

# Biennial Master Plan **MONITORING REPORT**

SEPTEMBER 2019



## WHITE FLINT



6000 Executive Blvd Concept Perspective

## GREAT SENECA SCIENCE CORRIDOR



9800 Medical Center Drive



## Abstract

This report meets the 2010 White Flint Sector Plan and 2010 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 FY2020-2025.

## Sources of Copies

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

## Online at:

- <https://montgomeryplanning.org/planning/communities/area-2/white-flint/>
- <https://montgomeryplanning.org/planning/communities/area-2/great-seneca-science-corridor/>

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The Commission is charged with preparing, adopting and amending or extending The General Plan (On Wedges and Corridors) for the Physical Development of the Maryland-Washington Regional District in Montgomery and Prince George's Counties. The Commission operates in each county through Planning Boards appointed by those county governments. The Planning Boards are responsible for implementation of local plans, zoning ordinances, and subdivision regulations and the administration of the bi-county park system.

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SEPTEMBER 2019



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## GREAT SENECA SCIENCE CORRIDOR



Prepared by the  
Montgomery County Planning Department  
[MontgomeryPlanning.org](http://MontgomeryPlanning.org)



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# EXECUTIVE SUMMARY

The 2019 Biennial Monitoring Report (BMR) is a comprehensive update on development, infrastructure and

staging requirements in the 2010 White Flint Sector Plan and the 2010 Great Seneca Science Corridor (GSSC) Master Plan. Both the White Flint and Great Seneca plans require that the Planning Board produce biennial monitoring reports to the County Council and County Executive. Prior monitoring reports included the 2006 Shady Grove Sector Plan, but the Planning Department is currently updating this Sector Plan.

These transformational plans seek to shift primarily single-use commercial and suburban places into mixed-use and urban districts with new infrastructure and public amenities to support the transformation. These changes will contribute towards creating districts, which are more environmentally sustainable and economically resilient. It is anticipated that these new places will take many years to be fully implemented as envisioned in both plans.

Since the 2017 monitoring report, the first phase of the Western Workaround has been completed in White Flint and the second phase should be completed by 2020. The parking garage at the North Bethesda Conference Center is complete, several Capital Bikeshare stations have been installed, and additional protected bikeways are expected later this year. The White Flint area has continued to surpass the phase one Non-Auto Driver Mode Share (NADMS) goal of 34 percent.

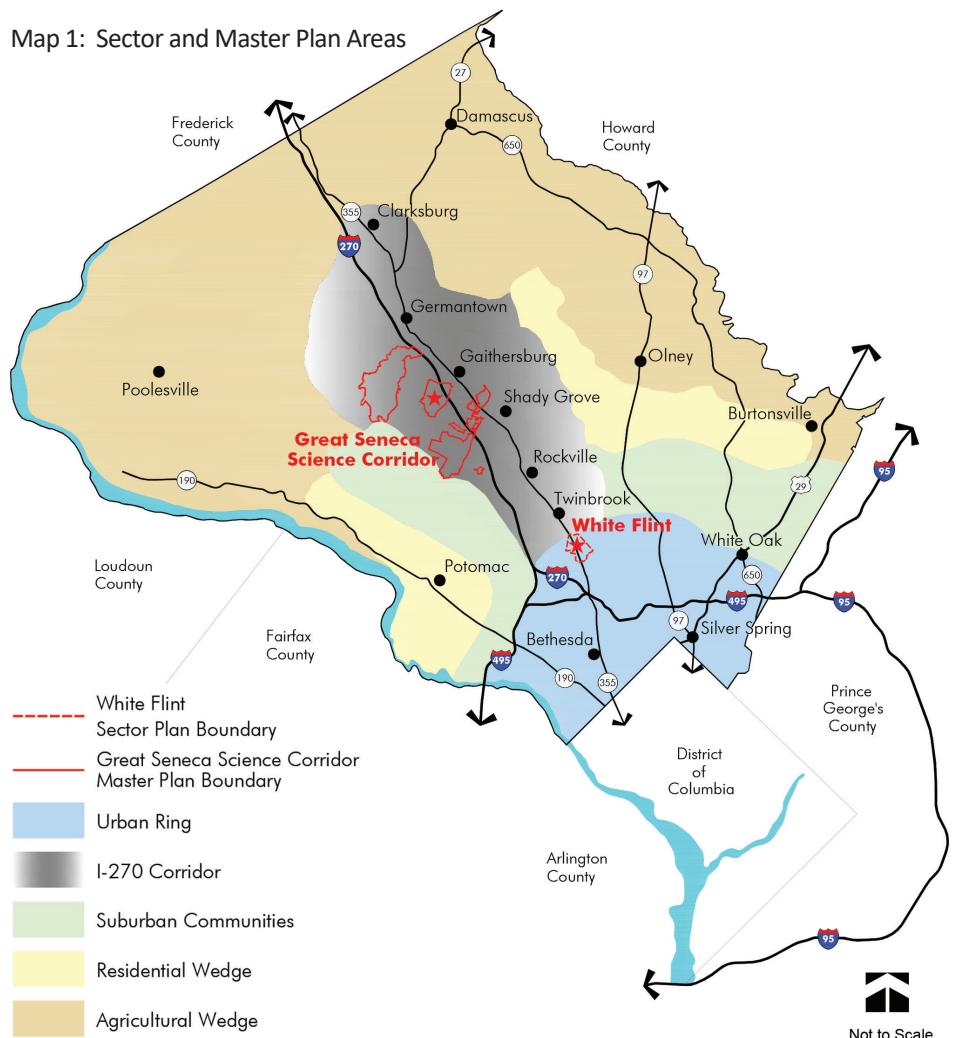
New mixed-use construction has continued primarily at Pike & Rose, including completion of phase one and most of phase two of this development. A new mid-rise residential building is under construction at the White Flint Metro Station property.

In the GSSC area, significant progress has been made in attaining the NADMS goal, with the NADMS surpassing 18 percent for the first time. A number of previously approved residential developments have been completed

or are nearing completion, introducing a significant residential component into what had been almost exclusively a suburban business park. These units are beginning the transformation of the Life Sciences Center into the mixed-use community envisioned in the Master Plan. At the same time, several new plan approvals for research and development-oriented buildings continue to advance the Master Plan's vision of making the Life Sciences Center the County's premier life sciences location. Included in the new developments are the new U.S. headquarters of the London-based biotech firm Autolus Therapeutics, and a new research lab building at the headquarters of the National Cancer Institute.

This and subsequent reports will provide the Planning Board, County Council and County Executive with guidance towards the public expenditures necessary to support the ongoing infrastructure requirements for each plan area.

Map 1: Sector and Master Plan Areas





# INTRODUCTION

The 2010 White Flint Sector Plan and 2010 Great Seneca Science Corridor Master Plan are transformative comprehensive plans that link the provision of new residential and non-residential development with new infrastructure and public amenities within a three-phase staging framework. Both plans promote mixed uses, new bikeways and transit options, including Bus Rapid Transit (BRT), affordable housing and environmental sustainability.

This 2019 monitoring report provides the status of each plan area's public infrastructure, development activity, public facilities and overall mobility, including bikeways, and staging triggers. Both Sector Plan's advisory committees have continued to monitor and provide public input towards the implementation of each plan.

As detailed in this report, each plan area has made progress towards implementing necessary staging triggers. In White Flint, the completion of the first phase of the Western Workaround, new bikeways and streets, and the continued implementation of Pike & Rose represent the type of development and infrastructure necessary to achieve the vision of the Sector Plan. The relocation of the Public Safety Training Academy (PSTA) helps implement the Executive's Smart Growth Initiative, and partial funding for the LSC Loop in Great Seneca reflects the advancement of new bikeway infrastructure.

Significant additional public infrastructure, such as the Corridor Cities Transitway (CCT) for Great Seneca and a northern entrance to the White Flint Metro Station are required to support new development in each plan area. These and other infrastructure items require significant public expenditures.

This report is a required tool to monitor and analyze the progress toward implementation for each plan area. It indicates that both plan areas are making progress towards the implementation of the different staging requirements. However, each plan has key staging requirements that remain incomplete.





# WHITE FLINT SECTOR PLAN

## BACKGROUND

The award-winning 2010 White Flint Sector Plan establishes the framework to transform primarily single-use commercial properties within the White Flint Sector Plan area into a mixed-use and urban environment that is supported by new public amenities, including parks and open spaces, a recreation center and a fire and emergency station. Creating an urban boulevard for Rockville Pike (MD 355) with bus rapid transit (BRT) service is a major mobility goal of the Sector Plan, along with a new grid of streets

and bikeways that promotes a multimodal environment. Unique to the implementation of the Sector Plan is a special taxing district that assesses an advalorem tax on commercial properties to fund new mobility infrastructure. The 2018 White Flint 2 Sector Plan embraced the principles of the 2010 White Flint Sector Plan and extended mixed-use redevelopment opportunities for the office park along Executive Boulevard and single-use commercial properties along MD 355.

Map 2: White Flint Sector Plan Area





KEY MONITORING UPDATES

Western Workaround

The White Flint Western Workaround (Phase 1) is complete. This project includes the construction of realigned Executive Boulevard (future Grand Park Avenue) and Banneker Street (Main/Market Street) on the Bethesda North Marriott Conference Center property.

Capital Bikeshare

In 2018, the Montgomery County Department of Transportation (MCDOT) installed several Capital Bikeshare stations in the plan area, including a bikeshare station at the White Flint Metro Station and another along the North Bethesda Trolley Trail at Woodglen Drive and Executive Boulevard.

Pedestrian and Bicyclist Improvements

The MCDOT has continued to implement new bikeways in the plan area, including along Executive Boulevard, between Nicholson Lane and Woodglen Drive, and along Marinelli Road, between Rockville Pike (MD 355) and Nebel Street. These bikeways will be implemented in fall 2019.

The Maryland Department of Transportation State Highway Administration (MDOT SHA) will be addressing pedestrian and bicyclist safety issues along Rockville Pike (MD 355), including at Marinelli Road and Nicholson Lane with the

installation of highly visible crosswalks. The MDOT SHA is also exploring the reconfiguration of the intersection of Old Georgetown Road (MD 187) and MD 355 to remove dedicated slip lanes.

White Flint Metro Station Northern Entrance

In 2018, the County Council approved \$3.5 million for preliminary planning and engineering for a new northern entrance to the White Flint Metro Station. The Washington Metropolitan Area Transit Authority (WMATA) is currently conducting a feasibility study for the northern entrance.

White Flint 2 Sector Plan

The Approved and Adopted 2018 White Flint 2 Sector Plan expanded the development capacities associated with the 2010 White Flint Sector Plan by adding 1,800 residential units and 750,000 square feet of non-residential development to the first two phases of the recommended staging plan in the 2010 Sector Plan.

Development Moratorium

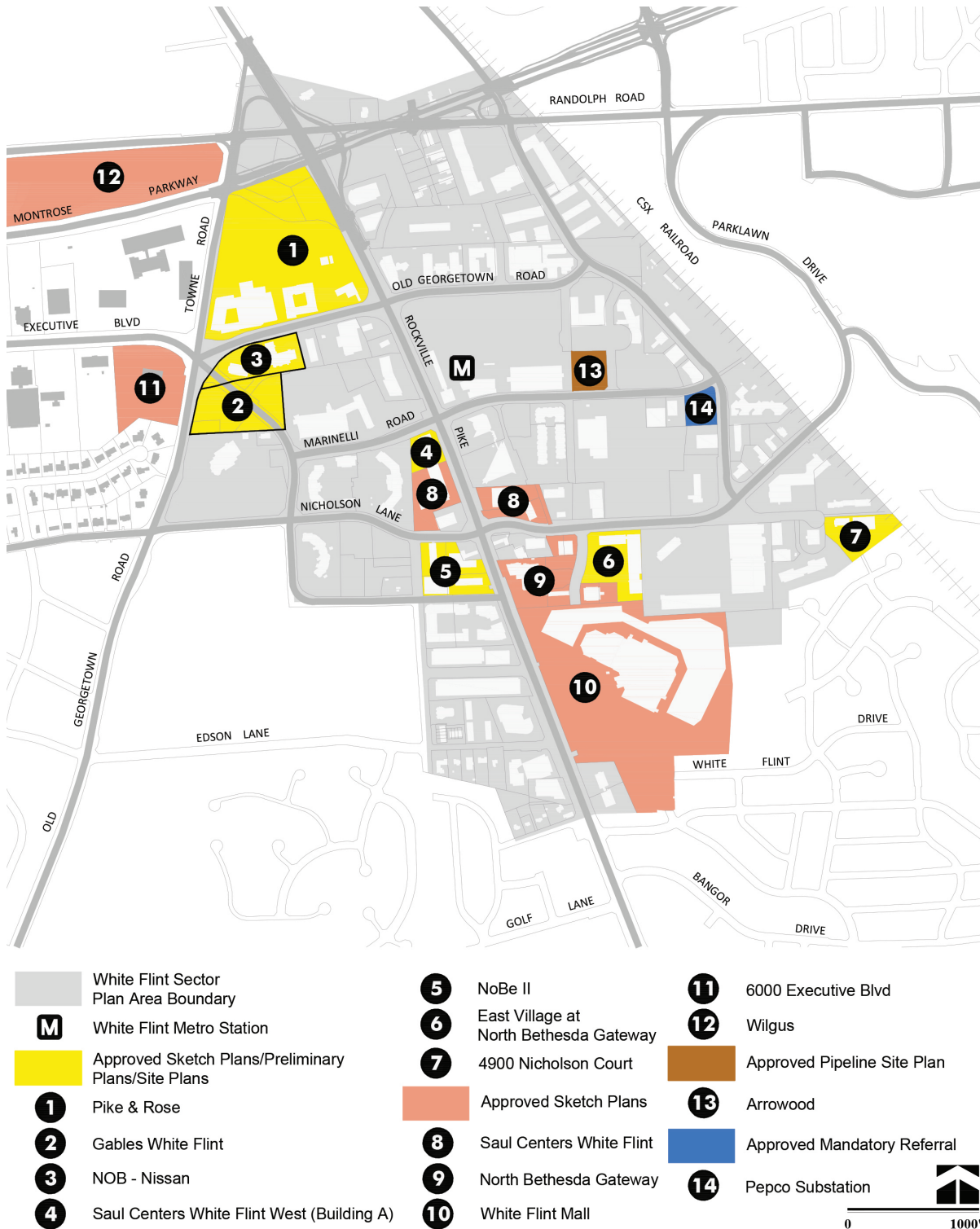
Based on the 2019 annual schools test, the Walter Johnson Cluster has been placed in a development moratorium since the cluster is at 129 percent. Any high school cluster that is above 120 percent of capacity is placed into a moratorium. The Planning Board cannot approve any new residential subdivisions in the Walter Johnson cluster.



## DEVELOPMENT APPROVALS

The Planning Board approves Sketch Plans, Preliminary Plans, Site Plans, Mandatory Referrals and Staging Allocation Requests (SARs) for new development in the 2010 White Flint Sector Plan area and three properties in the 2018 White Flint 2 Sector Plan area. All approved development plans (Map No.2) are illustrated below.

Map 3: Approved White Flint Development



## Western Workaround

The Planning Board has approved two Sketch Plans since the 2017 Biennial Monitoring Report. In 2018, the Planning Board approved 6000 Executive Boulevard, which is an existing office building that will be expanded to include new residential and non-residential development at the southwest intersection of Old Georgetown Road (MD 187) and Executive Boulevard. Public benefits approved with this development include 15 percent of apartments as moderately priced dwelling units (MPDUs), implementing a trail recommended in the White Flint 2 Sector Plan and building a neighborhood green. This development is within the White Flint 2 Sector Plan area.

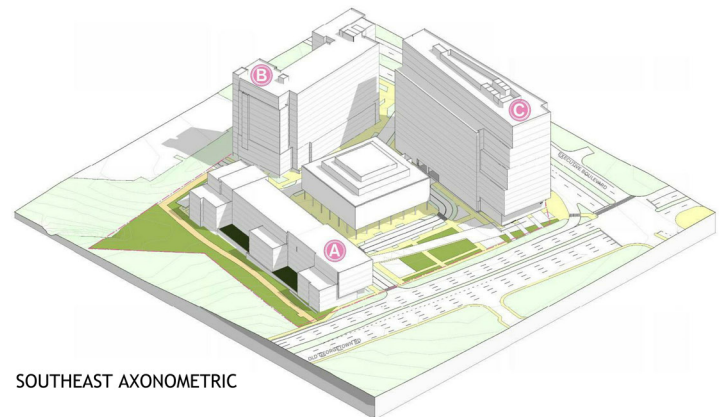
In May 2019, the Board approved the VOB Sketch Plan, which is located east of the intersection of Old Georgetown Road (MD 187) and Executive Boulevard. This development will permit up to 940,843 square feet of residential uses and 110,169 square feet of non-residential development. An approximate ½-acre open space; dedication for the extension of realigned Executive Boulevard (future Grand Park Avenue); and 15 percent of apartments as moderately priced dwelling units (MPDUs) are the key public benefits included with this development.



