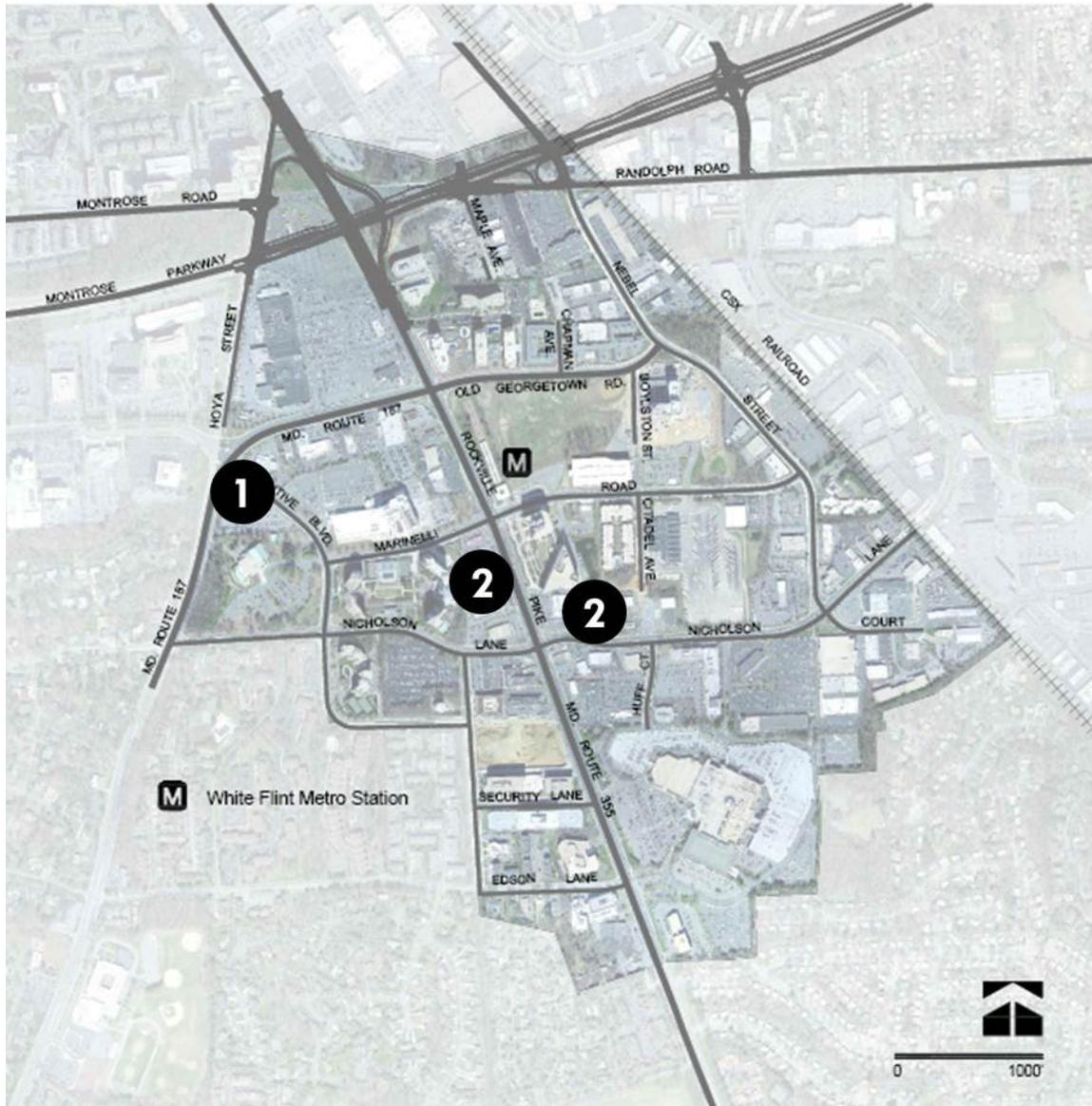
lack of office development weakens the concept of living and working within an urban area. Additional retail, in lieu of office development, could contribute to additional traffic.

- Although approximately 2.5 million square feet of office development has been added in the County since 2010, close to 60 percent of the new office development has been built for federal government agencies, including the National Institute of Allergy and Infectious Disease (NIAID) in Twinbrook.
- The County should promote White Flint as the destination for the Marriott International's new headquarters, since Marriott is seeking an activated, transit accessible site.
- The traffic study conducted by Montgomery County Department of Transportation (MCDOT) at the request of the Maryland State Highway Administration (SHA), as well as the traffic analysis conducted by the White Flint Partnership should be made available to the public.
- Projecting traffic conditions to the year 2042 seems almost futile because future transportation innovations may well reduce roadway congestion.
- Fewer or narrower travel lanes to accommodate bicycle lanes could have an impact on other roadway users.
- New transportation infrastructure must keep pace with new development since existing roads and transit cannot handle additional development. And better mass transit is needed for the White Flint Sector Plan area and surrounding areas.
- The pace of infrastructure delivery is still too slow.

Development Approvals

At the time of the first biennial monitoring report in 2013, four sketch plans had been approved since the adoption of the White Flint Sector Plan, including Pike & Rose, North Bethesda Gateway, North Bethesda Market II and White Flint Mall. Of these projects, only Pike & Rose has begun construction.

Map 3: White Flint, Approved Sketch Plans



- 1** Gables White Flint
- 2** Saul Centers White Flint

Sketch Plans

Since the 2013 monitoring report, new sketch plans for Gables White Flint and Saul Centers White Flint have been approved by the Planning Board. Two sketch plan amendments, North Bethesda Gateway and NoBe II, were also approved by the Board.

Gables White Flint (No.320120010), located adjacent to Wall Local Park and along existing Executive Boulevard, involves the redevelopment of a vacant parking lot, a portion of abandoned Executive Boulevard and a segment of the Bethesda North Marriott Conference Center parking lot. This development, approved in December 2013, will permit 490,000 square feet of residential development and 67,000 square feet of non-residential. A key public benefit for this development is the provision of land for a public parking garage that would support the future expansion of the existing Wall Park and the addition of a new recreation center.



Overview of Gables Residential

Saul Centers White Flint (No.320140010), located at the southwest intersection of Rockville Pike (MD 355) and Marinelli Road, and the northeast intersection of Rockville Pike (MD 355) and Nicholson Lane, will redevelop approximately 9.42 acres of two commercial properties. Approved in May 2014, these properties can redevelop with a total of 1.64 million square feet of new development, including 1.4 million square feet of residential development and 205,218 square feet of non-residential development.



Overview of Saul Centers White Flint

A sketch plan amendment was approved for North Bethesda Gateway (No. 320110020A), located at the southeast and southwest intersection of Huff Court and Nicholson Lane, that eliminates the office component; reduces the amount of retail; and increases the residential square footage for the Lake Waverly (or ProMark) property.

Another sketch plan amendment was approved for North Bethesda Market II (No.320110030A), which is located at the northeast corner of the intersection of Woodglen Drive and Executive Boulevard. This amendment allows development to occur in three phases rather than one. It reallocates 100,000 square feet of non-residential development to residential development and adds an option allowing the developer not to build one of the approved residential buildings.



Overview of NOBE II

Preliminary and Site Plans

The Planning Board has approved both preliminary and site plans for Pike & Rose-Phase II and Gables White Flint.

The November 14, 2013 approval of the Pike & Rose Phase II Site Plan (No. 820130120) permits 1.6 million square feet of development, including up to 645,976 square feet of residential development and the remainder as non-residential. This portion of the development, which is north of phase one and situated along Grand Park Avenue and Rose Avenue, will include an urban park, a 177-room hotel (Canopy by Hilton) and additional residential development. Phase one of Pike & Rose is close to completion with 493 residential units and 211,958 square feet of non-residential development, including the iPic Theater, AMP performance venue run by Strathmore and commercial uses. The American Planning Association and National Association of Counties recently awarded Pike & Rose a national award of excellence for a planning project.



Pike & Rose-Phase 2

Approved by the Board in April 2015, Gables White Flint Preliminary Plan (No. 120150010) and Site Plan (No.820150010) permit up to 521,000 square feet of mixed-use development, including up to 476 residential units and up to 31,000 square feet of non-residential development on approximately 5.14 acres. The development is adjacent to Wall Local Park and includes a segment of abandoned Executive Boulevard and a portion of the Bethesda North Conference Center parking lot. This action takes into consideration the fact that the County has authorized Gables to include the County portion of the land for approval purposes only; no development on the land currently owned by the County will be able to proceed until the land has become fully available, approved for disposition and sold to the developer.

The approved site plan permits the County or the Parks Department to construct a parking garage on the Gables residential site that would support Wall Park's future redevelopment. The implementation of this development is dependent on the County's implementation of the Western Workaround, including realigned Executive Boulevard and Market Street.

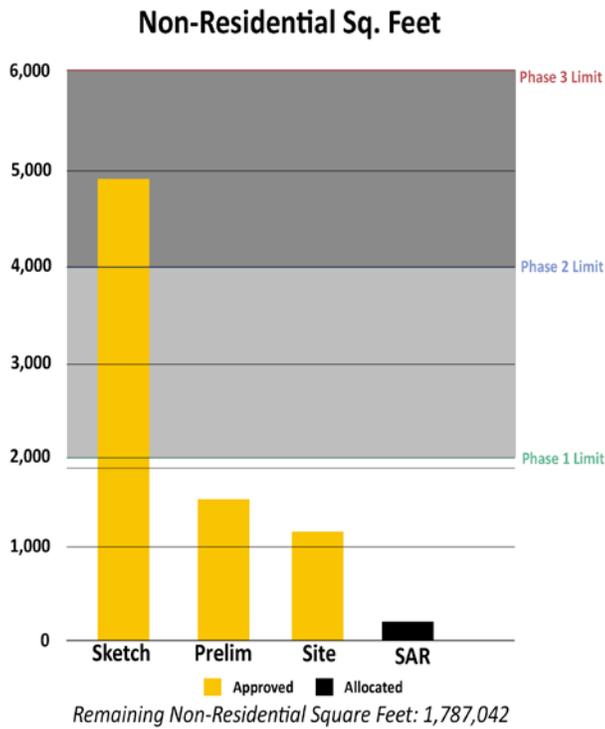
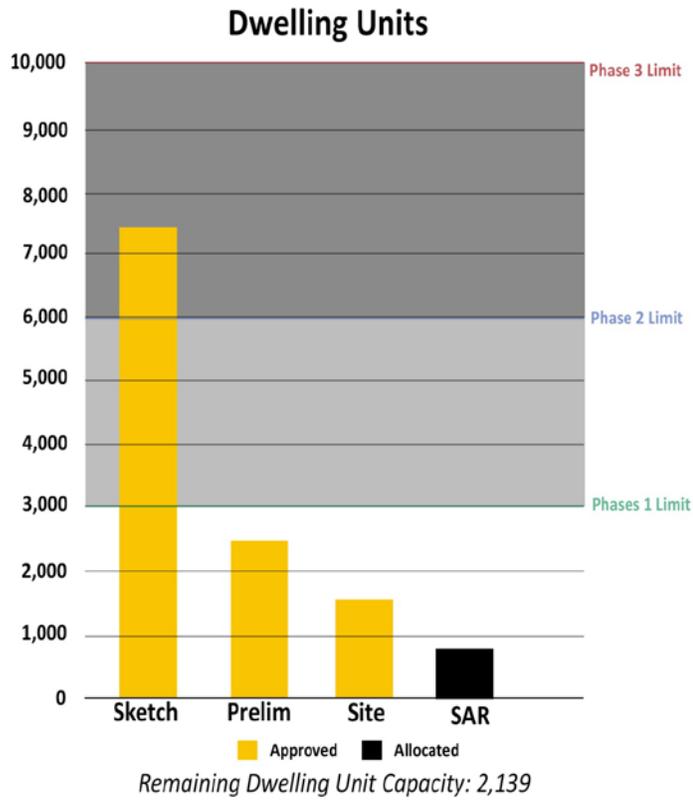
Staging Allocation Request

In July 2011, the Planning Board approved the *White Flint Sector Plan Implementation Guidelines* that provide direction and specific requirements for development implementation, including procedures for staging allocation. In White Flint, residential and non-residential development is allocated by a staging allocation request (SAR) tied to building permit submission, rather than earlier in the development approval process. The Planning Department website, <http://www.montgomeryplanning.org/gis/interactive/staging.shtm> tracks all approved residential and non-residential development, including allocated development.

The County Council, via Resolution No. 17-213, created the White Flint staging allocation process, giving the Planning Board authority to allocate development under the Subdivision Staging Policy White Flint Alternative Review Procedure.

So far, staging allocation requests (SARs) have only been awarded to Pike & Rose. Table 1 shows the allocated residential and non-residential development with remaining White Flint Sector Plan limits.

Table 1: White Flint Sector Plan Staging Allocation



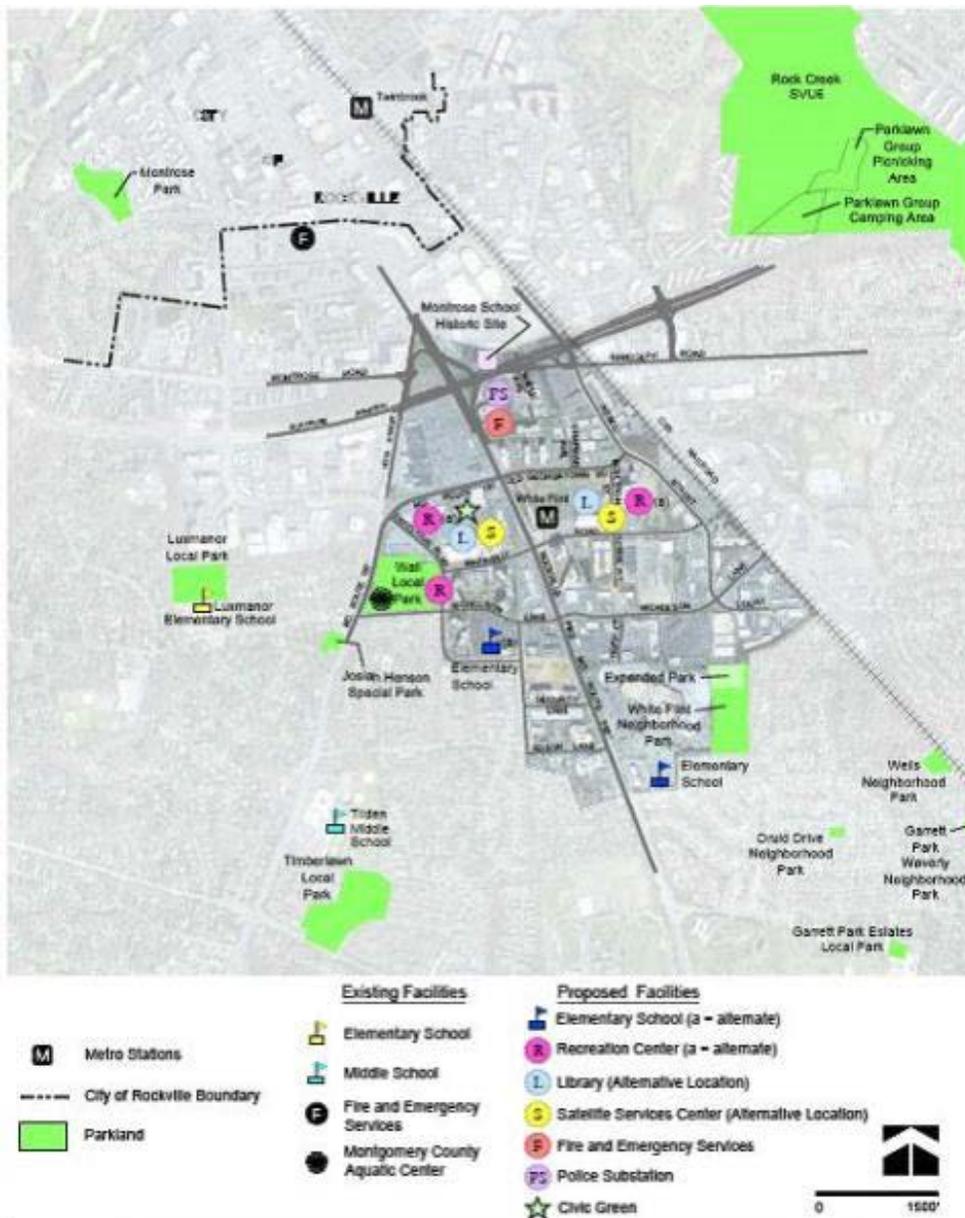
Public Facilities and Amenities

Plan Recommendations

A civic green, an elementary school, a library, a satellite regional service office and a recreation center are some of the public facilities recommended in the White Flint Sector Plan. The Sector Plan notes that “public facilities demonstrate public investment and interest in ensuring quality of life and public safety” and will support the planned population for the district.

The map below (from page 58 in the White Flint Sector Plan) illustrates the range and possible locations of these facilities.

Map 4: White Flint, Existing and Proposed Public Facilities



Wall Park and Recreation Center

The approved Site Plan for Gables Residential has included the provision of approximately 15,050 square feet of land for either the Parks Department or Montgomery County to construct a parking garage of up to 400 parking spaces to support Wall Park’s redevelopment. If the provided land area is not utilized by the County or Parks Department by December 1, 2026, the land will revert back to Gables Residential.

Public investment, in whole or in part, will be required for the public component of the parking garage construction. The Parks Department is exploring a Capital Improvements Program (CIP) amendment to fund a portion of the garage. The implementation of the parking garage on the Gables Residential property is essential to transform Wall Park’s surface parking lot into an urban park, expand the functions of the current Kennedy Shriver Aquatic Center and add a recreation center to serve North Bethesda.

White Flint Neighborhood Park

The approved White Flint Mall Sketch Plan received public benefit points for the dedication of 2.3 acres for the expansion of the White Flint Neighborhood Park. At preliminary plan approval, this area will be dedicated to the Parks Department for future development and implementation.

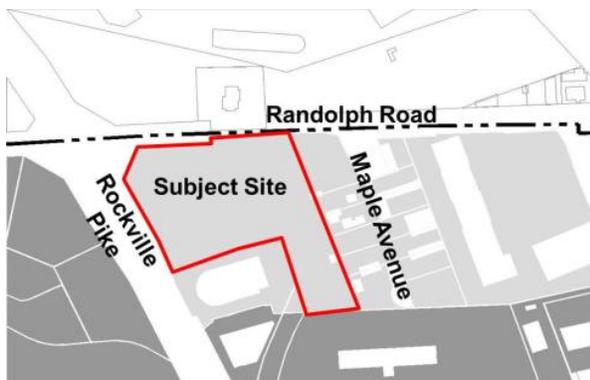
Civic Green

The construction of Market Street and realigned Executive Boulevard (future Grand Park Avenue) will establish the street network surrounding the proposed civic green. No proposals have been made at this time that would provide for the dedication of the civic green. Upon the completion of the street network around the Conference Center, some assemblage of properties is anticipated to provide for the potential dedication of a portion or the whole civic green. Public acquisition by the Parks Department is also an alternative for the implementation of the civic green.

Fire and Emergency Medical Services Station

Montgomery County has acquired the former SHA-owned property located in the northeast quadrant of the intersection of Rockville Pike (MD 355) and Randolph Road. This site will accommodate the relocated Fire Station 23 as a Class I fire station, along with senior housing and potential offices for the White Flint Urban District. This station is included in the FY15 CIP for design to begin in July 2015. The County Department of General Services (DGS) and Department of Housing and Community Affairs (DHCA) are currently working with the Housing Opportunities Commission (HOC) to determine the best scenarios to co-locate the fire station, residential uses and necessary parking on the site.

Map 5: White Flint, Proposed Fire and EMS Station Location



Library and Satellite Regional Services Center

The White Flint Sector Plan recommends co-locating the satellite library and regional services center in the Metro West or Metro East districts. There are currently no active proposals to co-locate these facilities, but it is anticipated that they will be included in future projects.

Schools

Elementary School

The White Flint Mall Sketch Plan, approved in 2012, illustrates the recommended elementary school site. At the time of preliminary plan review for the Mall property, the Board will determine whether the elementary school site should be reserved, dedicated or conveyed to the Montgomery County Board of Education, in whole or in part, under the Adequate Public Facilities findings required by the Subdivision Regulations, Chapter 50 and the provisions of the Commercial Residential (CR) Zone.

The Luttrell property, located at the southwest intersection of Woodglen Drive and Nicholson Lane, is recommended in the White Flint Sector Plan as an alternative location for the elementary school site.

Illustration 2: White Flint, Potential Elementary School Site

The potential four-acre school site included in the White Flint Mall Sketch Plan, at the southern end of the property, is adjacent to the White Flint Park residential community.



School Clusters

The White Flint Sector Plan area is located within the Walter Johnson High School cluster. A school facility payment is required if a school cluster's capacity is at 105 percent or greater. At 120 percent, a school cluster area is placed in moratorium and no new residential development may be approved.

The approved FY16 Subdivision Staging Policy for schools indicated the following capacities for the Walter Johnson cluster:

- 92.4 percent at the elementary level.
- 91.9 percent at the middle school level.
- 119.8 percent at the high school level.

A school facilities payment is currently required for the high school level and the cluster is close to a moratorium. Several future developments, such as Saul Centers White Flint and East Village at North Bethesda, will not be completely permitted to develop. Montgomery County Public Schools (MCPS) must submit a capital project to expand capacity for the cluster. The MCPS Capital Improvements Plan (FY15-20) indicates that all capital projects have been delayed until 2018 or 2020, including classroom additions and modernizations for North Bethesda Middle School, Ashburton Elementary School, Luxmanor Elementary School and other schools in the cluster.

Private Development Amenities

Public Use Space

Pike and Rose-Phase II and Gables White Flint will provide different public use spaces, including:

- Master-planned urban park, plazas and a mid-block connection.
- An urban plaza and a through-block connection.