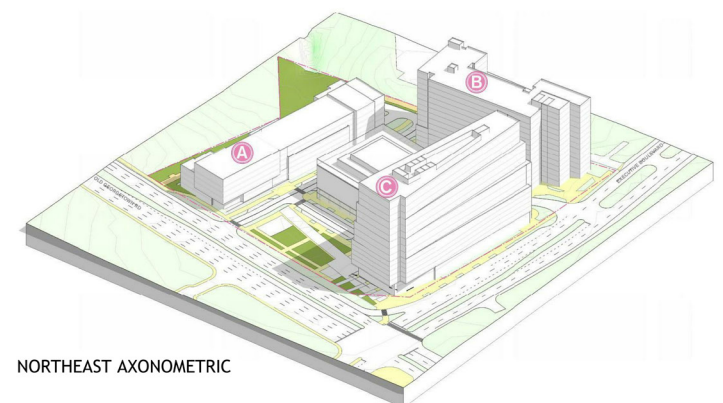
CONCEPT PERSPECTIVE FROM SOUTHEAST



CONCEPT PERSPECTIVE FROM NORTHEAST

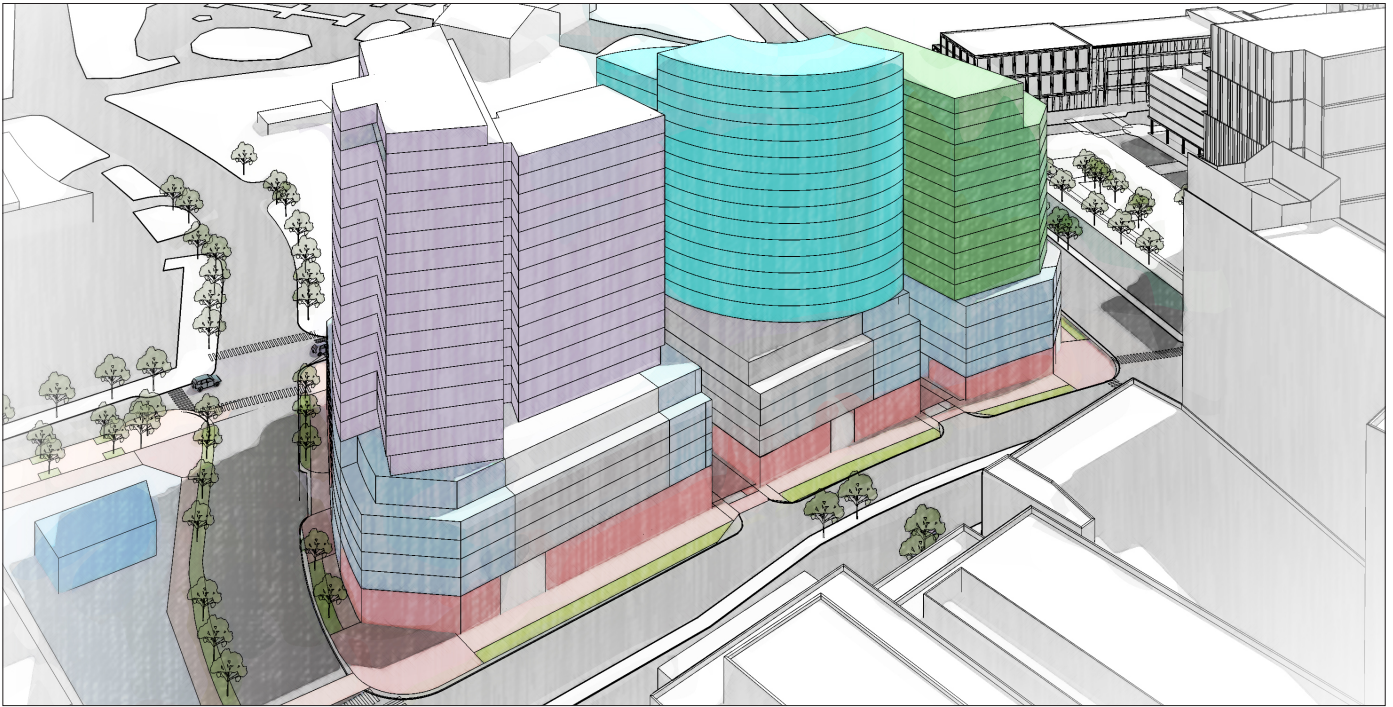


SOUTHEAST AXONOMETRIC



NORTHEAST AXONOMETRIC





VOB Sketch Plan-Illustrative Concept



Wilgus Sketch Plan

In July 2019, the Planning Board approved the Sketch Plan application for the 11-acre Wilgus property, which is located west of Towne Road and between Montrose Parkway and Montrose Road. This development, which will be implemented over several phases, will implement more than 1.0 million square feet of residential development and up to 248,709 square feet of non-residential development. Most of this property follows the staging and infrastructure requirements in the 2010 White Flint Sector Plan.

Prior approved Sketch Plans are:

- Pike & Rose (Mid-Pike Plaza)
- North Bethesda Gateway
- Gables White Flint
- NoBe II
- Saul Centers White Flint
- White Flint Mall



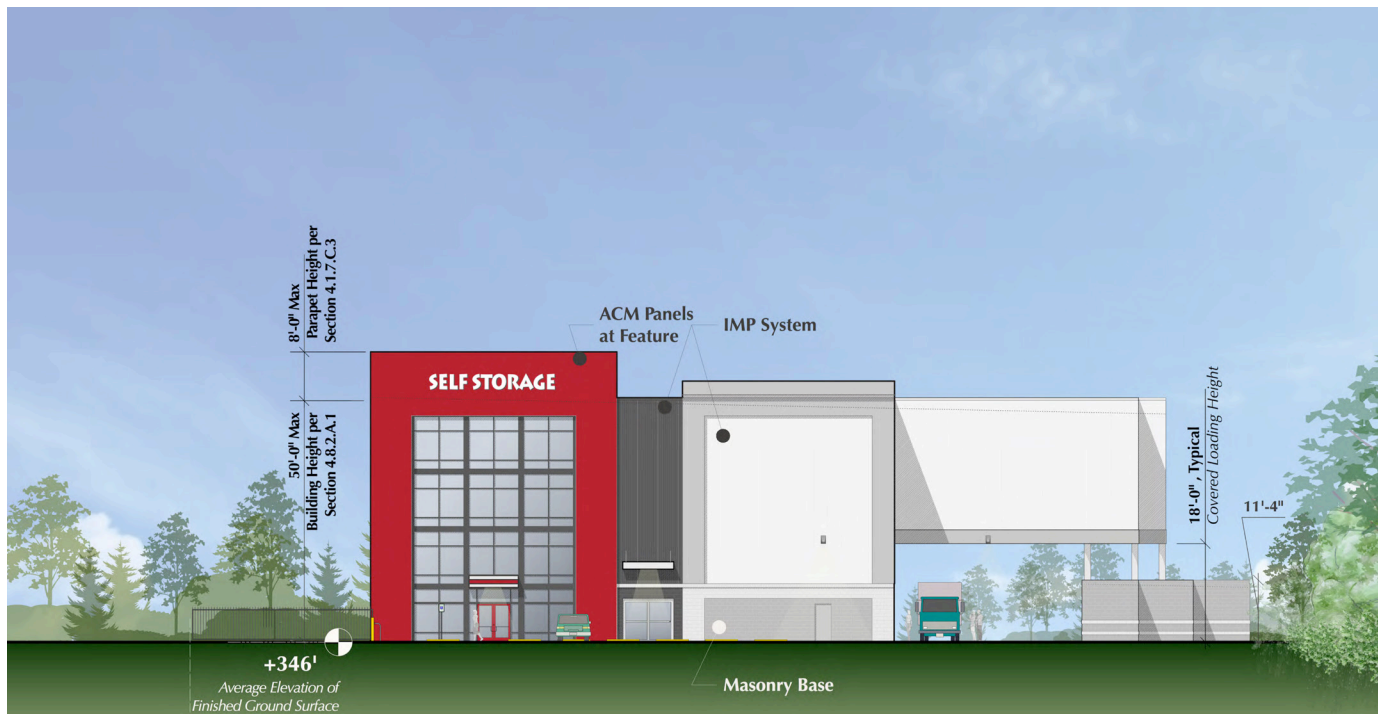
### Preliminary and Site Plans

The Planning Board has approved two new Site Plans, Arrowood and 4900 Nicholson Court, since the last BMR. Arrowood, a new multifamily residential building with 294 dwelling units, is under construction on the WMATA property. This building is another phase of the North Bethesda Center/LCOR development, which was approved before the approval of the 2010 White Flint Sector Plan and is excluded from the plan's staging limits. 4900 Nicholson Court is a new self-storage facility on the Barwood Taxi property. Prior approved Preliminary and Site Plans are:

- Pike & Rose
- Gables White Flint
- NoBe II
- Saul Centers White Flint-Building A
- East Village at North Bethesda Gateway



Arrowood Development at North Bethesda Center/LCOR



Self-Storage Facility - 4900 Nicholson Court

### Mandatory Referral

In July 2018, the Planning Board approved a new Pepco Substation at the southwest intersection of Marinelli Road and Nebel Street. Pepco anticipates that this new substation will be under construction by January 2020.



Pepco Substation along Nebel Street



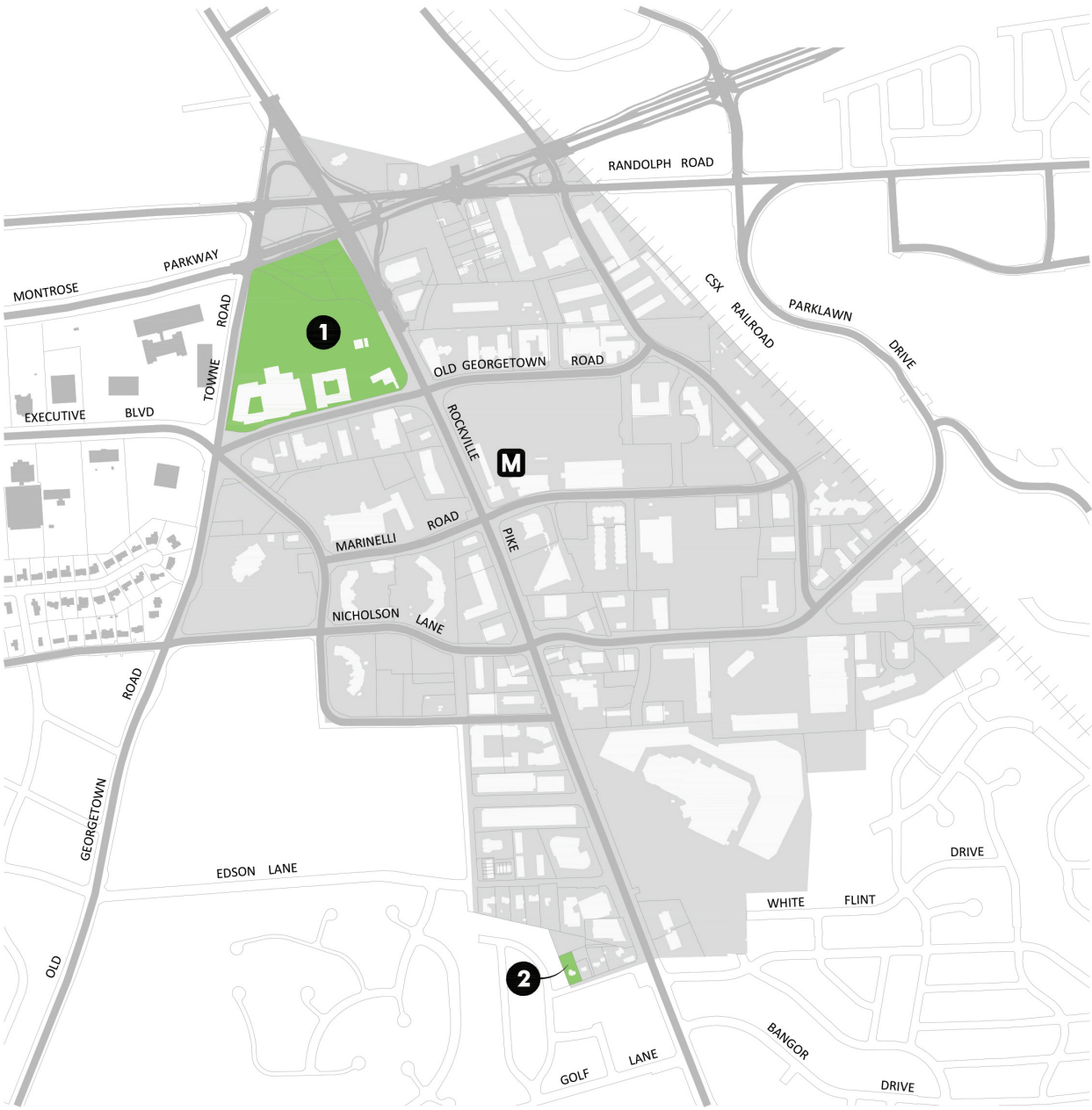
**Staging Allocation Request**






The County Council, via Resolution No. 17-213, gave the Montgomery County Planning Board the authority to allocate development under the Subdivision Staging Policy (SSP) White Flint Alternative Review Procedure. Pike & Rose, the new mixed-use development at Rockville Pike (MD 355) and Old Georgetown Road (MD 187), and Offutt Estates, a small infill residential development on Hillery Way, are the two developments that have received allocated residential and non-residential development. Table No. 1 below shows the status of White Flint staging development.

Table 1: Status of White Flint Phase 1 Development

	Residential	Non-Residential
Sector Plan Phase 1	4,800 dwelling units	2.75 million square feet
Allocated Development	862 dwelling units	385,640 square feet
Remaining Phase 1 Development	3,938 dwelling units	2,364,360 square feet

Map 4: Allocated new White Flint development



- |   |                                       |   |  |
|---|---------------------------------------|---|--|
|  | White Flint Sector Plan Area Boundary |  | Approved Sketch Plans/Preliminary Plans/Site Plans |
|  | White Flint Metro Station             |  | Pike & Rose  |
|   |                                       |  | Offutt Estates                                     |





## STAGING

### 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. Table 2 below shows the different stage one triggers, staging requirements and the status of each requirement.

Table 2: Status of Stage 1 Triggers

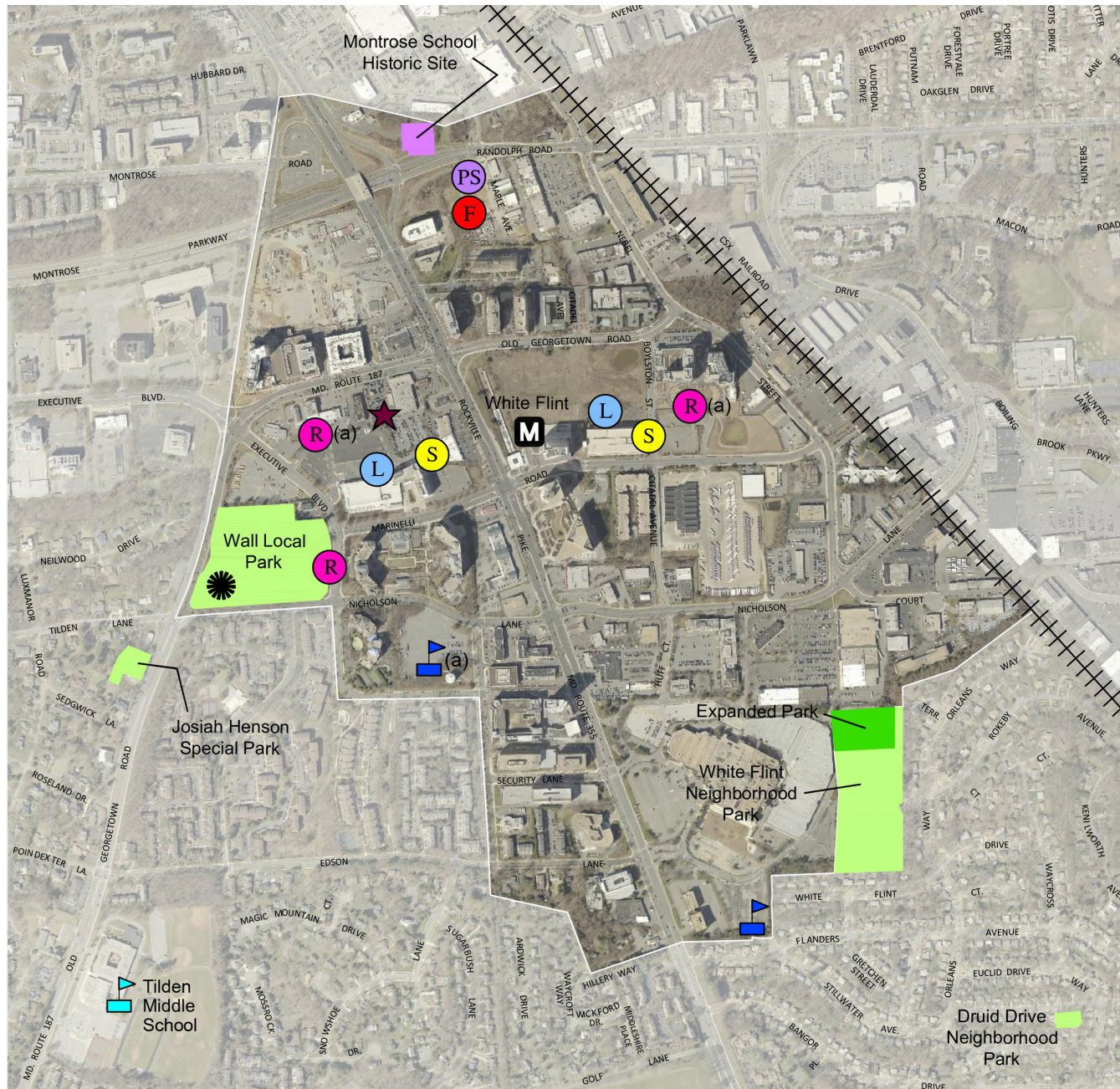
Stage 1	Infrastructure Requirement	Status
	Contract for the construction of the realignment of Executive Boulevard and Old Georgetown Road.	This requirement has been implemented with the funding of the Western Workaround, via CIP No. 501506.
	Contract for the construction of Market Street (B-10) in the Conference Center block.	This trigger has been achieved for the portion of Banneker Street (formerly Market Street) on the Bethesda North Conference Center property. Other properties in the Conference Center block have not submitted redevelopment plans.
	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.	This requisite is incomplete. MCDOT has a bikeway study for Marinelli Road, between Rockville Pike and Nebel Street. Other roadways have not been addressed.
	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).	MCDOT is currently conducting a Bus Rapid Transit (BRT) study for Rockville Pike (MD 355).
	Achieve 34 percent non-auto driver mode share (NADMS) for the plan area.	MCDOT Commuter Services indicated in the 2017 BMR that this requirement has been achieved. The 2019 BMR also confirmed the achievement of this NADMS.