NOBE public use space



A segment of Gables Residential public use space

Public Benefits Summary

All optional method development in the CR zone requires public benefits that enhance or contribute to the zone's objectives. The incentive density categories are:

- Major public facilities.
- Transit proximity.
- Connectivity and mobility.
- Diversity of uses and activities.
- Quality of building and site design.
- Protection and enhancement of the natural environment.
- Building reuse.

Gables White Flint (No. 320130010) was approved with the following public benefits:

- Major public facility: Provision of land area for parking for Wall Park redevelopment and bike-share station.
- Transit proximity: Level 1 (property is between ½ mile and 1 mile from the Metrorail station).

- Connectivity and mobility: Minimum parking and wayfinding.
- Quality of building and site design: Structured parking, public art and exceptional design.
- Protection and enhancement of the natural environment: Building lot termination, energy conservation and generation, vegetated wall and cool roof.

Saul Centers White Flint (No. 320140010) was approved with the following public benefits:

- Major public facility: Land for a bike-share station.
- Transit Proximity: Level 1 (property is between ½ and 1 mile from a Metrorail station).
- Connectivity and mobility: Minimum parking and public parking.
- Diversity of uses and activities: Enhanced accessibility.
- Quality of building and site design: Structured parking, public art, public open space and exceptional design.
- Protection and enhancement of the natural environment: Building lot termination, tree canopy, vegetated roof and cool roof.

All approved projects exceed the minimum 100 public benefit points required for an optional method development in the Commercial Residential (CR) zone. Any CR zone optional method development must allocate five percent of incentive density for Building Lot Terminations (BLTs).

The Building Lot Termination (BLT) Program, established in 2008, is the County’s newest farmland preservation initiative. The primary purpose of a BLT easement is to preserve agricultural land by reducing farmland fragmentation resulting from residential development in the Agricultural Reserve. A BLT easement restricts residential, commercial, industrial and other non-agricultural uses. So far, 5.72 BLTs have been purchased for Pike & Rose by its developer, Federal Realty Investment Trust.

A key feature of the BLT easement is an enhanced level of compensation for landowners who can demonstrate that their land is capable of residential development. As part of the BLT easement, the landowner must agree to forego residential development and permanently retire an approved on-site waste disposal system associated with the lot to be terminated under the easement.

Transportation

Plan Recommendations

The White Flint Sector Plan generally recommends a transit-focused, multi-modal transportation system that supports the proposed urban center with a street grid and improved pedestrian and bicyclist access. The transformation of Rockville Pike into an urban boulevard is recommended with bus rapid transit options, an improved streetscape and an enhanced pedestrian realm.

Non-Auto Driver Mode Share

The White Flint Sector Plan’s first phase requires achieving a non-auto driver mode share (NADMS) of 34 percent for the Plan area. Montgomery County Department of Transportation (MCDOT) is in the process of creating a White Flint Transportation Demand Management (TDM) Plan that promotes strategies enabling the ultimate 50 and 51 percent NADMS for employees and residents, respectively.

Using several different sources, the current White Flint TDM study estimated that NADMS for employees working in the Plan area is approximately 30 percent, while the NADMS for residents is approximately 50 percent. MCDOT’s annual commuter survey of employees working in White Flint in

2014 indicated the NADMS for the 3-hour peak period was 31.7 percent. Recommendations in the TDM Plan will focus on strategies to impact mode choices of employees working in White Flint and will include a combination of near-term and long-term strategies involving policies, facilities and services. Measures, such as developing and expanding the bike-share system, establishing a White Flint circulator service and parking policy changes, are under consideration. In order to proceed to phase two, the NADMS must be 34 percent for the plan area.

Bicycle and Pedestrian Connections

In 2014, MCDOT installed the County's first separated bike lane along Woodglen Drive, between Edson Lane and Marinelli Road. Located along the western side of Woodglen Drive, the separated bike lane is for exclusive use by bicyclists and provides an important connection to the Bethesda Trolley Trail.

During this period, MCDOT also installed two additional bike lanes: one along Marinelli Road between Rockville Pike (MD 355) and Executive Boulevard, and the other on Security Lane between MD 355 and Woodglen Drive as part of repaving projects. Either a bike lane or a cycle track is under consideration for Nebel Street, between Randolph Road and Nicholson Lane.

In addition, a shared-use path has been included along Executive Boulevard in the Western Workaround CIP project that was not called for under the White Flint Sector Plan, but was strongly recommended by the Implementation Committee as plans were being reviewed. These new bikeways further the implementation of the plan's bikeway network and the State's designation of White Flint as a Bicycle-Pedestrian Priority Area.

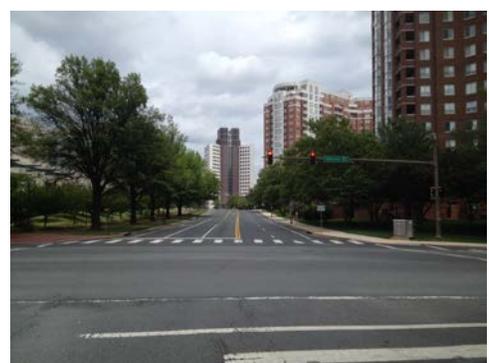
A Bicycle-Pedestrian Priority Area (BPPA) is intended to ensure that the needs of bicyclists and pedestrians are taken into account during all phases of transportation planning, design, construction or expansion. White Flint is the first designated Bicycle-Pedestrian Priority Area in the State of Maryland. In 2015, the Governor of Maryland signed a new law requiring the State Highway Administration (SHA) to act within one year of a BPPA designation by a local agency.



Security Lane bike lane

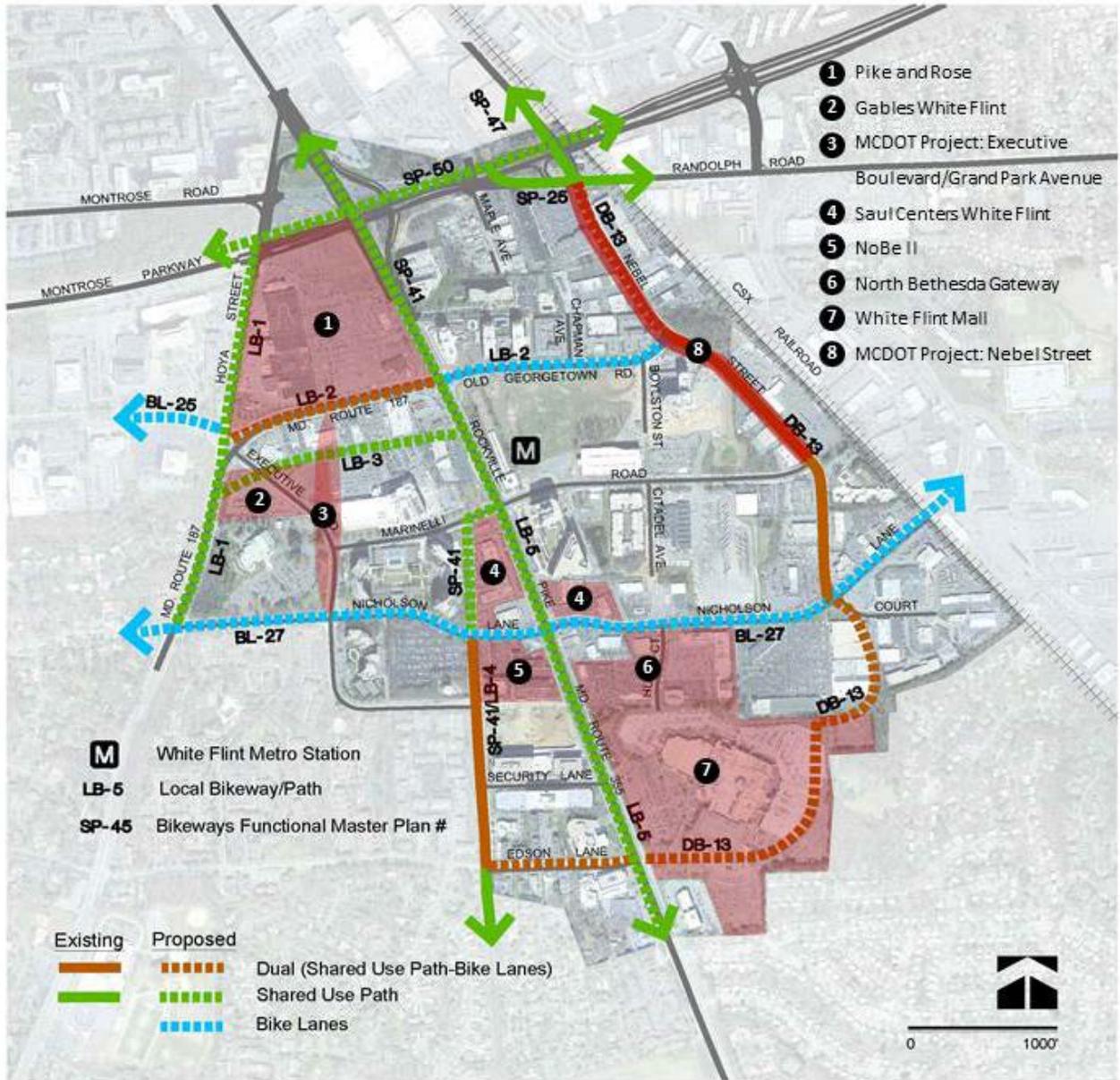


Woodglen Drive separated bike lane

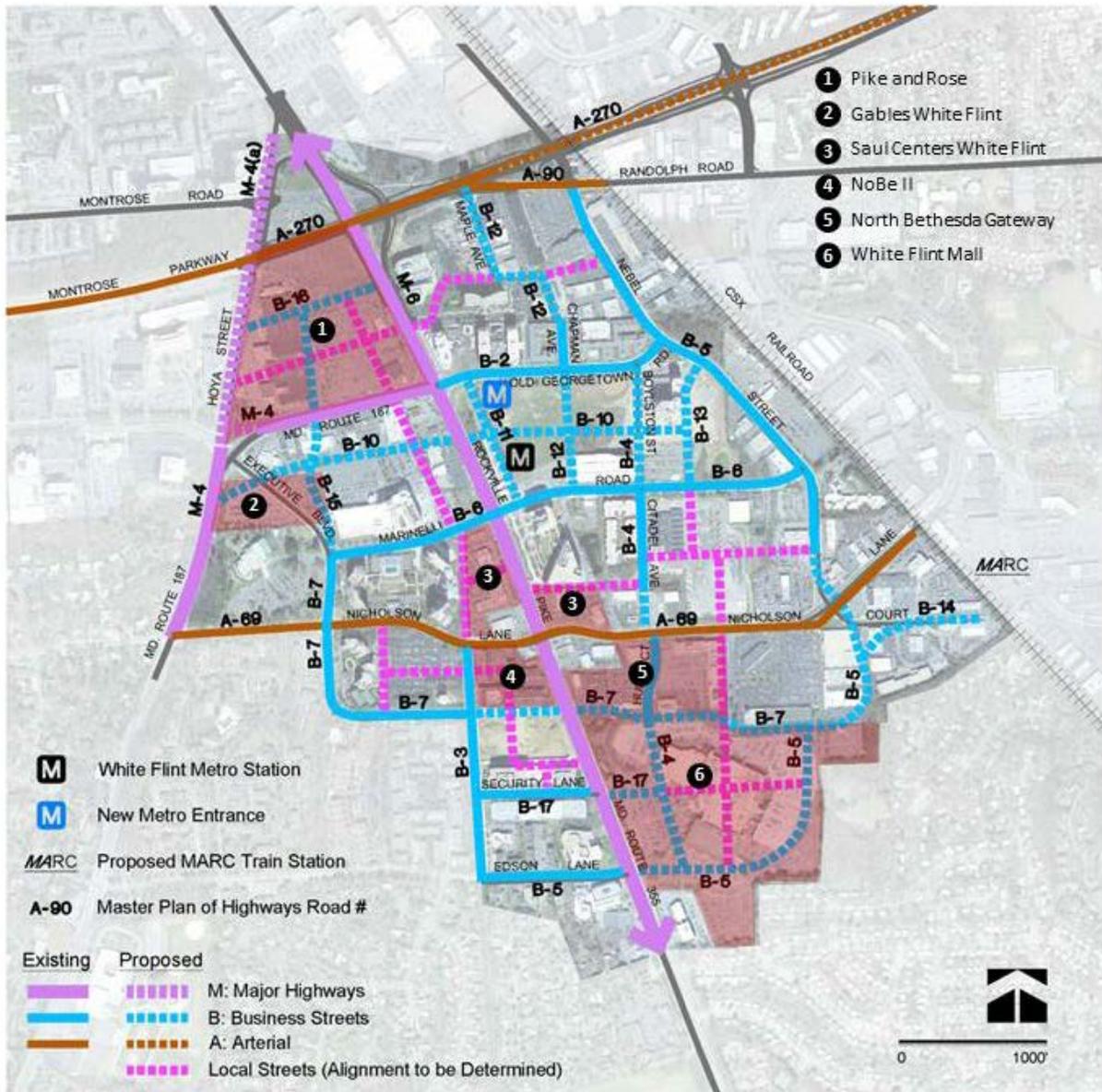


Marinelli Road bike lane

Map 6: White Flint, Bikeway Network and Approved Sketch Plans



Map 7: White Flint, Street Network and Approved Sketch Plans



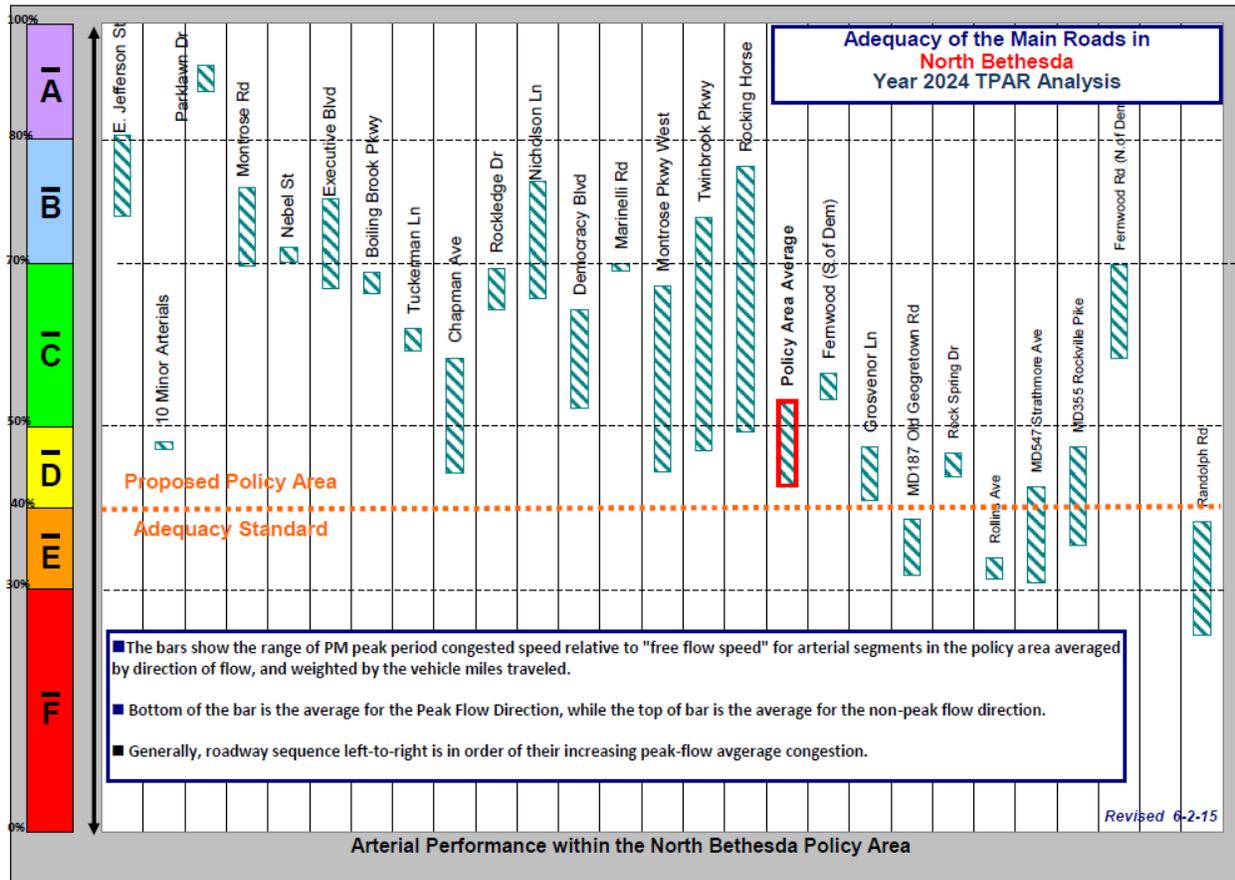
Transportation Policy Area Review Analysis

The White Flint Special Taxing District (Bill No. 50-10) exempts new White Flint development from Transportation Policy Area Review (TPAR) and Local Area Transportation Review (LATR). Instead of being subject to these reviews, the district requires payment of a tax for infrastructure improvements based on the phasing plan and roadway network recommended in the White Flint Sector Plan. The 2012-2016 Subdivision Staging Policy confirms this exemption.

Although individual development applications are exempt from TPAR and LATR tests, the areawide transportation network has been evaluated for roadway and transit adequacy. The results of this

evaluation for the collection of individual roadways in the North Bethesda policy area (see Illustration 3) show that North Bethesda, from an areawide policy area perspective, is forecasted to achieve TPAR roadway adequacy by 2024.

Illustration 3: Adequacy of the Main Roads in the North Bethesda Policy Area

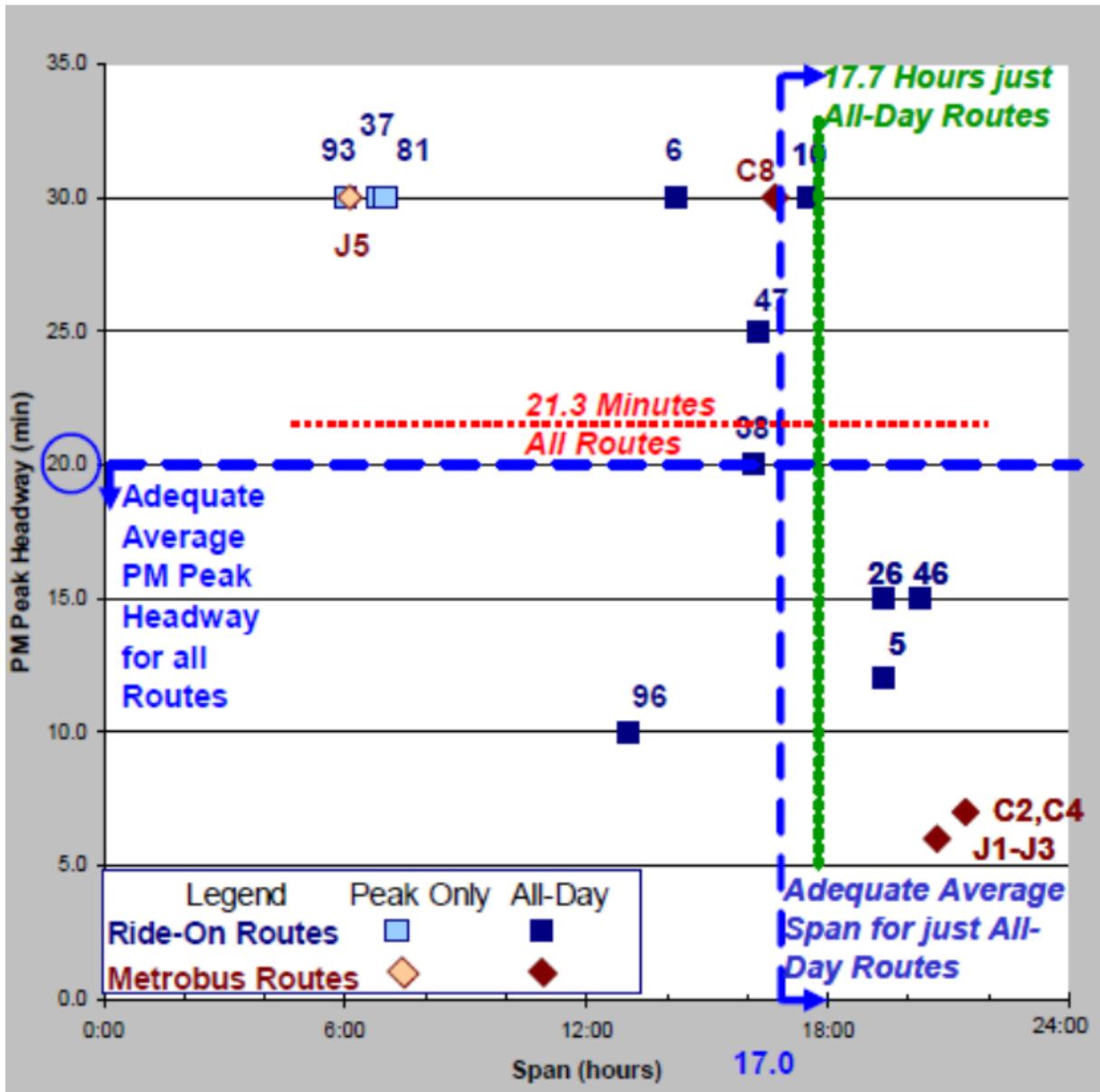


The TPAR analysis also evaluated transit adequacy for existing local bus service in the North Bethesda Policy Area based on three metrics: service coverage, peak headways and span of service. A brief discussion of these results is provided below.

Service coverage: About 87 percent of the North Bethesda Policy Area is located within a mile of a Metrorail station or 1/3 of a mile from one of the area’s 15 bus routes (see Map 8). The service coverage standard for an Urban Policy Area is 80 percent. Therefore, under TPAR guidelines, transit coverage in the North Bethesda Policy Area is adequate.