## 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 2010 White Flint Sector Plan. These facilities are essential to support existing and future residents, demonstrate public investment and ensure a high quality of life in the White Flint area.

Map 5: Existing and proposed White Flint Public Facilities



- White Flint Sector Plan Area Boundary
- Parkland
- Metro Station
- Existing Facilities
- Middle School
- Montgomery County Aquatic Center

#### Proposed Facilities

- Elementary School (a = alternate)
- Recreation Center (a = alternate)
- Library (Alternative Location)
- Satellite Services Center (Alternative Location)
- Fire and Emergency Services
- Police Substation
- Civic Green



0 1000'



### Fire Station and Emergency Medical Services Station

The future White Flint Fire Station and Emergency Medical Services Station is the only Sector Plan-recommended public facility that is currently in the design phase in the county's Capital Improvements Program (CIP), No. P451502. Located at the southeast quadrant of Rockville Pike (MD 355) and Randolph Road, this new Class I fire station will replace the existing Station #23 on Rollins Avenue. The county's Department of General Services (DGS) is working with other public agencies to determine what other public uses, including a police substation, could be included with the fire station. Construction is anticipated by mid to late 2022. The Housing Opportunities Commission (HOC) will build a multi-family residential building adjacent to the fire station in the future.

### Wall Park and Recreation Center

The County Council has approved \$6.5 million to finance a parking garage that will be located on the Gables Residential property, which is adjacent to Wall Local Park. This garage, which will accommodate up to 250 parking spaces, provides the opportunity to create a future urban park and other public amenities, including a recreation center at Wall Park. Gables Residential anticipates that the construction of the garage will begin in 2020. There is no current timetable for the construction of a recreation center.

### Library and Satellite Regional Services Center

There are no active proposals for the library or satellite regional services center. Future redevelopment of properties in the Metro West and Metro East districts of the 2010 White Flint Sector Plan area could include either of these public facilities as public benefits in the Commercial Residential (CR) zone.

### Public Parks

#### *White Flint Neighborhood Park*

The approved White Flint Mall Sketch Plan received public benefit points for the dedication of approximately 2.3 acres for the expansion of the White Flint Neighborhood Park. A future preliminary plan will determine the dedication of this area to the Parks Department for future implementation. The future redevelopment of the Mall property is unknown at this time.

#### *Civic Green*

The approved VOB Sketch Plan illustrates an approximately ½-acre open space/park, east of realigned Executive Boulevard/Grand Park Avenue extended. The property owner intends to dedicate this open space to the Parks Department that begins to give shape to the civic green. Enlargement of this open space is possible through the public acquisition of an adjacent property or future redevelopment of other properties to the east.



VOB Grand Park Sketch Plan

## Public Schools

### *School Cluster*

The 2010 White Flint Sector Plan area and a large portion of the 2018 White Flint 2 Sector Plan area are within the Walter Johnson School Cluster. Over the last decade, the cluster has experienced significant enrollment increases driven by existing residential turnover and new development.

The Montgomery County Public Schools (MCPS) has addressed student enrollment increases by planning for the reopening of Woodward High School; expanding existing schools, including North Bethesda Middle School and Luxmanor Elementary, and conducting a site selection study for a new elementary school. The MCPS Superintendent has also recommended conducting a capacity study to explore enrollment solutions that could include elementary schools in the Walter Johnson and the Bethesda-Chevy Chase clusters.

Based on the 2016-2020 Subdivision Staging Policy (SSP) provisions, the Walter Johnson cluster, as of July 1, 2019, is now in a moratorium for new residential development, excluding senior housing.

The 2010 White Flint Sector Plan recommended the southern portion of the White Flint Mall property as the preferred location for an elementary school and the Luttrell property, located at the southwestern intersection of Nicholson Lane and Woodglen Drive, as the alternative elementary school site. No redevelopment has taken place on either property and no public agency has acquired any property for an elementary school.

The 2018 White Flint 2 Sector Plan recommended that “each and every development application should be thoroughly evaluated for a potential school site, notwithstanding any previous development approvals” (p.96).

### *Elementary School*

Garrett Park Elementary and Luxmanor Elementary provide elementary school services to the plan area. The southern portion of the White Flint Mall property is the Sector Plan’s preferred elementary school site and the Luttrell property, which is located at the southwest quadrant of Woodglen Drive and Nicholson Lane, is the alternative location.

The approved White Flint Mall Sketch Plan shows the recommended elementary school site on the southern area of the property. A future preliminary plan will determine if the elementary school site will 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.

### *Middle School*

North Bethesda Middle School and Tilden Middle School provide middle school services for students in the plan area. By September 2020, the new Tilden Middle School on Tilden Lane should open. Both schools are projected to have enrollment capacity in the current CIP.

### *High School*

Walter Johnson High School is more than 275 program student capacity, and it is projected to remain over capacity through the next decade. The Board of Education has appropriated planning funds to reopen Woodward High School within four years. The future reuse of Woodward High School is expected to provide another high school for the cluster.



*Luxmanor Elementary School*

## MOBILITY

### Plan Recommendations

The White Flint Sector Plan recommends a transit-focused, multi-modal transportation system that supports the proposed urban center with a street grid and improved pedestrian and bicyclist access within the Plan area.

### New Street Network

The 2010 Sector Plan recommends a variety of new public and private streets to create a new grid of streets. Since the 2017 BMR, realigned Executive Boulevard (future Grand Park) and Banneker Street (Main/Market Street), which is a segment of the Western Workaround, on the Bethesda North Conference Center property have been built. The completion of realigned Executive Boulevard from its current terminus to Old Georgetown Road (MD 187) will be implemented with the VOB development. Prior to the construction of the unbuilt road segment, a new sidewalk has been built to provide a pedestrian connection to Old Georgetown Road.

Grand Park Avenue, Rose Avenue and Chapman Avenue, between Montrose Road and Old Georgetown Road, are new public streets implemented since 2010.

### Bicycle and Pedestrian Connections

Since 2014, the Montgomery County Department of Transportation (MCDOT) has installed protected bikeways and traditional bike lanes on several roadways in the plan area, including along Woodglen Drive and Nebel Street.

In 2018, three Capital Bikeshare stations were installed in the plan area, including at the White Flint Metro Station entrance and along the North Bethesda Trolley Trail at Woodglen Drive and Executive Boulevard. Additional bikeshare stations are anticipated in the Plan area.

Two new bikeways are under design by MCDOT: Executive Boulevard, between Nicholson Lane and Woodglen Drive, and Marinelli Road, between Rockville Pike (MD 355) and Nebel Street. Illustrated below are the cross-sections for new bikeways, which are under study by MCDOT. These new bikeways will be implemented later this year.



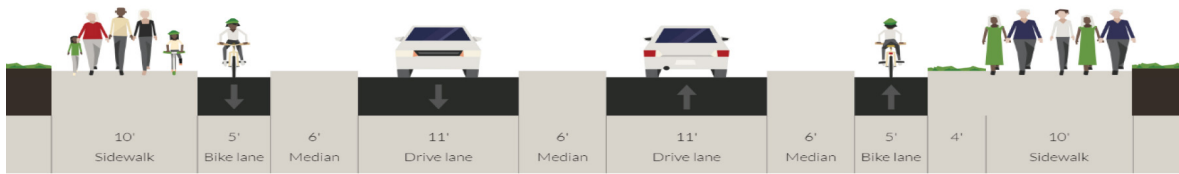
Realigned Executive Boulevard-Future Grand Park Avenue  
(looking south)



Banneker Street (looking east)

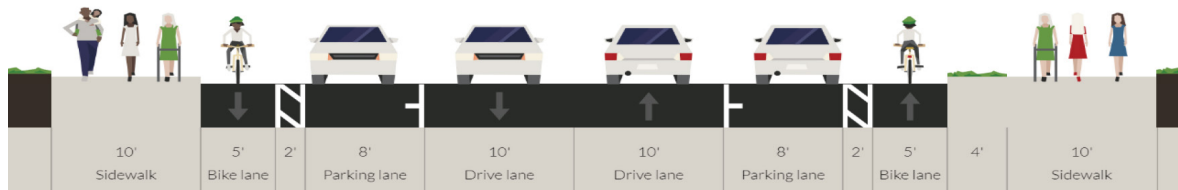


## Executive Boulevard at Strand Drive

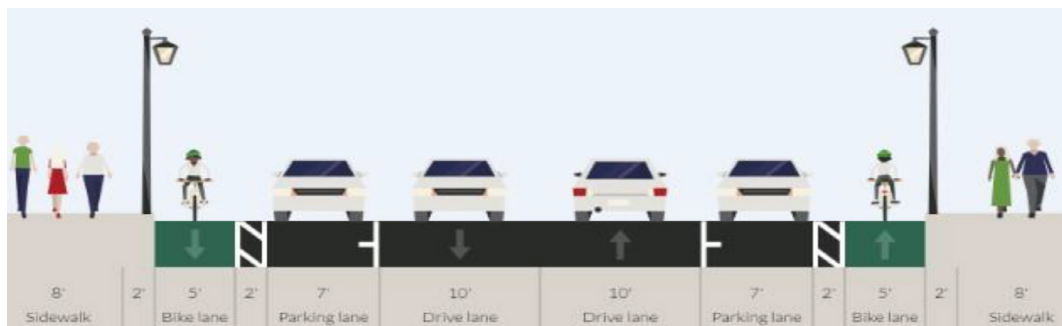


Proposed Executive Boulevard Bikeway

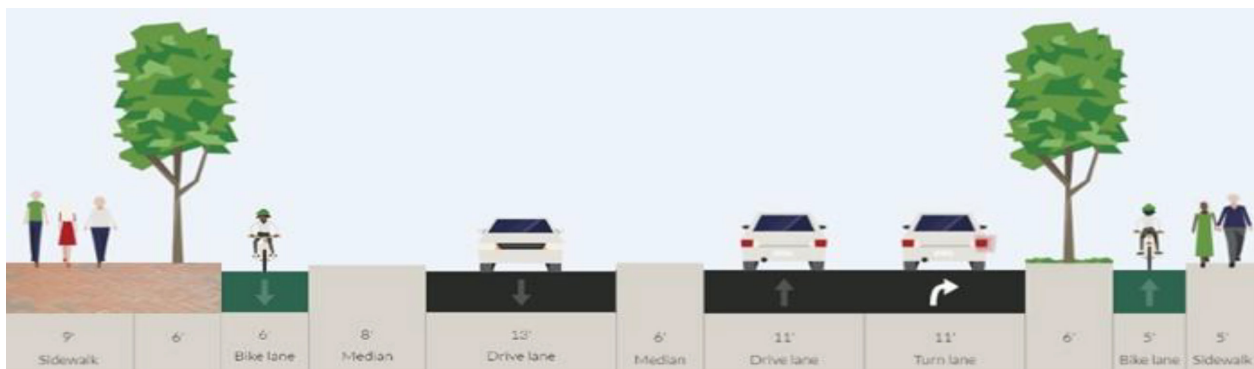
## Executive Boulevard at Woodglen Drive



Proposed Executive Boulevard Bikeway with on street parking



Proposed Marinelli Road Protected Bikeway Cross-Section (East of Citadel)  
with on street parking



Proposed Marinelli Road Protected Bikeway Cross-Section (NRC area)



Map 6: Recently implemented and under design review bikeways



White Flint Sector Plan Area Boundary



White Flint Metro Station

Existing

Proposed



Protected Bike Lanes



Bike Lanes



Protected Bike Lanes Under Design Review



0 1000'



## Non-Auto Driver Mode Share

The 2010 White Flint Sector Plan recommends achieving a higher percentage of non-auto driver mode share (NADMS) for the plan area, beginning with 34 percent in phase one and reaching an ultimate NADMS goals of 51 percent for residents and 50 percent for employees in phase three. Only the third phase in the Sector Plan indicated a blending of residential and employee mode share goals.

The latest information from MCDOT's Commuter Services Division revealed that the weighted NADMS average, based on the last four employee surveys (FY13,14,16,18) for White Flint, was 35.9 percent based on a three-hour time period. This average is above the required 34 percent. The 2017 BMR also reported that the phase one NADMS requirement of the Sector Plan has been achieved.

The latest survey from MCDOT did not include residential properties. It is anticipated that the next survey will include residential properties. The Planning Board's approved White Flint Sector Plan Implementation Guidelines (2011) and updated 2018 guidelines both indicate that the overall White Flint Sector Plan area mode share (NADMS) is the weighted average of NADMS-R (residents) and NADMS-E (employees).

The NADMS rate for employees will fluctuate from year to year due to a number of factors. These factors include the specific employers who will participate in the survey, the amount of turnover and level of participation of

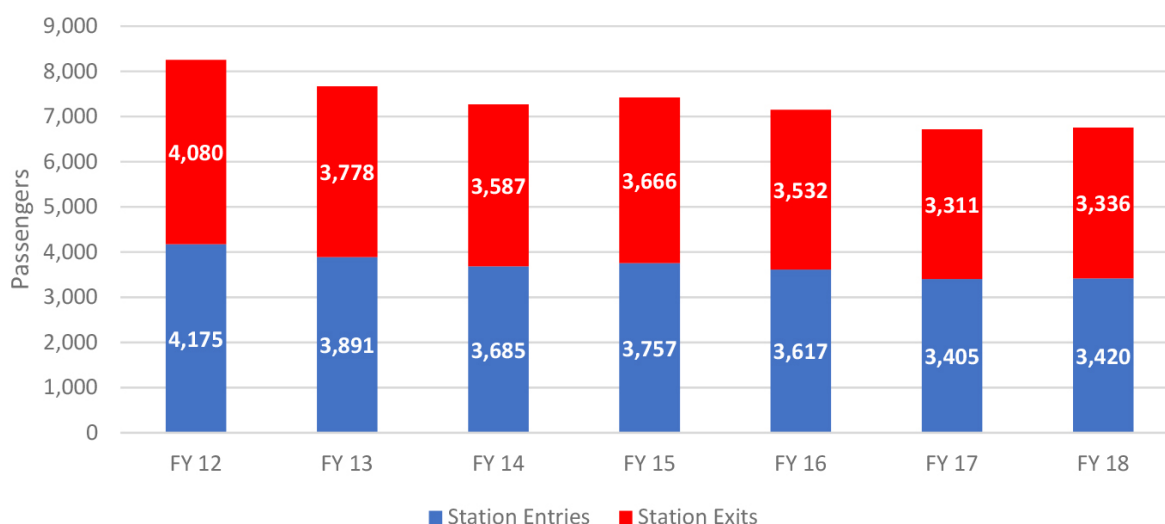
employees at those work sites, and changes in the types of transportation demand management (TDM) programs those employers make available to their employees.

In 2015, MCDOT released a broad framework to achieve the ultimate NADMS goals. The implementation of additional Capital Bikeshare, future bus rapid transit service on MD 355, as well as additional facility, policy and service initiatives will contribute to achieving the higher NADMS goals.

## Transit Ridership

Transit ridership data provides an additional benchmarking measure in which the relative success of transportation demand management programs and policies can be assessed. It is important to note, however, that ridership trends represent a package of local and national forces, including but not limited to land use, operational efficiency, gas and fuel costs, weather, and consumer comfort. Consistent with national trends, average weekday transit ridership at the White Flint Washington Metropolitan Area Transit Authority (WMATA) Metrorail Station fell between FY2012 and FY2016. In FY2017, declining ridership appears to have reached a floor, and the station attained a slight increase of roughly 40 average weekday riders in FY18. Table 3 depicts station ridership trends between FY2012 and 2018. Figure 2 depicts how riders accessed the Metrorail station in the morning during FY16. Future Biennial Monitoring Reports (2021) will provide more recent information, as available via WMATA.

Figure 1: WMATA White Flint Metrorail Station Average Weekday Ridership





Beyond rail service, the White Flint area is accessible via local and regional bus service. Table 3 shows the lines that operate within the vicinity. Figure 3 depicts ridership trends between FY14 and FY18 for lines that operate within the vicinity. Excluding the RideOn 42 and RideOn 81 lines, average weekday ridership has generally declined, which is consistent with national trends.

Figure 2: Modes Taken to the White Flint Metrorail Station (FY2016)

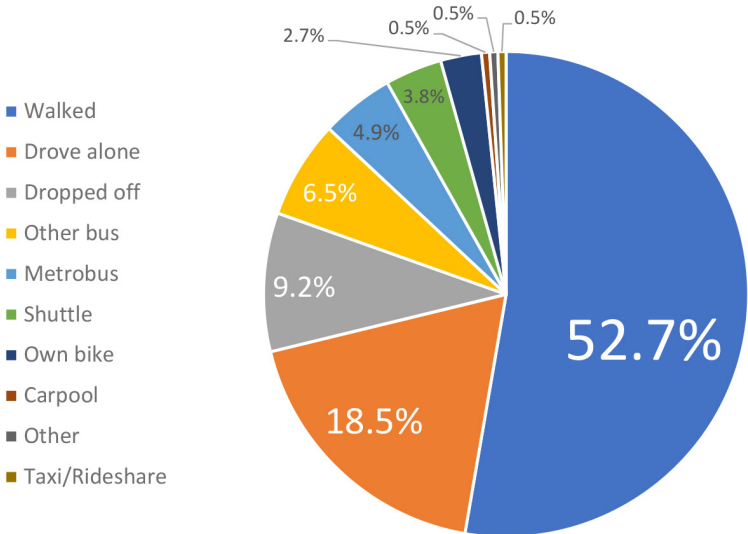
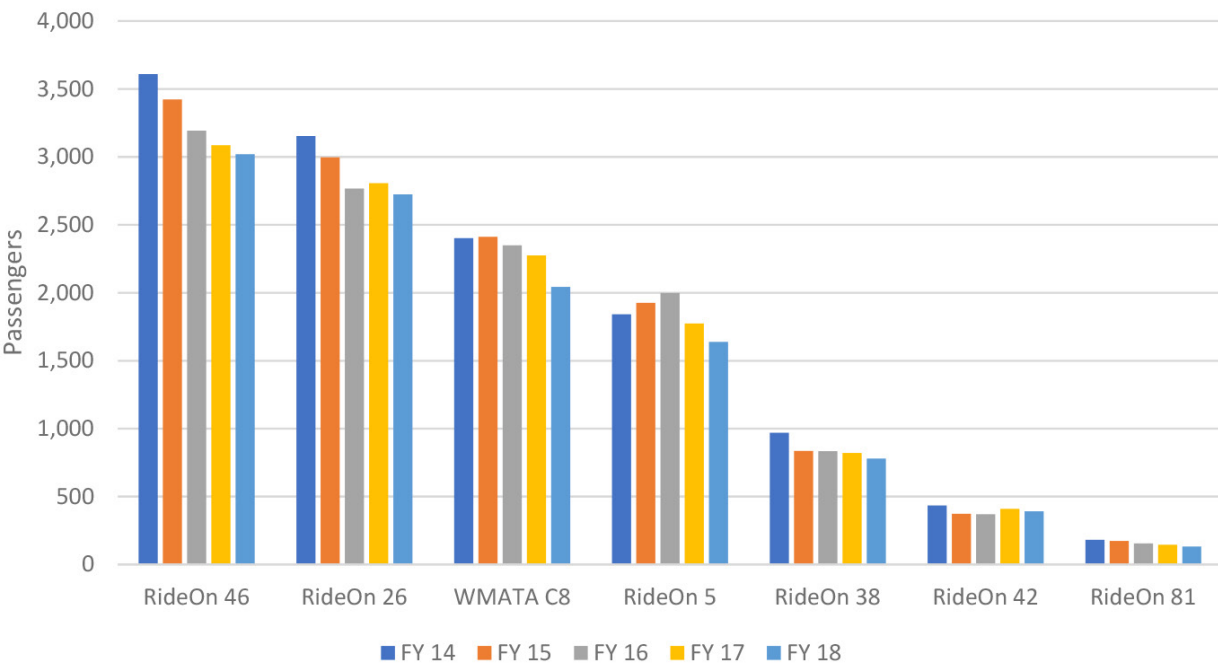


Table 3: Bus Service Accessible within White Flint

Line	Terminus 1	Terminus 2
RideOn 46	Shady Grove Metrorail Station	NIH Medical Center
RideOn 26	Glenmont Metro Station	Montgomery Mall
WMATA C8	White Flint Metro Station	University of Maryland, College Park
RideOn 5	Twinbrook Metro Station	Silver Spring Metro Station
RideOn 38	Wheaton Metro Station	Potomac Community Center
RideOn 42	White Flint Metro Station	Montgomery Mall
RideOn 81	Rockville Metro Station	White Flint Metro Station

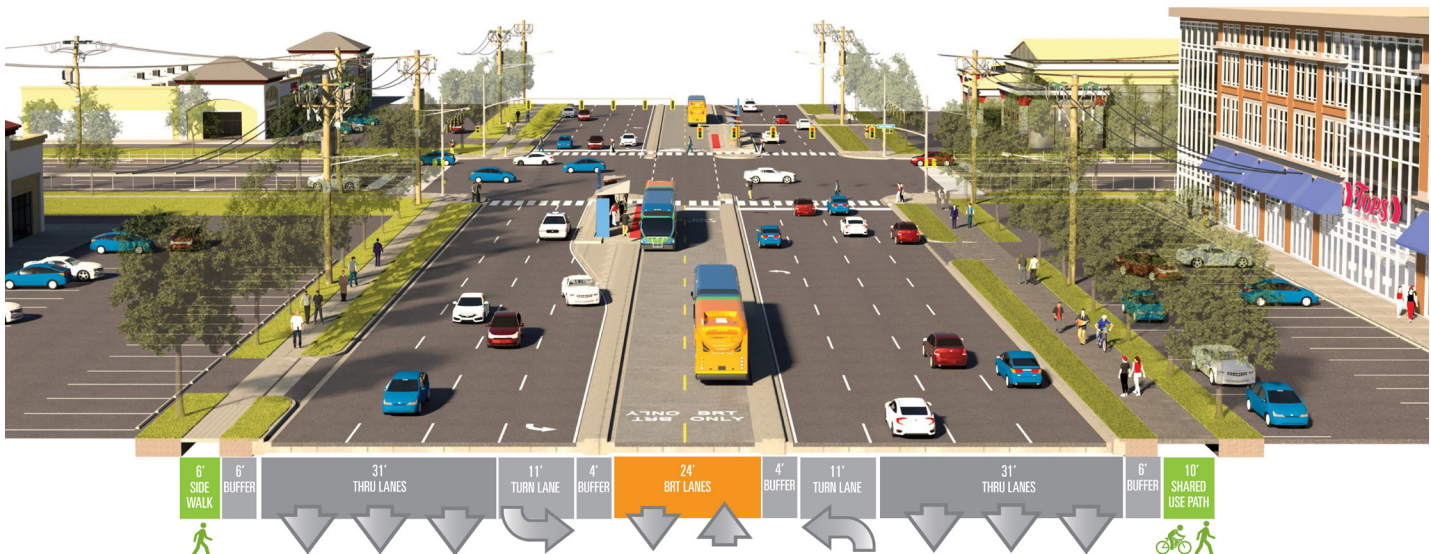
Figure 3: Average Weekday Bus Ridership



## Rockville Pike Bus Rapid Transit

The Rockville Pike (MD 355) bus rapid transit (BRT) project is still under alternatives study by the Montgomery County Department of Transportation (MCDOT). The next project milestone is the selection of a locally preferred alternative. The completion of the MD 355 BRT design study is a phase one trigger.

MD 355 concept with dedicated bus rapid transit service



## Subdivision Staging Policy

Properties in the 2010 *White Flint Sector Plan* area and three properties in the 2018 *White Flint 2 Sector Plan* area, 6000 Executive Boulevard, 6001, 6003 and 6011 Executive Boulevard, and a portion of the Wilgus property (Parcels N208, N279, N174 and N231) are exempt from Local Area Transportation Review (LATR) via the 2016-2020 Subdivision Staging Policy (SSP).

In March 2018, the SSP was amended to revise the boundaries of the White Flint Metro Station Policy Area (MSPA) and the North Bethesda Policy Area to include the three properties from the 2018 *White Flint 2 Sector Plan*.

## Transportation Standards

The White Flint Special Taxing District (Bill No. 50-10) exempts new development from the 2010 White Flint Sector Plan area and three properties in the 2018 White Flint 2 Sector Plan area from Local Area Transportation Review (LATR). Instead of being subject to LATR, the special taxing district, which is an ad valorem property tax, funds transportation infrastructure improvements based on the phasing plan and roadway network recommended in the White Flint Sector Plan. The 2016-2020 Subdivision Staging Policy (SSP) confirms this exemption.

The three prior Biennial Monitoring Reports (2013, 2015, 2017) utilized critical lane volume (CLV), which was the traditional measure of an intersection capacity. The 2017 BMR began to use the Highway Capacity Manual (HCM) delayed-based analysis methodology, which was approved in the 2016 SSP. Based on the 1,800 CLV standard for Metro station areas, including White Flint, none of the White Flint Plan area intersections exceed this threshold.

The HCM standard of average vehicle delay is 120 seconds for urban or urbanizing areas. Based on recently collected transportation data, all of the intersections in the 2010 White Flint Plan area operate within acceptable levels of congestion, as measured by delay and critical lane volume. Figures No. 4 and No.5 below depict the percentage of intersection capacity currently utilized per each measure, in the morning and afternoon. For the purposes of comparison, Figure 6 depicts the change in delay from 2015 to 2019 for both morning and afternoon peak periods.



Figure 4: Percentage of Capacity Utilized per HCM Delay

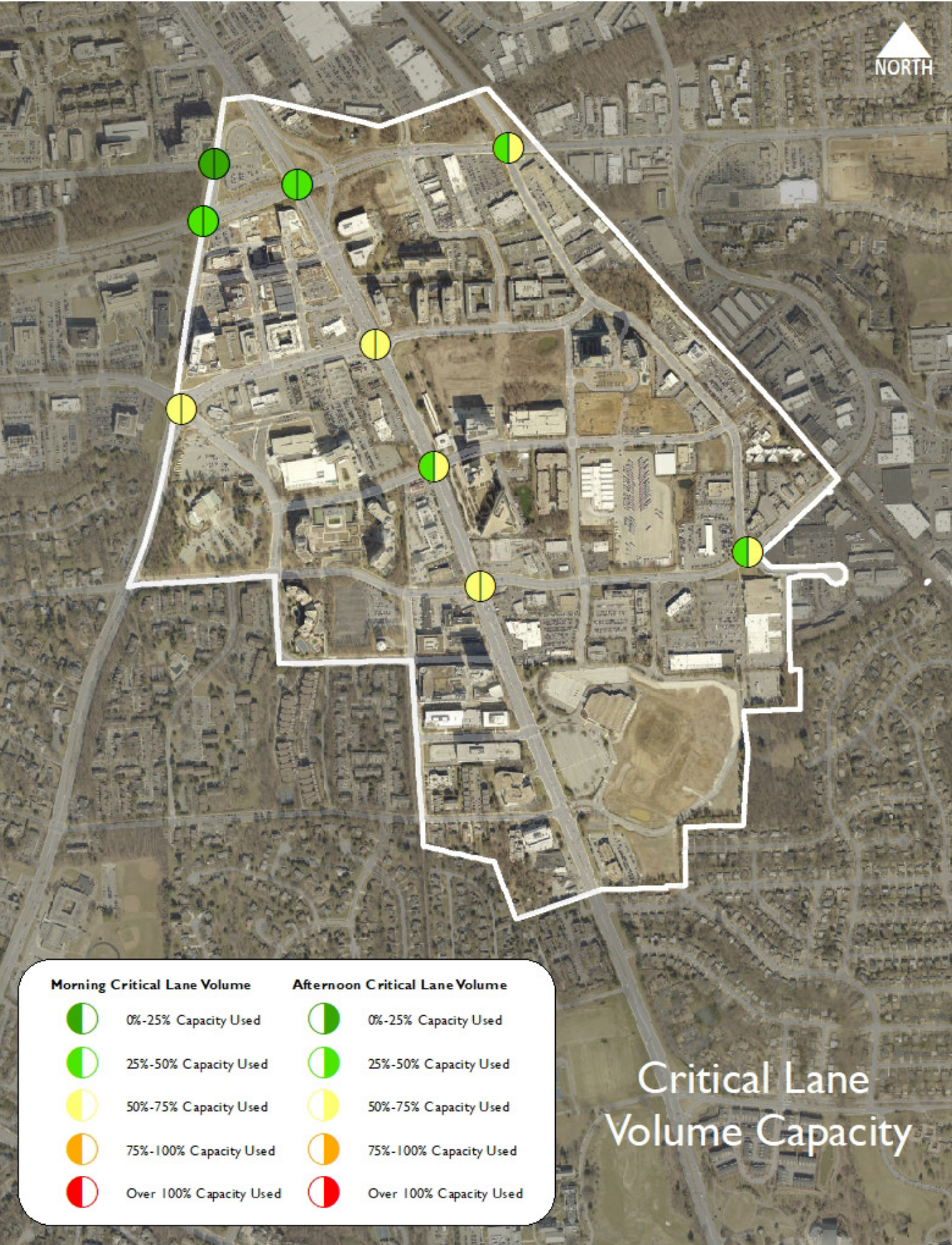




Figure 5: Percentage of Capacity Utilized per CLV

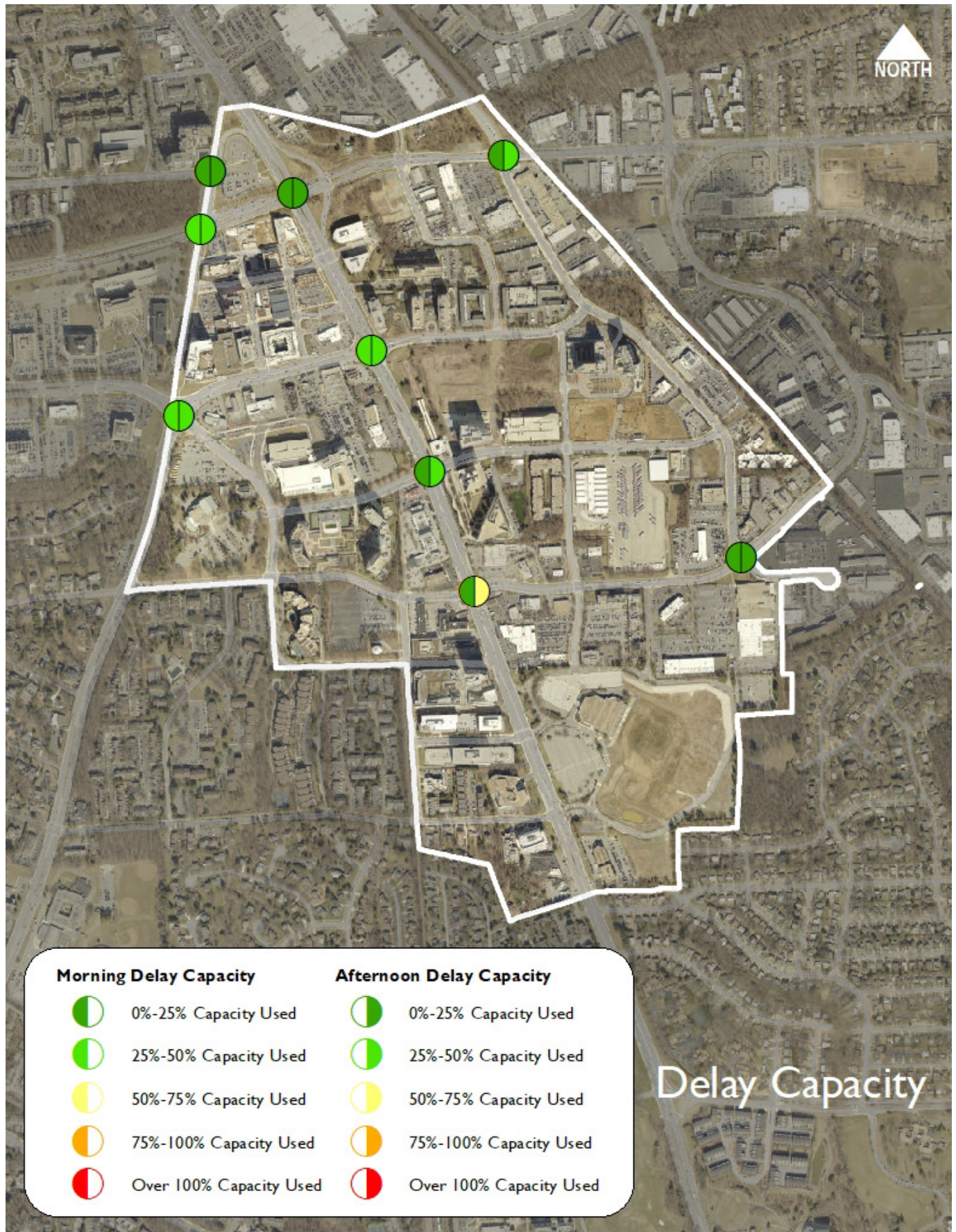
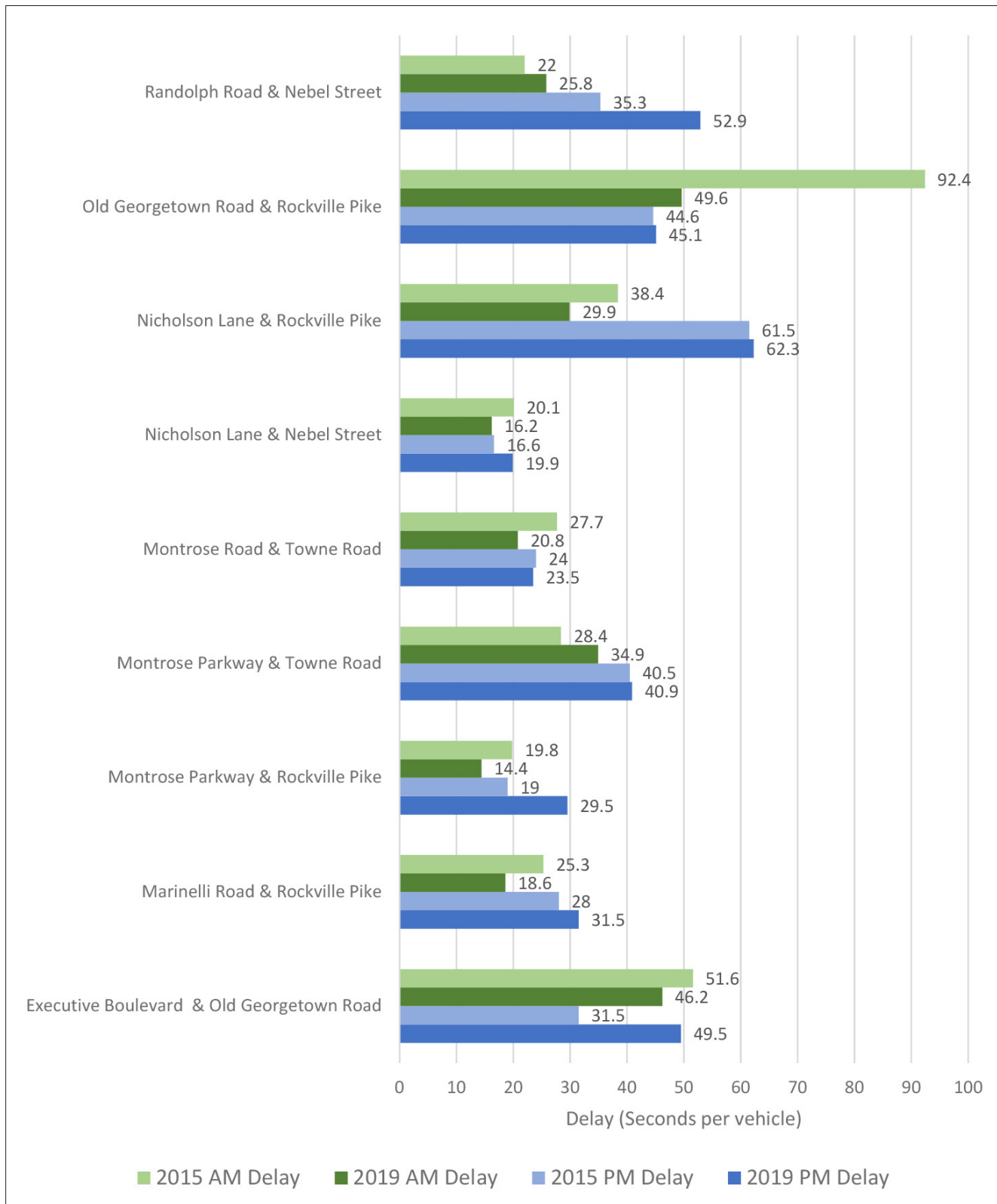