Peak headways: Buses in the area run, on average, every 21.3 minutes during the weekday evening peak period. Some, such as the J1, J3 and J5 Metrobuses, provide more frequent service. However, in areas like North Bethesda where Metrorail and commuter rail are provided, the standard for average peak headways is 20 minutes or less. Thus, the average peak headway for the area is not yet adequate. The TPAR transit adequacy analysis shows that a “conditional transit improvement project” to improve peak headways in other policy areas of the County includes local bus routes that also serve the North

Illustration 4: Route by Route and Average Adequacy, North Bethesda Policy Area



Recent Traffic Impact Studies

Three recently completed traffic impact studies are relevant to an evaluation of future local intersection traffic conditions in the White Flint Sector Plan area and vicinity. Key elements of these studies are summarized in the table below. The results of these studies will be used to inform decisions pertaining to transportation-related CIP recommendations in the area.

Traffic Impact Study Author	Modeling Tool/Methods	Performance Measures
Stantec, Inc.	<ul style="list-style-type: none"> ■ Critical Lane Volume (CLV) ■ Synchro 	<ul style="list-style-type: none"> ■ CLV ■ Highway Capacity Manual (HCM) level of service ■ HCM v/c ratio
STV Group, Inc.	<ul style="list-style-type: none"> ■ VISSIM (micro-simulation) 	<ul style="list-style-type: none"> ■ CLV ■ HCM level of service ■ HCM v/c ratio ■ Person Throughput
Sabra, Wang & Associates, Inc.	<ul style="list-style-type: none"> ■ Critical Lane Volume (CLV) ■ Synchro ■ VISTRO (micro-simulation) 	<ul style="list-style-type: none"> ■ CLV ■ HCM level of service ■ HCM v/c ratio ■ Connectivity Index ■ Person Throughput

A White Flint transportation inter-agency policy group and a technical team, including staff from the Montgomery County Department of Transportation (MCDOT), State Highway Administration (SHA) and County Planning Department, were established to review traffic studies and strategies relevant to implementing the Plan’s transit-oriented development vision, which is considered to be a model for Maryland.

These traffic studies are summarized in the following sections of this report. The results derived from these studies will be presented to the Planning Board when this information is fully available.

White Flint Area Traditional Traffic Impact Study

Between 2012 and 2014, the consultant firm Stantec (formerly Greenhorne & O’Mara) analyzed the estimated future traffic impact on the White Flint Sector Plan’s recommended development with a focus on two major state roadways: Rockville Pike and Old Georgetown Road.

The study examines existing traffic conditions in the plan area and also estimates future traffic conditions under two planning horizons: 2022 and 2042. Intersections within the plan area were evaluated using the *Synchro/Highway Capacity Manual* analysis procedures as well as the critical lane volume (CLV) method. The study identifies intersections that are projected to exceed the applicable Local Area Transportation Review (LATR) level-of-service standards and recommends possible intersection geometric changes to mitigate adverse traffic impacts. The year 2022 traffic analysis results derived from the study are particularly relevant to this report.

White Flint Area Micro-simulation Traffic Impact Analysis

The consultant firm STV Group, Inc. performed a traffic impact analysis generally similar in scope to the study described above. This multi-modal traffic analysis used software called VisSim to evaluate intersection performance. This micro-simulation tool uses a multi-modal traffic analysis process that

includes pedestrian, bicycle and transit travel. This tool also features explicit traffic assignment on all planned streets of the area roadway network (public and private) and reports on a variety of transportation system performance measures, including delay, travel time and person throughput. It provided more nuanced traffic analysis results relative to the techniques used in the Stantec traffic impact study. This traffic analysis was completed during fall 2014.

Rockville Area Transportation Capacity Analysis

Under a grant provided by the Metropolitan Washington Council of Governments' Transportation and Land Use Coordination Program, the City of Rockville sponsored a transportation capacity study performed by Sabra, Wang and Associates, Inc. Completed in June 2013, the study identifies potential capacity improvements and recommends alternative transportation system analysis methods.

The study area focuses on southern Rockville Pike and includes the Twinbrook Metrorail Station area, as well as the White Flint Sector Plan area. The study area is partly outside the Rockville city limits because redevelopment of these areas has caused increased traffic volumes within the city. This study highlights transportation impacts across jurisdictional lines between the City of Rockville and the County. The results of the study are posted online:

www.mwcog.org/transportation/activities/tlc/program/completedFY.asp#RockTCA

Capital Improvements Program Projects

Current White Flint CIP transportation projects are:

- White Flint District West Workaround (No. 501506)
- White Flint District West: Transportation (No. 501116)
- White Flint District East: Transportation (No. 501204)
- White Flint Traffic Analysis and Mitigation (No. 501202).

These CIP projects, overseen by MCDOT, are essential to implementing the public transportation infrastructure required to complete the first phase of the White Flint Sector Plan. Since the last Monitoring Report, the White Flint District Workaround Project was separated from the White Flint West: Transportation CIP Project to specify those projects that are identified as advance-funded and are in process.

MCDOT has created several phases for the design and construction of the West Workaround; for example, phase one begins with construction of realigned Executive Boulevard and Market Street on the Bethesda North Conference Center property. The design has been completed and utility work will begin in summer 2015. Construction will be coordinated with the building of the Conference Center Garage. The continuation of realigned Executive Boulevard between Market Street and Old Georgetown Road (MD 187) is dependent on the dedication of the right-of-way for the roadway.

The County Council recently added funding for the construction of Hoya Street between Old Georgetown Road and Montrose Parkway. As a result, MCDOT provided a revised traffic analysis of the functioning of the Old Georgetown Road/Hoya/Executive intersection to SHA, and was able to obtain approval for a design of Old Georgetown Road that eliminated additional lanes and included bicycle and pedestrian facilities. The cross-section of Old Georgetown Road, between relocated Executive Boulevard (future Grand Park Avenue) and Towne Road, will consist of two, 11-foot-wide through lanes; two, 12-foot-wide through lanes; a 6-foot-wide median; and two, 6-foot-wide bike lanes. On the approaches to Grand Park Avenue and Towne Road, a 12.5-foot-wide left-turn lane will be provided for a total curb-to-curb distance of 76.5 feet. The cross-section will also include a 10-foot-wide shared-use path on the

north side and a 6-foot-wide landscape strip on each side. It also allows for a 12.5-foot-wide right-turn lane on the eastbound approach to future Grand Park Avenue; this lane could be added at some point, if required, but will not be built at this time.

Design of Rockville Pike, which is covered under CIP Project No. P501116: White Flint District West: Transportation, is currently scheduled to begin in FY19 in order to coordinate with the implementation of the rapid transit system (RTS). The schedule in the original CIP project did not take into consideration the effect of the rapid transit system on the design.

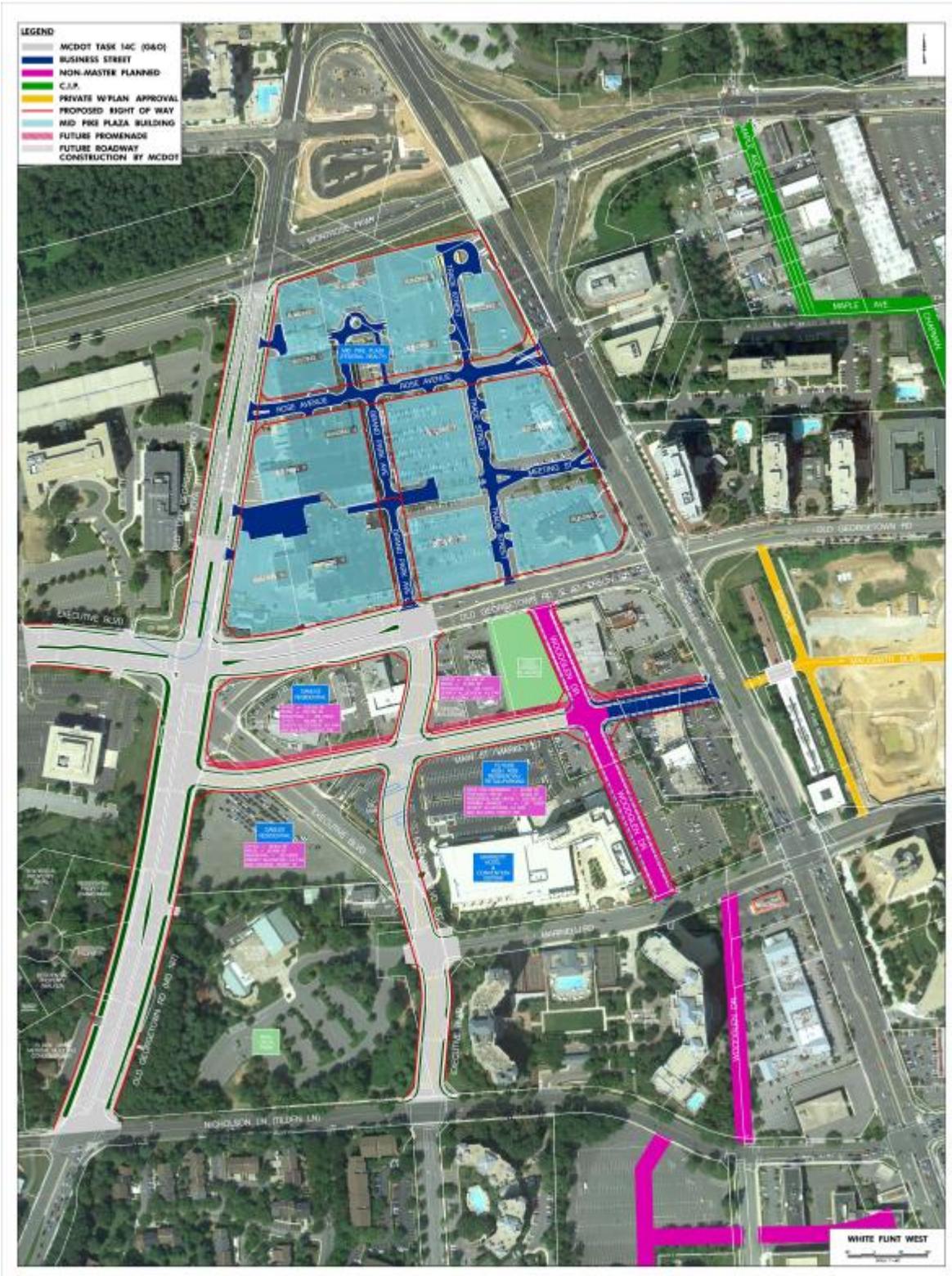
Three new roadway segments are included in the White Flint District East project. These segments include Executive Boulevard extended, from Rockville Pike to Huff Court, and then from Huff Court to Nebel Street extended; and a new bridge over the Metrorail tracks that would be an extension of McGrath Avenue connecting to Route 355 and the White Flint Metrorail Station.

Roadway design for Executive Boulevard extended has been repeatedly delayed due to a dispute between private property owners regarding the location of the right-of-way based on SHA's currently approved intersection alignment. Likewise, the design for the bridge that crosses the Metrorail station has been delayed due to the on-going discussions between LCOR, the developer of the North Bethesda Center, MCDOT and the Washington Metropolitan Area Transit Authority (WMATA).

The draft White Flint Transportation Demand Management (TDM) Plan is an example of a project that is associated with White Flint Traffic Analysis and Mitigation (No. 501202). The proposed White Flint Fire Station (No.451502) is in the CIP as is the White Flint Redevelopment Program (No.151200) that provides for plans, studies, analysis and development coordination activities needed to implement plan recommendations.

Conference Center Garage, CIP Project No 781401, is considered to be under the General Government category because the Bethesda North Marriott Conference Center is managed by the Department of Economic Development. This project currently provides for the design of a structured parking garage to accommodate the current and future parking needs of the Conference Center in order to replace all of the surface parking spaces that will be lost due to road construction and disposition of part of the property to form a grid street network. The funding for the garage project is already in an account jointly controlled by the County and State; it resulted from the sale of SHA/MDOT property through the County for White Flint transit-oriented development purposes.

Illustration 5: White Flint, Metro West District, Planned Roadway Network
 Source: Stantec



Recommendations

Pike & Rose, Gables White Flint and other development plans represent the type of urban and mixed-use development envisioned in the White Flint Sector Plan. Several CIP projects also indicate the County's commitment to successful infrastructure implementation in White Flint. As development moves forward, the following items should be addressed to ensure successful implementation.

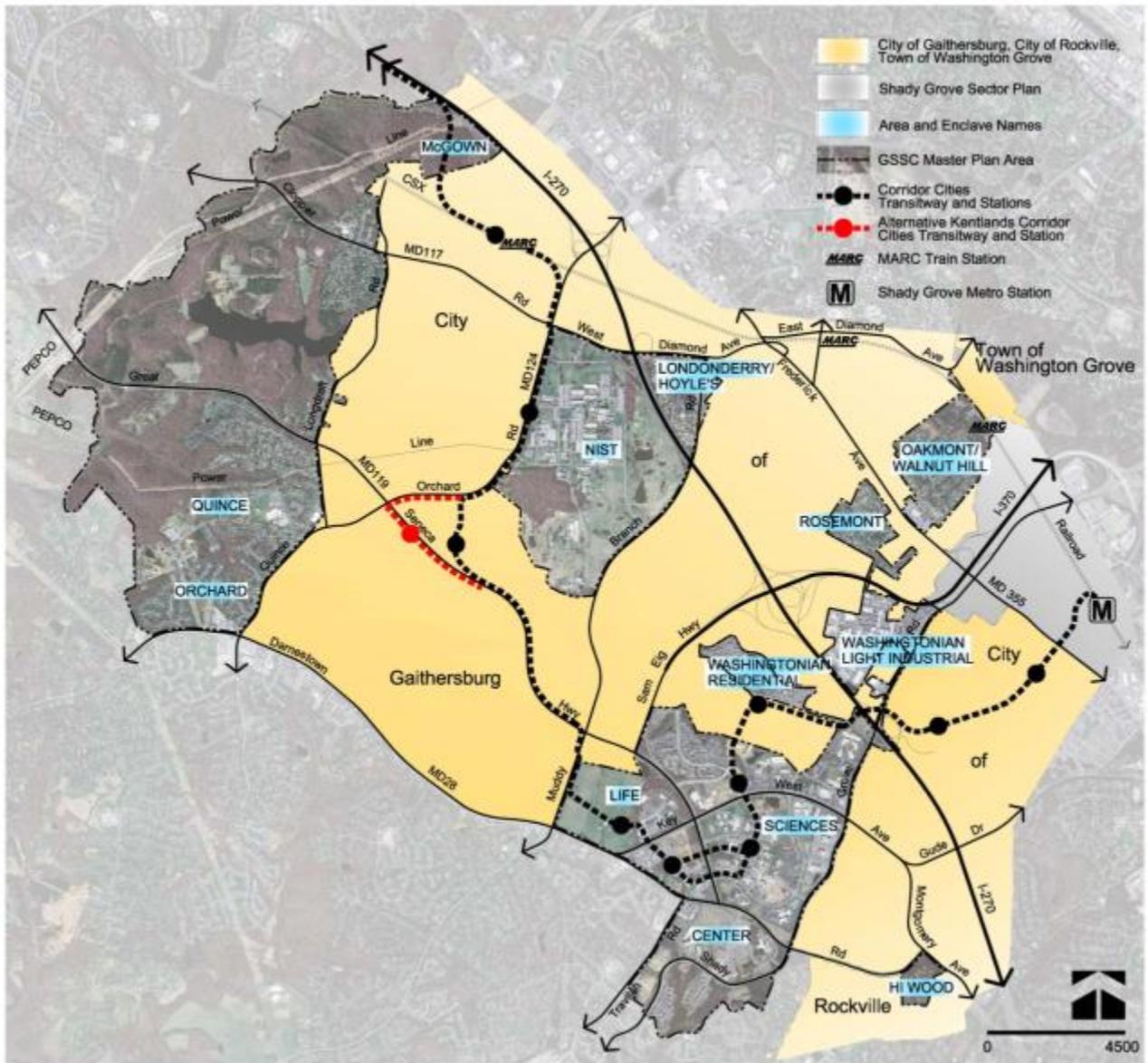
Public Facilities and Amenities

- The Parks Department should create a new Capital Improvements Program (CIP) or a CIP Amendment for the public component of the Gables White Flint parking garage that will support Wall Park's future redevelopment.
- An alternative to the CIP is the creation of a public-private partnership between the Parks Department, Montgomery County and Gables Residential to construct the public component of the parking garage.
- The Department of General Services (DGS) should consider incorporating a police sub-station within the new Fire Station 23.

Transportation

- Per phase one staging requirements, the bikeways along Nicholson Lane and Old Georgetown Road (MD 187) need to be programmed.
- The proposed Nebel Street bikeway should extend to Nicholson Lane, rather than terminating at Marinelli Road, in order to implement the White Flint Sector Plan-recommended bikeway network.
- The White Flint Transportation Demand Management Plan should provide a framework for Capital Bike Share, including preferred locations.
- Maryland Department of Transportation (MDOT) and State Highway Administration (SHA) must develop a framework plan that includes the latest pedestrian and bicycle initiatives for the White Flint Bicycle Pedestrian Priority Area.

Map 9: Great Seneca Science Corridor Master Plan Area



Great Seneca Science Corridor Master Plan

Background

Plan Goals

The 2010 Great Seneca Science Corridor Master Plan (GSSC) envisions “a dynamic and sustainable science and medical hub” (GSSC Master Plan, page 9) and, to achieve that goal, makes a number of key recommendations for the pace and pattern of development, public facilities and transportation, phased to the provision of public amenities.

Staging Triggers

Staging capacity in the science and medical hub, called the Life Sciences Center (LSC), is allocated at preliminary plan approval. Stage one made available 400,000 square feet of new commercial development and 2,500 new residential units. The last of the new commercial capacity in stage one was allocated by Planning Board approval of a preliminary plan on November 10, 2011. Stage one is, therefore, closed to approval of new commercial capacity. As of May 2015, 311 new residential units have been allocated by preliminary plan approval, leaving a capacity for 2,189 new residential units available in stage one.

Before stage two begins, the remaining staging triggers must be met:

- Fully fund construction of the Corridor Cities Transitway (CCT) from the Shady Grove Metrorail Station to Metropolitan Grove within the first six years of the County’s Capital Improvements Program (CIP) or the State Consolidated Transportation Program (CTP).
- Fund the LSC Loop trail in the County’s six-year CIP and/or through developer contributions as part of plan approvals.
- Attain an 18 percent non-auto driver mode share (NADMS).

Key Staging Updates

There are five major updates from the 2013 Biennial Master Plan Monitoring Report (BMR) for the GSSC Master Plan area.

- **Corridor Cities Transitway (CCT):** The GSSC Master Plan calls the CCT “the centerpiece of the Plan’s vision for the LSC.” More than any other element, the development of this transitway is critical for connecting areas within the plan area and implementing the plan recommendations. The Maryland Transit Authority (MTA) is scheduled to deliver plans for 30 percent design of the CCT by fall 2015. There has been extensive coordination between MTA, MCDOT, M-NCPPC, applicable advisory committees and GSSC residents and stakeholders regarding the advancement of the CCT from 15 percent to 30 percent since the 2013 BMR. The final alignment, cross-sections and right-of-way impacts for the CCT are expected to be established by MTA through this 30 percent design document. Funding the CCT is critical to implementing the GSSC Master Plan.
- **Life Sciences Center (LSC) Loop:** In July 2014, the Planning Department hired Alexandria, Virginia-based consultant Rhodeside & Harwell to develop a design for the LSC Loop with funding from the Metropolitan Washington Council of Governments (MWCOG) through its Transportation-Land Use Connection Program. The total grant was for \$60,000, with \$40,000 allocated for developing a unified trail design and \$20,000 allocated for developing an

implementation and funding strategy to be produced by the end of June 2015. Planning staff believes these documents were a necessary step forward toward securing the funding necessary for the LSC Loop, which is identified in the Master Plan as “the organizing element of the open space plan to connect districts and destinations, incorporate natural features, and provide opportunities for recreation and non-motorized transportation.” As such, funding of the LSC Loop is also critical to implementing the GSSC Master Plan.

- **Bicycle Master Plan (BMP):** At the request of the GSSC Implementation Advisory Committee and residents and stakeholders, the Planning Department commenced the BMP with an early focus on the LSC. It was important to begin this work to address concerns relating to the overall pedestrian and bike connectivity between the LSC Loop, County pedestrian and bike network, CCT stations and pedestrian and bike networks of Rockville and Gaithersburg. Timing was another key factor in beginning this work early, before the countywide Bicycle Master Plan launches in July 2015. MTA’s outreach and coordination for the advancement of the CCT from 15 percent to 30 percent design and the LSC Loop project are both expected to conclude by fall 2015.
- **Public Safety Training Academy (PSTA) relocation:** Much progress has been made on relocating the PSTA from the LSC West District to its new location at the Multi-Agency Service Park (MASP), which is under construction at a site on Snouffer School Road north of the Montgomery County Air Park. Funding for the purchase, planning and site development of the MASP is included in the Department of General Services CIP PDF No. 470907. Funding for the PSTA relocation is included in General Services CIP PDF No. 471102. A mandatory referral for the MASP was approved in January 2011 and the target date for opening the new PSTA is 2016.

A site for a new park and an elementary school has been identified on the PSTA site in the LSC West District. The need for the school has not yet been established by Montgomery County Public Schools (MCPS). Planning for redevelopment of the PSTA is being coordinated by the Montgomery County Department of General Services (MCDGS). MCDGS will coordinate planning for the park/school site with MCPS and the Montgomery County Department of Parks.

- **Non-Auto Driver Mode Share (NADMS):** NADMS is the percent of work trips via transit (bus or rail), walking, biking or carpooling during the peak travel periods of a typical weekday. MCDOT’s 2015 commuter survey identifies this figure at 16.1 percent in GSSC, while an 18 percent NADMS is needed to open stage two.