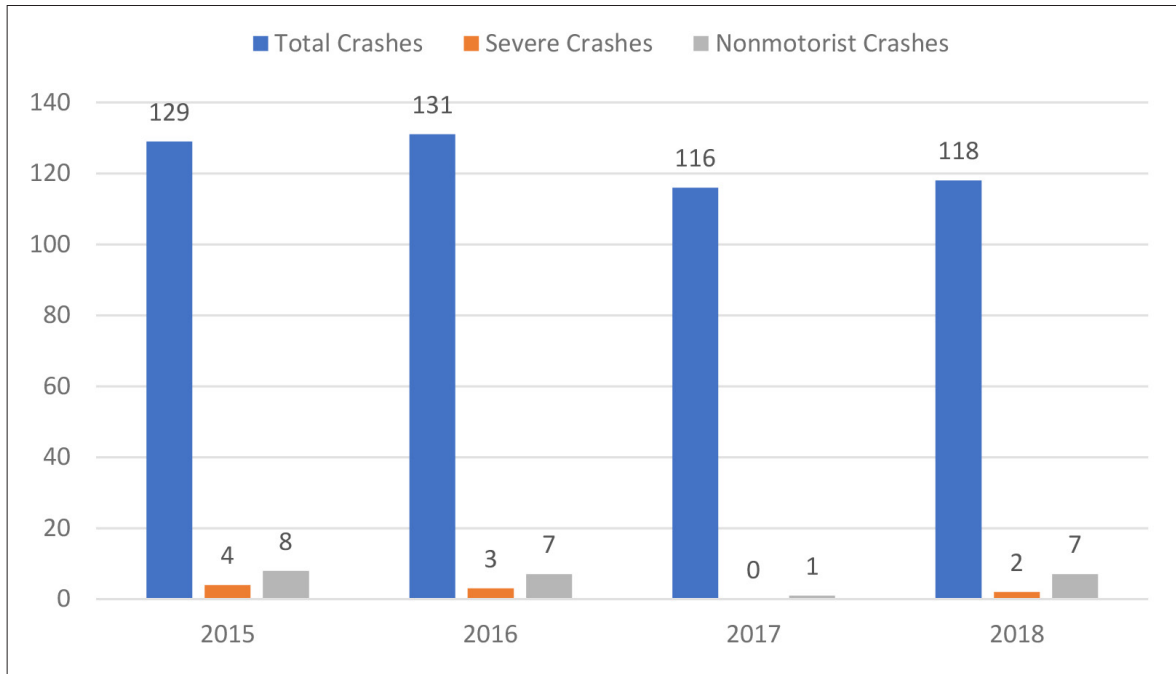
Figure 6: Comparison between 2015 and 2019 Peak Hour Delay



## Vision Zero

Between January 2015 and May 2019, 533 crashes occurred within the White Flint Plan area. While none of these crashes resulted in a fatality, 10 resulted in severe injuries. Twenty-five of the 533 crashes included nonmotorists, and 50 percent of the plan area's severe five crashes involved nonmotorists. Two problem intersections include Old Georgetown Road (MD 187) and Rockville Pike (MD 355) and Marinelli Road and Rockville Pike, in which four nonmotorist crashes have occurred. Figure 7 shows that crash rates have remained relatively consistent between 2015 and 2018. The study period's safest year was 2017. No severe crashes occurred in 2017, and only one crash involved a nonmotorist.

Figure 7: Reported vehicular crashes within the White Flint Sector Plan area





## CAPITAL IMPROVEMENTS PROGRAM (CIP)

### Capital Improvements Program Projects

The Montgomery County Department of Transportation (MCDOT) is managing several White Flint transportation projects that are essential to implementing the public transportation infrastructure, including:

- 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).
- White Flint Metro Station Northern Entrance (P501914).

Since the 2017 Biennial Monitoring Report, the construction of the first phase of the Western Workaround, including Banneker Street (Main/Market Street) and realigned Executive Boulevard (future Grand Park Avenue), is now open for traffic. Utility relocation for the second phase of the Western Workaround is currently underway and completion of construction is anticipated by FY 21.

In 2018, after delaying construction funding for Montrose Parkway East, the Council added \$3.5 million for the White Flint Metro Station's northern entrance. WMATA is currently leading the preliminary engineering design for the new entrance.

The new structured garage at the Bethesda North Conference Center was completed in 2018. The walkway connecting the Conference Center to the garage is expected to be completed by fall 2019. This project is identified in the CIP as Project No. 781401, under the General Government category.

The design for bus rapid transit service on Rockville Pike (MD 355), which is covered under CIP Project No. 501116 (White Flint District West). Transportation is projected to begin in FY 23 to coordinate with the implementation of bus rapid transit (CIP No. 501318). The current MD 355 BRT study will frame the MD 355 design.

No spending is included in the FY19-24 CIP for White Flint District East: Transportation (No. 501204). No new development activity has occurred along Executive Boulevard extended, east of Rockville Pike, since the approval of the 2010 White Flint Sector Plan. This project has been delayed beyond FY 24 due to affordability, including the potential costs to acquire needed roadway right-of-way. Similarly, the bridge over the Metro tracks has been delayed due to the ongoing discussions with Maryland State Highway Administration (SHA), MCDOT and WMATA about the future of this location.

## ADVISORY COMMITTEE

In 2010, the Montgomery County Planning Board created the White Flint Implementation Advisory Committee, per the 2010 White Flint Sector Plan requirement. This group includes property owners, County Executive Branch representatives, and civic and homeowners associations. The committee has reviewed all public and private development in the plan area as well as Montgomery County's Capital Improvements Program (CIP) projects. The Implementation Committee has reviewed this document and two members, Abbe Milstein and Mary Ward, have provided written comments.

Ms. Milstein, a representative from the Luxmanor Citizens Association, indicated that there is a "critical need for added new infrastructure, public transit, roads, bike & walking paths throughout the plan area, traffic mitigation, safety and open space." Specifically, to the Luxmanor neighborhood, Ms. Milstein noted that there are no public transportation options for residents, except for school busses. She also noted that "there are few safety features for pedestrians and bicycle access and the speed limits throughout the master plan area are dangerous for bicyclists and pedestrians."

Mary Ward, a resident from Crest of Wickford, provided the following comments:

- The importance of planning for the Civic Green implementation.
- Additional bikeways are needed to further connect White Flint to areas east of White Flint Mall, which would provide access to bike commuters from the White Flint Park-Garrett Park neighborhoods and via Garrett Park to the Rock Creek Trail network.
- Encourage more bike share station destinations outside of the White Flint areas. For example, Strathmore-Grosvenor and north and south along the Bethesda Trolley Trail. These connections will encourage and enable more bikeshare usage for shopping/errands, commuting and recreation.

## RECOMMENDATIONS

The completion of the first and second phases of Pike & Rose by Federal Realty Investment Trust and the approvals of other development plans, such as Grand Park North (VOB) and East Village at North Bethesda Gateway, represent the type of development envisioned in the White Flint Sector Plan.

The implementation of the roadway realignment of Old Georgetown Road, Executive Boulevard (Grand Park Extended) and Towne Road represent the County's commitment and investment to implement the street network recommended in the White Flint Sector Plan. Additional CIP projects, including the initial funding for the second White Flint Metro Station entrance and the completion of the construction of the Conference Center parking garage are additional examples of the County's commitment to successfully implementing the infrastructure recommendations in the plan area.

As new public and private development moves forward, the following items should be addressed to further ensure successful implementation of the Sector Plan.

### Transportation

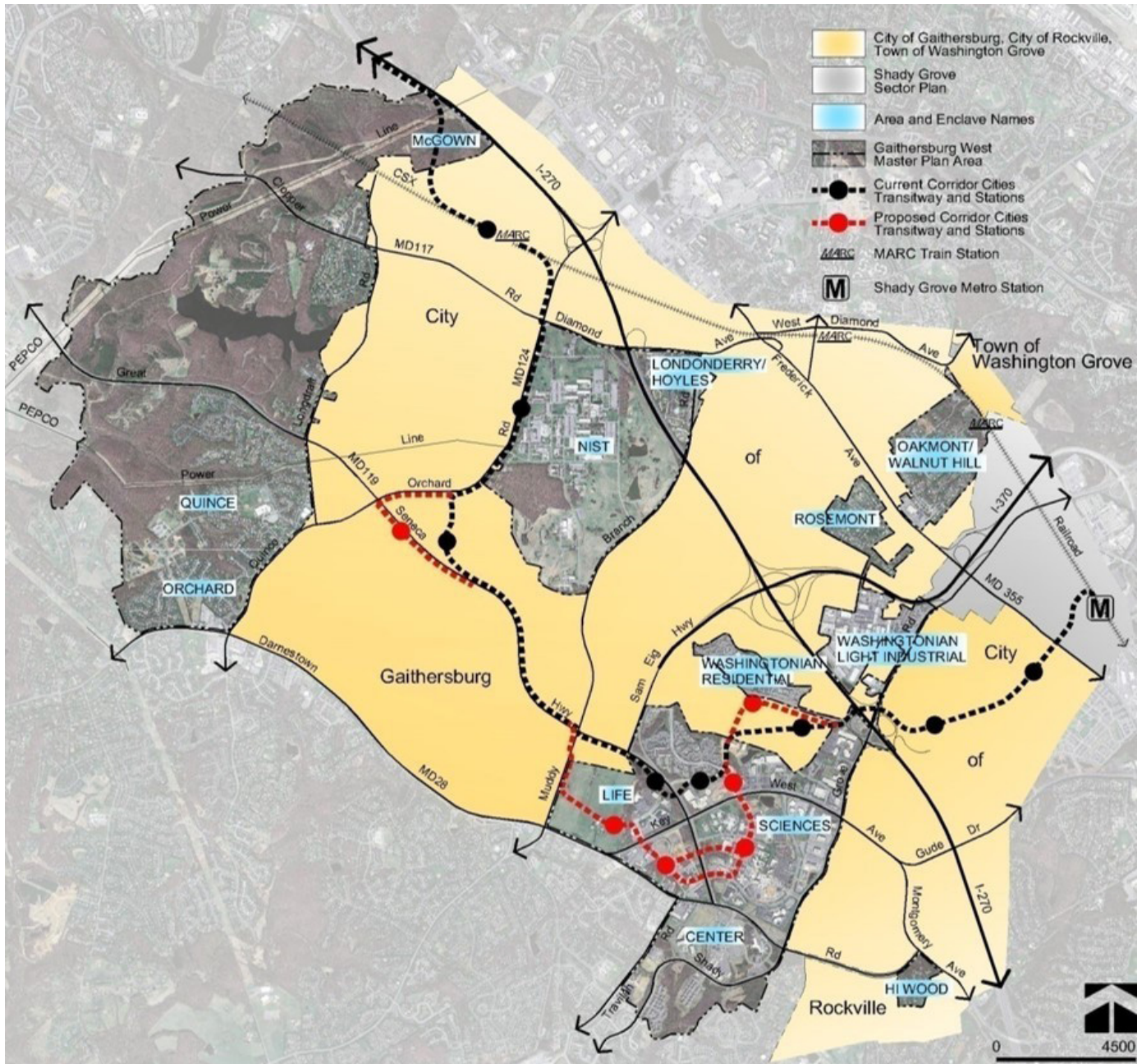
- Per phase one staging requirements, Montgomery County Department of Transportation (MCDOT) should fund streetscape and bikeways improvements for Old Georgetown Road, Marinelli Road and Nicholson Lane, which are within a ¼ mile of the White Flint Metro Station.
- The existing Nebel Street protected bikeway should extend to Nicholson Lane, to further implement the bikeway network.

### Public Facilities and Amenities

- The Parks Department should begin to pursue options to enlarge the dedicated area from the Grand Park/VOB development to create the future Civic Green. Enlargement could include potential acquisition of adjacent properties or a public-private partnership.
- The Department of General Services (DGS) should explore alternative design options for the proposed Fire Station 23 that would reflect an urban model with multiple uses, rather than a suburban model.
- The County should maximize its efforts to conclude and sign its development agreements with Gables Residential to permit shared parking garage construction to begin.



Map 7: GSSC 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” 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 April 2017, 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’s 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). This trigger has just been met.

## KEY STAGING UPDATES

There are three major staging updates from the 2017 Biennial Master Plan Monitoring Report (BMR) for the GSSC Master Plan area.

- **Non-Auto Driver Mode Share (NADMS): The NADMS trigger has now been met.** 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 FY 2018 commuter survey identifies this figure at 19.1 percent during the two-hour peak drive time. This figure, which is the standard that has been used since the Master Plan was adopted in 2010, now exceeds the 18 percent NADMS needed to open stage two. In recognition of an expansion of the time that can be considered “peak” drive time, MCDOT is now also calculating a NADMS spread over a three-hour peak time period. This more conservative figure has been calculated at 18.2 percent, which also exceeds the 18 percent required for opening stage two of the Master Plan.
  - **Corridor Cities Transitway (CCT): In July 2019, the Maryland Transit Authority sent a letter to Montgomery County informing them that the State has completed all the work they intend to do on the CCT, and are turning it over to the County for implementation.** 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. 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 2015 BMR. The 30 percent design was completed in October 2015. Currently, MTA is working to wrap up the Environmental Assessment for the CCT. This would complete the first major step of the National Environmental Policy Act (NEPA) process.
- Funding the CCT is critical to implementing the GSSC Master Plan, and this project suffered a setback in Fall 2016 when the Governor postponed funding for the CCT in the State’s Consolidated Transportation Plan (CTP). Subsequent to the funding postponement, 5 million dollars was restored to the CCT line item for FY18 in the CTP. This amount may help wrap up some current planning efforts; however it does little to advance attainment of the full funding goal. The MTA is considering options that will reduce up-front costs and facilitate earlier implementation of the system.



An additional challenge to construction of the CCT across the Belward Campus site of the Johns Hopkins University has arisen due to the historic site designation on the farm. As long as the historic setting of the farmhouse and outbuildings remains undisturbed, the Maryland Historic Trust (MHT) will not grant a permit for construction of the CCT across the Belward Campus. This may change in the future as other development on the property will likely change the character of the historic setting. At that time, MHT will reevaluate the granting of a construction permit for the CCT. Until that time, the 30 percent design plans for the CCT show the facility running along Darnestown Road and Muddy Branch Road rather than across the farm property as originally envisioned.

- Life Sciences Center (LSC) Loop: Funding for Final Design is now included in the current approved Capital Budget for Montgomery County. Final Design funding is included in FY 2023 and 2024. Funding for construction is not yet included in the six-year Capital Budget.** In July 2014, the Planning Department hired Rhodeside & Harwell to develop a design for the LSC Loop with funding from the Metropolitan Washington Council of Governments (MWCOC) 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. Since the 2015 Biennial Monitoring Report, the initial design for the LSC Loop was completed and approved by the Planning Board as an amendment to the Urban Design Guidelines for the GSSC Master Plan. Through continued outreach and advocacy for the Loop Trail, funding for facility planning of the trail was included in MCDOT’s CIP for FY 2017, and MCDOT completed 35% design plans in 2018. The LSC Loop Trail has been designated project number P501742 in the MCDOT CIP, with an estimated schedule for final design to occur in FY23-24, and construction in FY25-26. The Master Plan states that funding for this project may also be provided through developer contributions.

## Staging triggers previously met

- Public Safety Training Academy (PSTA) relocation:** The new PSTA at the Montgomery County Multi-Agency Service Park (MCMASP) opened in November 2016 and the former PSTA on Great Seneca Highway was vacated.

The Master Plan states that the new LSC West community to be constructed on the PSTA site should include a new public elementary school, if needed. 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). The MCDGS will coordinate planning for the park/school site with MCPS and the Montgomery County Department of Parks.

## Non-staging-related updates

- Bicycle Master Plan (BMP):** At the request of the GSSC Implementation Advisory Committee and residents and stakeholders, and in consultation with the Montgomery County Department of Transportation, the Planning Department commenced the Bicycle Master Plan with an early focus on the LSC. Due to the rapid pace of change in the Life Sciences Center area, the Planning Department has advanced work in this area so that meaningful opportunities to construct segments of the preferred bike network were not lost before the Bicycle Master Plan could be completed. This effort will enable the Planning Department to coordinate with development approvals and the design of the Corridor Cities Transitway. The Bicycle Master Plan was approved by the Montgomery County Council on November 27, 2018, and adopted by the Maryland-National Capital Park and Planning Commission on December 19, 2018.

## STATUS OF PLAN BUILDOUT

### Non-Residential Development

When the GSSC Master Plan was approved in 2010, there was approximately 7,000,000 square feet of existing non-residential development on the ground in the LSC, with about 3,700,000 square feet of approved but unbuilt development in the pipeline. Stage 1 of the Master Plan made an additional 400,000 square feet of non-residential development available, and allowed the conversion of approved unbuilt non-residential capacity to residential unit approvals with Planning Board approval. Since then, new non-residential development construction and conversions of non-residential approvals to constructed

residential projects has increased the built non-residential development to 8,266,850 square feet, and reduced the pipeline capacity to 2,474,084 square feet. Of the total remaining pipeline capacity, approximately 1,500,000 square feet is associated with Preliminary Plans on the two properties owned by Johns Hopkins University, leaving around 974,000 square feet of non-residential pipeline capacity available for the remainder of the LSC until Stage 2 is opened.

### Residential Development

Since the approval of the GSSC Master Plan, 1,219 new residential units have been added in the LSC. Of these, 139 units are townhouses, and the rest are in multifamily buildings. Of the total, only 311 units count against the cap of 2,500 new residential units in Stage 1. The other units were either non-residential to residential conversions or previously approved but unbuilt (pipeline) units. The remaining capacity for new residential development under Stage 1 is 2,189 units.

### 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.”

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.

### DEVELOPMENT APPROVALS

Since the 2017 Biennial Master Plan Monitoring Report, the Planning Board has approved three significant Site Plan Amendments that advance the goal to enhance the LSC’s role at the county’s premier life sciences location.

### Site Plans

A Site Plan Amendment was approved by the Montgomery County Planning Board on July 27, 2017 for the 9615 Medical Center Drive Base Building (No. 82010009B). This Site Plan Amendment approves a new 69,000 square foot laboratory building on the Johns Hopkins University’s Montgomery County Medical Center campus as part of the National Cancer Institute’s headquarters and research



*Hanover Shady Grove*



center. This project is under construction, and the building structure is substantially complete as of August 14, 2019.

A Site Plan Amendment was approved by the Montgomery County Planning Board on December 14, 2018 for Shady Grove Life Sciences Center Parcel 7 (No. 81997005B).

This Site Plan Amendment approves a new 85,000 square foot building that will serve as a combination office, laboratory, and light manufacturing facility. This facility will serve as the new U.S. headquarters for the London-based biopharmaceutical firm Autolus Therapeutics, and becomes the company’s first foothold in the United States. Autolus describes itself as a leader in cutting-edge T-cell programming technologies. This project is already under construction, and the building framing was nearing completion as of August 14, 2019.

A Site Plan Amendment and final water quality plan were approved by the Montgomery County Planning Board on January 10, 2019 for 9800 Medical Center Drive (No. 81995045E). This Site Plan Amendment approves an infill development plan for a new 175,840 square foot research and development building containing offices and laboratory space on a campus owned by Alexandria Real Estate Equities (ARE). The plans also approve a new

746-space parking garage. ARE is a national company that develops, owns and operates clusters of life science, technology and agtech campuses in “key urban innovation cluster locations” around the country. The new building joins four other buildings already existing on the campus, bringing the total of R&D uses approved for this site to 457,219 square feet. Groundbreaking for this project has occurred as of August 14, 2019.

### Concept Plans

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).

### Projects Approved Since 2017 Biennial Monitoring Report - Under Construction



All applicable properties have approved concept plans except the PSTA site. The Montgomery County Planning Department has recently accepted a concept plan for the PSTA redevelopment, and staff has submitted comments back to the Applicant. Responding to the staff comments will require substantial modification to the submitted plans; consequently, sharing images or details in this report would be premature.

## Projects Completed or Under Construction

Several projects that were highlighted in past biennial monitoring reports have either been completed or obtained building permits and are under construction. These projects include:

- **Travilah Square Shopping Center**, Preliminary Plan Amendment No. 12011034B and Site Plan Amendment 82013007A: The Trader Joe's grocery store approved in these plan amendments has been completed and is open for business.
- **Universities at Shady Grove**, Biomedical Sciences and Engineering Education Facility, Mandatory Referral No. MR2016008: This new 220,000-square foot, six-story, state-of-the-art academic building is under construction and scheduled to open in November 2019.
- **Camden Shady Grove**, Preliminary Plan Amendment No. 11996112A: 335 new multifamily units constructed.
- **Mallory Square**, Preliminary Plan No. 120120180, Site Plan No. 820120130: 379 new multifamily units constructed.
- **Travilah Grove**, Preliminary Plan Amendment No. 12012029A, Site Plan Amendment No. 82013020A: 100 new townhouse units constructed or under construction.
- **Hanover Shady Grove**, Preliminary Plan Amendment No. 11986186A: 355 new multifamily units constructed.

## 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 2015 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.





## PUBLIC FACILITIES AND AMENITIES

### 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 Nancy H. Dacek North Potomac Recreation Center has been completed, and was dedicated on October 22, 2016.

### Public Parks

The GSSC Master Plan includes recommendations for a public park on the Belward Farm site in the LSC Belward District, a park or shared park/school site on the redeveloped Public Safety Training Academy in the LSC West, and Traville Local Park just south of Shady Grove Road in the LSC South District. The parks at Belward and the PSTA will be planned and built in coordination with the development review processes for those properties. Traville Local Park is owned by the Department of Parks, but remains undeveloped. The Department of Parks will continue to assess the needs for development of Traville Local Park as the area builds out.

For references to public park sizes and descriptions, see the 2017 Park, Recreation and Open Space (PROS) Plan.

Many 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 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.

## 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 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.” The county is continuing to plan the redevelopment of the PSTA site and details about the school site will be considered as part of the regulatory process.

### *School Clusters*

Under the Subdivision Staging Plan (SSP), school adequacy is tested at the cluster level and at the individual school level. If at any school level, projected enrollment exceeds 120 percent of projected capacity, the Planning Board cannot approve additional residential development. For elementary schools, if projected enrollment exceeds projected capacity by 120 percent and the deficit is greater than 110 student seats, then the Planning Board cannot approve additional residential development within the applicable elementary school service area. For middle schools, if projected enrollment exceeds projected capacity by 120 percent and the deficit is greater than 180 student seats, then the Planning Board cannot approve additional residential development within the applicable middle school service area.

The Life Sciences Center is served by two high school clusters: the Gaithersburg Cluster and the Thomas S. Wootton Cluster. Middle school boundaries within the Life Sciences Center include Forest Oak MS, Cabin John MS, and Frost MS. Elementary school boundaries include Stone Mill ES, Lakewood ES, and Rosemont ES. Based on the results of the school test for FY20, Rosemont ES is over capacity, but remains open pending the opening of new Gaithersburg ES #8, slated to open in 2022. All other schools assessed in the FY20 Schools Test are below 120 percent capacity.

## 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.



*Travilah Fire Station*

## Library

The GSSC Master Plan 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. It could be located at the Johns Hopkins University Belward Campus, 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.”

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: Twenty-one percent of the net lot is approved as enhanced streetscape and pedestrian/cyclist facilities, landscaping and the master-planned CCT urban plaza.
- Travilah Grove: The 10 percent requirement will be exceeded with three areas of public use space in 2.0 acres. These public open spaces provide passive and

active recreation opportunities and the largest of the three areas will include: landscaped seating with park benches on brick pavers, a pergola, barbeque grills and picnic facilities, a fire pit, a bocce ball court and a grass-surface open play area, all in a linear park-like design.

- Mallory Square: Twenty percent of the net lot is approved for enhanced pedestrian/cyclist amenities, urban plazas, landscaping and a pocket park.
- National Cancer Institute: Thirty-seven percent of the net lot is approved for open space for employees and visitors.
- Hanover Shady Grove: Nineteen percent of the net lot is approved for an urban pocket park, enhanced streetscapes, and passive recreation areas.
- Johns Hopkins University (JHU) Belward Campus: Twenty 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: Twenty percent of the site is approved for improved landscaping, pocket parks and enhanced pedestrian/cyclist amenities.
- 9800 Medical Center Drive: Twenty percent of the net lot is approved for open space for employees and visitors.
- Travilah Square: The 10 percent public use space requirement to be met with a 7,500-square foot area on the west side of the proposed new building. The space is at the required 10 percent and will create a focal point/sitting area with a trellis feature, native plant landscaping and shade trees for canopy coverage. The public use space will activate the public realm as a gathering place for patrons and employees at the shopping center.
- Shady Grove Adventist Hospital: Twenty percent of the net lot is approved for enhanced streetscape and pedestrian/cyclist facilities, landscaping and the master-planned CCT urban plaza.
- Shady Grove Parcel N/Q: Public use space will comprise 47.3 percent of the site. That is well in excess of the 20 percent required in the LSC zone.



## 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 that 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.

## MOBILITY

### Plan Recommendations

The GSSC Master Plan recommends “a comprehensive transportation network for all modes of travel, including bicycle and pedestrian routes, and constructing the Corridor Cities Transitway through the Life Sciences Center.” The Plan proposes a local street network that will create a finer grid, which will in turn improve vehicular and pedestrian connections between the Plan’s districts. The Life Sciences Center Loop was specifically developed to help unify the Plan’s districts through a system of sidewalks, bikeways, and trails. While the loop offers much in terms of functional mobility, it also provides leisure options to individuals who work and reside within the area.

The Plan additionally recommends managing parking supply and demand, and identifying opportunities for shared public parking facilities. Managing parking, in tandem with supplying other mobility options —such as the LSC Loop Trail—will help the employees of the Life Sciences Center of the Plan area reach the increasing Non-Auto Driver Mode Share goals.

## Corridor Cities Transitway

Since the GSSC Master Plan's adoption in June 2010, the state 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. 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 30 percent design milestone was reached in October 2015. One of the challenges that surfaced during the review of the CCT is the cross-section and alignment of the CCT, which seeks to co-locate the transit lanes, automobile travel lanes and bike and pedestrian facilities 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 the Maryland Transit Authority (MTA), MCDOT, the Montgomery County Planning Department, Washingtonian Woods and Mission Hills communities, and various individual property owners.

In July 2019, the MTA sent a letter to Montgomery County stating it has completed the work it plans to do on the CCT, and is turning it over to the county for all remaining work.

## New Street Network

The 2010 Master Plan divided the Life Sciences Center into five distinct districts. No new links have been made to the Belward, Central, or South districts. Within the Life Sciences Center North District, the Mallory Square project constructed a master-planned connection, now called Siesta Key, between Research Boulevard and Key West Avenue. Right-of-way has been provided for an additional connection between the two streets just east of the new project, but has yet to be constructed. Private roadways were constructed in conjunction with the Camden project (formerly referred to as "Lot 7"), resulting in new links between Discoverly Drive, Key West Avenue, and Diamondback Drive. The Department of General Services has issued an RFP for development of the PSTA site located in the Life Sciences Center West District. Conceptual drawings show some of the master-planned connections

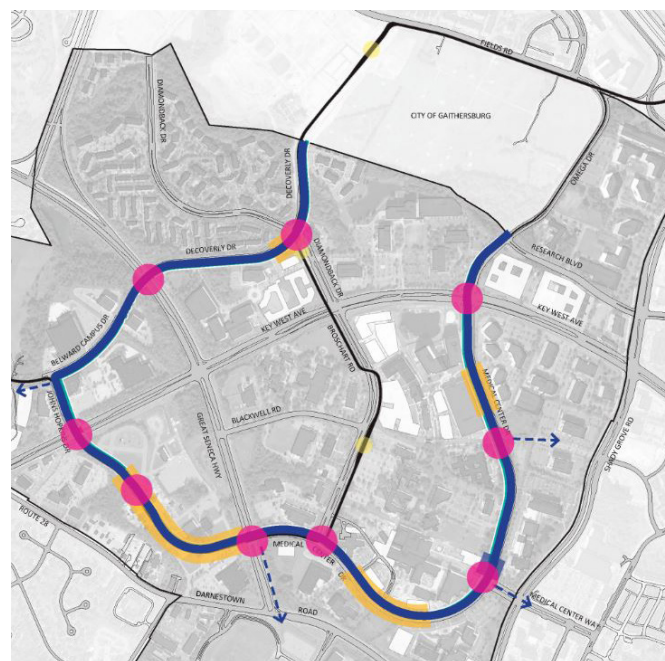
envisioned, as well as the extension of Medical Center Drive. Staff anticipates coordinating further with the Applicant through the development process.

## Bicycle and Pedestrian Connections

The Bicycle Master Plan was approved by the County Council on November 27, 2018 and subsequently adopted by the Full Commission on December 19, 2018. The Plan amends the facilities proposed in the 2010 GSSC Master Plan as many of the roadways in the plan area are considered to have a high level of stress. Figures 8 and 9 depict the existing and proposed bicycle networks within the Gaithersburg and R&D Village policy areas as shown below.

## The LSC Loop

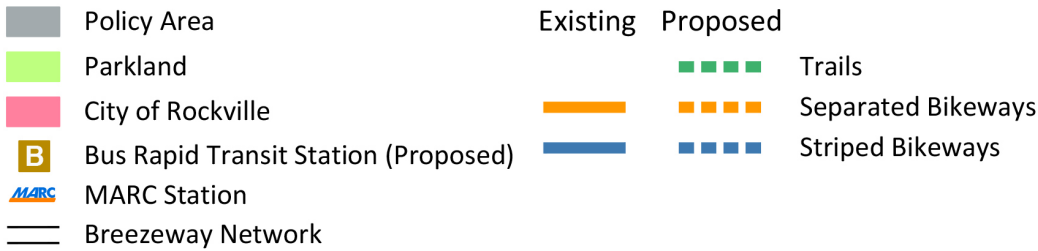
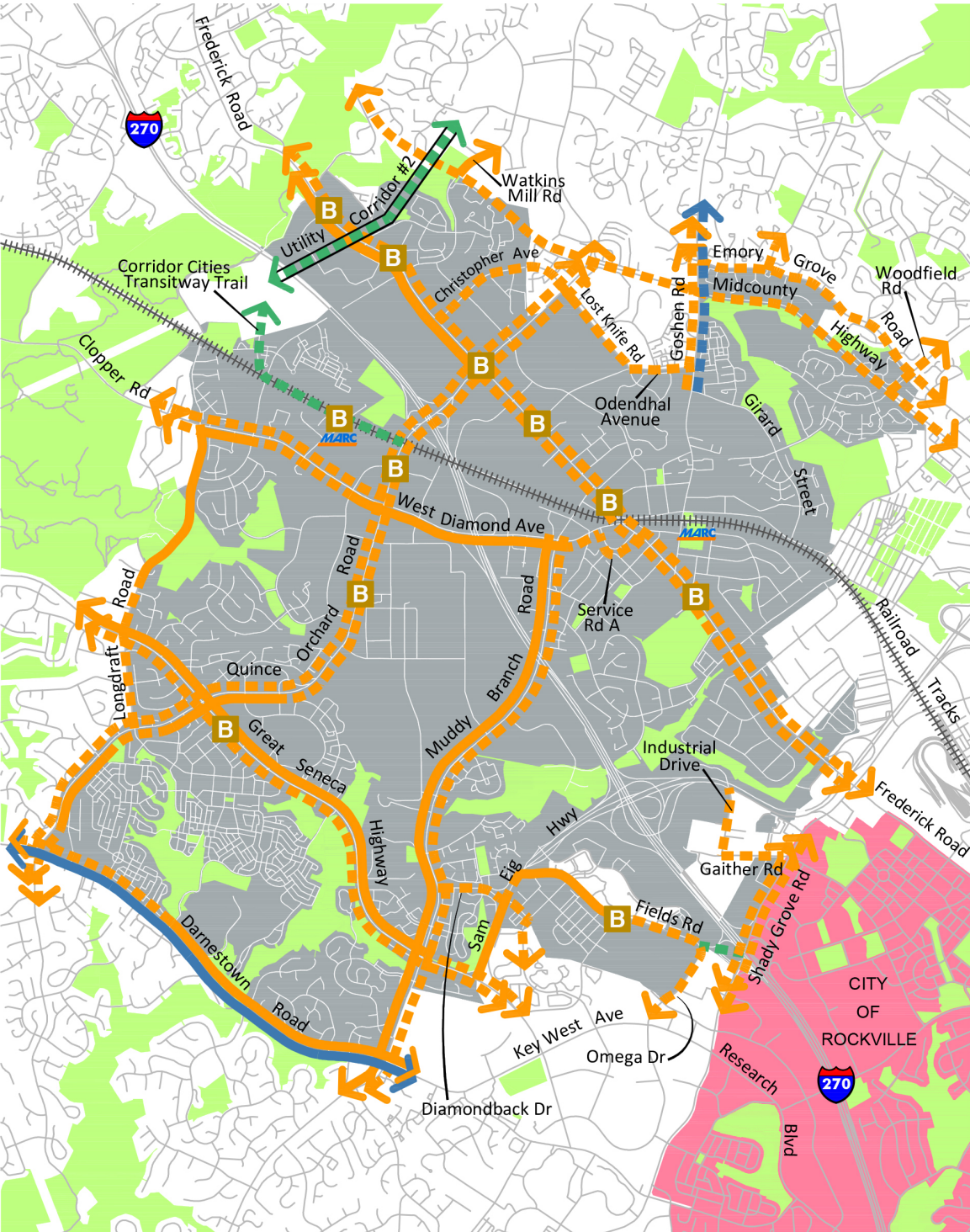
The LSC Loop trail will provide both non-auto transportation links throughout the LSC and opportunities for recreation. Portions of the LSC Loop will be constructed as part of large developments, such as the PSTA and JHU Belward Campus. Gaps will need to be identified and funding included in the county's Capital Improvements Program. As discussed earlier in this report, significant progress has been made in planning the LSC Loop, with funding for final design included in the currently approved Montgomery County six-year capital budget.