Advisors

GSSC Implementation Advisory Committee

The GSSC Implementation Advisory Committee (IAC) was established by the Planning Board on September 30, 2010 to “evaluate the assumptions made regarding congestion levels, transit use and parking. The committee’s responsibilities should include monitoring the Plan recommendations, monitoring the Capital Improvements Program and the Subdivision Staging Policy, and recommending action by the Planning Board and County Council to address issues that may arise, including, but not limited to, community impacts and design, and the status and location of public facilities and open space.” (GSSC Master Plan, page 79)

The committee members represent local property owners and residents, including residents of neighborhoods in the adjoining jurisdictions of the City of Rockville and the City of Gaithersburg, as well as representatives from the County Executive's office, the City of Rockville and the City of Gaithersburg.

The GSSC IAC has reviewed and provided comments and guidance to applicants, Planning staff and applicable agencies on a variety of topics, including the LSC Loop; the advancement of the CCT from 15 percent to 30 percent design; the Bicycle Master Plan; and sketch, preliminary and site plans. The committee's participation and input has improved GSSC Master Plan implementation.

GSSC IAC Recommendations

The GSSC IAC shares staff's concerns in the challenges for the GSSC Master Plan area, and agrees that the LSC is unlikely to transform from a suburban office park model to the dynamic, mixed-use community envisioned by the GSSC Master Plan unless the staging triggers adopted by the County Council are made a priority. Therefore, the GSSC IAC makes the following recommendations:

- Fully fund the LSC Loop trail in the County's six-year CIP and/or through developer contributions as part of plan approvals.
- Fully fund CCT construction from the Shady Grove Metrorail Station to Metropolitan Grove.

Development Approvals

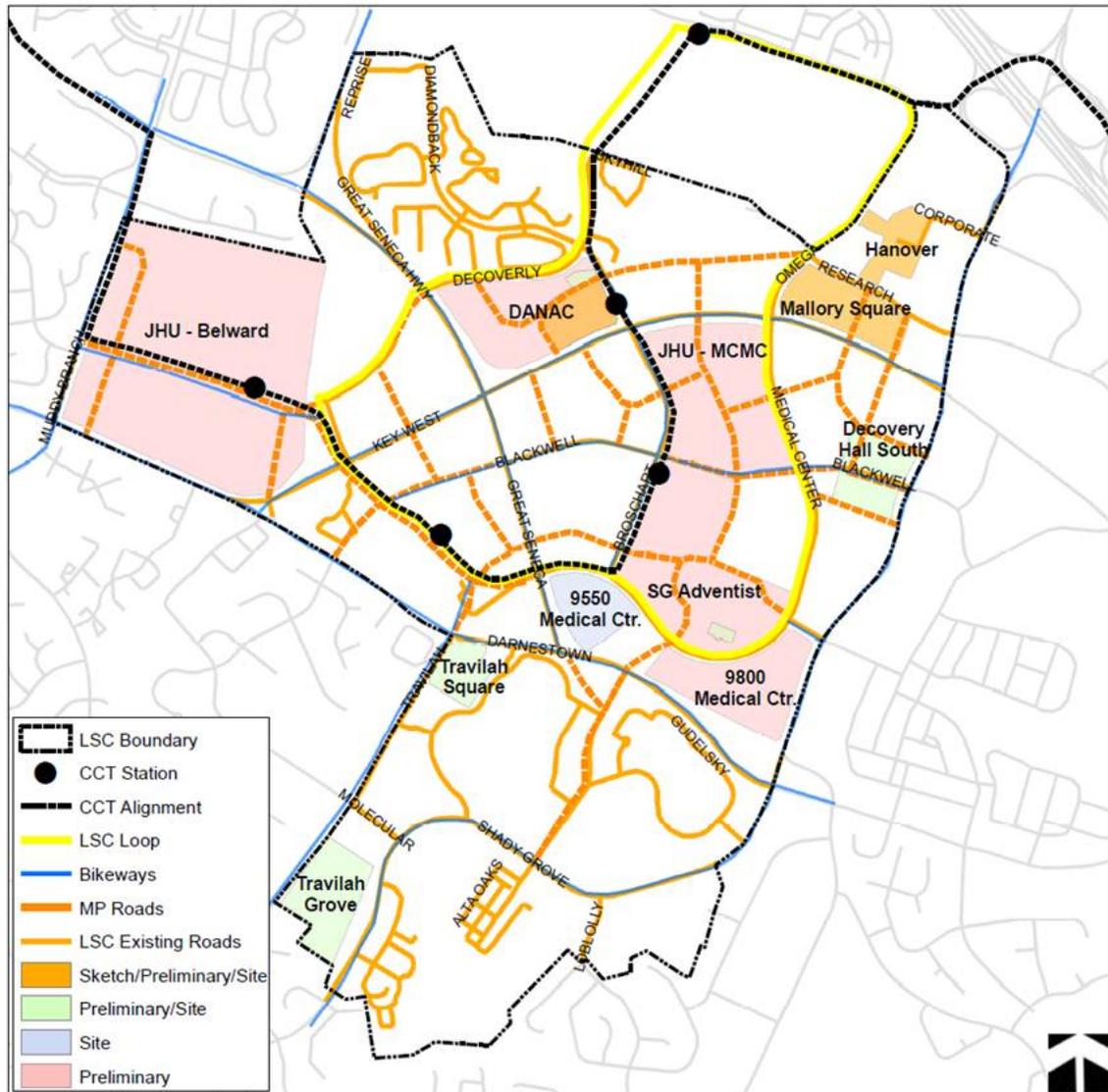
Since the 2013 Biennial Master Plan Monitoring Report, the Planning Board has approved the Preliminary Plan for the Shady Grove Adventist Hospital site and several other minor amendments to preliminary and site plans. A preliminary plan and site plan amendment for the Travilah Grove site have been filed to convert the previously approved multi-family units to townhomes, and the Site Plan Amendment for Shady Grove Life Sciences Center Parcel N/Q – 9905 Medical Center Drive is under review for Planning Board approval.

Certain owners of properties in the GSSC Master Plan area must submit a concept plan for Planning Board approval:

- This master plan requirement is unique to the GSSC Master Plan (see page 34).
- The concept plan must demonstrate how a site will achieve the GSSC Master Plan's vision at full build-out.
- These rules apply only to owners of properties comprising 20 acres or more, including Johns Hopkins University (JHU) Belward Campus, JHU Montgomery County Medical Center, Shady Grove Adventist HealthCare, DANAC Stiles campus and the Public Safety Training Academy (PSTA).

All applicable properties have approved concept plans except the PSTA site.

Map 10: GSSC, Bikeway and Roadway Networks and Development Approvals



Conversions

The GSSC Master Plan allows existing commercial plan approvals to be converted to residential unit approvals without counting against the residential unit capacity available in a development stage, provided that the change in development will not increase the number of vehicle trips. There have been no conversions since the 2013 Biennial Master Plan Monitoring Report; however, to date, three preliminary plans (Hanover Shady Grove, Mallory Square and Camden Shady Grove) have converted a total of 387,751 square feet of existing commercial capacity approvals to 1,212 new residential units.

Preliminary Plans

Since the 2013 monitoring report, the Planning Board has granted preliminary plan approvals for:

- Shady Grove Adventist Hospital.

The Planning Board approved an additional 506,946 square feet for a total of 1,133,856 square feet of development for Shady Grove Adventist Hospital (No. 120110160), located in the northeast quadrant of Medical Center Drive and Broschart Road. The new development is exempt from any requirements of stage one, per the Master Plan, but does count toward the available capacity in stage two. This approval includes requirements for right-of-way dedications for adjacent roadways and the CCT, and a shared use path along the Medical Center Drive frontage of the property.

Combined Preliminary and Site Plans

Since the BMR, the Planning Board has granted combined preliminary and site plan amendment approvals for:

- DANAC Stiles campus.
- Decoverly Hall South.
- Travilah Grove.

The Limited Preliminary Plan and Site Plan Amendments for DANAC Stiles/Camden Shady Grove (Nos. 11996112B & 82000018E), located in the northeast quadrant of Diamondback Drive and Key West Avenue, approved the abandonment of a portion of a transitway easement, and modified the forest conservation easement onsite. The transitway easement was previously recorded, but no longer necessary, for the CCT.

The Limited Preliminary Plan and Site Plan Amendments for Decoverly Hall South (Nos. 11999033A & 81999014C), located in the northwest quadrant of Blackwell Road and Shady Grove Road, permitted a change in use from office to medical office in an existing building. This amendment requires a traffic signal to be installed at the intersection of Blackwell Road and Shady Grove Road, and the extension of an existing shared use path (LB-4) on the north side of Blackwell Road to connect to Medical Center Drive and the LSC Loop.

The Preliminary Plan and Site Plan Amendments for Travilah Grove (Nos. 12012029A & 82013020A), the former Rickman property, seek to convert the approval for 300 multifamily units to 131 townhomes. Although this is a Commercial Residential-zoned property (CR 0.5, C 0.5, R 0.5, H 80), the standard method development did not require approval of a sketch plan and the site was specifically exempted from staging limitations in the GSSC Master Plan. The plan approval includes right-of-way dedication for Travilah Road and establishes conservation easements.

Site Plans

Mallory Square Limited Amendment (No. 82012013A) allowed for a clarification of the development program, while Administrative Amendment (No. 82012013B) allowed for an additional amenity rooftop terrace, and adjustments to the location of stormwater management facilities and trees onsite.

An administrative site plan amendment was approved for Shady Grove Executive Center (No. 81987011E), which allowed for a pedestrian bridge to connect one of the approved multi-family buildings to an existing/shared parking garage.

An administrative site plan amendment was approved for Shady Grove Technology Center (No. 81984058A), which allowed for reconfiguration of a driveway access point to accommodate the Mallory Square development and future construction of master-planned road B-10.

A site plan amendment is currently under review for Shady Grove Life Sciences Center Parcel N/Q – 9905 Medical Center Drive (No. 81997005A). This amendment proposes to reconfigure an approved/unbuilt office building to provide a more modern office building with a layout and a design in conformance with the GSSC Master Plan and Urban Design Guidelines.

Public Amenities and Facilities

Plan Recommendations

The GSSC Master Plan identifies several community facilities to serve the Life Sciences Center and make “great places to live, work and play. The LSC’s proposed redevelopment offers an opportunity to enhance public facilities, amenities, and recreational options. This plan recommends using urban design, parks and trails to create an open space network for the LSC that will provide a range of experiences and a sense of place, integrating the built and natural environments and passive and active spaces.” (GSSC Master Plan, page 30)

Community Recreation Center

As envisioned by the Master Plan, the North Potomac Community Recreation Center is under construction and should be completed by February 2016.

Public Parks

Traville Local Park in the LSC South District is recommended for facility planning early in the M-NCPPC Montgomery County Department of Parks FY15-20 Capital Improvements Program.

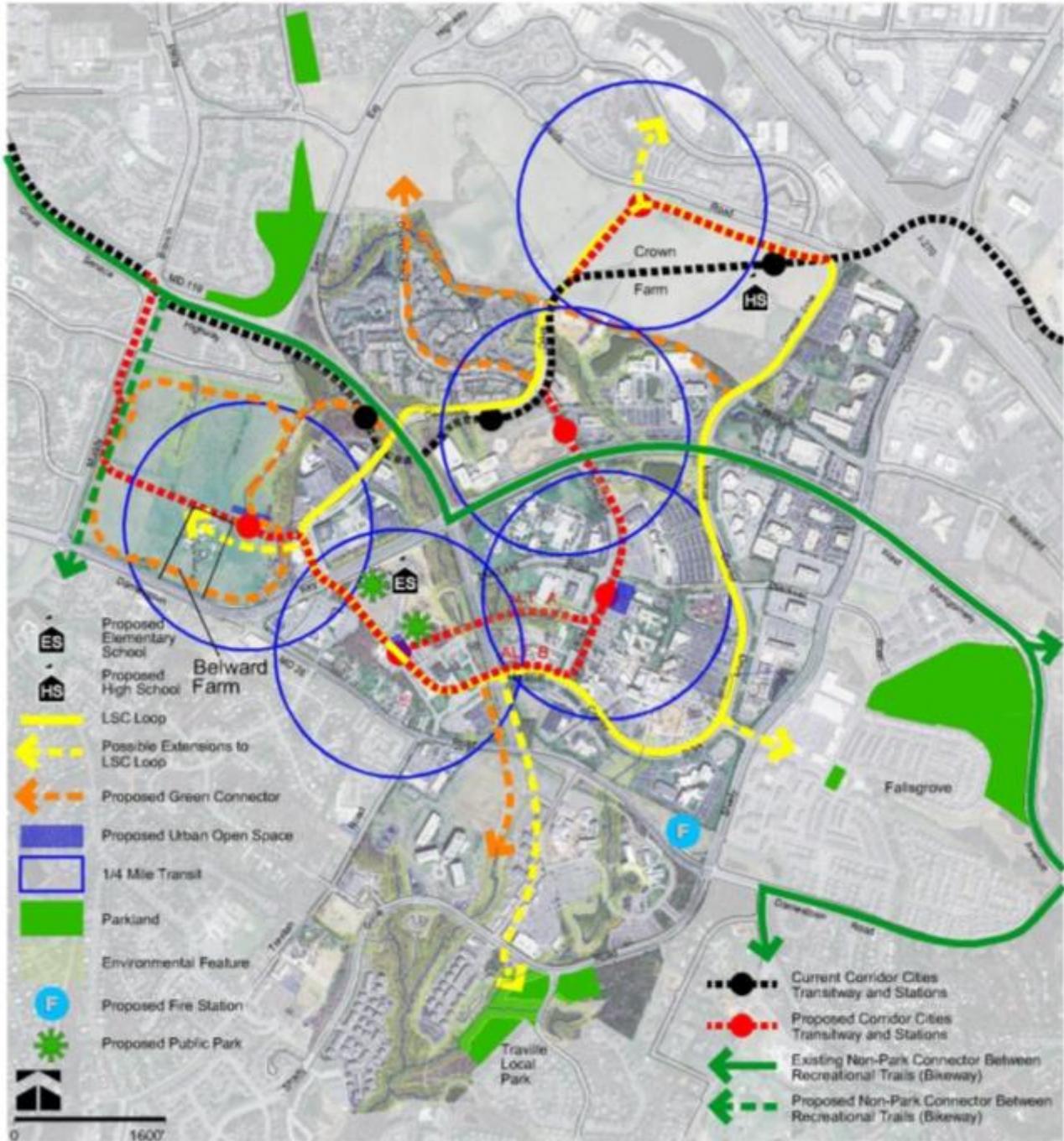
For references to public park sizes and descriptions, see the 2012 Park, Recreation and Open Space (PROS) Plan.

http://www.montgomeryparks.org/PPSD/ParkPlanning/Projects/pros_2012/documents/2012.PROS.Plan-final.10.19.12.pdf

Most of the other formal open spaces in the LSC are associated with development plans that are still in their early stages. The other significant open spaces (see the GSSC Master Plan, page 31) are:

- An extensive open space network on the Belward property with a variety of passive, active and cultural experiences.
- Completion of the Muddy Branch Trail corridor along the western edge of the Belward property.
- Civic greens at each CCT station.
- The shared park/school site in the LSC West District as well as a public civic green.
- Development of Traville Local Park in the LSC South District.
- Green corridors between and through major blocks linked by the LSC Loop to connect destinations and integrate passive and active spaces.
- An additional active use local park in the Quince Orchard area (outside the LSC; see the GSSC Master Plan, page 60). The possible annexation of the Johnson property into the City of Gaithersburg may make this goal more difficult to achieve.

Map 11: Life Sciences Center Open Space Network



Schools

Elementary School

The GSSC Master Plan specifies that a new public elementary school be included in LSC West District if needed. The Plan goes on to recommend that if a “new elementary school is needed, it could be combined with a local park on the northern portion of LSC West District. If the school is needed and if the northern area is chosen, the proposed local street (see B-5 on Map 29 in the GSSC Master Plan, page 54) should be eliminated to create adequate space for a park/school site.” Additionally, the Plan states that “if the school is not needed, a local public park for active recreation should be provided.” (GSSC Master Plan, page 38) The County is beginning to plan the redeveloped PSTA site and details about the school site should be worked out as part of the regulatory process.

School Clusters

The Life Sciences Center is served by two school clusters: the Gaithersburg Cluster and the Thomas S. Wootton Cluster. Based on the results of the school test for FY16, the Gaithersburg Cluster is more than 105 percent of capacity at both the elementary and the middle school levels. To address capacity needs, certain developers of residential projects will need to make school facility payments to receive plan approval in these clusters.

Fire Station

A new fire station (Travilah Fire Station 32) opened in February 2014 in the northwest quadrant of the intersection of Shady Grove Road and Darnestown Road.

Library

The GSSC Master Plan (page 31) notes that, “As the LSC grows into a major hub for life sciences research and development, a library specializing in science and medical research may be desirable. A publicly accessible specialized library could be funded through private sector development contributions to an amenity fund and could be located at the Johns Hopkins University Belward Campus or the Johns Hopkins University-Montgomery County Medical Center site, or another appropriate location in LSC Central.” Consideration should be given for such a facility as the potential sites mentioned move toward site plan approvals.

Private Development Amenities

Public Use Space

The GSSC Master Plan “recommends a series of open spaces provided through a combination of public and private efforts. Both residential and commercial development projects should provide recreational facilities, open spaces and trail connections that shape the public realm, help implement the Plan recommendations, and serve existing and future employees and residents.” (GSSC Master Plan, page 31)

Public use space requirements for development approvals vary by zone, but all contribute to fulfilling the open space needs of the employees and residents of the LSC. The following public use spaces have been, or will be, contributed by developments in the LSC:

- Camden Shady Grove: 21 percent of the net lot is approved as enhanced streetscape and pedestrian/cyclist facilities, landscaping and the master-planned CCT urban plaza.
- Travilah Grove: 10 percent of the net lot is proposed as open space for passive and active recreation and landscaping.
- Mallory Square: 20 percent of the net lot is approved for enhanced pedestrian/cyclist amenities, urban plazas, landscaping and a pocket park.

- National Cancer Institute: 37 percent of the net lot is approved for open space for employees and visitors.
- Hanover Shady Grove: 19 percent of the net lot is approved for an urban pocket park and for enhanced streetscapes and passive recreation areas.
- Johns Hopkins University (JHU) Belward Campus: 20 percent of the net lot is approved for small pocket parks, enhanced pedestrian/cyclist amenities, streetscapes and a large, active recreation park.
- JHU Montgomery County Medical Center: 20 percent of the site is approved for improved landscaping, pocket parks and enhanced pedestrian/cyclist amenities.
- 9800 Medical Center Drive: 20 percent of the net lot is approved for open space for employees and visitors.
- Travilah Square: 27 percent of the net site plan area is approved for seating areas, improved pedestrian/cyclist amenities and upgraded landscaping and streetscape.
- Shady Grove Adventist Hospital: 20 percent of the net lot is approved for enhanced streetscape and pedestrian/cyclist facilities, landscaping and the master-planned CCT urban plaza.

Public Amenity and Benefit Summary

For the Life Sciences Center zone, public facilities and amenities are defined as “those facilities and amenities of a type and scale necessary to provide an appropriate environment or to satisfy public needs resulting from the development of a particular project.” The following are the public amenities that were approved prior to the 2013 BMR. Facilities and amenities may include, but are not limited to:

- a. Green area or open space which exceeds the minimum required, with appropriate landscaping and pedestrian circulation.
- b. Streetscapes that include elements such as plantings, special pavers, bus shelters, benches and decorative lighting.
- c. Public space designed for performances, events, vending or recreation.
- d. New or improved pedestrian walkways, tunnels or bridges.
- e. Features that improve pedestrian access to transit stations.
- f. Dedicated spaces open to the public, such as museums, art galleries, cultural arts, community rooms, recreation areas.
- g. Day care for children or senior adults and persons with disabilities.
- h. Public art.

In the Commercial Residential (CR) zones, public facilities and amenities are based on public use space and public benefits related to set categories and a point system, as described in the County’s 2014 zoning ordinance and the White Flint public benefits section of this document.

In either case, these facilities and amenities are typically identified at the time of sketch plan approval for CR-zoned properties or at site plan approval. The following facilities and amenities will be provided through plan approvals in the GSSC Master Plan area:

Hanover Shady Grove (820120190) was approved with:

- Additional green space.
- Streetscapes.
- Public space.
- Pedestrian improvements.
- Bikeshare station.
- Enhanced tree canopy.

- Camden Shady Grove (320120050) was approved with:
- Additional green space.
- Streetscapes.
- Public space.
- Pedestrian improvements.
- Pedestrian access to transit.
- CCT station plaza.
- Enhanced tree canopy.

Mallory Square (820120130) was approved with:

- Additional green space.
- Streetscapes.
- Public space.
- Pedestrian improvements.
- Bikeshare station.
- Enhanced tree canopy.
- Public art payment.

Transportation

Plan Recommendations

The GSSC Master Plan recommends “a comprehensive transportation network for all modes of travel, including bicycle and pedestrian routes, and constructing the CCT [Corridor Cities Transitway] through the LSC.” It proposes a local street network that “will create a finer grid and improve vehicular and pedestrian connections between the districts.” The LSC Loop is intended to unify the pedestrian and bicycle circulation systems with sidewalks, bikeways, trails and paths that provide mobility and recreation options. (GSSC Master Plan, page 53)

The Plan also recommends managing parking supply and demand, and defining “public garage sites at preliminary plan for publicly-owned properties in LSC Central and LSC West,” as well as achieving an ultimate NADMS of 30 percent for LSC employees. (GSSC Master Plan, page 55)

Steps taken toward implementation of these goals include the provision of local road B-9 and dedication of right-of-way for B-10 as part of the Mallory Square development approval; bikeshare stations near or adjacent to proposed bikeways at Hanover Shady Grove and Mallory Square; and the dedications of CCT stations at Camden Shady Grove and Shady Grove Adventist Hospital.

As identified at the beginning of this report, while the CCT and LSC Loop are advancing, funding for these projects is critical to the implementation of this Master Plan.

Non-Auto Driver Mode Share (NADMS)

The Plan area is within the Greater Shady Grove Transportation Management District (TMD), established in 2011. The TMD will continue to work with GSSC employers to provide guidance and promote incentives that encourage commuters to travel to work by means other than single-occupant vehicles. The TMD’s work will be important in helping meet the NADMS goals. As identified at the beginning of this report, the most current commuter survey identifies a mode share of 16.1 percent in GSSC, while an 18 percent NADMS is needed to open stage two.