LSC Loop Trail



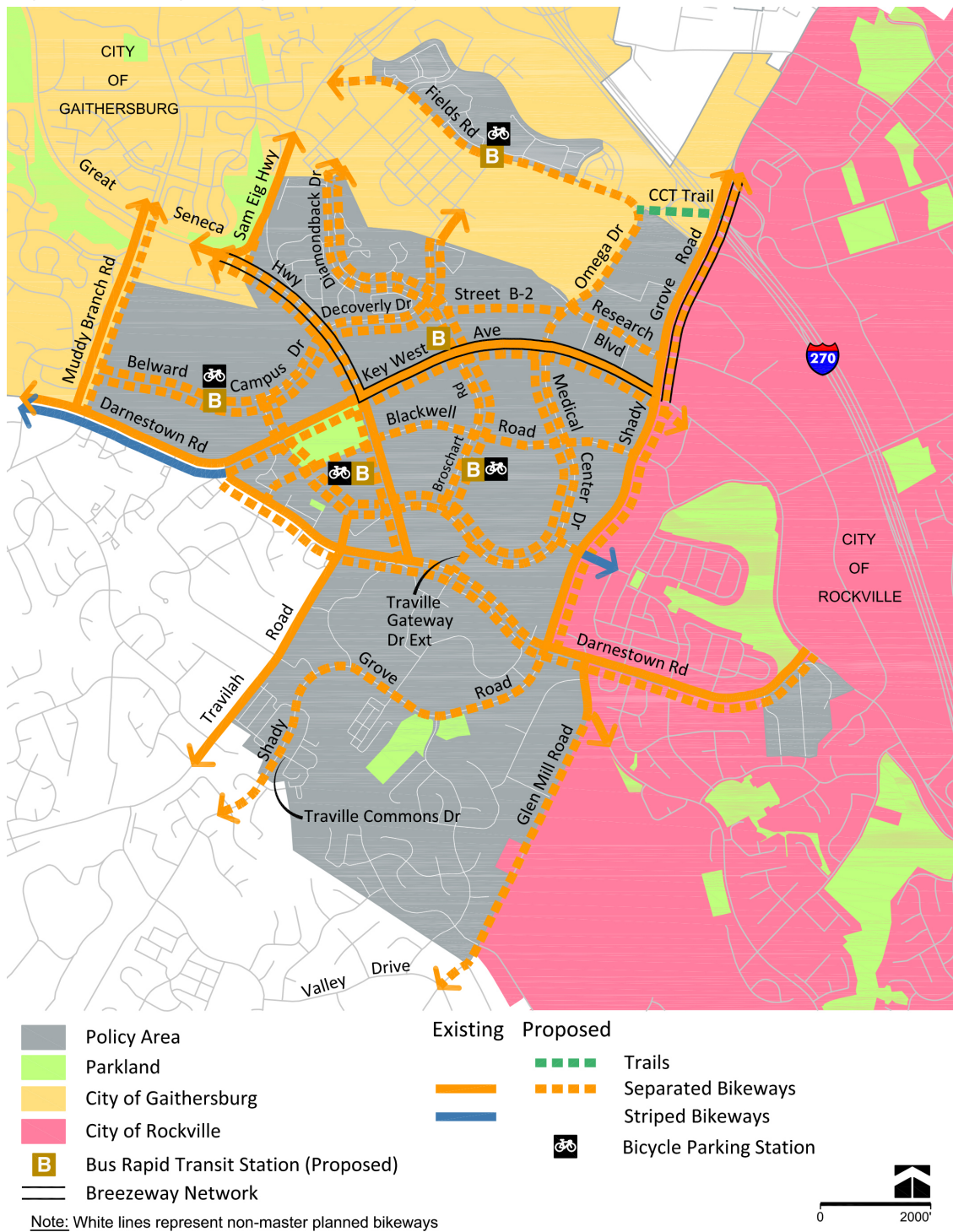
Figure 8: Gaithersburg City Existing and Planned Bicycle Network



Note: White lines represent non-master planned bikeways



Figure 9: R&D Village Existing and Planned Bicycle Network





**Non-Auto Driver Mode Share (NADMS)**

The Great Seneca Science Corridor Master Plan’s staging policy caps development levels based on a series of infrastructure and policy action items. Among these, NADMS goals are included to ensure that employees working within the Plan area make use of transit and non-vehicular travel options for commuting in support of the Plan’s multimodal goals.

The Life Sciences Center must achieve a NADMS of 18 percent in order for development to proceed into the

next stage. As part of its management of the Greater Shady Grove Transportation Management District, the Montgomery County Department of Transportation Commuter Services Division surveys employees of the Life Sciences Center to measure progress toward these goals. The most recent survey year was in 2018, in which 19 percent of respondents indicated using bus, train, carpooling, teleworking, bicycling or an alternative work schedule. Table 4 shows survey results across the most recent four survey years.

Table 4: Life Sciences Center NADMS Goals and Progress

TMD	Goal (%)	FY13	FY14	FY16	FY18
Life Sciences Center (part of Greater Shady Grove TMD)	18% (stage 1)	16%	16%	14%	19%

**Transit Ridership**

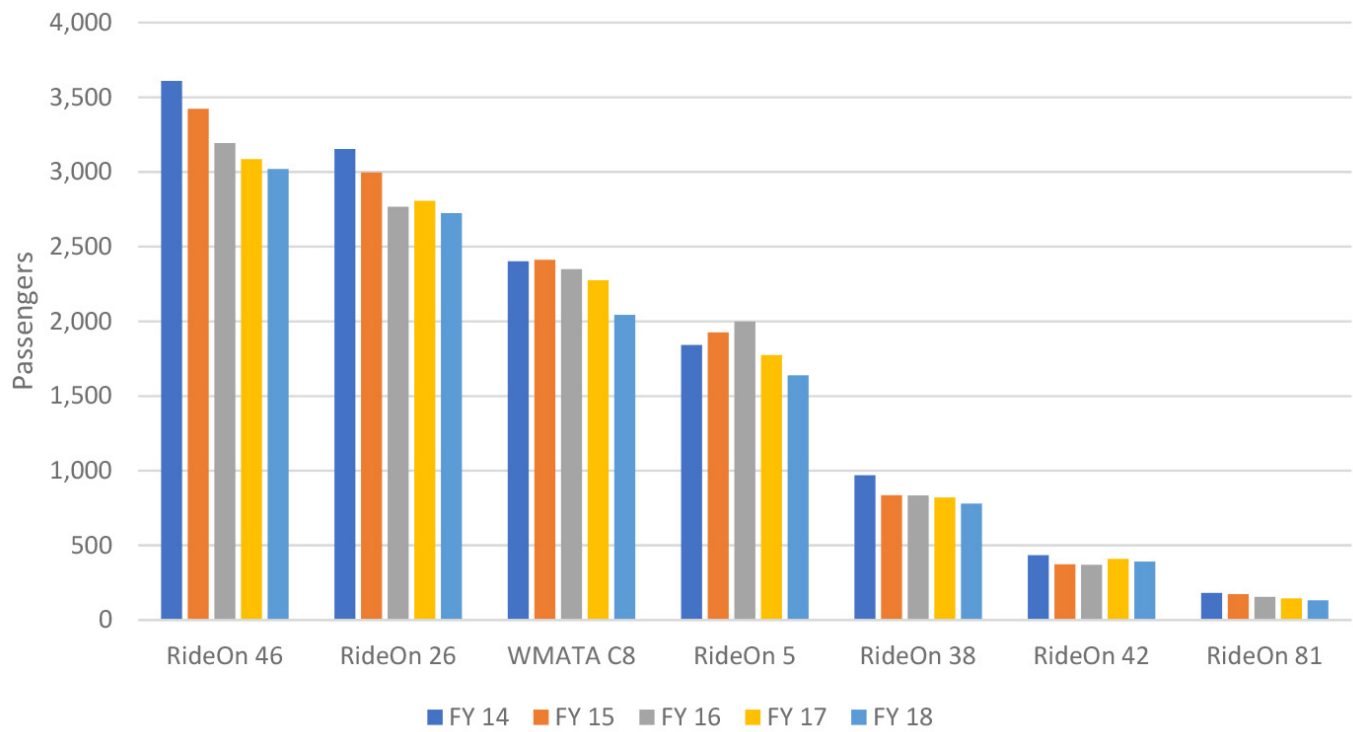
Transit ridership provides an additional benchmarking measure in which the relative success of transportation demand management programs and policies can be assessed. It is important to note that ridership trends represent a package of local and national forces, including but not limited to land use, operational efficiency, gas and

fuel costs, weather, and consumer comfort. Nationally, transit use has been on the decline. The predominantly used Ride On lines servicing the vicinity of the Life Sciences Center portion of the Plan area reflect national trends, while the leaner locally oriented routes show more year-over-year variability. Table 5 depicts the routes that generally serve the Plan area, as well as their termini. Figure 10 depicts ridership across fiscal years 2014-2018.

Table 5: Bus Service Accessible within the Life Sciences Center Vicinity

Line	Terminus 1	Terminus 2
RideOn 43	Shady Grove Metro Station	Traville Transit Center
RideOn 45	Twinbrook Metro Station	Rockville Regional Transit Center
RideOn 54	Rockville Metro Station	Lakeforest Transit Center
RideOn 56	Rockville Metro Station	Lakeforest Transit Center
RideOn 66	Shady Grove Metro Station	Traville Transit Center
RideOn 67	Shady Grove Metro Station	Traville Transit Center
RideOn 74	Shady Grove Metro Station	Germantown Transit Center

Figure 10: Average Weekday Bus Ridership





Subdivision Staging Policy

Per the county’s Subdivision Staging Policy, new development proposals in the Great Seneca Science Corridor are subject to Local Area Transportation Review (LATR) studies when a proposed use will generate more than 50 weekday peak-hour person trips. LATR studies apply newly generated vehicle trips to the roadway network and analyze how a proposed use will affect intersection operations based on the relevant measure of effectiveness.

The 2016 Subdivision Staging Policy Update developed a new policy to use two separate measures of effectiveness based on geography. Projects located in a “green” or “yellow” policy area are measured by assessing the critical lane volume (CLV) at a given intersection. The term “critical lane volume” essentially means the combined number of vehicles moving through the most constrained lane group of an intersection during the peak hour of operation. “Green” and “yellow” policy areas each have a

separate threshold of acceptable intersection congestion, as measured by the CLV methodology. While none of the intersections in the Great Seneca Science Corridor Plan area fall within “green” and “yellow” policy areas, it is important to note that previous plans and studies employed CLV as the primary measure of effectiveness for study intersections within the Great Seneca Science Corridor planning area.

Development projects located in “orange” or “red” policy areas are measured by assessing the weekday peak hour’s average intersection delay, per the most recent method of the Transportation Research Board’s Highway Capacity Manual, which is a generally accepted industry standard. Average intersection delay is the average number of seconds it takes a vehicle to pass through an intersection at any leg of the intersection. The methodology weights individual delay at each intersection leg by the leg’s volume to develop an overall measure of delay at the entire intersection.

Table 6: Study Intersections, Policy Areas, and Measures of Effectiveness

Study Intersection	Policy Area	Acceptable Delay Threshold	Acceptable Critical Lane Volume Threshold
Great Seneca Highway and Key West Avenue	R&D Village	55 seconds/vehicle	1450
Great Seneca Highway and Muddy Branch Road	Gaithersburg City	51 seconds/vehicle	1425
Great Seneca Highway and Quince Orchard Road	Gaithersburg City	51 seconds/vehicle	1425
Great Seneca Highway and Sam Eig Highway	R&D Village	55 seconds/vehicle	1450
Shady Grove Road and Fallsgrove Boulevard	Rockville City	63 second/vehicle	1500

Figures 11 and 12 illustrate the effectiveness of intersection operations based on the currently relevant average intersection delay standard, and the formerly relevant CLV standards. Figures 13 and 14 depict the locations within the Plan area.

Figure 11: Study Intersections Existing Average Intersection Delay

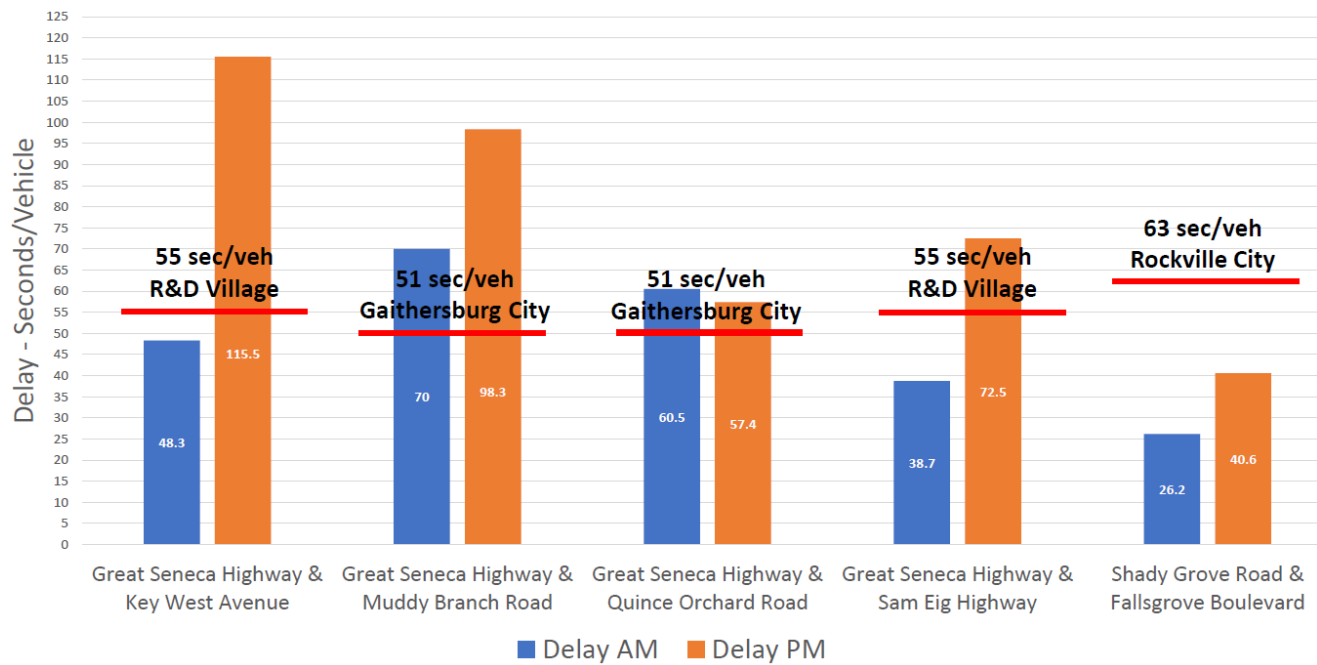


Figure 12: Study Intersections Existing Critical Lane Volumes

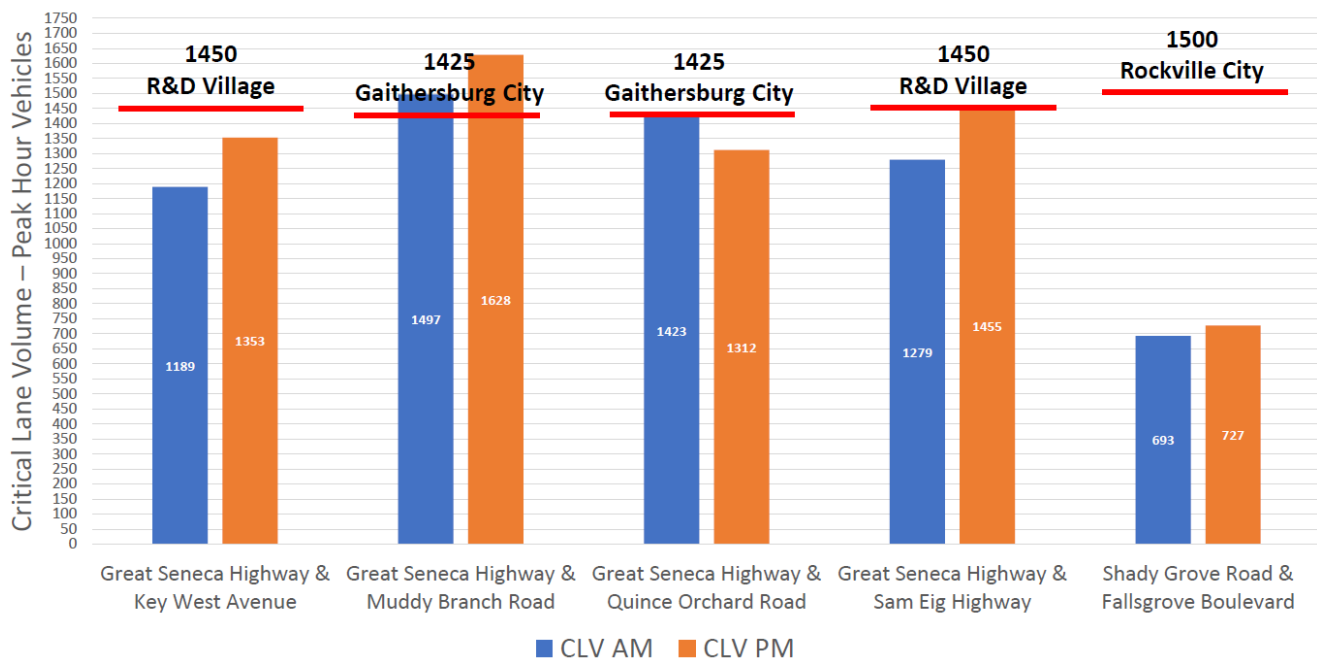




Figure 13: Percentage of Capacity Utilized per HCM Delay

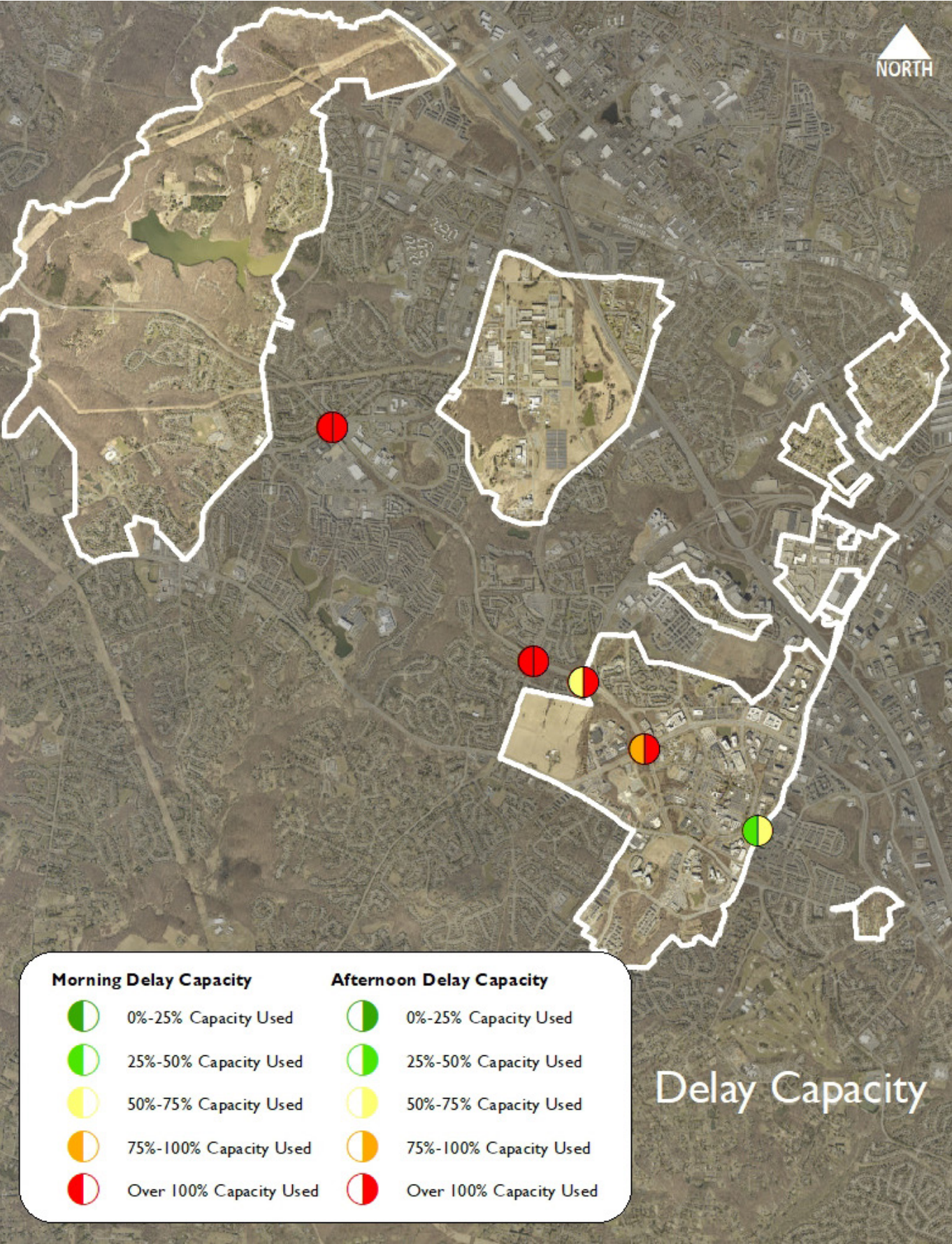
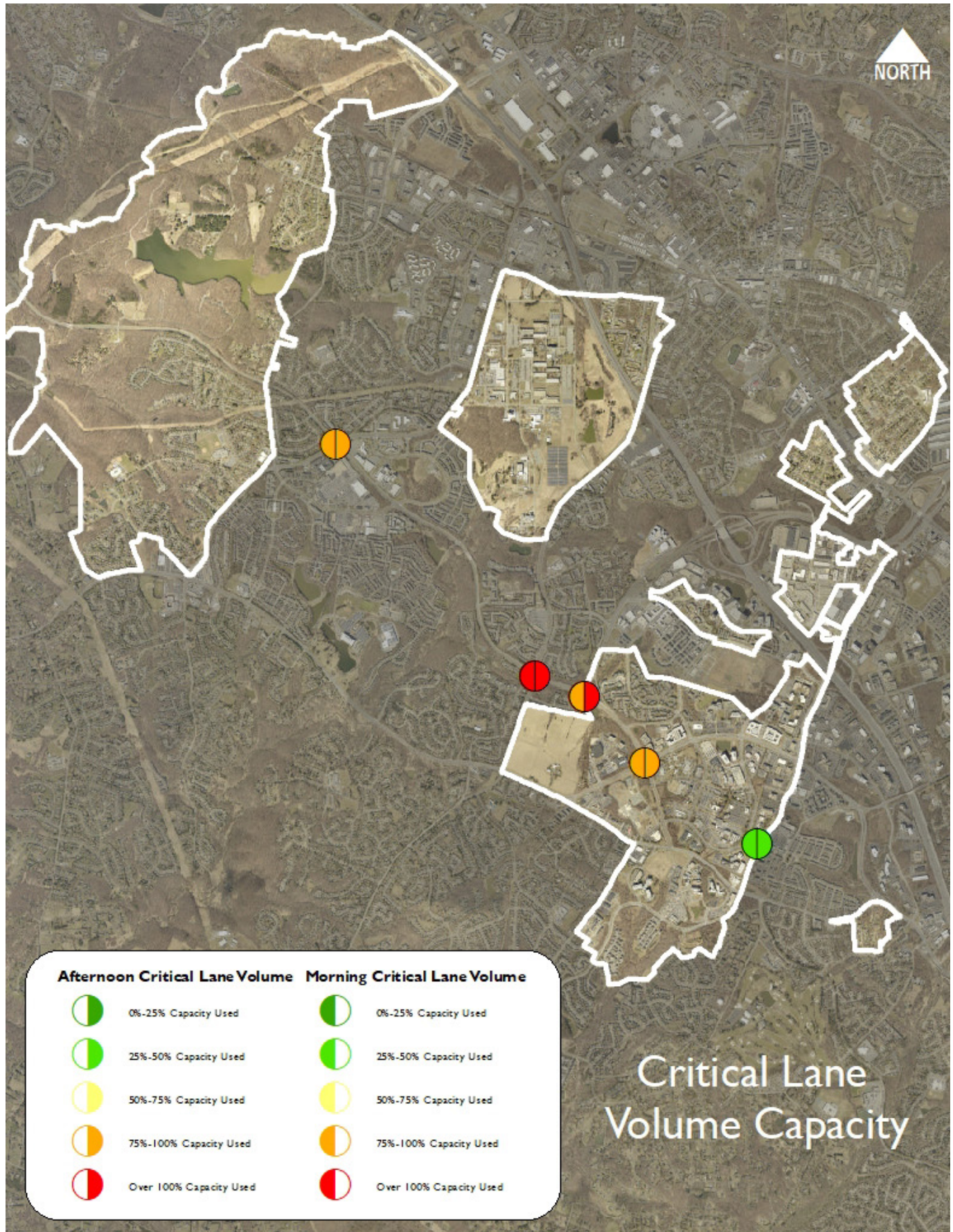




Figure 14: Percentage of Capacity Utilized per Critical Lane Volume





The charts indicate that, per the relevant delay standards, four of the five intersections are operating above the acceptable level of congestion for their relevant policy area. When measured per the CLV standard, only the intersection of Great Seneca Highway and Muddy Branch Road is operating above the acceptable level of congestion defined by the Subdivision Staging Policy.

The Great Seneca Science Corridor Master Plan recommended that three of the four Biennial Monitoring Report’s failing study intersections be recommended for grade-separated interchanges (Great Seneca Highway and Quince Orchard Road, Great Seneca Highway and Muddy Branch Road, and Great Seneca Highway and Sam Eig Highway). The Plan removed a former recommendation for a grade separated interchange at Great Seneca Highway and Key West Avenue.

Grade-separated interchanges have benefits for vehicular through-mobility, but the benefits are tied to trade-offs, which must be understood. First and foremost, costs are significant. The standard Single-Point Urban Interchange can easily cost over 50 million dollars, depending on the land-taking needs and grading work associated with the project. Beyond costs, there are property impacts, construction management impacts, and reductions in mobility quality and increases in delay for non-vehicular modes of transportation. Beyond these impacts, grade-separated interchanges impact the character of what can and will be built on adjacent land.

This report recognizes that different approaches to determining what impacts are tolerable and their respective quantitative measures of effectiveness have changed in the past (as when the 2016 Subdivision Staging Policy was updated) and may potentially change again in the future associated with subsequent biennial updates to the county’s Subdivision Staging Policy. For example, future measures of effectiveness may focus on overall trip travel time rather

than the performance of individual intersections.

For this reason, this report recommends further study of the planned interchanges. The studies should determine whether or not the existing threshold measures of effectiveness are appropriate, too high, or too low. They should also consider costs, construction management, property takings, impacts to non-vehicular mobility, and health impacts associated with the proposed interchanges.

Additionally, this report recommends a secondary study to prioritize capital improvements in the Plan Area. Capital Improvement funds are limited, and because interchange construction demands significant funding, the programming of these roadway improvements need to be weighed against other potential mobility improvements, such as the design and implementation of the Corridor Cities Transitway and the construction of the Life Sciences Center Loop.

## Vision Zero

Between January 2015 and May 2019, 1,727 crashes occurred on roadways within or along the bounds of the Great Seneca Science Corridor Plan Area, including I-270 and its ramps. Forty-six of these crashes resulted in at least one severe injury, and two (2) resulted in fatalities. Sixty-seven (or 4 percent) of the crashes in the Plan area involved at least one (1) non-motorist, nine (9) of which resulted in a severe injury, and one (1) of which resulted in a fatality. Focus areas to improve pedestrian and bicyclist safety are the intersection of Shady Grove Road and Gaither Road, Shady Grove Road and Traville Gateway Drive, and the two roadways, including Fields Road and Washington Boulevard, where higher volumes of non-motorists interact with vehicles. Figure 15 shows that crash rates have remained relatively constant between 2015 and 2018.

Figure 15: Reported Crashes within the Great Seneca Science Corridor (excludes fatalities)

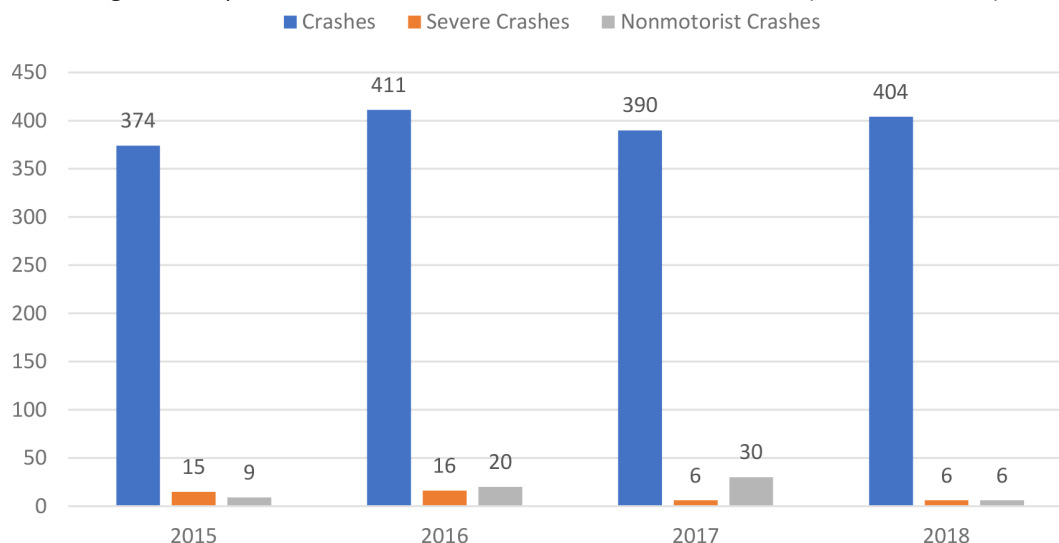




Table 7: Capital Improvements Program

Tied to Staging	Project Name	Project # (if assigned)	Location/Limits	Coordinating Agency	Project Status
No	Travilah Fire Station 32	450504	Northwest corner of Darnestown Rd and Shady Grove Rd	DGS	Constructed and operating
No	North Potomac Community Recreation Center	720102	13860 Travilah Rd	DGS	Constructed and operating
Yes (stage 2)	PSTA relocation	471102	LSC West: Key West Ave and Great Seneca Hwy	DGS	New PSTA constructed and operating; Relocation complete.
Yes (stage 2)	CCT funded		Shady Grove Metro Station and Metropolitan Grove	MSHA/MTA	Not funded
Yes (stage 3)	CCT under construction		Shady Grove Metro Station and Metropolitan Grove	MSHA/MTA	Not funded
Yes (Stage 4)	CCT operating		Full length	MSHA/MTA	Not funded
Yes (Stage 2)	LSC Recreation Loop		Throughout LSC	Various (public and private)	35% design completed. Final design funded FY23-24. Construction not funded.
No	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	Discoverly 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 Seneca Hwy		Intersection interchange	DOT/SHA	Not funded
No	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

## CAPITAL IMPROVEMENTS PROGRAM (CIP)

Three Capital Improvements Program projects identified in the GSSC Master Plan have been completed:

- Travilah Fire Station 32 has been constructed and is operating.
- North Potomac Recreation Center has been constructed and is operating.
- PSTA relocation is funded and the new PSTA facilities at the Multi Agency Service Park has been completed and is operating.

As noted earlier, funding for the CCT in the state's Consolidated Transportation Program (CTP) has been severely curtailed. Three CIP projects identified in the GSSC Master Plan have been completed. 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 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.

## 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, including:

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

**CCT:** Efforts are planned to identify strategies to reduce the cost of constructing and implementing the Corridor Cities Transitway, including identifying an alternate equivalent mass transit system. Approaches may include delaying acquisition and construction of sections of dedicated right-of-way and eliminating grade separations that were originally envisioned at certain intersections, as well as other changes to the original vision for the CCT. Based on

current and projected funding constraints, this raises open questions about whether the CCT can function as originally planned in 2010. This will be evaluated through the I 270 Corridor Transit Functional Plan, to begin in FY 2021.

**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. 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 to enable LSC employees and residents to access basic services without a car. The development of the nearby Crown Farm's retail center and the Plan's staging restriction on non-residential uses may be contributing to reduced commercial services in proposed 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.

The Master Plan envisioned that redevelopment of the PSTA site in the LSC West District would be a key factor in establishing a critical mass of residents to support neighborhood-serving retail and restaurants in the LSC. Due to the constraint on new non-residential development capacity in Stage 1 of the Master Plan, creating an active mixed-use center on the former PSTA site may be difficult.

**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 by creating more pedestrian and bicycle connections within districts through conditions in approved development plans and the new Bicycle Master Plan, but connectivity between districts remains challenging. Staff recommends examining the new Vision Zero program to derive new recommendations for improving bicycle and pedestrian safety.



## RECOMMENDATIONS

In conclusion, 1,219 residential units and 743,626 square feet of non-residential development have been completed since the plan adoption, as well as 3 capital projects. However, 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.

### CCT

At the time of this report, the State has indicated that the County is responsible for funding the CCT. Further discussions regarding funding responsibilities and mechanisms must be initiated. The process to advance funding and construction of the CCT should include an examination of the original vision for this public transit facility, and a look at how it is evolving, to make certain that the CCT functions as intended to provide a feasible alternative to travel by automobile in the LSC. The process should also identify opportunities for public review and comment regarding proposed changes to the system.

### 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. 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

- Implement the Bicycle Master 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, and to create an efficient multi-modal transportation system throughout the LSC.
- Coordinate a comprehensive study of parking needs and strategies for the LSC.
- Study the planned interchanges to 1) better gauge whether or not the current measures of effectiveness are appropriate, and 2) assess whether benefits of the interchanges outweigh the direct costs and indirect costs of implementation, such as construction management, property takings, non-vehicular mobility, health impacts, etc.
- Study the costs and benefits of planned capital improvements, including transit and multimodal investments, to better prioritize future investments within the plan area.
- In the event the Great Seneca Science Corridor is amended, the above recommendations should be addressed through the Plan Amendment.







# Biennial Master Plan

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## MONITORING REPORT

SEPTEMBER 2019



Prepared by the Montgomery County Planning Department  
[MontgomeryPlanning.org](http://MontgomeryPlanning.org)