Bicycle and Pedestrian Connections

The GSSC Master Plan proposes a network of trails for pedestrians and bicycles that offers transportation and recreation options within the LSC and connects to the larger countywide network. Significant portions of the pedestrian and bicycle network will be implemented in association with construction of the CCT and as part of larger development projects, including the PSTA and Belward Farm properties.

Sidewalks that meet current standards are being built as part of the Hanover Shady Grove, Mallory Square, Camden Shady Grove, Travilah Grove, Travilah Square and Shady Grove Adventist developments. As stated previously, Decoverly Hall South will provide an offsite extension of a shared-use path to Medical Center Drive and the LSC Loop. As intervening areas redevelop, sidewalk systems will become connected and provide links to destinations within the LSC.

The LSC Loop trail will provide both non-auto transportation links throughout the LSC and opportunities for recreation. Portions of the LSC Loop will be constructed as part of large developments, such as the PSTA and JHU Belward Campus. Gaps will need to be identified and funding included (if necessary) in the County's biennial Capital Improvements Program.

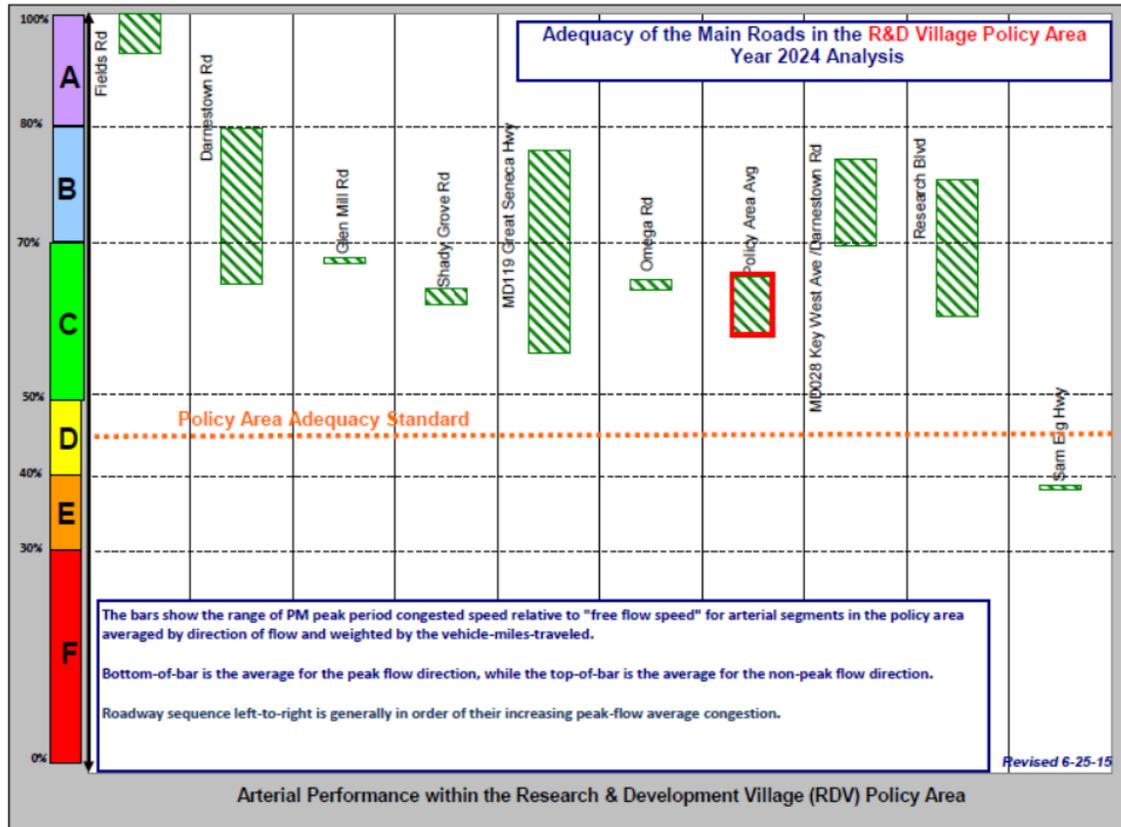
Transportation Policy Area Review Analysis

The LSC is within the Research and Development Village Policy Area. The 2024 TPAR assessment for that area projects adequate overall roadway capacity. But an assessment of the individual major roadways shows the Sam Eig Highway is projected to exceed the acceptable Highway Capacity Manual arterial level of service during the evening peak hours. Inadequate level of service traffic conditions also are projected for Sam Eig Highway for short-term (year 2018) and long-term (year 2040) planning horizons if no improvements are made beyond the current CIP.

In October 2012, a memorandum of understanding for the Coordination of Traffic Impact Studies for Proposed Development Projects was signed by representatives of the City of Gaithersburg, City of Rockville and Montgomery County Planning Department to improve review of inter-jurisdictional traffic impacts from development in the region.

TPAR transit adequacy is determined by an assessment of three metrics for existing local bus service: coverage, peak headways and span of service. The 2024 TPAR assessment shows that the Research and Development Village Policy Area is inadequate for one of these metrics, peak headways. As a result, the area is considered to be inadequate for transit as described below.

Illustration 6: Research and Development Village Policy Area TPAR Analysis



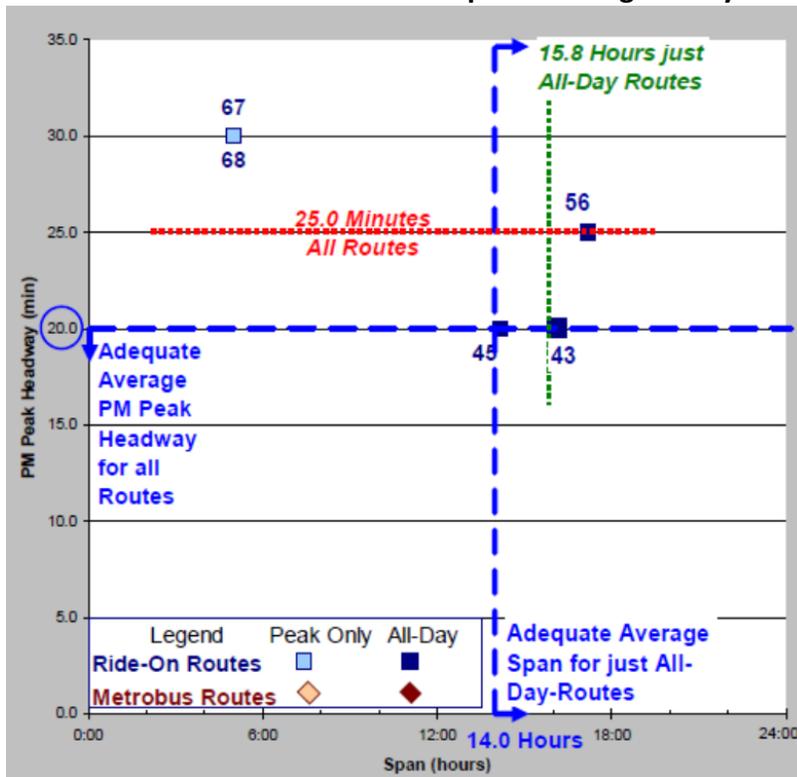
Service Coverage: Seventy-five percent of the Research and Development Village Policy Area is within 1/3 of a mile of existing bus routes. The standard for suburban policy areas is 30 percent; therefore, coverage is considered adequate in the Research and Development Village Policy Area.

Peak Headways: The Peak Headway standard for the Research and Development Village Policy Area is 20 minutes or less. Current TPAR tests show the headway for the policy area to be 25.8 minutes during evening peak hours; therefore peak headways are considered inadequate. A proposal for a Countywide initiative to add more buses to selected routes could bring peak headways up to acceptable levels in the policy area within the next 10 years.

Because the peak headways for transit are inadequate for the Research and Development Village Policy Area, new developments will be required to mitigate traffic associated with their construction by paying 25 percent of the development's total impact fees.

Span of Service: The standard for a suburban area is 14 hours of operation. The span of service for transit in the Research and Development Village Policy Area is 15.8 hours; therefore the span of service is adequate.

Illustration 7: Research and Development Village Policy Area TPAR Transit Adequacy



Corridor Cities Transitway

Since the GSSC Master Plan’s adoption in June 2010, the State has announced the locally preferred alternative for the CCT, establishing the alignment and determining that the transit mode will be bus rapid transit (BRT). This decision sets the stage for facility planning, including development of cost estimates for construction. Funding to begin this part of the process is included in the State’s six-year Consolidated Transportation Program (CTP). Cost estimates must be developed to enable inclusion of construction money in either the County CIP or the State CTP, as required for the opening of stage two of the GSSC Master Plan.

As noted at the beginning of this report, the Maryland Transit Administration (MTA) is currently advancing plans for the CCT from 15 percent to 30 percent design. One of the challenges to have surfaced during the review of the CCT is the cross-section and alignment of the CCT, automobile travel lanes and bike and pedestrian facilities that are to be co-located in the right-of-way of Muddy Branch Road. The co-location is necessary due to limited space available at the intersection of Muddy Branch Road and Great Seneca Highway. This challenge has required extensive coordination between MTA, MCDOT, Montgomery County Planning Department, Washingtonian Woods and Mission Hills communities, and various individual property owners. Discussions are ongoing and a final decision has not been made as of July 2015.

Capital Improvements Program Projects

Three Capital Improvements Program projects identified in the GSSC Master Plan are in some phase of development:

- Travilah Fire Station 32 has been constructed and is operating.

- North Potomac Recreation Center is under construction and is scheduled to open in February 2016.
- PSTA relocation is funded and construction of the new PSTA facilities at the Multi Agency Service Park is scheduled to be completed in 2015 and operating by 2016.

Partial funding is provided in the State Consolidated Transportation Program (CTP) for initial planning of the CCT. Fourteen additional CIP projects identified in the GSSC Master Plan are not currently funded. Five CIP/CTP projects are tied to staging, with two projects (full funding for CCT construction from the Shady Grove Metrorail Station to Metropolitan Grove and full funding of the LSC Loop trail) required for the opening of stage two of the GSSC Master Plan. In addition to these critical needs, Planning Department staff suggests funding for a facility planning study for potential improvements to the intersections of Great Seneca Highway with Sam Eig Highway and Muddy Branch Road.

Table 2: Great Seneca Science Corridor Capital Improvements Program

project number (if assigned)	location/ limits	coordinating agency	project status
450504	northwest corner of Darnestown Rd and Shady Grove Rd	DGS	constructed and operating
720102	13860 Travilah Rd	DGS	Under construction, to open in FY16
471102	LSC West: Key West Ave and Great Seneca Hwy	DGS	purchase and master planning for the Multi-Agency Service Park is funded under PDF No. 470907. New PSTA is under construction. New MCPS and M-NCPPC Facilities Maintenance Depots are in design build phase
CCT funded	Shady Grove Metro Station and Metropolitan Grove	MSHA/MTA	funds allocated in the State's Consolidated Transportation Program for CCT planning and engineering. No construction funding allocated
CCT under construction	Shady Grove Metro Station and Metropolitan Grove	MSHA/MTA	not funded
CCT operating	full length	MSHA/MTA	not funded
LSC Recreation Loop	throughout LSC	various (public and private)	not funded
civic green	LSC West/PSTA	DGS and M-NCPPC	not funded

no	park (with school)	LSC West/PSTA	DGS and M-NCPPC	not funded
no	elementary school	LSC West/PSTA	DGS, M-NCPPC, and MCPS	not funded
no	Traville Local Park	LSC South	M-NCPPC	not funded
no	local park	Quince Orchard	M-NCPPC	not funded
no	Muddy Branch Trail Connector	LSC Belward	M-NCPPC and private	not funded
yes (Stage 3)	Medical Center Drive Extended	Great Seneca Hwy to Key West Ave	DOT/SHA	not funded
no	Decoverly Drive Extended	Johns Hopkins Dr to Muddy Branch Rd	DOT/SHA	not funded
no	Key West Ave widening	Darnestown Rd to Shady Grove Rd	DOT/SHA	not funded
no	Sam Eig Hwy/Great	intersection interchange	DOT/SHA	not funded
no	Seneca Hwy Shady Grove Rd/Key West Ave	intersection interchange	DOT/SHA	not funded
no	Great Seneca Hwy/Muddy Branch Rd	intersection interchange	DOT/SHA	not funded

Challenges

There are several challenges to implementing the Plan:

Staging: Meeting prerequisites for opening stage two of the GSSC Master Plan will require significant effort:

- Fully fund the CCT construction from the Shady Grove Metrorail Station to Metropolitan Grove. The tight economy and greater government austerity are limiting funding for major transit projects such as the CCT, which will be competing with other transit projects for a shrinking pot of money.
- Fund the LSC Loop trail in the County's six-year CIP and/or through developer contributions as part of plan approvals. Again, fiscal constraints and limitations will most likely make this important staging trigger difficult to meet.
- Reaching 18 percent NADMS before the CCT is constructed will be difficult, given the plan area was created as an auto-centric suburban office park with abundant free parking. The task is made harder

by the obstacles to creating a walkable, bikeable community and market challenges to mixed-use development, as discussed above.

PSTA: The GSSC Master Plan identifies the current PSTA site in the LSC West District as the predominant residential community in the Life Sciences Center. The site's redevelopment is part of the County's Smart Growth Initiative, which focuses transit-supported commercial and residential development to areas planned for transit service by relocating public facilities. The County's Department of General Services is beginning a comprehensive plan for the redevelopment of the PSTA, which is envisioned to include 2,000 dwelling units, ancillary retail uses, an elementary school if needed, a public park and civic green, a CCT station and a portion of the LSC loop trail. Redevelopment of this site in LSC West District will be a much needed catalyst in the LSC.

Land use: The GSSC Master Plan envisions mixed-use development that will allow LSC employees and residents to access basic services without a car. The impending development of the nearby Crown Farm's retail center and the plan's staging restriction on non-residential uses is causing developers to shy away from providing basic commercial services in their developments. As a result, new developments tend to be single-use-focused and may not generate sufficient foot traffic to support ground-level retail uses. Without the CCT in place, it will be difficult, if not impossible, for the LSC to develop a critical mass of residents and workers sufficient enough to support the dynamic, mixed-use community envisioned by the GSSC Master Plan.

There is a very high vacancy rate for office buildings in the County and millions of square feet of commercial development in the pipeline. Without the CCT and LSC Loop to attract potential employers, there is very little incentive for businesses to locate/relocate to the LSC. The PSTA site in the LSC West District will be a key factor in establishing this critical mass of residents, as stated above, and is expected to be the premier residential community in the LSC. Most of the new mixed-use development in stage one is being achieved by retaining existing non-residential capacity for ancillary uses in commercial to residential conversions.

Form: The Plan envisions building heights of up to 150 feet adjacent to CCT stations and between 80 to 100 feet in height on sites farther from the CCT. Current market conditions are generating stick-built buildings of 70 to 80 feet. At these heights, buildings tend to occupy more of the available site, leaving less usable open space. Minimum open space requirements are being met and full densities are being developed, indicating that height is not necessary to accommodate density, nor is it economical in this market.

Pedestrian and bicycle connectivity and safety: The Plan aspires to re-create GSSC from an auto-centric suburban business park bisected by arterial roads into a walkable, bikeable community. However, existing roads work against knitting the GSSC districts together and against walking and biking between the districts. Some success is being achieved creating more pedestrian and bicycle connections within districts through conditions in approved development plans, but connectivity between districts remains challenging.

Recommendations

The LSC is unlikely to transform from a suburban office park model to the dynamic, mixed-use community envisioned by the GSSC Master Plan unless these three goals are achieved:

- Fully fund CCT construction from the Shady Grove Metrorail Station to Metropolitan Grove.
- Fully fund the LSC Loop trail in the County's six-year CIP and/or through developer contributions as part of plan approvals.
- Redevelop the PSTA site.

Staff believes these three goals are paramount to implementing the vision of the GSSC Master Plan.

Public Facilities and Amenities

Public facilities and amenities are specifically defined in the County's new zoning code, enacted in October 2014, and recommended in the GSSC Master Plan; they are provided by both public funding and private development, and are publicly accessible or enhance the public environment. Public CIP projects are discussed below. In order to augment public CIP projects, non-CIP facilities should be provided as part of larger developments, such as the Johns Hopkins University's Belward Campus and the PSTA.

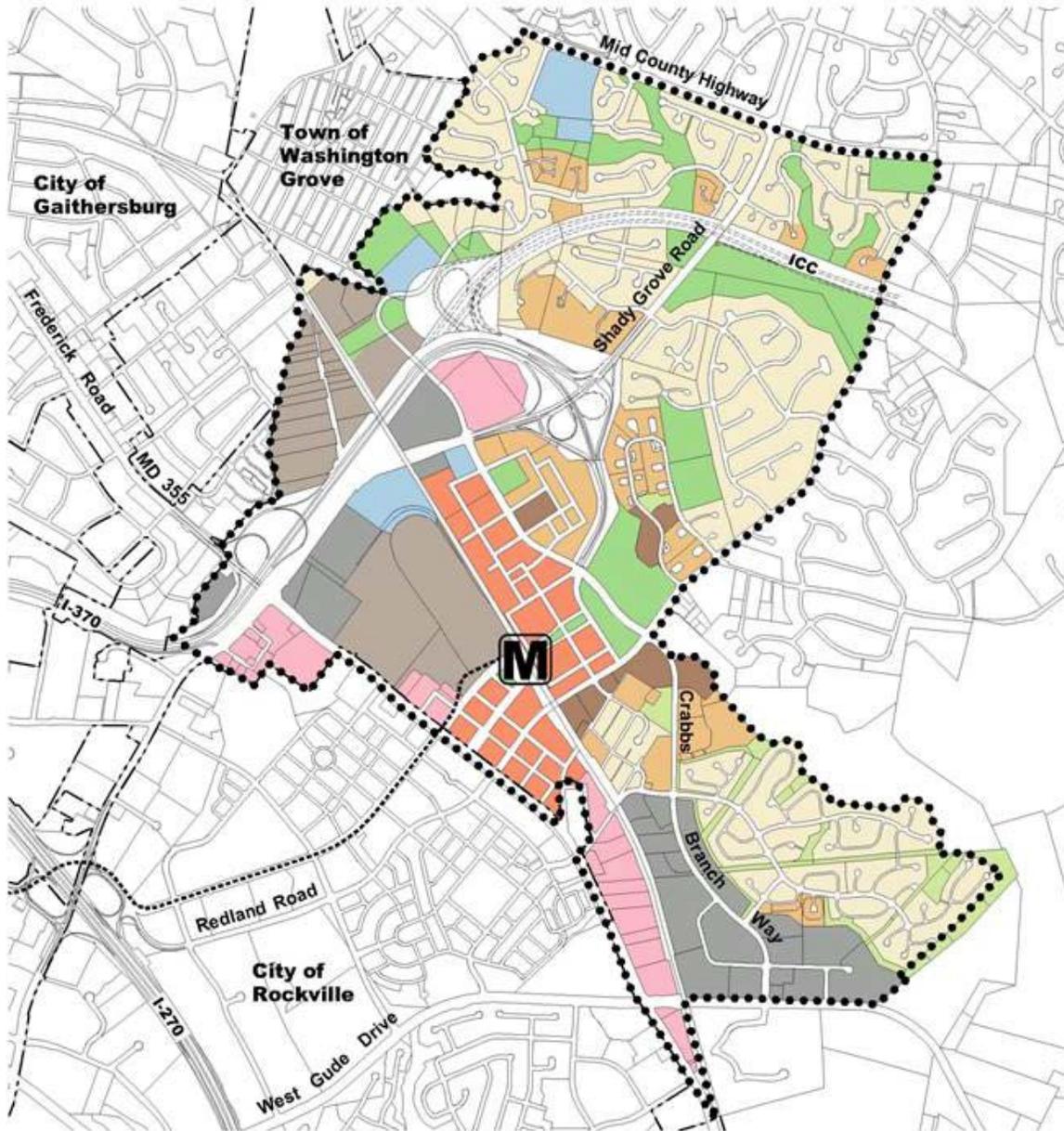
Capital Improvements Program

Partial funding is provided in the State CTP for initial planning of the CCT. Fourteen additional CIP projects identified in the Plan are not currently funded. Five CIP/CTP projects are tied to staging, with two projects (full funding for CCT construction from the Shady Grove Metrorail Station to Metropolitan Grove and full funding of the LSC Loop trail) required for the opening of stage two of the Master Plan. In addition to these critical needs, Planning Department staff suggests funding for a facility planning study for potential improvements to the intersections of Great Seneca Highway with Sam Eig Highway and Muddy Branch Road.

Transportation

- Advance the Bicycle Master Plan, in order to more effectively coordinate with MCDOT, Maryland SHA and Montgomery County Planning Department to create a plan to improve pedestrian and bicycle connections between the five districts of the Life Sciences Center, the neighboring jurisdictions of Rockville and Gaithersburg, and the County network as a whole. This plan will comprehensively examine the proposed road system and make recommendations to create an efficient multi-modal transportation system throughout the LSC.
- Coordinate a study of existing transit service and create a plan to increase NADMS and reduce bus headways to acceptable levels prior to completion of the CCT. Continue to work with applicants during development review to bring mixed uses into LSC developments.
- Coordinate a comprehensive study of parking needs and strategies for the LSC.

Map 12: Shady Grove Sector Plan Area



- | | | | | | |
|---|---|---|---|---|--|
|  | Residential, Single-Family |  | Technology, Office
(Research and Development) |  | Shady Grove Sector
Plan Boundary |
|  | Residential, Townhouse |  | Industrial |  | City of Gaithersburg, City of Rockville,
Town of Washington Grove |
|  | Residential, Multi-Family |  | Institutions (Public and Private)
Schools, Churches, Post Office |  | Corridor Cities Transitway |
|  | Residential, Mixed-Use
(Primarily Residential) |  | Public Parkland and Open Space |  | Shady Grove
Metro Station |
|  | Commercial, Mixed-Use
(Office, Retail, Service, Housing) |  | Private Open Space | | |



Shady Grove Sector Plan

Background

Plan Goals

The Shady Grove Sector Plan (2006) envisions an urban village surrounding the Shady Grove Metrorail Station with an array of new public facilities, parks and open spaces, bikeways and a new street network. The Plan recommends the redevelopment of the Montgomery County Service Park (CSP) with residential and non-residential development, and public facilities, including an elementary school site and a public park called Jeremiah Park. The Sector Plan's residential and non-residential developments are linked with required infrastructure for each stage.

Staging Triggers

All of the stage-one trigger requirements have been completed: the adoption of the Sectional Map Amendment (October 3, 2006) and establishment of the Greater Shady Grove Transportation Management District (May 2, 2006). Key transportation staging requirements for stage two include the following:

- The Planning Board must consider the aggregate performance of Transportation Mitigation Agreements in the Shady Grove Policy Area before deciding to move to stage two. If the total vehicle trips from all participating sites exceed the sum of the allowed trip caps, then the plan should not be considered ready to move to the subsequent stage.
- Each of the plan area's major intersections must operate at or better than its respective Subdivision Staging Policy Local Area Transportation Review (LATR) level of service standard or congestion level at the time of the plan's adoption, whichever is greater. Traffic will be measured from existing and approved development on a network programmed for completion four years later.
- The Metro Access Road partial interchange must be funded for completion within the first four years of the CIP to ensure adequate access to the Metrorail station.
- The Frederick Road/Gude Drive interchange must be funded for completion within the first four years of the CTP, the CIP or completed through other transit or transportation improvements that would bring the intersection to an acceptable level. "Acceptable" is defined as the applicable intersection congestion standard in the County's Subdivision Staging Policy.

The Townes at Shady Grove is the only new development with an approved Transportation Mitigation Agreement (TMAg). So far, only the townhouse units have been constructed, while the larger multi-family building has not been built. Currently, the assessment of TMAgs is not possible.

Sector Plan Amendment

An Amendment to the 2006 Sector Plan is included in the Planning Department's 2016 Work Program. The specific parameters of the Amendment will be included in a future Scope of Work, including the boundary and issues for the Plan Amendment.

Advisors

Shady Grove Sector Plan Advisory Committee

In 2006, as required by the Shady Grove Sector Plan, the Planning Board appointed an advisory committee that consists of property owners and civic and homeowners' representatives. The committee has reviewed all public and private development proposed for the Shady Grove Sector Plan area. Pam Lindstrom, a resident of Gaithersburg, is the current chair of the committee.

Municipalities

Since the 2013 master plan monitoring report, the cities of Rockville and Gaithersburg have not annexed any new properties from the Shady Grove Sector Plan area. Prior annexations by the municipalities included the Reed Brothers Dodge property, at the intersection of King Farm Boulevard and Frederick Avenue (MD 355), to the City of Rockville, and the former Sears/Great Indoors store property at 16331 Shady Grove Road to the City of Gaithersburg.

Stakeholder Concerns

The Shady Grove Sector Plan Advisory Committee has expressed the following concerns regarding development implementation:

- The Montgomery County Board of Education, County Executive and County Council should explore all alternatives to remove school buses from the County Service Park, including parking buses at high schools.
- Municipal annexations by Rockville and Gaithersburg will undermine the Shady Grove Sector Plan recommendations, including the balance of jobs and housing.

The Committee does not support the proposed Sector Plan Amendment since it endangers the Shady Grove Sector Plan's goals, as well as the community and the broader public interest. The Committee notes that the rationale and reason for advancing the amendment has not been clearly stated and precious land at Metrorail station areas should be reserved for the highest use.

Development Approvals

Shady Grove Station, Montgomery County Service Park redevelopment

On February 3, 2014, the Planning Board granted Site Plan No. 820130220 approval for Shady Grove Station, Westside. This development is the western segment of the approved Shady Grove Station Preliminary Plan that covers all of the County Service Park (CSP).



Overview of Shady Grove Station, Westside

Developed by EYA, Shady Grove Station, Westside will provide 1,521 residential dwelling units, including 407 townhouses, 1,114 multi-family residential dwelling units, 41,828 square feet of retail and space for a public library. This development will provide a significant amount of affordable housing, including 211 moderately priced dwelling units (MPDUs) and 116 workforce housing units.

In 2012, the Board approved the Preliminary Plan for the 90-acre Montgomery County Service Park redevelopment with the following features:

- 2,210 dwelling units, including townhouses and multifamily dwellings.
- 15 percent of the residential development as moderately priced dwelling units.
- 10 percent of the residential development as workforce housing.
- 41,828 square feet of retail and 131,422 square feet of office development.
- Dedicated land for a public park, elementary school and space for a public library.
- Creating an urban boulevard with on-street parking on Crabbs Branch Way.
- A new street network and shared use path along Crabbs Branch Way.
- Transferable development rights (TDRs).



Overview of the approved Shady Grove Station Preliminary Plan

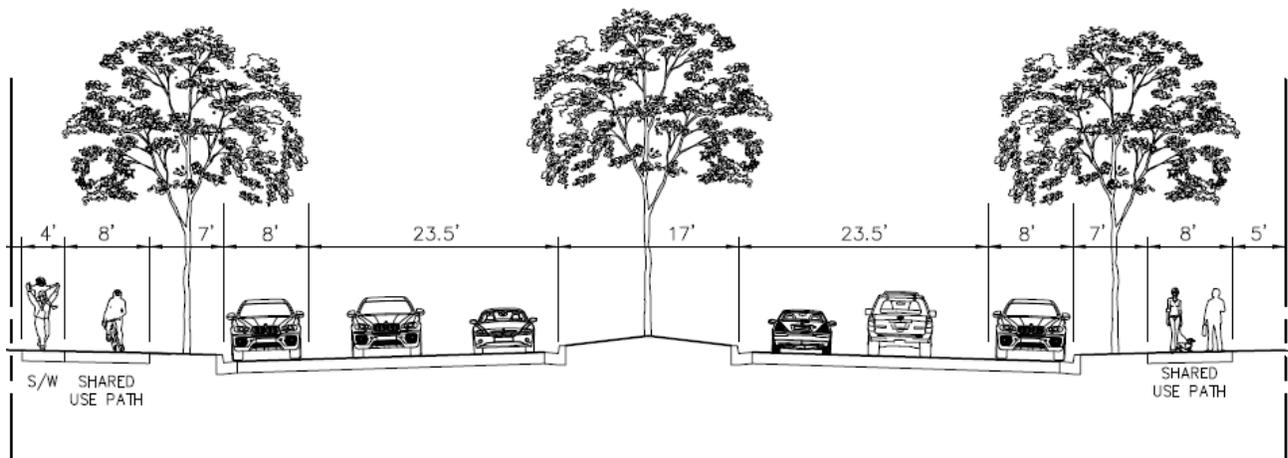
Shady Grove Station Public Infrastructure

The Planning Board on January 23, 2014, via Mandatory Referral No. 2014019, approved the Shady Grove Station Public Infrastructure Improvements that will support the public-private partnership for the County Service Park redevelopment. Montgomery County will implement the following infrastructure projects:

- Reconstructing Crabbs Branch Way into an urban boulevard with on-street parking, shared-use paths and new streetscape.
- Providing pedestrian improvements at the Shady Grove Metrorail Station.
- Installing a new sidewalk along the south side of Shady Grove Road, between Crabbs Branch Way and the Metro Access Road.
- Upsizing of existing sanitary sewer to serve the approved Shady Grove Station development.
- Constructing a new pedestrian trail around the stormwater management pond at Crabbs Branch Way and Redland Road.



Proposed trail around the stormwater management pond



Proposed Crabbs Branch Way Boulevard

Jeremiah Park

Montgomery County has entered into a development agreement with developers LCOR and NVR to redevelop Shady Grove Station, Eastside (Jeremiah Park). The County Council is currently reviewing the disposition of the Jeremiah Park property. The Planning Board will review a preliminary plan amendment and site plan for this segment of the County Service Park redevelopment in the future.

Townes at Shady Grove

The Townes at Shady Grove is currently under construction with 156 dwelling units, including townhouses, single-family residential units and multi-family residential units.



Townhouses at the Townes at Shady Grove

Staging Allocation

The Shady Grove Sector Plan is a three-level staged plan that limits residential and non-residential development, and requires infrastructure for each stage. Stage one is limited to 2,540 residential dwelling units and 1,570 jobs with the redevelopment of the County Service Park (CSP).

The Shady Grove Sector Plan does not establish a reporting requirement to the Council or a development allocation policy, but significant public investments are associated with the redevelopment of the CSP and moving the recommended development into stage two. The Metro Access Road partial interchange and improvements to the Frederick Road/Gude Drive interchange are two critical infrastructure projects in stage two for the Sector Plan implementation.

The table below shows the Sector Plan’s stage one limit, approved development and remaining development for stage one.

Table 3: Shady Grove Approved Development

	Residential Dwelling Units (DUS)	Non-Residential (Jobs)
Sector Plan Stage 1 Limit	2,540	1,570
Shady Grove Station	2,210	630 ¹
Townes at Shady Grove	156	NA
Total Approved Development	2,366	630
Remaining Stage 1 Development	174	940

Unlike recent sector and master plans, such as those for White Flint and Great Seneca Science Corridor, the allocation of development was not specified in the Shady Grove Sector Plan; therefore, both Shady Grove Station and Townes at Shady Grove developments were allocated at the preliminary plan stage.

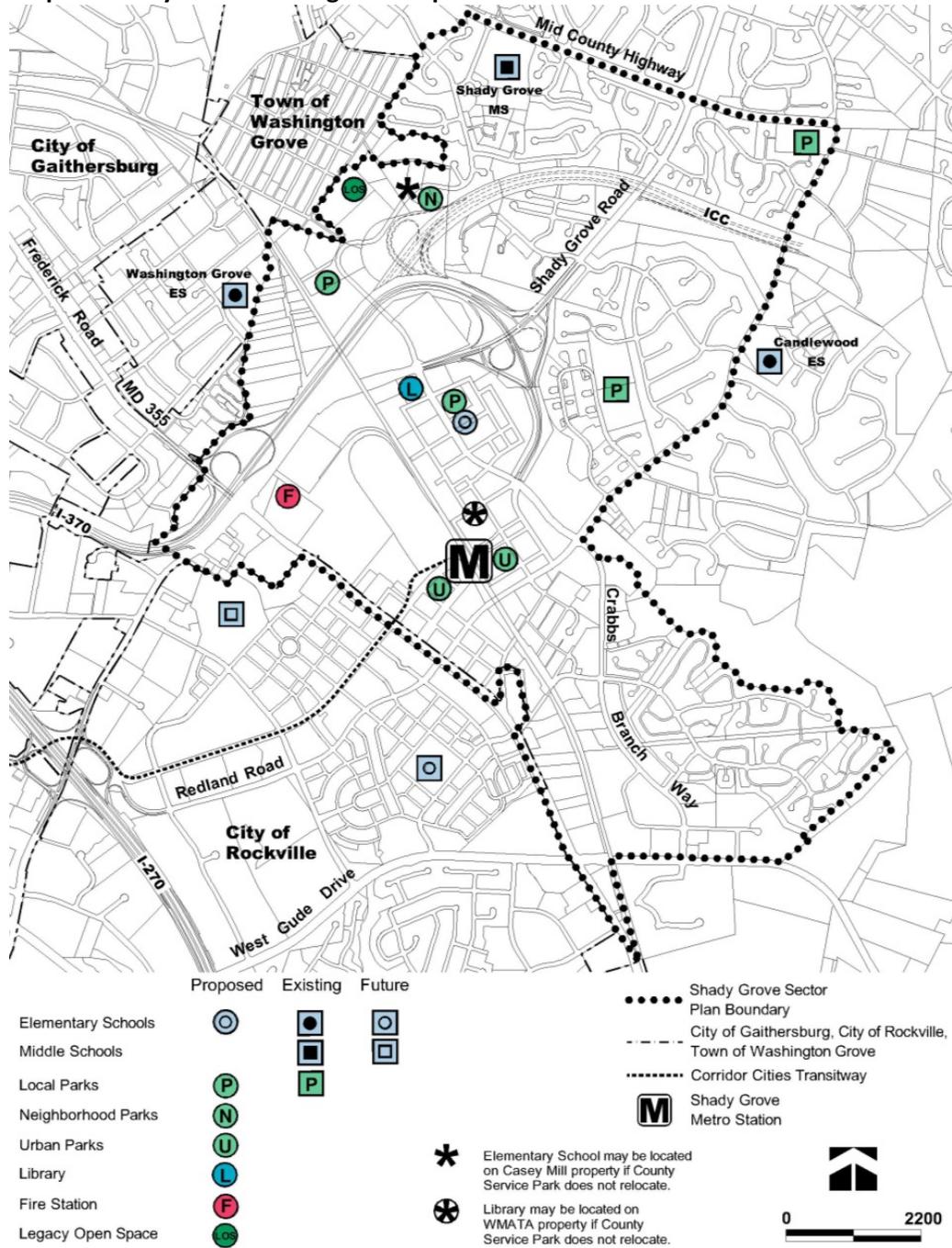
¹ This number was derived by using the Planning Department’s typical square-foot allocation for a retail job, 400 square feet, and 250 square feet for an office job.

Public Amenities and Facilities

Plan Recommendations

An elementary school, library, new parks and open spaces, including a large public park (Jeremiah Park) and a fire and EMS station are recommended to support both the existing and the new community.

Map 13: Shady Grove Existing and Proposed Public Facilities



Library

An urban library is included as part of the Shady Grove Station, Westside development. The County has entered into a library lease agreement with EYA that gives Montgomery County Public Libraries (MCPL) the right to lease the space, beginning with EYA's acquisition of the land for Building D. EYA will provide approximately 6,859 square feet as an unfinished retail bay in Building B to MCPL.

Fire and EMS Station

No proposals have been made regarding a fire and EMS station.

Recreation Center

No proposals have been made regarding a recreation center.

Public Parks

A neighborhood park at Shady Grove Crossing, formerly called Piedmont Crossing, located along Amenity Drive has been implemented by Toll Brothers. In 2008, the Parks Department acquired 9.77 acres of the Piedmont Crossing property, near the Town of Washington Grove, for a future local park. Currently, there is no public road access to this future park, either via Crabbs Branch Way extended or Amity Drive extended. The approved Shady Grove Station development has dedicated 4.1 acres of land for the future Jeremiah Park.

Schools

Elementary School

The approved Shady Grove Station Preliminary Plan has dedicated the preferred elementary school site at Jeremiah Park. The future implementation of the elementary school is dependent on the relocation of the bus depot operated by Montgomery County Public Schools (MCPS).

School Clusters

Three high schools clusters serve the Plan area: Magruder, Richard Montgomery and Gaithersburg. A schools facility payment is required if a school cluster capacity is at 105 percent or greater. At 120 percent, a school cluster is in moratorium and no new residential development may be approved.

The approved FY2016 Subdivision Staging Policy indicates that school facility payments are required for the elementary school levels for the Gaithersburg cluster, which is at 109.4 percent. A facility payment is required for the high school level for the Richard Montgomery cluster, which is at 110.8 percent.

The Montgomery County Public Schools (MCPS) FY16-20 CIP identified several capital projects for all three clusters, including a new elementary school in the Richard Montgomery cluster.

Transportation

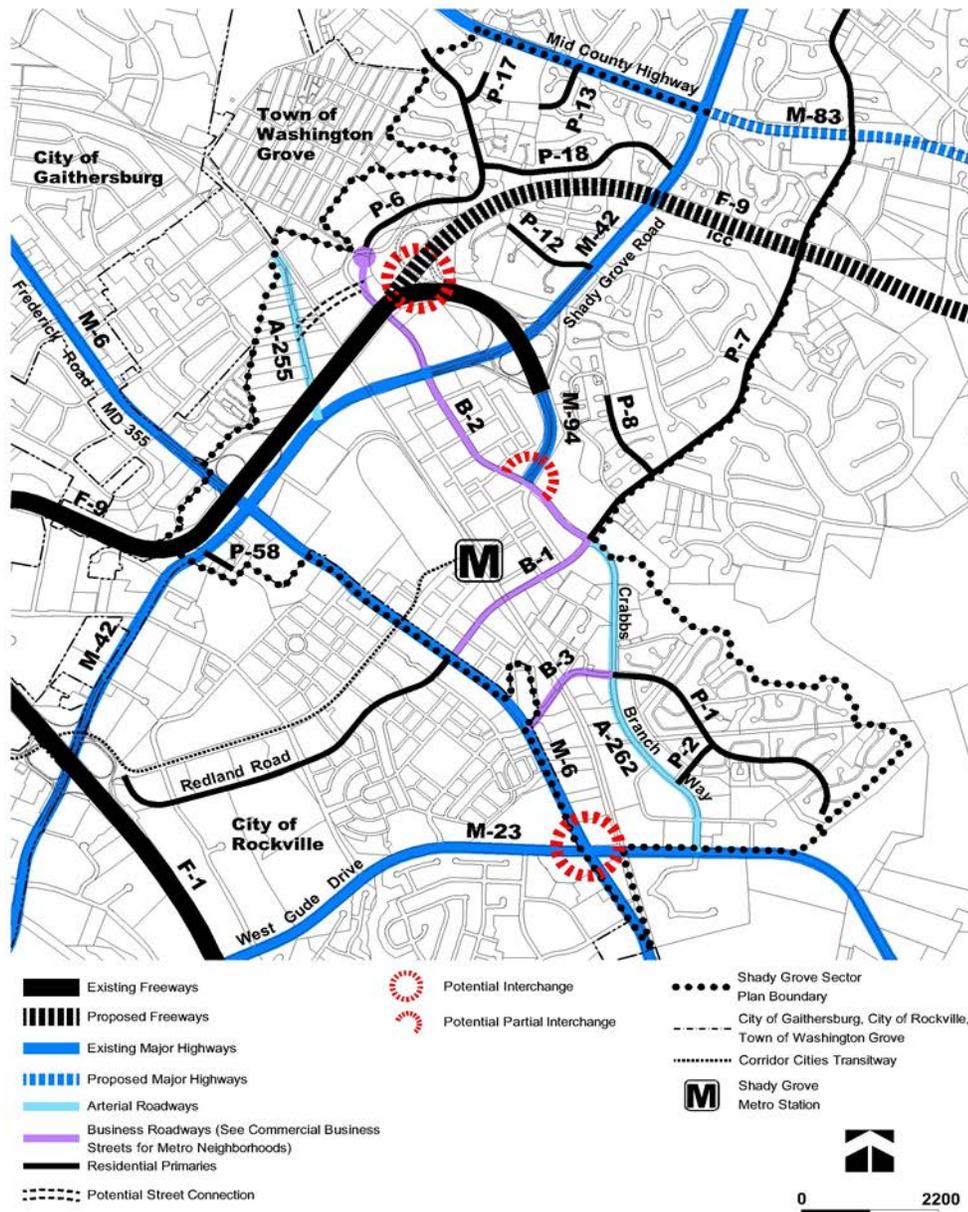
The Shady Grove Sector Plan's Shady Grove Technology Corridor, Metro West, Metro South, Metro East, County Service Park (Metro North and Jeremiah Park) neighborhoods are included in the Shady Grove Metro Station Policy Area (MSPA). All other parts of the Sector Plan, including properties north of Shady Grove Road and the existing residential communities are in the Derwood Policy Area. The critical lane volume (CLV) standard for the Metro Station Policy Area is 1800 CLV, while the Derwood Policy Area is 1475 CLV.

The Planning Department's Mobility Assessment Report (April 2014) indicated that none of the observed intersections within the Shady Grove Metro Station Policy Area exceed the applicable CLV standard.

However, three Derwood Policy intersections exceed the Derwood CLV standard. They are East Gude Drive at Crabbs Branch Way and Cecil Street; Shady Grove Road at Tupelo Drive and Epsilon Drive; and Midcounty Highway at Shady Grove Road.

The Shady Grove Sector Plan area is included in the Shady Grove Transportation Management District (TMD). A traffic mitigation agreement (TMAg) is required for each preliminary plan approval, including Shady Grove Station, which is in the Shady Grove Metro Station Policy Area. In the Shady Grove Metro Station Policy Area, the goal is transit ridership of 35 percent for residents, 25 percent for residents elsewhere in the Sector Plan area and 12.5 percent for employees of office developments traveling to work.

Map 14: Shady Grove Existing and Proposed Transportation Network



Recommendations

As indicated in the 2013 master plan monitoring report, relocating the Montgomery County Public School (MCPS) buses remains critical to successfully implementing the Sector Plan's recommendations. The Department of General Services (DGS) and MCPS are seeking alternative sites for relocating the school buses. Several locations are under consideration, but the final determination has not been made.

The partial interchange along Crabbs Branch Way is linked to the future development of the eastern side of the CSP and it must be funded prior to the opening of stage two. Another major transportation requirement is the funding of the Frederick Road/ Gude Drive interchange or other transportation improvements to achieve acceptable service level. Neither infrastructure item is included in the County's CIP or the State's Consolidated Transportation Program (CTP) for construction. The Gude Drive Interchange is listed as the fourth priority in the CTP for development and evaluation.

Shady Grove Station and the Townes at Shady Grove indicate that the Shady Grove Sector Plan recommendations can be implemented. The following areas should be addressed to further the successful implementation of the Plan.

County Service Park

- Relocate the County school bus depot to fully implement the Shady Grove Station recommendations.

Public Amenities and Facilities

- Begin programming the new library in Shady Grove Station, Westside.
- Explore with the County Department of Recreation as to whether a community center will be needed in the future as the Plan builds out.

Transportation

- Fund the Crabbs Branch Way partial interchange and the Frederick Road/Gude interchange to allow stage two development to move forward and complete redevelopment of the County Service Park. The Crabbs Branch Way interchange must be placed in the County's CIP and the Frederick/Gude interchange must be included in the State's Consolidated Transportation Program for construction.
- Establish public road access to the future public park on the Piedmont Crossing property via Crabbs Branch Way extended or Amity Drive extended.
- Establish a shared use path along Crabbs Branch Way extended to Brown Street in the Town of Washington Grove.
- Provide a sidewalk along Redland Road between MD 200 and Briardale Road.

White Flint Sector Plan Biennial Master Plan Monitoring Report, July 2015

Transportation Appendix

This appendix reports key roadway transportation system performance and safety information in the Sector Plan area. Observed and projected year 2022 roadway transportation system performance information is derived from two sources: (1) the *White Flint Traffic Operations Analysis* report prepared for MCDOT and (2) the *White Flint Sector Plan Private Traffic Impact Study* report prepared for the White Flint Partnership. Available observed roadway system performance information derived from MDSHA is also reported. Observed roadway safety data is reported for period January 1, 2013 to December 31, 2014. This data is derived from MDSHA and pertains to Rockville Pike (MD 355) and Old Georgetown Road (MD 187) within the White Flint Sector Plan area.

White Flint Traffic Operations Analysis Results

Observed and year 2022 Critical Lane Volume (CLV) results pertaining to the Sector Plan area are summarized in the table below. The applicable policy area congestion standard is 1,800 CLV.

WHITE FLINT SECTOR PLAN AREA TRAFFIC ANALYSIS

Source: White Flint Traffic Operations Analysis (MCDOT, Spring 2015)

Intersection	CLV Results					
	Existing			Year 2022		
	AM	PM	Sat	AM	PM	Sat
MD 355 @ Montrose Parkway NB Ramps	723	752	616	1,308	1,234	866
MD 355 @ Old Georgetown Road (MD 187)	1,182	1,415	1,283	1,566	2,299	1,201
MD 355 @ Marinelli Rd	935	1,036	884	1,243	1,424	1,049
MD 355 @ Nicholson Lane	1,110	1,516	1,315	1,458	2,236	1,511
MD 355 @ Security Lane	874	921	903	1,212	1,338	1,041
MD 355 @ Edson Lane	902	1,279	981	1,440	1,751	1,154
Hoya Street @ Montrose Road	440	442	392	642	871	699
Hoya Street @ Montrose Pkwy	622	784	609	2,241	2,305	1,486
Montrose Parkway @ Chapman Ave/Maple Ave	791	921	885	1,225	1,534	918
Randolph Road @ Nebel Street	723	1,116	908	637	790	608
MD 187 @ Executive Blvd/Hoya St	1,335	1,405	864	1,799	1,494	866
MD 187 @ Mid Pike/New Executive	587	690	643	619	796	667
MD 187 @ Nebel St	580	585	650	548	760	494
MD 187 @ Tilden Road/Nicholson Lane	1,117	1,260	901	1,041	1,875	1,089
Nicholson Ln @ Executive Blvd	612	667	561	648	677	677
Nicholson Ln @ Nebel St	938	1,001	762	1,190	2,061	901
Hoya St @ Mid Pike East-West (FUTURE)	n/a	n/a	n/a	951	878	534
MD 355 @ Mid Pike East-West	783	932	905	1,315	1,612	944
MD 187 @ Main St/Market St (FUTURE)	n/a	n/a	n/a	962	780	472
MD 355 @ Main St/Market St (FUTURE)	n/a	n/a	n/a	1,254	1,515	907
Marinelli Rd @ Citadel Ave	n/a	n/a	n/a	446	495	232
Nicholson Lane @ Citadel Ave	n/a	n/a	n/a	609	829	634
MD 355 @ Executive Blvd Extended	n/a	n/a	n/a	1,241	1,684	1,105

 CLV > 1,800

Existing conditions reflect traffic counts collected during fall 2011.

MDSHA Critical Lane Volume Results

Observed CLV results at selected locations within the Sector Plan area, derived from MDSHA, are reported in the following table.

Source: MD State Highway Administration

CLV Results			
Intersection	Existing		
	AM	PM	Date
MD 355 @ Old Georgetown Road (MD 187)	1,220	1,505	3/1/2015
MD 355 @ Marinelli Rd	801	808	3/16/2015
MD 355 @ Nicholson Lane	1,075	1,516	3/31/2015
MD 355 @ Edson Lane	1,142	1,269	10/31/2013
MD 187 @ Executive Blvd/Hoya St	1,575	1,712	11/22/2012

Existing conditions reflect traffic counts collected at selected locations on dates noted above.

White Flint Sector Plan Private Traffic Impact Study Results

The Highway Capacity Manual describes level of service (LOS) as qualitative measure of the ability of a transportation facility to handle the vehicles or people for which it is designed. LOS levels range from LOS A (optimal conditions) to LOS F (failing conditions). LOS E is generally considered to the target for urban area to maintain. The table below summarizes the observed and year 2022 intersection delay results within the Sector Plan area derived from the application of the VISSIM modeling tool.

Source: White Flint Sector Plan Private Traffic Impact Study (White Flint Partnership, Spring 2015)

HCM Intersection Delay LOS Results				
Intersection	Existing		Year 2022	
	AM	PM	AM	PM
MD 355 @ Montrose Parkway NB Ramps	n/a	n/a	D	D
MD 355 @ Old Georgetown Road (MD 187)	C	C	D	D
MD 355 @ Marinelli Road	C	B	D	D
MD 355 @ Nicholson Lane	D	D	D	D
MD 355 @ Security Lane	n/a	n/a	n/a	n/a
MD 355 @ Edson Lane	B	C	C	D
Hoya Street @ Montrose Road	n/a	n/a	D	D
Hoya Street @ Montrose Pkwy	A	B	D	D
Montrose Parkway @ Chapman Ave/Maple Ave	n/a	n/a	n/a	n/a
Randolph Road @ Nebel Street	A	A	n/a	n/a
MD 187 @ Executive Blvd/Hoya St	C	B	D	D
MD 187 @ Mid Pike/New Executive	n/a	n/a	n/a	n/a
MD 187 @ Nebel St	n/a	n/a	n/a	n/a
MD 187 @ Tilden Road/Nicholson Lane	C	B	D	D
Nicholson Ln @ Executive Blvd	n/a	n/a	n/a	n/a
Nicholson Ln @ Nebel St	n/a	n/a	n/a	n/a
Hoya St @ Mid Pike East-West (FUTURE)	n/a	n/a	n/a	n/a
MD 355 @ Mid Pike East-West	n/a	n/a	n/a	n/a
MD 187 @ Main St/Market St (FUTURE)	n/a	n/a	n/a	n/a
MD 355 @ Main St/Market St (FUTURE)	n/a	n/a	D	D
Marinelli Rd @ Citadel Ave	n/a	n/a	n/a	n/a
Nicholson Lane @ Citadel Ave	n/a	n/a	n/a	n/a
MD 355 @ Executive Blvd Extended	n/a	n/a	C	C
MD 187 @ Edson Lane	n/a	n/a	C	D
MD 187 @ Rose Street	n/a	n/a	C	D

Level of Service	
■	A-C
■	D
■	E
■	F

Maryland State Highway Administration
 Office of Traffic and Safety - Traffic Development and Support Division
 SHA 52.1 ADC Study Worksheet Output rev. 12/2012-3

Name: William MacLeod
 Date: 06/12/2015

Location: MD 355 From Flanders Ave To Twinbrook Pkwy
 County: Montgomery, D3 Period: January 01, 2013 To December 31, 2014

Logmiles: From 005.54 To 007.11 Length: 1.57
 Note: 2014 data is preliminary

Type Controls: 3U-19% 5U-81%

* Significantly Higher than Statewide

YEAR >>	2013	2014	Total	Study	StateWd
Fatal	0	1	1	2.3	1.2
No. Killed	0	1	1		
Injury	22	27	49	111.4 *	74.8
No. Injured	30	38	68		
Prop. Damage	17	39	56	127.3	106.4
Total Crashes	39	67	106	241.0 *	182.4
Severity Index	94	145	Avg 120		
RATE	271.3	229.1			
WAADT	51031	51031			
VMT millions	14.7	29.2	44.0		
Opposite Dir.	2	0	2	4.5	2.9
Rear End	18	27	45	102.3 *	73.3
Sideswipe	5	13	18	40.9 *	22.9
Left Turn	2	5	7	15.9	16.3
Angle	7	13	20	45.5 *	31.2
Pedestrian	4	3	7	15.9 *	4.4
Parked Veh.	0	0	0	0.0	0.8
Fixed Object	1	4	5	11.4	20.4
Other	0	2	2	4.5	3.1
U-Turn	1	1	2		
Backing	0	0	0		
Animal	0	0	0		
Railroad	0	0	0		
Fire / Expl.	0	0	0		
Overturn	0	0	0		
Truck Related	2	5	7	15.9	11.2
Night Time	13	21	34	32 %	31 %
Wet Surface	3	16	19	18 %	21 %
Alcohol	1	4	5	5 %	8 %
Intersection	16	43	59		
Total Vehicles	79	133	212		
Total Trucks	2	7	9		
Truck %	2.5	5.3	4.2		
Comments:					

Location: MD 355 From Flanders Ave To Twinbrook Pkwy Logmiles: From 005.54 To 007.11 Length: 1.57
 County: Montgomery, D3 Period: January 1, 2013 To December 31, 2014 Note: 2014 data is preliminary

SEVERITY	FATAL	INJURY	P-DAMAGE	TOTAL	DAY OF THE WEEK																							
Accidents	1	49	56	106	SUN	MON	TUE	WED	THU	FRI	SAT	UNK																
Veh Occ		61			11	15	21	15	14	15	15																	
Pedestrian	1	7	AVG Severity Index: 120																									
MONTH OF THE YEAR																												
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	UNK	CONDITION	DRIVER	PED													
7	6	7	3	6	9	13	11	7	11	12	14		Normal:	172	5													
													Alcohol:	4	1													
													Other:	36	2													
TIME	12	01	02	03	04	05	06	07	08	09	10	11	UNK	VEHICLES INVOLVED PER ACCIDENT														
AM:	4	1	2	1	2	1	3	1	6	2	6	6		1	2	3	4	5	6+	UNK	TOTAL							
PM:	5	4	5	9	8	9	10	7	4	5	3	2		14	81	9	1	1			212							
VEHICLE TYPE				SURFACE				MOVEMENTS																				
4	Motorcycle/Moped			Tractor Trailer			19	Wet			NORTH			SOUTH			EAST			WEST								
142	Passenger Vehicle			Passenger Bus			80	Dry			LF	ST	RT	LF	ST	RT	LF	ST	RT	LF	ST	RT						
20	Sport Utility Veh			School Bus			4	Sno/Ice			11	43	2	3	98	2	8	10	2	6	4	2						
7	Pick-Up Truck			Emergency Veh				Mud																				
9	Trucks (2+3 axles)			Other Types			3	Other			OTHER MOVEMENTS 21																	
PROBABLE CAUSES													COLLISION TYPES				FATAL	INJURY	PROP	TOTAL								
Influence of Drugs				1 Improper Lane Change				Opposite Dir				Related:																
2 Influence of Alcohol				Improper Backing				UnRelated:								1	1	2										
Influence of Medication				Improper Passing				Rear End				Related:				9				16	25							
Influence of Combined Subst.				Improper Signal				UnRelated:								11				9	20							
1 Physical/Mental Difficulty				Improper Parking				Sideswipe				Related:				3				7	10							
1 Fell Asleep/Fainted, etc.				Passenger Interfere/Obstruct.				UnRelated:								2				6	8							
32 Fail to give full Attention				Illegally in Roadway				Left Turn				Related:				3				2	5							
Lic. Restr. Non-compliance				Bicycle Violation				UnRelated:								1				1	2							
2 Fail to Drive in Single Lane				Clothing Not Visible				Angle				Related:				8				6	14							
1 Improper Right Turn on Red				Sleet, Hail, Freezing Rain				UnRelated:								4				2	6							
18 Fail to Yield Right-of-way				Severe Crosswinds				Pedestrian				Related:				2					2							
Fail to Obey Stop Sign				Rain, Snow				UnRelated:								1				4	5							
4 Fail to Obey Traffic Signal				Animal				Parked Vehicle				Related:																
Fail to Obey Other Control				Vision Obstruction				UnRelated:																				
Fail to Keep Right of Center				1 Vehicle Defect				Other Collision				Related:								2				2				
Fail to Stop for School Bus				Wet				UnRelated:																				
Wrong Way on One Way				Icy or Snow Covered				F	Bridge			01																
Exceeded Speed Limit				Debris or Obstruction				I	Building			02																
Operator Using Cell Phone				Ruts, Holes or Bumps				X	Culvert/Ditch			03																
Stopping in Lane Roadway				Road Under Construction				E	Curb			04			1			2	3									
2 Too Fast for Conditions				Traffic Control Device Inop.				D	Guardrail/Barrier			05																
6 Followed too Closely				Shoulders Low, Soft or High				O	Embankment			06																
1 Improper Turn				34 Other or Unknown				B	Fence			07																
								J	Light Pole			08						1	1									
								E	Sign Pole			09																
								C	Other Pole			10						1	1									
								T	Tree/Shrubbery			11																
								S	Contr. Barrier			12																
								Crash Attenuator			13																	
								Other Fixed Object																				
WEATHER	ILLUMINATION				TOTALS																							
84	Clear / Cloudy				64 Day				13-14				106															
	Foggy				6 Dawn/Dusk																							
12	Raining				32 Dark - Lights On																							
3	Snow / Sleet				2 Dark - No Lights																							
7	Other				2 Other																							

Location: MD 355 From Flanders Ave To Twinbrook Pkwy Logmiles: From 005.54 To 007.11 Length: 1.57
 County: Montgomery, D3 Period: January 01, 2013 To December 31, 2014 Note: 2014 data is preliminary

MilePt	Int Rel	Date	Severity	Time	Light	Surface	Alc Rel	FixObj	Collision	Movement		Probable Cause
										V1	V2	
MD0355												
5.54		08012013	Property	05P	Day	Dry			RREND	SS	SS	Fail to give full attention
5.65		01132014	Property	02P	Day	Dry			RREND	SS	SS	Fail to give full attention
5.67		07302013	Property	10A	Day	Dry			SDSWP	SS	SS	Fail to give full attention
5.68	✓	06272013	Property	11A	Day				ANGLE	NL	SS	Fail to give full attention
5.68	✓	08282013	Property	08P	Night	Wet		04	FXOBJ	EL	--	Improper turn
5.68	✓	09112013	Property	03P	Day				SDSWP	ER	WL	Fail to drive in single lane
5.68	✓	09302013	1 Injured	07P	Night	Dry			PED	EL	--	Fail to yield right-of-way
5.68	✓	02232014	Property	12A	Night	Dry	✓		RREND	SS	SS	Under influence of alcohol
5.69		07272013	Property	01P	Day	Dry			RREND	SS	SS	Fail to give full attention
5.69	✓	09042014	1 Injured	10A	Day				SDSWP	SS	SS	Fail to give full attention
5.75		10152013	Property	09P	Night	Dry			SDSWP	NS	NS	Vehicle defect
5.79		08262013	1 Injured	09A	Day	Dry			RREND	SS	SS	Fail to give full attention
5.79		10172013	1 Injured	06P	Night	Dry			ANGLE	Su	NS	Fail to yield right-of-way
5.79	✓	08232014	1 Injured	03P	Day	Wet			ANGLE	NS	ES	Fail to obey traffic signal
5.79	✓	10132014	Property	11A	Day	Wet			RREND	SS	SS	Too fast for conditions
5.80		10312013	1 Injured	07P	Night	Wet			RREND	SS	SS	Followed too closely
5.80	✓	09062014	Property	08P	Night	Wet			RREND	SS	SS	Other or Unknown
5.90	✓	12142013	1 Injured	02P	Day	Snow			ANGLE	NL	SS	Fail to yield right-of-way
5.91		08062014	1 K, 0 I	11P	Night	Dry	✓		PED	SS	--	Other or Unknown
5.98	✓	01132014	Property	07P	Night	Dry			SDSWP	NS	NS	Other or Unknown
6.00	✓	02142014	Property	07P	Night	Wet			SDSWP	NS	NR	Other or Unknown
6.00	✓	07122014	Property	05P	Day	Dry			RREND	WS	WS	Other or Unknown
6.00		07172014	2 Injured	07P	Day	Dry			RREND	SS	SS	Other or Unknown
6.00		10242014	Property	04P	Day	Dry			ANGLE	WS	NS	Fail to yield right-of-way
6.00	✓	11192014	Property	05P	Night	Dry			ANGLE	SS	WS	Other or Unknown
6.04		11082013	1 Injured	08A	Day	Dry			RREND	SS	SS	Fail to give full attention
6.04		06082014	2 Injured	04P	Day	Dry			PED	NL	--	Other or Unknown
6.06		11082013	1 Injured	08A	Day	Dry			ANGLE	NL	SS	Fail to yield right-of-way
6.06		04152014	Property	09A	Day	Wet			LFTRN	WL	SS	Other or Unknown
6.07		12022013	Property	12P	Day	Dry			OPDIR	ES	uu	Other or Unknown
6.09		05142014	Property	06P	Day	Dry			ANGLE	SS	SS	Other or Unknown
6.11		07252013	2 Injured	04A	Night	Dry			ANGLE	EL	SS	Fail to yield right-of-way
6.12		11152013	1 Injured	05A	Night	Dry			ANGLE	Eu	SS	Fail to yield right-of-way
6.13		04242014	Property	01A	Night	Dry		04	FXOBJ	Su	--	Other or Unknown
6.17		08112013	1 Injured	09P	Night	Dry			PED	SS	--	Other or Unknown
6.17	✓	12192013	1 Injured	03P	Day	Dry			RREND	SS	SS	Fail to give full attention

Fixed Object: 01 = Bridge 02 = Building 03 = Culvert/Ditch 04 = Curb 05 = Guardrail/Barrier 06 = Embankment 07 = Fence
 08 = Light Pole 09 = Sign Post 10 = Other Pole 11 = Tree/Shrubbery 12 = Construction Barrier 13 = Crash Attenuator

MilePt	Int Rel	Date	Severity	Time	Light	Surface	Alc Rel	FixObj	Collision	Movement		Probable Cause
										V1	V2	
6.17	✓	03052014	Property	05P	Day	Dry			OTHER	Nu	SS	Fail to give full attention
6.17	✓	05202014	1 Injured	11A	Day	Dry			SDSWP	SS	SR	Other or Unknown
6.17	✓	06292014	Property	06A	Day	Dry			SDSWP	SS	SS	Other or Unknown
6.17		12152014	1 Injured	03P	Day	Dry			PED	NS	--	Other or Unknown
6.25		07312014	Property	06P	Day	Dry			RREND	SS	SS	Fail to give full attention
6.34		07252013	Property	08A	Day	Dry			RREND	SS	SS	Too fast for conditions
6.34		09292014	1 Injured	06P	Day	Wet			RREND	SS	SS	Fail to give full attention
6.35	✓	06092013	Property	11A	Day	Dry			RREND	NS	NS	Fail to give full attention
6.35		08092013	1 Injured	02P	Day	Dry			RREND	SS	SS	Fail to give full attention
6.36	✓	06292013	5 Injured	06P	Day	Dry			LFTRN	SL	NS	Fail to yield right-of-way
6.36		07072013	Property	01P	Day	Dry			SDSWP	SS	SS	Fail to give full attention
6.36		07172013	2 Injured	03A		Dry			OPDIR	ES	NS	Fail to yield right-of-way
6.36	✓	01212014	2 Injured	04A	Night	Dry			ANGLE	ES	SS	Fail to yield right-of-way
6.36	✓	03112014	1 Injured	06P	Day	Dry			SDSWP	EL	EL	Other or Unknown
6.36	✓	05122014	Property	04P	Day	Dry			ANGLE	NS	NS	Fail to give full attention
6.36	✓	05212014	Property	09P	Night	Wet			RREND	NS	uu	Other or Unknown
6.36	✓	05302014	Property	10A	Day	Dry			RREND	NS	NS	Other or Unknown
6.36		06162014	Property	04P	Day	Dry			RREND	SS	SS	Other or Unknown
6.36	✓	07082014	Property	11P	Night	Dry	✓		RREND	NS	NS	Under influence of alcohol
6.36	✓	08312014	1 Injured	07A	Day	Dry			ANGLE	NS	ES	Fail to obey traffic signal
6.36	✓	09202014	Property	05P	Day	Dry			SDSWP	NL	NL	Other or Unknown
6.36	✓	11052014	1 Injured	05P	Day	Dry			RREND	NS	NS	Fail to give full attention
6.36	✓	11122014	Property	05P	Night	Dry			SDSWP	NL	NL	Fail to yield right-of-way
6.36	✓	12182014	Property	06A	Day	Dry			RREND	EL	ES	Other or Unknown
6.38		02182014	Property	07P	Night	Dry			RREND	SS	SS	Other or Unknown
6.38		07292014	3 Injured	03P	Day	Dry			RREND	SS	SS	Other or Unknown
6.39		10152013	Property	12P	Day	Dry			RREND	SS	SS	Fail to give full attention
6.40		10182013	Property	07P	Night	Dry	✓		RREND	NS	NS	Followed too closely
6.43		01312014	Property	06P	Night	Dry			SDSWP	SS	SS	Fail to give full attention
6.43	✓	08182014	Property	05P	Day	Dry			ANGLE	SL	NR	Fail to yield right-of-way
6.46		06162013	1 Injured	12A	Night	Dry			RREND	SS	SS	Improper lane change
6.50	✓	11112013	Property	04P	Day	Dry			RREND	SS	SS	Fail to give full attention
6.50		01032014	Property	10A	Day	Wet		08	FXOBJ	SS	--	Other or Unknown
6.50		03122014	Property	04P	Day	Wet			SDSWP	SR	SS	Fail to give full attention
6.50	✓	12312014	Property	03P	Day	Dry			RREND	NS	NS	Fail to give full attention
6.51	✓	06022014	1 Injured	02P	Day	Dry			RREND	SS	SS	Fail to give full attention
6.58		03252014	1 Injured	10P	Night	Ice		04	FXOBJ	SS	--	Other or Unknown
6.59		03252014	3 Injured	10P	Night	Ice			RREND	SS	SS	Other or Unknown
6.61	✓	11052013	2 Injured	09P	Night	Dry			ANGLE	ES	NL	Fail to obey traffic signal
6.78		08262014	Property	06P	Day	Dry		10	FXOBJ	SS	--	Fell asleep, fainted, etc.
6.80	✓	12282013	1 Injured	12P	Day	Dry			PED	NS	--	Other or Unknown
6.80	✓	12312013	Property	10A	Day	Dry			RREND	NS	NS	Fail to give full attention

Fixed Object: 01 = Bridge 02 = Building 03 = Culvert/Ditch 04 = Curb 05 = Guardrail/Barrier 06 = Embankment 07 = Fence
08 = Light Pole 09 = Sign Post 10 = Other Pole 11 = Tree/Shrubbery 12 = Construction Barrier 13 = Crash Attenuator

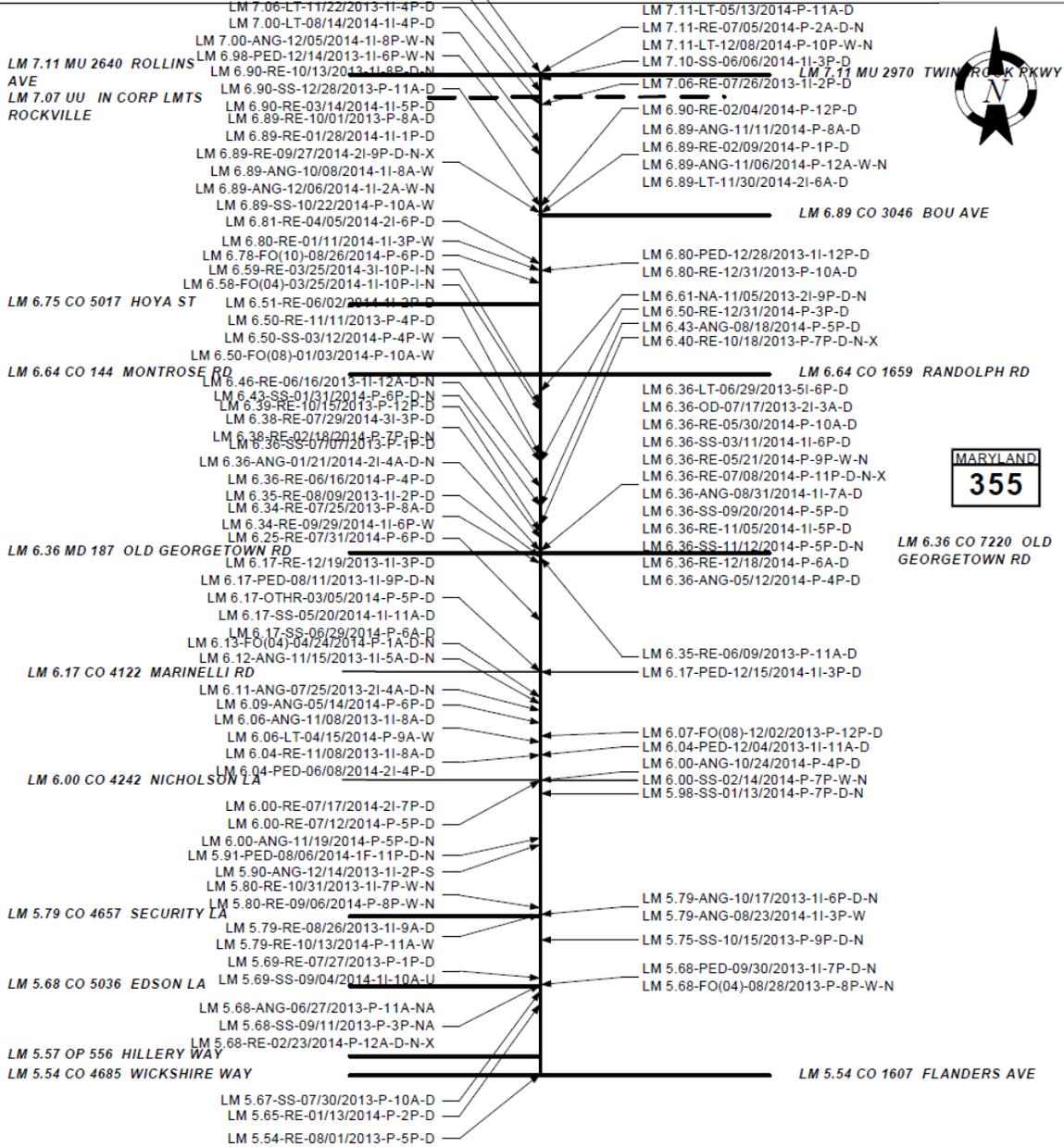
MilePt	Int Rel	Date	Severity	Time	Light	Surface	Alc Rel	FixObj	Collision	Movement		Probable Cause
										V1	V2	
6.80	✓	01112014	1 Injured	03P	Day	Wet			RREND	SS	SS	Fail to give full attention
6.81		04052014	2 Injured	06P	Day	Dry			RREND	SS	SS	Followed too closely
6.89	✓	10012013	Property	08A	Day	Dry			RREND	SS	SS	Followed too closely
6.89	✓	01282014	1 Injured	01P	Day	Dry			RREND	SS	SS	Fail to give full attention
6.89	✓	02092014	Property	01P	Day	Dry			RREND	WR	NS	Improper right turn on red
6.89	✓	09272014	2 Injured	09P	Night	Dry		✓	RREND	SS	SS	Other or Unknown
6.89	✓	10082014	1 Injured	08A	Day	Wet			ANGLE	SS	ES	Fail to give full attention
6.89	✓	10222014	Property	10A	Day	Wet			SDSWP	SS	SS	Fail to give full attention
6.89	✓	11062014	Property	12A	Night	Wet			ANGLE	NS	ES	Other or Unknown
6.89	✓	11112014	Property	08A	Day	Dry			ANGLE	WR	NS	Other or Unknown
6.89	✓	11302014	2 Injured	06A		Dry			LFTRN	NS	WL	Fail to obey traffic signal
6.89	✓	12062014	1 Injured	02A	Night	Wet			ANGLE	WL	SS	Fail to yield right-of-way
6.90		10132013	1 Injured	08P	Night	Dry			RREND	SS	SS	Fail to give full attention
6.90		12282013	Property	11A	Day	Dry			SDSWP	SS	SS	Fail to drive in single lane
6.90	✓	02042014	Property	12P	Day	Dry			RREND	NS	NS	Other or Unknown
6.90	✓	03142014	1 Injured	05P	Day	Dry			RREND	SS	SS	Physical or mental difficulty
6.98		12142013	1 Injured	06P	Night	Wet			PED	WL	--	Fail to yield right-of-way
7.00		08142014	1 Injured	04P	Day	Dry			LFTRN	NL	SS	Other or Unknown
7.00	✓	12052014	1 Injured	08P	Night	Wet			ANGLE	ER	uu	Other or Unknown
7.06	✓	07262013	1 Injured	02P	Day	Dry			RREND	EL	ES	Followed too closely
7.06	✓	11222013	1 Injured	04P	Day	Dry			LFTRN	NL	SS	Fail to yield right-of-way
7.08	✓	02242014	Property	12A	Day	Dry			OTHER	SS	SS	Followed too closely
7.08		03252014	2 Injured	12P	Day	Snow			SDSWP	SS	SS	Fail to give full attention
7.10		06062014	1 Injured	03P	Day	Dry			SDSWP	NS	NS	Fail to yield right-of-way
7.11	✓	12182013	2 Injured	03P	Day	Dry			RREND	WL	NS	Fail to yield right-of-way
7.11	✓	05132014	Property	11A	Day	Dry			LFTRN	EL	NS	Fail to yield right-of-way
7.11	✓	07052014	Property	02A	Night	Dry			RREND	NS	NS	Fail to give full attention
7.11	✓	12082014	Property	10P	Night	Wet			LFTRN	SL	NS	Fail to give full attention

Fixed Object: 01 = Bridge 02 = Building 03 = Culvert/Ditch 04 = Curb 05 = Guardrail/Barrier 06 = Embankment 07 = Fence
08 = Light Pole 09 = Sign Post 10 = Other Pole 11 = Tree/Shrubbery 12 = Construction Barrier 13 = Crash Attenuator



Office of Traffic & Safety
Traffic Development & Support Division
Crash Analysis Safety Team

Location: MD 355 from Flanders Ave to Twinbrook Pkwy
County: MONTGOMERY
Study Period: 06/01/2013 to 12/31/2014
Analyst: WMACLEOD Date: 05/25/2015



KEY: LogMile-CollisionType (FixedObjectStruck) -Date-Severity-Time-Surface-Illumination-Alcohol template 06-27-06

F - Fatalities	SS - Sideswipe	FO - Off Road	OFFRD - Off Road	00 - Not Applicable	08 - Light Support Pole	N - Night
I - Injury	PARKD - Parked Vehicle	O OBJ - Other Object	RUNWY - Downhill Runaway	01 - Bridge or Overpass	09 - Sign Support Pole	X - Alcohol
P - Property Damage	PED - Pedestrian	OT - Overturn	FIRE - Explosion Fire	02 - Building	10 - Other Pole	D - Dry Surface
OD - Opposite Direction	BIKE - Bicycle	SPILL - Spilled Cargo	BCKNG - Backing	03 - Culvert or Ditch	11 - Tree Shrubbery	W - Wet Surface
LT - Left Turn	PEDAL - Other Pedalcycle	JCKKNF - Jackknife	UTURN - U-Turn	04 - Curb	12 - Construction Barrier	I - Icy Surface
RE - Rear End	CONVY - Other Conveyance	SPRTD - Units Separated	OTHR - Other	05 - Guardrail or Barrier	13 - Crash Attenuator	S - Snowy Surface
ANG - Angle	ANIML - Animal	NCOLL - Other Non Collision	UNK - Unknown	06 - Embankment	88 - Other	
				07 - Fence	99 - Unknown	

Maryland State Highway Administration
 Office of Traffic and Safety - Traffic Development and Support Division
 SHA 52.1 ADC Study Worksheet Output rev. 12/2012-3

Name: William MacLeod
 Date: 06/12/2015

Location: MD 187 From Nicolson Lane To MD 355
 County: Montgomery, D3 Period: January 01, 2013 To December 31, 2014

Logmiles: From 004.80 To 005.32 Length: 0.52
 Note: 2014 data is preliminary

Type Controls: 5U-100%

* Significantly Higher than Statewide

YEAR >>	2013	2014	Total	Study	StateWd
Fatal	0	0	0	0.0	1.2
No. Killed	0	0	0		
Injury	3	6	9	56.3	80.1
No. Injured	4	6	10		
Prop. Damage	2	4	6	37.5	114.6
Total Crashes	5	10	15	93.8	195.9
Severity Index	13	22	Avg 18		
RATE	93.3	94.1			
WAADT	56012	56012			
VMT millions	5.4	10.6	16.0		
Opposite Dir.	0	0	0	0.0	3.1
Rear End	1	3	4	25.0	77.8
Sideswipe	1	0	1	6.3	25.1
Left Turn	2	2	4	25.0	18.0
Angle	1	2	3	18.8	34.4
Pedestrian	0	2	2	12.5 *	5.0
Parked Veh.	0	0	0	0.0	0.9
Fixed Object	0	1	1	6.3	21.1
Other	0	0	0	0.0	3.4
U-Turn	0	1	1		
Backing	0	0	0		
Animal	0	0	0		
Railroad	0	0	0		
Fire / Expl.	0	0	0		
Overturn	0	0	0		
Truck Related	1	0	1	6.3	12.0
Night Time	1	3	4	27%	31%
Wet Surface	0	1	1	7%	21%
Alcohol	0	0	0	0%	8%
Intersection	4	8	12		
Total Vehicles	10	18	28		
Total Trucks	1	0	1		
Truck %	10.0	0.0	3.6		
Comments:	2014 ADT's est at 2013 level				

Maryland State Highway Administration
Office of Traffic and Safety - Traffic Development and Support Division
SHA 52.1 ADC Summary Output rev. 03/2010-1

Name: William MacLeod
Date: 06/12/2015

Location: MD 187 From Nicolson Lane To MD 355 Logmiles: From 004.80 To 005.32 Length: 0.52
County: Montgomery, D3 Period: January 1, 2013 To December 31, 2014 Note: 2014 data is preliminary

SEVERITY	FATAL	INJURY	P-DAMAGE	TOTAL	DAY OF THE WEEK																
Accidents		9	6	15	SUN	MON	TUE	WED	THU	FRI	SAT	UNK									
Veh Occ		8			1	3	1	4	5	1											
Pedestrian		2			AVG Severity Index: 18																
MONTH OF THE YEAR													CONDITION	DRIVER	PED						
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	UNK	Normal:	27	2						
	2		1	1	4	1	1		1	2	2		Alcohol:								
													Other:	1							
TIME	12	01	02	03	04	05	06	07	08	09	10	11	UNK	VEHICLES INVOLVED PER ACCIDENT							
AM:	1	1						2	1		1	1		1	2	3	4	5	6+	UNK	TOTAL
PM:	2			1	1	1	1		1	1				3	11	1					28
VEHICLE TYPE			SURFACE			MOVEMENTS															
Motorcycle/Moped		Tractor Trailer		1	Wet	NORTH			SOUTH			EAST			WEST						
22 Passenger Vehicle		Passenger Bus		13	Dry	LF	ST	RT	LF	ST	RT	LF	ST	RT	LF	ST	RT				
Sport Utility Veh		School Bus			Sno/Ice	1	9	1	2	8		2	1		1	1					
2 Pick-Up Truck		1 Emergency Veh			Mud	OTHER MOVEMENTS															
1 Trucks (2+3 axles)		2 Other Types		1	Other	2															
PROBABLE CAUSES													COLLISION TYPES				FATAL	INJURY	PROP	TOTAL	
Influence of Drugs		Improper Lane Change				Opposite Dir	Related:														
Influence of Alcohol		Improper Backing				UnRelated:															
Influence of Medication		Improper Passing				Rear End	Related:			1	1		2								
Influence of Combined Subst.		Improper Signal				UnRelated:			1	1		2									
Physical/Mental Difficulty		Improper Parking				Sideswipe	Related:			1			1								
Fell Asleep/Fainted, etc.		Passenger Interfere/Obstruct.				UnRelated:															
5 Fail to give full Attention		Illegally in Roadway				Left Turn	Related:			1	2		3								
Lic. Restr. Non-compliance		Bicycle Violation				UnRelated:				1		1									
Fail to Drive in Single Lane		Clothing Not Visible				Angle	Related:			2	1		3								
Improper Right Turn on Red		Sleet, Hail, Freezing Rain				UnRelated:															
2 Fail to Yield Right-of-way		Severe Crosswinds				Pedestrian	Related:			2			2								
Fail to Obey Stop Sign		Rain, Snow				UnRelated:															
Fail to Obey Traffic Signal		Animal				Parked Vehicle	Related:														
Fail to Obey Other Control		Vision Obstruction				UnRelated:															
Fail to Keep Right of Center		Vehicle Defect				Other Collision	Related:														
Fail to Stop for School Bus		Wet				UnRelated:															
Wrong Way on One Way		Icy or Snow Covered				F	Bridge	01													
Exceeded Speed Limit		Debris or Obstruction				I	Building	02													
Operator Using Cell Phone		Ruts, Holes or Bumps				X	Culvert/Ditch	03													
Stopping in Lane Roadway		Road Under Construction				E	Curb	04		1						1					
1 Too Fast for Conditions		Traffic Control Device Inop.				D	Guardrail/Barrier	05													
Followed too Closely		Shoulders Low, Soft or High				O	Embankment	06													
2 Improper Turn		5 Other or Unknown				B	Fence	07													
						J	Light Pole	08													
							Sign Pole	09													
						E	Other Pole	10													
						C	Tree/Shrubbery	11													
						T	Contr. Barrier	12													
						S	Crash Attenuator	13													
							Other Fixed Object														
WEATHER	ILLUMINATION		TOTALS																		
13 Clear / Cloudy	11 Day	13-14	15																		
Foggy	Dawn/Dusk																				
1 Raining	4 Dark - Lights On																				
Snow / Sleet	Dark - No Lights																				
1 Other	Other																				

Maryland State Highway Administration
 Office of Traffic and Safety - Traffic Development and Support Division
 SHA 52.1 ADC History Output rev. 03/2013-1 - Combined Year Listing

Name: William MacLeod
 Date: 06/12/2015

Location: MD 187 From Nicolson Lane To MD 355 Logmiles: From 004.80 To 005.32 Length: 0.52
 County: Montgomery, D3 Period: January 01, 2013 To December 31, 2014 Note: 2014 data is preliminary

MilePt	Int Rel	Date	Severity	Time	Light	Surface	Alc Rel	FixObj	Collision	Movement		Probable Cause
										V1	V2	
MD0187												
4.80	✓	08042013	2 Injured	11A	Day	Dry			LFTRN	NL	SS	Fail to yield right-of-way
4.80		02272014	Property	07A	Day	Dry			LFTRN	EL	NS	Other or Unknown
4.80	✓	11102014	1 Injured	08P	Night	Dry			PED	NR	--	Fail to give full attention
4.80	✓	12012014	Property	12P	Day	Dry			RREND	NS	NS	Fail to give full attention
4.84	✓	06022014	1 Injured	05P	Day				RREND	SS	SS	Fail to give full attention
4.89		02112014	Property	12P	Day	Dry			RREND	SS	SS	Fail to give full attention
5.04		06052013	1 Injured	10A	Day	Dry			RREND	SS	SS	Fail to give full attention
5.04	✓	06142013	Property	04P	Day	Dry			ANGLE	SL	NS	Fail to yield right-of-way
5.04	✓	10022013	Property	09P	Night	Dry			LFTRN	EL	NS	Improper turn
5.04	✓	05072014	1 Injured	01A	Night	Dry			ANGLE	WS	SS	Other or Unknown
5.04	✓	11132014	1 Injured	12A	Night	Wet			PED	NS	--	Other or Unknown
5.17	✓	07032014	1 Injured	03P	Day	Dry			ANGLE	WL	ES	Other or Unknown
5.23	✓	06252014	Property	06P	Day	Dry			LFTRN	Su	NS	Other or Unknown
5.30	✓	04242014	1 Injured	07A	Day	Dry		04	FXOBJ	SL	--	Too fast for conditions
5.32	✓	12052013	1 Injured	08A	Day	Dry			SDSWP	NS	NS	Improper turn

Fixed Object: 01 = Bridge 02 = Building 03 = Culvert/Ditch 04 = Curb 05 = Guardrail/Barrier 06 = Embankment 07 = Fence
 08 = Light Pole 09 = Sign Post 10 = Other Pole 11 = Tree/Shrubbery 12 = Construction Barrier 13 = Crash Attenuator



Office of Traffic & Safety
Traffic Development & Support Division
Crash Analysis Safety Team

Location: MD 187 from Nicholson Lane to MD 355
County: MONTGOMERY
Study Period: 06/01/2013 to 12/31/2014
Analyst: WMACLEOD Date: 05/25/2015

LM 5.32 CO 7220 OLD GEORGETOWN RD (AHEAD)
LM 5.32 MD 355 ROCKVILLE PIKE

LM 5.30-FO(04)-04/24/2014-11-7A-D

LM 5.32-SS-12/05/2013-11-8A-D



LM 5.23-LT-06/25/2014-P-6P-D

LM 5.17-ANG-07/03/2014-11-3P-D

LM 5.04-RE-06/05/2013-11-10A-D
LM 5.04-ANG-05/07/2014-11-1A-D-N

LM 5.04-LT-10/02/2013-P-9P-D-N
LM 5.04-ANG-06/14/2013-P-4P-D
LM 5.04-BIKE-11/13/2014-11-12A-W-N

LM 5.04 CO 3239 EXECUTIVE BLVD

LM 4.89-RE-02/11/2014-P-12P-D

LM 4.84-RE-06/02/2014-11-5P-NA

LM 4.80-RE-12/01/2014-P-12P-D
LM 4.80-BIKE-11/10/2014-11-8P-D-N
LM 4.80-LT-02/27/2014-P-7A-D

LM 4.80 CO 3016 TILDEN LA

LM 4.80-LT-08/04/2013-21-11A-D

LM 4.80 CO 4242 NICHOLSON LA

KEY: LogMile-CollisionType (FixedObjectStruck) -Date-Severity-Time-Surface-Illumination-Alcohol

template 06-27-06

F - Fatalities	SS - Sideswipe	FO - Fixed Object	OFFRD - Off Road	00 - Not Applicable	08 - Light Support Pole	N - Night
I - Injury	PARKD - Parked Vehicle	O OBJ - Other Object	RUNWY - Downhill Runaway	01 - Bridge or Overpass	09 - Sign Support Pole	X - Alcohol
P - Property Damage	PEO - Pedestrian	OT - Overturn	FIRE - Explosion Fire	02 - Building	10 - Other Pole	D - Dry Surface
OD - Opposite Direction	BIKE - Bicycle	SPILL - Spilled Cargo	BCKNG - Backing	03 - Culvert or Ditch	11 - Tree Strubbery	W - Wet Surface
LT - Left Turn	PEDAL - Other Pedalcycle	JCKKNF - Jackknife	UTURN - U-Turn	04 - Curb	12 - Construction Barrier	I - Icy Surface
RE - Rear End	CONVY - Other Conveyance	SPRTD - Units Separated	OTHR - Other	05 - Guardrail or Barrier	13 - Crash Attenuator	S - Snowy Surface
ANG - Angle	ANML - Animal	NCOLL - Other Non Collision	UNK - Unknown	06 - Embankment	88 - Other	
				07 - Fence	89 - Unknown	

July 2015
Biennial Master Plan Monitoring Report
Great Seneca Science Corridor



White Flint



Shady Grove

